



June 5, 2026

Dunkirk Landing LLC
Regan Development Corp.
Larry Regan
1055 Saw Mill River Road, Suite 204
Ardsley, New York 10502

Dear Larry Regan:

**160-164 East 4th Street Site; No.: C907051
Dunkirk, Chautauqua County
Remedial Investigation/ Alternatives
Analysis Report & Decision Document**

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have reviewed the revised Remedial Investigation/ Alternative Analysis Report (RI/AAR) for the 160-164 East 4th Street site dated April 1, 2026, and prepared by Brydges Engineering in Environment and Energy, DPC (BE3) on behalf of Dunkirk Landing LLC and Regan Development Corp. The RI/AAR is hereby approved. Please ensure that a copy of the approved RI/AAR is placed in the document repository. The draft report should be removed.

Attached is a copy of the Department's Decision Document for the site. The remedy will be ready to be implemented upon approval of the Remedial Action Work Plan. Please ensure that a copy of the Decision Document is placed in the document repository.

Please contact the Department's Project Manager, Michael Keller, at (716) 851-7218 or by email at michael.keller@dec.ny.gov at your earliest convenience to discuss next steps. Please recall the Department requires seven days' notice prior to the start of field work.

Sincerely,

Michael Cruden
Director
Remedial Bureau E
Division of Environmental Remediation

Sheet Metal Workers International Association Local 71

Timothy Benes

June 5, 2026

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ec: Andrew Guglielmi, Division Director, NYSDEC
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DECISION DOCUMENT

160-164 East 4th Street
Brownfield Cleanup Program
Dunkirk, Chautauqua County
Site No. C907051
April 2026



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

160-164 East 4th Street
Brownfield Cleanup Program
Dunkirk, Chautauqua County
Site No. C907051
April 2026

Statement of Purpose and Basis

This document presents the remedy for the 160-164 East 4th Street 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 160-164 East 4th Street site and the public's input to the proposed remedy presented by NYSDEC.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most

recent edition) to improve energy efficiency as an element of construction.

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

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

2. Excavation

The existing on-site building will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy. All soils in the upper two feet which exceed the restricted residential SCOs will be excavated and transported off-site for disposal. Approximately 5,000 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the remedial excavation depth 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 DEC, submit the sample results and, in consultation with DEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

On-site soil which does not exceed the above excavation criteria or the protection of groundwater

SCOs for any constituent may be used anywhere beneath the cover system, including at or below the groundwater table to backfill the excavation or re-grade the site.

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3.

3. 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.

4. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include imposition of a site cover.

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the 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 OR commercial use OR industrial 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 County DOH; and
- require compliance with the NYSDEC approved Site Management Plan.

5. 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 Remedial Element 4 above.

Engineering Controls: The soil cover discussed in Remedial Element 3 above.

This plan includes, but may not be limited to:

- o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- o A provision to ensure that, should redevelopment occur, no soil exceeding protection of groundwater concentrations will remain below storm water retention basins or infiltration structures.
- o Descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- o 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;
- o A provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Remedial Element 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- o Provisions for the management and inspection of the identified engineering controls;
- o Maintaining site access controls and NYSDEC notification; and
- o 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:

- o A schedule of monitoring and frequency of submittals to the NYSDEC;
- o 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.

6/5/2026

Date



Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

160-164 East 4th Street
Dunkirk, Chautauqua County
Site No. C907051
April 2026

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 repository:

DECInfo Locator - Web Application
<https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C907051>

Dunkirk Public Library
Attn: Brenda Nickerson
536 Central Avenue
Dunkirk, NY 14048
Phone: (716) 366-2511

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 160-164 East 4th Street Site is an approximately 2.15-acre site, located in the City of Dunkirk, Chautauqua County. The site is three blocks south of Lake Erie and is bordered by East 3rd Street to the north, a commercial retail plaza to the east, Lake Shore Bank to the south, and Lakeshore Orthopedics and Sports Medicine to the west. East 4th Street is located south of Lake Shore Bank and Park Avenue is located west of Lakeshore Orthopedics and Sports Medicine.

Site Features:

The site is comprised of a single parcel and is generally flat. The site is improved with one building on the eastern portion of the site. The building connects to the off-site plaza to the east. The on-site building is one-story and currently vacant. The front of the building faces south towards East 4th Street. The parcel is mostly comprised of the building and asphalt parking lot, with some green space along East 3rd Street.

