Hanna Furnace Subparcel 3
Union Ship Canal Public Open Space

ERIE, NEW YORK

Site Management Plan

NYSDEC Site Number: B00164

Prepared for:
Buffalo Urban Development Corp.
95 Perry Street, Suite 404
Buffalo, NY

Prepared by:
Arcadis
50 Fountain Plaza, Suite 600
Buffalo, NY 14202
(716) 667-0900

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

APRIL 2022

CERTIFICATION STATEMENT

I MICHAEL HIGGINS certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Michael Higgins P.E.

APRIL 18, 2022 DATE

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification: B00164: Hanna Furnace Subparcel 3 – Buffalo, New York

Institutional Controls:	1. The property may be used for commercial use.	
	2. Site property will be used as a passive green space and park.	
	3. An evaluation of the condition and continued effectiveness of the site cover system will be conducted by a Qualified Engineering Professional annually.	
Engineering Controls:	1. Cover system	
Inspections:		Frequency
1. Cover inspection		Annually
2. Canal Wall Inspection		Annually
Maintenance:		
1. Site cover maintenance		As needed
Reporting:		
1. Periodic Review Report		Annually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at Union Ship Canal Public Open Space Parcel 3 Development (hereinafter referred to as the "Site") under the New York State (NYS) Environmental Restoration Program (ERP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with State Assistance Contract (SAC) # C3-03-218, Site # B00164, which was executed on February 17, 2005 and last amended on December 8, 2010.

1.1.1 General

The City of Buffalo and County of Erie entered into a SAC with the NYSDEC to remediate an approximately 22-acre property located in Buffalo, New York. This SAC required the Remedial Party, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this approximately 22-acre site is provided on Figure 1. The boundaries of the site are more fully described in the metes and bounds site description (see Appendix A).

After completion of the remedial work described in the Remedial Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as "remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Arcadis (formerly Malcolm Pirnie, Inc.), on behalf of Buffalo Urban Development Corp., in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated March 2008, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the site.

1.1.2 Purpose

The site contains contamination left after completion of the remedial action. ECs have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to promote protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Erie County Clerk, will require compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to be in compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of ECs and ICs;) maintenance of and (2) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes an Excavation Work Plan for management of potentially impacted soil/fill during potential future disturbance of these materials present beneath the clean cover system.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. The Environmental Easement is a part of the Final Engineering Report (FER). Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC).
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the SAC (Index #C3-03-218; Site # B00164) for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The site is located in the City of Buffalo, County of Erie, New York and is identified as Parcel Number 3 in Lot 18 in the Ogden Gore Track, Township Number 10, Range Number 8. The site is an approximately 22-acre area bounded by vacant property of Parcel 4 of the Buffalo Lakeside Commerce Park to the north, Ship Canal Parkway to the south and east, and Commerce Drive and Fuhrmann Boulevard to the west (see Site Plan Figures 2A and 2B). The site is located in the middle of the Buffalo Lakeside Commerce Park (BLCP). The boundaries of the site are more fully described in Appendix A Metes and Bounds.

1.2.2 Site History

The site is located on the Hanna Furnace Subparcel 3 of the former Hanna Furnace site which was divided into four parcels. Hanna Furnace Subparcel 3 surrounds the 8.7-acre Union Ship Canal water body with 200-foot area on the north, south, and east sides of the canal. The Union Ship Canal was constructed to provide access to Lake Erie for iron and steel manufacturing operations. The site is located on the former storage yard for the iron manufacturing process. The canal was built in 1903 and its length extended in 1910. The wall of the canal is made of concrete dock face and is supported on top of wooden cribbing down to the bedrock. The top of the canal walls are approximately 7 feet above the canal water surface. The Pennsylvania Railroad owned 25 acres of the land north of the canal for unloading of ore from railcars. The Hanna Furnace Corporation purchased the land which consisted of mainly swamps with a depth up to 15 feet. The railroad tracks ran around the property purchased by Hanna Furnace Corporation. The swamp area was backfilled with silty sand, gravel, and some black cinders to its present grade and used as a storage yard. The area to the south of the canal has a large 3 feet-thick concrete pad that runs the entire 1900 feet of the canal. This concrete pad was used to store the iron ore and limestone for Hanna Furnace. There are building foundations

on the land east of the canal. The buildings were used for dock operation and recovering flue dust.

The Hanna Furnace Corporation ceased all operations at the site in 1982 due to increased foreign competition and the closure of the Shenango Furnace Company, formerly a primary recipient of pig iron from Hanna Furnace. The Jordan Foster Scrap Corporation purchased the site in 1983 and subsequently dismantled many of the buildings and removed the rails from the Former Railroad Yard for scrap. The Jordan Foster Scrap Corporation filed for bankruptcy during 1986 and leased the site briefly to the Equity Scrap Processing Company. In 1998, the City of Buffalo gained title to the Hanna Furnace Site due to nonpayment of taxes. The Hanna Furnace Site was vacant and unsecured from 1986.

1.2.3 Geologic Conditions

The naturally occurring soil layers at the site include a light to dark gray, clay to silty clay layer of variable, 1 to 8 feet, thickness overlying a water bearing, gray to brown, sandy peat layer with a thickness of 2 to 8 feet. Beneath the sandy peat gray, silty sand is present intermittently throughout the Site with a thickness of 1 to 5 feet. Underlying the silty sand is a basal silty clay layer which is underlain by a dense glacial till composed of cobbles, gravel, sand, and silt sized materials. Marcellus and Skaneateles Shale are below the till. The western portion of the north side is backfilled with reworked natural materials. On the south side the soil underneath the concrete pad is relatively undisturbed natural soils. The eastern portion of the north side and the east side of the Site have an abundance of industrial fill materials including slag, limestone, cinders, ash, concrete, wood, plastic, rubber, and metal debris.

The groundwater has different elevations on the north and south sides of the canal. The groundwater level on the north side is 5 to 7 feet above the elevation of the water in the canal. The groundwater level on the south side of the canal is roughly at the bottom of the concrete pad which is 0.5 to 3 feet above the canal water elevation. The groundwater elevations show that the south canal wall allows the water to pass through the wall's cribbing better than the north wall. The groundwater in the west end of the north side has elevated pH.

1.3 SUMMARY OF SITE INVESTIGATION FINDINGS

A Site Investigation (SI) was performed to characterize the nature and extent of contamination at the site. The results of the SI are described in detail in the *Site Investigation*

and Remedial Alternative Report (SI/RAR) for the Former Hanna Furnace Site Subparcel 3, 3B-00164-9 Buffalo, New York, prepared by URS Corporation in March 2002.

Generally, the SI determined that elevated levels of Semi Volatile Organic Compounds (SVOCs) are present in the site's soils. Those elevated levels were above the concentrations allowed for commercial use as established in the "Explanation of Significant Difference" (February 2017), prepared by the NYSDEC, for passive recreational areas. The northeast portion of the site had the highest concentrations of cPAHs found on the site. The groundwater beneath the site has elevated pH levels. The highest pH readings were encountered in the northwest portion and decreased toward the east. The water has dissolved metals with the primary dissolved metal being sodium and isolated cases of iron, antimony, arsenic, lead, magnesium, and manganese. SVOCs consisting primarily of phenols were also found in the groundwater. The canal sediments had levels of SVOCs (primarily cPAHs), several metals, and polychlorinated biphenyls (PCBs).

Below is a summary of site conditions when the SI was performed in 2002. Sample results are compared to the standards and guidance values that were applicable at the time of the investigation.

Soil

The surface and subsurface soils do not contain Volatile Organic Compounds (VOCs), pesticides, or PCBs at concentrations that exceed the NYSDEC Technical Administrative Guidance Memorandum (TAGM) 4046: *Determination of Soil Cleanup Objectives and Cleanup Levels* (dated January 1994, revised) based on residential use scenarios. Various metals were detected in the subsurface and surface soils that exceeded the TAGM 4046 levels. There were low levels of total and free cyanide detected in some samples but the TAGM 4046 has no specific criteria for cyanide. There were one or two cPAHs in most samples that had minor exceedances with regards to the SVOCs. The northeast portion of the site had higher concentrations and number of samples that exceeded the TAGM 4046 then the rest of the site.

The sediment of the canal was compared to the NYSDEC Technical *Guidance for the Screening of Contaminated Sediments* (dated March 1998). The canal sediments contained SVOCs (primarily cPAHs), several metals, and PCBs. The metals and cPAHs concentrations are uniformly distributed throughout the canal. Where the PCB concentrations are highest in the northeast corner of the canal and decreases to the west. In the northeast corner of the site there is an outflow from the former Shenango Steel Molds site in the canal which possibly caused the increased PCB levels.

Site-Related Groundwater

Analytical results of groundwater samples collected from the Site were compared to the NYSDEC Technical and Operation Guidance Series (TOGS) 1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* (dated June 1998). Dissolved metals were detected in the groundwater at levels that exceeded the TOGS 1.1.1. The primary dissolved metal was sodium and isolated cases of iron, antimony, arsenic, lead, magnesium, and manganese. There were five monitoring wells that contained elevated levels of SVOCs, primarily phenols most probably associated with the iron making process. Total cyanide levels exceeded the TOGS 1.1.1 in three of the monitoring wells in the northwest portion of the site. However, the levels of free cyanide in the samples were below the RBCs established by the United States Environmental Protection Agency (USEPA) for drinking water. Groundwater pH exceeded 8 in six of the nine groundwater samples on the site, with the highest being 12 in the northwest portion of the site. The levels are most likely caused by the lime associated with the slag materials used as fill on the site. The pH of the groundwater coming out of the outflow into the canal in the southeast corner of the canal is also elevated. This is most likely caused by the slag material located northeast of the site.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in general accordance with the NYSDEC-approved Record of Decision (ROD) dated February 2005, with the exception of the reduced requirement for a one-foot minimum clean cover placement (formerly two feet) further explained in Section 1.4.3.

The following is a summary of the Remedial Actions performed at the site:

1. Excavation of soil/fill exceeding Site-Specific Action Levels (SSALs) listed in Table B1. Two distinct areas required removal as illustrated on Figures 3A and 3B.

2. Construction and maintenance of a soil cover system consisting of one foot of clean soil on Site to prevent human exposure to remaining contaminated soil/fill remaining at the site. A one-foot stone aggregate cover was also placed over the sediment within the canal to prevent direct contact to contaminated canal sediments.

3. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to contamination remaining at the site.

4. Development and implementation of this SMP for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) ICs and ECs, (2) inspections and maintenance and (3) periodic reporting.

Remedial activities were completed at the site in September 2011.

1.4.1 Removal of Contaminated Materials from the Site

A list of the Site-Specific Action Levels (SSALs) for the primary contaminants of concern (COCs) and applicable land use for this site is provided in Table B1 of the Excavation Work Plan (Appendix B). There was a fill material that is known as blue fill found on the north side of the site. The blue fill is known to have elevated levels of cyanide. The amount of the blue fill removed from the site was 332.05 ton. A figure showing the area where excavation of the Blue Fill was performed is shown on Figure 3A. The blue fill removal area was located on the northern edge of the Site property. A second area of impacted Soil/fill was encountered near the southeastern corner of the canal. This material contained elevated concentrations of arsenic and chromium such that it exceeded the SSALs for those analytes. This material was removed and disposed of off Site at a NYSDEC-approved and permitted disposal facility. The former location of this material is illustrated on Figure 3B. All other sampled soil/fill from the Site did not exceed the SSALs and was therefore used as subgrade material on the site and later covered with 1 foot of documented clean soil or pavement. Various debris including roofing, tires, railroad ties, and floating debris was also removed from the site as further detailed in the Final Engineering Report (FER).

1.4.2 Remaining Contamination

The remaining subgrade ($\geq$ 1.0 feet deep) soil/fill throughout the site contains PAHs, metals, and cyanide at concentrations greater than the Commercial use SCOs (Table B2 of Appendix B). These subgrade materials are covered with a minimum of 1.0 feet of documented clean soil and/or pavement. A demarcation layer of orange mesh (3/4-inch square hole size) is present between the subgrade and the overlying clean cover. Where buried utilities exist on Site, they are surrounded by clean crushed stone.

1.4.3 Site Cover System

Exposure to remaining contamination in soil/fill at the site is prevented by the soil cover system placed over the site. This cover system is comprised of a minimum of 12 inches of clean soil, asphalt pavement, concrete-covered sidewalks, and concrete building slabs. In between the clean cover and the remaining contaminated soil/fill is the orange mesh material to distinguish where the clean cover cap stops.

At the time that the ROD was issued, the 6 NYCRR Part 375 regulations did not distinguish between active and passive recreational Site uses. Regulations now allow that 12 inches of clean soil cover is protective for passive recreational sites.

The Site was designed and built as a public park, with paved and gravel walkways, paved parking lots and landscaped areas. The park does not include athletic fields or playgrounds (i.e., areas that would be considered suitable for active recreation). Therefore, the reasonably anticipated use of the Site would not likely result in heavy foot traffic over the soil cover.

