DECISION DOCUMENT

Rogers Snyder Brownfield Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224374
Sepetember 2023

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Statement of Purpose and Basis

This document presents the remedy for the Rogers Snyder Brownfield 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 Rogers Snyder Brownfield Site and the public's input to the proposed remedy presented by the 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™ (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

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 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 depths 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 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.

Approximately 4,770 cubic yards of contaminated soil will be removed from the site for remediation. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

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 replace the excavated soil and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

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

5. Local Institutional Controls

If no Environmental Easement (EE) or Site Management Plan (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 SVI evaluation is not completed prior to completion of the Final Engineering Report (FER), then a SMP and 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 five years of the date of the Certificate of Completion (COC).

In the event that Track 1 unrestricted use is not achieved, including achievement of soil and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 4 restricted residential cleanup.

Contingent Remedial Elements

6. Cover System

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

7. Institutional Controls

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.

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 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 5 above.
- Engineering Controls: The Cover System discussed in Paragraph 6.

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;
- 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- 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:

- a schedule of monitoring and frequency of submittals to the NYSDEC; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

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

September 6, 2023

Date

Jane H. O'Connell
Regional Remediation Engineer, Region 2

DECISION DOCUMENT

Rogers Snyder Brownfield Site
Brooklyn, Kings County
Site No. C224374
September 2023

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.

The 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

The 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 the 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=C224374

Brooklyn Public Library Flatbush Branch
22 Linden Boulevard
Brooklyn, NY 11226
Phone: (718) 856-0813

Brooklyn Community Board 17
4112 Farragut Road
Brooklyn, NY 11210
Phone: (718) 434-3461

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 Rogers Snyder Brownfield Site is located at 858-880 Rogers Avenue and 2605 Snyder Avenue in the Flatbush section of Brooklyn encompassing Lots 88, 97 and 101. The site is bounded to the north by Erasmus Street, to the east by Rogers Avenue, to the south by Snyder Avenue, and to the west by Veronica Place and a commercial building.

Site Features: The 0.325-acre fenced-in site is currently vacant.

Current Zoning and Land Use: The site is zoned as R6 residential with a C2-3 commercial overlay. The surrounding properties are primarily commercial, with some residential housing to the west.

Past Use of the Site: The site was first developed as early as the late 1800s with two-story residential and commercial storefronts through 2007. The central portion of the site was occupied by an auto garage from 1951 until the 1980s. The southern portion of the site was used as an automotive paint shop from approximately 1928 to 1951, by a machine shop from 1951 to 1988, and by an automotive repair shop from 1988 until approximately 2007.

Site Geology and Hydrogeology: The site stratigraphy from the surface down consists of historic fill generally made up of brown to dark brown fine to medium sand and silty sand with gravel and fragments of concrete, brick, glass, and ceramic to depths of approximately 10 feet below grade (ft bg). The fill layer is underlain by a potentially native layer consisting of fine to medium sand with varying amounts of fine and coarse gravels and cobbles. The native interval was observed up to the terminal depth of soil borings ranging from 15 to 50 ft bg. The depth to bedrock is estimated at greater than 100 ft bg.

Groundwater was encountered at depths ranging from approximately 39 to 41 ft bg, with the shallowest groundwater elevations observed in the northern region of the site and the deepest in the southwestern region. Groundwater is inferred to flow from the north to the south-southwest.

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 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, an alternative that restricts 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 under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the 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. The 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 contaminants of concern identified at this site are:

benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
chrysene
indeno(1,2,3-cd)pyrene
dieldrin
lead
mercury
copper
nickel
zinc
tetrachloroethene (PCE)
trichloroethene (TCE)

The contaminants 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.

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, per- and polyfluoroalkyl substances (PFAS), and 1,4-dioxane. Soil vapor was analyzed for VOCs. The primary contaminants of concern at the site include SVOCs, metals, and pesticides in soil, SVOCs in groundwater and chlorinated VOCs in soil vapor.

Soil
Exceedances of the unrestricted use soil cleanup objectives (UUSCOs) were primarily found in the historic fill layer which extends to approximately 10 feet below grade (ft bg). In general, the highest concentrations were detected in the upper 2 feet of site soils with some deeper exceedances extending up to 14 ft bg.

A single VOC acetone, which is a common laboratory contaminant, was detected at concentrations up to 2.4 parts per million (ppm) compared to the UUSCO of 0.05 ppm.

Several SVOCs were detected at concentrations exceeding their respective UUSCOs including: benzo(a)anthracene up to 26 ppm (UUSCO of 1 ppm), benzo(a)pyrene up to 28 ppm (UUSCO of 1 ppm), benzo(b)fluoranthene up to 33 ppm (UUSCO of 1 ppm), benzo(k)fluoranthene up to 11 ppm (UUSCO of 0.8 ppm), chrysene up to 25 ppm (UUSCO of 1 ppm), dibenz(a,h)anthracene up to 3.3 ppm (UUSCO of 0.33 ppm), and indeno(1,2,3-c,d)pyrene up to 18 ppm (UUSCO of 0.5 ppm).

