

DECISION DOCUMENT

26-32 Jackson Avenue
Brownfield Cleanup Program
Long Island City, Queens County
Site No. C241217
March 2022



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

26-32 Jackson Avenue
Brownfield Cleanup Program
Long Island City, Queens County
Site No. C241217
March 2022

Statement of Purpose and Basis

This document presents the remedy for the 26-32 Jackson Avenue 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 26-32 Jackson Avenue site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- 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 contaminant source areas, including:

- soil exceeding the 6 NYCRR Part 371 hazardous criteria for lead;
- soil with visual waste material; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Excavation and off-site disposal of all on-site soils which exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8, in the upper 15 feet which includes excavation to approximately 4 feet below ground surface (bgs) across most of the site and up to 14 bgs in areas of deeper contamination. If a Track 2 residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 2,500 cubic yards of contaminated soil will be removed from the site. Any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination will be excavated and removed from the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) may be brought on site to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

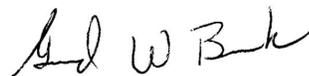
As part of the Track 2 residential remedy, a soil vapor intrusion evaluation will be completed. Indoor air sampling will be conducted as part of the evaluation. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

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.

March 22, 2022

Date



Gerard Burke, P.E.
Director, Remedial Bureau B

DECISION DOCUMENT

26-32 Jackson Avenue
Long Island City, Queens County
Site No. C241217
March 2022

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Queens Public Library at Long Island City
37-44 21 Street
Long Island City, NY 11101
718-752-3700

Queens Community Board No. 2
43-22 50th Street, Room 2B
Woodside, NY 11377
718-533-8773

Receive Site Citizen Participation Information by Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:

The site is located at 26-32 Jackson Avenue in the Long Island City neighborhood of Queens, NY. The site is bounded by Jackson Avenue followed by a vacant lot (BCP site no. C241209) to the north; a vacant lot followed by Dutch Kills Street to the east; a multi-story residential building and a vacant lot followed by mixed-use commercial and residential buildings to the south; and a mixed-use commercial and residential building followed by Purves Street to the west.

Site Features:

The site is a square, 10,000 square foot (0.230 acre) lot. Until recently, a one-story building with a loft and partial cellar spanned the site footprint. The existing building slab will remain in place until the remedial action commences.

Current Zoning and Land Use:

The site is located in the Special Long Island City Mixed Use Paired District (M1-5/R9) and was most recently used as a construction field office and materials storage space. Adjoining parcels and surrounding area are used for commercial, residential and industrial purposes.

Past Use of the Site:

Historic operations at the site included a garage with petroleum bulk storage (circa 1922 to 1936), a warehouse (circa 1947 to 1994) and an automotive parts shop (1994 to 2006).

Site Geology and Hydrogeology:

The site is at an elevation of approximately 15 feet above mean sea level. The surrounding area slopes gradually to the south toward the Dutch Kills, which is located approximately 0.3 miles to the south. Historic fill is present up to approximately 2 to 7 feet below grade. The fill material is underlain by native soil generally consisting of medium-dense fine-grained silty sand with varying amounts of gravel and clay. Bedrock was not encountered during the remedial investigation but is anticipated to be present at a depth of 40 to 50 feet below grade. Groundwater was encountered from approximately 15 to 17 feet below grade and flows toward the north-northwest. Groundwater flow may be influenced by the sites proximity to the Metropolitan Transit Authority (MTA) subway tunnel beneath Jackson Avenue, which is actively being dewatered.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative that restricts the use of the site to residential use (which allows for restricted-residential use, 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, 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 contaminants of concern identified at this site are:

tetrachloroethene (PCE)	dibenzo[a,h]anthracene
trichloroethene (TCE)	indeno(1,2,3-cd)pyrene
cis-1,2-dichloroethene	pyrene
vinyl chloride	barium
benzo(a)anthracene	copper
benzo(a)pyrene	lead
benzo(b)fluoranthene	mercury
benzo(k)fluoranthene	chromium
chrysene	

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, and per- and polyfluoroalkyl substances (PFAS). Soil vapor was analyzed for VOCs. The primary contaminants of concern are SVOCs and metals in soil, VOCs and SVOCs groundwater and chlorinated VOCs in soil vapor.