Given the passive recreational use of the site, the remedy outlined in the ROD was modified to a soil cover system consisting of a 1-foot minimum thickness to prevent human exposure to remaining contaminated soil/fill at the Site as detailed in the "Explanation of Significant Difference" (February 2017) prepared by the NYSDEC.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Because remaining contaminated soil and groundwater exists beneath the site, ECs and ICs are required to protect human health and the environment. This EC/IC Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by the NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site.
- The basic implementation and intended role of each EC/IC.
- A description of the key components of the ICs set forth in the Environmental Easement.
- A description of the features to be evaluated during each required inspection and periodic review.
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site.
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Soil Cover Systems

Exposure to remaining contamination in soil/fill at the site is prevented by a soil cover system placed over the site. This cover system is comprised of a minimum of 12 inches of clean

soil, asphalt pavement, concrete-covered sidewalks, and concrete building slabs. There is an orange mesh demarcation material between the clean cover and the remaining contaminated soil. The Excavation Work Plan that appears in Appendix B outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP and the Site Inspection Form to be used as part of the Periodic Review Report is provided in Appendix C.

2.3 INSTITUTIONAL CONTROLS

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of ICs in the form of site restrictions. Adherence to these ICs is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used as a park, under passive recreational conditions provided that the long-term ECs and ICs included in this SMP are employed.
- The property may not be used for a higher level of use, such as residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- Vegetable gardens and farming on the property are prohibited.
- The site owner or remedial party will submit to the NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance

of any and all controls. This certification shall be submitted annually, or an alternate period of time that the NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The site has been remediated for commercial use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix B to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP is attached in section B-17 of Appendix B to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State, and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP, and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will facilitate site development activities as not to interfere with, or otherwise impair or compromise the engineering controls described in this SMP.

2.3.2 Site Use

The use of the site is limited to park space provided that long-term ECs and ICs are employed. Under Part 375 regulations, "commercial use" includes passive recreational areas (i.e., parks) without areas such as playgrounds and athletic fields. The property can’t be used for a higher level of use such as residential without additional remediation and amendment of the Environmental Easement. Activities that will disturb the remaining contaminated material on the

property must be conducted in accordance with this SMP. No vegetable gardens or farming is permitted on the property.

2.3.3 Groundwater Use Restrictions

Use of the groundwater on site is prohibited without treatment rendering it safe for the intended use.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed.
- If these controls continue to be protective of human health and the environment.
- Compliance with requirements of this SMP and the Environmental Easement.
- If site records are complete and up to date.
- Changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a Qualified Environmental Professional as defined in the 6 NYCRR Part 375 regulations.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the SAC, 6 NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other ECs 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 reduces or has the potential to reduce the effectiveness of ECs 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 shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the SAC, and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

Table 1: DEC/DOH Contact Numbers

David Locey – NYSDEC: Project Manager	(716) 851-7220 e-mail: david.locey@dec.ny.gov
Andre Caprio – NYSDEC: Regional Environmental Remediation Engineer	(716) 851-7220 e-mail: andrea.caprio@dec.ny.gov

Kelly Lewandowski – NYSDEC: Site Control	(518) 402-9543 e-mail: Kelly.lewandowskia@dec.ny.gov
Matt Forcucci – NYSDOH	(716) 847-4382 e-mail: beei@health.ny.gov

* Note: Contact numbers subject to change and should be updated as necessary

2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to Ben Girard of Arcadis. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 2: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3-day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362
Jason Paananen – City of Buffalo: Director of Environmental Affairs	(716) 851-5406 e-mail: jpaananen@city-buffalo.com
Ben Girard – Arcadis U.S., Inc.	(716) 667-6645 e-mail: ben.girard@arcadis.com

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 2 and 4 Fuhrmann Boulevard, Buffalo, New York, 14203

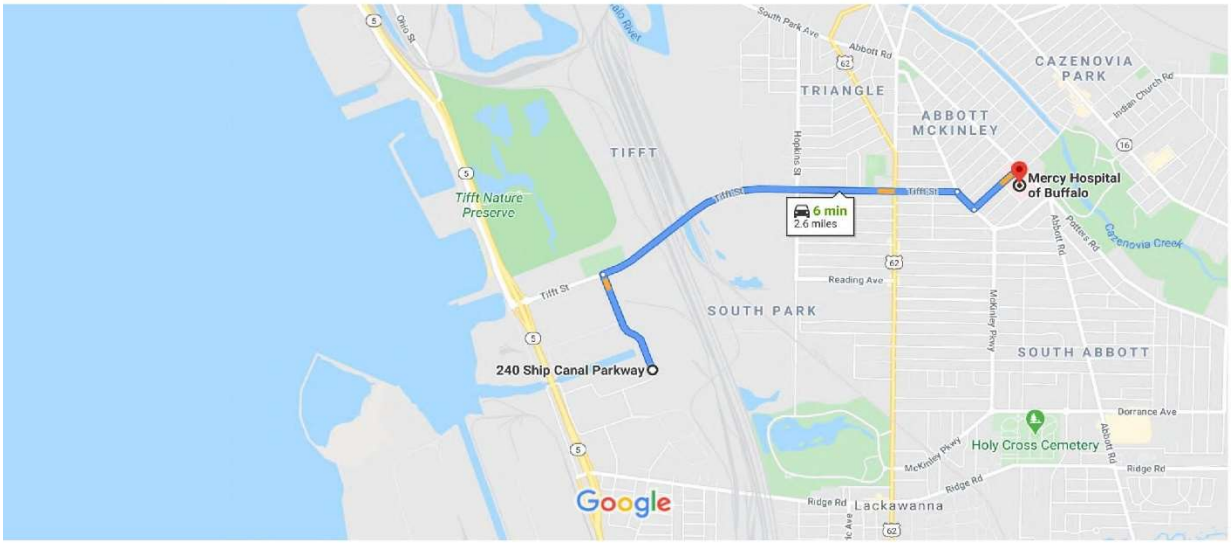
Nearest Hospital Name: Mercy Hospital of Buffalo

Hospital Location: 565 Abbott Road, Buffalo, New York, 14220

Hospital Telephone: (716) 826-7000

Map Showing Route from the site to the Hospital:

Google Maps **240 Ship Canal Pkwy, Buffalo, NY 14218 to Mercy Hospital of Buffalo** Drive 2.6 miles, 6 min



240 Ship Canal Pkwy
Buffalo, NY 14218

1. Head north on Ship Canal Pkwy toward Laborers Way — 0.5 mi
2. Turn right onto Tifft St — 1.7 mi
3. Turn right onto McKinley Pkwy — 0.1 mi
4. Turn left onto Lorraine Ave — 0.2 mi

Destination will be on the right

Mercy Hospital of Buffalo
565 Abbott Rd, Buffalo, NY 14220

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 1). The list will also be posted prominently at the site and made readily available to all personnel at all times.

3.0 SITE MONITORING PLAN

The physical components of the cover system and canal walls shall be inspected annually by a representative of Owner (or its delegated agent) qualified to carry out such inspections. The inspector should be, at a minimum, a certified industrial hygienist or a person with a four-year college degree in environmental sciences. The inspection will be coordinated with facility personnel at least 1 week prior to ensure that most, if not all, of the paved areas will be accessible for inspection. For paved surfaces the inspection should at minimum make note of areas with settled or uneven surfaces, seepage or flooding. Arrangements to repair those areas that the inspector requires to be maintained, if any, will be initiated as may be required by the inspector. Portions of the canal walls should be inspected above water for early evidence of failure or collapse. Cracks or structural displacement of concern will be marked and photographed during inspections. Displacement of the marking will be measured to track deformation and/or movement of sections of the canal wall that are currently failing. Additional underwater inspections should be coordinated if the above water inspection reveals evidence of additional failure to the canal wall.

The annual inspection shall include, but not be limited to, those matters set forth on the Environmental Inspection Form, included in Appendix C. These inspection reports will include a map that shows areas of damage or required maintenance and shall be kept on file by the Owner. If the inspections reveal that maintenance is necessary, then the Owner shall notify the NYSDEC, and arrange to complete the repairs. The NYSDEC shall be informed by Owner when repairs are complete.

3.1 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after severe weather conditions that may affect ECs. During these inspections, an inspection form will be completed (Appendix C). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage.
- An evaluation of the condition and continued effectiveness of the Site cover system and canal walls.

- General Site conditions at the time of the inspection.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Periodic Review Report which is Appendix C. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted whenever a severe condition has taken place, such as an erosion or flooding event that may affect the cover system.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections will be recorded on the appropriate forms which are contained in Appendix C. These forms are subject to NYSDEC revision.

The inspection form and other records, including all media sampling data generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective.
- The site remedy continues to be protective of public health and the environment and is performing as designed in the Decision Document and FER.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a Qualified Environmental Professional or a Professional Engineer licensed to practice in New York State will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and ECs required by the remedial program was performed under my direction.
- The IC and/or EC employed at this site is unchanged from the date the control was put in place, or last approved by the Department.
- Nothing has occurred that would impair the ability of the control to protect the public health and environment.
- Nothing has occurred that would constitute a violation or failure to comply with any SMP for this control.
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document.
- Use of the site is compliant with the environmental easement.
- The engineering control systems are performing as designed and are effective.
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices.
- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, _____of _____[business address], am certifying as _____[Owner or Owner's Designated Site Representative to sign this certification] for the site.

The signed certification will be included in the Periodic Review Report described below.

5.3 PERIODIC REVIEW REPORT

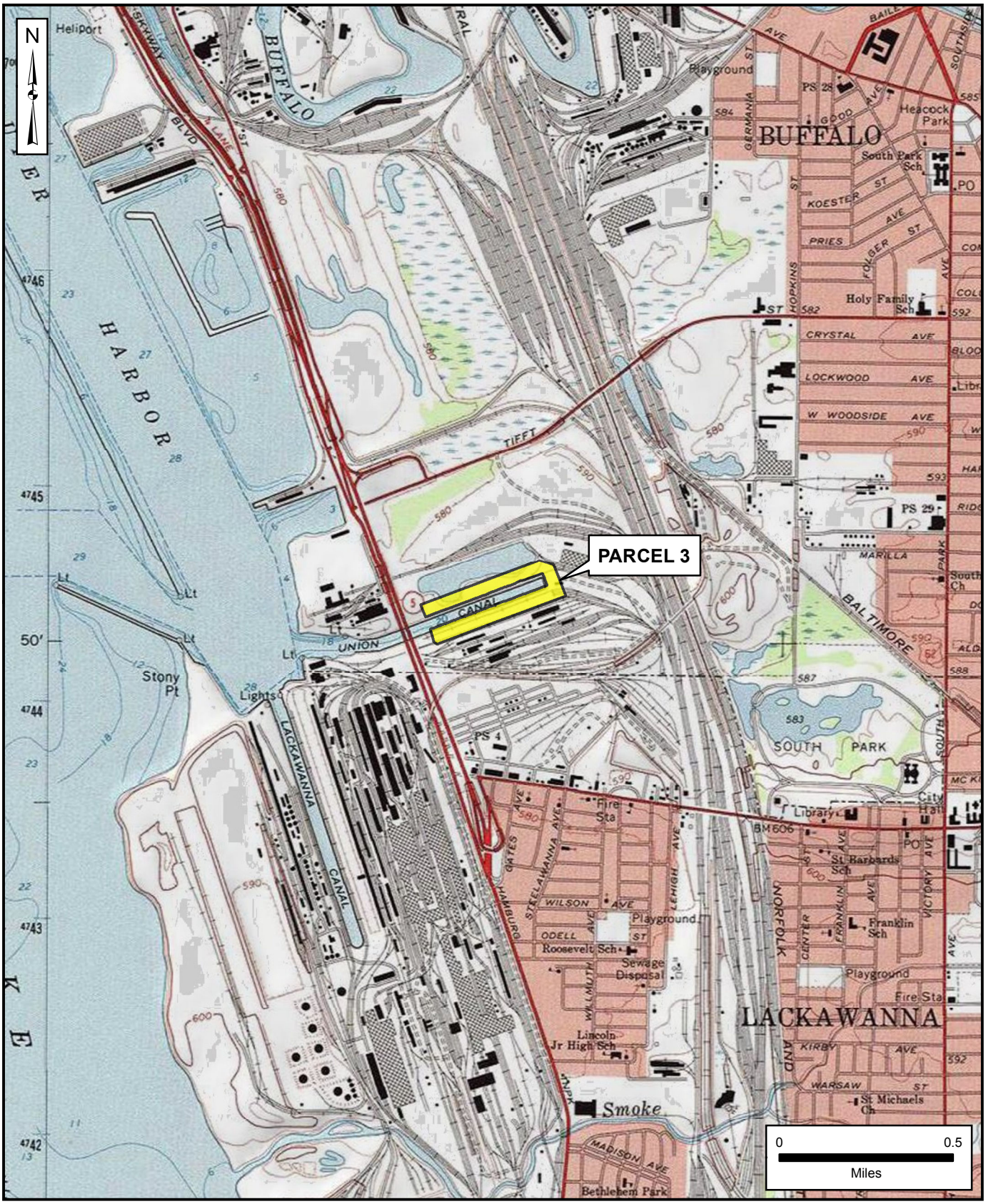
A Periodic Review Report will be submitted to the Department every year, beginning 18 months after the Certificate of Completion is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix A (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format.
- If sampling was performed as required in the Excavation Work Plan, data summary tables and graphical representations of contaminants of concern by media, which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format.
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the Excavation Work Plan in Appendix B.
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan.
    - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation. A hard copy of the certification pages, with original signatures, of the Periodic Review Report will be submitted to the NYSDEC Central Office and Regional Office in which the site is located.

