CORRECTIVE ACTION COMPLETION REPORT
LOWER GENESEE RIVER
OPERABLE UNIT 5 (OU-5)
OF THE EASTMAN BUSINESS PARK

ENVIRONMENTAL RESPONSE TRUST
NYSDEC SITE NUMBER: 828177
EPA ID NO. NYD980592497
ROCHESTER, NEW YORK

Prepared for:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Prepared by:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, New York 13212

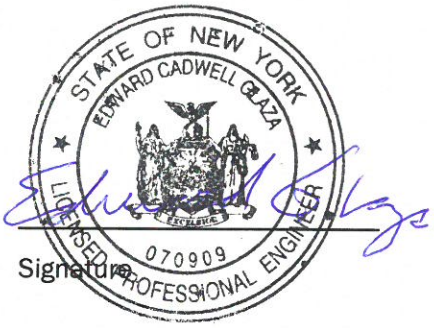
JANUARY 2023

CERTIFICATIONS

I, EDWARD G. GLAZA, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Design was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Design.

A Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site, and that such plan has been approved by DER.

070909	January 18, 2023	
NYS Professional Engineer #	Date	Signature



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.

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LIST OF ACRONYMS

ACRONYM	Definition	ACRONYM	Definition
ACs	Administrative Controls	NYCRR	New York Codes, Rules and Regulations
AOC	Area of Concern	OBG	O'Brien and Gere
ASTM	American Society for Testing and Materials	OSHA	Occupational Safety and Health Administration
CAO	corrective action objective	OU	Operable Unit
CAMP	Community Air Monitoring Plan	PFAS	per- and polyfluoroalkyl substances
CMS	Corrective Measures Study	ppm	parts per million
CPOI	chemical parameter of concern	RCRA	Resource Conservation and Recovery Act
DER	Division of Environmental Remediation	RFI	RCRA Facility Investigation
EBP	Eastman Business Park	RTK	real-time kinematic
EC	Engineering Control	SCO	sediment cleanup objective
FWRIA	Fish and Wildlife Resources Impact Analysis	SEQR	State Environmental Quality Review Act
gpm	gallon(s) per minute	SMI	Seneca Meadows, Inc.
GPS	global positioning system	SMP	Site Management Plan
HASP	Health and Safety Plan	SOB	Statement of Basis
HDPE	high-density polyethylene	SWPPP	Stormwater pollution Prevention Plan
IC	Institutional Control	USEPA	United States Environmental Protection Agency
KLWWTP	Kings Landing Wastewater Treatment Plant	VOC	volatile organic compound
Kodak	Eastman Kodak Company	WLDDI	White Lake Dock and Dredge, Inc.
LLDPE	linear low-density polyethylene		
µg	microgram(s)		
µg/m^3	microgram(s) per cubic meter		
NAVD	North American Vertical Datum		
NTU	nephelometric turbidity unit		
NYSDEC	New York State Department of Environmental Conservation		

1 BACKGROUND AND SITE DESCRIPTION

1.1 Site Background

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 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.

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 Lower Genesee 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 contamination remaining at the site. The Lower Genesee River is OU-5 (also referred to as the Site). In January 2020, the Statement of Basis – Corrective Measures Selection for the Site was signed into the administrative record.

1.2 Site Description

The Site is in Rochester, Monroe County, New York (**Figure 1**). The OU-5 portion of the Lower Genesee River consists of the area from the mouth of the river at Lake Ontario approximately 4 miles upstream to the State 104 (Veteran's Memorial) Bridge south, which crosses the river just upstream of the Kings Landing Wastewater Treatment Plant (KLWWTP). Current land use upstream of the Turning Basin is primarily park land, cemeteries, and undeveloped areas due to steep topography along much of the 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 Lower Genesee River is designated as an area of concern (AOC) in the Great Lakes region under the United States-Canada Great Lakes Water Quality Agreement.

The corrective measures selected for OU-5 included dredging and capping two in-river areas (AOC 1 and AOC 2) and dredging, backfilling, and restoring one wetland area (Wetland C) on the eastern shore (**Figure 1**).

2 SUMMARY OF THE SITE REMEDY

2.1 Corrective Action Objectives

Corrective action objectives (CAOs) were developed for the Site with the goal of protecting human health and the environment. Based on the results of the RCRA Facility Investigation (RFI) (Parsons Corporation [Parsons] et. al. 2017) and the Corrective Measures Study (CMS) (Parsons and OBG 2019), silver was identified as the chemical parameter of concern (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. The CAOs identified for this Site are described below.

2.1.1 Sediment CAOs

Remedial Goals for Public Health Protection:

- 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.

Remedial Goals for Environmental Protection:

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

2.2 Description of Selected Remedy

The Site was remediated in accordance with the remedy selected by the NYSDEC in the Final Statement of Basis (SOB) Corrective Measures Selection (NYSDEC 2020).

The factors considered during the selection of the remedy are those listed in 6 New York Codes, Rules and Regulations (NYCRR) Part 373. The components of the selected remedy are described below.

2.2.1 Component 1: Remedial Design

Component 1 required preparation of a Remedial Design to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques were implemented to the extent feasible in the design, implementation, and site management of the remedy in accordance with NYSDEC Division of Environmental Remediation (DER) Guidance DER-31, Green Remediation (2010a). The major green remediation components were as follows:

- Consider the environmental impacts of treatment technologies and remedy stewardship over the long term
- Reduce direct and indirect greenhouse gas and other emissions
- Increase energy efficiency and minimize use of non-renewable energy

- Conserve and efficiently manage resources and materials
- Reduce waste and increase recycling and reuse of materials which would otherwise be considered a waste
- Maximize habitat value and create habitat when possible
- Foster green and healthy communities and working landscapes which balance ecological, economic, and social goals
- Integrate the remedy with the end use where possible and encourage green and sustainable redevelopment

2.2.2 Component 2: Dredging

Component 2 required the following activities:

- River sediments were to be dredged in areas where there was a potential for greater than 4 inches of scour during a 100-year flow event. Dredging was required to a depth of approximately 2.5 feet to accommodate placement of an isolation cap over deeper sediments exceeding the site-specific toxicity action level of 70 parts per million (ppm) silver. Dredging was required in two localized areas, one at the KLWWTP (AOC 1) encompassing approximately 1.8 acres and a second location downstream of the KLWWTP (AOC 2) encompassing approximately 2.0 acres.
- Wetland sediments were to be dredged from an approximately 2.7-acre area (Wetland C) where silver concentrations exceeded the site-specific toxicity action level of 70 ppm. Dredging was required to a minimum depth of two feet followed by placement of clean backfill to a minimum thickness of 2 feet.

2.2.3 Component 3: Capping

Component 3 required placement of an isolation cap over dredged areas within the river (AOC 1 and AOC 2). Cap requirements consisted of a minimum 6-inch-thick chemical isolation layer of sand overlain with an erosion protection/habitat layer. The specific thickness and material for each layer were determined during design. The average cap thickness was anticipated to be 2.5 feet to restore the riverbed to pre-dredge (existing bathymetry) conditions. All activities associated with the cap, cover and fill placement were required to meet the requirements of 6 NYCRR Part 608.

2.2.4 Component 4: Restoration

Component 4 required placement of clean backfill in dredged areas of the wetland (Wetland C). The specific thickness and type of material for each backfill layer were determined during design. The average backfill thickness was required to be a minimum of 2 feet to restore the wetland to approximate pre-dredge (existing bathymetry) conditions. The clean backfill materials had to meet the requirements of 6 NYCRR Part 375-6.7(d). Shoreline areas disturbed by the remedial effort also required restoration.

2.2.5 Component 5: Institutional Controls

Component 5 required implementation of the following:

- Controls to prevent damage to the capped areas of the river from activities such as excavating and filling to prevent unacceptable disturbance of or exposure to residual silver contamination within remediated areas

- Controls that included notification of appropriate government agencies with authority for permitting potential future activities that could impact the implementation and effectiveness of the remedy

2.2.6 Component 6: Site Management Plan

Component 6 required preparation of a Site Management Plan (SMP) which includes a Monitoring Plan to assess the performance and effectiveness of the remedy and restoration success. A Habitat Restoration Plan was developed to meet the substantive requirements of 6 NYCRR Parts 608 and 663. Habitat assessments performed as part of the RFI or any pre-design investigation were used as the basis of design for restoration initiatives. The Habitat Restoration Plan included the necessary requirements for monitoring restoration success for five years after remedial action and for needed restoration maintenance. The plan included specific monitoring requirements and success criteria.

The SMP includes an Institutional and Engineering Control (IC/EC) Plan that identifies all use restrictions and engineering controls for the Site and details the steps and media-specific requirements necessary to ensure the ICs and/or ECs remain in place. The IC/EC Plan includes:

- Provisions for the management and inspection of the identified ECs
- The steps necessary for periodic reviews and certification of ICs and ECs
- A Monitoring Plan to assess the performance and effectiveness of the remedy, including monitoring of cap integrity (bathymetry and coring) and reporting to assess the performance of the cover system
- A Monitoring Plan to assess restoration success and any necessary maintenance for five years after remedial action

3 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

3.1 Governing Documents

The remedy for this Site was performed as a single project, and no interim remedial measures, OUs or separate construction contracts were required. The information and certifications made in the Contract Documents (Parsons 2020) were relied upon to prepare this report and certify that the remediation requirements for the Site have been met.

3.1.1 Site-Specific Health and Safety Plan

All remedial work performed under this remedial action was in full compliance with governmental requirements, including site and worker safety requirements mandated by the Occupational Safety and Health Administration (OSHA).

The Health and Safety Plan (HASP) (White Lake Dock and Dredge, Inc. [WLDDI] 2021) was complied with for remedial and invasive work performed at the Site.

3.1.2 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) for the Site remedial construction was included in the HASP. The CAMP was implemented to protect the downwind community from potential airborne contaminant releases directly resulting from remedial construction activities. The downwind community included off-site receptors such as residences and businesses and on-site workers not directly involved with the remedial construction activities. Emission control measures specified in the CAMP were implemented.

Air monitoring for particulates took place at two upwind and two downwind locations near the perimeter of the staging area. Meteorological monitoring was also conducted as part of the CAMP to document site conditions and help assess wind direction and speed. WLDDI prepared daily air monitoring reports that were included in the daily log and daily field reports prepared by Parsons and submitted daily to NYSDEC.

Action levels and corresponding response measures for particulates were identified in the CAMP. CAMP results and response actions are provided in Section 3.2.5.

3.1.3 Contractors Work Plans

The Remediation Engineer (Parsons) reviewed plans and submittals for this remedial project (i.e., contractor and subcontractor submittals) and confirmed that they complied with the Contract Documents. All remedial documents requested by NYSDEC were submitted in a timely manner prior to the start of work.

The submittals included a Stormwater Pollution Prevention Plan (SWPPP) which established the erosion and sediment controls for the project. All remedial construction activities were performed in conformance with SWPPP requirements.

3.1.4 Citizen Participation

NYSDEC sought public review and comment on all corrective measure alternatives described in the SOB and held a 45-day public comment period and public meeting. Comments received from the public were subsequently addressed. Site-related reports were also made available for public review at designated document repositories in the Rochester area. Additionally, several public meetings and presentations were made to inform the public about the project.

3.1.5 Statement of Basis

The Site was remediated in accordance with the remedy selected by the NYSDEC in the Final SOB Corrective Measures Selection dated January 2020. The remedial program was chosen in accordance with 6 NYCRR 373 and addressed historical releases to the Genesee River from the EBP.

3.1.6 Permits

Project-related permits/approvals consisted of the following:

- United States Army Corps of Engineers authorization under Nationwide Permit No. 38 for Cleanup of Hazardous and Toxic Wastes (No. LRB-2020-00226)
- NYSDEC Section 401 Water Quality Certification (original and modification) (Permit ID 8-2614-00963/00002)
- State of New York Department of State determination of "No Review Necessary" (No. F-2020-0706)
- New York State Office of General Services determination of "No Permit Required" (No. I-4276)
- City of Rochester Certification of Zoning Compliance for Temporary Storage Permit (Certification No. 1210770)
- New York State Department of Environmental Conservation Waste Characterization Authorization for the KLWWTP

Documentation of agency approvals, permits, and permit equivalents required by the Remedial Design is included in **Appendix B**.

3.2 Remedial Program Elements

3.2.1 Contractors and Consultants

The prime contractor for the Site was WLDDI of Norton Shores, Michigan. The following companies were subcontractors to WLDDI:

Company	Location	Products or Services Provided
Riccelli Trucking, Inc.	North Syracuse, NY	Transportation and disposal of nonhazardous waste solids; supply of site aggregates, fill materials and topsoil
Riccelli-Northern Ready Mix & Blacktop	Syracuse, NY	Concrete
Lehigh Hanson	Rochester, NY	Supplier of Portland cement
Cardno	Elma, NY	Wetland plantings

Company	Location	Products or Services Provided
Gayron deBruin (GdB) Geospatial LS, P.C.	Melville, NY	Surveying
Global Treatment Solutions	Holly, MI	Water treatment system
Veteran Fencing	Schuylerville, NY	Chain link fence
Hewitt Young Electric LLC	Rochester, NY	Electrical
ALS Group USA, Corp.	Dallas, TX	Analytical services
Paradigm Environmental Services	Rochester, NY	Analytical services
Poseidon Barge Ltd	Berne, IN	Sectional barges

The Engineer of Record for the Site was Parsons of Syracuse, New York. The following companies were subcontractors to Parsons:

Company	Location	Products or Services Provided
Alpha Analytical Labs	Westboro, MA	Analytical services

3.2.2 Site Preparation

A pre-construction meeting was held with NYSDEC, Parsons and WLDDI on April 14, 2021. Dig Safely New York was called prior to mobilization to identify and mark out on-site underground utilities and confirm there were no utilities in the project area. Site mobilization activities began on April 26, 2021.

Pre-work photographs and video documentation were collected for the upland staging area north of the KLWWTP, the haul route within the KLWWTP, and Hanford Landing Road East to its intersection with Maplewood Drive. This documentation served as a benchmark to determine whether project traffic was adversely affecting the roads. In addition, steel road plates were placed over utility crossings within the KLWWTP to protect them from potential damage from haul trucks.

A pre-work topographic survey of the staging area and pre-work bathymetric surveys of AOC 1, AOC 2 and Wetland C were completed. Waste characterization samples from AOC 1, AOC 2 and Wetland C were also collected and analyzed to obtain approval from Seneca Meadows, Inc (SMI), the selected waste disposal facility.

A temporary Engineer's trailer, electric generator, and security fencing were set up in a Kodak parking lot on Keehl Street. A temporary Contractor's trailer was set up at the southwest corner of the staging area with power supplied from the KLWWTP. Portable sanitary services were provided at the Engineer's trailer, staging area, and dredge barge and maintained with weekly servicing.

Preparation of the staging area began with installation of erosion control fencing, limited tree cutting, and removal of a short section of the existing chain link fence at the north end of the staging area. Clearing and grubbing of the staging area was not required.

A temporary dock extending approximately 40 feet into the Genesee River was constructed at the north end of the staging area. The dock was used to offload barges containing sediment removed from the remediation areas to onload barges with clean cap/backfill materials, and to launch and retrieve equipment. The dock consisted of steel sheet piles driven into the river bottom that were reinforced with steel wales and tie rods. The dock structure was then backfilled with #2 stone, which was overlaid

with timber mats. A spill plate was installed at the dock to catch sediment that fell from the material handler bucket during barge offloading.

Two temporary sediment processing pads were constructed at the south end of the staging area. A 16-ounce non-woven geotextile fabric was placed on top of the existing grade as a demarcation layer. Imported clean fill was then placed on the geotextile to level the area. The fill was covered, in order, with a 16-ounce non-woven geotextile fabric, a 20-millimeter low linear density polyethylene (LLDPE) liner, and another 16-ounce non-woven geotextile fabric. The liner and geotextiles extended laterally further than the fill on all sides. A perimeter drain consisting of a slotted 3-inch-diameter high density polyethylene (HDPE) pipe embedded in #2 stone was built on the geotextile/liner extension at the perimeter and drained to a sump at the southeast corner of the pads. Three levels of concrete bin blocks measuring 2 feet by 2 feet by 6 feet each were then placed on top of the perimeter drain, and the liner and geotextiles were pulled up over the block exterior and secured to seal the pads. A 4-inch layer of concrete was placed on the interior of the blocks to provide a durable working surface.

A water treatment pad similar to the sediment processing pads was constructed at the southeast corner of the staging area. The area was graded and varying levels of concrete bin blocks were placed around the perimeter. A 16-ounce non-woven geotextile fabric, a 20-millimeter LLDPE liner and another 16-ounce non-woven geotextile fabric were placed inside and up the interior of the blocks to seal the pad. The liner drained to a sump located at the southeast corner of the pad. A 6-inch layer of #2 stone was placed on the interior of the bin blocks to provide a durable working surface.

