NEW YORK STATE | Department of Environmental Conservation

KATHY HOCHUL
Governor

AMANDA LEFTON
Acting Commissioner

April 2, 2025

Frank L. Ciminelli, II
SAB Hope LLC
100 South Elmwood Ave., Suite 100
Buffalo, NY 14202

Re: Hope on Main Site
Site ID No. C915393
Buffalo, Erie County
Remedial Work Plan & Decision Document

Dear Frank Ciminelli, II:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Work Plan (RWP) for the Hope on Main site dated December 31, 2024 and prepared by C&S Engineers, Inc. on behalf of SAB Hope LLC. The RWP is hereby approved. Please ensure that a copy of the approved RWP is placed in the document repository(ies). The draft plan should be removed.

Attached is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repository(ies).

Please contact the Department's Project Manager, Veronica Kreutzer, at (716) 851-7220 or veronica.kreutzer@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 J Cruden

Michael Cruden, P.E.
Director
Remedial Bureau E
Division of Environmental Remediation

Enclosure

ec *w/attachments*:

Andy Guglielmi, Esq. – NYSDEC
David Harrington – NYSDEC
Michael Cruden – NYSDEC
Andrea Caprio – NYSDEC
Veronica Kreutzer – NYSDEC
Gregory Scholand, Esq. – NYSDEC
Christine Vooris – NYSDEC
Sara Bogardus – NYSDOH
Stephen Lawrence – NYSDOH
Frank L. Ciminelli, II- SAB Hope, LLC, fciminelli@arcbldg.com
Cody Martin – C&S Engineers, cmartin@cscos.com
Adam S. Walters – Phillips Lytle, LLP, awalters@phillipslytle.com
Matt Gokey, matthew.gokey@tax.ny.gov
Paul Takac, paul.takac@tax.ny.gov

ver 2018-04-16

DECISION DOCUMENT

Hope on Main
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915393
April 2025

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

DECLARATION STATEMENT - DECISION DOCUMENT

Hope on Main
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915393
April 2025

Statement of Purpose and Basis

This document presents the remedy for the Hope on Main 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 Hope on Main 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™ (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 buildings 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. Excavation and off-site disposal of all on-site soils which exceed Unrestricted Use Soil Cleanup Objectives (USCOs) as defined by 6 NYCRR Part 375-6.8 will be completed. Approximately 10,115 tons of contaminated soil will be removed from the site. If a Track 1 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 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, stated, and local laws, rules, and regulations and facility-specific permits.

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.

3. Interim Remedial Measures (IRM): An IRM will be performed prior to the rest of the site remediation. The IRM consists of excavation and off-site disposal of approximately 2,895 tons of soil/historical fill material (HFM) which exceed USCOs as defined by 6 NYCRR Part 375. This IRM is intended to remediate the southern portion of the site, an approximate 0.62 acre portion.

The intent of the remedy is to achieve a Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. If groundwater standards and screening levels are not achieved prior to completion of the Final Engineering Report (FER), then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address groundwater monitoring; a Track 1 cleanup can only be achieved if groundwater monitoring is no longer needed within 5 years of the date of the Certificate of Completion.

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.

Michael J Cruden

4/2/2025

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Hope on Main
Buffalo, Erie County
Site No. C915393
April 2025

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=C915393

Buffalo & Erie County Public Library
Attn: April Tompkins
1 Lafayette Square
Buffalo, NY 14203
Phone: (716) 858-7129

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 Hope on Main site is comprised of two parcels, 954 Main Street (SBL: 100.78-6-1.1) and 1000 Main Street (SBL: 100.71-6-6.1), which total 2.88 acres. The site is located in an urban area in the City of Buffalo, Erie County. The site is bounded by North Street to the north, Main Street to the east, North Pearl Street to the west, and Allen Street to the south.

Site Features: The site consists of five structures with surrounding asphalt parking lots. There are three two story buildings, one three story shelter, and a single one-story office building, all occupied, and surrounding asphalt parking lots.

Current Zoning and Land Use: The site zoned as N-1C, Mixed Use Core. This zoning allows for uses including, but not limited to, dormitory, dwelling, emergency shelter, vehicle repair, and parking lot. The on-site buildings are currently used by the Salvation Army for offices, an emergency shelter, and a day-care facility. Land uses immediately adjacent to the site include commercial, residential, and health care (Buffalo Medical Campus).

Past Uses of the Site: According to historical records, the site was initially occupied by residential homes. The property at 978 Main Street contained a gas station from the 1930s to the 1960s. After 1960, the gas station at 978 Main Street was demolished and a hotel operated on the parcel from 1964 to 1998. The property at 988 Main Street contained an auto repair shop from 1946 to the 1950s. The auto repair shop at 988 Main Street was demolished after 1951. The office and day care building at 1000 Main Street was constructed in 2001. Surrounding historical property uses consisted of commercial and residential use, mainly along Pearl and Main Streets. Development included gas stations, automobile repair stations, storefronts, restaurants, apartments, and warehousing. Contamination at the site appears to be from the placement of historic fill material (HFM) as property uses changed along Main Street and buildings were built and/or demolished. Due to the age of the former gas station (prior to NYSDEC registration requirements), the condition and status of the underground tanks is unknown. Tanks potentially remain in the ground underneath the existing building.