5.4 CORRECTIVE MEASURES PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an IC or EC, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.



ARCADIS
Infrastructure · Water · Environment · Buildings

4080007 NOVEMBER 2011

BUFFALO LAKESIDE COMMERCE PARK (PARCEL 3)

BUFFALO, NEW YORK

FIGURE 1

SITE LOCATION MAP

FUHRMANN BLVD. EXTENSION
MAP 327, PARCEL 181

N. GATES AVE.

— UNION SHIP CANAL —

L. 11026, P. 7626
EXCEPTION PARCEL

200.0' NORTHERLY AND PARALLEL WITH THE NORTH LINE OF THE SHIP CANAL

1925.18' MEAS
1924.74' DEED

1899.3' MEAS
1902.64' DEED
THE NORTH LINE OF THE SHIP CANAL

1901.10' MEAS
1904.57' DEED
THE SOUTH LINE OF THE SHIP CANAL

245.0' SOUTHERLY AND PARALLEL WITH THE SOUTH LINE OF THE SHIP CANAL

2131.34' DEED
2172.98' MEAS

CONCRETE RETAINING WALL

MATCHLINE
SEE FIGURE 2B FOR CONTINUATION

BENCHMARK:
BOLT
ELEVATION=580.43

C.P. 80
EXISTING = 579.46

C.P. 120
EXISTING RAILROAD SPIKE
ELEVATION = 578.68

LEGEND:

- PROPERTY LINE
- PROJECT LIMIT LINE
- 578 — EXISTING CONTOUR
- 576.03 — EXISTING SPOT ELEVATION
- 578 — PROPOSED CONTOUR
- SF — EXISTING SILT FENCE / STRAW BALE DIKE

NOTES:

1. CONTRACTOR MAY RE-UTILIZE REMAINING SILT FENCE AND OTHER BMP'S LEFT FROM PREVIOUS GRADING CONTRACTS AS APPROPRIATE. CONTRACTOR SHALL BE RESPONSIBLE FOR REFURBISHING, AS APPROPRIATE ANY SILT FENCE PROPOSED FOR REUSE.
2. CONTRACTOR SHALL UTILIZE DESIGNATED CONSTRUCTION ENTRANCES TO ACCESS THE SITE UNLESS APPROVED BY ENGINEER.
3. CONTRACTOR SHALL CONTACT DON POLITO WITH CITY OF BUFFALO DPW (851-5359) PRIOR TO REMOVAL OF SUBMERGED VEHICLES FROM CANAL. THIS EFFORT WILL BE COORDINATED THROUGH THE BUFFALO POLICE DEPARTMENT.

50 0 50 100
SCALE: 1" = 100'

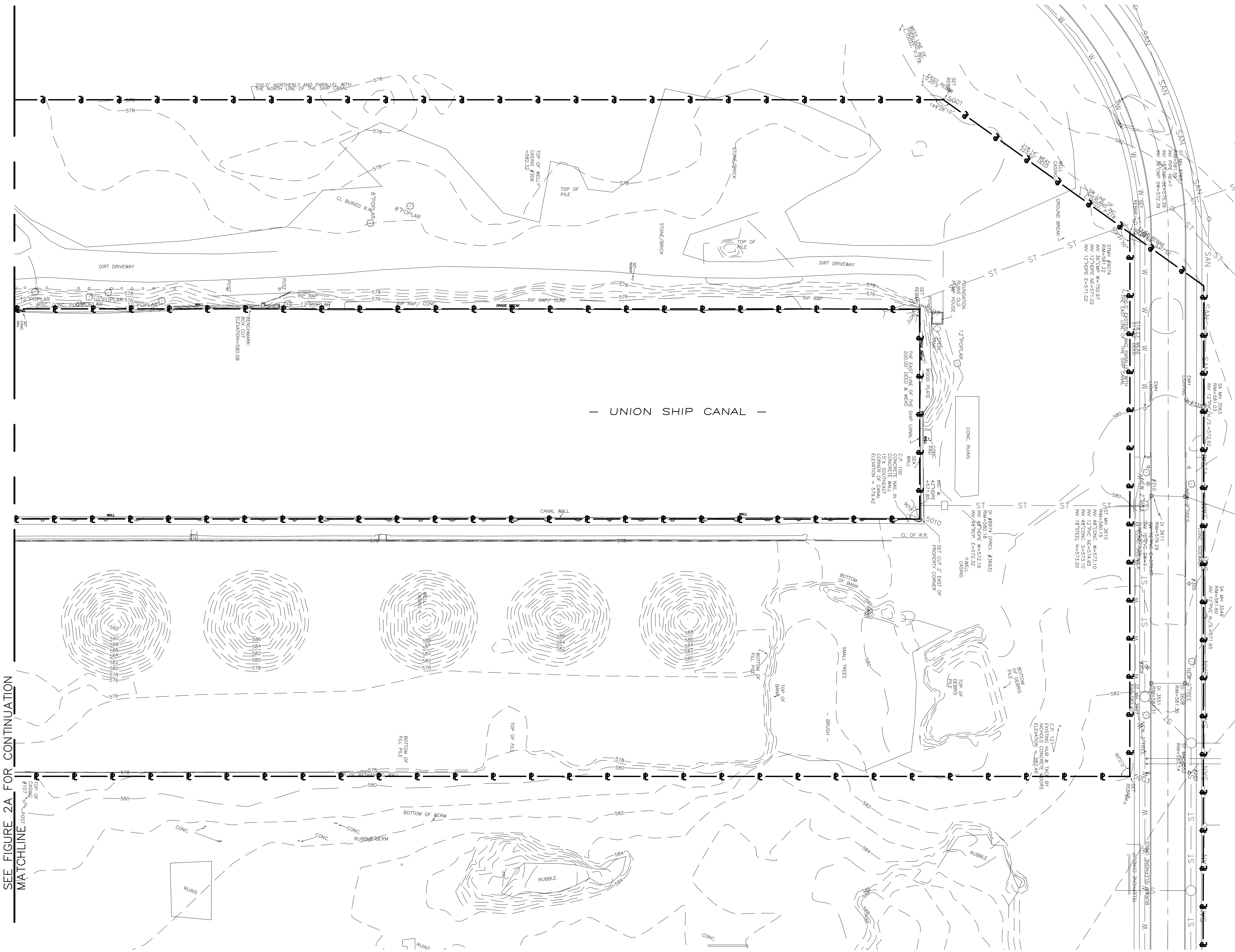
ARCADIS

BUFFALO URBAN DEVELPOMENT CORPORATION
UNION SHIP CANAL OPEN SPACE PARCEL 3 DEVELOPMENT

PROJECT SITE PLAN — WEST PLAN

SCALE: 1"=100'

ARCADIS U.S., INC.
NOVEMBER 2011
FIGURE 2A



LEGEND:

—ᘓ—ᘓ—ᘓ—	PROPERTY LINE
——— · ———	PROJECT LIMIT LINE
- - - 578 - - -	EXISTING CONTOUR
576.03	EXISTING SPOT ELEVATION
——578——	PROPOSED CONTOUR
——— SF ———	EXISTING SILT FENCE / STRAW BALE DIKE

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3. CONTRACTOR SHALL UTILIZE DESIGNATED CONSTRUCTION ENTRANCES TO ACCESS THE SITE UNLESS APPROVED BY ENGINEER.
4. CONTRACTOR SHALL CONTACT DON POLITO WITH CITY OF BUFFALO DPW (851-5359) PRIOR TO REMOVAL OF SUBMERGED VEHICLES FROM CANAL. THIS EFFORT WILL BE COORDINATE THROUGH THE BUFFALO POLICE DEPARTMENT.
5. ERIE COUNTY WATER AUTHORITY WILL BE DELIVERING BUD MATERIAL TO BE UTILIZED IN THE CLEAN SOIL CAP STARTING IN AUGUST 2009. CONTRACTOR SHALL COORDINATE OPERATIONS TO FACILITATE THESE DELIVERIES.