An access road was constructed from the dock to the sediment processing pads. A 16-ounce non-woven geotextile fabric was placed on top of the existing grade as a demarcation layer then covered with imported clean fill followed by gravel. An access road was also constructed on the truck loading (west) side of the processing pads that included a LLDPE liner sandwiched between geotextiles under gravel. The liner drained to a sump located at the southwest corner of the access road.

A temporary water treatment system was constructed within the water treatment pad to treat construction water from sediment dredging and processing. The system was provided by Global Treatment Systems and had a treatment capacity of 100 gallons per minute (gpm). The treatment system included, in order from influent to effluent, a 21,000-gallon influent storage/settling tank, polymer and ferric chloride injection, one 18,000-gallon solids settling tank, two 5 microgram (µg) bag filters, two granular activated carbon tanks, two 0.5 µg bag filters and four 21,000-gallon effluent storage tanks. System components were connected with flexible piping.

Floating equipment (e.g., sectional barges, tugs) was launched from Gibbs Marine located near the mouth of the river to the north. A long-reach excavator and other materials/supplies were loaded onto the dredging barge and secured to the deck. Barges for material handling received containment beams to form walls on the decks. Gaps were sealed with rigid and urethane foams, and a layer of plywood was placed on the decks to prevent damage to the barges. Navigation lights were installed on all barges.

All State Environmental Quality Review Act (SEQR) requirements and all substantive compliance requirements for attainment of applicable natural resource or other permits were achieved during this remedial action.

A NYSDEC-approved project sign was erected at the KLWWTP entrance at the intersection of Hanford Landing Road East and Maplewood Drive and remained in place for the duration of the project.

3.2.3 General Site Controls

The following Site control activities were completed:

- Site security
- Jobsite record keeping
- Erosion and sedimentation controls
- Equipment decontamination and residual waste management
- Stockpile methods
- Decontamination

3.2.3.1 Site Security

Site security fences and gates were not required in either the staging area or the remediation areas. The staging area was located at the north end of the KLWWTP, which does not allow public access. All personnel and vehicles were required to pass through the KLWWTP. The remediation areas were in gorge sections of the river with high and steep embankments and were therefore only accessible by boat.

A security fence with gate was installed around the Engineer's trailer located in a parking lot on Keehl Street. The trailer was locked when Engineer's staff was not present, and the gate was locked when the Engineer's staff were not on site.

All project personnel and visitors, except haul truck drivers, were required to sign in at WLDDI's trailer in the staging area.

3.2.3.2 Jobsite Record Keeping

Both Parsons and WLDDI prepared daily field reports. Parsons also prepared minutes for all project meetings and a daily log documenting dredge, material delivery, capping, and waste disposal quantities; turbidity data; air monitoring data; and construction water treatment, test results and discharge quantities.

3.2.3.3 Erosion and Sedimentation Controls

Erosion fence was installed on the east and west sides of the staging area prior to the start of work; the north and south ends of the Site did not receive erosion fence to allow access for haul trucks. In addition, sediment filters were placed in the storm basins at the south end of the staging area adjacent to the KLWWTP. Parsons inspected the erosion and sediment control features and coordinated repairs with WLDDI during construction, when needed.

3.2.3.4 Equipment Decontamination and Residual Waste Management

Several methods were employed to minimize spillage of contaminated materials and to decontaminate equipment that came in contact with contaminated material:

- The dredge bucket was kept closed until properly placed over the material barge.
- Barge decks were hosed off within the dredge containment area to remove spilled materials.
- A spill plate was installed at the dock to catch sediment that fell from the material handler bucket during barge offloading. The spill plate was lined with 6-millimeter polyethylene sheeting to catch spilled material, which was then collected and placed in the haul truck.
- Haul trucks were carefully loaded to avoid spillage.
- The sediment processing pad was constructed with an access road on each side – one road on the east side to haul contaminated material from the dock to the processing pad and one road on the west side to load trucks for off-site disposal. The west/loading side road was maintained as a clean road to eliminate the need to decontaminate truck tires. The road was lined with 6-millimeter polyethylene sheeting to catch spilled material. Spills were immediately cleaned up so that the road and truck tires remained clean.
- Material barges and haul trucks were pressure washed after handling contaminated material to ensure they were clean prior to handling clean cap and backfill materials.

3.2.3.5 Stockpile Methods

Dredged material was placed in barges, offloaded into haul tracks, then hauled to and dumped in the sediment processing pad. The processing pad was the only location where contaminated material was stockpiled. The stockpiles were covered with polyethylene sheeting during rain events. Water that drained from the stockpiles was collected in the sump and pumped to the temporary water treatment plant for processing.

3.2.4 Nuisance Controls

Dust control was performed during solidification of stockpiled material by pneumatically transferring the Portland cement from the delivery trucks to a bulk storage pig and then to a covered day use bin. A DustBoss® dust suppression misting cannon was used to control dust at the processing pad during mixing operations. Dust control along the access road was performed by wetting down the road with a road sweeper, a water tank on a truck, or a hose.

No odor controls were required because the stockpiles of contaminated material did not emit odors of concern.

The KLWWTP roadways were kept clean with an Elgin® Pelican® broom sweeper and occasional washing down with a hose.

Truck traffic was controlled by using two-way radios to inform the trucks when it was acceptable to enter the Site to minimize congestion within the Site and prevent entering trucks from having to pass exiting trucks. Trucks were allowed to queue on Hanford Landing Road East west of Maplewood Drive until cleared to enter the Site. Large mirrors were installed at blind spots along the road, orange traffic cones were placed to keep the trucks to one side of the road, and a 15 mile per hour speed limit was strictly enforced on Hanford Landing Road East and within the KLWWTP. The northbound right lane of Maplewood Drive was occasionally shut down with traffic cones and signage to provide additional safety for trucks entering the Site.

3.2.5 CAMP Results

WLDDI monitored air quality at the staging area for particulates (dust) using Thermo Scientific™ personal DataRAM™ pDR-1000AN and pDR-1200 real-time dust monitors continuously during active Site activities unless wet weather precluded operation of the equipment. Dust was monitored at four locations within the staging area – two upwind and two downwind of the active work area. The action level for particulates to begin dust suppression was the when the downwind level exceeded the upwind level by 150 micrograms per cubic meter (µg/m^3) or 2.5 times. No exceedances were reported during the work.

No dust monitoring was performed at AOC 1, AOC 2, or Wetland C because the excavated material was saturated and did not generate dust. No monitoring was performed for volatile organic compounds (VOCs) because VOCs were not present at levels of concern.

3.2.6 Turbidity Monitoring Results

WLDDI monitored turbidity upstream and downstream of AOC 1, AOC 2, and Wetland C during active dredging and capping/backfilling at each area. Turbidity was monitored using NexSens CB-450 Data Buoys and YSI 6-series Sondes. The alert level to begin operational changes was established as when the downstream level exceeded the upstream level by 25 nephelometric turbidity units (NTUs). The action level to cease operations until resolution of the exceedance cause was established as when the downstream level exceeded the upstream level by 50 NTUs. There were no exceedances of either the alert or action levels reported during the work.

3.2.7 Surveys of KLWWTP Sheet Pile and Tank Walls

The KLWWTP sheet pile and tank walls were surveyed prior to, during and after intrusive work in AOC 1 to verify that the remediation work did not adversely affect the walls. The pre- and post-condition surveys consisted of a visual survey, photographic documentation, a drone video, and deflection surveying of 20 optical monitoring targets – 10 on each wall – for two weeks prior to and after intrusive work. The optical monitoring targets were also surveyed during each day of remediation work in AOC 1

adjacent to the walls. The pre-condition survey established a baseline for comparison with the post-condition survey.

The post-condition survey of the walls documented the same conditions as the pre-condition survey. No visual changes occurred throughout the intrusive work period and two-week post-work period. Movement of the walls recorded by the deflection surveying never exceeded the ¼-inch threshold value, consistent with the movement expected from thermal expansion and contraction of the walls.

3.2.8 Reporting

Parsons and WLDDI prepared daily field reports. The reports contained hours worked, weather conditions, health and safety factors, a summary of work performed, personnel, equipment, material tracking, visitors, schedule notes, issues, and photographs. Biweekly meetings were held, and meeting minutes were prepared and distributed to the project team.

The digital photographic log documenting the Site work is included in **Appendix C**. The log shows the progression of the major work elements throughout construction.

3.3 Contaminated Materials Removal

The following were sediment cleanup objectives (SCOs) for the contaminant of concern for this project:

- In-River Areas (AOC 1 and AOC 2) – Dredging was required to a depth of approximately 2.5 feet to accommodate placement of an isolation cap over deeper sediments exceeding the site-specific toxicity action level of 70 ppm silver in areas where there was potential for greater than 4 inches of scour during a 100-year flow event.
- Wetland C – Sediment removal was required where silver concentrations exceeded the site-specific toxicity action level of 70 ppm silver within the top two feet. Deeper removals were necessary in some areas to facilitate access to the work area and construction of deeper pools as part of the restoration plan. Contaminated sediment was removed using mechanical dredging. The mechanical dredging equipment consisted of the following:
    - One Volvo EC480 excavator with a 70-foot long-reach, an environmental dredge bucket, real time kinematic (RTK) global positioning system (GPS) hardware and Dredgepack® software
    - A 40-foot by 60-foot float plant on which the excavator was mounted
    - Four 30-foot by 40-foot material barges
    - Two work/push boats to transfer barges between the float plant and the temporary dock
    - One Sennebogen 835 material handler to offload sediment from the barges
    - Two Volvo off-road haul trucks (one A30G and one A40) with sealed tailgates to haul sediment from the dock to the processing pad

Pre-construction bathymetric surveys were performed in each work area prior to beginning dredging to confirm existing conditions. The bathymetric surveys used single-beam sonar mounted on either a traditional survey boat or remote-controlled Echo boat for shallow depths. RTK-GPS survey rod data collection was used where the water depth was too shallow for a bathymetric survey. Post-dredging

surveys were performed using the same equipment and methods to confirm that the target dredge depths had been achieved.

The active portion of each work area was enclosed with a turbidity curtain that was extended or moved as work progressed through the area. Turbidity was continuously monitored upstream and downstream of each work area during dredging.

The dredging process used for each area was identical. Contaminated sediment was excavated with the barge-mounted long-reach excavator and placed into the material barges. The environmental dredge bucket maintained enclosure of the excavated sediment as it was raised through the water column to minimize spillage and the generation of turbidity. The loaded barges were then pushed to the temporary dock where they were offloaded into the haul trucks using the material handler. The loaded trucks then traveled to and dumped into the sediment processing pad where the sediment was solidified with Portland cement for off-site disposal. Construction water remaining in the barges and that drained from the sediment in the processing pad was transferred to the temporary water treatment system for treatment prior to discharge to the KLWWTP.

The NYSDEC Section 401 Water Quality Certification restricted in-water work to specific timeframes for each area to protect spawning fish. Dredging and backfilling operations were permitted within Wetland C from June 1 to October 15. Restoration of Wetland C with planting was required to be completed no later than October 30. Dredging and capping within the river channel (AOC 1 and AOC 2) was permitted from July 1 to October 31. Dredging proceeded from Wetland C to AOC 2 to AOC 1. A description of each area is provided in chronological work completion order in Sections 3.3.1 through 3.3.3.

3.3.1 Wetland C Sediment Removal

Sediment was dredged from two separate areas within Wetland C totaling approximately 2.7 acres (**Figure 1**). Wetland C South was approximately 0.8 acre and was dredged from June 2 through June 16, 2021. Wetland C North was approximately 1.9 acres and was dredged from June 17 through July 9, 2021.

Dredging in Wetland C was required to a minimum depth of 2 feet. However, a minimum draft of 3.5 feet was required for the material barges to operate effectively in the wetland. Due to low water levels in the river during the work, dredging to a greater depth was required to provide barge access into both wetland areas. All of Wetland C South was dredged to a greater depth, while five access channels were dredged to a greater depth in Wetland C North. Areas adjacent to the access channels in Wetland C North did not require dredging to a greater depth because the mechanical dredge could reach those areas from the access channels. The target dredging elevation in Wetland C South and the Wetland C North access channels was 241.0. The target dredging elevation in the Wetland C North non-access channel areas was 244.0.

The surveyed quantities removed from Wetland C were:

- South 7,068 cubic yards
- North 11,791 cubic yards
- Total 18,859 cubic yards

The location of original sources and areas where excavations were performed are presented on Drawing C-004 in **Appendix A1**. The excavation/dredging plan of estimated cut and fill thicknesses for Wetland C is presented on Drawing C-009 in **Appendix A1**.

3.3.2 In-River Sediment Removal (AOC 1 and AOC 2)

Sediment was dredged from two separate in-river areas totaling approximately 3.8 acres (**Figure 1**). AOC 2 downstream of the KLWWTP was approximately 2.0 acres and was dredged first from August 6 through August 26, 2021, and a cleanup pass was performed on September 2, 2021. AOC 1 adjacent to the KLWWTP was approximately 1.8 acres and was dredged from August 26 through September 9, 2021. AOC 1 was dredged upstream and downstream of the KLWWTP. No dredging occurred in front of the KLWWTP due to stability concerns related to the sheet pile and tank walls. Dredging was required to a uniform average target depth of 26 inches to accommodate placement of the isolation cap.

The surveyed quantities removed from the in-river areas were:

- AOC 1 9,285 cubic yards
- AOC 2 4,620 cubic yards
- Total 13,905 cubic yards

The locations of original sources and areas where excavations were performed in AOC 1 and AOC 2, respectively, are presented on Drawings C-002 and C-003 in **Appendix A1**. The excavation/dredging plans of estimated cut and fill thicknesses for AOC 1 and AOC 2, respectively, are presented on Drawings C-007 and C-008 in **Appendix A1**.

3.3.3 Characterization of Excavated Materials

Prior to dredging, WLDDI collected composite samples of sediment from Wetland C and AOC 1/AOC 2 for waste characterization. The samples were sent to Paradigm Environmental Services for chemical analysis. The analytical results were used to create a waste profile which SMI subsequently approved to accept the sediment. The SMI approvals are included in **Appendix D1**.

3.3.4 Disposal Details

Dredged sediment was solidified with approximately 5.9 percent Portland cement by weight (2,556 tons total) prior to off-site disposal. The Portland cement was mixed into the sediment on the processing pad using a Volvo EC300CLR long-reach excavator. A paint filter test (USEPA SW-846 Test Method 9095B) was run on each batch of solidified sediment to ensure there were no free liquids prior to off-site disposal. After confirming there were no free liquids, the sediment was loaded into haul trucks using a Sennebogen 840 material handler. The sediment was then hauled to SMI in Waterloo, New York, for off-site disposal.

Contaminated surface soil from the haul road between the dock and processing pad and concrete and liners from the processing pad were also disposed at SMI.

The amount of material disposed at SMI is summarized in Table 1.

Table 1. Summary of Waste Material Disposal

Type	Hauler	Area	Date From	Date To	Quantity (tons)
Nonhazardous / Impacted Material	Riccelli	Wetland C	6/4/21	8/7/21	24,179.91
		AOC 2	8/9/21	9/8/21	13,564.55
		AOC 1	8/28/21	9/24/21	6,410.62
		Surface Soil	10/26/21	11/5/21	1,447.12
		Concrete Pad	10/27/21	10/29/21	384.70
		Total			45,986.90

Hauler permit certificates, disposal facility approval letters, disposal facility permit certificates, and tabulated load quantities/summaries are included in **Appendices D2 to D4**.

Construction water collected from the sediment barges and processing pad was pre-treated in the on-site temporary water treatment system prior to discharge to the KLWWTP. The water needed to meet the pre-treatment criteria established by the NYSDEC Waste Characterization Authorization. A total of 271,590 gallons were treated and discharged to the KLWWTP. A construction water disposal log is included in **Appendix D5**.

3.4 Remedial Performance Documentation

Dredging to target elevations was required in Wetland C and the in-river areas. No post-dredging samples were required as the localized areas for removal were targeted and confirmed prior to and as part of the pre-design scope of work. Sampling and delineation of the extents of the areas requiring remediation was completed as part of the RFI (Parsons et. al. 2017) and CMS (Parsons and OBG 2019).

Post-dredging surveys were performed to confirm that the target dredge depths had been achieved. The surveys consisted of bathymetric surveys using single-beam sonar mounted on either a traditional survey boat or remote-controlled Echo boat for shallow depths and RTK-GPS survey rod data collection where the water depth was too shallow for a bathymetric survey.

3.5 Imported Materials

Earthen materials were imported to the Site to prepare the staging area for the work and to restore the remediated areas after dredging. All sources of imported materials with quantities for each source are shown in Table 2.

