December 3, 2024

National Railroad Passenger Corporation (AMTRAK)
c/o Dexter Fordyce
1 Massachusetts Ave NW
Washington, D.C. 20001
dexter.fordyce@amtrak.com

Re: Agency Interest Number: 179405
Tracking Number: 202361267
Wetlands and Waterways Authorization Numbers: 23-WL-0811 / 23-NT-0190 / 23-WQC-0045

Dear Mr. Fordyce:

Your project did not qualify for approval under the Maryland State Programmatic General Permit-6 (MDSPGP-6); therefore, a separate review and issuance of the federal permit will be required by the U.S. Army Corps of Engineers. The federal permit is not attached.

Additionally, your project requires a Nontidal Wetlands and Waterways Permit from the Maryland Department of the Environment (MDE) and a Wetlands License to be approved and issued by the Maryland Board of Public Works (BPW). The Nontidal Wetlands and Waterways Permit will be sent to you by MDE and the Wetlands License will be sent to you by BPW's Wetlands Administrator.

A project that does not qualify for approval under the MDSPGP-6 requires an individual Water Quality Certification (WQC) to be issued by the MDE (attached). Please take a moment to read and review your WQC to ensure that you understand the limits of the authorized work and all of the general and special conditions.

You should not begin any work until you have obtained all necessary State, local, and federal authorizations. Please contact Lou Parnes (nontidal) at louis.parnes@maryland.gov or 410-537-3786, Matthew Wallach (tidal) at matthew.wallach@maryland.gov or 410-207-0893 with any questions.

Sincerely,

Amanda Sigillito
Chief, Nontidal Wetlands Division

cc: Peter Mazzeo/ HNTB
USACE

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
WATER QUALITY CERTIFICATION

23-WQC-0045

EFFECTIVE DATE:	December 3, 2024
CERTIFICATION HOLDER:	National Railroad Passenger Corporation (AMTRAK) 1 Massachusetts Avenue NW Washington, DC Attn: Dexter Fordyce
PROJECT LOCATIONS:	Perryville, Harford County Havre de Grace, Cecil County 8-digit Watershed (02120201)

UNDER AUTHORITY OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT AND ITS AMENDMENTS AND IN ACCORDANCE WITH §9-313 THROUGH §9-323, INCLUSIVE, OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND, THE WATER AND SCIENCE ADMINISTRATION ("ADMINISTRATION") HAS DETERMINED THAT THE REGULATED ACTIVITY DESCRIBED IN THE REQUEST FOR CERTIFICATION FOR AMTRAK SUSQUEHANNA RIVER RAILS REPLACEMENT PROJECT ASSOCIATED WITH US ARMY CORPS AUTHORIZATION NAB-2023-61267, WILL NOT VIOLATE MARYLAND'S WATER QUALITY STANDARDS, IF CONDUCTED IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION AND WITH ALL TERMS AND CONDITIONS OF THIS CERTIFICATION.

THIS CERTIFICATION DOES NOT RELIEVE THE APPLICANT OF RESPONSIBILITY FOR OBTAINING ANY OTHER APPROVALS, LICENSES, OR PERMITS IN ACCORDANCE WITH FEDERAL, STATE, OR LOCAL REQUIREMENTS AND DOES NOT AUTHORIZE COMMENCEMENTOF THE PROPOSED PROJECT. A COPY OF THIS REQUIRED CERTIFICATION HAS BEEN SENT TO THE ARMY CORPS OF ENGINEERS. THE CERTIFICATION HOLDER SHALL COMPLY WITH THE CONDITIONS LISTED BELOW.

PROJECT DESCRIPTION

The National Railroad Passenger Corporation (AMTRAK) proposes to construct two replacement and parallel four-track elevated train bridges spanning the Susquehanna River and on land between Harford (Havre de Grace) and Cecil (Perryville) counties. One lane will be designed specifically for high-speed passenger train service. The existing two-track moveable swing bridge above the waterway, in addition to the remaining in-use AMTRAK rail sections on land are to be dismantled and removed.

The Administration satisfied statutory and regulatory public notice requirements by placing this WQC on Public Notice from August 1, 2024, to September 1, 2024, on the Maryland Department of the Environment's Public Notice webpage and advertisements within two newspapers: The Aegis (Harford County) and in the Cecil Whig (Cecil County) on August 1, 2024.

NONTIDAL IMPACTS

(Harford County) Havre de Grace (Gasheys Creek, Lilly Run/ Use I): The project will permanently impact 20,974 square feet of forested nontidal wetland, 8,619 square feet of forested (isolated) nontidal wetland, 18,297 square feet of emergent nontidal wetland, 2,488 square feet of emergent (isolated) nontidal wetland, 163,141 square feet of a 25-foot nontidal wetland buffer, 14,140 square feet of a perennial nontidal stream, 7,586 square feet of an intermittent nontidal stream, and 286,331 square feet of a 100-year nontidal floodplain.

(Cecil County) Perryville (Mill Creek/ Use I): The project will permanently impact an additional 20,402 square feet of forested nontidal wetland, 10,944 square feet of scrub-shrub nontidal wetland, 44,653 square feet of emergent nontidal wetland, 124,392 square feet of a 25-foot nontidal wetland buffer, 16,782 square feet of a perennial nontidal stream, 1,816 of an intermittent nontidal stream and 38,601 square feet of a 100-year nontidal floodplain. Havre de Grace: The project will temporarily impact 9,225 square feet of a perennial nontidal stream and 2,291 square feet of an intermittent nontidal stream. Perryville: The project will temporarily impact 8,704 square feet of a perennial nontidal stream and 34,261 square feet of an intermittent nontidal stream.

TIDAL IMPACTS:

(Between Havre de Grace and Perryville at the Susquehanna River/ Use II): The project will result in 294,834 square feet (6.77 acres) of coverage over State Tidal Wetlands including the Susquehanna River and will be supported by 34 piers totaling 5,875 (0.14 acres) within State Tidal Wetlands. The project will also include 7,599 square feet (0.17 acres) of dolphins and fendering systems. The existing bridge will be mechanically demolished after the first new span is complete with the existing in-water foundations mechanically removed to two feet below the mudline. The project will include 72,356 square feet (1.66 acres) of temporary impacts including trestles and mooring piles.

SPECIAL CONDITIONS

1) All Critical Area requirements shall be followed and all necessary authorizations from the Critical Area Commission ("Commission") shall be obtained. This Certification does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.

2) If the authorized work is not performed by the property owner or is not otherwise exempt from the licensing requirement, all work performed under this Tidal Wetlands Permit shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland and COMAR 26.30. The licensed marine contractor shall be authorized for the appropriate license category to perform or solicit to perform the activities within this authorization, if applicable. A list of licensed marine contractors and their license category may be obtained by contacting the MCLB at 410-537- 3249, by e-mail at MDE.MCLB@maryland.gov, or by accessing the Maryland Department of the Environment, Environmental Boards webpage at: https://mde.maryland.gov/programs/water/WetlandsandWaterways/Pages/LicensedMarineContractors.aspx.

3) The issuance of this Certification is not a validation or authorization by the Department for any of the existing structures depicted on the plan sheets on the subject property that is not part of the authorized

work description, nor does it relieve the Certification Holder of the obligation to resolve any existing noncompliant structures and activities within tidal wetlands.

4) Due to the presence of anadromous and spawning fish, including Yellow Perch and Striped Bass, if any in-water pile installation occurs between February 15 through June 30, inclusive during any year, the Certification Holder shall coordinate with the Maryland Department of Natural Resources (DNR) for minimization and avoidance measures and receive a modification to the associated tidal wetlands license, 23-WL-0811, prior to activity commencement. The Certification Holder shall make every effort to complete pile driving activities outside of the above Time of Year Restriction (TOYR).

5) Due to the presence of the Northern Map Turtle (*Graptemys geographica*), if any in-water construction occurs from November 1 through April 1, inclusive during any year, the Certification Holder shall coordinate with DNR for minimization and avoidance measures and receive a modification to the associated tidal wetlands license, 23-WL-0811, prior to activity commencement.

6) Due to the presence of submerged aquatic vegetation, if any in-water construction occurs from April 15 through October 15, inclusive during any year, the Certification Holder shall coordinate with DNR for minimization and avoidance measures and receive a modification to the associated tidal wetlands license, 23-WL-0811, prior to activity commencement.

7) The Certification Holder shall strictly manage and maintain all in-water Best Management Practices (BMPs) to minimize sedimentation during construction activities.

8) The Certification Holder shall use Best Management Practices (BMPs), not limited to, but including such as soft-start and using vibratory hammers to the extent possible for pile driving activities.

9) Due to construction activity within Northern Map Turtle (*Graptemys geographica*) basking habitat, the Certification Holder shall maintain a minimum of four floating turtle basking platforms that will be installed prior to the commencement of construction, which are to be maintained through the completion of all construction activities, including the shoreline restoration on the Perryville shoreline.

10) Due to the presence of the Northern Map Turtle (*Graptemys geographica*), the Certification Holder shall install exclusion fencing in appropriate areas prior to activity commencement and before nesting begins. The Certification Holder shall coordinate with DNR Wildlife and Heritage Service to verify fencing locations prior to installation. Fencing shall be maintained and inspected by a designated environmental monitor and hatchlings shall be moved and released to suitable areas outside the fence should they be found.

11) The Certification Holder shall submit a Tidal In-Water Construction Plan (TIWC Plan) at least 30 days prior to the commencement of any work authorized under this Certification. The Certification Holder shall implement and comply with the TIWC plan in accordance with the approved plan. The TIWC Plan shall include detailed support for the implementation of appropriate practices to protect water quality, marine life, and estuarine habitat, and mitigation/recovery plans for unavoidable/unexpected impacts, and address the following at a minimum:
    a) The use of best management practices to protect water quality, marine life, and habitat during and after construction such as bubble curtains and other applicable best management practices;
    b) Noise management including provisions for a “zone of safe fish passage,” to exist in the river at all times to allow migrating, resting, or foraging fish to continue their behaviors while the project is ongoing.
    c) "Hold points," which would stop pile driving, or other in-water work injurious to marine life until coordination has occurred with DNR’s Environmental Review Program.

i) If any of the following is observed during or immediately (approximately 1 hour) after pile driving activities:
   (a) Presence of dolphin, sea turtle, or sturgeon within the following injury or behavioral modification zones:
      (i) 775 meter distance for sturgeon
      (ii) 100 meter distance for sea turtle
      (iii) 215 meter distance for cetaceans;
   (b) One stunned or dead log perch, sturgeon, map turtle, and/or dolphin (applicability: all impact hammer activities);
   (c) Ten stunned or dead game fish or species considered to be in need of conservation per pile location, such as Largemouth Bass, Striped Bass/Rockfish, Alewife, Blueback Herring, and American Shad and others (applicability: all impact hammer activities);

ii) If the following is observed cumulatively for all pile driving during 24-hour period when pile driving occurred related to hammer activities:
   (a) One stunned or dead sturgeon, dolphin, log perch, map turtle;
   (b) Thirty stunned or dead game fish or species considered to be in need of conservation, such as all Bass species, Alewife, Blueback Herring, and American Shad and others;
   (c) One hundred-twenty (120) stunned or dead non-game fish.

d) Reporting requirements that include:
   i) If any of the above f any of the above are observed, the Certification Holder shall contact Maryland Department of Natural Resources (DNR) Environmental Review Program
   ii) A report to MDE Tidal Wetlands Division (Division) and DNR Environmental Review Program at the end of any week following any documented injured/killed fish while in-water tidal construction activities are ongoing. The report will include the approximate location relative to where the pile driving or noise-generating activity was occurring, and time/date.
   iii) A quarterly report summarizing all injured/kill fish within a 3-month period.
   iv) A final report summarizing the fish kills associated with construction. The final report shall be submitted to the Division within 60 days following completion of construction.

e) Procedures for coordination and approval procedures for release of hold points.

f) The TIWC Plan can only be modified upon approval by the Division.

12) The Certification Holder shall provide compensation for fish mortality. The Certification Holder shall provide payment into a Maryland Department of Natural Resources (DNR) Special Fund as designated by DNR. Monetary values associated with fish kills shall be evaluated in accordance with the Fish Mortality Mitigation Cost Table depicted on Attachment A of the approved tidal wetlands license, 23-WL-0811, and shall be paid within six months following completion of the project.

13) The Certification Holder shall submit a Water Quality Monitoring Plan (WQM Plan) submitted at least 30 days prior to the commencement of any work authorized under this Certification to ensure water quality standards are maintained during the duration of the Project.
   i) The WQM Plan shall contain the water quality criteria and benchmarks for which the Project shall be monitored and documented to ensure consistency with the requirements of the Clean Water Act, COMAR 26.08.02, and conditions in this Certification, including, at minimum, applicable total suspended solids/turbidity, temperature, dissolved oxygen, conductivity, salinity, and pH criteria.
   ii) The WQM Plan shall also contain monitoring methodology, monitoring locations, reporting schedule(s), quality assurance/quality control procedures, and corrective action plans.
   iii) The WQM Plan can only be modified upon approval by MDE.

14) The Certification Holder shall submit a Severe Weather and Flood Action Plan (SWFA Plan) to ensure water quality standards are maintained during significant weather events at least 30 days prior to the commencement of any work authorized under this Certification. The SWFA Plan shall include the following:
    i) Weather and the possibility of a rainfall/wind event shall be monitored on a daily basis. When a significant weather event is forecast, appropriate actions shall be taken to protect water quality including review and repair of erosion and sediment control measures, securing all equipment, addressing material storage and stockpile areas, and other sources of potential pollution. A significant weather event is a greater than 50 percent chance of 1 inch or more rainfall forecast during a 24-hour period within the watershed or probability of gale force winds.
    ii) Storm surges - Identify and address areas susceptible to storm surge and make provisions to remove materials, equipment, and other potential contaminants prior to inundation.
    iii) The SWFA Plan can only be modified upon approval by the Program.

15) The Certification Holder shall submit a Submerged Aquatic Vegetation (SAV) Mitigation and Monitoring Plan with approved performance standards.

16) The Certification Holder shall not allow debris to enter the waterway. The Certification Holder shall implement BMPs and measures such as suspended netting, skip pans, and containment barges to minimize the quantity of material from entering waterways. The Certification Holder shall immediately remove all debris inadvertently introduced into the waterway because of any construction activity. Debris shall be disposed of at an upland (non-wetland) disposal site and in a manner which does not adversely impact surface or subsurface waterflow into or out of tidal wetlands.

17) Sediment and erosion control plans and stormwater management plans approved by MDE shall be submitted to MDE for approval prior to initiation of work in regulated areas. All work shall be performed in accordance with the required Soil Erosion and Sediment Control Plan as approved by MDE. Runoff or accumulated water containing sediment or other suspended materials shall not be discharged into the waters of the State unless treated by an approved sediment control device or structure. Any proposed changes to approved sediment and erosion control plans or stormwater management plans during construction shall be forwarded to the approving authority for approval prior to implementation.

18) If the Certification Holder requires any on-site facility that requires a General Discharge Permit application (Maryland General Permit No. 15-MM), the Certification Holder shall apply to the Water and Science Administration, Industrial Discharge Permits Division for review and approval, as determined necessary, prior to the commencement of work. The Certification Holder shall send confirmation to MDE, Tidal Wetlands Division.

19) Prior to the start of construction, the Certification Holder shall retain a qualified full-time Independent Environmental Monitor (IEM) that is independent from the Certification Holder, design consultants, and construction contractors working on the project. The Certification Holder shall retain an IEM to assess compliance with all conditions of this and other applicable permits and environmental regulations. The Certification Holder shall develop a project-specific IEM Manual detailing all IEM responsibilities and procedures and submit the manual to MDE for review and approval prior to implementation. MDE and BPW Wetlands Administration shall be provided with the opportunity to review the qualifications of the IEM proposed by the Certification Holder and provide concurrence that the candidate is qualified to perform the IEM role. The IEM shall:
    a) Review design submittals and construction activities for compliance with all conditions of this Water Quality Certification and other applicable permits and environmental regulations;

b) Report findings directly and concurrently to MDE's Tidal Wetlands Division, the Army Corps of Engineers (the Corps), and BPW Wetlands Administration, notifying them and the Certification Holder immediately of any reported or observed violations or noncompliance issues within the terms or conditions of the Tidal Wetlands License, this Water Quality Certification, or approved plans and specifications;
c) Document impacts to regulated resources by developing and maintaining a detailed tracking list of impacted resources; and
d) Assist with identification of ongoing opportunities for further avoidance and minimization of impacts to regulated environmental resources and protection of water quality.

20) A pre-construction meeting shall be held with the Tidal Section of the Maryland Department of the Environment, the US Army Corps of Engineers (Baltimore Regional Office), the Independent Environmental Monitor (IEM), other agency stakeholders, and Amtrak's primary contractors and subcontractors, to provide the opportunity for all to review and discuss the construction plans and conditions. All meeting participants shall be notified of this meeting a minimum of 14 days prior to the date of the meeting.

21) Mitigation is required for 1.57 acres of impacts to Tidal Submerged Aquatic Vegetation (SAV). The Certification Holder shall plant 4.71 acres of SAV in accordance with the Compensatory Mitigation Plan, Attachment B of the approved Tidal Wetlands License, 23-WL-0811.

22) The Certification Holder shall maintain the mitigation site and monitor for five years. The Certification Holder shall submit a monitoring report to the MDE Tidal Wetlands Division verifying that the planted SAV has been successful no later than December 31 of each year per the required 5 years of monitoring. The following project shall be considered successful based on the approved SAV Mitigation and Monitoring Plan with approved performance standards. If these standards are not met, the licensee shall determine the reason(s) for failure, correct the problem(s), and replant the project.

23) The Certification Holder shall restore and revegetate the constructed living shoreline on the Havre de Grace shoreline, in addition to the tidal emergent vegetation on the Perryville shoreline within one year following completion of construction, as depicted on the attached plans.

24) The Certification Holder shall install appropriate hazard notification, visibility, and safety requirements on all temporary pilings, temporary structures, or monitoring devices.

25) The Certification Holder shall remove all temporary structures, or cut two feet below the mudline, within six months following completion of construction.

26) This Water Quality Certification does not authorize dredging. If any dredging is proposed to provide construction access, the Certification Holder shall coordinate with resource agencies and submit a Joint Permit Application (JPA) and plans for the proposed work.

GENERAL CONDITIONS

1. The Certification Holder shall meet all water quality-related performance standards and conditions required by the Department in any state issued authorization for activities in Waters of the United States to ensure that any discharges will not result in a failure to comply with water quality standards in COMAR 26.08.02 or other water quality requirements of state law or regulation.

2. Structures and activities may not interfere with the movement of aquatic life, fish, and other wildlife nor cause their entanglement.

3. When operating an intake structure, the Certification Holder shall use a screen having a nominal mesh size of 1 mm and an intake velocity not to exceed 0.5 ft/sec. during the Time of Year Restriction specified in the applicable Department authorization.

4. Non-native species may not be introduced with adverse effects on the aquatic ecosystem.

5. The proposed project shall be constructed in accordance with the approved final plan by the Department, or, if Department approval is not required, the plan approved by the Corps, and its approved revisions.

6. Activities which result in an earth disturbance subject to the requirements in Annotated Code of Maryland, Environment Article, Title 4 and COMAR 26.17.01 shall have an erosion and sediment control plan approved by the appropriate approval authority, including following the stabilization requirements set forth in COMAR 26.17.01.07 and "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control," as may be amended.

7. The disturbance of the bottom of the waterway and sediment transport into adjacent State waters shall be minimized.

8. All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into the waters of this State.

9. The Certification Holder shall adhere to the construction time of year restrictions, unless waived or amended by the Department, as identified in a state authorization.

10. The Certification Holder shall obtain all additional authorizations or approvals, including self-certifying General Permits issued by the Department, and shall comply with all conditions of such authorizations.

11. This Certification does not obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.

12. This Certification does not authorize any injury to private property, any invasion of rights, or any infringement of federal, state, or local laws or regulations.

13. The Certification Holder shall allow authorized representatives of the Department access to the site of authorized activities during normal business hours to conduct inspections and evaluations of the operations and records necessary to assure compliance with this Certification.

14. This Certification is valid for the project identified herein and the associated U.S. Army Corps of Engineers authorization NAB-2023-61267 until such time that it expires.

15. All water quality-related performance standards and conditions required by the Department in any state issued for activities in tidal wetlands, nontidal wetlands, their 100-year floodplains, no nontidal wetlands buffers, or nontidal wetland expanded buffers to ensure that any discharges will not result in a failure to comply with water quality standards in COMAR 26.08.02 or any other water quality requirements of state law or regulation shall be met.

STATEMENTS OF NECESSITY AND CITATIONS

1. Statement of Necessity for General Conditions 1, 5, 10, 11, 15 and Special Conditions 1, 3, 19, 20: The condition is necessary to ensure that water quality standards are met and designated uses are maintained.

   Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.02B(1); 26.08.02.03B(1)(b); 26.08.02.03B(2)(e); COMAR 26.08.03.03-3.D; COMAR 26.17.04; COMAR 26.23; COMAR 26.23.02.06

2. Statement of Necessity for General Conditions 2, 3: Movement of aquatic life and passage of flows is essential for growth and propagation of aquatic life, fish, and other wildlife to meet these designated uses.

   Citation: Federal and state laws that authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10E; COMAR 26.08.02.02B(1); 26.08.02.03B(1)(b); 26.08.02.03B(2)(e); COMAR 26.17.01; COMAR 26.23.02.06; COMAR 26.23; COMAR 26.17.04

3. Statement of Necessity for General Condition 4: Nuisance or non-native species may spread and disrupt and dislodge native species from their habitat, leading to declines in distribution, density, growth and propagation. This may result in failure to support native species; and growth, propagation of fish, other aquatic life, and wildlife. Limitations on loss will sustain habitat for a variety of aquatic species. In addition to direct loss, turbidity created by construction or ongoing operation must be limited for support of aquatic life and to meet water quality standards. The conditions ensure that discharges will not result in failure to support designated uses.

   Citations: COMAR 26.08; COMAR 26.08.02.02.B(5); COMAR 26.08.03.03-3.D; COMAR 26.23.02.06; COMAR 26.23; COMAR 26.17.04

4. Statement of Necessity for General Condition 6, 7, 8: Fill or construction material within or adjacent to regulated resources or other earth disturbance may result in discharges that result in impacts to water quality, clarity, growth and propagation of fish, other aquatic life, wildlife, potable water; and other designated uses; and fail to meet general water quality criteria that waters not be polluted by substances in amounts sufficient to be unsightly or create a nuisance.

   Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10E; COMAR 26.08.02.02B(1); 26.08.02.03B(1)(b); 26.08.02.03B(2)(e); COMAR 26.17.01; COMAR 26.23.02.06; COMAR 26.23; COMAR 26.17.04

5. Statement of Necessity for General Condition 9: Restrictions on instream construction are necessary to protect designated uses for propagation and growth of fish, other aquatic life, and wildlife. Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4;

Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.03-3.D; COMAR 26.23.02.06

6. Statement of Necessity for General Condition 12: The condition is necessary to clarify the scope of this certification to ensure compliance with water quality regulations, without limiting restrictions through other requirements.

   Citation: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08, COMAR 26.08.02.10E; COMAR 26.23.02.06; COMAR 26.17.04; COMAR 26.23

7. Statement of Necessity for General Condition 13: Conditions of certification involve precise actions to comply with water quality standards. Site inspection may be necessary to ensure that limits, methods, and other requirements are met to ensure that water quality standards are met and designated uses are maintained. These conditions are necessary to ensure that the activity was conducted and project completed according to terms of the authorization/ certification, while allowing for review of in-field modifications which may have resulted in discharges to ensure that water quality standards were met.

   Citation: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.02.B(5); COMAR 26.08.02.03B(1)(b); COMAR 26.08.02.03B(2); COMAR 26.08.03.03-3.D; COMAR 26.23.02.06; COMAR 26.23; COMAR 26.17.04

8. Statement of Necessity for General Condition 14: This condition is necessary to qualify the period of applicability of the terms and conditions of this Certification to be protective of Maryland water quality standards.

   Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; 40 C.F.R. 121, 15 C.F.R. 930, Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.23.02.06; COMAR 26.23; COMAR 26.17.04

9. Statement of Necessity for Special Condition 2: Expertise for conducting certain activities is required to ensure that there is no violation of water quality standards nor interference with designated uses. This condition is necessary to ensure that discharges will be conducted in a manner which does not violate water quality criteria nor interfere with designated uses.

   Citation: COMAR 26.08.02.02B(2)- B(4); COMAR 26.08 02.03B(2)(d) – (e); COMAR 26.08.02.03B(1)(b); 26.08.02.03B(2); COMAR 23.02.04.04.

10. Statement of Necessity for Special Condition 4, 6: A time-of-year restriction is necessary to allow for designated use for support of estuarine and marine aquatic life. Discharges may result in increases in turbidity which may violate water quality standards for clarity needed to support SAV designated uses and uses for aquatic life including yellow perch and striped bass, which migrate between February 15 and June 30 to find suitable spawning habitat. Access to the upper reaches of rivers and tributaries to habitats suitable for spawning is essential to support yellow perch populations. Disturbance during the closure period would interfere directly or indirectly with designated uses.

    Citation: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code,

Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10G(3); COMAR 26.24; COMAR 26.08.02.02B(1)(d); COMAR 26.08.02.02B(3); COMAR 26.08.02.03-3C(9); COMAR 26.08.02.03-3C(9)(a).

11. Statement of Necessity for Special Condition 5, 9, 10: A time of year restriction and best management practices are necessary to support and allow for Northern Map Turtle (Graptemys geographica) basking and nesting. Northern Map Turtle move from basking areas to nesting habitat to hibernating. Basking, nesting and hibernating habitat are essential to support Northern Map Turtle populations. Disturbance during the closure period would interfere directly or indirectly with designated uses.

    Citation: COMAR 26.08.02.02.B.(3); COMAR 26.08.02.02.B.(1)(d); COMAR 26.08.02.03.B.(1)(b); COMAR 26.08.02.03.B.(2)(e); COMAR 26.24.

12. Statement of Necessity for Special Condition 7, 8, 14, 16: The discharge and deposition of material within or adjacent to regulated resources may result in discharges that result in impacts to water quality and designated uses.

    Citation: COMAR 26.08.02.02.B.(3); COMAR 26.08.02.03-3.C.(2)d.(5).

13. Statement of Necessity for Special Condition 11: A hold point for agency for agency coordination, adaptive management, reporting, and compensation is necessary to protect migratory and resident fish, mammals, and aquatic life; and offset the loss of these species by providing compensation due to unavoidable impacts or alteration of the designated uses.

    Citation: COMAR 23.02.04.11A-D; COMAR 23.02.04.12B; COMAR 23.02.04.12E COMAR 26.24.05.01B; COMAR 26.08.02.02.B.(3); COMAR 26.08.02.03-3.C.(2)d.(5); 33 U.S.C. § 1341(a), (b), & a; (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.24.

14. Statement of Necessity for Special Condition 11, 13, 14, 15: Requirements for additional plans that include BMPs and monitoring are necessary to protect migratory and resident fish, mammals, and other aquatic life; and to ensure that limits, methods, and other requirements are met to ensure that water quality standards are met and designated uses are maintained.

    Citation: COMAR 23.02.04.11A-D; COMAR 23.02.04.12B; COMAR 23.02.04.12E COMAR 26.24.05.01B; COMAR 26.08.02.02.B.(3); COMAR 26.08.02.03-3.C.(2)d.(5); 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.24.

15. Statement of Necessity for Special Condition 17, 18: The condition is necessary to ensure that water quality standards are met under circumstances for discharges relating to upland industrial activities so that designated uses of waters are maintained. Discharge of materials associated with cement production may enter waters of the United States or waters of the State and interfere with designated uses, including surface and groundwater flows necessary for support of drinking waters and growth and propagation of fish, other aquatic life, and wildlife.

    Citation: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 & 4; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10G(3); COMAR 26.17.04; COMAR 26.23; COMAR 26.24; COMAR 26.23.02.06, COMAR 26.08, COMAR 26.08.02.10E; COMAR 26.08.02.09C(3); COMAR 26.08.02.03B(1)(b); COMAR

26.08.02.03B(2); COMAR 26.08.02.03-3; COMAR 26.08.02.02B(2); COMAR 26.08.02.02B(4); COMAR 26.08.02.02B(6); COMAR 26.08.02.02B(8).

16. Statement of Necessity for Special Conditions 12, 21, 22, 23: These conditions are necessary to restore designated uses and offset the loss and impact of the activities within and over the water for the unavoidable alteration of the designated uses. Citation: COMAR 23.02.04.11A-D; COMAR 23.02.04.12B; COMAR 23.02.04.12E COMAR 26.24.05.01B.

17. Statement of Necessity for Special Condition 24, 25: Structures that are not clearly visible can interfere with designated uses for recreation. Temporary structures that are not properly can result in pieces of the structure discharging to navigable waters. The conditions are necessary to ensure that structures do not result in additional discharges which would violate water quality standards and designated uses for water clarity, turbidity, growth and propagation of fish, other aquatic life, and wildlife and recreation. The condition is necessary to ensure that the discharge will not interfere with designated uses for water contact recreation and fishing nor create a nuisance.

    Citation: 26.08.02.02B(1)(d); COMAR 26.08.02.02B(3); COMAR 26.08.02.03B COMAR 26.08.02.01B(1) and B(2) COMAR 26.08.02.03B(1)(a); COMAR 26.08.02.03B(2)(d).

18. Statement of Necessity for Special Condition 26: The condition is necessary to ensure that no dredged material enters waters of the United States or State and will not result in a violation of water quality standards for turbidity and interfere with designated uses.

    Citation: COMAR 26.08.02.02B(1)(d); COMAR 26.08.02.02B(3); COMAR 26.08.02.03B.

CERTIFICATION APPROVED

Matthew C. Rowe
Matthew C. Rowe (Dec 2, 2024 08:09 EST)

D. Lee Currey, Director
Water and Science Administration

Dec 2, 2024
Date

Tracking Number: 202361267

Agency Interest Number: AI 179405

Effective Date: **December 3, 2024**

Enclosure: Plan Sheets dated July 09, 2024
Attachment A: Fish Mortality Compensation Table
Attachment B: Compensatory Mitigation Plan

cc: WSA Inspection & Compliance Program
U.S. Army Corps of Engineers

Attachment A
Fish Mortality Mitigation Cost Table

	Prices as of March 2022						Prices in COMAR 08.02.09.01					
	Under 4"	**4"-6"**	**6"-8"**	**8"-10"**	**10"-12"**	**12"+ price/lb**	**Under 4"**	**4"-6"**	**6"-8"**	**8"-10"**	**10"-12"**	**12"+ price/lb**
Bass, Largemouth	1.75	2.45	3.85	5.60	7.00	8.75	0.50	0.70	1.10	1.60	2.00	2.50
Bass, Striped*	2.63	4.38	6.13	7.88	10.50	17.50	0.75	1.25	1.75	2.25	3.00	5.00
Bluefish	1.75	2.98	4.03	5.25	7.00	11.73	0.50	0.85	1.15	1.50	2.00	3.35
Catfish, Bullheads	0.35	0.70	1.05	1.40	1.75	1.75	0.10	0.20	0.30	0.40	0.50	0.50
Catfish, Channel, White	0.53	0.88	1.23	1.58	1.93	3.50	0.15	0.25	0.35	0.45	0.55	1.00
Catfish, Blue, Flathead	Invasive						0.00	0.00	0.00	0.00	0.00	0.00
Crappie, Black, White	0.70	1.40	2.10	3.50	5.25	8.75	0.20	0.40	0.60	1.00	1.50	2.50
Croaker	0.53	1.05	1.58	2.10	2.63	2.63	0.15	0.30	0.45	0.60	0.75	0.75
Drum, Black, Red	1.75	2.98	4.03	5.25	7.00	11.73	0.50	0.85	1.15	1.50	2.00	3.35
Eel, American	0.18	0.35	1.05	1.05	1.05	1.75	0.05	0.10	0.30	0.30	0.30	0.50
Herring*	0.35	0.70	1.05	1.75	2.63	1.75	0.10	0.20	0.30	0.50	0.75	0.50
Menhaden	0.35	0.70	1.05	1.75	2.63	1.75	0.10	0.20	0.30	0.50	0.75	0.50
Perch, White	0.53	0.88	1.23	1.58	1.93	2.28	0.15	0.25	0.35	0.45	0.55	0.65
Perch, Yellow	0.53	0.88	1.23	1.58	1.93	2.28	0.15	0.25	0.35	0.45	0.55	0.65
Seatrout, all species	0.88	1.58	2.28	3.15	3.85	5.25	0.25	0.45	0.65	0.90	1.10	1.50
Shad, American*	0.35	0.70	1.05	1.75	2.10	2.98	0.10	0.20	0.30	0.50	0.60	0.85
Shad, Hickory*	0.35	0.70	1.05	1.75	2.10	2.98	0.10	0.20	0.30	0.50	0.60	0.85
Shad, Gizzard	0.07	0.14	0.21	0.28	0.35	0.53	0.02	0.04	0.06	0.08	0.10	0.15
Snakehead	Invasive						0.00	0.00	0.00	0.00	0.00	0.00
Spot	0.53	1.05	1.58	2.10	2.63	2.63	0.15	0.30	0.45	0.60	0.75	0.75
Sturgeon*						175.00						50.00
Sunfish, all species	0.70	1.23	3.50	6.13	10.50	10.50	0.20	0.35	1.00	1.75	3.00	3.00
	Under 4"		**Over 4"**				**Under 4"**		**Over 4"**			
Forage fish, shiners, daces, silversides, anchovies, etc.*	$3.50/thousand		$7/thousand				$1/thousand		$2/thousand			
	Under 5"		**Over 5"**				**Under 5"**		**Over 5"**			
Blue Crabs, Hard*	.87/each		1.74/each				.25/each		.50/each			
	Under 3.5"		**Over 3.5"**				**Under 3.5"**		**Over 3.5"**			
Blue Crabs, Soft, Peeler*	.87/each		1.74/each				.25/each		.50/each			
Soft-shell Clams	$70/bushel						$20/bushel					
Hard-shell Clams	.70/each						.20/each					
Oysters	$52.50/bushel						$15/bushel					
Grass Shrimp	$14/gallon						$4/gallon					
Diamondback Terrapins*	$3.49/pound						$1/pound					
Notes:												
COMAR values have been adjusted to reflect the cumulative rate of inflation from 1980 to March 2022 which is just under 250%												
https://www.usinflationcalculator.com/?mc_cid=1603cc288f&mc_eid=740ba2c29d												
Edited/Proposed by Jim Thompson 05.04.2022												

Attachment B

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
COMPENSATORY MITIGATION PLAN

CECIL AND HARFORD COUNTIES, MD

JUNE 2024

Prepared For:

AMTRAK®

Prepared By:

COASTAL RESOURCES INC.

25 Old Solomons Island Road, Annapolis, Maryland 21401

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I. Introduction

The National Railroad Passenger Corporation (Amtrak) is planning to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. The moveable swing bridge, built in 1906, is beyond the end of its 100-year design lifespan. The project would replace the two-track bridge with four tracks in the form of east and west spans over the Susquehanna River.

Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. This proposed compensatory mitigation plan addresses impacts and associated mitigation for non-tidal and tidal wetland and waterway impacts and submerged aquatic vegetation (SAV).

II. Project Background

The existing two-track bridge—located on Amtrak's Northeast Corridor (NEC) at Milepost (MP) 60 between MP 61 (south) and MP 59 (north)—has structural and operational deficiencies that prevent the accommodation of future high-speed rail plans for the NEC. The bridge also creates a bottleneck in train capacity and restricts speeds along this segment of the NEC, resulting in conflicts between Amtrak's regional service, Amtrak long-distance trains, the Maryland Area Regional Commuter (MARC) Penn Line trains, and Norfolk Southern Railway (NS) freight trains, which all use the bridge to carry regional, commuter, and freight rail service across the Susquehanna River.

The proposed project consists of demolition and replacement of the existing bridge and construction of two new two-track river bridges with accompanying piers and abutments, along with new approaches, track realignment, embankments, and retaining walls. The two new bridges and associated track realignment would require a widening of the right-of-way (ROW) on the approaches of both the Havre de Grace and Perryville sides. The track realignment also necessitates undergrade and overhead bridge modifications, building and utility relocations in Perryville, major roadway realignment with Otsego Street in Havre de Grace, and a new access point for truck traffic at the Amtrak maintenance facility in Perryville.

As required under the National Environmental Policy Act of 1970 (NEPA), an Environmental Assessment (EA) was completed for the project in March 2017. Following the EA, the Federal Railroad Administration (FRA) released a Finding of No Significant Impact (FONSI) in May 2017 and concluded that the project was not likely to result in significant adverse environmental impacts. Since the EA, the basis for project design has followed the Selected 9A Alternative. This alternative was chosen from among 18 conceptual alternatives identified by the project team. Since more than five years had lapsed from the FRA's issuance of the FONSI and several design refinements have been proposed, a NEPA Re-evaluation was prepared.

III. Impacts

Table 1 presents a summary of the aggregate permanent and temporary impacts to wetlands and waters of the U.S. (WOTUS) and Waters of the State associated with the rail bridge replacement. Wetland and

waterway impacts occur within the Lower Susquehanna, Chester-Sassafras, and Gunpowder Patapsco watersheds (8-digit Hydrologic Unit Codes [HUC-8] 02060003, 02050306, and 02060002, respectively).

Table 1. Impact Summary

		Chester-Sassafras	Gunpowder-Patapsco	Lower Susquehanna	
NON-TIDAL WATERS					**TOTAL**
Ephemeral (permanent)	LF	28	0	63	**91 LF**
	SF	94	0	171	**265 SF**
Ephemeral (temporary)	LF	0	0	0	**0 LF**
	SF	0	0	0	**0 SF**
Intermittent/Perennial (permanent)	LF	1,706	0	4,340	**6,046 LF**
	SF	15,599	0	24,725	**40,324 SF**
Intermittent/Perennial (temporary)	LF	7,300	1,051	2,140	**10,491 LF**
	SF	41,147	4,147	9,187	**54,481 SF**
Palustrine Open Water (permanent)	AC	0	0	0.01	**0.01 AC**
	SF	0	0	205	**205 SF**
NON-TIDAL WETLANDS					**TOTAL**
Palustrine Emergent (permanent)	AC	0.05	0.03	1.42	**1.50 AC**
	SF	1,994	1,506	61,938	**65,438 SF**
Palustrine Scrub-Shrub (permanent)	AC	0.00	0.00	0.25	**0.25 AC**
	SF	0	0	10,944	**10,944 SF**
Palustrine Forested (permanent)	AC	0.22	0.00	0.93	**1.15 AC**
	SF	9,676	0	40,319	**49,995 SF**
TIDAL WATERS (Susquehanna River)					**TOTAL**
Riverine Tidal - Aquatic Bed (SAV) (permanent)	AC	0.00	0.00	1.57	**1.57 AC**
	SF	0	0	68,357	**68,357 SF**
Riverine Tidal - Open Water * (permanent)	AC	0.00	0.00	-0.39	**-0.39 AC**
	SF	0	0	-16,976	**-16,976 SF**
Riverine Tidal - Open Water (temporary)	AC	0.00	0.00	0.35	**0.35 AC**
	SF	0	0	15,316	**15,316 SF**
TIDAL WETLANDS					**TOTAL**
Tidal Scrub-Shrub (permanent)	AC	0.00	0.00	0.02	**0.02 AC**
	SF	0	0	852	**852 SF**
Low Marsh (Living Shoreline) (permanent)	AC	0.00	0.00	0.004	**0.004 AC**
	SF	0	0	157	**157 SF**

		Chester-Sassafras	Gunpowder-Patapsco	Lower Susquehanna	
TIDAL WETLANDS (Continued)					**TOTAL**
High Marsh & Transition Zone (Living Shoreline)	AC	0.00	0.00	-0.013	**-0.013 AC**
	SF	0	0	-560	**-560 SF**
FLOODPLAIN					**TOTAL**
Nontidal 100 Year Floodplain (permanent)	AC	0.89	2.37	4.19	**7.46 AC**

***Table 1.1. Tidal Open Water Permanent Impact Calculations**

Structure	Impact
Removal of Existing Piers	-0.51 AC
Installation of New Piers	0.12 AC
TOTAL	**-0.39 AC**

Permanent impacts to nontidal wetlands will occur from track realignment, new approaches, stormwater management, and embankments. The majority of proposed permanent wetland impacts will occur within and immediately adjacent to the existing rail alignment where wetlands have been historically altered to a considerable degree for the construction and maintenance of the existing rail alignment. Therefore, these wetlands are of low quality and provide minimal functions and values. These functions and values include flood flow alteration, sediment/toxicant retention, and nutrient removal.

Permanent impact to one tidal wetland will occur due to the placement of the west track and a trestle for construction access. This scrub-shrub wetland occurs along the Susquehanna River and contains invasive common reed (*Phragmites australis*). Functions and values associated with this wetland include flood flow alteration, sediment/toxicant retention, sediment/shoreline stabilization, and nutrient removal.

The project will permanently impact 0.004 acre of low marsh wetland associated with the living shoreline on the Havre de Grace shore of the Susquehanna River as a result of the proposed pier. The removal of the existing pier in the living shoreline is 0.013 acres. The 0.013 acre credit fulfills the 0.004 acre mitigation requirement. This project was authorized under Tidal Wetland License No. 20-0558, which expires March 2, 2025. This area is currently unvegetated, but impacts were based on the proposed permitted condition, which will be addressed as part of this project.

Impacts to non-tidal waters are due to manipulated streams that are located parallel to the existing tracks, or stream segments within and abutting existing culverts. These impacts will occur due to track realignment and extension of existing culverts. The project will impact 16,628 linear feet (LF) of stream (perennial, intermittent and ephemeral) including 10,491 LF of impacts that do not require mitigation, which includes 586 LF of culvert replacement, 9,905 LF of stream that will be replaced in-place and in-kind. In addition, 1,146 LF of culverts will remain in-place and will not be impacted and are therefore not included in the impacts noted above. Stream impacts that require mitigation total 6,046 LF, which excludes ephemeral streams that are not under the jurisdiction of MDE and not requiring mitigation from the USACE. A detailed assessment of the function and quality of impacted streams was completed in accordance with the Maryland Stream Mitigation Framework Version 1 Manual for Stream Impact and

Stream Mitigation Calculation (2023). The results of this assessment are summarized in Appendix D. Cumulatively, the impacts to these streams result in minimal loss of aquatic functions because the impacted streams have limited physiochemical and biological functions and have in most cases been previously ditched or placed in culverts. A summary of stream impacts not requiring mitigation and a detailed breakdown of stream impacts by resource type can be found in the permit package.

Riverine tidal impacts come from a number of different sources. As previously mentioned, a trestle will be built for construction access to the existing and proposed rail bridge within the Susquehanna River. Due to the length of time that the trestle will be in place, impacts to SAV due to shading as result of the placement of trestle decking are considered permanent. Permanent impacts to SAV are also a result of the new bridge span due to the shading that would occur from the combined width of the two bridge spans. Impacts to all riverine tidal resources (SAV and open water) will also occur as a result of placement of new piers for the new bridge spans. The permanent impacts to tidal open water will be mitigated through the removal of the existing bridge piers. Since the footprint of the new piers is smaller than that of the existing piers, no additional mitigation will be required. Temporary impacts to tidal open waters are due to the trestle pilings located within water that is over three feet deep, which is based on available bathymetry data. Impacts to SAV have been calculated using a detailed SAV survey that was conducted within the project limits in August 2023.

IV. Twelve Mitigation Plan Components

In accordance with MDE's Nontidal Wetland Phase I Mitigation Plan – Required Information (2020) and 33 CFR part 322 Compensatory Mitigation for Losses of Aquatic Resources dated April 10, 2008, the Amtrak team has prepared the following information.

1. Project Objectives

The proposed compensatory wetland and stream mitigation plan includes wetland creation/restoration and enhancement, mitigation banking options, stream restoration, SAV restoration, fish blockage removal northern map turtle (NMT) basking platforms, and funding for NMT habitat improvements at Wood Island. This mitigation package was developed to offset the impacts associated with the Susquehanna River Rail Bridge project and is based on coordination with United States Army Corps of Engineers (USACE), Maryland Department of the Environment (MDE), National Oceanic and Atmospheric Administration National Marine Fisheries (NOAA NMFS) and the Maryland Department of Natural Resources (MDNR) through Pre-Application meetings, on-site agency field visits, monthly agency coordination meetings and the Joint Evaluation (JE) process.

Several mitigation options were considered and are detailed in Section 2 but ultimately Amtrak ended up pursuing off and on-site permittee-responsible mitigation with an option to purchase credits from an approved mitigation bank if needed. A surplus of available compensatory wetland and stream mitigation options are being included within this plan to provide additional assurance that final project mitigation requirements will be met if proposed sites fall out of consideration due to fatal flaw investigations during the next phase.

Impacts to non-tidal palustrine emergent (PEM, 1.50 acres), palustrine scrub-shrub (PSS, 0.25 AC), and palustrine forested (PFO, 1.15 acres) wetlands will be mitigated at a 1:1 (PEM, 1.50 acres), 2:1 (PSS, 0.50 acres), and 2:1 (PFO, 2.30 acres) ratio through restoration at one of the preferred or backup wetland and stream combination mitigation sites presented in this package. During the on-site agency field reviews, the resource agencies were interested in wetland and stream combination sites as they provide greater functional uplift and a holistic approach to offsetting impacts due to their connectivity. If the total wetland mitigation requirement cannot be fulfilled at either of the preferred site or backup sites, credits can be purchased at the Peige or Pheasant Run mitigation banks as dictated by their approved service areas. The Pheasant Run mitigation bank is currently pending approval but should be approved by the time mitigation is required for these impacts. The Pheasant Run bank may only be considered for impacts within the Gunpowder-Patapsco HUC-8 watershed (the primary service area), and the Peige bank may only we considered for impacts within the Gunpowder-Patapsco HUC-8 watershed (the primary service area) or Lower Susquehanna HUC-8 watershed (the secondary service area). If impacts within the Lower Susquehanna HUC-8 watershed are proposed to be mitigated at Peige, the ecological justification for function replacement by the use of this bank will be discussed in the Phase II mitigation plan.

Non-tidal impacts to streams (approximately 2,113 functional feet) will be mitigated in-kind, utilizing the Maryland Stream Mitigation Framework Calculator (MSMFC) to identify functional feet, at one of the wetland and stream combination mitigation sites. This value of 2,113 functional feet is considered an estimate until it has been confirmed by MDE and USACE. Functional uplift for impacted streams will be identified and addressed through the mitigation framework which is based on the Stream Functions Pyramid. The Stream Functions Pyramid addresses biology, physiochemical, geomorphology, hydraulics and hydrology (Harman 2012). Amtrak assumes that most of the functional feet requirement will be met at either one or a combination of these sites and if additional functional feet are needed, one of the three proposed fish blockage sites could be used to fulfill this need.

Tidal impacts associated with the project include impacts to SAV (1.57 acres), scrub-shrub wetland (0.02 acre) and low marsh (0.004 acre). SAV will be mitigated in-kind, at a 3:1 (4.71 acres) mitigation ratio through restoration of one of the three proposed SAV sites (SAV 8, SAV-9 and SAV-10). The tidal scrub shrub wetland will be restored post construction and will be planted with native woody species. The tidal open water credit (-0.39 acre) that is a result of the difference between the new piers being installed and the old piers being removed, is being used to compensate for the 0.04 acre of tidal scrub shrub mitigation that is required for the project as shown in Table 2. Applying a multiplier of 4:1 for out of kind mitigation brings the total tidal scrub shrub mitigation requirement to 0.08 acre. The 0.39 acre credit that we currently have for tidal open water fulfills the 0.08 acre mitigation requirement. Therefore, no mitigation is required for the impacts to tidal scrub-shrub and low marsh impacts.

The resource agencies were in support of turtle basking platforms and fish passage sites to offset impacts to tidal open water impacts as both the NMT and anadromous fish are species that utilize the mainstem of the Susquehanna River and could be impacted by the project. However, the permanent impacts to tidal open water are offset by the existing pier removals and only temporary impacts are associated with the trestle pilings as a result of the project. Given that the NMT is considered a state-listed endangered species with populations concentrated in the Susquehanna River basin, Amtrak is committed to understanding how the project could potentially impact these species. Towson has completed basking, nesting, and overwintering surveys for the NMT. Based on the results of these surveys, the NMT are only using the Perryville shoreline and cove north of the project areas. There are no signs of NMT using the

Havre de Grace shoreline for basking, nesting, and overwintering. Amtrak is continuing to work with DNR and Towson to identify effective ways to avoid and minimize impacts to these species. The NOAA Fisheries has also commented that historically low levels of anadromous fish occur within the mainstem of the Susquehanna River. Thus, the presence of NMT and record low levels of anadromous fish are an overall concern for the lower Susquehanna watershed and Amtrak is proposing to fund a habitat management project on Wood Island and a fish passage site to address this watershed need. Turtle basking platforms are also being considered to mitigate impacts to basking habitat during construction.

Table 2. Total Wetland and Waterway Impacts and Mitigation Requirements

Resource	**Impacts Requiring Mitigation** Acres (AC)/ Square Feet (SF) or Linear Feet (LF)	**Compensatory Mitigation Ratio**	**Compensatory Mitigation Required** Acres (AC) or Functional Feet (FF)	**Proposed Mitigation**
Non-tidal PEM	1.50 AC 65,438 SF	1:1	1.50 AC	Non-tidal wetland and stream mitigation site
Non-tidal PSS	0.25 AC 10,944 SF	2:1	0.50 AC	Non-tidal wetland and stream mitigation site
Non-tidal PFO	1.15 AC 49,995 SF	2:1	2.30 AC	Non-tidal wetland and stream mitigation site
Tidal SS	0.02 AC 852 SF	4:1	0.08 AC	Post construction restoration. Mitigation not required due to tidal open water credit.
Non-tidal streams (P/I)	6,046 LF	N/A	2,113 FF	Non-tidal wetland and stream mitigation site
Riverine Tidal - Aquatic Bed (SAV)	1.57 AC 68,357	3:1	4.71 AC	SAV Restoration (SAV-8, SAV-9, or SAV-10)
Watershed Need	TBD	TBD	TBD	Northern Map Turtle Habitat Management and Basking Platforms; and Fish Blockage Removal Site

2. Site Selection

A watershed approach to identify suitable mitigation sites was initiated within the MDE 8-digit watersheds (Swan Creek, Lower Susquehanna River, and Furnace Bay) and within close proximity to the project area.

However, due to the lack of available mitigation sites, the site search was expanded to the larger Gunpowder Patapsco (02060003), Lower Susquehanna River (02050306), and Chester Sassafras (02060002) 8-digit Federal HUC watersheds. Despite having to search further away from the project area, sites with closer proximity to the impacts were deemed to have a higher priority. An initial search for shallow water habitat and tidal open water mitigation opportunities was conducted, but mitigation was ultimately not required due to a lack of impacts to these resources. Areas considered to have sufficient potential at a desktop level were then further assessed on-site to confirm suitability for mitigation.

2.1. Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS)

The Federal Mitigation Rule prioritizes using approved mitigation banks whenever possible. Therefore, a search of the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) was conducted to determine if approved banks with credits are available within the project service area. Through review of RIBITS, it was determined that one approved bank and one pending bank are in the project service area. The Peige wetland mitigation bank has minimal available wetland credits as of May 2024. Both the primary service area (Gunpowder-Patapsco) and the secondary service area (Lower Susquehanna) overlap the project area. The Pheasant Run bank has pending wetland and stream credit as of May 2024. The primary service area (Gunpowder-Patapsco) overlaps the project area. However, the project impacts within the Gunpower Patapsco watershed are limited. Based on the lack of bank availability across the most impacted watersheds, the project will need to seek permittee-responsible mitigation opportunities to compensate for unavoidable wetland and stream impacts. Therefore, a search for permittee-responsible mitigation sites was initiated using the method and data referenced below.

2.2. Desktop Based Search

2.1.1. Watershed Resources Registry Search

The Watershed Resources Registry (WRR) is a GIS-based targeting tool that was created by the Environmental Protection Agency (EPA) and other partners as part of a Green Highways Partnership project to integrate the Clean Water Act with multiple state programs. Potential wetland restoration sites listed in the WRR database are identified as areas that have somewhat, poorly, or very poorly drained soils, and do not consist of existing wetlands or forest. The database scores the potential wetland restoration sites using an array of ecological factors. This web-based application was used to locate potential wetland mitigation sites within the target watersheds. These sites were further evaluated in a desktop GIS-based search to ensure they are free from obvious constraints such as public utilities or forest cover. The WRR was also used to investigate possible stream mitigation sites in the target watersheds. The WRR riparian restoration layer targets non-forested and non-developed areas in the vicinity of a waterbody in order to identify areas that would benefit from riparian woody plantings. The sites identified on the WRR were investigated during the GIS-based desktop review to ensure that they were free from obvious land use constraints.

2.1.2. GIS-Based Search

a. Nontidal Wetlands

In addition to the sites identified from the WRR, potential wetland mitigation sites in the Gunpowder Patapsco, Lower Susquehanna, and Chester Sassafras watersheds were identified using aerial photographs (MDiMAP 2020) and GIS data layers for soils (NRCS, 2019), NWI wetland data (USFWS, 2022), hydro line data (MDiMAP 2019), and FEMA 100-year floodplains (FEMA, 2017). Open land areas adjacent

to mapped wetlands, streams, and floodways were prioritized due to the presence of existing sources of hydrology in those areas. Additionally, the Natural Resources Conservation Service (NRCS) mapped hydric soils and topo maps were referenced to target areas where soils and elevation are desirable for wetland restoration. These sites were further investigated using aerial photography, including bird's eye views and street views, to eliminate sites with obvious constraints such as public utilities and forest cover, or sites unable to provide the minimum necessary mitigation acreage. Areas where multiple resource layers overlapped were given the highest priority and were included in the database. Sites located within forested canopy cover and areas overlapping historical preservation, forest conservation easements, and agricultural land preservation were noted and given a lower priority. Other key factors in the site selection process included restoration feasibility and likelihood for success, site connectivity, site accessibility, potential for "in-kind" (emergent, scrub-shrub or forested habitat) replacement of lost functions, potential impacts to other resources, existing easements and encumbrances, potential for traditional development, landscape position, land use/land cover, and ecological uplift potential.

b. Nontidal Streams

The GIS-based search for streams involved overlaying federal, state, and regional data over aerial photography to locate areas suitable for restoration. These data ranged from point-source discharges; fish blockages; land-use and imperviousness; biological monitoring data; 303(d) impaired waters; conservation easements; and sensitive areas as designated by the county. Biological monitoring data were also consulted to examine areas of impairment or focus. An initial search of streams lacking forested riparian buffers was conducted, to which other suitable areas were added as determined by the incorporation of federal, state, and regional data in GIS. Stream sites were considered somewhat more suitable if there were potential wetland mitigation sites nearby (via WRR or other sources), in order to create an ecological coupling of wetlands, floodplains, and streams. Other key factors in the site selection process included restoration feasibility and likelihood for success, site connectivity, site accessibility, potential for "in-kind" replacement of lost functions, potential impacts to other resources, existing easements and encumbrances, potential for traditional development, landscape position, land use/land cover, and ecological uplift potential.

c. Fish Blockages

Potential fish blockage sites were identified using various sources including the Chesapeake Fish Passage Prioritization (CFPP) database, the North Atlantic Aquatic Connectivity Collaborative (NAACC) and sites recommended by the MDNR. The blockages were assessed and ranked based on their upstream network, known presence of anadromous fish, access, presence of other known blockages within the reach, and blockage severity. The blockages from CFPP were also assessed based on their Anadromous Tier rating.

d. Tidal Wetlands

All shorelines within the Susquehanna flats regions of the Chesapeake Bay were assessed at a desktop level for their potential to create or enhance tidal wetlands. Riparian land use within this region is primarily comprised of residential and forest, with few areas of open shoreline. These open areas were considered for their topography and any potential site constraints. The majority of the shoreline on the southwest side of the Susquehanna Flats is a part of Aberdeen Proving Ground and therefore lacked any creation potential. Areas into the Bohemia River were considered to be too far from the project area to mitigate tidal impacts. Regions that appeared, based on aerial imagery, to be existing tidal wetland comprised primarily of *Phragmites australis* were selected to assess for enhancement potential.

e. Submerged Aquatic Vegetation (SAV)

Utilizing DNR's guidance, CRI performed a desktop search for areas that were historically vegetated but have not been vegetated with SAV within the past five years. CRI employed Virginia Institute of Marine Sciences (VIMS) SAV survey data for the Susquehanna Flats and into the Susquehanna River to compare mapped SAV beds over multiple years within the region. Using DNR bathymetry data, areas between zero meter and one meter depth where SAV was present over 5 years ago were selected as potential sites. Areas with residential riparian land uses or water access were avoided.

2.3. Field Investigations

2.1.3. Windshield Site Assessments

Following the desktop identification of potential mitigation sites, CRI completed a windshield field assessment of the sites that could be viewed from publicly accessible locations.

a. Nontidal Wetlands

Potential wetland sites were assessed based on their topography, existing wetland condition, and functional uplift potential. Sites were eliminated based upon land use, accessibility, and the potential functional uplift likely to be achieved.

b. Nontidal Streams

Potential stream sites were viewed for their potential to support stream restoration, in-stream habitat improvements, and fish blockage removal. Sites were eliminated based upon stream condition, land use, accessibility, and the potential functional uplift likely to be achieved.

c. Fish Blockages

Blockage sites were viewed to confirm the presence of a blockage, assess the ability to restore passage, any upstream or downstream stream restoration potential, access, and any constraints. Sites were eliminated if no blockage was seen, or other significant constraints were observed.

d. Tidal Wetlands

Due to topography and land use, the majority of tidal wetland creation or enhancement sites were not visible from publicly accessible locations. Sites were eliminated based upon land use, topography, and the potential functional uplift likely to be achieved. Additional patches of *Phragmites australis* with no obvious seed source seen during the windshield survey were added as sites for potential enhancement opportunity.

2.4. On-site Assessments

Coordination with property owners occurred via certified mailing to gain access and further assess potential sites from private land. On-site investigations followed to confirm desktop and windshield conditions for the potential sites.

a. Nontidal Wetlands

Nontidal wetland sites were scored based on soils, hydrology, landscape position, vegetation, habitat, and water quality, and site constraints (including access and utilities). Sites with both wetland and stream potential were given higher priority.

b. Nontidal Streams

Stream sites were scored based on multiple criteria including bank erosion, habitat and water quality, floodplain condition, riparian buffer, site constraints (including access and utilities), and uplift potential. Sites with both stream and wetland potential were given higher priority.

c. Fish Blockages

Blockage sites were field assessed and scored based on functional upstream network, blockage height, number of downstream blockages, percentage of upstream impervious surface, fish habitat diversity, and ease of construction and access. They were assessed to judge whether there could be additional stream restoration potential up or downstream of the blockage.

d. Tidal Wetlands

Tidal wetland creation sites were assessed based on land use, topography, constraints, and functional uplift potential. Tidal enhancement sites were ranked based on access, size, and the likelihood of successful invasive species treatment.

e. SAV

The team utilized the SAV restoration guidance, *Small-Scale SAV Restoration in Chesapeake Bay*, to determine what types of criteria are required for a successful SAV creation site, including water depth, water clarity, salinity, water velocity, and waves (Jasinski et al., 2021). Based on these criteria, the team performed field investigations of the recommended sites. CRI mapped the one-meter contours to refine the potential site polygons. Site constraints like beach areas, piers, and mooring areas were avoided to further refine the polygons. Substrate was assessed at all sites to confirm compatibility with SAV growth.

