

DECISION DOCUMENT

817-819 Bedford Avenue Development
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224399
August 2025



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

817-819 Bedford Avenue Development
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224399
August 2025

Statement of Purpose and Basis

This document presents the remedy for the 817-819 Bedford Avenue Development 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 (NYSDEC) for the 817-819 Bedford Avenue Development site and the public's input to the proposed remedy presented by NYSDEC.

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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent

feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise(TM) (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site buildings will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy. Approximately 1,200 cubic yards of contaminated soil will be removed from the site.

Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, 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.

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete any required backfilling of the excavation and establish the designed grades at the site.

3. Institutional Controls

The remedy will achieve a Track 2 restricted residential cleanup at a minimum.

Imposition of an institutional control 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 NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

4. Site Management Plan

A Site Management Plan is required, 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 Remedy Element 3 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 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;
- maintaining site access controls and NYSDEC 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; and
- a schedule of monitoring and frequency of submittals to the NYSDEC

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.

August 11, 2025

Date



Scott Deyette, Director
Remedial Bureau B

DECISION DOCUMENT

817-819 Bedford Avenue Development
Brooklyn, Kings County
Site No. C224399
August 2025

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (NYSDEC), 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.

NYSDEC 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

NYSDEC 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 NYSDEC 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=C224399>

Brooklyn Community Board 3
Attn: Beryl Nyack
Restoration Plaza
1360 Fulton Street, Floor 2
Brooklyn, NY 11216
Phone: (718) 622-6601

Brooklyn Public Library - Marcy Branch
Attn: Marcia McGibbon
617 DeKalb Avenue at Nostrand Avenue
Brooklyn, NY 11216
Phone: (718) 935-0032

Receive Site Citizen Participation Information By Email

Please note that NYSDEC'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

Site Location

The site is located at 817-819 Bedford Avenue, Brooklyn, NY 11205. The approximately 5,000-square-foot (sf) site is comprised of two tax lots identified as Brooklyn Block 1734, Lot 61 (819 Bedford Ave.) and Lot 62 (817 Bedford Ave).

The site has an environmental E-Designation (E-102) for hazardous materials resulting from a City Environmental Quality Review (CEQR) effective 9 May 2001 (CEQR # 00DCP015K) for the Flushing Bedford Rezoning Action.

The site is bounded to the north by a multi-story residential building; to the east by multi-story residential buildings; to the south by a multi-story mixed residential and commercial building; and to the west by Bedford Avenue followed by a vacant construction site, multi-story residential buildings, and a fire station.

Site Features

Lot 62 is a rectangular-shaped lot and contains a vacant one-story building that was previously utilized as an auto garage and includes a partial cellar that extends about 12 feet below grade surface (ft bgs) in the northwest corner of the lot along Bedford Avenue. The partial cellar houses the natural gas meter for the building and was formerly used as a workshop and office space.

Lot 61 is a rectangular-shaped lot and contains a vacant two-story mixed-use commercial and residential building along Bedford Avenue (western portion of lot) with a rear yard that is covered by vegetation (eastern portion of the lot).

Current Zoning and Land Use

According to the New York City Planning Commission Zoning Map, the site is zoned M1-2/R6A zone, which allows for light manufacturing, commercial, and residential uses. The site is located within an urban area characterized by multi-story residential and commercial buildings.

Past Site Use

817 Bedford Avenue (Lot 62) was developed as early as 1897 and utilized for residential purposes through the mid- 1940s. By 1948, the lot was redeveloped with the existing commercial use structure. Historic commercial uses at 817 Bedford Avenue include Belmar Sales Co, wholesale grocers (late 1940s), Surplus Paper Stock Co (early 1970s to mid-1980), and most recently Putnam Auto Repairs (early 1990s to 2021). The lot has been vacant since June 2022.

819 Bedford Avenue (Lot 61) was developed as early as 1887 with two low-rise commercial structures. Historic commercial uses at 819 Bedford Avenue include an auto top wind shield factory named Progress Auto Wrecking Co (late 1920s to early 1960s), a sign company, Kilroy for Signs Inc. and Kilroy Truck Lettering & Spraying (mid-1960s to early 1970s), a warehouse (mid- to late 1970s), an art studio and storage space with residential use on the second floor (early 1880s to 2022).