Table 2. Summary of Imported Materials

Material Description	Source	NY Mine ID #	Chemical Testing Required (1,2,3)	Quantity (tons)
Staging Area Materials				
General Fill	Quarry Road Mine, Sodus, Wayne County, NY	80841	Yes	2,462.10
General Fill	Lake Road Pit, Phelps, Ontario County, NY	80634	Yes	3,704.87
Crusher Run	Quarry Road Mine, Sodus, Wayne County, NY	80841	Yes	2,577.67
# 2 Stone	Quarry Road Mine, Sodus, Wayne County, NY	80841	No	921.20
3-inch Stone	Quarry Road Mine, Sodus, Wayne County, NY	80841	No	75.88
Topsoil	Stripped from Love's Truck Stop in Waterloo, NY – transported to and stored at Lake Road Pit, Phelps, Ontario County, NY	80710	Yes	2,000 cy (3)
Capping/Backfill Materials				
Chemical Isolation/ Backfill Material	Oak Openings Road, Avon, Livingston County, NY	80857	Yes	21,541.94
Habitat/Erosion Protection Material	Granby Mine, Granby, Oswego County, NY	70465	No	9,015.26
Habitat/Erosion Protection Material	Smith Gravel Pit, Sodus, Wayne County, NY	80710	No	5,044.00
Topsoil	Stripped from Love's Truck Stop in Waterloo, NY – transported to and stored at Lake Road Pit, Phelps, Ontario County, NY	80634	Yes	2,000 cy (3)

cy – cubic yard(s)

(1) Imported staging area materials were required to meet the Appendix 5, Commercial/Industrial Ecological Resource requirements of NYSDEC DER-10 Section 5.4(e) Technical Guidance for Site Investigation and Remediation (NYSDEC 2010b) and the most recent version of the memorandum *Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs*

(2) Imported backfill and capping materials were required to meet the Appendix 5, Ecological Resource requirements of NYSDEC DER-10 Section 5.4(e) Technical Guidance for Site Investigation and Remediation (NYSDEC 2010b), including silver concentration standards of 8.3 ppm and 2 ppm for "Commercial or Industrial Use" and "If Ecological Resources are Present", respectively. Imported backfill and capping materials were also required to meet the most recent version of the memorandum *Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs*.

(3) No chemical testing was required for imported materials with a gradation of 10 percent or less by weight passing the #10 sieve as determined by American Society for Testing and Materials (ASTM) C136 or ASTM D6913 consistent with NYSDEC DER-10 Section 5.4(e)(5) Technical Guidance for Site Investigation and Remediation (NYSDEC 2010b), provided that the material consisted of gravel, rock or stone, consisting of virgin material from a permitted mine or quarry.
(4) Estimated quantity based on 17.5 cy per truckload.

Tables summarizing chemical analytical results for imported materials, in comparison to allowable levels, are provided in **Appendix E**.

3.6 Site Restoration

The same capping/backfilling process was used for each area. Imported capping/backfilling materials were delivered to the south end of the staging area where they were dumped then reloaded into an off-road dump truck and hauled to the loading dock. The materials were then loaded onto the material barges using the material handler. The loaded barges were pushed to the work area where the material was placed in the area being restored using the barge-mounted long-reach excavator. The active portion of each work area was enclosed with a turbidity curtain that was extended or moved as work progressed through the area. Turbidity was continuously monitored upstream and downstream of each work area during capping/backfilling.

The original restoration plan for Wetland C required the placement of clean backfill to a minimum thickness of 2 feet to restore the entire wetland to pre-dredge (existing) elevations. Prior to the start of work, habitat enhancements were incorporated that created areas with greater water depth and varied habitat within Wetland C. This was completed by eliminating topsoil in the access channels and by not installing backfill to pre-dredge elevations in the access channels.

Wetland C South and the Wetland C North access channels were backfilled with a minimum 12-inch layer of chemical isolation/backfill material (¾-inch minus sand) to an elevation of 242.0 North American Vertical Datum of 1988 (NAVD 88). The Wetland C North non-access channel areas were backfilled a minimum 12-inch layer of chemical isolation/backfill material overlaid with a minimum 12-inch layer of topsoil to an elevation of 246.0 (NAVD 88), approximately equal to the pre-dredge elevation.

Wetland C South was backfilled first from July 12 through July 14, 2021. The Wetland C North non-access channels were then backfilled from July 14 through July 28, 2021, followed by the Wetland C North access channels from August 2 through August 5, 2021. Wetland C was then restored with a mixture of over 12,000 emergent and submergent plants comprised of 20 species and a seed mix comprised of 18 species planted in random clusters throughout the area from August 13, 2021 through September 1, 2021 and June 21 through June 24, 2022.

AOC 1 and AOC 2 were capped with a minimum 12-inch layer of chemical isolation/backfill material overlaid with a minimum 12-inch layer of habitat/erosion protection material (4-inch minus gravel) to approximately the pre-dredge elevation. The chemical isolation/backfill material was placed in AOC 2 then AOC 1 from September 10 through September 23, 2021. The habitat/erosion protection layer was placed in AOC 2 then AOC 1 from September 10 through September 23, 2021.

Post-placement surveys were performed after each layer was completed in each area to ensure that the proper thickness of capping/backfilling materials had been installed. The surveys were performed using the same equipment and methods used for dredging (bathymetric survey using single-beam sonar mounted on either a traditional survey boat or remote-controlled Echo boat for shallow depths and RTK-GPS survey rod data collection where the water depth was too shallow for a bathymetric survey). The post-placement surveys are presented in **Appendix F**.

In addition, core samples were collected from placed layers of the chemical isolation/backfill material and topsoil at a minimum frequency of eight per acre to confirm placed thickness (**Appendix F**). Core samples could not be collected from the placed habitat/erosion protection layer due to the gravel size.

Restoration of the staging area commenced with removal of the dock, water treatment plant, and processing and water treatment pads. The concrete and liner from the processing pads were disposed offsite. Approximately 6 inches of gravel were removed from the top of the access road and disposed offsite. The entire staging area was then regraded to a slightly higher elevation than the pre-existing elevation so that the imported fills did not require off-site disposal. The staging area was then covered with a minimum of 3 inches of topsoil and seeded, and erosion controls were installed until sufficient grass growth was established. A final topographical survey of the staging area was performed (**Appendix A2**).

3.7 Contamination Remaining at the Site

The goal for the Remedial Action was to achieve unrestricted use of the waterway to the extent feasible. The Remedial Action mitigated significant threats to public health relative to exposure in the top 2 feet of sediment and in the top 1 foot of wetland/floodplains to support commercial (passive recreation) of the waterway. In accordance with the SOB, the NYSDEC 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 SCO of 1,500 ppm was considered as a guidance value for human health protection. To this extent, the Quantitative Human Health Exposure Assessment 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. The Remedial Action further reduced this concentration to a site-specific toxicity action level of 70 ppm and for sediment containing silver contamination exceeding 70 ppm to remain beneath isolation caps consisting of a minimum of 1-foot of cover.

Therefore, sediment with silver contamination exceeding the site-specific toxicity action level of 70 ppm silver remains beneath the isolation caps in AOC 1 and AOC 2. Silver porewater and Toxicity Characteristic Leaching Procedure concentrations collected during the pre-design phase from sediment in the zones of residual contamination were all non-detect confirming that a non-hazardous waste condition remains.

Figures 2 and 3, respectively, provide the results of all collected sediment samples in AOC 1 and AOC 2 that exceeded the SCOs after completion of the remedial action.

Since sediment with silver contamination exceeding the site-specific toxicity action level of 70 ppm silver remains beneath the Site after completion of the Remedial Action, ECs and ICs are required. These ECs and ICs are described in Sections 3.8 and 3.9. Long-term management of these EC/ICs and residual contamination will be performed under the SMP approved by the NYSDEC.

3.8 Engineering Controls

Since sediment with silver contamination exceeding the site-specific toxicity action level of 70 ppm silver remains beneath the Site in AOC 1 and AOC 2, ECs are required.

Exposure to remaining contamination at the Site is prevented by a cap system placed over the AOC 1 and AOC 2 portions of the Site. This cap 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 4A and 4B** presents the locations of the sediment caps and applicable profile layers.

Procedures for monitoring the cap system are provided in the Monitoring Plan in Section 4.0 of the SMP. The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

3.9 Institutional Controls

The Site remedy requires that ICs be placed on the Site 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., passive recreational use) only.

The SOB for the Site identified associated exposure pathways to ecological receptors, including fish and wildlife receptors, wetlands, groundwater resources, and surface water. As an IC, Administrative Controls (ACs) have been established for this Site that identify the limits of remaining contamination.

The ACs are 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 (Parsons et. al. 2017). Complete exposure pathways for the contaminants exceeding soil guidance values were evaluated through the FWRIA.

Should future work be proposed for the EC areas, the NYSDEC permit administrator is instructed to consult with the NYSDEC Division of Environmental Remediation to apply necessary provisions to maintain protection of the remedy within the remedial boundaries on a case-by-case basis under special permit conditions. Adherence to these ICs will be implemented under the SMP. The IC boundaries are presented on **Figures 4A and 4B**.

3.10 Deviations from the Remedial Action Work Plan

Prior to the start of work, NYSDEC received a request to incorporate habitat enhancements in Wetland C under a Natural Resources Trustee Council resolution. The habitat enhancements consisted of not backfilling the access channels in Wetland C to the original grade, thus creating areas with greater water depth and varied habitat within Wetland C. The NYSDEC Section 401 Water Quality Certification was modified to incorporate these changes (**Appendix G**).

4 REFERENCES

NYSDEC. 2010a. NYSDEC Division of Environmental Remediation (DER) Guidance DER-31, Green Remediation.

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

NYSDEC. 2020. *Final Statement of Basis Corrective Measures Selection for the Lower Genesee River Operable Unit 5 (OU-5) of Eastman Business Park*. January.

Parsons, OBG, and LimnoTech. 2017. *RCRA Facility Investigation for the Lower Genesee River Operable Unit 5 of the Eastman Business Park.* Prepared for the New York State Department of Environmental Conservation. February.

Parsons and OBG. 2019. *Corrective Measures Study Report for the Lower Genesee River (Operable Unit 5 of the Eastman Business Park)*. Prepared for the New York State Department of Environmental Conservation. October.

Parsons. 2020. *Contract Documents for the Lower Genesee River Corrective Measures Remedial Construction*. December.

White Lake Dock and Dredge, Inc. 2021. Health and Safety Plan. March.

FIGURES

WETLAND C NORTH

WETLAND C SOUTH

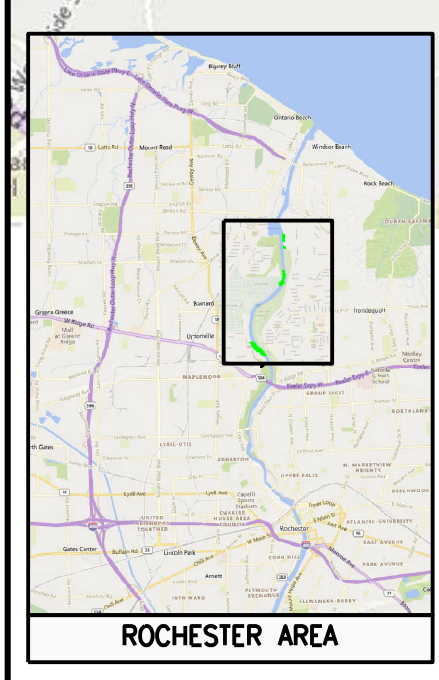
AOC 2

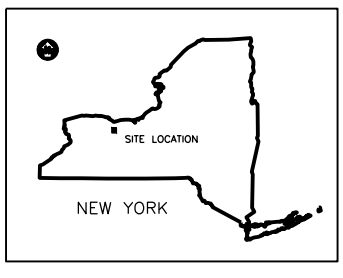
AOC 1

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

FINAL ENGINEERING REPORT
SYRACUSE, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

LOWER GENESEE RIVER
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
PLOT DATE: 11/29/2022 4:09 PM PLOTTED BY: RUSSO, JILL [US-US]

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 IN THE TOP 2 FEET OF SEDIMENT.
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 2

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

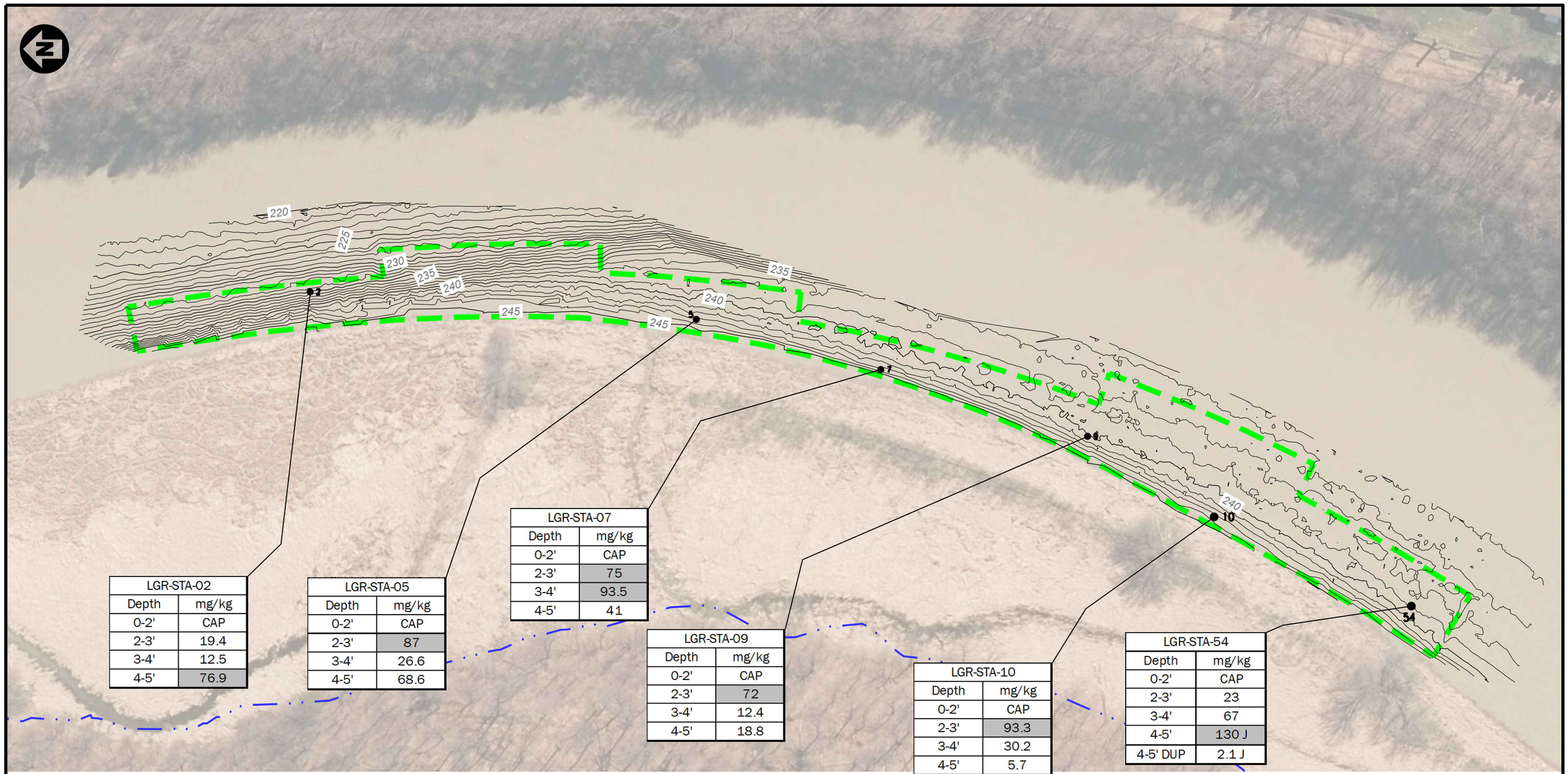
FINAL ENGINEERING REPORT
SYRACUSE, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

REMAINING SEDIMENT SAMPLE EXCEEDANCES
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-REMAINING.DWG
PLOT DATE: 6/21/2022 9:49 AM PLOTTED BY: RUSSO, JILL [US-US]



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. SEDIMENT DEPTHS ARE FROM ORIGINAL ELEVATIONS PRIOR TO DREDGING AND CAPPING.
5. CONTOURS SHOWN ARE FROM THE WHITE LAKE DOCK AND DREDGE POST-CAP BATHYMETRIC SURVEY DATED OCTOBER 18, 2021.

