LOWER GENESEE RIVER
OPERABLE UNIT 5 (OU-5) OF THE EASTMAN BUSINESS PARK
MONROE COUNTY
ROCHESTER, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: 828177

USEPA ID # NYD980592497

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012

Prepared by:

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Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date
01	1/18/2023	Addresses USEPA Comments dated 9/28/22	1/18/2023

JANUARY 2023

CERTIFICATION STATEMENT

I, EDWARD G. GLAZA, certify that I am currently a New York State registered Professional Engineer as in defined in 6 NYCRR Part 375 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).

EDWARD G. GLAZA, P.E.

JANUARY 18, 2023

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

January 11, 2023

Lisa Gorton, P.E.
Project Manager, Remedial Bureau E
Division of Environmental Remediation
New York State Department of
Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7017

Re: NYSDEC's Response to EPA's Comments on the Lower Genesee River Remedial Action Completion Report dated August 3, 2022; Lower Genesee River Operable Unit 5 (OU-5) of the Eastman Business Park, Rochester, Monroe County, New York.

Dear Ms. Gorton:

The United States Environmental Protection (EPA) Region 2 has completed review of the response of the New York State Department of Environmental Conservation (NYSDEC) dated November 22, 2022 to EPA's October 4, 2022 comments on the Remedial Action Completion Report (RACR) and Site Management Plan (SMP) concerning the cleanup of the Lower Genesee River. Enclosed please find EPA's review. Based on the review, NYSDEC's response is acceptable.

Please provide EPA with the baseline periodic review reports including annual reports starting this year and continue annually through 2027 and five-year review evaluation thereafter.

Sincerely,

Andrew Park, Chief
Corrective Action Section
Land and Redevelopment Programs Branch

Enclosure

cc: Michael J. Cruden, Division of Environmental Remediation, NYSDEC
Benjamin Rung, Division of Environmental Remediation, NYSDEC

EPA'S REVIEW OF NYSDEC'S NOVEMBER 22, 2022 RESPONSE TO EPA'S OCTOBER 4, 2022 COMMENTS ON THE LOWER GENESEE RIVER REMEDIAL ACTION COMPLETION REPORT AND SITE MANAGEMENT PLAN BOTH DATED AUGUST 2022

I. GENERAL COMMENTS - *Site Management Plan (SMP)*

EPA Comment 1: Section 4.2.1.2 (Performance Monitoring) discusses performance monitoring assessments for the initial five years. These assessments include photographic logs as required by the New York State Department of Environmental Conservation (NYSDEC) DER-10 *Technical Guidance for Site Investigations and Remediation*, dated May 3, 2010 (DER-10). We would like to suggest that in addition to photographic logs, the assessments include a periodic review of aerial photographs of wetland areas or any constructed area visible from the surface (e.g., perhaps every third and fifth year), as appears to have been conducted during construction. This line of evidence will further support the conclusions on remedial performance and effectiveness over time for the first, five-year review period.

DEC Response 1*: The Department acknowledges this comment and will incorporate the requested assessment every third and fifth year, as an addendum to the Site Management Plan.*

EPA Review: Agreed.

EPA Comment 2: Section 4.2.2 (Site Cover Monitoring) discusses performance monitoring assessments of the constructed submerged covers. The assessments do not include sampling and analysis for silver, the primary chemical parameter of concern (CPOI). While no impacts to human health were identified, the corrective action objectives (CAOs) do focus on environmental impacts. The covers were primarily designed to provide chemical isolation of the CPOIs and prevent biota and environmental exposure. As discussed in the EPAs December 2005 guidance document titled *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (EPA-540-R-05-12), all submerged covers will eventually allow dissolved contaminants of concern through to the surface waters. Therefore, periodic monitoring of the concentrations in the upper 6 to 12 inches of the constructed cover needs to be conducted to ensure these contaminants do not exceed applicable standards associated with the covers expected performance. Include performance monitoring criteria (including the procedures developed to conduct the soil sampling) that include periodic review (e.g., perhaps every third and fifth year) of the silver concentrations and CPOIs at the cap/soil and water interface to assess the cover effectiveness in isolating these CPOIs and preventing environmental impacts per the CAOs. This line of evidence will further support any conclusions on remedial performance and effectiveness over time for the first, five-year report.

DEC Response 2: *The upper 6 to12 inches of the cap layer consists of a gravel (rock) layer which is not conducive to chemical sampling. Upwelling through the cap was not a controlling design factor as supported by the pre-design porewater data (solid phase microextraction [SPMEs] technique) that indicated chemical upwelling and/or dissolved metals concentrations would not be of concern under the selected remedy nor be considered a critical measure of cap performance. The decision document was developed to support inspection for physical integrity, exclusively. [Please note that this response was reviewed with Mr. Wilfredo Palomino via email correspondence dated September 29,*

EPA Review: Agreed.

II. COMMENTS ON REMEDIAL ACTION COMPLETION REPORT (RACR)

EPA Comment 1: According to Section 2.1.1 (Sediment CAOs), "under a passive recreator use designation, no impacts to human health from silver were identified at the Lower Genesee River; therefore, a corrective action was not required for protection of human health." However, the RACR

states in Section 3.7 (Contamination Remaining at the Site) and Section 3.8 (Engineering Controls) that institutional and engineering controls are needed to protect human health. It is unclear why land use controls are needed to protect human health, when Section 2.1.1 indicates that no human health concerns were identified, and no corrective action objectives related to human health were developed. Revise the RACR to explain the purpose of the engineering and institutional controls with respect to protection of human health.

DEC Response 1: *The goal for the corrective action program was to achieve unrestricted use of the waterway to the extent feasible. The corrective measure(s) mitigate significant threats to public health relative to exposure in the top 2 feet of sediment and top 1 foot of wetland/floodplains to support commercial (passive recreation) of the waterway. In accordance with the January 2020 Statement of Basis, the Department considered soil action levels for a commercial scenario to be protective of passive recreational use (6 NYCRR Part 375). Therefore, the human health commercial silver Soil Cleanup Objective (SCO) of 1,500parts per million (ppm) was considered as a guidance value for human health protection. To this extent, the Quantitative Human Health Exposure Assessment (QHHEA) conclusions were based on findings that all silver concentrations in the top 2 feet of river sediment and in the top 1 foot of wetland/floodplain sediments were less than 1,500 ppm. Corrective actions further reduced this concentration to 70 ppm and a minimum of 1-foot of cover meeting ecological use standards within the corrective action boundaries.*
Sections 3.7 and 3.8 of the RACR will be revised to be consistent with the above-presented information.

EPA Review: Agreed.

EPA Comment 2: Appendix F (Quality Assurance/Quality Control) includes photographic logs of cores collected, along with various figures and tables describing the surveyed post-placement upper surface elevations of various cap layers. These figures and tables do not provide sufficient information to allow for interpretation of the results. The figures need to include:
- title blocks for figures without titles,
- coordinates and the coordinate systems used for surveys where not already identified on figures and tables,
- elevation references (e.g., feet above mean sea level) where elevations are presented on figures,
- clarification of each identifier/acronym (e.g., what is meant by "N" on the N-Series, "TS" on the TS-Series (it is assumed to be "TS" for "topsoil" but clarify on the figure), etc.), and,
- the site locations in a title block for each figure (e.g., Wetland C North, AOC-01, AOC-02, etc.).

DEC Response**:** *Please note that the figures are provided for illustration purposes only and are not intended to be subject of certification by a professional engineer. Certified record drawings are provided in Appendix A of the RACR. Therefore, the requested changes will not be made.*

EPA Review*:* Agree.

EPA Comment 3: Appendix E (Imported Materials Documentation) appears to include several laboratory analytical reports twice. For example, laboratory analytical reports 212794, L2134452, 21042438, and 452506 on electronic pages 15 through 176, 308 through 469, 670 through 706, and 848 through 884 appear to include duplicates. Remove all duplicate laboratory analytical reports from Appendix E.

DEC Response 3: *The requested changes will not be made for reasons explained herein. Appendix E includes a complete record of submittals and responses for each material imported to the site. Different materials were sometimes included in the same laboratory report; therefore, the laboratory report was included in the submittal for each material. This occurred twice:*

- *Paradigm report #212794 and Alpha report #L2134452 included both Chemical Isolation/Wetland Backfill material (samples B1 to B5) and Topsoil (samples TS1 to TS3)*

- *Alpha report #L2134452 included General Fill from different quarries: Sodus (samples Sodus 1, 2 and 3) and Lake Road (sample Lake Road 1)*

EPA Review: Agreed.

III. ***SITE MANAGEMENT PLAN (SMP)***

EPA Comment 1: Section 3.2 (Institutional Controls), Page 16. This section addresses institutional controls required for the Site. In accordance with DER-10, Section 6.2.1 (Institutional Control and Engineering Control Plan), the SMP appears to fail to meet required NYSDEC elements. These elements include:

a) DER-10 6.2.1(a): An institutional control and engineering control plan is required for all sites for which the remedy does not allow for unrestricted use.

Section 3.2 of the SMP states institutional controls (ICs) may not be discontinued unless and until remaining contamination is fully remediated. However, the SMP does not describe what is meant by the term "fully remediated." Since ICs are required for sites that are not fully remediated to allow for unrestricted use, clarify the term "fully remediated" as it relates to removal of the applicable ICs and include the standard that will be used to assess if remediation has been fully achieved (a quantifiable concentration as allowed by current regulations). Alternatively, clarify in the text of Section 3.2 if the intent is to keep ICs in place in perpetuity.

b) DER-10 6.2.1(a)(1)(i): This plan should include a description of all institutional controls and, if applicable, engineering controls.

Section 3.2 of the SMP states administrative controls have been established. Include all institutional controls currently established in an appendix to the SMP. Further, in accordance with DER-10 6.2.1(a)(1)(v) provide evidence that the IC has been added to the Site's environmental easement or deed restriction.

c) DER-10 6.2.1(c): The IC/EC plan must identify the provisions for transfer of site management responsibilities upon property transfer, including the notifications required by subdivision DER-10 6.1(d) and 6 NYCRR 375-1.11(d).

Section 3.2 of the SMP does not appear to address this requirement. Include provisions for the transfer of site management responsibilities upon property transfer, including the required notification to this section of the SMP. Additionally, add this notification requirement to Section 1.3 (Notifications) of the SMP.

DEC Response 1a and 1c: *The Department acknowledges this comment and clarifies that the intent is to ensure ICs remain in place in perpetuity as an addendum to the existing SMP as a state-lead responsibility managed under of the Environmental Response Trust.*

DEC Response 1b: *Environmental easements and/or deed restrictions are not applicable given that the project area is current passive recreator use as lands underwater. Administrative control will be implemented through permit administration under the NYSDEC's Regional 401 Water Quality Certification (WQC) jurisdictional review. Future work within the waterway will be reviewed on a case-specific basis and under consult with the Division of Environmental Remediation to ensure protection and restoration associated with any work within the corrective action boundaries. Permit applicants will be required to submit a work plan for review and approval by the Department prior to issuance of the permit. The approved work plan will be included by reference as a special permit condition.*

EPA Review: Agreed.

EPA Comment 2: Section 5.0 (Operations and Maintenance Plan), Page 27. This section states:

> "The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, 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."

However, DER-10 requires an operations and maintenance (O&M) plan for remedial systems that include engineered caps or covers as specified in DER-10 6.2.3(a) (Operations and Maintenance Plan - General). Develop an O&M plan for the engineered caps at the Site. The O&M plan should include, but is not limited to, procedures to place materials and ensure they are appropriately tied into existing cap materials, procedures to ensure cap thickness is maintained if repairs are necessary, material specifications, any other necessary information to allow persons unfamiliar with the Site to maintain the physical components of the remedy. Further, ensure the O&M plan includes each of the elements outlined in Chapter V: Corrective Measures Implementation, Section II: Operation and Maintenance Plan of EPA's *RCRA Corrective Action Plan* (OSWER Directive 9902.3-2A, May 1994) guidance (e.g., the project management approach, personnel training requirements, O&M procedures, contingency procedures, etc.).

DEC Response 2: *Section 5.0 of the SMP is based on Department-provided/preferred template language. Should future cap monitoring activities identify that cap maintenance is warranted, a case- and site-specific O&M plan and a corrective action plan will be developed on an as-needed basis in accordance with DER-10 and Chapter V: Corrective Measures Implementation, Section II: Operation and Maintenance Plan of EPA's Corrective Action Plan guidance.*

EPA Review: Agreed.

EPA Comment 3: Section 6.0 (Periodic Assessments/Evaluations), Page 28. This section focuses on river flow rates to assess vulnerability considerations that may impact cap integrity. The Site description provided in the *Final Statement of Basis Corrective Measures Selection*, dated January 2020, clearly states that periodic navigational dredging of the river channel at least up to Turning Point does occur. The Site description is unclear if periodic dredging that may occur upstream of Wetlands A and B. As it is possible periodic dredging may occur further upstream, especially given the low scour potential of the Lower Genesee River created by the upstream Mount Morris Dam and Reservoir system in place as described by the SMP, please include in this vulnerability assessment the potential for cap damage occurrences due to possible periodic dredging operations on, or near, the constructed caps.

DEC Response 3*: It is not anticipated that the U.S. Army Corps of Engineer (USACE)-maintained Navigational Channel will extend beyond its current reach, which terminates approximately 500 feet downstream of the extent of the closest constructed in-river cap. If future Lower Genesee River conditions warrant extension of the Navigational Channel, any work proposed by the USACE, or others, will be subject to a permit condition under the 401 Water Quality Certification that is issued through the New York State Department of Environmental Conservation Region 8 Permit Administrator. As ICs (Administrative Controls) are in place for the Site in perpetuity, any proposed impacts to the constructed cap/Corrective Action Area would be subject to issued permit conditions. These conditions will be developed in cooperation with the Department to address dredging controls and to mitigate/address proposed impacts to the Corrective Action Area.*

EPA Review: Agreed.

EPA Comment 4: Appendix C (Excavation Work Plan (EWP) Template). Appendix C references a "full suite of analytical parameters" in Sections C-7 (Materials Reuse on Site) and C-10 (Backfill from Off-Site Sources). Please include a table that shows the full suite of analytical parameters in the SMP.

DEC Response 4: *The Department acknowledges this comment and will include a table that presents the full suite of analytical parameters, as an addendum to the SMP. These parameters will be consistent with the standards provided in DER-10, Appendix 5, Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e), "If Ecological Resources are Present". Please note that in accordance with DER-10, Section 5.4(e)5, material used as part of the final site cover may be imported without chemical testing provided it contains less than 10 percent by weight material which would pass through a size 10 sieve and consists of gravel, rock, or stone consisting of virgin material from a permitted mine or quarry.*

EPA Review: Agreed.

IV. COMMENTS ON DOCUMENTATION, INSTITUTIONAL CONTROLS, PERMITS, AND WASTE DISPOSAL

EPA Comment 1: Section 3.4 (Remedial Performance Documentation), Page 15. According to this section, no post-dredging samples were required as the areas targeted for removal were confirmed prior to and as part of the pre-design scope of work. For completeness, revise Section 3.4 to include a reference to the specific report(s) that document how the extents of the areas requiring excavation were determined and confirmed.

DEC Response 1: *Sampling was completed as a part of the RCRA Facility Investigation (RFI) and the Corrective Measures Study to define the extents of the areas targeted for removal. Section 3.4 of the RACR will be revised to include references to the report(s) that document how the extents of the areas requiring excavation were determined and confirmed.*

EPA Review: Agreed.

EPA Comment 2: Section 3.9 (Institutional Controls), Page 19. According to Section 3.9, ICs are needed to "prevent future exposure to remaining contamination." It is unclear what receptors warrant protection from remaining contamination, and what the exposure pathways include, as this is not discussed. Revise this section to clarify which receptors the ICs will afford protection, and identify the associated exposure pathways (e.g., ingestion of/dermal contact with sediment, etc.).

DEC Response 2: *The Statement of Basis for the Site identified associated exposure pathways to ecological receptors, including fish and wildlife receptors, wetlands, groundwater resources, and surface water. The IC (Administrative Control) is intended to maintain the integrity of the cap to afford continued protection to these ecological resources, especially benthic macroinvertebrates, which contribute to silver bioaccumulation in higher order vertebrate tissues. Exposure pathways between affected media and ecological receptors were evaluated in the RFI - Fish and Wildlife Resources Impact Analysis (FWRIA) report, which presents a detailed discussion of potential impacts from the site to fish and wildlife receptors. Complete exposure pathways for the contaminants exceeding soil guidance values (SGVs) were evaluated through the FWRIA.*

Section 3.9 of the RACR will be revised to be consistent with the above-presented information.

***EPA Review*:** Agreed.

EPA Comment 3: Appendix B (Permits). Appendix B includes engineering designs that are not stamped and signed (sealed) by the Professional Engineer with responsible charge for construction of the cap. Provide the official, sealed design documents in Appendix B.

Response 3: *Certified construction drawings were issued independent of the permitting applications and incorporated through reference. Certified record drawings (certified construction drawings incorporating changes during execution of the project) are provided in Appendix A1.*

EPA Review: Agreed

EPA Comment 4: Appendix D (Waste Disposal). Appendix D-1 (Disposal Facility Approval and Approval Letters) appears to include uncertified waste stream documents from Waste Connections. Please include the final, signed certifications for the waste disposal facility approval documents as this is the point of final disposition of the waste stream.

DEC Response 4*: Appendix D-1 will be revised as requested. Approvals for Wetland C, AOC 1 and AOC 2 dredge sediment and broken concrete will be included in Appendix D-1. Note that Seneca Meadows recently revised their approval system and cannot provide signatures on all of the document; however, all of the documents are stamped "Approved."*

EPA Review: Agreed.

EPA Comment 5: Section 3.5 (Imported Materials), Page 16, and Appendix E (Imported Materials Documentation). Appendix E includes laboratory analytical reports that identify small concentrations of silver (i.e., less than 1 milligram per kilogram) in soil used for backfilling. As silver is the primary CPOI, please discuss these reported concentrations of silver in the narrative in Section 3.5 (Imported Materials).

DEC Response 5: *Silver concentrations in soil used for backfilling met the requirements for the standard of 8.3 parts per million (ppm) and the standard of 2 ppm provided in DER-10, Appendix 5, Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e), "If Ecological Resources are Present" and "If Ecological Resources are Present", respectively. Please note that in accordance with DER-10, Section 5.4(e)5, material used as part of the final site cover was imported without chemical testing provided it contained less than 10 percent by weight material which would pass through a size 10 sieve and, consisted of gravel, rock, or stone consisting of virgin material from a permitted mine or quarry. Section 3.5 of the RACR will be revised to be consistent with the above-presented information.*

EPA Review: Agreed.

SITE MANAGEMENT PLAN

LOWER GENESEE RIVER
OPERABLE UNIT 5 (OU-5) OF THE EASTMAN BUSINESS PARK
MONROE COUNTY
ROCHESTER, NEW YORK

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List of Acronyms

AC	Administrative Control
AOC	Area of Concern
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CAO	Corrective Action Objective
C&D	construction and demolition
CFR	Code of Federal Regulation
cfs	cubic feet per second
CMS	Corrective Measures Study
CPOI	chemical parameter of concern
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EBP	Eastman Business Park
EC	Engineering Control
ECL	Environmental Conservation Law
EWP	Excavation Work Plan
GPS	global positioning system
HASP	Health and Safety Plan
IC	Institutional Control
KLWWTP	Kings Landing Wastewater Treatment Plant
Kodak	Eastman Kodak Company
kybp	thousand years before present
NOEC	no-effects concentration
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYCRR	New York Codes, Rules and Regulations
OU	Operable Unit
PCB	polychlorinated biphenyl
P.E. or PE	Professional Engineer
PFAS	per- and polyfluoroalkyl substances
ppm	parts per million
PRR	Periodic Review Report
QEP	Qualified Environmental Professional
RAU	Ready for Anticipated Use
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RTK	real time kinematics
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SGV	Sediment Criteria or Guidance Values
Site	Lower Genesee River OU-5 of the EBP located in Rochester, New York
SMP	Site Management Plan
SOB	Final Statement of Basis Corrective Measures Selection
SPDES	State Pollutant Discharge Elimination System
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

ES EXECUTIVE SUMMARY

This Site Management Plan (SMP) is a required element of the remedial program for the Lower Genesee River Operable Unit 5 (OU-5) of the Eastman Business Park (EBP) Site located in Rochester, Monroe County, New York (hereinafter referred to as the "Site"). The following summarizes the controls implemented for the Site, as well as the inspections, monitoring, maintenance, and reporting activities required by this SMP.

Site Identification: NYSDEC[1] Site Number: 828177
USEPA[2] ID# NYD980592497
Lower Genesee River OU-5 of the EBP
Monroe County, Rochester, New York

Institutional Controls:	1. The property may be used for commercial use (i.e., passive recreational use).
	2. All Administrative Controls must be maintained as specified in this SMP.
	3. All Engineering Controls must be maintained as specified in this SMP.
	4. All Engineering Controls must be inspected at a frequency and in a manner defined in this SMP.
	5. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
	6. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
	7. Maintenance, monitoring, inspection, and reporting of any component of the remedy shall be performed as defined in this SMP.
	8. Access to the Site must be provided to agents, employees, or other representatives of the state of New York with reasonable prior notice to the property owner to ensure compliance with the restrictions identified by this SMP.
Engineering Controls:	1. Cover System

[1] NYSDEC – New York State Department of Environmental Conservation
[2] USEPA – United States Environmental Protection Agency

Inspections: 1. Cover Inspection	Frequency: 1. Annually for a five-year period and once every five years thereafter, or as otherwise determined by the NYSDEC
Monitoring: 1. Wetland Monitoring	Frequency: 1. Annually for a five-year period
Maintenance: 1. Cover System Maintenance 2. Wetland Maintenance	Frequency: 1. As needed 2. As needed
Reporting: 1. Interim Monitoring/ Inspection Report 2. Maintenance Report 3. Periodic Review Report	Frequency: 1. As needed 2. As needed 3. Annually for a five-year period and once every five years thereafter

Further descriptions of the above requirements are provided in detail in the latter sections of this SMP.

1.0 INTRODUCTION

1.1 General

The Lower Genesee River is part of the Eastman Kodak Company's (Kodak) Eastman Business Park (EBP) which encompasses approximately 1,200 acres within the City of Rochester and the Town of Greece, New York (Figure 1). Construction and manufacturing processes at the EBP began in 1891 and included the manufacturing of various photographic materials and products and the production of synthetic organic chemicals, dyes, and couplers. Wastewater generated during photographic film and paper making operations contained several heavy metals, most notably silver. Over time these metals migrated into the sediments of the Lower Genesee River and its adjoining wetlands.

As a result of Kodak's bankruptcy and related settlement agreements, the Kodak Environmental Response Trust was established in 2008 to fund environmental response actions related to pre-existing contamination associated with historical releases from the EBP, including releases to the river. The New York State Department of Environmental Conservation (NYSDEC) is responsible for administering trust obligations under the conditions of the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Part 373 Hazardous Waste Permit (RCRA ID# NYD980592497). The EBP is comprised of nine operable units (OUs) to address remaining contamination (NYSDEC Site No. 828177); the Lower Genesee River is OU-5.

This Site Management Plan (SMP) is a required element of the remedial program for the Lower Genesee River OU-5 of the EBP located in Rochester, New York (hereinafter referred to as the "Site") (see Figure 1). Remedial boundaries of the Site are presented in Figures 2A and 2B.

After completion of the remedial work, some contamination was left at this Site, which is hereafter referred to as "remaining contamination." Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. As an IC, Administrative Controls (ACs) have been established for this Site that identify the limits of remaining contamination and restored work areas with a protected remedial

boundary. Should future work be proposed for these areas, the NYSDEC permit administrator is instructed to consult with the NYSDEC Division of Environmental Remediation (DER) to apply necessary provisions to maintain protection of the remedial boundaries on a case-by-case basis under special permit conditions.

This SMP was prepared to manage remaining contamination at the Site in accordance with Environmental Conservation Law (ECL) Article 71, Title 36. This plan has been approved by the NYSDEC and may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Final Statement of Basis (SOB) Corrective Measures Selection (NYSDEC 2020). Failure to properly implement the SMP is a violation of the SOB.
- Failure to comply with this SMP is also a violation of ECL6 NYCRR Part 375 and the New York State Hazardous Waste Management Program (also known as RCRA) Part 373 Hazardous Waste Permit (RCRA ID# NYD980592497) for the Site, and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Appendix A.

Parsons prepared this SMP on behalf of the NYSDEC in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC (NYSDEC 2010a). This SMP addresses the means for implementing the ICs and/or ECs that are required by the SOB for the Site.

1.2 Revisions

Revisions to this SMP will be necessary upon, but not limited to, the following occurring: a change in monitoring requirements, post-remedial removal of contaminated sediment, or other significant change to the Site conditions. The NYSDEC project manager

will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by NYSDEC's agent and assigns to the NYSDEC, as needed, in accordance with NYSDEC's DER-10 for the following reasons:

1. Sixty-day advance notice of any proposed changes in Site use that are required under the terms of the 6 New York Codes, Rules and Regulations (NYCRR) Part 375 and/or ECL.
2. Seven-day advance notice of any field activity associated with the remedial program.
3. Fifteen-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan (EWP). If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. 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 seven days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

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

1. 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/Remedial Party has been provided with a copy of all approved work plans and reports, including this SMP.
2. 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 to the NYSDEC.

Table 1 includes contact information for the above notifications. The information on this table will be updated as necessary to provide accurate contact information. A full list of Site-related contact information is provided in Appendix A.

Table 1: Notifications*

Name	**Contact Information**	**Required Notification****
Lisa Gorton, PE NYSDEC Project Manager	(518) 402-9574 lisa.gorton@dec.ny.gov	All Notifications
Michael Cruden, PE NYSDEC Remediation Bureau E Director	(518) 402-9825 Michael.cruden@dec.ny.gov	All Notifications
Melissa Doroski NYSDOH*** Project Manager	(518) 402-7860 beei@health.ny.gov	Notifications 4, 6, and 7

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

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

*** NYSDOH – New York State Department of Health.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Lower Genesee River is part of Kodak's EBP which encompasses approximately 1,200 acres within the City of Rochester and the Town of Greece, New York. The OU-5 portion of the EBP is located in Rochester, Monroe County, New York, and consists of the area from the mouth of the river at Lake Ontario upstream approximately 4 miles to the State 104 (Veteran's Memorial) Bridge, which is south (upstream) of the Kings Landing Wastewater Treatment Plant (KLWWTP) (see Figure 1). Most of the Site is located within the riverbed, which is owned by the State of New York.

2.2 Physical Setting

2.2.1 Land Use

The Site includes a 4-mile-long section of the Lower Genesee River and its banks, flowing north from State Route 104 Bridge to the mouth of the river at Lake Ontario. The Site is located in an area zoned Village Center District (H-V) at the downstream extents and Open Space District (O-S) at the upstream extents, assigned as passive recreational use under NYDEC programs.

Occupants of properties adjacent to the Site include the KLWWTP, several public parks owned by the City of Rochester, and Rochester Gas and Electric Corporation. Current land use upstream of the Turning Basin is primarily park land, cemeteries, and undeveloped areas due to steep topography along much of the river shoreline. From the Turning Basin downstream to its mouth, the river is characterized by reinforced banks and bulkheads, boat docks and marinas. A navigation channel extends upstream from the mouth of the river to approximately 0.5 mile upstream of the Turning Basin. The navigation channel is dredged as necessary to accommodate commercial shipping traffic. The river is designated as an Area of Concern (AOC) in the Great Lakes region under the United States-Canada Great Lakes Water Quality Agreement.

2.2.2 Geology

Surficial features within the region were influenced primarily by episodes of glaciation that ceased 12 thousand years before present (kybp). Glacial retreat resulted in geologic surface deposits composed of glacial till, glaciofluvial features, and outwash sediments. Surface sediments surrounding the river are primarily composed of glaciolacustrine silts and sands deposited within a proglacial lake. While glacially derived sediments within the glaciated portion of the Genesee River watershed have been observed to be hundreds of feet thick, observed minimum sediment thickness within the Lower Genesee River based on RCRA Facility Investigation (RFI) sediment probing data ranged from 0 to 20 feet; however, it could be thicker in these areas (Parsons et al. 2017). Site specific sediment boring logs are provided in Appendix B.

The incision of the Genesee River to form the Rochester Gorge was the result of changing lake levels within the bodies of water that preceded Lake Ontario. Repeated advance and retreat of glaciers during the Quaternary period continually altered lake levels and the course of the Genesee River. Most important to the formation of the river is the advance and retreat of the Laurentide ice sheet approximately 13 kybp (Larson and Schaetzel 2001). Proglacial Lake Iroquois was present within the river prior to the retreat of the Laurentide ice sheet. The lake's paleo-strandline is represented today by the sandy ridge that strikes east-west along State Route 104/Ridge Road, approximately 200 feet above the current shore elevation of Lake Ontario and roughly coinciding with the top of Lower Falls (Grasso 1993). The onset of glacial retreat resulted in the breaching of the Thousand Island inlet, which resulted in a drop of Lake Iroquois levels to 50 feet below current Lake Ontario levels. The rapid fall in lake levels induced the incision of the Rochester Gorge by the Genesee River below Lower Falls. Incision was eventually halted by glaciostatic rebound, leading to the current configuration of Lake Ontario.

Bedrock in the Rochester Gorge in the EBP vicinity is Upper Ordovician and Lower Silurian aged sedimentary rock consisting of shales, siltstones, and sandstones. The stratigraphic sequence within the gorge represents a varying coastal plain environment that experienced a series of sea level transgressions and regressions (Goodman 2005). The bedrock below the riverbed and exposed on the lower walls of the gorge is the Queenston

formation. This formation is comprised of alternating shales, siltstones, and fine-grained sandstones, which were easily eroded during the formation of the Rochester Gorge. A representative cross-section of the river gorge adjacent to the EBP at KLWWTP (NYSDEC 2003) is presented on Figure 3.

2.2.3 Hydrogeology

The Genesee River watershed covers approximately 2,500 square miles within western New York and northern Pennsylvania (United States Army Corps of Engineers [USACE] 2004). The river originates in the Alleghany Plateau of northern Pennsylvania and is approximately 160 miles long. The watershed is broken into two major basins, bound centrally by the Mount Morris Dam located in Mount Morris, New York. The Erie Canal, a man-made waterway completed in 1825 and used for commercial and recreational boat traffic, is oriented east to west through the northern portion of the Genesee River watershed. The canal intersects the Genesee River at grade approximately 12 miles upstream of the mouth.

Within the Rochester Gorge, the river averages approximately 300 feet wide. Water depths along the deepest parts of the channel average approximately 15 feet, with deeper scours on cut banks reaching nearly 30 feet. The upstream portion of the river within the Rochester Gorge is more than 150 feet below the surrounding land. This portion of the river is within the vicinity of EBP, with the easternmost portion of the facility, the KLWWTP, located directly adjacent to the west bank of the river.

Groundwater from the surrounding uplands, including some areas of the EBP, discharge directly through bedrock and storm sewer outlets into the river. A groundwater pumping and collection system has been implemented at EBP to intercept contaminated groundwater. This system collects approximately 50 million gallons of groundwater annually, which is then treated at KLWWTP. Additionally, approximately 30 million gallons of groundwater is collected annually by an underdrain system at the Weiland Road Landfill and is subsequently treated at KLWWTP. Groundwater conditions within EBP are monitored using a network of approximately 800 wells. Groundwater migration through the bedrock within EBP and adjacent to the river is limited due to the groundwater pumping

and collection system and because the bedrock is mainly comprised of shales and siltstone that do not readily transmit flow.

2.3 Investigation and Remedial History

Construction and manufacturing processes at the EBP began in 1891 and primary operations at the EBP have included manufacturing of various photographic materials and products and production of synthetic organic chemicals, dyes, and couplers. Many of these operations involved intensive use of various chemicals and occasional inadvertent releases from storage tanks, pipelines, and manufacturing units. Wastewater generated from photographic film and paper making operations contained several heavy metals, most notably silver. Over time these metals migrated into the sediments of the Lower Genesee River and its adjoining wetlands. There are other past and ongoing industrial operations along the river upstream of the Lower Genesee River, primarily within the City of Rochester. KLWWTP is currently owned by Kodak and operated by RED-Rochester. It continues to treat wastewater from EBP operations under a permitted discharge to the river.

The RCRA Corrective Action process for OU-5 of the Lower Genesee River began with investigations to evaluate potential areas of the Site that may have been impacted by hazardous wastes and/or hazardous constituents. Based on the results of investigations, NYSDEC determined that hazardous wastes and/or hazardous constituents were released at the Site. The following sections provide a remedial history timeline and a summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for milestone reports referenced are provided in Section 8.0 – References.

2.3.1 Historical Studies

Environmental studies have been conducted at the EBP and the Lower Genesee River since at least 1991, and results from these studies were incorporated into the RFI report (Parsons et al. 2017). Work performed as a part of these historical studies and incorporated into the RFI includes:

- Conducting bathymetric surveys
- Sampling and analysis of surface water, river sediment, and sediment porewater

- Collecting biological tissue samples from benthic macroinvertebrate, crayfish, amphibians, and fish tissue
- Monitoring upland groundwater
- Studying acute sediment toxicity
- Assessing macroinvertebrate communities and health of individual fish
- Observing and assessing habitat in the river and wetland/floodplain areas
- Assessing behavior of juvenile stocked lake sturgeon (*Acipenser fulvescens*)

2.3.2 RCRA Facility Investigation

The RFI was conducted with the goals of assessing potential contamination within OU-5, characterizing physical aspects of the river, identifying and assessing remaining sources of sediment contamination, determining if significant chemical loadings are impacting the Lower Genesee River and quantifying those impacts, and assessing whether impacts to the Lower Genesee River warrant corrective measure. Fieldwork for the RFI was conducted in 2015 and 2016, and the final RFI report was submitted in March 2017 (Parsons et al. 2017). The following tasks were completed during the RFI:

- Sampling and analyzing river surface water, suspended sediment, river sediment, wetland/floodplain sediments and soils, benthic macroinvertebrates, fish, and groundwater (at the KLWWTP)
- Using analytical techniques to further assess environmental impacts on organisms from river sediment, including chronic sediment toxicity testing
- Assessing potential impacts to existing cultural resources (including archaeological and historical resources)
- Analyzing hydrodynamics and bed sediment transport to assess potential future movement of sediment within the river and floodplain
- Assessing potential impacts to human health by identifying pathways of exposure to contaminated media
- Assessing potential impacts on fish and wildlife in the river and adjacent wetlands/ floodplain habitats

2.3.3 Fall 2017 Corrective Measures Study Supplemental Fieldwork

Following submittal of the final RFI report, additional fieldwork was completed in the fall of 2017 to further define silver distribution in river sediments and wetland/floodplain areas (Parsons and OBG 2018). The fieldwork activities included:

- Sampling and analysis for silver, moisture content, and total organic carbon at 52 river sediment locations and 72 wetland/floodplain sediment and soil locations
- Geotechnical analysis of sediment and soil samples
- Wetland/floodplain characterization to assess wetland functions and values
- Refinement of the hydrodynamic and sediment transport model using additional geotechnical data and performing additional simulations

2.3.4 Fall 2018 Corrective Measures Study Supplemental Fieldwork

Additional data gaps were identified during preliminary Corrective Measures Study (CMS) work, and a data gap investigation was completed in the fall of 2018 to assess those data gaps. Tasks included:

- Assessment of silver concentrations in sediments and porewater within scour areas adjacent to Wetland D (five locations)
- Assessment of sediments adjacent to KLWWTP for silver concentrations in sediments and porewater and for a characteristically hazardous waste determination (three locations)
- Wetland E habitat characterization and to assess silver distribution in sediments (19 locations)

2.3.5 Corrective Measures Study

A CMS was completed in 2019 to evaluate existing data and to collect and evaluate additional data necessary for the implementation of the remedial alternative (Parsons and OBG 2019). These activities included:

- Completion of field surveys at KLWWTP and proposed dredging areas
- Collection of geotechnical samples at and adjacent to KLWWTP and select proposed dredging areas
- Collection of Wetland C sediment samples for chemical and geotechnical analysis

- Completion of a bench-scale study to assess post-dredging sediment processing characteristics
- Collection of water samples to evaluate ambient water quality data for determination of background turbidity levels

2.3.6 Key Findings

Key findings associated with silver contamination from the historical studies, the RFI, and the CMS are presented in the sections below.

2.3.6.1 Surface Water

The Lower Genesee River is defined as a Class B surface water body, meaning that its most suitable uses are primary (bathing) and secondary (incidental) contact, recreation and fishing, and wildlife propagation and survival. Although total silver concentrations downstream of the KLWWTP exceeded the Class B surface water criterion for silver, the criterion used for comparison is specific to ionic silver. During the RFI, dissolved silver results were below the detection limit at all sample locations.

