

# DECISION DOCUMENT

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1510 Broadway Dry Cleaner Site  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224280  
January 2021



**Department of  
Environmental  
Conservation**

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

# DECLARATION STATEMENT - DECISION DOCUMENT

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1510 Broadway Dry Cleaner Site  
Brownfield Cleanup Program  
Brooklyn, Kings County  
Site No. C224280  
January 2021

## **Statement of Purpose and Basis**

This document presents the remedy for the 1510 Broadway Dry Cleaner 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 1510 Broadway Dry Cleaner 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;
- 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 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 which exceed unrestricted SCOs, as defined by 6 NYCRR 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 20,000 cubic yards of contaminated soil will be removed from depths ranging from 15 feet below ground surface (bgs) to 20.5 feet bgs at the site.

## **3. Backfill**

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

## **4. In-Situ Chemical Reduction**

In-situ chemical reduction will be implemented to treat VOCs in groundwater. Zero-valent iron will be injected into the subsurface to form a vertical permeable reactive barrier (PRB) along the upgradient and downgradient boundaries of the site to destroy contaminants entering or leaving the site. The method and depth of injection will be determined during the remedial design.

Monitoring of VOCs will be required and conducted upgradient of the PRB located at the downgradient boundary of the site, and downgradient of the PRB located at the upgradient boundary of the site.

## **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**

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

### **Conditional Track 1**

The intent of the remedy is to achieve a Track 1 unrestricted use therefore, no environmental

easement or site management is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report (FER), then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement action as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion (COC).

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup.

### ***Contingent Remedial Elements***

#### **7. Institutional Control**

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 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 NYCDOH; and
- require compliance with the Department-approved Site Management Plan.

#### **8. 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 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 7 above.

This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use and 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

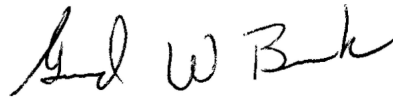


- controls;
  - maintaining site access controls and Department notification; and
  - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
  - a schedule of monitoring and frequency of submittals to the Department;
  - monitoring of 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.

January 26, 2021



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Date

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Gerard Burke, Director  
Remedial Bureau B

# DECISION DOCUMENT

1510 Broadway Dry Cleaner Site  
Brooklyn, Kings County  
Site No. C224280  
January 2021

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## **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:

DECInfo Locator - Web Application  
<https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224280>

Brooklyn Community Board 16  
444 Thomas Boyland Street Rm 103  
Brooklyn, NY 11212  
Phone: (718) 385-0323

Brooklyn Public Library  
10 Grand Army Plaza  
Brooklyn, NY 11238  
Phone: (718) 230-2100

### **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**

Site Location: The site is located at 1510 Broadway in the Bedford-Stuyvesant/Brownsville section of Brooklyn in a residential and commercial area. The 0.46-acre site is irregularly shaped and is bordered on west by Saratoga Avenue, on the south by Hancock Street, on the north by Jefferson Avenue, and on the northeast by Broadway. There is also a two-story building bordering the southwest portion of the site.

Site Features: Currently, the site is vacant, enclosed by construction fencing and covered by gravel, dirt and overgrown vegetation. An elevated subway is located above Broadway and the MTA Halsey Street Station is adjacent to site.

Current Zoning and Land Use: The site is currently zoned residential (R6) with a commercial overlay (C1-3) and is in the process of being re-zoned to R7-1 (Mandatory Inclusionary Housing) with C2-4 overlay. Adjacent land uses are a transit system substation to the northeast; commercial uses to the east; a vacant building followed by a medical center and residences to the south; and a brick building followed by residences to the west. The surrounding area is predominantly residential and commercial, with some institutional uses.

