DECISION DOCUMENT

366 Rockaway Ave. Cabinet Furniture Manufacturing
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224357
November 2024

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

DECLARATION STATEMENT - DECISION DOCUMENT

366 Rockaway Ave. Cabinet Furniture Manufacturing
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224357
November 2024

Statement of Purpose and Basis

This document presents the remedy for the 366 Rockaway Ave. Cabinet Furniture Manufacturing 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 366 Rockaway Ave. Cabinet Furniture Manufacturing 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

Excavation and off-site disposal of all on-site soils which exceed unrestricted soil cleanup objectives (SCOs) as defined by 6 NYCRR Part 375-6.8 in the upper 4 to 17 feet across the site. A Preliminary Design Investigation will be performed to verify the excavation depths. If a Track 1 Unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy.

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.

Approximately 13,000 cubic yards of contaminated soil will be removed from the site.

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.

Any unknown underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination will be excavated and removed.

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 Unrestricted Use remedy, a soil vapor intrusion must 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 NYCDOHMH 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 EE or SMP is anticipated. If the soil vapor intrusion (SVI) evaluation discussed in Remedy Element 4 is not completed prior to completion of the Final Engineering Report, then an SMP and EE will be required to address the SVI evaluation and implement actions 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.

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 4 restricted residential cleanup at a minimum.

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.

If a Track 2 cleanup is achieved, a Cover System will not be a required element of the remedy.

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 Remedy Element 7 above.
   - Engineering Controls: The Cover System discussed in Remedy Element 6 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; {Note: an excavation plan is not needed for a remedy that achieves residential SCOs in the upper 15 ft};
   - 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;
   - 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 NYSDEC guidance, as appropriate. The remedy is protective of public health and the environment.

November 8, 2024
Date

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

DECISION DOCUMENT

366 Rockaway Ave. Cabinet Furniture Manufacturing
Brooklyn, Kings County
Site No. C224357
November 2024

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=C224357

Brooklyn Public Library - Brownsville Branch
61 Glenmore Avenue
Brooklyn, NY 11212
Phone: (718) 498-9721

Brooklyn Community Board 16
bk16@cb.nyc.gov

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

Location: The site is located at 358 – 386 Rockaway Avenue in the Brownsville neighborhood of Brooklyn, Kings County and is identified as Block 3499, Lot 15 on the New York City Tax Map. The site is bounded to the north by an active construction site followed by East New York Avenue, to the east by Rockaway Avenue followed by 2- and 3-story residential and commercial buildings, to the south by 2-family residential buildings and a 2-story office building followed by Pitkin Avenue, and to the west by Chester Street followed by a 2-story juvenile detention center. The site is approximately 0.56 miles southeast of the Atlantic Avenue MTA subway station and the East New York LIRR train station.

Site Features: The 1.31-acre site is vacant and covered in vegetation consisting of grassy weeds and several trees. The site is fully enclosed with a construction fence with two padlocked gates along Chester Street and Rockaway Avenue.

Current Zoning and Land Use: The site is currently located in an R7A medium-density residential district with a C2-4 local retail commercial overlay. The surrounding area is zoned for residential, commercial, and institutional use with R6 medium density residential and C4-3 general commercial districts, and C2-3 commercial overlays.

Past Use of the Site: The site was first improved by 1907 with various mixed-use commercial and residential structures, including a one-story automobile garage in the southeastern corner. By 1928 the eastern portion of the site was improved with several stone cutting sheds. Oil burner permits were issued for several buildings across the site between 1946 and 1955. By 1950 the southeastern most buildings were occupied by a wholesale wallpaper outlet and a cabinet manufacturing facility. By 1966 the wallpaper outlet had been replaced with an upholstery shop and several other furniture upholstery shops occupied the buildings along Rockaway Avenue. By 1977 the cabinet manufacturers and most of the upholstery shops had been demolished except for one upholstery storefront in the southeastern corner. All on-site structures were demolished by 1983. The northeastern most portion of the site had most recently been used as an electrical supply storage yard for an adjacent business up until 2023.

Site Geology and Hydrogeology: The site has a topographic elevation of approximately 48 feet (ft) above mean sea level. The site is relatively flat with a slope gently downward to the southeast. Urban fill makes up the top 17 ft of the site, consisting of mainly of sand, gravel, brick, concrete, wood, various organics, plastic, metal, ceramic, and glass. This urban fill layer is underlain by a native layer of loamy sand with varying amounts of gravel, silt, and cobbles. In Brooklyn, much of the surface is underlain with unconsolidated deposits containing Cretaceous and Pleistone deposits reaching a thickness of as much as 1150 feet. The unconsolidated deposits overlie the consolidated bedrock, which is estimated at 400 ft below grade (ft-bg). Groundwater was encountered at approximately 39 ft-bg and flows south-southeast towards Jamaica Bay. Groundwater is not used as a potable water source on the site. The site is in a minimal flood hazard area.

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

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) 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, 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 contaminants of concern identified at this site are:

xylene (mixed)	indeno(1,2,3-cd)pyrene
benzo(a)anthracene	arsenic
benzo(a)pyrene	lead
benzo(b)fluoranthene	mercury
chrysene	barium

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 samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern for the site include SVOCs and metals in soil.

