DECISION DOCUMENT

975 Nostrand Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224335
November 2022

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

DECLARATION STATEMENT - DECISION DOCUMENT

975 Nostrand Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224335
November 2022

Statement of Purpose and Basis

This document presents the remedy for the 975 Nostrand Avenue 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 975 Nostrand Avenue 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 contaminant source areas, including

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- any underground storage tanks (USTs), dispensers, underground piping or other structures associated with a source of contamination.

Excavation and off-site disposal of all on-site soils which exceed unrestricted soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8.

Approximately 35,500 cubic yards of contaminated soil will be removed from the site. If a Track 1 or Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify the Department, submit the sample results and, and in consultation with the Department, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.

4. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from subsurface. The system and any vapor intrusion monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

5. Soil Vapor Extraction (SVE)

Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface and to prevent off-site migration of VOCs in soil vapor in two areas of the site where deeper sources of VOCs are suspected. These two areas of the site would achieve a Track

2 cleanup. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

6. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the Track 2 portion of the property that:

- requires 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);
- allows the use and development of the controlled property for residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts 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
- requires compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required for the Track 2 portion of the site, 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 in paragraph 6 above.
    - Engineering Controls: The vapor mitigation system discussed in Paragraph 4 and the SVE system in Paragraph 5 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;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- 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. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
    - A schedule of monitoring and frequency of submittals to the Department; and
    - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
    - procedures for operating and maintaining the remedy;
    - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
    - maintaining site access controls and Department notification; and
    - providing the Department access to the site and O&M records.

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.

November 7, 2022

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

975 Nostrand Avenue
Brooklyn, Kings County
Site No. C224335
November 2022

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, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

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:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224335

Brooklyn Community Board 9
890 Nostrand Avenue
Brooklyn, NY 11225
Phone: (718) 778-9279

Brooklyn Public Library - Crown Heights Branch
560 New York Ave at Maple Street
Brooklyn, NY 11225
Phone: (718) 773-1180

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 site is located at in the Crown Heights neighborhood of Brooklyn, NY and is identified on the New York City Tax Map as Block 1309, Lot 6. The site is bounded by Nostrand Avenue to the west, Montgomery Street to the north, Redfern Clove Road to the east, and several commercial buildings to the south.

Site Features:
The site is currently a vacant lot covered entirely with gravel and an asphalt paved parking lot. The surrounding areas are comprised of residential and commercial uses.

Current Zoning and Land Use:
The site is zoned as R7-1 and C2-3 (residential and commercial). The site is located in a mixed-use commercial and residential neighborhood with some institutional uses, including a public school. The nearest sensitive receptors include the Beth Rivkah High School, Success Academy Crown Heights (Brooklyn 7)/Success Academy Charter School, and M.S. 061 Dr. Gladstone H. Atwell, and two daycare facilities (Associated Beth Rivkah School and P.S. 161 the Crown) within a 500-foot radius of the site.

Past Use of the Site:
The historic use of the site included residential and commercial uses. The site was developed with a trucking company as early as 1908. At the time, a portion of an unspecified road intersected the eastern portion of the site in a north-south direction. A printer and multiple dry cleaners operated on the site between 1934 and 1965. Since then, the site was occupied by various uses including stores, a parking garage, a printing facility, upholstery facility, a carpenter, an auto repair shop, and an auto school. Most recently, the site was occupied by a grocery store and an asphalt paved parking lot.

Site Geology and Hydrogeology:
Subsurface materials at the site consist of an urban fill layer (sand, gravel, and silt with varying

amounts of concrete, brick, wood, ash, glass, and asphalt) to a depth of approximately 15 feet below grade surface (bgs) underlain by native soil. Bedrock was not encountered during previous site investigations.

Groundwater is present at depths ranging from 65 to 71 feet bgs. Groundwater flow is generally south to southwest. Groundwater in this area of Brooklyn is not used as a source of potable water.

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 Volunteer(s) does/do not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

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:

benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
benzo(k)fluoranthene
chrysene
dibenz[a,h]anthracene
indeno(1,2,3-cd)pyrene
tetrachloroethene (PCE)
trichloroethene (TCE)
1,1,1-trichloroethane
lead
mercury
perfluorooctane sulfonic acid
perfluorooctanoic acid

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

- groundwater
- soil
- soil vapor intrusion

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

Based on the results of the RI, installation of a support of excavation is needed to achieve final remedial excavation depths. The installation of the SOE requires excavation of a guide wall trench approximately 3 feet wide by 5 feet deep around the site perimeter, which will generate approximately 1,300 cubic yards of contaminated soil. The IRM is currently being implemented 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.

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor was sampled for VOCs. Based on the investigations conducted to date, the primary contaminants of concern are VOCs and SVOCs in soil; VOCs, SVOCs, and metals in groundwater; and chlorinated VOCs in soil vapor.

