DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel B
Brownfield Cleanup Program
New York, New York County
Site No. C231128
September 2019

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel B
Brownfield Cleanup Program
New York, New York County
Site No. C231128
September 2019

Statement of Purpose and Basis

This document presents the remedy for the Sendero Verde Redevelopment Project - Parcel B site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Sendero Verde Redevelopment Project - Parcel B site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent

feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soils beneath the areas of the proposed building footprints which exceed unrestricted use soil cleanup objectives (UUSCOs), as defined by 6 NYCRR Part 375-6.8. Outside of the building footprints, all soils in the upper two feet which exceed the restricted residential SCOs (RRSCOs) will be excavated and transported off-site for disposal.

Excavation and off-site disposal of a total of approximately 18,600 cubic yards (cy) of soil across the site. The estimated excavation and disposal volumes include: 15,400 cy of soil exceeding the UUSCOs to be removed to achieve a Track 1 unrestricted use cleanup beneath the building footprints and approximately 3,200 cy to achieve the RRSCOs in the remainder of the site. Approximately 450 cy of the total may require disposal as lead hazardous waste, pending delineation sampling.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and/or complete the backfilling of the excavation and establish the designed grades at the site.

Soil meeting UUSCOs will be imported for use in the landscaped areas of the community gardens even though a Track 4 remedy is planned for that portion of the site. The site will be re-graded to accommodate installation of a cover system in the Track 4 areas of the site as described in remedy element 4.

4. Cover System

A site cover will be required in the Track 4 areas of the site to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation

will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

6. Local Institutional Controls

The following local use restriction will be relied upon to prevent ingestion of groundwater in the Track 1 area of the site: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval.

7. Institutional Control

Imposition of an institutional control for any portions of the site that do not achieve a Track 1 cleanup in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Site Management Plan

A Site Management Plan is required (for all portions of the site that do not achieve a Track 1 Unrestricted Use cleanup, i.e., everywhere except the proposed building footprints), which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed above.
   - Engineering Controls: The cover system discussed above.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination (i.e., the Track 4 areas);
   - descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

September 16, 2019

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel B
New York, New York County
Site No. C231128
September 2019

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

New York Public Library - Aguilar Branch
174 East 110th Street
New York, NY 10029
Phone: 212-534-2930

Manhattan Community Board 11
1664 Park Avenue, Ground Floor
New York, NY 10035
Phone: 212-369-3571

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The 1.36-acre site located in an urban area. It is bounded by Park Avenue to the east, East 111th Street to the south, Madison Avenue to the west and East 112th Street to the north.

Site Features:
The site is relatively flat and is currently a vacant, unpaved lot surrounded by chain-link fence. Most recently, the site was utilized as a baseball field and community gardens. The community gardens were located on the eastern and southwestern perimeter of the site and were vacated in February 2018.

Current Zoning and Land Use:
The site is currently vacant and is zoned as R9 (residential) with a C2-5 (commercial) overlay. The area surrounding the site is urban and developed with low to high-rise multi-family residential buildings, commercial and office buildings, and mixed use residential and commercial properties.

Past Use of the Site:
A portion of the site was identified as a laundry from at least 1911 to 1979 and a portion of the site contained paint stores from at least 1939 to 1968. Numerous residential dwellings existed on-site between 1896 and 1980. Portions of the site operated as a dry cleaner (1968), a printer (1920), a furrier (1920), a pharmacy (1947-1950), and a shoe sale/manufacturer (1920, 1923 and 1934).

Site Geology and Hydrogeology:
The site is underlain by urban fill to depths of approximately 10 to 15 feet below land surface. Groundwater is generally encountered between approximately 10 to 13 feet below land surface. Groundwater flow direction is to the southeast towards the Harlem River, which is located approximately 3,300 feet east of the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which

allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

lead	benzo(a)anthracene
mercury	benzo(a)pyrene
benzo(b)fluoranthene	tetrachloroethene (PCE)
chrysene	xylene (mixed)
barium	toluene

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Support of Excavation Installation IRM

An IRM Work Plan was approved to allow for excavation and installation of the excavation support for the new building foundation around the perimeter of the site and the footprints of the proposed site buildings. IRM activities include: grading and leveling the site; installation and testing of driven and drilled soldier piles at the deep excavation areas in portions of the site with cellars; installation of timber lagging and associated excavation to approximately 12 feet below grade to allow for installation of walers; excavation of approximately 5,000 cubic yards (CY) of soil from the northern portion of the site to a depth of approximately six feet below grade to facilitate the installation of excavation support; and community air monitoring during the work. The IRM commenced in July 2019 and will be documented in the Final Engineering Report.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Groundwater samples were also analyzed for emerging contaminants. Soil vapor samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern are SVOCs and metals.