2.5. Outreach and Agency Coordination

Agency coordination occurred throughout the compensatory mitigation search during Joint Evaluation (JE) meetings, agency on-site reviews, and pre-application meetings. The team considered all agency recommendations and incorporated them into the mitigation approach and site search. Each type of mitigation involved coordination with various relevant agencies and adjusting the mitigation method based on the input received. A detailed summary of outreach and agency coordination per impacted resource is included below.

a. Nontidal Wetlands and Streams

The mitigation site search for nontidal wetlands and streams involved multiple agency field tours with primary coordination occurring with MDE, USACE, and MDNR. The team utilized agency feedback to pursue sites with potential and drop those considered to have limited uplift potential.

b. Fish Blockages

Coordination for fish blockage removal was primarily with MDNR, NOAA NMFS and USFWS. MDNR provided the Amtrak team with a list of prioritized projects within the target watersheds that they were in favor of removing. The team held an agency review of the top fish passage restoration opportunities during which agencies provided feedback on which opportunities had the most potential. Additionally, the culvert at Gashey's Creek along the Susquehanna Rail Bridge project corridor was proposed as a potential fish passage/restoration project during the pre-application field meeting and subsequent Joint Evaluation meetings.

c. Tidal Wetlands

The team coordinated with MDE Tidal Division regarding the limited tidal creation and enhancement potential in the project vicinity. Since banking for tidal wetlands does not exist, it was determined that the most feasible option would be to lump the tidal impacts in with the nontidal mitigation, or to restore and enhance the impacted tidal wetland within the project area. MDE emphasized that an alternatives analysis would have to be done in order to show that there are no feasible tidal mitigation opportunities within the project vicinity.

d. Shallow Water Habitat

Significant research was done on various methods to offset the shallow water habitat impacts resulting from this project. Through the JE process, the agencies suggested that the removal of derelict fishing gear, specifically crab pots, would be a sufficient shallow water mitigation option. However, after discussion with VIMS researchers it was established that the derelict fishing gear research and accompanying removal projects are concentrated in the southern regions of the Chesapeake Bay. It was determined that there are not any known opportunities within the target watersheds. Oyster reef seeding and freshwater mussel creation was also recommended by the resource agencies as potential mitigation to shallow water habitat impacts. However, after discussion with experts at the Oyster Recovery Partnership it was determined that the salinity of the water in the Susquehanna Flats is not suitable for oyster reef or freshwater mussel production.

The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries (NMFS) suggested historical fill removal as potential shallow water habitat mitigation. Open areas within and near the Susquehanna River were assessed at a desktop level for the potential to remove historical fill, however all areas deemed to have potential would require significant SAV or forest impacts. It was ultimately determined that there would be no impacts to shallow water habitat from this project.

e. Tidal Open Water

Due to the fact that populations of the endangered NMT are concentrated in the Susquehanna River and within the project area, the creation of turtle basking platforms was brought up as a possible mitigation opportunity. The agencies mentioned that turtle basking platforms have been utilized on other projects to offset tidal open water impacts. Since there are no tidal open water impacts associated with the project, this mitigation opportunity is being assessed to address a watershed need as identified by the resource agencies. Amtrak has been working with Towson University on basking, nesting and overwintering surveys within the project area. As part of this coordination, Towson University has agreed to design the NMT basking platforms and determine where these platforms can successfully be installed within the Susquehanna River. The number of platforms needed will be decided through coordination with the resource agencies and Towson. Additionally, during agency coordination meetings, DNR has expressed concerns that NMT habitat is diminishing within the Susquehanna River basin and recommended that the greatest ecological uplift for NMT would be habitat improvements at Wood and Robert Island. The Amtrak team is continuing to coordinate with DNR and Towson University regarding these habitat management projects.

f. SAV

The Amtrak team engaged in ongoing coordination with MDNR regarding SAV site selection at the desktop and onsite level. Recommendations for site selection and SAV protocols for monitoring were provided by MDNR. Based on MDNR's guidance, it was determined that sites that have not been vegetated within the last five years but were historically vegetated would be ideal for successful mitigation. MDNR also

provided insight into recommended SAV site sampling methods which the team utilized for their investigations.

2.6. Results

a. Nontidal Wetlands

A total of 84 nontidal wetland sites were identified at a desktop level and were windshield surveyed. Of these 84 sites, 64 sites warranted more investigation and were pursued for on-site assessments. A total of 36 sites were dropped due to property access issues or landowner refusal, while 11 sites were dropped due to a lack of mitigation need in the Gunpowder Patapsco after it was determined that there would be negligible permanent wetland impacts within the watershed. Of the remaining 17 sites, six were deemed to have sufficient wetland restoration or creation potential and were shown for review at agency field tours.

b. Nontidal Streams

A total of 59 streams were identified at a desktop level and were windshield surveyed. Of these 59 sites, 48 sites were deemed to have potential and were pursued for onsite investigations. Property access was coordinated/granted, and an on-site investigation was performed for 35 of these sites. Seven sites were dropped due to a limited need for mitigation in the Gunpowder Patapsco after it was determined that there would be no permanent waterway impacts within the watershed. In order to pursue a combination wetland/stream project, the other impacted watersheds (Lower Susquehanna and Chester-Sassafras) were prioritized. Seven streams were deemed to have sufficient potential and were reviewed by the agencies during the mitigation field tours.

c. Fish Blockages

A total of 29 fish blockage opportunities were identified at a desktop level and were then windshield surveyed. 19 of these blockages were deemed to have sufficient potential and onsite investigations were performed. Six of these blockages were considered good removal opportunities and were presented at an agency field tour. Three additional high priority projects for removal that were provided by MDNR as mitigation opportunities were also reviewed verbally with the agencies during the field tour.

d. Tidal Wetlands

A total of 11 tidal wetland creation and/or enhancement sites were identified at a desktop and windshield level. All but one of these sites fell out for various reasons including land use, topography, and other constraints. Due to the small amount of tidal wetland impacts, it was determined that on site restoration and enhancement of the impacted tidal wetland (WL12) along the eastern shore of the Susquehanna within the project limits would be sufficient mitigation if needed.

e. SAV

A total of 13 SAV sites were identified at a desktop level. Three of these sites were deemed to have sufficient potential through review by MDNR and field investigations and are currently being pursued for mitigation.

3. Site Protection Instrument

The proposed sites will have some level of property access or easement depending on the type of mitigation. The non-tidal wetland, non-tidal stream, and fish passage mitigation sites will be placed in a perpetual easement with restrictive covenants and will be protected in perpetuity. Draft perpetual easement language is provided in Appendix E. These will be finalized to be site specific and reviewed by Amtrak's legal team before they are executed. Turtle basking platforms are permitted by the USACE and MDE due to their placement within jurisdictional Waters of the US and Waters of the State. Towson University will be responsible for obtaining the permits for this effort. The platforms will remain in place during the basking season (April through June) and will be pulled from the river once the basking season ends. Amtrak is currently coordinating with Towson University to determine the locations and access of the platforms for 2025 and for subsequent years of construction. Amtrak is providing the funding for the proposed NMT Habitat Management. Any site protection instruments will be coordinated and maintained by DNR. Amtrak is also currently working with MDNR and TetraTech on an agreement to collect seed, plant seed, monitor and maintain any SAV beds established as part of this project. Information on the coordination between Amtrak and Towson, TetraTech, and MDNR will be provided as available.

Table 3. Site Protection Instrument Summary

Site Type	Site Protection Instrument
Off-site Non-Tidal Weland/Stream Mitigation Sites	Perpetual Easement
Fish Blockage	Perpetual Easement
NMT Habitat Management	Amtrak to provide funding and DNR to establish site protection instrument
Turtle Basking Platforms	Installation/Access/Agreement with Towson University for permitting of the platforms
SAV	Agreement/MOU with TetraTech for monitoring and maintenance in perpetuity

4. Baseline Information

Agency field review meetings were held on 06/01/2023, 7/18/2023, and 02/16/2024 to review the potential wetland, stream, and fish blockage mitigation sites for the Susquehanna River Rail Bridge Project. Agencies agreed that the sites presented below provide potential for both wetland and stream mitigation. Conceptual mitigation maps and corresponding summaries are included in Appendix B. Each potential stream mitigation site was assessed using the Function Based Rapid Assessment (Starr et al. 2015) for all stream segments greater than 300 linear feet, and the EPA Rapid Bioassessment Habitat Form (Barbour, et al. 1999) for streams less than 300 linear feet. The following describes existing conditions for the reviewed and highest ranked mitigation opportunities.

3. Nontidal Wetlands/Streams

Hollands Branch (W-57/59, S40/41)

The Hollands Branch stream and wetland restoration site is located within agricultural fields and pasture along Trappe Church Rd., between Poole Rd. and Deths Ford Rd in Darlington, Maryland. The site is

associated with Hollands Branch and an unnamed tributary, which flow south to Deer Creek. A total of 4,790 linear feet of Hollands Branch and 3,232 linear feet of an Unnamed Tributary to Hollands Branch are proposed for restoration. The site is located within the Lower Susquehanna HUC-8 watershed and was previously pursued for restoration as part of the Maryland Department of Transportation State Highway Administration's TMDL program. The site is located within a Tier II Watershed, a DNR Targeted Ecological Area, and overlaps with a Sensitive Species Project Review Area (SSPRA). Additionally, project parcels overlap a Purchase Development Rights (PDR) Easement and Maryland Inventory Historic Property (MIHP). Coordination with Maryland Historic Trust (MHT), US Fish and Wildlife Service (USFWS), DNR Environmental Review, and DNR Wildlife and Heritage has been initiated to coordinate and screen for rare, threatened, and endangered species and historic resources. The results of this coordination are included in Appendix F. The site also abuts and includes small, forested areas and mapped FIDS habitat. The stream and adjacent floodplain are identified as Wetland and Riparian Restoration areas in the WRR database and are candidates for both.

The stream channel lacks a riparian buffer, is highly sinuous, disconnected from the existing floodplain, and contains actively eroding banks ranging from 3 – 6 feet. The adjacent abandoned floodplain areas along the stream are flat, topographically low within the valley, and lie within the FEMA 100-year floodplain. It is dominated by crop fields and maintained meadow areas and is mostly mapped by NRCS as Hatboro silt loam, predominantly hydric soil. At a representative test plot, hydric soils were observed beginning at a depth of 28in from the surface, and saturation was observed at 48in. NWI and DNR wetlands are mapped on site, adjacent to proposed wetland creation areas. Evidence of groundwater, proximity to adjacent streams and wetlands, and topography show suitability for the creation of groundwater wetland/floodplain wetlands. A WOTUS/Waters of the State delineation and installation of groundwater wells will occur in later phases for implementation into the project design.

The drainage area to Hollands Branch is approximately 3.03 square miles. The section of Hollands Branch selected for mitigation begins at a forest boundary where streambanks immediately show signs of degradation and lack riparian buffer. The slope of the channel appears low as it continues downstream. Previously, an exposed gas pipeline was repaired by the utility owner, Colonial Pipeline. The stream repair has created a significant fish blockage during baseflow conditions from a large rock sill at the downstream extent of the repair work. Continuing downstream, there is a short, forested section where stream conditions remain stable, and no work is recommended. Below this area, the canopy opens up and bank conditions worsen. The stream appears overly sinuous creating tight meanders, leading to active bank erosion and steep banks with minimal surface protection. BEHI/NBS bank erosion scoring resulted in a rating of Very High/ Very High for the left bank and High / Very High for the right bank. Bank slumps were observed throughout the site where the bank collapsed into the stream, creating multiple flow paths around the fallen material. Minimal point or mid-channel bars were observed during the site investigation indicating that the stream does not appear oversized and is laterally migrating, contributing to bank erosion. The channel is eroding laterally to increase channel area and will continue to degrade until the channel is oversized and aggradation occurs. Based on the Channel Evolution Model (Schumm et al. 1984), Hollands Branch is exhibiting characteristics of degradation and widening, Stage 4.

Near the upstream extent of the project, a small intermittent tributary (Tributary 1) approximately 280 LF, was assessed using the RBP habitat form. Tributary 1 has a drainage area of 0.04 square miles and is moderately sloped. The tributary appears to have been straightened at some point with one culvert crossing present. The channel was deeply incised with steep vegetated banks ranging in heights between

2 – 5 feet tall. Fine sediments were observed in the channel. The riparian buffer area was recently mowed with just scrub/shrub and small trees present along the stream banks.

Tributary S-41 flows into Hollands Branch directly upstream of Trappe Church Road. The tributary is approximately 3,200 linear feet and has a drainage area of 0.18 square miles. The slope of the reach is approximately 2.5 percent. The tributary originates downstream from an existing farm pond located upstream from the assessed area. Multiple ground water sources contribute to the baseflow throughout the reach. At the upstream extents, the channel is narrow and incised with eroded banks and no riparian buffer. This tributary is in open pasture which livestock have full access to. The livestock have created multiple eroded access points along the streambanks and degraded in-stream channel segments. Continuing downstream, banks remain steep with no riparian buffer. BEHI/NBS bank erosion scores were High/High for both left and right streambanks. Based on the Channel Evolution Model, (Schumm et al. 1984) the tributary is showing signs of degradation, Stage 3. The tributary has noticeable issues throughout the site including a location where a stream bank has failed, leading to a significant portion of the baseflow flowing through an existing wetland, creating a headcut. Additionally, existing segments of the tributary are culverted, likely from old, abandoned stream crossing locations. Downstream, below a driveway crossing, the stream appears to have been straightened and flows perpendicular with Trappe Church Road, resulting in a minimal stream buffer along the left floodplain.

Near the downstream extent, an additional intermittent tributary, (Tributary 2) enters Hollands Branch from the left floodplain. This tributary contains steep, eroded banks with minimal surface protection. Debris blockages are present throughout the reach and the stream has no floodplain connection due to the bank heights exceeding 3 feet. Heavier deposits of fine sediments are present throughout the reach.

Pylesville/Schwartz (W-33, S-27)

The Pylesville/Schwartz stream and wetland mitigation site located in Pylesville, Maryland consists of two Unnamed Tributaries to Broad Creek. The site is located within agricultural fields northeast of the intersection of Pylesville Rd and Jenkins Rd., within the Lower Susquehanna HUC-8 watershed, and overlaps a MDNR Targeted Ecological Area and Sensitive Species Project Review Area (SSPRA). Based on available county and state GIS data, there are no mapped easements or historic resources within the project area. Coordination with Maryland Historic Trust (MHT), US Fish and Wildlife Service (USFWS), MDNR Environmental Review, and MDNR Wildlife and Heritage has been initiated to screen for rare, threatened, and endangered species and historic resources. Results of this coordination are included in Appendix F. The stream and floodplain are identified as Wetland and Riparian Restoration areas in the WRR database and are candidates for both.

Tributary 1 enters the site through a road culvert under Wheeler School Road along the western side of the parcel and continues down to the confluence of with Tributary 3. The drainage area is approximately 0.83 square miles; and the channel slope is approximately 0.91 percent. Tributary 1 is a moderately sinuous channel with actively eroding banks and multiple braided locations where the stream has created new channel paths during high flows. BEHI/NBS scoring was High / High for the left banks and Very High/ High for the right bank. Minimal deposition has occurred within the channel or along the top of bank. The right bank and floodplain is higher than the left bank, resulting in no floodplain connection. The right floodplain is planted with row crops. The left floodplain shows evidence of past flooding; however the left top of bank is higher than portions of the field, allowing sheet flows to run perpendicularly through the floodplain instead of entering the channel.

Tributary 3 enters the property through a large corrugated metal pipe (CMP), under Wheeler School Road from the eastern side of the parcel where an existing plunge pool is located. A small, forested section of the stream appears stable and is not recommended for restoration. Where the trees begin to thin out, a change in planform and bank stability is observed. Tributary 3 has an existing stream length of 1,207 linear feet proposed for restoration. The drainage area for Tributary 3 is 1.2 square miles. Like Tributary 1, Tributary 3 is an incised channel that is pinched due to slumping banks. Stream banks appear undercut in areas that have not already fallen. Bank Erosion Hazard Index and Near Bank Stress (BEHI/NBS) scoring was High/Very High for both banks. The tributary contains row crop fields along both floodplains with no trees present.

Tributaries 1 and 3 combine, forming the start of the Main Tributary. The main tributary contains approximately 1,422 linear feet of existing stream proposed for restoration and continues to the downstream property boundary where the stream enters through a large box culvert under MD 165, Pylesville Road. The Main Tributary has a drainage area of approximately 2.15 square miles and an estimated slope of 0.53 percent. Row crops are planted directly along the right top of the bank for a majority of the tributary. The left bank contains a small, grassed buffer between the stream and crop fields. Steep banks with minimal surface protection continue throughout the reach. An increase in fine sediments was observed within the pools, however, point bars and depositional features are not present within the stream continuing to indicate that the channel is actively widening and downcutting to increase channel area. BEHI/NBS scoring was High/High for both streambanks. Based on the Channel Evolution Model, (Schumm et al. 1984) all three tributaries assessed are degrading with some indications of degradation and widening (Stage 3 / Stage 4).

All tributaries contain narrow floodplain benches and wetlands along the stream containing reed canary grass. The adjacent field is flat and topographically low within the valley and lies within the FEMA 100-year floodplain. It is dominated by planted crops, winter wheat, and other grasses. Hydric soils were observed at all test plots and areas identified for wetland restoration are mostly mapped by NRCS as Hatboro silt loam, predominantly hydric soil. Loamy soils with a low percentage of clay underlie the field and are compact in some locations. Saturation was observed at a depth of approximately 20 inches, and a water table was observed at 22 inches about a restrictive layer at 25 inches. Evidence of groundwater, proximity to adjacent streams and wetlands, and topography show suitability for the restoration of groundwater wetland/floodplain wetlands. A WOTUS/Waters of the State delineation and installation of groundwater wells will occur in later phases for implementation into the project design.

Ikea Way (S-22, S-34)

Two Unnamed Tributaries to Mill Creek, S-22 and S-34 are proposed for mitigation. The streams are in Perryville, Maryland and each originate from a stormwater outfall from the Ikea Warehouse. The SWM as-built files will be requested through coordination with Ikea and Cecil County to verify the drainage area and impervious area draining to the SWM facility, as well as the original outfall stabilization plan. S-22 and S-34 parallel each other and both tributaries flow south where they feed into the confluence of Mill Creek and Furnace Bay. The upstream project location begins on the Ikea Management Inc. parcel; however, most of the degraded streams are located on the parcel owned by the Town of Perryville. While these streams remain as two separate systems, field indicators suggest that overbank flows from S-34 make their way into S-22 approximately halfway down the reach, suggesting that the narrow channel berm separating the streams could erode, and cut-off the downstream extent of S-22. Both streams are located

within a forested area; however, trees are spaced out enough to allow for site access with minimal tree clearing needed.

S-22 originates from an RCP and has an estimated drainage area of 0.20 square miles. The reach has an estimated restoration length of 553 LF for restoration. Upstream of the study area, a series of weirs were constructed with riprap as part of the warehouse stormwater management. At the downstream extent of the riprap stabilization, the stream enters a forested area, and the channel begins to degrade with exposed stabilization matting and eroded banks. Continuing about 20 feet downstream of the SWM stabilization, a significant headcut of approximately six feet occurs. A large scour pool has formed directly below the drop and banks are significantly undercut. The channel remains deeply incised from the headcut down to the confluence with Mill Creek / Furnace Bay. Bank heights average approximately 7.5 feet in height with no floodplain connection. Trees are falling into the channel due to the severity of the undercut banks. BEHI/NBS bank erosion scoring was rated as Very High/High for both left and right banks. Below the headcut, the stream appears vertically stable and has a reach slope of 3.2 percent. It is also likely that the existing upstream headcut will continue to migrate upstream into previously stabilized areas. Erosion in this area could be due to the high impervious drainage area coming from the warehouse estimated to be 60% impervious, in combination with poor soils in the area. Based on the Channel Evolution Model, (Schumm et al. 1984) S-22 is degrading and categorized as Stage 3.

S-34 begins directly downstream of an existing RCP and has a drainage area of 0.06 square miles. The site has an estimated restoration length of 452 LF. Large riprap and exposed geotextile fabric are present at the upstream extent of the reach where the previous outfall has failed. Overall, the reach slope is approximately 2.0 percent with the steepest portions of the reach occurring directly downstream of the outfall and near the downstream reach, where the stream enters Mill Creek / Furnace Bay. Bank erosion is significant along the reach. BEHI/NBS bank erosion scoring resulted in High/Very High for the left bank and Very High/Very High for the right bank. Banks are actively eroding and are undercut with overhanging roots throughout the length of the reach. Trees located along the top of the bank have fallen into the stream, pulling up roots, contributing to bank degradation. S-34 continues to vertically degrade with minimal grade-controls in place to prevent additional headcutting. Based on the Channel Evolution Model, (Schumm et al. 1984), S-34 is degrading and categorized as Stage 3.

Deer Creek Site

The Deer Creek stream and wetland mitigation site is located in Pylesville, Maryland and consists of two unnamed tributaries to Deer Creek between Federal Hill Road and Deer Creek and a portion of Rock Hollow Branch between Saint Clair Bridge Road and Deer Creek. The unnamed tributaries to Deer Creek are Use IV-P streams, and Rock Hollow Branch is a Use III-P stream. The site is located within agricultural fields and pasture on three parcels within the Lower Susquehanna HUC-8 watershed and overlaps a MDNR Targeted Ecological Area, a Tier II catchment, and Sensitive Species Project Review Area (SSPRA). Based on available county and state GIS data, there are no mapped easements or historic resources within the project area. During later phases, coordination with Maryland Historic Trust (MHT), US Fish and Wildlife Service (USFWS), MDNR Environmental Review, and MDNR Wildlife and Heritage will be initiated to continue to screen for rare, threatened, and endangered species and historic resources. According to the WRR, the Deer Creek Site contains areas that have been identified as areas for Riparian Preservation and Restoration, and Wetland Restoration. In addition, the site is upstream from Rocks State Park, a Targeted

Ecological Area and areas designated for Riparian and Wetland Preservation and Restoration along the Mainstem of Deer Creek.

The Mainstem of the unnamed tributary to Deer Creek begins at the culvert under Federal Hill Road (MD-165). There is a riparian buffer along the left bank for the upper 1/3 of the reach, then it becomes pasture, and the right bank is consistently open pasture. The stream is moderately sinuous and flows within a narrow valley. Cattle have access to the entire stream. The upstream portion of the mainstem is characterized as a G4 channel with steep eroding banks. Bank heights are between 4 and 5 feet on both banks with BEHI/NBS ratings in very high in both categories along both banks. The drainage area is approximately 1.67 square miles with only about 6% impervious area within the drainage area. The channel slope is approximately 1.1%.

Near the upstream end of the Mainstem, Tributary 1 enters along the left bank. The drainage areas is approximately 0.51 square miles. The channel is actively migrating laterally and has slumped banks in several areas. The stream is characterized as an E4 channel with a 2.6% slope. BEHI and NBS scores are Very High and High respectively.

The mainstem stream flows under a driveway bridge where it enters the Deer Creek 100-yr floodway. The downstream section is more sinuous and has higher erosion levels and channel instability. There is no riparian buffer at the downstream end to the confluence with Deer Creek. The stream slope drops to about 0.7% and banks are still approximately 4-5 feet high. BEHI and NBS ratings were Very High and High respectively.

The project also includes a portion of Rock Hollow Branch which begins at the bridge under Saint Clair Bridge Road and flows into Deer Creek on the opposite bank of the other reach described above. The drainage area is approximately 2.06 square miles. The channel has little riparian vegetation and heavy fines. RHB-MS1 is a B4c channel with a 1.1% slope, and bank heights of 5 feet. The BEHI and NBS ratings for the left bank are High and High, respectively, and the BEHI and NBS ratings for the right bank are Very High and High, respectively.

The fields adjacent to the tributaries to Deer Creek and Rock Hollow Branch are either flat or very gradually sloped and are topographically low within the valley. The fields lie within the FEMA 100-year floodplain and are dominated by pasture and mowed grasses. The riparian area is mostly mapped by NRCS as Codorus silt loam, predominantly non-hydric soil. However, hydric soils were observed in several palustrine emergent wetlands within gradual seep and depression wetlands within the floodplain. Evidence of adjacent groundwater- fed wetlands, proximity to streams, and topography show suitability for creation or restoration of wetlands within the floodplain. A WOTUS/Waters of the State delineation and installation of groundwater wells will occur in later phases for implementation into the project design.

Simon's Run Site

The Simon's Run stream and wetland mitigation site is located in Forest Hill, Maryland and consists of Northern and Southern mitigation areas, which are located along an unnamed tributary to Stout Bottle Branch, a first order, and Use IV-P stream. The southern portion of the mitigation area is located just upstream of Pyle Road and also includes an unmapped unnamed tributary. The northern portion of the site is located immediately upstream of and downstream of Ward Road and includes three unmapped unnamed tributaries. The site is located within agricultural fields and pasture on multiple parcels within

the Lower Susquehanna HUC-8 watershed and is upstream of a MDNR Targeted Ecological Area and Sensitive Species Project Review Area (SSPRA). Based on available county and state GIS data, there are PDR easements and a Harford County MD Agricultural Easement within the project area. During later phases, coordination with Maryland Historic Trust (MHT), US Fish and Wildlife Service (USFWS), MDNR Environmental Review, and MDNR Wildlife and Heritage will be initiated to continue to screen for rare, threatened, and endangered species and historic resources. Coordination with Harford County regarding the agricultural easement is underway. According to the WRR, the Simon's Run Site contains areas that have been identified as areas for Riparian Preservation and Restoration.

Both the Northern and Southern mitigation areas are used for agricultural purposes, including a mixture of cattle pasture and row crops. Cattle have access to the streams within the south tributary. The south tributary maintains a riparian buffer along the right side of the stream only, however there are open patches throughout the floodplain. The banks and floodplain are predominantly scrub / shrub with invasives throughout. The north mitigation area contains a small riparian buffer along the mainstem and tributaries, however the forest appears to be in poor health with invasives noted throughout the floodplain.

The Southern portion of the site contains the Mainstem (Unnamed Tributary to Stout Bottle branch) and Tributary 2. The Mainstem enters the site at the edge of a forested corridor and continues downstream to a culvert under Pyle Road. The culvert is maintained by Harford County and has a fish blockage at the downstream end of the culvert outside of the project area. The drainage area is approximately 0.71 square miles, and the channel slope is approximately 1.3 percent. The stream is moderately sinuous channel with actively eroding banks. The right bank has a forested buffer for the upstream half, and then it becomes open pasture. The channel is characterized as a C4 channel Hanks are approximately four feet high with BEHI/NBS scoring of High/Very High for the right banks, and Very High/Very High for the left banks. Deposition is present within the floodplain and on inner meanders suggesting the stream is somewhat connected to the floodplain during larger storms. Several swales and wetlands drain into the channel. Cattle have full access to the stream and there is evidence of trampling banks and stream features. The substrate is native gravel and cobble. There is a large supply of fine sediment that settles in bars and on the floodplain. The riffles are free of fines, however there is excess sediment in the pools. No fish were observed in this section of stream.

Tributary 2 begins at a farm road crossing and drains a farm pond upstream on the property adjacent to the house and barns. The drainage area is 0.06 square miles, and the channel slope is approximately 2.5%. The stream is very straight and is characterized as a B4. Bank heights range from 5 feet to 5.5 feet at the downstream end of the tributary. BEHI/NBS varies but is Very High/ High along both banks for the majority of the reach. There is no evidence that the stream accesses the floodplain. It appears the channel has been trenched/straightened at some point as it follows a fence/hedge row. Vegetation consists of mostly invasive species, including multiflora rose, and small trees.

The Northern mitigation area is split by Ward Road. The mainstem upstream of Ward Road begins at the property line. Just upstream of the project area is an existing beaver dam. The dam is about 3' high and partially breached. There is an open field with no trees in the upstream few hundred feet of the right floodplain, which could be sediment from an old beaver impoundment. The stream is very sinuous with sediment bars and loose sediment in pools and slightly embedded riffles. As the stream approaches Ward Road, it flows up to the roadway embankment and makes a 90 degree turn to flow along the embankment

until it turns again to flow under the Ward Road bridge. The roadway embankment is currently being undermined and there is evidence of recent road repairs. The stream is stable going under the bridge. The drainage area for the area upstream of Ward Road is approximately 1.1 square miles. The channel slope is approximately 0.6 percent. The reach was classified as a C4 channel. Banks ranged from 3 to 5 feet. Both banks had BEHI/NBS ratings of Very High/ High. There is a very narrow riparian buffer along the stream with open floodplain and active crops adjacent to the buffer. There is no evidence of cattle actively in the stream, however there are new fences and remnant groundwater watering devices in the floodplain.

Tributary 3 begins at a culvert under an old farm road. The stream has very low flow and has deposition of fines, and several aquatic organism passage barriers at headcuts. The slope is approximately 4% and banks are between 4 and 8.5 feet high with higher bank heights in the downstream section of the trib. The BEHI/NBS ratings along each bank were High/ High respectively. There is a small, forested buffer with mostly vine covered dead and/or dying trees.

Tributary 5 is an unnamed tributary that enters a wetland near the middle of the mainstem above Ward Road. The reach has a B4 channel type with a 3.0% slope. The banks are approximately six feet high. Both banks have BEHI and NBS ratings of High and Moderate, respectively.

Downstream of Ward Road, the Mainstem has a drainage area of approximately 1.3 square miles. There is a thin riparian buffer along both banks for several hundred feet. Then the left buffer thins out and becomes a single row of trees with row crops in the left floodplain. The stream flows along the valley wall on the right bank. There are steep slopes stabilized with tree roots and imported riprap placed by property owners. The slope is steeper just downstream of the culvert at about 1% but is lower at the downstream end with a slope of about 0.4%. The stream is characterized as a C4. There is a lot of fine sands and sediment in the stream especially at the downstream area where the slopes drop out. The banks very between 2 to 6 feet with erosion along every outside meander. Both banks have BEHI/NBS ratings of High/High respectively. There is a rock sill with small seating area on the right floodplain that the property owners have constructed and use to sit and view the stream.

SR-Trib4 is an unnamed tributary that enters the mainstem in the center of the section below Ward Road in the Simon's Run Northern study area. The reach has an F4 channel type with a 2.0% slope, and 2.5- to 3.0-foot banks. The left bank has both BEHI and NBS ratings of Moderate, while the right bank has both BEHI and NBS ratings of High. The tributary has a very thin buffer with very dense young vegetation.

The adjacent field is flat and topographically low within the valley and lies within the FEMA 100-year floodplain. It is dominated by pasture, mowed grasses, and crops. The riparian area is mostly mapped by NRCS as Codorus silt loam, predominantly non-hydric soil. However, hydric soils were observed in several wetland depressions within the floodplain. At several test plot locations outside of existing wetland areas, hydric soils were observed within the soil profile at a depth ranging from 5 to 24 inches from the surface. Soils were predominantly silty loam or silty clay loams in texture and were compact in some locations. During soil test plot sampling and during installation of groundwater wells throughout potential wetland creation/restoration areas, depth to groundwater ranged from approximately 16 to 41 inches. Evidence of groundwater, proximity to adjacent streams and wetlands, and topography show suitability for the restoration of groundwater wetland/floodplain wetlands. Results of a WOTUS/Waters of the State delineation and further analysis of data from groundwater wells will be implemented into the project design during later phases.

Peige Mitigation Bank

The Peige mitigation bank is located at 701 Luthardt Road, in Middle River, Maryland. The bank was approved and established on December 10, 2020 and includes PFO wetland bank credits. The primary service area associated with this bank is the Gunpowder-Patapsco HUC-8 watershed and the secondary service area includes the coastal plain portion of the Lower Susquehanna HUC-8 watershed. As of May 1, 2024, information on the RIBITS site shows 0.03 acres of available wetland credit, and 14.24 acres of potential credit at the bank. Coordination with Ecotone—the bank sponsor—on credit availability and potential purchase is ongoing.

Pheasant Run Bank

The Pheasant Run mitigation bank is located west of Baldwin Mill Rd and north of Patterson Rd in Baldwin, Maryland. The bank is pending as of February 10, 2021 and includes PFO wetland bank credits, in addition to ephemeral, intermittent, and perennial stream credit. The primary service area associated with this bank is the Gunpowder-Patapsco HUC-8 watershed. The secondary service area does not apply to the Susquehanna Rail Bridge project, as it includes only the piedmont portion of the Lower Susquehanna HUC-8 watershed. As of May 1, 2024, no credits are listed as available. However, it is anticipated that credits will be available for purchase or advance purchase for the Susquehanna Rail Bridge project. Coordination with Ecotone—the bank sponsor—on credit availability and potential advanced credit purchase is ongoing.

4. Fish Blockage

Stony Run (F-20)

This fish blockage site is located on Stony Run at a culverted crossing along Pulaski Highway (US 40), just east of the intersection with Rhudy Drive in North East, MD. Stony Run is a perennial Use I stream and the drainage area to this site is approximately 8.9 square miles. The crossing is a double box culvert (9’ x 15’ for each cell) with a perched apron causing a 10-inch fish blockage at the downstream end. Fish passage is also limited by shallow water depth through the culvert at base flow conditions. Adjacent to the roadway, the stream channel is forested with adjacent commercial land use, but close access from Pulaski Highway or Stony Run Apartments. Based on mapped diadromous species ranges in the CFPP online tool, American eel, blueback herring, alewife, hickory shad, and American shad are all currently present in the stream network downstream of the blockage and there are no documented downstream fish blockages. In addition, there are 48 resident fish species, one rare fish species, and two rare mussel species in the Chester-Sassafras HUC-8 watershed, according to the CFPP online tool. There is an opportunity to remove the fish blockage to provide access to 16.57 miles of upstream network.

Herring Run (F-21)

This fish blockage site is located on Herring Run at a culverted crossing along Lapidum Road, north of the intersection with Herring Run Lane in Havre De Grace, MD. Herring Run is a perennial Use I stream and the drainage area to this site is approximately 1.4 square miles. The crossing is a triple lined CMP culvert (48” for each cell) with an offset cell for base flow. Shallow water depths at base flow conditions create a fish blockage at this structure. Adjacent to the roadway, the stream channel is forested, falling within Susquehanna State Park and a DNR Owned Lands and Conservation Easement. The site also falls within a MDNR Targeted Ecological Area. Based on mapped diadromous species ranges in the CFPP online tool,

American eel, blueback herring, alewife, and hickory shad are all currently present in the stream network downstream of the blockage and there are no documented downstream fish blockages. In addition, there are 53 resident fish species, two rare fish species, and three rare mussel species in the Lower Susquehanna HUC-8 watershed, according to the CFPP online tool. There is an opportunity to remove the fish blockage to provide access to 2.11 miles of upstream network.

Unnamed Tributary to Northeast Creek (F-23)

This fish blockage site is located on an Unnamed Tributary to Northeast Creek at a culverted crossing along West Old Philadelphia Road, west of the intersection with Howery Lane in North East, MD. The Unnamed Tributary to Northeast Creek is a perennial Use I stream and the drainage area to this site is approximately 2.4 square miles. The crossing is a quadruple lined CMP culvert (48" for each cell) with perched outlets, creating a 10-inch fish blockage. Fish passage is also limited by shallow water depth through the culvert at base flow conditions. Adjacent to the roadway, the stream channel is forested with very low density residential nearby. The site also falls within a MDNR Targeted Ecological Area and Cecil County Resource Conservation Area. Based on mapped diadromous species ranges in the CFPP online tool, American eel is currently present and blueback herring and alewife are potentially present in the stream network downstream of the blockage and there are no documented downstream fish blockages. In addition, there are 48 resident fish species, one rare fish species, and two rare mussel species in the Chester-Sassafras HUC-8 watershed, according to the CFPP online tool. There is an opportunity to remove the fish blockage to provide access to 2.14 miles of upstream network.

Gashey's Creek

The Gashey's Creek study area is located in Havre de Grace, Harford County, Maryland, just downstream of U.S. 40 Pulaski Highway at approximately 754 Pulaski HWY. In this location, the current project limits of disturbance (LOD) are limited to the trackbed with no proposed impacts occurring to Gashey's Creek. The proposed work in this location consists of track profiling and surfacing.

Gashey's Creek, a Use I stream, has a fish blockage located at the Amtrak crossing. The crossing is a concrete lined box culvert with a secondary arched concrete lined culvert that has an invert set approximately 2.4' higher than the main culvert. Dimensions for the main culvert are approximately 13.5' x 14.5' and 13.3' x 15.3' for the arched culvert. Facing downstream, the left cell has a perched apron causing a 9-inch fish blockage at the downstream end. The right bank and the left bank downstream of the culvert are surrounded by forest while the left bank, upstream of the culvert, has a very narrow riparian area with adjacent commercial land use. Based on mapped diadromous species ranges in the CFPP online tool, American eel is currently present and blueback herring and alewife are potentially present in the stream network downstream of the blockage and there are no documented downstream fish blockages. In addition, there are 52 resident fish species and one rare fish species in the Gunpowder-Patapsco HUC-8 watershed, according to the CFPP online tool. There is an opportunity to remove the fish blockage to provide access to 0.09 miles of upstream network. There are two additional fish blockages located upstream of the Amtrak crossing. One is a minor blockage located at the downstream extent of the culvert crossing under Pulaski Highway (US 40) where the culvert invert is slightly raised, creating a small drop of approximately five inches that occurs during low flows. Further upstream, there is another blockage located at the culverted crossing under the CSX Transportation, Inc. railroad tracks where the existing concrete bottom of the bridge is perched, leaving an approximate one-foot drop to the pool below the bridge. Due to the two additional blockages upstream, removal of the fish blockage at the Amtrak

crossing would only provide access to approximately 0.09 miles (~450 feet) of upstream network. If the two additional upstream blockages were removed, that would provide access to an additional 2.42 miles of upstream network.

The wood turtle, a candidate for listing under the ESA in Summer 2024, has a hibernaculum located near the Gashey's Creek crossing. Wood turtles that are radio tracked by the Susquehannock Wildlife and Maryland Zoo may also be present within Gashey's Creek. Based on coordination with NOAA NMFS, DNR and USFWS, sedimentation of the stream is a concern for wood turtle habitat. A site assessment and geomorphic survey was performed at the Gashey's Creek site. The results of this assessment are included in Appendix C.

5. SAV

SAV Restoration Site (SAV-8)

SAV-8 is the northern-most and smallest proposed SAV mitigation site totaling about 23 acres. The site is located at the following coordinates (39.517088, -75.982906), just south of Cara Cove along the Eastern shore of Chesapeake Bay and adjacent to Red Point, offshore of DNR owned lands. The proposed restoration would involve re-planting the area that had historically been vegetated in years 2007 through 2010. During the 2023 on-site assessments, the depth at the site ranged from 3 meters to 5.2 meters; transparency ranged from 0.60 to 0.75 meters; velocity ranged from 0 to 0.30 meters per second (m/s); salinity ranged from 0.29 to 0.44 parts per thousand (ppt); pH from 8.43 to 8.81; dissolved oxygen ranged from 8.88 to 10.26 mg/L; and turbidity ranged from 6.10 to 6.75 NTU. The sediment type was a mix of fine to coarse sand and gravel. SAV was noted in the vicinity of the area; however, none was found at the sampling points. At the southern end of the site, a private canoe/kayak launch was present associated with a camp area, and a steeper shoreline with some shoreline stabilization. The northern boundary consisted of a private mooring/beach area. Due to these, both northern and southern sections of the boundary are recommended to be avoided. The site is being proposed due to its ideal location, water conditions, and historic presence of SAV.

SAV Restoration Site (SAV-9)

SAV-9 is located just south of SAV-8 and north of the NorthBay Adventure camp, at the coordinates (39.505331, -75.987984). The mitigation site is located offshore of DNR and privately owned land and is about 55 acres in size. The proposed restoration would involve re-planting the area that had historically been vegetated in years 2007 through 2010. The depth at the site ranged from 4.9 meters to 6 meters, transparency ranged from 0.70 to 0.75 meters, and velocity from 0.02 to 0.20 m/s. Salinity ranged from 0.34 to 0.47 ppt, pH from 8.57 to 8.80, dissolved oxygen from 9.59 to 10.26 mg/L and turbidity from 5.10 to 7.89 NTU. The sediment type was fine to medium sand. SAV was noted in the vicinity of the area, however none was found at the sampling points. The banks were mostly steep clay. An area towards the southern end of the site appeared to be a private beach access and is recommended to avoid. The site is ideal for restoration due to its location, existing sediment material, water conditions, and historic presence of SAV.

SAV Restoration Site (SAV-10)

SAV-10 is located as the coordinates (39.47745, -75.996069), further south than both SAV-8 and 9. The site borders Elk Neck State Park and a portion of Turkey Point area and is offshore of DNR owned land.

The mitigation site is the largest proposed site consisting of about 70 acres. The proposed restoration would involve re-planting the area that had historically been vegetated in years 2007 through 2009, with the southern portion being vegetated through 2010. The depth at the site ranged from 4.4 meters to 6 meters, transparency ranged from 0.6 to 0.8 meters, and velocity from 0.0 to 0.6 m/s. Salinity ranged from 0.55 to 0.87 ppt, pH from 8.04 to 8.48, dissolved oxygen from 7.61 to 9.10 mg/L and turbidity from 6.73 to 12.85 NTU. The sediment type was fine to medium sand. SAV was noted in the vicinity of the area with some floating along the shoreline, however none was found at the sampling points. The northern portion of the site consisted of very steep banks with bank stabilization present just north of the site. Proposed restoration is being recommended at this site for its ideal location, existing sediment material, water conditions, and historic presence of SAV.

5. Determination of Credits

a. Non-tidal Wetlands

The Susquehanna River Rail Bridge Project is estimated to permanently impact 2.90 acres of nontidal wetlands. USACE and MDE typically require mitigation for non-tidal PEM wetlands at a 1:1 ratio, and mitigation for non-tidal PFO/PSS wetlands at a 2:1 ratio. Based on these mitigation ratios, a total of 4.30 acres of wetland mitigation credit is required for the overall project (Table 4). A breakdown of the required wetland mitigation for each HUC-8 watershed is included in Table 5.

Table 4. Non-tidal Wetland Impacts and Mitigation Requirements Summary

Wetland Type	Project Permanent Impacts		Mitigation Ratio	Mitigation Required	
	(SF)	(AC)		(SF)	(AC)
PEM	65,438	1.50	1:1	65,438	1.50
PSS	10,944	0.25	2:1	21,888	0.50
PFO	49,995	1.15	2:1	99,990	2.30
Totals	**126,377**	**2.90**		**187,316**	**4.30**

Table 5. Non-tidal Wetland Mitigation Requirements Per HUC-8 Watershed

Wetland Type	Mitigation Ratio	Chester-Sassafras	Gunpowder-Patapsco	Lower Susquehanna	Total
PEM	1:1	0.05 AC 1,994 SF	0.03 AC 1,506 SF	1.42 AC 61,938 SF	**1.50 AC** **65,438 SF**
PSS	2:1	0 AC 0 SF	0 AC 0 SF	0.50 AC 21,888 SF	**0.50 AC** **21,888 SF**
PFO	2:1	0.44 AC 19,352 SF	0 AC 0 SF	1.86 AC 80,638 SF	**2.30 AC** **99,990 SF**

Note: See Table 1 for wetland impact numbers within each HUC-8 watershed

The proposed creation of wetlands at the Simon's Run site can provide up to 12.77 acres of wetland mitigation credit as shown in Table 6. An additional 1.73 acres of wetland mitigation credit potential exists at Simon's Run for native planting and enhancement of existing wetlands on site, at a ratio of 3:1. The Deer Creek site has a total potential wetland mitigation credit of 6.91 acres, including 5.45 acres of

wetland creation area, 1.45 acres of wetland enhancement area at a ratio of 1.5:1, and 0.34 acres of wetland preservation area at a ratio of 10:1. The proposed restoration of wetlands at the Hollands Branch and Pylesville/Schwartz site will provide either 8.12 acres or 9.30 acres of wetland mitigation credit, respectively. The proposed wetland enhancement to W-33 at the Pylesville/Schwartz site, which includes invasive species treatment and native woody species establishment, will provide an additional 1.01 acres of wetland mitigation credit at a ratio of 10:1. The proposed PFO/PSS/PEM wetland restoration or restoration/enhancement at the selected site will ensure a minimum of 1:1 replacement of PFO/PSS/PEM wetland acreage lost. This creation would include a minimum PFO creation area to match the functions and values of the PFO impacts. An area equal to the PSS impacts could be designed as PSS or PFO, and an area to match the PEM impacts could be PEM, PSS, or PFO. As the project design continues and permanent wetland impacts may be refined, mitigation requirements will reduce, and the proposed mitigation package may change. Through additional studies, including a detailed WOTUS and Waters of the State delineation and analysis of groundwater well data, the proposed mitigation site acreages and credit areas will be refined to the area needed to meet the non-tidal wetland and stream mitigation need for the Susquehanna Rail Bridge Project. For any proposed wetland enhancement areas, a conditional assessment of existing wetlands will be completed to determine potential uplift and final mitigation ratios will be coordinated with USACE and MDE.

Table 6. Non-tidal Wetland Mitigation Summary Table

Mitigation Site Name	Mitigation Site ID	Proposed Activity	Wetland Type	Available Mitigation Site Acreage	Mitigation Ratio	Available Mitigation Credit
Pylesville/ Schwartz	W-33	Restoration	PEM/PSS/ PFO	9.30	1:1*	9.30
	W-33	Enhancement	PSS/PFO	10.78	10:1**	1.01
Hollands Branch	W-57	Restoration	PEM/PSS/ PFO	3.61	1:1*	3.61
	W-59	Restoration	PEM/PSS/ PFO	4.51	1:1*	4.51
Deer Creek	N/A	Creation	PEM/PSS/ PFO	5.46	1:1*	5.46
	N/A	Enhancement	PSS/PFO	2.18	1.5:1**	1.45
	N/A	Preservation	PFO	0.34	10:1**	0.03
Simon's Run	N/A	Creation	PEM/PSS/ PFO	12.77	1:1*	12.77
	N/A	Enhancement	PSS/PFO	5.19	3:1**	1.73

***Wetland creation areas may receive less than a 1:1 mitigation credit ratio.**

****Wetland enhancement and preservation ratios are proposed based on initial site assessments and concepts and will be coordinated with the agencies for approval in later phases.**

b. Non-tidal Streams

Based on the final output of the Maryland Stream Mitigation Framework (MSMF) "Stream Impact Calculator" (Calculator), which excludes ephemeral stream impacts, the project will result in 6,046 linear feet and 2,113 functional feet of permanent stream loss (impact) (Appendix D). When completing the Calculator, streams within the limits of disturbance (LOD) were considered to be a total functional loss except for those already in culverts (which are considered to have already lost function, therefore no net loss and no mitigation required) and those streams that will be replaced in kind. A list of stream impacts not requiring mitigation can be found in Appendix D. Table 7 summarizes the detailed breakdown of the specific stream impacts along the project corridor, which is included in Appendix D. Details regarding the locations and nature of stream impact locations can be found on the impact plates.

Stream mitigation credits were determined using the MSMF "Stream Mitigation Calculator". The five off-site stream restoration projects will restore 30,023 linear feet of stream and provide 10,129 functional feet of stream gains (mitigation credit). Table 8 shows a summary of the mitigation quantities and what form of mitigation is being provided. As the project design continues, the Impact Calculator will be re-run to potentially refine the amount of stream mitigation required and the Mitigation Calculator will be re-run as the restoration designs advance to refine the stream gains achieved at the mitigation sites.

Table 7. Stream Mitigation Stream Impact Calculator Impact Summary

Reach Name	Impact Type	Stream Quality Score (%)		Reach Length (LF)	Stream Losses/Gains (FF)*
		Existing	Proposed		
WC1	Relocate	49	49	1,377	0
WC1.1	Fill	44	0	495	-150
WC1.1.T	Relocate	44	44	448	0
WC2	Culvert	75	0	151	-326
WC3.A	Relocate	59	0	82/818[#]	340
WC3.T	Relocate	59	59	329	0
WC3.1	Fill	60	0	276	-124
WC4	Fill	44	0	8	-2
WC5	Fill	53	0	94	-34
WC6	Culvert	51	0	200	-184
WC7	Culvert	44	0	67	-24
WC7.1	Culvert	50	0	28	-11
WC7.2	Culvert	33	0	17	-5
WC7.3	Culvert	47	0	53	-20
WC8	Culvert	47	0	14	-4
WC9-Int	Fill	46	0	752	-215
WC9-Per	Fill	46	0	38	-11
WC9.1	Fill	40	0	66	-16
WC9.2	Fill	46	0	896	-256
WC10.C	Culvert	41	0	379	-96
WC10.F	Fill	41	0	50	-13
WC11	Culvert	38	0	118	-43
WC12	Relocate	43	43	699	0
WC12.1	Relocate	45	45	252	0
WC14	Fill	49	0	1,077	-332

Reach Name	Impact Type	Stream Quality Score (%)		Reach Length (LF)	Stream Losses/Gains (FF)*
		Existing	Proposed		
WC14.T	Relocate	49	49	406	0
WC14.1	Relocate	48	48	317	0
WC14.2	Relocate	49	49	166	0
WC15	Fill	46	0	12	-3
WC16	Relocate	24	24	13	0
WC18	Relocate	44	44	277	0
WC19	Fill	52	0	50	-16
WC20-Int	Fill	39	0	20	-5
WC21	Fill	58	0	613	-448
WC21.1-Int	Relocate	53	53	4,798	0
WC21.1-Per	Relocate	53	53	677	0
WC23	Fill	56	0	55	-55
WC24	Fill	36	0	392	-392
TOTAL PERMANENT IMPACT				**15,907[ǂ] LF**	**-2,113[§] FF**

[§] Rounded stream lengths and losses are presented.

[ǂ] 736 LF of WC3.A will be created therefore existing and proposed lengths provided, total permanent impact (LF) includes only existing values.

[β] Total from Stream Calculator and not a sum of losses.

** A decimal in a WC name indicates that the reach was split during survey because of a change in stream conditions. Reach names ending with "-Int", or "-Per" indicate intermittent, and perennial reaches, respectively.*

Rounded stream lengths and losses are presented. Totals are sums of un-rounded values.

Table 8. Proposed Stream Mitigation Credit Calculator Summary

Reach	Reach Length	Existing Stream Quality (%)	Proposed Stream Quality (%)	Proposed Mitigation Activity[4]	Stream Gains (Functional Feet)
S-40 & S-41 Hollands Branch	**8,022[1]**	**50.3[2]**	**80.7[2]**	**—**	**2,829[3]**
S-40	4,790	55.7	83.3	Restoration/Enhancement	2,201
S-41	2,574	53.3	84.7	Restoration/Enhancement	500
S-41.1	658	42.0	74.0	Restoration/Enhancement	127
S-27 Pylesville	**4,819[1]**	**53.7[2]**	**84.9[2]**	**—**	**1,961[3]**
S-27-Trib1	2,190	55.7	86.7	Restoration/Enhancement	770
S2-7-Trib3	1,207	52.7	84.7	Restoration/Enhancement	497
S-27-Main	1,422	52.7	83.3	Restoration/Enhancement	694
Ikea Way	**1,005[1]**	**37.9[2]**	**77.7[2]**	**—**	2383
S-22	452	40.7	80.7	Restoration/Enhancement	116

Reach	Reach Length	Existing Stream Quality (%)	Proposed Stream Quality (%)	Proposed Mitigation Activity[4]	Stream Gains (Functional Feet)
S-34	553	35.0	74.7	Restoration/Enhancement	122
Deer Creek	**5,619[1]**	**50.8[2]**	**76.7[2]**	**—**	**2,276[3]**
DC-MS1	1,452	46.0	76.7	Restoration/Enhancement	564
DC-MS2	2,529	47.3	75.3	Restoration/Enhancement	1,121
DC-MS3	810	51.0	73.3	Restoration/Enhancement	297
DC-Trib1	278	55.3	80.0	Restoration/Enhancement	69
RHB-MS1	550	54.3	78.0	Restoration/Enhancement	224
Simon's Run	**10,558[1]**	**52.1[2]**	**78.2[2]**	**—**	**2,825[3]**
SR-MS1	1,991	52.7	80.0	Restoration/Enhancement	520
SR-MS2	2,336	54.3	80.7	Restoration/Enhancement	696
SR-MS3	264	53.3	81.3	Restoration/Enhancement	92
SR-MS4	1,376	53.3	78.7	Restoration/Enhancement	441
SR-MS5	578	54.0	78.0	Restoration/Enhancement	187
SR-MS6	1,651	58.3	82.0	Restoration/Enhancement	544
SR-Trib2	624	44.0	75.3	Restoration/Enhancement	91
SR-Trib2.1	107	48.7	74.7	Restoration/Enhancement	18
SR-Trib3	426	49.3	75.3	Restoration/Enhancement	55
SR-Trib3.1	585	52.0	74.0	Restoration/Enhancement	86
SR-Trib4	279	55.7	81.3	Restoration/Enhancement	41
SR-Trib5	343	50.0	77.3	Restoration/Enhancement	53
Total Reach Length Mitigation	**30,023**				**10,129**

[1] Total reach length per mitigation site
[2] Average stream quality score per mitigation site
[3] Total stream gains per mitigation site
[4] Activity as selected in the MSMF Stream Mitigation Calculator

c. Tidal Wetlands

The Susquehanna River Rail Bridge Project is estimated to permanently impact 0.02 acres of tidal scrub-shrub wetland within the Lower Susquehanna HUC-8 watershed. USACE and typically require mitigation for tidal PSS wetlands and low marsh at a 2:1 ratio. Based on this mitigation ratio, a total of 0.04 acres of tidal wetland mitigation credit is required for the overall project (Table 9).

The tidal scrub shrub wetland will be restored post construction and will be planted with native woody species. The tidal open water credit (-0.39 acre) that is a result of the difference between the new piers being installed and the old piers being removed, is being used to compensate for the 0.04 acre of tidal scrub shrub mitigation that is required for the project. Applying a multiplier of two for out of kind mitigation brings the total tidal scrub shrub mitigation requirement to 0.08 acre (Table 9). The 0.39 acre

credit that we currently have for tidal open water fulfills the 0.08 acre mitigation requirement. Therefore, no mitigation is required for the impacts to tidal scrub-shrub wetland.

Table 9. Tidal Wetland Impacts and Mitigation Requirements Summary

Wetland Type	Project Permanent Impacts		Mitigation Ratio	Mitigation Required	
	(SF)	(AC)		(SF)	(AC)
Tidal SS*	852	0.02	4:1	3,408	0.08
Totals	**852**	**0.02**			**0.08**

d. SAV

The Susquehanna River Rail Bridge Project is estimated to permanently impact 1.57 acres of SAV. USACE and MDE typically require mitigation for SAV at a 3:1 ratio, mitigation for shallow water habitat at a 2:1 ratio, and mitigation for open water at a 1:1 ratio. Based on these mitigation ratios, a total of 4.71 acres of SAV mitigation credit are required for the overall project (Table 10).

The proposed SAV restoration will provide up to 148 acres of mitigation credit at a mitigation ratio of 1:1 (Table 11). The proposed SAV sites range from 23 to 70 acres in size as shown in Table 11.

Table 10. Tidal Waters Impacts and Mitigation Requirements Summary

Tidal Waters (Susquehanna River) Resource Type	Project Permanent Impacts		Mitigation Ratio	Mitigation Required	
	(SF)	(AC)		(SF)	(AC)
SAV	68,357	1.57	3:1	205,071	4.71
Totals	68,357	**1.57**		205,071	**4.71**

Table 11. Tidal Waters Mitigation Summary Table

Mitigation Site Name	Mitigation Site ID	Proposed Activity	Available Mitigation Site Acreage	Mitigation Ratio	Available Mitigation Credit
SAV Restoration Site 8	SAV-8	Restoration	23	1:1	23
SAV Restoration Site 9	SAV-9	Restoration	55	1:1	55
SAV Restoration Site 10	SAV-10	Restoration	70	1:1	70

6. Mitigation Work Plan

Amtrak has considered and implemented avoidance and minimization measures throughout the preliminary design phase. Despite avoidance and minimization to the extent practicable, this project will incur some unavoidable impacts that will require compensatory mitigation and restoration. The required non-tidal and tidal stream and wetland mitigation will be achieved offsite through the potential sites

outlined below. The total wetland and waterway impacts, associated mitigation ratios, and proposed mitigation are detailed in Table 2.

Based on agency feedback and approval, restoration and uplift potential, and coordination with property owners, the sites listed in Table 12 are the preferred mitigation package for each type of mitigation required for the Susquehanna Rail Bridge project. The sites included in Table 13 have been included as backup mitigation sites, should any of the sites in Table 12 fall out due to fatal flaws. Further investigation will be conducted for sites included within the preferred mitigation package, which will be utilized to refine site concepts and will be presented in the Phase II Compensatory Mitigation Plan. The additional mitigation sites that have been dropped from consideration are documented in Table 14. Details regarding restoration concepts for the preferred mitigation package sites and backup sites, as well as justification for why sites were dropped from consideration are included below.

