INVENTUM ENGINEERING, PC

Excavation Interim Remedial Measure Work Plan

80 Lyndon Road

80 Lyndon Rd., LLC.

Proposed Brownfield Cleanup Program Site

NYSDEC Site No. C828230
80 Lyndon Road

Fairport, NY 14450

May 22, 2024
Revised: September 19, 2024

Final Appendix A and Appendix B drawings added May 19, 2025

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Engineering Certification

I, John. P. Black, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Excavation Interim Remedial Measure Work Plan was prepared in accordance with all applicable statutes and regulators and in substation conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

Respectfully Submitted,

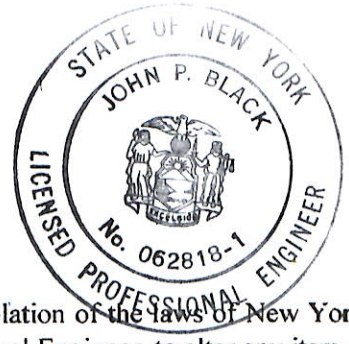
Inventum Engineering, P.C.

Date: Sept. 19, 2024

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List of Acronyms

AST	Above Ground Storage Tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CPP	Community Air Monitoring Plan
CFR	Code of Federal Regulation
DER	Division of Environmental Remediation
E&SC	Erosion and Sediment Control
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
IDW	Investigation Derived Waste
IRM	Interim Remedial Measure
NFRAP	No Further Remedial Action Planned
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PM	Project Manager
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanic Acid
PFOS	Perfluorooctanesulfonic Acid
SCO	Soil Cleanup Objective
SEMS	Superfund Enterprise Management System
SOW	Statement of Work
SVOCs	Semi-Volatile Organic Compounds
SSD	Sub-slab Depressurization
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USACE	United States Army Corps of Engineer
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds



1 Introduction

On behalf of 80 Lyndon R., LLC, Inventum Engineering, P.C. (Inventum) has prepared this Excavation Interim Remedial Measures (IRM) Work Plan for the Brownfield Cleanup Program (BCP) Site located at 80 Lyndon Road (Site) in Fairport, New York within the Town of Perinton and Monroe County. The Site #C828230 consists of 23.468 (surveyed) acres and the Monroe County section/block/lot tax parcel number is 153.03-1-26. The location of the Site is shown in Figure 1-1. The BCP Site name is 80 Lyndon Road.

On June 15, 2016, 80 Lyndon Road., LLC (80 Lyndon Road) purchased the proposed BCP Site from Thomas Creek Enterprise, Inc. 80 Lyndon Road has no prior business relationship with Thomas Creek Enterprise, Inc., with the previous owners of the property, or with the operator of the landfill. The BCP Site was conveyed from Craig Parsons to Thomas Creek Enterprise, Inc in 1975 and Mr. Alen Granger conveyed the BCP Site to Mr. Craig Parsons in 1967 (LCS, 2016).

The site was used for a landfill from 1971 to 1975. The landfill (formerly known as Granger Landfill) was reported to have begun operation in 1971 and was operated by Granger Landscape Service, Inc. Mr. Allen Granger applied and received a permit to operate as a sanitary landfill, reportedly allowing the only disposal of boards, wooded debris, and rubble, a construction and demolition (C&D) landfill. The landfill operated until its closure in 1975. Based on historical aerial photographs, the entire property was disturbed during the landfilling activities, no pre-existing surface contours or materials are believed to exist on the BCP Site. "No final inspection for the [landfill] site was completed." (NYSDEC InfoLocator).

According to Mike Doser, Director of Planning and Rob Kozarits, Town Engineer – Town of Perinton there was no activity on the site after the landfill closed in 1975 until 1988 when the first ice skating facility was developed on the property. Site operations have been limited to the operation of the ice-skating facility since 1988 (Figure 1-2). 80 Lyndon Road was not the owner or operator of the landfill and did not contribute waste to the landfill or on site.

At the time of purchase and not until the results of the 2020 New York State Department of Environmental Conservation (NYSDEC) Investigation (Parsons, 2020) and 2023 NYSDEC Investigation (Ramboll, 2023), 80 Lyndon Road had no knowledge of any potential environmental conditions of concern on their property. The Phase I Environmental Site Assessment (ESA) conducted for their purchase indicated no significant environmental risk on the property. Although 80 Lyndon Road has owned the property since 2016, the NYSDEC only initiated investigations under the inactive landfill program in 2020, and the constituents of concern were not regulated until 2022.

This IRM Work Plan is being submitted to the NYSDEC with the intent to allow excavation of the foundations for a third ice rink while the investigation work for the BCP Site is being conducted. The excavation activity will be overseen by the environmental professionals conducting the remedial investigation and the excavation activities will allow far more observation and sampling of the site fill than would be possible during an investigation. The IRM will be conducted in accordance with DER-10 Technical Guidance for Site Investigation and Remediation (May 2010) and Green Remediation DER-31.

1.1 Site Excavation Objectives

The objectives of the IRM program are to complete the excavation and onsite transport and placement of soil and debris from the area planned for development in 2024 (Appendix A) to a designated stockpile location on Site. The Remedial Investigation Work Plan (RIWP, Inventum, 2024) was submitted with the

BCP Application and has been revised in accordance with comments from both the NYSDEC and the New York State Department of Health (NYSDOH). A Community Air Monitoring Program (CAMP), Health and Safety Plan (HASP) and a Quality Assurance Project Plan (QUAP) aka Quality Assurance/Quality Control (QA/QC) Plan are appended to this document. The site name is 80 Lyndon Road, formerly Lyndon Road Landfill (also known as the Granger Landfill) with Site Code C828230 (NYSDEC InfoLocator).

A figure showing the Site location and boundaries of this Site is provided in Figures 1-1 and 1-2. For reference, the proposed 2024 development on the property is defined on the Site Plans, prepared by BME Associated (Appendix A). The Site Plans and Erosion and Sediment Control (E&SCP) were subject to review and approval by the Town of Perinton, these plans have been approved.

This IRM was prepared to provide the environmental framework to manage soil excavation actions for the third ice rink on 80 Lyndon Road. This IRM is not intended, to address the remedial actions for the BCP Site, final grading of the BCP Site, or final cover placement. The remedial alternative (remedial actions) activities will be recommended in a Feasibility Study (FS) following the Remedial Investigation (RI) and NYDEC and NYSDOH approval as the final remedial alternative. This IRM Work Plan is intended to allow onsite relocation of soil from the proposed 2024 rink construction location, observe and sample as necessary the excavated materials, and to stockpile the materials in the designated area on the southern portion of the Site (see Appendix A). 80 Lyndon Road, or its representatives, will notify the NYSDEC if potentially grossly contaminated materials (see Section 3) are encountered. The Site owner or their representative will provide the NYSDEC with at least 5 days prior notice before the initiation of excavation activities. The CAMP air monitoring program will be conducted during all intrusive activities.

This IRM was prepared by Inventum Engineering, P.C., on behalf of 80 Lydon Road, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, NYSDEC's DER-31 ("Green Remediation"), dated January 2011, and the guidelines provided by the NYSDEC. This IRM addresses the means for the management of soil and debris during the IRM.

Several DER-31 components considered for the Excavation Work Plan were removed due to the early phase of investigation and understanding of the site characteristics. A bioretention basin was considered for management of stormwater. Although the basis would promote infiltration and management of stormwater, it would also introduce additional water into the former landfill mass and potentially mobilize materials that were otherwise above the shallow groundwater surface. Rather than promote mobility at this time, the DER-31 components will be deferred until the Remedial Investigation has provided data to define a more complete understanding of the site.

1.2 IRM Organization

This IRM has been organized in the following sections:

Section 1 - Introduction
Section 2 - Site Description and History
Section 3 - Excavation Scope of Work
Section 4 - Waste Management Plan
Section 5 - Construction Completion Report
Section 6 - Schedule
Section 7 - Bibliography
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Appendix A – Community Air Monitoring Plan
Appendix B – Health and Safety Plan
Appendix C – QA/QC Plan

2 Site Description and History

The 80 Lyndon Road site address is 80 Lyndon Road, Fairport, New York and is located in a mixed-use area within the Town of Perinton in Monroe County, New York (Figure 1-1). The Monroe County Tax Parcel number is Section 154. 030; Block 1; Lot-26 and the total surveyed acreage is 23. 468. Of the total surveyed acreage of 23.468, 0.711 acres of the parcel is located southwest of the main parcel and on the west side of Lyndon Road (County Route 44). The site surveyed boundary is shown on Figure 1-2.

Surrounding the ice-skating facility are 14.42 acres of woodlands, Thomas Creek and 1.71 acres of maintained lawn. Thomas Creek flows south parallel to the eastern border, flows west after turning around the south end of the Site and then flows north-northwest on the western side of the site before flowing west and crossing under Lyndon Road. Runoff is currently controlled by an onsite stormwater retention basin (Note: soil/sediments removed from the building and parking lot stormwater retention basin were tested in 2022 and all compounds analyzed were below commercial Soil Cleanup Objectives (SCOs), but the full DER10 list was not included in the suite of testing.) (Paradigm, 2022) The stormwater management for the proposed excavation is subject to the Town of Perinton MS4 (MS4 SPDES Permit ID # NYR20A385), and the Town's MS4 Official is Jason Kennedy, Commissioner of Public Works.

Preliminary identification of wetlands was made along the eastern property boundary and along Thomas Creek. The field survey and report for the wetland and waterbodies delineation was completed by Earth Dimensions, Inc., and a field meeting with the United States Army Corps of Engineer (USACE) to approve jurisdictional determination has been requested and is expected to be conducted in 2024. The Wetland and Waterbodies Delineation Report was prepared by Earth Dimensions, Inc. The proposed excavation work plan encroaches to within 50-feet of the wetland boundary, within the 100-foot buffer but only on property previously disturbed and filled by the landfill operations.

The Site was used as a landfill from 1971 to 1975. The landfill (formerly known as Granger Landfill) was reported to have begun operation in 1971 (see Photograph No. 1) and operated by Granger Landscape Service, Inc. Mr. Allen Granger applied and received a permit to operate as a sanitary landfill, reportedly allowing the disposal of boards, wooded debris, and rubble. The landfill operated until its closure in 1975. No final inspection for the site was completed" (NYSDEC InfoLocator). The exact boundary of the former landfill is unknown; however, a previous investigation has estimated the landfill limits to encompass the majority of the Site (Ramboll, 2023). Based on the previous report and historical aerial photographs (see Photograph No. 2), the entire surface on the BCP Site has been disturbed and no natural surfaces or surface soils are believed to exist on the property.



Photograph No. 1

Aerial Photograph dated 1971, Landfilling Activity

Note: surface features that existed prior to landfilling no longer exist.



Photograph No. 2

Aerial Photograph dated 1980, After Known Landfilling Activity

According to Mike Doser, Director of Planning and Rob Kozarits, Town Engineer – Town of Perinton there was no activity on the Site after the landfill closed in 1975 until 1988 when the first ice skating facility was developed on the property. Since 1988 a portion of the BCP site has been a commercial ice-skating facility including parking. Outside of the ice-skating facility and parking, the remainder of the site has been allowed to naturally evolve (see Photograph No. 3).



Photograph No. 3

Oblique Aerial Photograph Taken February 2023, looking North

While the landfill was reportedly "allowing the disposal of boards, wooded debris, and rubble", recent investigations by the NYSDEC have encountered plastic materials, suspect printing shop wastes, suspect medical wastes, and several buried and partially buried 55-gallon drum carcasses and one intact drum. Surface inspections in the wooded areas identified metal and concrete debris that is no longer covered by the assumed 12-inch thick 1975 cover system. These conditions were not reported to the owners in the Phase I ESA that was conducted by LCS, Inc. in 2016 prior to 80 Lyndon Road purchasing the property.

The recent investigations performed by Parsons in 2020 and Ramboll in 2023 under the direction of the NYSDEC suggest that other wastes were disposed with the "boards, wooded debris and rubble" and that these materials contain Polycyclic Aromatic Hydrocarbons (PAHs), Perfluorooctanoic Acid (PFOS) and, per- and poly-fluoroalkyl substances (PFAS), 1,4-dioxane, Volatile Organic Compounds (VOCs) Semi-volatile Organic Compounds (SVOCs), and metals. The RIWP was developed to investigate and characterize the BCP Site.

2.1 Operational History

According to Mike Doser, Director of Planning and Rob Kozarits, Town Engineer – Town of Perinton there was no activity on the site after the landfill closed in 1975 until 1988 when the first ice-skating facility was developed on the Site. The ice-skating facility is fully operational today under the ownership of 80 Lyndon Road and expansion will allow detailed evaluation of the landfill materials in the proposed building footprint.

Since the transfer of ownership of the Site in 2016, 80 Lyndon Road has taken significant actions to secure the Site and protect the environment:

- Site Security;
- Proper management of waste generated from the facility operations; and
- Protect the streams and wetlands present onsite.

The excavation IRM will continue the good stewardship of the property by excavating a relatively large mass of the landfill, allow detailed inspection and screening of the landfill materials, remove grossly contaminated materials from the excavated materials, and reduce the overall footprint of the landfill exposed to precipitation and infiltration (and ultimately leaching).

2.2 Previous Investigations

Records indicate that a Phase II investigation was completed in 1990 and did not document the presence of hazardous waste on-site. The Phase II Report stated that the NYSDEC had determined that there are no known environmental problems associated with the disposal of hazardous waste at this site (LCS, 2016).[1]

A Phase II field investigation was conducted and completed in 1991 by Ecology and Environment Engineering, P.C.[2] in conjunction with the adjacent Little League Landfill site (#828026A) located to the west across Lyndon Road. This investigation included an initial site reconnaissance, an electromagnetic terrain conductivity (EM31) survey, and a portable proton magnetometer survey to define the site geological conditions, locate and buried metals, and determine the presence of contaminant plumes. Four monitoring wells were installed in the overburden of the former Granger Landfill. Groundwater, surface water, and sediment samples were collected from the former Granger Landfill site. The 1991 results did not indicate that there was any significant contamination at the site (DECInfo Locator, 2023). Both of the Phase II investigations were conducted before the emerging contaminants PFOA, PFOS, and 1,4-dioxane were regulated.

In August 2020, emerging contaminant sampling was completed by Parsons under the Inactive Landfill Initiative which included the collection of four groundwater samples. Four monitoring wells were installed in the eastern portion of the BCP Site. The depths of the monitoring wells range from 15-feet to 31-feet below the ground surface. The collected groundwater samples were analyzed for VOCs, polycyclic aromatic hydrocarbons, 1,4-dioxane, perfluorinated compounds, baseline leachate indicators, and modified baseline metal. Detected parameters of concern in the groundwater consist of PFOA, PFOS, and 1,4-dioxane (Parsons, 2020).

During the first quarter of 2023, Ramboll conducted an environmental site characterization of the BCP Site under the direction of the NYSDEC. 80 Lyndon Road only has access to the work plan with a sample location figure which was prepared by Ramboll in advance of the field investigation and the analytical laboratory reports for the samples collected during the site characterization investigation. In summary, the project objective of Ramboll's work plan was to assess the potential for site-related constituents to migrate off-site above regulatory standards and guidance values. The site characterization will evaluate the presence of VOCs, SVOCs, polychlorinated biphenyls (PCBs), 1,4-dioxane, PFAS, inorganics, mercury, cyanide, and pesticides/herbicides in groundwater, surface water, soil, sediment, and fill material. The scheduled sampling consisted of:

- Soil sampling from three selected intervals from four soil boring locations
- Six test pit trenches with a projected depth of 4-feet to six feet and up to 8-feet in length.

[1] Lyndon Road does not have a copy of the 1990 Phase II, and it is not included in the NYSDEC Info Locator Document resource. It is possible that LCS was referring to the 1991 Investigation that is described in the DECInfo Locator Site Record which was the 1991 investigation Ecology and Environment Engineering, P.C. that included 80 Lyndon Road site and the Little League Landfill Site.

[2] Lyndon Road does not have a copy of the 1991 Phase II,

- Install four monitoring wells to collect groundwater samples. The intent was to install the well screen in native material either vertically or horizontally outside the fill material to assess potential for migration of contaminants Surface water and sediment sampling of two samples collected from an upstream and downstream stream location.

Sampled constituents of SVOCs, PFOA, metals and PFAS were detected in exceedance of DER-10 Part 375, Soil Cleanup Objectives (SCOs).

During the test pitting, several red and blue plastic bags containing what appeared to be medical waste, were unearthed in two locations. In a third location, a semi-intact 55-gallon steel drum was discovered. The drum contained unknown material, solids, and liquids, which were sampled and contained elevated levels of VOCs and SVOCs. These discoveries indicate the landfill was used for disposal of other waste besides the intended use of disposal of boards, wooded debris, and rubble. A sample from the drum contained 2-Butanone (MEK), Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene above industrial SCOs and Benzo(b)fluoranthene, Chrysene, and Indeno(1,2,3-cd)pyrene at above restricted residential SCOs.

In February 2024 during a geotechnical investigation, two soil samples were collected from soil borings on Site. Exceedances of SVOCs were detected in GEO-SB-04 including Benzo(a)anthracene, Benzo(a)pyrene, Benzo(a)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene. An exceedance of a pesticide 4, 4'-DDD was detected in GEO-SB-06.

2.3 Site Location and Description

The Site in a mixed-use area consisting of undeveloped land, residential, and recreational sport fields.

The BCP Site is bounded to the north by two residential tracts that are approximately 6 acres each. To the east, the Site borders an undeveloped tract that is zone residential and an undeveloped tract that is zone industrial. An additional undeveloped tract that is zone residential borders the Site to the South. Lyndon Road is along the west side of the Site and to the west of Lyndon Road is the inactive Little League Sanitary Landfill (Solid Waste ID: 28S12 and Inactive Hazardous Waste Number: 828026A, Class N) which is now operational sport fields. The Little League Sanitary Landfill reportedly began operations in 1971 and operated as a construction and demolition debris site from 1971 through 1976 and as a disposal site for municipal debris that was removed from the Emerson Street Dump in 1977 and 1978.

An aerial image of the surrounding properties can be viewed in Figure 1-1.

2.4 Topography

A topographic survey of the Site was conducted in October 2023 by Schultz Associates, Engineers and Land Surveyors, P.C., a New York State licensed surveyor (Figure 1-2). The natural elevation of the Site is generally flat at around 475 feet above mean sea level (ft. AMSL) in the center and along Lyndon Road. Thomas Creek flows south along the eastern border of the Site, wraps south of the Site, and then flows north along the west boundary before exiting the Site to the west. The topography of the Site has slopes to the east, southeast, and south toward Thomas Creek. The maximum relief is approximately 20-feet to 25-feet located in the northwest, western, and south sections of the site towards Thomas Creek. These slopes do not appear to be natural and are suspected to represent landfilled materials.

2.5 Geology

Monroe County lies within the Central Lowland physiographic province (Eastern Lake Section) of New York. The county is primarily mantled by glacial tills, laminated lacustrine clay and silt deposits. The till consists of unconsolidated, poorly sorted clay, silt and/or sand deposits of relatively low permeability (loamy matrix). The stratigraphy of the site area can be characterized as shale bedrock (Vernon Shale) overlain by 25-feet to 50-feet of glacial deposits and lacustrine sediments. Bedrock was encountered at depths ranging from 28.2-feet to 50.5-feet below ground surface (BGS) according to drilling logs for the Granger Landfill site (Ramboll, 2023).

Review of the boring logs indicates that most of the waste material is unsaturated. The shallow groundwater flow was shown to be towards the southwest based on observations from the four monitoring wells installed by Parsons (Parsons, 2020). Groundwater generally occurs in the underlying overburden deposits. Water level elevations measured in November 1989 indicated groundwater flows towards Thomas Creek which would coincide with the observations made in 2020.

Clay soils with intermittent sand lenses were reported to be present below the landfill material at monitoring well location MW-01 and MW-02 in the west central portion of the Site and mainly sand with thin layers of clay and/or silt were reported to be present below the landfill material at monitoring wells MW-03 and MW-03 in the center to southern portion of the Site (Parson, 2020).

2.6 Surface Water Hydrology

Surface water from the improved parking lot and building flows to the southwest corner of the parking lot to a stormwater retention pond and any water that exits the retention pond flows to the west towards Thomas Creek. Surface water from outside the footprint of the building and parking lot flow away from the improved areas towards Thomas Creek. The proposed site plan includes surface water controls being reviewed and that require the approval of the Town of Perinton.

2.7 Wetlands and Waterways

On behalf of 80 Lyndon Rd, a preliminary identification of wetlands was made along the eastern property boundary and along Thomas Creek. Thomas Creek flows south along the eastern border of the site and then west along the southern boundary. The topography of the slight slopes to the east, southeast, and south toward Thomas Creek. The field survey and report for the wetland and waterbodies delineation has been completed by Earth Dimensions, Inc., and a field meeting with the United States Army Corps of Engineer (USACE) to approve jurisdictional determination has been requested and is expected to be conducted in 2024. The Wetland and Waterbodies Delineation Report was prepared by Earth Dimensions, Inc. and has been submitted to the NYSDEC and US Army Corps of Engineers, but a jurisdictional determination has yet to be made.

2.8 Groundwater

Review of the boring logs indicates that most of the waste material is unsaturated. The shallow groundwater flow was shown to be towards the southwest based on observations from the four monitoring wells installed by Parsons in 2020 (Parsons, 2020). Groundwater generally occurs in the underlying overburden deposits. Water level elevations measured in November 1989 indicated groundwater flows towards Thomas Creek which would coincide with the observations made in 2020. Groundwater information is not available from the 2023 investigation.

There are no municipal groundwater wells located within a 1-mile radius of the Site. Two private wells were located within a 0.25-mile radius from the center of the site, based on a 1935 Monroe County Survey.

Both well locations were at a higher elevation and located in the presumed upgradient direction from the proposed Site. One well was located approximately 315-feet north of the northwest corner of the Site and the second well was located approximately 360-feet northeast from the northeast corner of the Site. Three additional private wells were located to the northwest and northeast of the Site within a 0.25-mile and 0.5-mile radius. Seven additional private wells were located to the northwest and northeast of the site within a 0.5-mile and 1-mile radius, three of which are located in the presumed downgradient direction but were on the south side of the Erie Canal, a presumed hydraulic barrier. (EDR 2023).

The Field Activities Summary Report prepared by Parsons in November 2020 states that the area is searved by public water and to the according the DEC website, there are no public drinking water wells within a mile of the Site (Parsons 2020). As part of the RI for Site, Inventum will contact the municipality to confirm that properties within 0.5-miles of the Site that had groundwater wells shown on their property in the EDR database are currently supplied by the municipal water system.

3 Excavation Scope of Work

This IRM scope of work is a required element for the excavation of the foundation of a proposed third ice rink. The Site is listed in the NYSDEC registry as No. C828230. The excavation scope of work includes the excavation and placement of soil/fill should the proposed 80 Lyndon Road BCP Site be accepted into the BCP (Figure 1-2). The civil engineering aspects of the project are being designed by BME Associates for review and approval by the Town of Perinton. Images provided by BME of the excavation IRM are shown over an aerial image in Appendix A. This IRM Work plan defines the aspects of the proposed work that must comply with the BCP.

A figure showing the Site location and boundaries of this Site is provided in Figures 1-1 and 1-2. For reference, the proposed 2024 redevelopment is shown on the figures in Appendix A. This IRM Work Plan was prepared to provide the framework and requirements to manage the removal actions at 80 Lyndon Road within the context of the BCP as required to allow construction of the third ice rink, protect surface water, monitor air quality, and ensure no grossly contaminated materials are placed in the fill areas. This IRM while improving the overall site conditions, is not intended to address the long-term remedial actions required at the BCP Site. The long-term remedial alternative can only be identified following the RI and FS. This IRM Work Plan scope of work is intended to:

- Remove soil from the location to be developed as the third ice rink (Appendix A);
- Allow inspection of the landfill surface following clearing of the excavation and stockpile locations. The site preparation will also allow access for the BCP RI sampling program (Appendix A);
- Protect surface water by installing appropriate controls (Appendix B);
- Allow inspection of the large mass of landfill material to develop a conceptual model of what had been placed in the 1970's;
- Allow analysis of the quality of shallow groundwater, if any, within the landfill mass;
- Allow removal of any grossly contaminated materials from the excavated materials within the third ice rink footprint from the BCP Site;
- Allow analysis and monitoring of the placement and compaction of fill from the ice rink excavation; and
- Facilitate placement of a cover system, the ice rink building, over a large section of the former landfill.

In accordance with DER-10, the reuse of the fill will comply with Table 5.4(e)4, as it is within the area of the landfill and is composed of the same materials that exist in the area of placement. For those areas that will be utilized by site employees or users of the ice center, during the RI, Feasibility Study, and Remedial Design, the fill will be placed below 12-inches of soil cover, pavement or below the rink building, both that will provide the equivalent interruption of exposure pathways to a commercial cover.

Table 5.4(e)4 Reuse of Soil [for Paragraph 5.4(e)4]		
Soil on the Site Meets:	**Reuse on the Site:**	**Off-site Export & Reuse:**
Unrestricted Soil SCGs	Without restrictions	Without restrictions
Meets the Applicable Use-based and Groundwater Protection SCG and where Appropriate Protection of Ecological Resources Soil SCGs for a Site w/ an IC & SMP.	In the soil cover/cap or as backfill within the area of the site subject to the IC.	Not Allowed, unless going to a site with IC subject to a 6 NYCRR Part 360 Beneficial Use Determination (BUD).
Meets Site-Specific Background Soil Levels.	Without restrictions. (Does not apply to sites in the BCP.)	Not Allowed, unless going to a site with IC subject to a 6 NYCRR Part 360 BUD.
Site-specific cleanup goals for subsurface soil	Placement below the soil cover/cap within the area of the site subject to the IC.	Not Allowed, unless going to a site with IC subject to a 6 NYCRR Part 360 BUD.

3.1 Health and Safety

The existing indoor ice-skating facility will remain active during the excavation and fill placement. There are two active indoor skating rinks, parking, and equipment and material storage outside the existing building and outside the proposed limits of disturbance. To prevent inadvertent access, construction fencing, and signage will be posted around the limits of disturbance. No unauthorized personnel will be allowed within the designated area.

The Community Air Monitoring Plan (CAMP, Appendix C) will be in place to ensure there are no potential exposures to dust or other potential emissions from the excavation to visitors to the site outside the area of disturbance or to the community. During earthwork activities, at least one air monitoring station will be maintained at a location adjacent to the closest entrance to the existing ice rink, and a second downwind CAMP station will be located and adjusted as need based on current wind directions.

All appropriate precautions will be taken to ensure site access is restricted to authorized contractors, consultants and visitors inside the area of disturbance with proper Personal Protective Equipment (PPE). Although no hazardous wastes are anticipated, a Health and Safety Plan is included in Appendix D and will be followed by onsite personnel as a contingency. All management and sampling of any materials identified as potentially grossly contaminated will be conducted in accordance with the HASP. Of particular note, the following potential threats have been noted onsite:

- A buried 55-gallon drum;
- Buried potential medical wastes;
- Steep slopes and slip and fall hazards along Thomas Creek;
- Large areas of poison ivy;
- Ticks; and
- Beavers (Avoid)

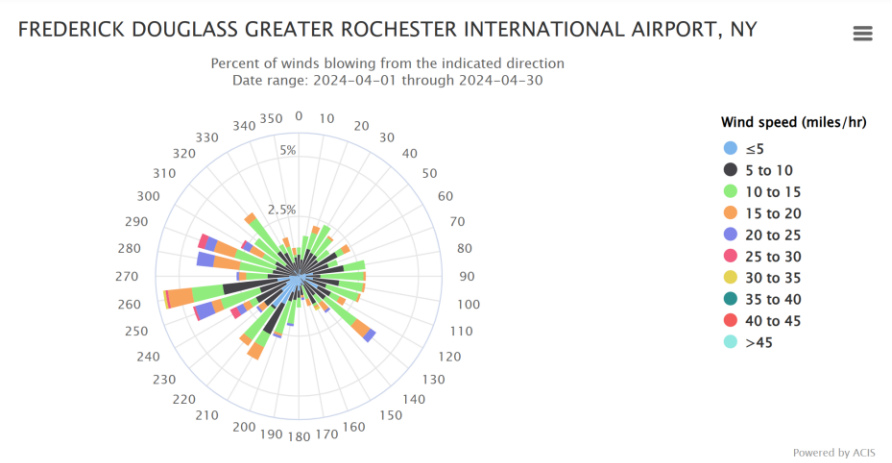
Note: the property owner on the property that shares the south property boundary of the BCP Site has been conducting what they term “controlled burning” of cleared and grubbed materials. Should that occur during the earthmoving IRM activities, the impact on the CAMP sensors will be noted and additional visual monitoring of onsite dust will be conducted.

As part of the foundation construction a permeable soil vapor collection layer will be installed under the area to receive a slab. Perforated piping will be installed within the collection media and will be routed outside the north wall of the mechanical room and will be capped. Following completion of the structure and rink, soil vapor and indoor air sampling will be conducted at the locations shown on Figure 3-1. The selected locations include the common areas around the rink and the office on the ground level. Other areas

shown on the plan are open elevated mezzanine areas that are not enclosed and share indoor air with the common areas. A detailed SVI IRM Work Plan will be submitted after the foundation excavations, before the building is completed, and will include the results of sampling conducted during the excavation program.

3.2 Erosion and Sediment Control Plan

The management of stormwater throughout the IRM program shall, at a minimum, comply with the Erosion and Sediment Control Plan (E&SC, Appendix B). The E&SC plan includes wind and water controls. For general reference, the predominant wind direction, based on the Rochester International Airport Wind Rose (see below) is from the west.



https://www.nrcc.cornell.edu/wxstation/windroses/windroses.html

Silt fence will be installed around the proposed area to be cleared (Appendix B). Silt fence, and/or hay bale check dams, will be installed and inspected once a week and after every storm event (greater than 0.5 inches of precipitation). Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately before any earthmoving in the area that the E&SC controls are compromised.

Accumulated sediments will be removed as required to keep the silt fence, and hay bale check barriers functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

E&SC measures identified in the E&SC plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

3.3 Clearing

The surface of the landfill, outside the limits of the existing ice rink operations have been allowed to naturally evolve. Following installation of the E&SC controls, the following activities will be conducted in the area of disturbance (Appendix A):

- Cutting the brush using a brush hog or similar to allow mobility of the foresters throughout the area to be cleared;

- The cut brush will be transported and disposed at the Town of Perinton municipal yard waste facility;
- Trees will be cut down;
- Branches will be removed, chipped and used as mulch onsite in steeper areas of the site;
- Large branches and trucks will be cut and removed from the site for disposal or firewood offsite; and
- Stumps shall be pulled and disposed in accordance with state and local regulations at the Town of Perinton municipal yard waste facility or as solid waste.

Although the neighbor to the south conducted a "controlled burn" of cleared material on that property, no onsite burning of cleared materials is allowed on the BCP Site.

3.4 Water Management

Groundwater is not expected in the excavations, all measured groundwater elevations are below the base of the excavations. Should groundwater be encountered, a contingency plan will be submitted for treatment and discharge to the Town of Perinton Publicly Owned Treatment Works (POTW). No excavation dewatering will be discharged to Thomas Creek.

The Town of Perinton has been notified of the proposed excavation and all plans will be approved by the Town and the Towns Conservation Board before any ground disturbance. The pre-treatment coordinator will be consulted to provide the requirements for testing and discharge of excavation water to the sanitary sewer. No excavation water will be pumped to Thomas Creek.

3.5 Soil Screening Methods

Visual and olfactory screening of the materials being managed will be performed by the equipment operator and the 80 Lyndon Road representatives. Following clearing and grubbing, where there is identifiable soil cover, the top 3- to 6-inches of clean soil will be removed and stockpiled. Although there was reportedly a 12-inch soil cover, visual evidence is no more than 6-iches of soil cover is recoverable. the area cleared will be graded to remove low spots and holes that would not be suitable subgrade for subsequent fill placement. The stockpiled soil cover materials will be placed after all subsurface materials are compacted and outside those areas to be used during the RI, FS and Remedial Design.

During grading the 80 Lyndon representatives will inspect the surfaces for grossly contaminated materials and screen the soils with a Photoionization Detector (PiD). As the soil/fill is excavated for the ice rink, the materials in the excavation and sidewalls of the excavation will be inspected. The excavation materials will be screened with a PiD and any materials that appear stained or grossly contaminated will be stockpiled separately. PiD detections of more than 200 ppm will be considered indicative of potential impact and the soils will be sampled prior to reuse. All pre-existing landfill soil will, at a minimum, ultimately be placed below a commercial soil cover in accordance with the future Remedial Action Work Plan.

Any material producing a noticeable non-aqueous liquid like behavior, appear grossly contaminated, or produce an odor detectable more than 4 feet away shall be reported to the onsite 80 Lyndon Road Staff:

1. Shawn O'Donnell, Owners Representative - 585.606.1679
2. Peter Zaffram - 716.553.5129
3. John Black - 571.217.6761

If underground storage tanks, tar, underground pipes or utilities, or other previously unidentified contaminant sources are found during excavation, activities will be suspended until appropriate equipment

is mobilized to address the potential sources.

For purposes of this IRM potential gross contamination shall mean those materials that could act as a source of ground or surface water contamination:

1. Sealed containers potentially containing liquids or gasses;
2. Free flowing non-aqueous liquids (e.g. oil);
3. Potential Medical Waste;
4. Universal wastes potentially containing refrigerants or mercury (lightbulbs and switches);
5. Materials identified by the owner's onsite representative or the NYSDEC.

Potentially grossly contaminated materials have been identified previously in the wooded areas no longer covered by the assumed 12-inch thick 1975 cover system. Potentially grossly contaminated materials shall be placed in the stockpile area shown on Drawing No. 7 (Appendix A). The potentially grossly contaminated soil shall be placed on one layer of 6 mil (minimum) polyethylene sheeting and shall be covered after each workday with a sheet of 4 mill (minimum) polyethylene sheeting.

Potentially grossly contaminated containers and equipment shall be placed in the storage area shown on Drawing No. 7 (Appendix A). The potentially grossly contaminated containers and equipment shall be placed on two layers of 6 mil (minimum) polyethylene sheeting that are supported by a berm of soil to create a secondary containment and shall be covered after each workday with a sheet of 4 mil (minimum) polyethylene sheeting. Anything that has the potential to contain hazardous substances will be sampled and labeled Non-hazardous waste pending analysis. To date no hazardous wastes have been identified on the site but benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and possible medical wastes have been identified. Any sample with a detection of BTEX that is more than 20 times the concentration of a characteristic hazardous waste will be sampled and tested for the Toxicity Characteristic Leaching Procedure (TCLP). Potential medical wastes will be examined and if they appear in any way to meet the definition of Regulated Medical Waste (RMW) they will be disposed in accordance with the RMW disposal requirements.

Drums and drum carcasses have been identified on the south/southeastern portion of the BCP Site. Although these areas are not within the area to be excavated for the proposed ice rink, the excavation crew and oversite personnel will observe the excavated materials for drums and containers and manage them in accordance with the sixth bullet (below) of this section. All locations of drum or drum carcasses will be documented by GPS.