LEGEND:

- RIVER SAMPLE LOCATIONS
- AOC 2 BOUNDARY

100 50 0 100 200

SCALE: 1"=100'

FIGURE 3

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

FINAL ENGINEERING REPORT
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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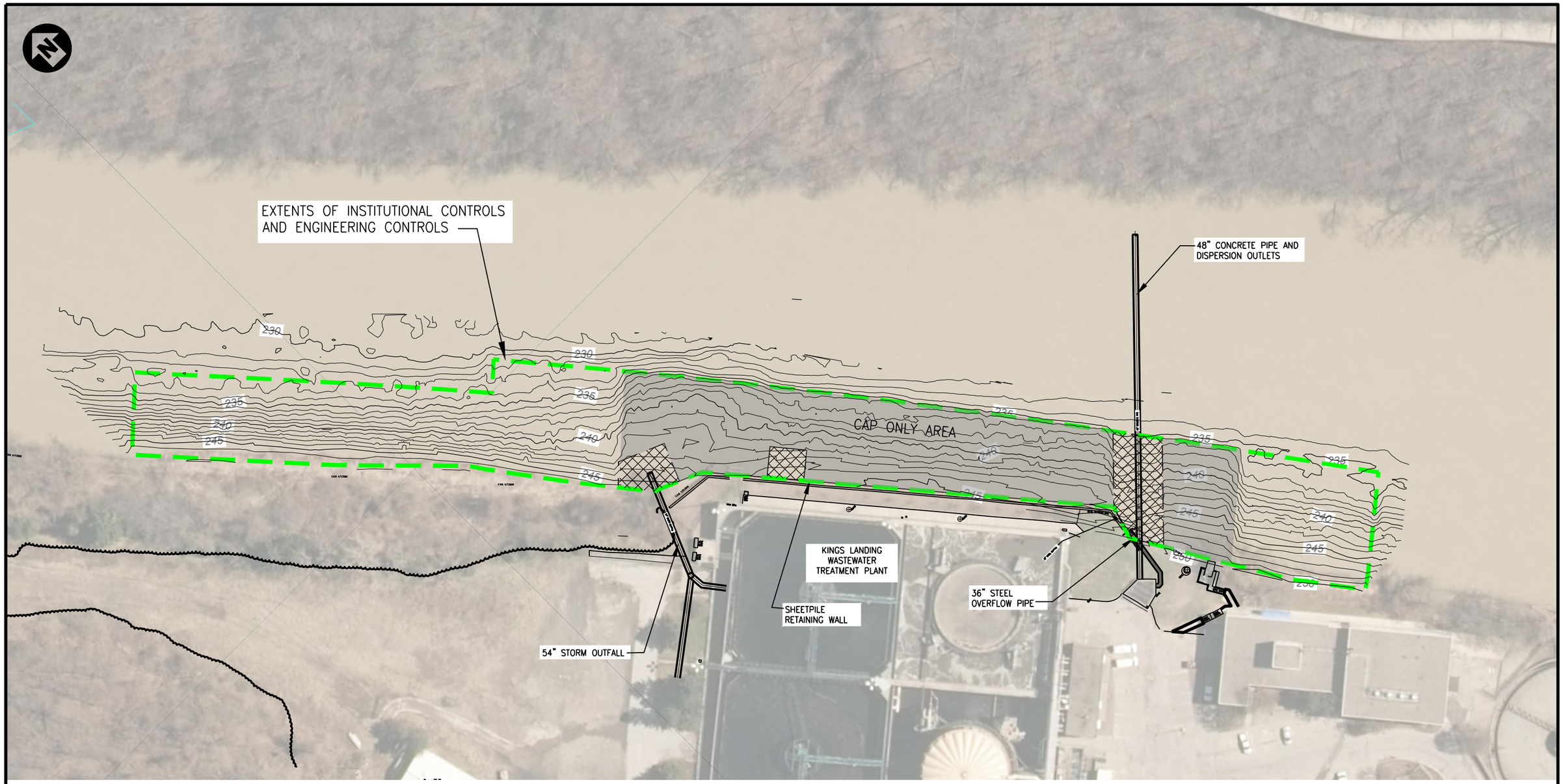

80 40 0 80 160

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 4A

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

FINAL ENGINEERING REPORT
SYRACUSE, NY

LOWER GENESEE RIVER OU-5 OF THE EASTMAN BUSINESS PARK

IC BOUNDARIES AND EC PLANVIEW
AOC 1

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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
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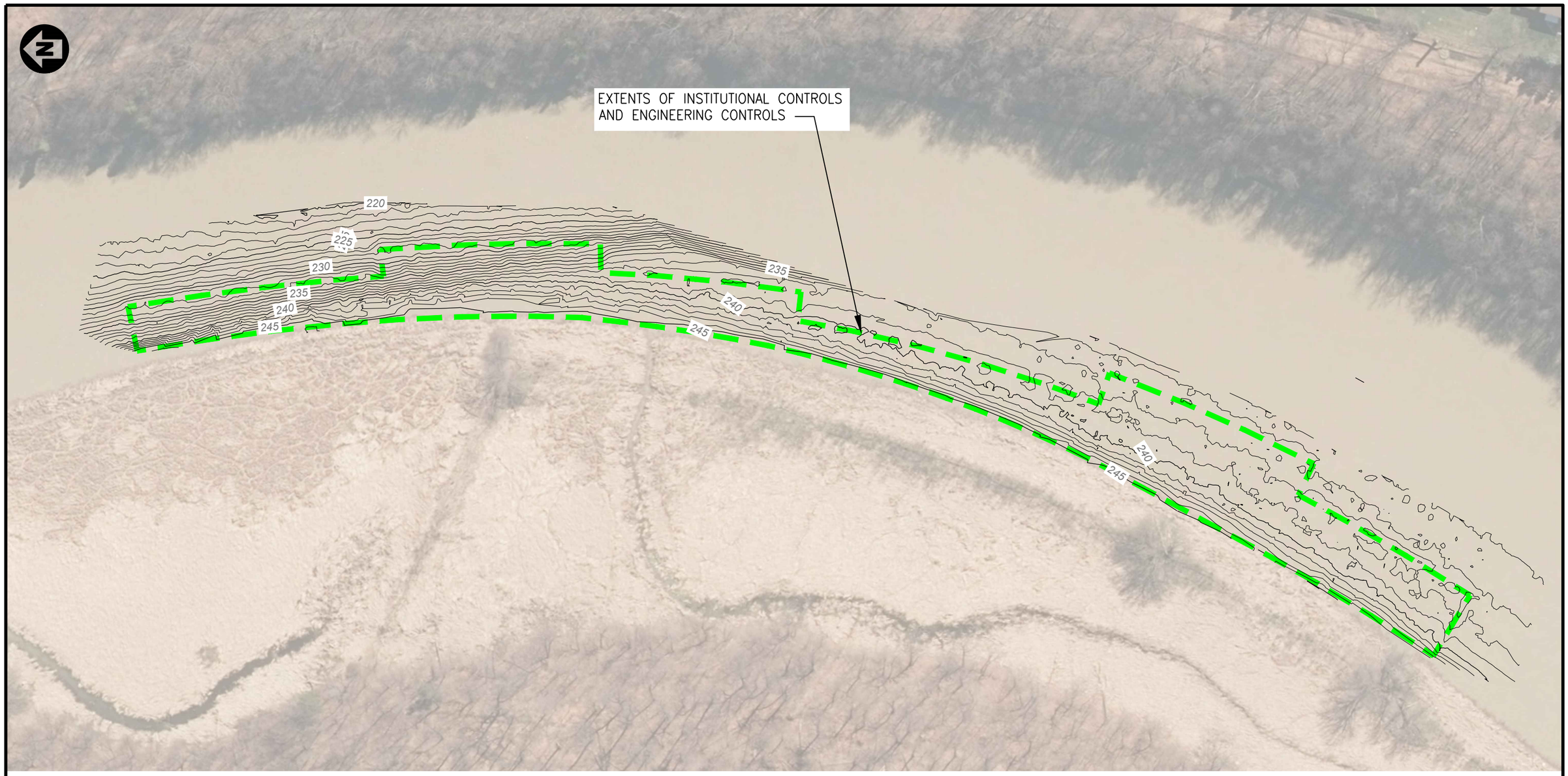


LEGEND:

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 4B

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

FINAL ENGINEERING REPORT
SYRACUSE, 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 4:00 PM PLOTTED BY: RUSSO, JILL [US-US]

APPENDIX A RECORD DRAWINGS

A1 – RECORD DRAWINGS

A2 – POST-CONSTRUCTION STAGING AREA TOPOGRAPHIC SURVEY

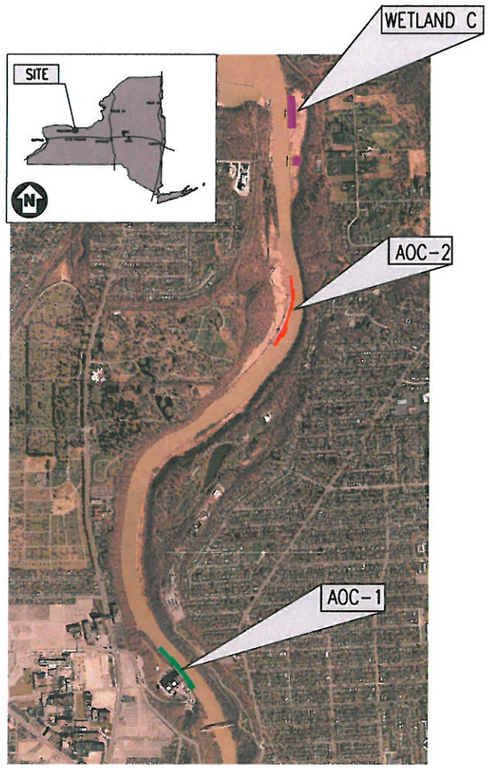
A1 – RECORD DRAWINGS

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:\WYSDEC 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: 6/13/22

STATE OF NEW YORK
EDWARD CADWELL GUY
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

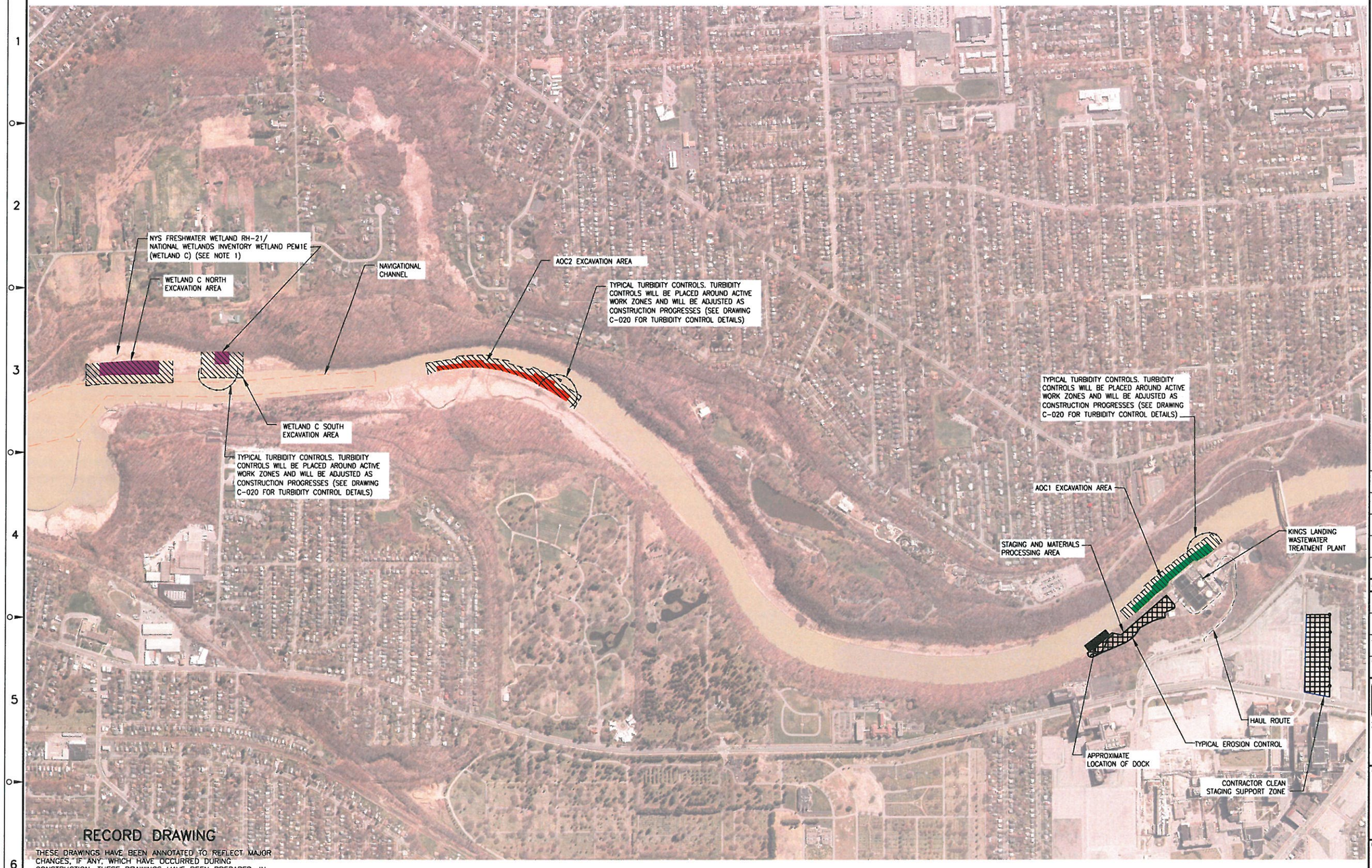
GENERAL NOTES

SCALE: NONE

DRAWING NO.: 452506-G-002

REV.: 2

FILE NAME: P:\WYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\GEN\452506-RD-G001.DWG
PLOT DATE: 6/6/2022 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

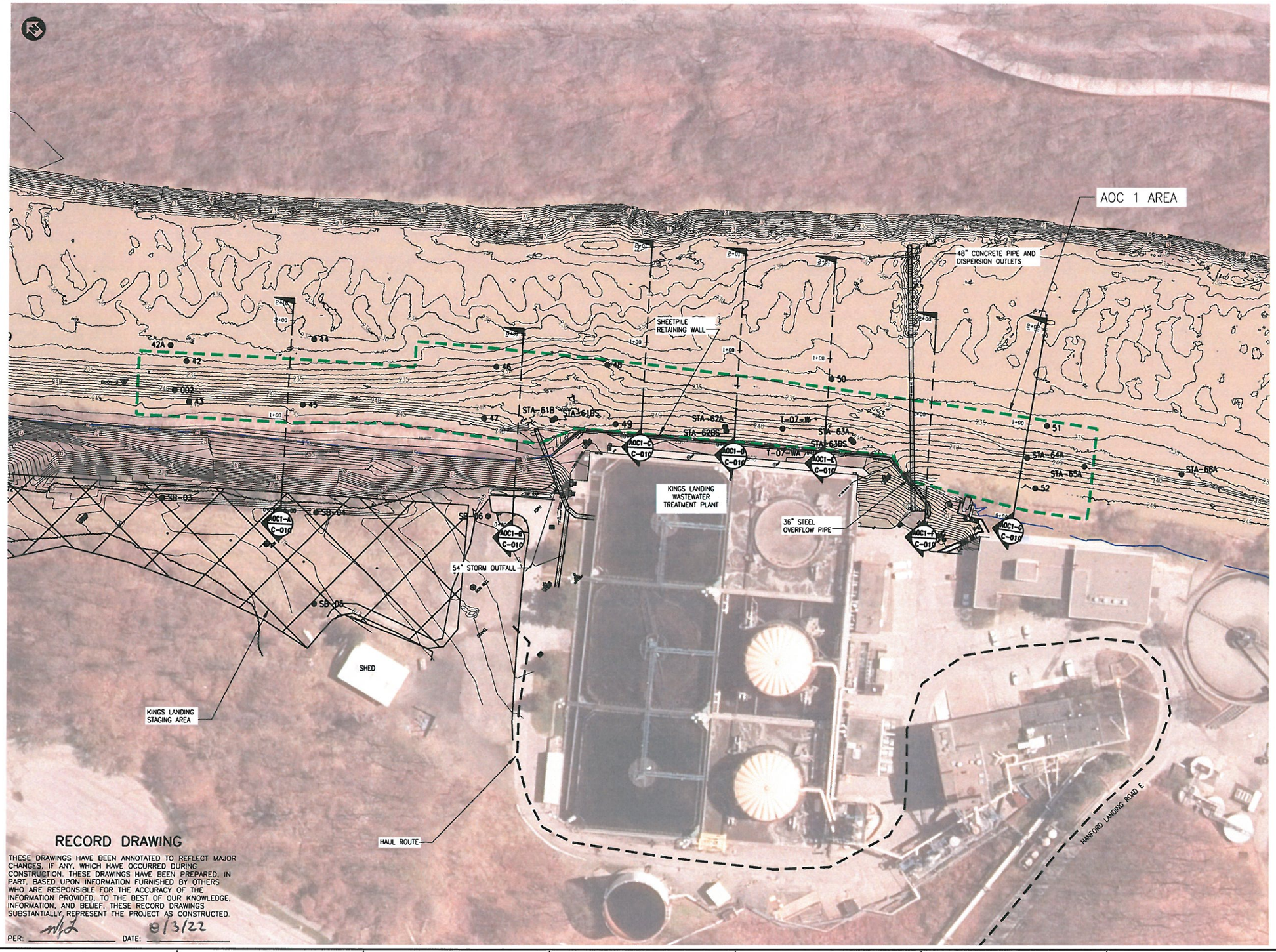
SITE PLAN

SCALE AS SHOWN

DRAWING NO. 452506-C-001

REV. 2

FILE NAME: P:\NYSDEC PROGRAM\452508 - 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)