ARCADIS

BUFFALO URBAN DEVELPOMENT CORPORATION

UNION SHIP CANAL OPEN SPACE
PARCEL 3 DEVELOPMENT

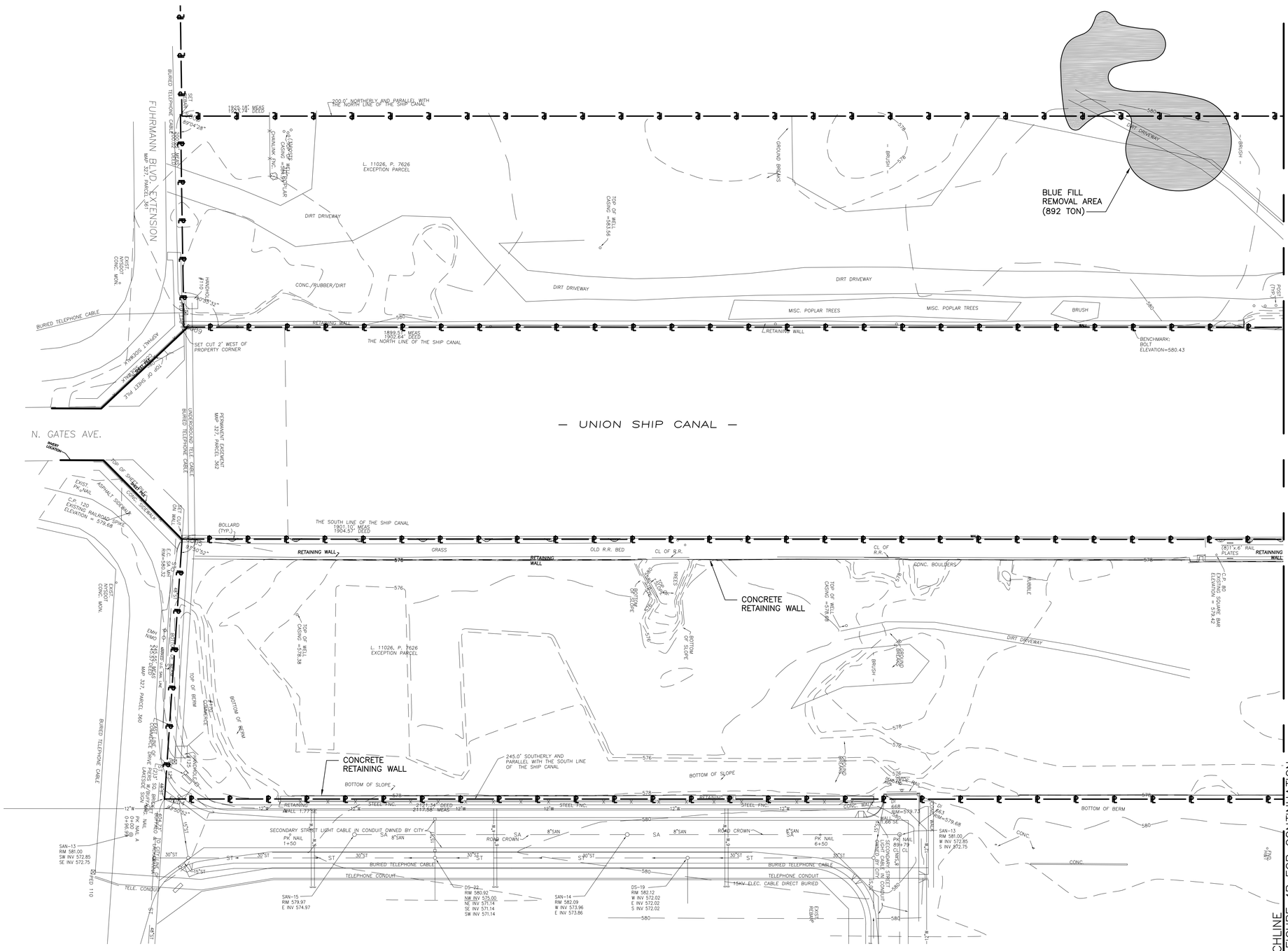
PROJECT SITE PLAN – EAST PLAN

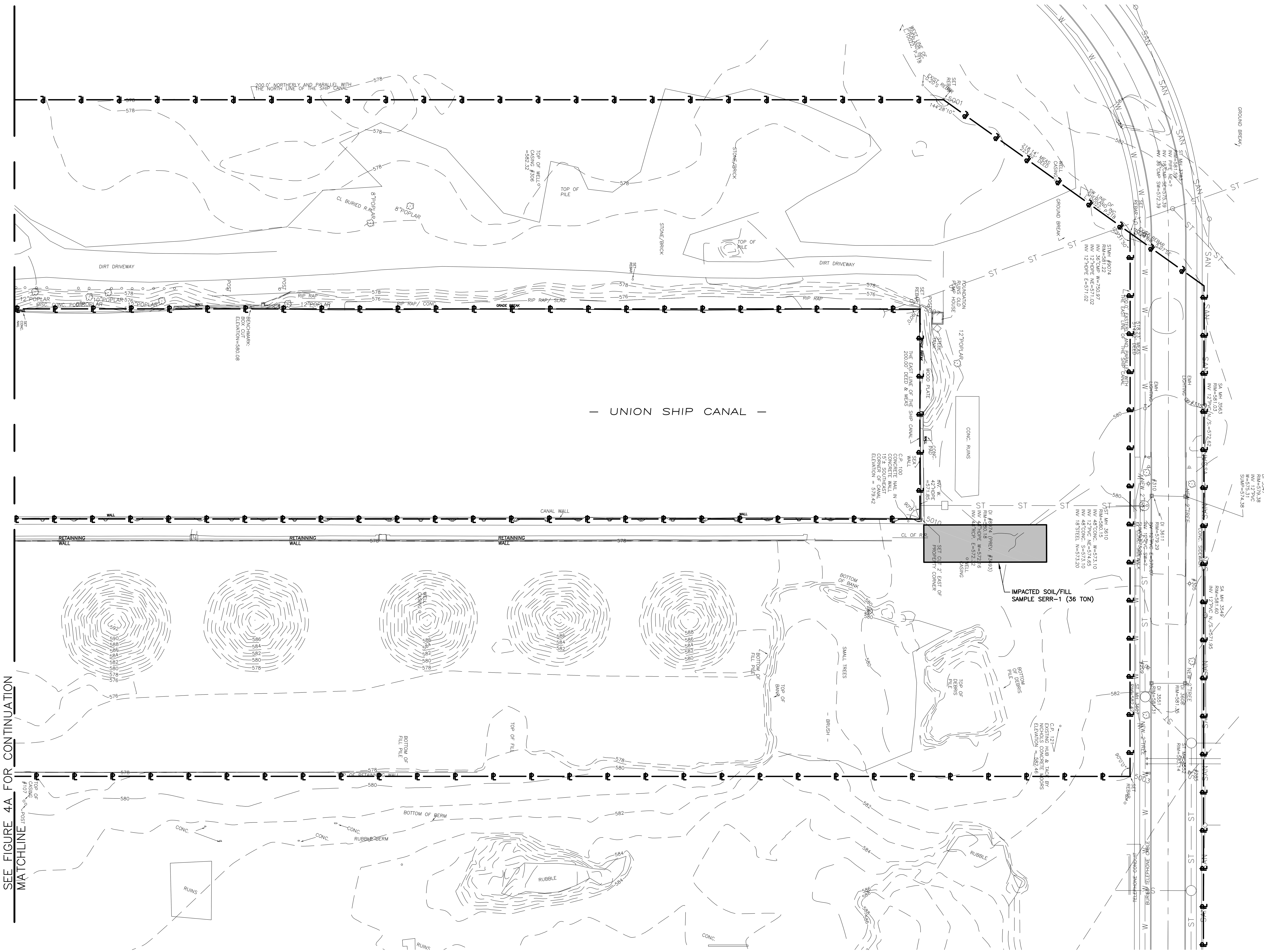
SCALE: 1"=100'

ARCADIS U.S., INC.

NOVEMBER 2011

FIGURE 2B


FUHRMANN BLVD. EXTENSION
MAP 327, PARCEL 381
N. GATES AVE.
— UNION SHIP CANAL —
BLUE FILL REMOVAL AREA (892 TON)
CONCRETE RETAINING WALL
CONCRETE RETAINING WALL
L. 11026, P. 7626 EXCEPTION PARCEL
DIRT DRIVEWAY
CONC./RUBBER/DIRT
MISC. POPLAR TREES
BRUSH
RETAINING WALL
GRASS
OLD R.R. BED
CL OF R.R.
CONC. BOULDERS
RUBBLE
GROUND BREAKS
BENCHMARK: BOLT ELEVATION=580.43
SET CUT 2' WEST OF PROPERTY CORNER
1899.3' MEAS 1902.64' DEED THE NORTH LINE OF THE SHIP CANAL
200.0' NORTHERLY AND PARALLEL WITH THE NORTH LINE OF THE SHIP CANAL
THE SOUTH LINE OF THE SHIP CANAL 1901.10' MEAS 1904.57' DEED
245.0' SOUTHERLY AND PARALLEL WITH THE SOUTH LINE OF THE SHIP CANAL
2131.34' DEED 2172.98' MEAS
L. RETAINING WALL 1.77' SE
BURIED TELEPHONE CABLE
BURIED TELEPHONE CABLE
TELEPHONE CONDUIT
15KV ELEC. CABLE DIRECT BURIED
SECONDARY STREET LIGHT CABLE IN CONDUIT OWNED BY CITY
PERMANENT EASEMENT MAP 327, PARCEL 382
PERMANENT EASEMENT MAP 327, PARCEL 390
TOP OF BERM
BOTTOM OF BERM
BOTTOM OF SLOPE
TOP OF SLOPE
TOP OF SHEET PILE
ASPHALT SIDEWALK
CONC. SIDEWALK
EXIST. ASPHALT SIDEWALK
EXIST. CONC. MON.
HANDHOLE #1101
HANDHOLE #1102
HANDHOLE #1103
HANDHOLE #1104
HANDHOLE #1105
HANDHOLE #1106
HANDHOLE #1107
HANDHOLE #1108
HANDHOLE #1109
HANDHOLE #1110
HANDHOLE #1111
HANDHOLE #1112
HANDHOLE #1113
HANDHOLE #1114
HANDHOLE #1115
HANDHOLE #1116
HANDHOLE #1117
HANDHOLE #1118
HANDHOLE #1119
HANDHOLE #1120
HANDHOLE



LEGEND:

—ɐ—ɐ—ɐ—	PROPERTY LINE
———·———	PROJECT LIMIT LINE
- - -578- - -	EXISTING CONTOUR
576.03	EXISTING SPOT ELEVATION
——578——	PROPOSED CONTOUR
—— SF ——	EXISTING SILT FENCE / STRAW BALE DIKE

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5. ERIE COUNTY WATER AUTHORITY WILL BE DELIVERING BUD MATERIAL TO BE UTILIZED IN THE CLEAN SOIL CAP STARTING IN AUGUST 2009. CONTRACTOR SHALL COORDINATE OPERATIONS TO FACILITATE THESE DELIVERIES.

50 0 50 100
SCALE: 1" = 100'

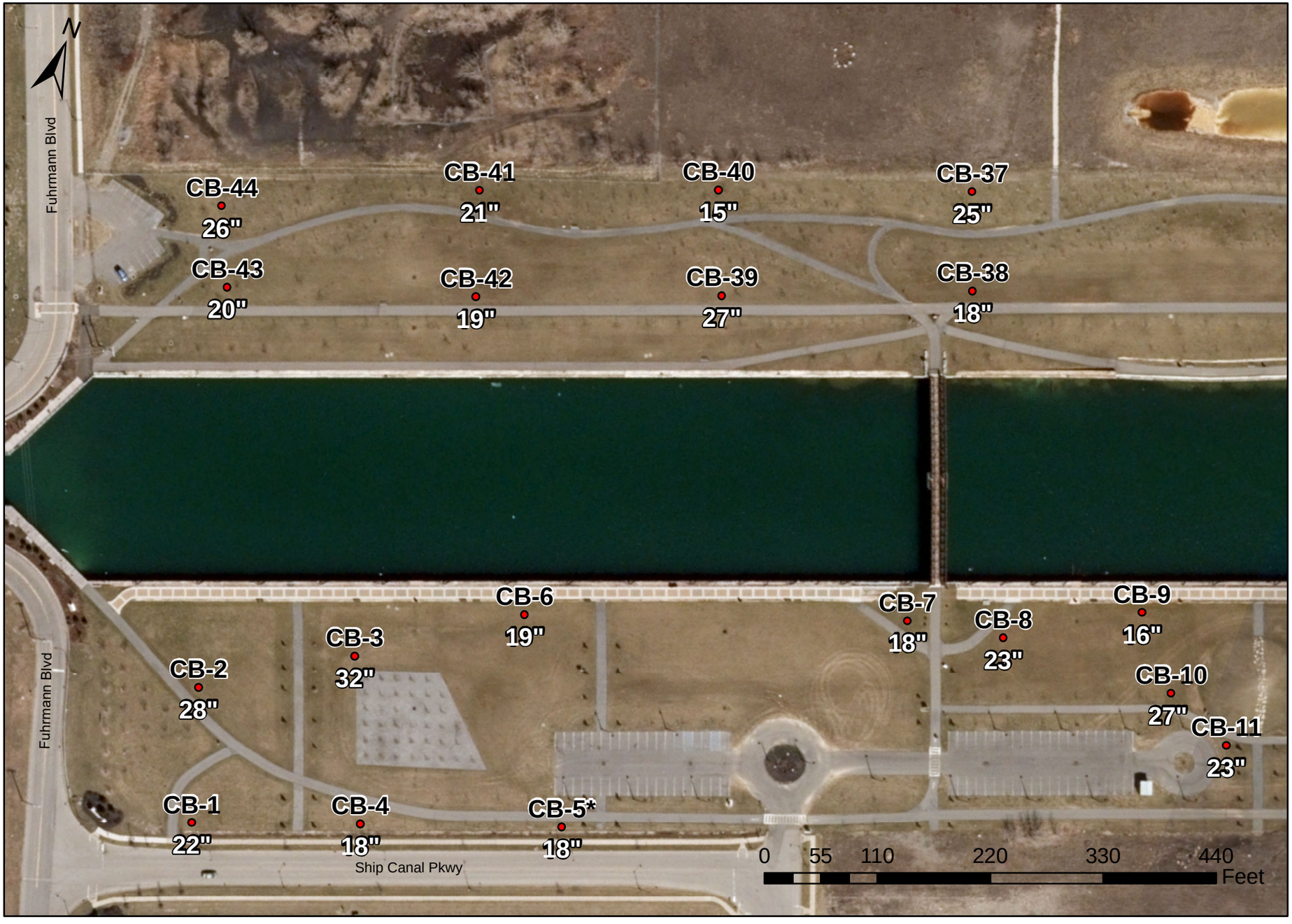
ARCADIS

BUFFALO URBAN DEVELPOMENT CORPORATION
UNION SHIP CANAL OPEN SPACE
PARCEL 3 DEVELOPMENT

LOCATIONS OF IMPACTED SOIL/FILL REMOVAL
EAST PLAN
SCALE: 1"=100'

ARCADIS U.S., INC.
NOVEMBER 2011
FIGURE 3B

Figure 4A: Union Ship Canal Cap Verification (West)
Buffalo, NY



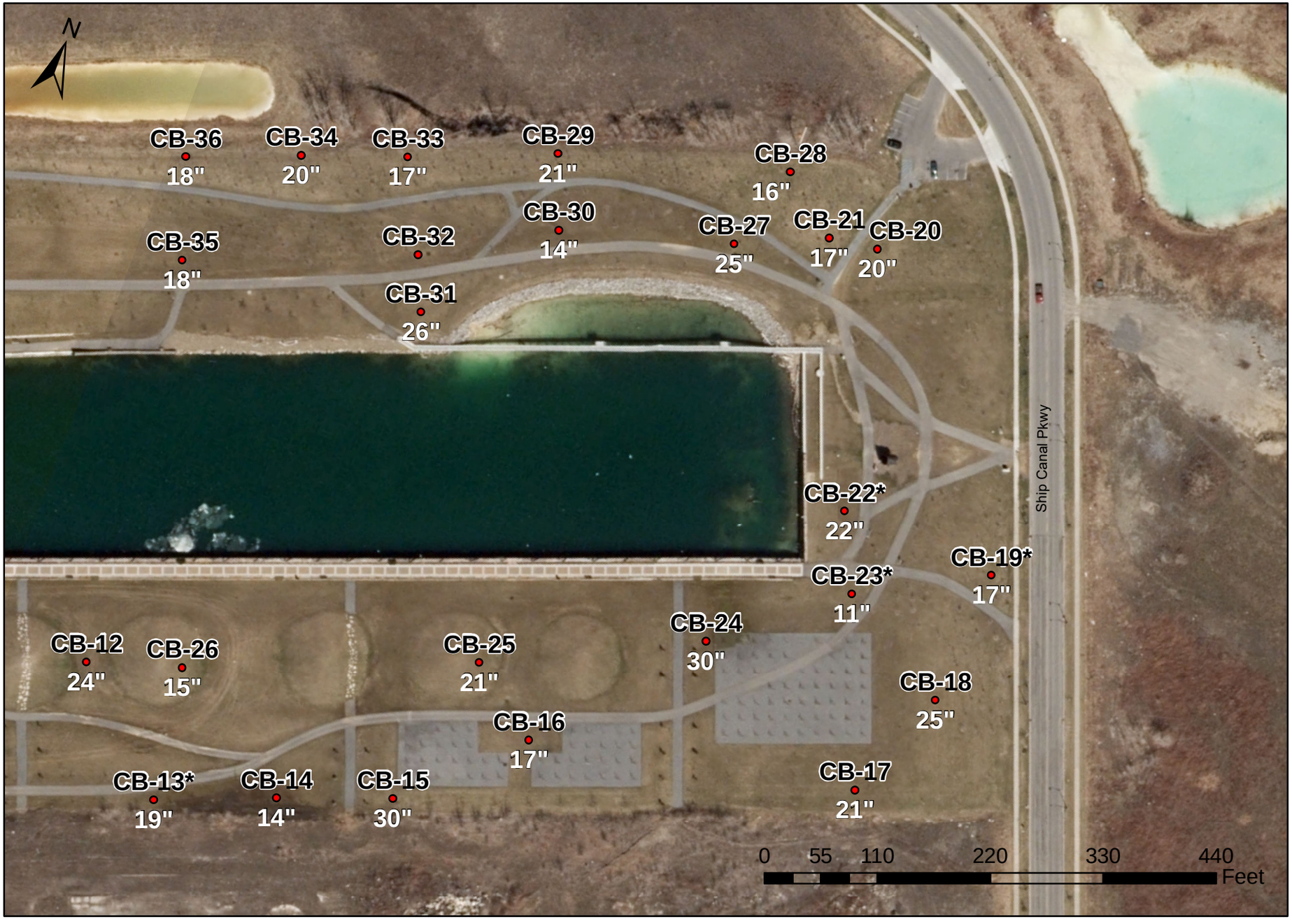
ARCADIS Design & Consultancy for natural and built assets