Off-site disposal of site materials will not be conducted under this IRM with the following exceptions;

- Trash and construction solid waste will be stored in a roll off container and transported by licensed carrier to the local municipal landfill;
- Potential spill cleanup materials will be sampled, profiled, and transported and disposed offsite in accordance with all applicable requirements in facilities permitted for the profiled materials;
- White goods and equipment that may contain refrigerants will be transported and properly recycled or managed offsite;
- Universal wastes that may contain mercury will be accumulated onsite and transported for proper offsite disposal;
- Potential medical wastes will be stored in proper containers and transported offsite to a facility permitted for proper disposal of these materials as regulated medical wastes (RMW); and
- Any containers that may contain liquids or gasses will be staged, inspected and if there are suspected liquid or gaseous content, will be labeled and non-hazardous pending analysis,

characterized and transported to a facility permitted to dispose of the characterized content. All liquid containing containers will be staged on two layers of polyethylene sheeting with surrounding berms to prevent any release while disposal is being scheduled; and

- Grubbing debris transported to the Town of Perinton municipal yard waste facility.

3.6 Placement Methods

Excavated material shall be placed in the designated area (Appendix A). Hay bales, filter socks, or silt fence shall be used and maintained around all temporary and the proposed final catch basin(s). No soil/fill placement shall be placed that has the potential to be exposed to precipitation that could produce runoff that can directly discharge offsite without sediment controls.

The fill shall be placed in lifts, no thicker than 8-inches in loose thickness. Each lift shall be compacted using two passes of a smooth drum roller, prior to placement of the subsequent lift and at the end of each workday. There will be no compaction unit weight or moisture requirement as the underlying landfill will not provide a base for compaction. A water truck will be onsite to control dust. Only moisture shall be used to ensure no excessive dust is generated, but not in quantities that the fill could become saturated or that would induce runoff.

The placement of the reused soil will be inspected daily. Results of inspections will be recorded in a dedicated logbook and maintained at the site and available for inspection by the NYSDEC. Logbook notes will be provided to the NYSDEC after the completion of the soil excavation and placement work.

3.7 Materials Excavation and Load-Out

Loaded vehicles leaving the site will be appropriately cleaned and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site at the location shown at an exit point of the limit of disturbance (Appendix A), as appropriate. 80 Lyndon Road or the transportation staff will be responsible for ensuring that all outbound trucks will be inspected and, if necessary, washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash water will be collected and disposed of in the Town of Perinton sewer outfall in accordance with the pre-treatment permit.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site material tracking (soil). 80 Lyndon Road or its contractor will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the access road or Lyndon Road will be performed as needed to maintain a clean condition with respect to site-derived materials.

3.8 Import Materials

The majority of the planned import materials are granular and have been specified that less than 10 percent pass a No. 80 sieve. Grain size analyses and an import request form will be submitted to the NYSDEC prior to any granular fill import. There are limited landscaped areas around the proposed buildings that will require some unclassified fill and topsoil. Those finer grain materials will be tested in accordance with Table 5.4(e)10 of NYSDEC DER-10 and an import form will be submitted no less than 5 days before any such materials are imported.

Table 5.4(e)10 Recommended Number of Soil Samples for Soil Imported To or Exported From a Site			
Contaminant	**VOCs**	**SVOCs, Inorganics & PCBs/Pesticides**	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
➢ 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

3.9 Materials Reuse On-Site

The placement of the excavated fill onsite is consistent with the NYSDEC initiative for Green Remediation (DEC-31). The reuse onsite (1) reduces the area of the site subject to infiltration, (2) reduces the amount of offsite fill needed to reduce low areas and thereby naturally reduces infiltration, and (3) eliminates offsite transport of materials, reducing the generation of greenhouse gasses (GHGs). The offsite transportation and disposal of materials is typically the highest source of GHGs for landfill remediation. All reused fill be within the limits of the pre-existing landfill. No fil will be placed directly over native soils and no fill will be placed in an area that is not controlled by the E&SCP, protecting Thomas Creek.

3.10 Temporary and Permanent Seeding

Green remediation techniques shall be implemented in the completion of this IRM in accordance with DER-31. Prevention of long-term erosion, surface runoff, and off-site water quality impacts as well as unintended soil compaction shall be considered during the completion of work.

Permanent planting and temporary seeding of the Site will be conducted during completion of the IRM following the specification of Drawing No. 7 (Appendix A).

3.11 Community Air Monitoring Program

The air monitoring program during the IRM will be conducted in accordance with the Community Air Monitoring Plan (CAMP) provided in Appendix C. Should the particulate action level of 150 µg/m^3 above the upwind monitoring concentration be exceeded after corrective actions are taken, work must stop and NYSDEC and NYSDOH must be notified within 24-hours by either phone or email. The notification shall include a description of the control measures implemented to prevent further exceedances. Should significant dust associated with burning on the neighboring property be observed, additional dust control measures will be instituted until the upwind fumes abate.

Perimeter air monitoring during completion of IRM field activities will be conducted at one upwind and one downwind location (excavation or fill placement based on the dust being generated) on the perimeters of the Site. The location of the perimeter air monitors will be adjusted as necessary as the work area shifts and/or with noticeably sustained shifts in prevalent wind directions. Ribbon will be installed near the work area as a guide to determine prevalent wind direction. The prevalent wind direction and the location of the air monitors will be documented daily in the field notebook.

CAMP data summaries will be provided to the Site's NYDEC and NYDOH project managers on a weekly basis while active intrusive earthwork and soil investigations are occurring on the Site.

3.12 Odor Control Plan

The odor control plan is to control emissions of nuisance odors to the site, no nuisance odors shall migrate off-site. Specific odor control methods to be used on a routine basis will include covering odor producing materials grossly contaminated soil, or polyethylene sheeting. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all off-site odor events and of any other complaints about the project. Implementation of all odor controls, including halting work, is the responsibility of the owner's on-site representative.

All necessary means will be employed to prevent off-site nuisances. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of material to trucks for off-site transportation; (b) use of chemical odorants in spray or misting systems; and (c) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions, the excavation and handling of excavated material in the area will be suspended.

3.13 Dust Control Plan

A dust suppression plan that addresses dust management during intrusive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations, fill placement areas, and stockpiles.
- Temporary roads within the Site will be limited in total area to minimize the area required for water truck sprinkling.

3.14 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's Project Manager (PM). Revisions will be necessary upon, but not limited to, the following occurring: any removal of contaminated sediment or soil, or other significant change to the Site conditions.

3.15 Notifications

Notifications will be submitted by the Site owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

- 5-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- 5-day advance notice of any proposed movement of potentially grossly contaminated materials.
- Notice within 48 hours of any damage or defect to the foundation, structures that have the potential to affect the environment, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that has the potential to reduce the effectiveness of surface water controls in place

at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken.

- Notifications of all spills and releases of petroleum products in accordance with the Erosion and Sediment Control (E&SC) plan. Review E&SC plan for completed details, but the following is provided for reference:
- All petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362) within 2 hours of discovery, except spills which meet all of the following criteria:
    - The quantity is known to be less than 5 gallons; and
    - The spill is contained and under the control of the spiller; and
    - The spill has not and will not reach the State's water or any land; and
    - The spill is cleaned up within 2 hours of discovery.
- A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill on the Site or any soil surfaces or any gravel parking lot is considered to have impacted land and is reportable. Any spills or releases that do not require reporting to the NYS Spill Hotline will be reported, in writing, to the DEC BCP PM within 48 hours of discovery.
- In the event of a potential or actual release from the property beyond, the following shall be called in the order given after calling the NYS Spill Hotline (1-800-457-7362):
    - National Response Center - 800.424.8802
    - U.S. EPA - 732.548.8730
    - NYSDEC (Region 8) - (585) 226-5428 Avon
    - NYSDEC (Albany) - 800.457.7362
- In the event of a spill that generates material from on-Site excavation efforts (e.g., sorbent material, impacted soil, etc.), the PM will confer with Inventum and the DEC regarding the nature of the waste in order to determine the proper reuse, recycling and/or disposal method.

Table 1 includes contact information in addition to the required notification listed above. The information on this table will be updated as necessary to provide accurate contact information.

Table 1: Notifications*

Name	**Contact Information**
Sahraoui, Mohamed R (DEC) NYSDEC PM	Mohamed.Sahraoui@dec.ny.gov
Luke W. Scannell, PhD Environmental Engineer, Division of Water	P: (585) 226-5427 Luke.Scannell@dec.ny.gov
Jason Kennedy** Commissioner of Public Works Town of Perinton Department of Public Works	P: (585)-223-5115 jkennedy@perinton.org

* Note: Notifications are subject to change and will be updated, as necessary.

** **To be notified of any release with the potential to reach a Town of Perinton sanitary or storm sewer.**

Each notification of a variation from this IRM will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below ground surface, estimated volumes of potentially contaminated materials to be excavated, and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this IRM.
- A statement that the work will be performed in compliance with this IRM and 29 CFR 1910.120 (if applicable).
- A copy of the contractor's health and safety plan (HASP), in electronic format (if applicable).
- Identification of disposal facilities for potential waste streams (if applicable); and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

3.16 Field Modification Notifications

The NYSDEC BCP PM, or their designated representative, will be notified via electronic mail and telephone if the following conditions occur:

- Prior to all field activities.
- No less than 5-days before any excavated materials are transported from the BCP Site.
- The observation of any materials not previously anticipated by this Work Plan.
- Field activities are delayed and/or rescheduled due to unsafe or unsuitable weather conditions and/or equipment malfunctions.

4 Waste Management Plan

The following waste management procedures will be followed during completion of the IRM.

4.1 Soils

Soils excavated from the Site that exhibit potential gross contamination will be stockpiled in the designated location. Stockpile volumes on plastic sheeting shall not exceed 100-cubic yards. Additional waste characterization samples may be collected as necessary and separate stockpiles may be used to segregate clearly grossly contaminated material of different characteristics. One (1) waste characterization sample will be collected for every 100-cubic yards of stockpiled material and from each unique[3] drum containing unidentified liquid or sludge. Waste characterization sample analysis shall include the full suite of toxicity characteristics:

- Toxicity Characteristic Leaching Procedure (TCLP) VOCs, SVOCs, and Metals
- PFAS
- PCBs
- Flash Point and Paint Filter Test
- pH
- Reactivity, Cyanide
- Reactivity, Sulfide

A record of which test pit soil is in each stockpile, where they are stockpiled, and which waste characterization results represent that material will be kept in the field notebook.

4.2 Water

Equipment decontamination water will be containerized in the decontamination area and will be discharged to the sanitary sewer system under a specific approval or profiled to be disposed of offsite as a waste.

4.3 Drums and Containers

Drums and drum carcasses have been identified on the south/southeastern portion of the BCP Site. Although these areas are not within the area to be excavated for the proposed ice rink, the excavation crew and oversite personnel will observe the excavated materials for drums and containers and manage them in accordance with the sixth bullet (below) of this section. All locations of drum or drum carcasses will be documented by GPS.

Any containers that may contain liquids or gasses will be staged, inspected and if there are suspected liquid or gaseous content, will be labeled and non-hazardous pending analysis, characterized and transported to a facility permitted to dispose of the characterized content. All liquid containing containers will be staged on two layers of polyethylene sheeting with surrounding berms to prevent any release while laboratory analyses are being completed, profile and waste approval is sought, and disposal is being scheduled

4.4 Personal Protective and Disposable Sampling Equipment

PPE, disposal sampling equipment (ex. bailers and rope), and general trash that may come in contact with potentially impacted soils/water generated during completion of the IRM will be containerized in DOT-

[3] If multiple drums of similar labeling and content, a single composite sample will be collected and tested.

compliant 55-gallon open top steel drums or a roll-off container and stored in the IDW Storage Area. These materials will be secured and labeled as non-hazardous waste and disposed of accordingly.

5 CCR

An CCR will be prepared consistent with NYSDEC DER-10 and will include, at minimum, the following components:

- Introduction
- Site Description and History
- Site Physical Characteristics
- IRM Scope of Work and Results Summary
- Implemented IRM Summary
- Qualitative Exposure Assessment
- Cleanup Objectives
- Summary and Conclusions
- Appendices
    - Laboratory Data
    - Data Usability Summary Report

The IRM Report will include a discussion of the IRM results compared to applicable SCGs which are the Soil Cleanup Objectives (SCOs) under 6 NYCRR Part 375 and the groundwater effluent limitations for discharge to Class GA waters under 6 NYCRR Part 703.6. The discussion in the RIR on the nature and extent of contamination will be focused on any exceedances of applicable Commercial Use SCOs.

6 Schedule

The IRM activities are expected to begin in the second quarter of 2024. The start date of these activities is dependent on approval of this IRM WP and the BCP application. The schedule as presented assumes:

- BCP Agreement and RIWP Approval – Second Quarter 2024 (Public comment period ended May 2024)
- Citizen Participation Plan (CPP) – Third Quarter 2024 - Completed
- Excavation Interim Remedial Measures (IRM) Work Plan Approval – Third Quarter 2024
- Clearing and Grubbing – Beginning of Third Quarter 2024
- Excavation, Placement and Revegetation – Third and Fourth Quarter 2024
- Third Ice Rink Open – Third Quarter 2025
- Indoor and sub-slab vapor testing – Heating Season 2025/2026

7 Bibliography

The bibliography provides a list of documents used in conjunction with site visits, discussions with NYSDEC personnel and contractors to develop this IRM.

1. NYSDEC, December 11, 2023, Environmental Site Remediation Database Search Details, https://extapps.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm?ProgNo=828026B

2. Paradigm, 2022, Analytical Report for Rochester Ice Center, 225960, Soil Pile Sampling

3. Phase I Environmental Site Assessment of the Thomas Creek Ice Arena. 80 Lyndon Road, Perinton, New York, 14305. LCS Inc. March 2, 2016.

4. Parsons, 2020, Inactive Landfill Initiative, Work Assignments #D007623-33/D009811-02, Prepared for the New York State Department of Environmental Conservation, Albany, New York, November.

5. Ramboll, 2022, Schedule 1 – Scope of Work, Site Characterization for Lyndon Road Landfill, Perinton, New York

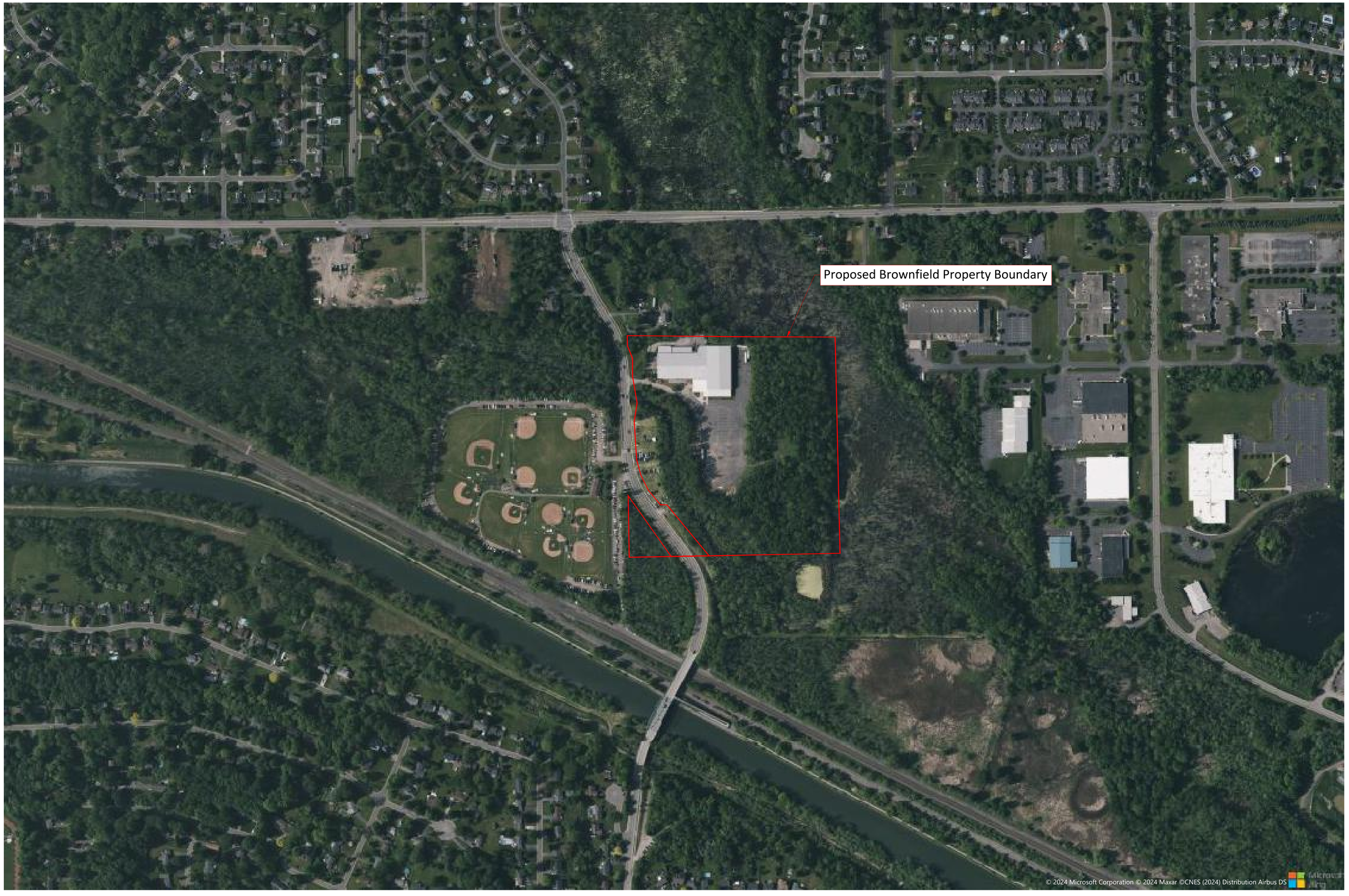
6. SGS, 2023, Analytical Reports for Lyndon Road Landfill, (JD61598, JD60906, JD60984, JD61307, JD61586, JD61598, JD61785, JD62631, JD62640, JD62646, JD64649)

7. Environmental Data Resources, 2023 Radius Map Report with GeoCheck. 80 Lyndon Road. 80 Lyndon Road, Fairport, NY. November 20232.

8. Schultz Associates, Engineers and Land Surveyors, P.C., 2023, Survey, 80 Lyndon Road.

9. Inventum, 2024, Remedial Investigation Work Plan, 80 Lyndon Rd., LLC, #C828230, September.

Figures



D

REFERENCE:
1. NYS ITS GEOSPATIAL SERVICES, HTTPS://EXPERIENCE.ARCGIS.COM/EXPERIENCE

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SITE AERIAL
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FAIRPORT, NEW YORK 14450

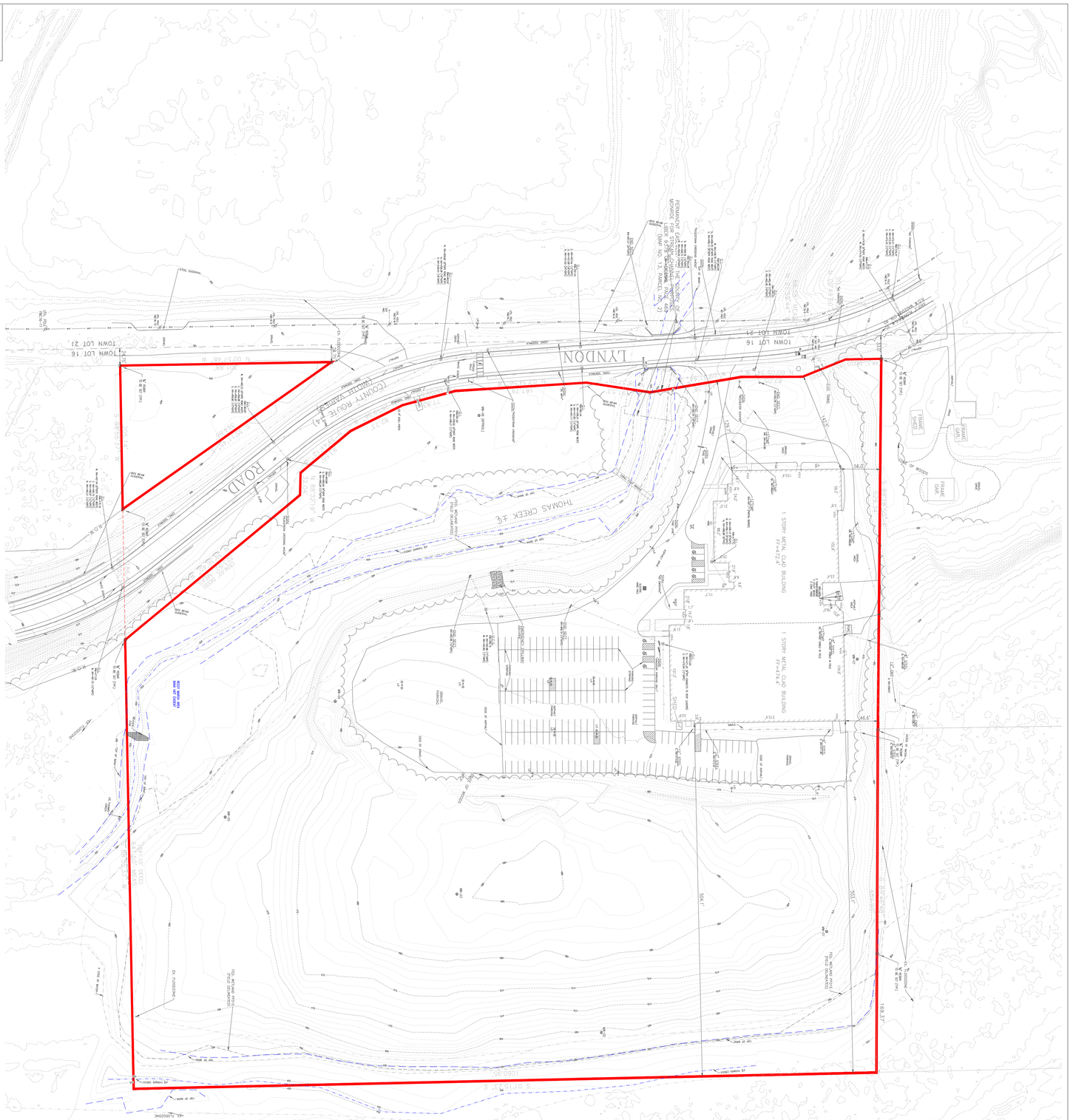
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FIGURE 1

DRAWING NUMBER
EXCAVATION IRM WORKPLAN

D

Source: Schultz Associates, 2023. Map of a Survey of 80 Lyndon Road, Town of Perrinton, County of Monroe, New York.



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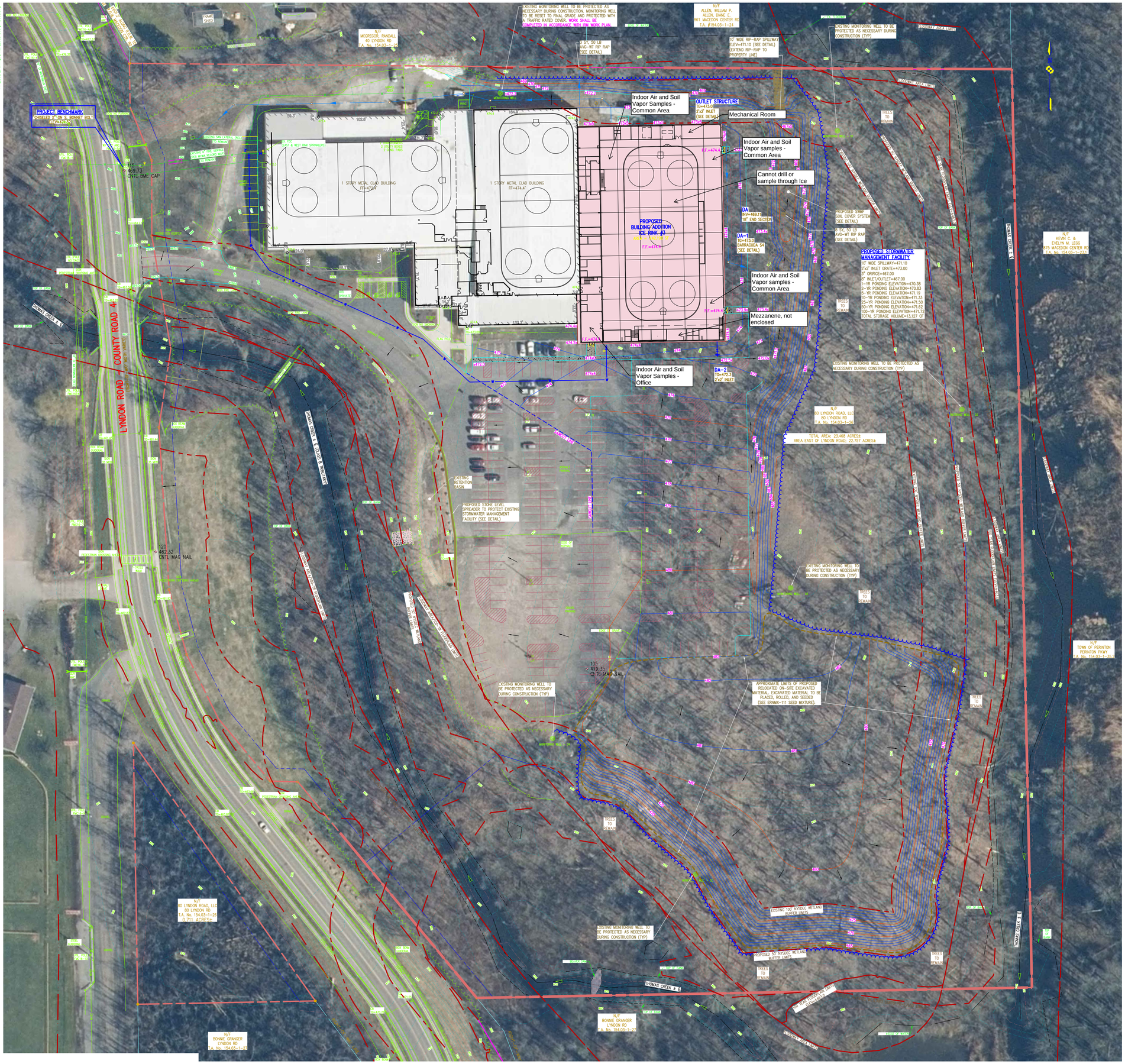
FIGURE 2
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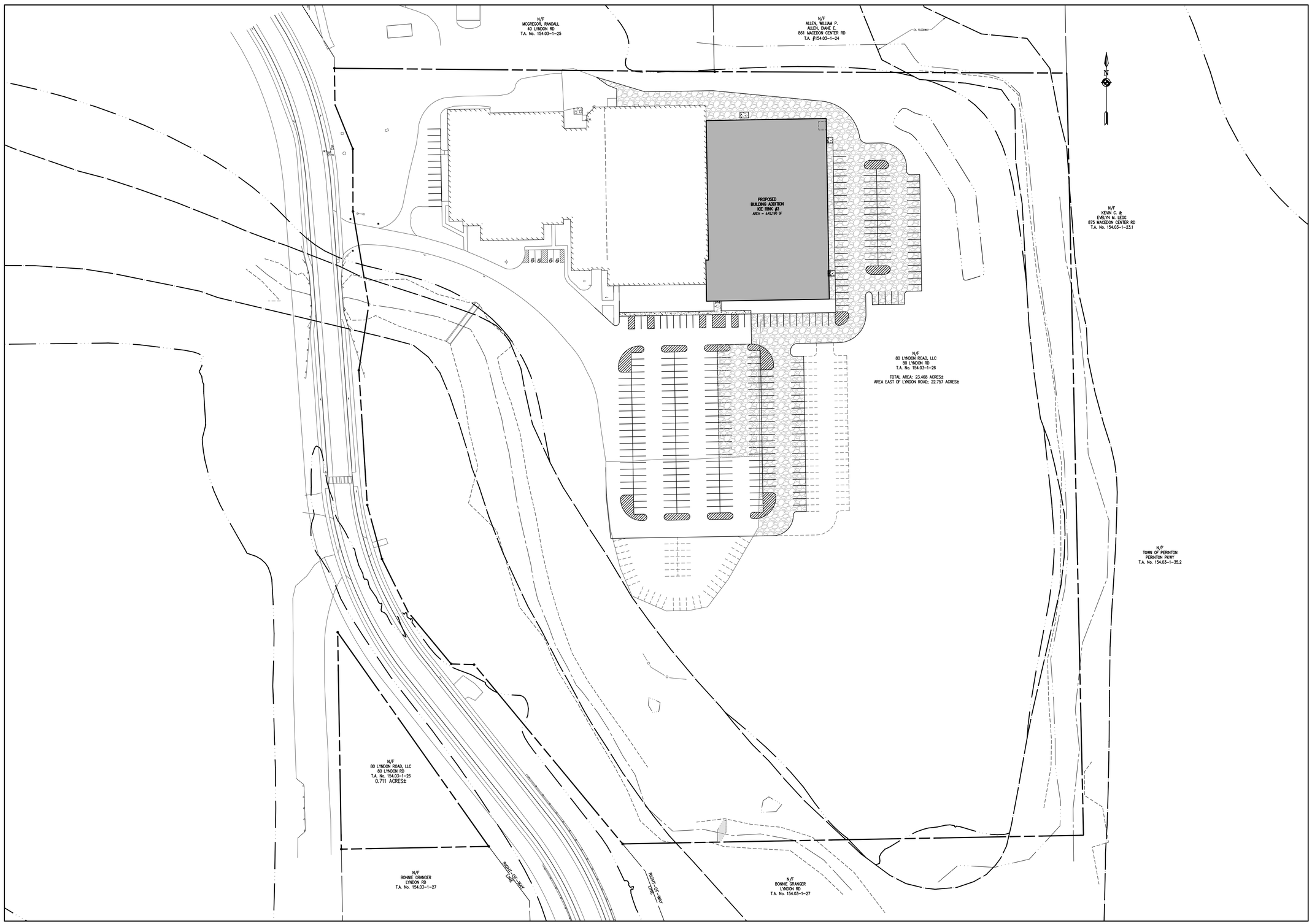
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NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IT IS A VIOLATION OF STATE LAW FOR ANY PERSONS, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.


EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION. MONITORING WELL TO BE RESET TO FINAL GRADE AND PROTECTED WITH A TRAFFIC RATED COVER. WORK SHALL BE COMPLETED IN ACCORDANCE WITH RIM WORK PLAN.
N/F ALLEN, WILLIAM P. ALLEN, DIANE C. 861 MACEDON CENTER RD T.A. #154.03-1-24
N/F MCGREGOR, RANDALL 40 LYNDON RD T.A. No. 154.03-1-24
1 SY, 50 LB AVG-WT RIP RAP (SEE DETAIL)
50' WIDE RIP-RAP SPILLWAY ELEV=471.10 (SEE DETAIL) (EXTEND RIP-RAP TO PROPERTY LINE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPERTY LINE (TYP)
PROJECT BENCHMARK CHISELED 'X' ON S. BONNET BOLT ELEV=471.71
115 ∘ 469.73 CNTL BMC CAP
FRAME SHED
EXISTING SAN LATERAL (SCC) TO REMAIN
EXISTING FIRE HYDRANT (TYP) TO BE REMOVED AND RELOCATED
EXISTING 6" WATER SERVICE TO REMAIN
EXISTING 8" WATER MAIN TO REMAIN
EXISTING 8" SANITARY SEWER TO REMAIN
EXISTING 8" STORM SEWER TO REMAIN
EXISTING 12" STORM SEWER TO REMAIN
EXISTING 24" STORM SEWER TO REMAIN
EXISTING 36" STORM SEWER TO REMAIN
EXISTING 48" STORM SEWER TO REMAIN
EXISTING 60" STORM SEWER TO REMAIN
EXISTING 72" STORM SEWER TO REMAIN
EXISTING

Appendix A – Site Plans, Prepared by BME Associates

P:\2932\Drawings\Final\2932 Cover Sheet.dwg



LOCATION MAP
NOT TO SCALE

ROCHESTER ICE CENTER

TOWN OF TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE

PREPARED FOR:
80 LYNDON ROAD, LLC
1 ELM LANE
ROCHESTER, NY 14610

PRELIMINARY/FINAL SITE PLANS

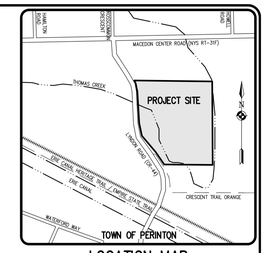
ROCHESTER ICE CENTER

DWG. No.	TITLE
2932-02	COVER SHEET
2932-03	SITE PLAN
2932-04	EXISTING CONDITIONS & DEMOLITION PLAN
2932-05	UTILITY PLAN
2932-06	GRADING PLAN
2932-07	CONSTRUCTION EROSION CONTROL PLAN
2932-08	LANDSCAPE & LIGHTING PLAN
2932-09	DETAIL SHEET 01
2932-10	DETAIL SHEET 02

SCALE: 1"=50'

DRAWING NUMBER: 2932-02
DATE ISSUED: APRIL 2024

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LIFT BRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
PHONE 585-377-7360
FAX 585-377-7309



LOCATION MAP
NOT TO SCALE

ROCHESTER ICE CENTER

PRELIMINARY/FINAL

TOWN OF PERINTON, MONROE COUNTY, NEW YORK

PREPARED FOR:

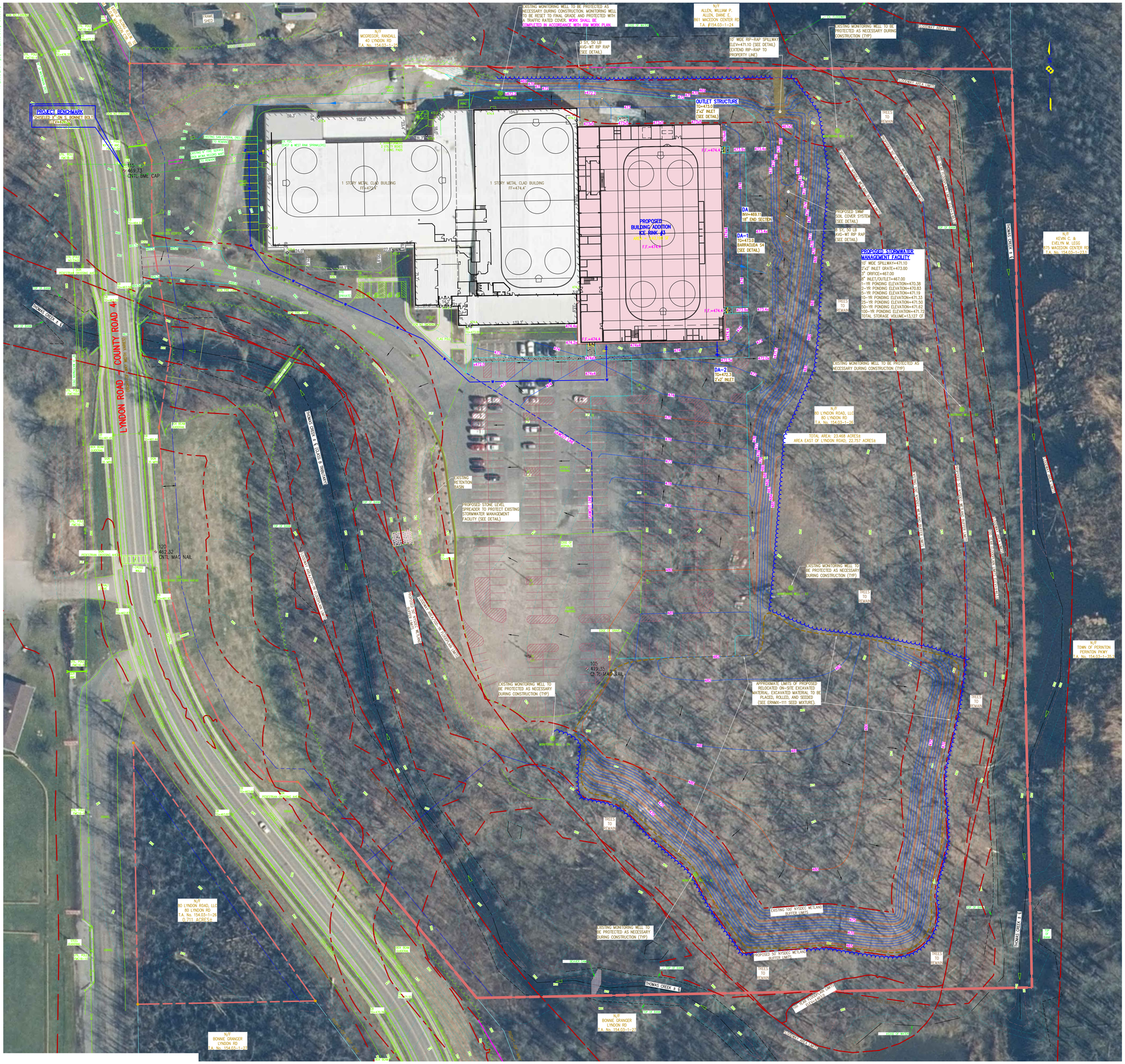
80 LYNDON ROAD, LLC

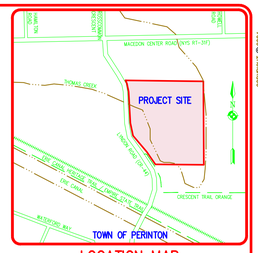
1 ELM LANE

ROCHESTER, NY 14610

SCALE: 1"=40'
PROJECT NUMBER: 2932
DATE ISSUED: MAY, 2024

BME | ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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LOCATION MAP
NOT TO SCALE

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BME Associates

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item on this drawing in any way. If the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

#	DATE	BY	REVISIONS
14			
13			
12			
11			
10			
9			
8			

#	DATE	BY	REVISIONS
7			
6			
5			
4			
3	7/8/24	APB	
2			REVISED PER TOWN AND AGENCY COMMENTS
1			

ALL CONSTRUCTION OPERATIONS SHALL COMPLY WITH:

1. INVENTUM, 2024, DRAFT EXCAVATION INTERIM REMEDIAL MEASURE (IRM) WORK PLAN, 80 LYNDON ROAD, PROPOSED BROWNFIELD CLEANUP PROGRAM SITE, NYSDEC SITE NO. 828230, 80 LYNDON ROAD, FAIRPORT, NY 14450, MAY 22, 2024.
2. INVENTUM, 2024, COMMUNITY AIR MONITORING PLAN (CAMP), 80 LYNDON ROAD, LLC, PROPOSED BROWNFIELD CLEANUP PROGRAM (BCP) SITE, 80 LYNDON ROAD, FAIRPORT, NY 14450, JANUARY 9, 2024.