Geology and Hydrogeology: HFM containing ceramics, crushed rock, lumber, ash, sand, silt, clay, concrete, metal, coal, plastics, and brick was observed in 28 out of 55 grid locations from beneath the asphalt surface or grass areas to approximately four feet below ground surface, with a few six-foot-deep areas. Underlying the HFM, are mixed deposits of silt, clay, and sand down

to 50 feet below ground surface. The mixed deposits vary but generally consist of alternating grey and brown zones of silty sand, sand, clayey silt, sand silt, and glacial deposits. Layers of these soil types were observed to be discontinuous across the site.

The site is located 1.3 miles northeast of Lake Erie. Groundwater was encountered between 30 and 50 feet below ground surface- and flows to the west toward the lake. The primary hydrologic unit identified beneath the site is the semi-confined water table aquifer present in the sand layer. Groundwater at and in the vicinity of the site is not used for public drinking water supply as the Buffalo Water Board states that every dwelling, house, or other building requiring the use of water must be supplied from the water mains maintained by the City of Buffalo.

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, alternatives (or an alternative) that restrict(s) the use of the site to as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, 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:

Benzo(a)anthracene	Arsenic
Benzo(a)pyrene	Lead
Benzo(b)fluoranthene	Mercury
Benzo(k)fluoranthene	Perfluorooctanesulfonic acid
Chrysene	Chloroform
Indeno(1,2,3-cd)pyrene	1,2-Dichloroethane

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, however, an IRM, approved May 21, 2024, will be performed on the southern portion of the site to excavate contaminated HFM and soil material. Additional native soil samples will be taken to further delineate the vertical extent of mercury contamination in this area. Site work for this IRM began January 2025 and is set to continue through May 2025.

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.

During the Remedial Investigation (RI), samples for analysis were collected from surface soil/fill, subsurface fill, native soil, and groundwater. Surface water and sediment were not found at the site. A soil vapor intrusion investigation was also completed at this site.

Surface soil/fill, subsurface fill, and native soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and per-and polyfluoroalkyl substances (PFAS). Groundwater was also analyzed for VOCs, SVOCs, pesticides, PCBs, metals, and PFAS. This investigation determined that metals, SVOCs, and cVOCs were the primary contaminants of concern at the site.

Remedial Investigation Results:

Surface Soil/Fill:
Four surface soil/fill samples (0-2-inches depth) were collected from on-site and analyzed for VOCs, SVOCs, PFAS, pesticides, PCBs, and metals. No VOCs were detected above the Department's Part 375 USCOs. Several SVOCs, specifically polycyclic aromatic hydrocarbons (PAHs), were detected in on-site near-surface soils above the Department's Part 375 USCOs. The surface soil/fill sample data does not indicate potential for off-site migration.

The SVOCs that exceeded the Part 375 USCOs (with the number of exceedances and highest concentrations) include:

- Benzo(a)anthracene (2 samples exceeded the 1.0 ppm USCO; maximum detection 9.1 ppm)
- Benzo(b)pyrene (2 samples exceeded the 1.0 ppm USCO; maximum detection 9.2 ppm)

- Benzo(b)fluoranthene (2 samples exceeded the 1.0 ppm USCO; maximum detection 13 ppm)
- Benzo(k)fluoranthene (1 sample exceeded the 0.8 ppm USCO; maximum detection 2.5 ppm)
- Chrysene (2 samples exceeded the 1.0 ppm USCO; maximum detection 9 ppm)
- Dibenzo(a,h)anthracene (1 sample exceeded the 0.33 ppm USCO; maximum detection 1.2 ppm)
- Indeno(1,2,3-cd)pyrene (2 samples exceeded the 0.5 ppm USCO; maximum detection 7.4 ppm)

Several metals were detected in on-site near-surface soil/fill above the Department's Part 375 USCOs. These metals (with the number of exceedances and highest concentrations) include:

- Lead (2 samples exceeded the 63 ppm USCO; maximum detection 206 ppm)
- Mercury (1 sample exceeded the 0.18 ppm USCO; maximum detection 0.644 ppm)
- Zinc (3 samples exceeded the 109 ppm USCO; maximum detection 372 ppm)

PFAS were detected in on-site near-surface soil/fill above the Department's Part 375 USCOs. This contaminant (with the number of exceedances and highest concentrations) include:

- Perfluorooctanesulfonic Acid (PFOS) (4 samples exceeded the 0.00088 ppm USCO; maximum detection 0.00207 ppm)

Slight exceedances of pesticides were detected in on-site surface soil/fill above the Department's Part 375 USCOs in two samples.

PCBs were detected in on-site surface soil/fill above the Department's Part 375 USCOs. This contaminant (with the number of exceedances and highest concentrations) include:

- Total PCBs (1 sample exceeded the 0.1 ppm USCO; highest concentration 0.233 ppm)

Subsurface Fill:
15 subsurface fill samples (2-inches to 3-feet depth) were collected from on-site and analyzed for VOCs, SVOCs, pesticides, PCBs, metals, PFAS, and 1,4-dioxane. No VOCs were detected above the Department's Part 375 USCOs. The subsurface fill sample data does not indicate potential for off-site migration.