Soil - The following SVOCs attributed to historic fill are present at levels exceeding residential soil cleanup objectives (RSCOs) to depths of one to seven feet below ground surface (bgs): benzo(a)anthracene up to 76.9 parts per million (ppm) (RSCO of 1 ppm), benzo(a)pyrene up to 65.9 ppm (RSCO of 1 ppm), benzo(b)fluoranthene up to 65.6 ppm (RSCO of 1 ppm), benzo(k)fluoranthene up to 45.8 ppm (RSCO of 0.8 ppm), chrysene up to 66.6 ppm (RSCO of 1 ppm), dibenzo(a,h)anthracene up to 15.9 ppm (RSCO of 0.33 ppm), indeno(1,2,3-cd)pyrene up to 34.9 ppm (RSCO of 0.5 ppm) and pyrene up to 144 ppm (RSCO of 100 ppm). Although protection of groundwater (PGW) SCOs apply to those SVOCs also found in groundwater above standard, the RSCOs are as strict or stricter than PGW SCOs and therefore drive the soil remedy.

The following metals were detected at levels exceeding RSCOs: barium up to 1,910 ppm (RSCO of 350 ppm), cadmium up to 13.2 ppm (RSCO of 2.5 ppm), trivalent chromium up to 124 ppm (RSCO of 36 ppm), copper up to 766 ppm (RSCO of 270 ppm), lead up to 8,470 ppm (RSCO of 400 ppm) and mercury up to 17.5 ppm (RSCO of 0.81 ppm).

For PFAS, perfluorooctanoic acid (PFOA) was detected at a maximum concentration of 0.088 parts per billion (ppb) and perfluorooctanesulfonic acid (PFOS) up to 0.198 ppb, both below their Residential Guidance Values of 6.6 ppb and 8.8 ppb, respectively.

No VOCs, pesticides, or PCBs were detected above the RSCOs in on-site soil. 1,4-dioxane was not detected in soil samples.

The data do not indicate any off-site impacts in soil related to this site.

Groundwater - The following chlorinated VOCs (CVOCs) were detected in on-site groundwater exceeding Class GA Ambient Water Quality Standards (AWQS): tetrachloroethene (PCE) up to 300 ppb (AWQS is 5 ppb), trichloroethene (TCE) up to 141 ppb (AWQS is 5 ppb), cis-1,2-dichloroethene up to 1,300 ppb (AWQS is 5 ppb), vinyl chloride up to 46 ppb (AWQS is 2 ppb), 1,1-dichloroethane up to 150 ppb (AWQS is 5 ppb), 1,1-dichloroethene up to 34 ppb (AWQS is 5 ppb) and 1,2,4-trichlorobenzene up to 35 ppb (AWQS is 5 ppb), 1,2-dichlorobenzene up to 5.9 ppb (AWQS is 3 ppb), 1,2-dichloroethane up to 1.6 ppb (AWQS is 0.6 ppb), 1,3-dichlorobenzene up to 15 ppb (AWQS is 3 ppb), 1,4-dichlorobenzene up to 9.2 ppb (AWQS is 3 ppb). The CVOCs in groundwater are likely attributable to an off-site source, specifically the upgradient Purves Street Groundwater site (Site No. 241170) which has a known CVOC groundwater plume with higher PCE and TCE concentrations than on-site. Additionally, no on-site sources were found in soil and past site operations do not appear to be CVOC related.

The following SVOCs were detected above AWQS: benzo(a)anthracene up to 0.06 ppb (AWQS is 0.002 ppb), benzo(a)pyrene up to 0.09 ppb (AWQS is 0.002 ppb), benzo(b)fluoranthene up to 0.08 ppb (AWQS is 0.002 ppb), benzo(k)fluoranthene up to 0.07 ppb (AWQS is 0.002 ppb), chrysene up to 0.06 ppb (AWQS is 0.002 ppb), and indeno(1,2,3-cd) pyrene up to 0.0667 ppb (AWQS is 0.002 ppb).