LEGEND

- BOUNDARY LINE
- EXISTING EASEMENT LINE
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY LATERAL
- PROPERTY MARKER FOUND
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING CONTOUR W/ ELEVATION (336)
- PROPOSED CONTOUR W/ ELEVATION (336x5)
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION (336x5)
- PROPOSED FINISHED FLOOR ELEVATION (F.F. = 336.0)
- CREEK CENTERLINE AND FLOW DIRECTION
- EDGE OF WATER
- TOP OF BANK
- DELINEATED WETLAND LIMITS
- NYSDEC WETLAND BUFFER LIMITS
- 100 YEAR FLOODPLAIN LIMITS
- FLOODWAY AREA LIMITS
- PROPOSED RELOCATED LANDFILL AREA

GRADING NOTES:

1. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD, AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY GEODETIC SURVEY OFFICE.
2. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCE OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
3. EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS. EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CALL THE UPPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
4. LOWEST ARCHITECTURAL OPENING (OR FLOOR ELEVATION) SHALL BE 474.40.
5. ALL EXCAVATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
6. DUST SHALL BE CONTROLLED DURING CONSTRUCTION BY THE CONTRACTOR TO MINIMIZE EFFECT ON THE ADJACENT PROPERTIES IN ACCORDANCE WITH THE COMMUNITY AIR MONITORING PLAN.
7. THE OWNER AND THE CONTRACTOR SHALL HAVE COMPLETE KNOWLEDGE OF THE CURRENT BLASTING POLICY FOR THE TOWN OF PERINTON, AND THEY WILL CONFORM TO THIS POLICY AT ALL TIMES.
8. HIGHWAY DRAINAGE ALONG LYNDON ROAD (COUNTY RD 44) TO BE MAINTAINED AS DIRECTED BY COUNTY SUPERINTENDENT OF HIGHWAYS.
9. FILL MATERIAL PLACED IN THE PAVEMENT AND BUILDING AREA SHALL BE SELECT MATERIAL AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS MEASURED BY THE MODIFIED PROCTOR TEST (ASTM D1557) AND/OR THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. ALL IMPORTED MATERIAL SHALL MEET THE COMMERCIAL SOIL CLEANUP OBJECTIVES AND BE TESTED IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
10. REVIEW OF THE FEMA MAPS INDICATES THAT THIS PROPERTY IS WITHIN A RECOGNIZED 100-YEAR FLOODPLAIN PER THE FLOOD INSURANCE RATE MAP, TOWN OF PERINTON, NEW YORK, PANEL 364 OF 528 MAP NUMBER 36055C0364G EFFECTIVE DATE AUGUST 28, 2008.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

ALL EXISTING PROPERTY SURVEY INFORMATION, INCLUDING BUT NOT LIMITED TO BOUNDARY, TOPOGRAPHY, UTILITIES, EASEMENTS, ETC. WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS ON EXISTING CONDITIONS PLANS (EX-1 & EX-2), DATED DECEMBER 5, 2023

MONROE COUNTY
DEPT. OF TRANSPORTATION
APPROVED _____
DATE _____
APPLICATIONS FOR PERMITS WILL NOW BE ACCEPTED
THIS PROJECT APPROVAL IS VALID FOR TWO (2) YEARS

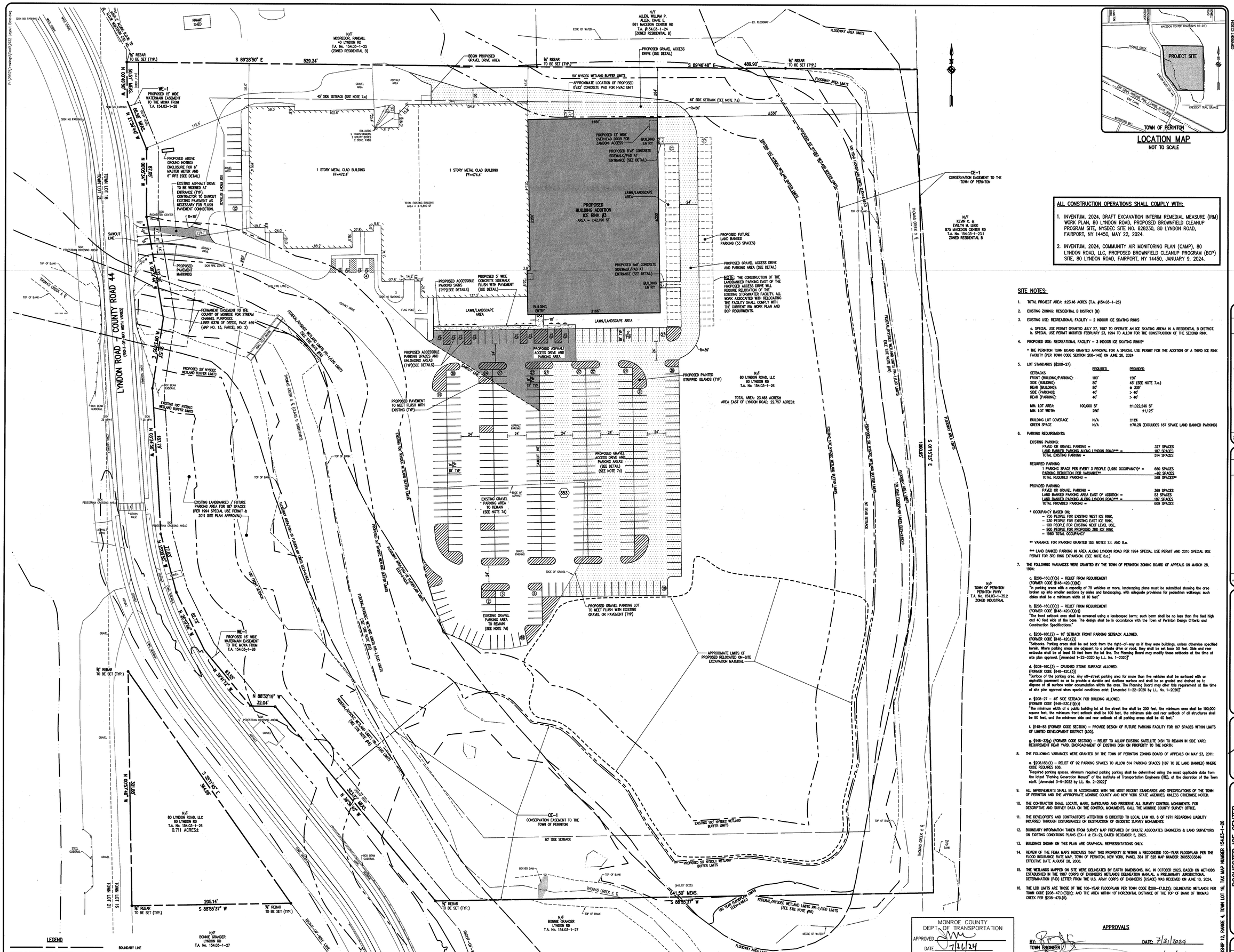
BME ASSOCIATES
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FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

STATE OF NEW YORK
JOSEPH GEORGE CRETEKOS
LICENSED PROFESSIONAL ENGINEER

ROCHESTER ICE CENTER
PRELIMINARY/FINAL
PROJECT: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION: 80 LYNDON ROAD, LLC
CLIENT: 80 LYNDON LANE
ROCHESTER, NY 14610
DRAWING TITLE: GRADING PLAN

PROJECT MANAGER
PG VARS
PROJECT ENGINEER
JG CRETEKOS
DRAWN BY
A. BEYLER
SCALE: 1" = 40'
DATE ISSUED: JUNE 2024
PROJECT NO.: 2932
DRAWING NO.: 06

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 16, TAX MAP NUMBER 154.03-1-26



LOCATION MAP
NOT TO SCALE

ALL CONSTRUCTION OPERATIONS SHALL COMPLY WITH:

1. INVENTUM, 2024, DRAFT EXCAVATION INTERIM REMEDIAL MEASURE (IRM) WORK PLAN, 80 LYNDON ROAD, PROPOSED BROWNFIELD CLEANUP PROGRAM SITE, NYSDEC SITE NO. 828230, 80 LYNDON ROAD, FAIRPORT, NY 14450, MAY 22, 2024.
2. INVENTUM, 2024, COMMUNITY AIR MONITORING PLAN (CAMP), 80 LYNDON ROAD, LLC, PROPOSED BROWNFIELD CLEANUP PROGRAM (BCP) SITE, 80 LYNDON ROAD, FAIRPORT, NY 14450, JANUARY 9, 2024.

SITE NOTES:

1. TOTAL PROJECT AREA: ±23.46 ACRES (T.A. #154.03-1-26)
2. EXISTING ZONING: RESIDENTIAL B DISTRICT (B)
3. EXISTING USE: RECREATIONAL FACILITY – 2 INDOOR ICE SKATING RINKS
   a. SPECIAL USE PERMIT GRANTED JULY 27, 1987 TO OPERATE AN ICE SKATING ARENA IN A RESIDENTIAL B DISTRICT.
   b. SPECIAL USE PERMIT MODIFIED FEBRUARY 23, 1994 TO ALLOW FOR THE CONSTRUCTION OF THE SECOND RINK.
4. PROPOSED USE: RECREATIONAL FACILITY – 3 INDOOR ICE SKATING RINKS*
   * THE PERINTON TOWN BOARD GRANTED APPROVAL FOR A SPECIAL USE PERMIT FOR THE ADDITION OF A THIRD ICE RINK FACILITY (PER TOWN CODE SECTION 208-14G) ON JUNE 26, 2024
5. LOT STANDARDS (§208-27):

	REQUIRED	PROVIDED
SETBACKS:		
FRONT (BUILDING/PARKING):	100'	156'
SIDE (BUILDING):	80'	45' (SEE NOTE 7.a.)
REAR (BUILDING):	80'	± 339'
SIDE (PARKING):	40'	> 40'
REAR (PARKING):	40'	> 40'
MIN. LOT AREA:	100,000 SF	±1,022,246 SF
MIN. LOT WIDTH:	250'	±1,125'
BUILDING LOT COVERAGE	N/A	±11%
GREEN SPACE	N/A	±70.2% (EXCLUDES 187 SPACE LAND BANKED PARKING)

6. PARKING REQUIREMENTS:

EXISTING PARKING:	
PAVED OR GRAVEL PARKING =	327 SPACES
LAND BANKED PARKING ALONG LYNDON ROAD*** =	187 SPACES
TOTAL EXISTING PARKING =	514 SPACES
REQUIRED PARKING:	
1 PARKING SPACE PER EVERY 3 PEOPLE (1,980 OCCUPANCY)* =	660 SPACES
PARKING REDUCTION PER VARIANCE**	-92 SPACES
TOTAL REQUIRED PARKING =	568 SPACES**
PROVIDED PARKING:	
PAVED OR GRAVEL PARKING =	369 SPACES
LAND BANKED PARKING AREA EAST OF ADDITION =	53 SPACES
LAND BANKED PARKING ALONG LYNDON ROAD*** =	187 SPACES
TOTAL PROVIDED PARKING =	609 SPACES

   * OCCUPANCY BASED ON:
   - 750 PEOPLE FOR EXISTING WEST ICE RINK,
   - 230 PEOPLE FOR EXISTING EAST ICE RINK,
   - 100 PEOPLE FOR EXISTING NEXT LEVEL USE,
   - 900 PEOPLE FOR PROPOSED 3RD ICE RINK
   - 1980 TOTAL OCCUPANCY

   ** VARIANCE FOR PARKING GRANTED SEE NOTES 7.f. AND 8.a.

   *** LAND BANKED PARKING IN AREA ALONG LYNDON ROAD PER 1994 SPECIAL USE PERMIT AND 2010 SPECIAL USE PERMIT FOR 3RD RINK EXPANSION. (SEE NOTE 8.a.)
7. THE FOLLOWING VARIANCES WERE GRANTED BY THE TOWN OF PERINTON ZONING BOARD OF APPEALS ON MARCH 28, 1994:
   a. §208-16C.(1)(b) – RELIEF FROM REQUIREMENT (FORMER CODE §148-42C.(1)(b))
   "In parking areas with a capacity of 75 vehicles or more, landscaping plans must be submitted showing the area broken up into smaller sections by aisles and landscaping, with adequate provisions for pedestrian walkways; such aisles shall be a minimum width of 10 feet"
   b. §208-16C.(1)(c) – RELIEF FROM REQUIREMENT (FORMER CODE §148-42C.(1)(c))
   "The front setback area shall be screened using a landscaped berm; such berm shall be no less than five feet high and 40 feet wide at the base. The design shall be in accordance with the Town of Perinton Design Criteria and Construction Specifications."
   c. §208-16C.(2) – 10' SETBACK FRONT PARKING SETBACK ALLOWED. (FORMER CODE §148-42C.(2))
   "Setbacks. Parking areas shall be set back from the right-of-way as if they were buildings, unless otherwise specified herein. Where parking areas are adjacent to a private drive or road, they shall be set back 50 feet. Side and rear setbacks shall be at least 15 feet from the lot line. The Planning Board may modify these setbacks at the time of site plan approval. [Amended 1-22-2020 by LL No. 1-2020]"
   d. §208-16C.(3) – CRUSHED STONE SURFACE ALLOWED. (FORMER CODE §148-42C.(3))
   "Surface of the parking area. Any off-street parking area for more than five vehicles shall be surfaced with an asphaltic pavement so as to provide a durable and dustless surface and shall be so graded and drained as to dispose of all surface water accumulation within the area. The Planning Board may alter this requirement at the time of site plan approval when special conditions exist. [Amended 1-22-2020 by LL No. 1-2020]"
   e. §208-27 – 45' SIDE SETBACK FOR BUILDING ALLOWED. (FORMER CODE §148-53C.(1)(b))
   "The minimum width of a public building lot at the street line shall be 250 feet, the minimum area shall be 100,000 square feet, the minimum front setback shall be 100 feet, the minimum side and rear setback of all structures shall be 80 feet, and the minimum side and rear setback of all parking areas shall be 40 feet."
   f. §148-63 (FORMER CODE SECTION) – PROVIDE DESIGN OF FUTURE PARKING FACILITY FOR 197 SPACES WITHIN LIMITS OF LIMITED DEVELOPMENT DISTRICT (LDD).
   g. §148-32(a) (FORMER CODE SECTION) – RELIEF TO ALLOW EXISTING SATELLITE DISH TO REMAIN IN SIDE YARD; REQUIREMENT REAR YARD. ENCROACHMENT OF EXISTING DISH ON PROPERTY TO THE NORTH.
8. THE FOLLOWING VARIANCES WERE GRANTED BY THE TOWN OF PERINTON ZONING BOARD OF APPEALS ON MAY 23, 2011:
   a. §208.16B.(1) – RELIEF OF 92 PARKING SPACES TO ALLOW 514 PARKING SPACES (187 TO BE LAND BANKED) WHERE CODE REQUIRES 606.
   "Required parking spaces. Minimum required parking parking shall be determined using the most applicable data from the latest "Parking Generation Manual" of the Institute of Transportation Engineers (ITE), at the discretion of the Town staff. [Amended 3-9-2022 by LL No. 2-2022]"
9. ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE TOWN OF PERINTON AND THE APPROPRIATE MONROE COUNTY AND NEW YORK STATE AGENCIES, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY SURVEY OFFICE.
11. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCES OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
12. BOUNDARY INFORMATION TAKEN FROM SURVEY MAP PREPARED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS ON EXISTING CONDITIONS PLANS (EX-1 & EX-2), DATED DECEMBER 5, 2023.
13. BUILDINGS SHOWN ON THIS PLAN ARE GRAPHICAL REPRESENTATIONS ONLY.
14. REVIEW OF THE FEMA MAPS INDICATES THAT THIS PROPERTY IS WITHIN A RECOGNIZED 100-YEAR FLOODPLAIN PER THE FLOOD INSURANCE RATE MAP, TOWN OF PERINTON, NEW YORK, PANEL 384 OF 528 MAP NUMBER 36055C0384G EFFECTIVE DATE AUGUST 28, 2008.
15. THE WETLANDS MAPPED ON SITE WERE DELINEATED BY EARTH DIMENSIONS, INC. IN OCTOBER 2023, BASED ON METHODS ESTABLISHED IN THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. A PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) LETTER FROM THE U.S. ARMY CORPS OF ENGINEERS (USACE) WAS RECEIVED ON JUNE 10, 2024.
16. THE LDD LIMITS ARE THOSE OF THE 100-YEAR FLOODPLAIN PER TOWN CODE §208-47.D.(2); DELINEATED WETLANDS PER TOWN CODE §208-47.D.(3)(b); AND THE AREA WITHIN 10' HORIZONTAL DISTANCE OF THE TOP OF BANK OF THOMAS CREEK PER §208-47D.(5).

LEGEND

- BOUNDARY LINE
- CENTERLINE
- SETBACK LINE
- PROPERTY MARKER FOUND
- EXISTING EASEMENT LINE
- CREEK CENTERLINE AND FLOW DIRECTION
- EDGE OF WATER
- TOP OF BANK
- DELINEATED WETLAND LIMITS
- NYSDEC WETLAND BUFFER LIMITS
- 100 YEAR FLOODPLAIN LIMITS
- FLOODWAY AREA LIMITS

ADA NOTES:

1. ALL IMPROVEMENTS ARE TO BE MADE PER THE MOST RECENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. ALL SIDEWALKS ON AN ACCESSIBLE ROUTE SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5% (1:20) AND A MAXIMUM CROSS-SLOPE OF 2% (1:48).
3. ALL LANDINGS ALONG AN ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM SLOPE OF 2% (1:48) IN ALL DIRECTIONS.
4. ALL CURB RAMPS SHALL HAVE A MAXIMUM RUNNING SLOPE OF NO GREATER THAN 8% (1:12).
5. ALL CURB RAMP SIDE SLOPES SHALL HAVE A MAXIMUM SLOPE OF 10% (1:10).
6. ANY RUNNING SLOPE GREATER THAN 5% (1:20) IS TO BE CONSIDERED A RAMP AND MUST COMPLY WITH THE ADA STANDARD REQUIREMENTS FOR RAMPS.
7. PARKING (SEE DETAIL):
   - ALL ACCESSIBLE PARKING SPACES TO BE 9' X 18'
   - ALL ACCESS AISLES TO BE 9' X 18'
   - MAXIMUM SLOPE IN ALL DIRECTIONS TO BE NO GREATER THAN 2% (1:48) FOR BOTH PARKING STALL AND STRIPED AISLE.
   - ONE IN SIX ACCESSIBLE PARKING SPACES SHALL MEET THE VAN ACCESSIBLE STANDARDS PER THE ADA GUIDELINES
7. PARKING SIGNAGE: ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES TO BE PROVIDED SIGNAGE PER THE MOST RECENT ADA STANDARD REQUIREMENTS. (SEE SIGN DETAIL).
8. ALL OTHER IMPROVEMENTS TO BE IN CONFORMANCE WITH THE MOST RECENT ADA STANDARDS FOR DESIGN.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

ALL EXISTING PROPERTY SURVEY INFORMATION, INCLUDING BUT NOT LIMITED TO BOUNDARY, TOPOGRAPHY, UTILITIES, EASEMENTS, ETC. WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS ON EXISTING CONDITIONS PLANS (EX-1 & EX-2), DATED DECEMBER 5, 2023

MONROE COUNTY DEPT. OF TRANSPORTATION
APPROVED
DATE 7/26/24
APPLICATIONS FOR PERMITS WILL NOW BE ACCEPTED. THIS PROJECT APPROVAL IS VALID FOR TWO (2) YEARS

APPROVALS

BY: TOWN ENGINEER	DATE: 7/31/2024
BY: COMMISSIONER OF PUBLIC WORKS	DATE: 8/1/24
BY: PLANNING BOARD ATTORNEY	DATE: 8/7/24
BY: FIRE CHIEF	DATE: 8/6/2024
BY: CHAIRMAN OF THE PLANNING BOARD	DATE: 08/09/2024
BY: N/A TOWN CLERK	DATE:

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

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	DATE	BY
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2	7/19/24	APB
1	AGENCY COMMENTS	
	REVISIONS	

REVISED PER TOWN & AGENCY COMMENTS

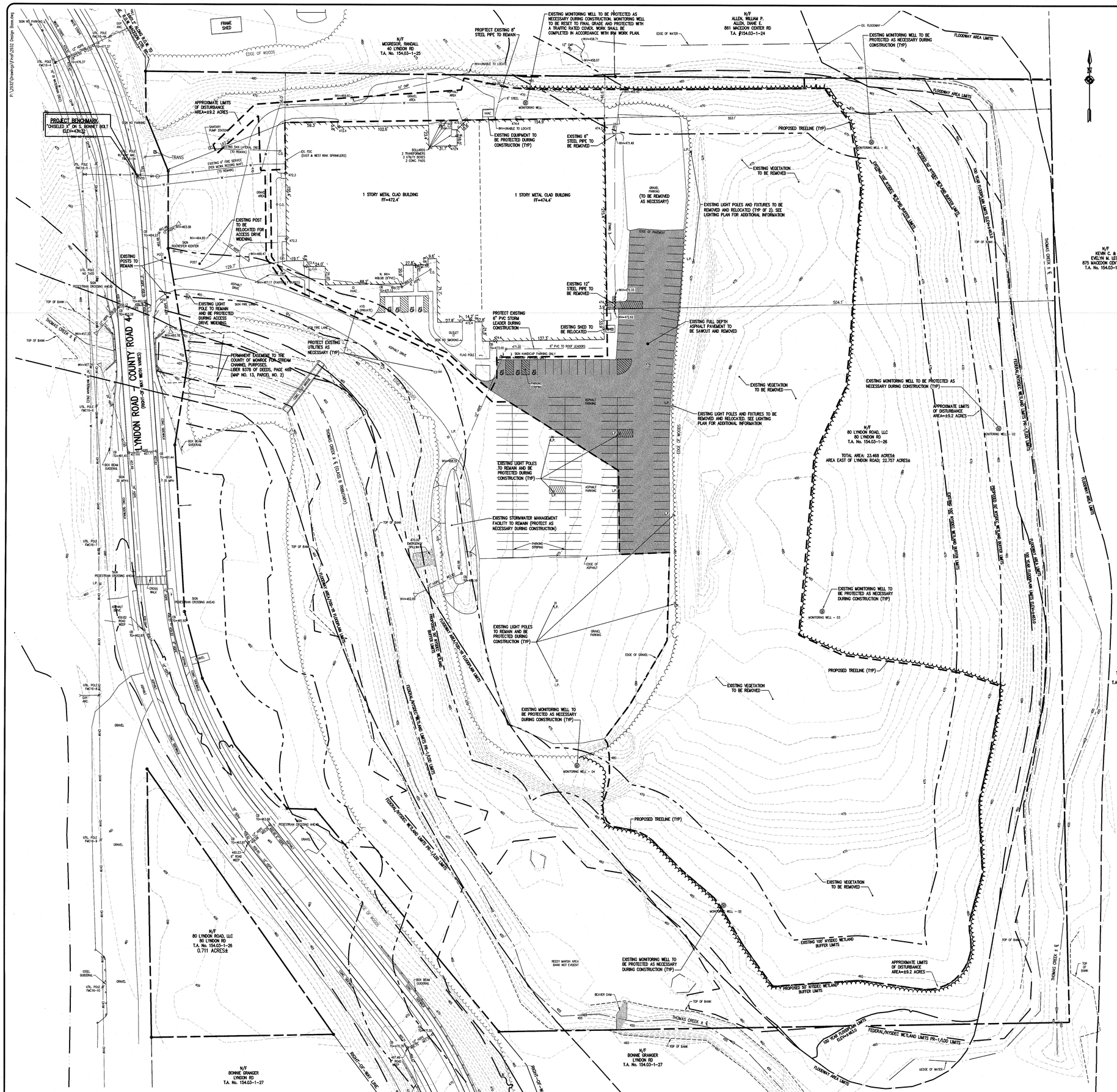
BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LEFTINGWELL LANE SUITE 1
FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

STATE OF NEW YORK — GEORGE M. BEYLER — 095078 — LICENSED PROFESSIONAL ENGINEER

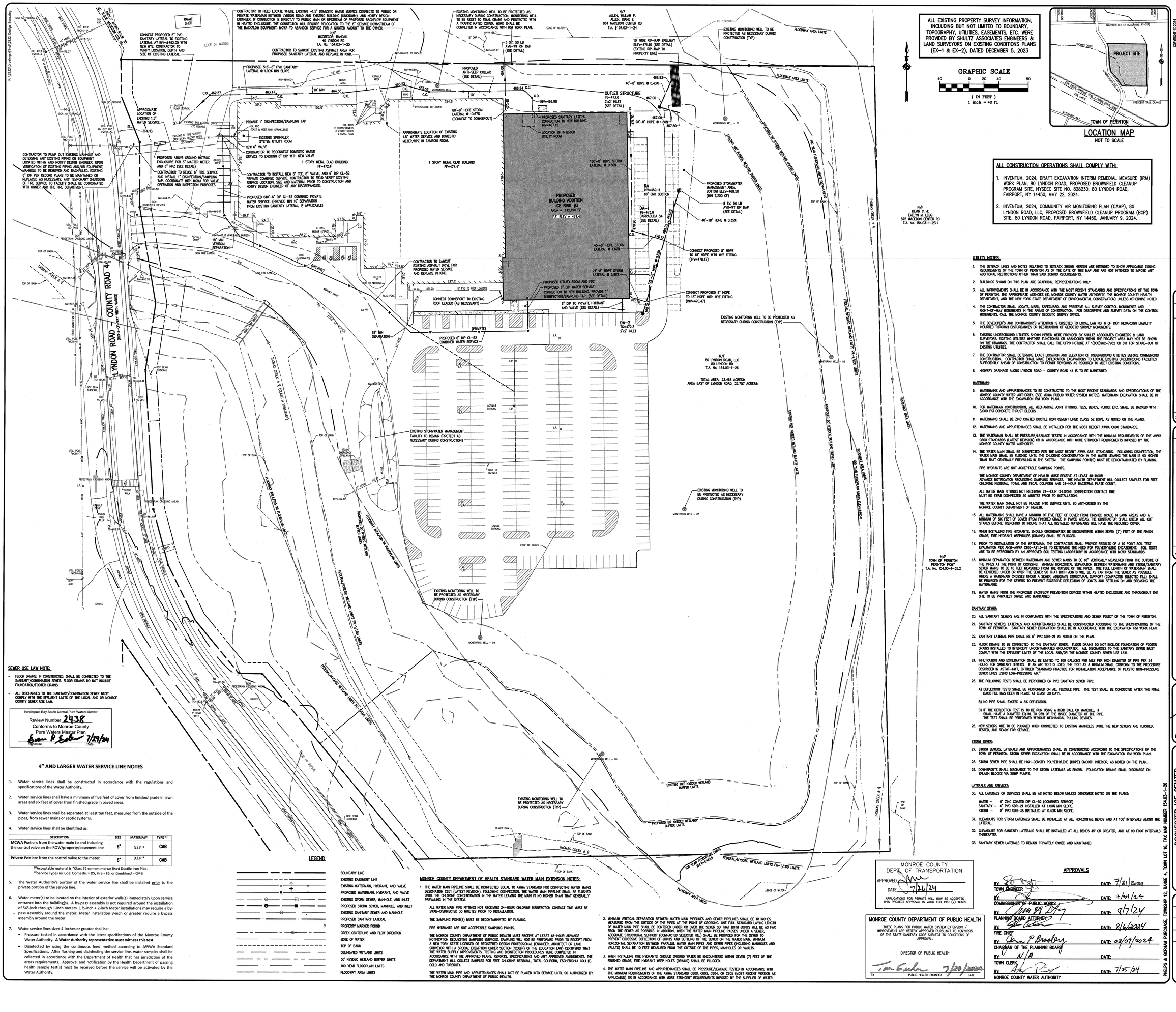
ROCHESTER ICE CENTER
PRELIMINARY/FINAL
PROJECT: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION: 80 LYNDON ROAD, LLC, 80 LYNDON ROAD, ROCHESTER, NY 14610
CLIENT:
DRAWING TITLE: SITE PLAN

PROJECT MANAGER	PG VARS
PROJECT ENGINEER	JC CRETEKOS
DRAWN BY	A. BEYLER
SCALE	1" = 40'
DATE ISSUED	JUNE 2024
PROJECT NO.	2932
DRAWING NO.	03

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 16, TAX MAP NUMBER 154.03-1-26


PROJECT BENCHMARK:
"CHISELED X" ON S. BONNET BOLT
ELEV=471.32
LYNDON ROAD - COUNTY ROAD 41
(RIGHT-OF-WAY WIDTH VARIES)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±9.2 ACRES
1 STORY METAL CLAD BUILDING FF=472.4'
1 STORY METAL CLAD BUILDING FF=474.4'
EXISTING SHED TO BE RELOCATED
EXISTING 12" STEEL PIPE TO BE REMOVED
EXISTING 6" STEEL PIPE TO BE REMOVED
EXISTING EQUIPMENT TO BE PROTECTED DURING CONSTRUCTION (TYP)
PROTECT EXISTING 8" STEEL PIPE TO REMAIN
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION. MONITORING WELL TO BE RESET TO FINAL GRADE AND PROTECTED WITH A TRAFFIC RATED COVER. WORK SHALL BE COMPLETED IN ACCORDANCE WITH BM WORK PLAN.
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED TREELINE (TYP)
EXISTING VEGETATION TO BE REMOVED
EXISTING LIGHT POLES AND FIXTURES TO BE REMOVED AND RELOCATED (TYP OF 2). SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION
EXISTING FULL DEPTH ASPHALT PAVEMENT TO BE SAWCUT AND REMOVED
EXISTING POST TO BE RELOCATED FOR ACCESS DRIVE WIDENING
EXISTING POSTS TO REMAIN
EXISTING LIGHT POLE TO REMAIN AND BE PROTECTED DURING ACCESS DRIVE WIDENING
PROTECT EXISTING 6" PVC STORM LEADER DURING CONSTRUCTION
PROTECT EXISTING UTILITIES AS NECESSARY (TYP)
PERMANENT EASEMENT TO THE COUNTY OF MONROE FOR STORM CHANNEL PURPOSES. LIBER 9378 OF DEEDS, PAGE 469 (MAP NO. 13, PARCEL NO. 2)
EXISTING LIGHT POLES TO REMAIN AND BE PROTECTED DURING CONSTRUCTION (TYP)
EXISTING STORMWATER MANAGEMENT FACILITY TO REMAIN (PROTECT AS NECESSARY DURING CONSTRUCTION)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
EXISTING VEGETATION TO BE REMOVED
EXISTING LIGHT POLES AND FIXTURES TO BE REMOVED AND RELOCATED. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±9.2 ACRES
TOTAL AREA: 23.468 ACRES±
AREA EAST OF LYNDON ROAD: 22.757 ACRES±
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
EXISTING VEGETATION TO BE REMOVED
PROPOSED TREELINE (TYP)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
EXISTING VEGETATION TO BE REMOVED
PROPOSED TREELINE (TYP)
EXISTING VEGETATION TO BE REMOVED
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
EXISTING 100' NYSDEC WETLAND BUFFER LIMITS
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
APPROXIMATE LIMITS OF DISTURBANCE AREA=±9.2 ACRES
PROPOSED ACCESS DRIVE WIDENING
PROPOSED 24' WIDE ACCESS ROAD
PROPOSED 24' WIDE ACCESS ROAD
PROPOSED 24' WIDE ACCESS ROAD

P:\2932\Drawings\Final\2932 Design Base.dwg



ALL EXISTING PROPERTY SURVEY INFORMATION, INCLUDING BUT NOT LIMITED TO BOUNDARY, TOPOGRAPHY, UTILITIES, EASEMENTS, ETC. WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS ON EXISTING CONDITIONS PLANS (EX-1 & EX-2), DATED DECEMBER 5, 2023

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

LOCATION MAP
NOT TO SCALE

ALL CONSTRUCTION OPERATIONS SHALL COMPLY WITH:

1. INVENTUM, 2024, DRAFT EXCAVATION INTERIM REMEDIAL MEASURE (IRM) WORK PLAN, 80 LYNDON ROAD, PROPOSED BROWNFIELD CLEANUP PROGRAM SITE, NYSDEC SITE NO. 828230, 80 LYNDON ROAD, FAIRPORT, NY 14450, MAY 22, 2024.
2. INVENTUM, 2024, COMMUNITY AIR MONITORING PLAN (CAMP), 80 LYNDON ROAD, LLC, PROPOSED BROWNFIELD CLEANUP PROGRAM (BCP) SITE, 80 LYNDON ROAD, FAIRPORT, NY 14450, JANUARY 9, 2024.