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

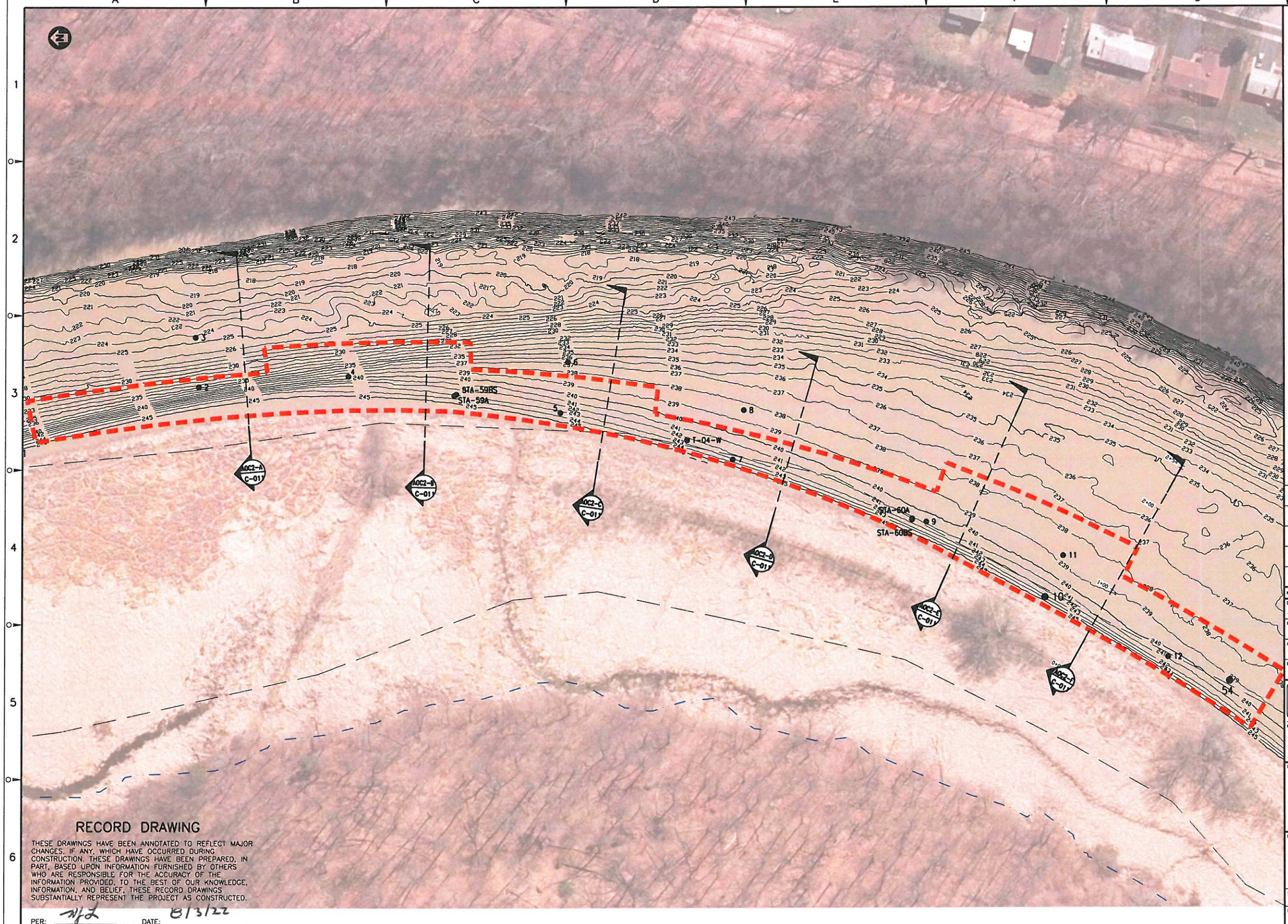
REV. 2

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:\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
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:\WYSDEC PROGRAM\452506 - 116 (13 - 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)

WETLAND C (NORTH)

WETLAND C (SOUTH)

FP-47 FP-50 FP-53 FP-55 FP-51 FP-111 FP-112 FP-57 FP-114 FP-116 FP-115 FP-59 BULKSED-04 FP-117 FP-48 FP-46 FP-07 FP-109 FP-110 FP-52 FP-113 FP-54 FP-56 FP-49 FP-108 FP-58

WC-A C-017 WC-B C-017 WC-C C-017 WC-D C-017 WC-E C-017

LEGEND:

- FLOODPLAIN/WETLANDS SAMPLE LOCATIONS
- NEW YORK STATE WETLAND (ESTIMATED)
- WETLAND C BOUNDARY
- OHWM (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
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 | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

EXISTING CONDITIONS
WETLAND C

SCALE: AS SHOWN

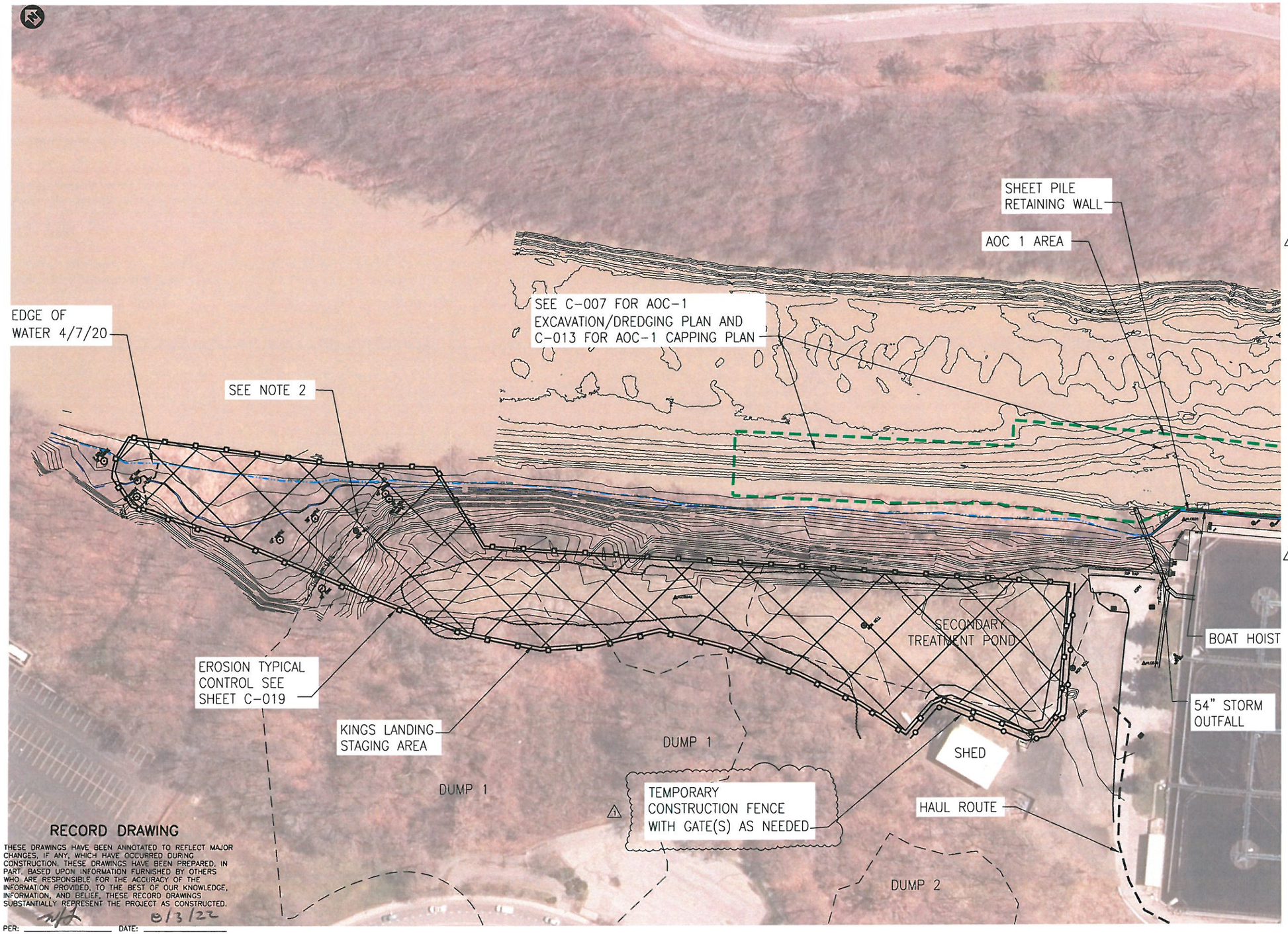
DRAWING NO. 452506-C-004 REV. 2

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:\WYSDEC 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 12:10 PM PLOTTED BY: RUSSO, JILL [US-US]



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/OFFLOADING 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 CLOSING 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

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:\WYSDEC PROGRAM\452506 - WA #18 - 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	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

		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

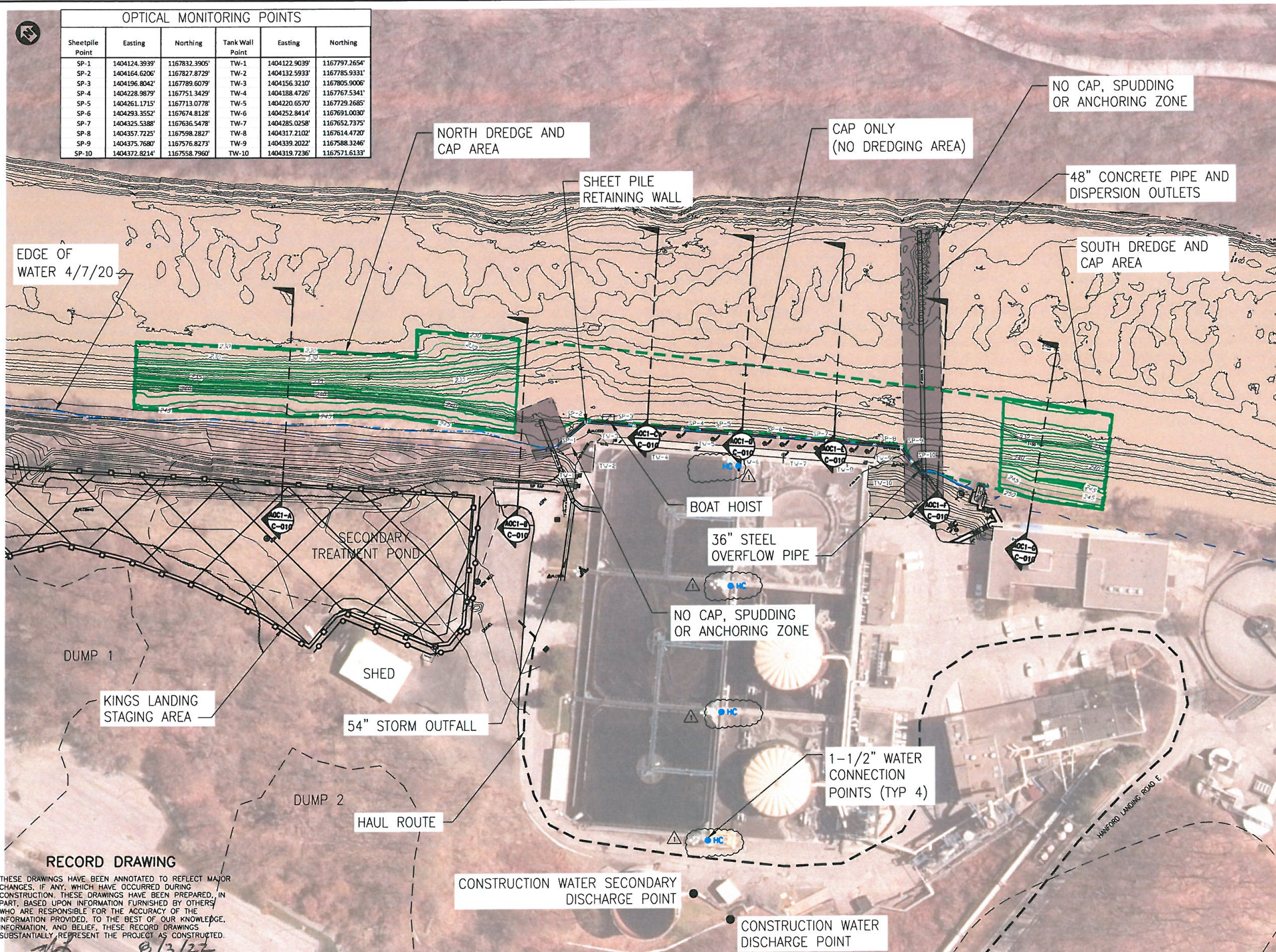
RECORD DRAWING

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

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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 CARDWELL GLAZA — 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

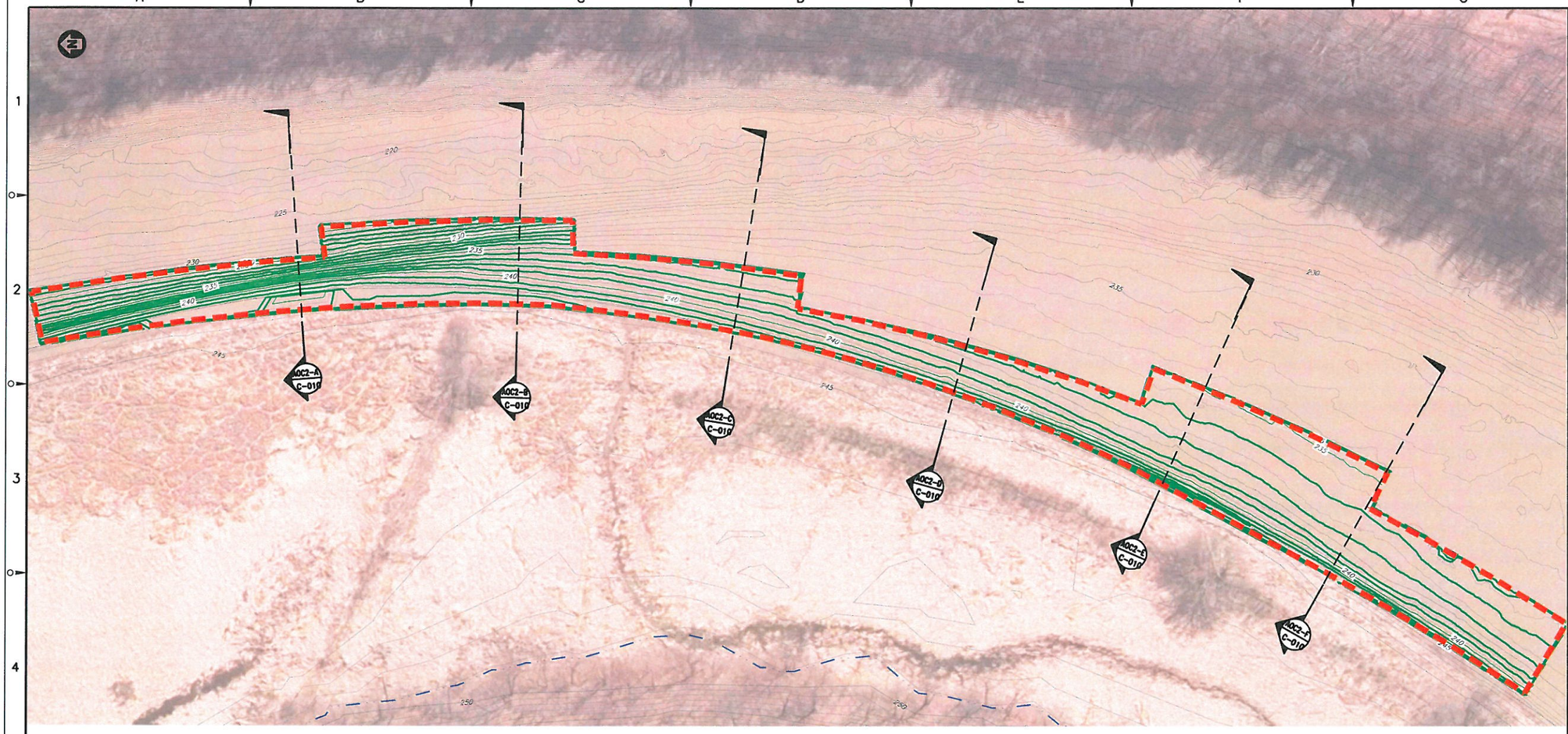
DRAWING TITLE: EXCAVATION/DREDGING PLAN AOC 1