The dissolved metals, magnesium, manganese, selenium and sodium, were detected at levels exceeding AWQS but are considered naturally occurring.

For PFAS, PFOS and PFOA were detected at concentrations up to 67 parts per trillion (ppt) and 314 ppt, respectively, exceeding the Maximum Contaminant Level (MCL) (drinking water standard) of 10 ppt each in groundwater. There are no public water supply wells within a half a mile and there is a municipal prohibition for use of groundwater at the site.

1,4-Dioxane was detected in five monitoring wells at concentrations between 0.218 ppb to 1.46 ppb (AWQS is 0.35 ppb).

The data do not indicate any off-site impacts in groundwater related to this site.

Soil Vapor

The following chlorinated VOCs were detected in on-site soil vapor; PCE up to 121 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), TCE ($21.2 \mu\text{g}/\text{m}^3$), cis-1,2-dichloroethene ($14 \mu\text{g}/\text{m}^3$), 1,1,1-TCA ($2.66 \mu\text{g}/\text{m}^3$) and vinyl chloride ($1,100 \mu\text{g}/\text{m}^3$). The CVOCs in soil vapor are likely attributable to an off-site source.

The data do 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 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 contaminated by the site. 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 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. The potential for soil vapor intrusion does exist in off-site structures but is likely attributable to an off-site source.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of groundwater 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 contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 2: Residential use with generic soil cleanup objectives remedy.

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

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
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- Maximizing habitat value and creating habitat when possible;
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- 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.

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- soil exceeding the 6 NYCRR Part 371 hazardous criteria for lead;
- soil with visual waste material; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Excavation and off-site disposal of all on-site soils which exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8, in the upper 15 feet which includes excavation to approximately 4 feet below ground surface (bgs) across most of the site and up to 14 bgs in areas of deeper contamination. If a Track 2 residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 2,500 cubic yards of contaminated soil will be removed from the site. Any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination will be excavated and removed from the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) may be brought on site to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

As part of the Track 2 residential remedy, a soil vapor intrusion evaluation will be completed. Indoor air sampling will be conducted as part of the evaluation. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