Confirmation Boring

Estimated Cap Thickness

* Demarcation fabric not observed

Figure 4B: Union Ship Canal Cap Verification (East)
Buffalo, NY



ARCADIS Design & Consultancy for natural and built assets

Confirmation Boring

Estimated Cap Thickness

* Demarcation fabric not observed

APPENDIX A – METES AND BOUNDS

ALL THAT TRACT OR PARCEL OF LAND situated in the City of Buffalo, County of Erie, State of New York, and being part of Lot 18, Ogden Gore Tract, Township 10, Range 8, bounded and described as follows:
BEGINNING AT A POINT on the east line of Commerce Street as delineated as Parcel No. 360 as shown on Map No. 327 of lands acquired by the People of the state of New York for the construction of Fuhrmann Boulevard-Hamburg Turnpike by deed recorded in the Erie County Clerk's Office in Liber 10082 of Deeds at Page 121 at its intersection with the south line of the existing Union Ship Canal, said point being also the northeast corner of said Parcel No. 360;
RUNNING THENCE: Easterly, at an interior angle of 93 -55'-00" with the east line of Commerce Street and along the south line of the existing Union Ship Canal, a distance of 1904.57 feet to a point;
RUNNING THENCE: Northerly, at an exterior angle of 90 -00'-00" with the last described line and along the east line of the existing Union Ship Canal, a distance of 200.00 feet to a point:
RUNNING THENCE: Westerly, at an interior angle of 270 -00'-00" with the last described line, a distance of 3.62 feet to a point on the west face of a concrete wall;
RUNNING THENCE: Southerly, at an Interior angle of 270 -05'-08" with the last described line and along the west face of a concrete wall, a distance of 5.02 feet to a point on the ordinary high water mark elevation 573.56 (NAVD88);
RUNNING THENCE: The following eleven (11) courses and distances along the ordinary high water mark elevation 573.56 (NAVD88);
1. Northwesterly, at an interior angle of 57 -57'-31" with the last described line, a distance of 27.29 feet to an angle point:
2. Northwesterly, at an interior angle of 161 -39'-01" with the last described line, a distance of 40.66 feet to an angle point;
3. Northwesterly, at an interior angle of 205 -38'-43" with the last described line, a distance of 35.97 feet to an angle point:
4. Westerly, at an interior angle of 194 -56'-45" with the last described line, a distance of 36.69 feet to an angle point;
5. Westerly, at an Interior angle of 188 -00'-37" with the last described line, a distance of 74.79 feet to an angle point;
6. Westerly, at an interior angle of 188 -41'-04" with the last described line, a distance of 67.94 feet to an angle point;
7. Southwesterly, at an Interior angle of 197 -04'-19" with the last described line, a distance of 50.89 feet to an angle point;
8. Southwesterly, at an interior angle of 193 -29'-28" with the last described line, a distance of 36.48 feet to an angle point:
9. Southwesterly, at an interior angle of 168 -16'-36" with the last described line, a distance of 16.12 feet to an angle point;
10. Westerly, at an interior angle of 154 -44'-49" with the last described line, a distance of 228.22 feet to an angle point:
11. Southerly, at an interior angle of .269 -25'-59" with the last described line, a distance of 3.67 feet to a point on the north line of the existing Union Ship Canal;

RUNNING THENCE: Westerly, at an interior angle of 90 -00'-00” with the last described line and along the north line of the existing Union Ship Canal, a distance of 1290.37 feet to a point on the east line of Fuhrmann Boulevard Extension as delineated as Parcel No. 361 as shown on said Map No. 327: said point being also the southeast corner of said Parcel No. 361:
RUNNING THENCE: Northerly, at an interior angle of 90 -36'-58” with the last described line and along the east line of said Parcel No. 361, and the east line of Fuhrmann Boulevard Extension, a distance of 200.01 feet to a point;
RUNNING THENCE: Easterly, at an interior angle of 89 -21'-02" with the last described line and parallel with the north line of the existing Union Ship Canal, a distance of 1924.60 feet to a point on the southwesterly line of lands conveyed to Sherland Incorporated by deed recorded in the Erie County Clerk's Office in Liber 100.22 of Deeds at Page 218;
RUNNING THENCE: Southeasterly, at an Interior angle of 144 -26'-00” with the last described line and along the southwest line of said Sherland Incorporated lands, a distance of 223.62 feet to a point on the west line of Ship Canal Parkway;
RUNNING THENCE: Southerly, at an interior angle of 125 -34’-00” with the last described line and along the west line of Ship Canal Parkway and parallel with the east line of the existing Union Ship Canal, a distance of 514.93 feet to a point;
RUNNING THENCE: Westerly, at an interior angle of 90 –00'-00” with the last described line and parallel with the south line of the existing Union Ship Canal and along the north line of Buffalo Lakeside Commerce Park, Phase I as filed in the Erie County Clerk's Office under Map Cover No. 3277, a distance of 2077.43 feet to a point;
RUNNING THENCE: Northwesterly, at an Interior angle of 133 -02'-30” with the last described line, a distance of 59.94 feet to a point on the east line of Commerce Street, said point being also on the east line of said Parcel No. 360:
RUNNING THENCE: Northerly, at an interior angle of 13.3 -02'-30” with the last described line and along the east line of said Parcel No. 3130 and the east line of Commerce Street, a distance of 201.613 feet to the POINT OR PLACE OF BEGINNING, containing 21.771 acres, be the same, more or less.
SUBJECT to easements, rights of way and restrictions of record.

APPENDIX B – EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the Department. Currently, this notification will be made to:

Dave Locey, NYSDEC

Assistant Engineer

270 Michigan Avenue, Buffalo, New York 14203

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control.
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this EWP.
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Section A-17 of this document.
- Identification of disposal facilities for potential waste streams.
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Soil will be screened in accordance with the Standard Operating Procedure (SOP) presenting in Section A-18.

Visual, olfactory, and instrument-based soil screening will be performed by a Qualified Environmental Professional, as defined in the 6 NYCRR Part 375 regulations, during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

The soil/fill removed during excavation will be inspected for staining and will be field screened for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). Stained soil is soil that is discolored, tinted, dyed, unnaturally mottled or contains a sheen. Excavated soil/fill that is visibly stained or produces elevated PID readings (i.e., sustained 10 parts per million or greater) will be considered potentially contaminated and stockpiled on-site and then sampled for reuse, treatment, or disposal.

All excavated and stockpiled soil/fill with evidence of contamination will be sampled and classified for reuse or disposal. Initially, one composite soil sample and a duplicate sample will be collected for each 100 cubic yards of stockpiled soil. The composite sample will be collected in the manner described in the SOPs included in Section A-18 from five locations within each stockpile. PID measurements will be recorded for each of the five composite sample locations, and one grab sample and one duplicate sample will be collected from the location with the highest PID measurement of the five composite locations. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for Target Compound List (TCL) semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs), and the metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver plus cyanide using current NYSDEC Analytical Services Protocols (ASP). Additionally, pH will be

analyzed using SW-846 Method 9045. The grab sample will be analyzed for TCL volatile organic compounds (VOCs).

Excavated soil/fill that exhibits no evidence of contamination (staining or elevated PID measurements) will also require characterization prior to use as subgrade or excavation subgrade backfill at the Site. Characterization samples will be collected and analyzed at a frequency of not less than one sample for 2000 cubic yards of soil/fill, and a minimum of one sample will be collected for volumes less than 2000 cubic yards. The characterization samples will be collected in accordance with the protocols described above; the sampling efforts shall consist of discrete samples for VOCs and composite samples collected from five locations for the remaining analytes.

Any soil/fill with a pH higher than 12.5 is considered hazardous and therefore must be properly disposed off-Site. Additionally, any soil/fill with a pH greater than 8.5 but less than 12.5 may be reused on-Site but only to fill in areas of grade below the final cover system. This soil/fill may not be used as backfill in utility trenches or to create berms or other above grade mounds. This soil/fill must also be covered with clean material.

Sampling and analysis will be completed in accordance with the protocols delineated in this Excavation Work Plan (EWP). Subgrade soil/fill containing one or more constituents in excess of the SSAL will be transported off-Site to a permitted waste management facility. Soil/fill awaiting analytical results or awaiting transportation will be stored on-Site under polyethylene sheeting.

Any soil/fill that has been characterized and found to meet the SSALs may be reused as subgrade or excavation subgrade backfill. If the analysis of the soil/fill samples reveals unacceptably high levels of any analytes (i.e., greater than one or more SSALS), additional analyses will be necessary to further classify the material for hazardous characteristics for disposal purposes. At a minimum, the duplicate sample will be analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) for the particular analytes that were detected at concentrations exceeding the SSALs. The duplicate sample may also be analyzed for RCRA Characteristics including reactivity, corrosivity, and ignitability. If the analytical results indicate that concentrations exceed the standards for either TCLP or RCRA Characteristic analysis, the

material will be considered a hazardous waste and must be properly disposed off-Site at a permitted disposal facility within 90 days of excavation. Additional characterization sampling for off-Site disposal may be required by the disposal facility. To potentially reduce off-Site disposal requirements/costs, the owner or Site developer may also choose to characterize each stockpile individually.

B-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters, and other discharge points.

The potentially contaminated soil/fill will be stockpiled in maximum 20 cubic yard piles. Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced. The potentially contaminated soil/fill will be stockpiled on polyethylene sheeting and will also be completely covered using polyethylene sheeting to reduce the infiltration of precipitation and the entrainment of dust.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained by the owner and available for inspection by NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A Qualified Environmental Professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the Qualified Environmental Professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

The excavation shall be completed in accordance with the following measures:

- Excavations for structures and utilities shall be open excavations. Provide excavation protection system(s) required by ordinances, codes, law and regulations to prevent injury to workmen and to prevent damage to new and existing structures or pipelines. Unless shown or specified otherwise, protection system(s) shall be utilized under the following conditions:
    - Excavation Less Than 5 Feet Deep: Excavations in stable rock or in soil conditions where there is no potential for a cave-in may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded, or shored and braced.
    - Excavations More Than 5 Feet Deep: Excavations in stable rock may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded or shored and braced.
    - All excavations or disturbances must be covered using appropriate cover material within 10 working days of backfilling or as otherwise approved by the NYSDEC.
- Utility Trench Preparation:
    - No more than 200 feet of trench may be opened in advance of utility laying. Trench width shall be minimized to greatest extent practical but shall conform to the following: Sufficient to provide room for installing, jointing and inspecting utilities. Enlargements at pipe joints may be made if required. Sufficient for shoring and bracing, or shielding and dewatering. Sufficient to allow thorough compaction of backfill adjacent to bottom half of utility. Do not use excavating equipment that requires the trench to be excavated to excessive width or depth.
- Notify the NYSDEC in writing when loading of contaminated soil/fill will occur and include the name and location of the disposal facility to be used. Submit to the NYSDEC, if requested, a full description of the disposal facility, licenses, permits, and compliance status.
- Do not load and transport contaminated soil and debris until receipt of approval from the disposal facility that the contaminated soil and debris will be disposed in.
- Conduct all loading and transportation activities in accordance with all applicable federal, state, and local regulations, including but not limited to United States Department of Transportation and USEPA regulations 40 CFR 172-179.

- Conduct all loading activities to minimize the formation of dust. Contaminated soil and debris transport container shall be covered to prevent release of dust and particulates and exposure of the contaminated soil and debris to precipitation.
- Obtain and comply with the required permits and authorization for transportation of contaminated soil and debris in accordance with State and local jurisdictions. The contaminated soil and debris shall be transported by a licensed waste hauler.
- Employ a temporary transport vehicle pad for vehicle loading operations to control and contain contaminated soil and debris spillage.
- Inspect and clean loaded transport vehicle tires and undercarriage to remove any adhering contaminated soil and debris prior to vehicle departure from the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Contaminated soil and debris shall be transported for disposal in containers that are watertight. Leaking containers shall be unloaded at the site and any leaked liquids cleaned up as spills.