Soil - Several SVOCs were detected in soil at concentrations exceeding both the unrestricted use soil cleanup objectives (UUSCOs) and the restricted residential soil cleanup objectives (RRSCOs), including: benzo(a)anthracene at a maximum concentration of 22 parts per million (ppm) as compared to the UUSCO and RRSCO of 1 ppm, benzo(a)pyrene at a maximum concentration of 21 ppm (UUSCO and RRSCO is 1 ppm), benzo(b)fluoranthene at a maximum concentration of 31 ppm (UUSCO and RRSCO is 1 ppm) and chrysene at a maximum concentration of 27 ppm (UUSCO is 1 ppm and RRSCO is 3.9 ppm).

Metals including barium, lead and mercury were found in soil exceeding both the UUSCOs and the RRSCO. Barium was found at a maximum concentration of 1,490 ppm (UUSCO is 350 ppm and RRSCO is 400 ppm). Lead was found at a maximum concentration of 3,540 ppm (UUSCO is 63ppm, RRSCO is 400 ppm). Mercury was found at a maximum concentration of 2.36 ppm (UUSCO is 0.18 ppm and RRSCO is 0.81 ppm). No VOCs, PCBs or pesticides were detected at concentrations exceeding the RRSCOs. Please note that tetrachloroethene (PCE) does not exceed protection of groundwater soil cleanup objectives (PGSCOs).

Data does not indicate any off-site impacts in soil related to this site.

Groundwater - Tetrachloroethene (PCE) was found at a maximum concentration of 9.7 parts per billion (ppb) as compared with the Ambient Water Quality Standard (AWQS) of 5 ppb. Several SVOCs, including benzo(a)anthracene, benzo(a)pyrene, chrysene and benzo(b)fluoranthene, were also found at concentrations marginally exceeding the AWQS in one well. No PCBs or pesticides were detected at concentrations exceeding the AWQSs.

Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - PCE was detected at a maximum concentration of 22.8 micrograms per cubic meter (ug/m3). Several petroleum VOCs were also detected including mixed xylenes at a maximum concentration of 764 ug/m3, and toluene at a maximum concentration of 159 ug/m3.

Data does not indicate any off-site impacts in soil vapor related to this site.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by site-related contamination. Access to the site is restricted by a fence. However, people who enter the site may come into contact with soil and groundwater contamination if they dig below the ground surface. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The site is vacant so inhalation of site contaminants in indoor air via soil vapor intrusion in not a current concern. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development and occupancy. Environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface

water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Multiple Cleanup Tracks remedy.

The selected remedy is referred to as the excavation and cover system remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soils beneath the areas of the proposed building footprints which exceed unrestricted use soil cleanup objectives (UUSCOs), as defined by 6 NYCRR Part 375-6.8. Outside of the building footprints, all soils in the upper two feet which

exceed the restricted residential SCOs (RRSCOs) will be excavated and transported off-site for disposal.

Excavation and off-site disposal of a total of approximately 18,600 cubic yards (cy) of soil across the site. The estimated excavation and disposal volumes include: 15,400 cy of soil exceeding the UUSCOs to be removed to achieve a Track 1 unrestricted use cleanup beneath the building footprints and approximately 3,200 cy to achieve the RRSCOs in the remainder of the site. Approximately 450 cy of the total may require disposal as lead hazardous waste, pending delineation sampling.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and/or complete the backfilling of the excavation and establish the designed grades at the site.

Soil meeting UUSCOs will be imported for use in the landscaped areas of the community gardens even though a Track 4 remedy is planned for that portion of the site. The site will be re-graded to accommodate installation of a cover system in the Track 4 areas of the site as described in remedy element 4.

4. Cover System

A site cover will be required in the Track 4 areas of the site to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

6. Local Institutional Controls

The following local use restriction will be relied upon to prevent ingestion of groundwater in the Track 1 area of the site: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval.