Zoning and Land Use:

The project includes the demolition of the on-site building and construction of new three-story apartment complex, associated parking, and greenspace. Current zoning for the Site is C-2 Community Business which also accommodates multi-Family zoning.

Past Use of the Site:

Historically, the area surrounding the subject property was predominantly residential and commercial. Sanborn maps indicate that from 1888 to 1964, the subject property contained several residences and commercial businesses. The area was redeveloped into commercial buildings which can be seen in aerial photographs dating back to 1985. Historical street directories indicate the subject property has been occupied by a Family Dollar from 1985 to 2020 and a VA clinic from 2010 to 2020.

Site Geology and Hydrogeology:

Overburden: The site is generally underlain by 3 to 7 feet of urban fill consisting of brown to black silty sand containing construction-related debris such as brick fragments and concrete. Beneath the fill, the native material typically consisted of stiff red-brown and grey silty clay. Auger refusal occurred between 8 and 16 feet below ground surface (fbgs) and is assumed to represent the top of bedrock.

Bedrock: Depths to top of bedrock ranged between approximately 8 and 16 fbs.

Groundwater: Five groundwater wells were installed, however only four produced water. Two rounds of groundwater elevation data were collected and groundwater depths were found to range from 5.2 to 9.5 fbs. After review, groundwater flowed north/northwesterly during both sampling events.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, 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 influences the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. NYSDEC has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

arsenic	benzo(a)anthracene
barium	benzo(a)pyrene
copper	benzo(b)fluoranthene
lead	dibenz[a,h]anthracene
mercury	indeno(1,2,3-cd)pyrene

The contaminants of concern exceed the applicable SCGs for:

- 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:

During the Remedial Investigation (RI), soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, cyanide, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor samples were also collected and analyzed for VOCs. Based on the investigations conducted to date, the primary contaminants of concern for the site are polyaromatic hydrocarbons (PAHs) and metals.

Surface Soil:

Samples were taken after approval of the Remedial Investigation Work Plan (RIWP) from the upper 2 inches of soil/fill present below the vegetative cover. A total of 4 surface soil samples (SS-1 through 4) were collected. The samples were analyzed for SVOCs, metals, PCBs, pesticides, 1,4-dioxane, and PFAS. The following contaminants were detected exceeding restricted residential soil cleanup objectives (RRSCOs) in the surficial soils.

- Benzo(a)anthracene (2.9 parts per million (ppm)) exceeded the RRSCO of 1.4 ppm at SS-1.
- Benzo(a)pyrene (up to 3.3 ppm) exceeded the RRSCO of 1 ppm in 2 samples.
- Benzo(b)fluoranthene (up to 4.9 ppm) exceeded the RRSCO of 1.4 ppm in 3 samples.
- Indeno(1,2,3-cd)pyrene (2.4 ppm) exceeded the RRSCO of 1.4 ppm at SS-1.
- Arsenic (17.2 ppm) exceeded the RRSCO of 16 ppm at SS-2.

Based on the investigations completed to date, limited areas of surface soils are impacted with PAHs and metals. Offsite migration of contaminants in shallow soil has not been observed.

Subsurface Soil:

37 total subsurface soil samples (35 initial samples before approval of the RIWP, 2 additional samples after approval of the RIWP) were collected from soil borings in 25 different locations ranging in depth from 2 inches down to approximately 12 fbg across the site. 35 initial samples (RI-BH-1 through 18, and RI-MW-1 through 5) were collected, then 2 additional samples (RI-BH-19 and 20) were collected. Contamination is spread throughout the entire site. The following contaminants were detected exceeding RRSCOs:

- Benzo(a)anthracene (4.3 ppm) exceeded the RRSCO of 1.4 ppm at RI-BH-7 (1-4 fbg).
- Benzo(a)pyrene (up to 4.1 ppm) exceeded the RRSCO of 1 ppm in 2 samples.

- Benzo(b)fluoranthene (up to 4.7 ppm) exceeded the RRSCO of 1.4 ppm in 2 samples.
- Dibenz(a,h)anthracene (0.72 ppm) exceeded the RRSCO of 0.33 ppm at RI-BH-7 (1-4 fbg).)
- Indeno(1,2,3-cd)pyrene (2.3 ppm) exceeded the RRSCO of 1.4 ppm at RI-BH-7 (1-4 fbg).)
- Arsenic (up to 41.5 ppm) exceeded the RRSCO of 16 ppm in 4 samples.
- Barium (up to 865 ppm) exceeded the RRSCO of 410 ppm in 2 samples.
- Copper (up to 598 ppm) exceeded the RRSCO of 280 ppm at RI-BH-9 (1-3 fbg).
- Lead (up to 4,950 ppm) exceeded the RRSCO of 400 ppm in 4 samples.
- Mercury (up to 1.2 ppm) exceeded the RRSCO of 0.33 ppm in 2 samples.