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

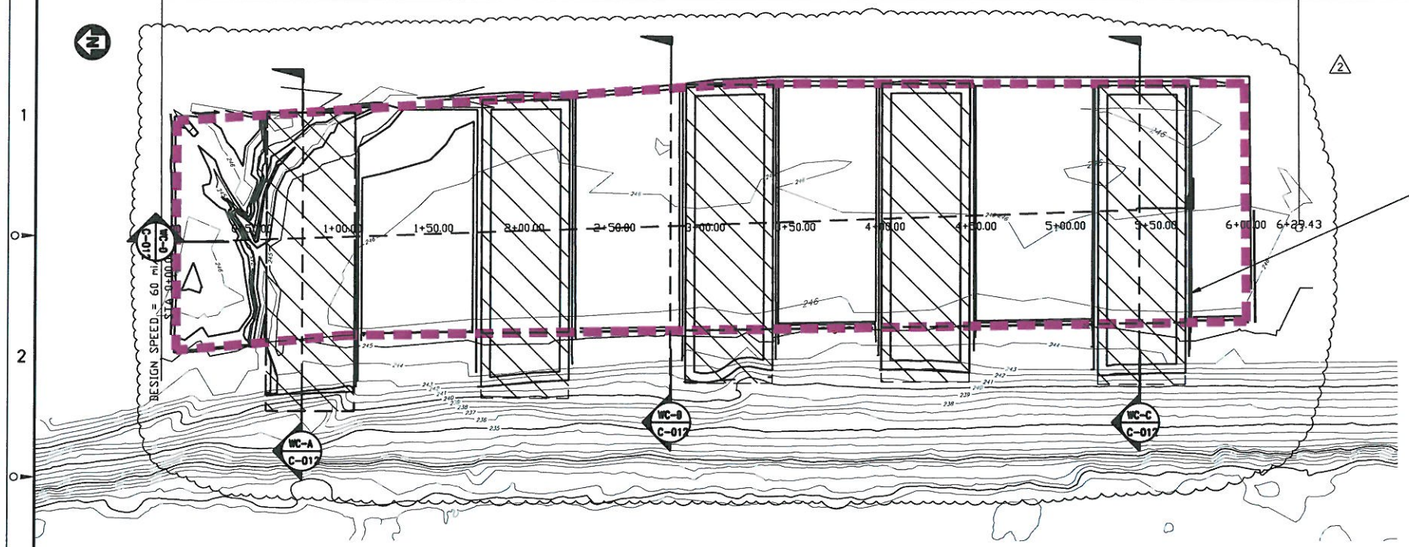
EXCAVATION/DREDGING PLAN
AOC 2

SCALE: AS SHOWN

DRAWING NO.: 452506-C-008

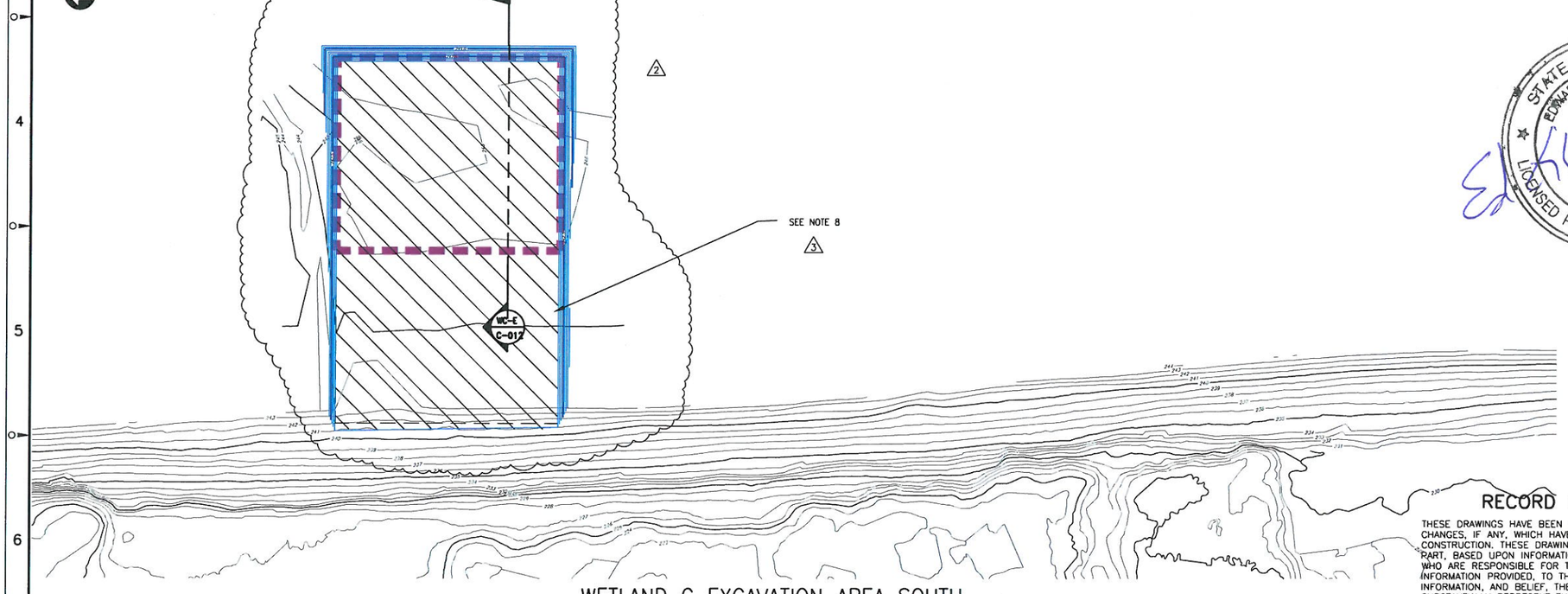
REV.: 2

FILE NAME: P:\HYDEC 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
BERNARD CADWELL GRAY
070909
LICENSED PROFESSIONAL ENGINEER

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

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

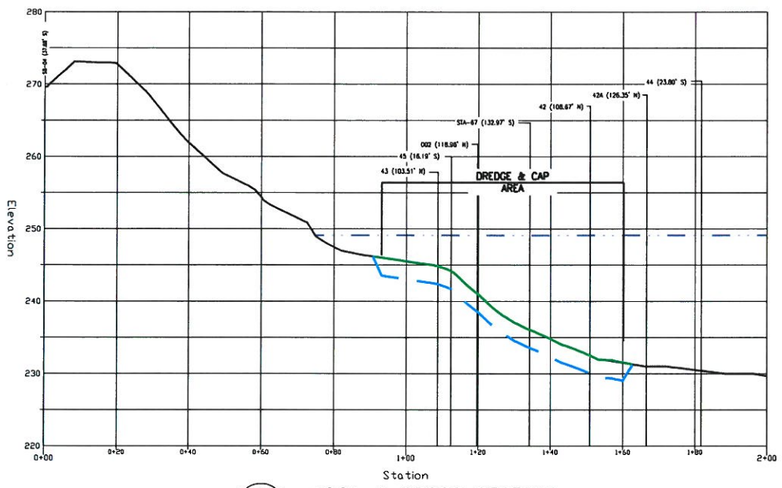
EXCAVATION/DREDGING PLAN
WETLAND C

SCALE: AS SHOWN

DRAWING NO. 452506-C-009

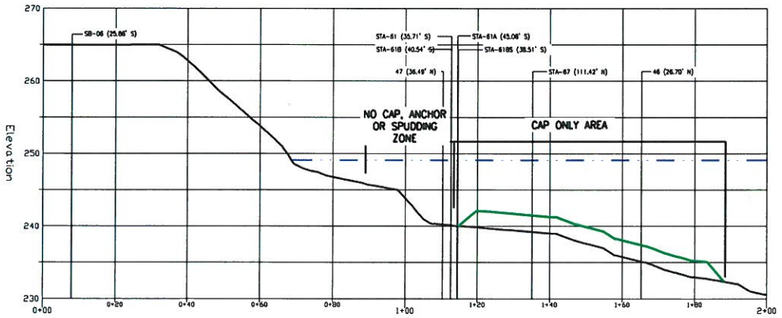
REV. 4

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: 8/8/2022 1:03 PM PLOTTED BY: RUSSO, JILL [US-US]



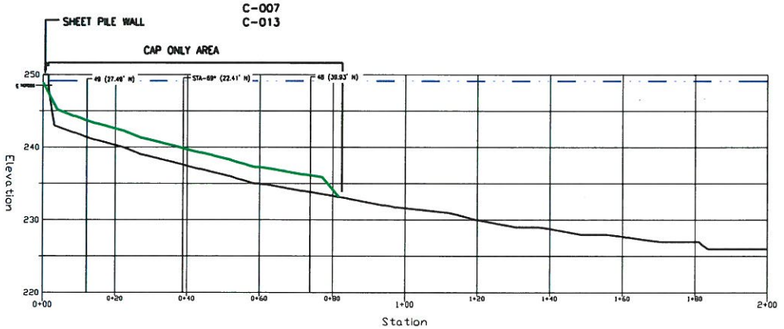
AOC1-A C-002 — **AOC1-A CROSS SECTION**

C-007
C-013



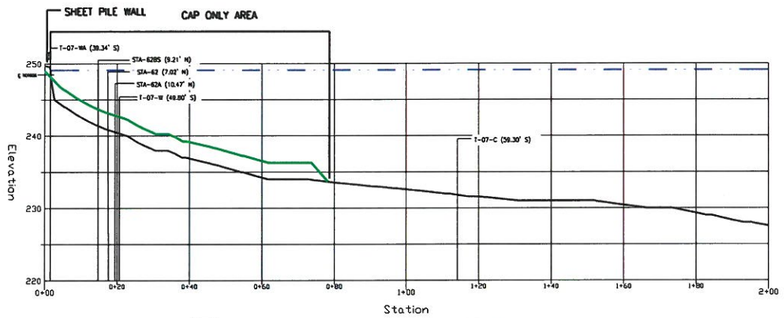
AOC1-B C-002 — **AOC1-B CROSS SECTION**

C-007
C-013



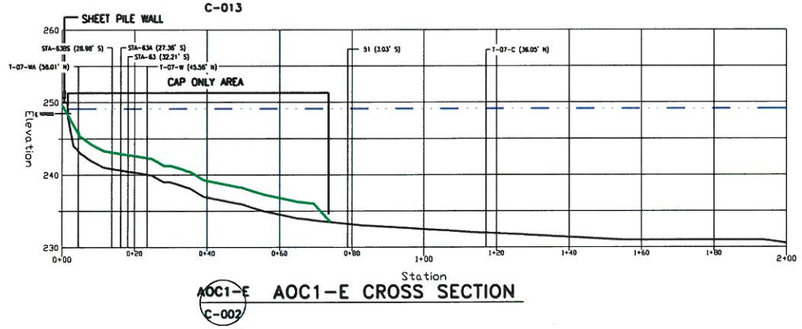
AOC1-C C-002 — **AOC1-C CROSS SECTION**

C-007
C-013



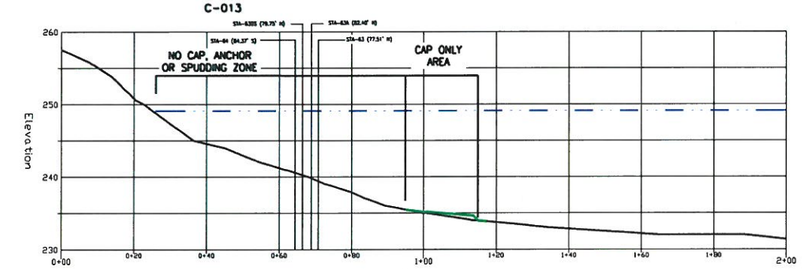
AOC1-D C-002 — **AOC1-D CROSS SECTION**

C-007
C-013



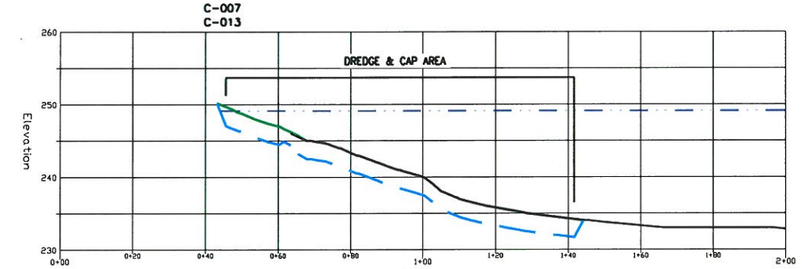
AOC1-E C-002 — **AOC1-E CROSS SECTION**

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

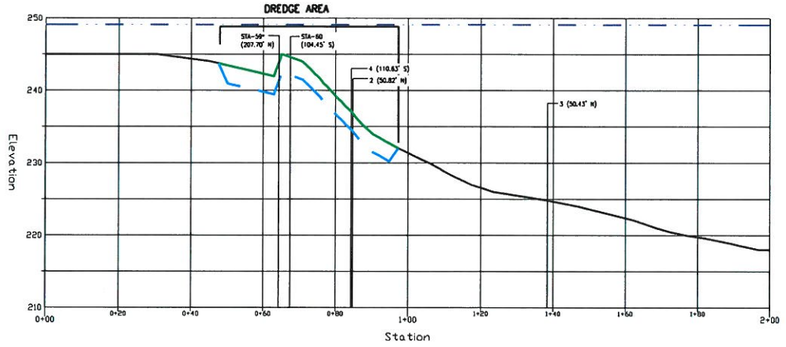
REV. 2

RECORD DRAWING

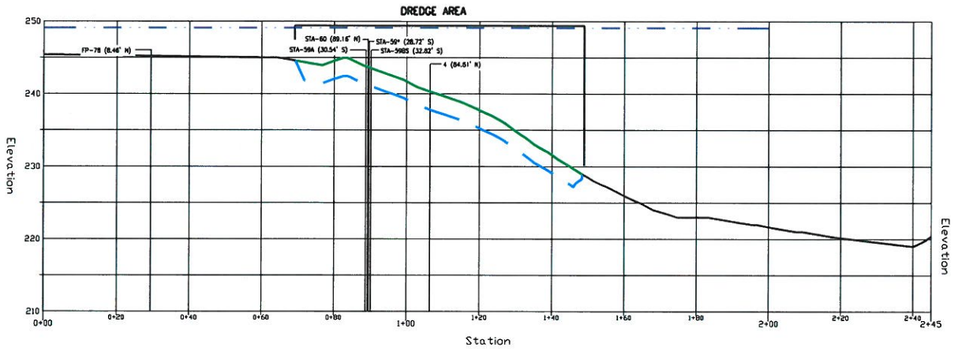
THESE DRAWINGS HAVE BEEN ANNOTATED TO REFLECT MAJOR CHANGES, IF ANY, WHICH HAVE OCCURRED DURING CONSTRUCTION. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED TO OTHERS WHO ARE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED, TO THE BEST OF OUR KNOWLEDGE, INFORMATION,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

PER: _____ DATE: 6/13/22

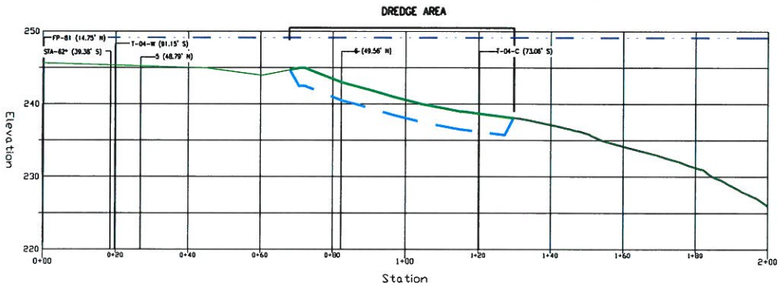
FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CWA\10.0 TECHNICAL DATECORES\10.10 CAD\RECORD DWG\CWA\452506-RD-C013.DWG
PLOT DATE: 6/8/2022 3:55 PM PLOTTED BY: RUSSO, JILL [US-US]