UTILITY NOTES:

1. THE SETBACK LINES AND NOTES RELATING TO SETBACK SHOWN HEREON ARE INTENDED TO SHOW APPLICABLE ZONING REQUIREMENTS OF THE TOWN OF PERINTON AS OF THE DATE OF THIS MAP AND ARE NOT INTENDED TO IMPOSE ANY ADDITIONAL RESTRICTIONS OTHER THAN SAID ZONING REQUIREMENTS.
2. BUILDINGS SHOWN ON THIS PLAN ARE GRAPHICAL REPRESENTATIONS ONLY.
3. ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE TOWN OF PERINTON, THE APPROPRIATE AGENCIES (E, MONROE COUNTY WATER AUTHORITY, THE MONROE COUNTY HEALTH DEPARTMENT, AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION) UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD, AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY GEODETIC SURVEY OFFICE.
5. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCES OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
6. EXISTING UNDERGROUND UTILITIES SHOWN HEREON WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS. EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
7. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION AND ELEVATION OF UNDERGROUND UTILITIES BEFORE COMMENCING CONSTRUCTION. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS TO LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS AS REQUIRED TO MEET EXISTING CONDITIONS.
8. HIGHWAY DRAINAGE ALONG LYNDON ROAD – COUNTY ROAD 44 IS TO BE MAINTAINED.

WATERMAIN:

9. WATERMAINS AND APPURTENANCES TO BE CONSTRUCTED TO THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE MONROE COUNTY WATER AUTHORITY. (SEE MCWA PUBLIC WATER SYSTEM NOTES). WATERMAIN EXCAVATION SHALL BE IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
10. FOR WATERMAIN CONSTRUCTION, ALL MECHANICAL JOINT FITTINGS, TEES, BENDS, PLUGS, ETC. SHALL BE BACKED WITH 3,000 PSI CONCRETE THRUST BLOCKS
11. WATERMAINS SHALL BE ZINC COATED DUCTILE IRON CEMENT LINED CLASS 52 (DIP), AS NOTED ON THE PLANS.
12. WATERMAINS AND APPURTENANCES SHALL BE INSTALLED PER THE MOST RECENT AWWA C600 STANDARDS.
13. THE WATERMAIN SHALL BE PRESSURE/LEAKAGE TESTED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE AWWA C600 STANDARDS (LATEST REVISION) OR IN ACCORDANCE WITH MORE STRINGENT REQUIREMENTS IMPOSED BY THE MONROE COUNTY WATER AUTHORITY.
14. THE WATER MAIN SHALL BE DISINFECTED PER THE MOST RECENT AWWA C651 STANDARDS. FOLLOWING DISINFECTION, THE WATER MAIN SHALL BE FLUSHED UNTIL THE CHLORINE CONCENTRATION IN THE WATER LEAVING THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM. THE SAMPLING POINT(S) MUST BE DECONTAMINATED BY FLAMING.

FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS.

THE MONROE COUNTY DEPARTMENT OF HEALTH MUST RECEIVE AT LEAST 48-HOUR ADVANCE NOTIFICATION REQUESTING SAMPLING SERVICES. THE HEALTH DEPARTMENT WILL COLLECT SAMPLES FOR FREE CHLORINE RESIDUAL, TOTAL AND FECAL COLIFORM AND 24-HOUR BACTERIAL PLATE COUNT.

ALL WATER MAIN FITTINGS NOT RECEIVING 24-HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.

THE WATER MAIN SHALL NOT BE PLACED INTO SERVICE UNTIL SO AUTHORIZED BY THE MONROE COUNTY DEPARTMENT OF HEALTH.

15. ALL WATERMAINS SHALL HAVE A MINIMUM OF FIVE FEET OF COVER FROM FINISHED GRADE IN LAWN AREAS AND A MINIMUM OF SIX FEET OF COVER FROM FINISHED GRADE IN PAVED AREAS. THE CONTRACTOR SHALL CHECK ALL CUT STAKES BEFORE TRENCHING TO INSURE THAT ALL INSTALLED WATERMAINS WILL HAVE THE REQUIRED COVER.
16. WHEN INSTALLING FIRE HYDRANTS, SHOULD GROUNDWATER BE ENCOUNTERED WITHIN SEVEN (7') FEET OF THE FINISH GRADE, FIRE HYDRANT WEEPHOLES (DRAINS) SHALL BE PLUGGED.
17. PRIOR TO INSTALLATION OF THE WATERMAIN, THE CONTRACTOR SHALL PROVIDE RESULTS OF A 10 POINT SOIL TEST EVALUATION PER ANSI-AWWA C105-A21.5-82 TO DETERMINE THE NEED FOR POLYETHYLENE ENCASEMENT. SOIL TESTS ARE TO BE PERFORMED BY AN APPROVED SOIL TESTING LABORATORY IN ACCORDANCE WITH MCWA STANDARDS.
18. MINIMUM SEPARATION BETWEEN WATERMAIN AND SEWER MAINS TO BE 18" VERTICALLY MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAINS AND STORM/SANITARY SEWER MAINS TO BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES. ONE FULL LENGTH OF WATERMAIN SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHERE A WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING THE WATERMAINS.
19. WATER MAINS FROM THE PROPOSED BACKFLOW PREVENTION DEVICES WITHIN HEATED ENCLOSURE AND THROUGHOUT THE SITE TO BE PRIVATELY OWNED AND MAINTAINED.

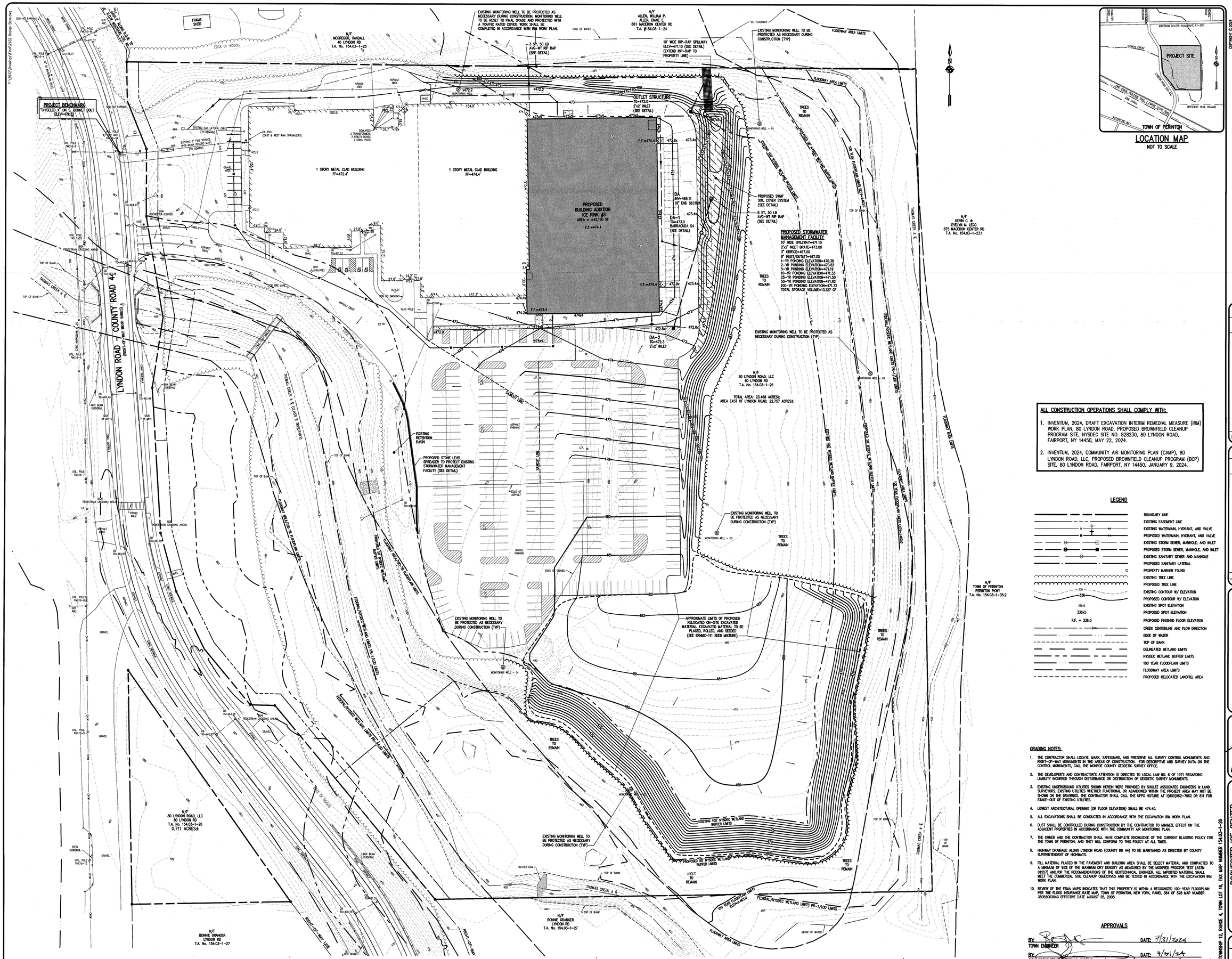
SANITARY SEWER:

20. ALL SANITARY SEWERS ARE IN COMPLIANCE WITH THE SPECIFICATIONS AND SEWER POLICY OF THE TOWN OF PERINTON.
21. SANITARY SEWERS, LATERALS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS OF THE TOWN OF PERINTON. SANITARY SEWER EXCAVATION SHALL BE IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
22. SANITARY LATERAL PIPE SHALL BE 6" PVC SDR-21 AS NOTED ON THE PLAN.
23. FLOOR DRAINS TO BE CONNECTED TO THE SANITARY SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION OF FOOTER DRAINS INSTALLED TO INTERCEPT UNCONTAMINATED GROUNDWATER. ALL DISCHARGES TO THE SANITARY SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE MONROE COUNTY SEWER USE LAW.
24. INFILTRATION AND EXFILTRATION SHALL BE LIMITED TO 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE PER 24 HOURS FOR SANITARY SEWERS. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM-F-1417, ENTITLED "STANDARD PRACTICE FOR INSTALLATION ACCEPTANCE OF PLASTIC NON-PRESSURE SEWER LINES USING LOW-PRESSURE AIR."
25. THE FOLLOWING TESTS SHALL BE PERFORMED ON PVC SANITARY SEWER PIPE:

A) DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACK FILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

B) NO PIPE SHALL EXCEED A 5% DEFLECTION.

C) IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER



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Drawing Attention
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

NO.	DATE	BY	REVISIONS
14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2	7/16/24	APB	REVISED PER TOWN AND AGENCY COMMENTS
1			REVISIONS

ALL CONSTRUCTION OPERATIONS SHALL COMPLY WITH:

1. INVENTUM, 2024, DRAFT EXCAVATION INTERIM REMEDIAL MEASURE (IRM) WORK PLAN, 80 LYNDON ROAD, PROPOSED BROWNFIELD CLEANUP PROGRAM SITE, NYSDEC SITE NO. 828230, 80 LYNDON ROAD, FAIRPORT, NY 14450, MAY 22, 2024.
2. INVENTUM, 2024, COMMUNITY AIR MONITORING PLAN (CAMP), 80 LYNDON ROAD, LLC, PROPOSED BROWNFIELD CLEANUP PROGRAM (BCP) SITE, 80 LYNDON ROAD, FAIRPORT, NY 14450, JANUARY 9, 2024.

LEGEND

- BOUNDARY LINE
- EXISTING EASEMENT LINE
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY LATERAL
- PROPERTY MARKER FOUND
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING CONTOUR W/ ELEVATION (336)
- PROPOSED CONTOUR W/ ELEVATION (336x6)
- EXISTING SPOT ELEVATION (336x5)
- PROPOSED SPOT ELEVATION (F.F. = 336.0)
- PROPOSED FINISHED FLOOR ELEVATION
- CREEK CENTERLINE AND FLOW DIRECTION
- EDGE OF WATER
- TOP OF BANK
- DELINEATED WETLAND LIMITS
- NYSDEC WETLAND BUFFER LIMITS
- 100 YEAR FLOODPLAIN LIMITS
- FLOODWAY AREA LIMITS
- PROPOSED RELOCATED LANDFILL AREA

GRADING NOTES:

1. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD, AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY GEODETIC SURVEY OFFICE.
2. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCE OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
3. EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS. EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CALL THE UPPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
4. LOWEST ARCHITECTURAL OPENING (OR FLOOR ELEVATION) SHALL BE 474.40.
5. ALL EXCAVATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
6. DUST SHALL BE CONTROLLED DURING CONSTRUCTION BY THE CONTRACTOR TO MINIMIZE EFFECT ON THE ADJACENT PROPERTIES IN ACCORDANCE WITH THE COMMUNITY AIR MONITORING PLAN.
7. THE OWNER AND THE CONTRACTOR SHALL HAVE COMPLETE KNOWLEDGE OF THE CURRENT BLASTING POLICY FOR THE TOWN OF PERINTON, AND THEY WILL CONFORM TO THIS POLICY AT ALL TIMES.
8. HIGHWAY DRAINAGE ALONG LYNDON ROAD (COUNTY RD 44) TO BE MAINTAINED AS DIRECTED BY COUNTY SUPERINTENDENT OF HIGHWAYS.
9. FILL MATERIAL PLACED IN THE PAVEMENT AND BUILDING AREA SHALL BE SELECT MATERIAL AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS MEASURED BY THE MODIFIED PROCTOR TEST (ASTM D1557) AND/OR THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. ALL IMPORTED MATERIAL SHALL MEET THE COMMERCIAL SOIL CLEANUP OBJECTIVES AND BE TESTED IN ACCORDANCE WITH THE EXCAVATION IRM WORK PLAN.
10. REVIEW OF THE FEMA MAPS INDICATES THAT THIS PROPERTY IS WITHIN A RECOGNIZED 100-YEAR FLOODPLAIN PER THE FLOOD INSURANCE RATE MAP, TOWN OF PERINTON, NEW YORK, PANEL 384 OF 528 MAP NUMBER 36055C0384G EFFECTIVE DATE AUGUST 28, 2008.

APPROVALS

BY: TOWN ENGINEER	DATE:	7/31/2024
BY: COMMISSIONER OF PUBLIC WORKS	DATE:	7/31/24
BY: PLANNING BOARD ATTORNEY	DATE:	8/7/24
BY: FIRE CHIEF	DATE:	8/6/24
BY: CHAIRMAN OF THE PLANNING BOARD	DATE:	08/09/2024
BY: N/A TOWN CLERK	DATE:	

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

ALL EXISTING PROPERTY SURVEY INFORMATION, INCLUDING BUT NOT LIMITED TO BOUNDARY, TOPOGRAPHY, UTILITIES, EASEMENTS, ETC. WERE PROVIDED BY SHULTZ ASSOCIATES ENGINEERS & LAND SURVEYORS ON EXISTING CONDITIONS PLANS (EX-1 & EX-2), DATED DECEMBER 5, 2023

MONROE COUNTY
DEPT. OF TRANSPORTATION
APPROVED
DATE 7/26/24
APPLICATIONS FOR PERMITS WILL NOW BE ACCEPTED
THIS PROJECT APPROVAL IS VALID FOR TWO (2) YEARS

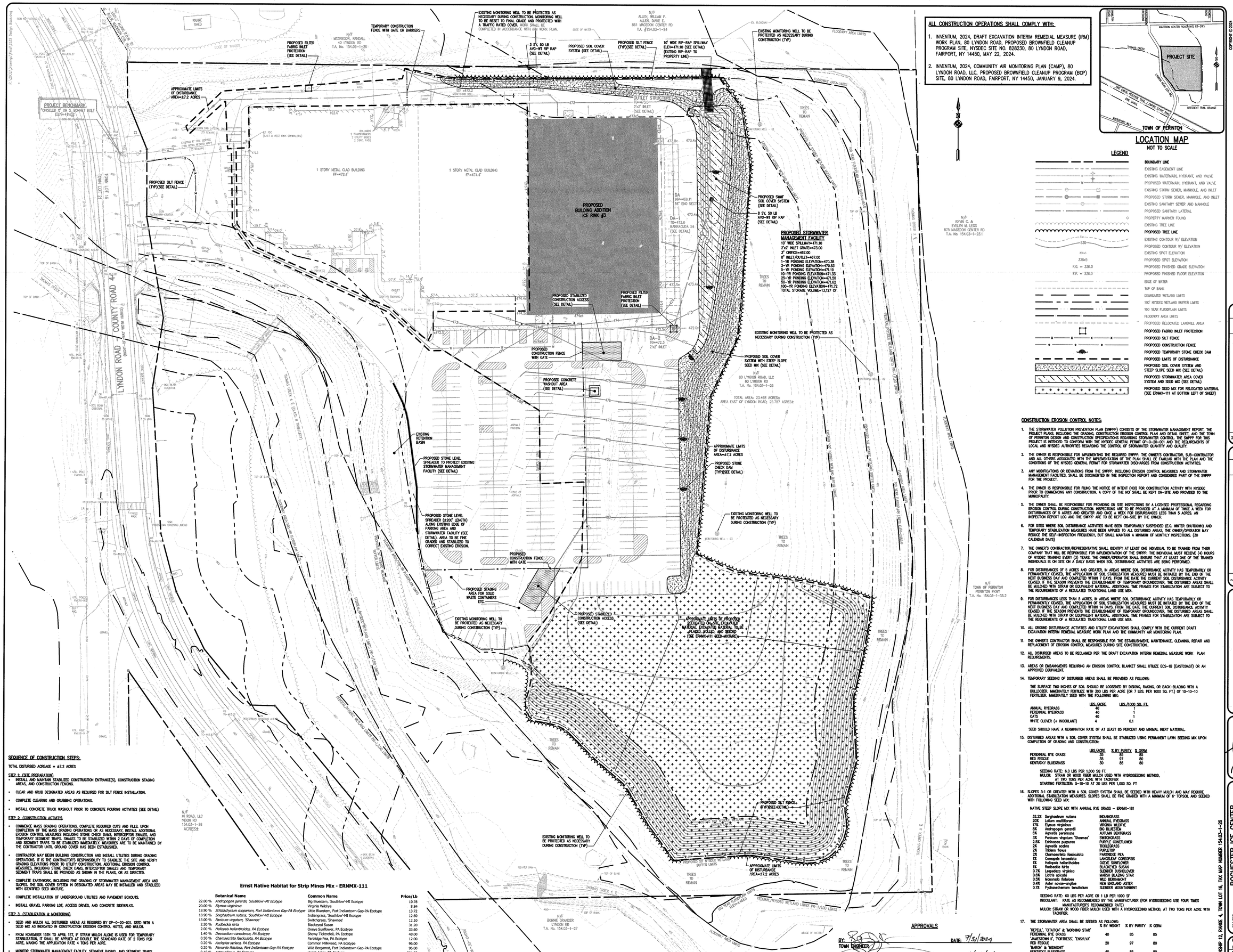
BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
65 EDGEBRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

STATE OF NEW YORK
GEORGE J. CRETEKOS
LICENSED PROFESSIONAL ENGINEER

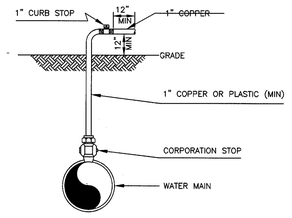
PROJECT: ROCHESTER ICE CENTER
PRELIMINARY/FINAL
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: 80 LYNDON ROAD, LLC
80 LYNDON ROAD
ROCHESTER, NY 14610
DRAWING TITLE: GRADING PLAN

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 16, TAX MAP NUMBER 154.03-1-26

PROJECT MANAGER	PG YARS
PROJECT ENGINEER	JG CRETEKOS
DRAWN BY	A. BEHLER
SCALE	1" = 40'
DATE ISSUED	JUNE 2024
PROJECT NO.	2932
DRAWING NO.	06


PROJECT BENCHMARK: "CHISELED 'X' ON S. BONNET BOLT ELEV=476.12
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
TEMPORARY CONSTRUCTION FENCE WITH GATE OR BARRIERS
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION. MONITORING WELL TO BE RESET TO FINAL GRADE AND PROTECTED WITH A TRAFFIC RATED COVER. WORK SHALL BE COMPLETED IN ACCORDANCE WITH RPA WORK PLAN.
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
3 SY, 50 LB AVG-WT RIP RAP (SEE DETAIL)
PROPOSED SOIL COVER SYSTEM (SEE DETAIL)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
10' WIDE RIP-RAP SPILLWAY ELEV=471.10 (SEE DETAIL) (EXTEND RIP-RAP TO PROPERTY LINE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
PROPOSED BUILDING ADDITION ICE RINK #3
1 STORY METAL CLAD BUILDING FF=472.4'
1 STORY METAL CLAD BUILDING FF=474.4'
PROPOSED SWMF SOIL COVER SYSTEM (SEE DETAIL)
8 SY, 50 LB AVG-WT RIP RAP (SEE DETAIL)
PROPOSED STABILIZED CONSTRUCTION ACCESS (SEE DETAIL)
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED CONCRETE WASHOUT AREA (SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SOIL COVER SYSTEM WITH STEEP SLOPE SEED MIX (SEE DETAIL)
EXISTING RETENTION BASIN
PROPOSED STONE LEVEL SPREADER TO PROTECT EXISTING STORMWATER MANAGEMENT FACILITY (SEE DETAIL)
PROPOSED STONE LEVEL SPREADER (±200' LENGTH) ALONG EXISTING EDGE OF PARKING AREA AND STORMWATER FACILITY (SEE DETAIL). AREA TO BE FINE GRADED AND STABILIZED TO CORRECT EXISTING EROSION.
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED STAGING AREA FOR SOLID WASTE CONTAINERS ETC.
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED STABILIZED CONSTRUCTION ACCESS, (SEE DETAIL)
APPROXIMATE LIMITS OF PROPOSED RELOCATED ON-SITE EXCAVATED MATERIAL (EXCAVATED MATERIAL TO BE PLACED, ROLLED, AND SEEDED) (SEE ERNMX-111 SEED MIXTURE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
PROPOSED STORMWATER MANAGEMENT FACILITY
10' WIDE SPILLWAY=471.10
2'x2' INLET GRATE=473.00
3" ORIFICE=467.00
8" INLET/OUTLET=467.00
1-YR PONDING ELEVATION=470.38
2-YR PONDING ELEVATION=470.63
5-YR PONDING ELEVATION=471.15
10-YR PONDING ELEVATION=471.33
25-YR PONDING ELEVATION=471.50
50-YR PONDING ELEVATION=471.62
100-YR PONDING ELEVATION=471.72
TOTAL STORAGE VOLUME=13,127 CF
DA-1 TOW=473.0 BARRACUDA S4 (SEE DETAIL)
DA-2 TOW=472.3 2'x2' INLET
DA INV=469.11 18" END SECTION
OUTLET STRUCTURE TOW=473.0 2'x2' INLET (SEE DETAIL)
PROPOSED SOIL COVER SYSTEM WITH SEED MIX (SEE DETAIL)
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
PROPOSED STEEP SLOPE SOIL COVER SYSTEM AND SEED MIX (SEE DETAIL)
PROPOSED STORMWATER AREA COVER SYSTEM AND SEED MIX (SEE DETAIL)
PROPOSED SEED MIX FOR RELOCATED MATERIAL (SEE ERNMX-111 AT BOTTOM LEFT OF SHEET)
PROPOSED SOIL COVER SYSTEM AND STEEP SLOPE SEED MIX (SEE DETAIL)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
PROPOSED STABILIZED CONSTRUCTION ACCESS (SEE DETAIL)
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SOIL COVER SYSTEM WITH STEEP SLOPE SEED MIX (SEE DETAIL)
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
APPROXIMATE LIMITS OF DISTURBANCE /AREA=±7.2 ACRES
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
PROPOSED STONE LEVEL SPREADER (±200' LENGTH) ALONG EXISTING EDGE OF PARKING AREA AND STORMWATER FACILITY (SEE DETAIL). AREA TO BE FINE GRADED AND STABILIZED TO CORRECT EXISTING EROSION.
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED STAGING AREA FOR SOLID WASTE CONTAINERS ETC.
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED STABILIZED CONSTRUCTION ACCESS, (SEE DETAIL)
APPROXIMATE LIMITS OF PROPOSED RELOCATED ON-SITE EXCAVATED MATERIAL (EXCAVATED MATERIAL TO BE PLACED, ROLLED, AND SEEDED) (SEE ERNMX-111 SEED MIXTURE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
APPROXIMATE LIMITS OF DISTURBANCE /AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)

P:\2932\Drawings\Final\2932 Detail Base.dwg



NOTE: IN THE PRESENCE OF A WATER AUTHORITY REPRESENTATIVE REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY DISINFECTION/SAMPLE TAPS AND REPLACE WITH THREADED BRASS PLUGS.

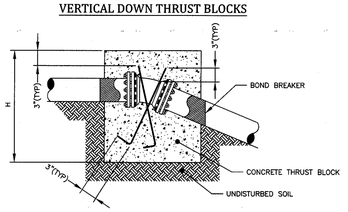
DISINFECTION/BLOW-OFF/SAMPLING TAP (TEMPORARY)

NOT TO SCALE

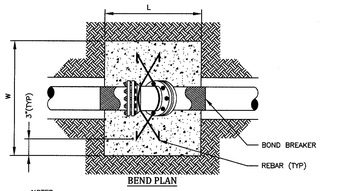
PIPE DIAMETER	BEND														
	11¼ DEGREE				22½ DEGREE				45 DEGREE				90 DEGREE			
	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)
6"	3.0	3.0	3.0	1.0	3.0	4.0	3.5	1.5	3.0	6.0	4.2	2.5	3.0	6.2	4.5	3.0

SOIL BEARING STRENGTH - PSF
PSI TEST PRESSURE

VERTICAL DOWN THRUST BLOCKS



BEND ELEVATION



BEND PLAN

NOTES:
1. THRUST BLOCKS SHALL BE CENTERED HORIZONTALLY ON BENDS.
2. VOLUMES SHOWN IN CHART ARE MINIMUMS.

VERTICAL DOWN THRUST BLOCKS

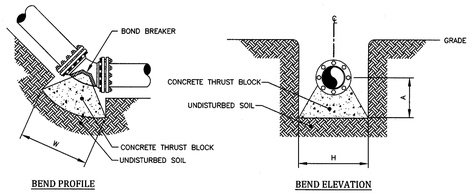
NOT TO SCALE

PIPE DIAMETER	BEND OR FITTING												TEE*, CAP OR PLUG		
	11¼ DEGREE			22½ DEGREE			45 DEGREE			90 DEGREE					
	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)
6"	1.0	1.0	1.5	1.0	1.5	1.5	1.5	2.0	1.5	2.0	2.5	1.5	1.5	2.5	1.0

* SIZE BLOCK BASED ON BRANCH DIAMETER.

SOIL BEARING STRENGTH - PSF
PSI TEST PRESSURE

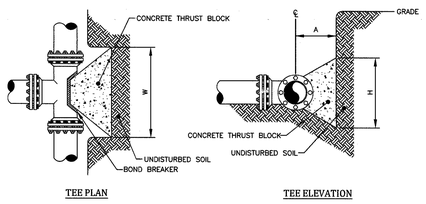
HORIZONTAL AND VERTICAL UP THRUST BLOCKS



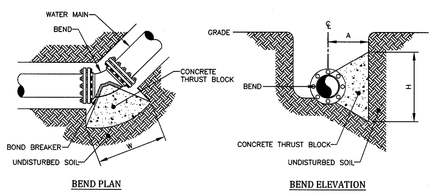
BEND PROFILE BEND ELEVATION

VERTICAL UP THRUST BLOCKS

NOT TO SCALE



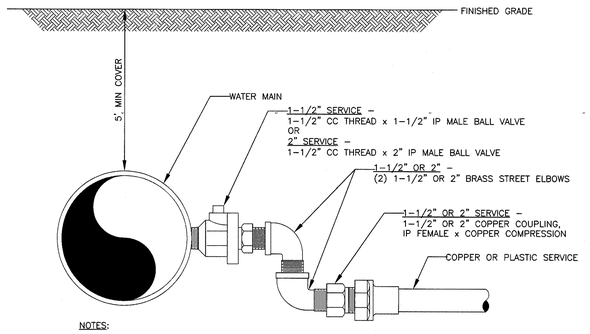
TEE PLAN TEE ELEVATION



BEND PLAN BEND ELEVATION

HORIZONTAL THRUST BLOCKS

NOT TO SCALE



NOTES:

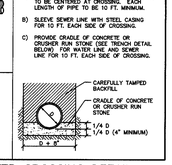
1. CORPORATION SWING JOINT ASSEMBLY INSTALLED PARALLEL WITH WATER MAIN (ROTATE ELBOWS).
2. TAPPING SADDLES ARE REQUIRED FOR ALL 1-1/2" AND 2" TAPS MADE ON A 4" THROUGH 12" DUCTILE IRON AND CAST IRON MAINS AND ALL SIZES OF PVC AND ASBESTOS MAINS

1-1/2" AND 2" SERVICE INSTALLATION

NOT TO SCALE

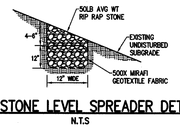
CONDITION	SCHEMATIC	REQUIREMENTS
I WATER LINE ABOVE SEWER LINE	WL MORE THAN 18" SL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) BACKFILL WITH COMPACTED CRUSHER RUN STONE.
II WATER LINE ABOVE SEWER LINE	WL 18" MIN. SL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) WHEN BOTH WATER LINE AND SEWER LINE ARE NEW, SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. WHEN ONE LINE IS EXISTING, SLEEVE PIPE BEING INSTALLED WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. C) BACKFILL WITH COMPACTED CRUSHER RUN STONE.
III SEWER LINE ABOVE WATER LINE	SL 18" MIN. WL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. C) PROVIDE CRADLE OF CONCRETE OR CRUSHER RUN STONE (SEE TRENCH DETAIL BELOW) FOR WATER LINE AND SEWER LINE FOR 10 FT. EACH SIDE OF CROSSING.

NOTES
WL (WATER LINE)
SL (SEWER LINE)
D (OUTSIDE DIAMETER OF PIPE)
IN NO CASE SHALL PIPES BE CLOSER THAN 18" APART. DISTANCES ARE MEASURED BETWEEN OUTSIDES OF PIPE.



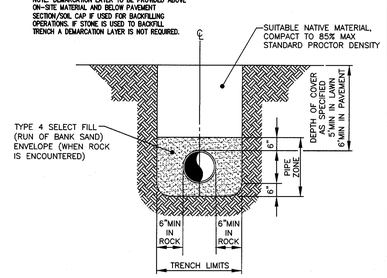
WATERMAIN/SEWER CROSSING DETAIL

(N.T.S.)



LINED STONE LEVEL SPREADER DETAIL

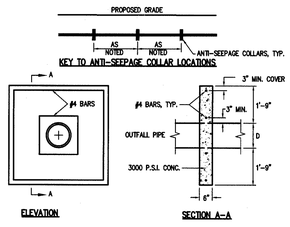
N.T.S



NOTE: EXCAVATION TO MEET OSHA REQUIREMENTS.

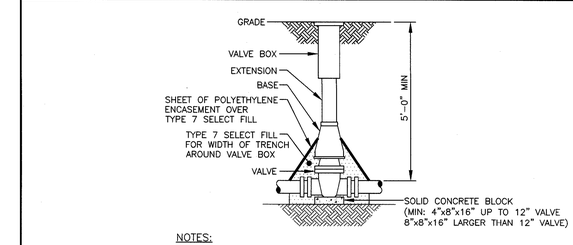
DIP TRENCH

NOT TO SCALE



TYPICAL ANTI-SEEPAGE COLLAR

N.T.S.

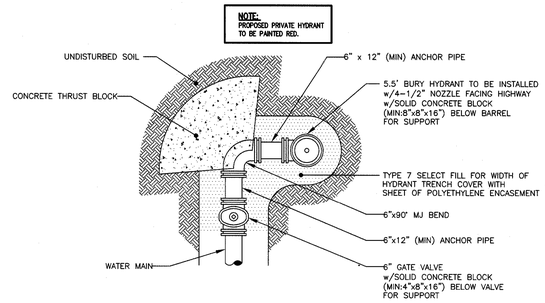


NOTES:

1. VALVE BOX SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. ALL VALVES SHALL BE OPEN LEFT EXCEPT:
   TOWN OF WEBSTER – VALVES 12" AND SMALLER SHALL OPEN RIGHT.
   TOWN OF HENRIETTA – SHALL OPEN RIGHT

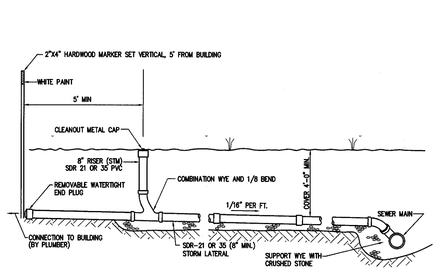
VALVE

NOT TO SCALE



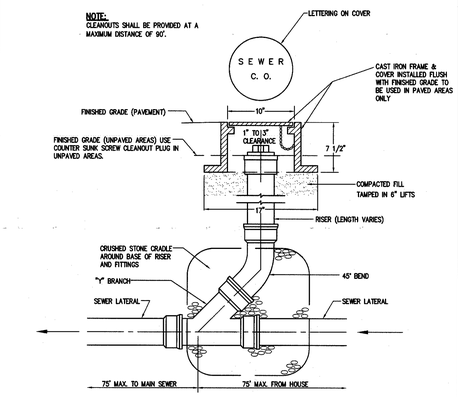
DEAD END PERPENDICULAR HYDRANT ASSEMBLY (PRIVATE)

NOT TO SCALE



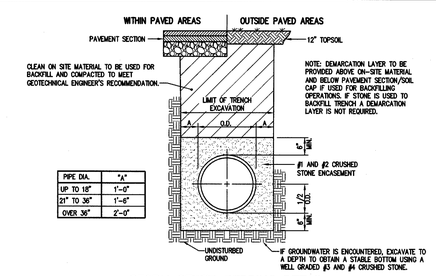
TYPICAL STORM SEWER BUILDING LATERAL

N.T.S.



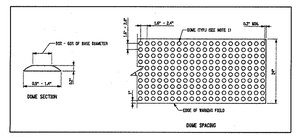
SANITARY CLEANOUT DETAIL IN PAVEMENT

N.T.S.



STORM SEWER BEDDING DETAIL

N.T.S.



NOTE:

1. THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE. THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING UNITY (THE DOMES AND THE ENTIRE 24" LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.

   DETECTABLE WARNING UNIT DIMENSIONS:

2. THE SIZE OF THE DETECTABLE WARNING FIELD SHALL BE 24" IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUSIVE SIDE FLARES.

   DOME ALIGNMENT:

3. THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP LANDING OR CURB RAMP AND STREET.

   COLOR REQUIREMENTS:

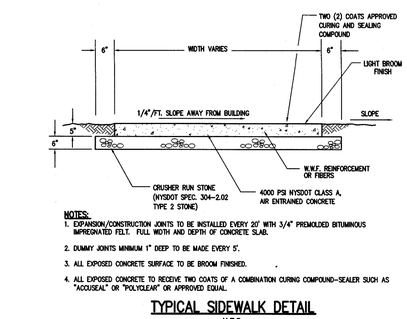
4. THE DETECTABLE WARNING FIELD SHALL BE THE COLOR SPECIFIED IN THE CONTRACT DOCUMENTS OR MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

   DETECTABLE WARNING LOCATIONS:

5. DETECTABLE WARNINGS SHALL BE LOCATED SO THAT THE EDGE OR CORNER OF THE WARNING FIELD NEAREST TO THE ROADWAY IS 5" TO 8" FROM THE FRONT OF THE CURB OR THE ROADWAY EDGE (12" WHERE TRAVERSABLE CURB IS USED).
6. THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 6'-0" MIN. AND 15'-0" MAX FROM THE CENTERLINE OF THE NEAREST RAIL.