Site Geology and Hydrogeology

Material generally underlying the site is urban fill consisting of coarse to fine sand with silt and varying amounts of gravel, concrete, brick, and coal ash. The fill layer was observed from surface to depths of 5 to 14 ft below ground surface (bgs) in each soil boring. The fill interval is underlain by a native layer consisting of fine sand with varying amounts of silt, medium sand, and fine gravel.

The topography of the Site is generally flat and the ground level elevation on the site is approximately 30 feet above mean sea level (amsl). Groundwater was encountered at depths between 27.23 to 28.64 feet bgs, and groundwater beneath the site generally flows to the northeast.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC 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 that restrict 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 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 Applicants under the Brownfield Cleanup Agreement is are Volunteers. The Applicants do not have an obligation to address off-site contamination. However, NYSDEC 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. NYSDEC 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(b)fluoranthene	mercury
benzo(a)anthracene	cadmium
benzo(k)fluoranthene	tetrachloroethene (PCE)
chrysene	benzo(a)pyrene
indeno(1,2,3-cd)pyrene	dibenz[a,h]anthracene
lead	

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.

There were no IRMs performed at this site during the RI.

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 analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the Site include SVOCs (specifically polyaromatic hydrocarbons [PAHs]), arsenic, lead, mercury, cadmium, and tetrachloroethene (PCE).

Soil

Soil analytical results were compared to NYSDEC Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted-Residential Use Soil Cleanup Objectives (RRSCOs) and the Protection of Groundwater Soil Cleanup Objectives (PGWSCO).

PAHs, including benzo(a)anthracene at a maximum concentration of 15 parts per million (ppm) (RRSCO 1 ppm), benzo(a)pyrene at a maximum concentration of 12 ppm (RRSCO 1 ppm), benzo(b)fluoranthene at a maximum concentration of 16 ppm (RRSCO 1 ppm), benzo(k)fluoranthene at a maximum concentration of 4.8 ppm (PGWSCO 1.7 ppm), chrysene at a maximum concentration of 14 ppm (PGWSCO 1 ppm), dibenzo(a,h)anthracene at a maximum concentration of 1.5 ppm (RRSCO 0.33 ppm), and indeno(1,2,3-cd)pyrene at a maximum concentration of 5.9 ppm (RRSCO 0.5 ppm), are found on the eastern portion of the Site in soils from surface grade to a maximum depth of 14 ft bgs. Metals, including arsenic at a maximum concentration of 125 ppm (PGWSCO and RRSCO 16 ppm), lead at a maximum concentration of 30,800 ppm (RRSCO 400 ppm), mercury at a maximum concentration of 14.4 ppm (PGWSCO 0.73 ppm), and cadmium at a maximum concentration of 6.48 ppm (RRSCO 4.3 ppm), are found across the Site in soils from surface grade to a maximum depth of 14 ft bgs. No VOCs, PCBs, pesticides, or PFAS were found at concentrations exceeding RRSCOs in soil samples collected from the Site. PFAS were found at concentrations exceeding PGWSCOs in two soil samples collected from the Site. Elevated concentrations of PAHs and metals in Site soils are attributed to historic fill material. Data does not indicate any off-site impacts in soil related to this site.

Groundwater

Groundwater analytical results were compared to 6NYCRR Part 703.5 NYSDEC Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards (AWQSs).