2.3.6.2 River Sediments

- Silver concentrations exceeded the Class C Sediment Criteria or Guidance Value (SGV) of 2.2 parts per million (ppm) throughout the study area, with the highest silver concentrations observed at and just downstream of the KLWWTP. Concentrations decreased with distance from the KLWWTP. In general, the concentrations of silver within sediments were lower in the center of the river channel and higher toward the banks. Silver concentrations also tended to be higher in depositional areas. The highest silver concentrations were typically located at a depth of 2 or more feet below ground surface (bgs).
- Silver porewater and Toxicity Characteristic Leaching Procedure (TCLP) concentrations were non-detect.

2.3.6.3 Sediment Transport Modeling

- Two sediment bed types are generally present at the Lower Genesee River: areas comprised of coarser sediments unlikely to erode during high flow events, and areas

that lack coarser sediments that are expected to erode only minimally due to cohesion. Areas lacking coarser sediments tend to be present along riverbanks and in the downstream portion of the Lower Genesee River that is navigationally dredged.

- Overall, the physical properties of the riverbed (e.g., armoring, high bulk density, low moisture content, and clay content), combined with presence of contaminants buried at depth, suggested that widespread erosion is unlikely even for a high shear stress (30,000 cubic feet per second [cfs]) flood event. Estimated flows high enough to produce sufficient scour to re-expose sediments with peak silver concentrations are unlikely to occur at the Lower Genesee River with the upstream Mount Morris Dam and reservoir system currently in place.
- Although modelling showed that buried peak silver concentrations are unlikely to be resuspended even under high flow conditions (i.e., 30,000 cfs), limited erosion and redeposition of the top 0.5 foot of sediments may occur.

2.3.6.4 Wetlands/Floodplain Sediments and Soils

Silver was the predominant, widespread chemical parameter of concern (CPOI) in wetland/floodplain sediments and soils. Silver was found in excess of the Class A SGVs and Soil Cleanup Objectives (SCOs) for the protection of ecological resources throughout the wetland/floodplain areas located along the length of the Lower Genesee River. Higher concentrations of silver in wetland/floodplain samples occurred downstream of the KLWWTP. Vertically, silver concentrations in the 0- to 2-foot zones generally tended to be higher than those in deeper (greater than 2 feet) sediments and soils, although silver concentrations in the 0.5- to 2-foot interval tended to exceed those in the top 0.5 foot. In general, Wetland C exhibited the highest average concentrations and the highest overall average concentration.

2.3.6.5 Biota

Benthic Toxicity

Benthic toxicity testing was performed during the RFI to evaluate acute and chronic toxic effects to the sediment-dwelling amphipod, *Hyalella azteca*. Concentrations of silver in sediment collected for the toxicity testing were lower than those observed during the

initial river sediment sampling, although still as high as 69 ppm. Only two samples exhibited statistically lower survival relative to the control after 42 days, an effect which appeared to be unrelated to sediment contaminant concentrations (sediment from these locations did not exceed the NYSDEC Class A SGVs for metals or ammonia). Growth rates were lower for several river sediment locations than for the control, which may have been caused in part by a lower male-to-female ratio. No statistically significant differences in reproduction rates were observed between river sediment and control samples.

Mussels

Silver in mussel tissue collected within the Lower Genesee River between KLWWTP and the Turning Basin was at concentrations above the mussel body burden no-effects concentrations (NOECs). Silver exceeded the NOECs in most locations, and concentrations were highest slightly downstream of KLWWTP.

Fish

Silver was detected most in whole body forage fish samples collected from the State Route 104 Bridge to the Turning Basin. Silver was rarely detected in forage fish upstream of the State Route 104 Bridge to the Lower Falls and was not detected in forage fish samples collected downstream of the Turning Basin or in the background area. Silver was not detected in benthic game fish fillets and detected in only one predatory game fish fillet sample (collected near the Turning Basin).

2.4 Corrective Action Objectives

Corrective Action Objectives (CAOs) were developed for the Site with the goal of protecting both the environment and human health. Based on the results of the RFI (Parsons et al. 2017) and the CMS (Parsons and OBG 2019), silver was identified as the CPOI for the Site. Other metals (cadmium, zinc, total chromium) were generally collocated with the silver and were addressed under the site-specific cleanup goal for silver. No impacts to human health from silver were identified at the river; therefore, a corrective action was not required for protection of human health. The following CAOs were identified for this Site:

Sediment

CAOs for environmental protection:

- Prevent the potential for migration of silver contamination related to EBP operations that may result in adverse impacts to surface water, river sediment, and wetland/floodplain soil/sediment contamination
- Prevent the potential for adverse impacts to biota from exposure to silver related to EBP operations in river surface water, river sediment, and wetland/floodplain sediments and soils

2.5 Remaining Contamination

The remedy consisted of the following:

(1) Dredging and off-site disposal of river sediments over an approximate 4.1-acre area (AOC 1 and AOC 2) where there was the potential for greater than 4 inches of scour during a 100-year flow event to accommodate placement of an isolation cover system over deeper sediments exceeding the site-specific toxicity action level of 70 ppm;

(2) Dredging and off-site disposal of wetland sediments from an approximate 2-acre area of Wetland C where silver concentrations exceeded the site-specific toxicity action level of 70 ppm, and placement of backfill (sand and/or topsoil) meeting 6 NYCRR Part 375 ecological standards; and

(3) Placement of an isolation cover system (AOC 1 and AOC2) within the riverbed remedial boundaries. The cover system is comprised of a minimum of 12 inches of clean sand (grain size less than ¾ inches) overlain by a minimum of 12 inches of fine gravel (grain size ½-inch to 4 inches) (NYSDEC 2020).

Since the remedy did not involve complete removal of contaminated material from AOC 1 and AOC 2, contaminated material remains in Lower Genesee River sediment. All sediment exceeding the site-specific cleanup goal was removed from Wetland C prior to restoration.

In AOC 1, an estimated 1,250 cubic yards of sediment with silver concentrations that exceed 70 ppm remain under an approximately 2-foot-thick isolation cover. Silver concentrations range from 71.1 ppm (2-3 feet bgs) to 1,550 ppm (4-6 feet bgs).

In AOC 2, an estimated 3,500 cubic yards of sediment with silver concentrations that exceed 70 ppm remain under an approximately 2-foot-thick isolation cover. Silver concentrations range from 72 ppm (2-3 feet bgs) to 130 ppm (4-5 feet bgs).

Figures 4A and 4B summarize the results of all sediment samples collected that exceed the NYSDEC standards, criteria, and guidelines (SCGs) after completion of the remedial action. Detailed subsurface silver profile results are presented in Appendix D of the CMS included in the Administrative Record for the Site.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the Site within AOC 1 and AOC 2, ICs and ECs are required to protect human health and the environment. This IC/EC Plan describes procedures for implementation and management of all IC/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the Site
- The basic implementation and intended role of each IC/EC
- A description of the key components of the ICs set forth in the SOB
- A description of the controls to be evaluated during each required inspection and periodic review
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the EWP (see Appendix C) 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 IC/ECs required by the Site remedy, as determined by the NYSDEC project manager

3.2 Institutional Controls

A series of ICs are required by the SOB to (1) implement, maintain, and monitor EC systems; (2) prevent future exposure to remaining contamination; and (3) limit the use and development of the Site to commercial uses (i.e., only passive recreational use). Adherence to these ICs at the Site is required by the SOB and will be implemented under this SMP.

As an IC, ACs have been established for this Site that identify the limits of remaining contamination within protected remedial boundaries.

ACs will be implemented through permit administration under the NYSDEC's Regional 401 Water Quality Certification jurisdictional review. Future work within the

waterway will be reviewed on a case-specific basis and under consult with DER to ensure protection and restoration associated with any work within the remedial boundaries. Permit applicants will be required to submit a work plan for review and approval by the DER prior to issuance of the permit. The approved work plan will be included by reference as a special permit condition. ACs shall remain in place at the Site in perpetuity as a state-lead responsibility managed under the Kodak Environmental Response Trust.

The IC boundaries are shown on Figures 5A and 5B. These ICs are:

- The property may be used for commercial use (i.e., passive recreational use).
- All ACs must be maintained as specified in this SMP.
- All ECs must be maintained as specified in this SMP.
- All ECs must be inspected at a frequency and in a manner defined in this SMP.
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
- Maintenance, monitoring, inspection, and reporting of any component of the remedy shall be performed as defined in this SMP.
- Access to the Site must be provided to agents, employees, or other representatives of the State of New York with reasonable prior notice to the property owner to ensure compliance with the restrictions identified by this SMP.

3.3 Engineering Controls

3.3.1 Cover (or Cap)

Exposure to remaining contamination at the Site within AOC 1 and AOC 2 is prevented by a cover system placed over dredged areas of the Site. This cover system is comprised of a minimum of 12 inches of clean sand (grain size less than ¾ inches) overlain by a minimum of 12 inches of fine gravel (grain size ½-inch to 4 inches). Figures 5A and 5B present the plan view location of the cover system, and Figures 6A and 6B present applicable profile layers. Record drawings, signed and sealed by a Professional Engineer (PE) who is licensed and registered in New York State, are included in Appendix D.

Procedures for the inspection of this cover are provided in the Monitoring Plan included in Section 4.0.

The EWP template provided in Appendix C outlines the general procedures that must be implemented in the event the cover system is breached, penetrated, or temporarily removed. If work that may disturb the cover system is proposed, the EWP template will be revised by the person(s) proposing the work and submitted to the NYSDEC project manager for approval. 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 associated Community Air Monitoring Plan (CAMP) prepared for the Site. The HASP and CAMP will be prepared by the person(s) proposing the work and submitted to the NYSDEC project manager for approval. Any disturbance of the Site's cover system must be overseen by a qualified environmental professional (QEP) as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

3.3.2 Criteria for Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The composite cover system is a permanent control, and the quality and integrity of this system will be inspected in perpetuity at defined, regular intervals in accordance with this SMP.

The remedial party will also conduct any needed Site restoration activities, any necessary restoration of vegetation coverage, trees, and wetlands, and will comply with NYSDEC and USACE regulations and guidance. Also, the remedial party will ensure that no ongoing erosion is occurring on the Site.

4.0 MONITORING PLAN

4.1 General

This Monitoring Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring Plan may only be revised with the approval of the NYSDEC project manager.

This Monitoring Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment

To adequately address these issues, this Monitoring Plan provides information on:

- Wetland monitoring locations, protocol, and frequency
- Site cover monitoring bathymetric measurement locations, protocol, and frequency
- Annual inspection and periodic certification

Reporting requirements are provided in Section 7.0.

4.2 Site-Wide Inspection

Unless otherwise specified by the NYSDEC project manager, site-wide inspections will be performed at a minimum of once per year for the first five years after completion of the remedy, and then once every five years until the NYSDEC issues a Performance Standards Attained determination. Site-wide inspections will also be performed after severe weather conditions that may affect ECs (i.e., a flood event with a magnitude at or exceeding the first post-remedy 100-year design recurrence interval for the cover or a flood event with a magnitude at or exceeding the 500-year design recurrence interval for the cover).

As part of the remediation, all sediment exceeding the site-specific cleanup goal was removed from Wetland C. Therefore, long-term monitoring of Wetland C is not required to verify remaining contamination remains isolated. However, site monitoring will include wetland performance monitoring for the first five years following restoration, as detailed in Section 4.2.1.

Given that the sediment cover is underwater, visual site inspections are not a significant component of the cover monitoring program. Rather, verifying that the cover is intact and protective will rely primarily on bathymetry measurements, as detailed in Section 4.2.2.

Site-wide inspections will be performed by a QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. During these inspections, all monitoring activities will be recorded in a field logbook. Inspections will be completed as provided in Appendix E – Periodic Review Report General Outline.

All remedial components installed at the Site will be inspected. A comprehensive Site-wide inspection will be conducted according to the SMP schedule and documented in the Periodic Review Report (PRR). 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
- Achievement of remedial performance criteria
- If Site records are complete and up to date

Reporting requirements are outlined in Section 7.0.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs, occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, a QEP must inspect the Site within two weeks of the event, to verify the effectiveness of the IC/ECs implemented at the Site, as defined in 6 NYCCR Part 375. NYSDEC Region 8 permitting agents or assigns will provide written confirmation to the NYSDEC project manager within three weeks of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.2.1 Wetland Monitoring

The overall objective of the wetland restoration is to achieve no net loss of wetland acreage and for the function and values of Wetland C that existed prior to the remedy to be maintained and/or enhanced following restoration. Restoration of Wetland C was completed from August 2021 through November 2021 (emergent wetland plantings) and June 2022 (submergent aquatic plantings).

Monitoring activities in Wetland C include a five-year performance monitoring period (i.e., Years 2022 through 2026), which includes a first year growing season assessment. Based on the results of the first year growing season assessment, conditions will be evaluated to determine whether maintenance activities are required. If maintenance activities are required, corrective action will be completed as outlined in Section 7.3 – Corrective Measures Work Plan, and the scope and timing of any required plantings will be evaluated.

At the end of the five-year monitoring period, the monitoring results will be assessed to determine whether overall restoration objectives have been met. This determination will be based in part on a function and value assessment that will be conducted as part of the fifth-year report (i.e., Year 2026), after soils, hydrology, vegetation, and functions and values have had sufficient time to become established in Wetland C. At the end of the five-year monitoring period, conditions will be evaluated to determine whether maintenance activities should be continued on a periodic basis. If maintenance activities are required, corrective action will be completed as outlined in Section 7.3 – Corrective Measures Work Plan, and the scope and timing of any required plantings will be evaluated.

4.2.1.1 First Year Growing Season Assessment

A first year growing season assessment will be completed in the fall of 2022. The monitoring will be conducted in a total of 25 randomly spaced stations designated at the time of the assessment. Of these stations, 17 will be located in the north area of Wetland C and eight will be located in the south area of Wetland C. In the north area, 12 of the stations will be located in the shallower emergent planting zones (two each within each distinct "peninsula") and five located in the deeper floating aquatic/submerge aquatic zones (one

each within each distinct "embayment") (See Figure 2B). In the south area, stations will be distributed such that four stations will be located in the eastern half and four in the western half.

At each station, monitoring will occur within a 100-square-foot area in which all species will be identified to the lowest possible taxonomic level, the percent cover of each species will be estimated, and the overall percent cover of plants will be estimated. Note that percent cover of each individual and total percent plant cover are two different estimates. The sum of individual percent covers may be greater than 100 percent due to the vertical projection area of each plant (including leaves, stalks, and branches) overlapping with other individuals, whereas total percent cover is the percentage of the plot area covered by plants when looking from above. Attempts will be made to differentiate planted individuals from volunteers and/or plants germinated from seed. If abundance is high and/or if aquatic vegetation is abundant, then estimates will be made. In addition, several representative photographs will be taken at each monitoring plot and additional photographs taken at photo locations designated at the time of the assessment. Any areas of note or concern will also be photographed, and the location documented on a map.

4.2.1.2 Performance Monitoring

Performance monitoring in the remediated portion of Wetland C will be completed annually for a period of five years to document wetland conditions. Both qualitative and quantitative methods will be used to assess Wetland C. Field surveys will be completed once annually for the duration of the five-year monitoring period. Monitoring will include observations of overall vegetation establishment and wildlife usage, as well as quantitative sampling or percent cover.

For the qualitative evaluation, the restored portions of Wetland C will be observed in their entirety by walking the interior of shallow emergent areas and boating through the deeper floating aquatic and submerged aquatic areas. All vegetation species encountered will be recorded as will an overall estimate of the abundance of native and invasive vegetation. Any wildlife or signs of wildlife will also be recorded. In addition, the dominant wetland community types (e.g., emergent, floating aquatic, submerged aquatic, open water,

mudflat, etc.) and the dominant species within each community type will be recorded on a map for each area. Vegetation species will be identified in the field to the lowest possible taxonomy and recorded. Observations of wildlife will be conducted using standard field observation methods. All wildlife, or signs of wildlife (e.g., visual observation, tracks, and scat), observed within the restoration area and the immediate vicinity will be recorded. Further, representative photographs will be taken of each area from photo locations, established during the first year growing season assessment, and of any areas of concern, which will also be noted and recorded. Finally, representative aerial photography of constructed wetland site conditions will be collected in the third year (Year 2024) and fifth year (Year 2026).

For the quantitative evaluation, 15 of the 25 sampling stations established during the first year growing season assessment survey will be used as the routine performance monitoring locations. Stations to be used as performance monitoring locations will remain the same for the duration of the five-year monitoring period. In the Wetland C north area, 11 stations will be sampled and in the Wetland C south area, four stations will be sampled (15 stations total). In the north area, the 11 stations will be divided between the two distinct habitat types that were created there: a deep floating aquatic/submerged aquatic habitat and a shallower emergent habitat. Six stations will be located in the shallower emergent planting areas (one within each distinct "peninsula") and five located in the deeper floating aquatic/submerge aquatic zones (one within each distinct "embayment"). In the south area, the four stations will be distributed such that two stations are located in the eastern half and two in the western half.

At each performance monitoring station, vegetation will be evaluated within a 100-square-foot plot centered within the monitoring plot. The data collected will be the same as for the first year growing season assessment.

4.2.1.3 Reporting

A monitoring summary report will be submitted to NYSDEC annually for five years. The monitoring reports will address progress towards meeting overall objectives and will include summaries of:

- Species composition, areal percent cover, distribution of vegetation

- The species composition, areal percent cover, and distribution of invasive plant species based on the current list of terrestrial, wetland, and floating aquatic plant species in 6 NYCRR Part 575 Prohibited and Regulated Invasive Species
- Representative photographs of current site conditions taken from fixed locations
- Descriptions of hydrology indicators observed including hydric soils development
- Wildlife observations

The annual report for the third year (Year 2024) and fifth year (Year 2026) will include representative aerial photography of constructed wetland site conditions and a periodic review of collected aerial photography.

The annual report for the fifth year (Year 2026) will identify trends in data collected during each of the previous monitoring events. Data collected during the preceding years will be included as Appendices in the Year 2026 report.

4.2.2 Site Cover Monitoring

Unless otherwise specified by the NYSDEC project manager, compliance monitoring of the sediment cover in AOC 1 and AOC 2 will be performed a minimum of once per year for the first five years (i.e., Years 2022 through 2026) after completion of the remedy and will continue at five-year intervals in perpetuity until the NYSDEC issues a Performance Standards Attained determination. If performance standards, as defined below, are not met during the annual compliance monitoring period, corrective action will be completed as outlined in Section 7.3 – Corrective Measures Work Plan. The monitoring objectives consist of the following:

- Determine whether the physical integrity of cover has been maintained
- Determine whether there is a need for additional protective measures

Given that Site ECs are underwater, verifying that the Site cover is intact and protective will rely on bathymetry measurements to measure cover elevation. Comprehensive cross-sectioning bathymetric surveys will be conducted in AOC 1 and

AOC 2 in accordance with the specifications contained in the USACE Engineer Manual EM 1110-2-1003 "Hydrographic Surveying" (USACE 2013) or equivalent standard. Monitoring survey data will be collected at sufficient density to establish sub-bottom contours at 1-foot intervals along pre-established transect lines (established during construction completion verification) running generally perpendicular to the slope of the river and spaced 25 feet apart (see Figures 7A and 7B). Where water depths allow watercraft access, single beam survey will be conducted. Where shallow water depths prohibit watercraft access, manual depth measurements will be collected. Data collection for both methods will use real time kinematic (RTK) global positioning system (GPS) equipment.

Bathymetric survey data collected during each monitoring event will be compared to previously collected data, including the post-construction bathymetric survey. The Year 2022 survey may be used as the baseline for subsequent cover measurements to account for any consolidation and associated settlement, most of which would be expected to take place within the first year following placement of the cover. If the Year 2022 survey does not indicate that significant decrease has occurred since the cover was installed, the record drawings of the cover will be used as the baseline for subsequent measurements.

Based on the results of each of the surveys, cover elevations from the current monitoring event will be compared to those shown on the record drawings and/or the Year 2022 survey, as appropriate, and to the prior monitoring event(s), using "elevation difference" and/or cross section plotting. Typical repeatability for single beam bathymetry measurements is +/- 0.5 feet. or less, and therefore bathymetry measurement is anticipated to detect relatively minor changes to the elevation of the cover. The goal will be to determine whether there is a significant decrease in cover material elevation since the cover was installed and between monitoring events. A significant decrease in cover elevation is defined as a loss of greater than 6 inches over a contiguous 10,000-square-foot area or 20 percent of an individual cover area, whichever is less, considering the accuracy of the measurement technique, the nature of the cover surface (e.g., irregular rock surface), and the nature of the substrate. If a significant decrease in cover elevation is observed that cannot be reliably accounted for based on settlement, a second tier of monitoring may be

conducted, including probing and visual investigation (e.g., underwater camera, diver inspection, side-scan sonar where appropriate) of the cover area. If the investigation confirms that there is significant cover loss, corrective measures will be completed as outlined in Section 7.3.

If an extreme weather event occurs (i.e., a flood event with a magnitude at or exceeding the first post-remedy 100-year design recurrence interval for the cover or a flood event with a magnitude at or exceeding the 500-year design recurrence interval for the cover), the cover will be inspected through a bathymetric survey as soon as practical after the event. If such an event occurs in the same year in which routine periodic monitoring of the cover is scheduled, the event-based monitoring will replace the routine monitoring survey for that year.

The information gathered during the Site cover monitoring events will be documented annually in the PRR. The annual report for Year 2026 will identify trends in data collected during each of the previous monitoring events.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, 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.

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the Site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe weather events.

Based on the results of a vulnerability assessment conducted as a part of the CMS, the Site cover has been designed to provide long-term chemical isolation with no anticipated Site cover maintenance or enhancement. The Site cover was designed to be protective during both a 100-year flow event and under flow conditions comparable to those produced during the 1972 Hurricane Agnes flood event. This event produced a flow of approximately 30,000 cfs and was the largest flood event experienced at the Lower Genesee River since completion of the Mount Morris dam in 1952. In addition, the Site cover was designed to withstand winter ice scour conditions, wind/wave erosion potential, and propeller wash.

If necessary, additional vulnerability assessments will be conducted for the Site as directed by the NYSDEC project manager to address the vulnerability of the Site and/or ECs to extreme weather events. This assessment will include, but not be limited to, a discussion of potential vulnerabilities related to any evidence of erosion at the Site or areas of the Site which may be susceptible to erosion during periods of extreme weather and/or geologic events, such as a 500-year flood and/or significant seismic event (i.e., a seismic event measuring 5.5 or larger within 30 miles of the Lower Genesee River as measured by the USGS).

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program, including Site

management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology (NYSDEC 2010b). This section of the SMP summarizes any green remediation evaluations to be completed for the Site during site management and reported in the PRR.

6.2.1 Timing of Green Remediation Evaluations

Green remediation evaluations and corresponding modifications will be undertaken at any time that the NYSDEC project manager feels evaluations are appropriate (e.g., during significant maintenance events or in conjunction with storm recovery activities).

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine monitoring activities. Reporting of these modifications will be presented in the PRR.

6.2.2 Frequency of System Checks, Sampling and Other Periodic Activities

The Site does not have any major remedial system components requiring green remediation evaluations. If any type of major remedial work were to be performed in the future due to an unanticipated event, then a green remediation evaluation would be part of the design effort for that work.

Transportation to and from the Site and use of consumables in relation to visiting the Site to conduct annual monitoring have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources. Consideration was given to coordination and consolidation of activities to minimize labor time and the use of mass transit for Site visits, where available. If any means or methods with the potential to reduce energy consumption, resource usage, or waste generation are determined, they will be presented in the PRR.

6.2.3 Metrics and Reporting

As discussed in Section 7.0, information on energy usage, solid waste generation, transportation and shipping, water usage, and land use and ecosystems will be recorded to

facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits. A set of metrics has been developed.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

All Site management inspection, maintenance, and monitoring events will be recorded on NYSDEC-provided forms, as applicable. Site management inspection, maintenance, and monitoring events will be conducted by a QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records generated for the Site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 2 and summarized in the PRR.

Table 2: Schedule of Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Interim Monitoring/Inspection Report	As needed.
Maintenance Report	As needed.
PRR	Annually for a five-year period, and once every five years thereafter, or as otherwise determined by the NYSDEC.

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

Interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period
- Name, company, and position of person(s) conducting monitoring/inspection activities
- Description of the activities performed
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet)
- Type of monitoring conducted (e.g., bathymetric survey)

- Copies of all field forms completed
- Monitoring results in comparison to appropriate standards/criteria
- A figure illustrating monitoring locations
- Where appropriate, copies of all laboratory data and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format)
- Any observations, conclusions, or recommendations
- A determination as to whether contaminant conditions have changed since the last reporting event

Maintenance event reporting forms will include, at a minimum:

- Date of event
- Name, company, and position of person(s) conducting maintenance activities
- Description of maintenance activities performed
- Any modifications to the system
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet)
- Other documentation such as copies of invoices for maintenance work, receipts for replacement materials (attached to the checklist/form)

Data will be reported in digital format as determined by the NYSDEC. Currently, when applicable, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

A PRR will be submitted to the NYSDEC project manager beginning 16 months after the Ready for Anticipated Use (RAU) determination is issued. After submittal of the initial PRR, PRRs shall be submitted annually for a five-year-period and, at the end of the five-year period, once every five years, or at another frequency as may be required by the NYSDEC project manager. 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 Site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted
- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation
- A summary of any monitoring data and/or information generated during the reporting period, with comments and conclusions
- A Site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific SOB
    - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan
    - The overall performance and effectiveness of the remedy
- A quantitative and qualitative overview of the Site's environmental impacts, which includes a summary of the Green Remediation evaluation

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a QEP as defined in 6 NYCRR Part 375 or PE licensed to practice and registered in New York State will prepare, and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

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

- *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;*
- *Nothing has occurred that would impair the ability of such control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan 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.*

The signed certification will be included in the PRR. The PRR will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The PRR may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

7.3 Corrective Measures Work 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 or failure to conduct Site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager 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 Work Plan until the plan has been approved by the NYSDEC project manager.

8.0 REFERENCES

Goodman, W.M. 2005. Bedrock exposures in the Lower Genesee River gorge – their context within the stratigraphic framework for the Niagara region: Rochester, NY. Rochester Committee for Scientific Information, Bulletin 329.

Grasso, T.X. 1993. Geology and Industrial History of the Rochester Gorge, Part Two. Rochester History LV (1): 3-35. Edited by Ruth Rosenberg-Naparsteck. Winter. Available online at: http://www.rochester.lib.ny.us/~rochhist/v55_1993/v55i1.pdf.

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NYSDEC. 2003. Statement of Basis for Kodak Park Investigation Area EIA-KL (Kings Landing). Division of Solid and Hazardous Materials. September.

NYSDEC 2010a. NYSDEC DER-10 Section 5.4(e)(5) Technical Guidance for Site Investigation and Remediation.

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Parsons and OBG. 2019. Corrective Measures Study (CMS) for Lower Genesee River (OU-5 of EBP). Prepared for the New York State Department of Environmental Conservation. Syracuse, NY. September.

USACE. 2004. The Genesee River Basin Action Strategy. Genesee/Finger Lakes Regional Planning Council. October.

USACE. 2013. Army Corps of Engineers Hydrographic Surveying Manual EM 1110-2-1003. November.

FIGURES

WETLAND C NORTH

WETLAND C SOUTH

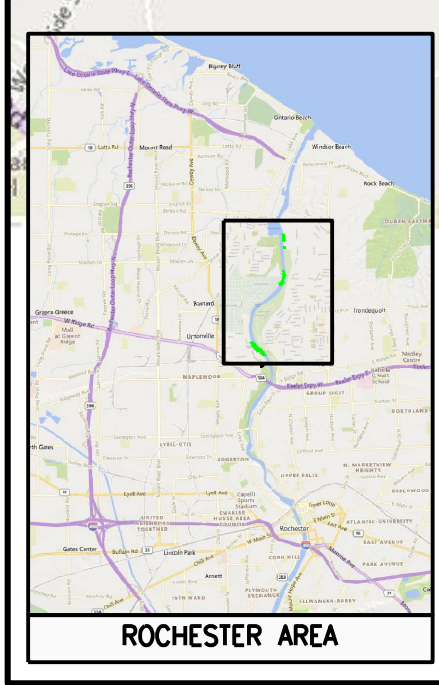
AOC 2

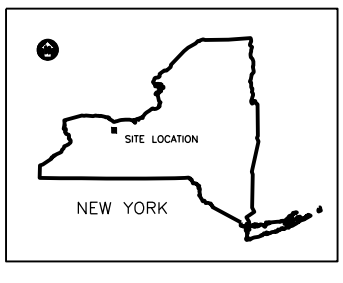
AOC 1

STAGING AREA

EASTMAN BUSINESS PARK

KINGS LANDING WASTEWATER TREATMENT PLANT





LEGEND:

APPROXIMATE BOUNDARIES OF WORK

1000 500 0 1000 2000

SCALE: 1"=1000'

FIGURE 1

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

SITE LOCATION MAP

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 • 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-PROJECT AREA.DWG
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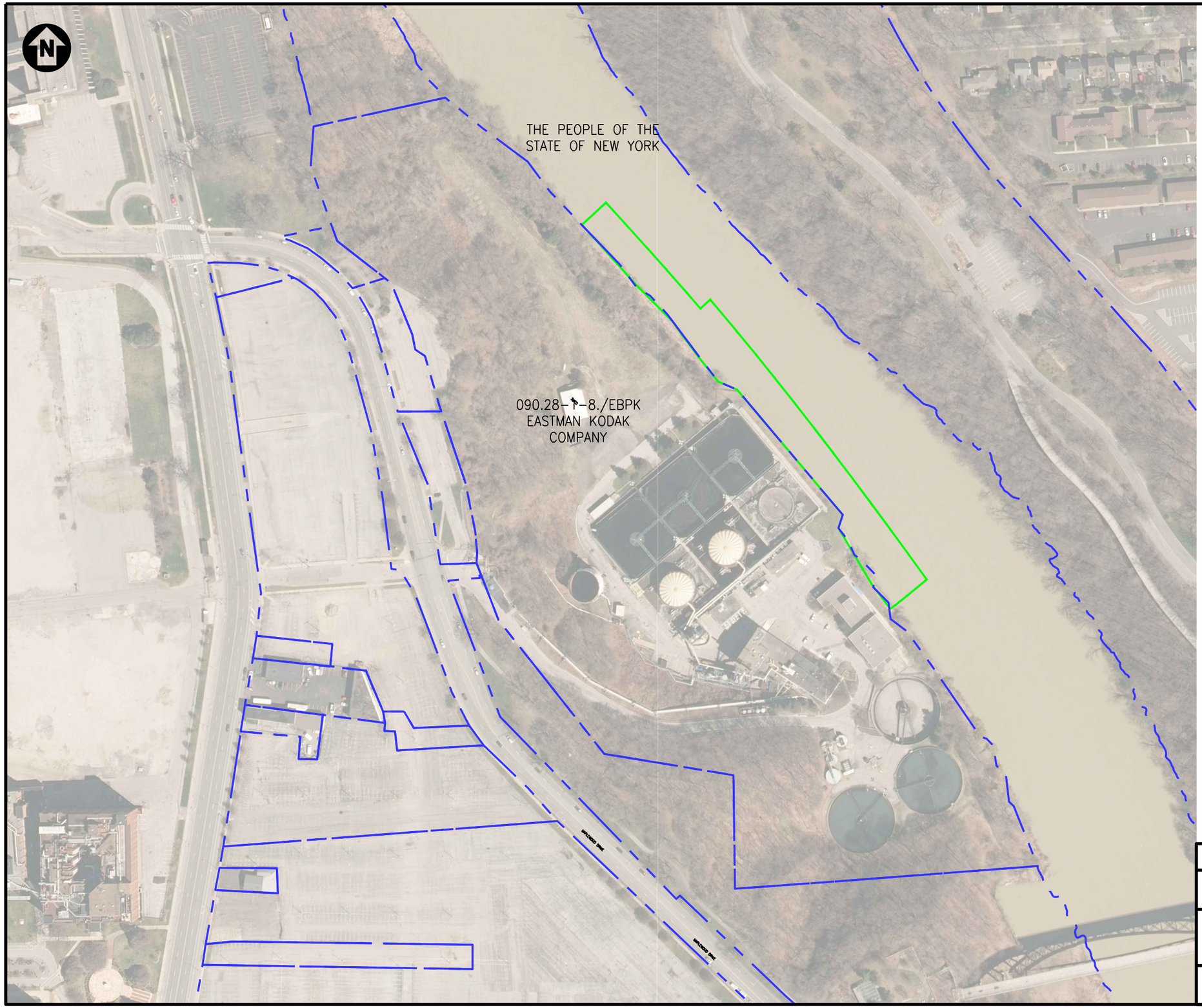

LEGEND:

AOC 2 BOUNDARY

PROPERTY BOUNDARY

NOTE:
PROPERTY BOUNDARIES ARE APPROXIMATED FROM MONROE COUNTY GEOGRAPHIC INFORMATION SYSTEMS DIVISION PARCEL BASE MAPS.

200 100 0 200 400

SCALE: 1"=200'

FIGURE 2A

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK
SITE LAYOUT
SOUTH

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FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-SITE LAYOUT.DWG
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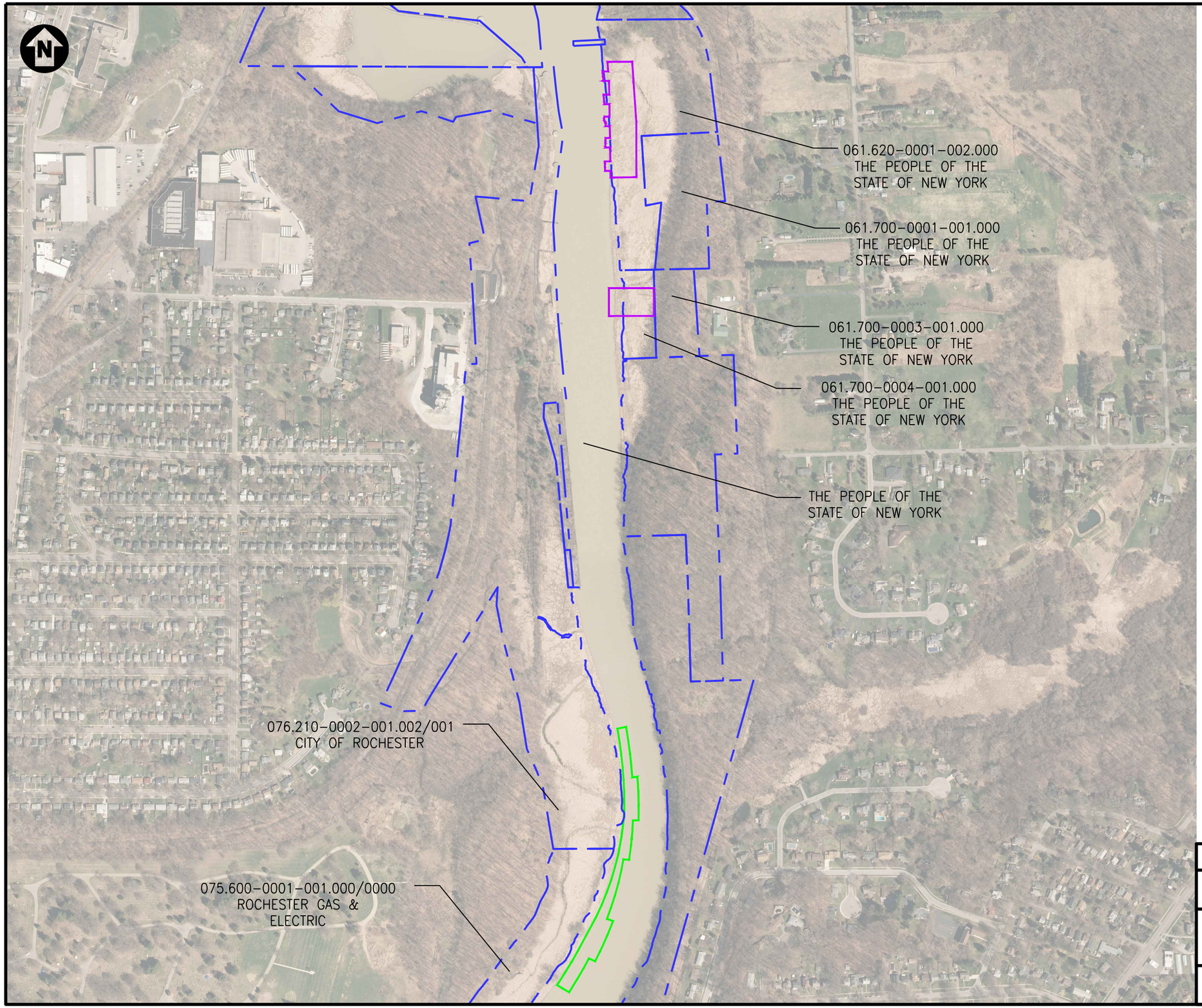

LEGEND:

- WETLAND C BOUNDARY
- AOC 2 BOUNDARY
- PROPERTY BOUNDARY

NOTE:
PROPERTY BOUNDARIES ARE APPROXIMATED FROM MONROE COUNTY GEOGRAPHIC INFORMATION SYSTEMS DIVISION PARCEL BASE MAPS.