Several SVOCs were detected in the on-site subsurface fill above the Department's Part 375 USCOs. These SVOCs (with the number of exceedances and highest concentrations) include:

- Benzo(a)anthracene (4 samples exceeded the 1 ppm USCO; highest concentration 13 ppm)
- Benzo(a)pyrene (5 samples exceeded the 1 ppm USCO; highest concentration 13 ppm)
- Benzo(b)fluoranthene (6 samples exceeded the 1 ppm USCO; highest concentration 17 ppm)

- Benzo(k)fluoranthene (2 samples exceeded the 0.8 ppm USCO; highest concentration 5.5 ppm)
- Chrysene (6 samples exceeded the 1 ppm USCO; highest concentration 13 ppm)
- Indeno(1,2,3-cd)pyrene (6 samples exceeded the 0.5 ppm USCO; highest concentration 10 ppm)

Metals were detected in the on-site subsurface fill above the Department's Part 375 USCOs. These metals (with the number of exceedances and highest concentrations) include:

- Lead (12 samples exceeded the 63 ppm USCO; highest concentration 349 ppm)
- Mercury (11 samples exceeded the 0.18 ppm USCO; highest concentration 1.92 ppm)
- Zinc (11 samples exceeded the 109 ppm USCO; highest concentration 385 ppm)

Low-level pesticides exceedances were detected in two on-site subsurface fill above the Department's Part 375 USCOs.

- 4,4'-DDE (2 samples exceeded the 0.0033 ppm USCO; highest concentration 0.105 ppm)

Low-level PCB exceedances were detected in two on-site subsurface fill samples above the Department's Part 375 USCOs.

- PCBs (total) (2 samples exceeded the 0.1 ppm USCO; highest concentration 0.269 ppm)

PFAS were detected in on-site subsurface fill above the Department's Part 375 USCOs. This PFAS (with the number of exceedances and highest concentrations) include:

- PFOS (2 samples exceeded the 0.00088 ppm USCO; highest concentration 0.00329 ppm)

Native Soil:
74 native soil samples (3to-52 feet below ground surface) were collected from on-site and analyzed for VOCs, SVOCs, pesticides, PCBs, metals, PFAS, and 1,4-dioxane. No VOCs were detected above the Department's Part 375 USCOS. The native soil sample data does not indicate potential for off-site migration.

SVOCs were detected in the on-site native soil up to four feet below ground surface above the Department's Part 375 USCOs. These SVOCs (with the number of exceedances and highest concentrations) include:

- Benzo(a)anthracene (3 samples exceeded the 1 ppm USCO; highest concentration 3.2 ppm)
- Benzo(a)pyrene (3 samples exceeded the 1 ppm USCO; highest concentration 3.3 ppm)
- Benzo(b)fluoranthene (4 samples exceeded the 1 ppm USCO; highest concentration 4.2 ppm)
- Chrysene (4 samples exceeded the 1 ppm USCO; highest concentration 3.1 ppm)
- Indeno(1,2,3-cd)pyrene (4 samples exceeded the 0.5 ppm USCO; highest concentration 2.1 ppm)

Metals were detected in the on-site native soil up to six feet below ground surface above the Department's Part 375 USCOs. These metals (with the number of exceedances and highest concentrations) include:

- Arsenic (2 samples exceeded the 13 ppm USCO; highest concentration 22 ppm)
- Copper (1 sample exceeded the 50 ppm USCO; highest concentration 140 ppm)
- Lead (12 samples exceeded the 63 ppm USCO; highest concentration 957 ppm)
- Mercury (11 samples exceeded the 0.18 ppm USCO; highest concentration 4.16 ppm)
- Zinc (7 samples exceeded the 109 ppm USCO; highest concentration 372 ppm)

Pesticides were detected in on-site native soil up to two feet below ground surface above the Department's Part 375 USCOs. This pesticide (with the number of exceedances and highest concentrations) include:

- 4,4'-DDT (3 samples exceeded the 0.00333 ppm USCO; highest concentration 0.0084 ppm)

A PCB exceedance was detected in on-site native soil at two feet below ground surface above the Department's Part 375 USCOs in one sample.

- PCBs (total) (1 sample exceeded the 0.1 ppm USCO; highest concentration 0.165 ppm)

PFAS were detected in on-site native soil up to three feet below ground surface above the Department's Part 375 USCOs. This PFAS (with the number of exceedances and highest concentrations) include:

- PFOS (3 samples exceeded the 0.00088 ppm USCO; highest concentration 0.0132 ppm)

Groundwater:
10 overburden groundwater samples were collected from five on-site wells and analyzed for VOCs, SVOCs, PFAS, 1,4-dioxane, pesticides, PCBs, and metals. Two rounds of groundwater sampling were performed. Based on the historic site use being an unlikely source for contamination, the depth to groundwater, and the groundwater use restrictions in place by the City of Buffalo, groundwater contaminants likely originated offsite and are not considered to be contaminants of concern for the site.