DETECTABLE WARNING FIELD DETAIL

N.T.S.



NOTES:

1. EXPANSION/CONSTRUCTION JOINTS TO BE INSTALLED EVERY 20' WITH 3/4" PREMOLDED BITUMINOUS IMPREGNATED FELT. FULL WIDTH AND DEPTH OF CONCRETE SLAB.
2. DUMMY JOINTS MINIMUM 1" DEEP TO BE MADE EVERY 5'.
3. ALL EXPOSED CONCRETE SURFACE TO BE BROOM FINISHED.
4. ALL EXPOSED CONCRETE TO RECEIVE TWO COATS OF A COMBINATION CURING COMPOUND-SEALER SUCH AS "ACCUSEAL" OR "POLYCLEAR" OR APPROVED EQUAL.

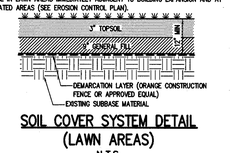
TYPICAL SIDEWALK DETAIL

N.T.S.

7/5/2024
TOWN ENGINEER DATE

7/30/24
COMMISSIONER OF PUBLIC WORKS DATE

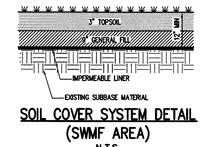
NOTE:
FOR USE IN LAWN AREAS IMMEDIATELY ADJACENT TO BUILDING EXPANSION AND AT DESIGNATED AREAS (SEE EROSION CONTROL PLAN).



SOIL COVER SYSTEM DETAIL (LAWN AREAS)

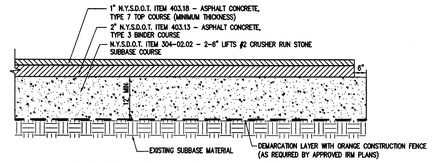
N.T.S.

NOTE:
FOR USE IN THE STORMWATER MANAGEMENT AREA ONLY (SEE EROSION CONTROL PLAN).



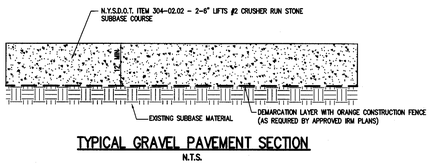
SOIL COVER SYSTEM DETAIL (SWMF AREA)

N.T.S.



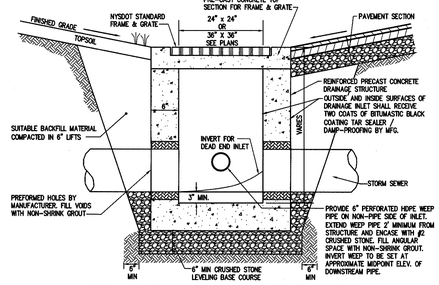
TYPICAL ASPHALT PAVEMENT SECTION

N.T.S.



TYPICAL GRAVEL PAVEMENT SECTION

N.T.S.



PRECAST CONCRETE STORM CATCH BASIN DETAIL (PAVEMENT OR GRASS)

N.T.S.

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing.
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of a professional engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

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			BY
			DATE
			REVISIONS
14	13	12	11	10	9	8	

								7/19/24	APS
								DATE	BY
7	6	5	4	3	2	1	REVISIONS PER TOWN & AGENCY COMMENTS		

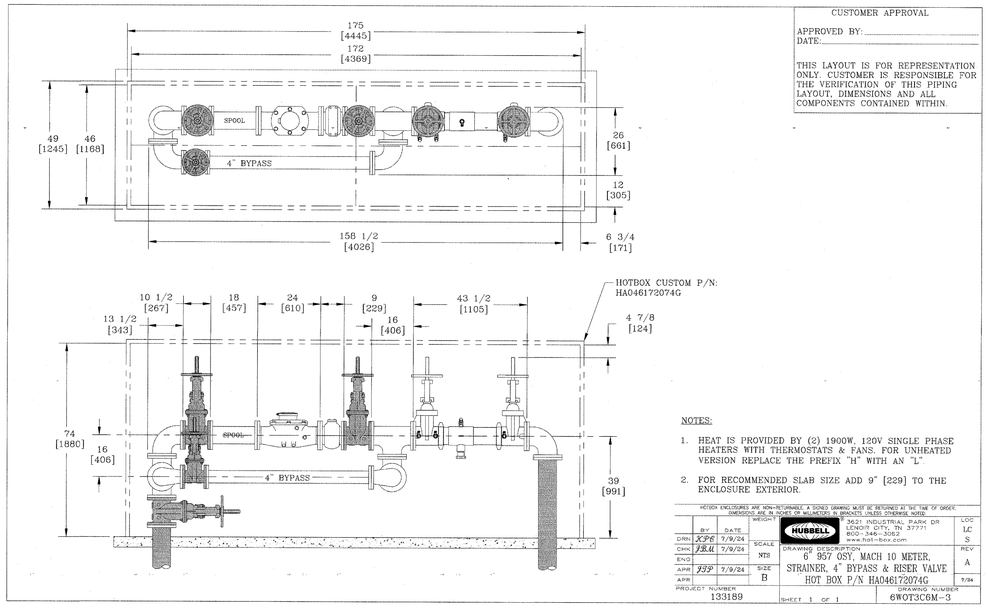
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STATE OF NEW YORK
GEORGE J. CRETEKOS
PROFESSIONAL ENGINEER

ROCHESTER ICE CENTER
PRELIMINARY/FINAL
TOWN OF PENFIELD, MONROE COUNTY, NEW YORK STATE
PROJECT
LOCATION
CLIENT
80 LYNDEN LANE, LLC
80 LYNDEN LANE
ROCHESTER, NY 14610
DRAWING TITLE
DETAIL SHEET

PROJECT MANAGER	
PG YARS	
PROJECT ENGINEER	
JG CRETEKOS	
DRAWN BY	
A. BEITLER	
SCALE	DATE ISSUED
1" = 40'	JUNE 2024
PROJECT NO.	
2932	
DRAWING NO.	
09 (SHEET 1 OF 2)	

P:\2932\Drawings\Final\2932 Detail Basic.dwg



CUSTOMER APPROVAL

APPROVED BY: .....

DATE: .....

THIS LAYOUT IS FOR REPRESENTATION ONLY. CUSTOMER IS RESPONSIBLE FOR THE VERIFICATION OF THIS PIPING LAYOUT, DIMENSIONS AND ALL COMPONENTS CONTAINED WITHIN.

NOTES:

1. HEAT IS PROVIDED BY (2) 1900W, 120V SINGLE PHASE HEATERS WITH THERMOSTATS & FANS. FOR UNHEATED VERSION REPLACE THE PREFIX "H" WITH AN "L"
2. FOR RECOMMENDED SLAB SIZE ADD 9" [229] TO THE ENCLOSURE EXTERIOR.

HOTBOX ENCLOSURES ARE NON-RETURNABLE. A SIGNED DRAWING MUST BE RETURNED AT THE TIME OF ORDER. DIMENSIONS ARE IN INCHES OR MILLIMETERS IN BRACKETS UNLESS OTHERWISE NOTED.

	BY	DATE
DRN	JCPE	7/9/24
CHK	JBW	7/9/24
ENG		
APR	JJP	7/9/24
APR		

WEIGHT: | SCALE: NTS | SIZE: B

HUBBELL — 3621 INDUSTRIAL PARK DR, LEWISBURG, TN 37091, 800-346-5062, www.hot-box.com

DRAWING DESCRIPTION: 6' 95° OSY, MACH 10 METER, STRAINER, 4" BYPASS & RISER VALVE HOT BOX P/N HA046172074G

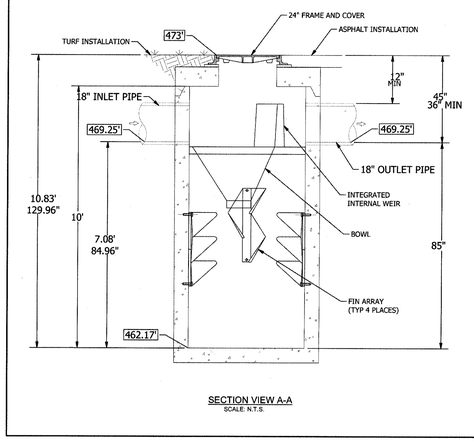
PROJECT NUMBER: 133189 | SHEET 1 OF 1 | DRAWING NUMBER: 6WOT3C6M-3 | LOC: LC S | REV: A 7/24

PRODUCT SPECIFICATIONS

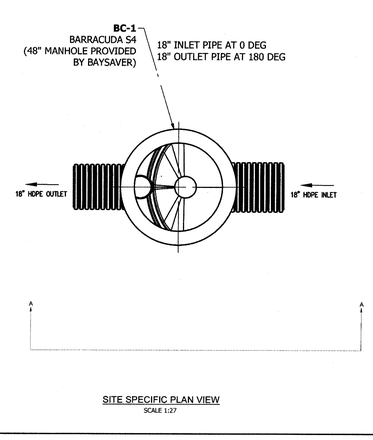
- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
-OR-
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d50=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
-OR-
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

BARRACUDA S4	
UNIT ID	S4
PEAK FLOW RATE CFS	5.6
TREATMENT FLOW RATE CFS	1.5

*TREATMENT FLOW RATE PER OK-110



SECTION VIEW A-A
SCALE: N.T.S.



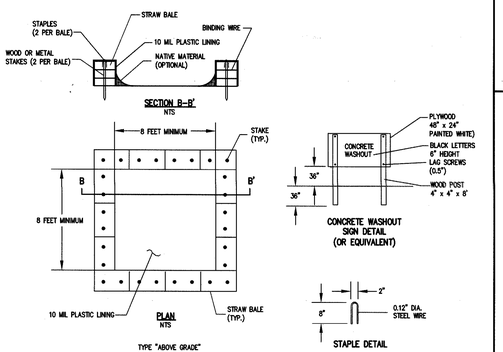
SITE SPECIFIC PLAN VIEW
SCALE 1:27

ROCHESTER ICE CENTER
BRIGHTON, NY
DATE:
DRAWN:
CHECKED:
PROJECT #:
SHEET: 1 OF 1
SCALE: AS NOTED
4845 TRUEMAN BLVD HILLIARD, OH 43026
(614) 777-1005 www.dsvision.com
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1000 Dean Wilson Pkwy Mount Airy, NC 27030 1.800.BARRACUDA 1.866.228.2384

RIP-RAP OUTLET DIMENSIONS

DESIGNATION	DIA. OF PIPE Do	3Do	La	W
DA	18"	4.5'	9'	10.5'

RIP-RAP OUTLET PROTECTION DETAIL TYPICAL
NTS



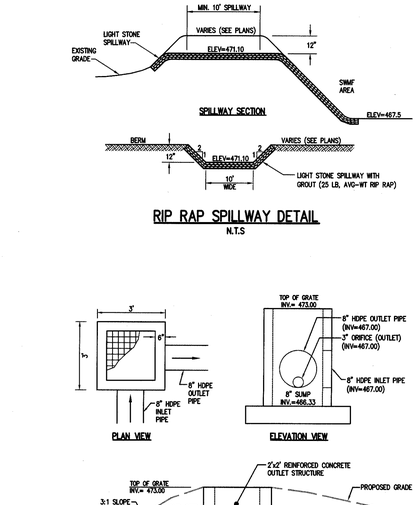
NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD. LOCATE THE FACILITY A MINIMUM OF 100 FEET FROM DRAINAGE SWALES, STORM DRAIN INLETS, WETLANDS, STREAMS AND OTHER SURFACE WATERS.
2. THE MINIMUM SIZE SHALL BE 8 FEET BY 8 FEET AT THE BOTTOM AND 2 FEET DEEP. IF EXCAVATED, THE SIDE SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL.
3. WASHOUT STATION SHOULD BE CLEANED WHEN CONCRETE ACCUMULATES TO 75% OF THE STORAGE VOLUME. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
4. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
5. THE PLASTIC LINER SHALL BE REPLACED WHENEVER THE LINER IS TORN, PUNCTURED, OR THE WASHOUT IS EMPTIED.

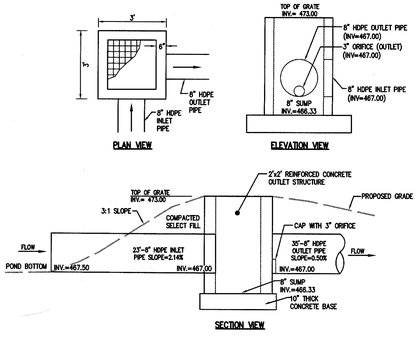
CONCRETE WASHOUT DETAIL
N.T.S.

Town Engineer — 7/31/2024 Date

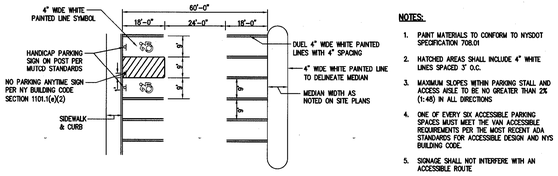
Town Clerk — 7/31/24 Date



RIP RAP SPILLWAY DETAIL
N.T.S



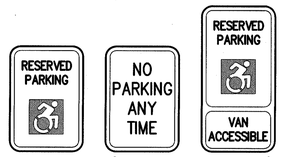
STORM WATER MANAGEMENT FACILITY OUTLET STRUCTURE DETAIL
N.T.S.



NOTES:

1. PAINT MATERIALS TO CONFORM TO NYSDOT SPECIFICATION 708.01
2. HATCHED AREAS SHALL INCLUDE 4" WHITE LINES SPACED 3' O.C.
3. MAXIMUM SLOPES WITHIN PARKING STALL AND ACCESS AISLE TO BE NO GREATER THAN 2% (1:48) IN ALL DIRECTIONS
4. ONE OF EVERY SIX ACCESSIBLE PARKING SPACES MUST MEET THE VAN ACCESSIBLE REQUIREMENTS PER THE MOST RECENT ADA STANDARDS FOR ACCESSIBLE DESIGN AND NYS BUILDING CODE.
5. SIGNAGE SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE

TYPICAL HAIRPIN STRIPING DETAIL
N.T.S.



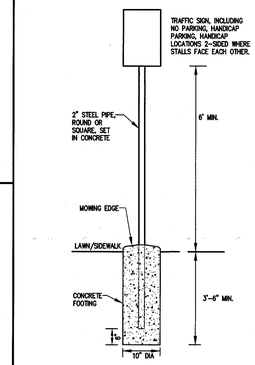
NOTES:

1. SIGN TO BE MOUNTED TO A 2" DIA. STEEL PIPE SET IN 3'6" DEEP BY 10" DIA. CONCRETE 3000 PSI. BASE, SET BELOW GRADE.
2. SIGNS MAY BE MOUNTED TO BUILDING WALLS WHERE POSTS WOULD INTERFERE WITH PEDESTRIAN ACCESSIBLE ROUTES.
3. SIGN TO BE MOUNTED BETWEEN 60" AND 84" FROM FINISHED GRADE TO BOTTOM OF SIGN.
4. POLE MOUNTED SIGNS TO BE MOUNTED 72" FROM FINISHED GRADE TO BOTTOM OF SIGN.

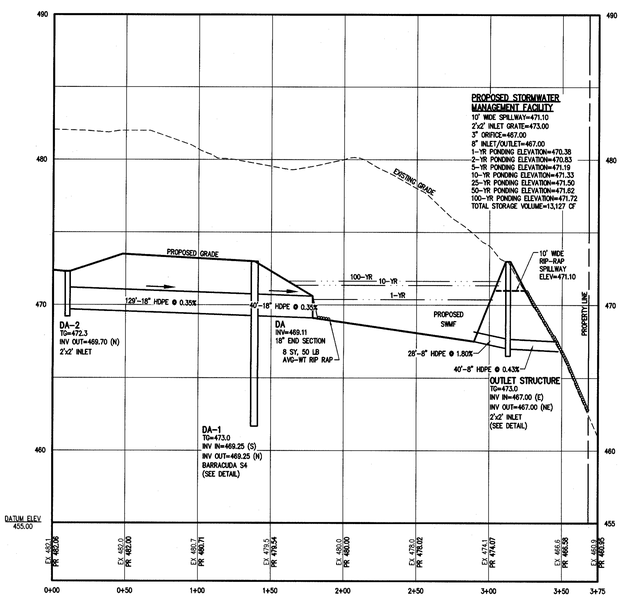
ACCESSIBLE PARKING SIGNS DETAIL
N.T.S.



ACCESSIBLE PARKING SYMBOL DETAIL
N.T.S.



TRAFFIC SIGN POLE MOUNTING DETAIL
N.T.S.



PROPOSED SWMF PROFILE
SCALE: HOR 1"=40'
VER 1"=4'

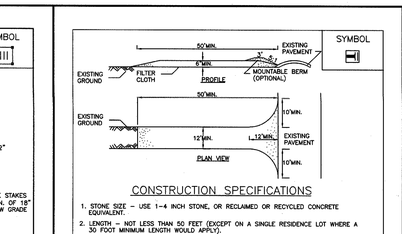
CONSTRUCTION SPECIFICATIONS

1. FABRIC SHALL HAVE AN EOS OF 40–85, BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. STAKES SHALL BE EVENLY SPACED AT 6 FEET APART AND DRIVE 8" DEEP ON THE DOWNSTREAM SIDE. WHERE GREATER THAN 6 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2"x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC TO R OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

FABRIC DROP INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE 1–4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE ENTRANCE OR EXPRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE, IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

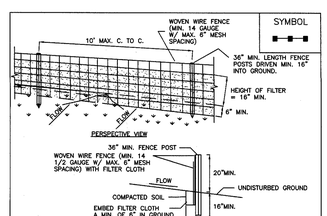
STABILIZED CONSTRUCTION ACCESS

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STONE CHECK DAM

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Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing.
It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the document and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

	BY	DATE	REVISIONS
14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2	JCPE	7/19/24	REVISED PER TOWN & AGENCY COMMENTS
1			

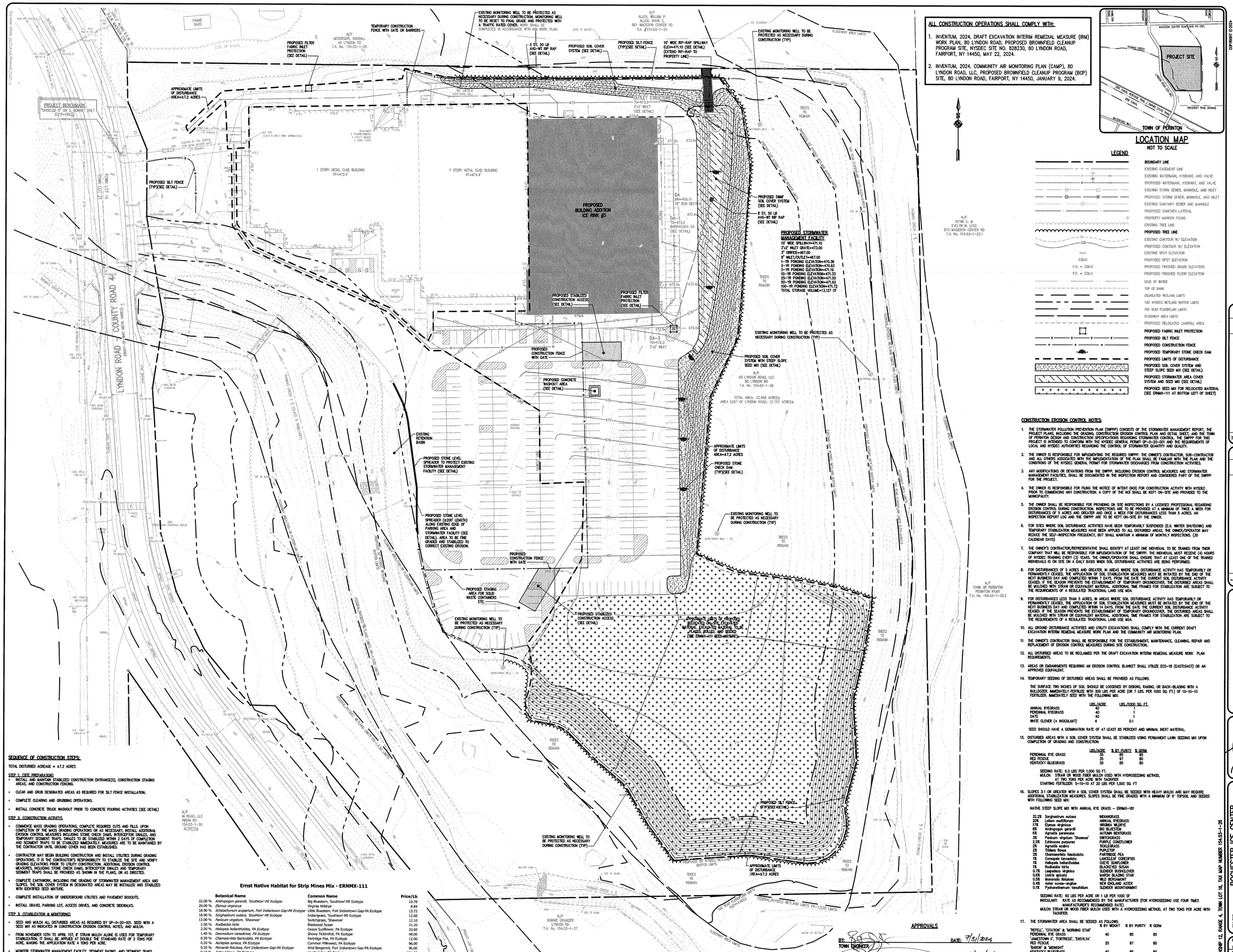
BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LETCHWORTH LANE EAST, FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM 585-377-2060

STATE OF NEW YORK — JOSEPH C. BEYER — 095076 — LICENSED PROFESSIONAL ENGINEER

PROJECT: ROCHESTER ICE CENTER
PRELIMINARY/FINAL
LOCATION: TOWN OF PENFIELD, MONROE COUNTY, NEW YORK STATE
CLIENT: BRIGHTON ICE, LLC
80 LATHAM LANE
ROCHESTER, NY 14610
DRAWING TITLE: DETAIL SHEET

PROJECT MANAGER	PG VARS
PROJECT ENGINEER	JG CRETEKOS
DRAWN BY	A. BEYER
SCALE	DATE ISSUED
1" = 40'	JUNE 2024
PROJECT NO.	2932
DRAWING NO.	10 (SHEET 2 OF 2)

Appendix B – Erosion & Sediment Control Plan – Prepared by BME Associates


PROJECT BENCHMARK: "CHISELED 'X' ON S. BONNET BOLT ELEV=476.12
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
TEMPORARY CONSTRUCTION FENCE WITH GATE OR BARRIERS
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION. MONITORING WELL TO BE RESET TO FINAL GRADE AND PROTECTED WITH A TRAFFIC RATED COVER. WORK SHALL BE COMPLETED IN ACCORDANCE WITH RPA WORK PLAN.
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
3 SY, 50 LB AVG-WT RIP RAP (SEE DETAIL)
PROPOSED SOIL COVER SYSTEM (SEE DETAIL)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
10' WIDE RIP-RAP SPILLWAY ELEV=471.10 (SEE DETAIL) (EXTEND RIP-RAP TO PROPERTY LINE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
PROPOSED BUILDING ADDITION ICE RINK #3
1 STORY METAL CLAD BUILDING FF=472.4'
1 STORY METAL CLAD BUILDING FF=474.4'
PROPOSED SWMF SOIL COVER SYSTEM (SEE DETAIL)
8 SY, 50 LB AVG-WT RIP RAP (SEE DETAIL)
PROPOSED STABILIZED CONSTRUCTION ACCESS (SEE DETAIL)
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED CONCRETE WASHOUT AREA (SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SOIL COVER SYSTEM WITH STEEP SLOPE SEED MIX (SEE DETAIL)
EXISTING RETENTION BASIN
PROPOSED STONE LEVEL SPREADER TO PROTECT EXISTING STORMWATER MANAGEMENT FACILITY (SEE DETAIL)
PROPOSED STONE LEVEL SPREADER (±200' LENGTH) ALONG EXISTING EDGE OF PARKING AREA AND STORMWATER FACILITY (SEE DETAIL). AREA TO BE FINE GRADED AND STABILIZED TO CORRECT EXISTING EROSION.
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED STAGING AREA FOR SOLID WASTE CONTAINERS ETC.
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED STABILIZED CONSTRUCTION ACCESS, (SEE DETAIL)
APPROXIMATE LIMITS OF PROPOSED RELOCATED ON-SITE EXCAVATED MATERIAL (EXCAVATED MATERIAL TO BE PLACED, ROLLED, AND SEEDED) (SEE ERNMX-111 SEED MIXTURE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
PROPOSED STORMWATER MANAGEMENT FACILITY
10' WIDE SPILLWAY=471.10
2'x2' INLET GRATE=473.00
3" ORIFICE=467.00
8" INLET/OUTLET=467.00
1-YR PONDING ELEVATION=470.38
2-YR PONDING ELEVATION=470.63
5-YR PONDING ELEVATION=471.15
10-YR PONDING ELEVATION=471.33
25-YR PONDING ELEVATION=471.50
50-YR PONDING ELEVATION=471.62
100-YR PONDING ELEVATION=471.72
TOTAL STORAGE VOLUME=13,127 CF
DA-1 TOW=473.0 BARRACUDA S4 (SEE DETAIL)
DA-2 TOW=472.3 2'x2' INLET
DA INV=469.11 18" END SECTION
OUTLET STRUCTURE TOW=473.0 2'x2' INLET (SEE DETAIL)
PROPOSED SOIL COVER SYSTEM WITH SEED MIX (SEE DETAIL)
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
PROPOSED STEEP SLOPE SOIL COVER SYSTEM AND SEED MIX (SEE DETAIL)
PROPOSED STORMWATER AREA COVER SYSTEM AND SEED MIX (SEE DETAIL)
PROPOSED SEED MIX FOR RELOCATED MATERIAL (SEE ERNMX-111 AT BOTTOM LEFT OF SHEET)
PROPOSED SOIL COVER SYSTEM AND STEEP SLOPE SEED MIX (SEE DETAIL)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
PROPOSED STABILIZED CONSTRUCTION ACCESS (SEE DETAIL)
PROPOSED FILTER FABRIC INLET PROTECTION (SEE DETAIL)
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SOIL COVER SYSTEM WITH STEEP SLOPE SEED MIX (SEE DETAIL)
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
APPROXIMATE LIMITS OF DISTURBANCE /AREA=±7.2 ACRES
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
PROPOSED STONE LEVEL SPREADER (±200' LENGTH) ALONG EXISTING EDGE OF PARKING AREA AND STORMWATER FACILITY (SEE DETAIL). AREA TO BE FINE GRADED AND STABILIZED TO CORRECT EXISTING EROSION.
PROPOSED CONSTRUCTION FENCE WITH GATE
PROPOSED STAGING AREA FOR SOLID WASTE CONTAINERS ETC.
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED STABILIZED CONSTRUCTION ACCESS, (SEE DETAIL)
APPROXIMATE LIMITS OF PROPOSED RELOCATED ON-SITE EXCAVATED MATERIAL (EXCAVATED MATERIAL TO BE PLACED, ROLLED, AND SEEDED) (SEE ERNMX-111 SEED MIXTURE)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
APPROXIMATE LIMITS OF DISTURBANCE AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
PROPOSED SILT FENCE (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)
PROPOSED 50' NYSDEC WETLAND BUFFER LIMITS
APPROXIMATE LIMITS OF DISTURBANCE /AREA=±7.2 ACRES
PROPOSED STONE CHECK DAM (TYP)(SEE DETAIL)
EXISTING MONITORING WELL TO BE PROTECTED AS NECESSARY DURING CONSTRUCTION (TYP)

Appendix C - Community Air Monitoring Plan

INVENTUM ENGINEERING, PC

Community Air Monitoring Plan

80 Lyndon Road, LLC

Brownfield Cleanup Program (BCP) Site

80 Lyndon Road

Fairport, NY 14450

September 19, 2024

441 CARLISLE DRIVE
SUITE C
HERNDON, VA 20170
WWW.INVENTUMENG.COM

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1 Overview 1
2 Community Air Monitoring Plan 2
3 VOC Monitoring, Response Levels, and Actions 2
4 Particulate Monitoring, Response Levels, and Actions 3
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1 Overview

This Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at the BCP sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required.

- *The 80 Lyndon Road, LLC (80 Lyndon Road) Site will have a perimeter air monitoring program before and during the Remedial Investigation (RI). If there are detections at the property line, additional monitoring requirements will be considered*[1].
- *Three (3) perimeter air monitoring station units (1 Upwind and 2 Downwind) will be mobile and moved as the work area(s) change at the 80 Lyndon Road Site. Example monitoring locations are shown on Figure 1 provided in Appendix A-2.*

Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. The following special requirement as determined NYSDOH will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities.

- During earthwork activities for the construction of the third ice rink facility as described in the Excavation Interim Remedial Measure Work Plan, at least one air monitoring station will be maintained at a location adjacent to the entrance of the existing ice rink, and a second downwind CAMP station will be located and adjusted as need based on current wind directions.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

CAMP data summaries will be provided to the Site's NYSDEC and NYSDOH project managers on a weekly basis while active intrusive earthwork and soil investigations are occurring on the Site.

[1] The text in *italic font* are comments inserted by 80 Lyndon Road, LLC in addition to the standard CAMP Template.

2 Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

- *VOC and particulate monitoring will be incorporated into the RI and IRM activities.*

Continuous monitoring will be required for all ground intrusive activities within the footprint of the former landfill. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

- *During sampling periodic monitoring will be implemented with hand-held instruments.*

3 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of

the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

5. The NYSDEC and NYSDOH project managers for the Site will be notified within 24 hours by phone or email if there is an exceedance of the VOC action level of 25 ppm at the perimeter of the work area as described within Section 3. The notification shall include a description of the control measures implemented to prevent further exceedances.

4 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

4. Should the action level of 150 mcg/m3 above the upwind monitoring concentration be exceeded after corrective actions are taken, work must stop and NYDEC and NYSDOH project managers for the Site must be notified within 24-hours by phone or email. The notification shall include a description of the control measures implemented to prevent further exceedances.

Appendix A-1
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;

(b) Measurement Ranges: 0.001 to 400 mg/m^3 (1 to 400,000 :ug/m^3);

(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m^3 for one second averaging; and +/- 1.5 g/m^3 for sixty second averaging;

(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);

(e) Resolution: 0.1% of reading or 1g/m^3, whichever is larger;

(f) Particle Size Range of Maximum Response: 0.1-10;

(g) Total Number of Data Points in Memory: 10,000;

(h) Logged Data: Each data point with average concentration, time/date and data point number

(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;

(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;

(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;

(l) Operating Temperature: -10 to 50° C (14 to 122° F);

(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m^3 (15 minutes average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m^3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m^3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential-- such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;

(b) Wetting equipment and excavation faces;

(c) Spraying water on buckets during excavation and dumping;

(d) Hauling materials in properly tarped or watertight containers;

(e) Restricting vehicle speeds to 10 mph;

(f) Covering excavated areas and material after excavation activity ceases; and

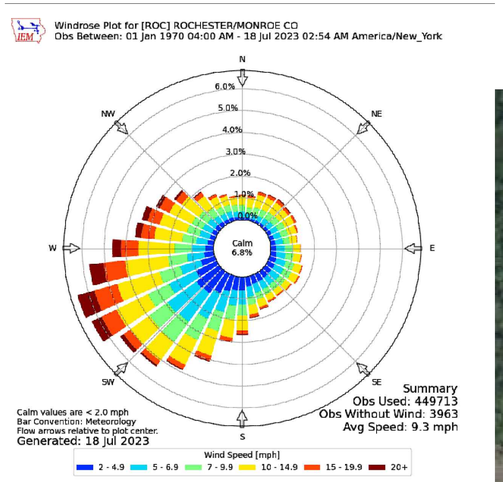
(g) Reducing the excavation size and/or number of excavations.

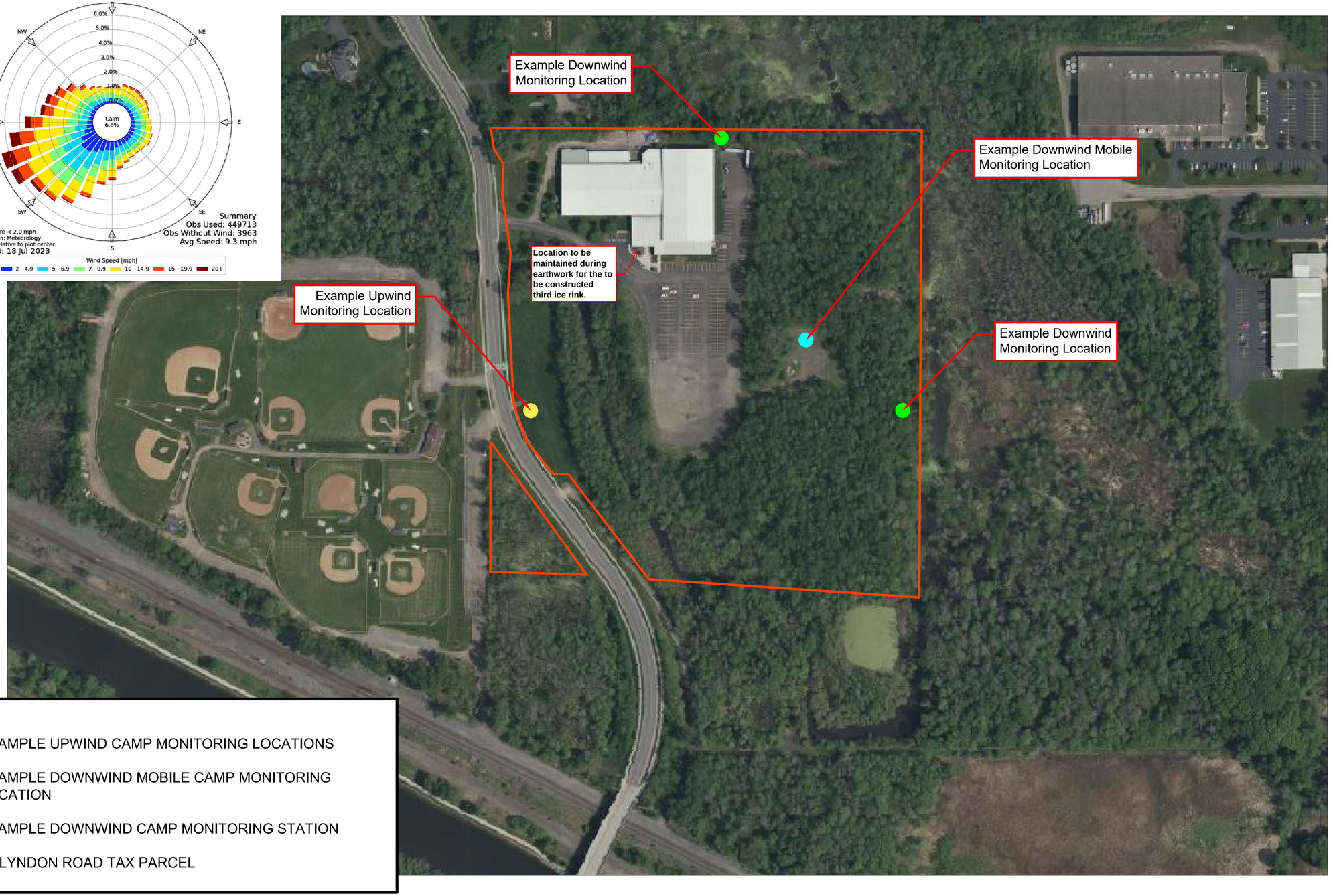
Experience has shown that the chance of exceeding the 150ug/m^3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.