A truck wash will be operated on-site. The Qualified Environmental Professional will be responsible for confirming that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The Qualified Environmental Professional will be responsible for confirming 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 adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport from the Site will be by Ship Canal Parkway, either north to Tifft Street or west to Fuhrmann Blvd. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site activities.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

Prior to off-Site disposal of contaminated soil/fill material, applications will be prepared for waste disposal at appropriate disposal facilities as well as waste transportation and disposal manifests. These waste transportation and disposal documents will be submitted to the NYSDEC, if requested. Waste transportation and disposal manifests, and all other documents required for waste shipment will be prepared for each load of waste material that is transported from the site. A waste disposal log will be maintained on-site containing pertinent waste disposal information. If requested, the NYSDEC on-site representative may review the log.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360), and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated

off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, and C/D recycling facility. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading, and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Chemical criteria (SSALs) for on-site reuse of Subgrade material have been approved by NYSDEC and are listed on Table B1. The Qualified Environmental Professional will confirm that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

Excavated on-Site soil/fill exhibiting no evidence of contamination (staining and/or elevated PID measurements) may be used as subgrade or excavation subgrade backfill.

However, soils with high pH (8.5 to 12.5) will not be used as backfill in utility trenches or as subsurface material in the construction of berms.

Excavated soil/fill that exhibits no evidence of contamination (staining or elevated PID measurements) will also require characterization prior to use as subgrade or excavation subgrade backfill at the site. Any soil/fill that has been characterized and found to meet the SSALs may be reused as subgrade or excavation subgrade backfill.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering will be handled, transported, and disposed in accordance with applicable local, State, and Federal regulations. Dewatering fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a State Pollutant Discharge Elimination System (SPDES) permit.

Pumping of water from excavations, if necessary, shall be done in such a manner to prevent the carrying away of particulates, soil/fill, or unsolidified concrete materials, and to prevent damage to the existing subgrade.

Water from the excavations will be disposed properly in accordance with all applicable regulations in such a manner as not to endanger public health, property, or any portion of the work under construction or completed.

In areas of high pH, the pH of the water in excavations will be measured using a field pH meter. Based on the groundwater analytical results, water in the excavations may be discharged to the ground surface unless staining or elevated PID measurements are observed in the excavation, a sheen is present on the water surface or if pH is less than 6.5 or greater than 8.5. If any of these conditions exist, the water pumped from the excavations will be containerized or may be discharged to the Buffalo Sewer Authority under a discharge permit if the water quality falls within the conditions of the permit. If the water quality is such that the permit requirements will be exceeded, the groundwater removed from the excavation will be containerized and

sampled. Containerized water not meeting the Surface Water and Groundwater Quality Standards set forth in 6 NYCRR Part 703.5 will be transported off-site for proper disposal.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the ROD (February 2005) and the "Explanation of Significant Difference (February 2017). The demarcation layer will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

Backfilling of excavations will be completed as promptly as work permits. Replacement of cover material will be completed within 10 days of backfilling excavation. The cover material shall be consistent with and will be placed in accordance with Backfill From Off-site Sources in Section A-10. Excavated on-site soil/fill shall not be used as cover material. If working conditions require the excavation to remain open for a period greater than ten days, plastic or metal sheeting will be used to cover the entire or portions of the excavation during periods of inactivity. Verification will be performed so that the final clean cover thickness is verified and documented by surveys conducted both before and after placement of the material. The clean final cover thickness must be a minimum of 12 inched thick (except paved surfaces).

B-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the Qualified Environmental Professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site. Off-Site borrow soils will be

documented as having originated from locations having no evidence of disposal or release of hazardous, toxic or radioactive substances, waste or petroleum products.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection human health for restricted residential use criteria, the resulting soil quality standards are listed in Table B2. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

If the contractor designates a source as "virgin" soil, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use. Virgin soils should be subject to collection of one representative composite sample per source. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, and the metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver plus cyanide. Imported soils will also have to be tested for 1,4-dioxane and emerging contaminants (listed in the most recent NYSDEC guidance for the sampling/testing of per- and poly-fluoroalkyl substances [PFAs]). The soil will be acceptable for use as backfill provided that all parameters meet the backfill and cover soil quality standards (Table B2).

Non-virgin soils will be tested via collection of one composite sample per 500 cubic yards of material from each source area. If more than 1,000 cubic yards of soil are borrowed from a given off-Site non-virgin soil source area and both samples of the first 1,000 cubic yards meet the backfill and cover soil quality standards (Table B2), the sample collection frequency will be reduced to one composite for every 2,500 cubic yards of additional soils from the same source, up to 5,000 cubic yards. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample per 5,000 cubic yards, provided all earlier samples met the backfill and cover soil quality standards

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-11 STORMWATER POLLUTION PREVENTION

When the remedial actions require the disturbance of more than one acre of land, federal and state laws require that the project obtain coverage under the NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activities that are classified as "Associated with Industrial Activity", Permit #GP-93-06 (Construction Storm Water General Permit). Requirements for coverage under the Construction Storm Water General Permit include the submittal of a Notice of Intent Form and the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP for the Site will be prepared by the Construction Contractor in accordance with "Chapter Four: the Storm Water Management and Erosion Control Plan" in Reducing Impacts of Storm Water Runoff from New Development, NYSDEC, 1992. The SWPPP will provide the following information:

- A background discussion of the scope of the construction project.
- A statement of the storm water management objectives.
- An evaluation of post-development runoff conditions.
- A description of proposed storm water control measures.
- A description of the type and frequency of maintenance activities required to support the control measure.

The SWPPP will also address issues such as erosion prevention, sedimentation control, hydraulic loading, pollutant loading, ecological protection, physical Site characteristics that impact design, and Site management planning. The SWPPP will also include a contingency plan to be implemented in the event that heavy rain events are determined to be impacting water quality in the Union Ship Canal due to closure or redevelopment activities. Descriptions of proposed features and structures at the Site shall include a description of structure placement, supporting engineering data and calculations, construction scheduling, and references to established detailed design criteria.

The use of appropriate temporary erosion control measures such as silt fencing and/or hay bales will be required around all soil/fill stockpiles and unvegetated soil surfaces during redevelopment activities. These methods are described below and in Section A-16 includes

details for various erosion control measures that might be used during Site redevelopment activities. Stockpiles shall be graded and compacted as necessary for positive surface water runoff and dust control. Stockpiles of soil/fill will be placed a minimum of ten feet from the property boundary.

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check 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.

Erosion and sediment control measures identified in the SMP 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.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

Erosion Controls

General Guidelines

The use of appropriate temporary erosion control measures such as silt fencing and/or hay bales will be required around all soil/fill stockpiles and unvegetated soil surfaces during redevelopment activities. These methods are described below. Stockpiles shall be graded and compacted as necessary for positive surface water runoff and dust control. Stockpiles of soil/fill will be placed a minimum of ten feet from the property boundary.

Temporary Measures

Temporary erosion and sedimentation control measures and facilities will be employed during active construction stages. Prior to any construction activity, temporary erosion and sediment control measures shall be installed and maintained until they are no longer needed, or until such time that permanent erosion control measures are installed and effective. Additional sediment control measures may also be necessary. Structural measures, as described below, will be designed and installed to provide the required sediment and erosion control. The following temporary measures will be incorporated into construction activities.

Silt Fencing

Site earth work activities may result in sheet flow to various areas of the Site; therefore, silt fencing will be used as the primary sediment control measure. Prior Site earth work, silt fences will be installed along all construction perimeter areas to prevent sedimentation in low areas and drainage areas. The location and orientation of silt fencing to be used during earth work will be field determined. There may be breaks and overlaps in the silt fencing to allow construction vehicles access to the construction areas.

Intermediate silt fencing will be used upslope of perimeter areas where phased construction activities are occurring. This measure will effectively lower sheet flow velocities and reduce sediment loads to perimeter fencing. In addition, silt fencing around soil stockpiles will be employed.

As sediment collects along the silt fences, it will be cleaned to maintain desired removal performance and prevent structural failure of the fence. Removed sediment may be disposed on-Site as general fill. The perimeter silt fences will remain in place until construction activities in the area are completed and vegetative cover or other erosion control measures are adequately established.

Straw Bales

Straw bales will be used to intercept sediment-laden runoff from storm water channels as needed during earth work. Additional straw bale dikes may be necessary in some areas.

Use of straw bales will be limited to swales and/or diversion ditches where the anticipated flow velocity will not be greater than 5 feet per second (fps). Where flows may eventually exceed 5 fps along a swale or diversion ditch, an intermediate straw bale barrier will

be installed upgradient of the final bale barrier. The intermediate bale barrier will effectively reduce flow velocities and sediment load to the final barrier.

As with the silt fencing, sediment will be removed to maintain performance and prevent overtopping or failure of the straw bale barrier. Removed sediment will be disposed of on-Site as general. Sediment laden straw bales that have lost their structural integrity and/or effectiveness will be disposed of off-Site as a solid waste. Straw bale barriers will remain in place until earth work activities contributing sediment to the barrier are completed and vegetative cover or other erosion control measures are adequately established.

Temporary Vegetation and Mulching

If earth work is to be performed in phases, portions of the Site may be left in intermediate/incomplete conditions. Intermediate areas may include rough graded areas awaiting finer grading or areas awaiting topsoil placement. Intermediate areas where activities will not resume for a period in excess of 2 weeks shall be seeded with a quick germinating variety of grass or covered with a layer of straw mulch.

The temporary cover will act to stabilize the soil and reduce erosion. As earth work progresses, areas containing temporary vegetation or straw mulch can be covered without removal of the temporary vegetation or mulch.

Permanent Control Measures

Permanent erosion control measures and facilities will be restored if damaged during earth work for long-term erosion protection.

Construction Features

Any final slopes greater than 33% have are reinforced or have a demarcation layer under the clean cover to indicate if erosion has extended into the subgrade. Regraded areas are vegetated to reduce erosion, enhance evapotranspiration, and improve runoff water quality. Areas that are grassed were seeded with 70 pounds per acre of seed conforming to the mix included in 3.2.1 of the Remedial Work Plan. In addition to the above seed mixture, mulch, mulch blankets, or synthetic fabric were placed to prevent erosion during turf establishment. Mulch was placed on slopes less than 15% and a mulch blanket on slopes greater than 15%.

Synthetic erosion control fabric was placed in drainage ditches and swales. As an aid to turf establishment, seeded areas were fertilized with a starter fertilizer.

B-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment, and surrounding soils as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 and Appendix C of the SMP.

B-13 COMMUNITY AIR MONITORING PLAN

Ambient air monitoring will be conducted on a real-time basis during all subsurface activities using a minimum of a photoionization detector and a dust meter. Battery charge level for each instrument will be checked at the beginning and end of each day. The instruments will be calibrated at a frequency recommended by the manufacturer. All air monitoring readings will be recorded in a logbook and will be available for review by the NYSDEC and New York State Department of Health (NYSDOH).

Baseline conditions will be measured at proposed intrusive activity locations prior to commencement of operations. Air quality within the work zone will be monitored in accordance with the Site-specific health and safety plan created by the contractor. In addition to monitoring the work area for worker health and safety, volatile organic compounds will be monitored at the

downwind perimeter of the work area every hour. If downwind perimeter organic vapor levels exceed 5 parts per million (ppm) above the upwind work area perimeter concentrations, the Vapor Emission Response Plan will be implemented.

As described in Section A-15, appropriate dust suppression techniques will be employed at all times during excavation activities. Using a dust meter, particulates will be continuously monitored immediately downwind in the work area and integrated over a period not to exceed 15 minutes. If the downwind particulate level is more than 150 micrograms per cubic meter ($\mu g/m^{3)}$, then upwind (background) levels must be measured immediately. If the downwind levels are more than 100 $\mu g/m^3$ above background, additional dust suppression measures must be taken.

Weekly submittal of air/dust monitoring data collected during intrusive activities (i.e., when soil/fill is being excavated and/or graded) to the NYSDEC is required.

Vapor Emission Response Plan

If the downwind area perimeter air concentrations of organic vapors exceed the upwind work area perimeter concentration by 5 ppm but less than 25 ppm, the following actions will be taken:

- Every 30 minutes monitor the perimeter work area location.
- Every 30 minutes monitor the organic vapor concentration 200 feet downwind of the work area perimeter or half the distance to the nearest receptor, whichever is less. If this reading exceeds the perimeter work area upwind organic vapor concentration by 5 ppm, all work must halt and monitoring increased to every 15 minutes. If, at any time, this reading exceeds the perimeter work area upwind concentration by 10 ppm, the Major Vapor Emissions Response Plan will be initiated.
- If organic vapor levels 200 feet downwind of the perimeter work area or half the distance to the nearest downwind receptor, whichever is less, exceeds by 5 ppm the work area perimeter upwind concentration persistently, then air quality monitoring must be performed within 20 feet of the nearest downwind receptor (20-foot zone). If the readings in the 20-foot zone exceed the perimeter work area upwind concentration by 5

ppm for more than 30 minutes, then the Major Vapor Emissions Response Plan will be implemented.

- Work activities can resume only after the downwind 200 foot reading and the 20-foot zone reading are less than 5 ppm above the perimeter work area upwind concentration. In addition, the downwind perimeter work area concentration must be less than 25 ppm above the perimeter work area upwind concentration.