Past Uses of the Site: Sanborn maps indicated the property was developed with four three-story buildings used as offices and storefronts by 1888. Nine additional four-story commercial buildings were developed by 1908, and by 1932, two additional buildings occupied the site. Past uses include a dry cleaner, a cleaning and dyeing facility, a paint and oils store, a dress house/dress manufacturer, a printer, and a watch and jewelry repair shop, and various office, manufacturing and commercial uses. Industrial, automotive, and dry-cleaning uses were also noted in the surrounding area.

Site Geology and Hydrogeology: Subsurface soil at the site consists of historic fill material from the surface to a depth of 5 to 21 feet below ground surface (bgs). The fill is underlain by native sand with various amounts of silt and gravel. Bedrock was not encountered and is expected to be 300 to 500 feet bgs based on surrounding geology. The site elevation is approximately 40 feet

above mean sea level. The topography within the immediate area slopes down to the west.

Groundwater occurs beneath the site at a depth of approximately 36 feet bgs. Based on groundwater data collected at the site, groundwater generally flows in a southwesterly direction.

A site location map is attached as Figure 1 and a site plan is attached as Figure 2.

#### **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, an alternative that allows for unrestricted use of the site was evaluated.

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:

copper	4,4' - DDE
lead	4,4' - DDT
tetrachloroethene (PCE)	mercury
benzo(a)anthracene	nickel
benzo(a)pyrene	zinc
benzo(b)fluoranthene	dieldrin
benzo(k)fluoranthene	arsenic
chrysene	barium
dibenz[a,h]anthracene	cadmium
indeno(1,2,3-cd)pyrene	trichloroethene (TCE)
4,4' - DDD	chloroform

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.

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.

#### Nature and Extent of Contamination:

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, and polyfluoroalkylated substances (PFAS). Soil vapor was analyzed for VOCs. The primary contaminants are the VOC tetrachloroethylene (PCE) in groundwater; SVOCs and metals in soil; and the VOC trichloroethylene (TCE) in soil vapor.

Soil - Several SVOCs were detected in soil samples to a depth of 17 feet below ground surface (bgs) at levels above unrestricted use soil cleanup objectives (UUSCOs) include the following with their respective UUSCO noted in parentheses: benzo(a)anthracene up to 36 parts per million (ppm) (1.0 ppm), benzo(a)pyrene up to 28 ppm (1.0 ppm), benzo(b)fluoranthene up to 34 ppm (1.0 ppm), benzo(k)fluoranthene up to 12 ppm (0.8 ppm), chrysene up to 36 ppm (1 ppm), dibenzo(a,h)anthracene up to 4.3 ppm (0.33 ppm), and indeno(1,2,3-cd)pyrenes up to 15 ppm (0.5 ppm). Metals were detected to a depth of 17 feet bgs above UUSCOs and include the following, with their respective UUSCO noted in parentheses: arsenic up to 15.5 ppm, barium up to 2,540 ppm (350 ppm), cadmium up to 11.6 ppm (2.5 ppm), copper up to 38,200 ppm (50 ppm), lead up to 20,800 ppm (63 ppm), mercury up to 8.2 ppm (0.18 ppm), nickel up to 36.8 ppm (30 ppm), and zinc up to 4,310 ppm (109 ppm). Total PCBs were detected in three samples up to 0.5 ppm compared to its UUSCO of 0.1 ppm. Several pesticides were detected to a depth of 17.5 feet bgs above UUSCOs, with their respective UUSCO noted in parentheses: 4,4'-DDD up to 0.25 ppm (0.005 ppm), 4,4'-DDE up to 0.2 ppm (0.0033 ppm), and 4,4'-DDT up to 0.96 ppm (0.0033 ppm). VOCs were not detected above UUSCOs in soil. 1,4-dioxane was not detected in any of the soil samples collected.

Perfluorooctanesulfonic acid (PFOS) was measured in subsurface soil at concentrations ranging from 0.25 parts per billion (ppb) to 8.87 ppb. The guidance value for unrestricted use is 0.88 ppb.