8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

Appendix A-2
Perimeter Air Monitoring Locations





LEGEND

- EXAMPLE UPWIND CAMP MONITORING LOCATIONS
- EXAMPLE DOWNWIND MOBILE CAMP MONITORING LOCATION
- EXAMPLE DOWNWIND CAMP MONITORING STATION
- 80 LYNDON ROAD TAX PARCEL

D

120 0 60 120 240 480

1 INCH = 120 FEET (22X34)

Notes:
1. Downwind and upwind monitoring locations will be moved and relocated as necessary to account for active work areas.

References:
1. 80 Lyndon Road and Surrounding Properties Aerial, *Google Earth*, https://earth.google.com/web
2. Wind Rose Rochester/Monroe County, Iowa State University IEM, https://mesonet.agron.iastate.edu/

N

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CHECKED
APPROVED

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COMMUNITY AIR MONITORING PLAN (CAMP)

LYNDON ROAD SITE
80 LYNDON ROAD, LLC
FAIRPORT, NY14450

INVENTUM ENGINEERING
441 CARLISLE DRIVE
SUITE C
HERNDON, VIRGINIA 20170
(703) 722-6049
www.InventumEng.com

FIGURE 1

DRAWING NUMBER
CAMP

Appendix D – Health and Safety Plan

Inventum Engineering, PC
Site-Specific Health and Safety Plan (HASP)

(Required for all Type 2 and 3 projects.)

1. General Information

Client Name: 80 Lyndon Rd., LLC

Project #: 80 Lyndon Road

Project Name: 80 Lyndon Road

Project Manager: John Black, PE

Street Address:
80 Lyndon Road
Fairport, New York 14450

Prepared By: James Edwards

Date: January 5, 2024

Approved By: John Black, P.E.

Date: January 8, 2024
Updated: August 29, 2024

Proposed Date(s) of Work: TBD

Proposed Scope of Work:

Inventum Engineering, PC (Inventum) will be the owner's representative, investigation team and engineer supporting the site management, site investigation(s), and remedial investigation(s) through the New York State Brownfield Cleanup Program (BCP) for 80 Lyndon Rd., LLC located on the former Granger Landfill (Site). The general scope of work is provided below, and tasks will be updated with additional details/specifications as the project progresses through the BCP.

Task 1 - Site Management and Oversight

Inventum will conduct site visits, general management support, and general contractor and subcontractor oversight related to the remedial investigation for the Site. This task includes site visits related to oversight of the RI, but specifically excludes Inventum personnel directly performing any intrusive site work or oversight of contractors/subcontractors performing intrusive site work. Direct intrusive site work and/or intrusive site work oversight is covered under Tasks 2 through 7 below.

Task 2 – Surficial Soil Sampling

Surficial (approximately 0 to 2 feet below ground surface [bgs]) soil samples will be collected from various locations of the Site to establish current conditions. Shallow samples will be collected using a hand-auger, shovel, or trowel and the material will be recovered for lithological characterization and field screening with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field

notebook. Samples may be collected for various constituents including Metals, Semi-Volatile Organic Compounds (SVOCs), Volatile Organic Compounds (VOCs), Pesticide, Herbicides, Polychlorinated Biphenyls (PCBs), 1,4-Dioxane, and Per- and Polyfluoroalkyl Substances (PFAS).

Task 3 – Subsurface Soil Sampling

Subsurface (> 1 feet bgs) soils samples will be collected from various locations of the Site to establish current conditions. Depending on the depth of sample, subsurface samples may be collected using a hand-auger, shovel, trowel, light or heavy excavating equipment, direct-push equipment, or rotary drilling equipment. Material will be recovered for lithological characterization and field screening with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook. Samples may be collected for various constituents including Metals, SVOCs, VOCs, PCBs, Pesticide, Herbicides, 1,4-Dioxane, and PFAS.

Task 4 – Surface Water (Stream) and Sediment Sampling

Water and sediment sampling from along Thomas Creek. Surface water and sediment samples will be analyzed for VOCs, SVOCs, Metals, Pesticide, Herbicides, 1,4-Dioxane, and PFAS.

These samples shall be collected in accordance with approved work plans. No personnel will enter the stream to collect samples.

Task 5 – Monitoring Well Installation

New monitoring wells may be installed as part of the investigation(s) and remedial activities. The borings for the wells will be advanced to depth using hollow-stem augers and include the collection of soil samples for lithological characterization and for samples for analytical testing. Unconsolidated material samples will be collected for observation and screening with a photo-ionization detector (PID) equipped with a 10.6 eV lamp in a continuous interval over the total depth of the boring with a split barrel sampler driven through the augers. All lithological observations, field measurements, and well construction details will be logged in the field notebook. Surface and subsurface soil samples may be collected in accordance with Tasks 2 and 3.

The new wells will be completed with a 2-inch diameter Schedule 40 polyvinyl chloride (PVC) well casing and 5-feet of 0.010-inch slotted screen. A sand filter pack will be placed from the bottom of the screened interval to a minimum of 1 foot above the top of the screen. A 2-foot bentonite seal will be placed on top the filter pack and the remaining annular space will be completed with a cement grout (Portland Type I cement with 3 – 5% bentonite). The wells may either be completed flush-to-grade within a traffic rated box or within a steel bollard enclosure that protrudes a minimum of 2-feet above ground surface.

All newly installed wells will be developed prior to sampling and any existing monitoring wells may be redeveloped prior to sampling. The water levels in the monitoring wells will be manually measured using an oil/water interface probe prior to redevelopment and the depth to water, depth and thickness of any Light Non-Aqueous Phase Liquid (LNAPL), and the total depth of the well will be measured and logged in the field notebook. LNAPL is not anticipated based on historical data. The wells will be redeveloped by removing three well volumes, purging the wells until dry, or purging and surging the wells using a submersible pump.

Field parameters (temperature, pH, conductivity, ORP, turbidity) will be measured and logged in the field notebook at least three (3) times during the development process (beginning, middle, and end) using a hand-held water quality monitor. All development water will be containerized and stored in appropriately labeled drums or totes and disposed offsite or treated and discharged in accordance with site permits and applicable local, state, and federal regulations.

Task 6 – Groundwater Monitoring and Sampling

Inspections will be conducted prior to sampling and will include visual observations of the well head, seal, and cover. Measurements of the depth to liquid (if LNAPL is present), depth to water, and the overall total depth of the well will be collected using an oil/water interface probe and recorded in the field notebook for comparison to construction dimensions and previous records.

Monitoring wells will be sampled using a bailer by standard purge methods or peristaltic pump or QED bladder pump following low-flow sampling procedures. Field parameters (temperature, pH, dissolved oxygen, conductivity, ORP, turbidity) will be measured and logged in the field notebook at periodic intervals using a hand-held water quality monitor. All purge water will be containerized and stored in appropriately labeled drums or totes and disposed offsite or treated and discharged in accordance with applicable local, state, and federal regulations.

Samples may be collected for various constituents including Metals, SVOCs, VOCs, Pesticides, Herbicides, Cyanide, 1,4-Dioxane, and PFAS.

Task 7 – Sampling of Residuals

Samples may be collected from possible discovered drums or containers at the BCP Site and from containerized investigation derived waste to characterize contents and prepare profiles for recycling and disposal. To the extent practicable, all samples will be collected from the surface or from equipment outside the accumulation. Samples may be collected installed using a bailer, hand-auger, shovel, trowel, sludge sampler or other long reach equipment. Material will be recovered, and field screened with a PID equipped with a 10.6 eV lamp. All observations and measurements will be logged in the field notebook.

Inventum Engineering, PC
Site-Specific Health and Safety Plan (HASP)

(Required for all Type 2 and 3 projects.)

Samples may be collected for various constituents including Metals, SVOCs, VOCs, PCBs, hazardous characteristics, pH and water content.

Inventum Role(s) On Site:

☐ Inventum Staff Will Not Be On Site (HASP and Risk Analysis is for subcontractor information only)

☒ Resident Project Representative (*e.g.,* "Observe and Document")

☐ Construction Manager (*e.g.,* CM, Managing/General Contractor)

☒ Representative for Client (*e.g.,* "Agent for Owner")

☒ General On-site Consulting/Engineering Services

☒ Other

☒ Soil Sampling	☒ Solid Waste Sampling	☒ Liquid Waste Sampling
☒ Groundwater Sampling	☒ Surface Water Sampling	☒ Wastewater Sampling
☒ Sediment Sampling	☐ Surveying	☐ Confined Space Entry

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Major Project Tasks	Inventum Task	Subcontractor Task	Minimum PPE Level Required see HASP for details (suggested levels for Subcontractor work)
1. Site Management and Oversight	☒	☐	☐ N/A ☒ D ☐ C ☐ B ☐ A
2. Surficial Soil Sampling	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
3. Subsurface Soil Sampling	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
4. Permit Compliance Water and Wastewater Sampling	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
5. Monitoring Well Abandonment	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
6. Monitoring Well Installation	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
7. Groundwater Monitoring and Sampling	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A
8. Sampling of Residuals	☒	☒	☐ N/A ☒ D ☐ C ☐ B ☐ A

2. Contingency Planning

LOCAL EMERGENCY RESOURCES:	
Ambulance: 911	Emergency Room: 585.922.2000 (non-emergency)
Police: 911	Fire Department: 911
NYSDEC Contact: Pending	Poison Control Center: 800.222.1222 ☐ Specify:
Other (client services offered, etc.):	

SITE RESOURCES:			
Drinking Water Supply	☐ Inventum	☐ Subcontractor	☒ Client
Wash Water Supply	☐ Inventum	☐ Subcontractor	☒ Client
Telephone – Land Line		☐ Subcontractor	☒ Client
Telephone - Cellular	☒ Inventum	☐ Subcontractor	
First Aid Kit	☒ Inventum	☒ Subcontractor	
Fire Extinguisher	☐ Inventum	☒ Subcontractor	☒ Client
Emergency Shower **N/A**	☐ Inventum	☐ Subcontractor	☐ Client
Eye Wash **N/A**	☐ Inventum	☐ Subcontractor	☐ Client
Other: Confined space retrieval device **N/A**	☐ Inventum	☐ Subcontractor	☐ Client

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

EMERGENCY/SAFETY CONTACTS:	
Inventum Technical Contacts	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048)
Inventum Project Manager (PM): John Black	571.217.6761
Inventum Office Safety Coordinator (OSC)	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048)
Inventum Field Contact:	John Black (571.217.6761); Todd Waldrop (571.217.3627); James Edwards (571.232.5048); Roxanne Birx (585.734.5255); Peter Zaffram (716.553.5129); Corey Bryerton (716.720.3256)
Contractor Contact (To Vary – Main Remedial Contractor provided):	Pending – not yet selected
Client Contact:	Swan O'Donnell (585.606.1679)
Facility (Rochester Ice Center)	585.223.2160

Emergency Route:

Hospitals or clinics identified for emergency medical care should be contacted, to verify that emergency care is provided at that location. Verify the exact location of the medical facility during this call. See directions and map of route to Rochester General Hospital on the following page:

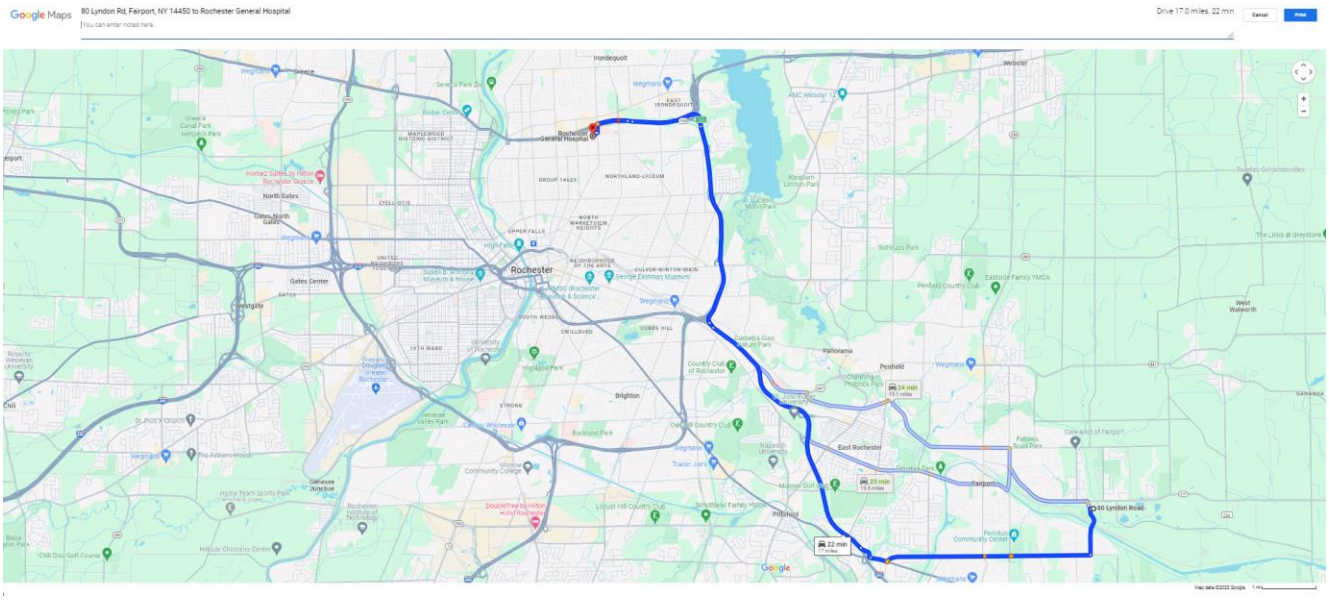
Hospital: **Rochester General Hospital**
1425 Portland Ave
Rochester, NY 14621
585.922.2000

Other: NA

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Map to Hospital



Directions to Hospital:

- Turn Left (South) onto Lyndon Road
- Turn Right onto Ayrault Road (0.9 miles)
- Turn Right onto NY-31 W/Palmyra Road/Pittsford Palmyra Road (3.8 miles)
- Use Right Lane to Merge onto I-490 West (0.4 miles)
- Exit at Exit 21 for NY-590 North (5.3 miles)
- Keep Right at the fork following signs for State Route 590 North and Merge onto NY-590 North
- Using Right two lane, take Exit 10A to Merge onto NY-104 West (3.7 miles)
- Take the Exit toward Goodman St/Portland Ave (1.5 miles)
- Merge onto NY-104 Service Road West
- Use the Middle Lane to Turn Left onto Portland Ave (0.6 miles)
- Turn Right onto Rochester General Hospital Drive (0.2 miles)
- Turn Left into Rochester General Hospital

Emergency Procedures:

If an emergency develops at the site, the first responder should take the following course of action:

- Notify the proper emergency services for assistance.
- Notify other personnel at the site.
- As soon as possible, contact the Inventum Project Manager to inform them of the incident.
- Complete the Inventum Incident Report Form (see Appendices) within 24 hours of the incident and client notifications, as required.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Investigation of Near Miss Incident and Initial Report of Incident/Exposure:

Inventum employees are required to report any incident, near miss, or injury, as soon as possible, by contacting the following:

☒ Inventum Managing Partner ☒ Notify supervisor ☐ Notify project manager

☐ Notify Site Manager () ☐ Complete client report: as required

(name):

(phone number):

Emergency Equipment Required On Site:

☒ First Aid Kit

☐ Emergency Eye Wash

☐ Emergency Shower

☐ Fire Extinguisher

☐ Spill Control Media

☐ Tripod/Hoist/Harness for non-entry confined space rescue

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

3. Site Classification

	Identification of Potential Hazards	YES	NO	SITE TYPE[(1)]
1.	Is the work a Phase I ESA (i.e., supervised plant walk-through, etc.)?	☒	☐	1
2.	Is the work being performed solely by a subcontractor (i.e., INVENTUM not on site)?	☐	☒	1
3.	Is the work just a supervised inspection for process evaluation, other inspections, meetings, records review, or a tour?	☒	☐	1
4.[1]	Is the work completely absent of any chemical, physical, biological, or radiological hazards which would require a site-specific health and safety plan?	☐	☒	1
5.	Does the work include any mandatory client H&S requirements?	☒	☐	1, 2, or 3
6.	Does the project include on-site work other than office type areas?	☒	☐	2 or 3
7.	Does the proposed work scope involve any of the following:			
	Known and controlled chemical or biological hazards	☒	☐	2
	Unprotected work at elevation (fall protection required)	☐	☒	2
	Invasive activities (*i.e.,* Phase II ESA, UST Removal, sampling, etc.)	☒	☐	2 or 3
	Exposure to ionizing radiation (i.e., using nuclear gauges, etc.)	☐	☒	2 or 3
	Open excavations/trenches (Competent Person may be required on site)	☒	☐	2 or 3
	Confined space entry (permit may be required)	☐	☒	2 or 3
	The use of scaffolding (qualified inspections are required)	☐	☒	2 or 3
	Heavy equipment	☒	☐	2 or 3
	Facility maintenance (O&M, piping, electrical, lockout/tagout, etc.)	☐	☒	2 or 3
	Underground utilities may be encountered	☒	☐	2 or 3
	Overhead utilities may be encountered	☒	☐	2 or 3
	Stack testing	☐	☒	2 or 3
	Geotechnical drilling	☒	☐	2 or 3
	Demolition Activities with known or suspected contamination	☒	☐	2 or 3
	Unknown or uncontrolled chemical or biological hazards	☐	☒	3
	Known and uncontrolled chemical or biological hazards	☒	☐	3
	Waste sampling	☒	☐	3
	Construction activities with known or suspected contamination	☒	☐	3
	Remedial activities (RCRA, CERCLA, EnviroBlend®, Oxigent, etc.)	☒	☐	3
8.	Is the work regulated by 29 CFR 1910.120 (OSHA) or 30 CFR (MSHA)?	☒	☐	3
9.	Is the work regulated by NPL, CERCLA, RCRA, TSD, or SARA?	☒	☐	3

(1) Denotes typical site level (based on activities).

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Site Type Designation:

☐ **Type 1** Known and controlled hazards associated with consulting/engineering services.

☐ **Type 2** Known and controlled hazards, but with invasive, hazardous activities and/or civil/mechanical construction related services, or sampling.

☒ **Type 3** Unknown and/or uncontrolled hazards associated with corrective action clean-up, and/or remediation of hazardous substances.

4. Site Characterization

Client Requirement(s)[1]:	☒ None	☐ Site Orientation	☐ H&S Orientation
	☐ Permits or Other Requirements (specify and attach, if available):		
Site Information:	☒ Map/Diagram (attach)	☐ Map/Diagram Unavailable	
	☐ Inactive Site	☒ Active Site (specify below)	
General Environmental Concerns:	☒ Contaminated Water	☒ Wastewater	☒ Dust
	☒ Contaminated Soil	☒ Solid Waste	☒ Noise
	☒ Contaminated Air	☒ Waterways	☐ Other:
Site Security/Access Control:	☐ None	☒ On Site	
	☐ Other (explain):		
Amenities Available for Work:	☐ None	☒ Waste Storage	☒ Restrooms
	☐ Tools/Equipment Storage	☐ Office/Trailer Space	☐ Supplies Storage
Utilities Available for Work:	☐ None	☒ As Listed: Water, electric	
Medical Services Available:	☐ None On Site	☒ As Listed: First Aid	
Facility Alarms/Signals:	☒ None	☐ As Listed:	
Traffic/Parking/Railway Issues:	☐ None	☒ As Listed (On-Site/Off-Site): On-site parking	
☐ Permits Required (specify)[2]:	☐ Confined Space Entry	☐ Local:	☐ State:
	☐ Federal:	☐ Other:	☒ N/A
☒ Utility Locate Service(s):	☒ On Site	☐ Client	☐ Other:
	☐ Off Site	☐	☒ One Call
		☐	☐ N/A

[1] If relying on the client for any specific hazard identification and control, implemented control and effectiveness should be documented prior to beginning any work activities. This is recommended for all field projects.

[2] Permit examples: Utilities (electrical, water, gas, etc.); Excavations; Explosives; Cranes; Burning; Fuel storage; Traffic control; Hoists; Cutting; Welding; Demolition; Confined space; Restricted access areas; etc.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Detailed Physical Description of Site/Facility: ☒ **Map/Diagram Attached**

The 80 Lyndon Road site address is 80 Lyndon Road, Fairport, New York and is located in a mixed-use area within the Town of Perinton in Monroe County, New York (Figure 1). The Monroe County Tax Parcel number is Section 154. 030; Block 1; Lot-26 and the total surveyed acreage is 23. 468. Of the total surveyed acreage of 23.468, 0.711 acres of the parcel is located southwest of the main parcel and on the west side of Lyndon Road (County Route 44). The site surveyed boundary is shown on Figure 2.

Surrounding the ice skating facility are 14.42 acres of woodlands, Thomas Creek and 1.71 acres of maintained lawn. Thomas Creek runs parallel to the eastern border and runs parallel to the west side of the property before Thomas Creek wraps around the southern portion of the site before flowing west. Runoff is controlled by an onsite stormwater retention basin. The Site in a mixed use area consisting of undeveloped land, residential, and recreational sport fields.

The BCP Site is bounded to the north by two residential tracts that are approximately 6-7 acres each. To the east, the site borders an undeveloped tract that is zone residential and an undeveloped tract that is zone industrial. An additional undeveloped tract that is zone residential borders the Site to the South. Lyndon Road is along the west side of the Site and to the west of Lyndon Road is the inactive Little League Sanitary Landfill (Solid Waste ID: 28S12 and Inactive Hazardous Waste Number: 828026A, Class N) which is now operational sport fields.

Previous Site Remediation

A Phase II field investigation was conducted and completed in 1991 by Ecology and Environment Engineering, P.C. in conjunction with the adjacent Little League Landfill site (#828026A). This investigation included an initial site reconnaissance, an electromagnetic terrain conductivity (EM31) survey, and a portable proton magnetometer survey to define the site geological conditions, locate and buried metals, and determine the presence of contaminant plumes. Four monitoring wells were installed in the overburden of the former Granger Landfill which is the BCP Site. Groundwater, surface water, and sediment samples were collected from the former Granger Landfill site. The results did not indicate that there was any significant contamination at the site.[1] The more recent investigation in 2020 and 2023 which were conducted under the direction the NYSDEC were focused on investigating potential impacts to drinking water sources and other receptors (Parsons, 2020) and assess the potential for site-related constituents to migrate off-site above regulatory standards and guidance values (Ramboll, 2023).

In August 2020, emerging contaminant sampling was completed by Parsons (Parsons, 2020) under the Inactive Landfill Initiative which included the collection of four groundwater samples. Four monitoring wells were installed in the eastern portion of the BCP Site. The depths of the monitoring wells range from 15-feet to 31-feet below the ground surface. The collected groundwater samples were analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons, 1,4-dioxane, perfluorinated compounds, baseline leachate indicators, and modified baseline metals.

Soil samples were not collected for laboratory analysis during the August 2020 investigation.

[1] The 1991 Phase II investigation is not available to 80 Lyndon Rd., LLC.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

In 2023, Ramboll[2] conducted an environmental site characterization of the BCP Site under the direction of the NYSDEC. The requestor only has access to the work plan that was prepared by Ramboll in advance of the field investigation and the analytical laboratory reports for the samples collected during the site characterization investigation. In summary, the project objective of Ramboll's work plan was to assess the potential for site-related constituents to migrate off-site above regulatory standards and guidance values. The site characterization evaluated the presence of VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), 1,4-dioxane, per- and poly-fluoroalkyl substances (PFAS), inorganics, mercury, cyanide, and pesticides/herbicides in groundwater, surface water, soil, sediment, and fill material. The scheduled sampling consisted of:

- Soil sampling from three selected intervals from four soil boring locations
- Six test pit trenches with a projected depth of 4-feet to six feet and up to 8-feet in length.
- Install four monitoring wells to collect groundwater samples. The intent was to install the well screen in native material either vertically or horizontally outside the fill material to assess potential for migration of contaminants
- Surface water and sediment sampling of two samples collected from an upstream and downstream stream location

Soil – SVOC were detected in upper 1-foot soils at below restricted residential (DER-10 Part 375, Soil Cleanup Objectives [SCO]) standards at three soil boring /monitoring well locations around the perimeter of the Site. Lead was the only metal detected above restricted residential levels along the eastern portion of the site near Lyndon Road.

PFOA and PFOS were detected at multiple intervals from five monitoring well borings and at three test pit locations across the Site. PFOA and PFAS were detected above restricted residential levels at one test pit location in the northeast portion of the site in the upper surface soil sample and PFOS was detected over restricted residential levels at 6-feet to 8-feet below the ground surface in the southeast portion of the site a monitoring well boring. The SVOCs Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene and Indeno(1,2,3-cd)pyrene were also detected in the upper 1-foot at above Commercial and Industrial SCOs

During the test pitting, a buried container of medical waste and a drum of material which was sampled and contained elevated levels of VOCs and SVOCs levels was observed which indicates the landfill was used for disposal of other waste besides the intended use of disposal of boards, wooded debris, and rubble. A sample from the drum contained 2-Butanone (MEK), Ethylbenxene, Toluene, m,p-Xylene, o-Xylene, Xylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene above industrial SCOs and Benzo(b)fluoranthene, Chrysene, and Indeno(1,2,3-cd)pyrene at above restricted residential SCOs.

Groundwater – PFOS and PFOA were detected at concentrations above their applicable Class GA standards in four of the seven onsite monitoring wells. The four wells with the exceedance are located along the eastern and southern portion of the site. PFOS exceedances ranged from 3. 8 to 847 ng/L and PFOA ranged from 24 to 5,470 ng/L.

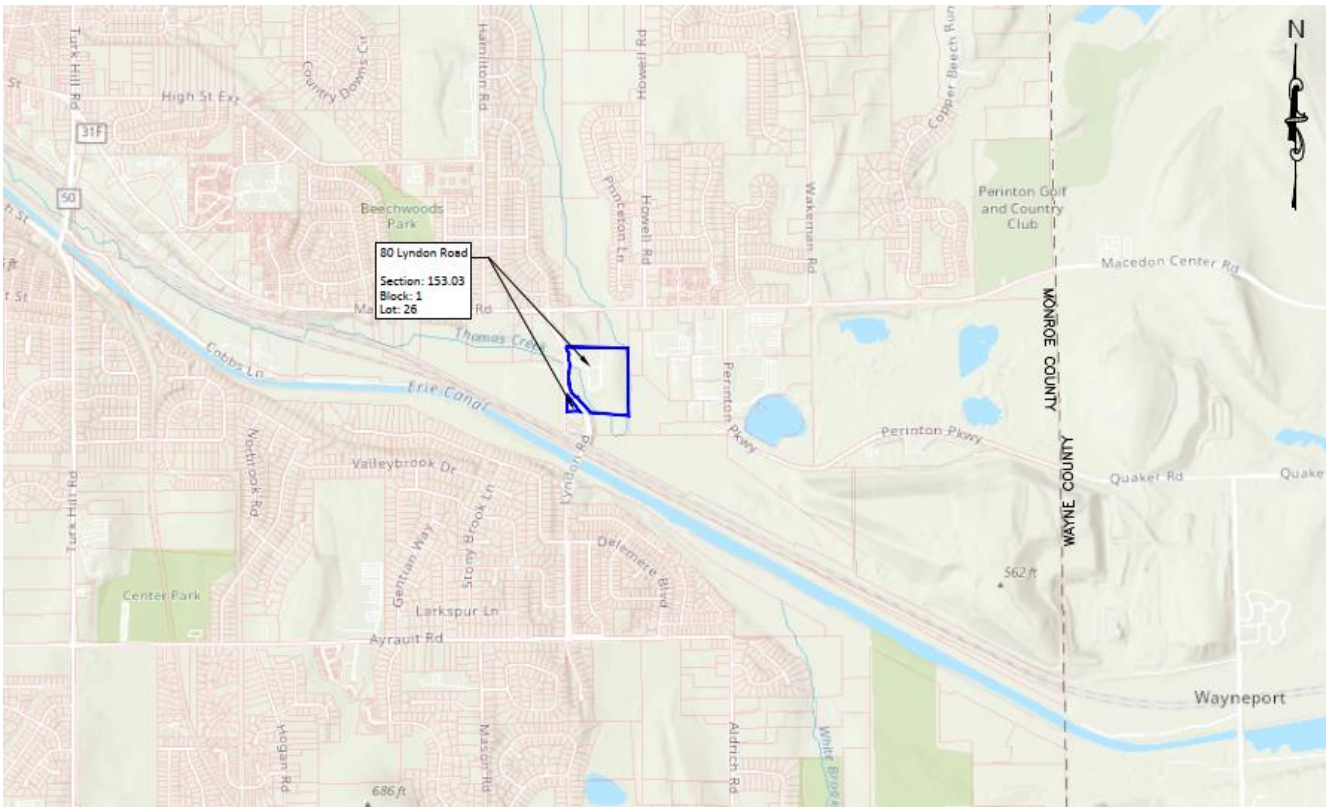
[2] 80 Lyndon Road, LLC does not have copy a Site Characterization Report. Only a work plan, laboratory reports and sample location figure was made available to 80 Lyndon Rd., LLC.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Surface Water – Five surface water samples were collected onsite from Thomas Creek and one surface water sample from the southwest portion of the site had an exceedance of PFOA above the Ambient Water Quality Guidance Values, April 2023, (Human Health Criteria for Surface Water and Groundwater) at 6. 8 ng/L.

Figure 1; Site Location



Site Activities/Current Operations: ☒ None ☐ As Specified

Other Concurrent Site Activities, Work, and/or Other Adjacent Hazards or Concerns:

☐ None

As Specified:

☐ Schools ☐ Daycare ☐ Hospital ☐ Airport

☐ Residential ☐ Offices ☐ Shopping

☒ Active parking lot and ice skating facility

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Hazard Evaluation

Complete (1) Substance Name (be specific)	Specific Applicable OSHA Standard (if any)	Physical State (2) (S, L, G, Aq, Vap, F, P)	Max. (3) Conc. Level Per Physical State	General (4) Control Measures (Eng., Admin., PPE)
Acetone	2400 mg/m3	S	9,300 ug/kg	Eng., PPE
Benzo(a)anthracene	0.2 mg/m3	S	4,230 ug/kg	Eng., PPE
Benzo(a)pyrene	0.2 mg/m3	S	4,660 ug/kg	Eng., PPE
Benzo(b)fluoranthene	0.2 mg/m3	S	5,180 ug/kg	Eng., PPE
Benzene	1 ppm (PEL TWA)		191 ug/kg	Eng., PPE
Benzo(k)fluoranthene	N/A	S	2,130 ug/kg	Eng., PPE
Chlorobenzene	350 mg/m3	L	16 ug/L	Eng., PPE
Chrysene	0.2 mg/m3	S	4,030 ug/kg	Eng., PPE
1,4-Dichlorobenzne	450 mg/m3	S, L	<74 ug/L, 2.6 ug/L	Eng., PPE
2,4-Dimethylphenol	N/A	L	2.6 ug/L	
1-4-Dioxane	360 mg/m3	L	43 ug/L	
Ethylbenzene	545 mg/m3	S, L	387,000 ug/kg, 21.5 ug/L	Eng., PPE
Indeno(1,2,3-Cd) Pyrene	NA	S	3,520 ug/kg	Eng., PPE
Methyl ethyl ketone (MEK) 2-Butanone	590 mg/m3	S	940,000 mg/kg	Eng., PPE
Toluene	200 ppm	S, L	1,130,000 ug/kg	Eng., PPE
Total Xylenes	435 mg/m3	S, L	2,960,000 ug/kg, 142 ug/L	Eng., PPE
Lead	0.05 mg/m3	S	446 mg/kg	Eng., PPE
Magnesium	NA	L	97,900 ug/L	Eng., PPE
Sodium	NA	L	89,500 ug/L	Eng., PPE

(1) Use OSHA regulated name, not elemental forms. If available, attach SDS. Identify any sample preservative or O&M chemicals or subcontractor chemicals in this table also.
(2) S = Solids, L = Liquid, G = Gas, Aq = Aqueous, Vap = Vapor, F = Fume, P = Airborne Particulate.
(3) Site Maps with Soil and Groundwater exceedances are included in Attachment A.
(4) See the following sections for detailed control measures: personal protection equipment (PPE), Air Monitoring (Admin), or Site Control (Admin and Eng.).
(6) IP = Ionization Potential, VP = Vapor Pressure, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit, N/A = Not Applicable, N.D. = Not Determined
(7) IDLH = Immediately Dangerous to Life and Health. NEVER enter IDLH conditions on site without proper respiratory protection.
(8) C = Ceiling Value, ST = Short-Term Exposure Limit, TWA = Time-Weighted Average, None Est. = None Established
(9) R = Respirable Limit, T = Total Limit
(10) Warning Properties: Good (G), Poor (P), None (N)

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Hazard Evaluation (continued)