500 250 0 500 1000

SCALE: 1"=500'

FIGURE 2B

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK
SITE LAYOUT
NORTH

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-SITE LAYOUT.DWG
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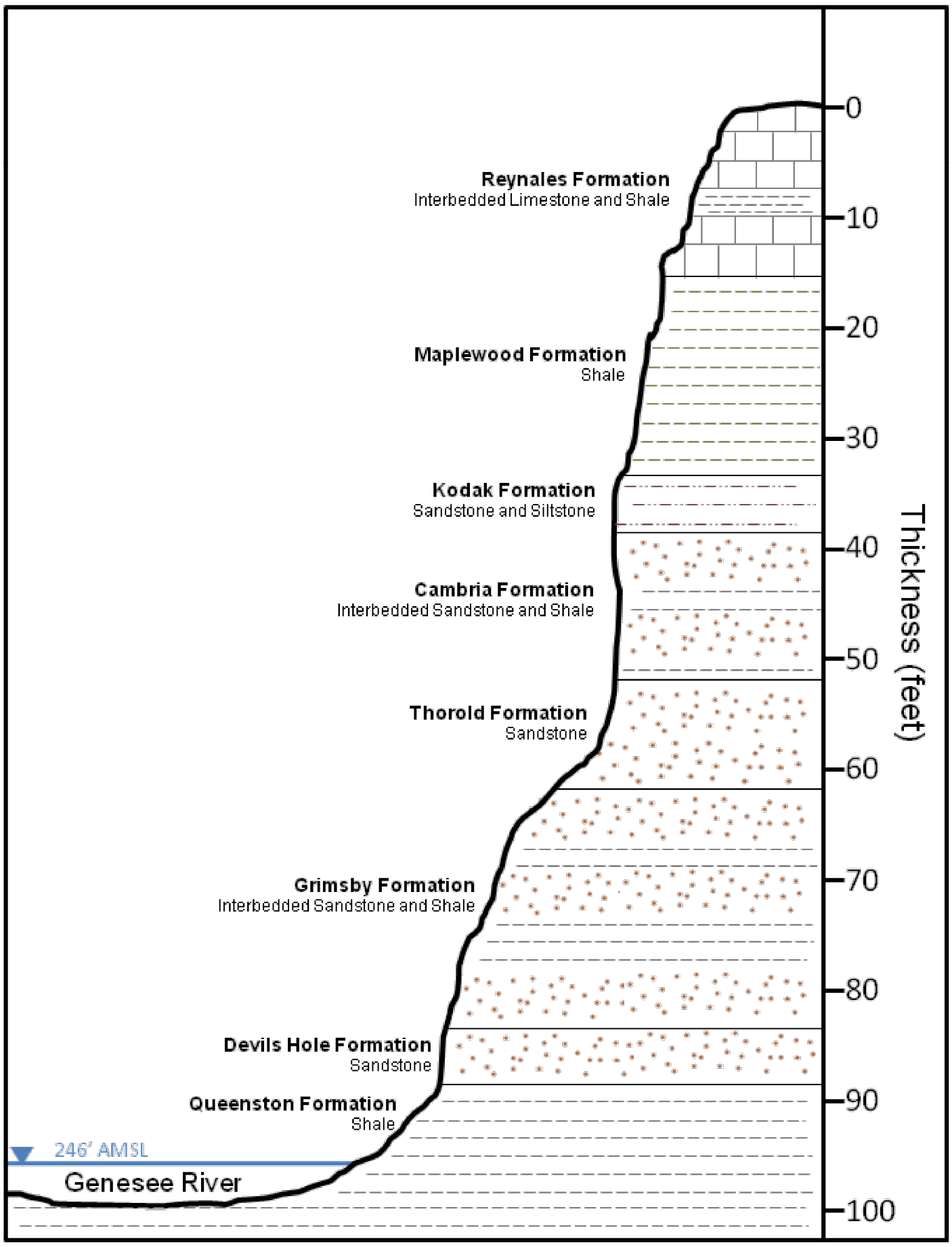

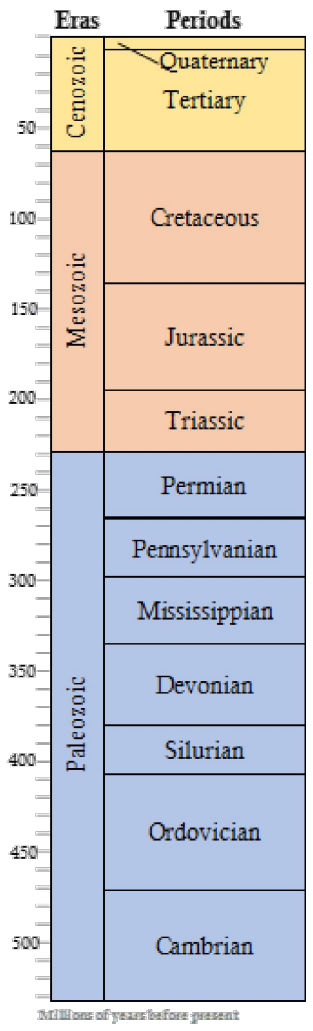

NOTES:
GEOLOGIC CROSS SECTIONS OBTAINED FROM *STATEMENT OF BASIS FOR KODAK PARK INVESTIGATION AREA EIA-KL (KINGS LANDING)*, NYSDEC DIVISION OF SOLID AND HAZARDOUS MATERIALS, SEPTEMBER, 2003.

FIGURE 3

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

GEOLOGIC CROSS SECTION

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FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-GEOLOGIC X-SEC-FIG 3.DWG
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LGR-STA-42	
Depth	mg/kg
0-2'	CAP
2-3'	478
3-4'	36.2
4-5'	10.4

LGR-STA-45	
Depth	mg/kg
0-2'	CAP
2-3'	6.4
3-4'	219
4-5'	104

LGR-STA-46	
Depth	mg/kg
0-2'	CAP
2-3'	117
3-4'	61.7
4-5'	379

LGR-STA-48	
Depth	mg/kg
0-2'	CAP
2-3'	158
3-4'	164
4-5'	97 J

002	
Depth	mg/kg
2.78-5.55'	58.2
5.55-8.33'	151

LGR-STA-47	
Depth	mg/kg
0-2'	CAP
2-3'	333
3-4'	44.1
4-5'	50.7

LGR-STA-49	
Depth	mg/kg
0-2'	CAP
2-3'	71.1
3-4'	46.5

T-07-W	
Depth	mg/kg
0-2'	CAP
2-4'	32.5
4-6'	1550 J
8-10'	7.94
14.6-16.6'	0.194 J

AOC 1 AREA

48" CONCRETE PIPE AND DISPERSION OUTLETS

CAP ONLY AREA

KINGS LANDING WASTEWATER TREATMENT PLANT

SHEETPILE RETAINING WALL

36" STEEL OVERFLOW PIPE

54" STORM OUTFALL

RIP RAP

GRAVEL

NOTES:

1. SAMPLE RESULTS ARE TOTAL SILVER CONCENTRATION.
2. REMAINING CONTAMINATION IS BASED ON EXCEEDANCES OF THE SITE SPECIFIC TOXICITY ACTION LEVEL OF 70 mg/kg SILVER.
3. J-ESTIMATE ABOVE THE METHOD DETECTION LIMITS AND BELOW THE ADJUSTED REPORTING LIMIT.
4. SEDIMENT DEPTHS ARE FROM THE ORIGINAL ELEVATIONS PRIOR TO DREDGING AND CAPPING.
5. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 7, 2021.

LEGEND:

- RIVER SAMPLE LOCATIONS
- AOC 1 BOUNDARY
- NO CAP ZONE

80 40 0 80 160

SCALE: 1"=80'

FIGURE 4A

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

REMAINING SEDIMENT SAMPLE EXCEEDANCES
AOC 1

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FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-REMAINING.DWG
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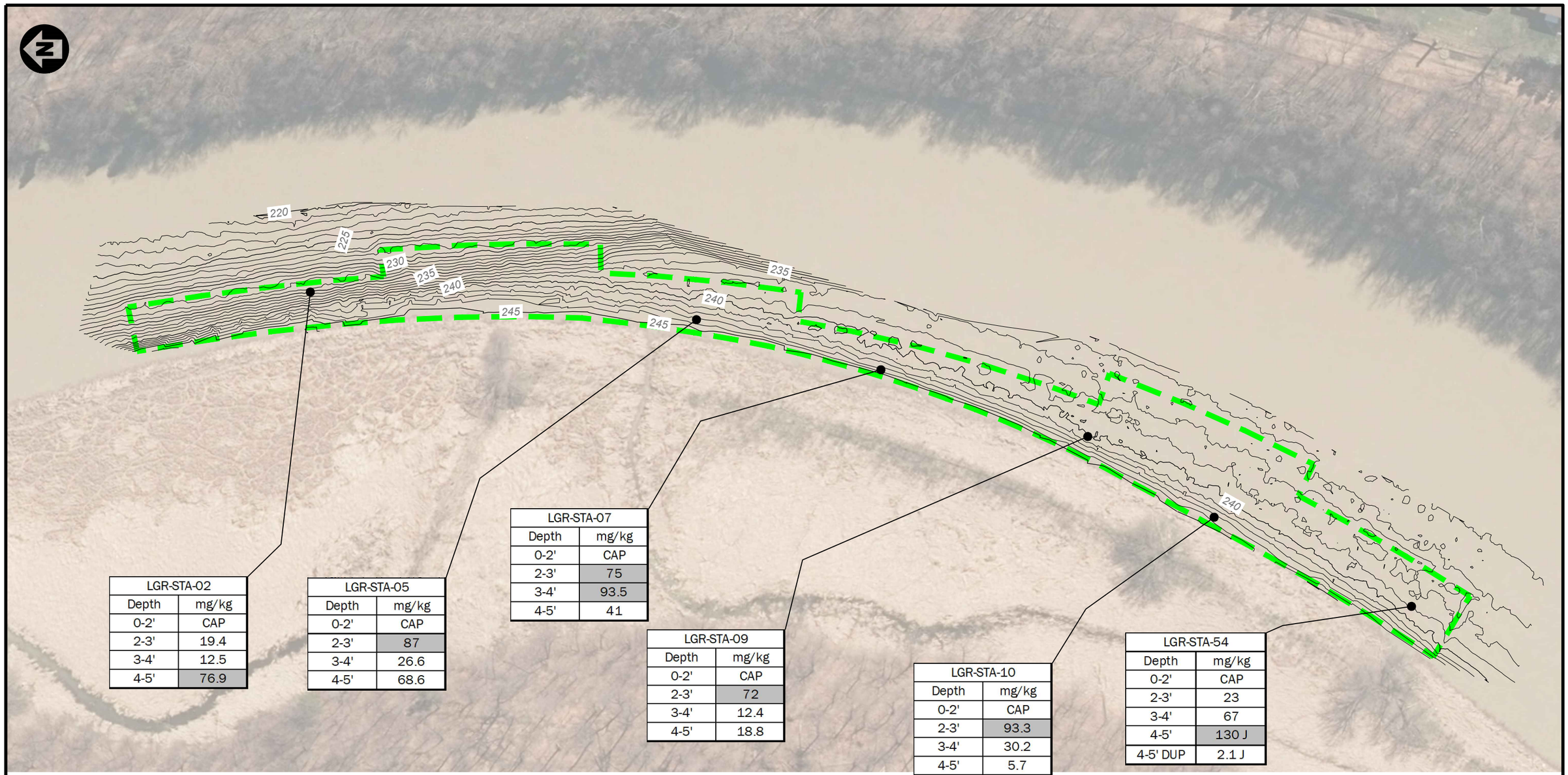

LGR-STA-02	
Depth	mg/kg
0-2'	CAP
2-3'	19.4
3-4'	12.5
4-5'	76.9

LGR-STA-05	
Depth	mg/kg
0-2'	CAP
2-3'	87
3-4'	26.6
4-5'	68.6

LGR-STA-07	
Depth	mg/kg
0-2'	CAP
2-3'	75
3-4'	93.5
4-5'	41

LGR-STA-09	
Depth	mg/kg
0-2'	CAP
2-3'	72
3-4'	12.4
4-5'	18.8

LGR-STA-10	
Depth	mg/kg
0-2'	CAP
2-3'	93.3
3-4'	30.2
4-5'	5.7

LGR-STA-54	
Depth	mg/kg
0-2'	CAP
2-3'	23
3-4'	67
4-5'	130 J
4-5' DUP	2.1 J

NOTES:

1. SAMPLE RESULTS ARE TOTAL SILVER CONCENTRATION.
2. REMAINING CONTAMINATION IS BASED ON EXCEEDANCES OF THE SITE SPECIFIC TOXICITY ACTION LEVEL OF 70 mg/kg SILVER ACTION LEVEL.
3. J-ESTIMATE ABOVE THE METHOD DETECTION LIMITS AND BELOW THE ADJUSTED REPORTING LIMIT.
4. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 18, 2021.

LEGEND:

- SAMPLE LOCATIONS
- AOC 2 BOUNDARY

100 50 0 100 200

SCALE: 1"=100'

FIGURE 4B

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

REMAINING SEDIMENT SAMPLE EXCEEDANCES
AOC 2

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 • 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-REMAINING.DWG
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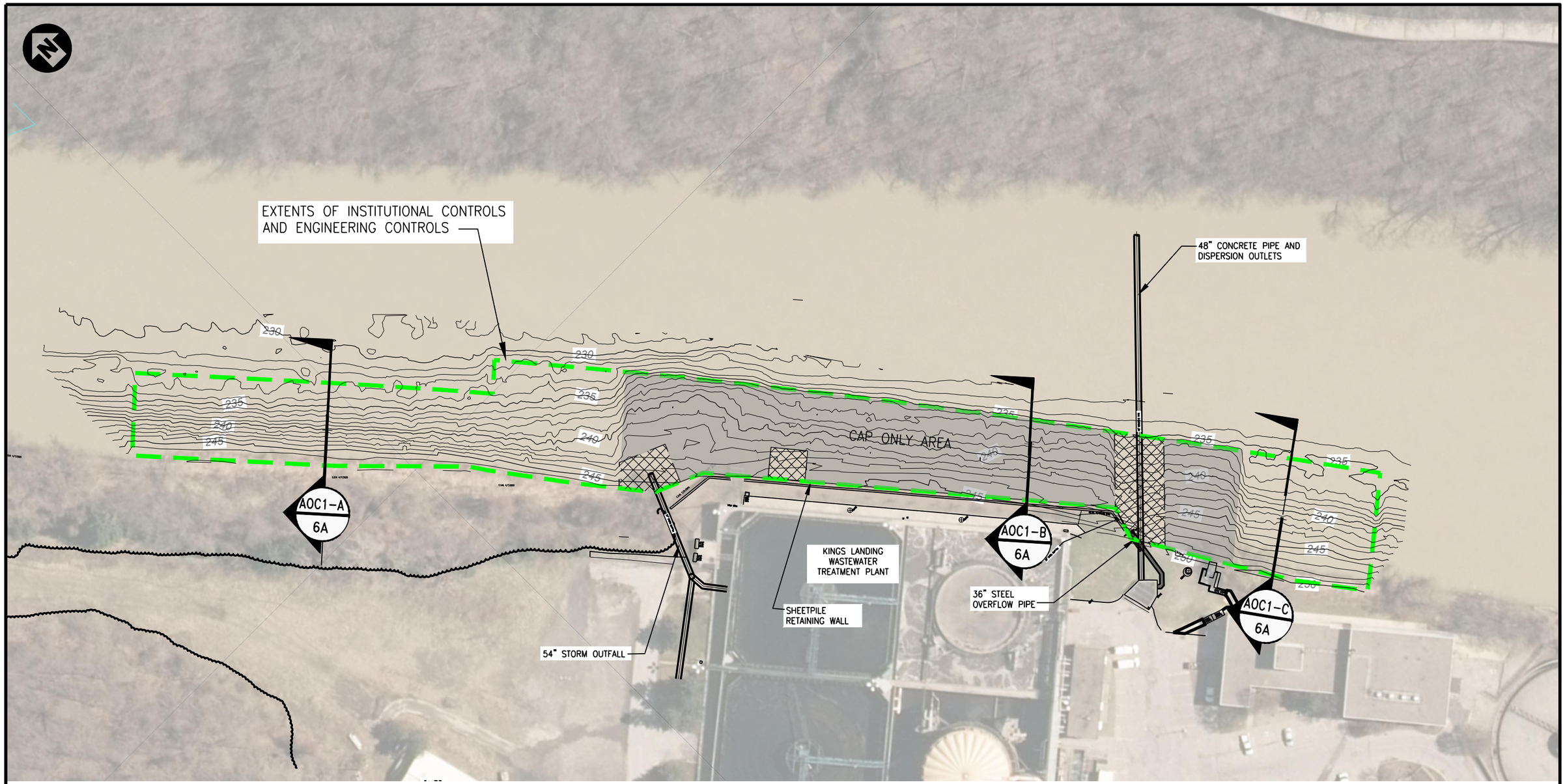

80 40 0 80 160

SCALE: 1"=80'

LEGEND:

AOC 1 BOUNDARY

NO CAP ZONE

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 7, 2021.

FIGURE 5A

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

IC BOUNDARIES AND EC PLANVIEW
AOC 1

PARSONS

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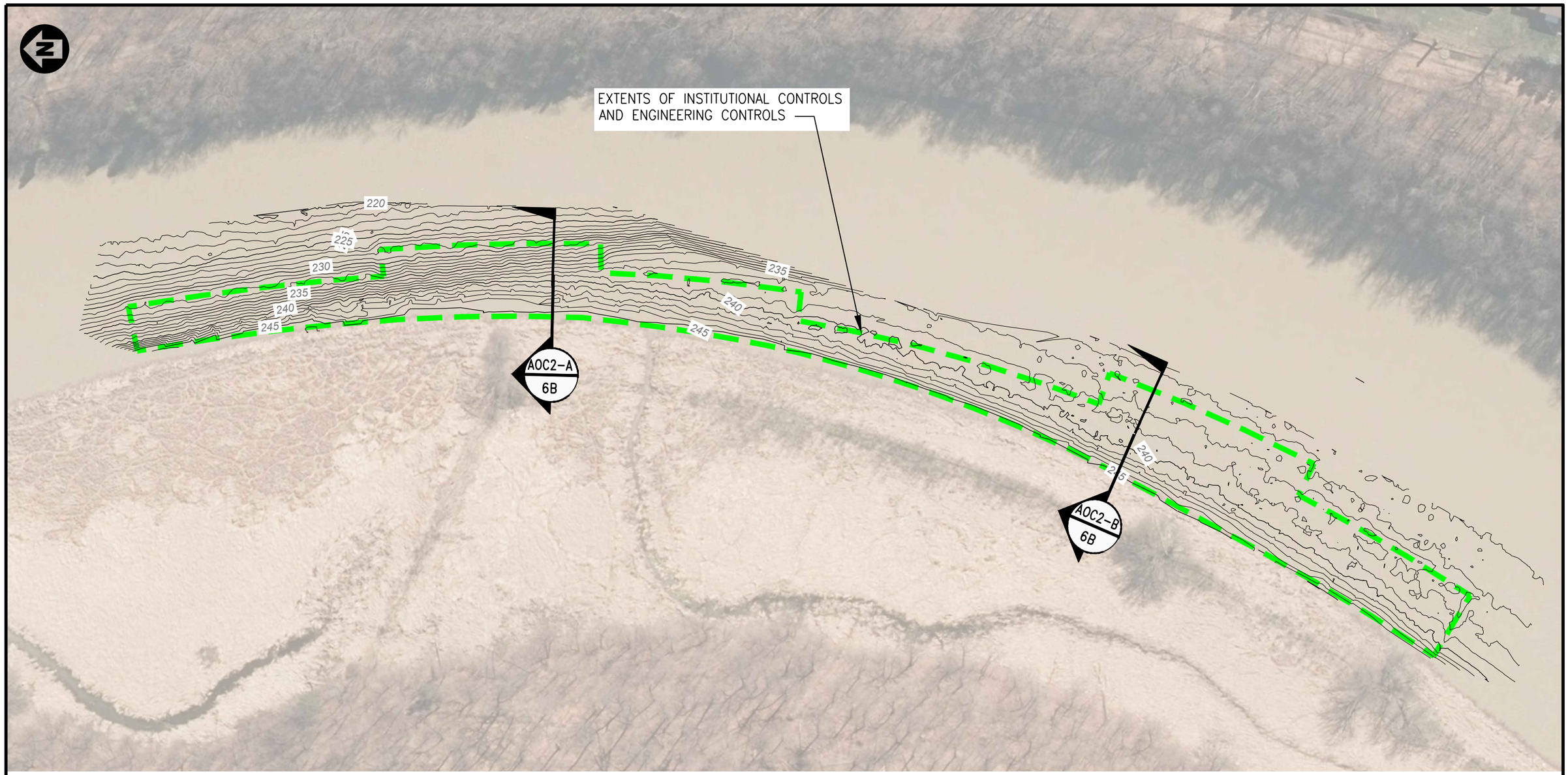


LEGEND:

AOC 2 BOUNDARY

100 50 0 100 200

SCALE: 1"=100'

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 18, 2021.

FIGURE 5B

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

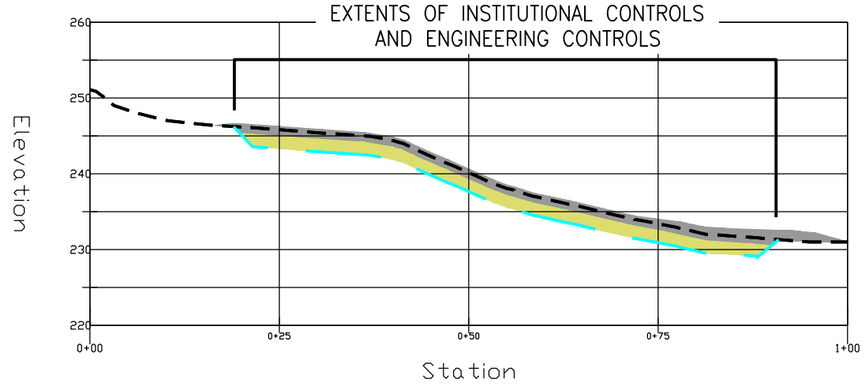
SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

IC BOUNDARIES AND EC PLANVIEW
AOC 2

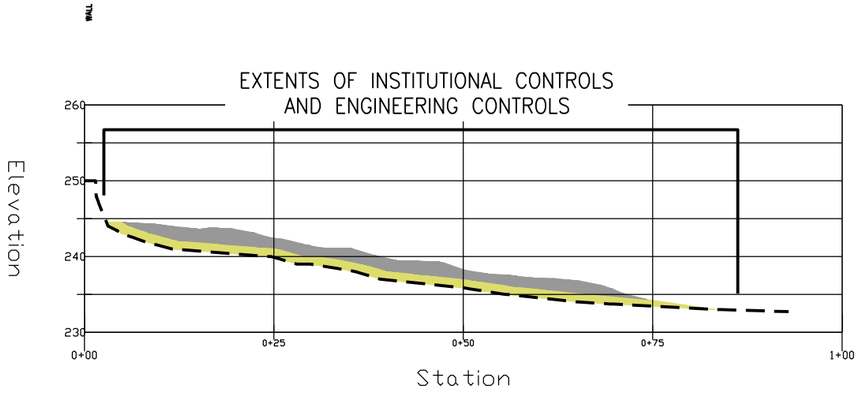
PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 • 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-IC-BOUNDARIES.DWG
PLOT DATE: 6/16/2022 3:14 PM PLOTTED BY: RUSSO, JILL [US-US]



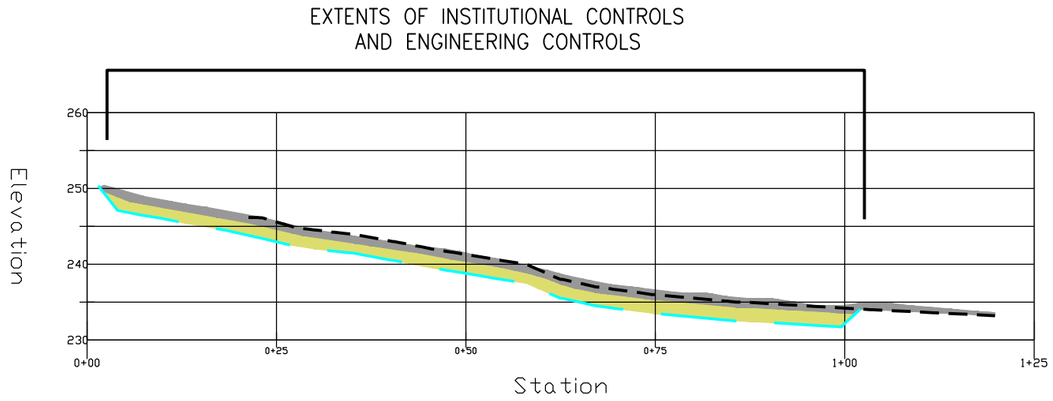
AOC1-A / 5A

AOC1-A TYPICAL EC PROFILE VIEW



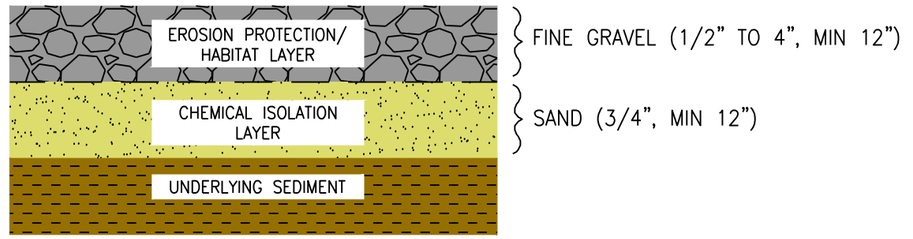
AOC1-B / 5A

AOC1-B TYPICAL EC PROFILE VIEW



AOC1-C / 5A

AOC1-C TYPICAL EC PROFILE VIEW



TYPICAL ISOLATION CAP

LEGEND:

- APPROXIMATE ORIGINAL GROUND SURFACE
- APPROXIMATE EXTENTS OF SEDIMENT REMOVAL
- APPROXIMATE ISOLATION CAP GRADE
  - EROSION PROTECTION/HABITAT LAYER
  - CHEMICAL ISOLATION LAYER

20 10 0 20 40

SCALE: 1"=20'

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 7, 2021.

FIGURE 6A

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

TYPICAL EC PROFILE VIEW
AOC 1

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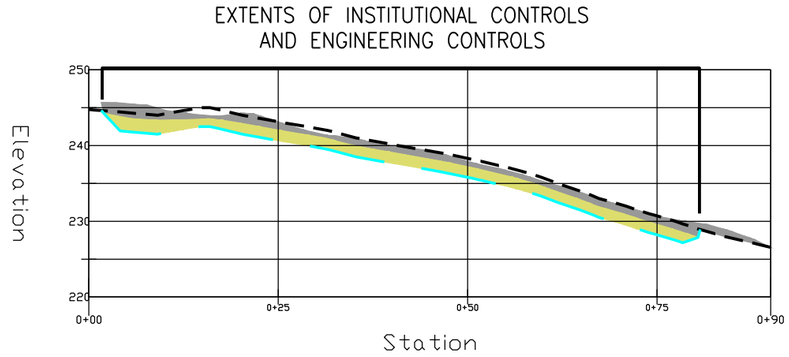
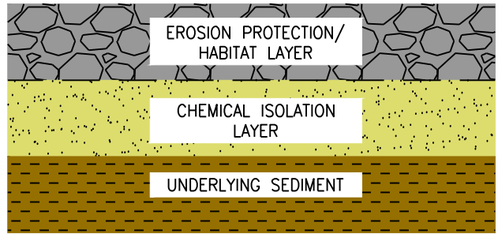
FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-IC-BOUNDARIES.DWG
PLOT DATE: 6/15/2022 5:09 PM PLOTTED BY: RUSSO, JILL [US-US]



AOC2-A
5B

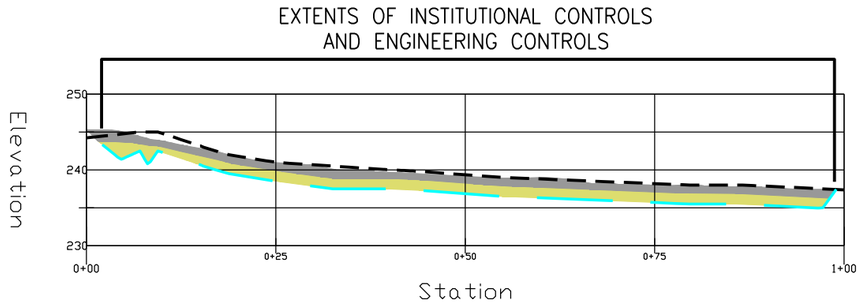
AOC2-A TYPICAL EC PROFILE VIEW



TYPICAL ISOLATION CAP

LEGEND:

- APPROXIMATE ORIGINAL GROUND SURFACE
- APPROXIMATE EXTENTS OF SEDIMENT REMOVAL
- APPROXIMATE ISOLATION CAP GRADE
  - EROSION PROTECTION/HABITAT LAYER
  - CHEMICAL ISOLATION LAYER



AOC2-A
5B

AOC2-A TYPICAL EC PROFILE VIEW

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 18, 2021.

20 10 0 20 40

SCALE: 1"=20'

FIGURE 6B

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK
TYPICAL EC PROFILE VIEW
AOC2

PARSONS
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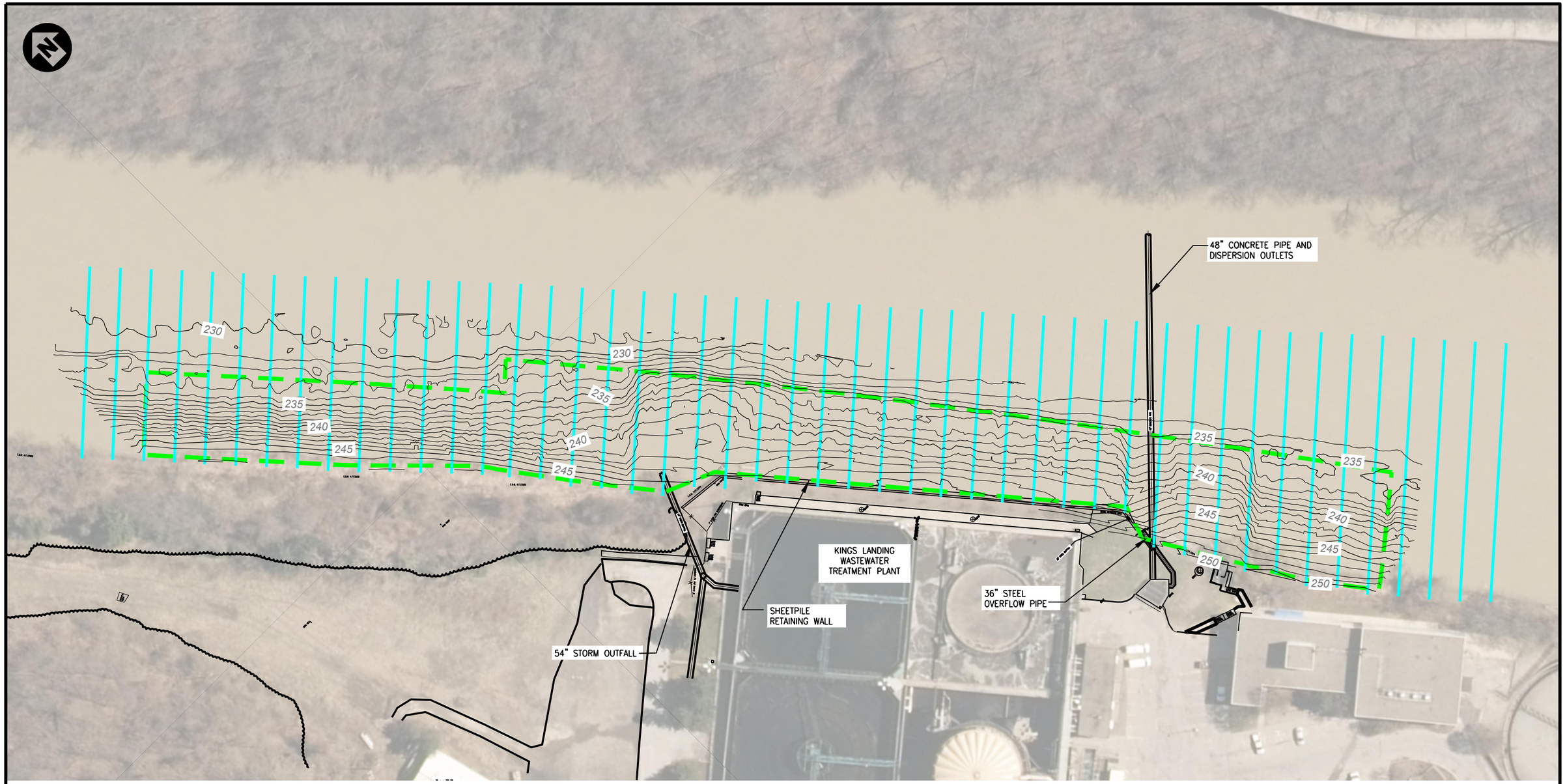
FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-IC-BOUNDARIES.DWG
PLOT DATE: 6/15/2022 5:09 PM PLOTTED BY: RUSSO, JILL [US-US]



80 40 0 80 160

SCALE: 1"=80'

LEGEND:

AOC 1 BOUNDARY

SITE COVER MONITORING TRANSECT LOCATION

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 7, 2021.

FIGURE 7A

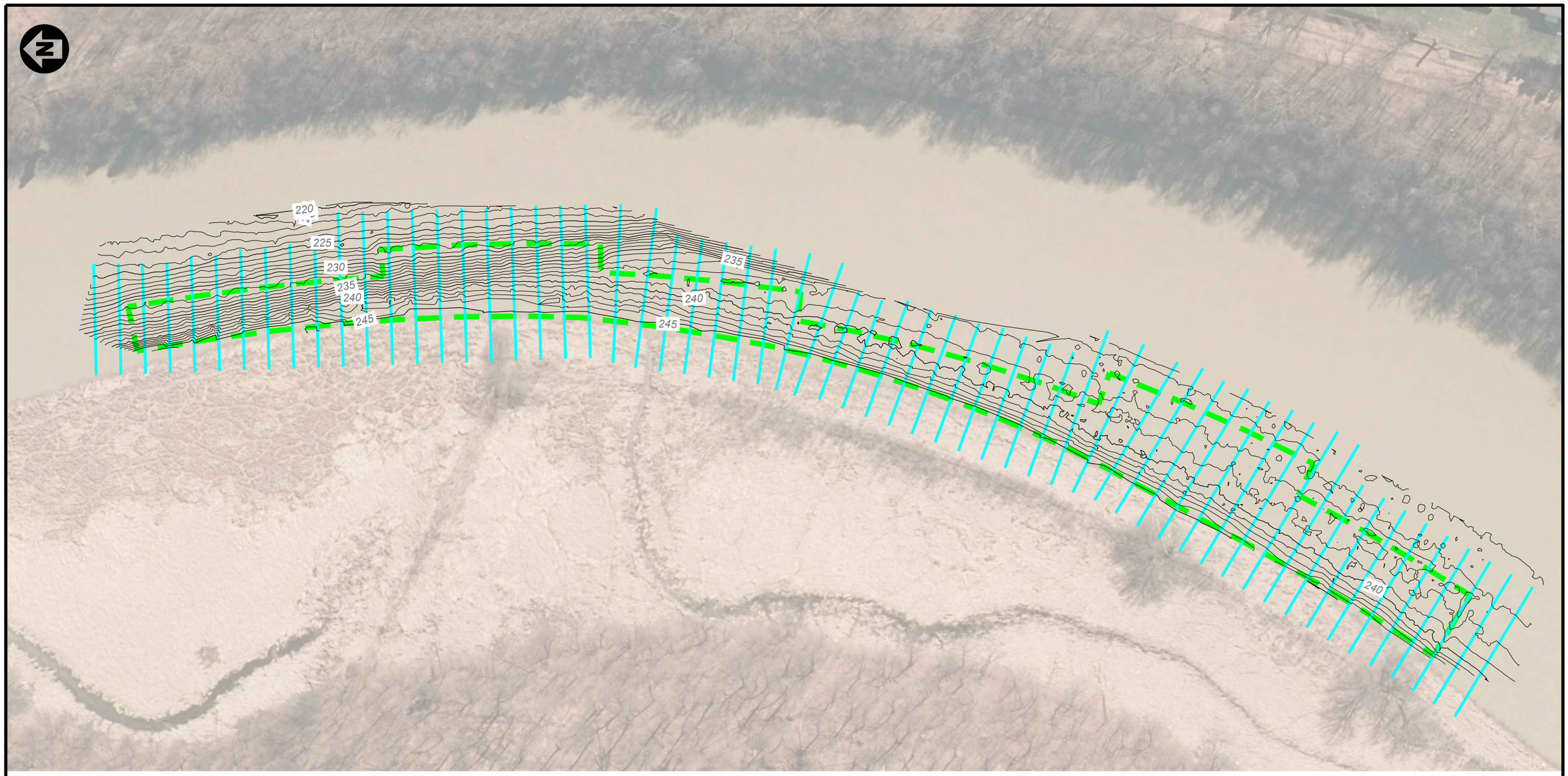
NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK
SITE COVER MONITORING TRANSECT LOCATIONS
AOC 1

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 • 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-SITE COVER-TRANSECT.DWG
PLOT DATE: 6/16/2022 10:41 AM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

AOC 2 BOUNDARY

SITE COVER MONITORING TRANSECT LOCATION

100 50 0 100 200

SCALE: 1"=100'

NOTES:

1. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 18, 2021.