Soil - One VOC (tetrachloroethene, or PCE) was detected in one soil boring in the southwest portion of the site at concentrations exceeding the applicable unrestricted use soil cleanup objectives (UUSCOs) at a maximum concentration of 10 parts per million, or ppm (UUSCO is 2 ppm). SVOCs were found at concentrations exceeding the UUSCOs including benzo(a)anthracene (max of 31 ppm; UUSCO is 1 ppm), benzo(a)pyrene (max of 28 ppm; UUSCO is 1 ppm), benzo(b)fluoranthene (max of 38 ppm; UUSCO is 1 ppm), benzo(k)fluoranthene (max of 16 ppm; UUSCO is 3.9 ppm), chrysene (max of 29 ppm; UUSCO is 1 ppm), dibenz(a,h)anthracene (max of 3.8 ppm; UUSCO is 0.33 ppm), and indeno(1,2,3-cd)pyrene (max of 17 ppm; UUSCO is 0.5 ppm. Metals exceeding UUSCOs including lead (max of 12,100 ppm; UUSCO is 63 ppm) and mercury (max of 2.6 ppm; UUSCO is 0.18 ppm). These contaminants were detected in soil borings

throughout the site. PFAS compounds were detected at trace concentrations below unrestricted use guidance values, including perfluorooctanesulfonic acid (PFOS) (max of 0.37 parts per billion (ppb); guidance value 0.88 ppb) and perfluorooctanoic acid (PFOA) (max of 0.27 ppb; guidance value of 0.66 ppb). Data does not indicate any off-site impacts in soil related to this site.

Groundwater - Exceedances of the Class GA Ambient Water Quality Standards (AWQS) for VOCs included chloroform (max of 17 ppb; AWQS of 7 ppb) and PCE (max of 17 ppb; AWQS of 5 ppb). These VOCs were detected in groundwater samples throughout the site. Dissolved metals detected in exceedance of AWQS include antimony (max of 6.2 ppb; AWQS is 3 ppb), magnesium (max of 47,300 ppb; AWQS is 35,000 ppb), manganese (max of 2,620 ppb; AWQS is 300 ppb), and selenium (max of 10.6 ppb; AWQS is 10 ppb). These metals are naturally occurring and are not a result of on-site contamination. Emerging contaminants that exceeded the maximum contaminant limit, or MCL drinking water standard) of 10 parts per trillion (ppt) include PFOS (max of 16.5 ppt) and PFOA (max of 32.7 ppt). Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - VOCs were detected in the soil vapor throughout the site, including PCE (max of 37,000 micrograms per cubic meter, or ug/m3), trichloroethene (TCE) (max of 377 ug/m3), and 1,1,1-trichloroethane (max of 900 ug/m3). Data indicates potential 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.*

Since the site is now a vacant lot covered in gravel people will not come into contact with site-related soil and groundwater contamination unless they dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by site contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into 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. Because the site has no buildings on it, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern, however the potential exists for the indoor air in future on-site buildings to be impacted by site contaminants via the soil vapor intrusion pathway. Environmental sampling indicates that soil vapor may be migrating off-site, and the potential exists for the inhalation of site contaminants due to soil vapor intrusion in 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, Vapor Mitigation and SVE 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.

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- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- any underground storage tanks (USTs), dispensers, underground piping or other structures associated with a source of contamination.

Excavation and off-site disposal of all on-site soils which exceed unrestricted soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8.

Approximately 35,500 cubic yards of contaminated soil will be removed from the site. If a Track 1 or Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify the Department, submit the sample results and, and in consultation with the Department, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.

4. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from subsurface. The system and any vapor intrusion monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

5. Soil Vapor Extraction (SVE)

Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface and to prevent off-site migration of VOCs in soil vapor in two areas of the site where deeper sources of VOCs are suspected. These two areas of the site would achieve a Track 2 cleanup. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

6. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the Track 2 portion of the property that:

- requires 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);
- allows the use and development of the controlled property for residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts 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
- requires compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required for the Track 2 portion of the site, which includes the following:

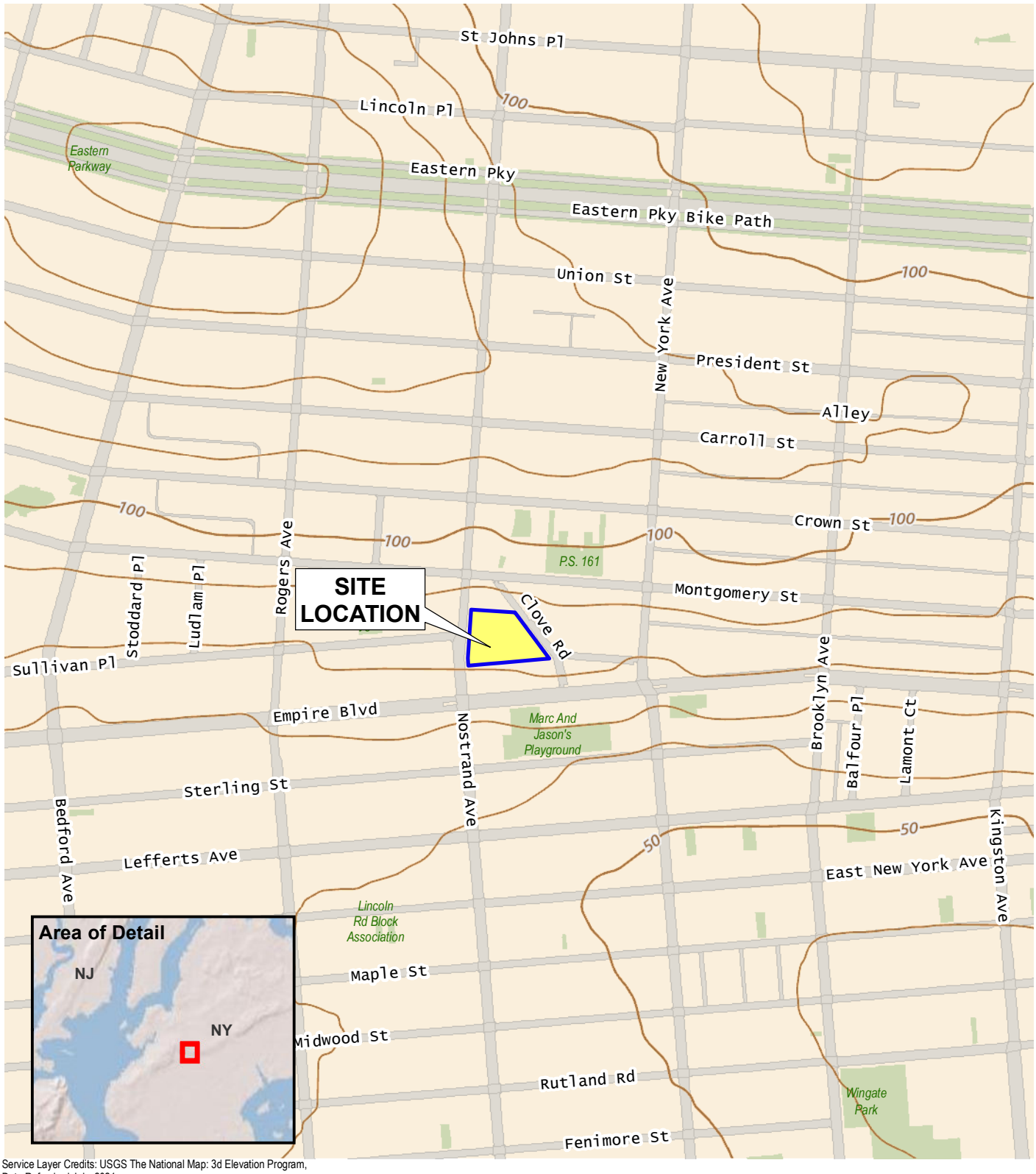
a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
    - Institutional Controls: The Environmental Easement discussed in paragraph 6 above.
    - Engineering Controls: The vapor mitigation system discussed in Paragraph 4 and the SVE system in Paragraph 5 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;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- 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. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
    - A schedule of monitoring and frequency of submittals to the Department; and
    - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
    - procedures for operating and maintaining the remedy;
    - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
    - maintaining site access controls and Department notification; and
    - providing the Department access to the site and O&M records.



Service Layer Credits: USGS The National Map: 3d Elevation Program, Data Refreshed July, 2021

0 600 1,200

SCALE IN FEET

AKRF

440 Park Avenue South, New York, NY 10016

975 Nostrand Avenue
Brooklyn, New York

BCP SITE LOCATION

DATE
Nov. 2022

FIGURE
1

LEGEND

- BCP SITE BOUNDARY
- 6 LOT BOUNDARY AND TAX LOT NUMBER
- 1309 BLOCK NUMBER
- BUILDING
- EXTENT OF REMEDIAL EXCAVATION TO 15 FEET BELOW GRADE TO ACHIEVE A TRACK 1 CLEANUP
- EXTENT OF REMEDIAL EXCAVATION TO A MINIMUM OF 15 FEET BELOW GRADE TO ACHIEVE A TRACK 2 CLEANUP
- PROPOSED ENDPOINT SAMPLE LOCATION