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

Groundwater - Nine groundwater samples were collected on-site and three groundwater samples were collected off-site from beneath the adjacent sidewalk. The primary contaminant of concern in groundwater is the VOC, PCE which was found on-site in 6 wells up to 34 parts per billion

(ppb) and in all the off-site wells with a maximum of 60 ppb. The Class GA Ambient Water Quality Standard (AWQS) for PCE is 5 ppb. Chloroform, detected at a maximum concentration of 36 ppb (7 ppb standard), was an additional VOC detected above standards. The only dissolved metal detected above AWQS was sodium at a maximum concentration of 118,000 ppb, above its AWQS of 20,000 ppb. Sodium is a naturally occurring metal commonly found in groundwater.

For PFAS, perfluorooctanoic acid (PFOA) and PFOS were reported at concentrations of up to 102 and 76 parts per trillion (ppt), respectively, exceeding the Maximum Contaminant Level (drinking water standard) of 10 ppt in groundwater. However, PFAS were not identified as a contaminant of concern for this site because the groundwater detections were located in monitoring wells at the upgradient perimeter of the site. Additionally, there are no public water supply well within a half a mile and there is a municipal prohibition for use of groundwater at the site.

Soil Vapor - Twelve soil vapor samples were collected at 15 feet below the ground and analyzed. Several VOCs were detected in soil vapor samples throughout the site. The only notable detection was of trichloroethene (TCE) at 400 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) located in the middle of the site. Based on the available data, there is no indication that contaminated soil vapor is migrating from the 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 who enter the site may contact contaminants in the soil by walking on it, digging or otherwise disturbing the soil. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the subsurface may move into soil vapor (air spaces within the soil), which in turn 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 is currently vacant, soil vapor intrusion does not represent a current concern. Environmental sampling indicates that the potential exists for the inhalation of site contaminants due to soil vapor intrusion for future onsite buildings, however soil vapor intrusion in offsite structures is not a concern.

#### **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**

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

## **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 Conditional Track 1 remedy.

The selected remedy is referred to as the Excavation, Groundwater Treatment and Soil Vapor Intrusion Evaluation remedy.

The elements of the selected remedy, as shown in Figure 3, 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 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 which exceed unrestricted SCO, as defined by 6 NYCRR 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 20,000 cubic yards of contaminated soil will be removed from depths ranging from 15 feet below ground surface (bgs) to 20.5 feet bgs at the site.

## **3. Backfill**

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

## **4. In-Situ Chemical Reduction**

In-situ chemical reduction will be implemented to treat VOCs in groundwater. Zero-valent iron will be injected into the subsurface to form a vertical permeable reactive barrier (PRB) along the upgradient and downgradient boundaries of the site to destroy contaminants entering or leaving the site. The method and depth of injection will be determined during the remedial design.

Monitoring of VOCs will be required and conducted upgradient of the PRB located at the downgradient boundary of the site, and downgradient of the PRB located at the upgradient boundary of the site.

## **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**

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

### **Conditional Track 1**

The intent of the remedy is to achieve a Track 1 unrestricted use therefore, no environmental easement or site management is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report (FER), then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement action as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion (COC).

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup.

### ***Contingent Remedial Elements***

## **7. Institutional Control**

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 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 NYCDOH; and
- require compliance with the Department-approved Site Management Plan.