Table 12. Preferred Mitigation Package

Type	Site ID	Required Compensatory Mitigation	Available Mitigation Credit*
Nontidal Wetlands	Simon's Run	4.30 acres	14.50 acres
Nontidal Streams	Simon's Run	2,113 FF	2,736 FF
Watershed Need	F-20 (Stony Run)		600 FF**
Watershed Need	Turtle Basking Platforms and NMT Habitat Management	TBD	TBD
SAV	SAV-8, SAV-9, or SAV-10	4.71 acres	Up to 70 acres

***Total restoration potential is displayed in the event that additional mitigation is required. However, the most suitable areas for mitigation will be identified in later phases as detailed studies and design continue, and only an area equivalent to the mitigation need will be pursued.**

****Approximate value of functional footage associated with removal of the F-20 Stony Run fish blockage was provided through coordination with NOAA NFMS.**

Table 13. Backup Mitigation Sites

Type	Site ID	Required Compensatory Mitigation	Available Mitigation Credit*
Nontidal Wetlands	Hollands Branch *(W-57/59)*	4.30 acres	8.12 acres
Nontidal Wetlands	Pylesville/Schwartz (W-33)	4.30 acres	10.31 acres
Nontidal Streams	Hollands Branch (*S40/41)*	2,113 FF	2,829 FF
Nontidal Streams	Pylesville/Schwartz (S-27)	2,113 FF	1,961 FF

Watershed Need	Gashey's Creek	TBD	TBD

***Total restoration potential is displayed in the event that additional mitigation is required. However, the most suitable areas for mitigation will be identified in later phases as detailed studies and design continue, and only an area equivalent to the mitigation need will be pursued.**

Table 14. Mitigation Sites Dropped from Consideration

Type	Site ID	Reason For Drop
Nontidal Wetlands	Deer Creek	Property owner not amenable to expanded riparian buffer requested by the resource agencies
Nontidal Streams	Deer Creek	
Nontidal Streams	Ikea Way	Site provides minimal functional footage, and is no longer required as part of the package to meet the mitigation need
Watershed Need	F-21 (Herring Run)	Limited upstream anadromous fish network due to presence of natural bedrock upstream
Watershed Need	F-23 (Unnamed Tributary to Northeast Creek)	Adjacent property owner denial

6.1. Preferred Mitigation Package Sites

a. Nontidal Wetlands/Streams

Simon's Run

The conceptual design for the Simon's Run Site includes the restoration of the mainstem (Unnamed Tributary to Stout Bottle Branch) that is split up between the southern and northern parcel, and four small tributaries that flow into the mainstem. In total, approximately 10,558 LF of restoration is proposed at the site. The restoration approach along the mainstem of Simon's Run proposes minor improvements to the existing planform by eliminating tortuous meanders throughout the southern parcel that are contributing to the suspended sediment entering Deer Creek. Where possible, abandoned meanders will be left as oxbow wetland features for habitat enhancement. The proposed design will utilize the existing alignment elsewhere to save trees within the riparian corridor and reduce impacts from construction. In order to improve floodplain connection, the design proposes a Rosgen Priority 2 approach to raise the existing stream channel elevation to meet the existing floodplain. This approach will raise the existing hydrology and assist with wetland creation throughout the floodplain area. In areas with steep, tall banks, the floodplain may be lowered to balance the cut-fill ratio. Vertical stability will be maintained using in-stream structures and clay channel blocks buried within the channel and floodplain to prevent channel incision. In-stream structures will include riffle grade controls, rock j-hooks, and log vane structures. Well suited natural channel material located throughout the mainstem will be supplemented into the riffle grade control mix. Lateral stability will be improved by creating gentler channel side slopes for improved

floodplain access. The side slopes will be stabilized with a native seed mixture and planted with live stakes. Outside meander banks will be protected with toe log structures that provide woody habitat to the channel and reduce in-channel velocities. Throughout the project area, livestock exclusion fencing is proposed to protect the restoration. Additionally, panel crossings will be installed at existing stream crossing locations for stable crossing areas that minimally impact the stream bed. A few areas along the north parcel offer a good opportunity to realign the channel completely that will increase stream sinuosity and reduce the need to remove existing trees. Upstream of Ward Road, evidence of past beaver activity has left a large portion of the right floodplain open with no trees. The proposed restoration will create a new channel through this open area and create wetlands in the existing channel bed. Natural channel material can be salvaged from the existing channel and used within the riffle grade control mix. Below Ward Road, the existing alignment is pushed up against the right valley wall slope, leaving steep eroding banks with minimal room to grade back. The design in this area proposes to utilize an open field within the left floodplain to develop a new alignment that will tie back into the existing alignment further downstream where right bank and valley slopes are not as steep.

Tributary 2, located at the south parcel, is a ditched intermittent stream that leads from an existing pond. The restoration of the existing incised channel will begin with a new panel crossing to replace the failing culvert. Below this, the design proposes a Rosgen Priority 2 approach, raising the existing channel invert and grading back the banks and floodplain in order to eliminate an existing berm that runs along the tops of bank. This will improve sheet flow to the channel and avoid concentrated flows forming within the floodplain. Due to the steeper slope of the channel, the existing planform will remain, and grade control structures will be utilized to dissipate energy and gradually lower the stream bed elevation. Possible structures will include step-pools, riffle weirs, and log sills.

Tributary 3 and Tributary 5, both located at the north parcel, upstream of Ward Road will follow a similar approach to Tributary 3. These tributaries contain steep slopes with bank heights ranging from 5-12 feet. Following a Rosgen Priority 2 approach, the channels will be filled and compacted to raise the stream inverts. Clay channel blocks are proposed with every two feet of elevation drop. Steep banks will be graded back to allow for floodplain benching to increase entrenchment ratio. Grade control structures will be utilized to dissipate energy and gradually lower the stream bed elevation. Possible structures will include step-pools, riffle weirs, and log sills.

Tributary 4, located at the north parcel, downstream of Ward Road maintains a lower slope as most of the proposed restoration along Tributary 4 is within the inundation boundary of the mainstem. The restoration proposes channel realignment in order to increase sinuosity and slow the water down during high flows. A pilot channel will be created with low bank heights and gradual side slopes for improved floodplain connection. Tributary 4 has the opportunity to utilize a portion of an open field to create a stream and wetland complex instead of the straightened channel that currently exists. Log sills and riffle grade control structures will be proposed throughout the stream channel. Additionally, buried logs in the floodplain will provide floodplain stability and help prevent headcuts from forming.

Wetland enhancement and creation is proposed throughout the floodplain corridor. The wetland creation areas propose a minimum amount of cut due to the raised stream invert and lowered channel banks. Wetland enhancement areas will be tilled to eliminate any compaction from construction. Native plantings will be established throughout the wetlands. Micro-topography will be added throughout the wetlands with areas of woody material placed and secured for habitat enhancement. Additionally, valley

wide grade controls will be implemented to reduce the risk of head cutting or channelization through created wetland areas.

A forested stream buffer is proposed along the mainstem and all unnamed tributaries. The stream buffer will be planted with native trees and shrubs to improve water quality and the stream's biological health. A buffer will provide shade to the stream and reduce nitrogen and phosphorus runoff from nearby agricultural fields and livestock. Planted trees will provide long term stabilization by increasing rooting depths and root density along the streambanks.

b. Fish Blockage

Stony Run (F-20)

The conceptual fish passage design proposed at Stony Run includes the installation of a chute placed along the far-left box culvert that would provide adequate baseflow. USFWS Fish X-ing design tool and HEC-RAS modeling will be implemented to examine peak flows during spring migration periods and would be utilized to determine appropriate baseflow depths through the chute. Additionally, weirs or spoiler baffles are proposed along the chute to reduce velocities along the length of the culvert. During high flow events, water will be able to spread out across both box culverts under U.S. 40. Just downstream of the apron, a riffle grade-control structure or similar rock structure is proposed to eliminate the 10-inch drop from the apron to the water surface of the stream below. This grade-control structure will help to backwater the downstream end of the culvert and contain a flow path with sufficient depths suitable for fish passage. The structure will be designed to withstand existing velocities and shear stress from flows exiting the culvert and span the width of the channel; however, a baseflow channel will be prioritized below the culvert chute.

c. SAV

The selected site(s) and final boundaries of the SAV restoration site will be finalized through coordination with DNR. The methods and process of SAV restoration will be completed in accordance with *Small-scale SAV Restoration in Chesapeake Bay: A Guide to the Restoration for Submerged Aquatic Vegetation (SAV) in Chesapeake Bay and its Tidal Tributaries* (2021). Through coordination with MDNR and TetraTech, the process will include the selection of a suitable site for SAV collection, harvesting and transplant of SAV plants, or harvesting and germination of seeds for dispersal.

d. Watershed Need

The conceptual design for the proposed mitigation project to address the watershed need of low levels of anadromous fish and the concentration of NMT populations within the mainstem of the Susquehanna River will partially include the installation of turtle basking platforms within the Susquehanna River. The basking platforms will provide additional basking areas for the Northern map turtle (G*raptemys geographica*) during construction. The Amtrak team is coordinating with herpetologists at Towson University, who are completing detailed studies on the nesting, basking, and overwintering patterns of northern map turtles within the project area. Based on the results of these surveys, the NMT are only using the Perryville shoreline and cove north of the project areas. There are no signs of NMT using the Havre de Grace shoreline for basking, nesting, and overwintering. Amtrak is continuing to work with DNR

and Towson to identify effective ways to avoid and minimize impacts to these species. Currently, Towson University is testing the basking platforms and will provide recommendations on the number and placement of turtle basking platforms within an area to provide the greatest benefit to the species. Amtrak is also in the process of installing sediment and erosion control fencing near Rodgers Tavern for a utility project, but this fencing will also act as exclusion fencing to keep nesting NMT from accessing the Amtrak limits of disturbance. DNR has expressed concerns that NMT habitat is diminishing within the Susquehanna River basin and the greatest ecological uplift for NMT would be habitat improvements at Wood and Robert Island. Amtrak is providing funding for habitat management at these islands that would include removing trees and predator control.

Additionally, one of three of the fish blockage projects described in concept above in Section IV.6.b will be constructed to offset impacts to anadromous fish species, which are a critical resource within the watershed and are known to occur in historically low levels within the project area. Fish blockage removal will benefit anadromous fish species by opening upstream network and increasing availability of spawning habitat.

6.2. Backup Mitigation Sites

a. Nontidal Wetlands/Streams

Hollands Branch (W-57/59, S-40/41)

The conceptual design of Hollands Branch includes approximately 4,790 LF restoration. Additionally, 3,232 LF of Unnamed Tributary to Hollands Branch is proposed for restoration. The proposed design will follow a Rosgen Priority 2 Restoration approach combining raising the stream invert and grading back the floodplain to create floodplain benches. This will increase floodplain connection, allowing high flows to spread out where safe to do so in an effort to reduce in-channel velocities and shear stress contributing to the current stream instability. The proposed design will realign the channel where necessary to create a stable planform. Steep banks will be lowered in elevation and graded back to a gentler slope to eliminate localized bank erosion occurring throughout the site. Wetlands will be restored within the adjacent floodplain through additional grading.

The estimated cut to wetland hydrology within proposed restoration areas is approximately 2-3 feet based on preliminary site assessments. Groundwater well data will be analyzed to finalize proposed grading and wetland extents. The floodplain wetlands will be re-connected to the adjacent stream and provide enhanced ecological habitat and flood storage, allowing flows to infiltrate and promote groundwater recharge. Proposed functions of the restored wetlands include groundwater recharge/discharge, floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization, and wildlife habitat.

Grade-control structures in the form of woody material and furnished stone will be utilized throughout the stream site to provide vertical stability and help stabilize the banks as needed. Bank protection in the form of toe wood will introduce additional woody material to pools for improved shelter for fish and habitat quality. Riffle grade-control structures will incorporate salvaged streambed material to each structure to maintain riffle diversity. Valley grade control in the form of floodplain logs and large woody debris will be installed perpendicular to stream flow in the floodplain and proposed wetlands to protect from any potential headcuts or rills forming within those areas due to shifts in the stream bed or before

the vegetation has established. A riparian buffer is proposed along the project's extent, consisting of native trees and shrubs to improve water quality and the stream's biological health. A buffer will provide shade to the stream and reduce nitrogen and phosphorus runoff from nearby agricultural fields and livestock. Planted trees will provide long term stabilization by increasing rooting depths and root density along the streambanks. Stream crossings are proposed along both streams to provide stable crossing locations for equipment and livestock. Additionally, fencing is proposed along the unnamed tributary and riparian buffer area to exclude cattle from the stream and ensure a proper riparian buffer can be achieved. The proposed work will look into providing a watering facility for livestock as an alternative to the stream to protect the restored stream and wetlands.

The work proposed along Hollands Branch will begin at the upstream property boundary where the stream loses its riparian buffer due to agricultural practices. Upstream of this location, the channel remains stable through a forested corridor with reduced bank heights and an improved width / depth ratio. An existing Colonel Pipeline crossing occurs through Hollands Branch that has been previously stabilized. The work has created an approximate 10-inch fish blockage at the downstream extent of the repair from an installed rock sill. The proposed restoration work will install grade-control measures downstream of the pipeline crossing to raise the water surface in this location to eliminate the existing fish blockage. The work proposed along Hollands Branch excludes approximately 700 LF of stream directly below Trappe Church Road based on stable stream conditions and an adequate riparian buffer. The proposed work continues where the canopy opens, and the stream reverts to unstable conditions. The proposed tie out location occurs near the downstream property extent where the stream enters a forested area. Bank heights are lower in this area and the stream remains connected to the floodplain.

The proposed restoration work along the Unnamed Tributary to Hollands Branch begins at an upstream wetland, currently headcutting. The restoration efforts will stabilize the wetland headcut and restore the channel downstream. Restoration is proposed the tributary's length, down to the confluence with Hollands Branch.

Pylesville/Schwartz (W-33, S-27)

The overall project consists of restoring two Unnamed Tributaries to Broad Creek (Tributaries 1 and 3), and the (Main) Tributary beginning at the confluence with Tributary 1 and 3. The conceptual design of the Unnamed Tributaries to Broad Creek includes floodplain grading to improve the site drainage, removing a small berm located along the streambanks, and reducing concentrated flows occurring from nearby hillslopes running through the crop fields. The design approach will follow the Rosgen Priority 2 Restoration approach, combining raising the existing channel invert and cutting the floodplain down to improve floodplain connection. Streambanks will be graded back to a gentler slope to encourage out of bank flows during a storm event to help reduce in-channel velocities. Site wide, low points in the adjacent fields are creating concentrated flows perpendicular to the stream, leading to erosion issues where concentrated flows enter the stream. The proposed design will improve the stream planform through increased sinuosity with a riffle-pool sequence.

Vertical stability will be achieved through the use of in-stream structures that will utilize salvaged streambed material. Bank protection measures will use a combination of woody material and stone structures to stabilize portions of the bank prone to erosion, particularly around outside meanders. The right bank and floodplain, which is noticeably higher than the left bank, will be graded down to establish floodplain benches.

Floodplain wetlands are proposed along both banks throughout the site. Wetlands will be restored within the adjacent floodplain through additional grading. The estimated cut to wetland hydrology within proposed restoration areas is approximately 1-2 feet based on preliminary site assessments. Groundwater well data will be analyzed to finalize proposed grading and wetland extents. Existing wetland within the floodplain will be enhanced through chemical and mechanical eradication of invasive reed canary grass, and establishment of native species. The site will be monitored for success of invasive species treatment. These restored/enhanced wetland areas will create habitat and provide flood storage during high flows, allowing water to slowly infiltrate, improving groundwater recharge. Proposed functions of the restored wetlands will include groundwater recharge/discharge, floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization, and wildlife habitat.

A key improvement to the tributaries will be adding a forested riparian buffer of native trees and shrubs. The Riparian buffer will provide a filter between adjacent drop fields and the stream to help reduce nitrogen and phosphorus runoff from entering the stream. Also, a riparian buffer will provide shade and long-term stabilization to the streams, improving water quality and biologic health. Habitat diversity will be incorporated into the design using woody structures as bank protection measures and grade-controls. Stream crossings are proposed along the Main Tributary and Tributary 1 to create stable crossing locations for machinery to access adjacent agricultural fields while minimizing impacts to the stream and floodplain.

Proposed work along Tributary 1 begins at a culvert crossing under Wheeler School Road. A minor fish blockage created from the double barrel CMP will be addressed by installing a structure downstream to back water up through the culverts. Tributary 1 restoration work continues for approximately 2,190 LF to the confluence with Tributary 3. The restoration proposed along Tributary 3 begins approximately 300 LF downstream from the road crossing under Wheeler School Road. This portion of the stream was excluded from the restoration due to stable stream conditions and an established riparian buffer. Tributary 3 restoration continues down to the confluence with Tributary 1. The Main Tributary begins at the confluence and continues approximately 1,422 LF downstream to the property boundary where the tributary flows through an open box culvert under MD 165.

Peige & Pheasant Run Mitigation Bank

Amtrak proposes to meet the non-tidal wetland and stream mitigation needs at a combination of permittee-responsible mitigation sites, as described above. However, if the total mitigation requirement cannot be fulfilled at either one of the proposed sites, credits can be purchased at the Peige or Pheasant Run mitigation bank. The Pheasant Run mitigation bank is currently pending approval but should be approved by the time mitigation is required for these impacts. Coordination with the Bank sponsor, Ecotone, is ongoing.

b. Fish Blockage/Watershed Need

Gashey's Creek (F-20)

The conceptual fish passage design proposed at Gashey's Creek would be a stream restoration project. In order to backwater the existing culvert apron and provide adequate water depth at low flow conditions an in-stream weir would be installed downstream of the culvert. If the existing mid-channel bar is to remain, a W-weir could be used to split the flow into the two existing channels. This grade-control

structure will help to backwater the downstream end of the culvert and contain a flow path with sufficient depths suitable for fish passage. The structure will be designed to withstand existing velocities and shear stress from flows exiting the culvert and span the width of the channel; however, a baseflow channel will be prioritized below the culvert chute. The project would also include the installation of a chute placed along the far-left box culvert that would provide adequate baseflow. USFWS Fish X-ing design tool and HEC-RAS modeling will be implemented to examine peak flows during spring migration periods and would be utilized to determine appropriate baseflow depths through the chute. Additionally, weirs or spoiler baffles are proposed along the chute to reduce velocities along the length of the culvert. During high flow events, water will be able to spread out across both box culverts under the Amtrak track. Access is available via an existing Amtrak access road. Steep slopes and highly erodible soils downstream would be challenging to access and install any in-stream or fish passage structures.

Fish passage is the priority of this project; however, the wood turtle would benefit from stream restoration that allows for better sediment transport within areas downstream of the Gashey's Creek culvert. This concept may be further evaluated if this project becomes a preferred option.

6.3. Mitigation Sites Dropped from Consideration

a. Nontidal Wetlands/Streams

Deer Creek

The Deer Creek stream and wetland mitigation site was field reviewed by the agencies on February 16, 2024. While it was agreed that the site is impaired and has opportunity for functional uplift, a revision to the wetland restoration areas to be along the restored stream and an expanded proposed riparian buffer area were requested to confirm agencies acceptance of the mitigation site. Following the agency field review, a revised concept was presented to the property owners and the property owners are not amendable to the additional requested riparian buffer area.

Ikea Way (S-22, S-34)

The Ikea Way site has fallen out of consideration due to its small size and lack of mitigation need for the project. The Ikea Way site will only provide approximately 234 functional feet of credit as detailed in Section 5. The required non-tidal stream mitigation of 2,113 functional feet for the project can be met at either the preferred or backup mitigation sites. Therefore, this site has been dropped from further consideration.

b. Fish Blockage

Herring Run (F-21)

The Herring Run fish blockage site has fallen out of consideration due to the presence of natural barriers (bedrock) that were observed upstream of the blockage during additional field investigations. The presence of this bedrock limits upstream anadromous fish network.

Unnamed Tributary to Northeast Creek (F-23)

The Unnamed Tributary to Northeast Creek fish blockage site has fallen out of consideration due to landowner denial. The property owner denied right-of-entry and expressed an unwillingness to participate

in the project. Since this adjacent parcel is necessary for the constructability of the site, it has been dropped from further consideration.

c. Tidal Wetlands

There will be no mitigation required for project impacts associated with the tidal scrub-shrub wetland (0.02 acre) and the low marsh wetland (0.004 acre). The tidal open water credit (-0.39 acre) that is a result of the difference between the new piers being installed and the old piers being removed, is being used to compensate for the combined 0.05 acre of tidal scrub shrub and low marsh mitigation. Applying a 4:1 ratio for out of kind mitigation brings the total tidal scrub shrub mitigation requirement to 0.10 acre. The 0.39 acre credit that we currently have for tidal open water fulfills the 0.10 acre mitigation requirement.

7. Maintenance Plan

Following construction, the mitigation projects will be subject to regular inspections and monitoring protocols to determine the progress and continued viability of the projects as determined by the permit conditions. Monitoring will be generally conducted following construction of the sites for 7-10 years or until the regulatory agencies agree that no further monitoring is needed. If remediation action is needed, Amtrak will prepare a remediation plan to be submitted for agency approval.

8. Performance Standards

The project's ecologically based performance standards are tied to the site's objectives and its values. The wetland performance standards will be in accordance with *Ecological Performance Standards and Monitoring Protocol for Nontidal Wetland Mitigation Sites in Maryland*, May, 2024. Performance standards will be measured in accordance with the approved post-construction monitoring protocols developed for the project during final design over a 10-year monitoring period. The stream performance standards will be based on the function-based assessment protocols described in *The Maryland Stream Mitigation Framework Version 1 Final (MSMF V.1. Final) Manual For Stream Impact And Stream Mitigation Calculation* and supporting documentation and will be assessed over a 10-year monitoring period (USACE, 2023).

Performance standards for fish blockage removal will be determined through coordination with the resource agencies, including USFWS, NOAA Fisheries, USACE, MDNR, and MDE. Performance standards for SAV restoration sites will be based on the monitoring protocols identified in *Small-scale SAV Restoration in Chesapeake Bay: A Guide to the Restoration for Submerged Aquatic Vegetation (SAV) in Chesapeake Bay and its Tidal Tributaries* (2021).

9. Monitoring Requirements

Amtrak will be responsible for the monitoring of all mitigation sites. The wetland restoration sites will be evaluated in accordance with the *Ecological Performance Standards and Monitoring Protocol for Nontidal Wetland Mitigation Sites in Maryland* (May 2024) document. The stream restoration sites as well as the riparian buffer areas receiving FF credit will be evaluated using the overall project goals and in accordance with *The Maryland Stream Mitigation Framework Version 1 Final (MSMF V.1. Final)*. The stream restoration will be evaluated using the protocols in the MSMF V.1 Final Appendix C3: Function Based Rapid Stream Assessment (FBRSA) Methodology for Monitoring The riparian buffers will be monitored using the MSMF V.1 Final Appendix D3: Monitoring Stream Buffer Quality Assessment

(SBQA) (USACE, 2023). Depending on the details of the proposed final design, Amtrak anticipates that both the stream restoration and wetland mitigation sites will require 10 years of post-construction monitoring.

The SAV sites will be entered into an agreement with a third party who will manage the monitoring of the SAV sites. Monitoring of the selected fish blockage removal project will be determined through coordination with the resource agencies. Amtrak assumes that monitoring of fish blockage removal will involve hydraulic assessments and sampling of eDNA.

10. Long-Term Management Plan

Amtrak will purchase a perpetual easement on each of the stream/wetland mitigation sites as well as the fish passage sites. The *Easement Template* for permittee-responsible mitigation sites in Maryland, approved by MDE and USACE, will be presented to the property owners (See Appendix E). A long-term management plan, long-term steward, and associated funding will be provided as a part of the Phase II mitigation plan. Any modifications that may need to be made to the template as a result of meetings between Amtrak and the property owners will be documented in a memorandum.

Installation, access to, and maintenance of established turtle basking platforms will be conducted through an agreement with Towson University. An agreement/memorandum of understanding (MOU) will be established with DNR for monitoring and maintenance of SAV restoration sites in perpetuity.

11. Adaptive Management Plan

The Adaptive Management Plan for the mitigation sites will include monitoring the site, analyzing the site for success, and having contingencies in place for changes in site conditions to address deficiencies or changes in management strategies and objectives. If deficiencies are found, remedial action will occur, and additional monitoring will take place to ensure success. If the mitigation goals of the projects are not being met, an Adaptive Management Plan will be developed to assess and remediate the problem. Depending on the problem, the plan could include various assessments/corrective actions such as:

Wetlands

- Adjustment of monitoring schedule based on site conditions
- Additional hydrologic monitoring
- Hydrologic adjustment
- Invasive species treatment recommendations
- Vegetation protective measures
- Supplemental plantings
- Soil amendments
- Animal control/protection (beaver/deer/Canada goose, etc.)
- Trespass deterrence measures

Streams

- Structure stability assessments
- Physical stream surveys including; cross sections, longitudinal profile and pebble counts
- Habitat assessments

- Supplemental vegetative plantings and vegetation assessments
- Invasive species treatment recommendations
- Channel stabilization
- Trespass deterrence measures

Fish Blockage

- Structure stability assessments
- Physical stream surveys including cross sections, longitudinal profile, and pebble counts
- Channel stabilization
- Hydraulic assessments and modeling

SAV

- Vegetation protective measures
- Supplemental planting/seeding
- Trespassing deterrent measures

Turtle Basking Platforms

- Structure Repairs
- Trespassing deterrent measures

Once the sites are assessed, the monitoring team will coordinate the findings with Amtrak and recommendations will be developed. The agencies will be informed of the assessment findings and recommendations. If needed, an interagency meeting will be conducted with the regulatory agencies and Amtrak to determine the best course of action.

12. Financial Assurances

Amtrak will purchase perpetual easements on the on and off-site stream, wetland and fish passage mitigation sites. Contact with all of the owners of the off-site mitigation has been made and the acquisition coordination between Amtrak and the landowners of the off-site mitigation is ongoing. Post-construction monitoring, adaptive management, and long-term maintenance of the mitigation sites are Amtrak's responsibility, and Amtrak will also be responsible for any remedial actions that may be necessary. Amtrak will be responsible for providing MDE and USACE with financial assurance associated with any wetland mitigation. Amtrak will also provide financial assurances for all costs associated with the mitigation project including construction, monitoring & maintenance, long-term management, and catastrophic events mitigation, per the 2008 Federal Mitigation Rule. Monitoring and maintenance of SAV and turtle basking platforms will be accomplished through agreements/MOUs with TetraTech and Towson University. Amtrak will annually review its need for funding of monitoring, management, and remediation for the off-site mitigation sites.

V. Conclusions

The goals and objectives of the proposed mitigation strategy are to compensate for unavoidable impacts associated with the Susquehanna River Rail Bridge project through off-site in-kind mitigation for impacts

associated with the track, bridge foundations and construction access options. All impacts requiring compensatory mitigation will be completed in accordance with the guidelines of Section 404(b)1 of the Clean Water Act.

VI. Literature Cited

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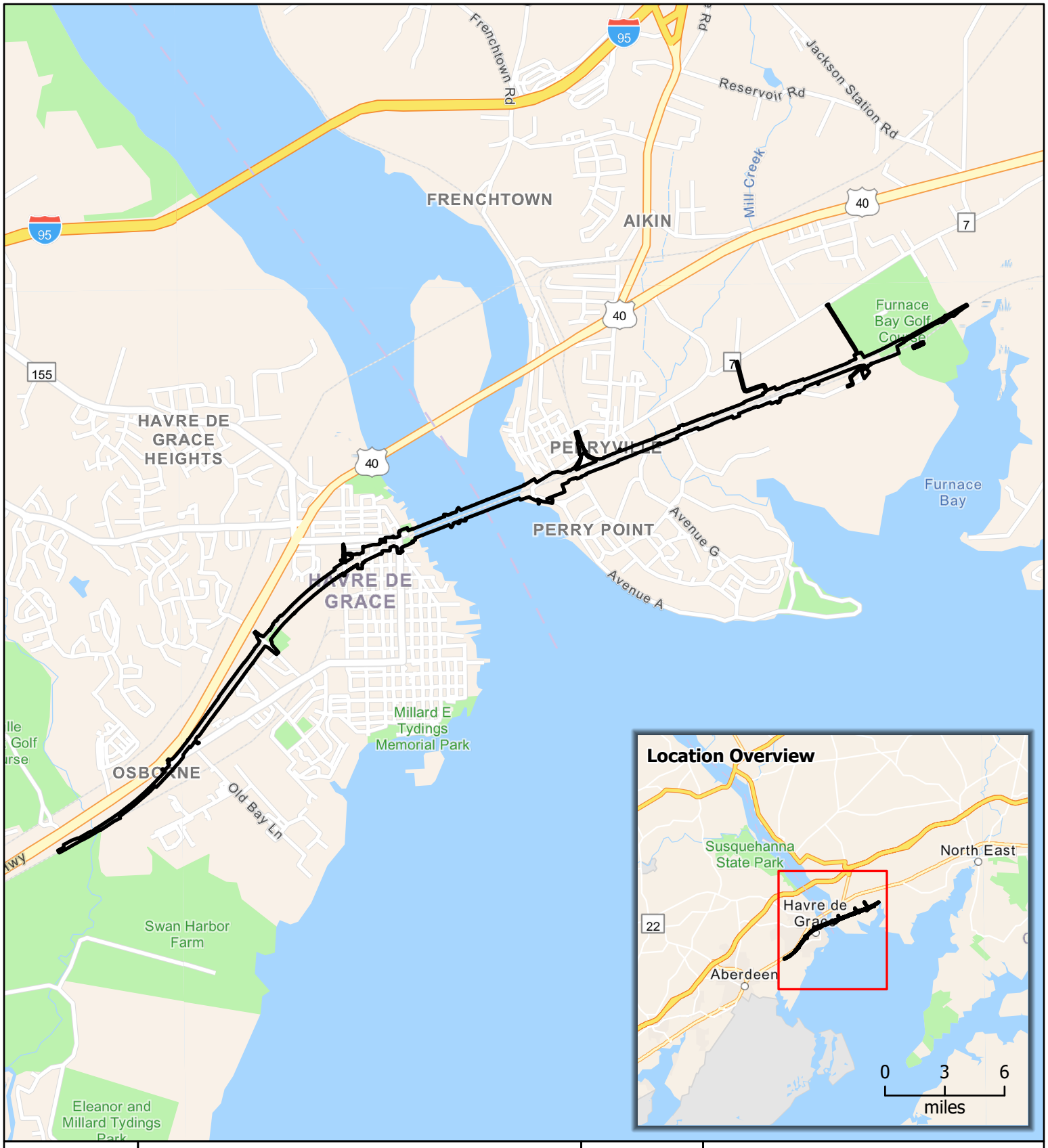
APPENDIX A: PROJECT LOCATION MAP



COASTAL RESOURCES INC.

Susquehanna River Rail Bridge

Appendix A: Vicinity Map

Cecil and Harford Counties, Maryland
May 2024

N
W E
S

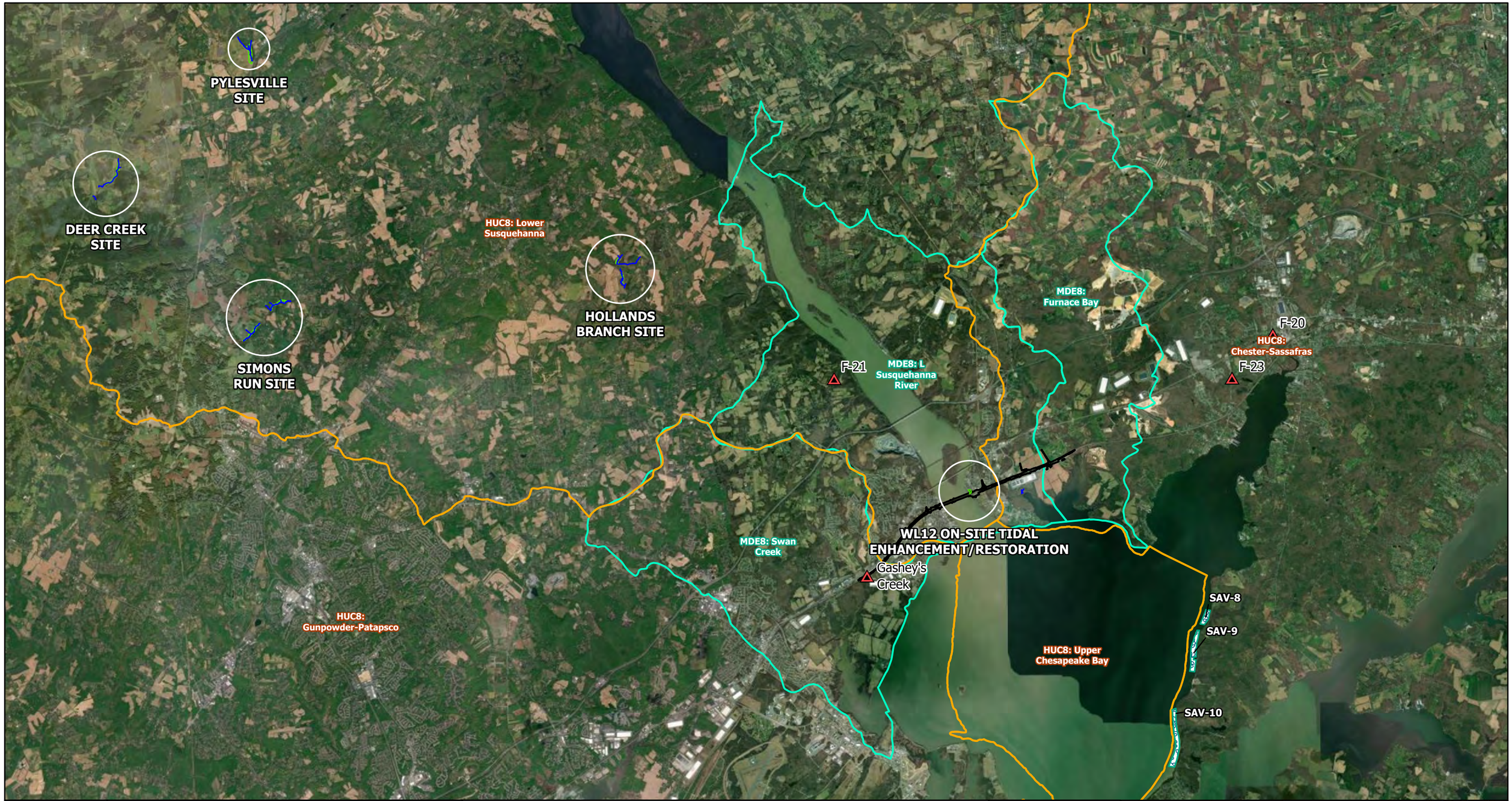
Legend

Limit Of Disturbance

0 0.75 1.5
Miles

Source: Large-scale map: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received August 2023. Small-scale map: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received August 2023.

APPENDIX B: MITIGATION SITE OVERVIEW MAP



COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

SRB Compensatory Mitigation:
Wetland, Stream, SAV, and Fish Passage Sites

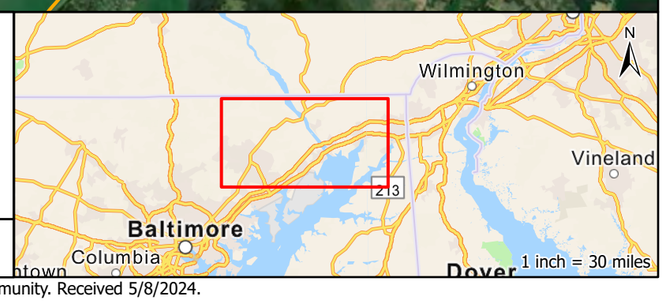
Harford and Cecil Counties, Maryland
May 2024

- LOD
- Fish Blockage Site
- SAV Restoration Site
- Stream Mitigation Site
- Wetland Mitigation Site
- HUC8 Watershed
- MDE 8-Digit Watershed

N W E S

0 1 2
Miles
1 inch = 2 miles

Map Center, NAD83
39.5865°, -76.1667°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 5/8/2024. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 5/8/2024.

APPENDIX C: CONCEPTUAL MITIGATION MAPS AND SUMMARIES

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Hollands Branch Stream and Wetland Mitigation Site
(W-57/59 & S-40/41)

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Lower Susquehanna
Coordinates: 39.6289, -76.22055
Location: Trappe Church Rd., between Poole Rd. and Deths Ford Rd., Darlington, MD
Property Ownership: Private (Glenview Family Farm LLC, Hopkins/Cohen)
Constraints: PDR Easement, MIHP

Site Conditions

Parcel Area: 17 Ac, 107 Ac, 23 Ac, 164 Ac **Existing Land Use:** Agricultural/Pasture
Landscape Position: Stream Valley **Adjacent Land Use:** Residential/Agricultural
Drainage Area for Streams: S-40: 1,939.2 ac. / 3.03 sq. mi. S-41: 115.2 ac. / 0.18 sq. mi.
Drainage Area for Wetlands: W-57: 33.16 ac. / 0.05 sq. mi. W-59: 50.58 ac. / 0.08 sq. mi.
Habitat Location: Contiguous to wetland/upland forest, Flows to Deer Creek
Mapped Soils: Hatboro silt loam
Mapped Wetlands: NWI and MDNR wetlands mapped on site
Other: WRR (Wetland/Riparian Restoration Area), SSPRA (bog turtle), Targeted Ecological Area, Rural Legacy Area, Tier II Watershed

This stream and wetland restoration site is located within agricultural fields and pasture along Trappe Church Rd., between Poole Rd. and Deths Ford Rd and was previously pursued as a TMDL site. The site is associated with Hollands Branch (S-40) and an Unnamed Tributary to Hollands Branch (S-41). The stream channel lacks a riparian buffer, is highly sinuous, disconnected from the existing floodplain, and contains actively eroding banks ranging from 3 – 6 feet. The stream could benefit from floodplain reconnection by raising the channel invert in an effort to preserve existing trees and stabilizing the banks to eliminate localized bank erosion. Additionally, riparian plantings, and in-stream habitat features will enhance the site. There may be an opportunity to daylight stream section(s) along the unnamed tributary and exclude/restrict cattle from the stream. The adjacent abandoned floodplain areas along the stream are flat and topographically low within the valley. It is dominated by crop fields and grasses and is mostly mapped by NRCS as predominantly hydric soil. Portions of the open spaces are suitable for the creation of a groundwater wetland/floodplain wetland creation. At one soil test plot located on the east bank of Hollands Branch, south of Trappe Church Rd., hydric soils were observed beginning at a depth of 28in from the surface, and saturation was observed at 48in. Groundwater wells will be installed to monitoring hydrology within the floodplain and proposed wetland restoration areas. Well data will be analyzed and used to determine grading elevations and refine extends of proposed wetlands as the design progresses. Native herbaceous and woody species, including shrubs and trees, will be planted within the restored wetland areas, and along the restored stream.

Summary of Opportunities

- Stream Restoration - Approximately 8,022 Linear Feet
- Wetland Restoration - Approximately 8.12 Acres

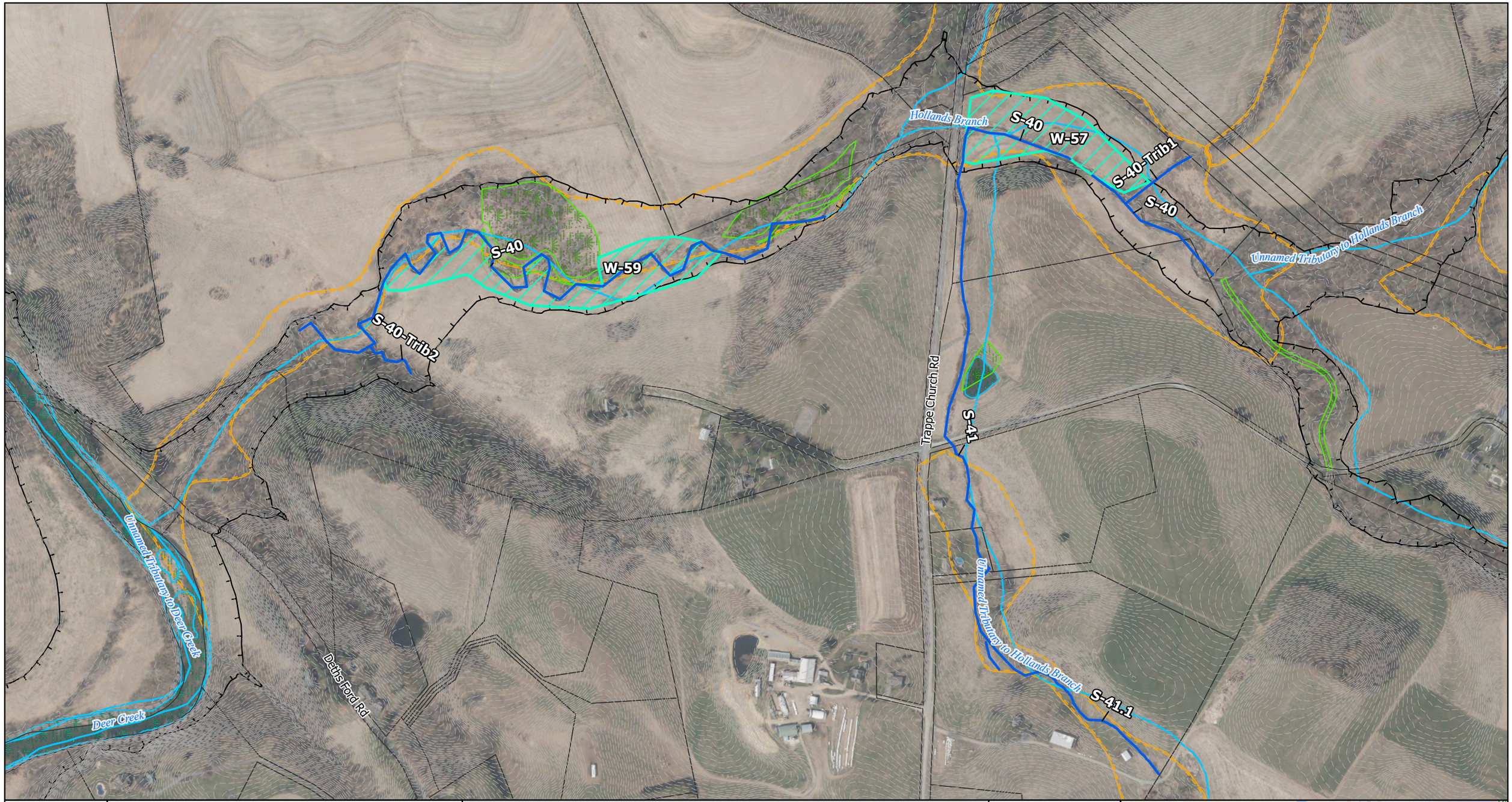
Restoration Objectives

- Floodplain Reconnection & Bank Stabilization
- Establish Riparian Buffer throughout Stream Corridor
- Wetland Creation/Restoration

- Proposed Wetland Functions and Values include: Groundwater recharge/discharge, Floodflow alteration, Sediment/toxicant/pathogen retention, Nutrient removal/retention/transformation, Production export, Sediment/shoreline stabilization, and Wildlife habitat
- Improvement of In-Stream and Riparian Habitat

Restoration Concept

- Combination of raising stream invert to connect to floodplain and establishing floodplain benches & wetlands within open spaces
- Installation of cattle exclusion fencing
- Establish a riparian buffer and preserve existing trees along the stream corridor
- Installation of in-stream structures to provide channel stability and habitat diversity



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Susquehanna River Rail Bridge Project

Potential Mitigation Sites:
Mitigation Site ID(s): Hollands Branch (W-57/59, S-40/41)

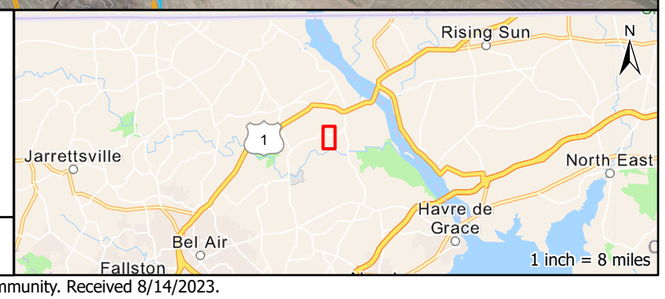
Harford County, Maryland
August 2023

- Stream Restoration
- Non-Tidal Wetland Restoration
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

W S N E

0 180 360
feet
1 inch = 380 feet

Map Center, NAD83
39.6282°, -76.2195°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/14/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/14/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Pylesville/Schwartz Stream and Wetland Mitigation Site along Unnamed Tributaries to Broad Creek (W-33 & S-27)

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Lower Susquehanna
Coordinates: 39.700288, -76.374946
Location: Northeast of the intersection of Pylesville Rd and Jenkins Rd, Pylesville, MD
Property Ownership: Private (Schwartz Family)
Constraints: N/A

Site Conditions

Parcel Area: 70.82 Ac **Existing Land Use:** Agricultural
Landscape Position: Stream Valley **Adjacent Land Use:** Residential/Agricultural
Drainage Area for Streams: Trib 1: 531 Ac. / 0.83 Sq. mi., Trib 3: 768 Ac. / 1.20 Sq. mi., Main Trib: 1,376 Ac. / 2.15 Sq. mi.
Drainage Area for Wetlands: 196 Ac
Habitat Location: Not Contiguous to wetland/upland forest, Farm field
Mapped Soils: Hatboro silt loam; Codorus silt loam
Mapped Wetlands: No NWI and DNR wetlands mapped on site
Other: WRR (Wetland/Riparian Restoration Area), SSPRA, Targeted Ecological Area

This stream and wetland restoration site is located within agricultural fields northeast of the intersection of Pylesville Rd and Jenkins Rd. The site is associated with two unnamed tributaries to Broad Creek (Tributaries 1 and 3) that combine to make the Main Tributary. The stream channel lacks a riparian buffer and erosion is present along meanders, particularly along the right bank that is at a higher elevation. The stream could benefit from riparian planting, bank stabilization, and habitat enhancements. There are narrow floodplain benches and wetlands along the stream that contain reed canary grass. Treatment of invasive species within this riparian area and enhancement of existing wetlands is proposed. The adjacent left field is flat and topographically low within the valley. It is dominated by planted crops, winter wheat, and other grasses. Hydric soils were observed at all test plots. Additionally, saturation was observed at a depth of approximately 20 inches, and a water table was observed at 22 inches about a restrictive layer at 25 inches. The area is suitable for the creation of a groundwater wetland/floodplain wetland creation. Loamy soils with a low percentage of clay underlie the field and are compact in some locations. Minimal grading will be necessary to intercept groundwater in order to restore wetlands. Groundwater wells will be installed to monitoring hydrology within the floodplain and proposed wetland restoration areas. Well data will be analyzed and used to refine grading elevations and extends of proposed wetlands as the design progresses. Native herbaceous and woody species, including shrubs and trees, will be planted within the restored and enhanced wetland areas, and along the restored stream.

Summary of Opportunities

- Stream Restoration - Approximately 4,819 Linear Feet combined.
- Wetland Restoration/Enhancement - Approximately 20.08 Acres

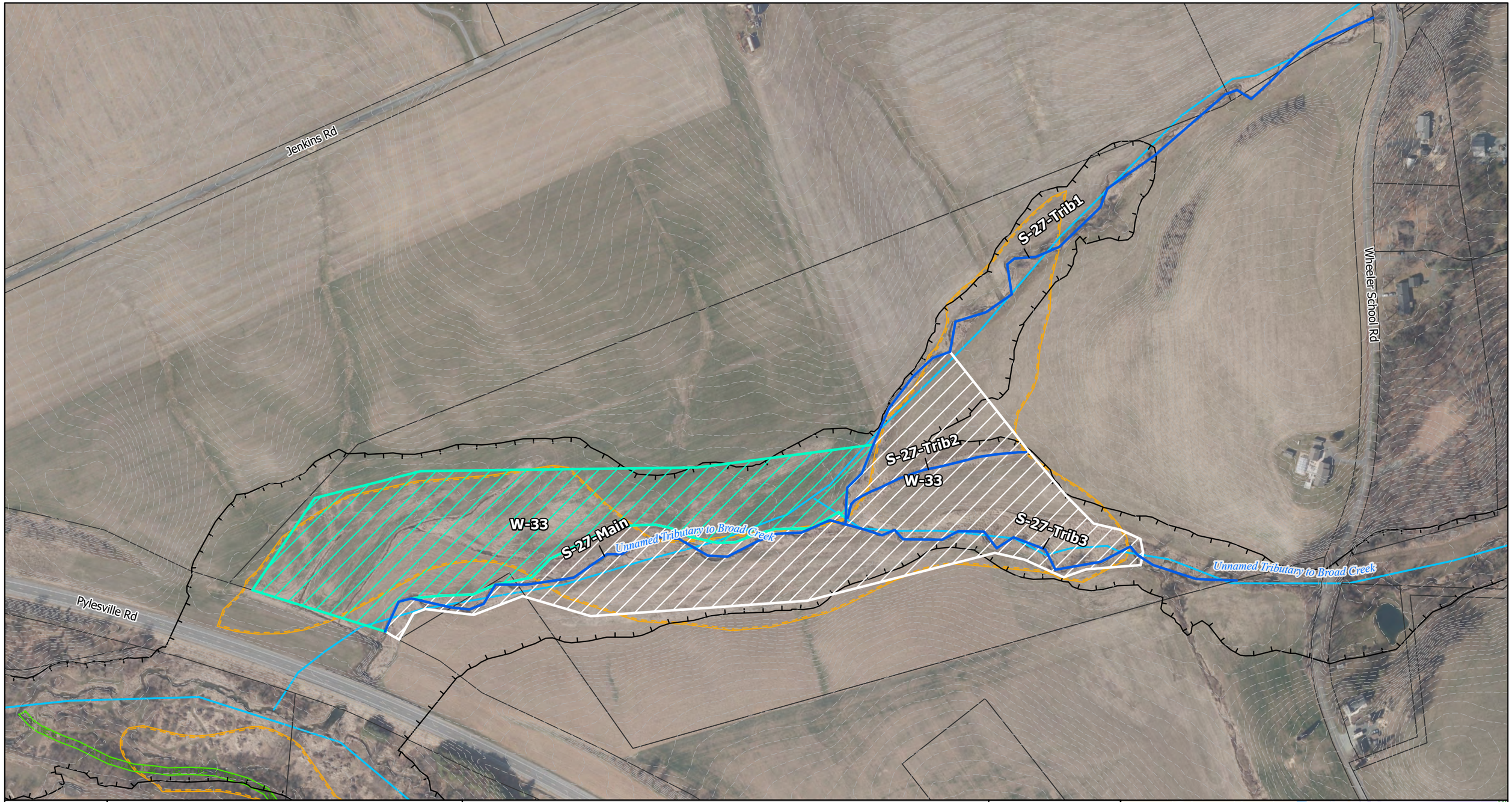
Restoration Objectives

- Bank Stabilization
- Improved Floodplain Connection and Reforestation
- Wetland Restoration and Enhancement

- Proposed Wetland Functions and Values include: Groundwater recharge/discharge, Floodflow alteration, Sediment/toxicant/pathogen retention, Nutrient removal/retention/transformation, Production export, Sediment/shoreline stabilization, and Wildlife habitat
- Non-native Invasive Species Control
- Improvement of In-Stream and Riparian Habitat

Restoration Concept

- Minor grading and plugging of created ditches to create floodplain wetlands
- Removal of reed canary grass and installation of riparian plantings
- Reconnection of stream to floodplain where stream has downcut
- Installation of in-stream structures to provide channel stability and habitat diversity



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Susquehanna River Rail Bridge Project

Potential Mitigation Sites:
Mitigation Site ID(s): Pylesville/Schwartz (W-33 and S-27)

Harford County, Maryland
August 2023

- Stream Restoration
- Non-Tidal Wetland Restoration
- Non-Tidal Wetland Enhancement
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

W N S E

0 125 250
feet
1 inch = 250 feet

Map Center, NAD83
39.699°, -76.3752°

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/14/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/14/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Deer Creek Stream and Wetland Mitigation Site

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Lower Susquehanna
Coordinates: 39.657499, -76.434932
Location: Holy Cross Road
Property Ownership: Private (4302 St Clair Bridge Road LLC, Hubbard, Reeves)
Constraints: PDR Easement

Site Conditions

Parcel Area: 14 Ac, 84 Ac, 15 Ac
Existing Land Use: Agricultural/Pasture
Landscape Position: Stream Valley **Adjacent Land Use:** Residential/Agricultural
Drainage Area for Streams: 1,67 (Mainstem), 0.51 (Tributary 1), 2.06 sq mi. (Rock Hollow Branch)
Drainage Area for Wetlands: 34 ac, 56 ac
Habitat Location: Contiguous to wetland/upland forest, Unnamed Tributaries to Deer Creek, Rock Hollow Branch, and Deer Creek
Mapped Soils: Codorus silt loam, and Glenelg loam
Mapped Wetlands: NWI wetlands mapped on site
Other: WRR (Wetland/Riparian Restoration Area), SSPRA (Group 3), Targeted Ecological Area, Rural Legacy Area, 100-year floodplain

This stream and wetland restoration site is located within agricultural fields and pasture between St Clair Bridge Road and Federal Hill Road. The site is associated with Unnamed Tributaries to Deer Creek, and Rock Hollow Branch. The stream channel lacks a riparian buffer, is highly sinuous, disconnected from the existing floodplain, and contains actively eroding banks ranging from 3 – 5 feet. Cattle have unhindered access to stream throughout a large portion of the site and stream banks are significantly degraded within this area. The stream could benefit from floodplain reconnection by raising the channel invert and through minimal grading to stabilize the banks and eliminate localized bank erosion. Additionally, riparian plantings, in-stream habitat features, and cattle exclusion/restriction will enhance the site. The adjacent floodplain areas along the stream are flat or minimally sloped and topographically low within the valley. The floodplain is dominated by pasture and mowed grasses and is mostly mapped by NRCS as predominantly non hydric soil. The low-lying open spaces along the larger tributary to Deer Creek are suitable for the creation of floodplain wetlands that are contiguous with the stream channel. Groundwater wells would be installed to monitor hydrology within the floodplain and proposed wetland creation areas. Well data will be analyzed and used to determine grading elevations and refine extends of proposed wetlands as the design progresses. Some floodplain areas are already wetland or are marginally wetland and are candidates for wetland enhancement. Native herbaceous and woody species, including shrubs and trees, will be planted within the created and enhanced wetland areas, and along the restored stream.

Summary of Opportunities

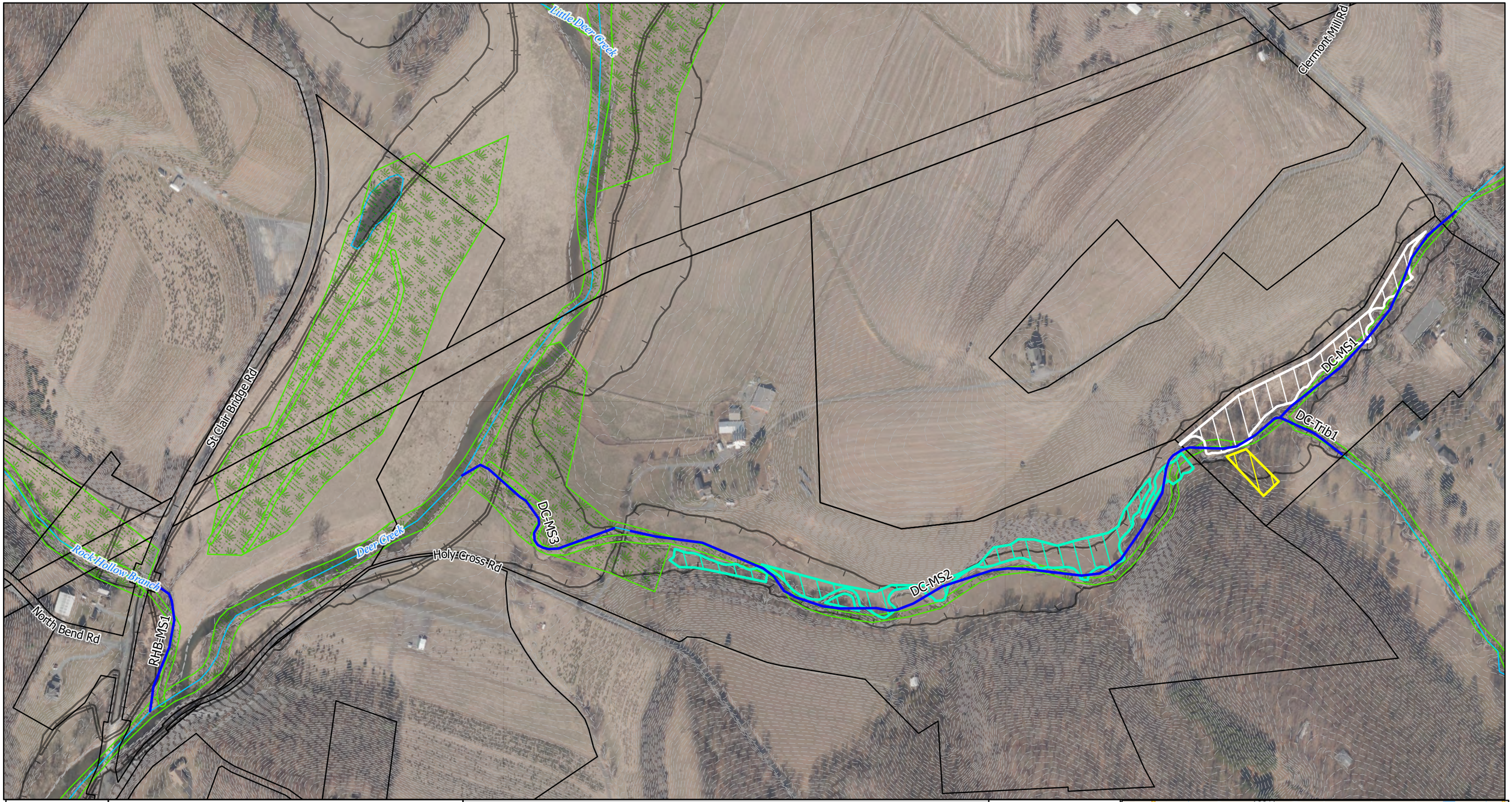
- Stream Restoration - Approximately 5,619 Linear Feet
- Wetland Creation - Approximately 5.46 Acres
- Wetland Enhancement - Approximately 2.18 acres
- Wetland Preservation - Approximately 0.34 acres

Restoration Objectives

- Floodplain Reconnection & Bank Stabilization
- Establish Riparian Buffer throughout Stream Corridor
- Wetland Creation/Restoration
- Proposed Wetland Functions and Values include: Groundwater recharge/discharge, Floodflow alteration, Sediment/toxicant/pathogen retention, Nutrient removal/retention/transformation, Production export, Sediment/shoreline stabilization, and Wildlife habitat
- Improvement of In-Stream and Riparian Habitat

Restoration Concept

- Combination of raising stream invert to connect to floodplain and establishing floodplain benches & wetlands within open spaces
- Installation of cattle exclusion fencing
- Establish a riparian buffer and preserve existing trees along the stream corridor
- Installation of in-stream structures to provide channel stability and habitat diversity



Susquehanna River Rail Bridge Project
Potential Mitigation Sites

Mitigation Site ID(s):
Deer Creek

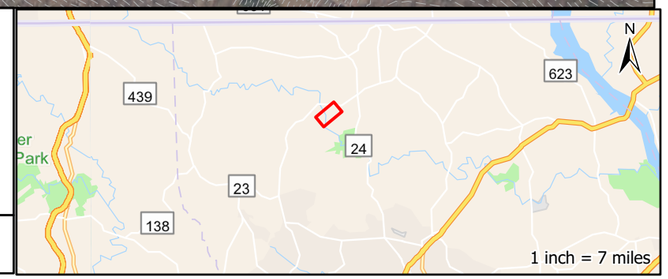
Harford County, Maryland
May 2024

COASTAL RESOURCES INC.