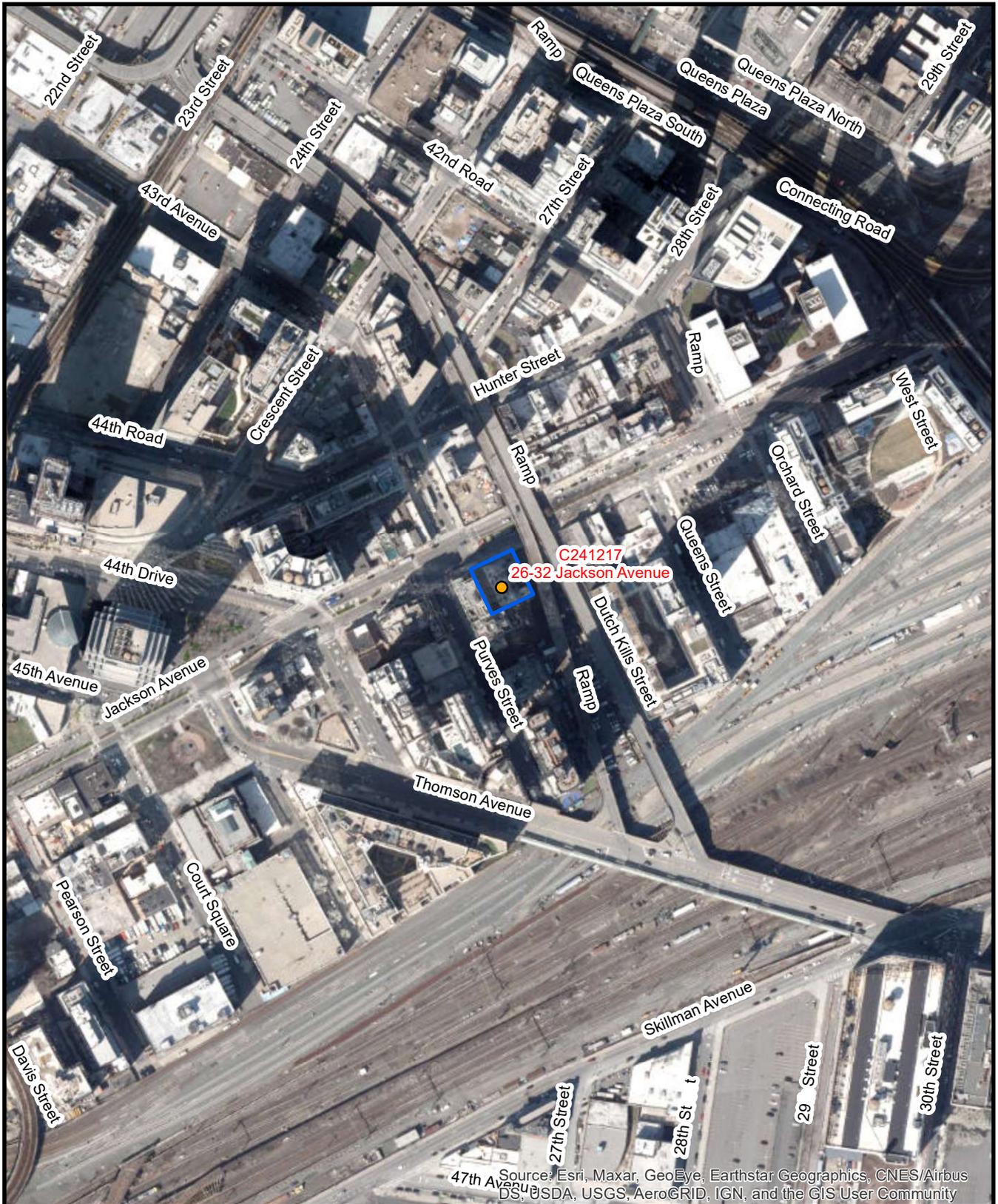
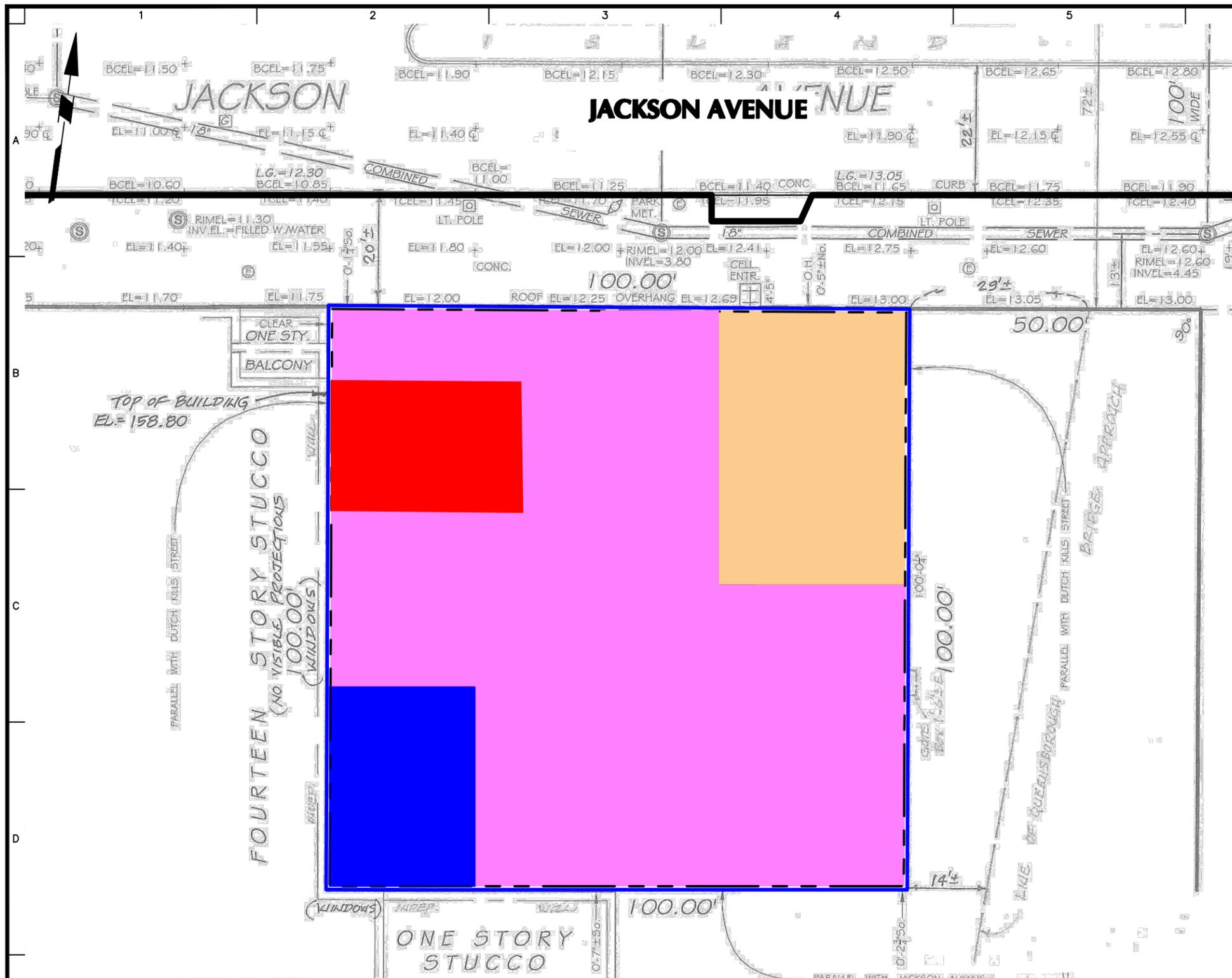