## **8. Site Management Plan**

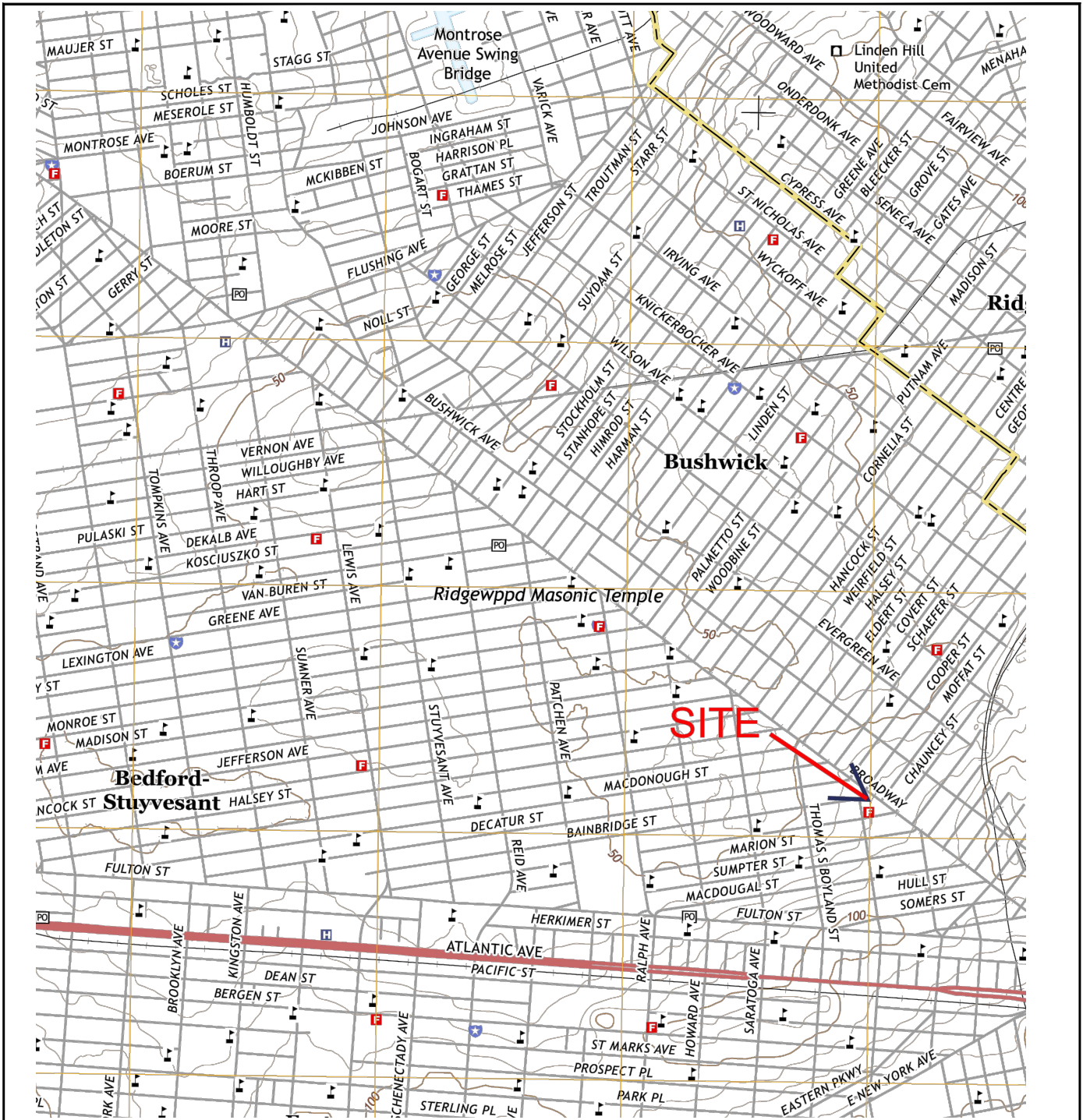
A Site Management Plan is required, which includes the following:

- a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details 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 7 above.