- Stream Restoration
- Wetland Creation
- Wetland Enhancement
- Wetland Preservation
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

0 175 350
feet
1 inch = 350 feet

Map Center, NAD83
39.659°, -76.4342°



SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Simon's Run Stream and Wetland Mitigation Site

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Lower Susquehanna
Coordinates: 39.615428, -76.367585
Location: Grier Nursery Road (south portion) and Ward Road (northern portion)
Property Ownership: Private (Ishak, Jones, Ward, Cysyk)
Constraints: PDR Easements, Harford County Agricultural Land Preservation Easement

Site Conditions

Parcel Area: 83 Ac, 97 Ac, 71 Ac, 8 Ac, 8 Ac, 7 Ac
Existing Land Use: Agricultural/Pasture
Landscape Position: Stream Valley **Adjacent Land Use:** Residential/Agricultural
Drainage Area for Streams: 0.71, 1.1, 1.3 (Mainstem), 0.06 (Trib 2), 0.19 (Trib 4) sq mi.
Drainage Area for Wetlands: 28, 03, 22, 5, 8, 6 acres
Habitat Location: Contiguous to wetland/upland forest, Flows to Deer Creek
Mapped Soils: Codorus silt loam, Chester silt loam, Glenelg loam, Glenville silt loam, Hatboro silt loam, Manor loam and Manor soils
Mapped Wetlands: NWI wetlands mapped on site
Other: WRR (Wetland/Riparian Restoration Area), 100-year floodplain, just upstream of Targeted Ecological Area and SSPRA

This stream and wetland restoration site is located within agricultural fields and pasture. One portion of the site is located south of Pyle Road, west of Grier Nursery Rd., and the other is on the north and south sides of Ward Road. The site is associated with an unnamed tributary to Stout Bottle Branch and on unnamed tributaries that flow into the unnamed tributary to Stout Bottle Branch. The stream channel lacks a riparian buffer in most regions, is highly sinuous, disconnected from the existing floodplain, and contains actively eroding banks ranging from 3 – 6 feet. A few sections of the mainstem and tributaries have a narrow riparian buffer, although invasives are present and trees are impacted by vines in several areas. The riparian vegetation has been compromised by eroding banks, and invasive shrubs and vines are prevalent through the immediate riparian area in several reaches. Invasive species treatment and native woody plantings throughout the stream and wetland mitigation area is proposed. The stream could benefit from floodplain reconnection by raising the channel invert in an effort to preserve existing trees and stabilizing the banks to eliminate localized bank erosion. Additionally, riparian plantings, and in-stream habitat features will enhance the site. There is also opportunity to exclude/restrict cattle from the stream. Currently, cattle have access to the stream in the southern portion of the site.

The adjacent abandoned floodplain areas along the stream are flat and topographically low within the valley and would require minimal cut in combination with raising the invert of the stream to create wetland hydrology where wetlands are currently not present. The riparian floodplain is dominated by crop fields, pasture, mowed grasses, and scrub-scrub areas with scattered trees. The floodplain is mostly mapped by NRCS as predominantly non-hydric soil. However, there are several existing depressions and swale wetlands along the mainstem and associated tributaries. There is an opportunity to enhance existing emergent wetlands by creating microtopography and planting native tree and shrub species to enhance species diversity and wetland function. The open spaces adjacent to these existing wetlands are suitable for the creation of a groundwater wetland/floodplain wetland creation. At multiple soil test plots and during installation of groundwater wells throughout potential wetland creation/restoration areas, depth to groundwater ranged from approximately 16 to 41 inches. Groundwater wells were installed at 16 locations around the site to monitor hydrology within the floodplain and proposed wetland restoration areas. Well

data will be analyzed and used to determine grading elevations and refine extends of proposed wetlands as the design progresses. Native herbaceous and woody species, including shrubs and trees, will be planted within the restored wetland areas, and along the restored stream.

Summary of Opportunities

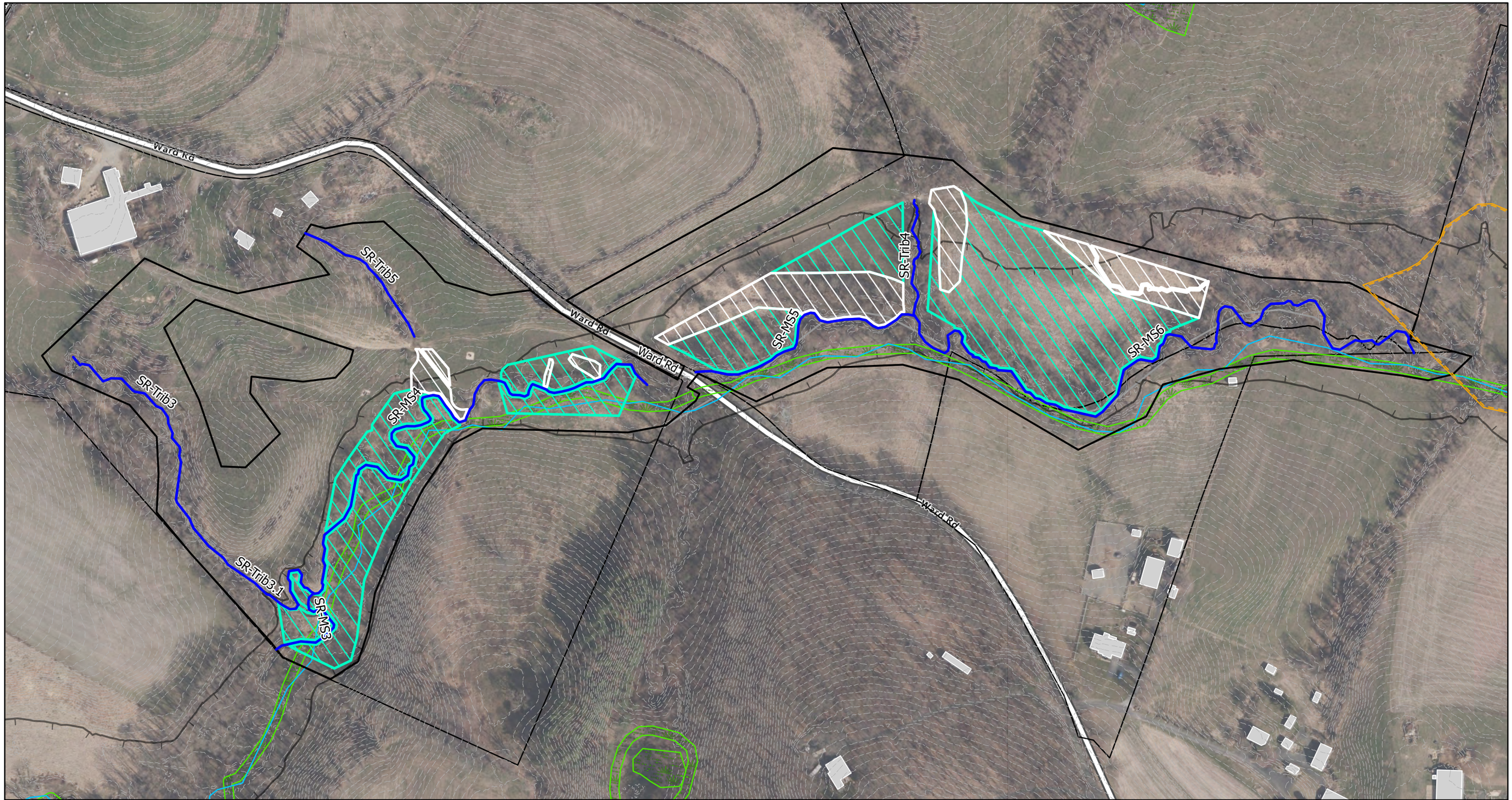
- Stream Restoration - Approximately 10,558 Linear Feet
- Wetland Creation/Restoration - Approximately 12.77 Acres
- Wetland Enhancement - Approximately 5.19 Acres

Restoration Objectives

- Floodplain Reconnection & Bank Stabilization
- Establish Riparian Buffer throughout Stream Corridor
- Wetland Creation/Restoration/Enhancement
- Proposed Wetland Functions and Values include: Groundwater recharge/discharge, Floodflow alteration, Sediment/toxicant/pathogen retention, Nutrient removal/retention/transformation, Production export, Sediment/shoreline stabilization, and Wildlife habitat
- Improvement of In-Stream and Riparian Habitat

Restoration Concept

- Combination of raising stream invert to connect to floodplain and establishing floodplain benches & wetlands within open spaces
- Installation of cattle exclusion fencing
- Establish a riparian buffer and preserve existing trees along the stream corridor
- Installation of in-stream structures to provide channel stability and habitat diversity



COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Mitigation Site ID(s): Simon's Run

Sheet 1 of 2

Harford County, Maryland

May 2024

- Stream Restoration
- Wetland creation/Restoration
- Wetland Enhancement
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

N W E S

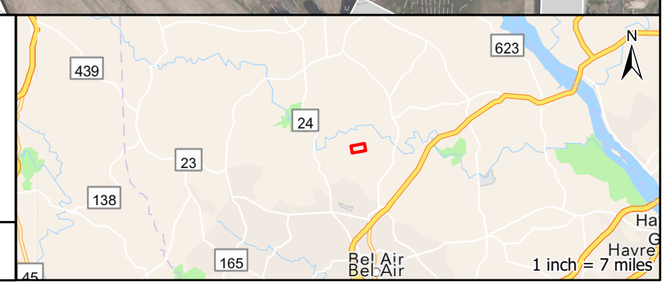
0 100 200

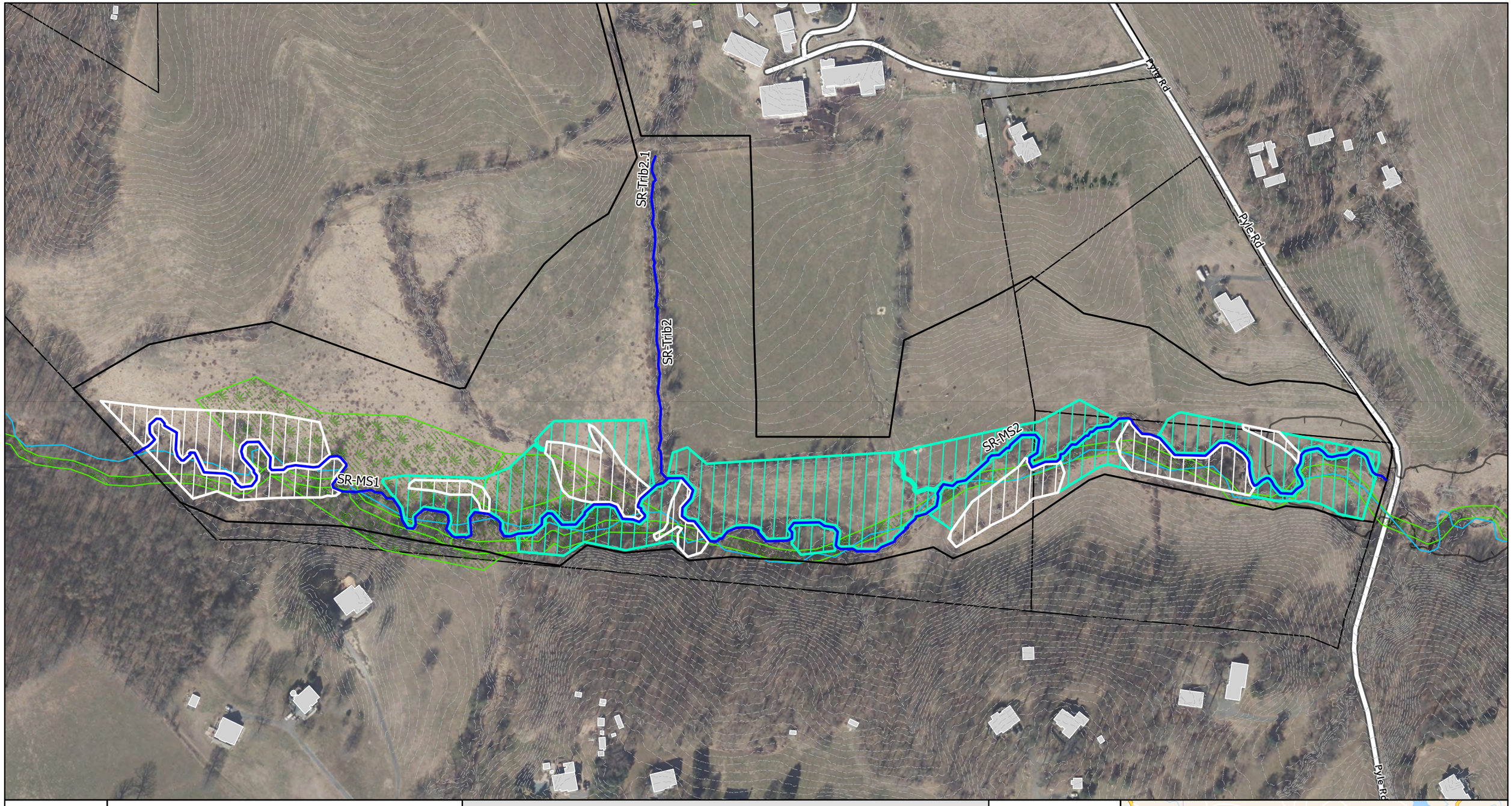
feet

1 inch = 200 feet

Map Center, NAD83

39.6186°, -76.3629°





COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Mitigation Site ID(s): Simon's Run

Sheet 2 of 2

Harford County, Maryland

May 2024

- Stream Restoration
- Wetland creation/Restoration
- Wetland Enhancement
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

W N S E

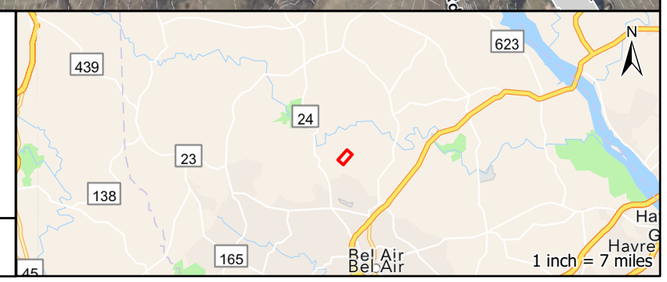
0 100 200

feet

1 inch = 200 feet

Map Center, NAD83

39.61°, -76.3744°



1 inch = 7 miles

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Ikea Way Stream Mitigation Site
Unnamed Tributaries to Mill Creek (S-22, S-34)

Existing Conditions Summary

Location Information

County: Cecil **Watershed:** Chester-Sassafras
Coordinates: 39.557164, -76.057756
Location: East of Ikea Way and Marion N Tapp Pkwy, Perryville, MD
Property Ownership: Ikea Property Inc. / Town of Perryville
Constraints: Forested

Site Conditions

Parcel Area: 20.03/ 267.48 Ac **Existing Land Use:** Forest
Landscape Position: Stream Valley **Adjacent Land Use:** Commercial/
Drainage Area: S-22: 128 Ac / 0.20 Sq mi S-34: 37 Ac / 0.06 Sq mi
Habitat Location: Contiguous to wetland/upland forest, >100Ac
Mapped Soils: Beltsville silt loam
Mapped Wetlands: MDNR wetlands (E1UBL6) mapped at downstream extent
Other: Targeted Ecological Area, Chesapeake Bay Critical Area, mapped FIDS

Two separate tributaries originate at different outfalls of stormwater management facilities on the IKEA warehouse property. The streams are armored with riprap to the edge of the IKEA property line. Downstream of the IKEA property line, the streams flow through a ROW parcel and then onto the Town of Perryville property. There are duck blinds and other evidence that this area is used for duck hunting. On the Western Tributary (S-22), just downstream of the property boundary there is a 8-10 foot headcut with collapsing eroded banks and widespread instability. Trees on both banks are falling into the stream from this headcut to the confluence with Mill Creek / Furnace Bay. The banks are 4-10 ft high with erosion along the left and right banks. The Eastern outfall channel (S-34) is very unstable right at the SWM outfall with severe erosion on left and right banks and bank heights ranging from 4-8 feet. Once the stream crosses onto the Town of Perryville property, the sediment from the eroded banks upstream has forced flow subsurface for approximately 100 ft. The tributary flows parallel to the western tributary and then flows to the east to a separate confluence with Mill Creek / Furnace Bay. The downstream section of the Eastern Tributary is less incised with only 2-4 ft banks, but trees were still being actively undermined and several trees were falling into the stream. The instability within these two channels is causing tree loss in this otherwise healthy mature forest. The streams are actively contributing sediment to the high-quality tidal wetland downstream.

Summary of Opportunities

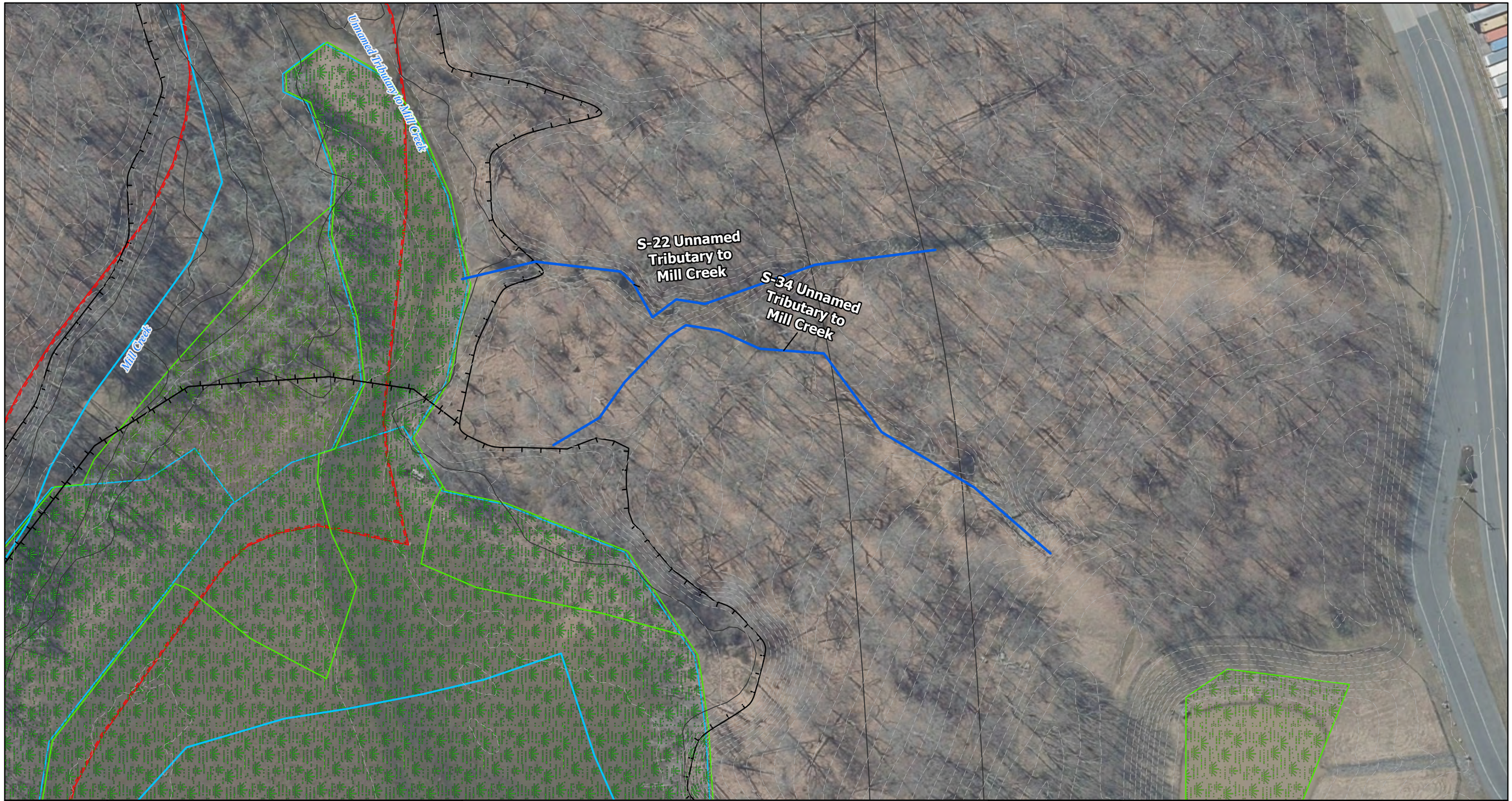
- Stream Restoration - Approximately 1,005 Linear Feet. S-22: 553 LF, S-34: 452 LF

Restoration Objectives

- Bank Stabilization
- Floodplain Reconnection
- Improvement of In-Stream and Riparian Habitat
- Protect Existing Riparian Buffer
- Minimize limits of disturbance area to reduce impacts to the mature forest.

Restoration Concept

- Maintain the existing stream alignments to reduce tree impacts.
- Raise the stream inverts to significantly reduce bank heights and improve the entrenchment ratio
- Reconnect the stream to its abandoned floodplain.
- Installation of in-stream structures to provide channel stability and habitat diversity



COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Potential Mitigation Sites:
Mitigation Site ID(s): Ikea Way (S-22 and S-34)

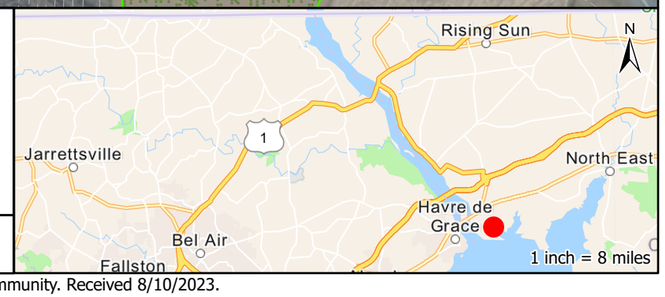
Cecil County, Maryland
August 2023

- Stream Restoration
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour
- Mapped Stream
- NWI Wetland
- DNR Wetland
- Partially Hydric (33 - 65%)
- Predominantly Hydric (66 - 99%)
- Hydric (100%)

N

0 40 80
feet
1 inch = 80 feet

Map Center, NAD83
39.5571°, -76.0576°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/10/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/10/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Potential Fish Passage Mitigation Site
Stony Run (F-20)

Existing Conditions Summary

Location Information

County: Cecil **Watershed:** Chester-Sassafras
Coordinates: 39.60613, -75.95397 **Property Ownership:** Public/Private
Location: East of Pulaski Hwy (US 40) and Rhudy Drive, North East, MD
Constraints: Forest; Culvert width; Private landowner buy-in likely needed
Source of Blockage Data: CFPP database – Tier 1 Diadromous Blockage

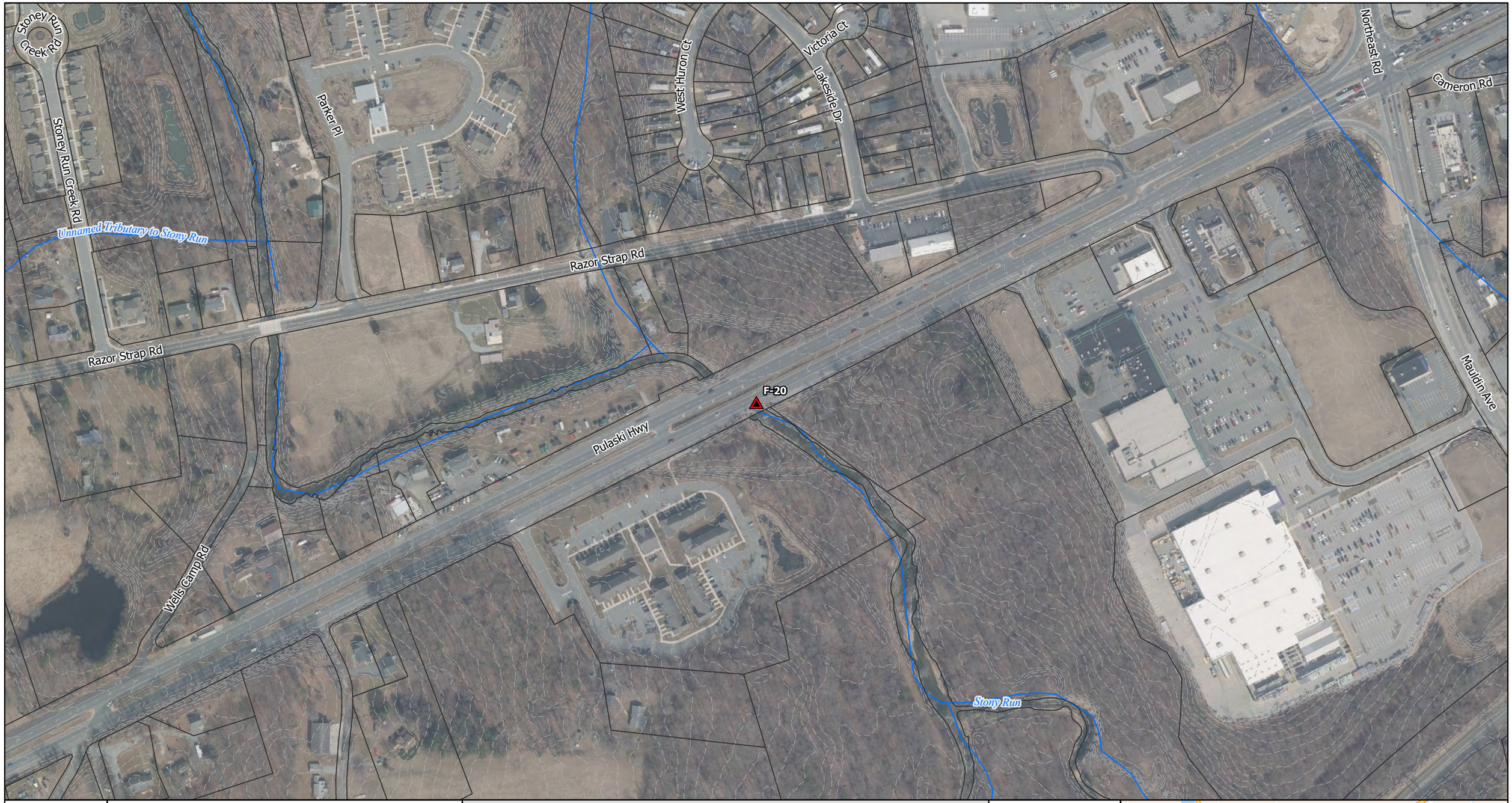
Site Conditions

Drainage Area: 5,664 Ac / 8.85 Sq mi **Existing Land Use:** Transportation/Forest
Stream Use Class: I **Adjacent Land Use:** Forest/Commercial
Stream Type: Perennial **Blockage Type:** Culvert (double box)
Culvert/Dam Size: 9’ x 15’ **Blockage Height:** 10” drop at apron
Functional Upstream Network Length: 16.57 miles
Diadromous Species: American eel, Blueback Herring, Alewife, Hickory Shad, American Shad
Number of Downstream Blockages: 0
Other: Mapped FIDS, Parallel sewer line; structure maintained by MDOT SHA

This fish passage site is located on Stony Run at a culverted crossing along Pulaski Highway (US 40), just east of the intersection with Rhudy Drive in North East, MD. The crossing is a 10’ x 15’ double box culvert with a perched apron causing a 10” fish blockage at the downstream end. Adjacent to the roadway, the stream channel is forested with adjacent commercial land use, but close access from Pulaski Highway or Stony Run Apartments, pending landowner approval. This project would likely require adjacent landowner buy-in for access to the stream. The culvert could be a candidate for retrofit to improve fish passage. Without a retrofit, options for providing fish passage may be limited, due to the width of the structure and shallow water depth inside the culvert during base flow conditions. An expansive grade control at the downstream culvert extent could eliminate the current blockage. Based on mapped diadromous species ranges in the CFPP online tool, American eel, blueback herring, alewife, hickory shad, and American shad are all currently present in the stream network downstream of the blockage. There is an opportunity to remove the fish blockage to provide access to 16.57 miles of upstream network. There is also an opportunity for bank stabilization upstream, pending landowner buy-in.

Summary of Opportunities

- Fish blockage removal through the installation of a grade control structure downstream of the blockage
- Culvert retrofit to increase baseflow depths
- Bank stabilization opportunity upstream of culvert



Susquehanna River Rail Bridge Project

Fish Blockage Sites:
Site ID: F-20

Cecil County, Maryland
August 2023

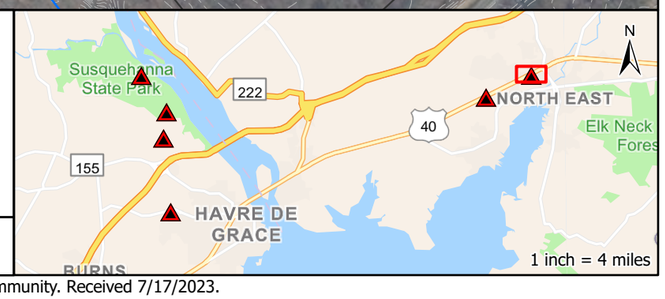
COASTAL RESOURCES INC.

- Fish Blockage Site
- Mapped Stream
- Parcel Boundary
- 2' Contour

N
W E
S

0 125 250
feet
1 inch = 250 feet

Map Center, NAD83
39.6061°, -75.954°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 7/17/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 7/17/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Potential Fish Passage Mitigation Site
Herring Run (F-21)

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Lower Susquehanna
Coordinates: 39.59355, -76.13457 **Property Ownership:** Public
Location: North of Lapidum Road and Herring Run Ln, Havre De Grace, MD
Constraints: Forest; Pending park approval
Source of Blockage Data: CFPP database – Tier 2 Diadromous Blockage

Site Conditions

Drainage Area: 864 Ac / 1.35 Sq mi **Existing Land Use:** Transportation/Forest
Stream Use Class: I **Adjacent Land Use:** Forest
Stream Type: Perennial **Blockage Type:** Culvert (triple lined CMP)
Culvert/Dam Size: 48” **Blockage Height:** No drop, but shallow flows
Functional Upstream Network Length: 2.11 miles (0.28 miles in database, but no blockage upstream)
Diadromous Species: American eel, Blueback Herring, Alewife, Hickory Shad
Number of Downstream Blockages: 0
Other: MDNR Owned Lands and Conservation Easement; MDNR Targeted Ecological Area; structure maintained by Harford County

This fish blockage site is located on Herring Run at a culverted crossing along Lapidum Road, north of the intersection with Herring Run Lane in Havre De Grace, MD. The crossing is a triple lined corrugated metal pipe culvert (48” for each cell) with an offset cell for base flow. Shallow water depths at base flow conditions create a fish blockage at this structure. Adjacent to the roadway, the stream channel is forested, falling within Susquehanna State Park and a MDNR Owned Lands and Conservation Easement. The site also falls within a MDNR Targeted Ecological Area. Based on mapped diadromous species ranges in the CFPP online tool, American eel, blueback herring, alewife, and hickory shad are all currently present in the stream network downstream of the blockage and there are no documented downstream fish blockages. There is an opportunity to remove the fish blockage to provide access to 2.11 miles of upstream network, as well as minor opportunities for channel restoration.

Summary of Opportunities

- Fish blockage removal
- Culvert replacement
    - Candidate for open-bottom structure
- Channel restoration

COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Fish Blockage Sites:
Site ID: F-21

Harford County, Maryland
August 2023

- Fish Blockage Site
- Mapped Stream
- Parcel Boundary
- 2' Contour

N
W E
S

0 125 250
feet
1 inch = 250 feet

Map Center, NAD83
39.5936°, -76.1346°

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 7/17/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 7/17/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Potential Fish Passage Mitigation Site
Unnamed Tributary to Northeast Creek (F-23)

Existing Conditions Summary

Location Information

County: Cecil **Watershed:** Chester-Sassafras
Coordinates: 39.592368, -75.970917 **Property Ownership:** Public/Private
Location: West of West Old Philadelphia Rd. and Howery Lane, North East, MD
Constraints: Forest; Private landowner buy-in likely needed
Source of Blockage Data: MDNR – downstream of Tier 1 Diadromous Blockage

Site Conditions

Drainage Area: 1,536 Ac / 2.4 Sq mi **Existing Land Use:** Transportation/Forest
Stream Use Class: I **Adjacent Land Use:** Forest/Low Density Residential
Stream Type: Perennial **Blockage Type:** Culvert (Quadruple lined CMP)
Culvert/Dam Size: 48” **Blockage Height:** 10” drop at outlets
Functional Upstream Network Length: 2.14 miles
Diadromous Species: American eel; Blueback Herring and Alewife (Potential Current)
Number of Downstream Blockages: 0
Other: Mapped FIDS; MDNR Targeted Ecological Area; Cecil County Resource Conservation Area; structure maintained by MDOT SHA

This fish blockage site is located on an Unnamed Tributary to Northeast Creek at a culverted crossing along West Old Philadelphia Road, west of the intersection with Howery Lane in North East, MD. The Unnamed Tributary to Northeast Creek is a perennial Use I stream and the drainage area to this site is approximately 2.4 square miles. The crossing is a quadruple lined corrugated metal pipe culvert (48” for each cell) with perched outlets, creating a 10-inch fish blockage. Fish passage is also limited by shallow water depth through the culvert at base flow conditions. Adjacent to the roadway, the stream channel is forested with very low density residential nearby. The site also falls within a MDNR Targeted Ecological Area and Cecil County Resource Conservation Area. Based on mapped diadromous species ranges in the CFPP online tool, American eel is currently present and blueback herring and alewife are potentially present in the stream network downstream of the blockage and there are no documented downstream fish blockages. There is also an opportunity for channel restoration upstream, pending landowner buy-in.

Summary of Opportunities

- Fish blockage removal
  - Installation of a grade control structure downstream of the blockage
  - Or culvert replacement with open bottom structure
- Channel restoration opportunity upstream of culvert

COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Fish Blockage Sites:
Site ID: F-23

Cecil County, Maryland
August 2023

Fish Blockage Site
Mapped Stream
Parcel Boundary
2' Contour

N
W E
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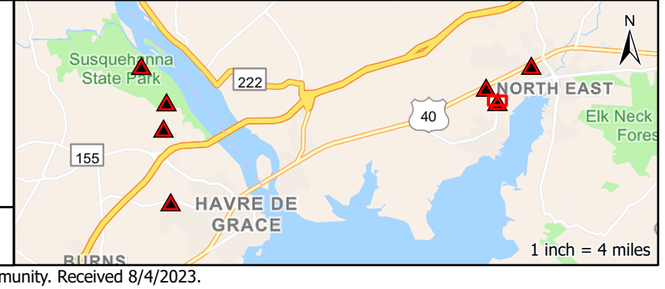
0 75 150
feet
1 inch = 150 feet

Map Center, NAD83
39.5924°, -75.9709°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/4/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/4/2023.

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
Potential Fish Passage Mitigation Site
Gashey's Creek

Existing Conditions Summary

Location Information

County: Harford **Watershed:** Gunpowder-Patapsco
Coordinates: 39.53071, -76.12184 **Property Ownership:** Public/Private
Location: East of Pulaski Hwy (US 40) and Blenheim Ln, Havre De Grace, MD
Constraints: Forest; Steep slopes; Multiple blockages US that would require coordination
Source of Blockage Data: Agency coordination (MDNR, USFWS)

Site Conditions

Drainage Area: 1,658 Ac / 2.59 Sq mi **Existing Land Use:** Transportation/Forest
Stream Use Class: I **Adjacent Land Use:** Forest/Residential
Stream Type: Perennial **Blockage Type:** Culvert (one box, one arched)
Culvert/Dam Size: 13.5' x 14.5'; 13.3' x 15.3' **Blockage Height:** 9" drop at outlet

Functional Upstream Network Length: ~0.09 miles (~450 feet)
Diadromous Species: American eel; Blueback Herring, Alewife (Potential Current)
Number of Downstream Blockages: 0
Other: Mapped FIDS; just US of Critical Area; just US of Local Protected Lands (Swan Harbor Farm); Amtrak Structure

This fish passage site is located on Gasheys Creek at a culverted crossing along the Amtrak railroad tracks, just east of the Pulaski Highway (US 40) and Blenheim Lane intersection in Havre De Grace, MD. The crossing is a 13.5' x 14.5' and 13.3' x 15.3' concrete lined box culvert perched outlet causing a 9-inch fish blockage at the downstream end. The right bank and the left bank downstream of the culvert are surrounded by forest while the left bank, upstream of the culvert, has a very narrow riparian area with adjacent commercial land use. This project would likely require adjacent landowner buy-in for access to the adjacent stream reaches. The downstream reach is also constrained by steep banks, highly erosive soils and split flow with a well-established mid channel bar with mature trees, which could limit the ability to install in-steam structures to raise water levels up to the existing culvert elevation. The culvert could also be a candidate for retrofit to improve fish passage. Based on mapped diadromous species ranges in the CFPP online tool, American eel is currently present and blueback herring and alewife are potentially present in the stream network downstream of the blockage. There are two additional fish blockages located upstream of the Amtrack crossing: one at the culverted crossing under Pulaski Highway (US 40) and one at the culverted crossing under the CSX Transportation, Inc. railroad tracks. Due to the two additional blockages upstream, removal of the fish blockage at the Amtrak crossing would only provide access to approximately 0.09 miles (~450 feet) of upstream network. If the two additional upstream blockages were removed, that would provide access to approximately 2.5 miles of additional upstream network.

Summary of Opportunities

- Fish Blockage Removal
- Potential Culvert Retrofit
- Incorporate riffle grade control structure or other in-stream structures downstream of culvert to improve baseflow levels and remove blockage

COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Fish Blockage Sites:
Site ID: Gashey's Creek

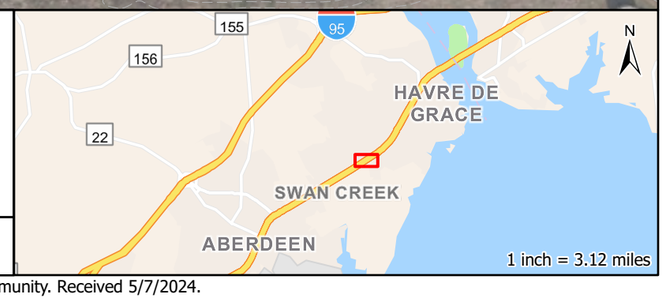
Cecil County, Maryland
May 2024

- Fish Blockage Site
- Mapped Stream
- Parcel Boundary
- 2' Contour

N
W E
S

0 75 150
feet
1 inch = 150 feet

Map Center, NAD83
39.5318°, -76.1226°



Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 5/7/2024. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 5/7/2024.

MEMORANDUM

DATE: 4/8/2024

TO: Robert Conway, Kevin Poad, Pete Mazzeo, Paul Dowd, Jade Watkins

FROM: Coastal Resources Inc.

SUBJECT: Gashey's Creek Existing Conditions

1.0 Introduction

The National Railroad Passenger Corporation (Amtrak) is planning to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. The moveable swing bridge, built in 1906, is beyond the end of its 100-year design lifespan. The project would replace the two-track bridge with four tracks in the form of East and West spans over the Susquehanna.

The proposed project consists of demolition and replacement of the existing bridge and construction of two new two-track river bridges with accompanying piers and abutments, along with new approaches, track realignment, embankments, and retaining walls. The two new bridges would require a widening of the railroad embankment on the approaches of both the Havre de Grace and Perryville sides.

A compensatory mitigation plan is being prepared for the project and includes mitigation to address project related impacts to non-tidal and tidal wetlands and streams, SAV, tidal open water and fish blockages. Gashey's Creek has been a focus of the agencies at the Joint Evaluation (JE) meetings due to a potential wood turtle hibernaculum near the crossing of Gashey's Creek. The wood turtle is a candidate for listing under the Endangered Species Act. The agencies have expressed restoration of Gashey's Creek for both wood turtle and anadromous fish purposes.

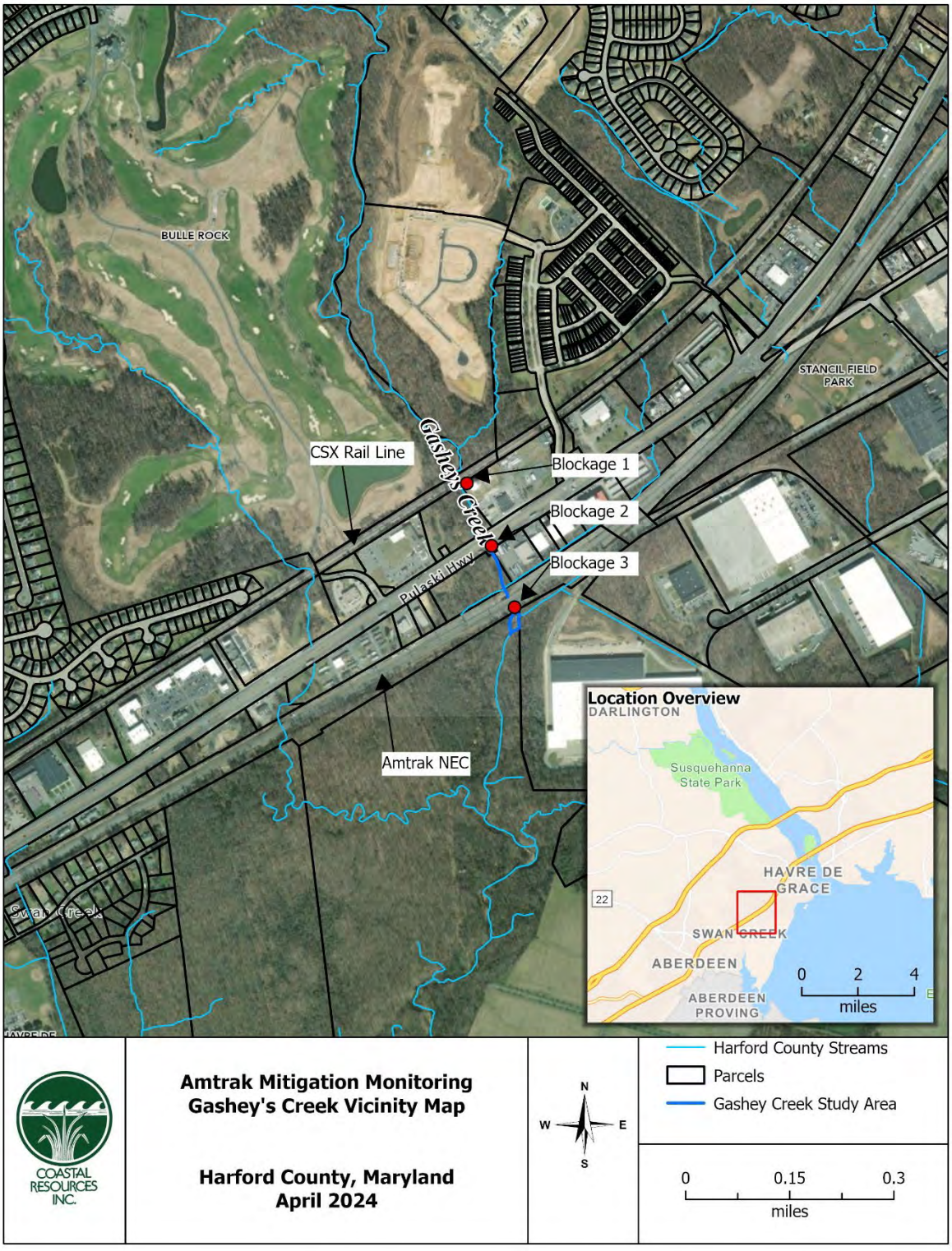
This memo documents the existing conditions of Gashey's Creek within the vicinity of the Amtrak Susquehanna River Rail Bridge project, along with areas upstream and downstream of the Amtrak crossing of Gashey's Creek.

1.1 Study Area

The Gashey's Creek study area is located in Havre de Grace, Harford County, Maryland, just downstream of U.S. 40 Pulaski Highway at approximately 754 Pulaski HWY. In this location, the current limits of disturbance (LOD) are limited to the trackbed with no proposed impacts occurring to Gashey's Creek. The proposed work in this location consists of track profiling and surfacing. This area was selected for assessment due to a known blockage under the train tracks bridge. The blockage occurs at the outlet of an existing concrete box culvert that has a perched apron. The culvert crossing also contains a second, concrete arch culvert that remains dry during baseflow conditions. The survey reach assessment began at the downstream culvert of Route 40, Pulaski Highway and continued downstream, through the Amtrak ROW for an additional 300 LF of survey. Additionally, Gashey's Creek was visually inspected above Pulaski Highway, to the CSX Transportation, Inc. Railroad crossing bridge. **Figure 1** shows a vicinity map of the assessed area.

During the abbreviated geomorphic assessment, survey was completed to capture a longitudinal profile of the stream in addition to an upstream cross-section. A pebble count and bar sample were collected to estimate existing channel substrate sizes and bed mobility. Culvert dimensions of the Gashey's Creek rail bridge were collected and GPS photo points were established throughout the study area.

Figure 1: Gashey's Creek Vicinity Map



2.0 Methodology

2.1 Methodology

Longitudinal Profile: The longitudinal profile surveys are used to characterize the slope and morphology of the stream channel through the study area. The longitudinal profile elevations were referenced and tied in using existing roadway culverts and outfall pipes that entered the stream with known invert elevations. The tape was laid down in the center of the channel for all reaches, and the profile was taken.

Cross Sections: CRI surveyed a cross-section directly upstream of the rail bridge in order to estimate headwater conditions. A laser level survey of the cross section was completed that captured at a minimum the top of floodplain, toe of floodplain, top of bank, top of structures, bankfull, edge of water, water depth, thalweg, areas of interest, and any significant slope break to capture steep slopes. Survey points were captured at a minimum of 5-foot intervals. Typically, a cross-section would be surveyed at a riffle cross-section directly downstream of the culvert, however the first riffle located downstream the culvert occurred through a large mid channel bar. Tailwater conditions will be obtained through a future topographic survey.

Pebble Count: An individual pebble count was completed at the cross-section location. CRI measured sizes of 100 random particles using a gravelometer or ruler.

Bar Sample: A bar sample was taken on a point bar on the lower two thirds of a bend, halfway between bankfull stage and the thalweg. The bar sample represents the size bedload in transport of the stream at the projected bankfull stage.

Photo Points: CRI documented photo points along the reach of the stream. Points were placed at beginning and end of reach, along the channel approximately every 50 feet, as well as at each monumented cross section.

Rapid Bioassessment Protocol: CRI used the US Environmental Protection Agency's Rapid Bioassessment Protocol (RBP) Habitat Form for high gradient streams to evaluate the channel upstream and downstream of the Amtrak culvert in Gashey's Creek.

3.0 Results

3.1 Geomorph Survey

The Longitudinal Profile survey of Gashey's Creek began just downstream of the Pulaski Highway roadway culvert, continuing through the Amtrak ROW for an additional 300 linear feet. The profile was surveyed for a total of 672 feet and maintained a slope of 0.99%. The surveyed cross-section was placed at stream station 226, approximately 90 linear feet upstream from the culvert. **Table 1** below lists the metrics for the measured cross section. **Table 3** and **Table 4** contain the material distribution results recorded from the pebble count and bar sample. **Appendix A** includes the full data collected from the geomorph survey. **Appendix B** contains site photos and a photo point location map.

Table 1: Cross Section Metrics

Metric	XS-1
Flood Prone Width (ft)	43.4
Bankfull Width (ft)	32.4
Entrenchment Ratio	1.3
Mean Depth (ft)	2.0
Max Depth (ft)	3.0
Width/Depth Ratio	16.2
Bankfull Area (ft^2)	64.5
Manning's n roughness estimate	0.041
Bankfull Discharge	377.9

Table 2: Individual Pebble Count Distribution

Size	Size (mm)
D16	12
D35	26
D50	40
D65	71
D84	120
D95	190

Table 3: Bar Sample Material Distribution

Size	Size (mm)
D16	1.6
D35	3.9
D50	8.8
D65	16
D84	33
D95	54

3.2 RBP Assessment

RBP scores for Gashey's Creek upstream and downstream of the Amtrak culvert are listed in **Table 4**. Gashey's Creek, upstream of the Amtrak culvert, is a cobble stream with around 55% of stable habitat and includes several deep pools with moderate cover. The left bank is high and sheer with a very narrow riparian zone width in the upstream extent of the reach. The stream channel downstream of the Amtrak culvert has higher fine sediment deposition and embeddedness, and less stable habitat compared to the

upstream reach. Downstream, the banks are approximately 15 feet high and sheer with very little vegetative protection.

Table 4: RBP Scores for Gashey's Creek Upstream and Downstream of the Amtrak Culvert

Reach Location		Upstream of Amtrak Culvert	Downstream of Amtrak Culvert
RBP Category	1. Epifaunal Substrate/Available Cover	13	12
	2. Embeddedness	12	11
	3. Velocity/Depth Regime	15	12
	4. Sediment Deposition	12	9
	5. Channel Flow Status	14	12
	6. Channel Alteration	13	16
	7. Frequency of Riffles	19	19
	8. Bank Stability, Left Bank	4	6
	8. Bank Stability, Right Bank	5	3
	9. Vegetative Protection, Left Bank	7	6
	9. Vegetative Protection, Right Bank	7	5
	10. Riparian Vegetative Zone Width, Left Bank	4	9
	10. Riparian Vegetative Zone Width, Right Bank	9	9
TOTAL (max 200)		**134**	**129**

3.3 Fish Blockage

Gashey's Creek, a Use I, stream has a fish blockage located at the Amtrak crossing. The crossing is a concrete lined box culvert with a secondary arched concrete lined culvert that has an invert set approximately 2.4' higher than the main culvert. Dimensions for the main culvert are approximately 13.5' x 14.5' and 13.3' x 15.3' for the arched culvert. Facing downstream, the left cell has a perched apron causing a 9-inch fish blockage at the downstream end. The right bank and the left bank downstream of the culvert are surrounded by forest while the left bank, upstream of the culvert, has a very narrow riparian area with adjacent commercial land use. Based on mapped diadromous species ranges in the CFPP online tool, American eel is currently present and blueback herring and alewife are potentially present in the stream network downstream of the blockage and there are no documented downstream fish blockages. In addition, there are 52 resident fish species and one rare fish species in the Gunpowder-PatapscoHUC-8 watershed, according to the CFPP online tool. There is an opportunity to remove the fish blockage to provide access to 0.09 miles of upstream network. There are two additional fish blockages located upstream of the Amtrak crossing. Blockage 2 is a minor blockage located at the downstream extent of the culvert crossing under Pulaski Highway (US 40) where the culvert invert is slightly raised, creating a small drop of approximately five inches that occurs during low flows. Further upstream, blockage 3 is located at the culverted crossing under the CSX Transportation, Inc. railroad tracks where

the existing concrete bottom of the bridge is perched, leaving an approximate one-foot drop to the pool below the bridge. Due to the two additional blockages upstream, removal of the fish blockage at the Amtrak crossing would only provide access to approximately 0.09 miles (~450 feet) of upstream network. If the two additional upstream blockages were removed, that would provide access to an additional 2.42 miles of upstream network.

4.0 Discussion & Recommendations

In summary, the field investigation determined three potential fish blockages that were located at the culvert crossing the Amtrak railroad tracks, the culverted crossing under Pulaski Highway, and the bridge crossing under the CSX Transportation, Inc. railroad tracks. Due to the multiple blockages within a short span, and the limited upstream network benefit of 0.09 miles, it is not recommended at this time that the fish blockage at Gashey's Creek be removed as part of this project.

The team needs additional information from DNR regarding the wood turtle and how restoration at the Gashey's Creek crossing would benefit this species. The secondary raised culvert at the Amtrak railroad bridge remains dry during baseflow conditions of Gashey's Creek. This culvert currently serves as a point of access for crossing the stream in the dry. During the time of the field investigation, scat was observed within the secondary culvert, indicating that local wildlife is utilizing the culvert for access.

5.0 Literature Cited

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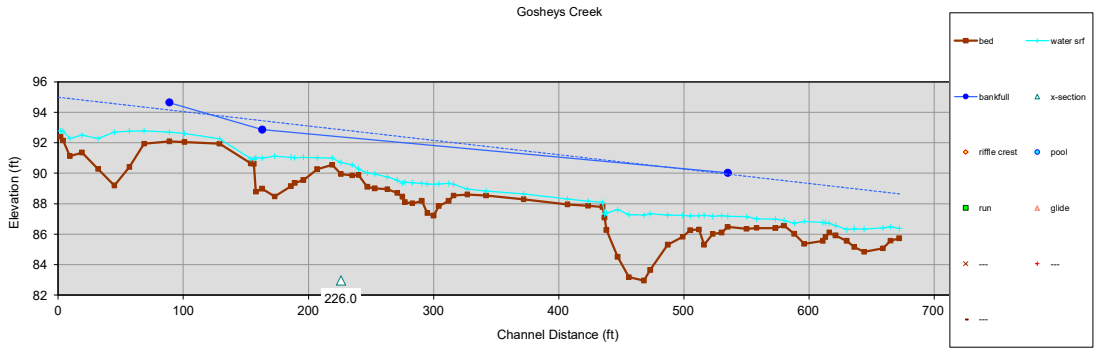
Harrelson, C.C., C.L. Rawlins, and J.P. Potyondy. 1994. Stream Channel Reference Sites: An Illustrated Guide to Field Technique. Gen. Tech. Rep. RM-245. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 61 p.

Mecklenburg, D. 2006. The Reference Reach Spreadsheet for Channel Survey Data Management, version 4.2L. A STREAM module: Spreadsheet Tools for River Evaluation, Assessment and Monitoring. Ohio Department of Natural Resources

Rosgen, D.L. 1996. Applied River Morphology. Wildland Hydrology, Fort Collins, CO.