PCE was found in groundwater across the site, with a maximum concentration of 92 parts per billion (ppb) (AWQS 5 ppb). PAHs such as benzo(a)anthracene at a maximum concentration of 0.9 ppb (AWQS 0.002 ppb), benzo(a)pyrene at a maximum concentration of 0.1 ppb (AWQS 0.002 ppb), benzo(b)fluoranthene at a maximum concentration of 0.12 ppb (AWQS 0.002 ppb), benzo(k)fluoranthene at a maximum concentration of 0.4 ppb (AWQS 0.002 ppb), chrysene at a maximum concentration of 0.06 ppb (AWQS 0.002 ppb), and indeno(1,2,3-cd)pyrene at a maximum concentration of 0.07 ppb (AWQS 0.002 ppb) were found in groundwater across the Site slightly exceeding groundwater standards. Metals including arsenic at a maximum concentration of 99.34 ppb (AWQS 25 ppb), lead at a maximum concentration of 458.2 ppb (AWQS 25 ppb), and mercury at a maximum concentration of 0.83 ppb (AWQS 0.7 ppb) were also found in groundwater. PFAS compounds, such as PFOS at a maximum concentration of 28 parts per trillion (ppt) (Guidance Value [GV] 2.7 ppt) and PFOA at a maximum concentration of 83.9 ppt (GV 6.7 ppt) were found in groundwater across the site. No PCBs or pesticides were detected at concentrations exceeding pertinent groundwater standards in groundwater samples collected from the site. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor

VOCs were found in soil vapor across the Site. PCE was detected in all soil vapor samples collected, at concentrations between 1.45 and 80 micrograms per cubic meter. Trichloroethene, a breakdown product of PCE, was detected in vapor samples collected from the western portion of the Site at concentrations between 1.84 and 19.9 micrograms per cubic meter. 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*.