7. Institutional Control

Imposition of an institutional control for any portions of the site that do not achieve a Track 1 cleanup in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a

periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

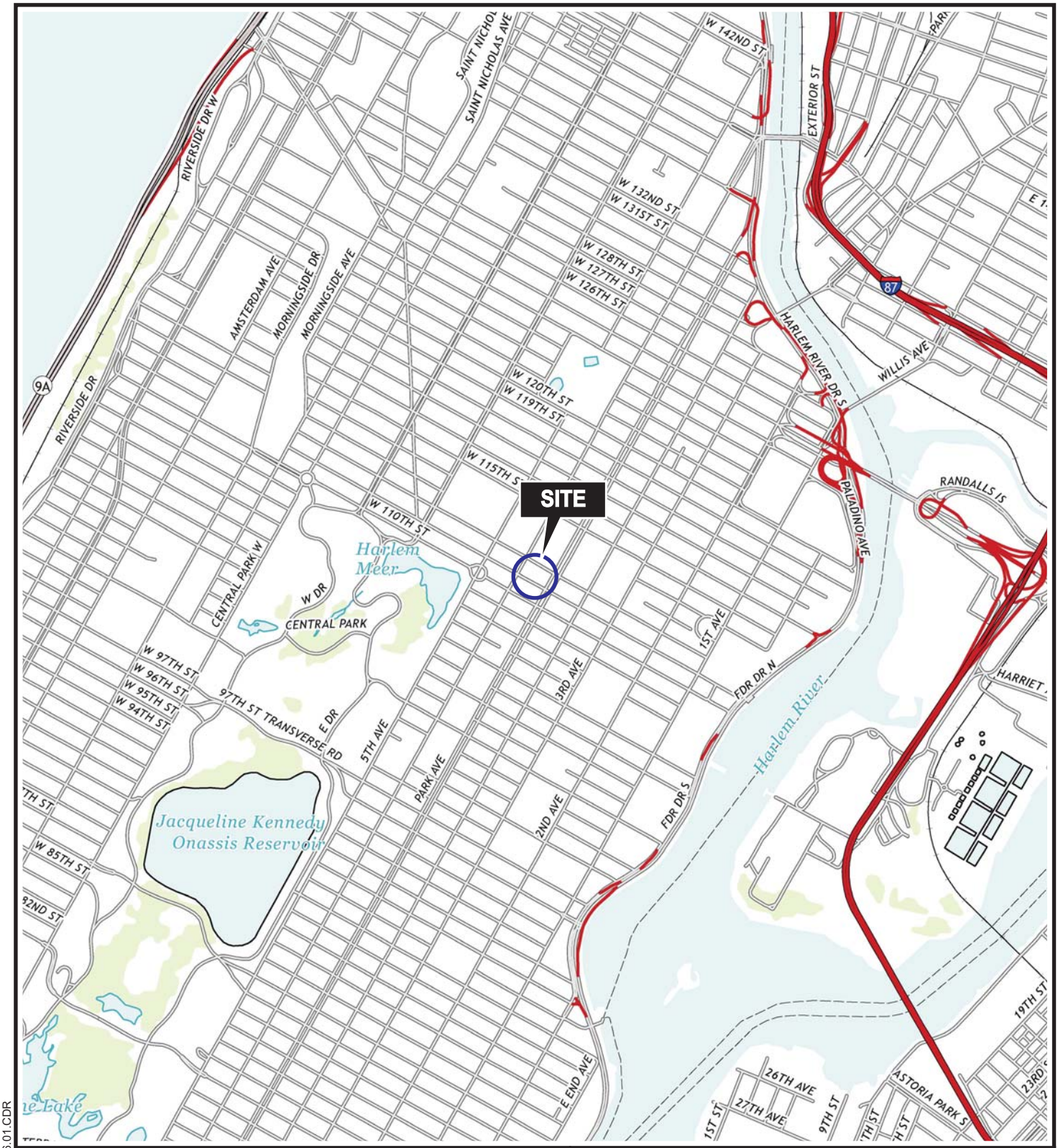
8. Site Management Plan

A Site Management Plan is required (for all portions of the site that do not achieve a Track 1 Unrestricted Use cleanup, i.e., everywhere except the proposed building footprints), which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed above.
   - Engineering Controls: The cover system discussed above.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination (i.e., the Track 4 areas);
   - descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



QUADRANGLE LOCATION

SOURCE:
USGS; 2013, Central Park, NY
7.5 Minute Topographic Quadrangle

N

0 2000’

Title:

SITE LOCATION MAP

SENDERO VERDE
REDEVELOPMENT PROJECT - PARCEL B

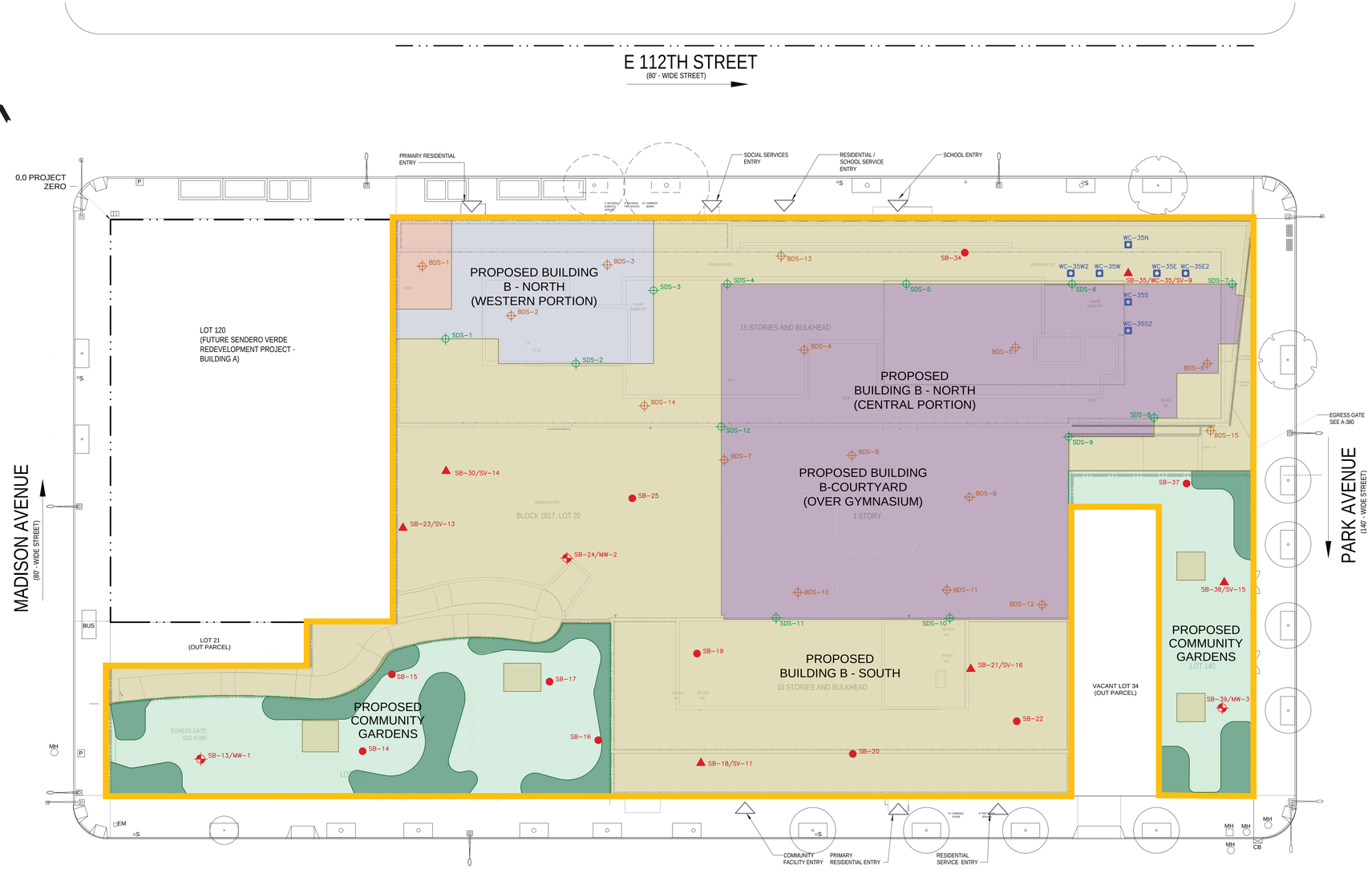
Prepared for:

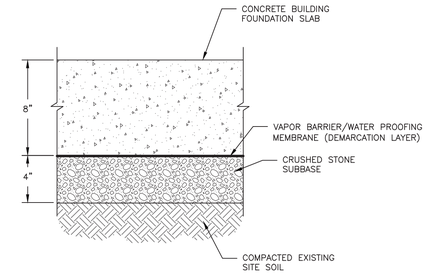
SV-B OWNERS LLC

FIGURE

1

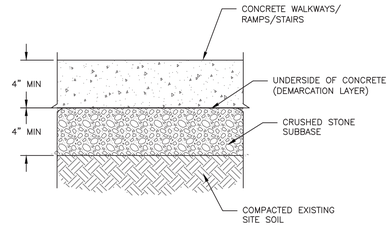
V:\CAD\PROJECTS\2984Y0003Y\116\2984.0003Y116.01.CDR