FIGURE 7B

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

SITE MANAGEMENT PLAN
ROCHESTER, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK
SITE COVER MONITORING TRANSECT LOCATIONS
AOC 2

PARSONS
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FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\FIGURES\452506-RD-SITE COVER-TRANSECT.DWG
PLOT DATE: 6/15/2022 5:03 PM PLOTTED BY: RUSSO, JILL [US-US]

APPENDIX A – LIST OF SITE CONTACTS

Name	Phone/Email Address
William Long Parsons Project Manager	(315) 546-6239 william.long@parsons.com
Edward Glaza, PE Parsons Certifying Engineer	(315) 730-4685 edward.glaza@parsons.com
Lisa Gorton, PE NYSDEC DER Project Manager	(518) 402-9574 lisa.gorton@dec.ny.gov
Michael Cruden, PE NYSDEC Remediation Bureau E Director	(518) 402-9825 michael.cruden@dec.ny.gov
Melissa Doroski NYSDOH Project Manager	(518) 402-7860 beei@health.ny.gov
Bryan Gallagher Eastman Kodak Company Director, EBP Dev, Remediation & Audits	bryan.gallagher@kodak.com

APPENDIX B – SEDIMENT BORING LOGS

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1185562.755
CPB-01	**Driller:** Tim		**Easting:** 1407516.770
2015 Sampling	**Geologist:** ALB		**Mudline:** 238.197
8/31/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: Cloudy, High 70s		**Water Depth:** 8.3 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.2	ML	Wet, soft, grey brown, SILT, trace sand.
2 - 4	LGR-0017-04	0.0	ML	Wet, soft, grey brown, SILT.
4 - 6	LGR-0017-05	0.5	ML	Wet, soft, brown with black bands, SILT, slight petroleum odor.
6 - 8		1.1	ML	Wet, soft, brown and black, SILT, little clay.
8 - 10	LGR-0017-06	1.0	ML	Wet, soft, brown and black, SILT, little clay, slight petroleum odor.
10 - 12		0.8	CL	0-25 inch Wet, medium stiff, brown with black banding, CLAY, organic lense at 23 inches.
12 - 14		0.1	CL	Wet, medium stiff, brown with black banding, CLAY, organic lense 14-16 inches.
14 - 17		0.0	CL/ML	0-34 inch Moist, medium stiff, grey to brown, SILTY CLAY grading to CLAYEY SILT, no odor.

Lower Genesee River	**Drilling Co:** ATL	**Northing:** 11878814.790
T-01-E	**Driller:** Tim/Pat	**Easting:** 1408967.444
2015 Sampling	**Geologist:** ALB	**Mudline:** 230.894
8/21/2015	**Rig Type:** Boat Mounted Vibracore	**Total Depth:** 20 Ft
	Weather:	**Water Depth:** 15.6 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	SC	Wet, soft, gray brown, SILT, little clay, trace organics, poorly graded.
2 - 4	LGR-0010-04	0.1	SC/SP	0-10.5 inch Wet, soft, brown, SILT, little clay, light plasticity. 10.5-14 Wet, soft, brown, SILT, some organics, well sorted, organic lense at 11.0 inch. 14-24 inch Moist, medium dense, brown, fine SAND, trace organics, well graded.
4 - 6		0.1	CL	0-11 inch Moist, soft, brown, SILT and CLAY, trace fibrous organics, very light organic odor. 11-16 inch Wet, soft, brown, CLAY and SILT, no odor. 16-24 inch Moist, soft, brown, SILT and CLAY, trace fibrous organics, no odor.
6 - 8	LGR-0018-01	0.0	OL/MH/ ML	0-3 inch Moist, medium soft, brown, SAND and SILT, trace organics. 3-12.5 inch Moist, loose, gray brown, SILT, little clay, trace fibrous organics, no odor. 12.5-16.5 inch Moist, soft, brown, CLAY and SILT, no odor. 16.5-24 Moist, medium stiff, brown, SILT, little fine sand, no odor.
8 - 10		0.0	ML/SM/ CL	0-5 inch Moist, soft, brown, SILT, little sand, no odor. 5-7 inch Moist, soft, brown, SILT and SAND, some organics, light organic odor. 7-13 Moist, soft, brown, SILT, little sand and clay, trace organics, light organic odor. 13-24 Moist, soft, brown, CLAY, trace silt, trace organics, no odor.
10 - 12	LGR-0010-06	0.2-0.9	CL/SC	0-9 inch Dry, medium stiff, gray brown, CLAY, little fine sand, no odor. 9-22 inch Moist, medium dense, brown, fine SAND, some clay, trace woody organics, organic odor. 22-24 inch Moist, medium stiff, gray brown, CLAY, little silt, light organic odor.
12 - 14		0.1	CL	Moist, medium stiff, gray brown, CLAY, little silt, trace woody organics, very light odor.
14 - 16		0.5	CH	Dry, medium stiff, gray, CLAY, trace woody organics, lense 7.5 to 9.5 inch dry medium stiff clay with fine sand, no odor.
16 - 17.5		1.0	CH	Dry, medium stiff, gray, CLAY, trace woody organics, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1187926.062
T-01-W	**Driller:** Tim		**Easting:** 1408768.372
2015 Sampling	**Geologist:** ALB		**Mudline:**
8/24/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 8
	Weather:		**Water Depth:** 24.6 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	SM	Wet, soft, brownish gray, SILT, trace fine sand, trace fibrous organics.
2 - 4	LGR-0011-04	0.5	SM/ML	0-5.5 inch Wet, loose, brownish gray, SAND and SILT, some fibrous and woody organics. 5.5-16 inch Wet, soft, brownish gray, SAND, some silt, trace clay, trace fibrous organics. 16-24 inch Moist, soft, brownish gray, CLAY, some silt, little sand and fibrous organics.
4 - 6	LGR-0011-07	1.4	CL	Moist, medium soft, gray, CLAY, little silt, little organics, slight organic odor.
6 - 8	LGR-0011-06	0.1	CH	0-22 inch Moist, medium soft, gray, CLAY, high plasticity, very light organic odor. 22-31 inch Moist, medium dense, brownish gray, medium to fine SAND, trace medium gravel.

Lower Genesee River, T-02-C	**Drilling Co:** ATL	**Northing:** 1181991.158
2015 Sampling	**Driller:** Tim/Corey	**Easting:** 1406691.998
8/24/2015	**Geologist:** ALB	**Mudline:** 220.799
	Rig Type: Boat Mounted Vibracore	**Total Depth:** 16 Ft
	Weather: Sun, 70s, light wind	**Water Depth:** 26.1

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.2	ML	Wet to moist, medium stiff, brownish gray, SILT, trace clay, trace woody organics.
2 - 4	LGR-0012-18	0.3	ML/CH/SP/ML	0-9 inch Wet to moist, medium stiff, brownish gray, SILT, trace clay, trace woody organics. 9-12 inch Moist, medium stiff, brownish gray, CLAY. 12-17 inch Wet, dense, brownish gray, fine SAND. 17-24 inch Wet, medium stiff, grayish brown, SILT and fine SAND, trace clay.
4 - 6	LGR-0012-19	0.3	CH/SW	0-17.5 inch Moist, soft, brownish gray with one gray and one black band, CLAY, trace woody organics. 17.5-24 inch Moist, medium loose, brown, medium SAND, trace woody organics and shell fragments.
6 - 6.5	LGR-0012-21	0.0	SW	Moist, medium loose, brown, medium SAND, trace woody organics and shell fragments.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1181976.318
T-02-E	**Driller:** Tim		**Easting:** 1406769.810
2015 Sampling	**Geologist:** ALB		**Mudline:** 221.31
8/24/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 17.5 Ft
	Weather:		**Water Depth:** 25.5

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.4	CL	0-8 inch Wet, soft, gray, CLAY and SILT. 8-24 inch Moist, medium stiff, gray, CLAY, trace organics.
2 - 4	LGR-0012-10	2.3	CL/CH/S C	0-13 inch Wet, medium stiff, brown and black mottled, CLAY, little silt, trace woody organics. 13-20 inch Wet, soft, brown, CLAY, medium to high plasticity. 20-24 inch Wet, soft, black, CLAY, some sand, trace silt, petroleum odor.
4 - 6		0.2	SC/GC	0-16 inch Wet, soft, black, CLAY, some sand, trace silt, pertoleum odor in first inch. 16-24 inch Wet, soft, black and brown, SILT and WOODY ORGANICS, some clay and fine sand, no odor.
6 - 8	LGR-0012-11	0.0	SM/CL/S W	0-8.5 inch Wet, loose, grayish brown, SAND, little silt, little fibrous and woody organics. 8.5-15.5 inch Moist, medium stiff, gray, CLAY, little silt, trace woody organics. 15.5-24 inch Moist, medium dense, gray brown, fine to medium SAND, clayey sand lense last inch.
8 - 10		0.0	CH/SP	0-17 inch Moist, medium stiff, gray with slight black mottling, CLAY. 17-24 inch Moist, medium dense, brownish gray, medium SAND and fibrous ORGANICS.
10 - 12	LGR-0012-13	0.0	CL/SC	0-4.5 inch Moist, soft, brownish gray, CLAY, little silt. 4.5-18 inch Moist, medium dense, grayish brown, medium SAND and CLAY, no odor.

Lower Genesee River, T-02-W	**Drilling Co:** ATL	**Northing:** 1182021.652
2015 Sampling	**Driller:** Tim	**Easting:** 1406630.220
8/24/2015	**Geologist:** ALB	**Mudline:** 223.217
	Rig Type: Boat Mounted Vibracore	**Total Depth:** 12 Ft
	Weather:	**Water Depth:** 23.2 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.2	SM	0-10 inch Wet, soft, brownish gray, SILT, little sand. 10-24 inch Wet, medium stiff, brownish gray, SILT, some sand, little fibrous and woody organics.
2 - 4	LGR-0012-04	0.2	SM/ML	0-10 inch Wet, medium dense, gray, fine SAND, little silt, trace clay and fibrous organics. 10-24 inch Moist, medium stiff, gray, CLAY, trace sand.
4 - 6	LGR-0012-05	0.0	CL	Damp, stiff, gray, CLAY, trace silt, no odor.
6 - 8	LGR-0012-06	0.5	CL/SP	0-21 inch Moist, medium stiff, gray, CLAY, trace sand, four sand lenses. 21-24 inch Damp, medium loose, brownish gray, medium SAND.
8 - 8.4		0.0	SP	Damp, medium loose, brownish gray, medium SAND.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1178994.402
T-03-CE	**Driller:** Tim		**Easting:** 1405827.354
2015 Sampling	**Geologist:** ALB		**Mudline:** 222.484
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 14 Ft
	Weather:		**Water Depth:** 23.8

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML/CL	0-14 inch Wet, soft, brown with some black mottling, SILT, trace organics. 14-24 inch Wet, soft, brown, CLAY, little fibrous organics.
2 - 4	LGR-0013-09	0.8	CL	Moist, medium stiff, light to dark brown, CLAY, trace fibrous organics, organic layer with slight organic odor from 22 to 23 inches.
4 - 6		1.4	ML/CH/ MH	0-7 inch Moist, medium stiff, grayish brown, SILT, trace clay. 7-21 inch Moist, medium stiff, dark brown, CLAY, sand lense at 14 inches. 21-24 inch Moist, medium stiff, black, SILT, little clay and woody organics, light organic odor.
6 - 8		0.7	MH/CH/ ML	0-2 inch Moist, medium stiff, black, SILT, little clay and woody organics, light organic odor. 2-22 inch Damp, medium stiff, brownish gray, CLAY, trace woody organics. 22-24 inch Damp, medium stiff, brownish gray, SILT and CLAY, little fine sand and fibrous organics.
8 - 10		0.2	CH	Dry, stiff, gray, CLAY, no odor.
10 - 12		0.1	CH	Dry, stiff, brownish gray, CLAY.
12 - 13.3		0.1	CH/CL	0-11 inch Moist, medium stiff, brownish gray, CLAY. 11-15 inch Moist, medium stiff, brownish gray, CLAY, trace of silt.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1179021.973
T-03-CW	**Driller:** Tim		**Easting:** 1405495.641
2015 Sampling	**Geologist:** ALB		**Mudline:** 242.711
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather:		**Water Depth:** 3.7

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	ML/CL	0-12 inch Wet, soft, brown and black mottling, SILT, no odor. 12-24 inch Wet, medium stiff, brown and black banding, SILT, little clay, no odor.
2 - 4	LGR-0013-16	0.0	CL	Wet, medium stiff, brown and black banding, SILT, little clay, no odor.
4 - 6		0.0	ML	Wet, soft, grayish brown, SILT, grading to silt with clay, no odor.
6 - 8	LGR-0013-17	0.2	ML	Moist, soft, grayish brown, SILT, little clay, black band from 3 to 4 inches.
8 - 10		0.0	ML	Moist, medium stiff, brown, SILT, some clay, organic lense at 1 inch, no odor.
10 - 12	LGR-0013-18	0.2	CL	Moist, medium stiff, grayish brown, SILT and CLAY, no odor.
12 - 14		1.0	CL	Moist, medium stiff, grayish brown, SILT and CLAY, clay layer 21 to 23 inches.
14 - 16		0.0	CH	Moist, medium stiff, brown, SILTY CLAY, grading to fat clay, organic lense at 22 inches.
16 - 18		0.1	CH	0-15 inch Moist, medium stiff, brown, CLAY, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1178994.730
T-03-E	**Driller:** Tim/Corey		**Easting:** 1406092.002
2015 Sampling	**Geologist:** ALB		**Mudline:** 221.721
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: Sunny, low 70s		**Water Depth:** 24.9

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.5	CL	Moist, soft, brownish gray, CLAY, trace silt and organics.
2 - 4	LGR-0013-04	1.0	ML/CH/SC	0-6 inch Wet, medium soft, brown, SILT. 6-21 inch Wet, soft, black, CLAY. 21-24 inch Moist, soft, brownish black, CLAY and medium SAND.
4 - 6.5	LGR-0013-05	1.2	CH/SP	0-21.5 inch Moist, soft, brownish black, CLAY, trace organics, sand lense at 3 inches. 21.5-28 inch Moist, loose, brown, medium SAND, trace coarse sand and shells.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1179038.217
T-03-W	**Driller:** Tim		**Easting:** 1405133.133
2015 Sampling	**Geologist:** ALB		**Mudline:** 240.088
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: Sunny, 70s		**Water Depth:** 6.7

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML	Wet, soft, brown and black, SILT, trace fibrous organics, no odor.
2 - 4	LGR-0013-24	0.0	ML	Moist, soft, brown with black banding, SILT, no odor.
4 - 6		0.2	ML	Moist, soft, brown and black, SILT.
6 - 8		0.4	ML	Moist, soft, brown and black, SILT, little clay.
8 - 10		0.2	ML	Moist, soft, brown and black, SILT, little clay.
10 - 12		0.5	ML	Moist, soft, brown to black, SILT and CLAY, grading to silt, no odor.
12 - 14		1.5	ML	Moist, medium stiff, brown with black bands, SILT, little clay.
14 - 16	LGR-0013-27	0.8	CH	Moist, medium stiff, gray brown with some black banding, CLAY, slight petroleum odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1174557.070
T-04-C	**Driller:** Tim		**Easting:** 1406402.515
2015 Sampling	**Geologist:** ALB		**Mudline:** 233.558
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: Cloudy, 70s		**Water Depth:** 13

Depth(ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML/SW	0-3 inch Wet, soft, blackish brown, SILT and WOODY ORGANICS. 3-24 inch Wet, loose, dark brown, fine SAND, trace shells, no odor.
2 - 4	LGR-0014-04	0.0	GM/SW	0-3 inch Damp, dense, dark brown, fine GRAVEL, some medium sand. 3-24 inch Moist, dense, brown to dark brown, medium SAND, trace shell fragments, no odor.
4 - 5.2	LGR-0014-05	0.4	GM/GP	0-6 inch Wet, medium dense, black to brown, medium to fine GRAVEL, some medium sand, trace silt and organics, slight petroleum odor. 6-15 inch Wet, dense, brown, medium SAND, grading to coarse sand with fine gravel, no odor.

Lower Genesee River	**Drilling Co:** ATL	**Northing:** 1174578.637
T-04-E	**Driller:** Corey/Tim	**Easting:** 1406475.566
2015 Sampling	**Geologist:** ALB	**Mudline:** 219.936
8/26/2015	**Rig Type:** Boat Mounted Vibracore	**Total Depth:** 10 Ft 4 in
	Weather: Cloudy, 65 degrees	**Water Depth:** 26.4

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	SW	Wet, dense, brown, SAND.
2 - 3	LGR-0016-04	0.0	SW/GW	Moist, dense, brown, medium to fine SAND, grading to medium to coarse gravel.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1174555.539
T-04-W	**Driller:** Tim		**Easting:** 1406300.531
2015 Sampling	**Geologist:** ALB		**Mudline:** 242.76
8/25/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather:		**Water Depth:** 3.5

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.7	ML	Wet, soft, brown and black bands, SILT, trace organics.
2 - 4	LGR-0013-31	1.0	ML	Wet, soft, brown and black bands, SILT, several organic lenses, strong petroleum odor.
4 - 6	LGR-0013-32	3.8	ML/CL/SM/CL	0-9 inch Wet, soft, brown and black, SILT, some fibrous organics, strong petroleum odor. 9-12 inch Wet, soft, brown and black, CLAY and SILT, some organics, light petroleum odor. 12-16 inch Wet, dense, black, fine SAND, little organics, petroleum odor. 16-24 inch Wet, soft, brown and black, CLAY and SILT, organic layer 16 to 18 inches, petroleum odor.
6 - 8		0.4	CL/PT/ML/CL/ML	0-3.5 inch Wet, soft, blackish brown, CLAY, little organics, petroleum odor. 3.5-5 inch Wet, loose, brown, FIBROUS ORGANICS. 5-9 inch Wet, medium stiff, grayish brown, SILT, no odor. 9-18 inch Wet, soft, brown and black, CLAY, little silt, light petroleum odor. 18-24 inch Wet, medium stiff, dark brown, SILT, little clay, no odor.
8 - 10		0.1	CL/OL/ML	0-3 inch Moist, soft, brown, CLAY, some silt, no odor. 3-7 inch Moist, soft, black, SILT, some orgaincs, light organic odor. 7-24 inch Moist, medium stiff, brown, SILT, little clay, one piece of wood, sand lense at 12 inches.
10 - 12	LGR-0013-33	0.0	PT/ML/CL-ML/SM	0-2 inch Wet, soft, black, PEAT, little silt. 2-7.5 inch Wet, soft, brown, SILT and fine SAND, little organics. 7.5-23 inch Wet, medium stiff, brown and black, SILT, trace clay, several 0.5 inch thick clay lenses. 23-24 inch Wet, loose, brown and black, fine SAND and FIBROUS ORGANICS, no odor.
12 - 14		0.0	ML/PT/SW/OL/ML/PT/CL	0-13 inch Wet, medium stiff, brown, SILT, several organic lenses. 13-14 inch Wet, soft, black, PEAT. 14-16 inch Wet, medium dense, brown, medium SAND. 16-18 inch Wet, medium stiff, brown, SILT and FIBROUS ORGANICS. 18-20.5 inch Wet, medium stiff, brown, SILT, no odor. 20.5-21.5 inch Wet, soft, brown, PEAT. 21.5-24 inch Moist, soft, brown, CLAY.
14 - 16	LGR-0013-34	0.0	CL	0-29 inch Moist, medium stiff, brown and black, CLAY, little silt, sand lense at 15 inches, several organic lenses, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1172024.774
T-05-C	**Driller:** Corey		**Easting:** 1403914.832
2015 Sampling	**Geologist:** ALB		**Mudline:** 228.067
8/26/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather:		**Water Depth:** 18.2

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	SW	Wet to moist, dense, dark brown, medium SAND, trace fine gravel, no odor.
2 - 4	LGR-0014-17	0.7	SW/GP/ CL/SP	0-7 inch Moist, dense, brown, SAND, no odor. 7-14 inch Moist, dense, black, coarse SAND, trace shells, petroleum odor. 14-17 inch Moist, medium stiff, brownish grey, SILT, no odor. 17-25 inch Moist, dense, brown, medium to fine SAND, trace fine gravel, no odor.
4 - 6	LGR-0014-18	0.0	SW/GM/ SW/SP	0-10 inch Moist, dense, brown, medium SAND, clay lense from 5-6 inches and 9-10 inches. 10-13 inch Wet, medium dense, reddish brown, fine to medium GRAVEL, some fine to medium sand, trace silt. 13-20 inch Moist, medium dense, grey brown, medium SAND. 20-24 inch Wet, dense, reddish brown, medium to coarse SAND, little fine gravel.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1171957.551
T-05-E	**Driller:** Corey/Tim		**Easting:** 1404005.832
2015 Sampling	**Geologist:** ALB		**Mudline:** 242.723
8/26/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: Partly cloudy, high 60s		**Water Depth:** 3.5

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.7	ML	Wet, soft, black, SILT, light petroleum odor.
2 - 4	LGR-0014-10	0.3	ML/SM/ ML	0-13 inch Wet, soft, black and grey, SILT, no odor. 13-19 inch Wet, medium dense, brown, fine SAND, no odor. 19-24 inch Wet, soft, black, SILT, no odor.
4 - 6		1.6	ML/SM/ ML/SM	0-6 inch Wet, soft, black and brown, SILT, petroleum odor. 6-14 inch Wet, medium dense, light brown, fine SAND, light petroleum odor. 14-22 inch Wet, soft, black and grey, SILT, petroleum odor. 22-26 inch Wet, medium stiff, brown, SAND and SILT, no odor.
6 - 8	LGR-0014-11	1.3	ML	0-25 inch Wet, soft, brown with black bands, SILT, sand band at 22 inches, petroleum odor between 10 and 11 inches.
8 - 10		3.3	ML	0-25 inch Wet, soft to medium stiff, brown with black bands, SILT, little organics, trace clay, petroleum odor.
10 - 12	LGR-0014-12	1.2	ML/GM/ ML/SM/ ML	0-2.5 inch Wet, soft, brown, SILT, trace organics. 3.5-10 inch Wet, loose, black, coarse SAND, trace fine gravel, trace shells. 10-16 inch Wet, soft, grey brown, SILT, no odor. 16-20 inch Wet, medium dense, grey brown, fine SAND, little silt, no odor. 20-24 inch Wet, medium stiff, grey brown, SILT, trace fine sand.
12 - 14	LGR-0014-13	0.0	CL/PT/M L	Moist, medium stiff, brownish grey, CLAY, grading to clayey silt, from 11-14 inches moist, medium stiff, brownish black, PEAT.

Lower Genesee River	Drilling Co: ATL		Northing: 1172091.564
T-05-W	Driller: Tim		Easting: 1403848.484
2015 Sampling	Geologist: ALB		Mudline: 230.164
8/26/2015	Rig Type: Boat Mounted Vibracore		Total Depth: 7 Ft
	Weather: Party cloudy, 60s		Water Depth: 16 Ft 3 in

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	GM	Wet, soft to medium stiff, grey brown to red brown, SILT, little fine to medium gravel, trace sand, no odor.
2 - 4	LGR-0014-22	0.0	GM	Wet, soft to medium stiff, grey brown to red brown, SILT, little fine to medium gravel, trace sand, trace coarse gravel, no odor.
4 - 5.6	LGR-0014-23	0.0	GC	0-20 inch Dry, stiff, brownish red, CLAY and SILT, some medium to coarse gravel, no odor.

Lower Genesee River, T-06-C	**Drilling Co:** ATL	**Northing:** 1169255.289
2015 Sampling	**Driller:** Tim	**Easting:** 1403358.531
8/26/2015	**Geologist:** ALB	**Mudline:** 232.521
	Rig Type: Boat Mounted Vibracore	**Total Depth:** 20 Ft
	Weather: Sunny, low 70s	**Water Depth:** 14 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.4	SP/SW	0-5 inch Moist, medium dense, dark brown, medium SAND, little fine gravel, trace organics and silt. 5-24 inch Moist, dense, brown, fine to medium SAND, little shells, no odor.
2 - 4	LGR-0014-35	1.2	SW/GP	0-14 inch Moist, dense, brown, fine to medium SAND, little shells, trace fine gravel, no odor. 15-24 inch Wet, medium dense, black and brown, fine to medium GRAVEL, some medium sand, petroleum odor.
4 - 6		0.2	GP/SP/CL/SP/ML	0-4 inch Wet, loose, black, fine GRAVEL and coarse SAND. 4-7 inch Wet, medium dense, brown, medium to coarse SAND, little fine gravel. 7-13 inch Wet, medium stiff, black and grey, CLAY, trace silt. 13-24 inch Wet, medium dense, brown and black, coarse SAND and fine GRAVEL. 24-24.5 inch Wet, medium stiff, grey, SILT.
6 - 8	LGR-0014-37	0.0	ML	Moist, medium stiff, brown and black, SILT, some clay, sand lenses at 13 and 15 inches, no odor.
8 - 10	LGR-0014-38	0.0	ML/SW/PT/SW/ML	0-7 inch Wet, medium stiff, grey, SILT, trace clay. 7-9 inch Wet, medium dense, grey, fine SAND. 9-11 inch Wet, medium dense, black and brown, PEAT. 11-18 inch Wet, medium dense, grey, fine SAND, trace silt and orgaics. 18-24 inch Wet, medium stiff, grey, SILT, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1169252.865
T-06-E	**Driller:** Tim		**Easting:** 1403502.121
2015 Sampling	**Geologist:** ALB		**Mudline:** 240.012
8/26/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather:		**Water Depth:** 6.8 Ft

Depth(ft)	Sample ID	PID	USCS	Soil Description
0 - 2		1.8	ML	Wet, soft, blackish brown, SILT, trace organics, petroleum odor.
2 - 4	LGR-0014-27	0.2	ML/CL	0-5 inch Wet, soft, black and brown, SILT, petroleum odor. 5-24 inch Moist, medium stiff, dark brown, CLAY, grading to silty clay, no odor.
4 - 6		0.1	CL	0-24.5 inch Wet, medium stiff, brown and black bands, CLAY, little silt, no odor.
6 - 8	LGR-0014-28	0.0	CL	Wet, medium stiff, brown and black bands, CLAY, little silt, no odor.
8 - 10		0.0	CL-ML	Wet, medium stiff, brown and black bands, CLAY with little silt, grading to SILT with little clay, no odor.
10 - 12	LGR-0014-29	0.0	CL	Moist, medium stiff, brown and black bands, CLAY, grading to CLAY with little silt, no odor.
12 - 14		0.0	CL	Moist, medium stiff, grey and black bands, CLAY.
14 - 16.5		0.0	CL	Wet, medium stiff, brown and black banding, CLAY, little silt, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1169246.574
T-06-W	**Driller:** Tim		**Easting:** 1403260.268
2015 Sampling	**Geologist:** ALB		**Mudline:** 225.79
8/26/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:**
	Weather:		**Water Depth:** 20.8 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.3	GM	Wet, soft, black, SILT, some sand, little fine gravel, slight petroleum odor.
2 - 4	LGR-0014-42	1.6	GM/SP-ML	0-8 inch Wet, soft, black, SILT, some sand, little fine gravel, slight petroleum odor. 8-24 inch Wet, loose, black, fine SAND, grading to silt, strong petroleum odor.
4 - 6		0.0	ML	Wet, medium stiff, grey, SILT, one cobble at 21 inches.
6 - 8		0.0	CL	Moist, medium stiff, grey, CLAY, one cobble at 18 inches.
8 - 10		0.0	ML	Wet, medium stiff, grey, SILT, little clay, coarse gravel lense at 6.5 inches, no odor.
10 - 12		0.0	ML	Wet, medium stiff, grey, SILT, little clay, no odor.
12 - 14		0.0	ML	Wet, medium stiff, grey, SILT, little clay, no odor.
14 - 16	LGR-0014-45	0.0	CL	Wet, medium stiff, grey, CLAY and SILT, fine gravel lense at 11.5 inches, no odor.

Lower Genesee River, T-07-C	**Drilling Co:** ATL	**Northing:** 1167734.360
2015 Sampling	**Driller:** Tim	**Easting:** 1404393.073
8/27/2015	**Geologist:** ALB	**Mudline:** 230.559
ostly cloudy, light rain	**Rig Type:** Boat Mounted Vibracore	**Total Depth:** 19 Ft 5 in
	Weather: Mostly cloudy, light rain	**Water Depth:** 15.67 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	SW/GP	0-18 inch Wet, dense, brown, SAND. 18-25.5 inch Wet, dense, brown to black, coarse SAND and fine GRAVEL, little medium gravel.
2 - 4	LGR-0016-08	0.1	GM/ML/ SP/ML	0-14 inch Wet, dense, black, coarse SAND and fine GRAVEL, trace silt and fine sand. 14-15 inch Wet, medium stiff, gray brown, SILT. 15-23 inch Wet, dense, brown, medium SAND, trace coarse sand. 23-24.5 inch Wet, medium stiff, greyish brown, SILT, some fine sand.
4 - 6		0.1	CL/GP/SP/SW	0-2 inch Moist, soft, grey, CLAY. 2-9.5 inch Wet, medium dense, brown, medium to coarse SAND, little fine gravel, trace silt. 9.5-26 inch Wet, medium dense, brown, fine to coarse SAND and medium GRAVEL, trace silt. 26-31 inch Wet, dense, brownish grey, fine SAND, trace organics.

Lower Genesee River, T-07-E	**Drilling Co:** ATL	**Northing:** 1167830.351
2015 Sampling	**Driller:** Tim	**Easting:** 1404462.265
8/27/2015	**Geologist:** ALB	**Mudline:** 234.167
	Rig Type: Boat Mounted Vibracore	**Total Depth:** 10 Ft
	Weather:	**Water Depth:** 12.5 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	GM/ML	0-6 inch Moist, stiff, grey and brownish red, SILT and coarse to medium GRAVEL. 6-24 inch Moist, stiff, grey, SILT, fine gravel lense at 17 inches.
2 - 4	LGR-0015-12	0.0	ML	Moist, stiff, grey, SILT.
4 - 6	LGR-0015-13	0.0	ML	Wet grading to dry, soft grading to stiff, grey, SILT.
6 - 8		0.0	ML	Wet, medium stiff, grey, SILT, fine gravel lense at 19 inches.
8 - 9		0.0	ML/GM	0-10 inch Wet, stiff, grey, SILT. 10-14.5 inch Wet, stiff, grey and light brown and red, SILT, trace fine gravel and fine sand, no odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1167679.210
T-07-W	**Driller:** Tim		**Easting:** 1404316.884
2015 Sampling	**Geologist:** ALB		**Mudline:** 240.254
8/27/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather: 60s Cloudy, light rain		**Water Depth:** 6.1 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML/GM/SM	0-10 inch Wet, soft, black, SILT, trace fine gravel and fibrous organics. 10-16 inch Wet, medium stiff, brown, SILT and fine GRAVEL. 16-24 inch Wet, medium dense, brown, medium SAND and SILT, some fine gravel.
2 - 4	LGR-0015-04	0.0	SP/ML	0-12 inch Wet, medium dense, brown and grey, medium SAND, some medium to coarse gravel, no odor. 12-24 inch Wet, medium dense, grey, SILT.
4 - 6	LGR-0015-08	5.9	ML	Wet, soft, black with grey banding, SILT, trace organics, sand lense at 16 inches with very strong petroleum odor.
6 - 8		13.1	ML/OL/SC/SM	0-10 inch Wet, dense, grey brown, fine SAND. 10-15 inch Wet, loose, black, medium SAND, trace organics, strong petroleum odor. 15-20 inch Wet, medium dense, brown with some grey, coarse SAND, some fine sand, petroleum odor. 20-24 inch Wet, loose, grey with brown, fine SAND, some silt, light petroleum odor.
8 - 10	LGR-0015-06	0.6	ML	Wet, medium stiff, grey with some black banding, SILT, sand lense from 16-18 inches, petroleum odor in black bands.
10 - 12		0.0	ML/CL	0-21 inch Moist, medium stiff, gray with black banding, SILT, no odor. 21-26 inch Moist, medium stiff, black with some gray banding, CLAY.
12 - 14		0.0	ML	Moist, medium dense, grey, SILT, clay band at 19 inches.
14 - 16.6		0.0	ML	Wet, soft, grey, SILT, woody organic lense at 16.5 inches, no odor.

Lower Genesee River	**Drilling Co:** ATL	**Northing:** 1165049.451
T-08-C	**Driller:** Tim	**Easting:** 140515.698
2015 Sampling	**Geologist:**	**Mudline:** 229.083
8/27/2015	**Rig Type:** Boat Mounted Vibracore	**Total Depth:** 8 Ft
	Weather:	**Water Depth:** 17 Ft 5 in

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	SW/GW	0-16 inch Moist, medium dense, dark brown, medium SAND, some coarse sand, trace coarse gravel. 16-23 inch Wet, dense, blackish brown, coarse SAND and fine GRAVEL, trace medium to coarse gravel. 23-27.5 inch Wet, medium stiff, greyish black, coarse GRAVEL and fine to medium GRAVEL.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1165036.265
T-08-E	**Driller:** Tim		**Easting:** 1405277.163
2015 Sampling	**Geologist:** ALB		**Mudline:** 233.432
8/27/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 11.5 Ft
	Weather: Low 70s, light rain		**Water Depth:** 13.5 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	ML	Wet, soft, brownish grey with black band from 13-15 inches, SILT, sand and organic lense at 13 inches.
2 - 4	LGR-0015-20	0.0	ML	Wet, stiff, grey, SILT.
4 - 6	LGR-0015-21	0.2	ML	Wet, medium stiff, grey with one black band at 19 inches, SILT, fibrous organic lense at 4 inches.
6 - 8		0.0	ML	Moist, medium stiff, grey, SILT, sand lense at 12 inches.
8 - 8.5		0.1	ML/SW	0-1 inch Moist, medium stiff, grey, SILT. 1-8 inch Moist, dense, black, medium SAND, some woody organics.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1165086.993
T-08-W	**Driller:** Tim		**Easting:** 1405062.264
2015 Sampling	**Geologist:** ALB		**Mudline:** 243.263
8/27/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 20 Ft
	Weather:		**Water Depth:** 3 Ft 4 in

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML	Wet, soft, grey brown, SILT.
2 - 4	LGR-0016-17	1.1	ML	Wet, soft, grey brown grading to black, SILT, petroleum odor 17-24 inches.
4 - 6	LGR-0016-18	9.8	ML	Wet, soft, black, SILT, sand lense at 17.5 inches, strong petroleum odor.
6 - 8	LGR-0016-19	1.0	SM/GM	0-5 inch Wet, medium dense, brownish black, fine SAND, some silt, light petroleum odor. 5-24 inch Wet, loose, black, fine to coarse SAND, some fine to medium gravel, trace coarse gravel and silt.
8 - 10	LGR-0016-20	0.2	SP	Wet, dense, black, medium to coarse SAND and fine GRAVEL, trace coarse gravel, silt lense at 13 and 16 inches, light petroleum odor.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1163693.816
T-09-E	**Driller:** Tim		**Easting:** 1404457.918
2015 Sampling	**Geologist:** ALB		**Mudline:** 244.632
8/27/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 4.0 Ft
	Weather:		**Water Depth:** 1.9 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	ML/GM	0-21 inch Wet, medium stiff, brown changing to black at 17 inches, SILT, little organics. 21-28 inch Wet, loose, black, medium SAND and fine to medium GRAVEL, little silt, trace organics.