Major Vapor Emission Response Plan

If the downwind work area perimeter organic vapor concentration exceeds the upwind work area perimeter concentration by more than 25 ppm, then the Major Vapor Emission Response Plan will be activated. Upon activation, the following activities will be undertaken:

1. All work will halt.
2. All Emergency Response Contacts as listed in the Health and Safety Plan will be contacted.
3. The NYSDEC, NYSDOH, and the Erie County Health Department will be notified and advised of the situation.
4. The local police and fire department authorities will immediately be contacted by the Safety Officer and advised of the situation.
5. Frequent air monitoring will be conducted at 30-minute intervals within the 20-Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer and work may resume.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

B-14 ODOR CONTROL PLAN

Based on the primary constituents of concern having no odor, as well as the field experience that odors were not observed on-site, odors are not anticipated to be an issue or concern.

B-15 DUST CONTROL PLAN

A dust suppression plan was prepared and implemented during Site construction. Site soils are now completely covered; either by vegetation, crushed stone, or paved surfaces. Significant disturbance of the site cover system is not anticipated. Therefore a dust suppression plan is not required at this time. If significant disturbance of Site soils is necessitated in the future, the need for a dust suppression plan will be determined by the NYSDEC.

B-16 OTHER NUISANCES

If buried drums or underground storage tanks are encountered during soil excavation activities, excavation will cease and the NYSDEC will be immediately notified. All drums and/or underground storage tanks encountered will be evaluated and the contractor will submit a removal plan for NYSDEC approval. Appropriately trained personnel will excavate all of the drums and/or underground storage tanks while following all applicable federal, state, and local regulations. Removed drums and underground storage tanks will be properly characterized and disposed off-Site. The soil/fill surrounding the buried drums or underground storage tanks will be considered as potentially contaminated and will be stockpiled and characterized.

B-17 HEALTH AND SAFTY PROCEDURES FOR INTRUSIVE OR MAINTENANCE ACTIVITIES

Contractors engaged in maintenance activities (e.g., foundation and utility workers) will be required to implement appropriate health and safety procedures. These procedures will involve, at a minimum, donning adequate personal protective equipment, performing appropriate air monitoring, and implementing other engineering controls as necessary to mitigate potential ingestion, inhalation and contact with residual constituents in the soils. A Site-specific, activity-specific health and safety plan will be prepared for the Site by the Construction Contractor (Contactor). Recommended health and safety procedures include the following:

- While conducting invasive work at the Site, the Contractor should provide working conditions on each operation that shall be as safe and healthful as the nature of that operation permits. The Contractor shall comply with all New York State Department of Labor regulations and published recommendations and regulations promulgated under the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with laws, rules, and regulations of other authorities having

jurisdiction. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance. The Contractor shall ensure that all work is performed in accordance with recognized safe work practices.

- The Contractor is responsible for the safety of the Contractor's employees, the public and all other persons at or about the Site of the work. The Contractor is solely responsible for the adequacy and safety of all construction methods, materials, equipment and the safe prosecution of the work.

- The Contractor shall stop work whenever a work procedure or a condition at a work Site is deemed unsafe by the safety professional or his trained safety representative(s).

- The Contractor shall employ a properly qualified safety professional whose duties shall be to initiate, review and implement measures for the protection of health and prevention of accidents. The Contractor shall also employ safety representative(s) whose duties, working under the direct supervision of the safety professional, shall include the implementation the safety program for the work at the Site.

- Recognition as a safety professional shall be based on a minimum of certification by the Board of Certified Safety Professionals as a Certified Safety Professional and 5 years of professional safety management experience in the types of construction and conditions expected to be encountered on the Site.

- The safety representative(s) who will work under the direction of the safety professional will have appropriate qualifications. The required qualifications shall include a minimum of: 5 years of relevant construction experience, 2 years of which were exclusively in construction safety management; successful completion of a 30-hour OSHA Construction Safety and Health training course; 40-hour training as per 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response; and, if confined space entry is required, training as per 29 CFR 1910.146, Permit-Required Confined Spaces.

- The safety professional shall visit and audit all work areas as often as necessary but at least once each week and shall be available for consultation whenever necessary.

- The safety representative(s) must be at the job Site full-time (a minimum of 8 hours per working day) whenever work is in progress. When multiple shift work is in progress more than one safety representative may be required.

- The safety professional and his safety representative(s) shall be responsible for ensuring Contractor compliance with governing laws, rules, and regulations as well as of good safety practice.

- The safety staff shall maintain and keep available safety records, up-to-date copies of all pertinent safety rules and regulations, Material Safety Data Sheets, and the Contractors' Site specific health and safety plans (HASPs) and the Site emergency response plan with emergency and telephone contacts for supportive actions.

- The responsible safety professional shall sign and seal the Contractor's written Site-specific HASP and the Plan shall be available to workers on Site. The Contractor shall provide copies of the HASP to the Contractors' insurer, if required.

- The safety professional and/or his trained safety representative(s) shall as a minimum:

    - Schedule and conduct safety meetings and safety training programs as required by law, the HASP, and good safety practice. A specific schedule of dates of these meetings and an outline of materials to be covered shall be provided with the HASP. All employees shall be instructed on the recognition of hazards, observance of precautions, of the contents of the health and safety plan and the use of protective and emergency equipment.

    - Determine that operators of specific equipment are qualified by training and/or experience before they are allowed to operate such equipment.

    - Develop and implement emergency response procedures. Post the name, address and hours of the nearest medical doctor, name and address of nearby clinics and hospitals, and the telephone numbers of the appropriate ambulance service, fire, and the police department.

- Post all appropriate notices regarding safety and health regulations at locations that afford maximum exposure to all personnel at the job Site.

- Post appropriate instructions and warning signs in regard to all hazardous areas or conditions that cannot be eliminated. Identification of these areas shall be based on experience, on Site surveillance, and severity of hazard. Such signs shall not be used in place of appropriate workplace controls.

- Ascertain by personal inspection that all safety rules and regulations are enforced. Make inspections at least once a shift to confirm that all machines, tools, and equipment are in a safe operating condition; and that all work areas are free of hazards. Take necessary and timely corrective actions to eliminate all unsafe acts and/or conditions, and submit to the Engineer each day a copy of his findings on the inspection check list report forms established in the health and safety plan.

- Provide safety training and orientation to authorized visitors to ensure their safety while occupying the job Site.

- Perform all related tasks necessary to achieve the highest degree of safety that the nature of the work permits.

- The Contractor shall have proper safety and rescue equipment, adequately maintained and readily available, for foreseeable contingencies. This equipment may include such applicable items as: proper fire extinguishers, first aid supplies, safety ropes and harnesses, stretchers, water safety devices, oxygen breathing apparatus, resuscitators, gas detectors, oxygen deficiency indicators, combustible gas detectors. This equipment should be kept in protected areas and checked at scheduled intervals. A log shall be maintained indicating who checked the equipment, when it was checked, and that it was acceptable. This equipment log shall be updated monthly and be submitted with the monthly report. Equipment that requires calibration shall have copies of dated calibration certificates on Site. Substitute safety and rescue equipment must be provided while primary equipment is being serviced or calibrated.

- All personnel employed by the Contractor or his subcontractors or any visitors whenever entering the job Site, shall be required to wear appropriate personal protection equipment required for that area. The Contractor may remove from the Site any person who fails to comply with this or any other safety requirement.

Because water with elevated pH may act as a skin irritant, care must be taken to inhibit dermal contact when handling any groundwater at the Site. Actions to inhibit contact with groundwater may include the use of latex or other waterproof gloves by on-Site workers.

B-18 STANDARD OPERATING PROCEDURES

SCREENING OF SOIL/FILL SAMPLES FOR ORGANIC VAPORS

This guideline presents a method for screening soil samples. During soil/fill excavation activities, a photoionization detection (PID) or flame ionization detector (FID) will be used to monitor the excavated soils. The monitoring results provide criteria for sampling of soil potentially impacted by volatile organic substances.

Methodology

1. During excavation, the excavated soil will be examined for visually contaminated (stained) soils. If present, these areas will be sampled first. If no staining is observed, collect samples from each stockpile at random locations.
2. Place the sample in a labeled wide-mouthed glass jar. Seal the jar with aluminum foil and a screw top cap.
   a. Keep these samples at as near to 70^{o}F as possible.
   b. Check head space of each sample for any organic vapor present by inserting the probe of the PID through the aluminum foil seal.
   c. The soil sample from each excavation location will be noted where VOA's were detected and removal of the contaminated soil will be coordinated per project requirements.

Equipment Used

- 40 ml. precleaned and prelabeled glass VOA vials with teflon-lined septum caps.
- Ice and ice chest.

- Wide mouthed glass jars with screw caps.
- Aluminum foil.
- Photoionization detector.

COMPOSITE SAMPLE PROCEDURE FOR NON-VOLATILE ORGANICS ANALYSYS

This guideline addresses the procedure to be used when soil samples are to be composited in the field.

Methodology

1. Transfer equal portions of soil from individual split-spoon samples to a large precleaned stainless steel (or Pyrex glass) mixing bowl.
2. Thoroughly mix (homogenize) and break up the soil using a stainless steel scoop or trowel.
3. Spread the composite sample evenly on a stainless steel tray and quarter the sample.
4. Discard alternate (i.e. diagonal) quarters and, using a small stainless steel scoop or spatula, collect equal portions of subsample from the remaining two (2) quarters until the amount required for the composite sample is acquired. Transfer these subsamples to a precleaned stainless steel (or glass Pyrex) mixing bowl and re-mix.
5. Transfer the composite sample to an appropriate precleaned jars provided by the laboratory and label. Store any excess sample from the stainless steel tray in separate, precleaned, sample containers, and submit to the laboratory for holding in case additional analysis is necessary.
6. Decontaminate all stainless steel (or glass Pyrex) trays, spoons, spatulas, and bowls in accordance with the sampling equipment decontamination procedure provided.

B-19 QUALITY ASSURANCE/ QUALITY CONTROL

Characterization samples collected shall be analyzed using USEPA-approved analytical methods using the most recent edition of the USEPA's "Test Methods for Evaluating Solid Waste" (SW-846). Methods for Chemical Analysis of Water and Wastes "(USEPA 600/4-79-

020), Standard Methods for Examination of Waste and Wastewater" (prepared and published jointly by the American Public Health Association, American Waterworks Association and Water Pollution Control Federation).

The laboratory that performs the analyses will be certified through the New York State Department of Health Environmental Laboratory Approval Program (ELAP) to perform Contract Laboratory Program (CLP) analysis and Solid Waste and Hazardous Waste Analytical testing on all media to be sampled. The laboratory will maintain this certification for the duration of the project.

The laboratory will perform the analysis of samples in accordance with the most recent NYSDEC Analytical Services Protocol (ASP). Analytical data will be submitted in complete ASP Category B data packs including documentation of laboratory QA/QC procedures that will provide legally defensible data in a court of law. If requested, the Category B data packs will be submitted to the NYSDEC.

Procedures for chain of custody, laboratory instrumentation calibration, laboratory analyses, reporting of data, internal quality control, and corrective actions shall be followed as per SW-846 and as per the laboratory's Quality Assurance Plan. Where appropriate, trip blanks, field blanks, field duplicates, and matrix spike, matrix spike duplicate samples shall be performed at a rate of 10% and will be used to assess the quality of the data. The laboratory's in-house QA/QC limits will be utilized whenever they are more stringent than those suggested by the USEPA methods.

Table B1

Site-Specific Action Levels for Subgrade Soil/Fill
Union Ship Canal Public Open Space – Parcel 3

Parameter	SSAL
Volatile Organic Compounds (µg/kg)	
- Total VOCs)	10,000[1]
Semi-Volatile Organic Compounds (µg/kg)	
- Total SVOCs	500,000[1,2]
Pesticides/PCBs (µg/kg)	
- Total Pesticides	10,000[1]
- Total PCBs (surface 0-1')	1,000
- Total PCBs (surface below 1')	10,000
Metals (mg/kg)	
- Arsenic	50
- Barium	500
- Cadmium	20
- Chromium	200
- Lead	1,000
- Mercury	1.0
- Selenium	50
- Silver	1,000
- Cyanide	50
pH (S.U.)	
pH triggering restricted soil/fill use	9.0 to 12.5
pH triggering "hazardous" soil/fill characterization	>12.5

Notes:
1 = Total concentration is the sum of concentrations of Target Compound List (TCL) compounds plus estimated concentrations of Tentatively Identified Compounds (TICs).

2 = In addition to SSALs of 500,000 µg/kg for total concentration of SVOCs, the SSAL for each individual SVOC is 50,000 µg/kg.