This plan includes, but may not be limited to:

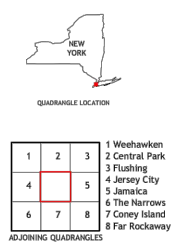
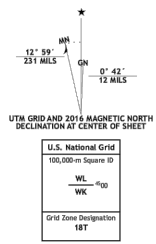
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
  - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address 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. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
  - a schedule of monitoring and frequency of submittals to the Department;
  - monitoring of vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



Produced by the United States Geological Survey  
 North American Datum of 1983 (NAD83)  
 World Geodetic System of 1984 (WGS84). Projection and  
 1 000-meter grid: Universal Transverse Mercator, Zone 18T  
 10 000-foot ticks: New York Coordinate System of 1983 (long  
 island zone)

This map is not a legal document. Boundaries may be  
 generalized for this map scale. Private lands within government  
 reservations may not be shown. Obtain permission before  
 entering private lands.

Imagery.....NAIP, June 2013  
 Roads.....U.S. Census Bureau, 2015 2016  
 Names.....GNIS, 2016  
 Hydrography.....National Hydrography Dataset, 2013  
 Contours.....National Elevation Dataset, 2015  
 Boundaries.....Multiple sources; see metadata file 1972 - 2016  
 Wetlands.....FWS National Wetlands Inventory 1977 - 2014



BROOKLYN, NY  
 2016

FIG-1

1510 BROADWAY  
 DRY CLEANERS SITE  
 BROOKLYN, NEW YORK

SITE LOCATION MAP

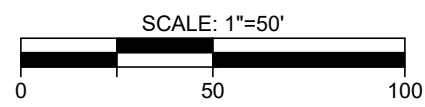
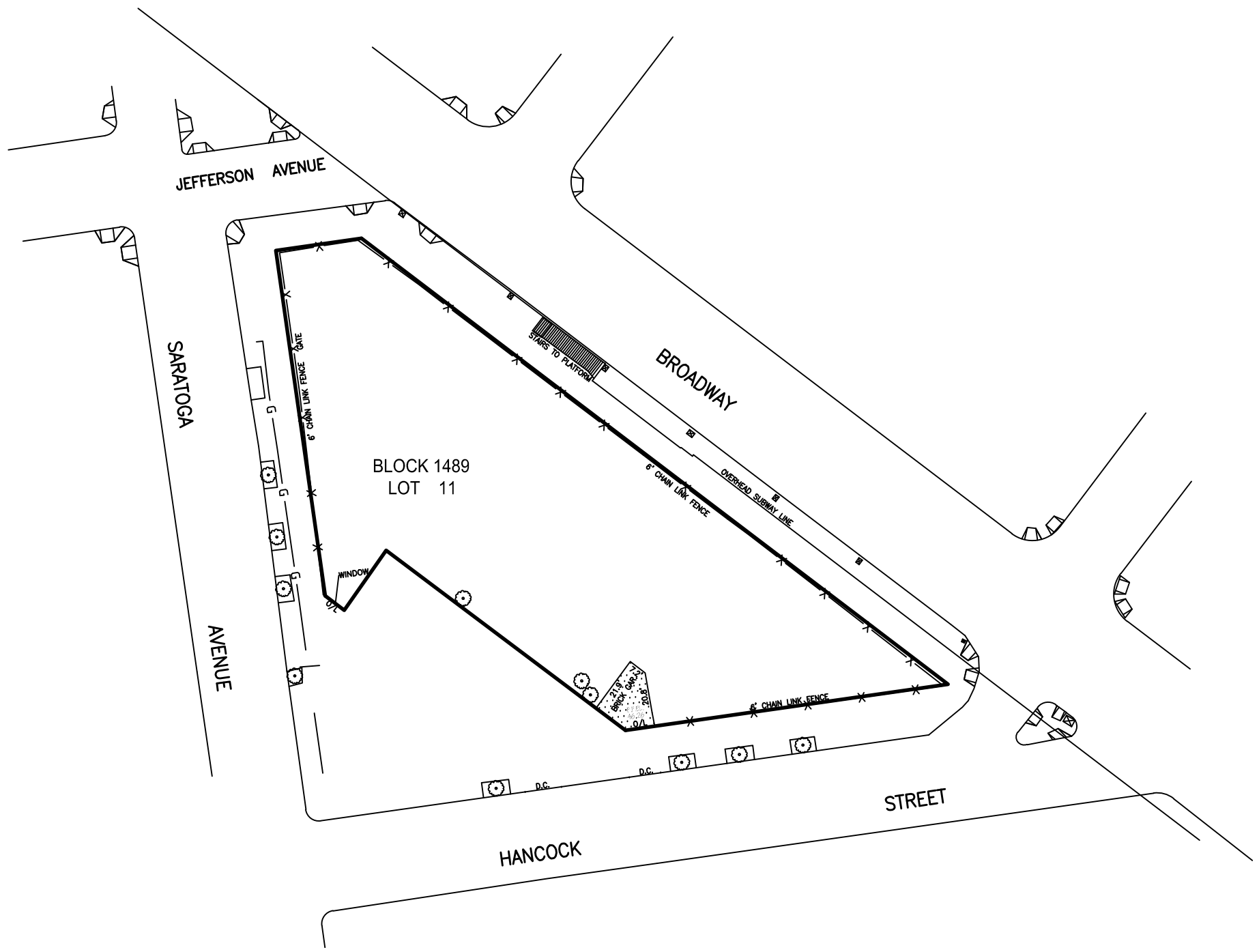
**SESI**  
 CONSULTING  
 ENGINEERS D.P.C.