Since the site is fenced and covered by asphalt or concrete, 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 this 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 there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. In addition, environmental sampling indicates soil vapor intrusion from site contamination 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.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated 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 Track 2: Restricted use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Track 2 Soil Removal 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at

a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise(TM) (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site buildings will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy. Approximately 1,200 cubic yards of contaminated soil will be removed from the site.

Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, 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.

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete any required backfilling of the excavation and establish the designed grades at the site.

3. Institutional Controls

The remedy will achieve a Track 2 restricted residential cleanup at a minimum.

Imposition of an institutional control 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 NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

4. Site Management Plan

A Site Management Plan is required, 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:

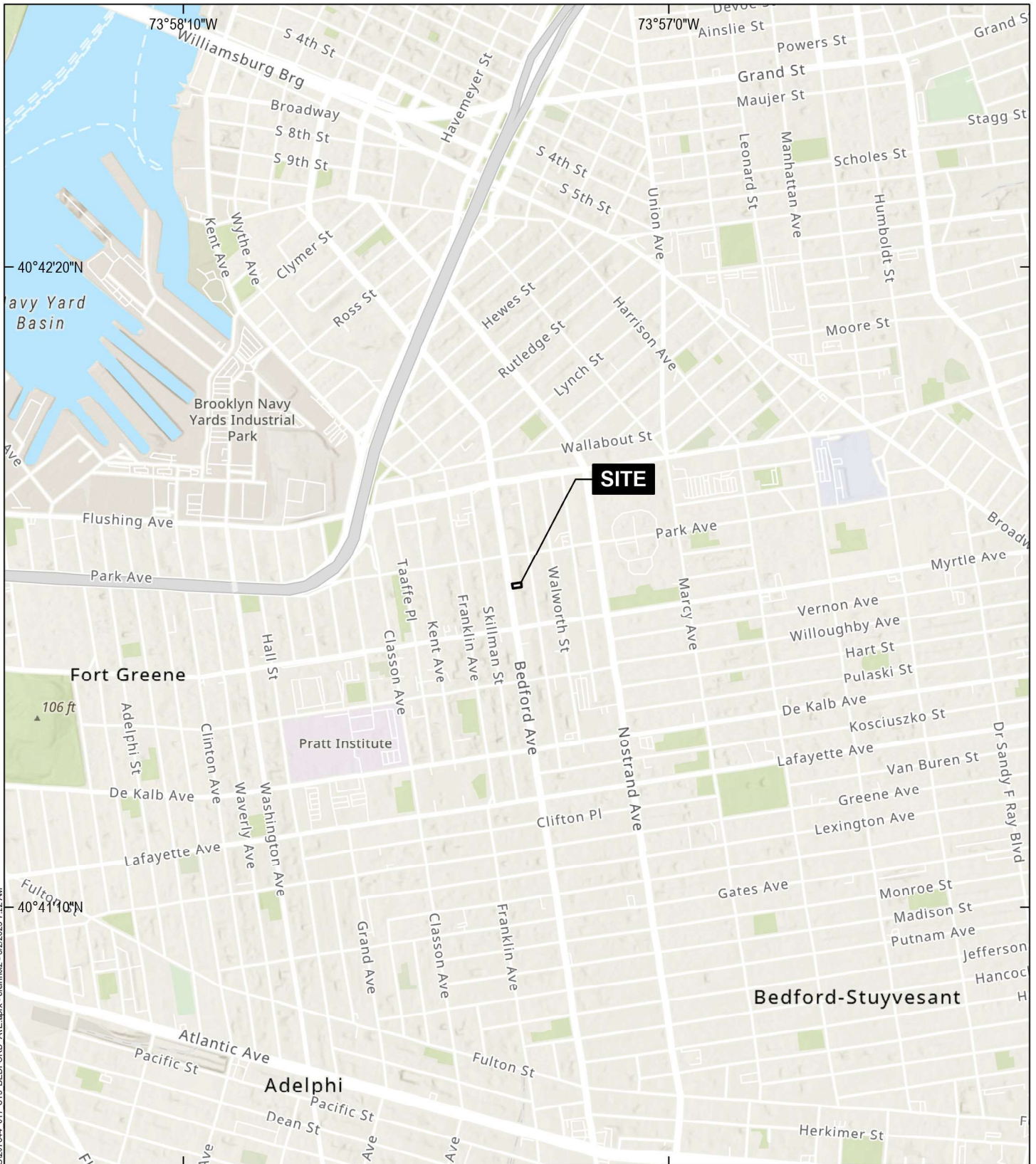
Institutional Controls: The Environmental Easement discussed in Remedy Element 3 above.