APPENDIX A: Geomorphic Survey

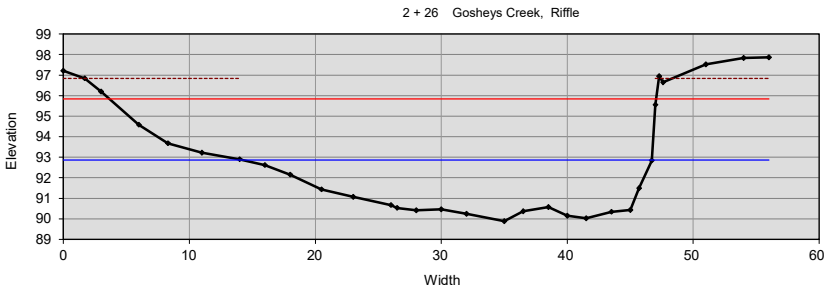
Longitudinal Slope Profile



	slope (%)	slope ratio	length (ft)	length ratio	pool-pool spacing (ft)	p-p ratio
reach	---	---	672.0 (20.7 channel widths	---	---	---
riffle	---	---	---	---	---	---
pool	---	---	---	---	---	---
	---	---	---	---	---	---
	---	---	---	---	---	---

notes	cross section ID	bed feature	station	station	Benchmark Elevation 100 Turning Points BS	HI	FS	FS bed	water	FS bankfull	user defined FS	FS	FS	azimuth AZ	ELEV bed	ELEV water sr	ELEV bankfull	ELEV ---	ELEV ---	ELEV ---
						100														
G top of survey			2			100		7.6	0.38						92.4	92.78				
P			4			100		7.85	0.61						92.15	92.76				
mid P			9.5			100		8.87	1.15						91.13	92.28				
mid P			19			100		8.64	1.15						91.36	92.51				
mid P			32			100		9.72	2						90.28	92.28				
Dmax			45			100		10.8	3.5						89.2	92.7				
end P			57			100		9.58	2.35						90.42	92.77				
G			68.7			100		8.06	0.85						91.94	92.79				
R			89			100		7.91	0.6	5.36					92.09	92.69	94.64			
mid R			101			100		7.94	0.55						92.06	92.61				
mid R			129			100		8.06	0.32						91.94	92.26				
N			154			100		9.35	0.3						90.65	90.95				
P			156.5			100		9.38	0.3						90.62	90.92				
P			158			100		11.22	2.25						88.78	91.03				
P			163			100		11.01	2	7.13					88.99	90.99	92.87			
Dmax			173			100		11.53	2.65						88.47	91.12				
P			186			100		10.85	1.9						89.15	91.05				
G			189			100		10.63	1.65						89.37	91.02				
G			196			100		10.45	1.5						89.55	91.05				
R			207			100		9.73	0.75						90.27	91.02				
			219			100		9.45	0.45						90.55	91				
XS-1	1		226			100		10.04	0.75						89.96	90.71				
mid R			235			100		10.14	0.7						89.86	90.56				
N			240			100		10.11	0.4						89.89	90.29				
mid N			247			100		10.88	0.9						89.12	90.02				
mid N			253			100		10.99	0.95						89.01	89.96				
mid N			263			100		11.04	0.8						88.96	89.76				
mid N			271			100		11.3	0.85						88.7	89.55				
P			275			100		11.54	0.9						88.46	89.36				
mid P			277			100		11.89	1.3						88.11	89.41				
mid P			283			100		11.97	1.35						88.03	89.38				
mid P			290.5			100		11.82	1.15						88.18	89.33				
mid P			295			100		12.61	1.9						87.39	89.29				
Dmax			300			100		12.78	2.05						87.22	89.27				
			304			100		12.15	1.45						87.85	89.3				
G			312			100		11.82	1.15						88.18	89.33				
R			316			100		11.47	0.75						88.53	89.28				
end of apron			327			100		11.39	0.35						88.61	88.96				
						100	9.58													
					5.12	95.54														
end of apron			342			95.54		7.01	0.3						88.53	88.83				
mid			372			95.54		7.25	0.35						88.29	88.64				
mid			407			95.54		7.59	0.35						87.95	88.3				
end			423.5			95.54		7.68	0.3						87.86	88.16				
edge of apron			435			95.54		7.75	0.3						87.79	88.09				
bottom of apron			436.5			95.54		8.46	0.25						87.08	87.33				
mid P			438			95.54		9.26	1.1						86.28	87.38				
			447			95.54		11.03	3.1						84.51	87.61				
max measured			456			95.54		12.36	4.1						83.18	87.28				
max measured			468			95.54		12.58	4.3						82.96	87.26				
in pool			473			95.54		11.89	3.7						83.65	87.35				
in pool			487			95.54		10.23	1.95						85.31	87.26				
G			499			95.54		9.71	1.4						85.83	87.23				
N			505			95.54		9.27	0.92						86.27	87.19				
P			512			95.54		9.23	0.9						86.31	87.21				
Dmax			516			95.54		10.23	1.92						85.31	87.23				
mid P			523			95.54		9.53	1.16						86.01	87.17				
G			530			95.54		9.43	1.1						86.11	87.21				
N			535			95.54		9.07	0.7	5.5					86.47	87.17	90.04			
mid N			550			95.54		9.19	0.8						86.35	87.15				
N			558			95.54		9.13	0.6						86.41	87.01				
mid N			573			95.54		9.14	0.58						86.4	86.98				
mid N			580			95.54		8.98	0.35						86.56	86.91				
P			588			95.54		9.52	0.7						86.02	86.72				
Dmax			596			95.54		10.18	1.48						85.36	86.84				
Pool			611			95.54		9.98	1.21						85.56	86.77				
G			613			95.54		9.72	0.92						85.82	86.74				
R			616			95.54		9.43	0.6						86.11	86.71				
mid R			621			95.54		9.62	0.65						85.92	86.57				
N			630			95.54		9.98	0.75						85.56	86.31				
P			636			95.54		10.38	1.2						85.16	86.36				
Dmax			644			95.54		10.7	1.5						84.84	86.34				
						95.54	8.4													
					6.4	93.54														
			659			93.54		8.47	1.35						85.07	86.42				
G			665			93.54		7.96	0.9						85.58	86.48				
R			672			93.54		7.81	0.65						85.73	86.38				

Cross Section 1



Bankfull Dimensions		Flood Dimensions		Materials	
64.7	x-section area (ft.sq.)	43.4	W flood prone area (ft)	40	D50 Riffle (mm)
32.4	width (ft)	1.3	entrenchment ratio	120	D84 Riffle (mm)
2.0	mean depth (ft)	7.0	low bank height (ft)	---	threshold grain size (mm):
3.0	max depth (ft)	2.3	low bank height ratio		
34.1	wetted parimeter (ft)				
1.9	hyd radi (ft)				
16.2	width-depth ratio				

Bankfull Flow		Flow Resistance		Forces & Power	
---	velocity (ft/s)	0.041	Manning's roughness	---	channel slope (%)
---	discharge rate (cfs)	0.16	D'Arcy-Weisbach fric.	---	shear stress (lb/sq.ft.)
---	Froude number	7.2	resistance factor u/u*	---	shear velocity (ft/s)
		5.1	relative roughness	---	unit strm power (lb/ft/s)

Cross Section

reference ID	1	
instrument height		100
longitudinal station		226.0

Bankfull Stage

FS		---
elevation		92.86

Low Bank Height

FS	3.16	= 96.84 elev
elevation		

Flood Prone Area

width fpa		43.4

Channel Slope

percent slope		---

Flow Resistance

Manning's "n"		---
D'Arcy - Weisbach "f"		0.16

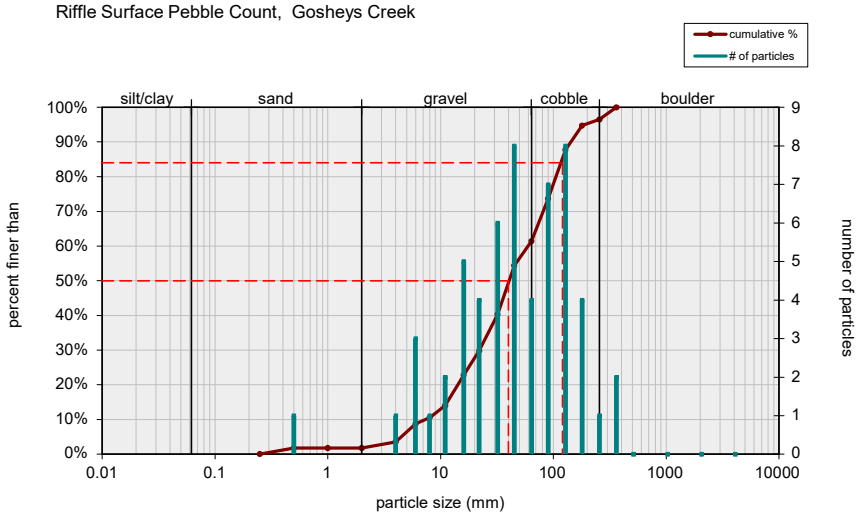
Note:

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		100	2.79	97.21		LEP Terrace
1.7		100	3.16	96.84		LTOB
3		100	3.8	96.2		FOS
6		100	5.42	94.58		FOS
8.3		100	6.32	93.68		Back of Ben
11		100	6.78	93.22		Bench
14		100	7.1	92.9		Bench
16		100	7.38	92.62		Bench
18		100	7.85	92.15		Front of Ben
20.5		100	8.57	91.43		on Deo
23		100	8.93	91.07		on dep.
26		100	9.33	90.67		
26.5		100	9.47	90.53		LEW
28		100	9.58	90.42		CS
30		100	9.54	90.46		CS
32		100	9.76	90.24		CS
35		100	10.12	89.88		TWG
36.5		100	9.64	90.36		CS
38.5		100	9.43	90.57		CS
40		100	9.85	90.15		
41.5		100	9.98	90.02		
43.5		100	9.66	90.34		
45		100	9.57	90.43		REW
45.7		100	8.51	91.49		R Toe
46.7		100	7.16	92.84		FOS
47		100	4.45	95.55		FOS
47.3		100	3.05	96.95		RTOB
47.6		100	3.35	96.65		TOB
51		100	2.48	97.52		Terrace
54		100	2.17	97.83		FP
56		100	2.14	97.86		REP OG

Riffle Surface

Material	Size Range (mm)	Count
silt/clay	0 - 0.062	
very fine sand	0.062 - 0.125	
fine sand	0.125 - 0.25	
medium sand	0.25 - 0.5	1
coarse sand	0.5 - 1	
very coarse sand	1 - 2	
very fine gravel	2 - 4	1
fine gravel	4 - 6	3
fine gravel	6 - 8	1
medium gravel	8 - 11	2
medium gravel	11 - 16	5
coarse gravel	16 - 22	4
coarse gravel	22 - 32	6
very coarse gravel	32 - 45	8
very coarse gravel	45 - 64	4
small cobble	64 - 90	7
medium cobble	90 - 128	8
large cobble	128 - 180	4
very large cobble	180 - 256	1
small boulder	256 - 362	2
small boulder	362 - 512	0
medium boulder	512 - 1024	0
large boulder	1024 - 2048	0
very large boulder	2048 - 4096	0
total particle count:		57
bedrock	----------	
clay hardpan	----------	
detritus/wood	----------	
artificial	----------	
total count:		57

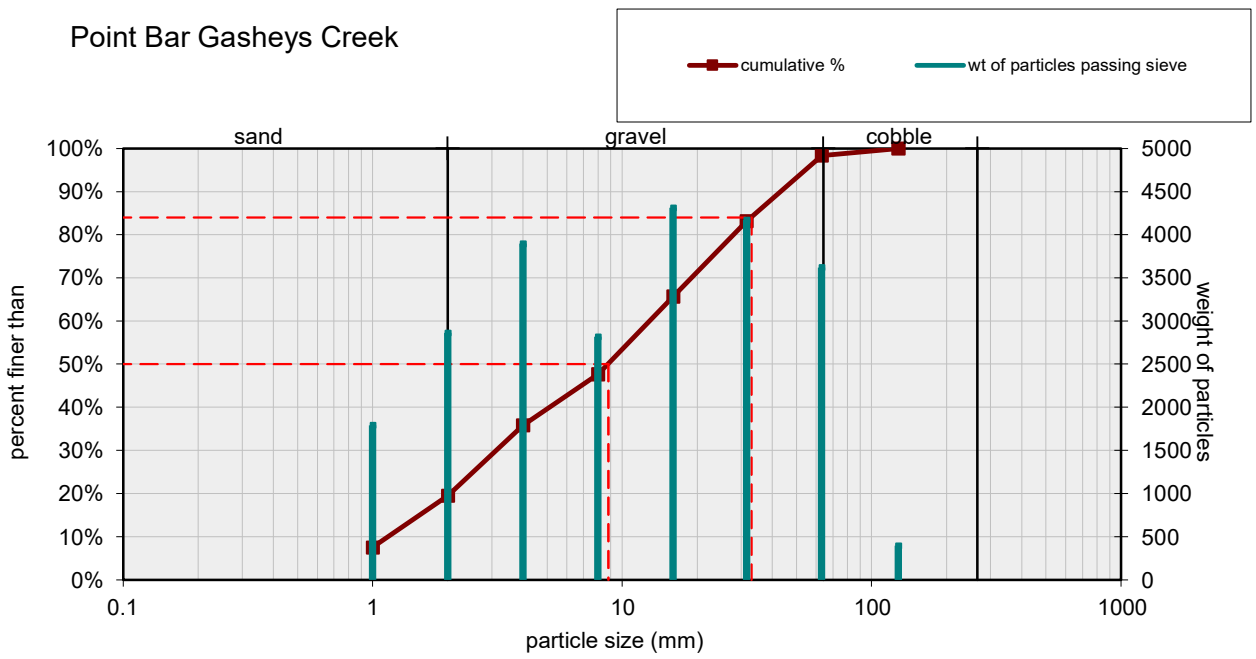
Note:



Size (mm)	
D16	12
D35	26
D50	40
D65	71
D84	120
D95	190

Size Distribution	
mean	37.9
dispersion	3.2
skewness	-0.02

Type	
silt/clay	0%
sand	2%
gravel	60%
cobble	35%
boulder	4%



	Size (mm)				
D16	1.6	D65	16	sand	100%
D35	3.9	D84	33		
D50	8.8	D95	54		

APPENDIX B: Photo Point Map and Log

COASTAL RESOURCES INC.

Amtrak Mitigation Monitoring
Gasheys Creek Photo Points

Sheet 1 of 2

Harford County, Maryland
April 2024

- Gasheys Creek Photo Points
- Cross Section Points
- Harford County Streams
- Gashey Creek Study Area
- Parcels

N
W E
S

0 50 100
feet
1 inch = 100 feet

Map Center, NAD83
39.5329°, -76.1217°

Blockage 2
0ft
Gasheys Creek long pro
100
200
XS
XS
XS
300
US end of culvert
400
Blockage 3
500
Trib
600
End long pro
MATCHLINE SHEET 1
MATCHLINE SHEET 2
Pulaski Hwy
Amtrak NEC

COASTAL RESOURCES INC.

Amtrak Mitigation Monitoring
Gasheys Creek Photo Points

Sheet 2 of 2

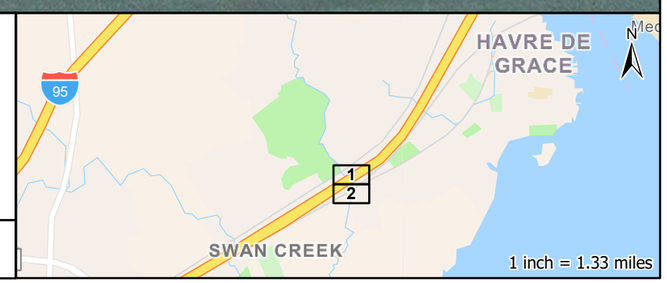
Harford County, Maryland
April 2024

- Gasheys Creek Photo Points
- Cross Section Points
- Harford County Streams
- Gashey Creek Study Area
- Parcels

N
W E
S

0 50 100
feet
1 inch = 100 feet

Map Center, NAD83
39.5307°, -76.1217°



Gasheys Creek Photo Exhibit
Blockage 1

Upstream blockage at CSX Transportation, Inc. Railroad tracks

Upstream blockage at CSX Transportation, Inc. Railroad tracks

Gasheys Creek Photo Exhibit
Blockage 2

Middle blockage at Pulaski HWY (US 40) culvert

Middle blockage at Pulaski HWY (US 40) culvert

Gasheys Creek Photo Exhibit
Blockage 3

Downstream blockage

Downstream blockage

Gasheys Creek Photo Exhibit

0 FT Facing Upstream

0 FT Facing Downstream

100 FT Facing Upstream

100 FT Facing Downstream

Gasheys Creek Photo Exhibit

200 FT Facing Upstream

200 FT Facing Downstream

300 FT Facing Upstream

300 FT Facing Downstream

Gasheys Creek Photo Exhibit

400 FT Facing Upstream

400 FT Facing Downstream

500 FT Facing Upstream

500 FT Facing Downstream

600 FT Facing Upstream

600 FT Facing Downstream

End of Profile Facing Upstream

End of Profile Facing Downstream

Facing Upstream at Tributary

Cross Section Facing Upstream

Cross Section Facing Downstream

Cross Section Left Bank

Cross Section Right Bank

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
On-Site Tidal Wetland Enhancement/Restoration
(WL12)

Existing Conditions Summary

Location Information

County: Cecil **Watershed:** Lower Susquehanna
Coordinates: 39.557276, -76.079192
Location: East side of the Susquehanna River, north of the existing bridge
Property Ownership: Public
Constraints: Will be impacted by Bridge Project

Site Conditions

Parcel Area: 2.6 Ac **Existing Land Use:** Tidal Scrub-Shrub Wetland
Landscape Position: Shoreline **Adjacent Land Use:** River
Drainage Area: 23 acres
Habitat Location: Abuts Susquehanna River and developed areas
Mapped Soils: Butlertown silt loam and Matapeak-Urban land complex
Mapped Wetlands: NWI (R1UBV) mapped on-site
Other: Watershed Resource Registry (Riparian Restoration Area), SSPRA

This tidal wetland enhancement site is located along the eastern shoreline of the Susquehanna River and includes a tidal/nontidal shoreline wetland, some of which is within the project Limits of Disturbance (LOD). The wetland is located west of Broad Street and north of the existing rail bridge tracks. The wetland will be impacted by the proposed trestle and construction access associated with the rail bridge replacement and was delineated within the project area as wetland WL12. Dominant species within the scrub-shrub wetland include common buttonbush (*Cephalanthus occidentalis*), false indigo bush (*Amorpha fruticosa*), and common reed (*Phragmites australis*). The tidal portion of the wetland is limited to the area between mean high water (MHW) and mean higher high water (MHHW). This wetland along the immediate shoreline is mostly dominated by common reed. All impacted areas will be restored following project construction. The proposed mitigation project seeks to further enhance this on-site wetland through eradication of invasive common reed, and establishment of native species along the shoreline.

Summary of Opportunities

- Wetland Restoration/Enhancement - Approximately 2.07 acres

Restoration Objectives

- Post-Construction Wetland Restoration
- Wetland Enhancement
- Non-native Invasive Species Control
- Enhanced Wildlife Habitat and Aesthetics

Restoration Concept

- Removal of common reed and planting of native species

WC25 - Susquehanna River

WL12

WL12

WL12

WL12

WL12

LOD

River Rd

Roundhouse Dr

Front St

Broad St

Broad St

Broad St

Broad St

Avenue A

WC3-C

COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Potential Mitigation Sites:
Mitigation Site ID(s): WL12
On-site Tidal Enhancement

Cecil County, Maryland
August 2023

- Tidal Wetland Enhancement Site
- LOD
- Mean Higher High Water Line
- Mean High Water Line
- Mapped Stream
- 100-Year Floodplain
- Parcel Boundary
- 2' Contour

Delineated Wetlands & Waters

- Perennial Stream
- Palustrine Emergent Wetland
- Palustrine Forested Wetland
- Palustrine Scrub-shrub Wetland
- Tidal Scrub-shrub Wetland

N W E S

0 50 100
feet
1 inch = 100 feet

Map Center, NAD83
39.557°, -76.079°

Rising Sun
Jarrettsville
North East
Havre de Grace
Bel Air
Fallston
1
1 inch = 8 miles

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/14/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/14/2023.

Susquehanna River
Rail Bridge Project

Mitigation Site ID(s): SAV-8
Sheet 1 of 3

Cecil County, Maryland
August 2023

COASTAL RESOURCES INC.

- Potential SAV Area
- Historical SAV (2007 to 2018)
- SAV 2021
- Chesapeake Bay Contour

0 100 200
feet
1 inch = 201 feet

Map Center, NAD83
39.5165°, -75.9831°

1 inch = 5 miles

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/4/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/4/2023.

Susquehanna River

SAV-9

SAV-8

-3
-2
-1
0

Susquehanna River
Rail Bridge Project

Mitigation Site ID(s): SAV-9
Sheet 2 of 3

Cecil County, Maryland
August 2023

COASTAL RESOURCES INC.

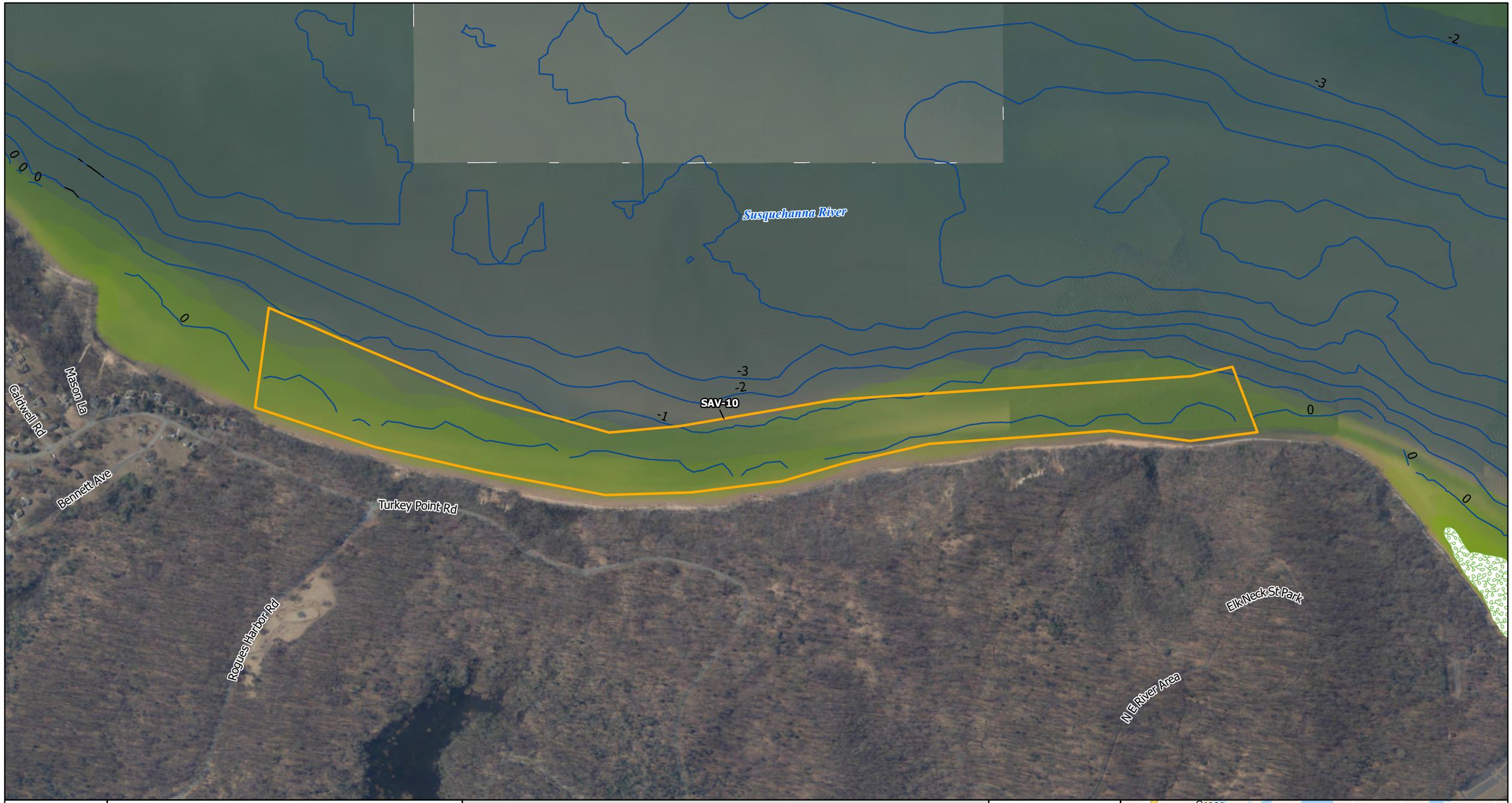
- Potential SAV Area
- Historical SAV (2007 to 2018)
- SAV 2021
- Chesapeake Bay Contour

W
S
N
E

0 230 460
feet
1 inch = 437 feet

Map Center, NAD83
39.5057°, -75.9876°

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/4/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/4/2023.



COASTAL RESOURCES INC.

Susquehanna River Rail Bridge Project

Mitigation Site ID(s): SAV-10
Sheet 3 of 3

Cecil County, Maryland
August 2023

- Potential SAV Area
- Historical SAV (2007 to 2018)
- SAV 2021
- Chesapeake Bay Contour

0 325 650
feet
1 inch = 618 feet

Map Center, NAD83
39.4782°, -75.9964°

Source: Large-scale frame: Maryland iMAP, DoIT. Imagery flown in 2022 (Eastern Shore) and 2020 (Western Shore). Received 8/4/2023. Small-scale frame: Esri, HERE, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS user community. Received 8/4/2023.

APPENDIX D: MARYLAND STREAM MITIGATION FRAMEWORK (MSMF) CALCULATOR RESULTS

APPENDIX E: DRAFT PERPETUAL EASEMENT AND RESTRICTIVE COVENANT LANGUAGE

This Conservation Easement Template is a standardized document for Mitigation Banks in Maryland. Modifications to this template shall be identified using tracked changes with an explanation for those changes provided in a cover memorandum. (Template Version Date: 05 August 2019)

STATE OF MARYLAND
COUNTY OF _____

CONSERVATION EASEMENT
(*Insert Bank Name)*

[USE THIS VERSION IF THE MITIGATION BANK SPONSOR IS THE SAME ENTITY AS THE EASEMENT HOLDER:]

THIS CONSERVATION EASEMENT ("Conservation Easement") is made this _____ day of ____, 20____, by ***[FULL LEGAL NAME OF GRANTING LANDOWNER]*** ("Grantor*(s)*") in favor of ***[FULL LEGAL NAME OF HOLDER OF CONSERVATION EASEMENT]*** ("Holder") (collectively, the "Parties"), with the U.S. Army Corps of Engineers, Baltimore District (the "Corps" or "Baltimore District") and the Maryland Department of the Environment ("MDE") as Third-Party Beneficiaries (collectively the "Third Parties").

[USE THIS VERSION IF THE MITIGATION BANK SPONSOR IS NOT THE HOLDER OF THE EASEMENT:]

THIS CONSERVATION EASEMENT made this _____day of _____, 20___, by [*full legal name of granting landowner*] (the "Grantor"), in favor of ***[FULL LEGAL NAME OF HOLDER OF THE CONSERVATION EASEMENT]*** (the "Holder") and **[*FULL LEGAL NAME OF THE MITIGATION BANK SPONSOR*]** (the "Bank Sponsor") (collectively, the "Parties"), with the U.S. Army Corps of Engineers (the "Corps," to include any successor agency) and the Maryland Department of the Environment ("MDE," to include any successor agency) as Third-Party Beneficiaries (collectively the "Third Parties").

RECITALS

WHEREAS, Grantor*(s) is/are* the fee simple owner*(s)* of certain real property ("Property" which shall include wetlands, streams, any interest in submerged lands, uplands, associated riparian/littoral rights, and other aquatic resources) located in _____County, Maryland, more particularly ***[DESCRIBE TRACT TO BE PRESERVED, INCLUDING: 1) ACREAGE, 2) A REFERENCE TO RECORDED PLAT(S), AND 3) ANY EXCLUDED PROPERTY]*** and shown in Exhibit A (i.e., metes and bounds of the Property), and Exhibit B (i.e., a metes and bounds and a scaled plat of the area subject to the Conservation Easement, the "Conservation Area"), and made a part hereof; and

WHEREAS, this Conservation Easement is granted in support of the Mitigation Banking Instrument ("MBI") dated, _____, 20__ and incorporated by reference in this document, by and between ***[INSERT BANK SPONSOR FULL LEGAL NAME]*** ("Bank Sponsor") and the Interagency Review Team (the "IRT"), which consists of the Corps, MDE, the U.S. Environmental Protection Agency ("EPA"), the U.S. Fish and Wildlife Service ("USFWS"), the National Oceanic and Atmospheric Administration ("NOAA"); the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays ("CAC"); the Maryland Historic Trust ("MHT"); and the Maryland Department of Natural Resources ("DNR");

WHEREAS, pursuant to the MBI, the Bank Sponsor proposes to create, maintain, and preserve a high-quality, self-sustaining natural aquatic system and buffer located on a portion of the Property described in Exhibit B attached hereto (the "Conservation Area"), which contains or will contain land, functions, values, and services that may serve as compensation and mitigation for impacts to waters of the United States and/or waters of the State that were permitted by the Third Parties; and

WHEREAS, the Parties intend that the Conservation Area will be used as a mitigation bank to be known as the ***[INSERT BANK NAME]***, Department of the Army Action ID ***[INSERT ACTION ID NUMBER FOR THE MBI]*** approved by IRT; and

WHEREAS, under Federal and State law, the Corps has issued Permit No. _____, and MDE has issued Permit No. _____ (collectively, the "Permits"), for impacts to waters of the United States and/or the State of Maryland expected to result from the creation of the self-sustaining natural aquatic system located on the Conservation Area; and

WHEREAS, the MBI requires that this Conservation Easement be executed and recorded in order that the Conservation Area shall remain substantially in its natural or improved condition forever; and

WHEREAS, the Bank Sponsor*(s)* desire(s) to comply with the conditions of the MBI by imposing this Conservation Easement on a Conservation Area within the Property; and

WHEREAS, in recognition of the continuing benefit to the Property, and for the protection of aquatic resources and scenic, resource, environmental, and general property values, the Grantor and Holder have agreed to place this Conservation Easement on the Property, in order that the Conservation Area shall be retained and maintained in perpetuity predominately in accordance with the vegetative and hydrological conditions described in the attached compensatory mitigation performance standards of the MBI (Exhibit C);

NOW THEREFORE, for good and valuable consideration and in consideration of the mutually held interests in enhancement and preservation of the environment, as well as the terms, conditions, and restrictions contained herein, and pursuant to the laws of the United States and the State of Maryland, Grantor does agree to the following terms and conditions, which shall run with the land and be binding in perpetuity and forever on all heirs, successors, assigns (they are included in the terms, "Grantor," below), lessees, or other occupiers and users.

1. Purpose. The purpose of this Conservation Easement is to preserve, protect, and enhance the native flora, fauna, soils, water table, aquifers, springs, drainage patterns, wetland resources, and other related environmental functions and values of the Conservation Area in perpetuity and to prevent any use of the Property that will impair or interfere with the aquatic resource values of the Property;

2. Covenants and Restrictions. Neither the Grantor*(s)*, nor any subsequent owner or owners of the Conservation Area or any portion thereof, shall undertake or cause to be undertaken within or upon the Conservation Area within the Property, as described in (*Recitals and/or the site plan attached*), any of the following:

a. Removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, or materials of any kind;

b. Changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics;

c. Disturbance of the water level or water table by drainage, impoundment, or other means;

d. Dumping, discharging of material, or filling with material, including the driving of piles and placing of obstructions;

e. Grading or removal of material that would alter existing topography;

f. Destruction or removal of plant life that would alter the character of the aquatic resources, or introduction of exotic species;

g. Agricultural or forestry activities, such as aquaculture, plowing, tillage, cropping, seeding, cultivating, and grazing and raising of livestock, sod production, harvesting for production of food and fiber products. Forestry activities mean planting, cultivating, thinning, harvesting, or any other activity undertaken to use forest resources or to improve their quality or productivity;

h. Use of off-road vehicles and motor vehicles;

i. Destruction or alteration of the Conservation Area EXCEPT:

(i) Alteration necessary to construct the mitigation areas and associated improvements proposed to be built by _____, or its successors, and/or assigns, as approved in the mitigation plan included in the approved MBI and the Permits;

(ii) Alteration necessary to ensure the success of the mitigation areas including monitoring, reconstruction, maintenance, or repair of the constructed mitigation areas, as approved by the Corps and MDE;

(iii) Removal of vegetation when approved by the Corps and MDE and conducted for removal of noxious or invasive plants;

[*IF REFERENCE IS MADE TO THE PERMIT, OR TO A MITIGATION PLAN APPROVED BY THE PERMIT, ALL EXCEPTIONS (INCLUDING THOSE AFFECTING BUFFER AREAS) MUST BE SPECIFICALLY SPELLED OUT IN THE PERMIT OR PLAN; ALSO, ADDITIONAL, SPECIFIC, EXCEPTIONS MAY BE LISTED IN THIS PARAGRAPH, E.G., FIRE OR WILDLIFE MANAGEMENT PLANS, BOARDWALKS, ETC*].

j. Utilizing a non-reporting Nationwide Permit, Regional Permit, or State Programmatic General Permit under Section 404 of the Clean Water Act or state general permits under MDE regulations to impact any aquatic feature on the Property. Notification shall be required to the Corps and MDE for the use of any Nationwide Permit, State Programmatic General Permit, or Regional Permit.

3. Duration and Amendment. The covenants and restrictions listed herein are created pursuant to the Annotated Code of Maryland, Real Property Article § 2-118 and shall run with and bind the Property, and be binding on the Grantor*(s)*, its/their personal representatives, heirs, successors and assigns, unless and until terminated or modified by the Third Parties, or other Federal, State, or County agencies which have the legal authority to enforce these covenants and restrictions by regulations, permit, or agreement. The failure of the Third Parties, or other such agencies to enforce the provisions of this Conservation Easement shall not be deemed a waiver of any rights created hereunder. After recording, this Conservation Easement may only be amended by a recorded document signed by the Third Parties and Grantor*(s)*. The recorded document, as amended, shall be consistent with the Baltimore District and MDE model conservation easements at the time of amendment. Amendment shall be allowed at the discretion of the Third Parties, in consultation with resource agencies as appropriate, and then only in exceptional circumstances. Mitigation for amendment impacts will be required pursuant to Third Parties' mitigation policies at the time of amendment. There shall be no obligation to allow an amendment. The Third Parties shall be provided with a 60-day advance written notice of any legal action concerning this Conservation Easement or of any action to extinguish, void, or modify this Conservation Easement in whole or in

part. This Conservation Easement is intended to survive foreclosure, bankruptcy, condemnation, or judgments affecting the Property. Should the Property be transferred, sold, or conveyed, be subject to foreclosure or bankruptcy, or transferred by any other means whatsoever, the Grantor or Bank Sponsor shall immediately notify the Corps in writing. This Conservation Easement shall not be invalid solely because aquatic resources within the Conservation Area are determined not to be waters of the United States or waters of the State.

4. Notice to Government. Any permit application, or request for certification or modification, which may affect the Conservation Area, made to any governmental entity with authority over wetlands or other waters of the United States and/or waters of the State, shall expressly reference and include a copy (with the recording stamp) of this Conservation Easement.

5. Reserved Rights. It is expressly understood and agreed that this easement does not grant or convey to members of the general public any rights of ownership, entry or use of the Conservation Area. This easement is created solely for the protection of the Property, and for the consideration and values set forth above, and Grantor*(s)* reserve*(s)* the ownership of the fee simple estate and all rights appertaining thereto, including without limitation the rights to exclude others and to use the property for all purposes not inconsistent with this Conservation Easement.

6. Monitoring and Maintenance. The Holder, Bank Sponsor, Long-Term Steward (as defined in the MBI), and their authorized agents shall have the right to enter and go upon the lands of Grantor*(s)* to monitor and manage the Conservation Area to ensure compliance with the Mitigation Site Plan ("Mitigation Site Plan") and Long-Term Management Plan ("Approved Long-Term Management Plan") approved in the MBI. This may include, but is not limited to, completing annual monitoring, controlling invasive species, planting native vegetation, repairing signs/fences, and repairing erosion.

7. Compliance Inspections. The Holder, Bank Sponsor, Long-Term Steward, Corps, MDE, IRT, and its/their authorized agents shall have the right to enter and go upon the lands of Grantor*(s)*, to inspect the Conservation Area and take actions necessary to verify compliance with the Mitigation Site Plan, the Approved Long-Term Management Plan, and this Conservation Easement.

8. Enforcement. The Grantor*(s)* grant*(s)* to the Holder, Bank Sponsor, Corps, the U.S. Department of Justice, and MDE, a discretionary right to enforce this Conservation Easement in a judicial action against any person*(s)* or other entity(ies) violating or attempting to violate this Conservation Easement; provided, however, that no violation of this Conservation Easement shall result in a forfeiture or reversion of title. In any enforcement action, an enforcing entity shall be entitled to a complete restoration for any

violation, as well as any other judicial remedy, such as civil penalties. Nothing herein shall limit the right of the Corps and MDE to modify, suspend, or revoke the Permits.

9. Property Transfers. Grantor*(s)* shall include the following notice on all deeds, mortgages, plats, or any other legal instruments used to convey any interest in the Property and/or Conservation Area (failure to comply with this paragraph does not impair the validity or enforceability of this Conservation Easement):

NOTICE: This property Subject to Conservation Easement Recorded at **[INSERT BOOK AND PAGE REFERENCES, COUNTY(IES), AND DATE OF RECORDING]**.

Grantor(s) agree(s) to give written notice to the Corps and MDE of the intent to transfer, sell, or convey any interest of the Property, or to amend this Conservation Easement by any other means whatsoever, at least sixty (60) days prior to the date of transfer.

10. Marking of Property. The perimeter of the Conservation Area shall at all times be plainly marked by permanent signs saying, "Protected Natural Area," or by an equivalent, permanent marking system.

[NOTE: THE GRANTOR, BANK SPONSOR, OR PERMITTEE MUST IDENTIFY ALL ENCUMBRANCES (I.E., MORTGAGES, LIENS, EASEMENTS, RIGHTS OF WAY, LEASES, ETC.), THAT MAY AFFECT THE CONSERVATION AREA AND SHOW THESE ENCUMBRANCES ON EXHIBIT B TO THIS EASEMENT. IF ANY ENCUMBRANCE AFFECTS THE CONSERVATION AREA, THEN SOME VERSION OF THE FOLLOWING CLAUSE SHOULD BE INCLUDED, AND THE HOLDER OF THAT INTEREST MUST SIGN, SUBORDINATING ITS INTEREST TO THIS CONSERVATION EASEMENT.]

11. Consent of Lender and Trustee. Grantor*(s)* is/are the maker*(s)* of a note dated _____ secured by a deed of trust dated _____ from the Grantor*(s)* to _____as trustees and either of whom may act, recorded in the Clerk's office in Deed Book _____at page _____, for the benefit of _____Bank (The "Deed of Trust."). _____, as trustees, join herein for the sole purpose of subordinating the lien, dignity and priority of the Deed of Trust to this Conservation Easement. _____Bank joins herein for the sole purpose of consenting to the trustee's actions.

12. Recording. Within thirty (30) calendar days of execution of this Conservation Easement, the Grantor*(s)* and Holder agree(s) to record this Conservation Easement in the Land Records of the County and provide the Third Parties with proof of recordation within thirty (30) calendar days of recordation. A plat depicting the boundaries of the

Conservation Area subject to this Conservation Easement shall be recorded in the deed records office for each county in which the Property is situated prior to or concurrent with the recording of this Conservation Easement. The plat*(s)* is/are recorded at ***[INCLUDE BOOK AND PAGE REFERENCES, COUNTY(IES), AND DATE]***.

13. Separability Provision. Should any separable part of this Conservation Easement be held contrary to law, the remainder shall continue in full force and effect.

14. Inaccurate or Fraudulent Information. Should an easement, right or lease on or to the Property not shown on the survey or listed in this Conservation Easement and prior in time and recording to this Conservation Easement, or unrecorded, be exercised in such a manner that it conflicts with or voids the prohibited uses of the Property set out in this Conservation Easement, then the Grantor(s) shall be responsible for providing alternative compensatory mitigation in such amounts and of such service and function as the Corps and MDE or any enforcer of this Conservation Easement shall determine in accordance with the Clean Water Act and/or the Maryland Nontidal Wetlands Act.

15. Eminent Domain. NOTICE TO PARTIES WITH EMINENT DOMAIN AUTHORITY: If the Property is taken in whole or in part through eminent domain, the consequential value of the Conservation Area protected by the Clean Water Act and/or the Maryland Nontidal Wetlands Act is the cost of replacement of the conservation functions, services and values with other property in the same watershed. Exercise of eminent domain by any party ("Condemning Party") to take land held as part of a mitigation bank site under this [Easement/Declaration] may remove restrictions that the Grantor, Grantee, Holder, the Corps or MDE intend will protect, in perpetuity, the Conservation Area, and preserve the land serving as compensation of other permitted impacts. Where the Condemning Party: (1) intends to take action(s) that will have impacts on the Conservation Area associated with debited mitigation credits, and (2) is required to obtain a Corps or MDE permit for such impacts, the Corps and MDE have discretion to increase the Condemning Party's wetland and/or stream compensation requirements, as part of the permitting process, in order to account for the loss of functions and values associated with the credits already debited and/or released from the mitigation bank site.

16. Merger. The doctrine of merger shall not operate to extinguish this Conservation Easement if the Conservation Easement and the Property become vested in the same party. If the doctrine of merger applies to extinguish the Conservation Easement then, unless Grantor, Holder, the Corps, and MDE otherwise agree in writing, a replacement conservation easement or restrictive covenant containing the same protections embodied in the conservation easement shall be recorded against the Conservation Area. The Grantor may suggest a new conservation easement holder and upon approval by the Corps and MDE, grant a conservation easement protecting the Conservation Area.

IN WITNESS WHEREOF, the Grantor*(s) and Holder has/have* duly executed this Conservation Easement the date written above.

IN THE PRESENCE OF: Grantor*(s)*

_____ By: _____

[*type name of witness under signature line*] [*type name of Grantor(s) under signature line*]

Its:

STATE OF MARYLAND
COUNTY OF _____

PERSONALLY appeared before me _____, the undersigned witness, and made oath that *he/she* saw the within named _____ [, *by* _____, *its* _____,] sign, seal and as *his/her/its* act and deed, deliver the within named Conservation Easement; and that *he/she* with the other witness named above witnessed the execution thereof.

_____

[*type name of Notary Public under signature line*]

SWORN to and subscribed before me
This _____day of _____, 20___.

NOTARY PUBLIC FOR
My Commission Expires:

IN THE PRESENCE OF: **Holder**

_____ By:
_____

[*type name of witness under signature line*] [*type name of Holder under signature line*]

Its:

STATE OF MARYLAND
COUNTY OF

PERSONALLY appeared before me _____, the undersigned witness, and made oath that *he/she* saw the within named _____[, *by* _____, *its* _____,] sign, seal and as *his/her/its* act and deed, deliver the within named Conservation Easement; and that *he/she* with the other witness named above witnessed the execution thereof.

_____

[*type name of Notary Public under signature line*]

SWORN to and subscribed before me
This _____day of _____, 20___.

NOTARY PUBLIC FOR
My Commission Expires:

I hereby certify this conservation easement was prepared by or under the supervision of _____, an attorney admitted to practice by the Court of Appeals of Maryland.

_____

APPENDIX F: RTE COORDINATION

January 11, 2024

Ms. Maddie White
Coastal Resources, Inc.
25 Old Solomons Island Road
Annapolis, MD 21401

RE: Environmental Review for Potential Compensatory Mitigation Sites, Susquehanna River Rail Bridge Project: 8 Sites, Harford and Cecil Counties, Maryland

Dear Ms. White:

For **Hollands Branch (W57/59 and S40/41)**, the Wildlife and Heritage Service has determined that this site falls within the drainage to a portion of Lower Deer Creek which is known to support the state-listed threatened Chesapeake Logperch (*Percina bimaculata*). There are also wetlands in the area known to support the state and federally-listed threatened Bog Turtle (*Glyptemys muhlenbergii*), and further surveys may be warranted to determine the presence of this species.

For **Pylesville Site (W33/S27),** the Wildlife and Heritage Service has determined that this site once supported a population of the state and federally-listed threatened Bog Turtle, and further surveys may be warranted to determine the presence of this species.

For **Ikea Way (S-22 and S-34)**, the Wildlife and Heritage Service has determined that this site drains into a portion of Mill Creek which is known to support the state-listed threatened Chesapeake Logperch. Also, our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Species habitat, especially for birds. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the Eastern United States. The conservation of this habitat is mandated within the Chesapeake Bay Critical Area.

For **WL-12**, the Wildlife and Heritage Service has determined that this site is considered to be nesting habitat for the state-listed endangered Northern Map turtle (*Graptemys geographica*). Also, the open waters that are adjacent to or part of the site are known historic waterfowl concentration areas. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

For **F-20**, the Wildlife and Heritage Service has no official records for State or Federal listed, candidate, proposed, or rare plant or animal species within the project area shown on the map provided.

For **F-21**, our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Species habitat, especially for birds. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the Eastern United States.

For **F-23**, our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Species (FIDS) habitat, especially for birds. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the Eastern United States.

For **SAV Restoration Site SAV-8**, the Wildlife and Heritage Service has determined that the site abuts a Wetland of Special State Concern known as Camp Rodney Swamp which supports occurrences of American Frog's-bit (*Limnobium spongia*) and Bulb-bearing Water-hemlock (*Cicuta bulbifera*), both state-listed endangered species. Also, our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Species (FIDS) habitat, especially for birds. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the Eastern United States. The conservation of this habitat is mandated within the Chesapeake Bay Critical Area. In addition, the open waters that are adjacent to or part of the site are known historic waterfowl concentration areas. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

For **SAV Restoration Site SAV-9**, the Wildlife and Heritage Service would like to point out that the open waters that are adjacent to or part of the site are known historic waterfowl concentration areas. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

For **SAV Restoration Site SAV-10**, the Wildlife and Heritage Service would like to point out that the open waters that are adjacent to or part of the site are known historic waterfowl concentration areas. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

We look forward to continued coordination for these potential concerns as mitigation sites are finalized. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2023.1981.hace
Cc: J. Homyack, DNR
B. Schlimm, DNR
C. Jones, CAC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004162
Project Name: Potential Fish Blockage Removal at Unnamed Tributary to Northeast Creek, North East, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004162

Project Name: Potential Fish Blockage Removal at Unnamed Tributary to Northeast Creek, North East, MD

Project Type: Fish Passage Barrier Removal

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to tidal open waters are due to existing bridge piers and trestle pilings. Further impacts are the result of new piers for new bridge spans. Impacts to these streams will impact species of anadromous fish. Compensatory mitigation may occur at Unnamed Tributary to Northeast Creek (F-23) in North East, Maryland. The proposed removal of the fish blockage, created by a culverted crossing, at this site would provide 2.14 miles of upstream network for the 48 resident fish species, one rare fish species, and two rare mussel species in the Chester-Sassafras watershed (MDE 8-digit 02060002).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.592381700000004,-75.970917,14z

Counties: Cecil County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review.

Species profile: https://ecos.fws.gov/ecp/species/6962

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004170
Project Name: Potential Fish Blockage Removal at Herring Run, Havre de Grace, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004170

Project Name: Potential Fish Blockage Removal at Herring Run, Havre de Grace, MD

Project Type: Fish Passage Barrier Removal

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to tidal open waters are due to existing bridge piers and trestle pilings. Further impacts are the result of new piers for new bridge spans. Impacts to these streams will impact species of anadromous fish. Compensatory mitigation may occur at Herring Run (F-21) in Havre de Grace, Maryland. The proposed removal of the fish blockage, created by a culverted crossing, at this site would provide would provide 2.11 miles of upstream network for the 53 resident fish species, two rare fish species, and three rare mussel species in the Lower Susquehanna watershed (MDE 8-digit 02050306).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.5936045,-76.1345826,14z

Counties: Harford County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

CLAMS

NAME	STATUS
Green Floater *Lasmigona subviridis* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7541	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004491
Project Name: Potential Compensatory Mitigation Nontidal Wetland/Stream Restoration at Hollands Branch

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004491

Project Name: Potential Compensatory Mitigation Nontidal Wetland/Stream Restoration at Hollands Branch

Project Type: Restoration / Enhancement - Wetland

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to non-tidal waters and wetlands are occurring adjacent to the existing rail alignment. Further impacts are the result of track realignment, new approaches and embankments, and extension of existing culverts. Impacts to non-tidal palustrine emergent (PEM, 1.46 acres), palustrine scrub-shrub (PSS, 0.24 AC), and palustrine forested (PFO, 1.15 acres) wetlands will be mitigated at a 1:1 (1.46 acres), 2:1 (0.48 acres), and 2:1 (2.30 acres) ratio. Impacts to streams will require 8,975 linear feet (3,638 functional feet) of mitigation. Compensatory in-kind mitigation of nontidal wetlands and streams may occur at Hollands Branch site, in Darlington, Maryland. There are 8.12 acres of proposed wetland restoration and 8,022 linear feet of proposed stream restoration to Hollands Branch. The proposed restoration at these sites would involve stream restoration and enhancement as the streams are experiencing erosion and degradation. The proposed restoration efforts occur within the Lower Susquehanna watershed (MDE 8-digit 02050306).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.632006450000006,-76.22335486169052,14z

Counties: Harford County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review.

Species profile: https://ecos.fws.gov/ecp/species/6962

FISHES

NAME	STATUS
Maryland Darter *Etheostoma sellare*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5135

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R3UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1/EM1A

FRESHWATER POND

- PUBHx

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004489
Project Name: Potential Compensatory Mitigation Stream Restoration at Ikea Way, Perryville, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004489

Project Name: Potential Compensatory Mitigation Stream Restoration at Ikea Way, Perryville, MD

Project Type: Restoration / Enhancement - Wetland

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to non-tidal waters are due to manipulated streams parallel to the existing tracks, or stream segments within and abutting existing culverts. Further impacts are the result of track realignment and extension of existing culverts. Impacts to these streams will require 8,975 linear feet (3,638 functional feet) of mitigation. Potential compensatory in-kind mitigation will occur at Ikea Way Site (S-22 and S-34) in Perryville, Maryland. S-22 has an estimated restoration length of 553 linear feet and S-34 has an estimated restoration length of 452 linear feet. The proposed restoration at these sites would involve stream restoration and enhancement of the areas, as both streams are experiencing erosion and degradation. The proposed restoration efforts occur within the Chester-Sassafras watershed (MDE 8-digit 02060002).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.557082300000005,-76.05782300332854,14z

Counties: Cecil County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- E1UBL6

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004484
Project Name: Potential Compensatory Mitigation Nontidal Wetland and Stream Restoration at Pylesville, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004484

Project Name: Potential Compensatory Mitigation Nontidal Wetland and Stream Restoration at Pylesville, MD

Project Type: Restoration / Enhancement - Wetland

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to non-tidal waters and wetlands are occurring adjacent to the existing rail alignment. Further impacts are the result of track realignment, new approaches and embankments, and extension of existing culverts. Impacts to non-tidal palustrine emergent (PEM, 1.46 acres), palustrine scrub-shrub (PSS, 0.24 AC), and palustrine forested (PFO, 1.15 acres) wetlands will be mitigated at a 1:1 (1.46 acres), 2:1 (0.48 acres), and 2:1 (2.30 acres) ratio. Impacts to streams will require 8,975 linear feet (3,638 functional feet) of mitigation. Compensatory in-kind mitigation of nontidal wetlands and streams may occur at Pylesville/Schwartz site, in Pylesville, Maryland. There are 9.30 acres of proposed wetland restoration and 4,819 linear feet of proposed stream restoration to Pylesville/Schwartz site. The proposed restoration at these sites would involve stream restoration and enhancement as the stream banks are eroded and uneven, resulting in a disconnection to the floodplain and degradation. The proposed restoration efforts occur within the Lower Susquehanna watershed (MDE 8-digit 02050306).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.69975395,-76.37439265958274,14z

Counties: Harford County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

CLAMS

NAME	STATUS
Green Floater *Lasmigona subviridis* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7541	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004480
Project Name: Potential Compensatory Mitigation SAV Restoration in Elk Neck, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004480

Project Name: Potential Compensatory Mitigation SAV Restoration in Elk Neck, MD

Project Type: Restoration / Enhancement - Wetland

Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to riverine tidal resources (SAV and open water) will come from multiple sources such as the placement of trestle decking and new piers. Impacts to 1.13 acres of SAV will be incurred through this project and will be mitigated in-kind at a 3:1 (3.39 acres) mitigation ratio. Potential compensatory mitigation will occur through the restoration of one of three proposed SAV sites (SAV-8, SAV-9, and SAV-10). Site SAV-8 is 23 acres just south of Cara Cove along the Eastern shore of the Chesapeake Bay. Site SAV-9 is 55 acres, north of the NorthBay Adventure camp. Site SAV-10 is 70 acres, bordering Elk Neck State Park and a portion of Turkey Point, further south than SAV-8 and SAV-9. The proposed restoration at these sites would involve re-planting the areas, which had been historically vegetated from 2007 to 2010 for SAV-8 and SAV-9, and from 2007 to 2009 for SAV-10. The proposed restoration efforts occur within the Chester-Sassafras watershed (MDE 8-digit 02060002).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.516428950000005,-75.98280603337456,14z

Counties: Cecil County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- E1UBL6

ESTUARINE AND MARINE WETLAND

- E2USP6

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 12, 2023
Project Code: 2024-0004157
Project Name: Potential Fish Blockage Removal at Stony Run, North East, MD

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0004157
Project Name: Potential Fish Blockage Removal at Stony Run, North East, MD
Project Type: Fish Passage Barrier Removal
Project Description: The National Railroad Passenger Corporation (Amtrak) is looking to replace the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland. Unavoidable wetland and waterway impacts incurred by the Susquehanna River Rail Bridge Project will be mitigated in accordance with the guidelines of Section 404(b)1 of the Clean Water Act as well as state and local regulations as applicable. Impacts to tidal open waters are due to existing bridge piers and trestle pilings. Further impacts are the result of new piers for new bridge spans. Impacts to these streams will impact species of anadromous fish. Compensatory mitigation may occur at Stony Run (F-20) in North East, Maryland. The proposed removal of the fish blockage, created by a culverted crossing, at this site would provide 16.57 miles of upstream network for the 48 resident fish species, one rare fish species, and two rare mussel species in the Chester-Sassafras watershed (MDE 8-digit 02060002).

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.606128,-75.9539726,14z

Counties: Cecil County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review.

Species profile: https://ecos.fws.gov/ecp/species/6962

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006280
Project Name: Potential Fish Blockage Removal along Stony Run (F-20)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal along Stony Run (F-20)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal along Stony Run (F-20)' (here forward, Project). This project has been assigned Project Code 2024-0006280 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006280 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal along Stony Run (F-20)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal along Stony Run (F-20)':

> Potential fish blockage removal as mitigation for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.6061996,-75.95411513803103,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006267
Project Name: Potential Fish Blockage Removal along Herring Run (F-21)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal along Herring Run (F-21)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal along Herring Run (F-21)' (here forward, Project). This project has been assigned Project Code 2024-0006267 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Green Floater *Lasmigona subviridis* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006267 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal along Herring Run (F-21)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal along Herring Run (F-21)':

> Potential fish blockage removal along Herring Run for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.593614599999995,-76.1345876655914,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006257
Project Name: Potential Fish Blockage Removal (F-23)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal (F-23)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal (F-23)' (here forward, Project). This project has been assigned Project Code 2024-0006257 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006257 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal (F-23)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal (F-23)':

> Potential fish blockage removal along an UNT to Northeast Creek as mitigation for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.592381700000004,-75.970917,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006227
Project Name: Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)' (here forward, Project). This project has been assigned Project Code 2024-0006227 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Maryland Darter *Etheostoma sellare* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006227 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)

2. Description

The following description was provided for the project 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)':

> Potential nontidal wetland and stream mitigation along Hollands Branch associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.632006450000006,-76.22335486169052,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006244
Project Name: Potential Compensatory Mitigation at Ikea Way (S-22)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Compensatory Mitigation at Ikea Way (S-22)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Compensatory Mitigation at Ikea Way (S-22)' (here forward, Project). This project has been assigned Project Code 2024-0006244 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006244 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Compensatory Mitigation at Ikea Way (S-22)

2. Description

The following description was provided for the project 'Potential Compensatory Mitigation at Ikea Way (S-22)':

> Potential nontidal stream restoration at Ikea Way associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.557082300000005,-76.05782300332854,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Coastal Resources Inc.
Name: Maddie White
Address: 25 Old Solomans Island Rd
City: Annapolis
State: MD
Zip: 21401
Email maddiew@cri.biz
Phone: 4109569000

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006144
Project Name: Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Railroad Administration

Subject: Record of project representative's no effect determination for 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)' (here forward, Project). This project has been assigned Project Code 2024-0006144 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Green Floater *Lasmigona subviridis* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006144 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)

2. Description

The following description was provided for the project 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)':

> Potential nontidal wetland and stream mitigation at the Pylesville Site in Harford County, MD, for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.69975395,-76.37439265958274,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Maddie White
Address: 25 Old Solomans Island Rd
City: Annapolis
State: MD
Zip: 21401
Email maddiew@cri.biz
Phone: 4109569000

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Railroad Administration

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006293
Project Name: Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project

Federal Action Agency (if applicable): Federal Railroad Administration

Subject: Record of project representative's no effect determination for 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project' (here forward, Project). This project has been assigned Project Code 2024-0006293 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006293 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project

2. Description

The following description was provided for the project 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project':

> Potential SAV Restoration and reseeding areas for mitigation associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.516428950000005,-75.98280603337456,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats <u>are</u> likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Coastal Resources, Inc
Name: Maddie White
Address: 25 Old Solomans Island Rd
City: Annapolis
State: MD
Zip: 21401
Email maddiew@cri.biz
Phone: 4109569000

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Railroad Administration

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006227
Project Name: Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)' (here forward, Project). This project has been assigned Project Code 2024-0006227 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Maryland Darter *Etheostoma sellare* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006227 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)

2. Description

The following description was provided for the project 'Potential Compensatory Mitigation at Hollands Branch (W-57/59 and S-40/41)':

> Potential nontidal wetland and stream mitigation along Hollands Branch associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.632006450000006,-76.22335486169052,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006144
Project Name: Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Railroad Administration

Subject: Record of project representative's no effect determination for 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)' (here forward, Project). This project has been assigned Project Code 2024-0006144 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Green Floater *Lasmigona subviridis* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006144 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)

2. Description

The following description was provided for the project 'Susquehanna River Rail Bridge Potential Mitigation at Pylesville Site (W33/S27)':

> Potential nontidal wetland and stream mitigation at the Pylesville Site in Harford County, MD, for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.69975395,-76.37439265958274,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006244
Project Name: Potential Compensatory Mitigation at Ikea Way (S-22)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Compensatory Mitigation at Ikea Way (S-22)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Compensatory Mitigation at Ikea Way (S-22)' (here forward, Project). This project has been assigned Project Code 2024-0006244 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006244 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Compensatory Mitigation at Ikea Way (S-22)

2. Description

The following description was provided for the project 'Potential Compensatory Mitigation at Ikea Way (S-22)':

> Potential nontidal stream restoration at Ikea Way associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.557082300000005,-76.05782300332854,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006280
Project Name: Potential Fish Blockage Removal along Stony Run (F-20)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal along Stony Run (F-20)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal along Stony Run (F-20)' (here forward, Project). This project has been assigned Project Code 2024-0006280 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006280 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal along Stony Run (F-20)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal along Stony Run (F-20)':

> Potential fish blockage removal as mitigation for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.6061996,-75.95411513803103,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006267
Project Name: Potential Fish Blockage Removal along Herring Run (F-21)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal along Herring Run (F-21)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal along Herring Run (F-21)' (here forward, Project). This project has been assigned Project Code 2024-0006267 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Green Floater *Lasmigona subviridis* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006267 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal along Herring Run (F-21)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal along Herring Run (F-21)':

> Potential fish blockage removal along Herring Run for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.593614599999995,-76.1345876655914,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006257
Project Name: Potential Fish Blockage Removal (F-23)

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Potential Fish Blockage Removal (F-23)'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential Fish Blockage Removal (F-23)' (here forward, Project). This project has been assigned Project Code 2024-0006257 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006257 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential Fish Blockage Removal (F-23)

2. Description

The following description was provided for the project 'Potential Fish Blockage Removal (F-23)':

> Potential fish blockage removal along an UNT to Northeast Creek as mitigation for impacts associated with the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.592381700000004,-75.970917,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note:If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: October 18, 2023
Project code: 2024-0006293
Project Name: Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project

Federal Action Agency (if applicable): Federal Railroad Administration

Subject: Record of project representative's no effect determination for 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project'

Dear Maddie White:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 18, 2023, for 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project' (here forward, Project). This project has been assigned Project Code 2024-0006293 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0006293 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project

2. Description

The following description was provided for the project 'Potential SAV Restoration Areas for the Susquehanna River Rail Bridge Project':

> Potential SAV Restoration and reseeding areas for mitigation associated with impacts from the Susquehanna River Rail Bridge Project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.516428950000005,-75.98280603337456,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats <u>are</u> likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 05/16/2024 18:44:16 UTC
Project Code: 2024-0091763
Project Name: Simon's Run Mitigation Site

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0091763
Project Name: Simon's Run Mitigation Site
Project Type: Mitigation Development/Review - Mitigation or Conservation Bank
Project Description: Potential stream and wetland compensatory mitigation site in Harford County, Maryland.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.61840935,-76.36590011548543,14z

Counties: Harford County, Maryland

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ For bog turtle projects in DE, email dnrec_envreview@delaware.gov for review. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R2UBH

FRESHWATER POND

- PUBF

FRESHWATER EMERGENT WETLAND

- PEM5A
- PEM1A

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A

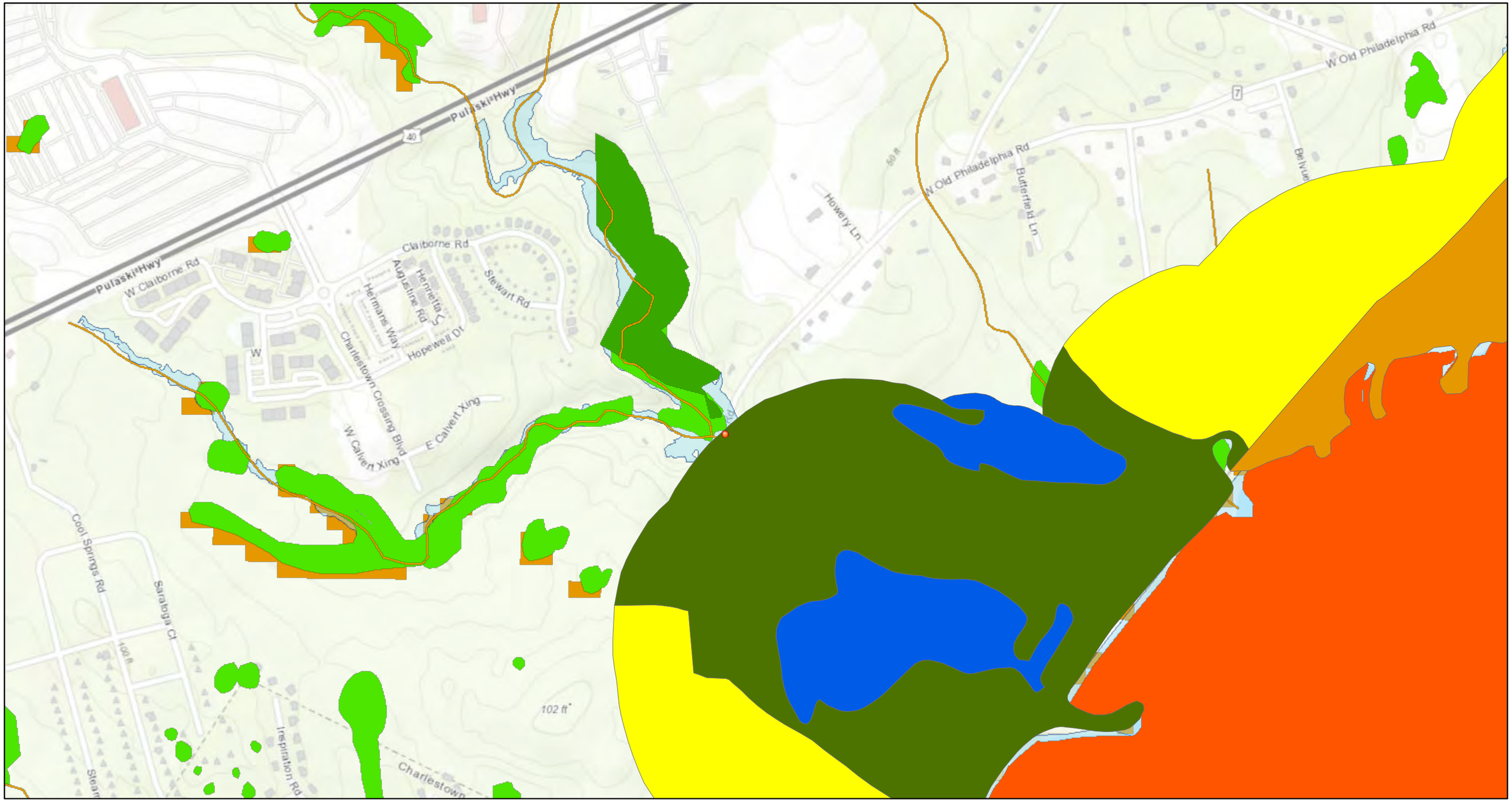
IPAC USER CONTACT INFORMATION

Agency: Coastal Resources, Inc.
Name: Maddie White
Address: 25 Old Solomans Island Rd
City: Annapolis
State: MD
Zip: 21401
Email maddiew@cri.biz
Phone: 4109569000