Based on the investigations completed to date, subsurface soils are impacted with PAHs and metals. Impacts are spread throughout the site, including below the former building slab. In addition to the above exceedances, other SVOCs, metals, VOCs, PFAS, and pesticides were detected; however no other detected analytes exceeded their respective guidance values. Off-site migration of contaminants in subsurface soils has not been observed and no off-site soil samples were collected.

Groundwater:

Groundwater samples were collected from 4 overburden wells (MW-2 through MW-5). The overburden wells were installed to 13 fbg. Groundwater was sampled during a single sampling event in June 2025. The following contaminants were detected exceeding groundwater quality standards (GWQS):

- Acetone (51 micrograms per liter (mcg/L)) exceeded the GWQS of 50 mcg/L at MW-5.
- Iron (up to 1,300 mcg/L) exceeded the GWQS of 300 mcg/L at 3 locations.
- Magnesium (up to 47,800 mcg/L) exceeded the GWQS of 35,000 mcg/L at 3 locations.
- Manganese (up to 2,600 mcg/L) exceeded the GWQS of 300 mcg/L at 3 locations.
- Sodium (up to 180,000 mcg/L) exceeded the GWQS of 20,000 mcg/L at 3 locations.

Investigation results indicate that overburden groundwater is slightly impacted by iron, magnesium, manganese, and sodium. The metals exceedances can be attributed to naturally occurring metals in native soils. Acetone was detected slightly exceeding; however this may be attributed to the use of acetone during lab analysis. In addition to the above exceedances, other SVOCs, metals, VOCs, PFAS, and pesticides were detected; however no other detected analytes exceeded their respective guidance values. On-site groundwater was observed to flow northerly towards Lake Erie. No off-site groundwater samples were collected.

Soil Vapor Investigation:

Six soil vapor samples were collected across the site. Depth of samples ranged from 3 to 13 fbg. No indoor air samples were collected because all on-site buildings/structures are vacant and proposed to be demolished prior to remediation. Samples were taken in various areas, including below pavement, the on-site building slab, and in vegetated areas. A total of 35 VOCs were detected in soil vapor. Elevated detections include Carbon Disulfide (up to 170 ug/m³), Ethylbenzene (up to 47 ug/m³), Cyclohexane (up to 530 ug/m³), Butane (up to 200 ug/m³),

Heptane (up to 12,000 ug/m³), Hexane (up to 250 ug/m³), m,p-xylene (up to 110 ug/m³), and Tetrachloroethene (up to 40 ug/m³).

An off-site soil vapor intrusion investigation was performed in the off-site connected eastern building due to the amount of analytes detected in soil vapor and the above specified elevated detections. Based on the results, there is no further concern about off-site migration.

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*.

Access to the site is unrestricted and people who enter the site may come into contact with site-related soil contamination if they walk on the soil or dig below the surface. People are not drinking the contaminated groundwater because the area is serviced by a public water supply that is not affected by site 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, however soil vapor intrusion is a potential concern for any future on-site occupancy. Environmental sampling indicates that 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.

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

- Prevent the discharge of contaminants to surface water.

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 Track 4: Restricted use remedy.

The selected remedy is referred to as the Excavation and Cover System remedy.

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

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and

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

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

2. Excavation

The existing on-site building will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy. All soils in the upper two feet which exceed the restricted residential SCOs will be excavated and transported off-site for disposal. Approximately 5,000 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the remedial excavation depth 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 DEC, submit the sample results and, in consultation with DEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including at or below the groundwater table to backfill the excavation or re-grade the site.

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil or complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3.

3. 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.

4. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include imposition of a site cover.

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the 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 OR commercial use OR industrial 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 County DOH; and
- require compliance with the NYSDEC approved Site Management Plan.

5. 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 Remedial Element 4 above.

Engineering Controls: The soil cover discussed in Remedial Element 3 above.