SOILS / FOUNDATIONS  
 SITE DESIGN  
 ENVIRONMENTAL

12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

DRAWN BY: yy
CHECKED BY: SG
SCALE: N.T.S.
DATE: 11/10/2020
JOB NO.: 9753

N:\ACAD\9753\DD\9753 - FIG-2 - SITE PLAN.DWG 11/10/20 09:31:02AM, aas, LAYOUT: FIG-2



**LEGEND**

————— PROJECT SITE BOUNDARY

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dwg by: yy  
chk by: FD  
scale: 1" = 50'  
date: 11/10/2020

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SOILS / FOUNDATIONS  
SITE DESIGN  
ENVIRONMENTAL

12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

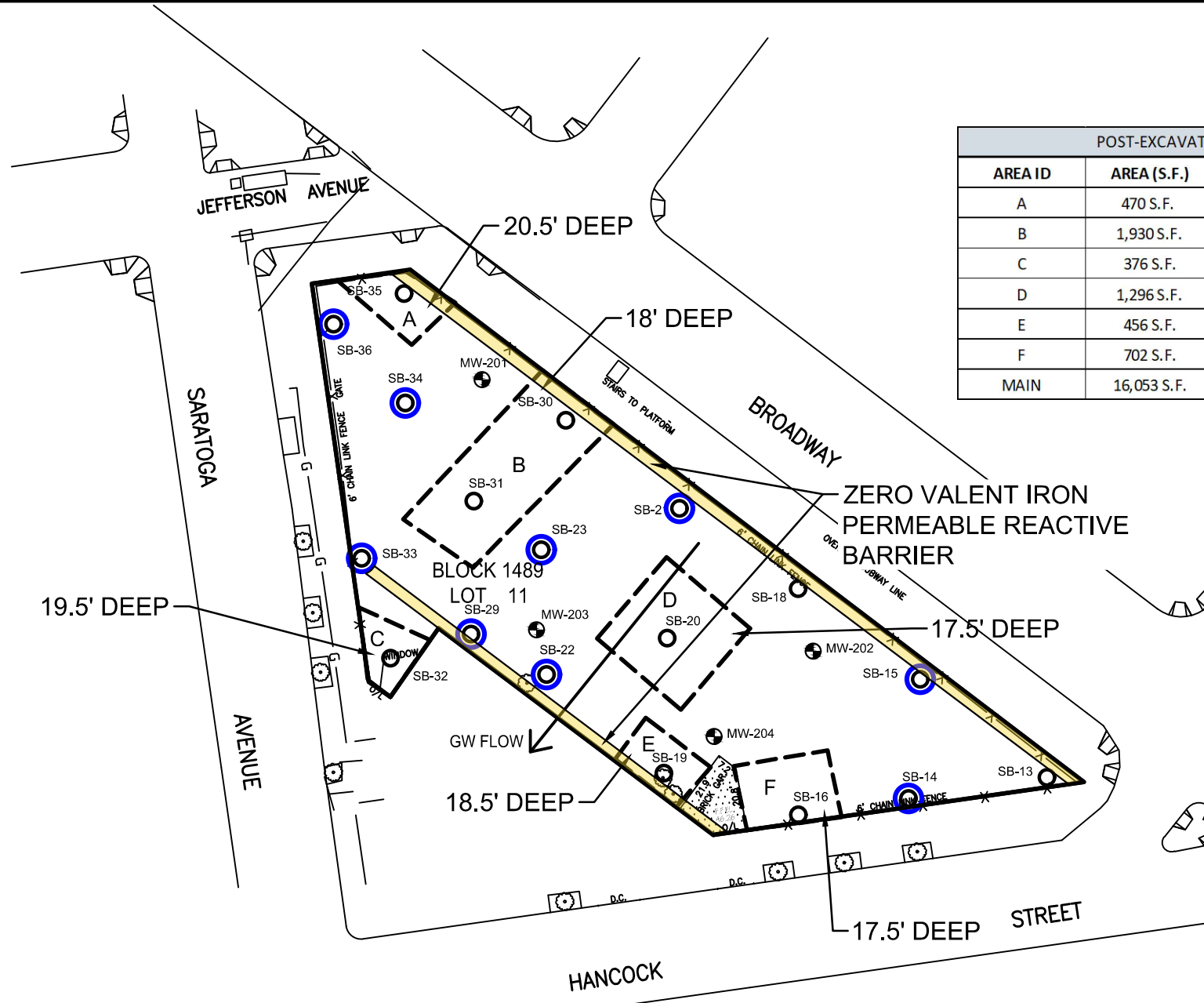
project: 1510 BROADWAY  
DRY CLEANERS SITE  
BROOKLYN, NEW YORK

drawing title: **SITE PLAN**

job no: 9753  
drawing no:

**FIG-2**

N:\ACAD\9753\DD\9753 - FIG-3 - REMEDIATION & EXCAVATION PLAN.DWG 11/10/20 09:38:09AM, aas, LAYOUT:FIG-3