Lower Genesee River	**Drilling Co:**		**Northing:** 1163886.504
T-09-W	**Driller:**		**Easting:** 1404256.936
2015 Sampling	**Geologist:**		**Mudline:** 240.741
8/27/2015	**Rig Type:**	Boat Mounted Vibracore	**Total Depth:** 7.0 Ft
Cloudy, 65 deg	**Weather:**	Cloudy, 65 degrees	**Water Depth:** 5 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	ML	Wet, soft, brown to black, SILT, trace organics and fine sand, trace fine gravel, no odor.
2 - 4	LGR-0016-28	0.0	GP	Wet, dense, black, medium to coarse SAND, some fine to coarse gravel, little silt, trace cobble.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1145252.432
T-10-E	**Driller:** Tim		**Easting:** 1406277.026
2015 Sampling	**Geologist:** ALB		**Mudline:** 509.229
9/1/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 11 Ft 3 in
	Weather:		**Water Depth:** 1.8 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.1	ML	Wet, soft, brown with black banding, SILT, no odor.
2 - 4	LGR-0017-12	0.1	ML	Wet, soft, brown with black banding, SILT, no odor.
4 - 6	LGR-0017-13	0.2	ML/SW	0-11 inch Wet, soft, grey, SILT. 11-14 inch Wet, soft, grey, SILT, some clay. 14-24 inch Moist, medium dense, grey, fine SAND, little silt.
6 - 8		0.0	ML/SW/ ML	0-18 inch Wet, soft, grey brown, SILT, no odor. 18-21 inch Wet, medium dense, brown, fine SAND. 21-24 inch Wet, soft, brown, SILT.
8 - 9		0.0	ML	0-11 inch Wet, soft, brown grey, SILT, trace woody organics.

Lower Genesee River	**Drilling Co:** ATL		**Northing:** 1145044.513
T-10-W	**Driller:** Tim		**Easting:** 1405794.463
2015 Sampling	**Geologist:** ALB		**Mudline:** 506.281
9/1/2015	**Rig Type:** Boat Mounted Vibracore		**Total Depth:** 8 Ft
	Sample Method:		**Water Depth:** 5.0 Ft

Depth (ft)	Sample ID	PID	USCS	Soil Description
0 - 2		0.0	ML	Wet, soft, greyish brown with black banding, SILT, sand lense at 16 inches.
2 - 4		0.0	ML	Wet, medium stiff, grey with little black banding, SILT and CLAY.
4 - 5		0.0	ML	Wet, medium stiff, grey brown, SILT and CLAY.

APPENDIX C – EXCAVATION WORK PLAN (EWP) TEMPLATE

C-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the Site's cover system, the party proposing the work, or their representative will notify the New York State Department of Environmental Conservation (NYSDEC) contacts listed in the table below. Table C-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in Appendix A of the Site Management Plan (SMP).

Table 1: Notifications[1]

Lisa Gorton, PE NYSDEC Project Manager	(518) 402-9574 lisa.gorton@dec.ny.gov
Michael Cruden, PE NYSDEC Remediation Bureau E Director	(518) 402-9825 Michael.cruden@dec.ny.gov
Melissa Doroski NYSDOH[2] Project Manager	(518) 402-7860 beei@health.ny.gov

[1] Notifications are subject to change and will be updated as necessary
[2] NYSDOH – New York State Department of Health

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for Site regrading, intrusive elements, or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated, any modifications of truck routes, and any work that may impact an engineering control (EC)
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, 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 Excavation Work Plan (EWP)
- A statement that the work will be performed in compliance with this EWP, 29 Code of Federal Regulations (CFR) 1910.120 and 29 CFR 1926 Subpart P
- A copy of the contractor's health and safety plan (HASP), in electronic format
- Identification of disposal facilities for potential waste streams
- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results

The NYSDEC project manager will review the notification and may impose additional requirements for the excavation that are not listed in this EWP.

C-2 SOIL/SEDIMENT SCREENING METHODS

Visual, olfactory, and instrument-based (e.g., photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination) or a breach of the cover system. A Qualified Environmental Professional (QEP) as defined in 6 New York Codes, Rules and Regulations (NYCRR) Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil/sediment screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work.

Soils/sediments will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on site beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections C-6 and C-7 of this EWP, respectively.

C-3 SOIL/SEDIMENT STAGING METHODS

Soil/sediment 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.

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.

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 at the Site and available for inspection by the NYSDEC.

C-4 MATERIALS EXCAVATION AND LOAD-OUT

A QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are 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 QEP. 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. A Site utility stakeout will be completed for all utilities prior to any ground intrusive activities at 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 New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements).

A truck wash will be operated on site, as appropriate. The QEP will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

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

The QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable federal, state, and local regulations.

C-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.

Truck transport routes are as follows: [*describe route and provide map*]. 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 considers: (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.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

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

C-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all federal, state, and local regulations. If disposal of material from this

Site is proposed for unregulated off-site disposal (i.e., clean soil/sediment removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils/sediments will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (e.g., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction and debris [C&D] recovery facility) Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report (PRR). This documentation will include, but will not be limited to waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils/sediments taken off site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted Soil Cleanup Objections (SCOs) is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 360-15 registered or permitted facility).

C-7 MATERIALS REUSE ON SITE

The QEP as defined in 6 NYCRR part 375 will ensure that procedures defined for materials reuse in the SMP are followed and that unacceptable material (i.e., contaminated) does not remain on site. Contaminated on-site material, including historic fill and contaminated soil/sediment, which is acceptable for reuse 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.

Proposed materials for reuse on site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane, as shown in Table 2.

Table 2: Analytical Parameters

Group	Chemical Name	Group	Chemical Name
Metals[1]	Arsenic	Polychlorinated biphenyls/ Pesticides[1]	2,4,5-TP Acid (Silvex)
	Barium		4,4'-DDE
	Beryllium		4,4'-DDT
	Cadmium		4,4'-DDD
	Chromium, Hexavalent[4]		Aldrin
	Chromium, Trivalent[4]		Alpha-BHC
	Copper		Beta-BHC
	Cyanide		Chlordane (alpha)
	Lead		Delta-BHC
	Manganese		Dibenzofuran
	Mercury (total)		Dieldrin
	Nickel		Endosulfan I
	Selenium		Endosulfan II
	Silver		Endosulfan sulfate
	Zinc		Endrin
Volatile Organic Compounds[1]	1,1,1-Trichloroethane		Heptachlor
	1,1-Dichloroethane		Lindane
	1,1-Dichloroethene		Polychlorinated biphenyls
	1,2-Dichlorobenzene	Semi-volatile Organic Compounds[1]	Acenaphthene
	1,2-Dichloroethane		Acenaphthylene
	1,2-Dichloroethene(cis)		Anthracene
	1,2-Dichloroethene(trans)		Benzo(a)anthracene
	1,3-Dichlorobenzene		Benzo(a)pyrene
	1,4-Dichlorobenzene		Benzo(b)fluoranthene
	1,4-Dioxane		Benzo(g,h,i)perylene

Group	Chemical Name	Group	Chemical Name
Volatile Organic Compounds (cont.)[1]	Acetone	Semi-volatile Organic Compounds (cont.)[1]	Benzo(k)fluoranthene
	Benzene		Chrysene
	Butylbenzene		Dibenz(a,h)anthracene
	Carbon tetrachloride		Fluoranthene
	Chlorobenzene		Fluorene
	Chloroform		Indeno(1,2,3-cd)pyrene
	Ethylbenzene		m-Cresol(s)
	Hexachlorobenzene		Naphthalene
	Methyl ethyl ketone		o-Cresol(s)
	Methyl tert-butyl ether		p-Cresol(s)
	Methylene chloride		Pentachlorophenol
	Propylbenzene-n		Phenanthrene
	Sec-Butylbenzene		Phenol
	Tert-Butylbenzene		Pyrene
	Tetrachloroethene	Perfluoroalkyl carboxylic acids[2]	Perfluorobutanoic acid
	Toluene		Perfluoropentanoic acid
	Trichloroethene		Perfluorohexanoic acid
	Trimethylbenzene-1,2,4		Perfluoroheptanoic acid
	Trimethylbenzene-1,3,5		Perfluorooctanoic acid
	Vinyl chloride		Perfluorononanoic acid
	Xylene (mixed)		Perfluorodecanoic acid
Perfluoroalkyl sulfonic acids[2]	Perfluorobutanesulfonic acid		Perfluoroundecanoic acid
	Perfluoropentanesulfonic acid		Perfluorododecanoic acid
	Perfluorohexanesulfonic acid		Perfluorotridecanoic acid
	Perfluoroheptanesulfonic acid		Perfluorotetradecanoic acid
	Perfluorooctanesulfonic acid	Fluorotelomer sulfonic acids[2]	4:2 Fluorotelomer sulfonic acid
	Perfluorononanesulfonic acid		6:2 Fluorotelomer sulfonic acid

Group	Chemical Name
Perfluoroalkyl sulfonic acids (cont)[2]	Perfluorodecanesulfonic acid
	Perfluorododecanesulfonic acid
Per- and Polyfluoroether carboxylic acids[2]	Hexafluoropropylene oxide dimer acid
	4,8-Dioxa-3H-perfluorononanoic acid
	Perfluoro-3-methoxypropanoic acid
	Perfluoro-4-methoxybutanoic acid
	Nonafluoro-3,6-dioxaheptanoic acid
Perfluorooctane sulfonamidoacetic acids[2]	N-methylperfluorooctane sulfonamidoacetic acid
	N-ethylperfluorooctane sulfonamidoacetic acid
Ether sulfonic acids[2]	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic
	acid (F-53B Major)
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic
Fluorotelomer sulfonic acids (cont)[2]	8:2 Fluorotelomer sulfonic acid
Fluorotelomer carboxylic acids[2]	3:3 Fluorotelomer carboxylic acid
	5:3 Fluorotelomer carboxylic acid
	7:3 Fluorotelomer carboxylic acid
Perfluorooctane sulfonamides[2]	Perfluorooctane sulfonamide
	N-methylperfluorooctane sulfonamide
	N-ethylperfluorooctane sulfonamide
Perfluorooctane sulfonamide ethanols[2]	N-methylperfluorooctane sulfonamidoethanol
	N-ethylperfluorooctane sulfonamidoethanol

[1] NYSDEC DER-10 Section 5.4(e)(5) Technical Guidance for Site Investigation and Remediation, May 2010.

[2] NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, November 2022.

The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents identified in "If Ecological Resources are Present" (May 2010 or date of current version, whichever is most recent), and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (November 2022 or date of current version, whichever is later) guidance values (see Table 2). Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on site will be segregated and staged as described in Sections C-2 and C-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of excavation activities and proximity to nearby Site features. Material reuse on site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

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 will not be performed on site without prior NYSDEC approval. Organic matter (e.g., wood, roots, stumps) or other solid waste derived from clearing and grubbing of the Site will not be reused on site.

C-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported, and disposed off-site at a permitted facility in accordance with applicable local, state, and federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the Site, and will be managed off site, unless prior approval is obtained from NYSDEC.

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.

C-9 COVER SYSTEM RESTORATION

After the completion of sediment removal and any other invasive activities the cover system will be restored in a manner that complies with the Statement of Basis. The existing cover system is comprised of a minimum of 12 inches of clean sand (grain size less than ¾ inches) overlain by a minimum of 12 inches of fine gravel (grain size ½-inch to 4 inches). If the type of cover system changes from that which exists prior to the excavation 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 PRR and in an updated SMP.

C-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the QEP, as defined in 6 NYCRR Part 375, and will comply with provisions in this SMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of five business days for review.

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

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) and DER-10 Appendix 5 for ecological use. Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane (see Table 2). Solid waste will not be imported onto the Site.

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.

C-11 STORMWATER POLLUTION PREVENTION

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 the 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 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.

C-12 EXCAVATION 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. The NYSDEC project manager will be promptly notified of the discovery.

Sampling will be performed on product, sediment, and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (Target Analyte List [TAL] metals, Target Compound List [TCL] volatiles and semi-volatiles [including 1,4-dioxane], TCL pesticides and polychlorinated biphenyls [PCBs], and PFAS), unless the Site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by telephone within two hours 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 PRR.

C-13 COMMUNITY AIR MONITORING PLAN

[This section should provide all details of the Community Air Monitoring Plan (CAMP). Guidance can be obtained in Appendix 1A of DER-10, Generic Community Air Monitoring Plan. At a minimum, this section must include:

- *Details of the perimeter air monitoring program*
- *Action levels to be used*
- *Air monitoring methods*
- *Analytes measured and instrumentation to be used*

The following text should be included somewhere in this section:]

A figure showing the location of air sampling stations based on generally prevailing wind conditions is shown in Figure [*X*]. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

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

C-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors on and off site. Specific odor control methods to be used on a routine basis will include [*define elements*]. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the PRR.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil/sediment stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils/sediments. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d)

direct load-out of soils/sediments to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

C-15 DUST CONTROL PLAN

Particulate monitoring must be conducted according to the CAMP provided in Section C-13. If particulate levels at the Site exceed the thresholds listed in the CAMP or if airborne dust is observed on the Site or leaving the Site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the Site.

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

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

C-16 OTHER NUISANCES

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

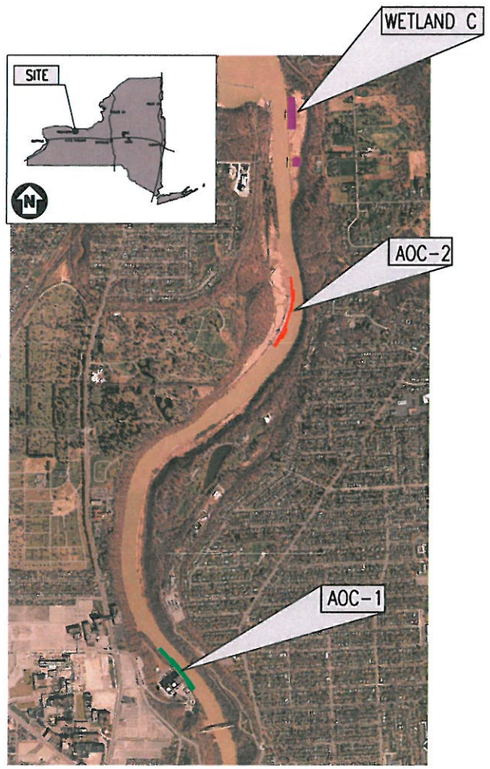
APPENDIX D – RECORD DRAWINGS

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

ENVIRONMENTAL RESPONSE TRUST
LOWER GENESEE RIVER (OU-5) EASTMAN BUSINESS PARK
Site No. 828177, Contract No. D011858

City of Rochester, Monroe County, New York
Corrective Measures Remedial Construction



SITE LOCATION MAP
Not To Scale

DRAWING INDEX

DRAWING No.	GENERAL
G-001	TITLE SHEET , DRAWING INDEX, AND SITE LOCATION
G-002	GENERAL NOTES
C-001	SITE PLAN
C-002	EXISTING CONDITIONS AOC-1
C-003	EXISTING CONDITIONS AOC-2
C-004	EXISTING CONDITIONS WETLAND C
C-005	KINGS LANDING STAGING AREA
C-006	CONTRACTOR CLEAN STAGING SUPPORT ZONE
C-007	EXCAVATION/DREDGING PLAN AOC-1
C-008	EXCAVATION/DREDGING PLAN AOC-2
C-009	EXCAVATION/DREDGING PLAN WETLAND C
C-010	CROSS SECTIONS AOC-1
C-011	CROSS SECTIONS AOC-2
C-012	CROSS SECTIONS WETLAND C
C-013	CAPPING PLAN AOC-1
C-014	CAPPING PLAN AOC-2
C-015	BACKFILL/RESTORATION PLAN WETLAND C
C-016	DETAIL SHEET
C-017	RESERVED
C-018	DETAIL SHEET
C-019	DETAIL SHEET
C-020	DETAIL SHEET

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

STATE OF NEW YORK
EDWARD CADWELL GAZE
070909
LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560
JOB: 452506
WBS:

PROJECT TITLE
NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
TITLE SHEET, DRAWING INDEX AND SITE LOCATION

SCALE: NONE

DRAWING NO.: 452506-G-001 | REV.: 2

FILE NAME: P:\WPSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\GEN\452506-RD-G001.DWG
PLOT DATE: 8/8/2022 10:17 AM PLOTTED BY: RUSSO, JILL [US-US]

SCHEDULE:

THE FOLLOWING SCHEDULE MILESTONES HAVE BEEN ESTABLISHED FOR IN-WATER WORK RESTRICTIONS AND PLANTING BEST MANAGEMENT PRACTICES:

• MOBILIZATION/UPLAND/SHORELINE SITE PREPARATION	APRIL – MAY 2021
• WETLAND C	
–FISH SPAWNING RESTRICTION – NO IN-WATER WORK (WETLAND C)	~~APRIL 15 TO MAY 31~~
–IN RIVER – DREDGING AND BACKFILLING OPERATIONS	~~JULY 1 TO OCT 15~~ JUNE 1 TO OCT 15
–RESTORATION – PLANTING	NO LATER THAN OCT 30
• AOC1 & AOC2	
–FISH SPAWNING RESTRICTION – NO IN-WATER WORK (AOC1 & AOC2)	~~APRIL 15 TO JUNE 30~~
–IN-RIVER DREDGING AND CAPPING	JULY 1 TO ~~SEPTEMBER 30~~ OCT 31
–SUBSTANTIAL COMPLETION	SEPT 17
–FINAL COMPLETION	SEPT 30
–FISH SPAWNING RESTRICTION – NO IN-WATER WORK (AOC1 & AOC2)	OCT 1 TO NOV 30
• UPLAND RESTORATION / DEMOBILIZATION	OCT–NOV 2021
• CONTRACT SUBSTANTIAL COMPLETION	NOVEMBER 2021
• CONTRACT FINAL COMPLETION	DECEMBER 2021

CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ENVIRONMENTAL PERMIT CONDITIONS PROVIDED IN SECTION IX, SUPPLEMENTARY CONDITIONS.

SUMMARY OF THE WORK:

- PRE-CONSTRUCTION CONFERENCE/ PREPARATION OF CONTRACTOR PLANS
- MOBILIZATION TO THE SITE AND INSTALLATION OF TEMPORARY FACILITIES AND EQUIPMENT
- HEALTH AND SAFETY
- PERFORM A PRECONSTRUCTION BATHYMETRIC SURVEY TO VERIFY PRECONSTRUCTION GRADES AND CONDITIONS.
- PERFORM PRE- AND POST-CONDITION SURVEYS AND OPTICAL MONITORING OF THE KINGS LANDING WASTE WATER TREATMENT PLANT (KLWWTP) EXISTING SHEET PILE WALL AND ADJACENT STRUCTURAL TANK WALL.
- PREPARE STAGING AREA TO THE NORTH OF THE KLWWTP INCLUDING THE DESIGN AND INSTALLATION OF A LOADING/OFFLOADING AND DOCKING FACILITY
- LIMITED TREE CLEARING TO PROVIDE ACCESS TO THE RIVER
- INSTALL EROSION AND SEDIMENTATION CONTROL DEVICES
- INSTALL DECONTAMINATION/STAGING PADS
- INSTALLATION AND OPERATION OF TURBIDITY CONTROL AND MONITORING SYSTEMS
- INSTALL TEMPORARY WWTP INCLUDING PROOF OF PERFORMANCE TESTING.
- EXCAVATION/DREDGING, DEWATERING, AND SOLIDIFICATION OF IMPACTED SEDIMENT FROM WITHIN THE RIVER ADJACENT TO THE KLWWTP (AREA AOC1)
- EXCAVATION/DREDGING, DEWATERING, AND SOLIDIFICATION OF IMPACTED SEDIMENT FROM WITHIN THE RIVER ADJACENT TO WETLAND D (AREA AOC2)
- EXCAVATION/DREDGING, DEWATERING, AND SOLIDIFICATION OF IMPACTED SEDIMENT AND SOIL FROM THE WETLAND C AREA (WETLAND C)
- PRE-TREATMENT OF CONSTRUCTION WATER TO SPECIFIED DISCHARGE CRITERIA AND DISCHARGE TO THE KLWWTP
- CHARACTERIZATION, TRANSPORTATION, AND OFFSITE DISPOSAL OF EXCAVATED/DREDGED SEDIMENT.
- CAPPING OF APPROXIMATELY 4.1 ACRES WITHIN THE RIVER NEAR KLWWTP (AOC1) AND WETLAND D (AOC2)
- BACKFILL OF APPROXIMATELY 2 ACRES WITHIN WETLAND C
- RESTORATION OF DISTURBED AREAS, INCLUDING WETLAND PLANTINGS
- DEMOBILIZATION

SITE-SPECIFIC CRITERIA:

- THE ALLOWABLE OVERDREDGE ALLOWANCE FOR EACH AREA IS AN AVERAGE OF SIX INCHES.
- ELEVATIONS AFTER DREDGING AND BACKFILLING ARE TO BE APPROXIMATELY EQUAL TO THE PRE-WORK ELEVATIONS (WITH THE EXCEPTION OF THE CAP ONLY AREAS AT AOC1).
- FOR AOC1:
  - –NO EQUIPMENT SHALL BE STAGED OR OPERATED LANDSIDE OF AOC-1 OUTSIDE OF DESIGNATED STAGING AREAS; ALL WORK TO BE PERFORMED FROM THE WATER.
  - –DREDGING ONLY IN AREAS DESIGNATED ON THE CONTRACT DRAWINGS.
  - –NO CAPPING, SPUDDING OR ANCHORING WITHIN 20 FEET OF OUTFALL PIPES AND OUTLETS
- FOR AOC1 AND AOC2:
  - –DREDGING TO A DEPTH OF APPROXIMATELY 2.5' TO BE CONDUCTED IN AREAS WITH POTENTIAL FOR GREATER THAN 4 INCHES OF SCOUR DURING A 100-YR FLOOD EVENT TO ACCOMMODATE PLACEMENT OF AN ISOLATION CAP OVER DEEPER SEDIMENTS EXCEEDING THE SITE SPECIFIC TOXICITY BASED THRESHOLD OF 70 mg/kg SILVER. CONFIRMATORY SAMPLING WILL NOT BE REQUIRED.
  - –DREDGE FROM UPSTREAM TO DOWNSTREAM AND UPSLOPE TO DOWNSLOPE.
  - –CAP FROM UPSTREAM TO DOWNSTREAM AND DOWNSLOPE TO UPSLOPE.
  - –CAP LAYERS CONSIST OF A CHEMICAL ISOLATION LAYER OVERLAYED BY A HABITAT/EROSION PROTECTION LAYER
- WORK WITHIN WETLAND C CONSISTS OF THE FOLLOWING:
  - –AREAS TO BE REMEDIATED ARE BASED ON EXCEEDANCES OF THE SITE-SPECIFIC TOXICITY-BASED THRESHOLD OF 70 MG/KG SILVER IN THE TOP TWO FEET OF SEDIMENT. CONFIRMATORY SAMPLING WILL NOT BE REQUIRED.
  - –THE ROOT MASS THICKNESS IS ESTIMATED TO BE SIX INCHES.
  - –REMOVE AND DISPOSE OF THE ROOT MASS WITH THE EXCAVATED SEDIMENT.
  - –MINIMIZE DISTURBANCE TO THE WETLAND BETWEEN THE RIVER AND THE AREA TO BE REMEDIATED. RESTORE THE DISTURBED AREA PER THE REQUIREMENTS FOR WETLAND RESTORATION.
  - –RESTORATION WITH A BACKFILL LAYER OVERLAYED BY A TOPSOIL LAYER WITH SEEDING AND PLANTINGS.

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

STATE OF NEW YORK
EDWARD CADWELL GLASS
070909
LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ ECG	WJL

DRAWN BY: JR	DATE: 11/24/20
CHECKED BY: TCD/ECG	DATE: 11/24/20
APPROVED BY: WJL	DATE: 11/24/20
PROJECT MGR.: MLV	DATE: 11/24/20

SEAL

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB: 452506
WBS:

PROJECT TITLE
NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

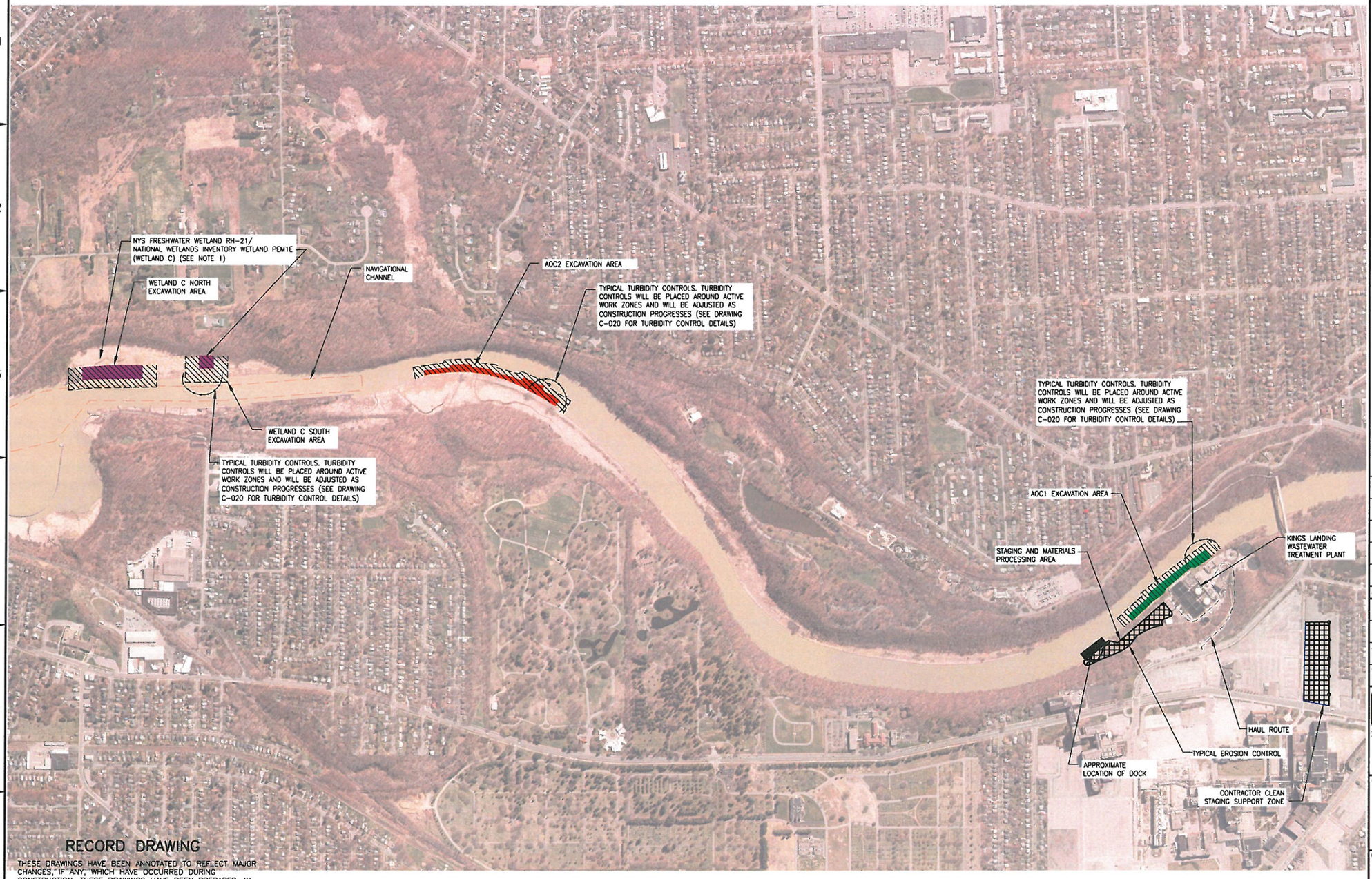
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
GENERAL NOTES

SCALE: NONE

DRAWING NO.: 452506-G-002 REV.: 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\GEN\452506-RD-G001.DWG
PLOT DATE: 8/8/2022 10:15 AM PLOTTED BY: RUSSO, JILL [US-US]



RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

LEGEND:

- AOC1
- AOC2
- WETLAND C (NYS FRESHWATER WETLAND RH-21/NATIONAL WETLANDS INVENTORY WETLAND PEM1E)
- STAGING AREAS
- WORK AREAS

STATE OF NEW YORK
EDWARD CADWELL GARZA
070909
LICENSED PROFESSIONAL ENGINEER

SURVEY NOTES:

1. AREA NOTED IS PART OF NYS FRESHWATER WETLAND RH-21/NATIONAL WETLANDS INVENTORY WETLAND PEM1E. IT WILL BE REFERRED TO AS WETLAND C FOR THIS PROJECT.
2. BASE MAP IN NAD83 NY WEST STATE PLANE, NAVD88 US SURVEY FT ELEVATION.
3. BATHYMETRIC RIVER SURVEYS CONDUCTED BY AQUA SURVEY, FLEMINGTON, NJ ON SEPTEMBER 8-9, 2015 AND JULY 22-24, 2019.
4. WETLAND C SURVEY CONDUCTED BY FISHER ASSOCIATES, ROCHESTER, NY ON NOVEMBER 21, 2019.
5. KLWWTP STAGING AREA SURVEYS CONDUCTED BY POPLI DESIGN GROUP, PENFIELD, NY ON AUGUST 1-7, 2019 AND APRIL 6-7, 2020.

500 250 0 500 1000

SCALE: 1"=500'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

SEAL

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE DEC | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

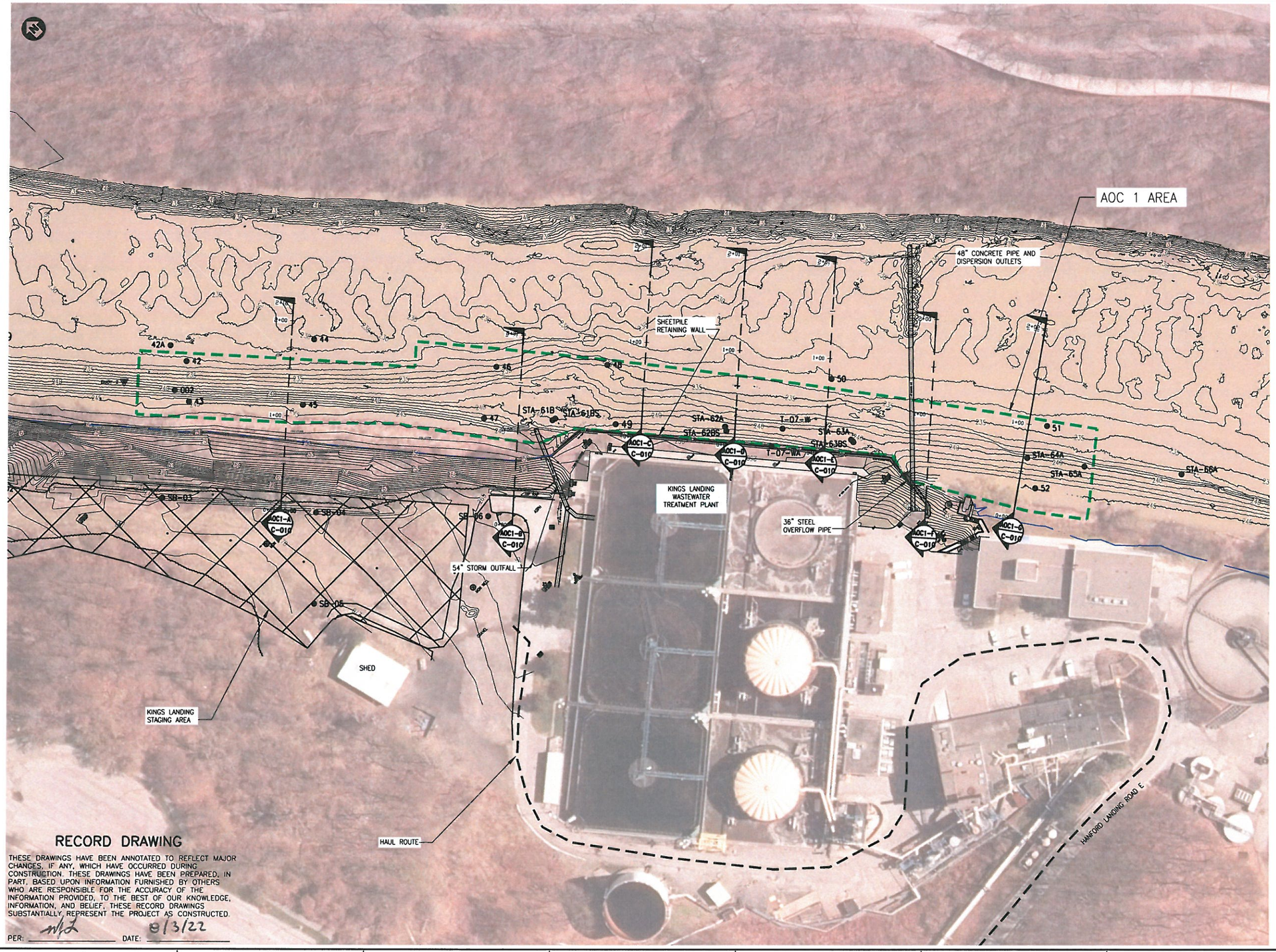
SITE PLAN

SCALE: AS SHOWN

DRAWING NO.: 452506-C-001

REV.: 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C001.DWG
PLOT DATE: 8/8/2022 11:17 AM PLOTTED BY: RUSSO, JILL (US-US)



RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: WJL DATE: 8/3/22

LEGEND:

- RIVER SAMPLE LOCATIONS
- SB SOIL BORING
- GROUNDWATER SAMPLE LOCATIONS
- AOC 1 BOUNDARY
- STAGING AND MATERIALS PROCESSING AREA
- OHMW (ORDINARY HIGH WATER MARK) APPROX 249.13'

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

50 25 0 50 100
SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

SEAL

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

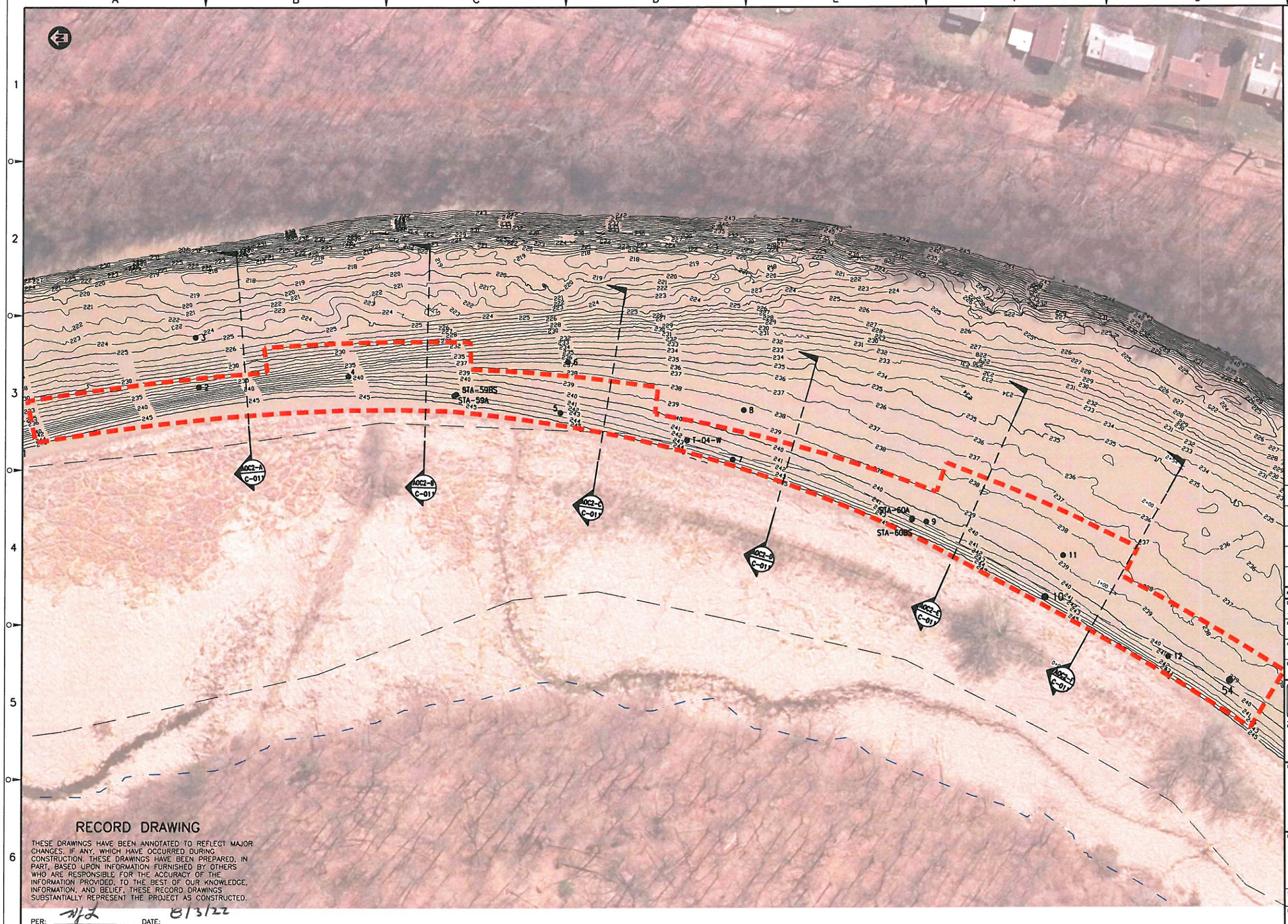
EXISTING CONDITIONS
AOC 1

SCALE: AS SHOWN

DRAWING NO.: 452506-C-002

REV.: 2

FILE NAME: P:\WYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C002.DWG
PLOT DATE: 8/8/2022 12:06 PM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