Site-Specific Physical Hazards

HAZARD	SPECIFIC CONTROL MEASURE
Slip/Trip/Fall Injury	– Use roads or trails whenever possible. – Occasionally reassess route to avoid dangerous terrain. – Maintain good housekeeping and keep work area clear of loose materials and equipment. – Use portable steps to mount and dismount sampling vehicle.
Ingestion of or contact with impacted soil or landfill debris	– Wear safety glasses. – Wear nitrile and appropriate cut-/puncture-resistant gloves (see Glove Selection Guideline) when performing tasks. – Wash hands and arms thoroughly when daily work is completed. – No eating, drinking, or smoking while conducting monitoring or sampling activities.
Pinched fingers or toes	– Wear appropriate cut-/puncture-resistant gloves (see Glove Selection Guideline) when the potential for hand injury exists. – Wear steel-toed safety shoes with steel shanks while on site.
Strained muscles	– Use proper lifting posture, techniques, and equipment when handling heavy objects. – Use two people for loads >40 lbs. or awkward items. – Take rests as needed during and between carries.
Cutting activities	– Wear appropriate cut-/puncture-resistant gloves (see Glove Selection Guideline) when the potential for hand injury exists.
Flying debris/eye injuries	– Wear ANSI-approved safety glasses when the potential for flying debris and eye injuries exists.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Aboveground Storage Tanks (AST)	Be aware of any aboveground storage tanks and the type of material being stored in them. Be aware of the potential of spills, fires, explosions, etc., while working near the tanks. Stay clear of tanks whenever possible and be aware of any equipment operators near the tank(s).
☒	Animals (dogs, etc.)	Be aware of any animals on site or adjacent to the site. Appropriate care should be taken if any feral (wild) animals are encountered.
☐	Blasting/Explosives	INVENTUM personnel shall not handle any explosive devices or materials. INVENTUM personnel should understand the blasting procedures being used by the subcontractor, and all of the associated health & safety precautions. The subcontractor shall handle, store, and use the explosives in accordance with 29 CFR 1926.900, Subpart H and U.
☐	Boat or Barge	A boat or barge should be used that is adequately stable for the type of activity conducted. The boat or barge should have all of the appropriate and current licensing and registrations required by the applicable regulatory agencies. All applicable laws and regulations will be followed when launching the boat or barge, and when navigating to and from the work site. Personal floatation devices should always be worn while navigating the boat or barge. The boat must be equipped with the following approved United States Coast Guard (USCG) safety equipment: — A Type 1, 2, or 3 personal flotation device (PFD) for every person aboard (should be worn while navigating) The following equipment is recommended: — A Type 4 throwable PFD — Audible distress signal device (air horn, whistle) — Fire extinguisher (if engine-propelled) — Auxiliary propulsion (spare paddles, trolling motor) — Bow and stern lines — Anchor and anchor line — First aid kit — Visual distress signal device(s) (flares, dyes) — Additional PFDs Be familiar with local weather and tidal characteristics. Do not conduct sampling from a boat/barge when threatening weather is imminent, or poor visibility exists. Sampling from a boat is prohibited in water containing substances likely to cause injury upon short-term or prolonged contact. Sampling from a boat is prohibited when the temperature of the water is high or low enough to cause injury upon short-term or prolonged exposure. Avoid sampling from a boat when unsafe water turbulence (waves) exists. Avoid standing in a boat. Always use the buddy system when sampling from a boat or barge; one person should be on shore with visual contact of the barge and should be able to summon emergency assistance if needed. Be familiar with local weather and tidal characteristics. Work on a boat or barge will not be performed when threatening or severe weather is impending or present.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Briars or Thistles	Be aware of any briars or thistles on site. Wear appropriate clothing and gloves. Avoid contact with briars or thistles whenever possible.
☒	Business Traffic	Be aware of traffic patterns associated with local businesses near the work site. Allow traffic to enter and exit the businesses in such a manner to avoid creating traffic hazards, back-ups, delays, or potential accident situations.
☐	Cement Dust	Stay clear of mixing operations and avoid contact with or breathing of the dust.
☐	Chain Saws	Stay clear of any chain saw operations. Subcontractor is responsible for the safe use of chain saws on site.
☐	Cleaning Agents	Use caution when applying cleaning agent to equipment. Use gloves, safety glasses, splash shields, and protective clothing as needed.
☒	Client Activities	Be aware of client activities at or adjacent to the site. Work activities should be coordinated with other site activities to avoid conflicts.
☒	Cold Stress	Work schedules may be modified when temperatures are below 20° F as measured by the wind chill factor. Take frequent breaks to warm up. Drink plenty of fluids. Wear appropriate clothing, and monitor for cold stress symptoms (frostbite, hypothermia, etc.).
☐	Compressed Air or Gas Cylinders	Compressed air or gas cylinders should be clearly marked, and they should be stored, transported, and secured in an approved manner.
☐	Compressed Air/Gas or Pressurized Liquids Hoses, Lines & Fittings	Compressed air or gas, or pressurized liquid lines or hoses should be inspected at least daily, or in the event a leak develops, or if a line or hose is run over or crimped.
☐	Concrete/Masonry/ Foundations	No construction loads shall be placed on a concrete structure or portion of a concrete structure unless a person who is qualified in structural design has determined that the structure or portion of the structure is capable of supporting the loads. All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement. No employee shall be permitted to work under concrete buckets while buckets are being elevated or lowered into position. To the extent practical, elevated concrete buckets shall be routed so that no employee, or the fewest number of employees, are exposed to the hazards associated with falling concrete buckets. A limited access zone shall be established whenever a masonry wall is being constructed. All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported so that it will not overturn or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place.
☐	Confined Spaces (tanks, vaults, vessels, trenches, manholes, some excavations, etc.)	The scope of this project does entail entry into confined spaces. Confined spaces will not be entered unless a confined space entry permit has been completed, signed, and approved, and all participating personnel are trained in confined space entry procedures, including safety, and rescue procedures. All potential hazards of confined space may not be addressed by this hazard assessment, and health and safety plan.
☒	Cutting Tools	Stay clear of contractors' cutting tools, especially saws and torches. Be aware that cutting operations could create other hazards, such as falling objects, or shifting materials, etc. Safety glasses should be worn while using cutting tools. Spark-proof tools should be used when working in areas of potential explosive or flammable conditions. Fixed-open blade knives are prohibited.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Demolition Activities	Stay clear of walls, ceilings, roofs, etc., as they are being demolished.
☐	Demolition Debris	Demolition material should only be handled by appropriate equipment because of sharp points, edges, etc. Demolition material may also pose a trip hazard, fall, or puncture hazard, so avoid walking or climbing on debris piles, etc.
☒	Drums	If drums are used on-site, they should be clearly labeled with the name of the contents and the appropriate label. Drums should only be handled with the appropriate equipment. Drums discovered during excavations, etc., shall not be opened or moved until appropriate identification can be performed. At a minimum, Level B protection is required for sampling any unlabeled drums discovered during remediation procedures.
☒	Dust/Particulates (Particulates Not Otherwise Regulated) (PNOR) (OSHA PEL = 15 mg./m^3, total) (OSHA PEL = 5 mg./m^3, respirable)	For general dust, work should be performed up-wind if possible. If conditions warrant it, monitoring should be done with a PM-10. Monitoring should occur at least 3 times per day, and every time re-entering the site. Readings should be taken downwind from the work area or inside the equipment as indicated by the conditions on site. If the OSHA PEL is exceeded, or is likely to be exceeded, engineering or administrative controls should be used, or a dust respirator must be worn. For hazardous dusts, a detailed air monitoring plan and a respiratory protection plan should be developed for the site activities.
☐	Elevated Work	For any construction work activities elevated 6 feet or more, or other non-construction activities elevated 4 feet or more, fall protection must be provided. Caution should be taken on catwalks and ladders because of potential slippery conditions, or the potential for footwear to catch on the surfaces.
☐	Energized Sources (electrical equipment or hookups, lines, etc.,) (Lockout/Tagout)	Contractors for all electrical activities, and any facility equipment with moving parts should follow proper lock-out/tag-out procedures, and only properly trained employees will perform the work. Employees will not perform any lock-out/tag-out activities unless personnel are properly trained in lockout/tagout procedures. Heed any caution signs or labels.
☒	Equipment Exhaust	Equipment exhaust should be ventilated away from the work area while drilling inside structures. Industrial fans can be used to move exhaust out of the area.
☒	Ergonomic Issues (job hazard analysis)	Ergonomic hazards will be addressed on a site-specific basis once mobilization to the field has occurred. Workstations will be evaluated on an individual basis.
☒	Evening Work	If work is performed during the evening hours, work shall be limited by the availability and the quality of artificial lighting. Care should also be taken to avoid slip, trip, and fall hazards that are not as easy to identify during low light conditions.
☒	Excavations	Stay clear of excavation walls. INVENTUM personnel will not enter an excavation, in accordance with 1926 Sub Part P. Subcontractor must provide a Competent Person on site if one is required by the planned activities. Side cuts should conform to 1926 Subpart P requirements, or shoring should be used. All open excavations should be secured using traffic cones, barrier tape, or barricade signs stating, "Do Not Enter Excavations", especially if left open overnight.
☐	Explosives	Be aware of potential explosive materials and how to identify them. No smoking is allowed on-site or near where potential explosive materials may be present.
☐	Facility Conveyors (product or waste lines)	Stay clear of facility conveyors, product process lines, and waste disposal lines. Be aware of any client-specific health and safety requirements to work in these areas.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Facility Equipment/Machinery	Be aware of active and moving client equipment on site.
☐	Facility Piping - aboveground	Stay clear of aboveground pipes. Client is responsible to identify all applicable aboveground facility pipes prior to any work activities in the area. Pipes can be overhead hazards, or trip hazards. Pipes can be hazardous because of the material flowing through them, such as steam, natural gas, toxic chemicals, etc. Some pipes are also coated with hazardous material such as asbestos.
☐	Facility Piping - belowground	Client is responsible to identify all applicable underground facility pipe locations prior to any subsurface activities.
☐	Fall Hazard	Proper tie-off, harnesses, railings, etc. should be used when performing work on ladders, scaffolding, man-lifts, or on the roof of buildings, etc. Stay clear of the edges of pits, trenches, quarries, etc.
☒	Falling Objects	Be aware of any potential falling objects or materials on site. Stay clear of any areas identified as potential falling object areas.
☒	Fences	Be aware of fences in disrepair that may be trip hazards or may have materials that could cause punctures or cuts. Use caution when crossing over or under fences.
☒	Field Equipment	If field equipment is heavy or awkward to carry, get assistance or use carts to help move around the site.
☒	Field Vehicle	Inventum personnel shall follow all applicable state and federal traffic laws while traveling to and from the site, and while working on the site. In particular, the following laws should be followed: speed limits, parking restrictions, use of wipers and lights during precipitation events, limiting cell phone use, etc. It is the responsibility of the driver to verify that all safety equipment on the vehicle is working properly before driving the vehicle. In particular, the following items should be checked: tire pressure, tire tread, windshield wipers, windshield washer, headlights, tail lights, brake lights, spare tire, fire extinguisher, first aid kit, etc.
☒	Fire Hazards	Eliminate sources of ignition in work areas that have ignitable materials. Provide an ABC fire extinguisher in close proximity to the support zone.
☒	Flooded Areas	Do not drive through flooded areas or standing water. Do not wade into moving water, or water deeper than 2 feet without adequate assistance.
☒	Flying Debris/ Eye Injuries	Be aware of any flying debris on site and wear protective eyewear when necessary.
☒	Fork Lifts	Be aware of forklift patterns and stay clear of those routes.
☒	Hand Tools	Use only the appropriate tool for the task at hand. Use the tool(s) as designed, described, and intended by the manufacturer.
☒	Heat Stress	The work schedule may be modified if the ambient temperature is more than 80° F. Take breaks as necessary, and drink plenty of fluids. If necessary, wear sunscreen and sunglasses on bright days. Monitor site personnel for signs of heat stress symptoms (heat rash, heat cramps, heat exhaustion, or heat stroke).

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Heavy Equipment	Contractor is responsible for safe operation of equipment. All mobile heavy equipment must have a functioning backup alarm, and operators must comply with manufacturer's equipment instructions. Maintain proper distance and remain in line of sight of operator and out of reach of equipment. Isolate equipment swings, if possible. Make eye contact with the equipment operator before approaching the equipment. Understand and review hand signals, and wear orange safety vest, if necessary.
☒	Heavy Lifting	Use proper lifting procedures and equipment when handling heavy objects such as drums, manhole covers, tank covers, etc.
☐	High Pressure Gas Lines, etc.	Be aware of high-pressure gas lines and follow approved safety precautions when working with or around the lines.
☐	Highway Traffic	Traffic control within the right-of-way will be in accordance with the WDOT "Work Zone Safety – Guidelines for Construction, Maintenance, and Utility Operations" procedures. Work may be restricted within specific lanes during peak traffic times. Verify peak traffic times, and review planned activities with the WDOT, so that appropriate lane closures can be coordinated.
☒	Housekeeping	All field vehicles, job trailers, and field offices will be properly cleaned and organized to prevent cluttered work and storage areas.
☐	Hunters/Firing Range, etc.	Be aware of surrounding activities that may involve hunting, firearms, etc. that may not be in your immediate area, but could create an unsafe work environment.
☒	Ice (thin)	When project activities include either crossing ice or working directly on the ice, a detailed plan should be developed that will be used to continually evaluate the ice conditions, and to determine when work should be terminated due to unsafe conditions. All staff working on the ice will wear an appropriate and approved personal flotation device. Other emergency equipment such as ropes, a throwable flotation device, a means to warm a wet and cold worker, etc. must be available. A buddy system should also be used for this type of work, such that one person is always on shore or at least on previously determined safe ice.
☒	Insects (ticks, bees, spiders, etc.)	Site workers with known allergies to insect bites should carry their own medication. In case of emergencies, inform fellow workers of any severe allergies. Use insect repellant as necessary, and as specifically allowed on site. If possible, wear long-sleeved shirts and pants. If appropriate, check for ticks at the end of each day. Have other appropriate first aid supplies handy for bites. (Be mindful of using insect repellant with the sampling work area.)
☒	Stakeholders	Be aware of the potential for irate neighbors or outsiders that may interfere with work activities, or that may potentially damage equipment or on-site materials, etc.
☐	Ladders	Ladders should only be used if they are in good condition, conform to OSHA requirements, and if they will be used in an appropriate manner. Be especially cautious of slipping on ladders when the ladder or footwear is wet or dirty.
☐	Landfill Gas (Methane, CO2, Hydrogen Sulfide)	Avoid breathing gas, especially in low oxygen areas (simple asphyxiant). Potentially flammable and explosive, so keep ignition sources away from gas. Explosive conditions of LEL >5% in a work area should be ventilated as soon as possible, or the area should be evacuated.
☐	Leachate (Municipal Solid Waste (MSW))	MSW leachate may contain hazardous biological substances, so avoid physical contact with leachate and, if possible, stay up-wind. If contact is made with leachate, wash affected areas thoroughly with soap and water. If boots contact leachate, they should be thoroughly washed with soap and water also.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Lead	Wear gloves when in contact with lead contaminated soil, etc. Thoroughly wash hands and arms when daily work is completed.
☒	Long Hours/Fatigue	Long work hours can lead to fatigue, and fatigue can lead to the physical inability to perform the work in a safe manner, or travel to or from a work site in a safe manner. If long work hours are scheduled, or if the scheduled work takes longer than planned, field staff should determine if fatigue is, or will be, an issue. Field staff should evaluate whether they are able to complete the work in a safe manner, or whether they are able to travel in a safe manner. If fatigue is an issue, appropriate breaks should be planned or taken, including overnight stays when necessary.
☒	Material Handling	Move containers and heavy material only with the proper equipment, and secure them to prevent dropping, falling, or loss of control during transport. Stay clear of material handling operations, especially near slopes. Do not stand down the slope from equipment, supplies or materials being moved above on the slope, or being deployed onto the slope.
☒	Material Storage	Stored material may be a falling hazard, or a crush hazard. Do not stand adjacent to materials stacked up, such as pipes, geosynthetic rolls, etc., or in the area of deployment.
☐	Methane Gas (Landfill Gas)	Explosive conditions (5% LEL) will be ventilated, if encountered, prior to working in an area. Methane is a simple asphyxiant.
☐	Mine or Quarry	No work shall be performed within 15 feet (or other designated client setback, whichever is greatest) of the mine or quarry walls. Be aware of the potential for falling rocks or slope failures.
☐	Municipal Solid Waste (MSW)	MSW may contain hazardous biological substances, so avoid physical contact, and if possible, stay up-wind. Wear appropriate PPE, such as gloves, safety shoes, and safety glasses. Wash hands, arms, and face after working near MSW. Reusable PPE and equipment should be thoroughly decontaminated after exposure to MSW. MSW may also contain sharp objects with the potential to puncture PPE.
☐	Natural Gas	Natural gas is flammable and explosive. Keep ignition sources away from gas sources. Use spark-proof tools when working with gas lines, etc.
☒	Noise	Hearing protection must be worn when noise levels exceed 85 dBA in the work area. If you need to raise your voice to be heard at the work site, then hearing protection should be worn. Hearing protection will be worn near drill rigs.
☒	Overhead Hazards	Pay attention to overhead equipment, piping, and structures. A hard hat must be worn at all times when overhead hazards are present on site including the operation of a drill rig.
☒	Pedestrian Traffic (public, client, workers)	Be aware of pedestrian traffic patterns and route traffic around the exclusion zone(s), as necessary, to avoid distractions and the potential for exposures or accidents. Use appropriate barricades and caution tape to mark work areas.
☒	Poisonous Plants	Be able to identify any local poisonous plants and avoid them if possible or wear protective clothing as necessary. When removing potentially exposed clothing or PPE, the clothing or PPE should be carefully and thoroughly washed or decontaminated. Poison Ivy is prevalent on the site.
☒	Portable Heaters	Be aware of portable heater locations and stay a safe distance from them.
☒	Power Washing Equipment	Stay clear of the power washing nozzles and equipment.
☐	Propane Tanks	Be aware of propane tank locations, and any gas lines leading to or from the tanks.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Radiation (ionizing)	Exposure to ionizing radiation can be controlled by one of three methods: time, distance, or shielding. Limit your time near the radioactive source. Keep your distance from the radioactive source. Shield yourself from the radioactive source with appropriate shielding material. If the radioactive source(s) are from INVENTUM equipment, the INVENTUM employee using the equipment needs required training to use the equipment and must be monitored using a dosimeter badge.
☐	Rock Blasting	Contractor is responsible for following safe blasting protocol. Heed all contractor warnings at time of blasting and stay well clear until safe to return to area, as indicated by the contractor.
☒	Sample Preservative Chemicals:	Wear safety glasses and nitrile gloves when adding preservative chemicals to sample bottles or vials. Have clean wash water nearby.
☐	Scaffolding	Stay clear of scaffolding. Be aware of the OSHA safety requirements for using constructing and scaffolding.
☒	Severe Weather	Work may be suspended if dangerous weather conditions (lightning, tornadoes, high winds, heavy rain, freezing rain, etc.) occur. Be aware of changing weather conditions and be prepared to take shelter as necessary. Potential shelters should be identified prior to beginning work.
☒	Sharp Objects	Wear appropriate gloves when handling sharp objects or use appropriate equipment to move objects.
☒	Slippery Ground/Surfaces	Exercise caution, especially on slopes, field trailer floors and stairs, after a precipitation event. Use slip resistant boots or implement surface preparations to eliminate the slippery nature of the surface prior to accessing the area. Spill control measures and general housekeeping should be utilized to help prevent slipping on wet floors, wet pavement, and general work areas.
☒	Slips, Trips, and Falls:	Maintain clear walkways for work areas.
☒	Snakes, Beavers, and other wild animals	Be aware of the potential for snakes in the area and wear snake boots, snake chaps, gaiters, or leggings as needed. Be aware that beavers have been observed onsite. Do not approach a beaver or its lodge/den. Avoid physical contact with beavers and their feces. If you encounter a beaver that appears sick or injured, make note of its location and report it to a New York State (NYS) conservation officer. Beavers are hosts for several ectoparasites and internal parasites including nematodes, trematodes, and coccidians. Giardia lamblia is a pathogenic intestinal parasite transmitted by beavers, which has caused human health problems in water supply systems. Beavers also are known to carry tularemia, which can be transmitted to humans through direct contact. All mammals are capable of being infected with and transmitting rabies. In the United States, most cases of rabies occur in wild animals—mainly skunks, raccoons, bats, coyotes, and foxes which could be present on site. **Do not approach any of these animals while working onsite**. Signs of rabies in animals include fearfulness, aggression, excessive drooling, difficulty swallowing, staggering, paralysis, and seizures. Contact a NYS conservation officer if an animal show signs or rabies is observed.
☒	Steam Cleaning Equipment	Stay clear of the steam cleaning nozzles and equipment.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☐	Steel Erection	All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement. The controlling contractor shall bar other construction processes below steel erection unless overhead protection for the employees below is provided. Employees engaged in steel erection activities on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
☒	Steep Slopes or Banks	Pay attention to footing and walking. Stay a safe distance from unstable or extremely steep slopes. Wear appropriate footwear. Be aware of potential slope or bank failures. Heavy equipment should not be operated on or near unstable slopes or banks.
☒	Strong Nuisance Odors	Strong odors should be ventilated before entering a work area, or a respirator shall be worn as needed.
☒	Sunburn	For extended periods of time outdoors on sunny days, sunglasses, long-sleeved shirts and long pants should be worn to help prevent sunburn and eye problems. Wear sunscreen as appropriate for the project. (Be mindful of not spraying aerosol sunscreen when collecting PFAS samples, review PFAS sampling guidelines).
☒	Surface Water	Working next to or on, bodies of water shall be done using the buddy system. Staff shall wear USCG-approved personal floatation devices when on or adjacent to bodies of water.
☒	Terrain	Uneven or steep terrain can cause hazardous conditions for walking and transporting equipment around the site. Site personnel should use caution when working on uneven surfaces, and they should avoid working down-slope from heavy equipment, or materials being moved or stored.
☒	Traffic (client, contractors, public, semi-trucks, forklifts, etc.)	Obey all posted speed limits. Park in designated areas only. Be aware of traffic patterns on site, and during access to the site. Use orange traffic cones and barrier warning tape, as needed, or if within 25 feet of the right-of-way. INVENTUM personnel must wear orange safety vests when working in or near traffic areas. Class 2 traffic vests are required with traffic speeds 25 mph or higher. Class 3 traffic vests are required with traffic speeds 50 mph or higher.
☐	Trains/Railroad Tracks	Be aware of any train activities on the site, entering or leaving the site, or immediately adjacent to the site. Do not walk between the rails or on the railroad ties. When driving, stop at all railroad crossings, even if they are unmarked, and look in both directions before proceeding across the tracks.
☒	Transporting Hazardous Materials	INVENTUM personnel who transport hazardous materials shall have the required DOT training prior to transporting materials, and will comply with all applicable DOT regulations and requirements for labeling, packaging, etc.
☒	Tree Cutting	Stay clear of tree cutting activities.
☒	Trenching	INVENTUM personnel will enter trenches in accordance with 1926 Sub Part P. Be aware that some trenching conditions may result in a confined space condition.
☒	Trip Hazards (wires, cords, hoses, debris, corn stubble, uneven surfaces, etc.)	Temporary wires, cords, hoses, etc., should be properly located, marked, and protected to help prevent tripping and disruption to work activities. Trip hazards are particularly a problem early in the morning, late in the day, or under other poor lighting conditions.
☐	Underground Storage Tanks (USTs) (Septic Tanks)	If any unknown USTs are encountered, drilling or excavations will be terminated in that location until a new scope of work, Risk Assessment and Health & Safety Plan can be developed.

Risk Analysis (RA)

(Required for all Inventum Type 2 or Type 3 field projects.)

Other Common Physical Hazards

(modify as needed, but include with all project hazard assessments)

☒	PHYSICAL HAZARD	GENERAL CONTROL MEASURE
☒	Uneven Surfaces	Be aware of uneven walking or driving surfaces and exercise caution when moving around the site.
☒	Utilities – Overhead (electrical, telephone, cable TV, etc.)	A subcontractor, the client, or INVENTUM will locate and identify all overhead utilities. The owner or client will be responsible for identifying all applicable overhead utilities, product lines, pipes, and aboveground tanks. A minimum clearance of 20 feet must be maintained between equipment and overhead utility lines.
☒	Utilities – Underground (electric, gas, telephone, water, storm sewer, sanitary sewer, cable TV, etc.)	A subcontractor, the client, or INVENTUM will call Digger's Hotline to locate all underground utilities. The owner or client will be responsible for marking all applicable on-site underground utilities, product lines, pipes, and tanks.
☒	Waterways	Exercise caution near, around, or in waterways. Harnesses should be worn when working in, or within 4 feet of, the waterway, especially when attempting to sample from shore or a boat or barge. All applicable laws and regulations will be followed when navigating a boat or barge to and from a work site.
☒	Welding Tools	Stay clear of welding operations, and do not look directly at the welding process without appropriate eyewear and shield.
☐	Traffic Control	**Traffic Control**: Traffic control within the right-of-way will be in accordance with the local Public Right-of-Way Agency. Work may be restricted within specific lanes during peak traffic times. Verify peak traffic times and review planned activities with the local Public Right-of-Way Agency, so that appropriate lane closures can be coordinated.

Proposed Date(s) of Inventum Work: TBD

ON-SITE PROJECT TEAM MEMBER	ON-SITE PROJECT RESPONSIBILITIES
John Black	Inventum Site Health and Safety Representative (Supervisor); Remedial Contractor Oversight
James Edwards	Inventum Site Health and Safety Representative (Supervisor); Remedial Contractor Oversight
Peter Zaffram	Inventum Site Health and Safety Representative; Remedial Contractor Oversight

Any required construction/demolition activities: ☒ No ☐ Yes If Yes, complete Section 1

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

1. Construction Tasks: work tasks to be performed by Inventum staff or Inventum subcontractors

Civil

- ☐ Sewer (utility)
- ☐ Water (utility)
- ☐ Electric (utility)
- ☐ Communications (utility)
- ☐ Siding
- ☐ Roofing
- ☐ Drywall
- ☐ Flooring
- ☐ Ceilings
- ☐ Casework
- ☐ Masonry
- ☐ Escalator
- ☐ Steel (erection)
- ☐ Pre-cast (erection)
- ☐ Concrete (erection)
- ☐ Re-bar
- ☐ Elevator
- ☐ Fireproofing
- ☐ Windows
- ☐ Landscaping
- ☐ Painting
- ☐ Insulation
- ☐ Doors
- ☐ Finish Concrete

Mechanical

- ☐ Insulation
- ☐ Millwright
- ☐ Fire Protection
- ☐ Boiler
- ☐ Industrial Ventilation
- ☐ Steel Fabrication/Erection

Other

- ☐ Electrical
- ☐ Demolition (attach a detailed "**Demolition Plan**")

- ☐ Others
- ☐ Others
- ☐ Others

Estimated Direct-Hire Inventum Employees:

Home Office: ☐ Not Applicable ☐ Specify:

Craft Labor: ☐ Not Applicable ☐ Specify:

Craft	Quantity
Craft	Quantity

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

2. Applicable Safety Standards or Regulations:

☒ Federal OSHA ☐ State OSHA ☐ Owner/Client

Specific Standards:	29 CFR 1910 (OSHA)	29 CFR 1926 (Other Regulations)
☒ Medical Services and First Aid	1910.151	1926.50
☒ Hazard Communication (HAZCOM)	1910.1200	1926.59
☒ Lead Exposure	1910.1025	1926.62
☒ HAZWOPER	1910.120	1926.65
☒ Personal Protective Equipment (PPE)	1910.132-138	1926.95-107
☒ Respiratory Protection	1910.134	1926.103
☒ Ventilation	1910.94	1926.57
☒ Noise Exposure	1910.95	1926.52
☐ Illumination	N/A	1926.56
☐ Fire Protection	1910.157	1926.24 and 150-155
☐ Sanitation	1910.141	1926.51
☐ Materials Handling (rigging, etc.)	1910.176	1926.250-251
☐ Welding/Cutting	1910.251-255	1926.350-354
☐ Lockout/Tagout	1910.147	1926.417
☐ Electrical (flexible cords, etc.)	1910.305	1926.400-449
☐ Scaffolding	1910.28-29	1926.450-454
☐ Fall Protection (elevated work)	1910.23-29, 1910.66-68	1926.104-107; 500-503
☐ Ladders/Stairways	1910.25-27	1926.1050 and 1060
☐ Cranes, Derricks, Hoists, Elevators, etc.	1910.179-181	1926.550-555
☐ Aerial Lifts	1910.66-68	1926.556
☐ Earthmoving Equipment	N/A	1926.602
☐ Powered Industrial Trucks (forklifts)	1910.178	1926.602
☒ Excavations and Trenching	N/A	1926.650-652
☐ Concrete and Masonry	N/A	1926.700-706
☐ Steel Erection	N/A	1926.750-761
☐ Demolition	N/A	1926.850-860
☐ Asbestos	1910.1001	1926.1101
☐ Confined Space Entry	1910.146	1926.21

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

☐ Commercial Diving	1910.401-441	1926.1071-1092
☐ Compressed Gases	1910.101-105	N/A
☐ Ionizing Radiation	1910.1096	1926.53
☒ Benzene	1910.1028	1926.1128
☐ Cadmium	1910.1027	1926.1127
☒ Tools - Hand and Power	N/A	1926.300-307
☐ Blasting and Using Explosives	N/A	1926.900-914

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

3. Training Required

(* required for all "Type 3" sites; but minimum recommended)

Check "A" if training required for everyone, and check "T" if training required for specific task.

A	T	SUBJECT	REFERENCE	
			29 CFR 1910	**29 CFR 1926 or Other**
☐	☒	HAZWOPER 40 hour*	1910.120	1926.65
☐	☐	3-Day HAZWOPER Supervised On-Site*	1910.120	1926.65
☐	☒	8-Hour HAZWOPER Refresher*	1910.120	1926.65
☐	☐	8-Hour Supervisor HAZWOPER*	1910.120	1926.65
☐	☒	First Aid, CPR*	1910.151	1926.23,.50
☐	☒	Respiratory Protection	1910.134	1926.103
☐	☐	Confined Space ☐ Permit attached	1910.146	1926.21
☐	☐	Mine Safety (MSHA)	N/A	30 CFR 48.8
☐	☐	Lockout/Tagout ☐ Permit attached	1910.147	1926.417
☒	☐	Bloodborne Pathogens	1910.1030	N/A
☒	☐	Noise Exposure	1910.95	1926.52
☐	☒	Competent Person	N/A	1926.32,.450,.650
☐	☐	Construction Health and Safety OSHA 10-Hour	N/A	1926.21
☐	☐	Demolition	N/A	1926.850
☐	☐	Excavations ☐ Permit attached	N/A	1926.650-652
☐	☐	Electrical Work	1910.332	1926.400-.449
☐	☐	Ladders/Stairways	N/A	1926.1050-1060
☐	☐	Scaffolding	1910.28	1926.450-454
☐	☐	Fall Protection	1910.23-29; 1910.66-68	1926.104,.501
☐	☐	Commercial Diving	1910.410	1926.1071-1092
☐	☐	Hot Work ☐ Permit attached	1910.251-255	1926.350
☐	☐	Lead Awareness	1910.1025	1926.62
☐	☐	Asbestos Awareness	1910.1001	1926.1101
☐	☐	Cadmium	1910.1027	1926.1127
☐	☐	Benzene	1910.1028	1926.1128
☐	☐	Ionizing Radiation	1910.1096	1926.53; 10 CFR 19.12
☐	☐	Troxler or NITON Gauge User	1910.1096	10 CFR 19.12
☐	☐	Radiation Safety Program	1910.1096	10 CFR 20.1101
☐	☐	Hazard Communication (HAZCOM)	1910.1200	1926.59
☐	☒	DOT Hazardous Materials Shipping	1910.1201	49 CFR 172.704

Client-specific training: ☒ Not Applicable ☐ Specify

Site-specific orientation: ☒ Not Applicable ☐ Specify

Competent person: ☒ Not Applicable ☐ Specify

Direct-hire employee training/certification: ☒ Not Applicable ☐ Specify

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

4. Medical Surveillance

Surveillance Required: * required for all "Type 3" sites; baseline is minimum recommended
** Specify frequency below

	29 CFR 1910	29 CFR 1926 or Other
☐ HAZWOPER Physical - Baseline*	1910.120	1926.65
☐ HAZWOPER Physical – Annual	1910.120	1926.65
☐ HAZWOPER Physical - Biennial*	1910.120	1926.65
☐ OSHA Respiratory Protection Questionnaire	1910.134	1926.103
☐ Respiratory Certification Exam	1910.134	1926.103
☐ Arsenic (urine) **	1910.1018	N/A
☐ Asbestos **	1910.1001	1926.1101
☐ Cadmium (blood) **	1910.1027	1926.1127
☐ Lead/ZPP (blood) **	1910.1025	1926.62
☐ Mercury (blood) **	N/A	N/A
☐ PCB **	N/A	N/A
☐ Vinyl Chloride **	1910.1017	1926.117
☐ Hepatitis B Vaccine (series) **	1910.1030	N/A
☐ Tetanus/Diphtheria	N/A	Stay Current
☐ Stress Test	N/A	Only as requested
☐ Visual Acuity Test	N/A	Only as requested
☐ Hearing Test (Audiometry)	N/A	Only as requested
☐ Pulmonary Function	N/A	Only as requested

Client-specific drug testing: ☒ Not Applicable ☐ Specify

Client-specific medical monitoring[1]: ☒ Not Applicable ☐ Specify

Site-specific medical monitoring: ☒ Not Applicable ☐ Specify

**Frequency of medical monitoring: ☒ Not Applicable ☐ Specify

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

5. Personal Protective Equipment (PPE)

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work tasks:

Specific Inventum Job Task or Function	Minimum Level of Protection
Task 1 – Site management and Oversight	☒ D ☐ C ☐ B ☐ A
Level D: safety glasses (ANSI), safety shoes (ANSI), ear plugs (ANSI); safety vest (ANSI)	
Task 2 – Surficial Soil Sampling	☒ D ☐ C ☐ B ☐ A
Level D: safety glasses (ANSI), safety shoes (ANSI), ear plugs (ANSI); safety vest (ANSI), nitrile gloves,	
Task 3 – Subsurface Soil Sampling	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	
Task 4 – Permit Compliance Water and Wastewater Sampling	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	
Task 5 – Monitoring Well Abandonment	☒ D ☐ C ☐ B ☐ A
Level D: safety glasses (ANSI), safety shoes (ANSI), ear plugs (ANSI); safety vest (ANSI)	
Task 6 – Monitoring Well Installation	☒ D ☐ C ☐ B ☐ A
Level D: safety glasses (ANSI), safety shoes (ANSI), ear plugs (ANSI); safety vest (ANSI)	
Task 7 – Groundwater Monitoring and Sampling	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	
Task 8 – Sampling of Residuals	☒ D ☐ C ☐ B ☐ A
Level D: Hard hat, safety glasses (ANSI), safety shoes (ANSI), nitrile gloves	

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Criteria for changing protection levels are as follows:

EVACUATION[2] or PROTECTION LEVEL CHANGE[3] CRITERIA	APPROVALS REQUIRED [1]
Site Evacuation Plan: ☒ Not Applicable ☐ Specify or Attach Plan:	
Change to Level D when: ☐ Not Applicable ☒	☒N/A All site work in Level D
Change to Level C when: ☒ Not Applicable ☐ dust levels exceed 2.5 mg/m^3 in the breathing zone continuously for 5 minutes.	☒ No work will be conducted in Level C. Site work will stop, controls reevaluated, and HASP updated as necessary
Change to Level B when: ☒ Not Applicable ☐ Specify	☒ Inventum will not conduct any work in Level B.
Change to Level A when: ☒ Not Applicable ☐ Specify	☒ Inventum will not conduct any work in Level A. ☒

[2] General Recommendations: Evacuate the area when LEL readings are >10% LEL in the atmosphere, or when PID readings are greater than the PEL in the breathing zone.

[3] General Recommendation: To Level C when PID readings are greater than the PEL in the breathing zone. To Level B or A only after detailed evaluation and planning.

Note: Changes to the level of protection shall be made only after the required approvals are obtained. All changes shall be recorded in the field log and reported to the Project Manager as soon as possible. Inventum's goal is to avoid using respiratory protection unless it is absolutely necessary or required. Administrative controls or engineering controls should always be considered as a means to reduce potential exposures before PPE is required or considered.

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

6. Air Monitoring [1]

The following monitoring instruments shall be used on site to measure airborne contaminant concentrations in either the breathing zone, or as part of the overall site **Air Monitoring Plan** (attach detailed plan):

MONITORING EQUIPMENT	LOCATION OF MONITORING	FREQUENCY OF MONITORING	ACTION LEVELS
☐ Combustible Gas Indicator	☐ N/A ☐ Monitoring Plan Attached ☐ Confined Space ☐ Manhole	☐ Continuously when potential combustible gases or lack of oxygen are suspected. ☐ Specify	5-10% LEL: continue with caution > 10 % LEL: evacuate the area ☐ Specify
☐ O2 Monitor ☐ CO Monitor ☐ H_2S Monitor	☐ N/A ☐ Confined Space ☐ Manhole – monitor oxygen, carbon monoxide, hydrogen sulfide , and lower explosive limit	☐ Continuously when excess oxygen (>22.5%) or lack of oxygen (<19.5%) are suspected. ☐ Test atmosphere prior to entry and continuous during confined space entry.	< 19.5% Oxygen: evacuate the area; supplied air may be needed. > 22.5% Oxygen: evacuate the area; potential fire hazard. ☐ Specify
☐ Colorimetric Tubes Type: Type: Type:	☐ N/A ☐ Specify ☐ Sample Container ☐ Confined Space ☐ Specify	☐ Periodically during sampling for analytical purposes only. ☐ Whenever noticeable odor is present. ☐ Specify	☐ Specify
☒ PID Lamp Needed: ☐ 9.8 eV ☒ 10.6 eV ☐ 11.7 eV	☒ Personal Monitoring ☒ Sample Container ☐ Confined Space ☐ Specify	☒ Periodically during sampling for analytical purposes only. ☒ Continuously within the employee breathing zone.	☒ None. ☒ >5 ppm above background in breathing zone for 5+ min. Stop work and reevaluate potential sources and controls.
Calibration Gas: Isobutylene		☐ Specify	
Correction Factor:		☐ Specify	
☐ FID	☐ N/A ☐ Specify	☐ Specify	☐ Specify
☒ Personal Dust Monitor	☐ N/A ☒ Personal Monitoring in Breathing Zone (Task 2 - 6 only)	☒ Continuously within the employee breathing zone	☒ >2.5 mg/m3 at work perimeter for 15 min sustained. Stop work and apply dust controls

☒Other: Perimeter Monitoring	☒ Perimeter Air Monitoring in accordance with the CAMP	☐ Specify	☐ Specify
☐Laboratory Supported ☐Personal ☐Area ☒Perimeter	☐ N/A ☐ Specify Employee breathing zone	☐ Specify continuous	☒ When visible dust is present apply dust control measures (water spray) until abated.