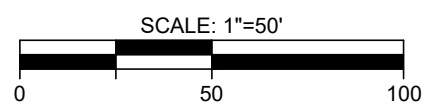
POST-EXCAVATION CONFIRMATIONS SAMPLES			
AREA ID	AREA (S.F.)	BOTTOM SAMPLES	SIDEWALL SAMPLES
A	470 S.F.	1	2
B	1,930 S.F.	3	5
C	376 S.F.	1	1
D	1,296 S.F.	2	4
E	456 S.F.	1	3
F	702 S.F.	1	3
MAIN	16,053 S.F.	17	N/A

**LEGEND**

- PROJECT SITE BOUNDARY
- SB-36 SOIL BORING LOCATION
- x — x — FENCE
- VERTICAL DELINEATION ACHIEVED  
SAMPLE DEPTHS PROVIDED IN TABLE 1 AND TABLE 2A - TABLE 2F
- - - EXCAVATION AREAS
- MW-204 ● PROPOSED POST-REMEDIATION MONITORING WELL
- ZERO VALENT IRON PERMEABLE REACTIVE BARRIER

**NOTE:**  
SITE WIDE EXCAVATION SHALL BE TO 15' BELOW GROUND SURFACE

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dwg by: yy  
chk by: FD  
scale: AS NOTED  
date: 11/10/2020

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job no: 9753  
drawing no:

**FIG-3**