Table B2
Soil Cleanup Objectives (SCOS) for Imported Soil/Fill
Union Ship Canal Public Open Space - Parcel 3

Contaminant	Protection of Public Health
	Commercial or Industrial Use
Metals	
Arsenic	16
Barium	400
Beryllium	47
Cadmium	7.5
Chromium, hexavalent[a]	19
Chromium, trivalent[a]	1500
Copper	270
Cyanide	27
Lead	450
Manganese	2000
Total Mercury	0.73
Nickel	130
Selenium	4
Silver	8.3
Zinc	2480
PCBs/Pesticides	
2,4,5-TP Acid (Silvex)	3.8
4,4'-DDE	17
4,4'-DDT	47
4,4'-DDD	14
Aldrin	0.19
alpha-BHC	0.02
beta-BHC	0.09
Chlordane (alpha)	2.9
delta-BHC	0.25
Dibenzofuran	210
Dieldrin	0.1
Endosulfan I	102
Endosulfan II	102
Endosulfan sulfate	200
Endrin	0.06
Heptachlor	0.38
Lindane	0.1
Polychlorinated biphenyls	1

Table B2
Soil Cleanup Objectives (SCOS) for Imported Soil/Fill
Union Ship Canal Public Open Space - Parcel 3

Contaminant	Protection of Public Health
	Commercial or Industrial Use
Semivolatiles	
Acenaphthene	98
Acenapthylene	107
Anthracene	500
Benz(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1.7
Benzo(g,h,i)perylene	500
Benzo(k)fluoranthene	1.7
Chrysene	1
Dibenz(a,h)anthracene	0.56
Fluoranthene	500
Fluorene	386
Indeno(1,2,3-cd)pyrene	5.6
m-Cresol	0.33[b]
Naphthalene	12
o-Cresol	0.33[b]
p-Cresol	0.33
Pentachlorophenol	0.8[b]
PFOA (Commercial Only)	0.5
PFOA (Industrial Only)	0.6
PFOS	0.44
Phenanthrene	500
Phenol	0.33[b]
Pyrene	500

Table B2
Soil Cleanup Objectives (SCOS) for Imported Soil/Fill
Union Ship Canal Public Open Space - Parcel 3

Contaminant	Protection of Public Health
	Commercial or Industrial Use
Volatiles	
1,1,1-Trichloroethane	0.68
1,1-Dichloroethane	0.27
1,1-Dichloroethene	0.33
1,2-Dichlorobenzene	1.1
1,2-Dichloroethane	0.02
cis-1,2-Dichloroethene	0.25
trans-1,2-Dichloroethene	0.19
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
1,4-Dioxane	0.1[b]
Acetone	0.05
Benzene	0.06
Butylbenzene	12
Carbon tetrachloride	0.76
Chlorobenzene	1.1
Chloroform	0.37
Ethylbenzene	1
Hexachlorobenzene	3.2
Methyl ethyl ketone	0.12
Methyl tert-butyl ether	0.93
Methylene chloride	0.05
n-Propylbenzene	3.9
sec-Butylbenzene	11
tert-Butylbenzene	5.9
Tetrachloroethene	1.3
Toluene	0.7
Trichloroethene	0.47
1,2,4-Trimethylbenzene	3.6
1,3,5- Trimethylbenzene	8.4
Vinyl chloride	0.02
Xylene (mixed)	1.6

Table B2
Soil Cleanup Objectives (SCOS) for Imported Soil/Fill
Union Ship Canal Public Open Space - Parcel 3

Notes:

All soil cleanup objectives (SCOs) are in parts per million (ppm).

a The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminant is below the specific SCO for Hexavalent Chromium.

b For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

APPENDIX C – PERIODIC REVIEW REPORT

ENVIRONMENTAL INSPECTION FORM

Site Name:_____

Site Number:_____

Inspection Date:_____

Property Address:_____

Site Owner:_____

Property ID:_____

Total Site Acreage:_____

Weather during inspection:_____

_____

SIGNATURE

The findings of this inspection were discussed with appropriate personnel, corrective actions were identified and implementation was mutually agreed upon:

Inspectors Signature:_____ **Date:**_____

Next Scheduled Inspection:_____

Illegal Dumping	Yes	No
1. Is there evidence of illegal dumping?	_____	_____

COVER & VEGETATION

	Yes	No
2. Final cover in acceptable condition?	_____	_____
Is there evidence of sloughing, erosion, ponding or settlement?	_____	_____
Is there evidence of **unintended traffic**; rutting?	_____	_____
Is there evidence of distressed vegetation/turf?	_____	_____
3. Final cover sufficiently covers soil/fill material?	_____	_____
Are there cracks visible in the soil or pavement?	_____	_____
Is there evidence of erosion in the stormwater channels or swales?	_____	_____

CANAL WALL

	Yes	No
4. Canal wall in acceptable condition?	_____	_____
Is there evidence of excess pitting, erosion or settlement?	_____	_____
Are there tension cracks visible in the concrete?	_____	_____
Canal wall or parts of wall are visually out of plumb, tilting or deflecting?	_____	_____
Other signs of damage or deterioration?	_____	_____

Describe:

Displacement of canal wall mark from prior inspection?____in.

ACTIVITY ON SITE

	Yes	No
5. Any activity on site that mechanically disturbed soil cover?	_____	_____

ADDITIONAL FACILITY INFORMATION

Development on or near the site? (Specify size and type: e.g., residential, 40 acres, well and septic)

COMMENTS

ATTACHMENTS

Engineering Controls / Institutional Controls (EC/IC) Certification Form

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

SITE DETAILS

SITE NO. B-00164-9

SITE NAME Union Ship Canal Public Parcel 3

SITE ADDRESS: 2 and 4 Fuhrmann Boulevard ZIP CODE: 14203

CITY/TOWN: Buffalo

COUNTY: Erie

CURRENT USE: Public Open Space

CURRENT CERTIFICATION FREQUENCY: EVERY 1 YEAR(S)

VERIFICATION OF SITE DETAILS

YES NO

1.	Are the SITE DETAILS above, correct?	☐	☐
	If NO, are changes handwritten above or included on a separate sheet?	☐	☐
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
3.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
4.	Has a change-of-use occurred since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
5.	Has any new information come to your attention to indicate that assumptions made in the qualitative exposure assessment for offsite contamination are no longer valid (applies to non-significant threat sites subject to ECL 27-1415.7(c))?	☐	☐
	If YES, is the new information or evidence that new information has been previously submitted included with this certification?	☐	☐
6.	Are the assumptions in the qualitative exposure assessment still valid (must be certified every five years for non-significant threat sites subject to ECL 27-1415.7(c))?	☐	☐
	If NO, are changes in the assessment included with this certification?	☐	☐

SITE NO. B-00164-9

Description of Institutional/Engineering Control	Control Certification	
	YES	NO
ENVIRONMENTAL EASEMENT	☐	☐
Implementation of the Site Management Plan		
		☐
		☐

CONTROL CERTIFICATION STATEMENT

For each institutional or engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

(a) the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in-place, or last approved by the Department;

(b) nothing has occurred that would impair the ability of such control to protect public health and the environment;

(c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and

(d) access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.

(e) if a financial assurance mechanism is required under the remedial work plan for the site, the mechanism remains valid and sufficient for their intended purpose under the work plan.

CONTROL CERTIFICATION

SITE NO. 9-07-029

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in this Institutional and Engineering Controls Certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name),_____

(print business address), am certifying as _____ (Owner or

Owner's Designated Site Representative (if the site consists of multiple properties, I have been authorized and

designated by all site owners to sign this certification) for the Site named in the Site Details section of this form.

_____ _____

Signature of Site Owner or Representative Rendering Certification Date

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QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in this Institutional and Engineering Controls Certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name), _____

(print business address), am certifying as a Qualified Environmental Professional for the_____

_____ (Owner or Owner's Representative) for the Site named in the Site Details section of this form.

_____	_____	_____
Signature of Qualified Environmental Professional, for the Owner or the Owner's Representative, Rendering Certification	Stamp (if Required)	Date

IV. **Definitions:**

"Engineering Control" (EC), means any physical barrier or method employed to actively or passively contain, stabilize, or monitor any hazardous waste or petroleum waste to ensure the long-term effectiveness of an inactive site remedial program or brownfield site remedial program or environmental restoration project, or to eliminate potential exposure pathways to any such hazardous waste or petroleum waste. Engineering Controls include, but are not limited to: pavement, caps, covers, subsurface barriers and slurry walls; building ventilation systems; fences, other barriers and access controls; and provision of alternative water supplies via connection to an existing public water supply, addition of treatment technologies to an existing public water supply, and installation of filtration devices on an existing private water supply.

"Institutional Control" (IC), means any non-physical means of enforcing a restriction on the use of real property, that limits human or environmental exposure to any hazardous waste or petroleum waste, restricts the use of groundwater; provides notice to potential owners, operators, or members of the public; or prevents actions that would interfere with the effectiveness of an inactive site remedial program or brownfield site remedial program or environmental restoration project, or with the effectiveness and/or integrity of Site Management activities at or pertaining to any site.

"Professional Engineer" means a person, including a firm headed by such a person, who holds a current New York State Professional Engineering license or registration, and has the equivalent of three (3) years of full-time relevant experience in site investigation and remediation of the type detailed in this Control Certification.

"Property Owner" means, for purposes of an IC/EC certification, the actual owner of a property. If the site has multiple properties with different owners, the Department requires that the owners be represented by a single representative to sign the certification.

"Oversight Document" means any document the Department issues pursuant to each Remedial Program (see below) to define the role of a person participating in the investigation and/or remediation of a site or area(s) of concern. Examples for the various programs are as follows:

BCP (after approval of the BCP application by DEC) - Brownfield Site Cleanup Agreement.
ERP (after approval of the ERP application by DEC) - State Assistance Contract.
Federal Superfund Sites - Federal Consent Decrees, Administrative Orders on Consent or Unilateral Orders issued pursuant to CERCLA.
Oil Spill Program - Order on Consent, or Stipulation pursuant to Article 12 of the Navigation Law (and the New York Environmental Conservation Law).
State Superfund Program - Administrative Consent Order.
VCP (after approval of the VCP application by DEC) - Voluntary Cleanup Agreement.
RCRA Corrective Action Sites- Federal Consent Decrees, Administrative Orders on Consent or permit conditions issued pursuant to RCRA.

"Qualified Environmental Professional" (QEP), means a person, including a firm headed by such a person, who possesses sufficient specific education, training, and experience necessary to exercise professional judgment, to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a property or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this guidance (DER10 Technical Guide).

1. Such a person must:
   i. Hold a current Professional Engineering or a Professional Geologist license or registration, and have the equivalent of three (3) years of full-time relevant experience in site investigation and remediation of the type detailed in this guidance; or
   ii. Be a site remediation professional licensed or certified by the federal government, a state; or a recognized, accrediting agency, to perform investigation or remediation tasks identified by this guidance, and have the equivalent of three (3) years of full-time relevant experience. Examples of such license or certification include, but are not limited to, the following titles:
      - Licensed Site Professional, by the State of Massachusetts
      - Licensed Environmental Professional, by the State of Connecticut

- Qualified Environmental Professional, by the Institute of Professional Environmental Practice
- Certified Hazardous Materials Manager, by the Institute of Hazardous Materials Management

2. The definition of QEP provided above does not preempt State Professional licensing or registration requirements such as those for a Professional Geologist, Engineer, or Site Remediation Professional. Before commencing work, a person should determine the applicability of State professional licensing or registration laws to the activities to be undertaken pursuant to section 1.5 (DER10 Technical Guide).

3. A person who does not meet the above definition of a QEP under the foregoing definition may assist in the conduct of all appropriate investigation or remediation activities in accordance with this document if such person is under the supervision or responsible charge of a person meeting the definition provided above.

"Qualitative Exposure Assessment" means a qualitative assessment to determine the route, intensity, frequency, and duration of actual or potential exposures of humans and/or fish and wildlife to contaminants.

"Remedial Party" means any person or persons, as defined in 6 NYCRR 375, who executes, or is otherwise subject to, an oversight document (State Superfund, BCP, ERP or VCP Program). For purposes of this guidance, remedial party also includes:

1. Any person or persons who is performing the investigation and/or remediation, or has control over the person (for example, contractor or consultant) who is performing the investigation and/or remediation, including, without limitation, an owner, operator or volunteer; and

2. The DER for State-funded investigation and/or remediation activities.

"Site Management" (SM) means the activities included in the last phase of the remediation of a site, in accordance with a Site Management Plan, which continue until the remedial action objectives for the project are met and the site can be closed-out. Site Management includes the management of the institutional and engineering controls required for a site, as well as the implementation of any necessary long-term monitoring and/or operation and maintenance of the remedy. (Formerly referred to as Operation and Maintenance (O&M)).

"Site Management Plan" (SMP) means a document which details the steps necessary to assure that the institutional and engineering controls required for a site are in-place, and any physical components of the remedy are operated, maintained and monitored to assure their continued effectiveness, developed pursuant to Section 6 (DER10 Technical Guide).

"Site Owner" means the actual owner of a site. If the site has multiple owners of multiple properties with ICs and/or ECs, the Department requires that the owners designate a single representative for IC/EC Certification activities.

"Site Owner's Designated Representative" means a person, including a firm headed by such a person, who has been designated in writing by the Site Owner(s) to complete and sign the Institutional and Engineering Controls Certification Form.

APPENDIX D
RESPONSIBILITIES of
OWNER and REMEDIAL PARTY

Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the Union Ship Canal Public Open Space Parcel 3 site (the "site"), number B00164, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:

City of Buffalo (the "owner")
65 Niagara Square, Rm 1100, City Hall
Buffalo, New York 14202

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Ms. Rebecca Gandour
Executive Vice President
Buffalo Urban Development Corp.
95 Perry Street, Suite 404
Buffalo, New York 14203
P: (716) 362-8361
E: rgandour@ecidany.com

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in a(n) Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 2.4.2 - Notifications.

6) In the event some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in 2.4.2 - Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.

7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A

60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 2.4.2 - Notifications of the SMP.

7) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

8) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.