Contaminant exceedances from the first round of sampling (with the number of exceedances and highest concentrations) include:

- Chloroform (2 samples exceeded the 7 ug/l NY-AWQS; highest concentration 9.2 ug/l)
- 1,2-Dichloroethane (2 samples exceeded the 0.6 ug/l NY-AWQS; highest concentration 0.83 ug/l)
- Benzo(b)fluoranthene (2 samples exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.02 ug/l)

- Benzo(k)fluoranthene (2 samples exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.01 ug/l)
- Chrysene (1 sample exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.01 ug/l)
- Aluminum (1 sample exceeded the 2,000 ug/l NY-AWQS with a concentration of 116,000 ug/l)
- Arsenic (1 sample exceeded the 50 ug/l NY-AWQS with a concentration of 70.13 ug/l)
- Barium (1 sample exceeded the 1,000 ug/l NY-AWQS with a concentration of 1,848 ug/l)
- Beryllium (1 sample exceeded the 5.37 ug/l NY-AWQS with a concentration of 5.37 ug/l)
- Cadmium (1 sample exceeded the 10 ug/l NY-AWQS with a concentration of 13.38 ug/l)
- Chromium (2 samples exceeded the 100 ug/l NY-AWQS; highest concentration 259.2 ug/l)
- Copper (1 sample exceeded the 200 ug/l NY-AWQS with a concentration of 494.4 ug/l)
- Iron (4 samples exceeded the 600 ug/l NY-AWQS; highest concentration 247,000 ug/l)
- Lead (1 sample exceeded the 50 ug/l NY-AWQS with a concentration of 612.4 ug/l)
- Magnesium (5 samples exceeded the 35000 ug/l NY-AWQS; highest concentration 477000 ug/l)
- Manganese (1 sample exceeded the 600 ug/l NY-AWQS with a concentration of 7033 ug/l)
- Nickel (1 sample exceeded the 200 ug/l NY-AWQS with a concentration of 267.4 ug/l)
- Selenium (1 sample exceeded the 20 ug/l NY-AWQS with a concentration of 71.7 ug/l)
- Thallium (1 sample exceeded the 0.5 ug/l NY-AWQS with a concentration of 2.37 ug/l)
- Zinc (1 sample exceeded the 2000 ug/l NY-AWQS with a concentration of 3838 ug/l)

Contaminant exceedances from the second round of sampling (with the number of exceedances and highest concentrations) include:

- Chloroform (1 sample exceeded the 7 ug/l NY-AWQS with a concentration of 8.4 ug/l)
- 1,2-Dichloroethane (1 sample exceeded the 0.6 ug/l NY-AWQS with a concentratio of 0.64 ug/l)
- Benzo(a)anthracene (1 sample exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.02 ug/l)
- Benzo(a)pyrene (2 samples exceeded the 0 ug/l NY-AWQS; highest concentration 0.04 ug/l)
- Benzo(b)fluoranthene (3 samples exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.04 ug/l)
- Benzo(k)fluoranthene (3 samples exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.02 ug/l)
- Chrysene (1 sample exceeded the 0.002 ug/l NY-AWQS with a concentration of 0.02 ug/l)
- Indeno(1,2,3-cd)pyrene (3 samples exceeded the 0.002 ug/l NY-AWQS; highest concentration 0.03 ug/l)
- Iron (3 samples exceeded the 300 ug/l NY-AWQS; highest concentration 2,630 ug/l)

- Magnesium (5 samples exceeded the 35,000 ug/l NY-AWQS; highest concentration 107,000 ug/l)

Soil Vapor
Four sub-slab soil vapor samples, four indoor air samples, and one outdoor air sample were collected from the basements of two on-site buildings. Low-level VOC exceedances were found in the indoor air results however, when compared to NYSDOH guidance documents, mitigation is not required.

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. Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Environmental sampling indicates that soil vapor intrusion is not a concern on-site or off-site.

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:

Soil:
RAOs for Public Health Protection
- Prevent ingestion/direct contact with contaminated soil

RAOs for Environmental Protection
- Prevent migration of contaminants that would result in groundwater or surface water contamination

Groundwater:
RAOs for Environmental Protection
- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent possible
- Prevent the discharge of contaminants to surface water; and
- Remove the source of ground water contamination

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternatives 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 1: Unrestricted use remedy.

The selected remedy is referred to as the 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 of the 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.