- RIVER SAMPLE LOCATIONS
- NEW YORK STATE WETLAND
- AOC 2 BOUNDARY
- OHMW (ORDINARY HIGH WATER MARK) APPROX 249.13'

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

50 25 0 50 100
SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CH'D	APP'D
2	RECORD DRAWING		JR	TCD/ ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ ECG	WJL

DRAWN BY: JR	DATE: 11/24/20
CHECKED BY: TCD/ECG	DATE: 11/24/20
APPROVED BY: WJL	DATE: 11/24/20
PROJECT MGR.: MLV	DATE: 11/24/20

SEAL

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

EXISTING CONDITIONS
AOC 2

SCALE: AS SHOWN

DRAWING NO.: 452506-C-003

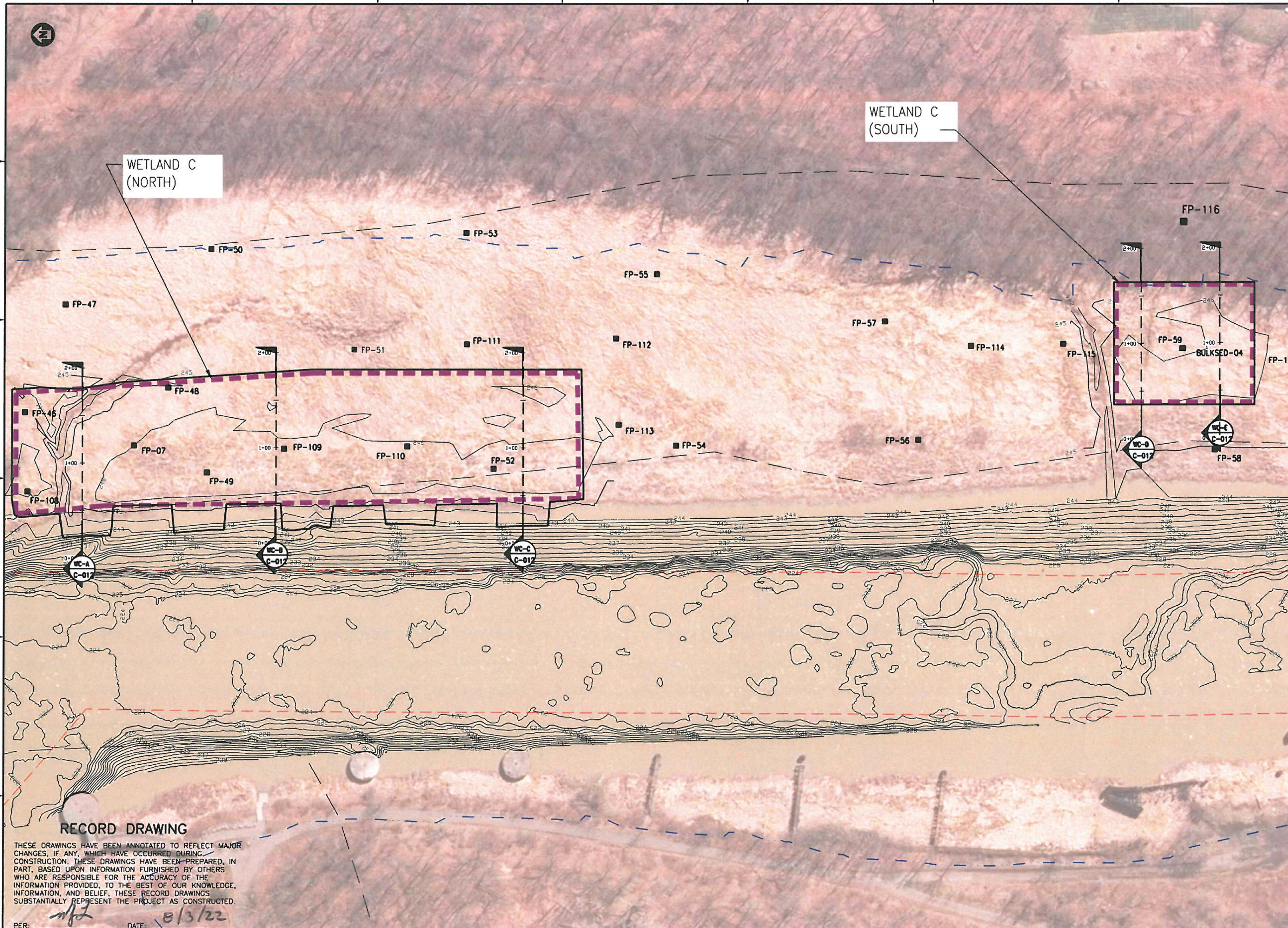
REV.: 2

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: WJL DATE: 8/3/22

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C002.DWG
PLOT DATE: 8/8/2022 12:09 PM PLOTTED BY: RUSSO, JILL (US-US)



RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: [signature] DATE: 8/3/22

LEGEND:

- FLOODPLAIN/WETLANDS SAMPLE LOCATIONS
- NEW YORK STATE WETLAND (ESTIMATED)
- WETLAND C BOUNDARY
- OHMW (ORDINARY HIGH WATER MARK) APPROX 249.13'
- NAVIGATIONAL CHANNEL

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

NOTE:

1. REMEDIATION AREAS ARE BASED ON EXCEEDANCES OF THE SITE SPECIFIC TOXICITY BASED THRESHOLD OF 70 mg/kg SILVER IN THE TOP 2 FEET OF SEDIMENT.

50 25 0 50 100

SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY: JR	DATE: 11/24/20	SEAL
CHECKED BY: TCD/ECG	DATE: 11/24/20	
APPROVED BY: WJL	DATE: 11/24/20	
PROJECT MGR.: MLV	DATE: 11/24/20	

PARSONS

OFFICE: 301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

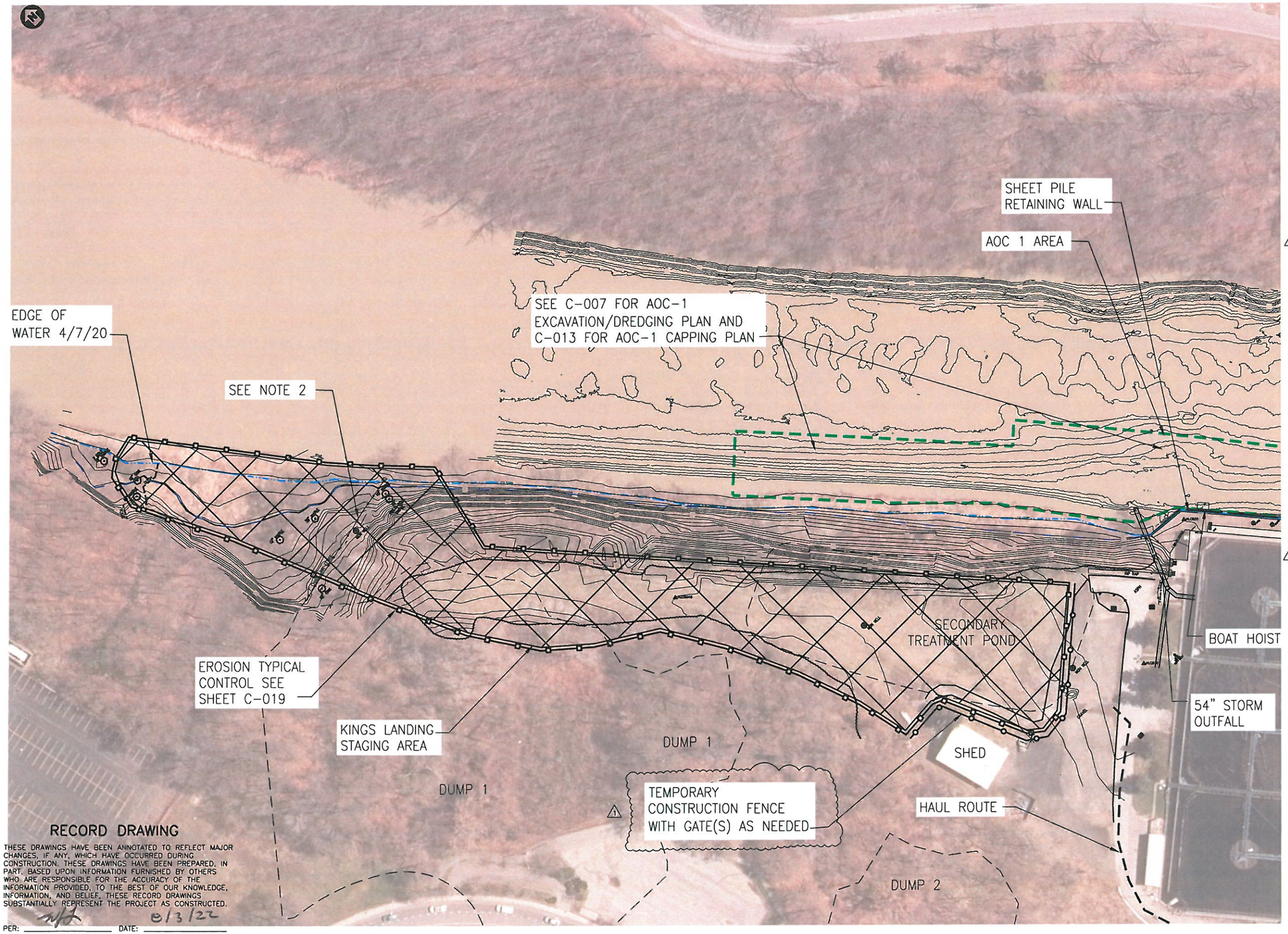
DRAWING TITLE:

EXISTING CONDITIONS
WETLAND C

SCALE: AS SHOWN

DRAWING NO.: 452506-C-004 REV.: 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CIV\452506-RD-C002.DWG
PLOT DATE: 6/6/2022 12:10 PM PLOTTED BY: RUSSO, JILL [US-US]



RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

LEGEND:

- AOC 1 BOUNDARY
- FORMER SECONDARY TREATMENT PONDS AND DUMPS
- STAGING AND MATERIALS PROCESSING AREA
- MONITORING WELL
- SILT FENCE
- TEMPORARY CONSTRUCTION FENCE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13'
- BENCHMARK (SEE SHEET C-016)

NOTES:

1. MINIMIZE TREE CUTTING TO THE EXTENT POSSIBLE. NO TREE CUTTING PERMITTED ALONG THE BANK OR OVER HISTORICAL DUMP AREAS.
2. REMOVE AND REPLACE FENCE BETWEEN RG&E AND KODAK PROPERTY.
3. LAY GEOTEXTILE AND GRAVEL DOWN OVER STAGING AREA AND RESTORE TO ORIGINAL CONDITION FOLLOWING CONSTRUCTION COMPLETION SURFACE DISTURBANCE IS LIMITED TO CLEARING AND GRUBBING, NOT TO EXCEED 6-INCHES IN DEPTH. REGRADING OUTSIDE THE FORMER DUMP/POND AREAS MAY EXCEED 6 INCHES PROVIDED HISTORIC FILL IS NOT ENCOUNTERED. NOTE THAT THE LIMIT OF HISTORIC FILL IS ESTIMATED.
4. RESTORE AREA AT RIVER ACCESS POINT TO ORIGINAL GRADE, INCLUDING ADDITION OF 12 INCHES OF TOPSOIL AND THE SAME SEED MIX AS SPECIFIED FOR WETLAND C.
5. CONTRACTOR TO PROPOSE LAYOUT OF OPERATION, TO INCLUDE AREAS FOR STOCKPILES, TRUCK SCALE, DECONTAMINATION PAD/TIRE WASH, WASTEWATER TREATMENT, AND ANY OTHER NECESSARY STRUCTURES AND PROCESSES.
6. NO WORK ALLOWED WITHIN 25 FEET OF THE SHED TO PROVIDE CONTINUAL ACCESS TO THE SHED FOR KLWWTP EMPLOYEES.
7. PROTECT MONITORING WELLS DURING WORK.
8. PROTECT THE BOAT HOIST AT THE NORTHERN END OF THE SHEET PILE WALL DURING CONSTRUCTION. NOT FOR USE BY CONTRACTOR.
9. NO MATERIAL STOCKPILES ALLOWED WITHIN 20 FEET OF THE TOP OF SLOPE.
10. CONTRACTOR TO DESIGN AND CONSTRUCT TEMPORARY DOCKING & LOADING/STAGING FACILITY. THE DESIGN IS TO BE STAMPED BY A PROFESSIONAL ENGINEER.
11. INSPECT SLOPE BETWEEN STAGING AREA AND RIVER FOR SIGNS OF MOVEMENT PRIOR TO AND DURING CONSTRUCTION.

50 25 0 50 100

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY: JR	DATE: 11/24/20
CHECKED BY: TCD/ECG	DATE: 11/24/20
APPROVED BY: WJL	DATE: 11/24/20
PROJECT MGR.: MLV	DATE: 11/24/20

SEAL

STATE OF NEW YORK — TIMOTHY C. DEWELL — 070909 — LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

KINGS LANDING STAGING AREA

SCALE: AS SHOWN

DRAWING NO.: 452506-C-005

REV.: 2

FILE NAME: P:\WYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C007.DWG
PLOT DATE: 8/8/2022 4:13 PM PLOTTED BY: RUSSO, JILL [US-US]

LEGEND:

PERIMETER

TEMPORARY CONSTRUCTION FENCE

NOTES:

1. CONTRACTOR USE IS DESIGNATED EXCLUSIVELY AS A CLEAN SUPPORT AREA INCLUDING TEMPORARY OFFICES, PERSONNEL PARKING, TRUCK STAGING, AND CLEAN MATERIAL STOCKPILING.
2. CONTRACTOR WILL BE REQUIRED TO INSTALL EROSION CONTROL AND STABILIZED (ANTI-TRACKING) CONSTRUCTION ENTRANCES IF AREA IS DESIGNATED FOR THE STAGING AND STORAGE OF AGGREGATE MATERIALS.
3. PROVIDE EROSION CONTROLS (SILT SOCKS) AROUND CAP MATERIALS/ AGGREGATE STOCKPILES.
4. PROTECT LIGHT POLES AND OVERHEAD ELECTRIC LINES FROM DAMAGE. (NOT SHOWN ON DRAWING)

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

50 25 0 50 100

SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

		SEAL
DRAWN BY: JR	DATE: 11/24/20	
CHECKED BY: TCD/ECG	DATE: 11/24/20	
APPROVED BY: WJL	DATE: 11/24/20	
PROJECT MGR.: MLV	DATE: 11/24/20	

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

CONTRACTOR CLEAN STAGING SUPPORT ZONE

SCALE: AS SHOWN

DRAWING NO.: 452506-C-006

REV.: 2

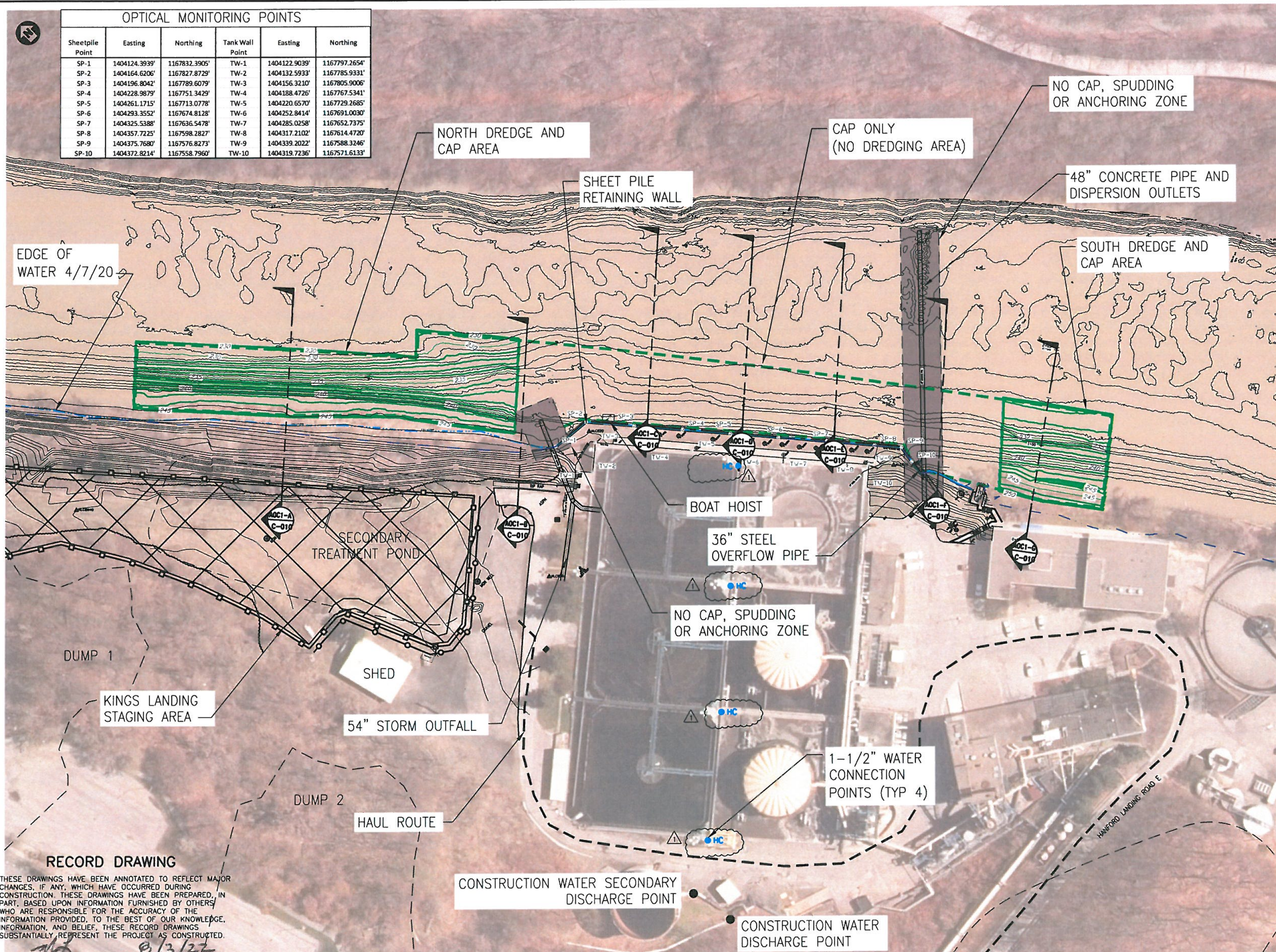
RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CWA\452506-RD-C002.DWG
PLOT DATE: 8/8/2022 12:11 PM PLOTTED BY: RUSSO, JILL [US-US]

OPTICAL MONITORING POINTS					
Sheetpile Point	Easting	Northing	Tank Wall Point	Easting	Northing
SP-1	1404124.3939'	1167832.3905'	TW-1	1404122.9039'	1167797.2654'
SP-2	1404164.6206'	1167827.8729'	TW-2	1404132.5933'	1167785.9331'
SP-3	1404196.8042'	1167789.6079'	TW-3	1404156.3210'	1167805.9006'
SP-4	1404228.9879'	1167751.3429'	TW-4	1404188.4726'	1167767.5341'
SP-5	1404261.1715'	1167713.0778'	TW-5	1404220.6570'	1167729.2685'
SP-6	1404293.3552'	1167674.8128'	TW-6	1404252.8414'	1167691.0030'
SP-7	1404325.5388'	1167636.5478'	TW-7	1404285.0258'	1167652.7375'
SP-8	1404357.7225'	1167598.2827'	TW-8	1404317.2102'	1167614.4720'
SP-9	1404375.7680'	1167576.8273'	TW-9	1404339.2022'	1167588.3246'
SP-10	1404372.8214'	1167558.7960'	TW-10	1404319.7236'	1167571.6133'



RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: [signature] DATE: 8/3/22

LEGEND:

- AOC 1 BOUNDARY
- NO CAP, SPUDDING OR ANCHORING ZONE
- EXISTING CONTOURS
- POST-DREDGING CONTOURS
- SILT FENCE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13'
- OPTICAL MONITORING POINTS
- BENCHMARK (SEE SHEET C-016)

NOTES:

1. PERFORM A PRE-DREDGING BATHYMETRIC SURVEY TO DETERMINE CURRENT CONDITIONS AND ADJUSTMENTS TO THE DREDGING ELEVATIONS.
2. DREDGING TO A DEPTH OF APPROXIMATELY 2.5 FEET TO BE CONDUCTED IN AREAS WITH THE POTENTIAL FOR GREATER THAN 4 INCHES OF SCOUR DURING A 100-YEAR FLOOD EVENT TO ACCOMMODATE PLACEMENT OF AN ISOLATION CAP OVER DEEP SEDIMENTS EXCEEDING THE SITE SPECIFIC TOXICITY BASED THRESHOLD OF 70 mg/kg SILVER.
3. DREDGE AOC 1 TO A UNIFORM AVERAGE TARGET DEPTH OF 28 INCHES TO PROVIDE SPACE FOR THE ISOLATION CAP.
4. THE AVERAGE SEDIMENT OVERDREDGE ALLOWANCE IS 6 INCHES.
5. NO DREDGING IS REQUIRED IN FRONT OF THE KLWWTP DUE TO STABILITY CONCERNS.
6. THE BOAT HOIST AT THE NORTHERN END OF THE SHEET PILE WALL MUST BE RAISED OR PROTECTED DURING CONSTRUCTION.
7. NO CAPPING, SPUDDING OR ANCHORING WITHIN 20 FEET OF OUTFALL PIPES AND OUTLETS.
8. PERFORM PRE- AND POST- CONDITIONS AND DEFLECTION SURVEYS OF THE SHEETPILE WALL AND ADJACENT TANK STRUCTURAL WALL PER SPECIFICATIONS.
9. DREDGE FROM UPSTREAM TO DOWNSTREAM AND FROM UPSLOPE TO DOWNSLOPE. DREDGING IS TO BE COMPLETE WITH ENGINEER ACCEPTANCE PRIOR TO START OF CAPPING.
10. ALL DREDGING AND CAPPING WORK AT AOC1 TO BE CONDUCTED FROM THE WATER.

50 25 0 50 100

SCALE: 1"=50'

STATE OF NEW YORK — EDWARD CROWELL GLAZ... — 070909 — LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY: JR	DATE: 11/24/20	SEAL
CHECKED BY: TCD/ECG	DATE: 11/24/20	
APPROVED BY: WJL	DATE: 11/24/20	
PROJECT MGR.: MLV	DATE: 11/24/20	

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE: NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

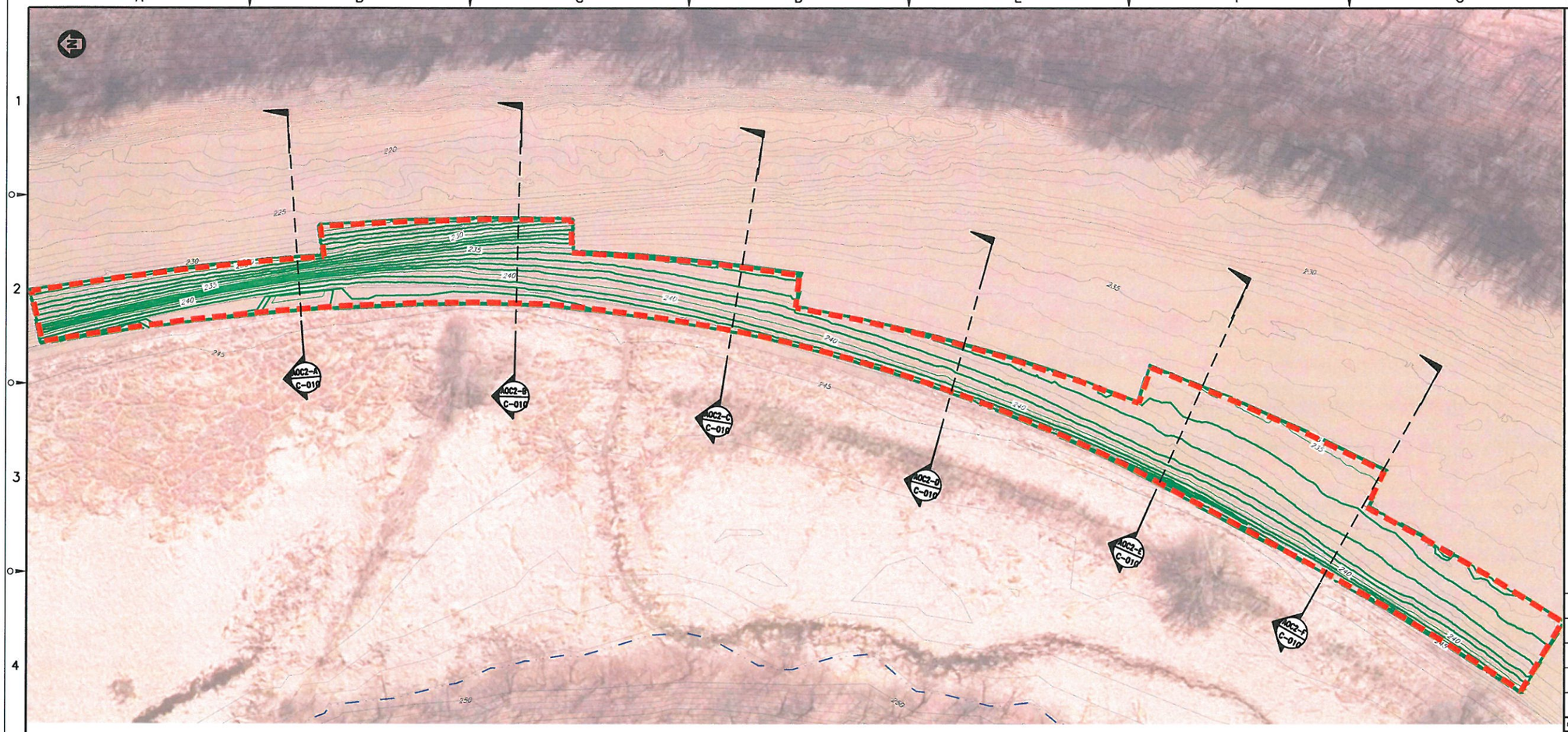
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE: EXCAVATION/DREDGING PLAN AOC 1

SCALE: AS SHOWN

DRAWING NO. 452506-C-007 REV. 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CIV\452506-RD-C007.DWG
PLOT DATE: 6/10/2022 2:44 PM PLOTTED BY: RUSSO, JILL [US-US]



AOC 2 EXCAVATION AREA

SCALE: 1"=50'-0"

LEGEND:

- AOC 2 BOUNDARY
- EXISTING CONTOURS
- POST-DREDGE CONTOURS
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13'

NOTES:

1. THE 2015 AND 2019 BATHYMETRIC SURVEYS INDICATE CHANGING RIVER BOTTOM ELEVATIONS DUE TO SEDIMENTATION. PERFORM A PRE-DREDGING BATHYMETRIC SURVEY TO DETERMINE CURRENT CONDITIONS AND ADJUSTMENTS TO THE DREDGING ELEVATIONS.
2. DREDGING TO A DEPTH OF APPROXIMATELY 2.5 FEET TO BE CONDUCTED IN AREAS WITH THE POTENTIAL FOR GREATER THAN 4 INCHES OF SCOUR DURING A 100-YEAR FLOOD EVENT TO ACCOMMODATE PLACEMENT OF AN ISOLATION CAP OVER DEEP SEDIMENTS EXCEEDING THE SITE SPECIFIC TOXICITY BASED THRESHOLD OF 70 mg/kg SILVER.
3. DREDGE AOC 2 TO A UNIFORM AVERAGE TARGET DEPTH OF 28 INCHES TO PROVIDE SPACE FOR THE ISOLATION CAP.
4. THE AVERAGE SEDIMENT OVERDREDGE ALLOWANCE IS 6 INCHES.
5. DREDGE FROM UPSTREAM TO DOWNSTREAM AND UPSLOPE TO DOWNSLOPE. DREDGING IS TO BE COMPLETE WITH ENGINEER ACCEPTANCE PRIOR TO START OF CAPPING.

50 25 0 50 100

SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'V'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY: JR	DATE: 11/24/20	SEAL
CHECKED BY: TCD/ECG	DATE: 11/24/20	
APPROVED BY: WJL	DATE: 11/24/20	
PROJECT MGR.: MLV	DATE: 11/24/20	

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

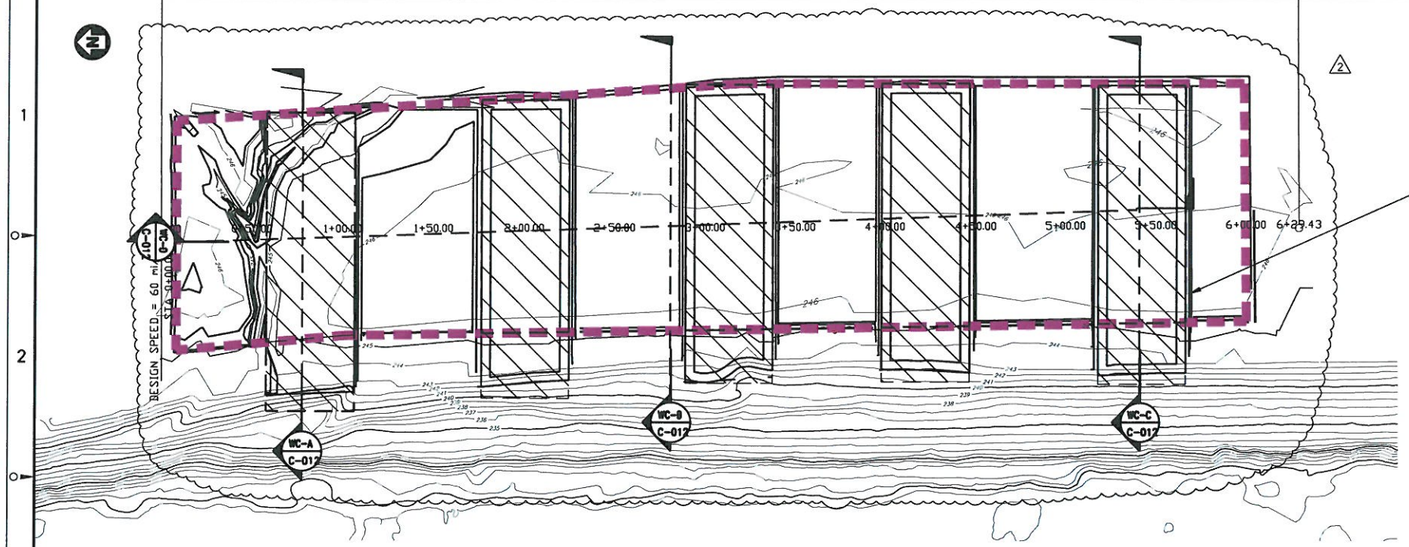
EXCAVATION/DREDGING PLAN
AOC 2

SCALE: AS SHOWN

DRAWING NO.: 452506-C-008

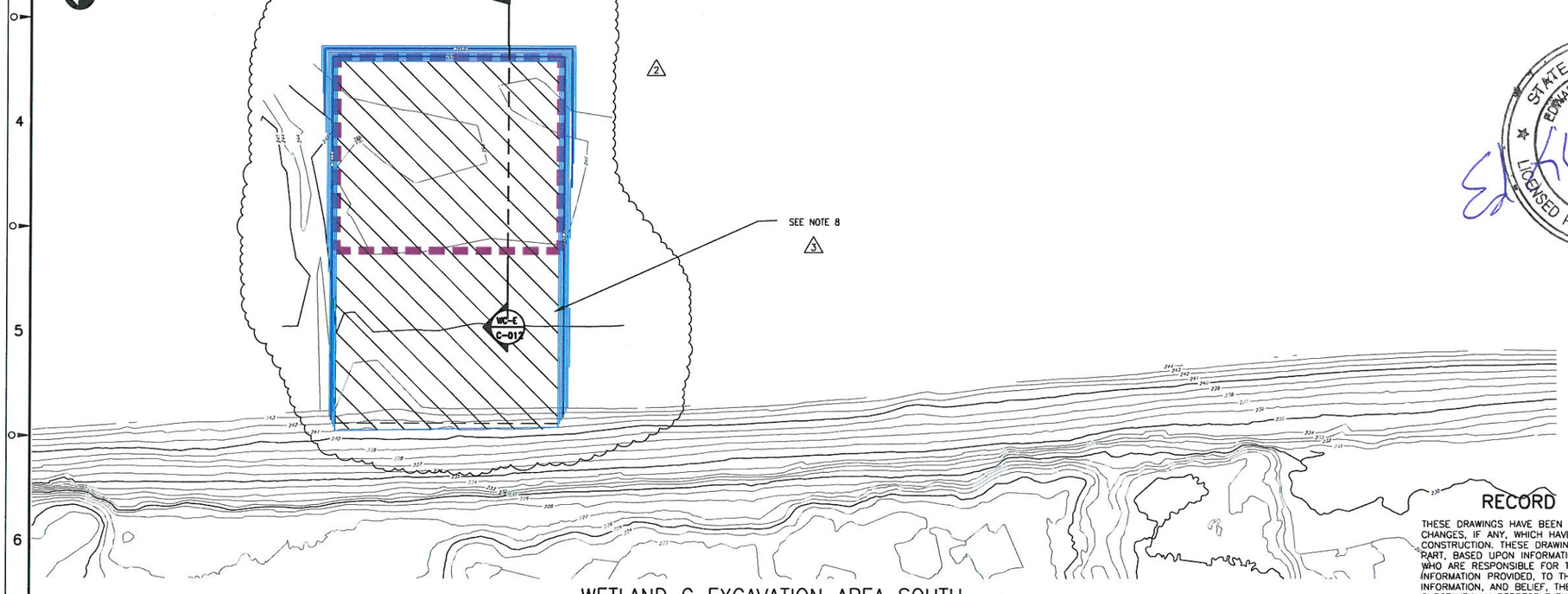
REV.: 2

FILE NAME: P:\MYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C008.DWG
PLOT DATE: 8/8/2022 12:48 PM PLOTTED BY: RUSSO, JILL [US-US]



WETLAND C EXCAVATION AREA NORTH

SCALE: 1"=40'-0"



WETLAND C EXCAVATION AREA SOUTH

SCALE: 1"=40'-0"

LEGEND:

- EXISTING CONTOURS
- POST EXCAVATION/DREDGE CONTOURS
- WETLAND C EXCAVATION AREA BOUNDARY
- ACCESS CHANNEL

NOTES:

1. THE SITE-SPECIFIC TOXICITY-BASED REMOVAL THRESHHOLD IS 70 mg/kg SILVER WITHIN THE TOP 2 FEET OF SEDIMENT.
2. DREDGE WETLAND C TO A UNIFORM AVERAGE TARGET DEPTH OF 26 INCHES. TARGET ELEVATION IN ACCESS CHANNELS IS GENERALLY 241.0' ~~242.0'~~ TARGET ELEVATION OUTSIDE ACCESS CHANNELS IS GENERALLY ~~243.5'~~. 244.0'
3. THE AVERAGE SEDIMENT OVERDREDGE ALLOWANCE IS 6 INCHES.
4. THE VEGETATION AND ROOT MASS (ESTIMATED TO BE AN AVERAGE OF 6" THICK) IS TO BE REMOVED AND DISPOSED WITH THE SEDIMENT.
5. EXCAVATION/DREDGE FULL DEPTH WITHIN WETLAND C EXCAVATION BOUNDARY. SLOPE EXCAVATION EDGES FROM BOUNDARY OUTWARD AS NEEDED TO ACHIEVE REQUIRED EXCAVATION DEPTH.
6. ~~MINIMIZE DISTURBANCE TO THE WETLAND BETWEEN THE RIVER AND AREA TO BE REMEDIATED. RESTORE DISTURBED AREA PER DRAWINGS C-015 AND C-016.~~
7. FINAL EXCAVATION DEPTH IN THE ACCESS CHANNELS MAY BE DEEPER DEPENDING ON THE RIVER WATER LEVEL AT THE TIME OF WORK.
8. THE ACCESS CHANNELS ARE SHOWN AS STRAIGHT LINES FOR EASE OF PRESENTATION. THE CHANNELS WILL BE SHAPED TO ACCOMMODATE DREDGE ACCESS TO REACH THE NON-CHANNEL AREAS. THE ACTUAL CHANNELS DURING DREDGING AND AFTER RESTORATION WILL CONSIST OF VARIABLE EDGES.