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Railroad Administration

Fish Blockage Removal at Unnamed Tributary to Northeast Creek



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0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

Preliminary FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Sea Level Rise Wetland Adaptation Areas
- High
- Low
- Medium
- F-23

Critical Areas (Counties)
- Corporate Limit
- Limited Development Area
- Resource Conservation Area
- Wetland Area

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P
- Forest Conservation Act Easements

Wetlands - National Wetlands Inventory
- Estuarine
- Lacustrine
- Marine
- Palustrine
- Riverine

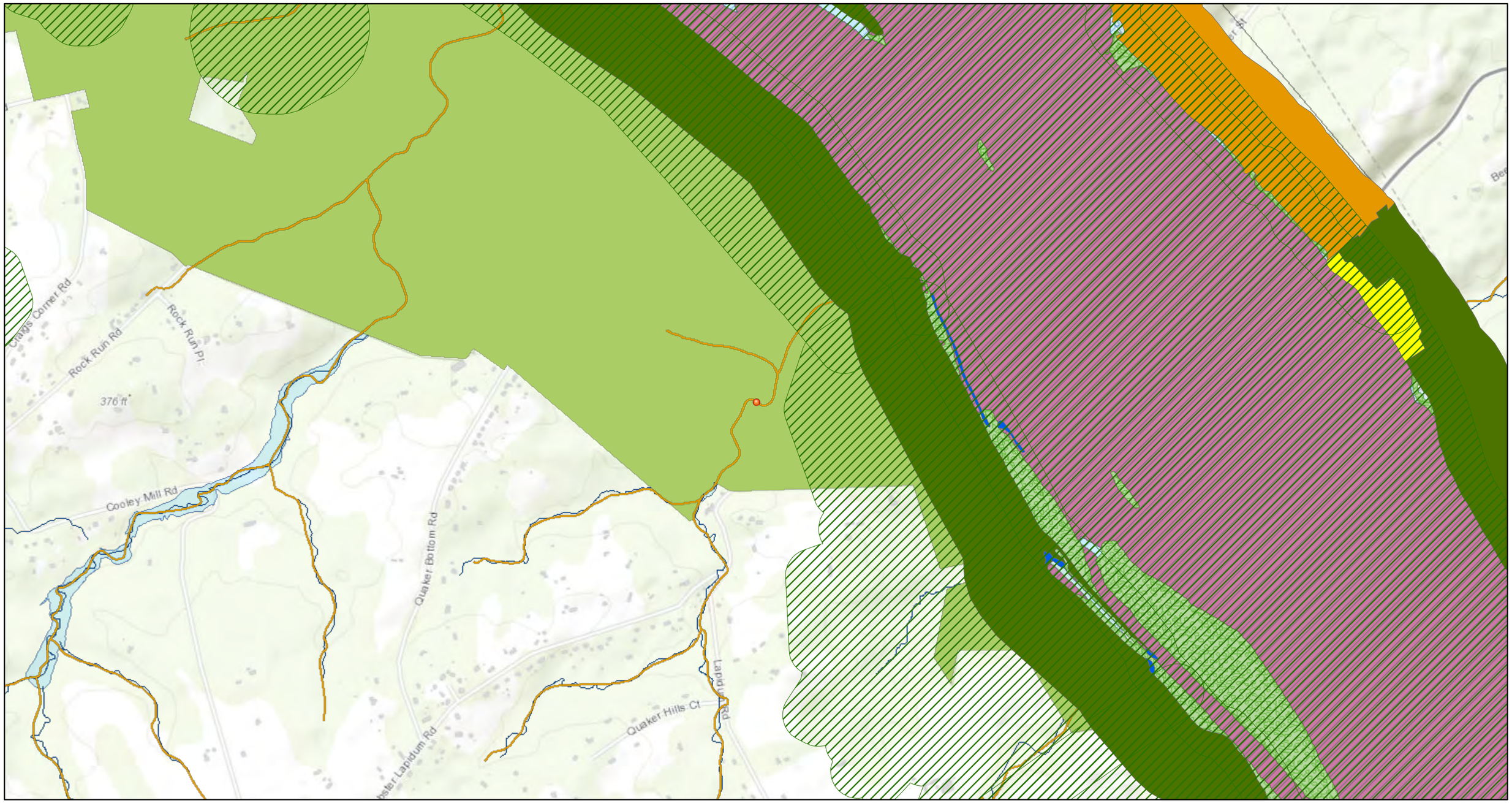
Wetlands - Polygon - Department of Natural Resources
- Estuarine

MDE, WSA, Cecil County, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, MD iMAP, DNR, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, MD iMAP, MDE

Web AppBuilder for ArcGIS

Cecil County, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of the Environment, Water and

Herring Run Fish Blockage Removal



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- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)
- Herring Run - F-21
- Sensitive Species Project Review Areas

Critical Areas (Counties)
- Corporate Limit
- Limited Development Area
- Resource Conservation Area
- Wetland Area

SAV
- SAV 2017
- SAV 2018
- SAV 2019
- SAV 2020
- SAV 2021

Tidal Waters
- II
- II-P

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

DNR Owned Lands and Conservation Easements
- DNR Owned Properties
- DNR Owned Properties - Submerged
- Conservation Reserve Enhancement Program
- Forest Legacy
- Other

1:18,056

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0 0.28 0.55 1.1 km

MDE, WSA, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, Maryland DNR, MD iMAP, MDE, Cecil County, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

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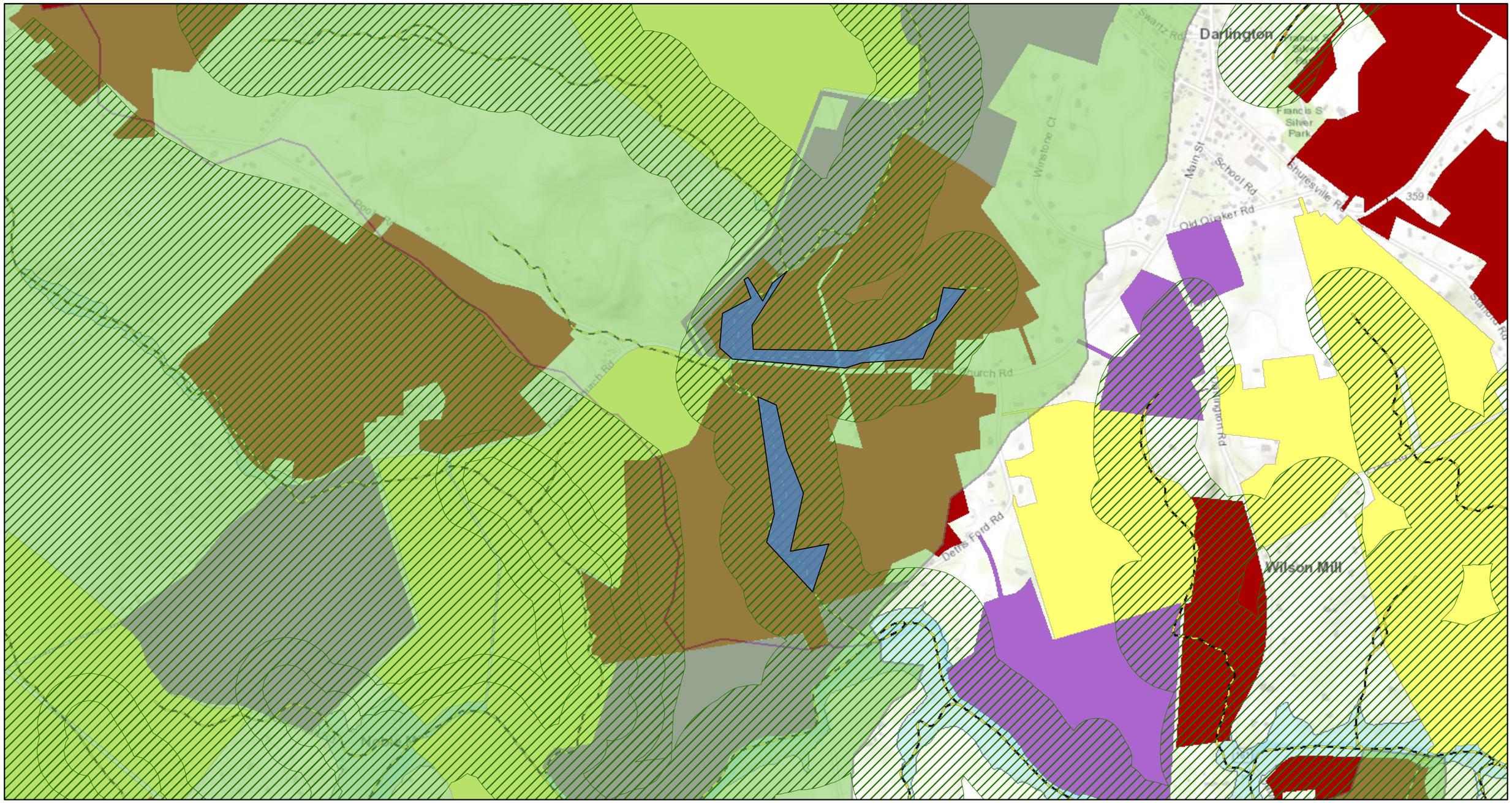
Cecil County, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of the

Hollands Branch Nontidal Stream and Wetland Restoration



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Preliminary FEMA Floodplain
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- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)
- Hollands Branch - Hollands_Branch
- Sensitive Species Project Review Areas

Tier II Catchments 2016
- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

Transfer Development Rights and Purchase Development Rights
- Transfer Development Rights
- Purchase Development Rights
- MD Agricultural Land Preservation Foundation Easements
- Rural Legacy Properties

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

MDE, WSA, MD iMAP, MDP, MDA, Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA), MD iMAP, MDE, Cecil County, Harford County Government, Esri, HERE,

Web AppBuilder for ArcGIS

Cecil County, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of the

Ikea Way Nontidal Stream Restoration

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Ikea

Waterfowl Areas

Critical Areas (Towns)

Intensely Developed Area

Limited Development Area

Resource Conservation Area

Critical Areas (Counties)

Corporate Limit

Resource Conservation Area

Trout Population by Watershed 2017

Brown or Rainbow Trout Present

Brook Trout Present

SAV 2017

SAV 2018

SAV 2019

SAV 2020

SAV 2021

Tidal Waters

II

II-P

Rivers and Streams

I

I-P

II

II-P

III

III-P

IV

IV-P

1:9,028

0 0.07 0.15 0.3 mi

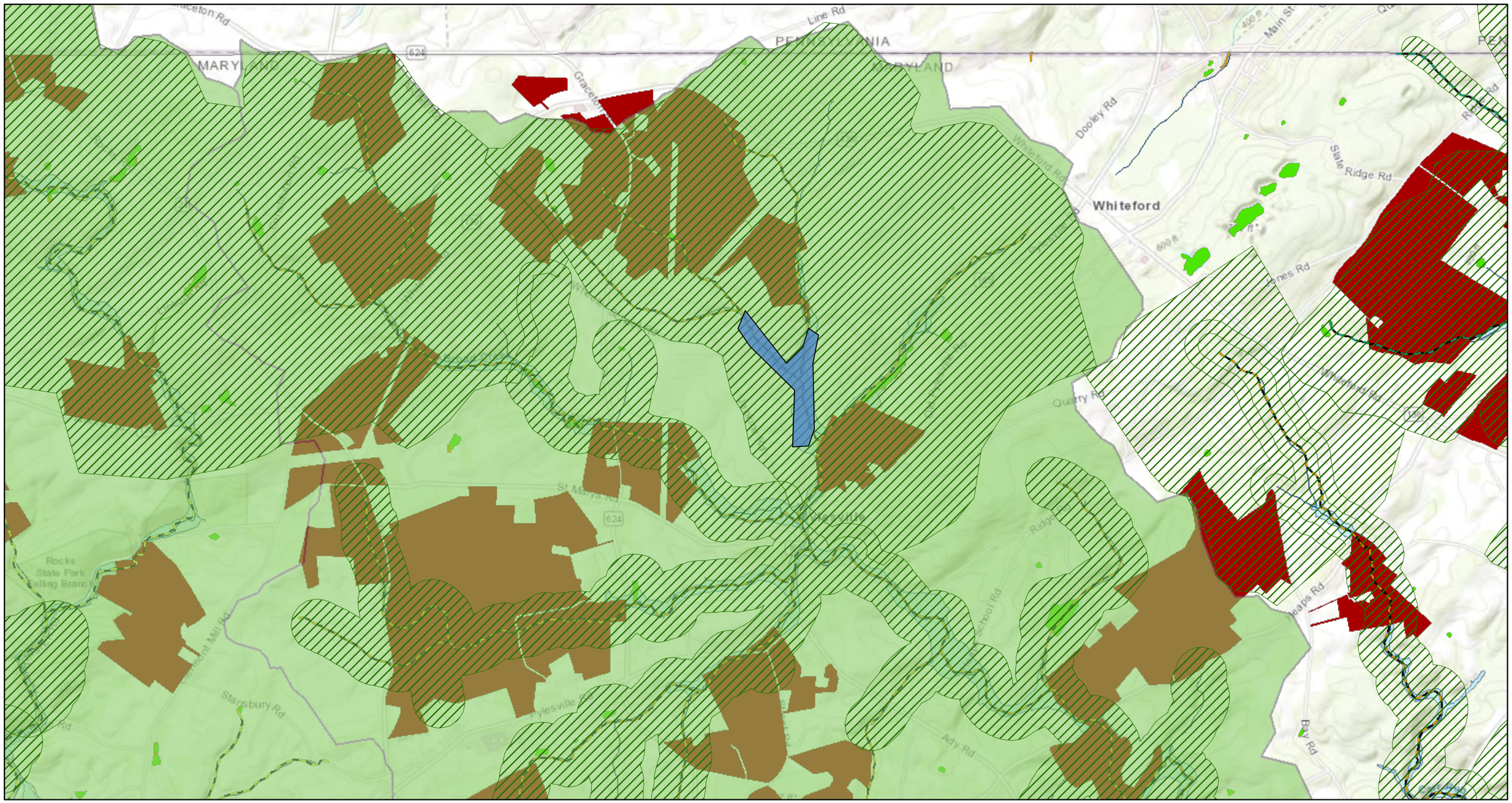
0 0.13 0.25 0.5 km

MDE, WSA, MD iMAP, MDP, MDA, Maryland DNR, Maryland DNR, Fishing and Boating Services and Maryland Biological Stream Survey, Cecil County, Harford County Government, Esri, HERE, Garmin,

Web AppBuilder for ArcGIS

Cecil County, Harford County Government, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of

Pylesville Nontidal Stream and Wetland Restoration



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Preliminary FEMA Floodplain
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- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Sea Level Rise Wetland Adaptation Areas
- High
- Low
- Medium
- Pylesville
- Sensitive Species Project Review Areas

Tier II Catchments 2016
- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

Transfer Development Rights and Purchase Development Rights
- Transfer Development Rights
- Purchase Development Rights

1:36,112

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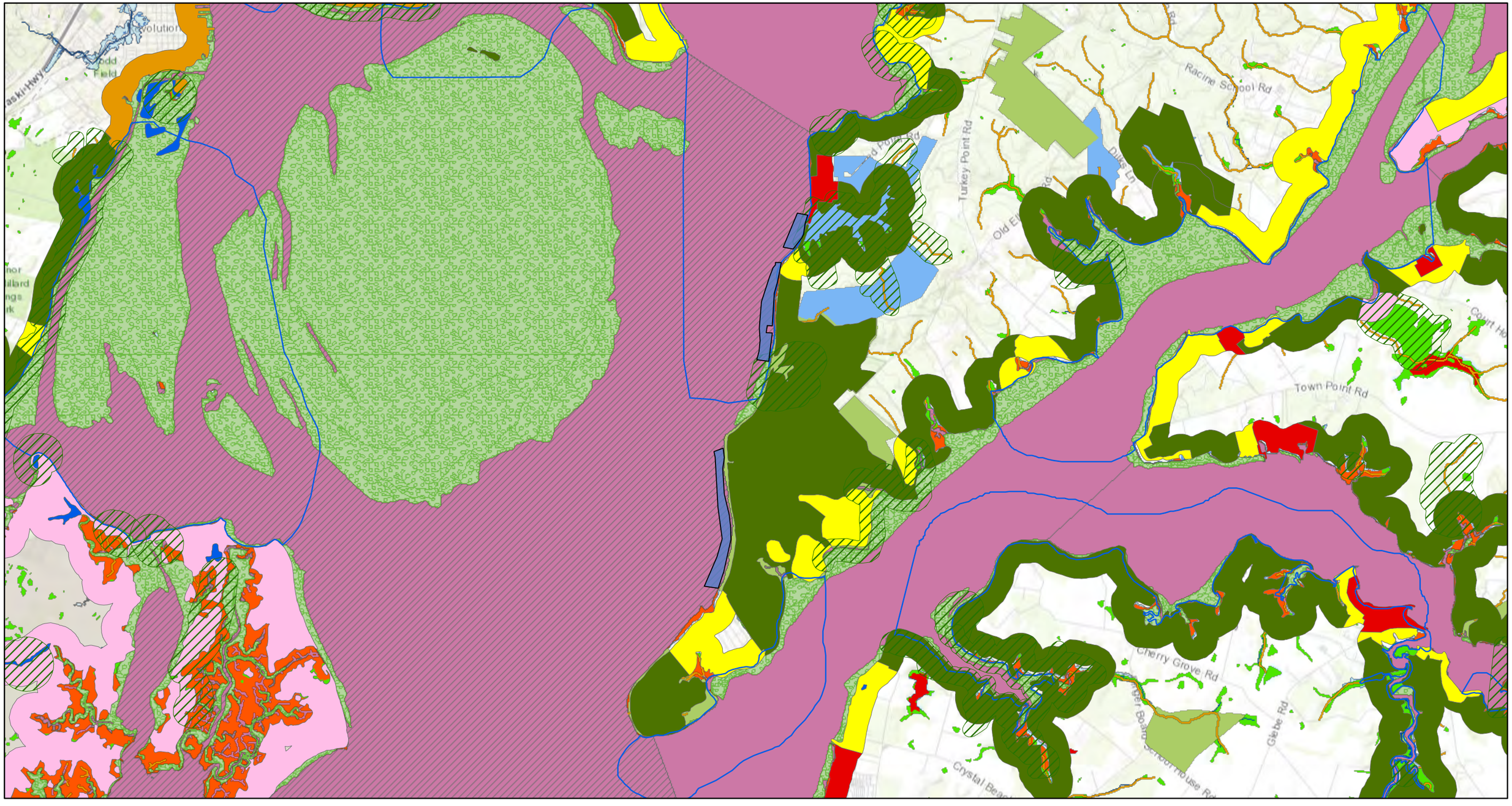
0 0.5 1 2 km

MDE, WSA, Baltimore County Government, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, MD iMAP, DNR, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, Creator:

Web AppBuilder for ArcGIS

Baltimore County Government, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland

SAV Restoration



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Preliminary FEMA Floodplain
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- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)
- SAVRestoration
- Sensitive Species Project Review Areas
- Waterfowl Areas

Critical Areas (Counties)
- Corporate Limit
- Federal Lands
- Intensely Developed Area
- Limited Development Area
- Resource Conservation Area
- Wetland Area
- SAV 2017
- SAV 2018
- SAV 2019
- SAV 2020
- SAV 2021

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

Tidal Waters
- II
- II-P

DNR Owned Lands and Conservation Easements
- DNR Owned Properties
- DNR Owned Properties - Submerged

1:72,224

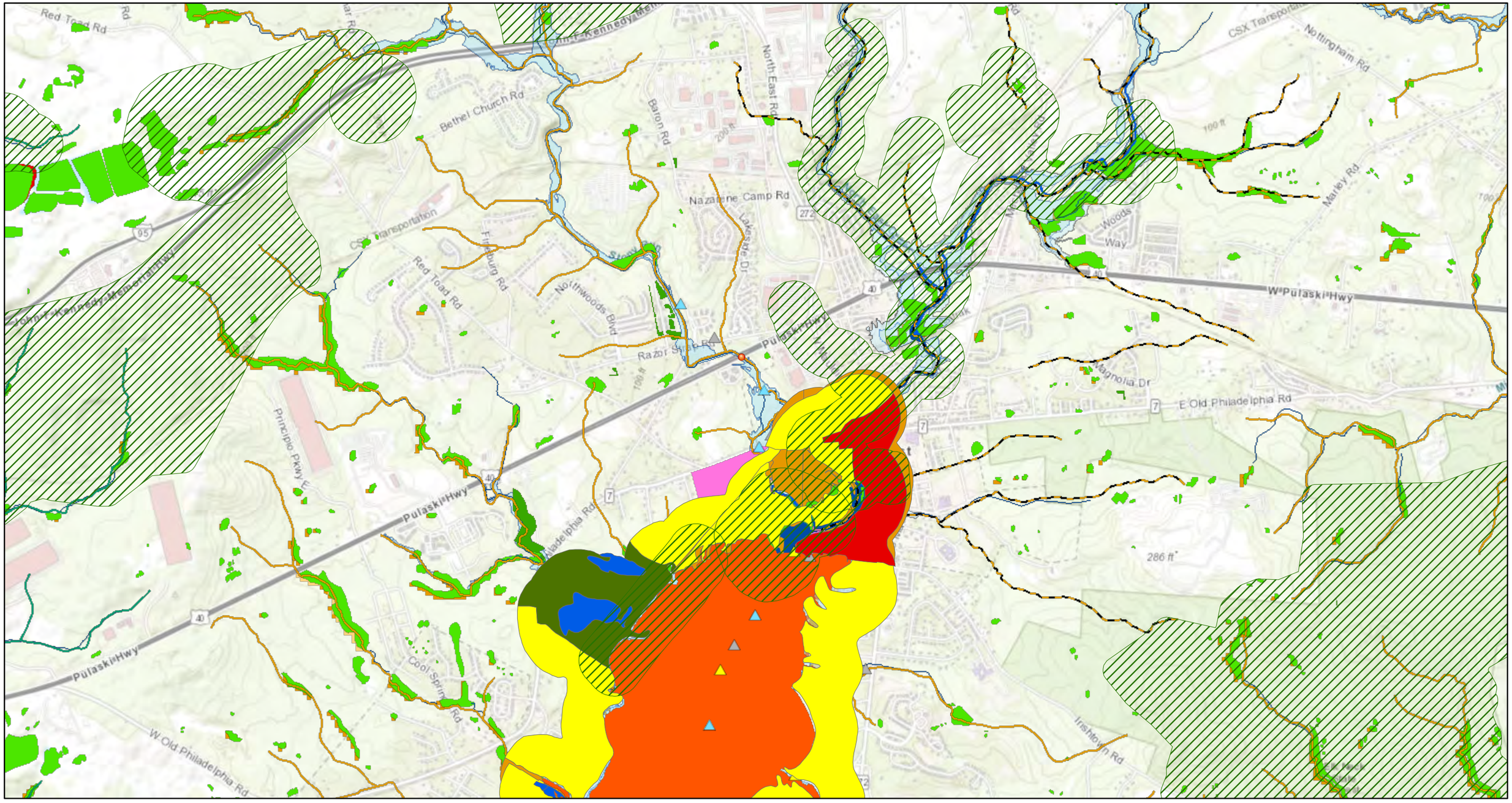
0 0.5 1 2 mi

0 1 2 4 km

MDE, WSA, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, Cecil County, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, Maryland DNR, MD iMAP, MDE

Web AppBuilder for ArcGIS
Cecil County, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of the Environment, Water and

Stony Run Fish Blockage Removal



10/13/2023, 1:15:56 PM

1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

Preliminary FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Sea Level Rise Wetland Adaptation Areas
- High
- Low
- Medium
- Stony Run
- Sensitive Species Project Review Areas

Critical Areas (Towns)
- Intensely Developed Area
- Limited Development Area
- Wetland Area

Critical Areas (Counties)
- Corporate Limit
- Limited Development Area
- Resource Conservation Area
- Wetland Area
- Clupeid
- White Perch
- Yellow Perch

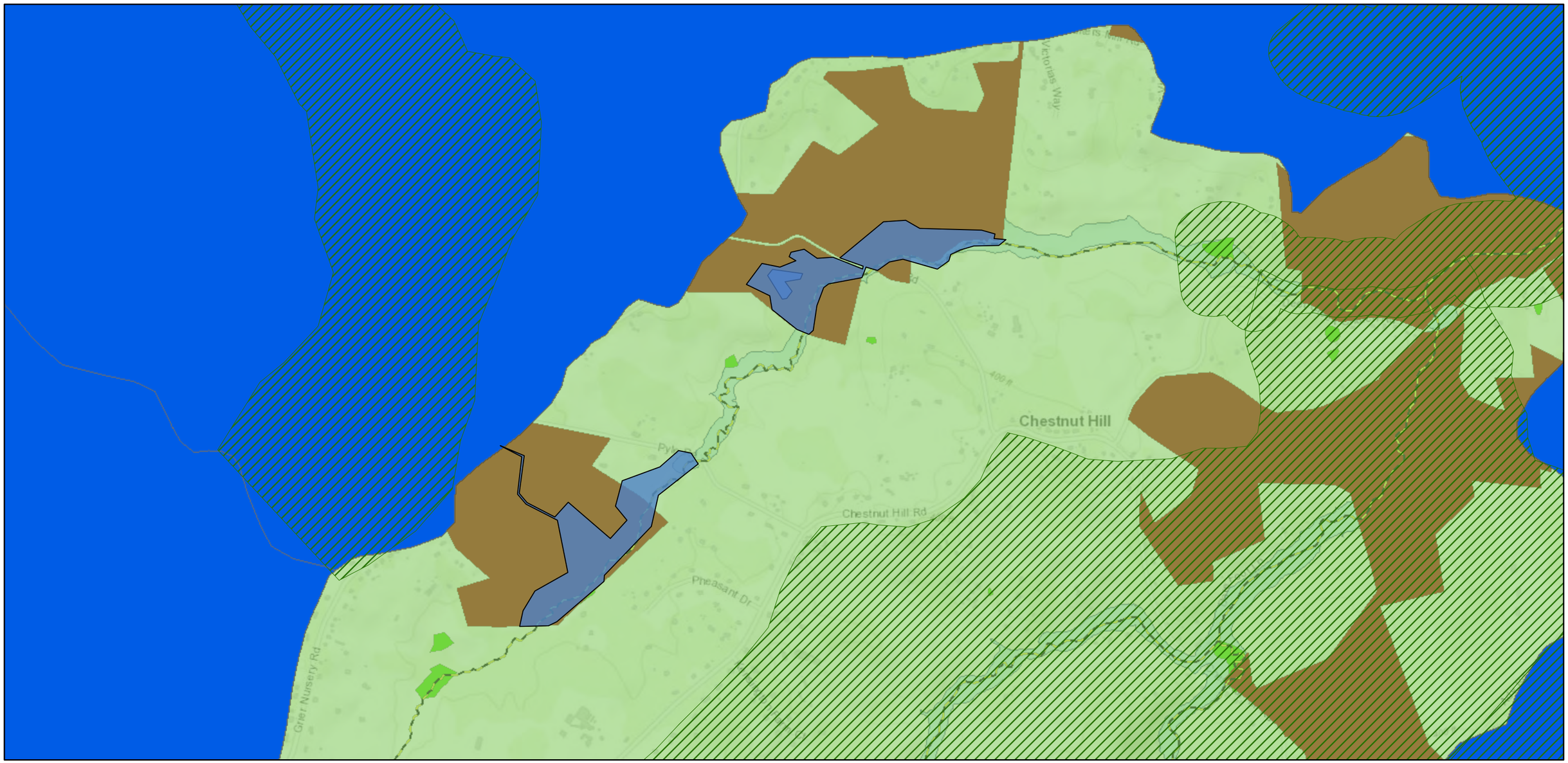
Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P
- Local Protected Lands
- Forest Conservation Act Easements

Wetlands - National Wetlands Inventory
- Estuarine
- Lacustrine
- Marine
- Palustrine
- Riverine

MDE, WSA, MD iMAP, DNR, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, MD iMAP, MDE, Maryland DNR, Fishing and Boating Services, Cecil County, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA,

Web AppBuilder for ArcGIS
Cecil County, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR | Creator: Maryland Department of the Environment, Water and Science

Simons Run Mitigation Site



5/16/2024, 3:05:07 PM

Preliminary FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)

Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
- 500 Year Floodplain (0.2% Chance)
- Floodway (1% Chance)
- Upland (Zone X)
- Simons Run LOD
- Sensitive Species Project Review Areas

Trout Population by Watershed 2017
- Brown or Rainbow Trout Present
- Brook Trout Present

Tier II Catchments 2016
- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining

Rivers and Streams
- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

Transfer Development Rights and Purchase Development Rights
- Transfer Development Rights
- Purchase Development Rights

Wetlands - National Wetlands Inventory
- Estuarine
- Lacustrine
- Marine
- Palustrine
- Riverine

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

MDE, WSA, Baltimore County Government, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, MD iMAP, MDP, MDA, MD iMAP, DNR, USFW, Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA), Maryland DNR, Fishing and

Web AppBuilder for ArcGIS

Baltimore County Government, Harford County Government, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | MD iMAP, MDP, SDAT | MD iMAP, DoIT | MD iMap, DNR | MD iMAP, MDE | MD iMAP, DNR, USFW | MD iMAP, MDP, MDA | MDE, WSA | Maryland DNR- SAV Monitoring Program, Virginia

APPENDIX F: MHT COORDINATION

DOVETAIL
CULTURAL RESOURCE GROUP
Knowing the Past—Building the Future

April 30, 2024
DRAFT

Robert Conway
HNTB Corporation
350 Fifth Avenue
New York, New York 10118

Re: Red Flag Report/Preliminary Cultural Resource Study Review of the Susquehanna River Rail Bridge Wetland Mitigation Areas, Cecil and Harford Counties, Maryland

Dear Robert:

On behalf of HNTB Corporation and in partnership with Coastal Resources, Inc., Dovetail Cultural Resource Group (Dovetail) is completing a background literature and records review of 10 areas related to wetland mitigation associated with the Susquehanna River Rail Bridge replacement project in Cecil and Harford Counties, Maryland. This letter provides preliminary data on potential cultural resource red flag items that could denote risk for the development of the project as noted during the review. The project area includes four terrestrial block areas to create wetland mitigation banks, three creek crossings to be used for fish blocking, and three submerged aquatic vegetation areas in the water. The 10 areas include:

- Holland Branch (W-57/59, S-40/41)= Wetland Block Area
- Pylesville Site (W-33, S-27)= Wetland Block Area
- Ikea Way (S-22)= Wetland Block Area
- Tidal Creek Restoration (WL-12)= Wetland Block Area
- Fish Blockage Removal at Stony Run (F-20)= Creek Crossing
- Fish Blockage Removal at Herring Run (F-21)= Creek Crossing
- Fish Blockage Removal UNT to Northeast Creek (F-23)= Creek Crossing
- SAV Restoration 8= Submerged Aquatic Vegetation (SAV) In-Water Area
- SAV Restoration 9= SAV In-Water Area
- SAV Restoration 10= SAV In-Water Area

The current boundaries of each of these 10 areas together define the "project area" for the purposes of this summary. The Maryland Historical Trust (MHT) online cultural resource information system, Medusa, was reviewed to identify any previously recorded, below- and above-ground resources within and directly adjacent to the project area boundaries.

Background Review Results

Table 1 (p. 6) and Figure 1 through Figure 4 (pp. 7–10) summarize the findings for all 10 areas under study. There is one archaeological site located within the project area and two located adjacent to the project area recorded in Medusa. Site 18CE259, Perry Point I-8, is a Late Woodland (precontact), short-term resource procurement camp that was determined eligible for the National Register of Historic Places (NRHP) by MHT staff and intersects with the Ikea Way (S-22) area. Site 18CE256, Perry Point I-5, is adjacent to the Ikea Way (S-22) area and includes both a Late Archaic- through Woodland-period precontact base camp and an eighteenth-century mill complex that was determined eligible by MHT staff. Finally, site 18CE15, Rodgers Tavern is an eighteenth- through nineteenth-century historic tavern that is adjacent to the Tidal Creek Restoration (WL-12) area and has not been evaluated for the NRHP.

The project area encompasses or intersects the mapped boundaries of seven previously recorded, above-ground resources. Lower Deer Creek Valley Historic District (HA-1551) was listed in the NRHP in 1993. The historic district intersects a stream site (S-40), is adjacent to another stream site (S-41), and intersects a wetland site (W-59). Additionally, Rodger's Tavern (CE-129), which is adjacent to the Tidal Creek Restoration (WL-12) area, was listed in the NRHP in 1972. The Amtrak Railroad Bridge over the Susquehanna River (HA-1712) was determined eligible under Criteria A and C by MHT in 1998 and is adjacent to the Tidal Creek Restoration (WL-12) area. Three of the previously recorded resources were determined not eligible for the NRHP by MHT in 2017. The house at 1958 Trappe Church Road (HA-0322), a two-story, frame dwelling built circa 1900, and the house at 1964 Trappe Church Road (HA-0323), a 1962 ranch dwelling, both intersect a project area stream site (S-41). The John C. and Pearl A. Murphy Farm (HA-2254) also intersects the same stream site (S-41). The final resource is Elk Neck State Park (CE-1529), which opened in 1939 and is adjacent to the three SAV Restoration areas.

Red Flag Issues

In sum, based on the background review, there are five previously recorded historic properties within or directly adjacent to the project area (Table 2, p. 11). This includes one historic district (Lower Deer Creek Valley Historic District [HA-1551]), two built resources (Rodgers Tavern [CE-129] and Amtrak Railroad Bridge over Susquehanna River [HA-1712]), and two archaeological sites (Perry Point I-5 [18CE256] and Perry Point I-8 [18CE259]). In addition, two previously recorded resources have not been formally evaluated by the MHT but may be determined to be significant based on further evaluation: the Rodgers Tavern archaeological site (18CE15) and Elk Neck State Park (CE-1529). These two resources are being included in this red flag analysis due to their high potential to be historic properties once evaluated. This renders a total of seven properties in the project area and adjacent land to be considered during this analysis. The 10 areas that comprise the project area are discussed below relative to these seven resources.

Holland Branch (W-57/59, S-40/41): The NRHP-listed Lower Deer Creek Valley Historic District (HA-1551) intersects project area. Listed in the NRHP in 1993, the district is significant for its association with area settlement patterns and its architectural fabric. Although the limits of disturbance (LOD) for the wetland area is within the district boundaries, due to the nature of the work, the potential for the project to adversely impact this resource is low. It is probable that the effect analysis would result in no adverse effect.

Pylesville Site (W-33, S-27): There are no recorded historic properties within or adjacent to the LOD.

Ikea Way (S-22): There are two previously recorded, eligible archaeological sites within or adjacent to the LOD, including Perry Point I-5 (18CE256) and Perry Point I-8 (18CE259). Perry Point I-5 is currently mapped adjacent to the project area, but the site may extend into the LOD. Perry Point I-8 is within the LOD. Archaeological survey would be warranted on both resources to determine boundaries. If the project cannot avoid or minimize impacts on these two sites, mitigation for adverse effects may be required.

Tidal Creek Restoration (WL-12): There are three resources to be noted within this area. All three are directly adjacent to the LOD but additional study may suggest that their boundaries and viewshed could extend into the current project area. Rodgers Tavern (CE-129) and Amtrak Railroad Bridge over Susquehanna River (HA-1712) are both historic properties while the Rodgers Tavern site (18CE15) has not been evaluated but previous studies on the property suggest intact soils and a high potential for features. Based on the nature of the work, the project would likely have no adverse effect on the two built resources. Archaeological survey would be warranted on site 18CE15 to determine site boundaries and evaluate this resource for the NRHP as part of any future studies.

Fish Blockage Removal at Stony Creek (F-20), Herring Run (F-21), and UNT to Northeast Creek (F-23): There are no recorded historic properties within or adjacent to the LOD.

SAV Restoration 8, SAV Restoration 9, and SAV Restoration 10: The boundaries of Elk Neck State Park (CE-1529) traverse all three areas under consideration. The capacious park comprises 2,188 acres. Opened in 1939, the park contains numerous built resources constructed by the Civilian Conservation Corps, who took advantage of the riverine setting. Due to the nature of the SAV process, it will render no visible above-ground elements or disturb archaeological resources. Although the resource needs to be evaluated for the NRHP and more formal analysis would be required on potential impacts, it is probable that the project would have no adverse effect on this resource.

It should be noted that this preliminary cultural resources study review only provides information on the location of previous work and previously recorded archaeological sites and architectural resources for project planning purposes. It does not serve as the results of

a full Phase I-level identification survey or Phase II/intensive evaluation study. Further work is necessary to identify all cultural resources within the project area, make eligibility recommendations on any identified resources, and assess any potential impacts to identified resources; this work must be coordinated with the MHT (MHT 2018). It is recommended that the client commence regulatory compliance protocols, including initial coordination with the MHT and consulting parties to determine an area of potential effect, once wetland areas are selected.

If you have any questions, please do not hesitate to contact us at (540) 899-9170 or by e-mail at cbetti@dovetailcrg.com/srodriguez@dovetailcrg.com.

Respectfully submitted,

Kerri Barile Tambs, PhD
Principal Investigator

Colleen Betti, PhD
Project Archaeologist

Sarah I. Rodriguez, MA
Historian

Reference

Maryland Historic Trust (MHT)
2018 Maryland Historic Trust Project Review and Compliance Log. Electonric document, https://apps.mht.maryland.gov/compliancelog/ComplianceLog Help.aspx, accessed February 2024.

MD iMAP, DOIT
2017 Maryland 6-inch Imagery 2016/2017. Electronic document, https://geodata.md.gov/imap/services/Imagery/MD_SixInchImagery/ImageServer, accessed April 2024.

Table 1: Summary of Archaeological and Architectural History Resources within or Adjacent to the Project Area Boundaries. Resources shown in **blue** have been determined eligible for the NRHP by MHT staff.

Site No./ MHT No.	Name	Type/Period	NRHP Eligibility Determination
18CE15	Rodgers Tavern	Tavern/18th–19th century	Not Evaluated
CE-129	Rodgers Tavern	Tavern/18th–19th century	Listed (1972)
18CE256	Perry Point I-5	Base Camp, Mill/Late Archaic–Woodland, 18th century	Eligible
18CE259	Perry Point I-8	Procurement Camp/Late Woodland	Eligible
CE-1529	Elk Neck State Park	State park/1939	Not Evaluated
HA-1551	Lower Deer Creek Valley Historic District	Historic district/mid-1700s to 1940s	Listed (1993)
HA-2254	John C. and Pearl A. Murphy Farm	Farm parcel with above-ground resources/20th century	Not Eligible
DOE-HA-0322	1958 Trappe Church Road	Two-story frame house/ca. 1900	Not Eligible
DOE-HA-0323	1964 Trappe Church Road	Ranch house/1962	Not Eligible
HA-1712	AMTRAK Railroad Bridge over Susquehanna River	Steel railroad bridge/1906	Eligible

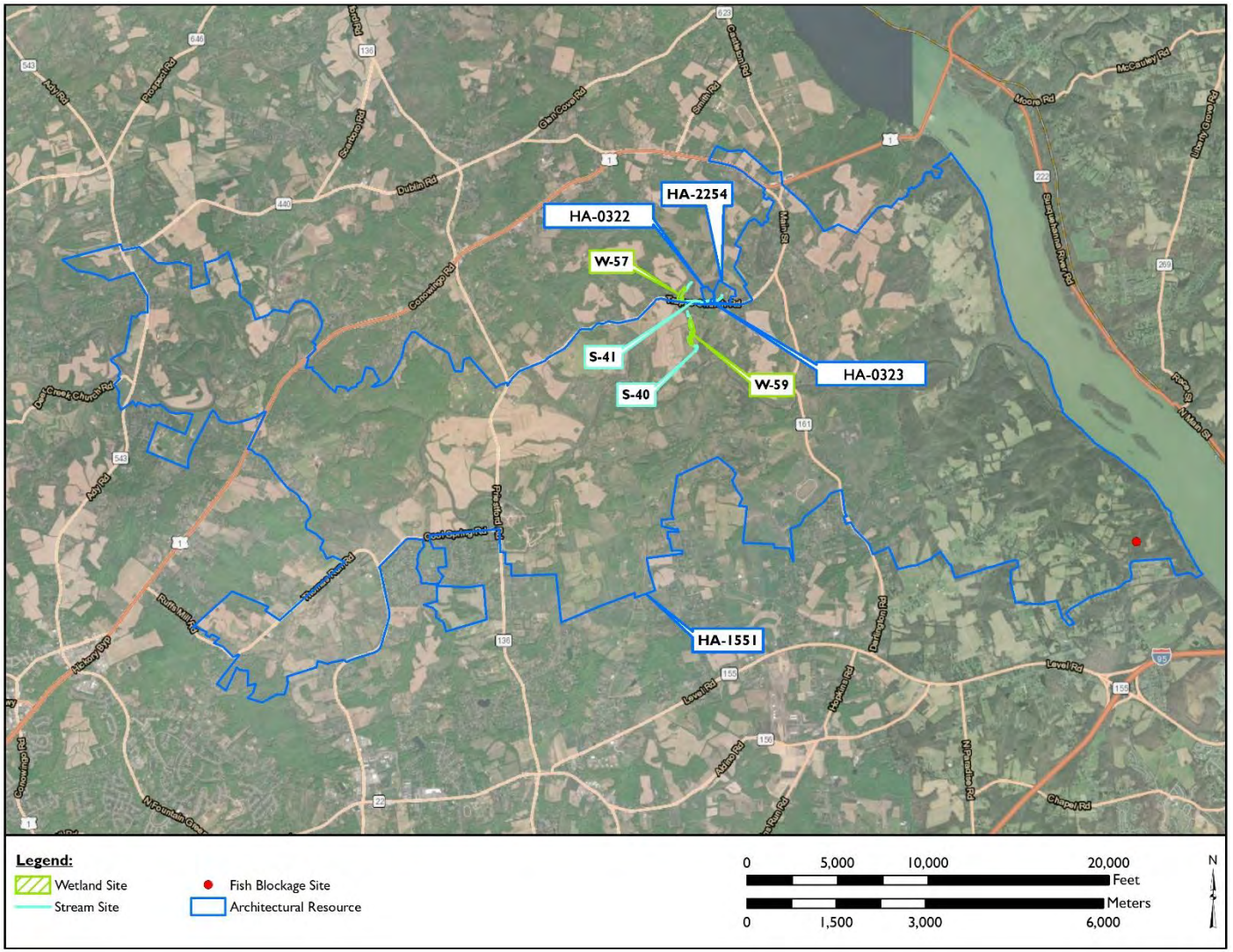


Figure 1: Map of Holland Branch Wetland Area (W-57/59, S-40/41) and Previously Recorded Resources (MD iMAP, DOIT 2017).

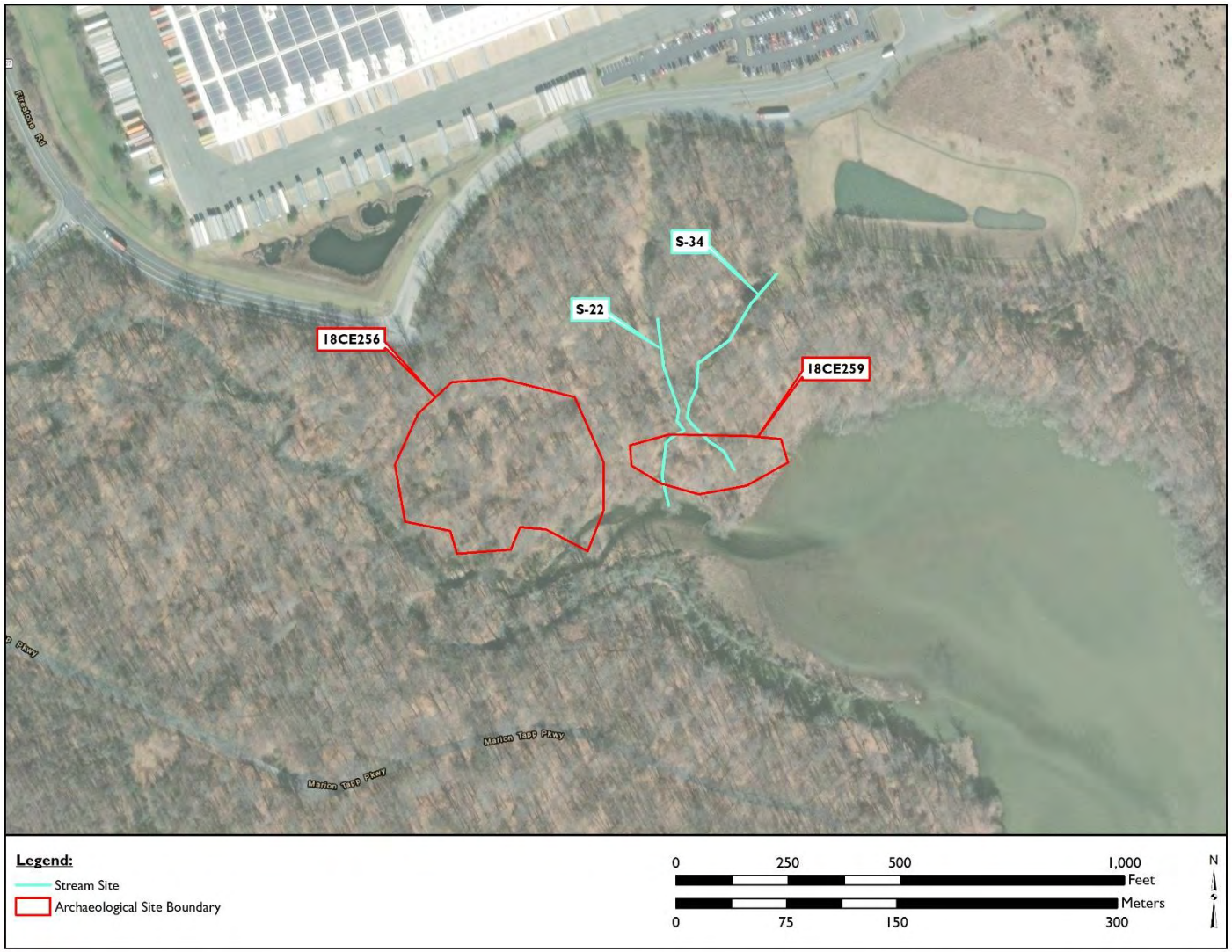


Figure 2: Map of Ikea Way Wetland Area (S-22) and Previously Recorded Resources (MD iMAP, DOIT 2017).

Figure 3: Map of Tidal Creek Restoration Area (WL-12) and Previously Recorded Resources (MD iMAP, DOIT 2017).

Figure 4: Map of SAV Restoration 8, SAV Restoration 9, SAV Restoration 10, and Previously Recorded Resources (MD iMAP, DOIT 2017).

Table 2: Red Flag Analysis Per Wetland Area Under Consideration.

Area	Survey or Resource Type	Project or Resource Name	Description	Eligible/ Listed	Location Relative to Project Area	Red Flags or Impacts on Current Project
Holland Branch (W-59, S-40, S-41)	Architectural resource HA-1551	Lower Deer Creek Valley Historic District	Historic district in Harford County with standing buildings, primarily consisting of churches, houses, mills, and schoolhouses, dating from the mid 1700s to the 1940s	Listed	Intersects project area. Listed in the National Register of Historic Places (NRHP) in 1993.	A historic property in the area of potential effects (APE); Will need to evaluate project effect but likely no adverse depending on construction activities
Holland Branch (S-41)	Architectural resource HA-0322	1958 Trappe Church Road	Two-story frame house built circa 1900 that may have housed farmers, renters, or children of original owners	Not Eligible	Intersects project area. Determined not eligible by MHT in 2017.	None
Holland Branch (S-41)	Architectural resource HA-0323	1964 Trappe Church Road	Ranch-style dwelling constructed in 1962 in Harford County	Not Eligible	Intersects project area. Determined not eligible by MHT in 2017.	None
Holland Branch (S-41)	Architectural resource HA-2254	John C. and Pearl A. Murphy Farm	23.86-acre farm parcel containing a 1936 frame house, two outbuildings made of stone, a garage, and two metal-clad agricultural buildings dating to the late 1900s	Not Eligible	Intersects project area. Determined not eligible by MHT in 2017.	None
Ikea Way (S-22)	Archaeological site 18CE256	Perry Point I-5	Late Archaic through Woodland-period base camp and a mill complex from the third to fourth quarter of the eighteenth century that includes an associated residence	Eligible	Adjacent to, but not intersecting with, the project area. Site has never been plowed or disturbed. Determined eligible by MHT in 1989.	Archaeological survey will be required. Should the site extend into the limits of disturbance, mitigation may be required.
Ikea Way (S-22)	Archaeological site 18CE259	Perry Point I-8	Late Woodland-period short-term resource procurement camp	Eligible	Intersects project area. Site has never been plowed or disturbed. Determined eligible by MHT in 1989.	Archaeological studies will be required as this historic property intersects project area. Mitigation may be required.

Area	Survey or Resource Type	Project or Resource Name	Description	Eligible/ Listed	Location Relative to Project Area	Red Flags or Impacts on Current Project
Tidal Creek Restoration (WL-12)	Archaeological site 18CE15	Rodgers Tavern, Stevenson's Tavern	Eighteenth and nineteenth century historic tavern site	Not Evaluated	Adjacent to, but not intersecting with, the project area.	Archaeological survey will be required. Should the site extend into the limits of disturbance, mitigation may be required.
Tidal Creek Restoration (WL-12)	Architectural resource CE-129	Rodgers Tavern	Eighteen century historic tavern building	Listed	Adjacent to, but not intersecting with project area. Listed in the NRHP in 1972.	A historic property in the APE; Will need to evaluate project effect but likely no adverse depending on construction activities
Tidal Creek Restoration (WL-12)	Architectural resource HA-1712	Amtrak Railroad Bridge over Susquehanna River	Steel railroad bridge with stone piers dating to 1906 over the Susquehanna River	Eligible	Adjacent to, but not intersecting with project area. Determined eligible for Criteria A and C by MHT in 1998.	A historic property in the APE; Will need to evaluate project effect but likely no adverse depending on construction activities
SAV-8, SAV-9, and SAV-10	Architectural resource CE-1529	Elk Neck State Park	2,188-acre state park that opened in 1939 and contains Civilian Conservation Corps (CCC) recreational buildings	Not Evaluated	Adjacent to, but not intersecting with, the project area. Documented by MHT in 2003.	A historic property in the APE; Will need to evaluate project effect but likely no adverse depending on construction activities

APPENDIX G: ADJACENT PROPERTY OWNER TABLES

SIMONS RUN SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1303041794	FOREST HILL, MD 21050	GRAFTON MARTHA LEE	3019 GRIER NURSERY RD, FOREST HILL, MD 21050
1303054616	803 WALTERS MILL RD, FOREST HILL, MD 21050	BAKER BRITTANY	803 WALTERS MILL RD, FOREST HILL, MD 21050
1303055213	811 WALTERS MILL RD, FOREST HILL, MD 21050	NOONKESTER VELMA L	811 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303137090	801 WALTERS MILL RD, FOREST HILL, MD 21050	OREM ANGELA G ET AL	801 WALTERS MILL RD, FOREST HILL, MD 21050
1303143902	729 WALTERS MILL RD, FOREST HILL, MD 21050	CHENOWITH KEVIN	729 WALTERS MILL RD, FOREST HILL, MD 21050
1303168395	727 WALTERS MILL RD, FOREST HILL, MD 21050	MARSTON DIANNA L	727 WALTERS MILL RD, FOREST HILL, MD 21050
1303254623	3005 VICTORIAS WAY, FOREST HILL, MD 21050	SEXTON DAVID J	3005 VICTORIAS WAY, FOREST HILL, MD 21050
1303267326	953 WALTERS MILL RD, FOREST HILL, MD 21050	WURTZBURGER CYNTHIA ANN	953 WALTERS MILL RD, FOREST HILL, MD 21050
1303275744	RD, FOREST HILL, MD 21050	JONES HENRY T	2931 GRIER NURSERY RD, FOREST HILL, MD 21050
1303280683	723 PYLE RD, FOREST HILL, MD 21050	RUPPERT LISA C	723 PYLE RD, FOREST HILL, MD 21050
1303029859	RD, FOREST HILL, MD 21050	BAYNE RUTH J L, BAYNE JANET LEE	PO BOX 31, FOREST HILL, MD 21050
1303254615	3007 VICTORIAS WAY, FOREST HILL, MD 21050	BECKNER JASON, BECKNER JENNIFER	3007 VICTORIAS WAY, FOREST HILL, MD 21050
1303279014	617 WALTERS MILL RD, FOREST HILL, MD 21050	CARMELLO ANDREW D, CARMELLO KELLY	617 WALTERS MILL RD, FOREST HILL, MD 21050
1303254682	3002 VICTORIAS WAY, FOREST HILL, MD 21050	CONNER GLENN W, CONNER DOROTHY A	3002 VICTORIA'S WAY, FOREST HILL, MD 21050
1303033732	723 WALTERS MILL RD, FOREST HILL, MD 21050	DALTON KENNETH R, DALTON ELSIE R	723 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303242668	FOREST HILL, MD 21050	DAMSGAARD ROBERT JR, DAMSGAARD ANN M	713 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303280896	689 PYLE RD, FOREST HILL, MD 21050	L, DE BAUGH SARAH JONES	689 PYLE RD, FOREST HILL, MD 21050
1303094693	731 WALTERS MILL RD, FOREST HILL, MD 21050	CHANDLER, DOWNES JESSICA LAUREN ETAL	C/O CAROL WHITE, 8348 NEWARK ROAD, NEWARK, MD 21841
1303279022	619 WALTERS MILL RD, FOREST HILL, MD 21050	GALLANT-GAGNON HEATHER L	619 WALTERS MILL RD, FOREST HILL, MD 21050
1303029875	RD, FOREST HILL, MD 21050	MICHAEL A, GROSSNICKLE JANET	PO BOX 103, FOREST HILL, MD 21050

SIMONS RUN SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1303043525	3012 WARD RD, FOREST HILL, MD 21050	HARKINS JOHN W, HARKINS MARGARET	3012 WARD RD, FOREST HILL, MD 21050
1303268268	3026 WARD RD, FOREST HILL, MD 21050	HARWARD WALLACE A, HARWARD TAMBRIA A	PO BOX 600, FOREST HILL, MD 21050
1303267288	959 WALTERS MILL RD, FOREST HILL, MD 21050	HIPPLER CHARLES T, HIPPLER GAIL L	959 WALTERS MILL RD, FOREST HILL, MD 21050
1303046850	CHURCH RD, FOREST HILL, MD 21050	MERRYMAN, JOHNSON VALERIE J	900 DEER CREEK CHURCH RD, FOREST HILL, MD 21050
1303254631	3003 VICTORIAS WAY, FOREST HILL, MD 21050	GIRARD KRISTEN, JONES ROBERT E	3003 VICTORIAS WAY, FOREST HILL, MD 21050
1303249778	700 PHEASANT DR, FOREST HILL, MD 21050	MARRAPODI LOUIS J JR, MARRAPODI DIANE E	700 PHEASANT DRIVE, FOREST HILL, MD 21050
1303249840	714 PHEASANT DR, FOREST HILL, MD 21050	M JR, MEZZANOTTE LAURA L	714 PHEASANT DRIVE, FOREST HILL, MD 21050
1303267261	961 WALTERS MILL RD, FOREST HILL, MD 21050	OCHAB EDWARD A III, OCHAB KAREN LYNN	961 WALTERS MILL RD, FOREST HILL, MD 21050
1303267296	957 WALTERS MILL RD, FOREST HILL, MD 21050	PEARCE DAVID SCOTT, PEARCE PATRICIA ANN	957 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303267318	955 WALTERS MILL RD, FOREST HILL, MD 21050	CYNTHIA ANN, RINES GRANT A JR	953 WALTERS MILL RD, FOREST HILL, MD 21050
1303249751	701 PHEASANT DR, FOREST HILL, MD 21050	ROHE JOSEPH T, ROHE JEANNE M	701 PHEASANT DRIVE, FOREST HILL, MD 21050
1303249816	708 PHEASANT DR, FOREST HILL, MD 21050	ROSAS DAVID M, ROSAS JEANNE M	708 PHEASANT DRIVE, FOREST HILL, MD 21050
1303279030	621 WALTERS MILL RD, FOREST HILL, MD 21050	SEDLER MICHAEL C, SEDLER LAUREN W	621 WALTERS MILL RD, FOREST HILL, MD 21050
1303254607	3009 VICTORIAS WAY, FOREST HILL, MD 21050	SHIFFLETT MARK A, SHIFFLETT CYNTHIA L	3009 VICTORIA'S WAY, FOREST HILL, MD 21050
1303267342	FOREST HILL, MD 21050	WILLARD, SIMMONS ROSA LEE	817 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303249786	702 PHEASANT DR, FOREST HILL, MD 21050	STEWART JOSEPH K JR, STEWART CHERYL L	702 PHEASANT DRIVE, FOREST HILL, MD 21050
1303249808	706 PHEASANT DR, FOREST HILL, MD 21050	TOBIN GERARD, TOBIN ANN	706 PHEASANT DRIVE, FOREST HILL, MD 21050
1303267253	963 WALTERS MILL RD, FOREST HILL, MD 21050	VEDRAL DAVID B, TRESS VICTORIA J	963 WALTERS MILL ROAD, FOREST HILL, MD 21050
1303249794	704 PHEASANT DR, FOREST HILL, MD 21050	WASKIEWICZ MICHAEL, WASKIEWICZ MICHELE	704 PHEASANT DR, FOREST HILL, MD 21050
1303254666	3001 VICTORIAS WAY, FOREST HILL, MD 21050	WILHELM WILLIAM, WILHELM KATHLEEN	3001 VICTORIAS WAY, FOREST HILL, MD 21050

SIMONS RUN SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1303249832	712 PHEASANT DR, FOREST HILL, MD 21050	AMASIA ANDREW D, WILHELM SHELBI	712 PHEASANT DR, FOREST HILL, MD 21050