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

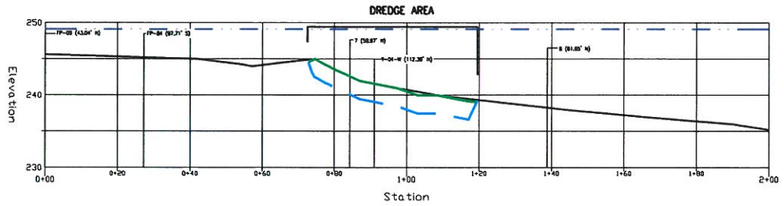


AOC2-B AOC2-B CROSS SECTION
C-003
C-008
C-014

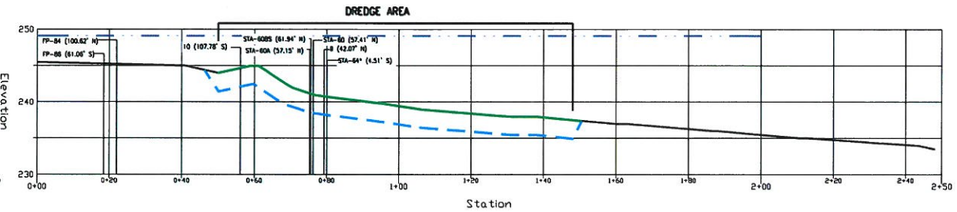


AOC2-C AOC2-C CROSS SECTION
C-003
C-008
C-014

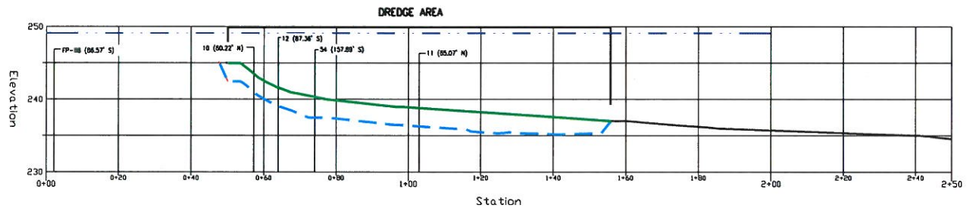
AOC2-D



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

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PER: MJ2 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:

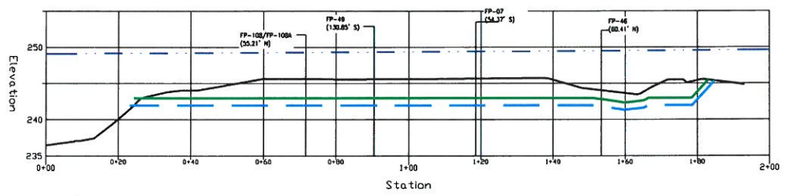
PROJECT TITLE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION | Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
CROSS SECTIONS
AOC-2

SCALE: AS SHOWN

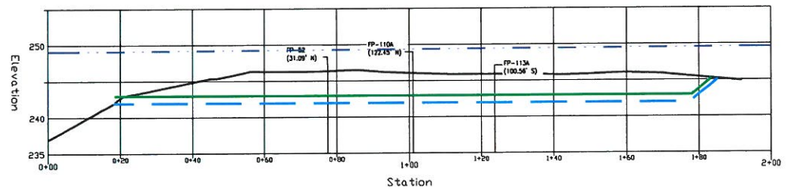
DRAWING NO.: 452506-C-011
REV.: 2

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: 6/8/2022 12:15 PM PLOTTED BY: RUSSO, JILL [US-LT5]



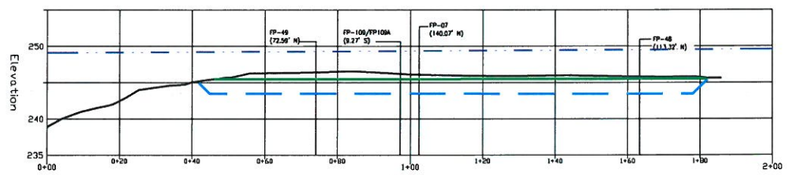
WA-A C-004 — **WETLAND C NORTH – CROSS SECTION A** 2

C-009
C-015



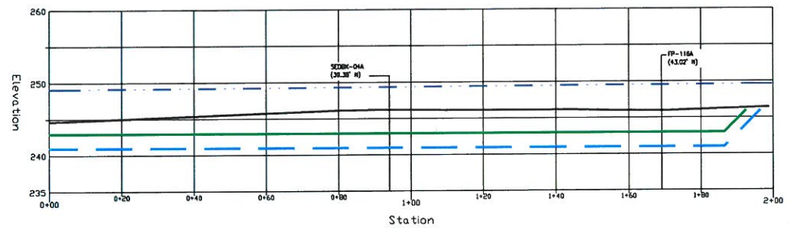
WA-C C-004 — **WETLAND C NORTH – CROSS SECTION C** 2

C-009
C-015



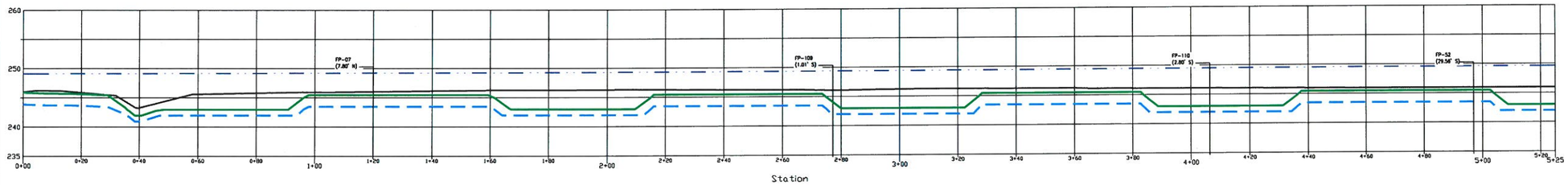
WA-B C-004 — **WETLAND C NORTH – CROSS SECTION B** 2

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

PARSONS

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

JOB 452506
WBS

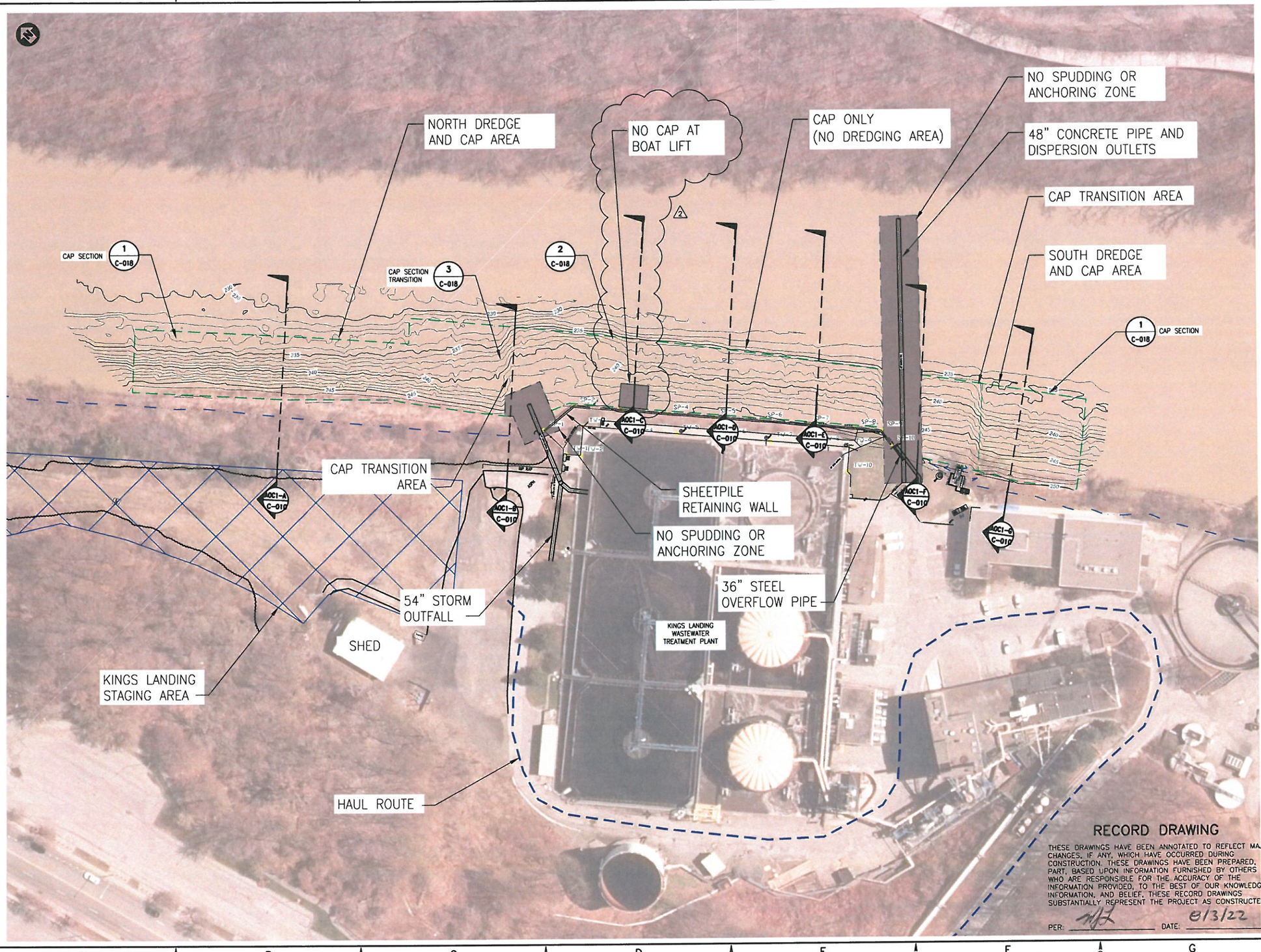
PROJECT TITLE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
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 IN 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

PARSONS

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

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

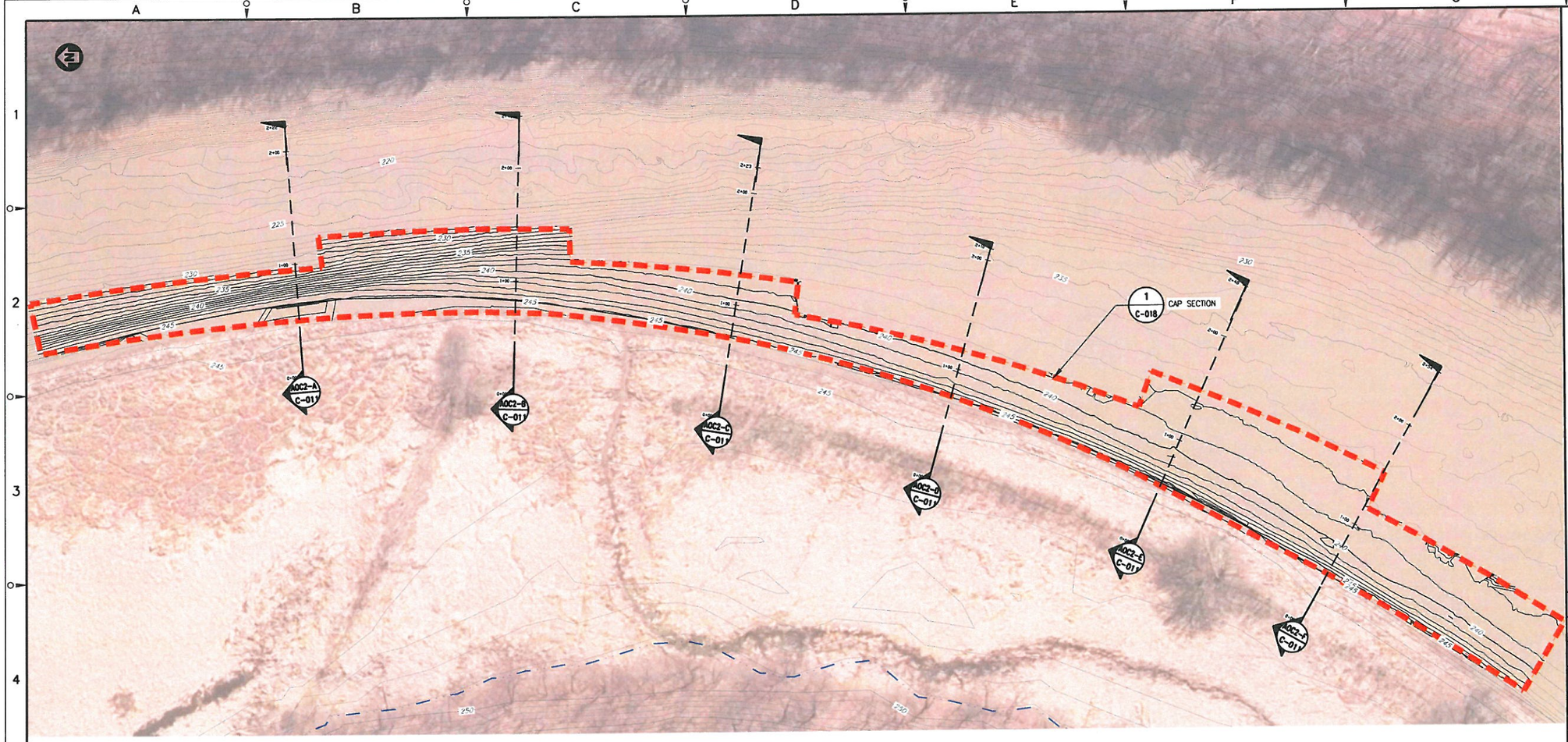
REV. 2

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'

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

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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

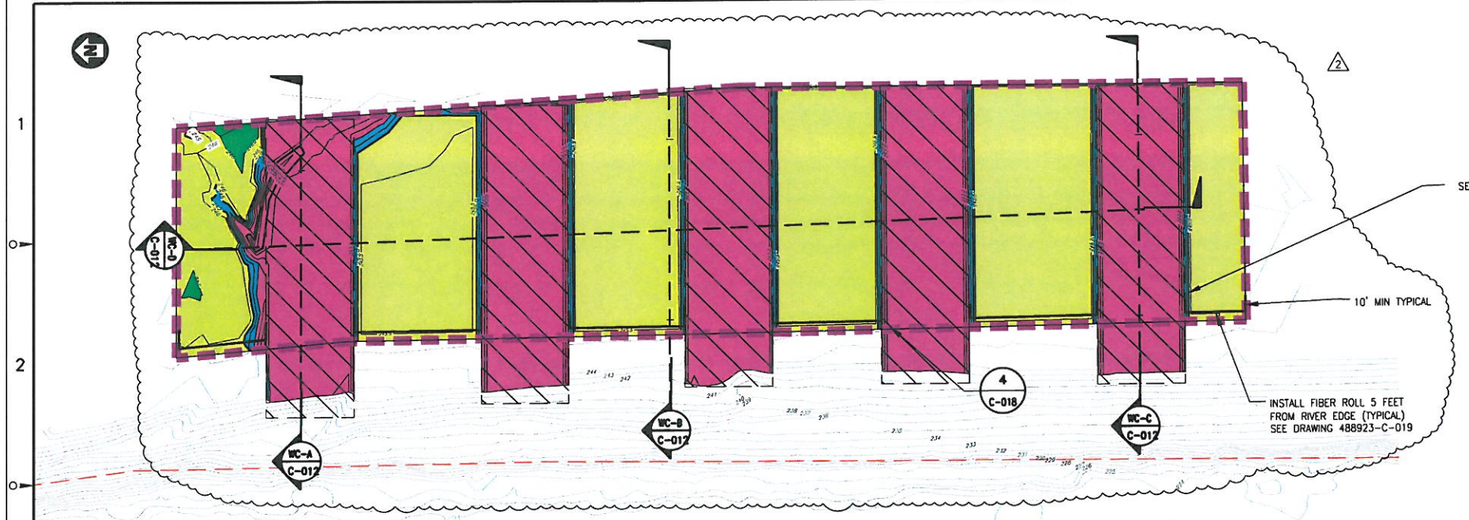
REV. 2

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.