40 20 0 40 80

SCALE: 1"=40'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
4	RECORD DRAWING		JR	TCD/ECG	WJL
3	CHANNEL EXCAVATION NOTES	05/14/21	JR	TCD/ECG	WJL
2	CHANNEL EXCAVATION ADDED	04/30/21	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

STATE OF NEW YORK
RICHARD CADWELL CAVA
070909
LICENSED PROFESSIONAL ENGINEER

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

EXCAVATION/DREDGING PLAN
WETLAND C

SCALE: AS SHOWN

DRAWING NO. 452506-C-009

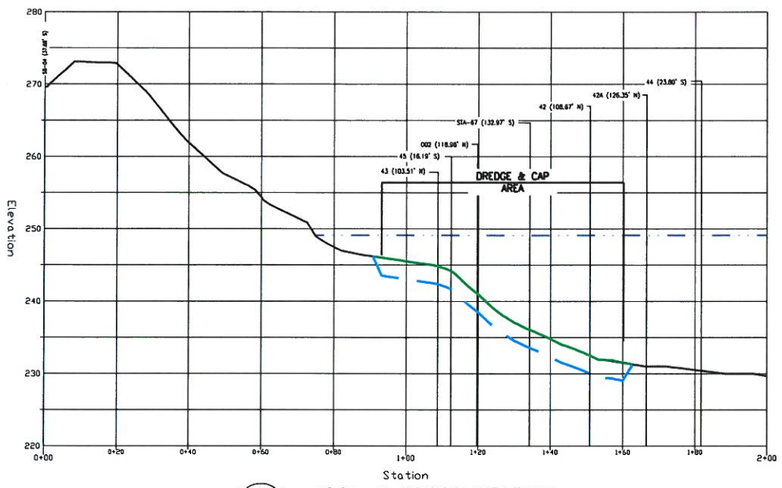
REV. 4

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

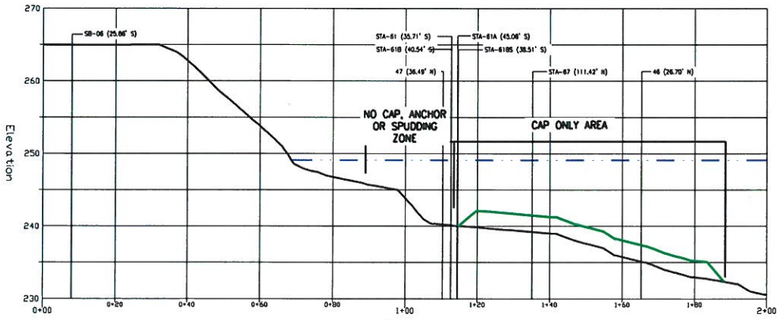
PER: _____ DATE: 6/3/22

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C009.DWG
PLOT DATE: 6/6/2022 1:03 PM PLOTTED BY: RUSSO, JILL [US-US]



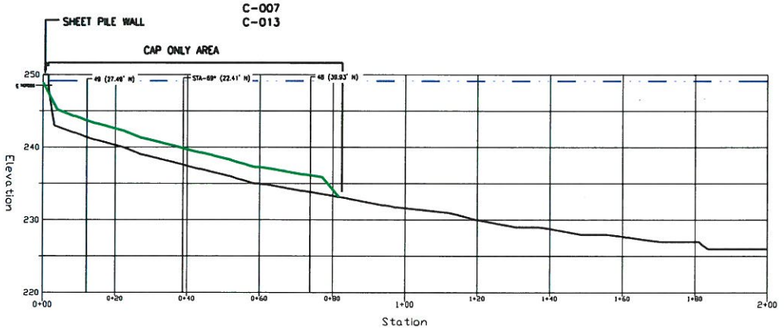
AOC1-A C-002 — **AOC1-A CROSS SECTION**

C-007
C-013



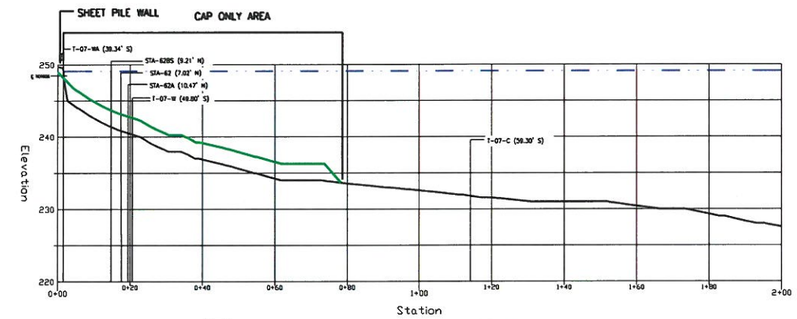
AOC1-B C-002 — **AOC1-B CROSS SECTION**

C-007
C-013



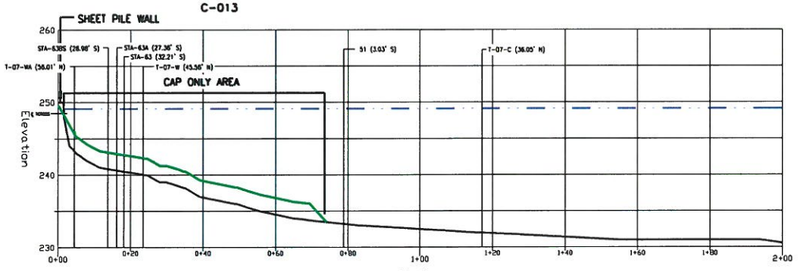
AOC1-C C-002 — **AOC1-C CROSS SECTION**

C-007
C-013



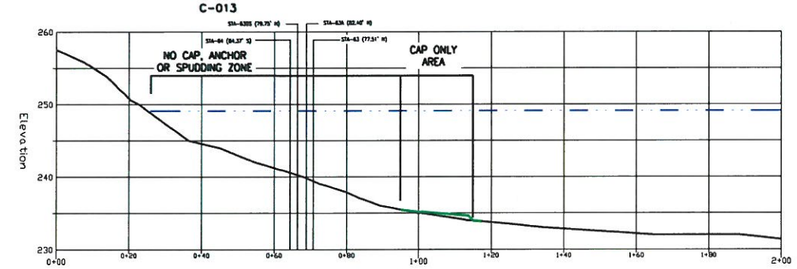
AOC1-D C-002 — **AOC1-D CROSS SECTION**

C-007
C-013



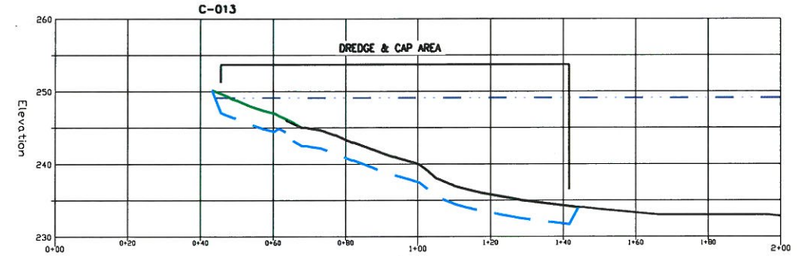
AOC1-E C-002 — **AOC1-E CROSS SECTION**

C-007
C-013



AOC1-F C-002 — **AOC1-F CROSS SECTION**

C-007
C-013



AOC1-G C-002 — **AOC1-G CROSS SECTION**

C-007
C-013

LEGEND:

- EXISTING GRADE
- POST-DREDGING GRADE
- CAPPING GRADE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13' (SEE NOTE 1)

NOTE:

1. OWHM – THE ORDINARY HIGH WATER MARK IN THIS SECTION OF THE LOWER GENESEE RIVER WAS COLLECTED BY PARSONS ON MARCH 18, 2020, USING FIELD OBSERVATIONS IN ACCORDANCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE) REGULATORY GUIDANCE LETTER No. 05-05. THE OWHM WAS MEASURED AT 249.13 FEET (DATUM NAVD 88).

LICENSED PROFESSIONAL ENGINEER 070909 EDWARD CADWELL GOZA STATE OF NEW YORK

20 10 0 20 40

SCALE: 1"=20'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

PARSONS

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560

JOB: 452506

WBS:

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

CROSS SECTIONS AOC 1

SCALE: AS SHOWN

DRAWING NO.: 452506-C-010

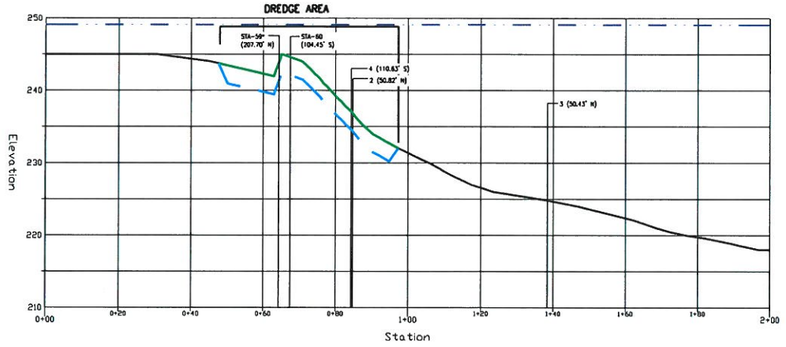
REV.: 2

RECORD DRAWING

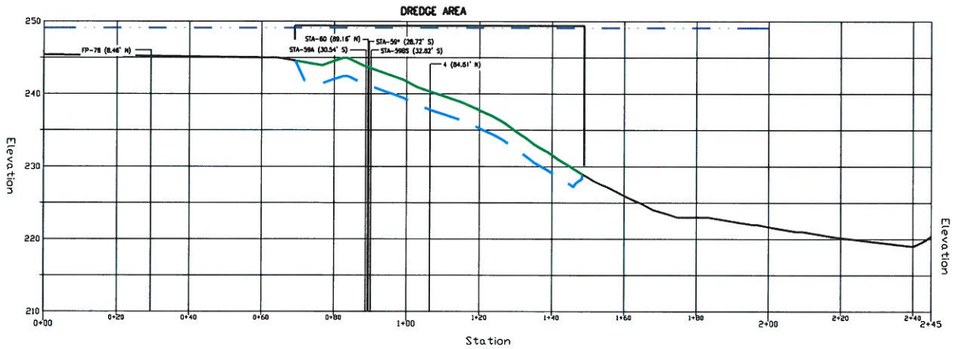
THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED TO OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

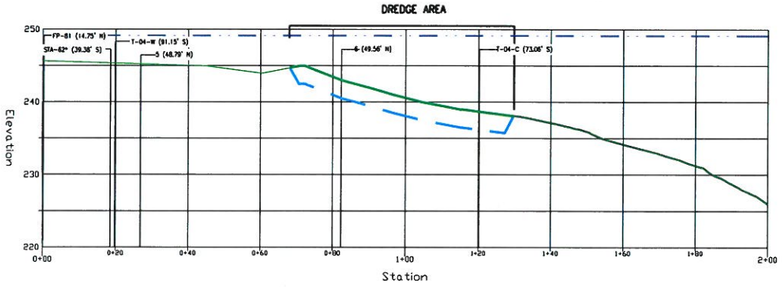
FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL DATECORES\10.10 CAD\RECORD DWG\CWA\452506-RD-C013.DWG
PLOT DATE: 6/8/2022 3:55 PM PLOTTED BY: RUSSO, JILL [US-US]



AOC2-A AOC2-A CROSS SECTION
C-003
C-008
C-014

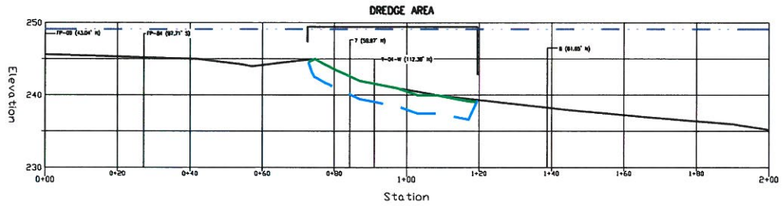


AOC2-B AOC2-B CROSS SECTION
C-003
C-008
C-014

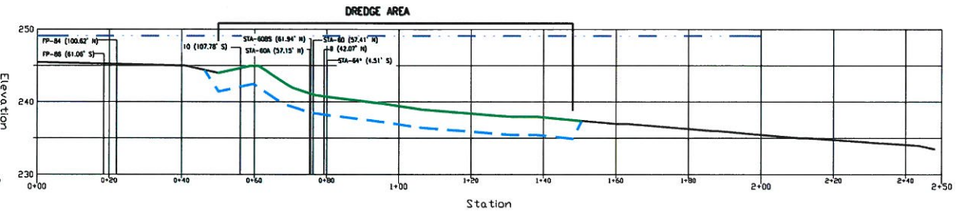


AOC2-C AOC2-C CROSS SECTION
C-003
C-008
C-014

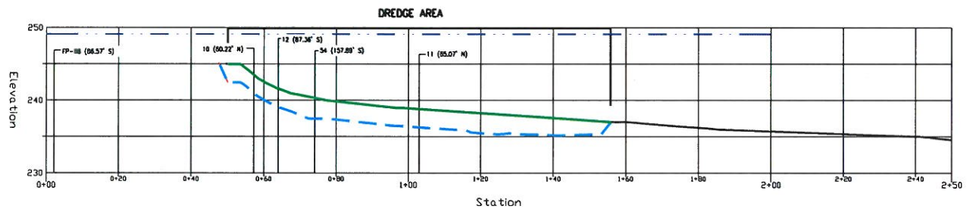
AOC2-D



AOC2-D AOC2-D CROSS SECTION
C-003
C-008
C-014



AOC2-E AOC2-E CROSS SECTION
C-003
C-008
C-014



AOC2-F AOC2-F CROSS SECTION
C-003
C-008
C-014

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE. INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

LEGEND:
- EXISTING GRADE
- POST DREDGING GRADE
- CAPPING GRADE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13' (SEE NOTE 1)

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070009
LICENSED PROFESSIONAL ENGINEER

NOTE:
1. OHWM - THE ORDINARY HIGH WATER MARK IN THIS SECTION OF THE LOWER GENESEE RIVER WAS COLLECTED BY PARSONS ON MARCH 18, 2020, USING FIELD OBSERVATIONS IN ACCORDANCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE) REGULATORY GUIDANCE LETTER No. 05-05. THE OHWM WAS MEASURED AT 249.13 FEET (DATUM NAVD 88).

20 10 0 20 40
SCALE: 1"=20'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

SEAL

PARSONS

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 452506
WBS

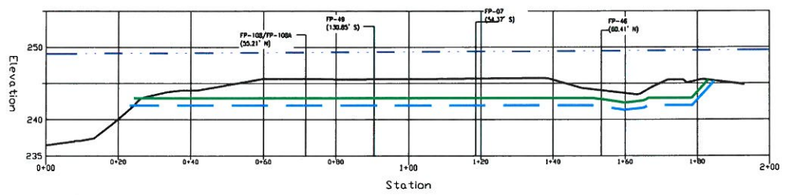
PROJECT TITLE
NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
CROSS SECTIONS
AOC-2

SCALE: AS SHOWN

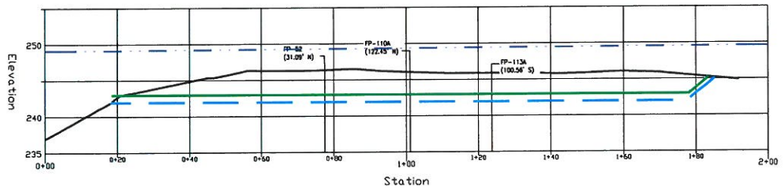
DRAWING NO. 452506-C-011
REV. 2

FILE NAME: P:\WYDEC PROGRAM\452506 - WA #18 - LOWER GENESEE RIVER CM\1.0.0 TECHNICAL CATEGORIES\1.0.10 CAD\RECORD DWG\CM\452506-RD-C002.DWG
PLOT DATE: 8/8/2022 12:15 PM PLOTTED BY: RUSSO, JILL (US-LT5)



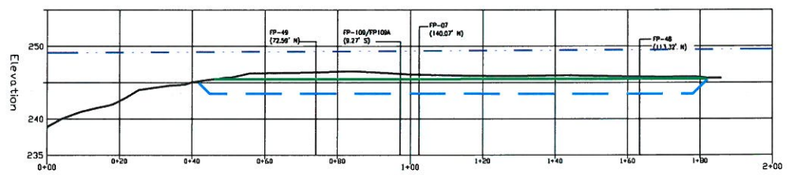
WA-A / C-004 — **WETLAND C NORTH – CROSS SECTION A** (2)

C-009
C-015



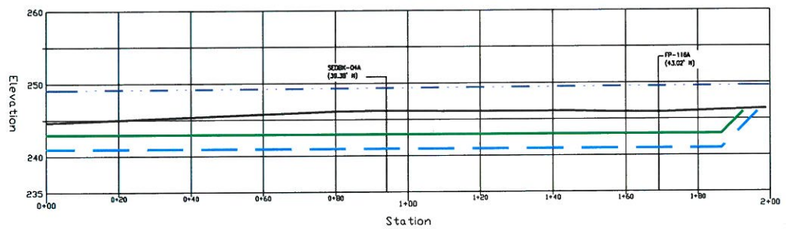
WA-C / C-004 — **WETLAND C NORTH – CROSS SECTION C** (2)

C-009
C-015



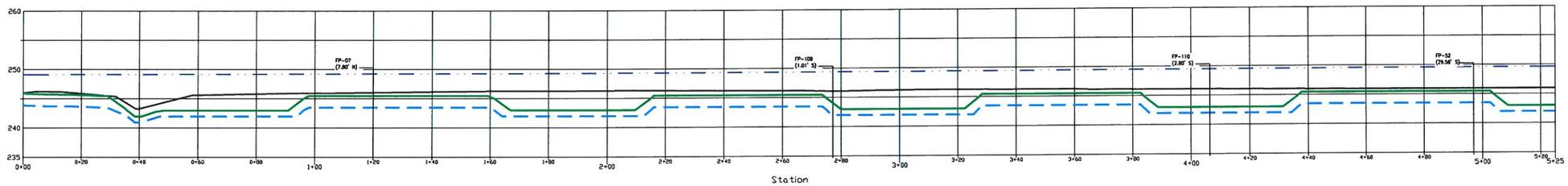
WA-B / C-004 — **WETLAND C NORTH – CROSS SECTION B** (2)

C-009
C-015



WA-E / C-004 — **WETLAND C SOUTH – CROSS SECTION E** (2)

C-009
C-015



WA-D / C-004 — **WETLAND C SOUTH – CROSS SECTION D** (2)

C-009
C-015

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 6/13/22

LEGEND:

- EXISTING GRADE
- POST DREDGING GRADE
- BACKFILL GRADE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13' (SEE NOTE 1)

NOTES:

1. OHWM – THE ORDINARY HIGH WATER MARK IN THIS SECTION OF THE LOWER GENESEE RIVER WAS COLLECTED BY PARSONS ON MARCH 18, 2020, USING FIELD OBSERVATIONS IN ACCORDANCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE) REGULATORY GUIDANCE LETTER No. 05-05. THE OHWM WAS MEASURED AT 249.13 FEET (DATUM NAVD 88).
2. NYS FRESHWATER WETLAND RH-21/NATIONAL WETLANDS INVENTORY WETLAND PEMIE IS REFERRED TO AS WETLAND C.
3. THE ACCESS CHANNELS ARE SHOWN AS STRAIGHT LINES FOR EASE OF PRESENTATION. THE CHANNELS WILL BE SHAPED TO ACCOMMODATE DREDGE ACCESS TO REACH THE NON-CHANNEL AREAS. THE ACTUAL CHANNELS DURING DREDGING AND AFTER RESTORATION WILL CONSIST OF VARIABLE EDGES.

STATE OF NEW YORK — EDWARD CADWELL GAZA — LICENSED PROFESSIONAL ENGINEER — 070909

20 10 0 20 40
SCALE: 1"=20'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
4	RECORD DRAWING		JR	TCD/ECG	WJL
3	CHANNEL EXCAVATION NOTES	05/14/21	JR	TCD/ECG	WJL
2	CHANNEL EXCAVATION ADDED	04/30/21	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

SEAL

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JOB 452506
WBS

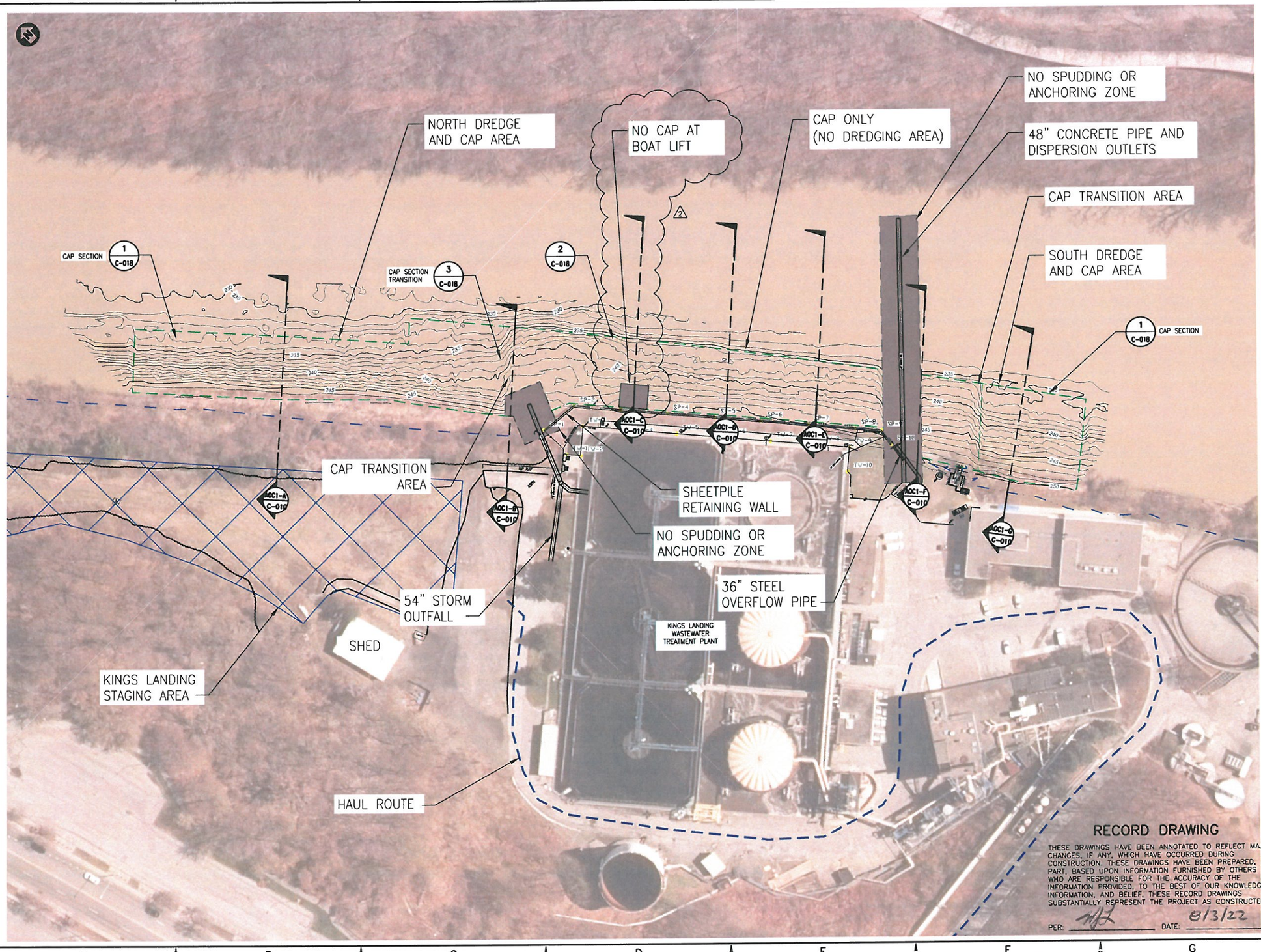
PROJECT TITLE
NEW YORK STATE DEC — Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
CROSS SECTIONS
WETLAND C

SCALE: AS SHOWN

DRAWING NO. 452506-C-012 REV. 4

FILE NAME: P:\MYSOEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C012.DWG
PLOT DATE: 6/6/2022 12:04 PM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

- AOC 1 BOUNDARY
- CAPPING CONTOURS (SEE NOTE 10)
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13'
- OPTICAL MONITORING POINTS B (SEE SHEET C-007)
- BENCHMARK (SEE SHEET C-016)

NOTES:

1. PLACE AN ISOLATION CAP CONSISTING OF A CHEMICAL ISOLATION LAYER WITH A MINIMUM THICKNESS OF 12 INCHES OVERLAYED BY A HABITAT/EROSION PROTECTION LAYER WITH A MINIMUM THICKNESS OF 12 INCHES. SEE 448923-C-018 FOR OVERPLACEMENT AND FINAL ELEVATION REQUIREMENTS.
2. THE CAP THICKNESS MAY VARY UP TO AN ADDITIONAL 6 INCHES TO ACCOUNT FOR OVERDREDGING IN THE DREDGE AREAS.
3. THE FINAL TOP OF CAP ELEVATION SHOULD APPROXIMATELY EQUAL THE SEDIMENT ELEVATION PRIOR TO DREDGING IN THE DREDGE AREAS BASED ON PRE-CONSTRUCTION BATHYMETRIC SURVEY (AVERAGE FINAL ELEVATION WITHIN +/- 6 INCHES).
4. CAP TO BEGIN 20 FT FROM DISCHARGE PIPES AND OUTLETS.
5. NET FILL IN CAP ONLY AREA APPROXIMATELY [illegible] CY.
6. NO CAPPING, SPUDDING OR ANCHORING WITHIN 20 FEET OF OUTFALL PIPES AND OUTLETS.
7. DREDGING AND CAPPING WORK TO BE COMPLETED WITHIN 3 MONTHS AND 1 CONSTRUCTION SEASON.
8. ALL DREDGING AND CAPPING WORK TO BE CONDUCTED FROM THE WATER.
9. PLACE CAP FROM UPSTREAM TO DOWNSTREAM AND DOWNSLOPE TO UPSLOPE.
10. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 7, 2021.

50 25 0 50 100

SCALE: 1"=50'

NO.	DESCRIPTION	DATE	DRAWN	CH'K'D	APP'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

STATE OF NEW YORK — EDWARD CALDWELL GLAZA — LICENSED PROFESSIONAL ENGINEER

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JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

CAPPING PLAN
AOC 1

SCALE: AS SHOWN

DRAWING NO. 452506-C-013

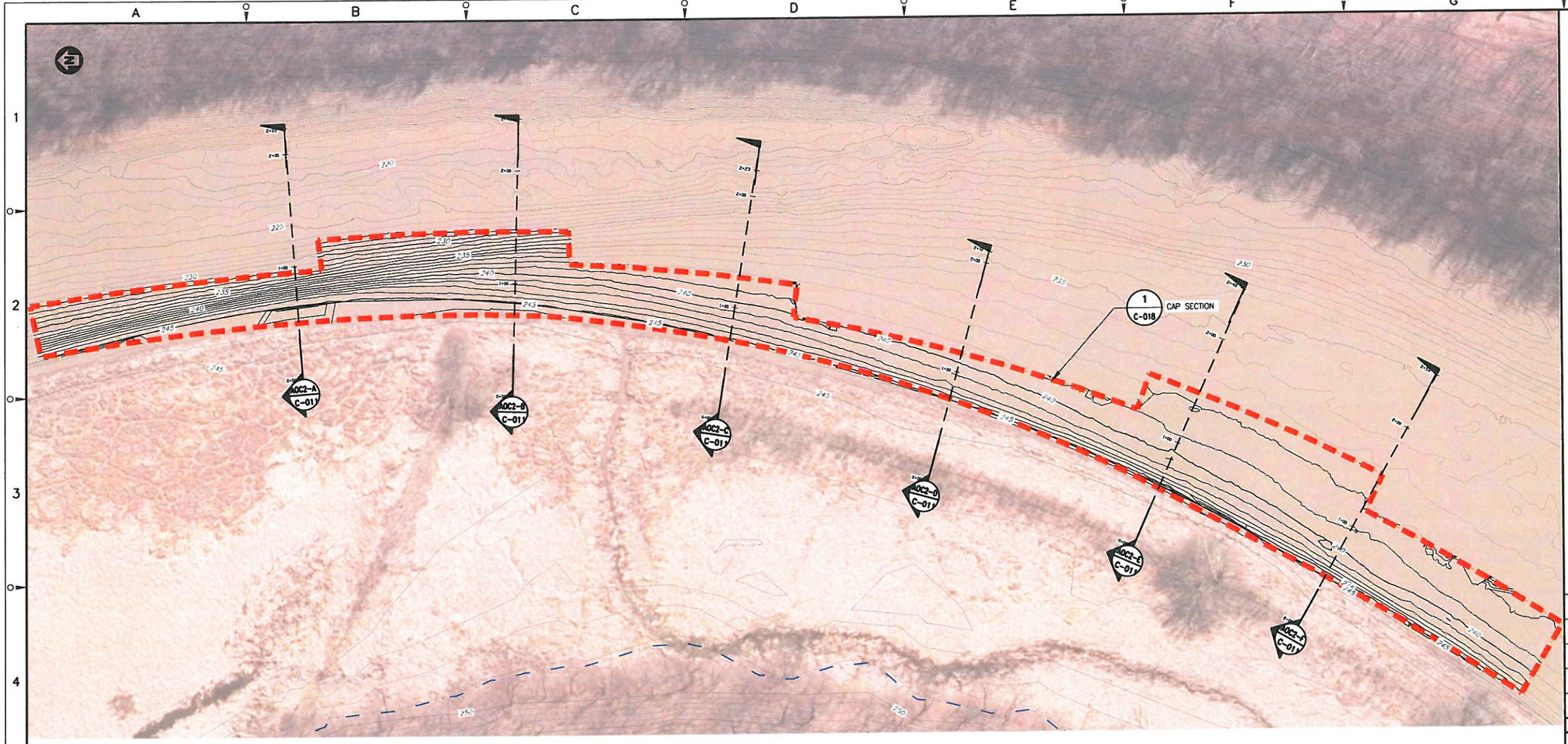
REV. 2

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C013.DWG
PLOT DATE: 6/17/2022 8:34 AM PLOTTED BY: RUSSO, JILL [US-US]



AOC 2 CAPPING AREA

SCALE: 1"=50'-0"

LEGEND:

- AOC 2 BOUNDARY
- EXISTING CONTOURS
- CAPPING CONTOURS
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13

STATE OF NEW YORK
EDWARD CADWELL GAZA
070909
LICENSED PROFESSIONAL ENGINEER

NOTES:

1. PLACE AN ISOLATION CAP CONSISTING OF A CHEMICAL ISOLATION LAYER WITH A MINIMUM THICKNESS OF 12 INCHES OVERLAYED BY A HABITAT/EROSION PROTECTION LAYER WITH A MINIMUM THICKNESS OF 12 INCHES. 448923-C-018 FOR OVERPLACEMENT AND FINAL ELEVATION REQUIREMENTS.
2. THE CAP THICKNESS MAY VARY UP TO AN ADDITIONAL 6 INCHES TO ACCOUNT FOR OVERDREDGING.
3. THE FINAL TOP OF CAP ELEVATION SHOULD APPROXIMATELY EQUAL THE SEDIMENT ELEVATION PRIOR TO DREDGING. (AVERAGE FINAL ELEVATION WITHIN +/- 6 INCHES).
4. DREDGING AND CAPPING IN AOC 2 TO BE COMPLETED WITHIN 3 MONTHS AND 1 CONSTRUCTION SEASON.
5. PLACE CAP FROM UPSTREAM TO DOWNSTREAM AND FROM DOWNSLOPE TO UPSLOPE.

50 25 0 50 100

SCALE: 1"=50'

RECORD DRAWING

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PER: _____ DATE: 8/3/22

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
2	RECORD DRAWING		JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

		DATE
DRAWN BY	JR	11/24/20
CHECKED BY	TCD/ECG	11/24/20
APPROVED BY	WJL	11/24/20
PROJECT MGR.	MLV	11/24/20

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JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

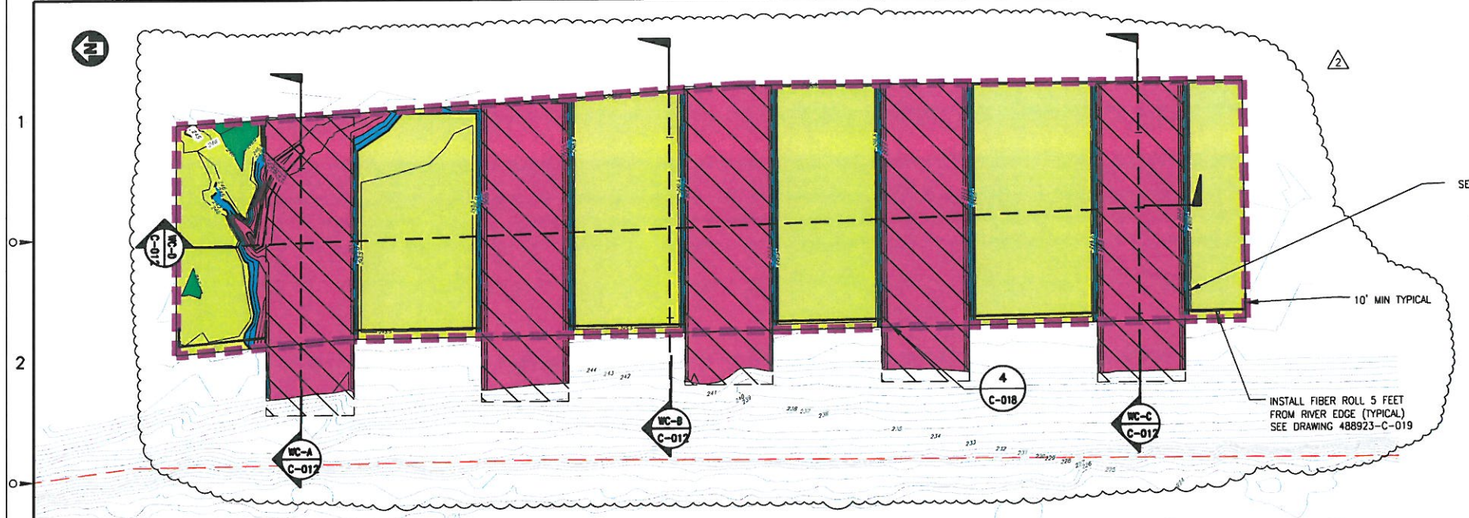
CAPPING PLAN
AOC 2

SCALE: AS SHOWN

DRAWING NO. 452506-C-014

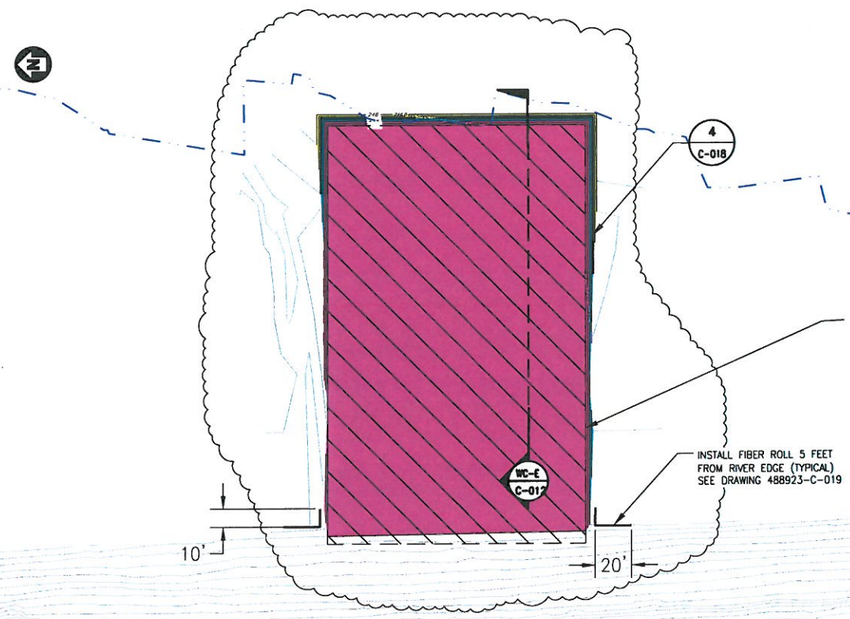
REV. 2

FILE NAME: P:\WYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\1.0.0 TECHNICAL CATEGORIES\1.9.10 CAD\RECORD DWG\CM\452506-RD-C014.DWG
PLOT DATE: 6/6/2022 2:51 PM PLOTTED BY: RUSSO, JILL [US-US]



WETLAND C RESTORATION AREA NORTH

SCALE: 1"=40'-0"



WETLAND C RESTORATION AREA SOUTH

SCALE: 1"=40'-0"

PLANTING ZONE ACREAGE			
PLANTING ZONES	ELEVATIONS	WETLAND C NORTH	WETLAND C SOUTH
D	<244	0.89	0.76
C	244 TO 245	0.09	0.02
B	245 TO 246	0.94	0.01
A	>246	0.01	0.00
	AREA TOTALS	1.93	0.79

LEGEND:

- WETLAND C BOUNDARY
- FINAL GRADE
- OHWM (ORDINARY HIGH WATER MARK) APPROX 249.13'
- NAVIGATIONAL CHANNEL
- 2 ACCESS CHANNEL

NOTES:

1. RESTORE ACCESS CHANNELS WITH A MINIMUM THICKNESS OF 12 INCHES OF BACKFILL AFTER SETTLING. TARGET ELEVATION IN ACCESS CHANNELS IS ~~243.0~~ 242.0'. RESTORE NON-ACCESS CHANNEL AREAS WITH A MINIMUM THICKNESS OF 12 INCHES OF BACKFILL OVERLAYED BY A MINIMUM THICKNESS OF TOPSOIL. TARGET ELEVATION IN NON-ACCESS CHANNEL AREAS IS GENERALLY ~~245.5~~ 246.0'
2. REFER TO RESTORATION PLAN AND SPECIFICATIONS FOR DETAILS REGARDING PLANT SPECIES AND QUANTITIES TO BE INSTALLED IN EACH PLANTING ZONE.
3. SEE DRAWING C-016 FOR PLANTING SCHEDULES.
4. ~~EXCAVATION/DREDGING AND BACKFILL/RESTORATION IN WETLAND C TO BE COMPLETED WITHIN 3 MONTHS AND 1 CONSTRUCTION SEASON.~~
5. RESTORE DISTURBED AREA BETWEEN THE RIVER AND REMEDIATION AREA USING ZONE B SEED MIX.
6. VERIFY FINAL BACKFILL ELEVATIONS HAVE BEEN MET PRIOR TO BEGINNING PLANTING AND SEEDING. TYPE D PLANTING ZONES (D1 OR D2) WILL BE BASED ON FINAL ELEVATIONS DURING CONSTRUCTION.
8. THE ACCESS CHANNELS ARE SHOWN AS STRAIGHT LINES FOR EASE OF PRESENTATION. THE CHANNELS WILL BE SHAPED TO ACCOMMODATE DREDGE ACCESS TO REACH THE NON-CHANNEL AREAS. THE ACTUAL CHANNELS DURING DREDGING AND AFTER RESTORATION WILL CONSIST OF VARIABLE EDGES.