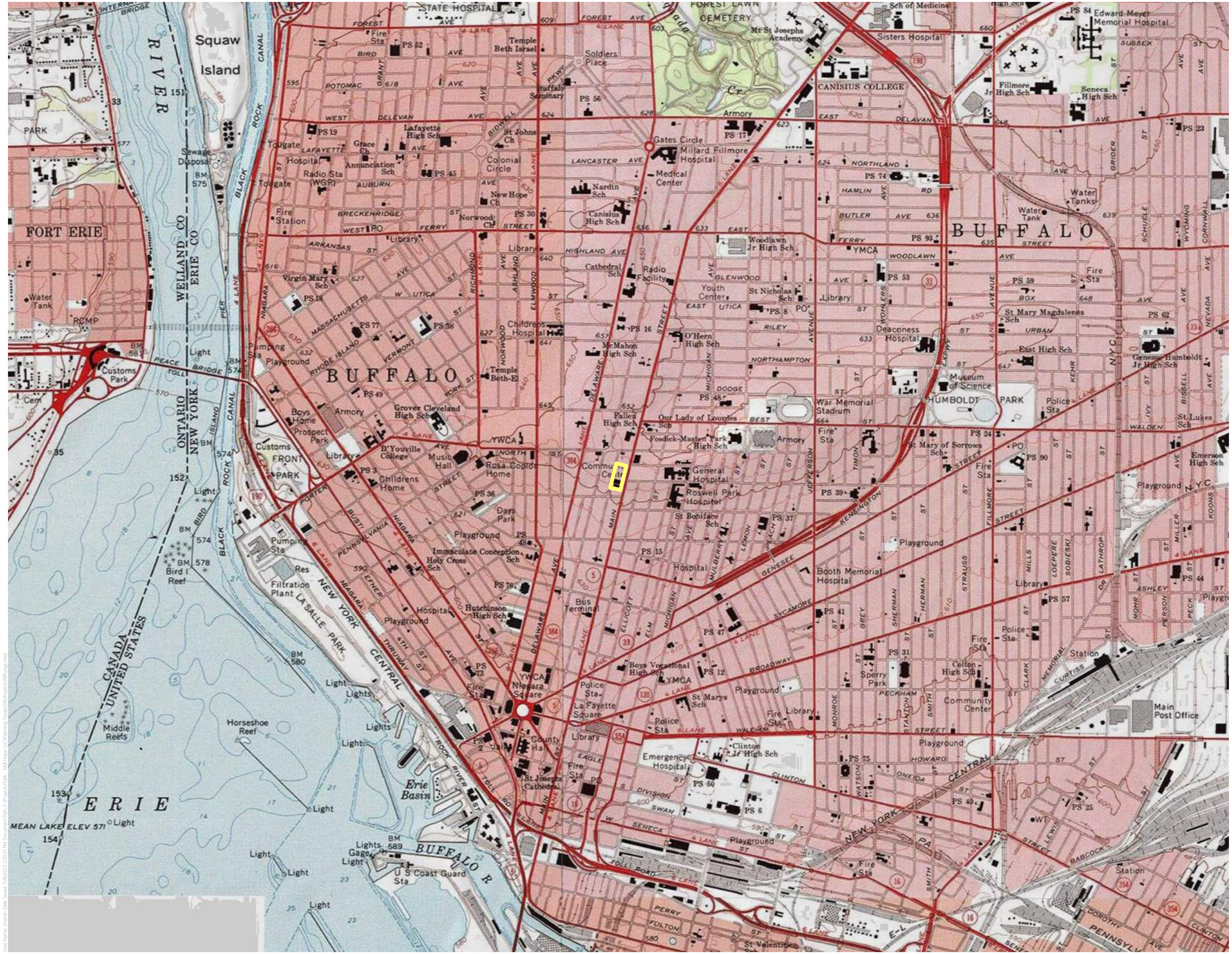
2. Excavation: The existing on-site buildings will be demolished, and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy. Excavation and off-site disposal of all on-site soils which exceed Unrestricted Use Soil Cleanup Objectives (USCOs) as defined by 6 NYCRR Part 375-6.8 will be completed. Approximately 10,115 tons of contaminated soil will be removed from the site. If a Track 1 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 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, stated, and local laws, rules, and regulations and facility-specific permits.

   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.

3. Interim Remedial Measures (IRM): An IRM will be performed prior to the rest of the site remediation. The IRM consists of excavation and off-site disposal of approximately 2,895 tons of soil/HFM which exceed USCOs as defined by 6 NYCRR Part 375. Excavation depths will be up to six fbgs, and ten confirmation/perimeter samples will be collected. This IRM is intended to remediate the southern portion of the site, an approximate 0.62 acre portion.

   The intent of the remedy is to achieve a Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated.