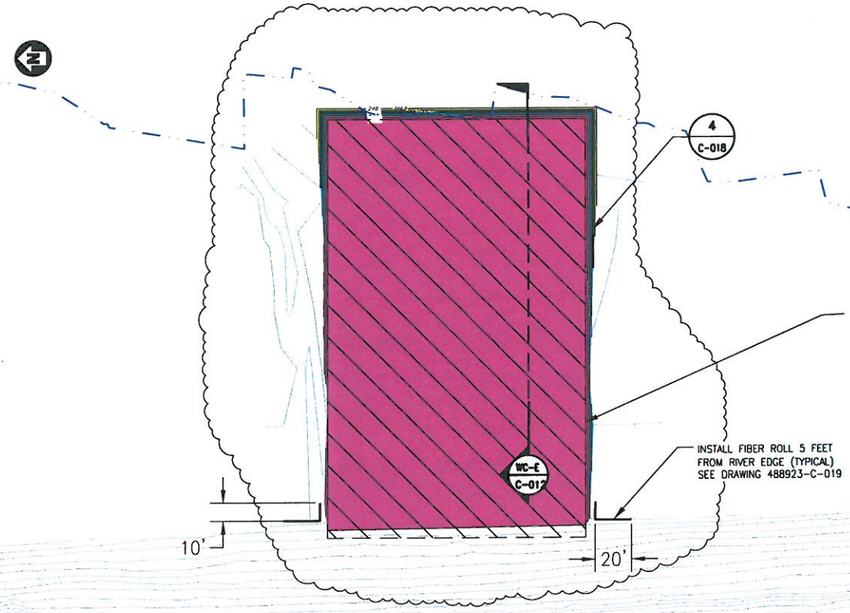
PER: _____ DATE: 8/3/22

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CM\1.0.0 TECHNICAL CATEGORIES\1.9.10 CAD\RECORD DWG\DWG\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: 6/3/22

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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:\MY\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

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PER: _____ DATE: 8/3/22

Restoration 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

Restoration 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

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

JOB 452506
WBS

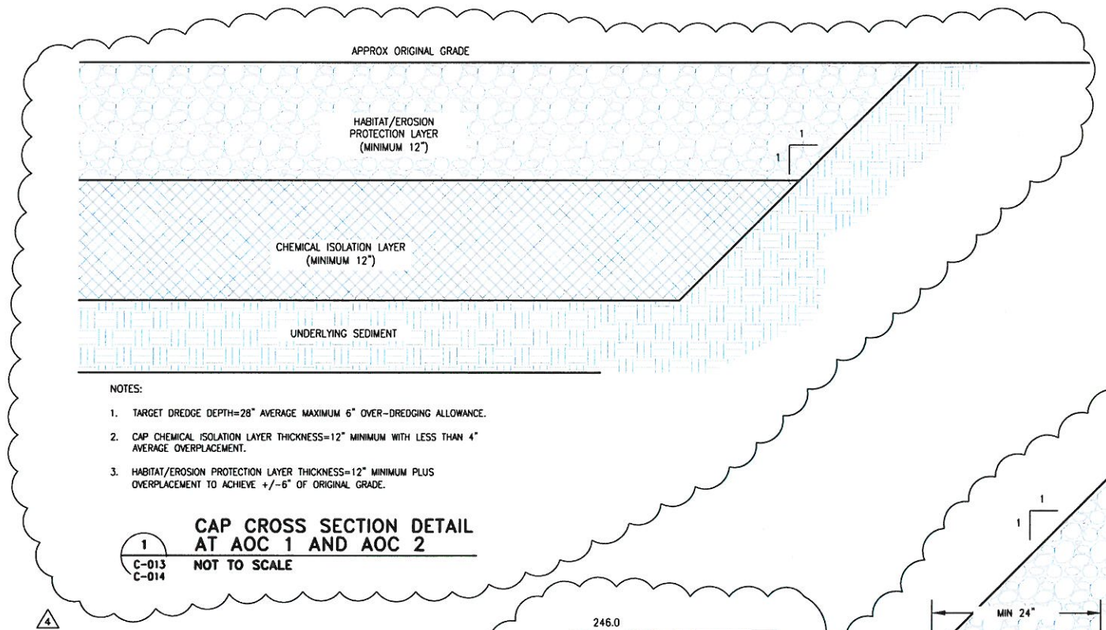
PROJECT TITLE
NEW YORK STATE Department of Environmental Conservation
Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE
DETAIL SHEET

SCALE NONE

DRAWING NO. 452506-C-016
REV. 3

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

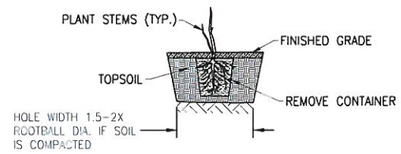


NOTES:

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

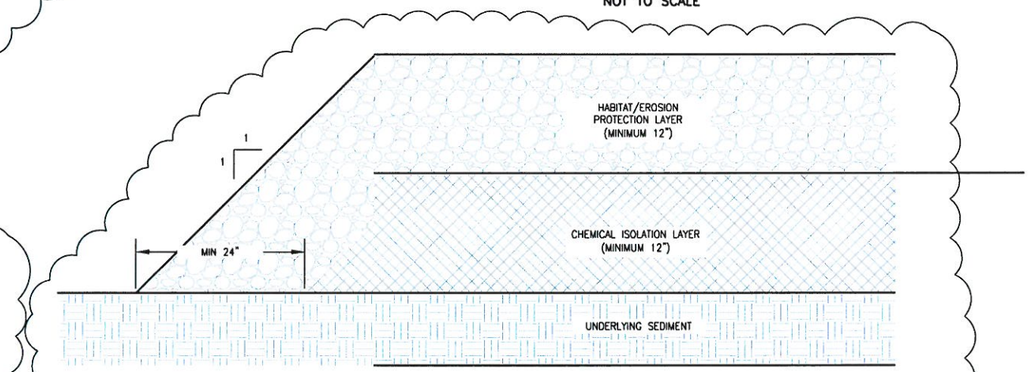


NOTES:

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

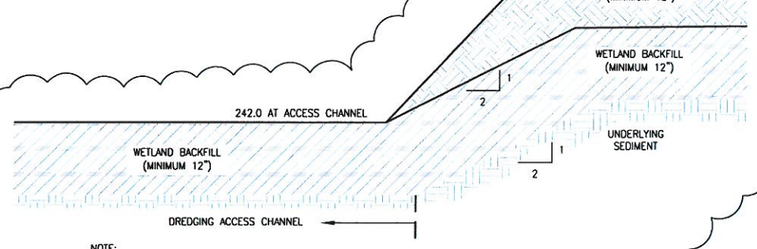


* THICKNESS MAY VARY UP TO AN ADDITIONAL 6" FOR OVER-DREDGING.

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

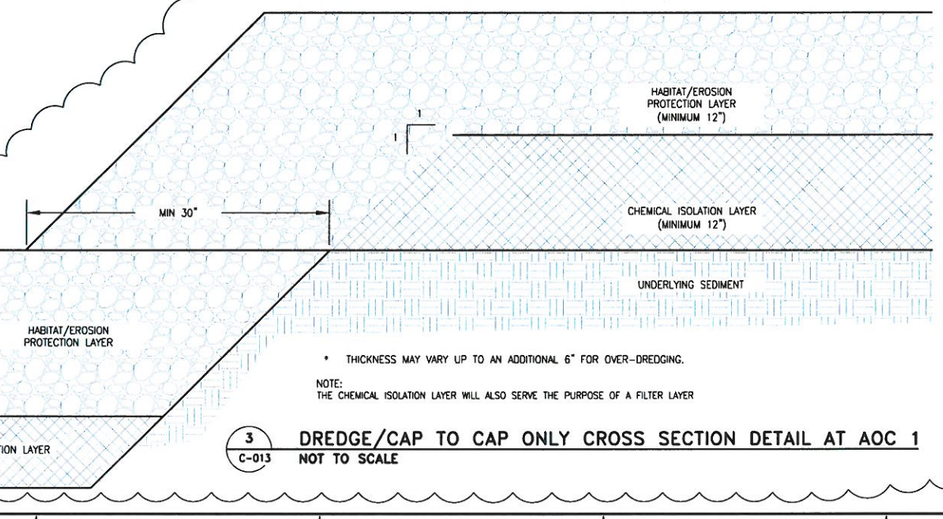


NOTE:

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

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

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

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

DETAIL SHEET

SCALE NONE

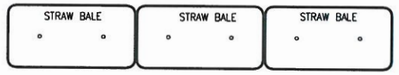
DRAWING NO. 452506-C-018

REV. 4

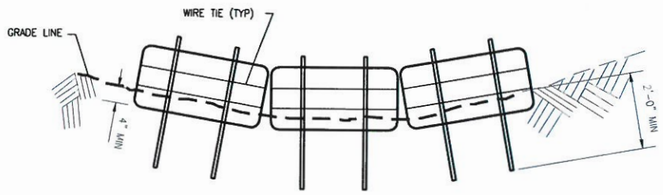
TOPSOIL (MINIMUM 12")

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

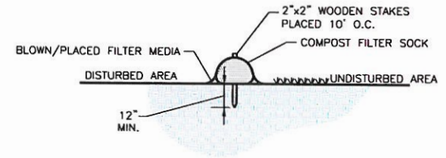


ELEVATION

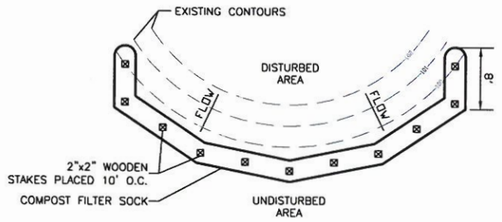
STRAW BALE SEDIMENT BARRIER NOTES:

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



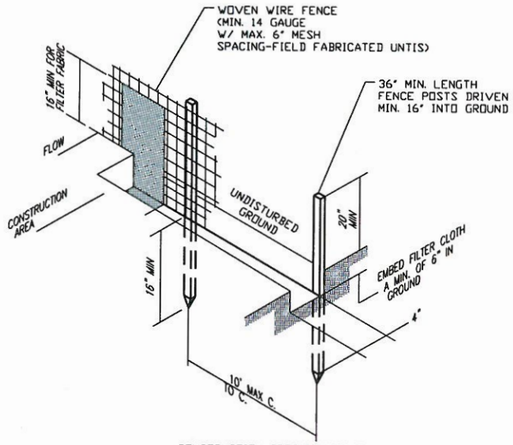
SECTION VIEW



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 8" 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.

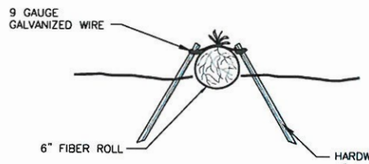
TYPICAL COMPOST FILTER SOCK
NOT TO SCALE



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



TYPICAL FIBER ROLL
NOT TO SCALE

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

RECORD DRAWING

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PER: _____ DATE: 8/3/22

STATE OF NEW YORK
EDWARD CADWELL GAZA
LICENSED PROFESSIONAL ENGINEER
070909

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 DEPARTMENT | Department of Environmental Conservation

Lower Genesee River
Corrective Measures Remedial Construction
Rochester, NY

DRAWING TITLE

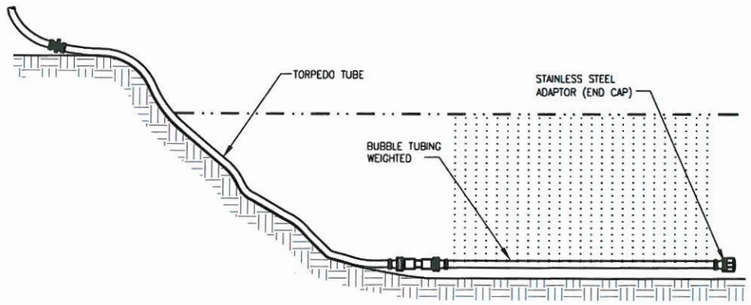
DETAIL SHEET

SCALE: NONE

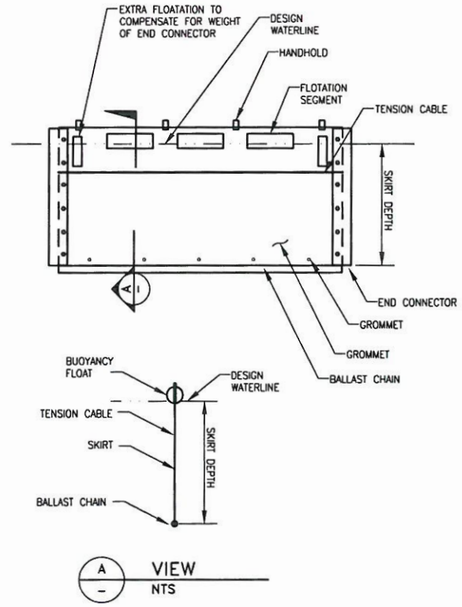
DRAWING NO.: 452506-C-019

REV.: 2

FILE NAME: P:\WSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CVR\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CVR\452506-RD-CD18-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

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

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
2	RECORD DRAWING	-	JR	TCD/ECG	WJL
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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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PARSONS

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

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

DETAIL SHEET

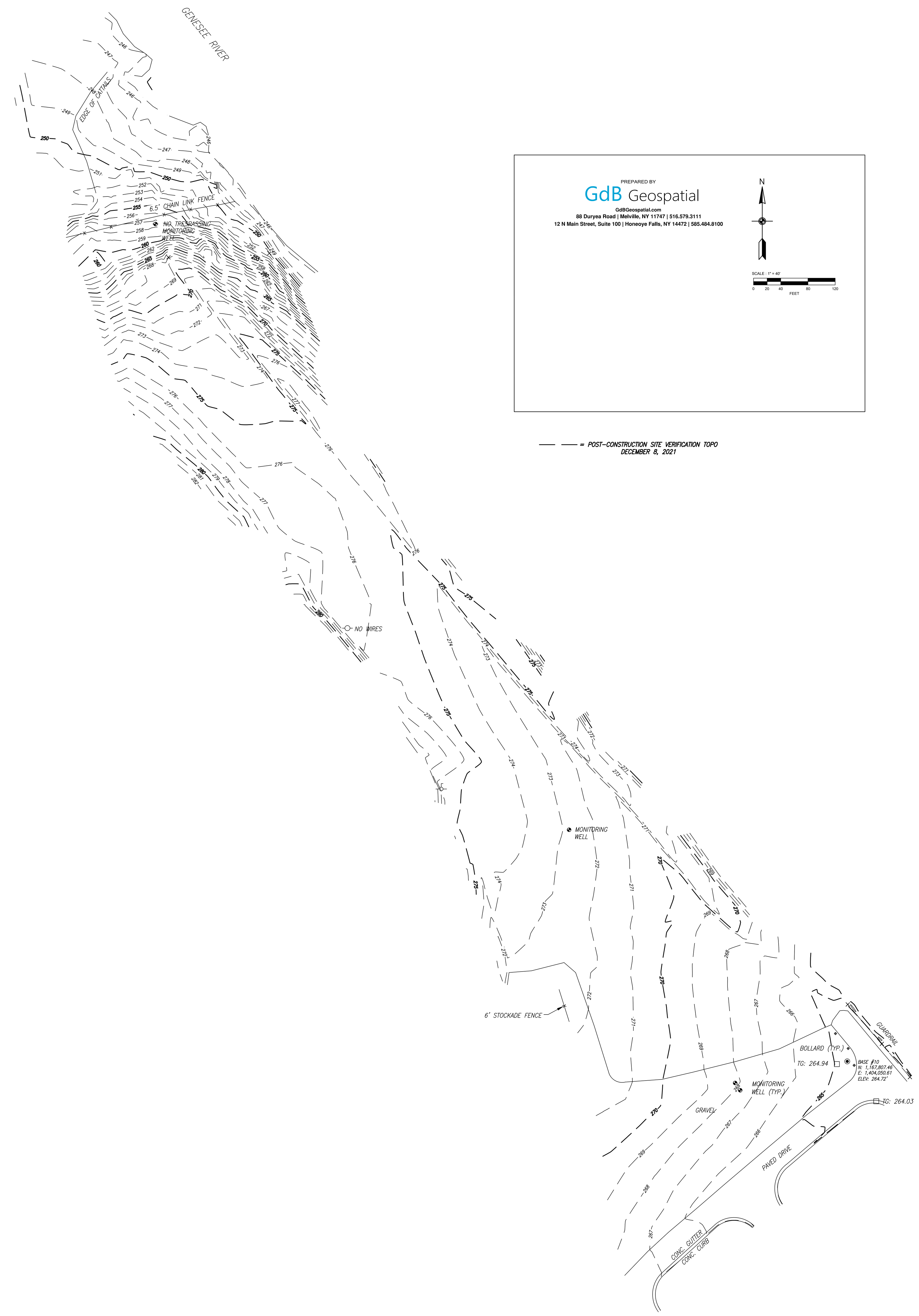
SCALE NONE

DRAWING NO. 452506-C-020

REV. 2

FILE NAME: P:\NYSDEC PROGRAM\452506 - WA #19 - LOWER GENESEE RIVER CVR\10.0 TECHNICAL CATEGORIES\10.10 CAD\RECORD DWG\CVR\452506-RD-C018-DETAILS.DWG
PLOT DATE: 8/3/2022 3:15 PM PLOTTED BY: RUSSEL JILL [US-US]

A2 – POST-CONSTRUCTION STAGING AREA TOPOGRAPHIC SURVEY



PREPARED BY

GdB Geospatial

GdBGeospatial.com

88 Duryea Road | Melville, NY 11747 | 516.579.3111

12 N Main Street, Suite 100 | Honeoye Falls, NY 14472 | 585.484.8100

N

SCALE : 1" = 40'

0 20 40 80 120

FEET

—— —— = POST-CONSTRUCTION SITE VERIFICATION TOPO
DECEMBER 8, 2021

LEGEND