PYLESVILLE SITE ADJACENT PROPERTY OWNERS			
ACCTID	**ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1305003539	626 WHEELER SCHOOL RD, WHITEFORD, MD 21160	JACKSON SCOTT C, JACKSON LISA M	626 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305008255	634 WHEELER SCHOOL RD, WHITEFORD, MD 21160	POTEET JAMES SCOTT, POTEET CYNTHIA ENFIELD	634 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305016800	4307 JENKINS RD, WHITEFORD, MD 21160	KLAUS WILLIAM M, KLAUS JUDITH A	4307 JENKINS RD, PYLESVILLE, MD 21132
1305023084	612 WHEELER SCHOOL RD, WHITEFORD, MD 21160	KOERMER GEORGE E SR, KOERMER PATRICIA E ETAL	612 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305032989	638 WHEELER SCHOOL RD, WHITEFORD, MD 21160	POTEET RICHARD SCOTT, POTEET CYNTHIA ENFIELD	634 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305039436	630 WHEELER SCHOOL RD, WHITEFORD, MD 21160	BLADES JOHN G JR, BLADES EVELYN S	618 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305043816	721 WHEELER SCHOOL RD, WHITEFORD, MD 21160	ENFIELD RICHARD H ETAL	3951 STREET RD, STREET, MD 21154
1305046815	717 WHEELER SCHOOL RD, WHITEFORD, MD 21160	ABOUT FACE SOLUTIONS LLC	C/O BRANDON JONES, PO BOX 13, WHITEFORD, MD 21160
1305052009	590 WHEELER SCHOOL RD, WHITEFORD, MD 21160	KOERMER CHRISTOPHER T SR, KOERMER DEBORAH D	590 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305052017	594 WHEELER SCHOOL RD, WHITEFORD, MD 21160	CROGAN MICHAEL W JR, CROGAN DONNA A	594 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305052025	622 WHEELER SCHOOL RD, WHITEFORD, MD 21160	ZDON JOHN F JR, ZDON SHARON M	622 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305052033	618 WHEELER SCHOOL RD, WHITEFORD, MD 21160	BLADES JOHN G JR, BLADES EVELYN S	PO BOX 128, WHITEFORD, MD 21160
1305052041	614 WHEELER SCHOOL RD, WHITEFORD, MD 21160	ZDON WALTER JR, ZDON KATHERINE R S	614 WHEELER SCHOOL RD, WHITEFORD, MD 21160
1305065429	711 WHEELER SCHOOL RD, WHITEFORD, MD 21160	SCHWARTZ BERNARD J, SCHWARTZ CAROL	711 WHEELER SCHOOL RD, WHITEFORD, MD 21160

HOLLANDS BRANCH SITE ADJACENT PROPERTY OWNERS			
ACCOUNT ID	**PREMISE ADDRESS**	**OWNER**	**OWNER ADDRESS**
1305000270	3180 DETHS FORD RD, DARLINGTON, MD 21034	MILLER HARMONY A	3180 DETHS FORD RD, DARLINGTON, MD 21034
1305004926	1950 TRAPPE CHURCH RD, DARLINGTON, MD 21034	KIDWELL WILLIAM A	1950 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305004934	1954 TRAPPE CHURCH RD, DARLINGTON, MD 21034	RODEN VICTORIA	1954 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305016169	1839 TRAPPE CHURCH RD, DARLINGTON, MD 21034	ADAMS THOMAS LUTHER IV	3320 LEVEL RD, CHURCHVILLE, MD 21028
1305017394	1128 MAIN ST, DARLINGTON, MD 21034	HARVEYS REST LLC	1128 MAIN ST, DARLINGTON, MD
1305019389	1957 TRAPPE CHURCH RD, DARLINGTON, MD 21034	COHEN STUART A, COHEN PAMELA G	1957 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305019397	2020 TRAPPE CHURCH RD, DARLINGTON, MD 21034	GALLOWAY CHARLES GORDON, GALLOWAY	2020 TRAPPE CHURCH ROAD, DARLINGTON, MD 21034
1305019400	2010 TRAPPE CHURCH RD, DARLINGTON, MD 21034	DUDECK GARY J, DUDECK CANDY K	2010 TRAPPE CHURCH ROAD, DARLINGTON, MD 21034
1305019419	2004 TRAPPE CHURCH RD, DARLINGTON, MD 21034	ROBINSON JOHN L, ROBINSON DOROTHY I	2000 TRAPPE CHURCH ROAD, DARLINGTON, MD 21034
1305023173	3100 DETHS FORD RD, DARLINGTON, MD 21034	BOWMAN LAWRENCE A, BOWMAN ELIZABETH A	3334 CHURCHVILLE RD, ABERDEEN, MD 21001
1305026105	3121 E NOBLES MILL RD, DARLINGTON, MD 21034	NORLING RICHARD D	PO BOX 5850, DARLINGTON, MD 21034
1305026385	3160 DETHS FORD RD, DARLINGTON, MD 21034	DRIVER KIMBERLY A, DRIVER MARK J	3160 DETHS FORD RD, DARLINGTON, MD 21034
1305027500	1975 TRAPPE CHURCH RD, DARLINGTON, MD 21034	MILLER COURTNEY L	1975 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305027799	2100 TRAPPE CHURCH RD, DARLINGTON, MD 21034	HOWE RICHARD S, HOWE JANE N	2100 TRAPPE CHURCH ROAD, DARLINGTON, MD 21034
1305041570	3172 DETHS FORD RD, DARLINGTON, MD 21034	NUNN JOHN G JR, NUNN ANDREA F	3172 DETHS FORD RD, DARLINGTON, MD 21034
1305044952	DARLINGTON, MD 21034	BECKER CHAD F	2226 HISTORIC DR, FOREST HILL, MD 21050
1305053323	3134 DETHS FORD RD, DARLINGTON, MD 21034	GLENVIEW FAMILY FARM LLC	1973 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305055164	1986 TRAPPE CHURCH RD, DARLINGTON, MD 21034	GLENVIEW FAMILY FARM LLC	1973 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305057094	3136 DETHS FORD RD, DARLINGTON, MD 21034	GLENVIEW FAMILY FARM LLC	C/O COURTNEY L MILLER, 1973 TRAPPE CHURCH ROAD, DARLINGTON, MD 21034
1305057108	3138 DETHS FORD RD, DARLINGTON, MD 21034	GLENVIEW FAMILY FARM LLC	1973 TRAPPE CHURCH RD, DARLINGTON, MD 21034
1305057116	3140 DETHS FORD RD, DARLINGTON, MD 21034	GLENVIEW FAMILY FARM LLC	1973 TRAPPE CHURCH RD, DARLINGTON, MD 21034

HOLLANDS BRANCH SITE ADJACENT PROPERTY OWNERS			
ACCOUNT ID	**PREMISE ADDRESS**	**OWNER**	**OWNER ADDRESS**
1305061911	2111 WINSTONE CT, DARLINGTON, MD 21034	RICHARDSON LAURA B	2111 WINSTONE CT, DARLINGTON, MD 21034
1305061938	2113 WINSTONE CT, DARLINGTON, MD 21034	KOHLHEPP EDWARD N, KOHLHEPP DEBRA A SCHINDLER	2113 WINSTONE CT, DARLINGTON, MD 21034
1305061946	2115 WINSTONE CT, DARLINGTON, MD 21034	BURNETT DONALD J, BURNETT SUSAN W	2115 WINSTONE CT, DARLINGTON, MD 21034
1305061954	2117 WINSTONE CT, DARLINGTON, MD 21034	PATRICK JOHN J, PATRICK DENISE R	2117 WINSTONE CT, DARLINGTON, MD 21034
1305061962	2119 WINSTONE CT, DARLINGTON, MD 21034	MOORE DAVID H, MOORE CARLEEN A TRUSTEES	2119 WINSTONE CT, DARLINGTON, MD 21034
1305396809	3145 E NOBLES MILL RD, DARLINGTON, MD 21034	GARDNER REBECCA P HALL	3145 NOBLES MILL ROAD, DARLINGTON, MD 21034

STONY RUN SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNNAME1**	**OWNER ADDRESS**
805012058	382 RAZOR STRAP RD, NORTH EAST, MD 21901	AYRES R HOWARD - LIFE ESTATE, AYRES DAVID H	27 CANTERBURY CT, NORTH EAST, MD 21901
805014581	2593 PULASKI HWY, NORTH EAST, MD 21901	DELUXE APARTMENTS LLC	412 RAZOR STRAP RD, COLORA, MD 21917
805034140	412 RAZOR STRAP RD, NORTH EAST, MD 21901	CRAMPTON KRISTINA, JONES GREGORY	1777 REISTERSTOWN RD, SUITE 165, NORTH EAST, MD 21901
805037611	NORTH EAST, MD 21901	DK NE STATION INC	2648 PULASKI HWY, BALTIMORE, MD 21208
805047102	2658 W PULASKI HWY, NORTH EAST, MD 21901	ROSENBERG SHARON LEE	2648 PULASKI HWY, NORTH EAST, MD 21901
805050715	2592 PULASKI HWY, NORTH EAST, MD 21901	ROSENBERG SHARON LEE	20 CORNFLOWER CIRCLE, NORTH EAST, MD 21901
805093120	468 RAZOR STRAP RD, NORTH EAST, MD 21901	LEGACY GROUP II LLC	1777 REISTERSTOWN RD STE 165, CONOWINGO, MD 21918
805110076	NORTH EAST, MD 21901	DK NORTH EAST STATION LLC	BALTIMORE, MD 21208

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1302101130	HAVRE DE GRACE, MD 21001	CSX TRANSPORTATION INC	500 WATER ST J-910, JACKSONVILLE, FL 32202
1302103613	36 ROCK GLENN RD, HAVRE DE GRACE, MD 21078	TURNER EBONY, TURNER MC KINNEY III	36 ROCK GLENN RD, HAVRE DE GRACE, MD 21078
1302103907	38 ROCK GLENN RD, HAVRE DE GRACE, MD 21078	SURANY ANDREW P, SURANY EMILY E	38 ROCK GLENN RD, HAVRE DE GRACE, MD 21078
1302103915	40 ROCK GLENN RD, HAVRE DE GRACE, MD 21078	BROOKS SHALAMA N	40 ROCK GLENN RD, HAVRE DE GRACE, MD 21078
1302103923	HAVRE DE GRACE, MD 21078	GREENS AT ROCK GLENN HOMEOWNERS ASSOCIATION INC	C/O MRA PROP MANAGEMENT, 3435 BOX HLL CORP CTR DR STE G, ABINGDON, MD 21009
1306005969	1811 PULASKI HWY, HAVRE DE GRACE, MD 21078	BLENHEIM LLC	650 S EXETER ST STE 200, BALTIMORE, MD 21202
1306006450	1751 PULASKI HWY, HAVRE DE GRACE, MD 21078	MID-ATLANTIC COOPERATIVE, SOLUTIONS INC	C/O AERO ENERGY, 230 LINCOLN WAY E, NEW OXFORD, PA 17350
1306007759	2100 SHERWOOD LN, HAVRE DE GRACE, MD 21078	NOVAK MICHAEL J, NOVAK DIANE G	2100 SHERWOOD LN, HAVRE DE GRACE, MD 21078
1306007945	2110 SHERWOOD LN, HAVRE DE GRACE, MD 21078	JANUSZKIEWICZ RICHARD J SR	2110 SHERWOOD LN, HAVRE DE GRACE, MD 21078
1306064272	HAVRE DE GRACE, MD 21079	CSX TRANSPORTATION INC	500 WATER ST J-910, JACKSONVILLE, FL 32202
1306064574	HAVRE DE GRACE, MD 21080	CSX TRANSPORTATION INC	500 WATER ST J-910, JACKSONVILLE, FL 32202
1306064663	HAVRE DE GRACE, MD 21081	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306065635	413 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LESTER MARC ANTHONY, LESTER SHANA CECILIA	413 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065643	415 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	BASIAGA LEON, BASIAGA CAROLYN	415 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065651	417 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	FRANCISCHETTI CARL J, FRANCISCHETTI DOLORES E	417 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065678	419 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	SHREFFLER CARLA	419 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065686	421 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	ELLIOTT-ARMSTRONG MARY ELIZABETH	421 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306065694	423 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	WRIGHT JOHN S, SINCLAIR CHERYL R	423 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065708	425 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MULLANEY BERNARD J, MULLANEY IVA J	425 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065716	427 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	WARD KENT L, TARPLEY-WARD ALFREDA M	427 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065724	429 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	DOVIDAITIS TRACY	429 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065732	431 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	VAGNONI RICHARD J, VAGNONI LILLIAN M	431 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065740	433 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	TOMARCHIO SEBASTIANO N, TOMARCHIO LINDA L	433 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065759	435 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	WANG ZHENG	PO BOX 152, MC LEAN, VA 22101
1306065791	HAVRE DE GRACE, MD 21082	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306065821	437 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	GOSNELL JOHN R JR	437 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065848	439 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	FEINBERG RICHARD L, FEINBERG M SUZANNE	439 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065856	441 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LABHART RONALD	441 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065864	443 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	ROTHWELL CHARLA M TRUSTEE	443 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065872	445 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	FERGUSON RODNEY T	535 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306065880	447 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MOSS JAMESHEIA, ANDREWS MATTHEW	447 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306065899	449 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	HSU CELIA SHAO-CHIN, HSU YAO KING	449 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065902	451 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LUKASAVAGE PETER J	451 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065910	453 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	BOEHM GILES, BOEHM TEKJA	453 MAJESTIC PRINC CIR, HAVRE DE GRACE, MD 21078
1306065929	455 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MAK THOMAS Y, DING GIGI	455 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065937	457 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	GRAYBEAL KATHRYN M	457 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065945	459 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	HARMS JOE T, HARMS DIANE A	459 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306065953	461 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	SCHOEPE HERMAN D, SCHOEPE DOLORES L TRUSTEES	461 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066232	HAVRE DE GRACE, MD 21083	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306066364	401 GRANVILLE CT, HAVRE DE GRACE, MD 21078	WELLER KEITH C, WELLER JANICE V	401 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066372	403 GRANVILLE CT, HAVRE DE GRACE, MD 21078	JOHNSON ANDRE J	403 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066380	405 GRANVILLE CT, HAVRE DE GRACE, MD 21078	JGB LIVING TRUST THE	405 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066399	407 GRANVILLE CT, HAVRE DE GRACE, MD 21078	PIPITONE E JOHN, PIPITONE KAREN A	407 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066402	409 GRANVILLE CT, HAVRE DE GRACE, MD 21078	SMITH PHILIP B III, SMITH LESLIE J	409 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066410	411 GRANVILLE CT, HAVRE DE GRACE, MD 21078	BRUECKNER DANIEL, PRICE-BRUECKNER EBONY C	C/O CMR 467 BOX 1105, APO, AE 9096
1306066429	413 GRANVILLE CT, HAVRE DE GRACE, MD 21078	SHIELDS RANDALL A, SHIELDS KATY B	413 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066437	415 GRANVILLE CT, HAVRE DE GRACE, MD 21078	FOSTER KAREN S ETAL	4802 WATER PARK DR, BELCAMP, MD 21017
1306066445	417 GRANVILLE CT, HAVRE DE GRACE, MD 21078	BUCKLEY MARK ALAN, BUCKLEY WENDY STONE	417 GRANVILLE CT, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306066453	419 GRANVILLE CT, HAVRE DE GRACE, MD 21078	MC CONNELL ANDRE, MC CONNELL PORTIA	419 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066461	421 GRANVILLE CT, HAVRE DE GRACE, MD 21078	JENKINS CHRISTY A	421 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066488	423 GRANVILLE CT, HAVRE DE GRACE, MD 21078	AWODELE TAYO	423 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066496	425 GRANVILLE CT, HAVRE DE GRACE, MD 21078	BRADLEY KATHLEEN D TRUSTEE	425 GRANVILLE CT, HAVRE DE GRACE, MD 21078
1306066518	427 GRANVILLE CT, HAVRE DE GRACE, MD 21078	GERLACH YANG W	3022 HARTRIDGE TER, WELLINGTON, FL 33414
1306066526	429 GRANVILLE CT, HAVRE DE GRACE, MD 21078	DENNISON THOMAS, DENNISON KATHY M	429 GRANSVILLE CT, HAVRE DE GRACE, MD 21078
1306066534	401 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LERTCH JOSEPH F III, CRONIN SUZANNE E	401 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066542	403 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	KOH SHAWN, KOH KISUNG	11163 WILLOW GREEN WAY, MARRIOTTSVILLE, MD 21104
1306066550	405 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	FLEMING ANNE M ETAL	405 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066569	407 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	CLARK JOSEPH W, CLARK GERALDINE L	407 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066577	409 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	ORLICKI JOSHUA A	409 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066585	411 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	TSELEPIS JOHN	411 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306066593	HAVRE DE GRACE, MD 21084	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306070663	HAVRE DE GRACE, MD 21085	FORESTAR USA REAL ESTATE GROUP INC	7021 COLUMBIA GATEWAY DR, SUITE 320, COLUMBIA, MD 21046
1306074421	HAVRE DE GRACE, MD 21086	GREENWAY FARM PHASE 1 COMMUNITY ASSOCIATION INC	PO BOX 858, ELKTON, MD 21922
1306075428	HAVRE DE GRACE, MD 21087	GREENWAY FARM PHASE I COMMUNITY ASSOCIATION INC	PO BOX 858, ELKTON, MD 21922

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306075606	HAVRE DE GRACE, MD 21088	GREENWAY FARM PHASE I COMMUNITY ASSOCIATION INC	PO BOX 858, ELKTON, MD 21922
1306075932	522 RISEN STAR CT, HAVRE DE GRACE, MD 21078	CARTER MATTHEW SCOTT, CARTER COLLEEN ERIN	522 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306075940	520 RISEN STAR CT, HAVRE DE GRACE, MD 21078	TAYLOR JARRIS L SR, TAYLOR JACQUELINE M	520 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306075959	518 RISEN STAR CT, HAVRE DE GRACE, MD 21078	JAEGER KENDALL T, JAEGER REGINA J	PO BOX 683, HAVRE DE GRACE, MD 21078
1306075967	516 RISEN STAR CT, HAVRE DE GRACE, MD 21078	BURTON DAVID, BURTON CYNTHIA	516 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306075975	514 RISEN STAR CT, HAVRE DE GRACE, MD 21078	ALDAY GERONIMA G	514 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306075983	512 RISEN STAR CT, HAVRE DE GRACE, MD 21078	FISHER ORLANDO E, FISHER ALFREDA J	512 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306075991	510 RISEN STAR CT, HAVRE DE GRACE, MD 21078	SHEFFIELD MICHAEL, SHEFFIELD TRICIA	510 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076009	508 RISEN STAR CT, HAVRE DE GRACE, MD 21078	HARRIS SYLVIA A	508 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076017	506 RISEN STAR CT, HAVRE DE GRACE, MD 21078	BERENGER RICKY BRYAN, BERENGER DEBORAH JEAN	506 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076025	504 RISEN STAR CT, HAVRE DE GRACE, MD 21078	WISE CALVIN, WISE ELIZABETH	504 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076033	502 RISEN STAR CT, HAVRE DE GRACE, MD 21078	GLADNEY GENTLE M, BARNES NICHOLE L	502 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076041	500 RISEN STAR CT, HAVRE DE GRACE, MD 21078	NIJHIA SUSAN	500 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076068	519 RISEN STAR CT, HAVRE DE GRACE, MD 21078	FLEISCHER STANLEY J, FLEISCHER PASCALE	PO BOX 187, HAVRE DE GRACE, MD 21078
1306076076	517 RISEN STAR CT, HAVRE DE GRACE, MD 21078	LANZILOTTA CHRISTOPHER S	517 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076084	515 RISEN STAR CT, HAVRE DE GRACE, MD 21078	COLVIN ANDREW E, COLVIN DOLORES P	515 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076092	513 RISEN STAR CT, HAVRE DE GRACE, MD 21078	ONDER ALI MIRZA, ONDER SONGUL	513 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076106	511 RISEN STAR CT, HAVRE DE GRACE, MD 21078	PATEL BIPIN, PATEL NITA	511 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076114	509 RISEN STAR CT, HAVRE DE GRACE, MD 21078	ZHANG JIANHUA	61 COMMERCIAL AVE, GARDEN CITY, NY 11530
1306076122	507 RISEN STAR CT, HAVRE DE GRACE, MD 21078	HALL KERRY D, HALL MARCIE E COPSON TRUSTEE	507 RISEN STAR CT, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306076130	505 RISEN STAR CT, HAVRE DE GRACE, MD 21078	BERGANDER PAUL T, BERGANDER DIANE M	505 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076149	503 RISEN STAR CT, HAVRE DE GRACE, MD 21078	DEMBECK BRIAN B, DEMBECK KAREN L	503 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076157	501 RISEN STAR CT, HAVRE DE GRACE, MD 21078	GEORGE MALCOLM T, GEORGE BONNIE A	501 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076165	524 RISEN STAR CT, HAVRE DE GRACE, MD 21078	MASLAK VICTOR	524 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076173	526 RISEN STAR CT, HAVRE DE GRACE, MD 21078	NEWCOMB KENNETH E, NEWCOMB HEATHER M	526 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076181	528 RISEN STAR CT, HAVRE DE GRACE, MD 21078	FREELAND MARK S, FREELAND DIANE P	528 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076203	530 RISEN STAR CT, HAVRE DE GRACE, MD 21078	DOUGHERTY CHARLES MICHAEL	530 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076211	532 RISEN STAR CT, HAVRE DE GRACE, MD 21078	WANNER JOHN D, WANNER ANDREA	532 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076238	534 RISEN STAR CT, HAVRE DE GRACE, MD 21078	RICHARD WILLIAM G III, RICHARD WENDY G	534 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076246	536 RISEN STAR CT, HAVRE DE GRACE, MD 21078	ARVA TERRY L	536 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076289	541 RISEN STAR CT, HAVRE DE GRACE, MD 21078	BIBLOW RACHEL E, BAYS JAMES R	541 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076297	539 RISEN STAR CT, HAVRE DE GRACE, MD 21078	HANLON THOMAS G, HANLON SUSAN S	539 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076300	537 RISEN STAR CT, HAVRE DE GRACE, MD 21078	WADE GREGORY AND DONNA REVOCABLE, TRUST THE	537 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076319	535 RISEN STAR CT, HAVRE DE GRACE, MD 21078	FERGUSON RODNEY T	535 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076327	533 RISEN STAR CT, HAVRE DE GRACE, MD 21078	OAKLEY DOUGLAS, NIELSEN LISA	533 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076335	531 RISEN STAR CT, HAVRE DE GRACE, MD 21078	SARKAR ANARKALI	531 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076343	529 RISEN STAR CT, HAVRE DE GRACE, MD 21078	WIENER DAVID S, WIENER MARY T CO-TRUSTEES	529 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076351	527 RISEN STAR CT, HAVRE DE GRACE, MD 21078	KORN HARRY D, KORN CINDA K	527 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076378	525 RISEN STAR CT, HAVRE DE GRACE, MD 21078	CHIN HARRY, CHIN AMY TRUSTEES	525 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076386	523 RISEN STAR CT, HAVRE DE GRACE, MD 21078	SAMCHUCK DANIEL B, SAMCHUCK NANCY C	PO BOX 1023, BEL AIR, MD 21014

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306076394	521 RISEN STAR CT, HAVRE DE GRACE, MD 21078	WARING DAVID L, WARING SUSAN M	521 RISEN STAR CT, HAVRE DE GRACE, MD 21078
1306076408	HAVRE DE GRACE, MD 21089	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306076858	463 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	RANDOLPH GRAHAM A, RANDOLPH EMILY H	463 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076866	465 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	HSU PI-LAN, HSU RONG YEW ETAL	465 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076874	467 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	BELL KENNETH EDWARD	467 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076882	469 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	VITELLI ANTHONY, VITELLI MARY ANN	469 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076890	501 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MUNSON TIMOTHY, MUNSON SHEILA	501 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076904	503 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	FLACK MARLA S	503 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076912	505 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	HUNT LISA M	505 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076920	507 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MOORE CAMPBELL A, MOORE ELOISE C ETAL	507 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076939	HAVRE DE GRACE, MD 21090	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306076947	509 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MURPHY KAITLIN S	509 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076955	511 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	OMAR AYISHAT, NDALOLO HALILU	511 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076963	513 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	SMITH VICTOR	513 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306076971	515 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	RITTER THOMAS A, RITTER NATALIE	515 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306076998	517 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	BYERS DAVID, BYERS KATHLEEN	517 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077005	519 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	DANSICKER ARNOLD, DANSICKER MARY B ETAL	519 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077013	521 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	CHASEY GLORIA J	521 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077021	523 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MERCER MICHAEL	523 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077048	525 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	MORAN GARY J, MORAN JOYCE L	525 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077056	527 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	SHELTON TIMOTHY	527 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077064	529 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LEWIS DOREEN	529 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077072	531 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	POSTON VICTOR M JR TRUSTEE	531 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077080	533 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LAFERTE KRISTIN H	533 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077099	535 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LUTZI FRANK A, LUTZI BARBARA A ETAL	535 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077153	HAVRE DE GRACE, MD 21091	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306077161	537 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	TYLER RICHARD K, TYLER JAYNE B	537 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077188	539 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	BRICK GEORGE	539 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077196	541 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	JONES DEVORA L	541 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306077218	543 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	CECIL ANN MARIE	543 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077226	545 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	GROSS JUSTIN M	545 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077234	547 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	RINGGOLD AKEEM SOLOMON, LAMLEY PHYLLIS NAA	547 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077242	549 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	LU MICHAEL H, WAN LI CHUN	549 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077250	551 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	GHAHRAMANLOU MITRA	551 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077269	553 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078	VARGIN SHARON, VARGIN MICHAEL	553 MAJESTIC PRINCE CIR, HAVRE DE GRACE, MD 21078
1306077307	HAVRE DE GRACE, MD 21092	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306079989	1825 PULASKI HWY, HAVRE DE GRACE, MD 21078	MAYOR AND CITY COUNCIL OF HAVRE DE GRACE	711 PENNINGTON AVE, HAVRE DE GRACE, MD 21078
1306082300	HAVRE DE GRACE, MD 21093	BULLE ROCK COMMUNITY ASSOCIATION INC	1200 BULLE ROCK PKWY, HAVRE DE GRACE, MD 21078
1306397014	1501 BLENHEIM FARM LN, HAVRE DE GRACE, MD 21078	M-10 HDG LLC	ATTN SAMUEL MANGIONE ESQUIRE, 1205 YORK ROAD, LUTHERVILLE, MD 21093
1306397015	HAVRE DE GRACE, MD 21094	MEERA REALTY LLC	C/O GHANSHYAM PATEL, 1410A FALLS CREST DRIVE, FALLSTON, MD 21047
1306397314	HAVRE DE GRACE, MD 21095	BR LANDHOLDER LLC	2700 PHILADELPHIA BLVD, EDGEWOOD, MD 21040
1306397315	HAVRE DE GRACE, MD 21096	BLENHEIM LLC	650 S EXETER ST STE 200, BALTIMORE, MD 21202
1306401213	HAVRE DE GRACE, MD 21097	BR LANDHOLDERS LLC	2700 PHILADELPHIA BLVD, EDGEWOOD, MD 21040
1306401663	HAVRE DE GRACE, MD 21098	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306401664	HAVRE DE GRACE, MD 21099	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037
1306401665	HAVRE DE GRACE, MD 21100	MANCINO FRANK PETER, WELTY SANDRA JEAN	151 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401666	HAVRE DE GRACE, MD 21101	LAWAL FOLAWLYO ALIU	153 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401667	155 CORRERI ST, HAVRE DE GRACE, MD 21078	OSUAGWU IHEANYI NNAEMEKA, NDUMAH JANE FENYA	155 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401668	157 CORRERI ST, HAVRE DE GRACE, MD 21078	COURVELLE CALEB DUPRE, COURVELLE RACHEL E	157 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401669	HAVRE DE GRACE, MD 21102	BLEDSOE SHAMAL AUDRAIL, BLEDSOE RENATA NASHELL	159 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401670	161 CORRERI ST, HAVRE DE GRACE, MD 21078	GAMEDAH STEPHNIE TINA	161 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401671	HAVRE DE GRACE, MD 21103	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037
1306401672	HAVRE DE GRACE, MD 21104	BLOCK JEFFREY A, BLOCK KELLEY M	165 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401673	HAVRE DE GRACE, MD 21105	D R HORTON INC	137 MITCHELLS CHANCE STE 300, EDGEWATER, MD 21037
1306401674	HAVRE DE GRACE, MD 21106	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401675	HAVRE DE GRACE, MD 21107	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401676	HAVRE DE GRACE, MD 21108	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401677	HAVRE DE GRACE, MD 21109	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401678	HAVRE DE GRACE, MD 21110	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401711	HAVRE DE GRACE, MD 21111	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401713	HAVRE DE GRACE, MD 21112	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401714	HAVRE DE GRACE, MD 21113	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401715	HAVRE DE GRACE, MD 21114	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306401716	HAVRE DE GRACE, MD 21115	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401717	HAVRE DE GRACE, MD 21116	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401718	HAVRE DE GRACE, MD 21117	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401719	HAVRE DE GRACE, MD 21118	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401720	HAVRE DE GRACE, MD 21119	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401721	HAVRE DE GRACE, MD 21120	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401722	HAVRE DE GRACE, MD 21121	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401723	HAVRE DE GRACE, MD 21122	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401724	HAVRE DE GRACE, MD 21123	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401725	HAVRE DE GRACE, MD 21124	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401726	HAVRE DE GRACE, MD 21125	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401727	HAVRE DE GRACE, MD 21126	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401728	HAVRE DE GRACE, MD 21127	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401729	HAVRE DE GRACE, MD 21128	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401730	HAVRE DE GRACE, MD 21129	FORESTAR USA REAL ESTATE GROUP	2221 E LAMAR BLVD, SUITE 790, ARLINGTON, TX 76006
1306401731	HAVRE DE GRACE, MD 21130	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401732	HAVRE DE GRACE, MD 21131	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401733	HAVRE DE GRACE, MD 21132	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401734	HAVRE DE GRACE, MD 21133	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401735	HAVRE DE GRACE, MD 21134	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401736	HAVRE DE GRACE, MD 21135	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306401749	HAVRE DE GRACE, MD 21136	PRESERVE AT GREENWAY FARM HOMEOWNE ASSOCIATION INC THE	7021 COLUMBIA GATEWAY DR, SUITE 320, COLUMBIA, MD 21046
1306401750	HAVRE DE GRACE, MD 21137	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401751	HAVRE DE GRACE, MD 21138	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401752	HAVRE DE GRACE, MD 21139	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401753	HAVRE DE GRACE, MD 21140	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401754	HAVRE DE GRACE, MD 21141	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401755	HAVRE DE GRACE, MD 21142	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401756	HAVRE DE GRACE, MD 21143	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401757	HAVRE DE GRACE, MD 21144	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401758	HAVRE DE GRACE, MD 21145	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401759	HAVRE DE GRACE, MD 21146	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401760	HAVRE DE GRACE, MD 21147	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401761	HAVRE DE GRACE, MD 21148	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037
1306401762	HAVRE DE GRACE, MD 21149	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037
1306401763	HAVRE DE GRACE, MD 21150	FULP DAVID AUSTIN, KOZUB MEGAN ANN	139 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401764	HAVRE DE GRACE, MD 21151	ADEKUNLE ELIZABETH, DORELUS NATHANIEL	141 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401765	HAVRE DE GRACE, MD 21152	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037
1306401766	HAVRE DE GRACE, MD 21153	D R HORTON INC	137 MITCHELLS CHANCE RD, SUITE 300, EDGEWATER, MD 21037

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306401773	HAVRE DE GRACE, MD 21154	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401774	HAVRE DE GRACE, MD 21155	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401775	HAVRE DE GRACE, MD 21156	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401776	HAVRE DE GRACE, MD 21157	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401777	HAVRE DE GRACE, MD 21158	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401778	HAVRE DE GRACE, MD 21159	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401779	HAVRE DE GRACE, MD 21160	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401780	HAVRE DE GRACE, MD 21161	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401781	HAVRE DE GRACE, MD 21162	DR HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401782	HAVRE DE GRACE, MD 21163	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401783	HAVRE DE GRACE, MD 21164	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401784	HAVRE DE GRACE, MD 21165	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401785	HAVRE DE GRACE, MD 21166	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401786	HAVRE DE GRACE, MD 21167	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401787	HAVRE DE GRACE, MD 21168	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401788	HAVRE DE GRACE, MD 21169	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401789	HAVRE DE GRACE, MD 21170	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401790	HAVRE DE GRACE, MD 21171	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401791	HAVRE DE GRACE, MD 21172	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401792	HAVRE DE GRACE, MD 21173	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401793	HAVRE DE GRACE, MD 21174	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037

GASHEY'S CREEK SITE ADJACENT PROPERTY OWNERS			
ACCTID	**PREMISE ADDRESS**	**OWNERS**	**OWNER ADDRESS**
1306401794	HAVRE DE GRACE, MD 21175	HODGES AUSTIN TAYLOR, HODGES CAITLIN ELIZABETH	107 CORRERI ST, HAVRE DE GRACE, MD 21078
1306401795	HAVRE DE GRACE, MD 21176	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401796	HAVRE DE GRACE, MD 21177	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401797	HAVRE DE GRACE, MD 21178	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401798	HAVRE DE GRACE, MD 21179	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401799	HAVRE DE GRACE, MD 21180	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401800	HAVRE DE GRACE, MD 21181	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037
1306401801	HAVRE DE GRACE, MD 21182	D R HORTON INC	137 MITCHELLS CHANCE DR 3RD FL, EDGEWATER, MD 21037

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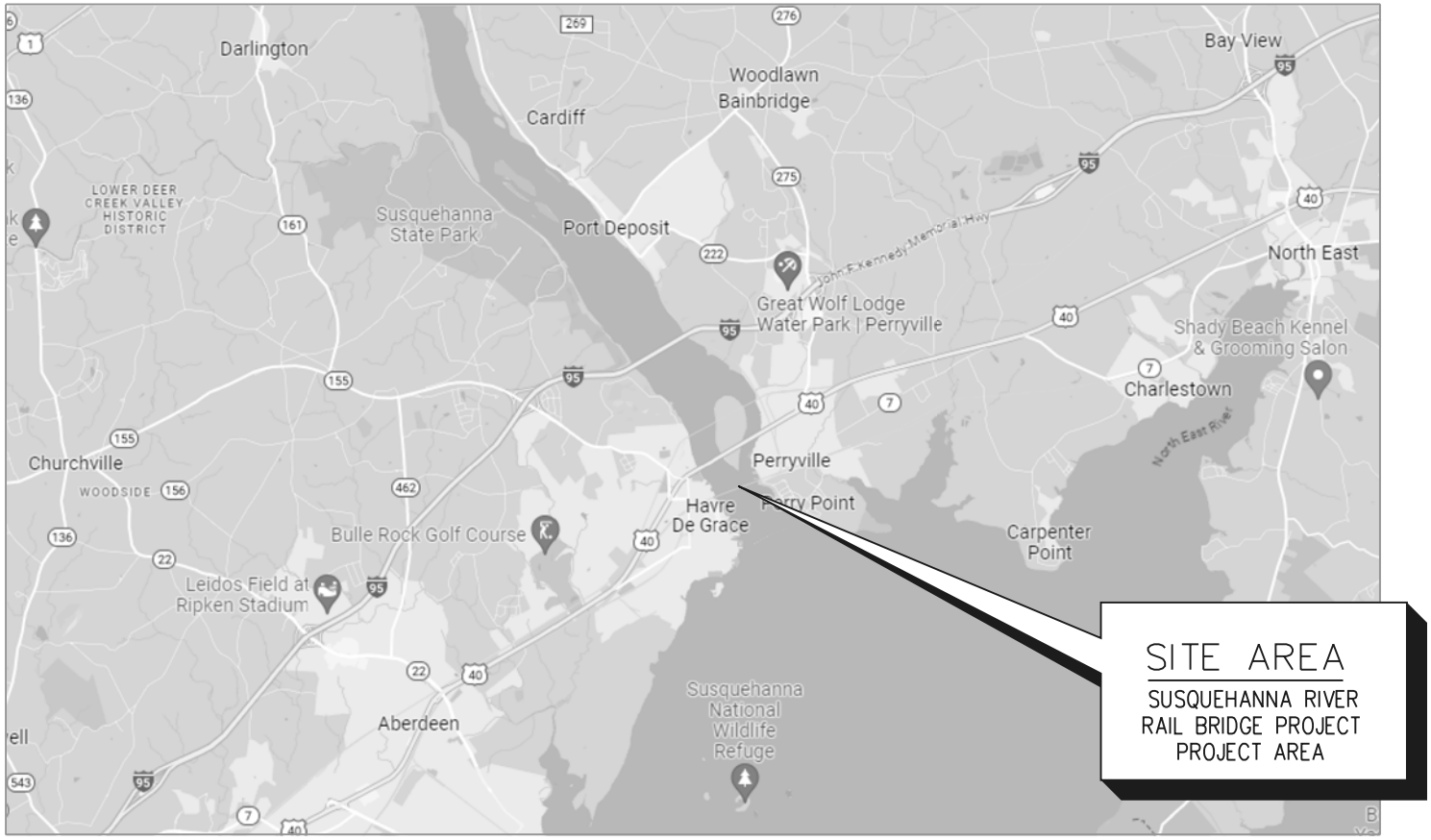
23-NT-0190

23-WL-0811

AMTRAK

SUSQUEHANNA RIVER RAIL BRIDGE PROJECT

IMPACT PLATES



SCALE: 1"=10,000'

VICINITY MAP

LOCATION: CECIL AND HARFORD COUNTIES

PLOT SCALE: AS SHOWN
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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

VICINITY MAP

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VCM-001

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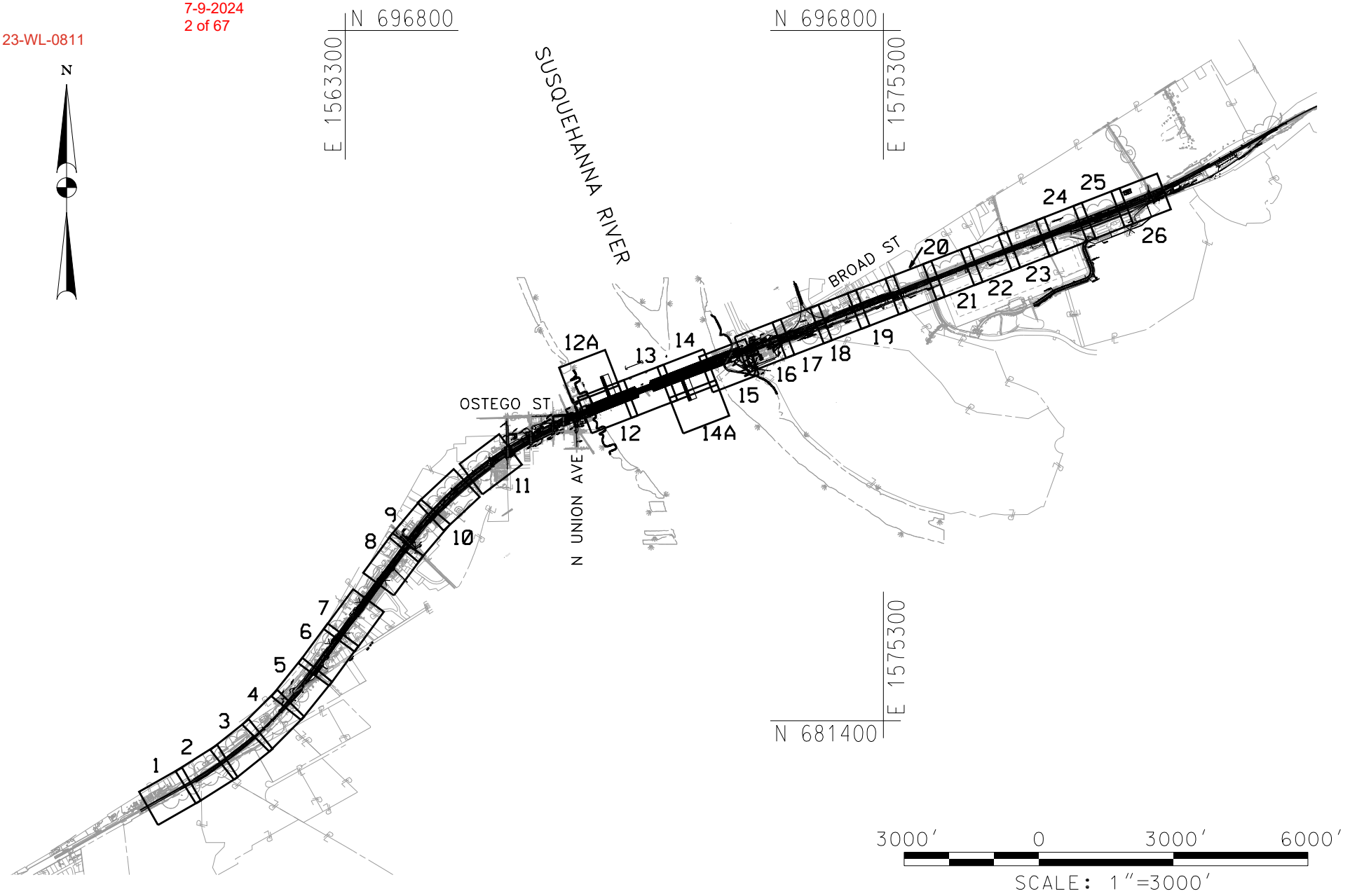
23-WL-0811



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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

KEY MAP

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LEGEND

LIMIT OF DISTURBANCE	LOD
100-YR FLOODPLAIN	100 YR
WATERS OF THE US	WUS
STREAM	
WETLAND	
WETLAND BUFFER	B
SUBMERGED AQUATIC VEGETATION (SAV)	SAV
STREAM IMPACTS	
WETLAND IMPACTS	
WETLAND BUFFER IMPACTS	
SAV IMPACTS	
MEAN HIGH WATER	MHW
MEAN HIGH HIGH WATER	MHHW

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No.	Revisions	Date	By
1	ADDED MHW AND MHHW BOUNDARY	11-13-23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

LEGEND

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LGN-001

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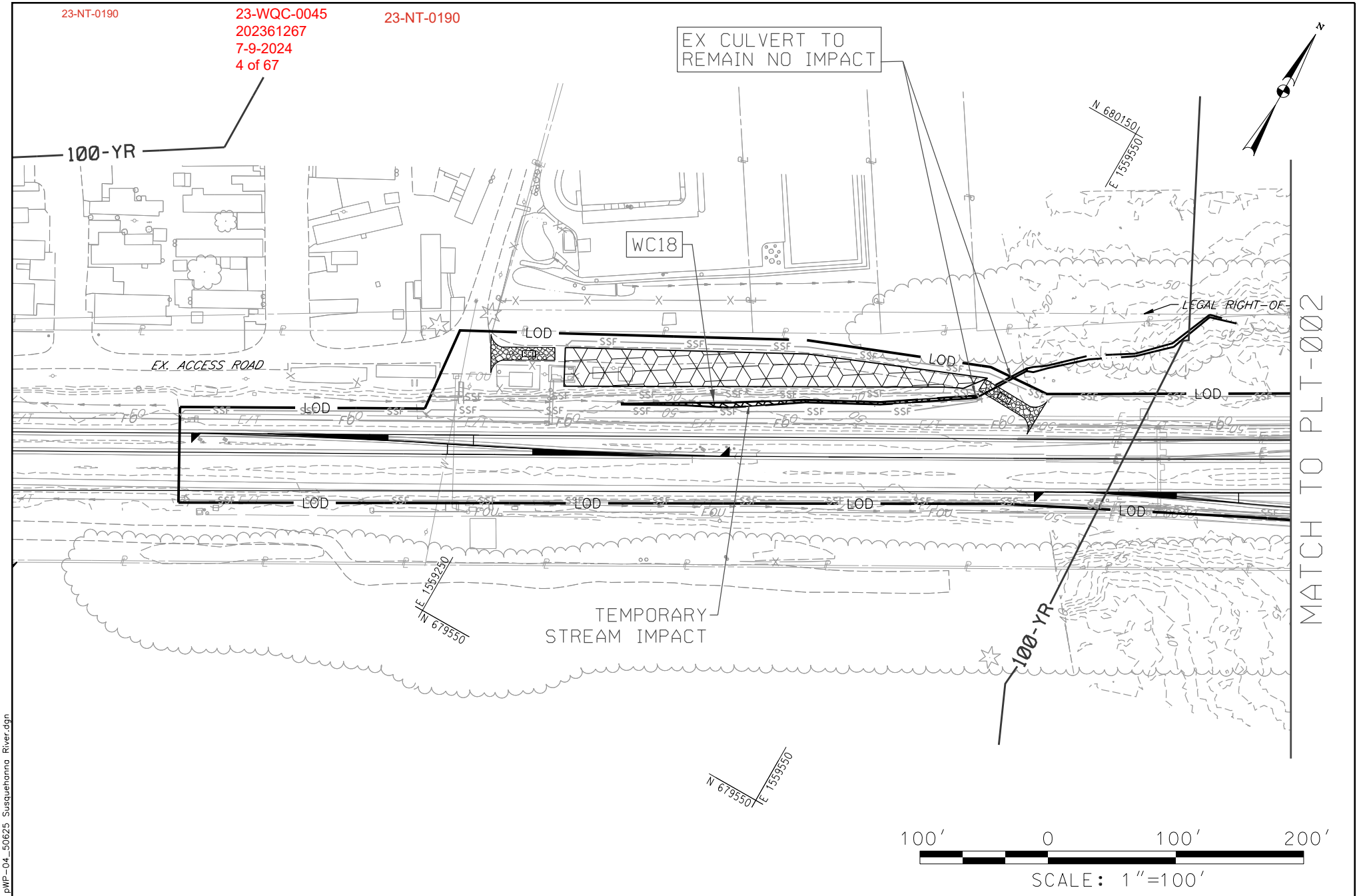

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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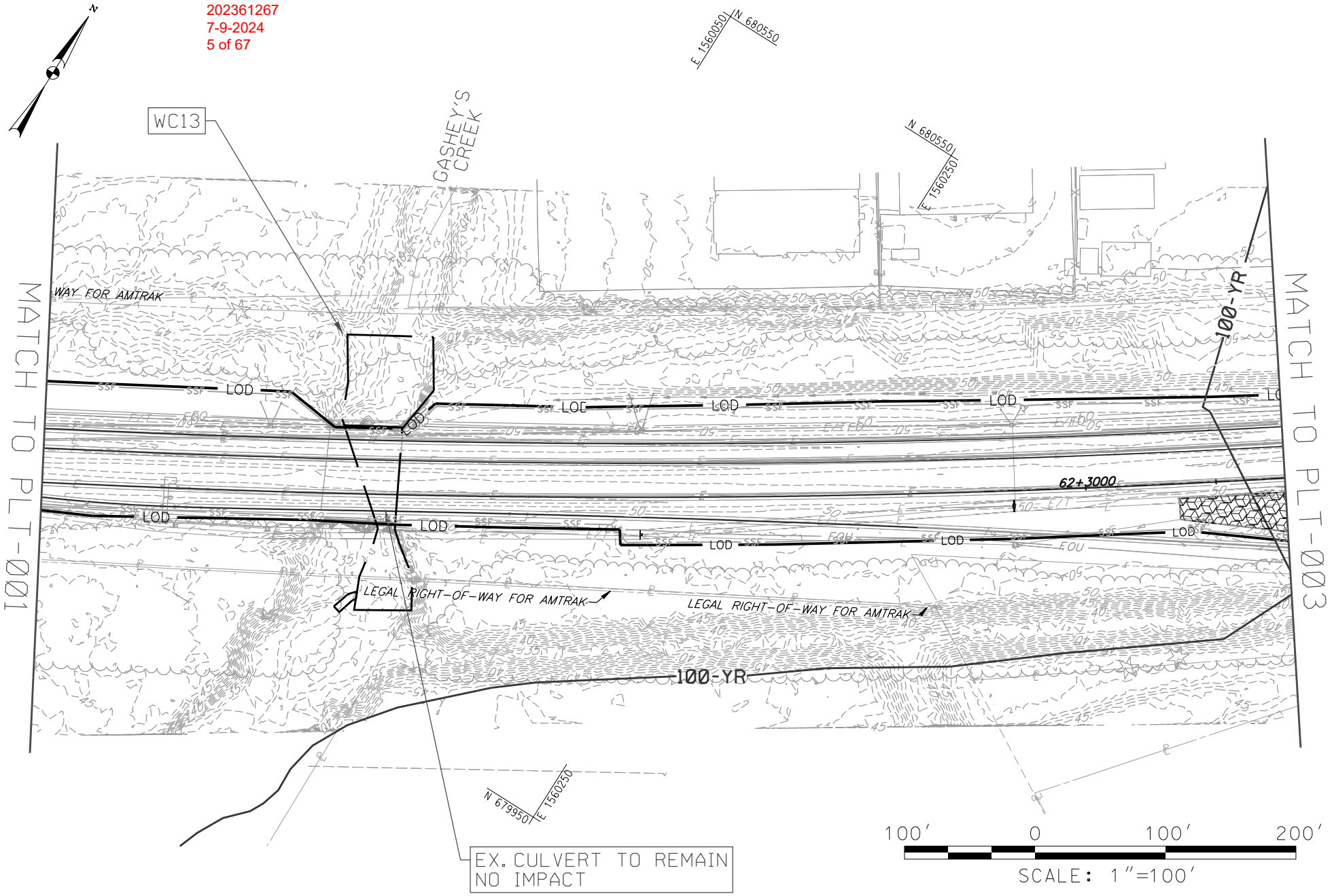

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-002

23-WQC-0045
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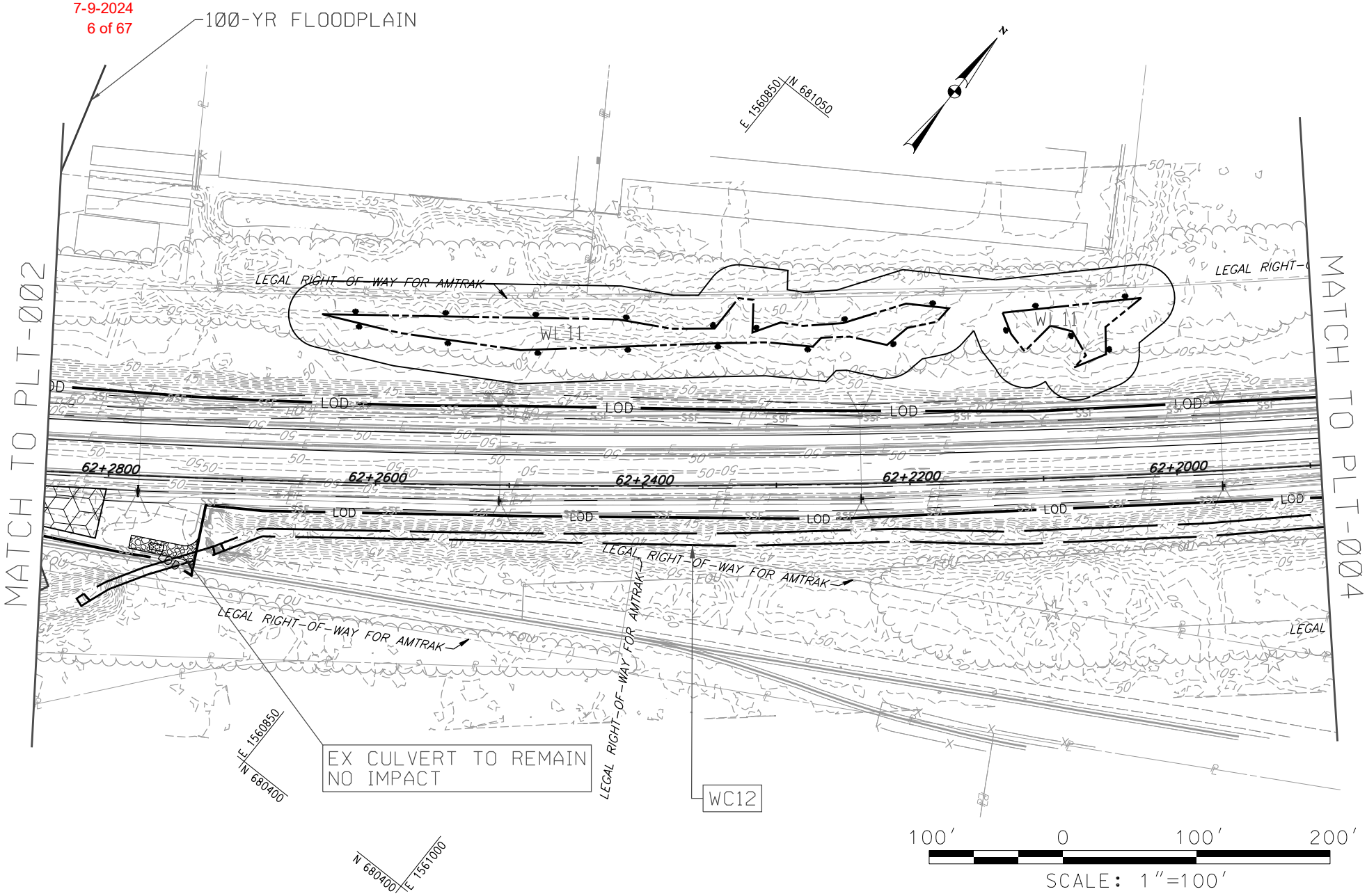
23-NT-0190



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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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PLT-003

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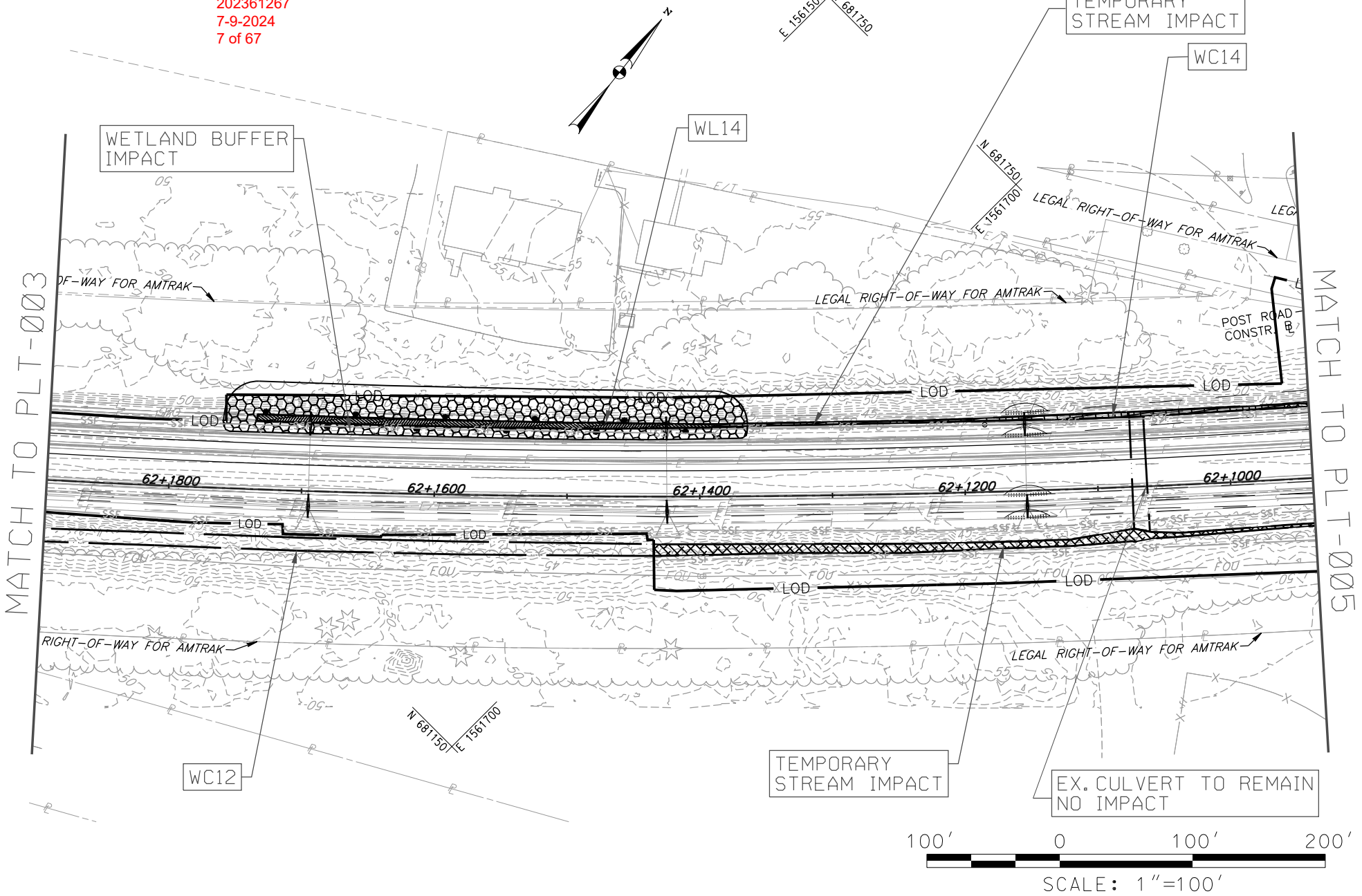

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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PLT-004

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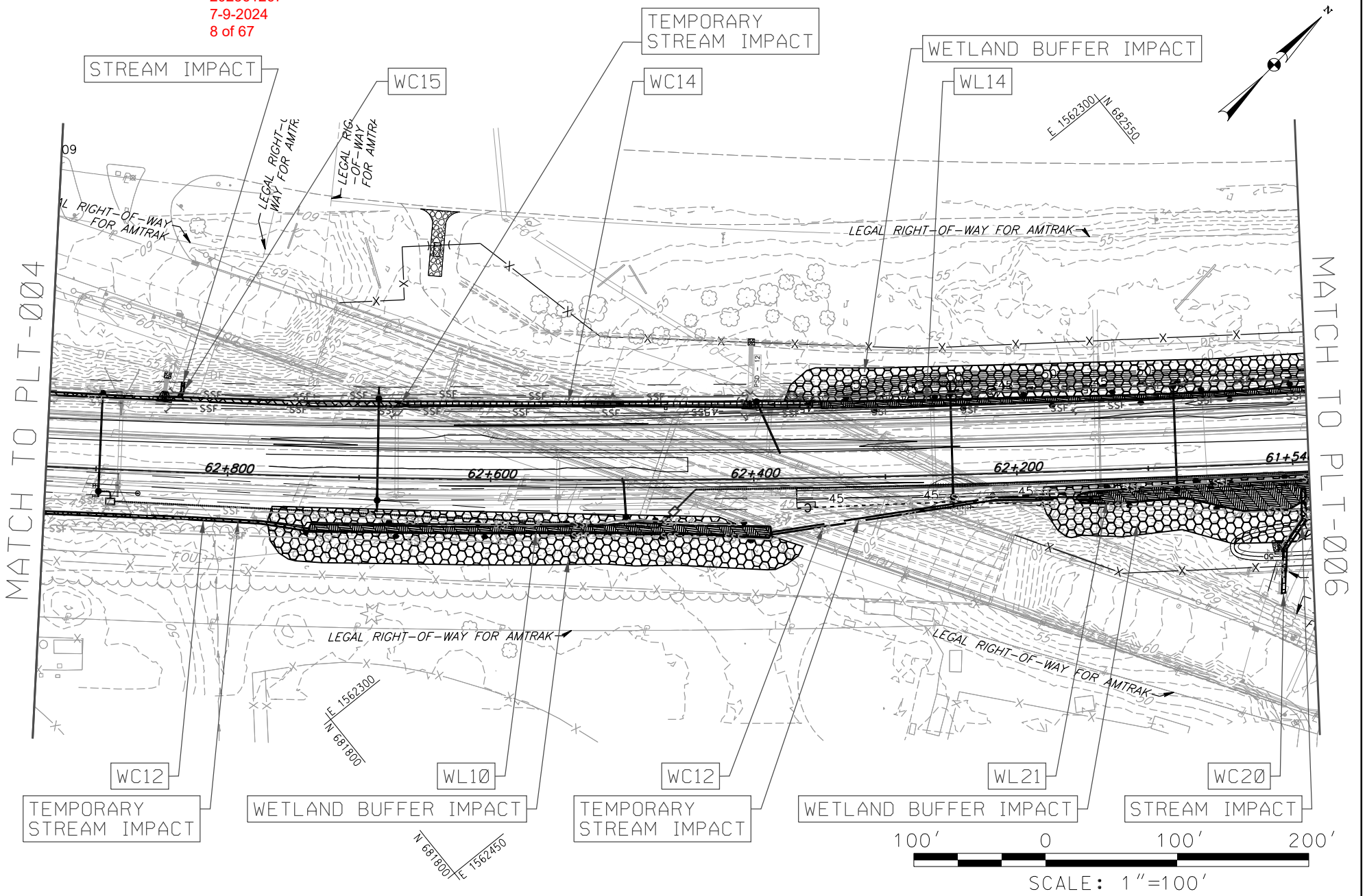