Metals detected at concentrations exceeding their respective UUSCOs include arsenic up to 14.2 ppm (UUSCO of 13 ppm), barium up to 373 ppm (UUSCO of 350 ppm), cadmium up to 4.18 ppm (UUSCO of 2.5 ppm), copper up to 886 ppm (UUSCO of 50 ppm), lead up to 1,150 ppm (UUSCO of 63 ppm), mercury up to 2.6 ppm (UUSCO of 0.18 ppm), nickel up to 33.3 ppm (UUSCO of 30 ppm), and zinc up to 2,530 ppm (UUSCO of 109 ppm).

Pesticides detected at concentrations exceeding their respective UUSCOs include 4,4'-DDD up to 0.171 ppm (UUSCO of 0.0033 ppm), 4,4'-DDE up to 0.139 ppm (UUSCO of 0.0033 ppm), 4,4'-DDT up to 0.167 ppm (UUSCO of 0.0033 ppm), aldrin up to 0.043 ppm (UUSCO of 0.005 ppm), dieldrin up to 0.647 ppm (UUSCO of 0.005 ppm), and endrin up to 0.0178 ppm (UUSCO of 0.014 ppm).

Total PCBs were detected at concentrations up to 0.293 ppm compared to the UUSCO of 0.1 ppm.

Perfluorooctanoic acid (PFOA) was detected at concentrations in soil up to 1.38 parts per billion (ppb), above its unrestricted use guidance value of 0.66 ppb, and perfluorooctanesulfonic acid (PFOS) was detected at concentrations up to 4.13 ppb (unrestricted use guidance value of 0.88 ppb). 1,4-Dioxane was not detected above the reporting limit in any of the soil samples.

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

Groundwater

The VOC chloroform was detected at concentrations up to 25 ppb compared to the Class GA Ambient Water Quality Standard and Guidance Value (AWQSGV) of 7 ppb. Chloroform is a byproduct of the drinking water chlorination process and can be found in groundwater due to leaking water or sewer lines.

SVOCs detected in groundwater above AWQSGVs include benzo(a)anthracene up to 0.07 ppb (AWQS is 0.002 ppb), benzo(b)fluoranthene at 0.02 ppb (AWQS is 0.002 ppb), and chrysene at 0.02 ppb (AWQS is 0.002 ppb).

The pesticide dieldrin was detected at a maximum concentration of 0.044 ppb compared to the AWQS of 0.004 ppb.

PFAS detected at concentrations exceeding their respective AWQSGVs include PFOA up to 145 parts per trillion (ppt) (AWQGV is 6.7 ppt) and PFOS up to 31.8 ppt (AWQGV is 2.7 ppt). 1,4-Dioxane was not detected above the reporting limit in any of the groundwater samples.

Aside from naturally occurring minerals such as sodium and manganese, no dissolved metals were detected above their respective AWQS. No PCBs were detected above their AWQS.

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

Soil Vapor

Various chlorinated VOCs were detected in soil vapor including: tetrachloroethene (PCE) up to 326 micrograms per cubic meter (µg/m³), trichloroethene (TCE) up to 6.23 µg/m³, cis-1,2-dichloroethene up to 6.3 µg/m³, vinyl chloride up to 322 µg/m³, methylene chloride up to 2.41 µg/m³, and carbon tetrachloride up to 2.06 µg/m³.

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

6.4: Summary of Human Exposure Pathways

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

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.

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.

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 and Soil Vapor 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 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

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Approximately 4,770 cubic yards of contaminated soil will be removed from the site for remediation. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

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 replace the excavated soil and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

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

5. Local Institutional Controls

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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 SVI evaluation is not completed prior to completion of the Final Engineering Report (FER), then a SMP and 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 five years of the date of the Certificate of Completion (COC).

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Contingent Remedial Elements

6. Cover System

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7. Institutional Controls

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.