Site Location

Brownfield Cleanup Program (BCP) Site

N

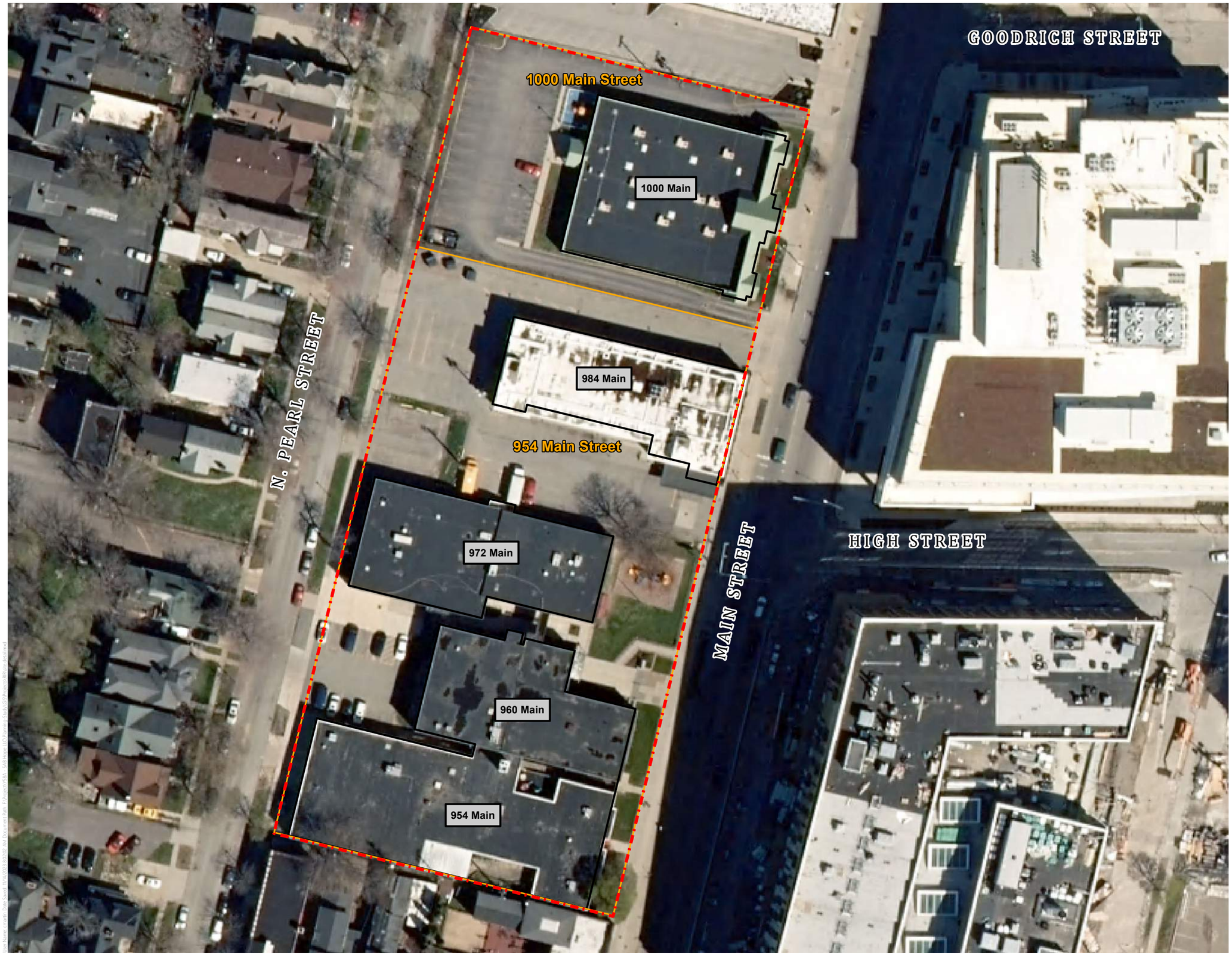
0 1,000 2,000 4,000 Feet

1 in. = 2,000 feet
When printed at 11 in. by 17 in.

Hope on Main
954 Main Street
Brownfield Cleanup Program

Sources: . Created by C&S Engineers, Inc.

Figure 1- Site Location Map



Site Detail

Brownfield Cleanup Program (BCP) Site

Property Boundary

972 Main Building ID

N

0 30 60 120 Feet

1 in. = 60 feet
When printed at 11 in. by 17 in.

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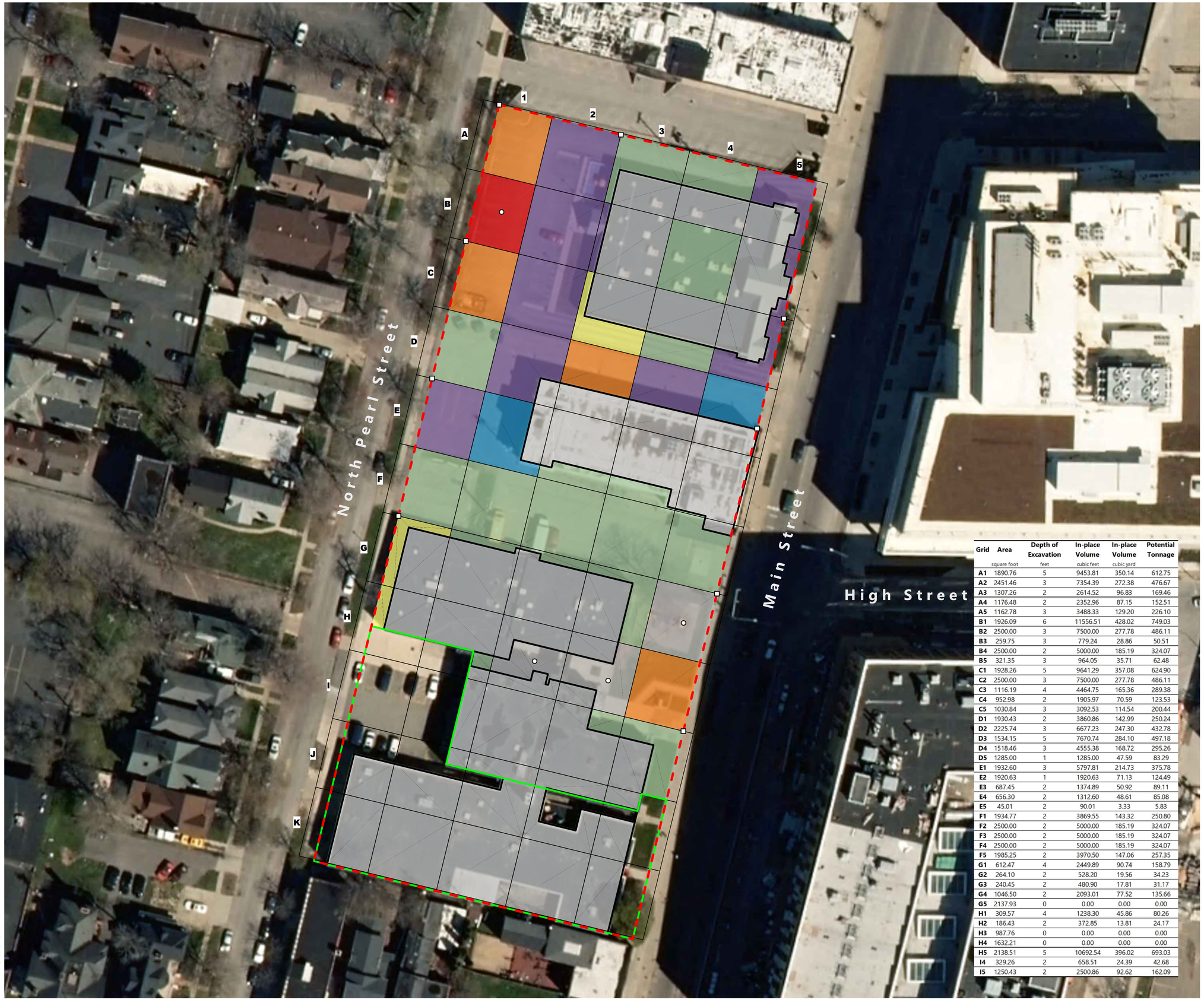
954 Main Street
Brownfield Cleanup Program