40 20 0 40 80

SCALE: 1"=40'

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
4	RECORD DRAWING		JR	TCD/ECG	WJL
3	CHANNEL EXCAVATION NOTES	05/14/21	JR	TCD/ECG	WJL
2	CHANNEL EXCAVATION ADDED	04/30/21	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

STATE OF NEW YORK
EDWARD CADWELL GLAZA
070909
LICENSED PROFESSIONAL ENGINEER

RECORD DRAWING

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PER: _____ DATE: 8/3/22

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JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

BACKFILL/RESTORATION PLAN
WETLAND C

SCALE AS SHOWN

DRAWING NO. 452506-C-015

REV. 4

FILE NAME: P:\NY\SDCC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C015-CHANNEL.DWG
PLOT DATE: 6/8/2022 3:08 PM PLOTTED BY: RUSSO, JILL [US-US]

PARTICLE SIZE DISTRIBUTION FOR CHEMICAL ISOLATION AND WETLAND BACKFILL LAYERS

CHEMICAL ISOLATION AND WETLAND BACKFILL LAYERS TO CONSIST OF SAND AND GRAVEL MEETING THE FOLLOWING CRITERIA:

- D5 > 0.075 MM (#200 SIEVE)
- D15 = 0.22 MM TO 0.3 MM WITH ≥ 15% PASSING #50 SIEVE AND ≤ 15% PASSING #80 SIEVE
- D60/D15 ≤ 10
- D85 ≥ 2.5 MM FOR 1.0 FOOT THICK HABITAT/EROSION PROTECTION LAYER. (NOTE: IF D85 ≥ 2.3 MM FOR THE SUPPLIED MATERIAL, INCREASE THE HABITAT/EROSION PROTECTION LAYER THICKNESS TO 1.1 FEET)
- MAXIMUM PARTICLE SIZE ≤ 3/4 INCH
- FALL BETWEEN THE MINIMUM AND MAXIMUM GRADATIONS SHOWN IN TABLE 1:

Table 1

Grain Size (inches or U.S. Sieve Size)	Grain Size (mm)	Percent Passing (Dry Weight Basis)
3/4	191	100
3/8	0	85-100
#4	4.76	70-100
#8	2.38	55-100
#16	1.19	42-63
#30	0.595	28-44
#50	0.297	≥15
#80	0.177	≤15
No. 200	>0.075	≤5

PARTICLE SIZE DISTRIBUTION FOR HABITAT/EROSION PROTECTION LAYER

HABITAT/EROSION PROTECTION LAYER WILL CONSIST OF COARSE GRAVEL WITH A D_{50} ≥ 40 MM. A RELATIVELY UNIFORM STONE SIZE (D85/D15 ≤ 2.5) AND A MAXIMUM PARTICULAR SIZE OF 4 INCHES. THE GRAVEL SHALL BE EQUAL TO OR COARSER THAN THE APPROXIMATE GRADATION SHOWN IN TABLE 2

Table 2

Grain Size (inches)	Grain Size (mm)	Percent Passing (Dry Weight Basis)
4	100	100
2 1/2	63	≤85
1 1/2	40	≤50
1	25	≤15
1/2	13	0 TO 3

PARTICLE SIZE DISTRIBUTION FOR TOPSOIL LAYER

TOPSOIL: TOPSOIL SHALL BE NATURAL OR MANUFACTURED, FRIABLE AND FERTILE SOIL THAT MEETS THE USDA BASIC SOIL TEXTURE CLASSES OF LOAM, SILT LOAM OR SANDY LOAM TO BE RECOVERED FROM THE A HORIZON OF AN IN-PLACE SOIL. TOPSOIL SHALL BE CAPABLE OF SUSTAINING HEALTHY PLANT LIFE AND BE REASONABLY FREE OF SUBSOIL, HEAVY OR STIFF CLAY, BRUSH, ROOTS, WEEDS, OTHER OBJECTIONABLE PLANT MATTER, FOREIGN MATERIAL, STONES LARGER THAN 4 INCHES IN GREATEST DIMENSION, AND ANY OTHER MATERIALS UNSUITABLE OR HARMFUL FOR PLANT GROWTH. TOPSOIL AS DELIVERED TO THE SITE OR STOCKPILED SHALL MEET THE FOLLOWING REQUIREMENTS:

1. WELL GRADED WITH A MAXIMUM PARTICLE SIZE OF 4 INCHES, 85 TO 100 PERCENT PASSING 1 INCH, 65 TO 100 PERCENT PASSING 1/4 INCH, AND 15 TO 80 PERCENT PASSING A NUMBER 200 SIEVE. THE 2-MICRON PARTICLE SIZE SHALL NOT BE GREATER THAN 20 PERCENT OF THE TOTAL SAMPLE MASS, AS DETERMINED BY HYDROMETER ANALYSIS.
2. ORGANIC MATERIALS USED IN THE MANUFACTURE OF TOPSOIL SHALL MEET THE REQUIREMENTS OF NYSDOT 713-05.
3. PH BETWEEN 5.5 AND 7.6.
4. PERCENT ORGANIC MATTER: TOPSOIL SHALL CONTAIN GREATER THAN 4 PERCENT AND LESS THAN 20 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS OF IGNITION OF MOISTURE-FREE SAMPLES DRIED AT 100° TO 110° CELSIUS.
5. CONTAINS NO NUISANCE WEEDS INCLUDING SEEDS, STEMS OR RHIZOMES OF PURPLE LOOSESTRIFE, PHRAGMITES, JAPANESE KNOTWEED OR ANY PLANTS ON THE FEDERAL NOXIOUS WEEDS LIST.

MATERIALS
NOT TO SCALE

KINGS LANDING AREA SURVEY

POINT	NORTHING	EASTING	ELEVATION
CB10	1167569.5461	1404356.8630	254.050
CB20	1167818.5910	1404159.9663	250.910
CB30	1167742.2008	1404024.5435	265.691
CB40	1168137.5659	1403728.4578	271.864

RIVER SURVEY

POINT	NORTHING	EASTING	ELEVATION
BM-1 (X-CUT ON NORTH RIM MH)	1167477.30	1404354.81	266.11
BM-2 (BOX CUT)	1167724.78	1404053.44	268.54

SURVEY CONTROL POINTS
NOT TO SCALE

SURVEY NOTES:

1. BATHYMETRIC RIVER SURVEYS CONDUCTED BY AQUA SURVEY, FLEMINGTON, NJ ON SEPTEMBER 8-9, 2015 AND JULY 22-24, 2019.
2. KLWWTP STAGING AREA SURVEYS CONDUCTED BY POPLI DESIGN GROUP, PENFIELD, NY ON AUGUST 1-7, 2019 AND APRIL 6-7, 2020.

RECORD DRAWING

THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

PER: _____ DATE: 8/3/22

storation Area Plantings and Seeding

Restoration Area	Species		Stock Type	Installation rate (# per acre)	Adjustments During Construction
	Common Name	Scientific Name			
A (Elevation 246' to 247')	Sweetflag	*Acorus americanus*	2" Plug	250	
	Water plantain	*Alisma subcordatum*	2" Plug	250	
	Water sedge	*Carex aquatilis*	2" Plug	250	
	Lake sedge	*Carex lacustris*	2" Plug	250	
	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2"-Plug~~	~~750~~	Not available
	Willow weed	*Justicia americana*	2" Plug	750+	Rate increased as substitute for Water willow and Water smartweed
	Arrow arum	*Peltandra virginica*	2" Plug	250	
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~2,500~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	2,500+	Rate increased as substitute for Water willow and Water smartweed
	Arrowhead	*Sagittaria latifolia*	2" Plug	300+	Rate increased as substitute for Deep water potato
	~~Deep water potato~~	~~*Sagittaria rigida*~~	~~2" Plug~~	~~500~~	Not available
	~~Hardstem bulrush~~	~~*Schoenoplectus acutus*~~	~~2" Plug~~	~~500~~	Not available
	Three-square	*Schoenoplectus pungens*	2" Plug	350	
	Softstem bulrush	*Schoenoplectus tabernaemontani*	2" Plug	500	
	Green bulrush	*Scirpus atrovirens*	2" Plug	500	
	~~Eastern burreed~~	~~*Sparganium americanum*~~	~~2" Plug~~	~~300~~	Not available
	Giant burreed	*Sparganium eurycarpum*	2" Plug	300+	Rate increased as substitute for Eastern burreed
	Wetland Seed Mix A[1]		Seed (lbs)	25	
	Winter Rye	*Secale cereal*	Seed (lbs)	15	
	Wild rice	*Zizania aquatica*	Seed (lbs)	75	
B (Elevation 245' to 246')	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2" Plug~~	~~1,000~~	Not available
	Willow weed	*Justicia americana*	2" Plug	1,000	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	500	
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	500+	Rate increased as substitute for Water willow and Water smartweed
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~3,000~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	3,000	
	~~Deep water potato~~	~~*Sagittaria rigida*~~	~~2" Plug~~	~~100~~	Not available
	Soft-stem bulrush	*Schoenoplectus tabernaemontani*	2" Plug	250	
	Green bulrush	*Scirpus atrovirens*	2" Plug	250	
	~~Eastern burreed~~	~~*Sparganium americanum*~~	~~2" Plug~~	~~250~~	Not available
	Giant burreed	*Sparganium eurycarpum*	2" Plug	250+	Rate increased as substitute for Eastern burreed
	Narrow leaf cattail	*Typha angustifolia*	2" Plug	900	
	Wetland Seed Mix B[1]		Seed (lbs)	25	
	Winter Rye	*Secale cereal*	Seed (lbs)	15	
	Wild rice	*Zizania aquatica*	Seed (lbs)	75	
C (Elevation 244' to 245')	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2" Plug~~	~~1,000~~	Not available
	Willow weed	*Justicia americana*	2" Plug	1,500	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	2,500+	Rate increased as substitute for insufficient wild rice
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	2,500+	Rate increased as substitute for Water willow, water smartweed and wild rice
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~2,500~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	1,000	
	~~Wild rice~~	~~*Zizania aquatica or palustris*~~	Seed (lbs)	~~100~~	Alternate mix due to insufficient available quantity of wild rice
D (Elevation <244')	Coontail	*Ceratophyllum demersum*	Whole Plant/Tuber	1,500	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	1,750+	Rate increased as substitute for insufficient wild rice
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	1,750+	Rate increased as substitute for insufficient wild rice
	Sago pondweed	*Stuckenia pectinata*	Whole Plant/Tuber	1,500	
	Wild celery	*Vallisneria americana*	Whole Plant/Tuber	1,500	
	Wild rice	*Zizania aquatica or palustris*	Seed (lbs)	~~100~~ 25	Rate decreased due to insufficient available quantity

[1] Refer to Seed Mix Table

storation Area Plantings and Seeding

Restoration Area	Species		Stock Type	Installation rate (# per acre)	Adjustments During Construction
	Common Name	Scientific Name			
A (Elevation 246' to 247')	Sweetflag	*Acorus americanus*	2" Plug	250	
	Water plantain	*Alisma subcordatum*	2" Plug	250	
	Water sedge	*Carex aquatilis*	2" Plug	250	
	Lake sedge	*Carex lacustris*	2" Plug	250	
	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2" Plug~~	~~750~~	Not available
	Willow weed	*Justicia americana*	2" Plug	750+	Rate increased as substitute for Water willow an
	Arrow arum	*Peltandra virginica*	2" Plug	250	
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~2,500~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	2,500+	Rate increased as substitute for Water willow an
	Arrowhead	*Sagittaria latifolia*	2" Plug	300+	Rate increased as substitute for Deep water pota
	~~Deep water potato~~	~~*Sagittaria rigida*~~	~~2" Plug~~	~~500~~	Not available
	~~Hardstem bulrush~~	~~*Schoenoplectus acutus*~~	~~2" Plug~~	~~500~~	Not available
	Three-square	*Schoenoplectus pungens*	2" Plug	350	
	Softstem bulrush	*Schoenoplectus tabernaemontani*	2" Plug	500	
	Green bulrush	*Scirpus atrovirens*	2" Plug	500	
	~~Eastern burreed~~	~~*Sparganium americanum*~~	~~2" Plug~~	~~300~~	Not available
	Giant burreed	*Sparganium eurycarpum*	2" Plug	300+	Rate increased as substitute for Eastern burreed
	Wetland Seed Mix A[1]		Seed (lbs)	25	
	Winter Rye	*Secale cereal*	Seed (lbs)	15	
	Wild rice	*Zizania aquatica*	Seed (lbs)	75	
B (Elevation 245' to 246')	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2" Plug~~	~~1,000~~	Not available
	Willow weed	*Justicia americana*	2" Plug	1,000	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	500	
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	500+	Rate increased as substitute for Water willow an
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~3,000~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	3,000	
	~~Deep water potato~~	~~*Sagittaria rigida*~~	~~2" Plug~~	~~100~~	Not available
	Softstem bulrush	*Schoenoplectus tabernaemontani*	2" Plug	250	
	Green bulrush	*Scirpus atrovirens*	2" Plug	250	
	~~Eastern burreed~~	~~*Sparganium americanum*~~	~~2" Plug~~	~~250~~	Not available
	Giant burreed	*Sparganium eurycarpum*	2" Plug	250+	Rate increased as substitute for Eastern burreed
	Narrow leaf cattail	*Typha angustifolia*	2" Plug	900	
	Wetland Seed Mix B[1]		Seed (lbs)	25	
	Winter Rye	*Secale cereal*	Seed (lbs)	15	
	Wild rice	*Zizania aquatica*	Seed (lbs)	75	
C (Elevation 244' to 245')	~~Water-willow~~	~~*Decodon verticillatus*~~	~~2" Plug~~	~~1,000~~	Not available
	Willow weed	*Justicia americana*	2" Plug	1,500	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	2,500+	Rate increased as substitute for insufficient wild
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	2,500+	Rate increased as substitute for Water willow, w
	~~Water smartweed~~	~~*Persicaria amphibia*~~	~~2" Plug~~	~~2,500~~	Not available
	Pickerelweed	*Pontederia cordata*	2" Plug	1,000	
	~~Wild rice~~	~~*Zizania aquatica or palustris*~~	~~Seed (lbs)~~	~~100~~	Alternate mix due to insufficient available quant
D (Elevation <244')	Coontail	*Ceratophyllum demersum*	Whole Plant/Tuber	1,500	
	Yellow water lily	*Nuphar lutea*	2" Plug/Tuber	1,750+	Rate increased as substitute for insufficient wild
	White water lily	*Nymphaea odorata*	2" Plug/Tuber	1,750+	Rate increased as substitute for insufficient wild
	Sago pondweed	*Stuckenia pectinata*	Whole Plant/Tuber	1,500	
	Wild celery	*Vallisneria americana*	Whole Plant/Tuber	1,500	
	Wild rice	*Zizania aquatica or palustris*	Seed (lbs)	~~100~~ 25	Rate decreased due to insufficient available qua

[1] Refer to Seed Mix Table for species composition of seed mix.

3 2 WETLAND RESTORATION PLANTINGS
NOT TO SCALE

STATE OF NEW YORK
EDWARD CADWELL GAZA
070909
LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
3	RECORD DRAWING	-	JR	TCD/ECG	WJL
2	CHANNEL EXCAVATION ADDED	04/30/21	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

SEAL

PARSONS

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JOB 452506
WBS

PROJECT TITLE

NEW YORK STATE Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

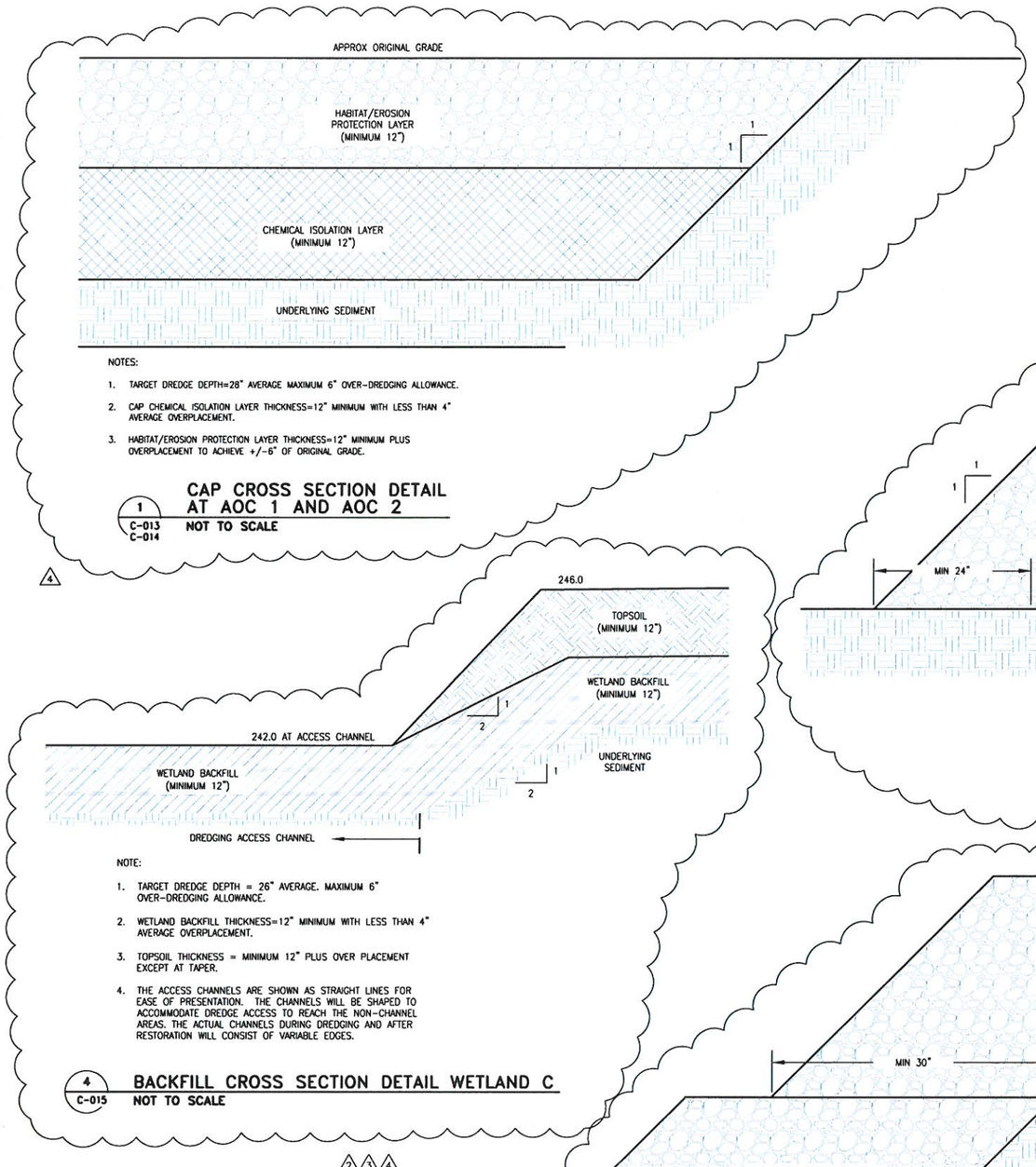
DETAIL SHEET

SCALE NONE

DRAWING NO. 452506-C-016

REV. 3

FILE NAME: P:\HYDSEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C016-DETAILS.DWG
PLOT DATE: 8/3/2022 3:39 PM PLOTTED BY: RUSSO, JILL [US-US]

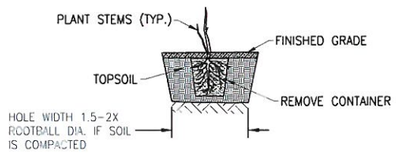


NOTES:

1. TARGET DREDGE DEPTH=28" AVERAGE MAXIMUM 6" OVER-DREDGING ALLOWANCE.
2. CAP CHEMICAL ISOLATION LAYER THICKNESS=12" MINIMUM WITH LESS THAN 4" AVERAGE OVERPLACEMENT.
3. HABITAT/EROSION PROTECTION LAYER THICKNESS=12" MINIMUM PLUS OVERPLACEMENT TO ACHIEVE +/-6" OF ORIGINAL GRADE.

1 C-013 C-014 CAP CROSS SECTION DETAIL AT AOC 1 AND AOC 2

NOT TO SCALE

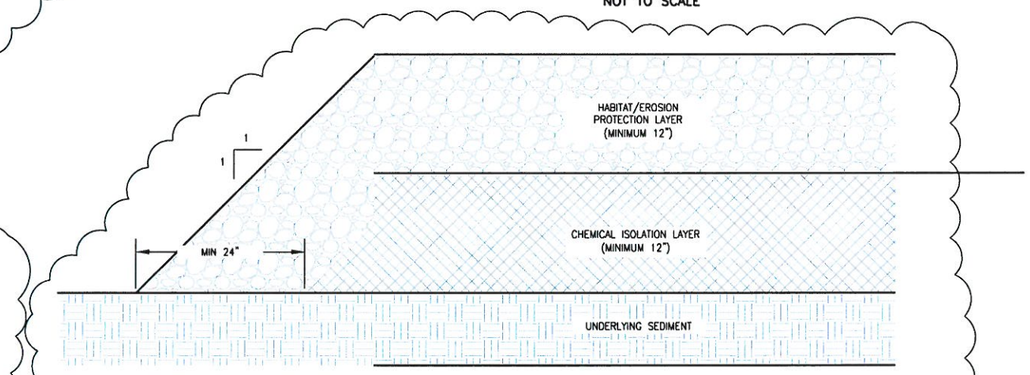


NOTES:

1. SEE SPECIFICATION 32 72 00 WETLAND RESTORATION AND DRAWING 448923-C-016 FOR INSTALLATION DETAILS AND SPECIES, SIZE AND QUANTITY REQUIREMENTS.
2. COMPLETELY REMOVE CONTAINER AND LOOSEN ROOTBALL PRIOR TO BACKFILLING.

HERBACEOUS PLUG

NOT TO SCALE



* THICKNESS MAY VARY UP TO AN ADDITIONAL 6" FOR OVER-DREDGING.

NOTE:
THE CHEMICAL ISOLATION LAYER WILL ALSO SERVE THE PURPOSE OF A FILTER LAYER

2 C-013 EDGE OF CAP CROSS SECTION DETAIL AT AOC 1

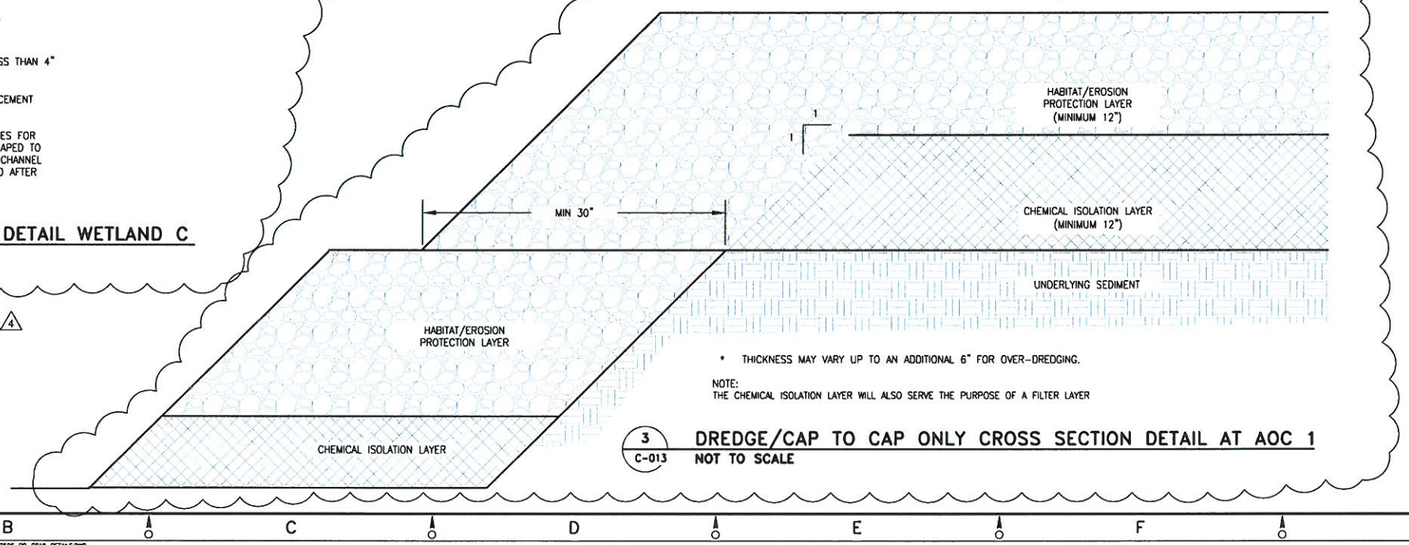
NOT TO SCALE

NOTE:

1. TARGET DREDGE DEPTH = 26" AVERAGE. MAXIMUM 6" OVER-DREDGING ALLOWANCE.
2. WETLAND BACKFILL THICKNESS=12" MINIMUM WITH LESS THAN 4" AVERAGE OVERPLACEMENT.
3. TOPSOIL THICKNESS = MINIMUM 12" PLUS OVER PLACEMENT EXCEPT AT TAPER.
4. THE ACCESS CHANNELS ARE SHOWN AS STRAIGHT LINES FOR EASE OF PRESENTATION. THE CHANNELS WILL BE SHAPED TO ACCOMMODATE DREDGE ACCESS TO REACH THE NON-CHANNEL AREAS. THE ACTUAL CHANNELS DURING DREDGING AND AFTER RESTORATION WILL CONSIST OF VARIABLE EDGES.

4 C-015 BACKFILL CROSS SECTION DETAIL WETLAND C

NOT TO SCALE



* THICKNESS MAY VARY UP TO AN ADDITIONAL 6" FOR OVER-DREDGING.

NOTE:
THE CHEMICAL ISOLATION LAYER WILL ALSO SERVE THE PURPOSE OF A FILTER LAYER

3 C-013 DREDGE/CAP TO CAP ONLY CROSS SECTION DETAIL AT AOC 1

NOT TO SCALE

RECORD DRAWING

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PER: _____ DATE: 6/3/22

STATE OF NEW YORK
EDWARD CADWELL GLEN
070909
LICENSED PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
4	RECORD DRAWING	05/14/21	JR	TCD/ECG	WJL
3	CHANNEL EXCAVATION ADDED	05/14/21	JR	TCD/ECG	WJL
2	CHANNEL EXCAVATION ADDED	04/30/21	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE	11/24/20
CHECKED BY	TCD/ECG	DATE	11/24/20
APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

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JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE DEC | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

DETAIL SHEET

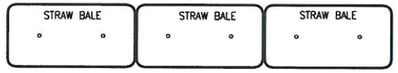
SCALE NONE

DRAWING NO. 452506-C-018

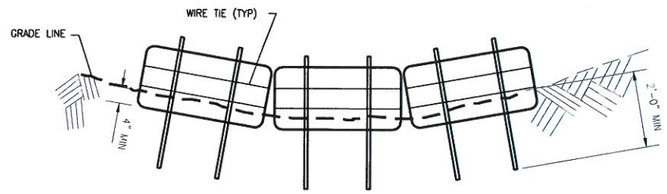
REV. 4

I.E. NAME: P:\WYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\DWG\452506-RD-C018-DETAILS.DWG
LOT DATE: 6/6/2022 3:29 PM PLOTTED BY: RUSSO, JILL [US-US]

FOR EACH STRAW BALE, DRIVE 2 #5 REBARS, STEEL PICKETS OR 2"x2" WOODEN STAKES INTO GROUND. ANGLE FIRST STAKE TOWARD PREVIOUSLY PLACED BALE.



PLAN VIEW

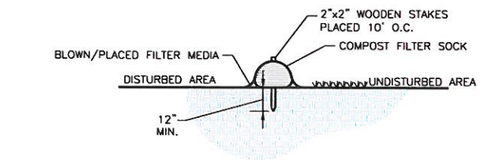


ELEVATION

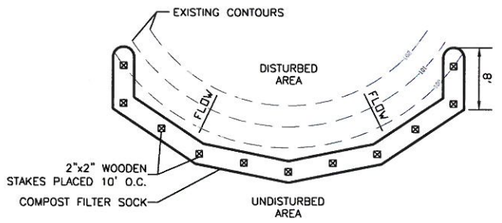
STRAW BALE SEDIMENT BARRIER NOTES:

1. STRAW BALES TO BE STACKED IN A SINGLE ROW AND EMBEDDED IN THE SOIL TO A MIN. 4" DEPTH.
2. ALL BALES ARE TO BE SECURELY BOUND WITH WIRE OR STRING.
3. SCATTER LOOSE STRAW OVER THE AREA IMMEDIATELY UPSLOPE FROM THE SEDIMENT PROTECTION FILL GAPS BETWEEN BALES WITH LOOSE STRAW.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEDIMENT BARRIERS IN A SATISFACTORY CONDITION UNTIL FINAL ACCEPTANCE OF WORK.

TYPICAL STRAW BARRIER INSTALLATION
NOT TO SCALE



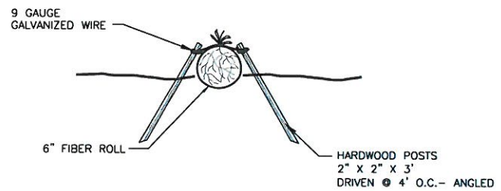
SECTION VIEW



PLAN VIEW

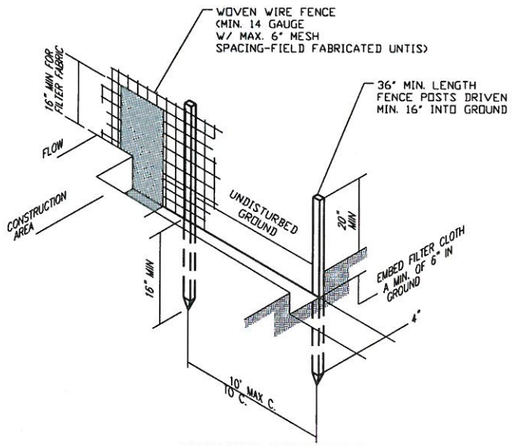
1. ~~SOCK FABRIC SHALL MEET STANDARDS OF TABLE 5.1; COMPOST SHALL MEET THE STANDARDS LISTED ON OF TABLE 5.2.~~ PROVIDE MINIMUM 6" COMPOST FILTER SOCK.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 5.2). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE X.X. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

TYPICAL COMPOST FILTER SOCK
NOT TO SCALE



TYPICAL FIBER ROLL
NOT TO SCALE

1. LOCATE ROLL 5' INBOARD ON SURFACE OF TOPSOIL
2. SAME AS COMPOSITE FILTER SOCK



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
6. PROVIDE TYPE I SILT FENCE PER 31 25 00

TYPICAL SILT FENCE
NOT TO SCALE

RECORD DRAWING

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PER: _____ DATE: 8/3/22

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2	RECORD DRAWING	–	JR	TCD/ECG	WJL
1	ISSUED FOR CONSTRUCTION	01/29/21	JR	TCD/ECG	WJL
0	ISSUED FOR BID	11/24/20	JR	TCD/ECG	WJL

DRAWN BY	JR	DATE 11/24/20
CHECKED BY	TCD/ECG	DATE 11/24/20
APPROVED BY	WJL	DATE 11/24/20
PROJECT MGR.	MLV	DATE 11/24/20

SEAL

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JOB 452506

WBS

PROJECT TITLE

NEW YORK STATE DEPARTMENT | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

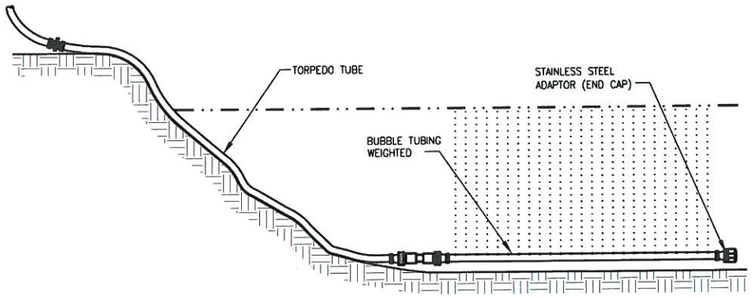
DETAIL SHEET

SCALE NONE

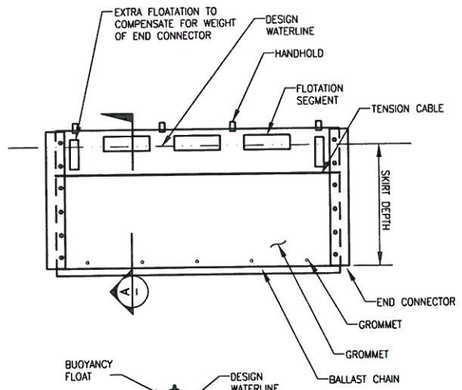
DRAWING NO. 452506-C-019

REV. 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CM\452506-RD-C018-DETAILS.DWG
PLOT DATE: 8/8/2022 3:17 PM PLOTTED BY: RUSSO, JILL [US-US]



TYPICAL BUBBLE CURTAIN INSTALLATION
NOT TO SCALE



TYPICAL TURBIDITY CURTAIN
NOT TO SCALE

RECORD DRAWING

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APPROVED BY	WJL	DATE	11/24/20
PROJECT MGR.	MLV	DATE	11/24/20

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PROJECT TITLE
NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
DETAIL SHEET

SCALE NONE

DRAWING NO. 452506-C-020 REV. 2

APPENDIX E – PERIODIC REVIEW REPORT GENERAL OUTLINE

Periodic Review Report (PRR) General Outline

I. Executive Summary: (½-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   A. Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.

B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.
D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations
A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
1. whether all requirements of each plan were met during the reporting period
2. any requirements not met
3. proposed plans and a schedule for coming into full compliance.
B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
C. Future PRR Submittals
1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
2. If the requirements for site closure have been achieved, contact the Department's Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

<u>Additional Guidance</u>
A. Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Department's Project Manager for the site.
B. Charts and graphs are useful to show remedial effectiveness, costs, mass removal etc., and should be used where applicable.