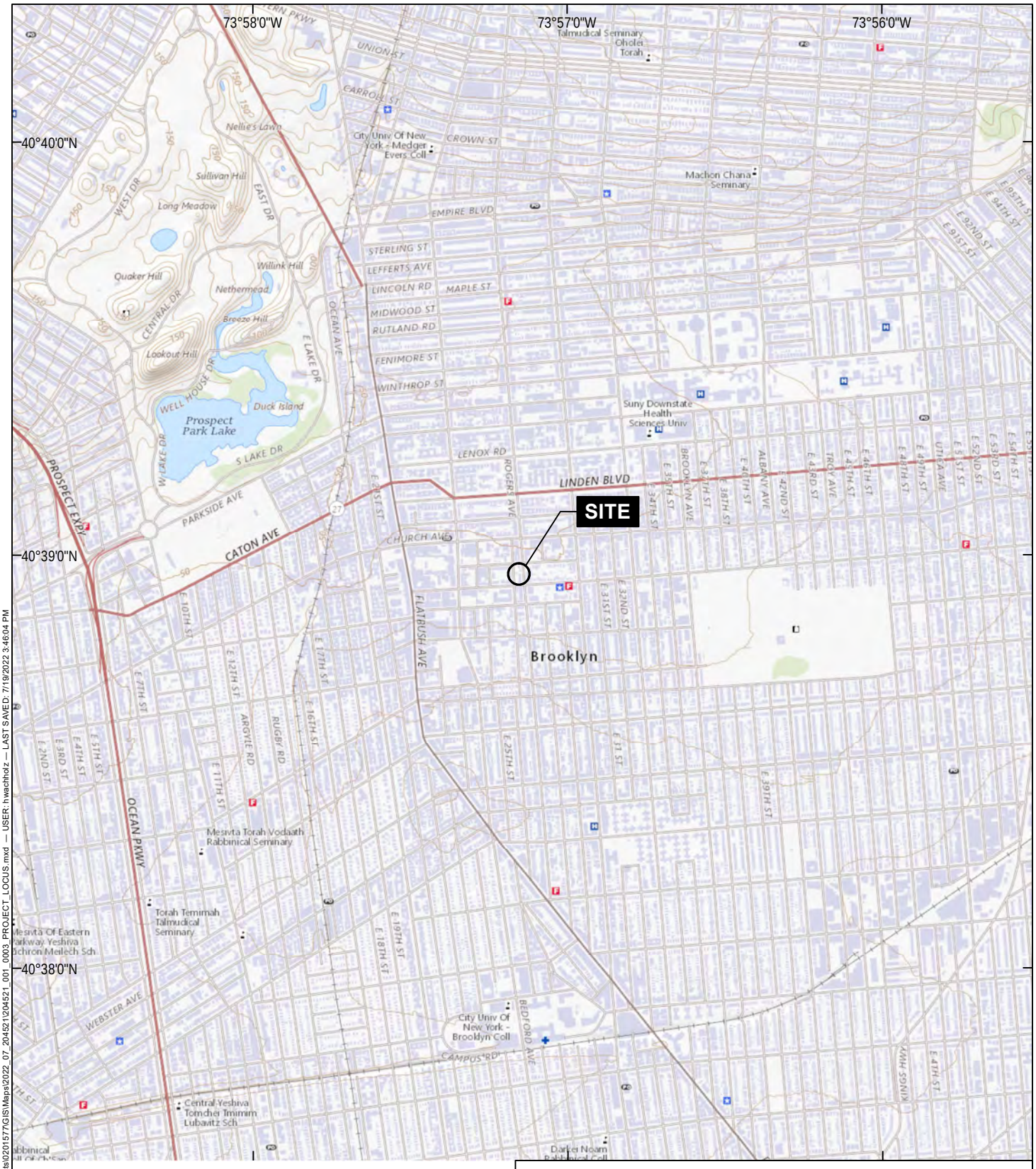
8. Site Management Plan

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 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 5 above.
   - Engineering Controls: The Cover System discussed in Paragraph 6.

   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;
   - 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;
   - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
   - provisions for the management and inspection of the identified engineering controls;
   - 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:
   - a schedule of monitoring and frequency of submittals to the NYSDEC; and
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



ROGERS SNYDER BROWNFIELD SITE
858 ROGERS AVENUE & 2605 SNYDER AVENUE
BROOKLYN, NY

PROJECT LOCUS

MAP SOURCE: USGS
SITE COORDINATES: 40°38'57"N, 73°57'09"W

APPROXIMATE SCALE: 1 IN = 2000 FT
MAY 2023

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0201577\GIS\Maps\2022_07_20\452\1204521_001_0003_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 7/19/2022 3:46:04 PM