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 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;
- maintaining site access controls and NYSDEC 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; and
- a schedule of monitoring and frequency of submittals to the NYSDEC.



GIS: \\haleyaldrich.com\share\GIS\Projects\0207044\GIS\207044_817_819_BEDFORD_AVE.aprx - c:\haley - 5/2/2023 7:22 AM



MAP SOURCE: ESRI
SITE COORDINATES: 40°41'45"N, 73°57'22"W

**HALEY
ALDRICH**

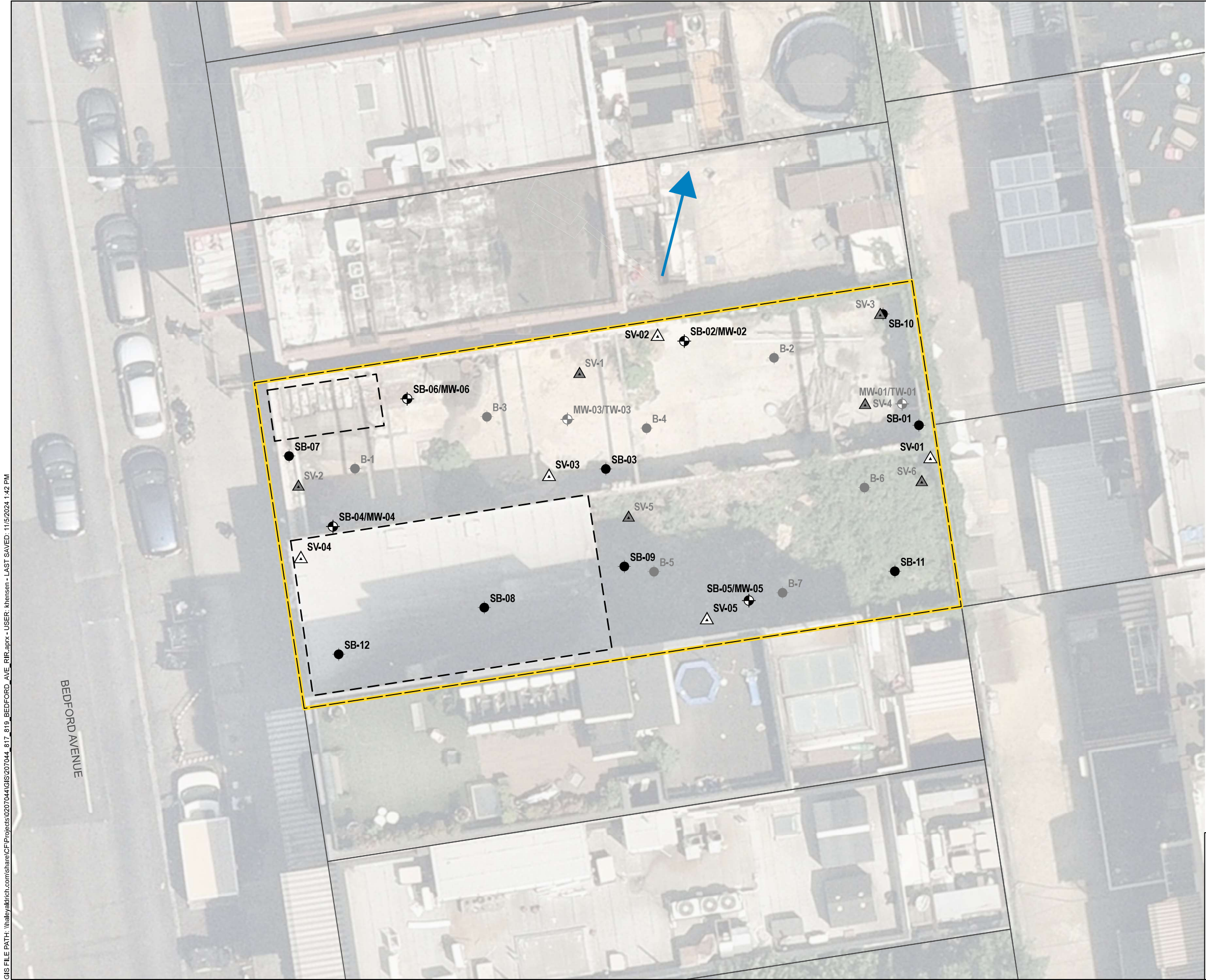
817-819 BEDFORD AVENUE
BROOKLYN, NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
MAY 2023

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0207044\GIS\207044_817_819_BEDFORD_AVE_RIR.aprx - USER: khensen - LAST SAVED: 11/5/2024 1:42 PM



LEGEND

2024 REMEDIAL INVESTIGATION EXPLORATION

- SOIL BORING
- ⊕ SOIL BORING/MONITORING WELL
- △ SOIL VAPOR POINT

2022/2023 LIMITED PHASE II INVESTIGATION EXPLORATION

- SOIL BORING
- ⊕ SOIL BORING/MONITORING WELL
- △ SOIL VAPOR POINT

← APPROXIMATE GROUNDWATER FLOW DIRECTION

--- CELLAR

--- SITE BOUNDARY

--- PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GREY MONITORING WELLS WERE INSTALLED/SAMPLED DURING 2022/2023 LIMITED PHASE II INVESTIGATION, THEN SAMPLED AGAIN DURING THE 2024 REMEDIAL INVESTIGATION.
3. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING
4. AERIAL IMAGERY SOURCE: NEARMAP, 28 MAY 2023