Sources: . Created by C&S Engineers, Inc.

Figure 2- Site Plan



Track 1 Cleanup

- Brownfield Cleanup Program (BCP) Site
- Interim Remedial Measure (IRM) Boundary
- Confirmatory Sample Location
- Perimeter Soil Sample Location

Excavation Depth (feet)

- 0
- 1
- 2
- 3
- 4
- 5
- 6

Grid	Area	Depth of Excavation	In-place Volume	In-place Volume	Potential Tonnage
	square foot	feet	cubic feet	cubic yard	
A1	1890.76	5	9453.81	350.14	612.75
A2	2451.46	3	7354.39	272.38	476.67
A3	1307.26	2	2614.52	96.83	169.46
A4	1176.48	2	2352.96	87.15	152.51
A5	1162.78	3	3488.33	129.20	226.10
B1	1926.09	6	11556.51	428.02	749.03
B2	2500.00	3	7500.00	277.78	486.11
B3	259.75	3	779.24	28.86	50.51
B4	2500.00	2	5000.00	185.19	324.07
B5	321.35	3	964.05	35.71	62.48
C1	1928.26	5	9641.29	357.08	624.90
C2	2500.00	3	7500.00	277.78	486.11
C3	1116.19	4	4464.75	165.36	289.38
C4	952.98	2	1905.97	70.59	123.53
C5	1030.84	3	3092.53	114.54	200.44
D1	1930.43	2	3860.86	142.99	250.24
D2	2225.74	3	6677.23	247.30	432.78
D3	1534.15	5	7670.74	284.10	497.18
D4	1518.46	3	4555.38	168.72	295.26
D5	1285.00	1	1285.00	47.59	83.29
E1	1932.60	3	5797.81	214.73	375.78
E2	1920.63	1	1920.63	71.13	124.49
E3	687.45	2	1374.89	50.92	89.11
E4	656.30	2	1312.60	48.61	85.08
E5	45.01	2	90.01	3.33	5.83
F1	1934.77	2	3869.55	143.32	250.80
F2	2500.00	2	5000.00	185.19	324.07
F3	2500.00	2	5000.00	185.19	324.07
F4	2500.00	2	5000.00	185.19	324.07
F5	1985.25	2	3970.50	147.06	257.35
G1	612.47	4	2449.89	90.74	158.79
G2	264.10	2	528.20	19.56	34.23
G3	240.45	2	480.90	17.81	31.17
G4	1046.50	2	2093.01	77.52	135.66
G5	2137.93	0	0.00	0.00	0.00
H1	309.57	4	1238.30	45.86	80.26
H2	186.43	2	372.85	13.81	24.17
H3	987.76	0	0.00	0.00	0.00
H4	1632.21	0	0.00	0.00	0.00
H5	2138.51	5	10692.54	396.02	693.03
I4	329.26	2	658.51	24.39	42.68
I5	1250.43	2	2500.86	92.62	162.09

- Material consists of non-hazardous contaminated historic fill material and impacted native soil
- Excavation based on in-place volumes of contaminated material. Potential volume of recyclable concrete, asphalt or brick is not included.
- Assumes a tonnage conversion factor of 125 per cubic foot or 1.75 per cubic yard.