LEGEND

PARCEL BOUNDARY

SITE BOUNDARY

NOTES

1. ASSESSOR PARCEL DATA SOURCE: KINGS COUNTY
2. AERIAL IMAGERY SOURCE: NEARMAP, 19 OCTOBER 2021

N

0 40 80

SCALE IN FEET

HALEY ALDRICH

ROGERS SNYDER BROWNFIELD SITE
858 ROGERS AVENUE & 2505 SNYDER AVENUE
BROOKLYN, NEW YORK

SITE MAP

MAY 2023

FIGURE 2

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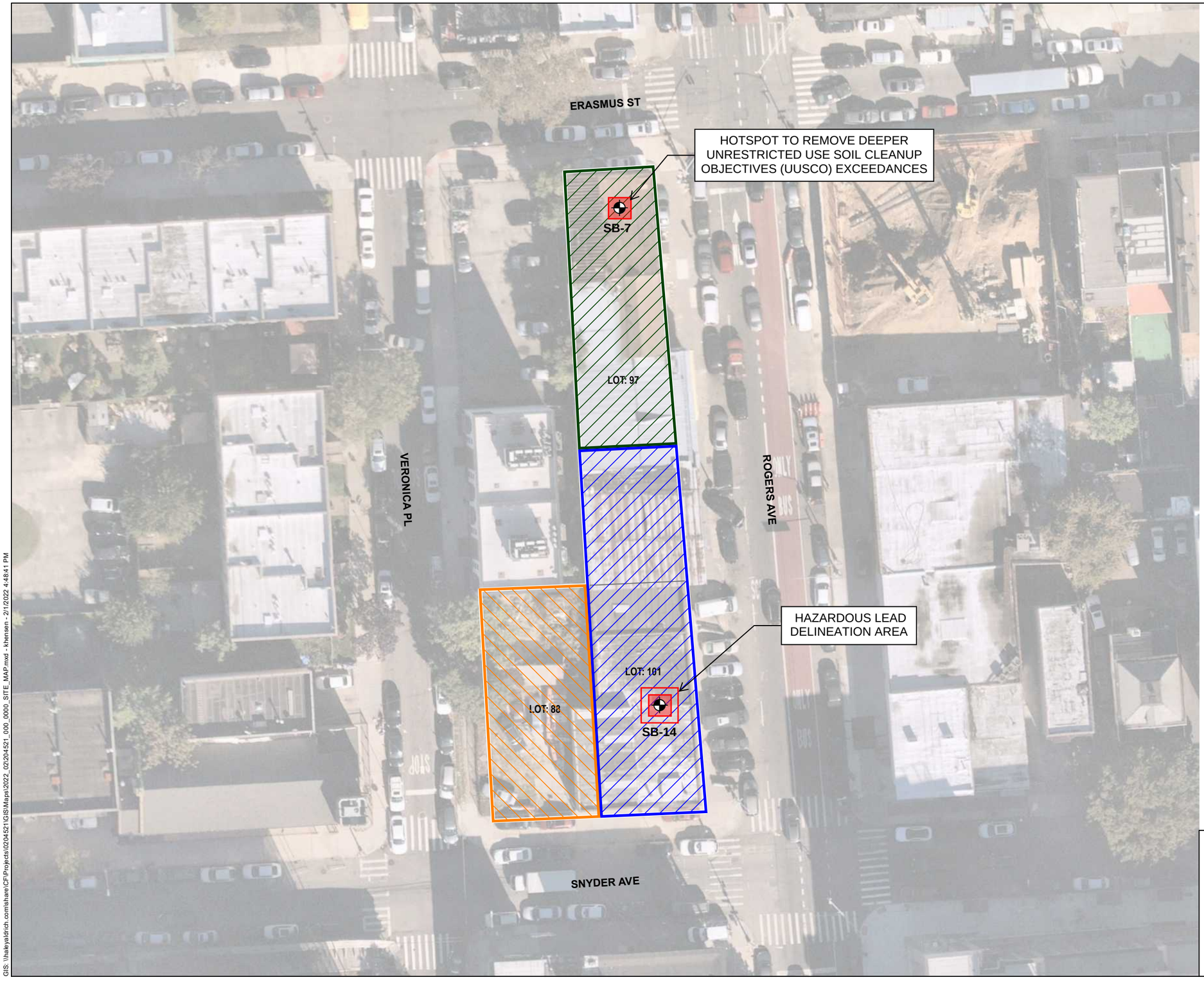

LEGEND

- PARCEL BOUNDARY
- SITE BOUNDARY

EXCAVATION DEPTHS BELOW GROUND SURFACE (BGS)

- 5 FEET
- 8 FEET
- 15 FEET
- EXCAVATION TO 15 FT BGS IN A 10 X 10 FT AREA CENTERED ON RI BORINGS LOCATIONS

NOTES

1. ASSESSOR PARCEL DATA SOURCE: KINGS COUNTY
2. AERIAL IMAGERY SOURCE: NEARMAP, 19 OCTOBER 2021

N

0 40 80

SCALE IN FEET

HALEY ALDRICH

ROGERS SNYDER BROWNFIELD SITE
858 ROGERS AVENUE & 2505 SNYDER AVENUE
BROOKLYN, NEW YORK

ALTERNATIVE I (TRACK 1) EXCAVATION PLAN

JULY 2023

FIGURE 3

GIS: \\haleyaldrich.com\share\CF\Projects\0204521\GIS\Maps\2022_0202204521_000_0000_SITE_MAP.mxd - khensen - 2/1/2022 4:48:41 PM