0 15 30
SCALE IN FEET

**HALEY
ALDRICH**

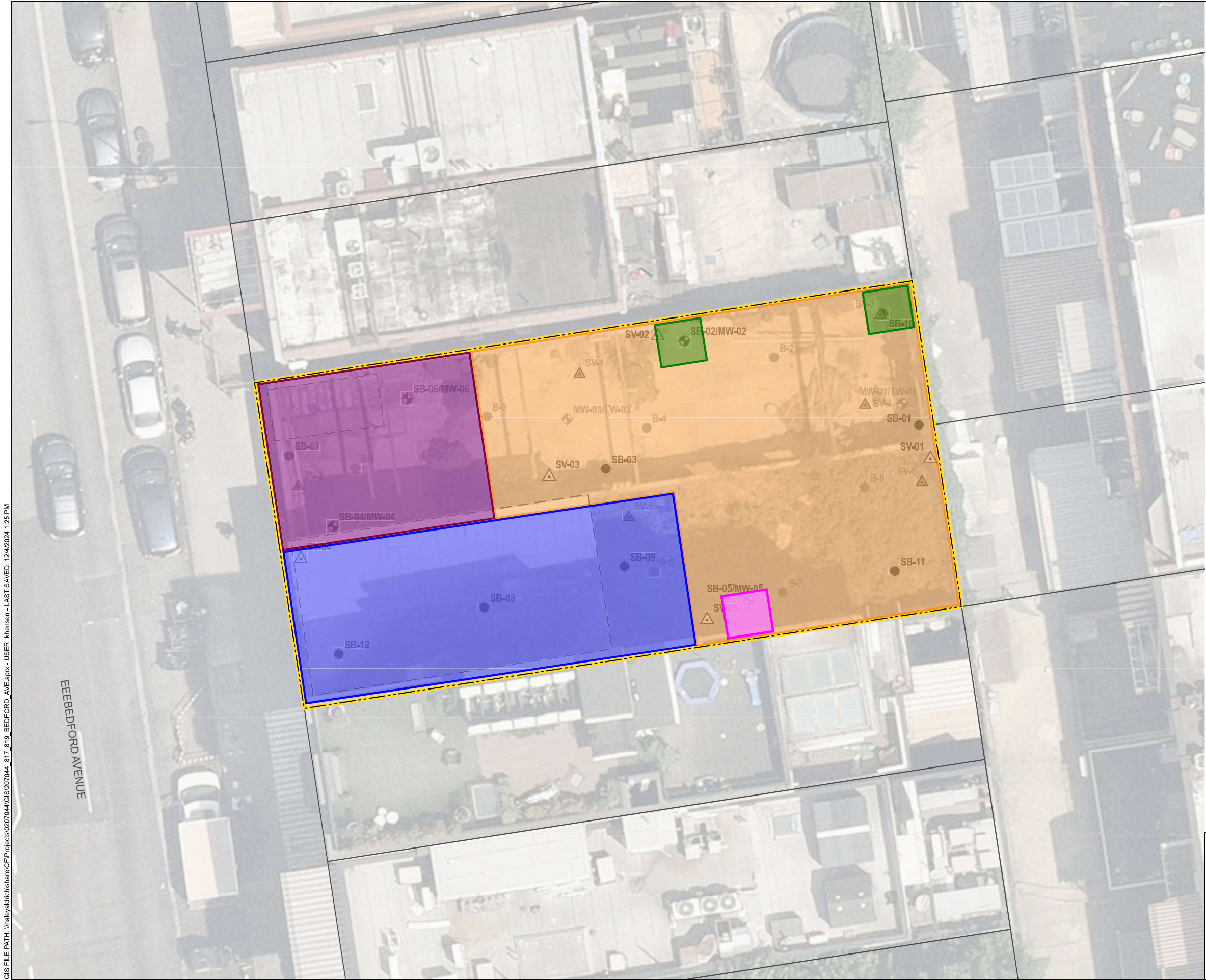
817-819 BEDFORD AVENUE
BROOKLYN, NEW YORK

SAMPLE LOCATION MAP








NOVEMBER 2024

FIGURE 3

GIS FILE PATH: \\waleyaldrich\share\CF\Projects\020704\GIS\020704_817_819_BEDFORD_AVE.aprx - USER: khensen - LAST SAVED: 12/4/2024 1:25 PM

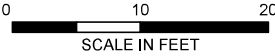


LEGEND

-  SITE BOUNDARY
-  PARCEL BOUNDARY
-  REMEDIAL EXCAVATION TO 2 FT BSG
-  REMEDIAL EXCAVATION TO 10 FT BSG
-  REMEDIAL EXCAVATION TO 14 FT BSG
-  5-FT BY 5-FT HOTSPOT EXCAVATION TO 12 FT BSG
-  5-FT BY 5-FT HOTSPOT EXCAVATION TO 14 FT BSG

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING
3. AERIAL IMAGERY SOURCE: NEARMAP, 18 JUNE 2024
4. FT BSG - FEET BELOW SIDEWALK GRADE



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ALTERNATIVE II -
EXCAVATION PLAN

DECEMBER 2024