Total Cubic Yards = 5,780.31
Potential Tonnage = 10,115.55

N

0 30 60 Feet

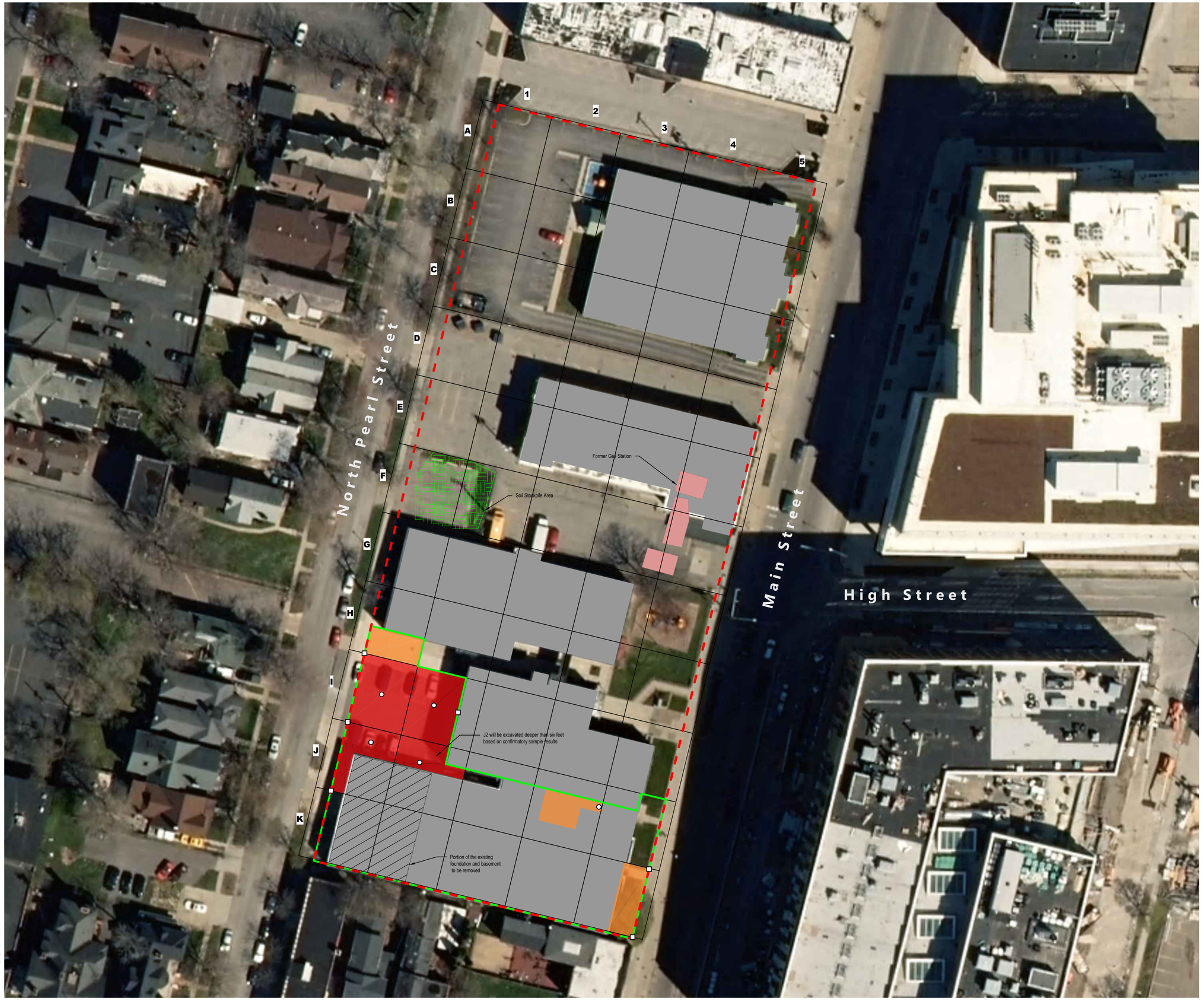
1" = 30'

When printed on 24 in. by 36 in.

Hope on Main
954 Main Street
Brownfield Cleanup Program

Sources: Survey information was provided by GPI Engineering, Landscape, Architecture & Surveying, LLP dated 12/10/2021. C&S Engineers, Inc. assumes no responsibility for its accuracy.

Figure 3a- RAWP Remedy



C&S COMPANIES®

IRM Track 1 Cleanup

- Brownfield Cleanup Program (BCP) Site
- Interim Remedial Measure (IRM) Boundary
- Confirmatory Sample Location
- Perimeter Soil Sample Location

Excavation Depth (feet)

- 4
- 6

Grid	Area	Depth of Excavation	In-place Volume	In-place Volume	Potential Tonnage
	square foot	feet	cubic feet	cubic yard	
H1	770.92	4	3083.66	114.21	199.87
I1	1941.28	6	11647.67	431.39	754.94
I2	1766.46	6	10598.75	392.55	686.96
J1	1066.90	6	6401.40	237.09	414.91
J2	829.88	6	4979.26	184.42	322.73
J3	211.14	0	0.00	0.00	0.00
J4	728.12	4	2912.48	107.87	188.77
J5	1081.23	0	0.00	0.00	0.00
K1	476.55	0	0.00	0.00	0.00
K5	910.55	4	3642.21	134.90	236.07

- Material consists of non-hazardous contaminated historic fill material and impacted native soil
- Excavation based on in-place volumes of contaminated material. Potential volume of recyclable concrete, asphalt or brick is not included.
- Assumes a tonnage conversion factor of 125 per cubic foot or 1.75 per cubic yard.

Total Cubic Yards = 1,654.29
Potential Tonnage = 2,895.00

N

0 30.0001 60.0001 Feet

1" = 30'

When printed on 24 in. by 36 in.

Hope on Main
954 Main Street
Brownfield Cleanup Program

Sources: Survey information was provided by GPI Engineering, Landscape, Architecture & Surveying, LLP dated 12/10/2021. C&S Engineers, Inc. assumes no responsibility for its accuracy.

Figure 3b- IRM Remedy