Soil

One VOC, total xylene, was detected at a maximum concentration of 6.7 parts per million (ppm) exceeding the Unrestricted Use Soil Cleanup Objective (UUSCO) of 0.26 ppm. Several SVOCs were detected above the UUSCOs including benzo(a)anthracene at a maximum concentration of 130 ppm (UUSCO is 1 ppm); benzo(a)pyrene at a max. of 140 ppm (UUSCO is 1 ppm); benzo(b)fluoranthene at a max. of 130 ppm (UUSCO is 1 ppm); chrysene at a max. of 120 ppm (UUSCO is 1 ppm); and indeno(1,2,3-cd)pyrene at a max. of 39 ppm (UUSCO is 0.5 ppm).

There were two detections of total PCBs at a maximum concentration of 0.14 ppm (UUSCO is 0.1 ppm). Two pesticides, 4,4'-DDE and 4,4'-DDT, were detected at maximum concentrations of 0.29 ppm and 1.2 ppm respectively (UUSCO for each is 0.0033 ppm).

Several metals were detected above the UUSCOs including arsenic at a max. of 17.1 ppm (UUSCO is 13 ppm); barium at a max. of 5,680 ppm (UUSCO is 250 ppm); lead at a max. of 3,270 ppm (UUSCO is 63 ppm); and mercury at a max. of 1.8 ppm (UUSCO is 0.18 ppm).

For PFAS compounds, perfluorooctanesulfonic acid (PFOS) was detected at a max. concentration of 2.38 parts per billion (ppb), exceeding both the unrestricted soil guidance value of 0.88 ppb and protection of groundwater guidance value of 1 ppb. Perfluorooctanoic acid (PFOA) was detected at a maximum concentration of 1.59 ppb, exceeding the unrestricted soil guidance value of 0.66 ppb and the protection of groundwater guidance value of 0.8 ppb.

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

Groundwater
One VOC, chloroform, was detected in groundwater at a max. of 8 ppb, exceeding the Ambient Water Quality Standards and Guidance Values (AWQSGVs) of 7 ppb. One SVOC, benzo(b)fluoranthene, was detected at a max. of 0.02 ppb (AWQSGV is 0.002 ppb).

Several dissolved metals were detected in exceedance of the AWQSGVs, including selenium at a max. of 11.4 ppb (AWQSGV is 10 ppb); and sodium at a max. of 159,000 ppb (AWQSGV is 20,000 ppb). These are naturally occurring elements and are not considered to be site-specific contaminants of concern.

PFOS and PFOA were found at max. concentrations of 127 parts per trillion (ppt) (AWQSGV is 2.7 ppt) and 93.7 ppt (AWQSGV is 6.7 ppt), respectively.

No PCBs or pesticides were detected above AWQSGVs.

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

Soil Vapor
Chlorinated VOCs were detected in soil vapor samples across the site, including tetrachloroethylene at a max. of 3 micrograms per cubic meter (ug/m3); trichloroethylene at a max. of 23 ug/m3; methylene chloride at a max. of 12 ug/m3; and 1,1,1-trichloroethane at a max. of 9.88 ug/m3.

Petroleum-related VOCs were also detected across the site including isooctane at a max. of 27 ug/m3; benzene at a max. of 21.3 ug/m3; cyclohexane at a max. of 32 ug/m3; ethylbenzene at a max. of 21 ug/m3; heptane at a max. of 100 ug/m3; hexane at a max. of 54 ug/m3; toluene at a max. of 110 ug/m3; and total xylene at a max. of 100 ug/m3.

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

6.4: Summary of Human Exposure Pathways

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

Since the site is currently fenced and will be fully fenced during construction and remediation activities, and access is controlled, people will not encounter 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 the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. In addition, environmental sampling indicates soil vapor intrusion related to 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.
- 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: Unrestricted use remedy.

The selected remedy is referred to as the Soil Excavation 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™ (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 soil cleanup objectives (SCOs) as defined by 6 NYCRR Part 375-6.8 in the upper 4 to 17 feet across the site. A Preliminary Design Investigation will be performed to verify the excavation depths. If a Track 1 Unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy.

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.

Approximately 13,000 cubic yards of contaminated soil will be removed from the site.

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.

Any unknown underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination will be excavated and removed.

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 Unrestricted Use remedy, a soil vapor intrusion evaluation that will include sampling must 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 NYCDOHMH code, which prohibits potable use of groundwater without prior approval.

Conditional Track 1

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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 4 restricted residential cleanup at a minimum.

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.

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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 Remedy Element 7 above.
- Engineering Controls: The Cover System discussed in Remedy Element 6 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- 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:
    - 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.