0 25 50 100

SCALE IN FEET

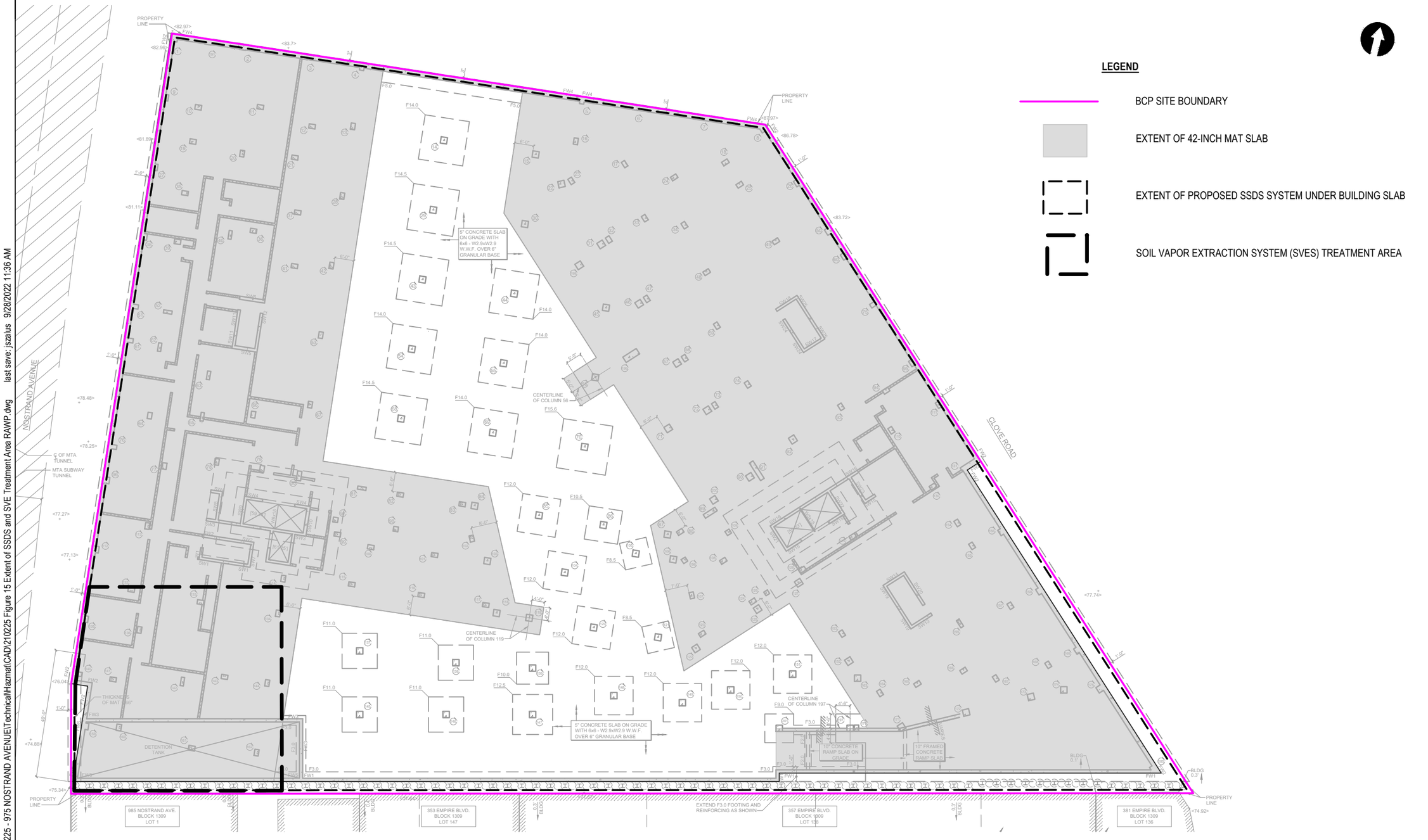
AKRF
440 Park Avenue South, New York, NY 10016

975 Nostrand Avenue
Brooklyn, New York

PROPOSED REMEDIAL EXCAVATION AND ENDPOINT SAMPLING PLAN

DATE
Nov. 2022

FIGURE
2



LEGEND

- BCP SITE BOUNDARY
- EXTENT OF 42-INCH MAT SLAB
- EXTENT OF PROPOSED SSDS SYSTEM UNDER BUILDING SLAB
- SOIL VAPOR EXTRACTION SYSTEM (SVES) TREATMENT AREA

0 15 30 60

SCALE IN FEET

Source:
ODA Architects New York "975 Norstrand Avenue Cellar/Foundation Plan", DWG No: FO-100.00, Dated 2-25-2022.

W:\Projects\210225 - 975 NOSTRAND AVENUE\Technical\Hazmat\CAD\210225 Figure 15 Extent of SSDS and SVE Treatment Area RAWP.dwg last save: jszalus 9/28/2022 11:36 AM

AKRF
440 Park Avenue South, New York, NY 10016

975 Nostrand Avenue
Brooklyn, New York

EXTENT OF SSDS AND SVE TREATMENT AREA

DATE
Nov. 2022

FIGURE
3