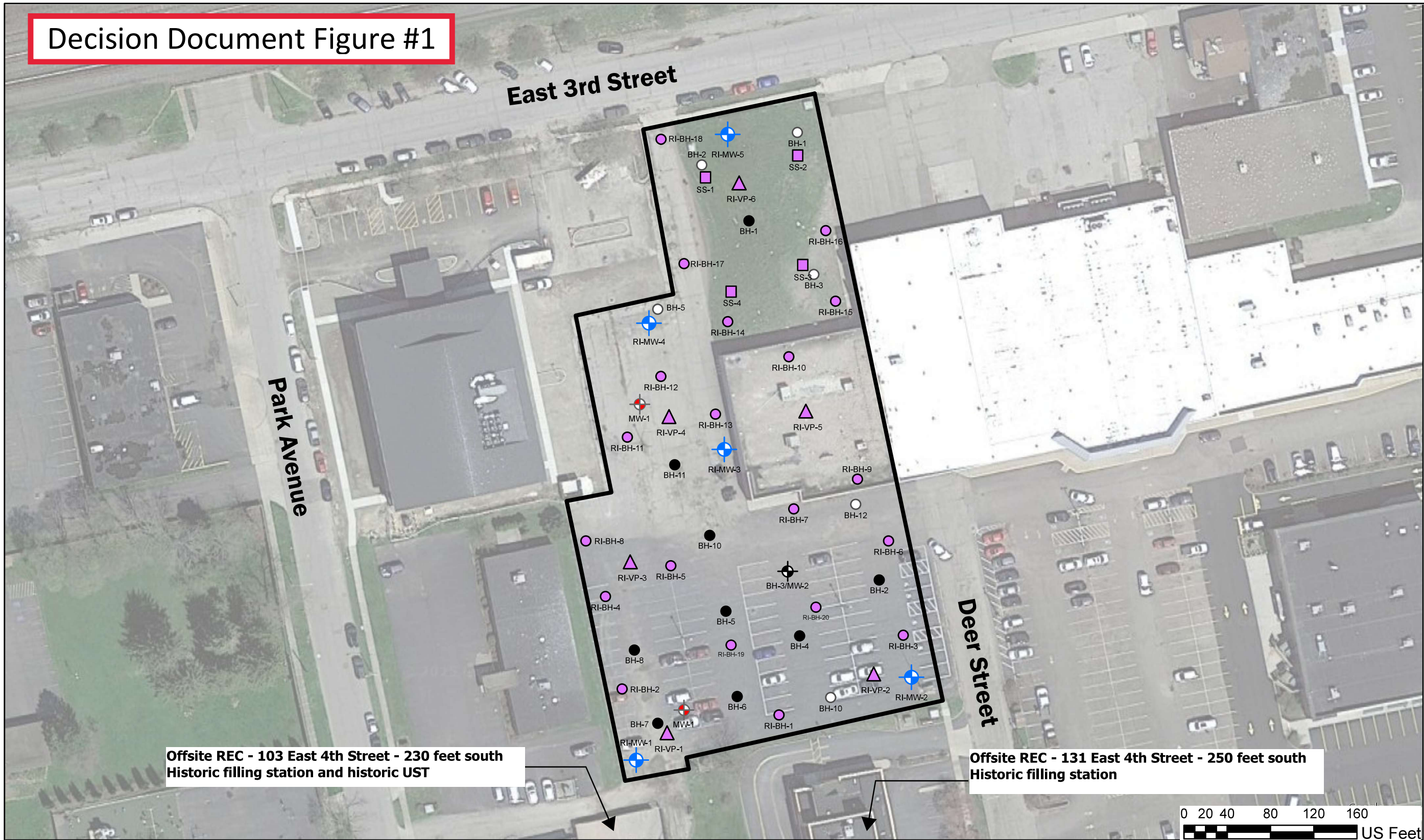
This plan includes, but may not be limited to:

- o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- o A provision to ensure that, should redevelopment occur, no soil exceeding protection of groundwater concentrations will remain below storm water retention basins or infiltration structures.
- o Descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- o 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;
- o A provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Remedial Element 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- o Provisions for the management and inspection of the identified engineering controls;
- o Maintaining site access controls and NYSDEC notification; and
- o 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:

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

Decision Document Figure #1



**BRYDGES
ENGINEERING**
IN ENVIRONMENT
AND ENERGY, DPC

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CLIENT: REGAN DEVELOPMENT

FIGURE 3
**Previous Sampling &
RI Sampling Locations**

160-164 East 4th Street
Dunkirk, NY 14048



DATE ISSUED:
August 28, 2025



SCALE: 1:1,088

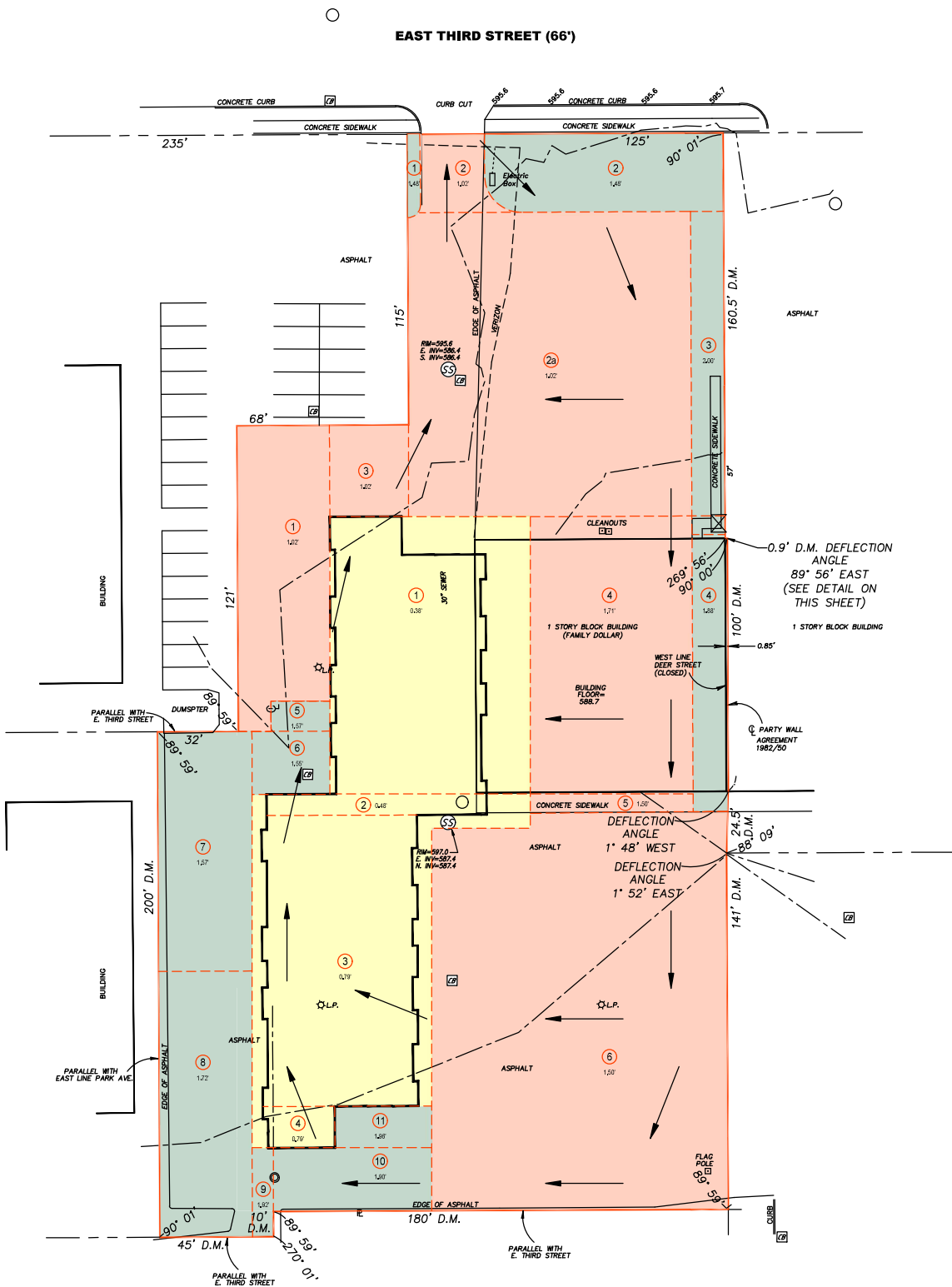
LEGEND

- Property Boundary
- RI-MW-1 RI Monitoring Well
- RI Boring Locations
- RI Vapor Point
- Previous Phase II ESA Boring Locations (9/21/2023)
- Previous Phase II ESA Boring Locations (4/1/2024)
- Previous Phase II ESA Temporary Well Locations (9/21/2023)
- Previous Phase II ESA Temporary Well/Boring Locations (4/1/2024)

NOTES

1. Basemap adopted from Google Maps

Decision Document Figure #2



- PROPERTY BOUNDARY
- EXCAVATION BOUNDARY
- X.XX' EXCAVATION DEPTH
- TRUCK ROUTES
- BUILDING AREAS ① ② ③ ④
- ASPHALT AREAS ① ② ③ ④ ⑤ ⑥
- LAWN AREAS ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