Figure 1 Site Map

Site No. C241217
26 - 32 Jackson Ave
Long Island City, Queens



LEGEND:

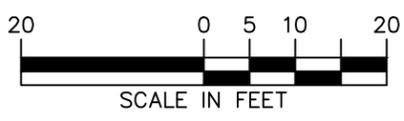
- SITE BOUNDARY
- - - PROPOSED EXTENT OF VAPOR BARRIER/WATERPROOFING
- PROPOSED EXTENT OF EXCAVATION TO APPROXIMATELY 4 FEET BELOW GRADE SURFACE
- PROPOSED EXTENT OF EXCAVATION TO APPROXIMATELY 14 FEET BELOW GRADE SURFACE
- PROPOSED EXTENT OF EXCAVATION TO APPROXIMATELY 9 FEET BELOW GRADE SURFACE
- PROPOSED EXTENT OF EXCAVATION TO APPROXIMATELY 9 FEET BELOW GRADE SURFACE

NOTES:

1. BASEMAP TAKEN FROM HAYNES LAND SURVEYORS, DATED ON DECEMBER 8, 2017.
2. ELEVATIONS ARE WITH RESPECT TO THE TRANSIT AUTHORITY (TA) DATUM AND THE BOROUGH PRESIDENT OF QUEENS DATUM (BPQD). ELEVATION OF THE TA DATUM IS 2.653 FT ABOVE MEAN SEA LEVEL AT SANDY HOOK, NJ AS ESTABLISHED BY U.S. COAST AND GEODETIC SURVEY.
3. ALL LOCATION ARE APPROXIMATE
4. DEPTH AND DIMENSION OF REMEDIAL EXCAVATION AREAS ARE ESTIMATED BASED ON ANALYTICAL RESULTS EXCEEDING TRACK 2 SOIL CLEANUP OBJECTIVES (SCO).

excavation plan

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com	Project	26-32 JACKSON AVENUE	Project No.	170472001	Figure No.	2
		BLOCK No. 267, LOT No. 21	Date	10/15/2019		
		QUEENS NEW YORK	Drawn By	JFY		
			Checked By	KDC		