(1) Whenever air monitoring is required to be performed, a detailed **Air-Monitoring Plan** should be developed and attached to the HASP. The plan should include **Monitoring Locations, Frequency of Readings**, and any **Action Levels** being used to control the work site.

Air Monitoring Plan

Field monitoring of dust production is anticipated only during subsurface soil sampling (Task 2) and installation of monitoring wells (Task 7). A visual assessment of dust levels will be used continuously during the work along with personal employee monitoring and perimeter air monitoring in accordance with an approved CAMP.

Dust production during monitoring well abandoned, monitoring well installation, and surficial soil sampling is not anticipated due to the typical moisture content of the soil.

This level of nuisance dust is visually observable. If dust is observable continuously in the breathing zone for 5 minutes, dust control methods will be used (*e.g.*, water spray will be applied) until dust is abated. Work will be temporarily discontinued until dust is reduced to acceptable levels within the breathing zone. Should particulate levels above the action level be a continual problem, relevant field personnel will reassess the situation with the project manager.

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

7. Site Controls and Work Zones (describe in detail)

Facility Alarms or Signals: ☒ Not Applicable ☐ Specify

Work Permits Required: ☒ Not Applicable ☐ Specify

Work Traffic Issues: ☒ Not Applicable ☐ Specify

Parking Issues: ☒ Not Applicable ☐ Specify

Railway Traffic Issues: ☒ Not Applicable ☐

Support Zone(s):

☒ Field vehicle ☐ Job Trailer On Site ☒ Other: **Parking Lot**

Contamination Reduction Zone(s):

☒ Field vehicle ☐ Facility restroom/utility room ☐ Other:

Exclusion Zone(s):

☒ Area immediately surrounding work area ☐ Other:

Site Entry Procedures:

☒ **Notify Site Safety Contact Representative.**

☒ **Read HASP Plan and sign Acknowledgment Statement.**

☒ **Check in with the facility contact person.** ☒ **Check in with owners full time site representatives.**

☒ **Check in with facility security guard.** ☒ **All visitors must check in and sign visitor logbook in guard house.**

☒ **Wear proper personal protective equipment.**

☐ Attend facility orientation. ☐

☒ **Conduct daily safety meeting (document).**

☐ Other: Confined space – do not enter the confined space if LEL >10%, oxygen <21% or >23.5%, carbon monoxide >35 ppm, or hydrogen sulfide >7 ppm. Exit the confined space if the atmospheric conditions become hazards as noted.

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Decontamination Procedures:

Personnel: (specify)	Work will be performed in Level D or Modified Level D, and minimal contamination is expected. Follow standard decontamination procedures, and good personal hygiene. Disposable PPE should be removed, contained, and disposed of in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site. Site workers should plan and stage for wash water and soap at the site, prior to beginning the work. Site workers should wash hands and any exposed skin extremely well with soap and water, prior to leaving the contamination reduction zone, eating, drinking, driving, or leaving the site. Any soiled or contaminated clothing should be removed and handled appropriately, by either washing as soon as possible, or if necessary, disposing. Soiled or contaminated clothing should be carefully bagged prior to disposal or washing, to reduce potential exposure.
Equipment: (specify)	Site workers should plan and stage for the appropriate decontamination method at the site prior to beginning the work. Any contaminated single-use disposable equipment or PPE should be appropriately containerized and disposed of as soon as possible in an appropriate manner. Prior arrangements should be made if disposal is planned for at the project site. Contaminated equipment or PPE that will be re-used should be handled and cleaned while wearing the appropriate PPE. Typically, equipment is decontaminated using Alconox soap and deionized water.

Disposal of Investigation-derived Material:

☒ Leave on site for disposal. Location TBD ☐ Other:

Work Limitations (time of day, buddy system, etc.):

☐ Buddy system required for some tasks.

☒ Work will be performed during daylight hours only.

☐ Work will be performed using artificial light.

Describe or attach a lighting plan: A lighting plan is attached.

☒ No eating, drinking, or smoking in contamination reduction zone(s) or exclusion zone(s).

☒ When temperatures are either above 80°F or below 20°F, work schedules may be modified.

☒ Other site-specific limitations: Do not enter battery building

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Radiation Safety:

- ☒ Radiation information is not applicable to this project.
- ☐ Notify RSO.
- ☐ Wear dosimeter badge when handling gauge.
- ☐ Post applicable radiation signs and documents.
- ☐ Post emergency numbers.
- ☐ Provide at least two lock systems for overnight storage.
- ☐ Maintain storage at least 15 feet from full-time workstations.
- ☐ Block, brace, and securely lock the gauge during "all" transportation.
- ☐ Limit "public" exposure to gauge while in use.
- ☐ Provide sketch of gauge storage to RSO.

Site-Specific Health and Safety Plan

(Required for all Inventum Type 2 or Type 3 field projects.)

Acknowledgment Statement:

As an employee of Inventum, I have reviewed the Hazard Assessment (HA)/Health & Safety Plan (HASP). I hereby acknowledge that I have received the **required level of training and medical surveillance as necessary**, that I am knowledgeable about the contents of this site-specific RA/HSP, and that I will use personal protective equipment (PPE) and follow procedures specified in the HASP.

Signatures of Inventum Site Personnel:

	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	
	Date:	

INVENTUM SAFETY OBSERVATION FORM
November 2022

Location/Project Name:		**Date:**	
Observer Name:			
Observee Name:		**Time:**	

Task Observed
Description of Task Observed and Background Information
Positive Comments

INVENTUM SAFETY OBSERVATION FORM
November 2022

Conclusions / Why the Questionable Items Occurred?

Feedback Session Conducted By: _____ **Date:** _____

Name of Observee's Supervisor: _____ **Time:** _____

At-Risk Observations/Root Cause Analysis

Personal Factor:
(1) Lack of skill or knowledge
(2) Correct way takes more time/requires more effort
(3) Shortcutting standard procedures is rewarded or appreciated
(4) In past, did not follow procedures or acceptable practices and no incident occurred

Job Factor:
(5) Lack of or inadequate operational procedures or work standards
(6) Inadequate communication of expectations or work standards
(7) Inadequate tools or equipment

At-Risk Observation #	Root Cause Analysis #	Solution(s) To Prevent Potential Incident from Occurring	Person Responsible	Agreed Due Date	Date Completed

Results of Verification (were solutions done?) and Validation (were solutions effective?)

Reviewed by (PM/Supervisor): _____ **Date:** _____

Approved by (Practice Safety Leader): _____ **Date:** _____

INVENTUM SAFETY OBSERVATION FORM
November 2022

PERSONAL PROTECTIVE EQUIPMENT	Safe	At-Risk	Comments
1. Hearing Protection (e.g., Ear Plugs)			
2. Head Protection (e.g., Hard Hat)			
3. ANSI Rated Eye Protection (e.g., Safety Glasses)			
4. Hand Protection (e.g., Kevlar Gloves)			
5. Foot Protection (e.g., Safety Shoes)			
6. Respiratory Protection			
7. Fall Protection Inspected (e.g., Harness)			
8. ANSI Rated Reflective Vest/High Visibility Clothing			
9. Other (Specify)			
BODY USE AND POSITIONING	**Safe**	**At-Risk**	**Comments**
10. Correct Body Use and Positioning When Lifting/Pushing/Pulling			
11. Pinch Points/Moving Equipment - Hands/Body Clear			
12. Mounts/Dismounts Using 3-Points of Contact			
13. Other (Specify)			

INVENTUM SAFETY OBSERVATION FORM
November 2022

WORK ENVIRONMENT	Safe	At-Risk	Comments
14. Work/Walk Surface Free of Obstructions (e.g., Tripping Hazards)			
15. Housekeeping/Storage			
16. Defined and Secured (e.g., warning devices, barricades, cones, flags)			
17. Suspended Load, Swing Radius & Lift Area is Barricaded			
18. Safety Shutdown Devices			
19. Proper Storage & Labeling /Disposal of Sample & Waste Materials			
20. Cylinders Stored Upright, Secured, & Caps in Place			
21. Manhole/vault Inspected for Hazards			
22. Other (Specify)			

INVENTUM SAFETY OBSERVATION FORM
November 2022

OPERATING PROCEDURES	Safe	At-Risk	Comments
23. Job Planning (HASP reviewed, JSAs, etc.)			
24. Fire Extinguishers Accessible and Inspections Current			
25. Work Permit/Authorization to Work (Hot, Cold, LOTO, Confined Space)			
26. JSA Reviewed & Followed			
27. Hazard Assessment - Hazard Hunt			
28. Interfaces with Other Functions (awareness with other personnel on site)			
29. Operators Looking Behind Prior to Backing Up			
30. Operators Wearing Seat Belts While Operating Equipment			
31. Subsurface Structures Identified			
32. Proper Trench Protective Equipment in Place			
33. Adequate Egress Is Available for Excavation & Trench (within 25 ft. if depth is <4 ft.)			
34. All Materials Set Back at Least 2 Feet From Edge of Trench/Excavation			
35. Other (Specify)			

INVENTUM SAFETY OBSERVATION FORM
November 2022

TOOLS/EQUIPMENT	Safe	At-Risk	Comments
36. Hand Tools (Proper Equipment Selection, Condition, and Use)			
37. Power Tools (Proper Equipment Selection, Condition, and Use)			
38. Equipment, Including Heavy (Proper Equipment Selection, Condition, and Use)			
39. Hoses Inspected			
40. Required Monitoring Equipment Calibrated & Used			
41. Ladders Set up Correctly & Inspected			
42. Right Tools for the Job are Available and in Good Condition - No Fixed Open Blade Knives (FOBKs)			
43. Other (Specify)			
Total #	0	0	

Daily Hazard Review Topic and Sign-In:

Daily Review Topic	Date

Acknowledgment Statement:

As an affected employee of Inventum Engineering, I hereby acknowledge that I have reviewed the contents of this site-specific HSP and the **daily safety meeting topic**, and that I will use the applicable personal protective equipment (PPE) and follow the procedures specified in the HASP.

Signatures of all onsite Inventum Personnel, including Direct-Hires (Required):

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

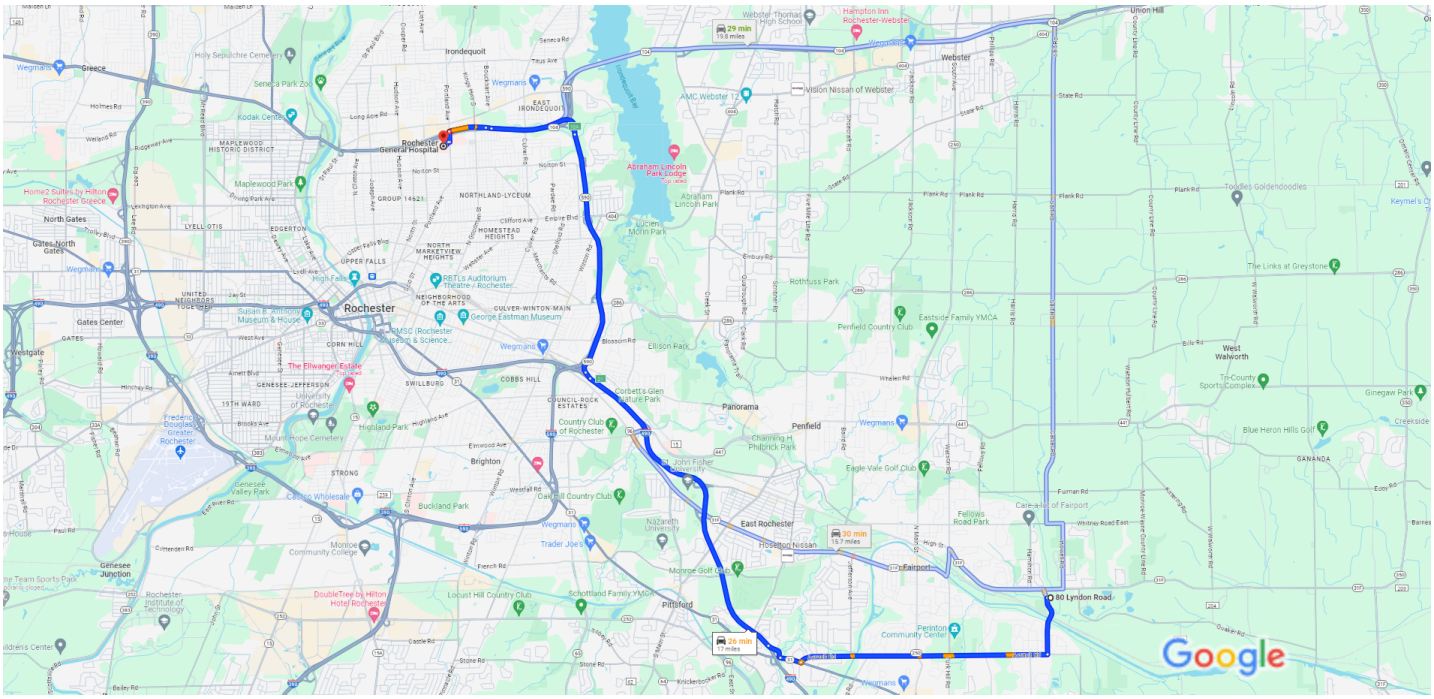
_____ Date: _____

Attachment A – Site Maps with Soil, Surface Water, and Groundwater Exceedances

Google Maps

80 Lyndon Rd, Fairport, NY 14450 to Rochester General Hospital

Drive 17.0 miles, 26 min



Map data ©2023 Google 1 mi

Directions to Hospital:

- Turn Left (South) onto Lyndon Road
- Turn Right onto Ayrault Road (0.9 miles)
- Turn Right onto NY-31 W/Palmyra Road/Pittsford Palmyra Road (3.8 miles)
- Use Right Lane to Merge onto I-490 West (0.4 miles)
- Exit at Exit 21 for NY-590 North (5.3 miles)
- Keep Right at the fork following signs for State Route 590 North and Merge onto NY-590 North
- Using Right two lane, take Exit 10A to Merge onto NY-104 West (3.7 miles)
- Take the Exit toward Goodman St/Portland Ave (1.5 miles)
- Merge onto NY-104 Service Road West
- Use the Middle Lane to Turn Left onto Portland Ave (0.6 miles)
- Turn Right onto Rochester General Hospital Drive (0.2 miles)
- Turn Left into Rochester General Hospital

Appendix E – QA/QC Plan

INVENTUM ENGINEERING, P.C.

Quality Assurance Project Plan

80 Lyndon Road, LLC.

Brownfield Cleanup Program Site

80 Lyndon Road

Fairport, NY 14150

August 29, 2024

441 CARLISLE DRIVE
SUITE C
HERNDON, VA 20170
WWW.INVENTUMENG.COM

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1 Introduction

The purpose of this Quality Assurance Project Plan (QAPP) is to serve as a guidance document during implementation of the Remedial Investigation (RI) for 80 Lyndon Road, LLC., The Brownfield Cleanup Program Site (BCP Site) is located at 80 Lyndon Road in Fairport, Monroe County, New York. The RI will be conducted in accordance with the executed BCP Agreement between the New York Statement Department of Environmental Conservation (NYSDEC) and 80 Lyndon Road, LLC.

This QAPP is designed to provide an overview of Quality Assurance/Quality Control (QA/QC) procedures. Specific methods and QA/QC procedure for chemical testing of environmental samples obtained from the site as part of the RI Work Plan (RIWP) are defined.

An Inventum Engineering, P.C. (Inventum) Project Manager will be responsible for verifying that QA procedures are followed during the investigation and analysis. This will provide for the valid collection of representative samples. The Project Manager will be in direct contact with the analytical laboratory to ensure that holding times and other QA/QC requirements are met. The selected laboratory will be responsible for overseeing analytical QA/QC activities.

The estimated number of environmental samples and corresponding analytical parameters/methods are provided in Table 1 below. These sample quantities may vary depending on media availability and routine adjustments made during the field work.

Table 1 – Analytical Parameters and Methods

Parameter	EPA Method Reference	Groundwater	Soil / Sediment	Surface Water
Metals	6010C	34	65	
Metals	200.7			6
Volatile Organic Compounds	8260C	34	54	
Volatile Organic Compounds	624.1			6
Semi-Volatile Organic Compounds	8270D	34	65	
Semi-Volatile Organic Compounds	625.1			6
Polychlorinated Biphenyls	8082A		59	
Pesticides	8081B	24	59	6
Herbicides	8151A	24	59	6

1,4 Dioxane	8270SIM	24	65	6
Per- and Polyfluoroalkyl Substances	1633 (draft)	24	65	6
Toxicity Characteristic Leaching Procedure	1311	As Required	As Required	As Required
Field Duplicates		1 per 20 Samples Collected (included in totals above)	1 per 20 Samples Collected (included in totals above)	1 per 20 Samples Collected (included in totals above)
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)		1 per 20 Samples Collected (included in totals above)	1 per 20 Samples Collected (included in totals above)	1 per 20 Samples Collected (included in totals above)
Trip Blanks	8260	One per Volatile Shipment		
Rinsate (Equipment) Blanks	All Sample Parameters Being Collected by use of Non-Disposable Equipment	10% of Total Sampling Program for Non-Disposable Equipment	10% of Total Sampling Program for Non-Disposable Equipment	

The analytical laboratory utilized will be a certified NYSDOH ELAP laboratory for the appropriates categories. The laboratory QA Manager will be responsible for performing project-specific audits and overseeing the quality control data generated.

2 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements which specify the quality of data required to support the investigation of the Site. DQOs focus on the identification of the end use of the data to be collected. The project DQOs will be achieved utilizing the definitive data category, as outlined in Guidance for the Data Quality Objectives Process, EPA QA/G-4 (September 1994). All samples will provide definitive data, which are generated using rigorous analytical methods, such as the reference methods approved by the United States Environmental Protection Agency (USEPA). The purpose of this investigation is to establish a baseline of current conditions in order to aid in the development of an Alternatives Analysis (AA) for the BCP Site.

Within the context of the purpose stated above, the project DQOs for data collected during the investigation are:



- To assess the current nature and extent of contamination in groundwater.
- To assess the current nature and extent of contamination in surficial soils.
- To assess the current nature and extent of contamination in subsurface soils.
- To assess the current nature and extent of contamination in surface water and stream sediments.

2.1 QA Objectives for Chemical Data Management

Sample analytical methodology for the media sampled and data deliverables will meet the requirements in the most recent NYSDEC Analytical Services Protocol (ASP). Laboratories will be instructed that completed Sample Preparation and Analysis Summary forms are to be submitted with the analytical data packages. The laboratory will also be instructed that matrix interferences must be cleaned up, to the extent practicable. Data Usability Summary Reports (DUSRs) will be generated. In order to achieve the definitive data category described above, the data quality indicators of precision, accuracy, representativeness, comparability, and completeness will be measured during offsite chemical analysis.

2.1.1 Precision

Precision examines the distribution of the reported values about their mean. The distribution of reported values refers to how different the individual reported values are from the average reported value. Precision may be affected by the natural variation of the matrix or contamination within that matrix, as well as by errors made in field and/or laboratory handling procedures. Precision is evaluated using analyses of a laboratory matrix spike/matrix spike duplicate (for organics) and matrix duplicates (for inorganics), which not only exhibit sampling and analytical precision, but indicate analytical precision through the reproducibility of the analytical results. Relative Percent Difference (RPD) is used to evaluate precision. RPD criteria must meet the method requirements identified in QAPP Section 6.1.

2.1.2 Accuracy

Accuracy measures the analytical bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques. This data helps to assess the potential concentration contribution from various outside sources. The laboratory objective for accuracy is to equal or exceed the accuracy demonstrated for the applied analytical methods on samples of the same matrix. The percent recovery criterion is used to estimate accuracy based on recovery in the matrix spike/matrix spike duplicate and matrix spike blank samples. The spike and spike duplicate, which will give an indication of matrix effects that may be affecting target compounds is also a good gauge of method efficiency.

2.1.3 Representativeness

Representativeness expresses the degree to which the sample data accurately and precisely represents the characteristics of a population of samples, parameter variations at a sampling point, or environmental conditions. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program or sub-sampling of a given sample. Objectives for representativeness are defined for sampling and analysis tasks and are a function of the investigative objectives. The sampling procedures have been selected with the goal of obtaining representative samples for the media of concern.

2.1.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. A DQO for this program is to produce data with the greatest practicable degree of comparability. This goal is achieved through using standard techniques to collect and analyze representative samples and reporting analytical results in appropriate units. Complete field documentation will support the assessment of comparability. Comparability is limited by the other parameters (e.g.,



precision, accuracy, representativeness, completeness, comparability), because only when precision and accuracy are known can data sets be compared with confidence. In order for data sets to be comparable, it is imperative that contract-required methods and procedures be explicitly followed.

2.1.5 Completeness

Completeness is defined as a measure of the amount of valid data obtainable from a measurement system compared to the amount that was expected to be obtained under normal conditions. It is important that appropriate QA procedures be maintained to verify that valid data are obtained in order to meet project needs. For the data generated, a goal of 90% is required for completeness (or usability) of the analytical data. If this goal is not met, then NYSDEC, Inventum, and the 80 Lyndon Road project personnel will determine whether the deviations might cause the data to be rejected.

3 Sampling Locations, Custody, Holding Times, and Analysis

Sample locations and procedures are discussed in the RI Scope of Work and the accompanying Tables and Figures of the Site's RIWP. Procedures for chain of custody, holding times and laboratory analyses shall be followed as per SW-846 and as per the laboratory's Quality Assurance Plan. All holding times begin with validated time of sample receipt (VTSR) at the laboratory. The laboratory must meet the method required detection limits which are referenced within the EPA Methods (QAPP Table 1).

In addition, for the emerging contaminants, the laboratory must meet the reporting limits for PFAS specified in the NYSDEC's most recent update to *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (April 2023)* of 2 nanograms per liter (ng/L) for aqueous samples and 0.5 micrograms per kilogram (µg/kg) for solids and 0.28 micrograms per liter (µg/L) for 1,4-Dioxane.

4 Calibration Procedures and Frequency

In order to obtain a high level of precision and accuracy during sample processing procedures laboratory instruments must be calibrated properly. Several analytical support areas must be considered so the integrity of standards and reagents is upheld prior to instrument calibration. The following section describes the analytical support areas and laboratory instrument calibration procedures.

4.1 Analytical Support Areas

Prior to generating quality data, several analytical support areas must be considered; these are detailed in the following paragraphs.

- Standard/Reagent Preparation - Primary reference standards and secondary standard solutions shall be obtained from National Institute of Standards and Technology (NIST), or other reliable commercial sources to verify the highest purity possible. The preparation and maintenance of standards and reagents will be accomplished according to the methods referenced. All standards and standard solutions are to be formally documented (i.e., in a logbook) and should identify the supplier, lot number, purity/concentration, receipt/preparation date, preparers name, method of preparation, expiration date, and any other pertinent information. All standard solutions shall be validated prior to use. Care shall be exercised in the proper storage and handling of standard solutions (e.g., separating volatile standards from nonvolatile standards). The laboratory shall continually monitor the quality of the standards and reagents through well documented procedures.



- Balances - The analytical balances shall be calibrated and maintained in accordance with manufacturer specifications. Calibration is conducted with two Class “ASTM" weights that bracket the expected balance use range. The laboratory shall check the accuracy of the balances daily and they must be properly documented in permanently bound logbooks.

- Refrigerators/Freezers - The temperature of the refrigerators and freezers within the laboratory shall be monitored and recorded daily. This will verify that the quality of the standards and reagents is not compromised, and the integrity of the analytical samples is upheld. Appropriate acceptance ranges (2 to 6°C for refrigerators) shall be clearly posted on each unit in service.

- Water Supply System - The laboratory must maintain a sufficient water supply for all project needs. The grade of the water must be of the highest quality (analyte-free) in order to eliminate false-positives from the analytical results. Ultraviolet cartridges or carbon absorption treatments are recommended for organic analyses and ion-exchange treatment is recommended for inorganic tests. Appropriate documentation of the quality of the water supply system(s) will be performed on a regular basis.

4.2 Laboratory Instruments

Calibration of instruments is required to verify that the analytical system is operating properly and at the sensitivity necessary to meet established quantitation limits. Each instrument for organic and inorganic analyses shall be calibrated with standards appropriate to the type of instrument and linear range established within the analytical method(s). Calibration of laboratory instruments will be performed according to specified methods.

In addition to the requirements stated within the analytical methods, the contract laboratory will be required to analyze an additional low-level standard at or near the detection limits. In general, standards will be used that bracket the expected concentration of the samples. This will require the use of different concentration levels, which are used to demonstrate the instrument's linear range of calibration.

Calibration of an instrument must be performed prior to the analysis of any samples and then at periodic intervals (continuing calibration) during the sample analysis to verify that the instrument is still calibrated. If the contract laboratory cannot meet the method required calibration requirements, corrective action shall be taken as discussed in QAPP Section 7. All corrective action procedures taken by the contract laboratory are to be documented, summarized within the case narrative, and submitted with the analytical results.

5 Internal Quality Control Checks

Internal QC checks are used to determine if analytical operations at the laboratory are in control, as well as determining the effect sample matrix may have on data being generated. Two types of internal checks are performed and are described as batch QC and matrix-specific QC procedures. The type and frequency of specific QC samples performed by the contract laboratory will be according to the specified analytical method and project specific requirements. Acceptable criteria and/or target ranges for these QC samples are presented within the referenced analytical methods.

QC results which vary from acceptable ranges shall result in the implementation of appropriate corrective measures, potential application of qualifiers, and/or an assessment of the impact these corrective measures



have on the established data quality objectives. Quality control samples including any project-specific QC will be analyzed are discussed below.

5.1 Batch QC

Method Blanks - A method blank is defined as laboratory-distilled or deionized water that is carried through the entire analytical procedure. The method blank is used to determine the level of laboratory background contamination. Method blanks are analyzed at a frequency of one per analytical batch.

Matrix Spike Blank Samples - A matrix spike blank (MSB) sample is an aliquot of water spiked (fortified) with all the elements being analyzed for calculation of precision and accuracy to verify that the analysis that is being performed is in control. An MSB will be performed for each matrix and organic parameter only.

5.2 Matrix-Specific QC

Matrix Spike Samples - An aliquot of a matrix is spiked with known concentrations of specific compounds as stipulated by the methodology. The matrix spike (MS) and matrix spike duplicate (MSD) are subjected to the entire analytical procedure in order to assess both accuracy and precision of the method for the matrix by measuring the percent recovery and relative percent difference of the two spiked samples. The samples are used to assess matrix interference effects on the method, as well as to evaluate instrument performance. MS/MSDs are analyzed at a frequency of one each per 20 samples per matrix.

Matrix Duplicates - The matrix duplicate (MD) is two representative aliquots of the same sample which are prepared and analyzed identically. The collection of duplicate samples provides for the evaluation of precision both in the field and at the laboratory by comparing the analytical results of two samples taken from the same location. Obtaining duplicate samples from a soil matrix requires homogenization (except for volatile organic compounds) of the sample aliquot prior to filling sample containers, in order to best achieve representative samples. Every effort will be made to obtain replicate samples; however, due to interferences, lack of homogeneity, and the nature of the soil samples, the analytical results are not always reproducible.

Rinsate (Equipment) Blanks - A rinsate blank is a sample of laboratory demonstrated analyte free water passed through and over the cleaned sampling equipment. A rinsate blank is used to indicate potential contamination from ambient air and from sample instruments used to collect and transfer samples. This water must originate from one common source within the laboratory and must be the same water used by the laboratory performing the analysis. The rinsate blank should be collected, transported, and analyzed in the same manner as the samples acquired that day. Rinsate blanks for nonaqueous matrices should be performed at a rate of 10 percent of the total number of samples collected throughout the sampling event. Rinse blanks will not be performed on samples (i.e., groundwater) where dedicated disposable equipment is used.

Trip Blanks - Trip blanks are not required for nonaqueous matrices. Trip blanks are required for aqueous sampling events. They consist of a set of sample bottles filled at the laboratory with laboratory demonstrated analyte free water. These samples then accompany the bottles that are prepared at the lab into the field and back to the laboratory, along with the collected samples for analysis. These bottles are never opened in the field. Trip blanks must return to the lab with the same set of bottles they accompanied to the field. Trip blanks will be analyzed for volatile organic parameters. Trip blanks must be included at a rate of one per volatile sample shipment.

6 Calculation of Data Quality Indicators

6.1 Precision

Precision is evaluated using analyses of a field duplicate and/or a laboratory MS/MSD which not only exhibit sampling and analytical precision but indicate analytical precision through the reproducibility of the analytical results. RPD is used to evaluate precision by the following formula:

$$RPD = \frac{(X1 - X2) \times 100\%}{[(X1 + X2)/2]}$$

Where:

X1= Measured value of sample or matrix spike

X2= Measured value of duplicate or matrix spike duplicate

Precision will be determined through the use of MS/MSD (for organics) and matrix duplicates (for inorganics) analyses.

6.2 Accuracy

Accuracy is defined as the degree of difference between the measured or calculated value and the true value. The closer the numerical value of the measurement comes to the true value or actual concentration, the more accurate the measurement is. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at known concentrations before analysis. Analytical accuracy may be assessed through the use of known and unknown QC samples and spiked samples. It is presented as percent recovery. Accuracy will be determined from matrix spike, matrix spike duplicate, and matrix spike blank samples, as well as from surrogate compounds added to organic fractions (i.e., volatiles, semi volatiles, PCB), and is calculated as follows:

$$\text{Accuracy (\%R)} = \frac{(Xs - Xu) \times 100\%}{K}$$

Where:

Xs- Measured value of the spike sample

Xu- Measured value of the unspiked sample

K - Known amount of spike in the sample

6.3 Completeness

Completeness is calculated on a per matrix basis for the project and is calculated as follows:

$$\text{Completeness (\%C)} = \frac{(Xv - Xn) \times 100\%}{N}$$

Where:

Xv- Number of valid measurements

Xn- Number of invalid measurements

N - Number of valid measurements expected to be obtained

7 Corrective Actions

Laboratory corrective actions shall be implemented to resolve problems and restore proper functioning to the analytical system when errors, deficiencies, or out-of-control situations exist at the laboratory. Full documentation of the corrective action procedure needed to resolve the problem shall be filed in the project records, and the information summarized in the case narrative. A discussion of the corrective actions to be taken is presented in the following sections.

7.1 Incoming Samples

Problems noted during sample receipt shall be documented by the laboratory. The Inventum Project Manager shall be contacted immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.2 Sample Holding Times

If any sample extraction and/or analyses exceed method holding time requirements, the Inventum Project Manager shall be notified immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.3 Instrument Calibration

Sample analysis shall not be allowed until all initial calibrations meet the appropriate requirements. All laboratory instrumentation must be calibrated in accordance with method requirements. If any initial/continuing calibration standards exceed method QC limits, recalibration must be performed and, if necessary, reanalysis of all samples affected back to the previous acceptable calibration check.

7.4 Reporting Limits

The laboratory must meet the method required detection limits listed in NYSDEC ASP, 10/95 criteria. If difficulties arise in achieving these limits due to a particular sample matrix, the laboratory must notify Inventum personnel for problem resolution. In order to achieve those detection limits, the laboratory must utilize all appropriate cleanup procedures in an attempt to retain the project required detection limits. When any sample requires a secondary dilution due to high levels of target analytes, the laboratory must document all initial analyses and secondary dilution results. Secondary dilution will be permitted only to bring target analytes within the linear range of calibration. If samples are analyzed at a secondary dilution with no target analytes detected, the Project Manager will be immediately notified so that appropriate corrective actions can be initiated.

7.5 Method QC

All QC method-specified QC samples shall meet the method requirements referenced in the analytical methods. Failure of method-required QC will result in the review and possible qualification of all affected data. If the laboratory cannot find any errors, the affected sample(s) shall be reanalyzed and/or re-extracted/redigested, then reanalyzed within method-required holding times to verify the presence or absence of matrix effects. If matrix effect is confirmed, the corresponding data shall be flagged accordingly using the flagging symbols and criteria. If matrix effect is not confirmed, then the entire batch of samples may have to be reanalyzed and/or re-extracted/redigested, then reanalyzed. Inventum shall be notified as soon as possible to discuss possible corrective actions should unusually difficult sample matrices be encountered.



7.6 Calculation Errors

All analytical results must be reviewed systematically for accuracy prior to submittal. If upon data review calculation and/or reporting errors exist, the laboratory will be required to reissue the analytical data report with the corrective actions appropriately documented in the case narrative.

8 Data Reduction, Validation, and usability

8.1 Data Reduction

Laboratory analytical data are first generated in raw form at the instrument. These data may be either in a graphic or printed tabular format. Specific data generation procedures and calculations are found in each of the referenced. Analytical results must be reported consistently. Identification of all analytes must be accomplished with an authentic standard of the analyte traceable to NIST or USEPA sources. Individuals experienced with a method's particular analysis and knowledgeable of requirements will perform data reduction.

8.2 Data Validation

Data validation is a systematic procedure of reviewing a body of data against a set of established criteria to provide a specified level of assurance of validity prior to its intended use. All analytical samples collected will receive a limited data review. All analytical samples will also receive a third-party verification and validation based on completeness and compliance checks of sample receipt conditions and both sample-related and instrument-related QC results. In addition, a minimum of 10-percent of the samples will also receive third-party recalculations checks and review of actual instrument outputs (i.e. Stage 4). A third-party Data Usability Summary Report (DUSR) will be prepared for all samples collected during the RI. Inventum personnel may recommend further third-party validation if significant deviations and problems with the analytical data are uncovered during completion of the work.

The methods as well as the general guidelines presented in the following documents will be used during the data review USEPA Contract Laboratory Program (CLP) Organic Data Review, SOP Nos. HW-6, Revision #11 and USEPA Evaluation of Metals Data for the Contract Laboratory Program based on 3/90, SOW, Revision XI. These documents will be used with the following exceptions:

- Technical holding times will be in accordance with NYSDEC ASP, 10/95 edition.
- Organic calibration and QC criteria will be in accordance with NYSDEC ASP, 10/95 edition. Data will be qualified if it does not meet NYSDEC ASP, 10/95 criteria.

Where possible, discrepancies will be resolved by the project manager (i.e., no letters will be written to laboratories). A complete analytical data validation is not anticipated. However, if the initial limited data audit reveals significant deviations and problems with the analytical data, project personnel may recommend a complete variation of the data.

Category B deliverables will be provided for all samples collected to delineate the nature and extent of contamination. Electronic Data Deliverables (EDDs) consistent with the most recent NYSDEC Environmental Information Management System (EIMS) format will be included with the deliverables and will be uploaded to the EIMS.



9 References

- Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Quality Assurance Manual, Final Copy, Revision I, October 1989.
- National Enforcement Investigations Center of USEPA Office of Enforcement. NEIC Policies and Procedures. Washington: USEPA.
- New York State Department of Environmental Conservation (NYSDEC). 1995. Analytical Services Protocol, (ASP) 10/95 Edition. Albany: NYSDEC.