QUADRANGLE LOCATION

N

2,000 0 2,000'

Title:

SITE LOCATION MAP

366 ROCKAWAY AVENUE
BROOKLYN, NEW YORK

Prepared for:

BROWNSVILLE ARTS OWNER LLC

ROUX

Compiled by: B.H.	Date: 03/12/24
Prepared by: M.S.R.	Scale: AS SHOWN
Project Mgr: L.D.	Project: 3868.0001Y000
File: 3868.0001Y112.1.mxd	

FIGURE 1

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LEGEND

- BCP SITE BOUNDARY
- PROPOSED BUILDING FIRST FLOOR OUTLINE
- PROPOSED BASEMENT AREA
- THEATER AREA

50' 0 50'

Title:

SITE PLAN

366 ROCKAWAY AVENUE
BROOKLYN, NEW YORK

Prepared for:

BROWNSVILLE ARTS OWNER LLC

ROUX

Compiled by: M.O.	Date: 10/9/2024	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	2
Project Mgr: L.D.	Project: 3868.0001Y000	
File: 3868.0001Y112.01.DWG		

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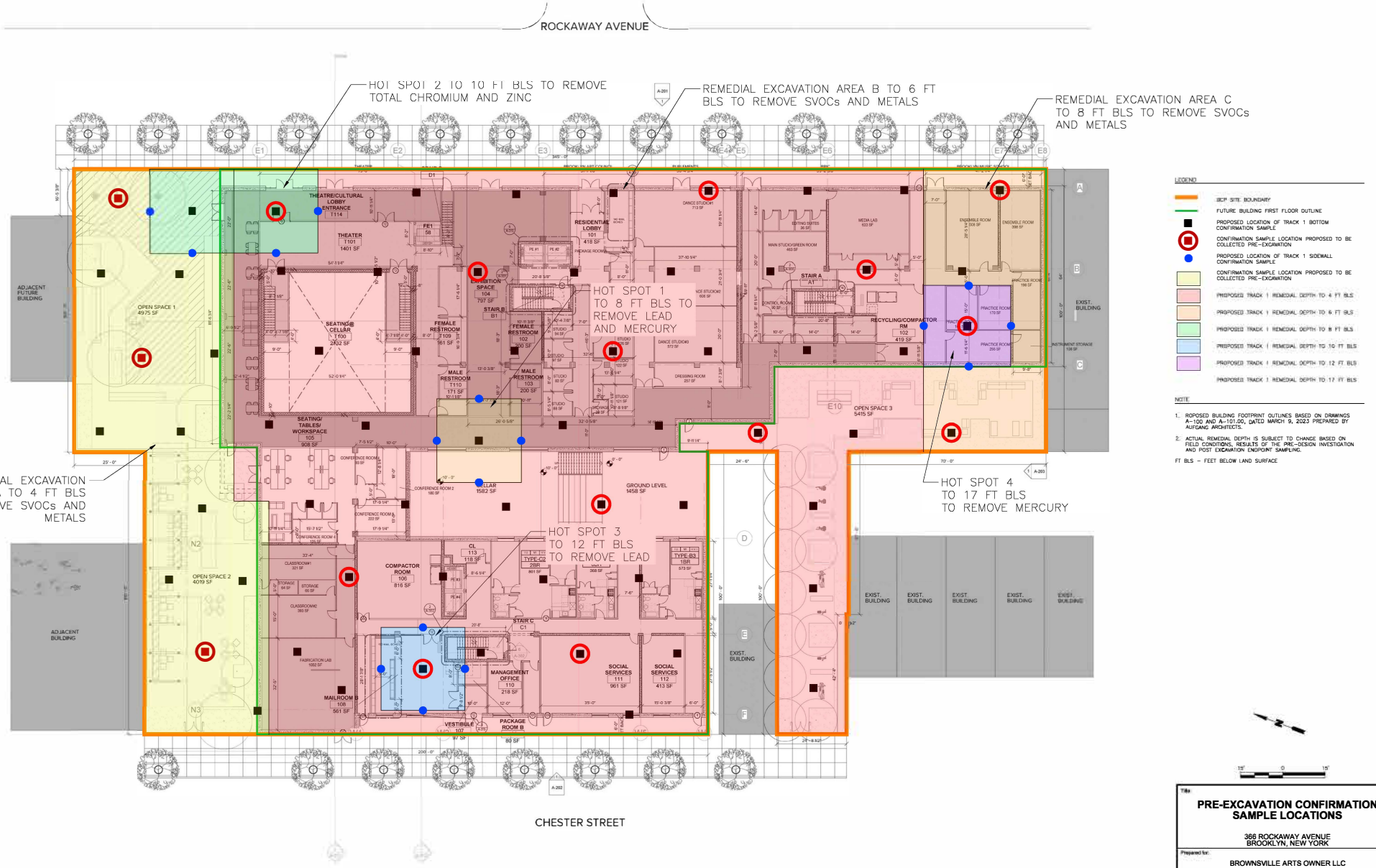

PRE-EXCAVATION CONFIRMATION SAMPLE LOCATIONS

366 ROCKAWAY AVENUE
BROOKLYN, NEW YORK

Prepared for:
BROWNSVILLE ARTS OWNER LLC

ROUX

Compiled by: B.L.	Date: 9/10/2024
Prepared by: B.H.C.	Scale: AS SHOWN
Project Mgr: L.D.	Project: 3868.0001Y000
File: 3868.0001Y121.01.DWG	

PLATE 3