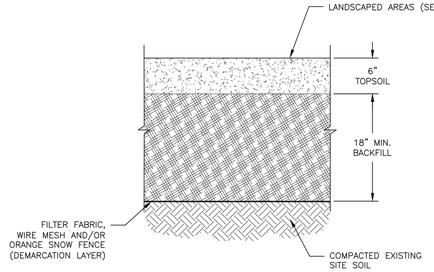
1 PROPOSED SITE COVER SYSTEM: CONCRETE BUILDING FOUNDATION

SCALE: NOT TO SCALE



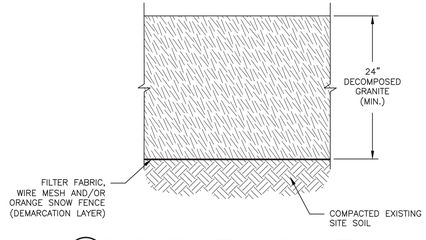
2 PROPOSED SITE COVER SYSTEM: CONCRETE WALKWAYS/RAMPS/STAIRS

SCALE: NOT TO SCALE



3 PROPOSED SITE COVER SYSTEM: LANDSCAPED AREAS

SCALE: NOT TO SCALE



4 PROPOSED SITE COVER SYSTEM: DECOMPOSED GRANITE

SCALE: NOT TO SCALE

LEGEND

- BCP SITE BOUNDARY
- SB-34 — RI SOIL BORING LOCATION AND DESIGNATION TO BE USED AS BDS
- SB-36/MW-5 — RI SOIL BORING/MONITORING WELL LOCATION AND DESIGNATION TO BE USED AS BDS
- SB-35/WC-35/SV-9 — RI SOIL BORING/WASTE CHARACTERIZATION SOIL SAMPLE/SOIL VAPOR SAMPLE LOCATION AND DESIGNATION TO BE USED AS BDS
- BDS-5 — PROPOSED BOTTOM DOCUMENTATION SAMPLE LOCATION AND DESIGNATION
- SDS-5 — PROPOSED SIDEWALL DOCUMENTATION SAMPLE LOCATION AND DESIGNATION
- WC-35N — PROPOSED LEAD DELINEATION SAMPLE LOCATION AND DESIGNATION AROUND WC-35

KEY

- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 2 FEET BLS. SITE COVER SYSTEM COMPRISED OF CONCRETE BUILDING FOUNDATIONS WITH A DEMARCATION LAYER OF 20 MIL THICK VAPOR BARRIER OR WATERPROOFING MEMBRANE (GRACE PRODUCTS)/CONCRETE WALKWAYS/STAIRS/RAMPS AND SUB-BASE AGGREGATE BACKFILL. SEE DETAILS 1 AND 2 AND NOTES 3 AND 4.
- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 2 FEET BLS. SITE COVER SYSTEM COMPRISED OF A MINIMUM OF TWO FEET OF SOIL MEETING UUSCOS PLACED OVER A DEMARCATION LAYER, WITH THE UPPER SIX INCHES OF SUFFICIENT QUALITY TO MAINTAIN A VEGETATIVE LAYER. SEE DETAIL 3 AND NOTES 3 AND 4.
- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 2 FOOT BLS. SITE COVER SYSTEM COMPRISED OF A MINIMUM OF TWO FEET OF DECOMPOSED GRANITE PLACED OVER A DEMARCATION LAYER. SEE DETAIL 4 AND NOTES 3 AND 4.
- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 11 FEET BLS TO MEET UUSCOs, SEE NOTES 3 AND 4
- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 13 FEET BLS TO MEET UUSCOs. SEE NOTES 3 AND 4.
- PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 15 FEET BLS TO MEET UUSCOs. SEE NOTES 3 AND 4.

BLS – BELOW LAND SURFACE
NYSDEC – NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
RRSCOs – PART 375 RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES
PGWSCOs – PART 375 PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES
UUSCOs – PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES
BDS – BOTTOM DOCUMENTATION SAMPLE
BCS – BOTTOM CONFIRMATION SAMPLE
SDS – SIDEWALL DOCUMENTATION SAMPLE
TCLP – TOXICITY CHARACTERISTICS LEACHING PROCEDURE

NO.	DATE	REVISION DESCRIPTION	INT.

PROJECT NAME:
SENDERO VERDE
REDEVELOPMENT PROJECT - PARCEL B

PROJECT FOR:
SV-B OWNERS LLC

TITLE:
REMEDIAL ALTERNATIVE 2:
COMBINED TRACK 1 UNRESTRICTED USE/TRACK 4 RESTRICTED RESIDENTIAL USE CLEANUP

Figure 2

V:\CAD\PROJECTS\29841\00031\116\29841-00031116-03.DWG