No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-005

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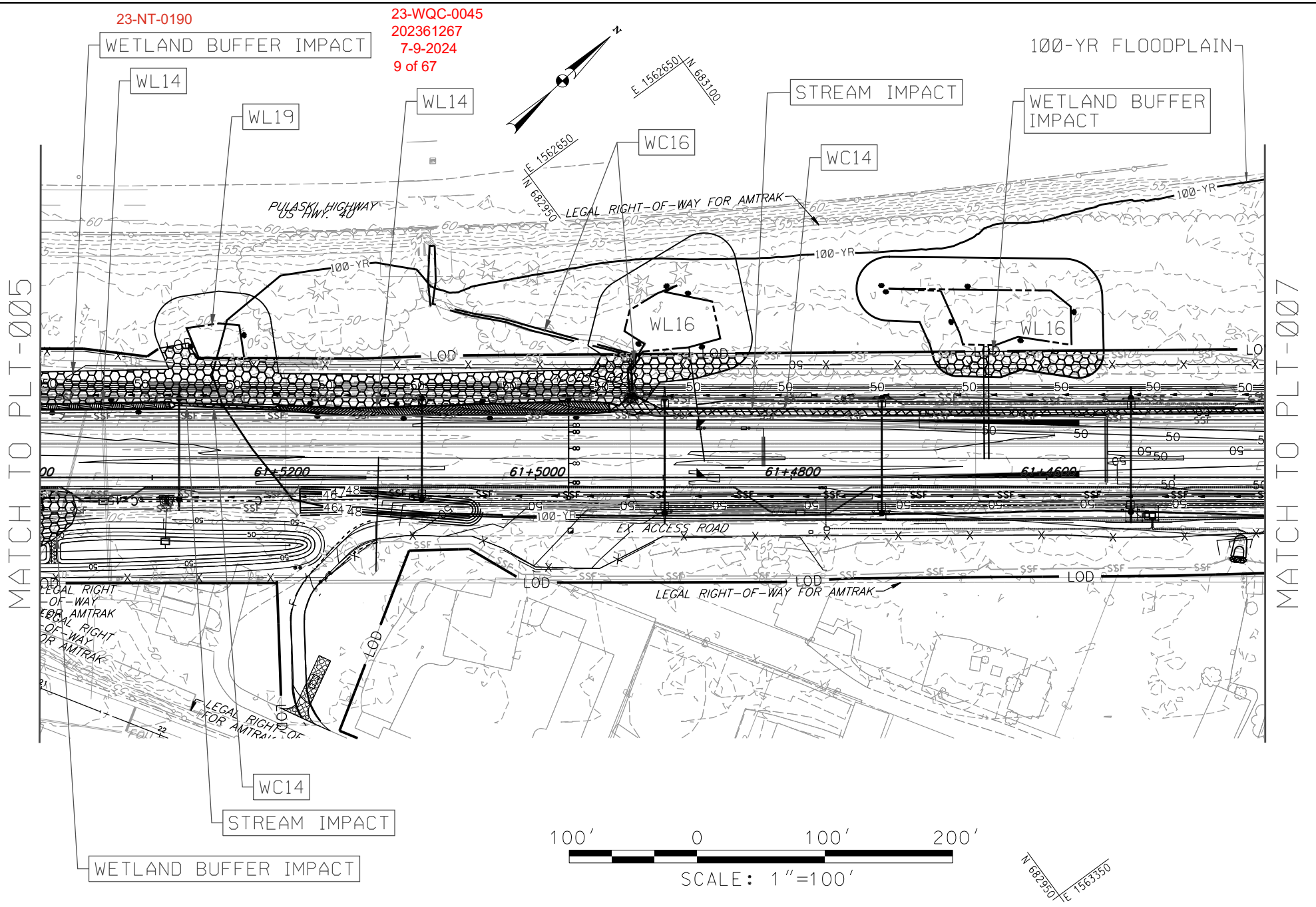

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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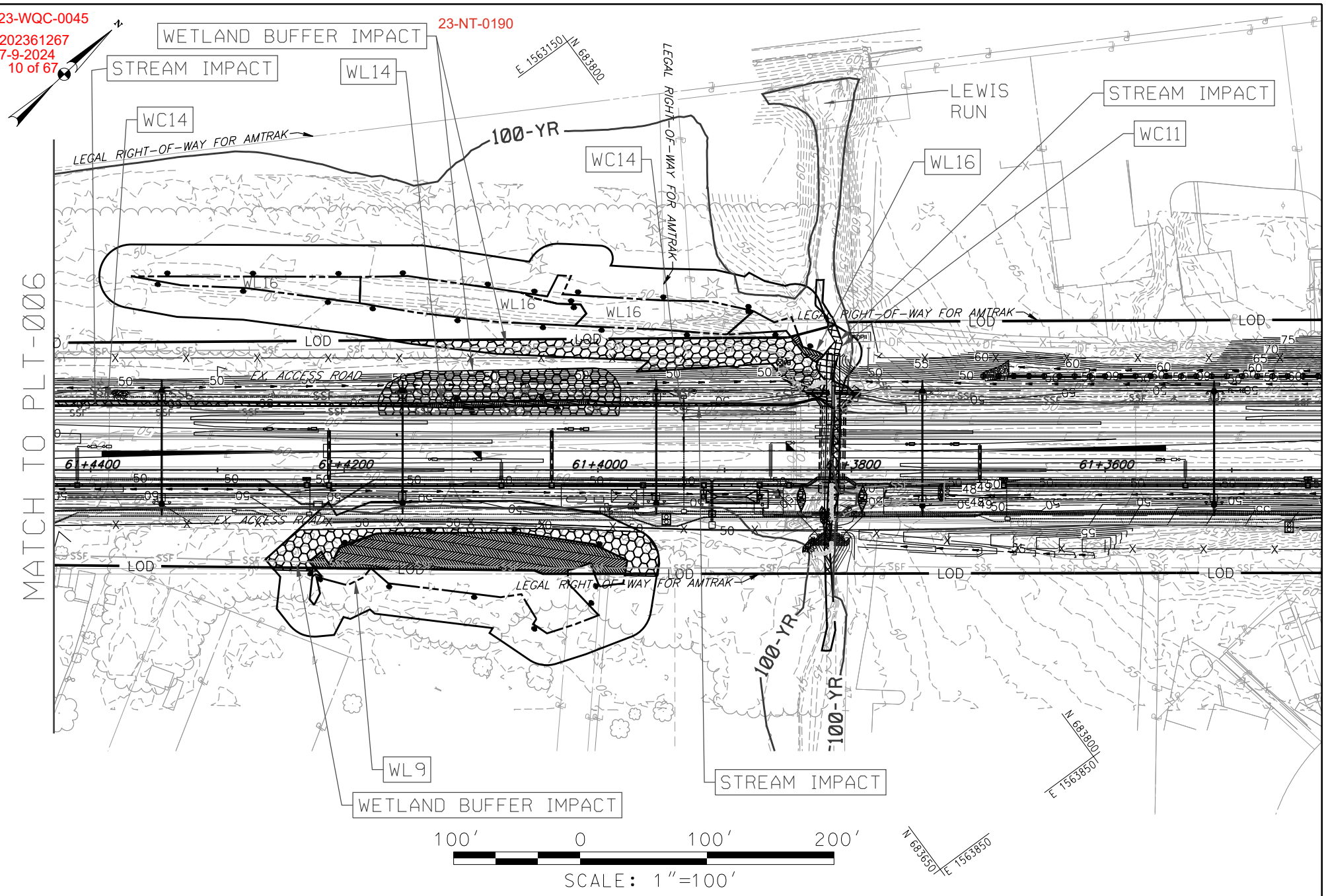
PLT-006



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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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PLT-007

23-NT-0190

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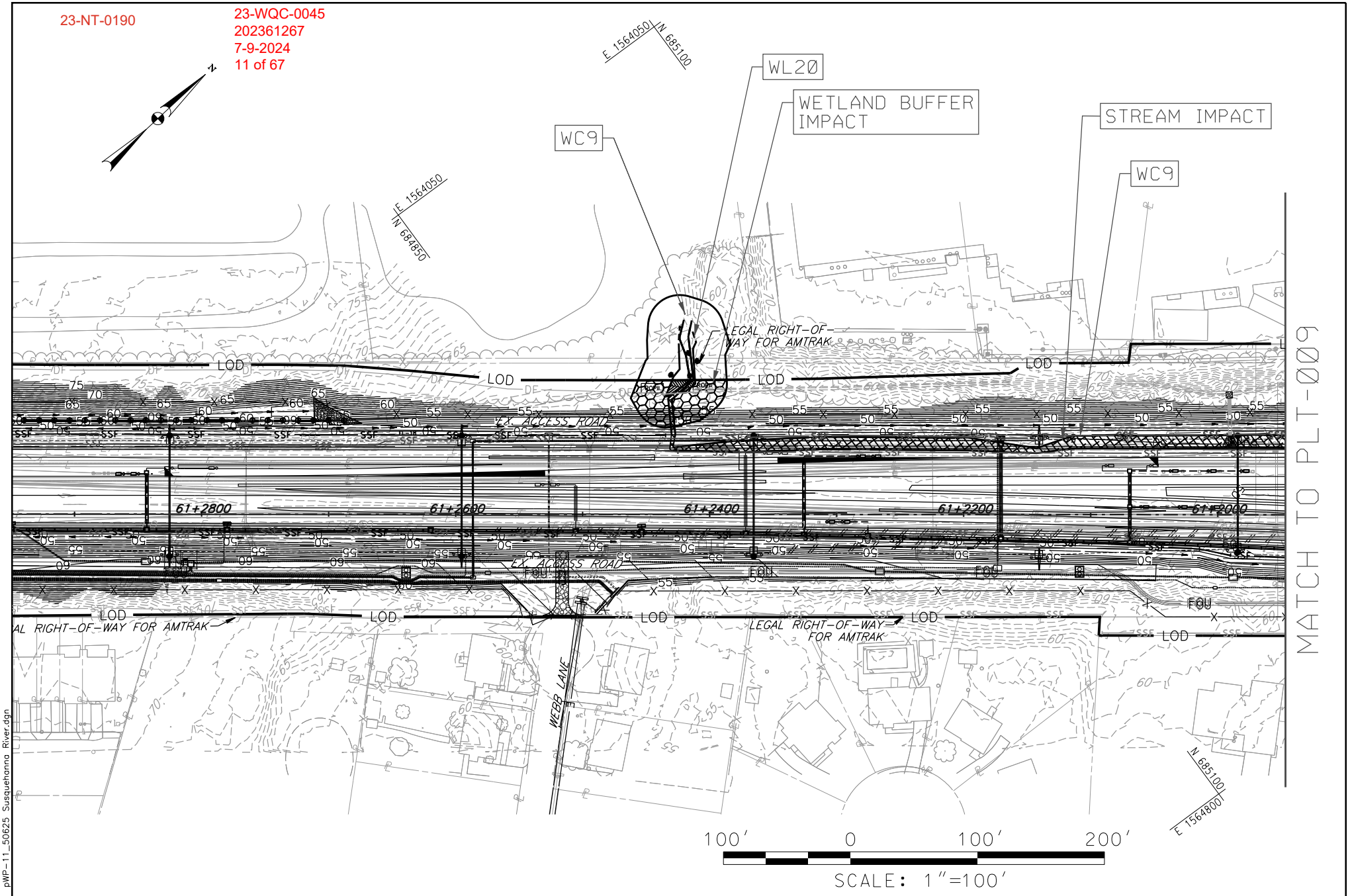

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-008

23-WQC-0045
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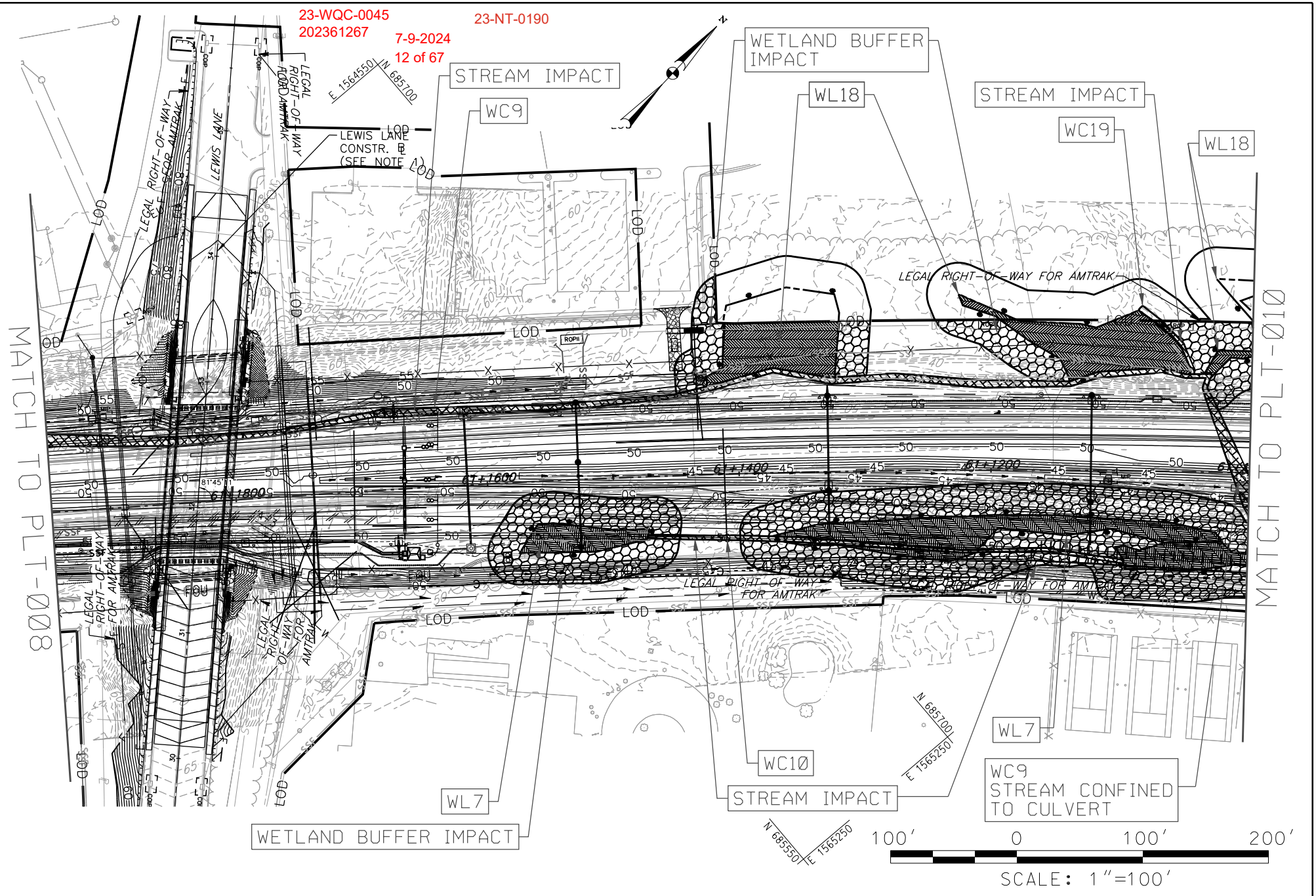

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
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PLT-009

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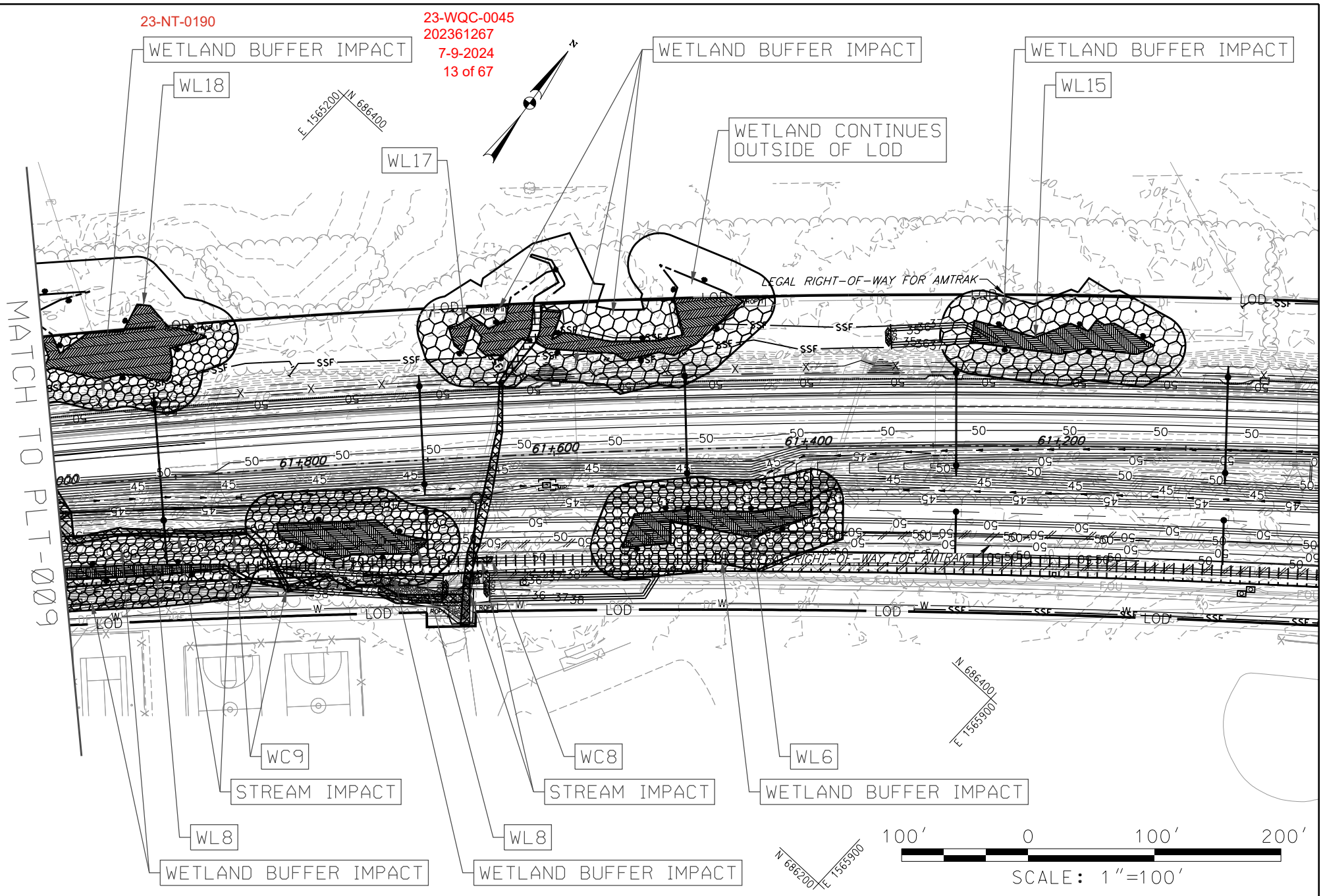

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No.	Revisions	Date	By

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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PLT-010

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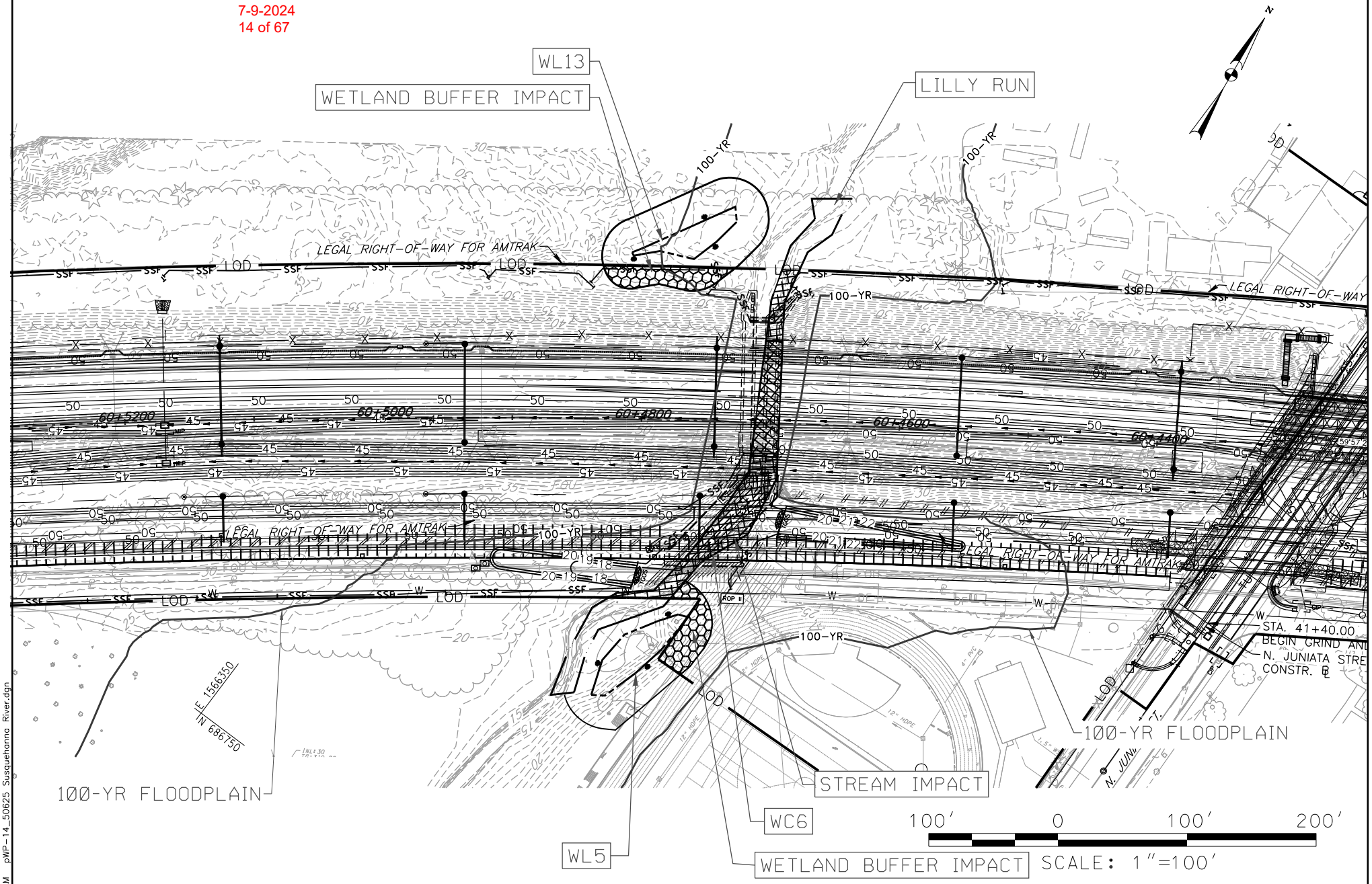

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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PLT-011

23-WQC-0045
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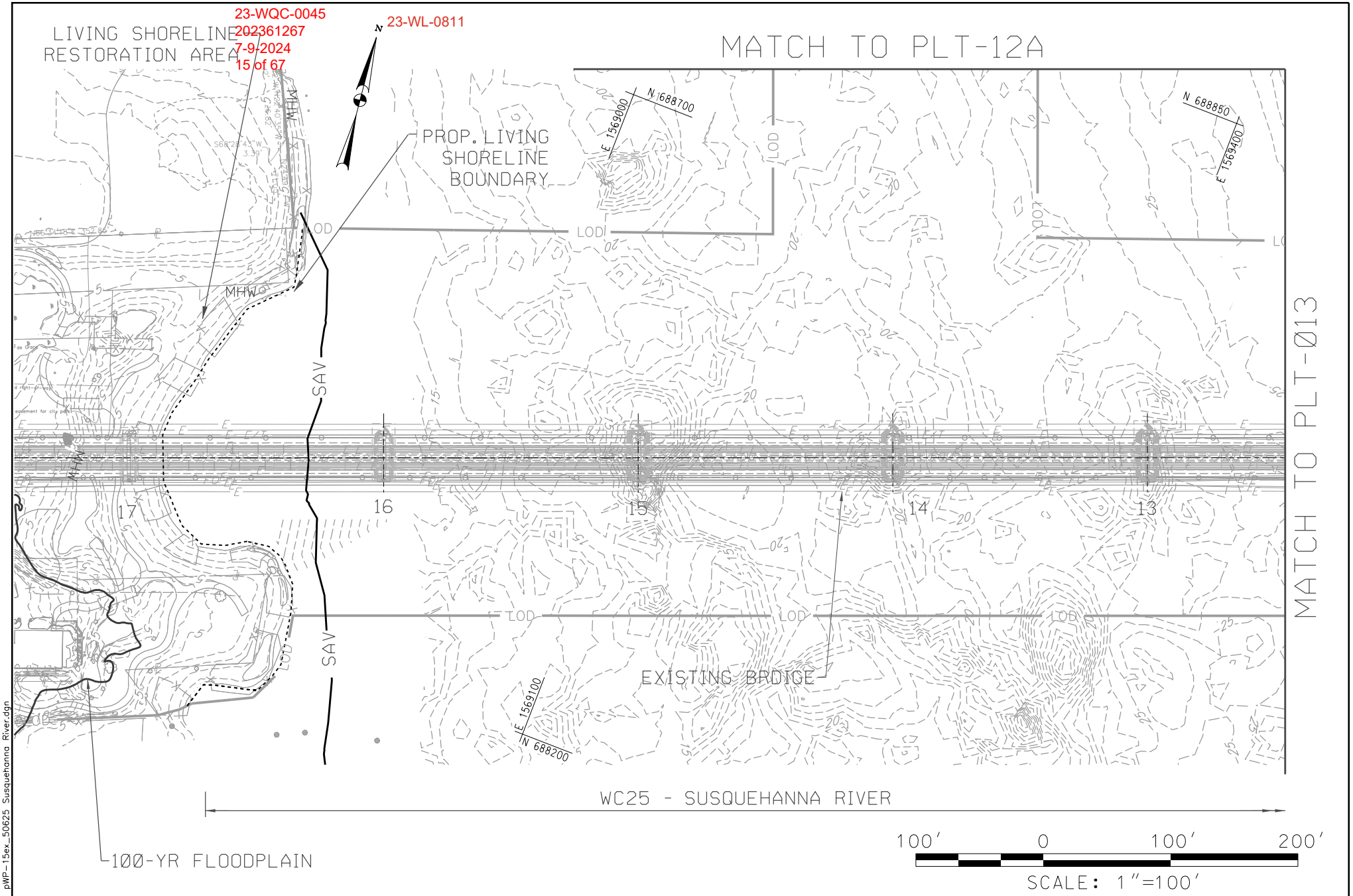

No.	Revisions	Date	By
1	ADDED MHHW AND MHW BOUNDARIES	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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23-WL-0811

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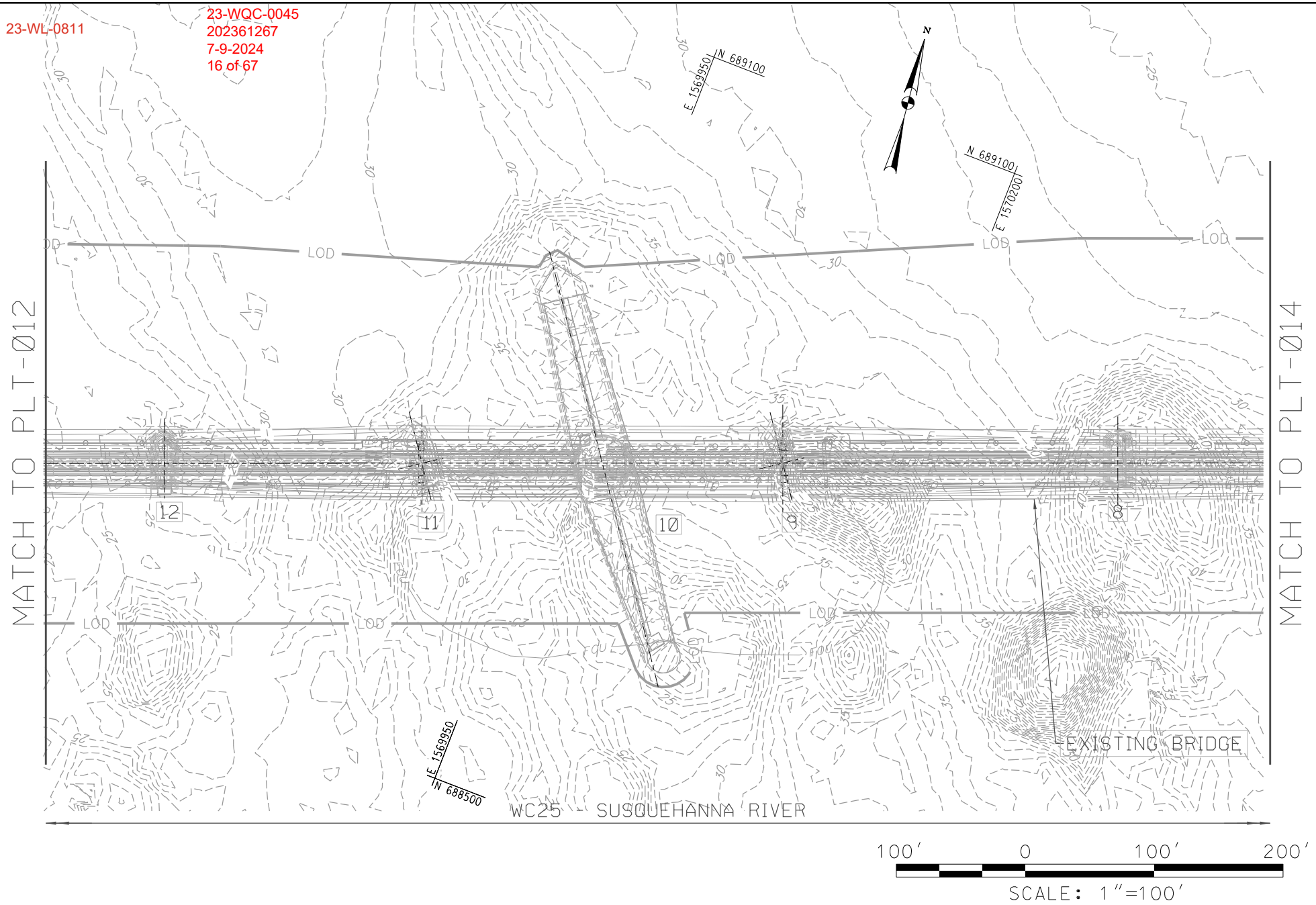

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-013

23-WQC-0045
202361267
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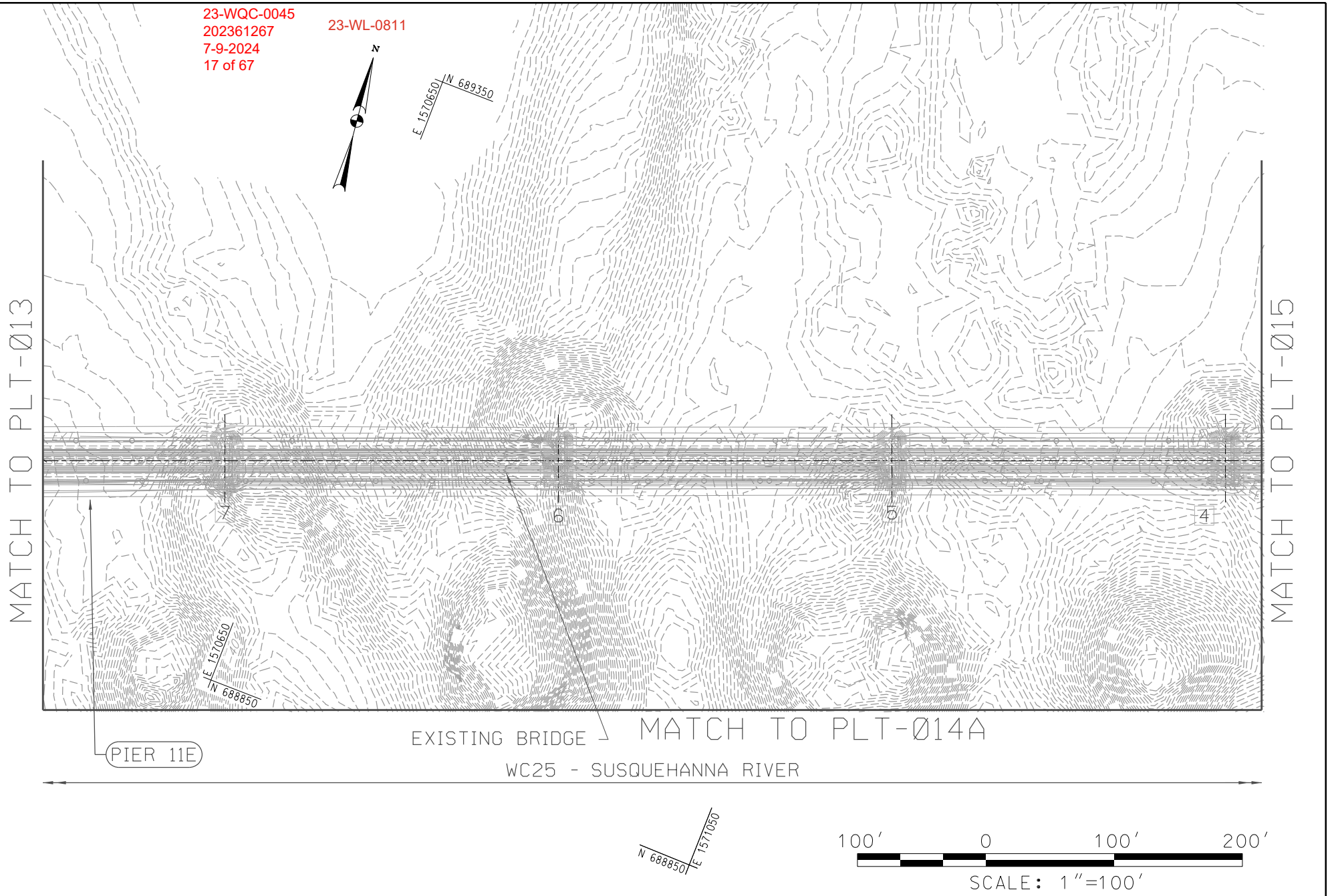

No.	Revisions	Date	By
1	ADDED MOORINGS	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-014

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23-NT-0190
23-WQC-0045
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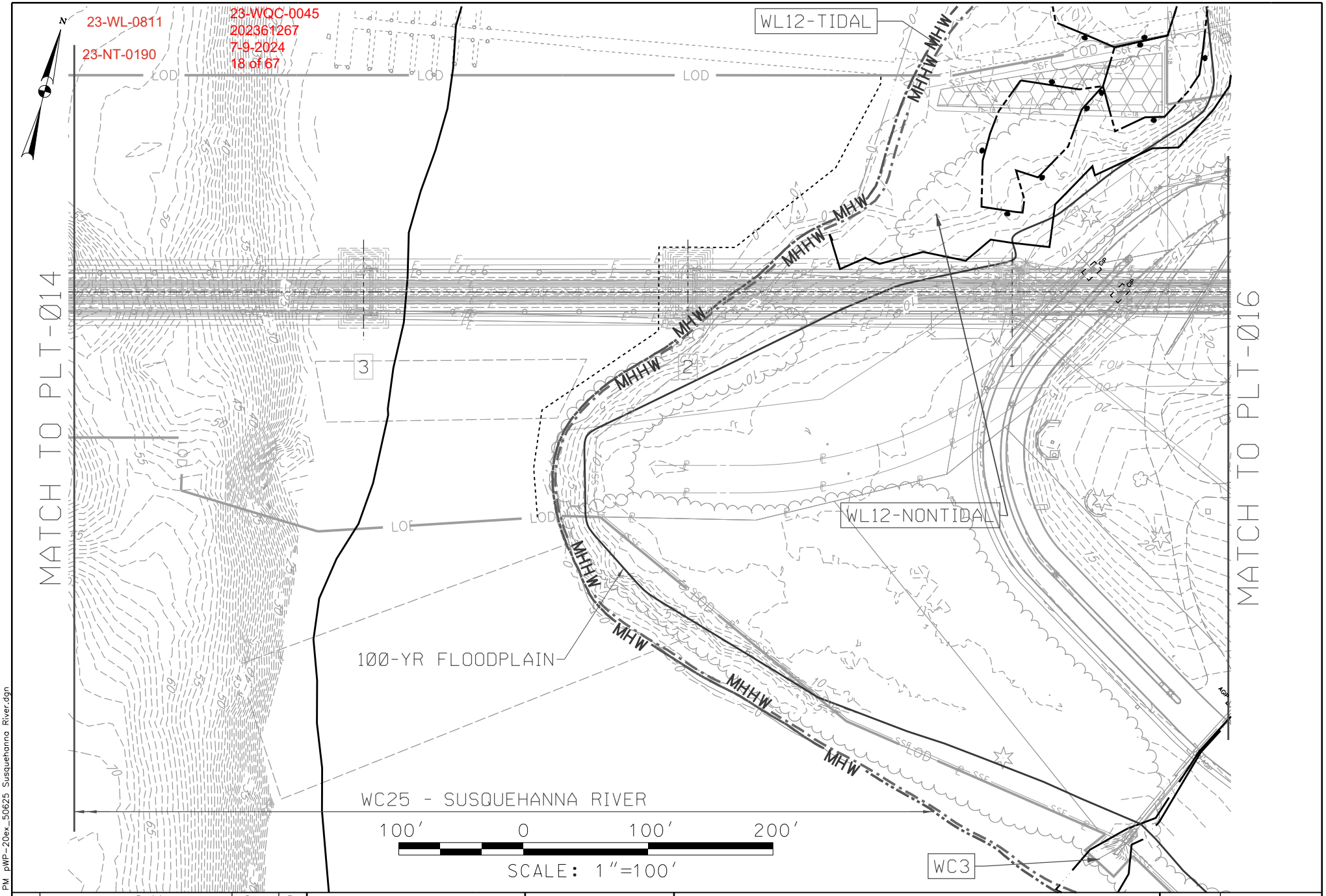

No.	Revisions	Date	By
1	ADDED MHW AND MHHW BOUNDARIES	11/13/23	MJF

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

EXISTING CONDITIONS IMPACT PLATE

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PLOT SCALE: AS SHOWN
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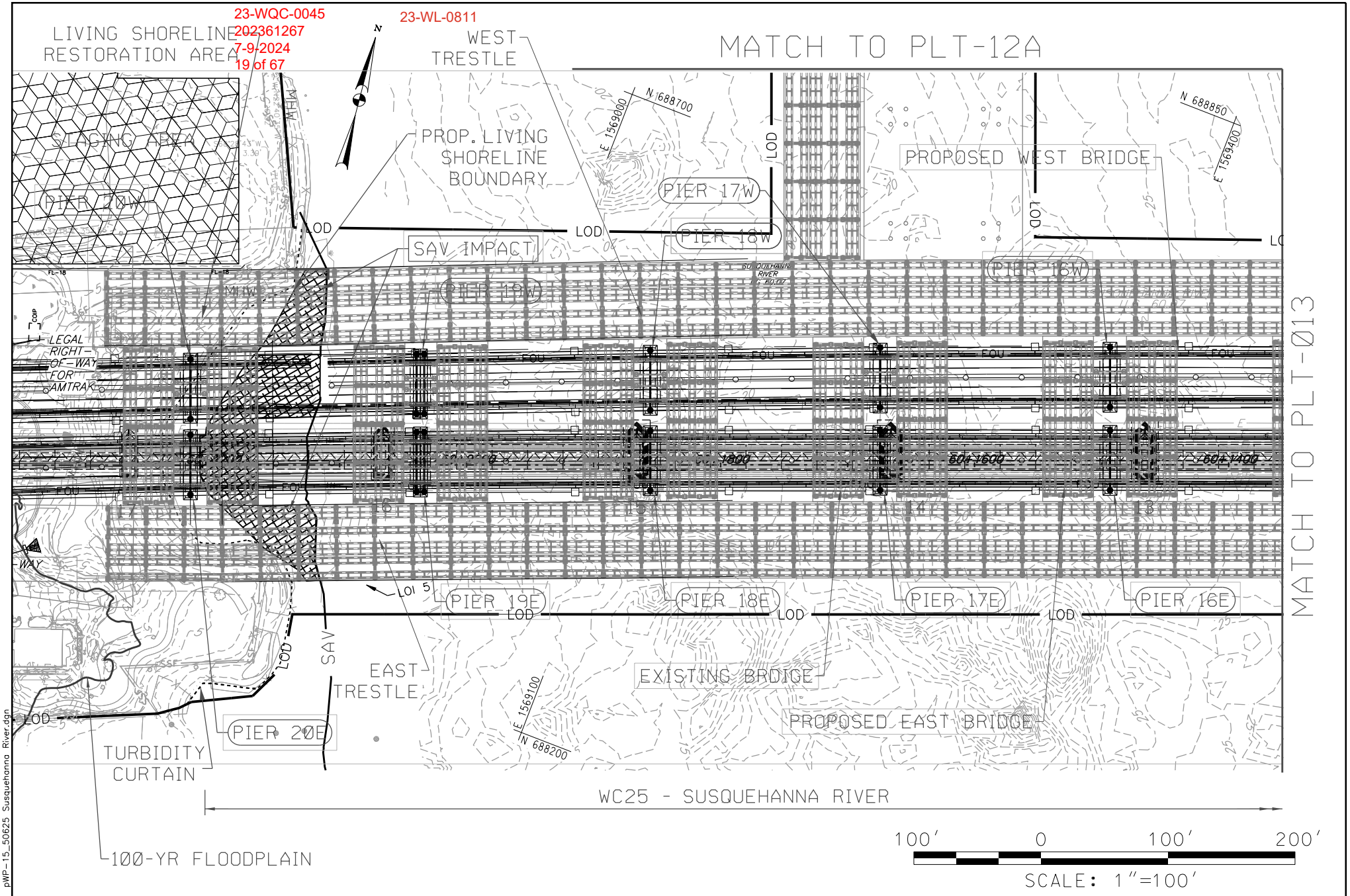

No.	Revisions	Date	By
1	ADDED MHHW AND MHW BOUNDARIES	11/13/23	MJF

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLOT SCALE: AS SHOWN
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23-WL-0811

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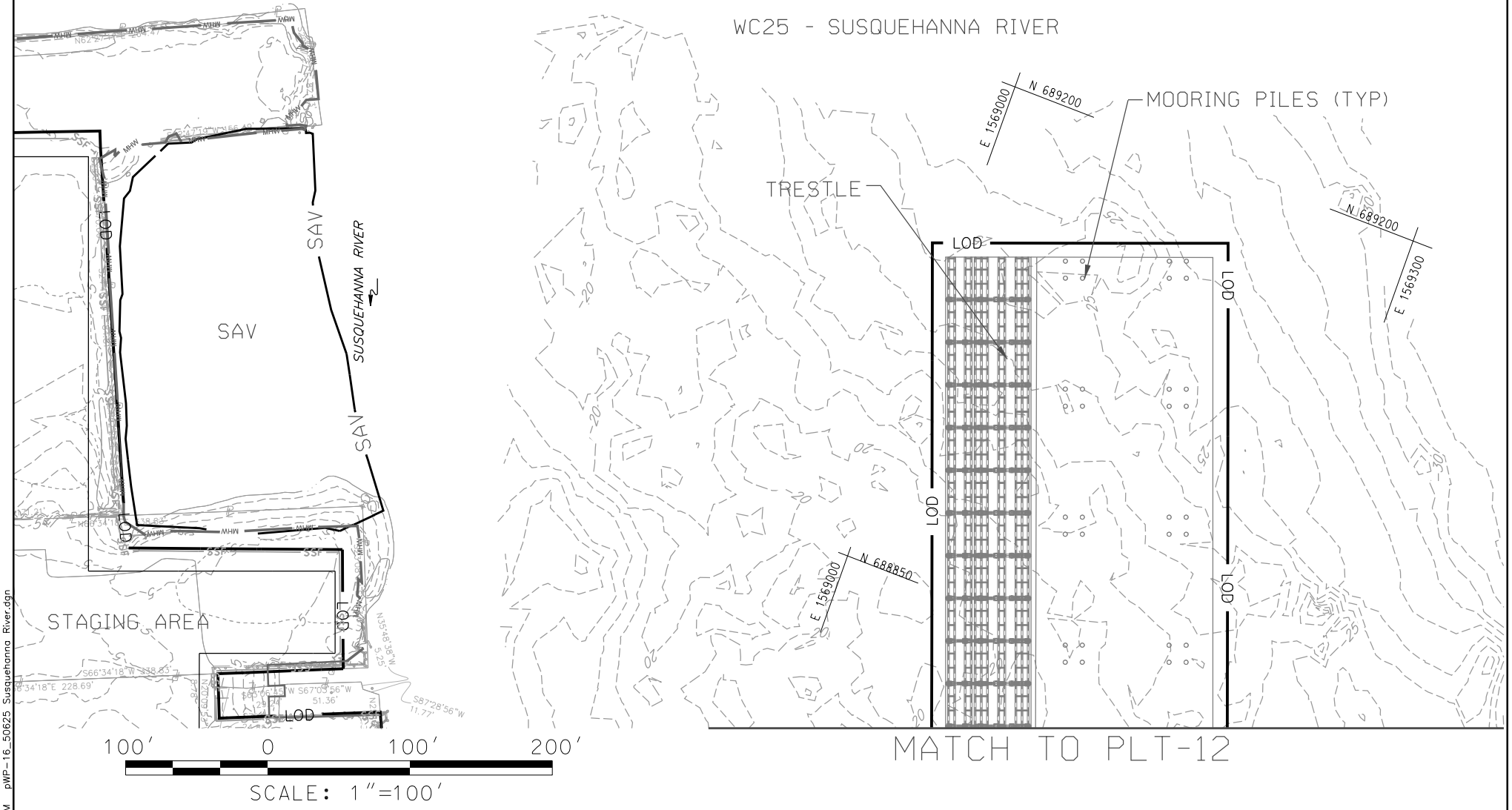

No.	Revisions	Date	By
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HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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PLT-012A

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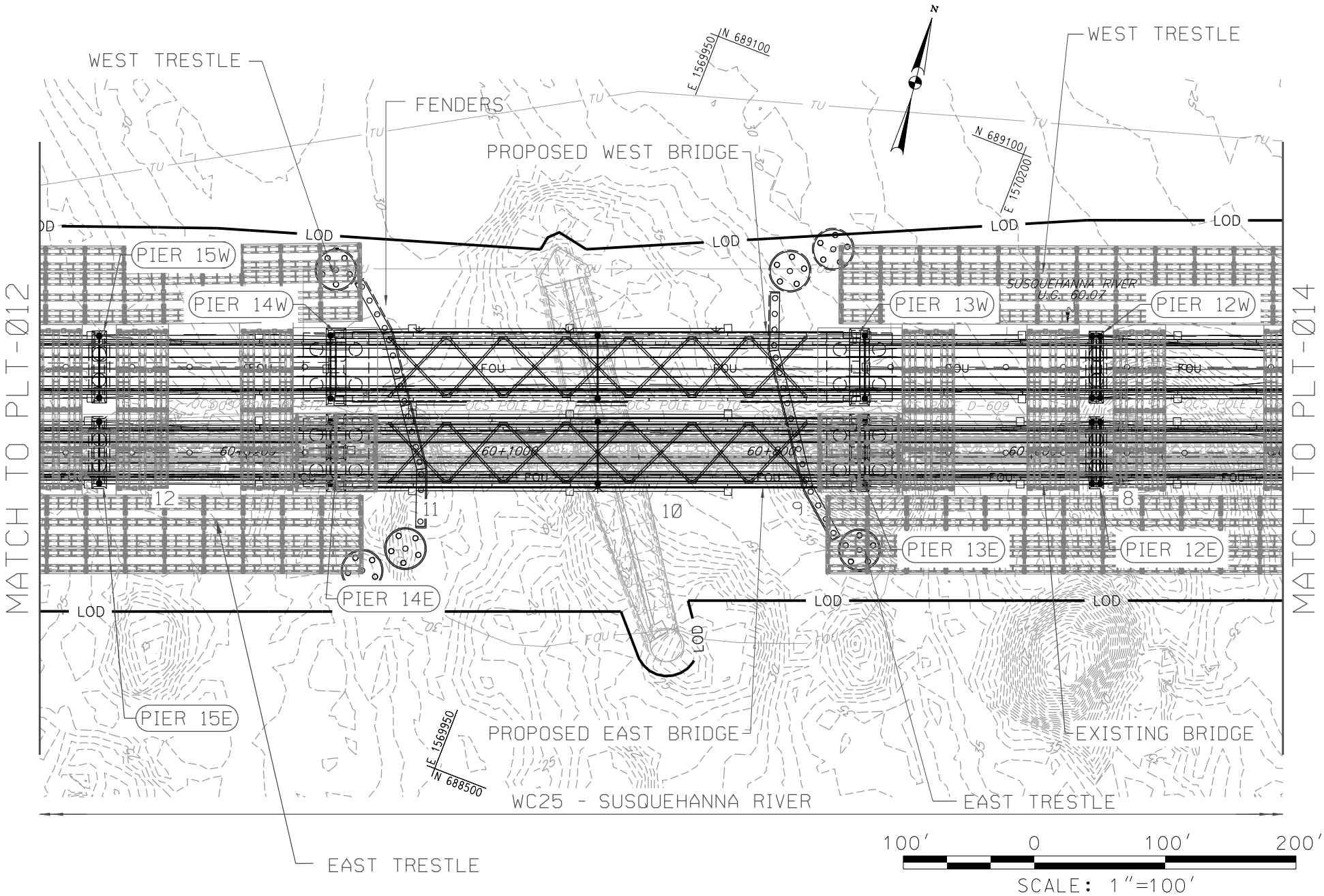

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
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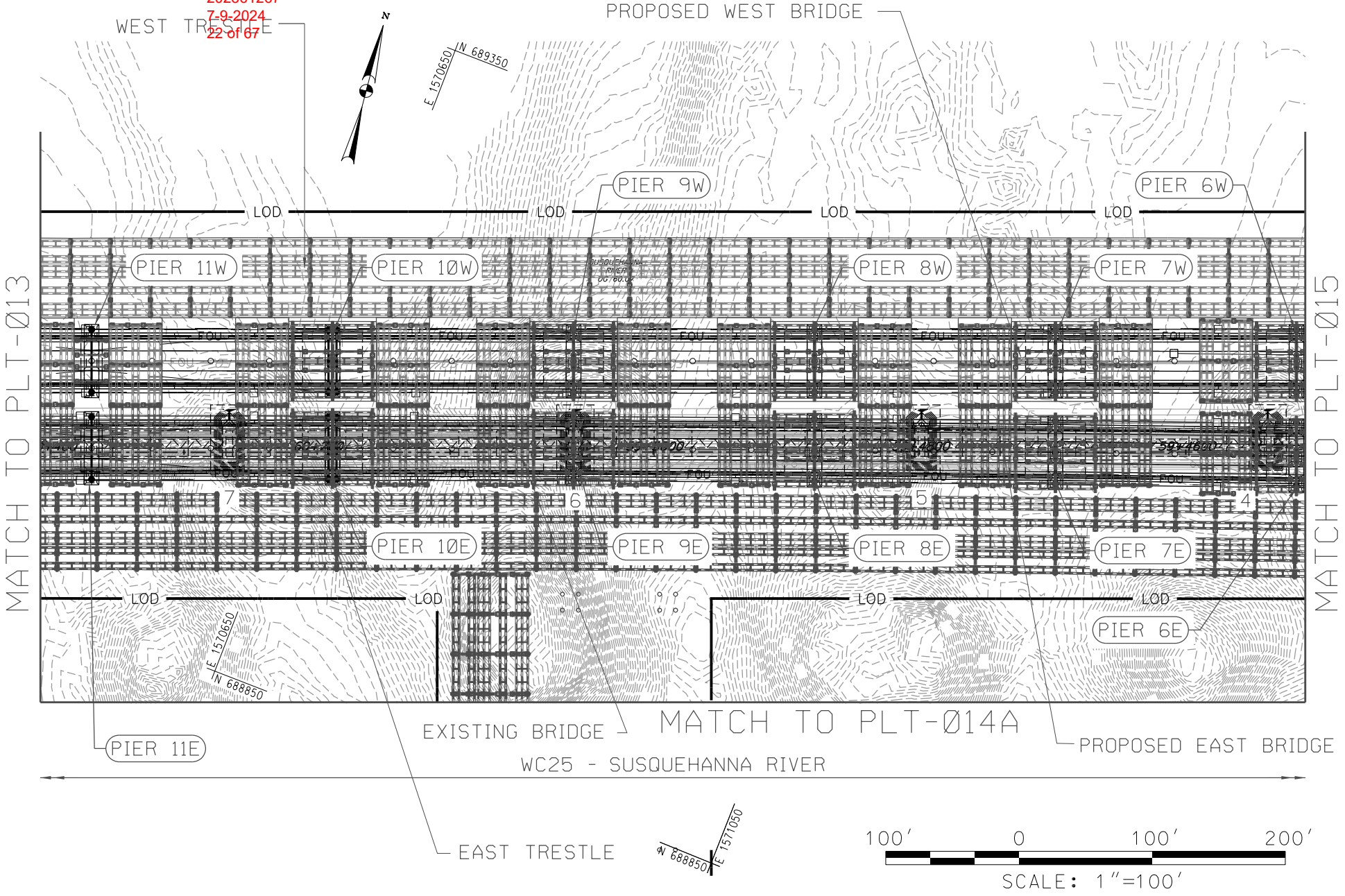

No.	Revisions	Date	By
1	ADDED MOORINGS	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
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RAIL BRIDGE PROJECT

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PLOT SCALE: AS SHOWN
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23-WL-0811

23-WQC-0045
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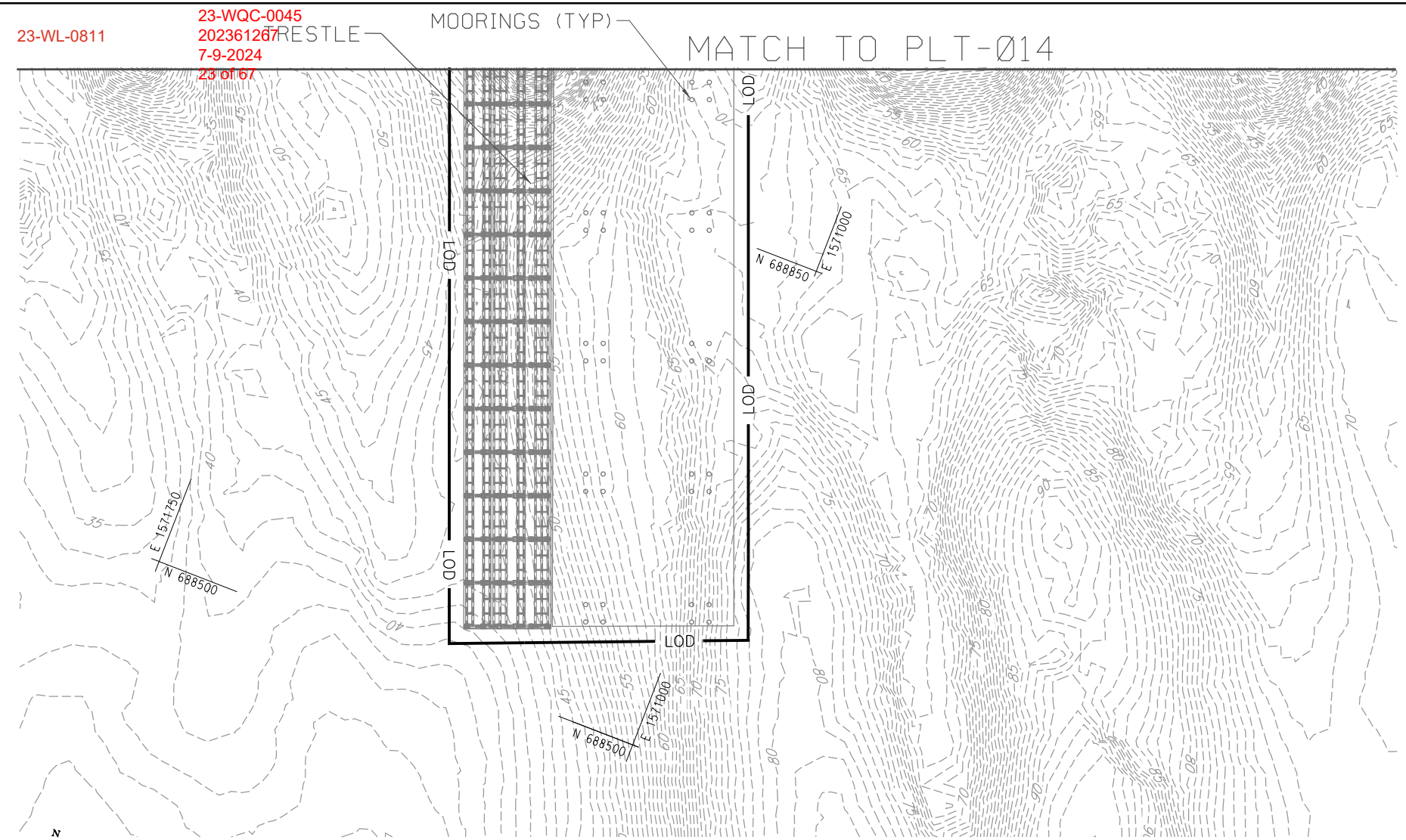

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

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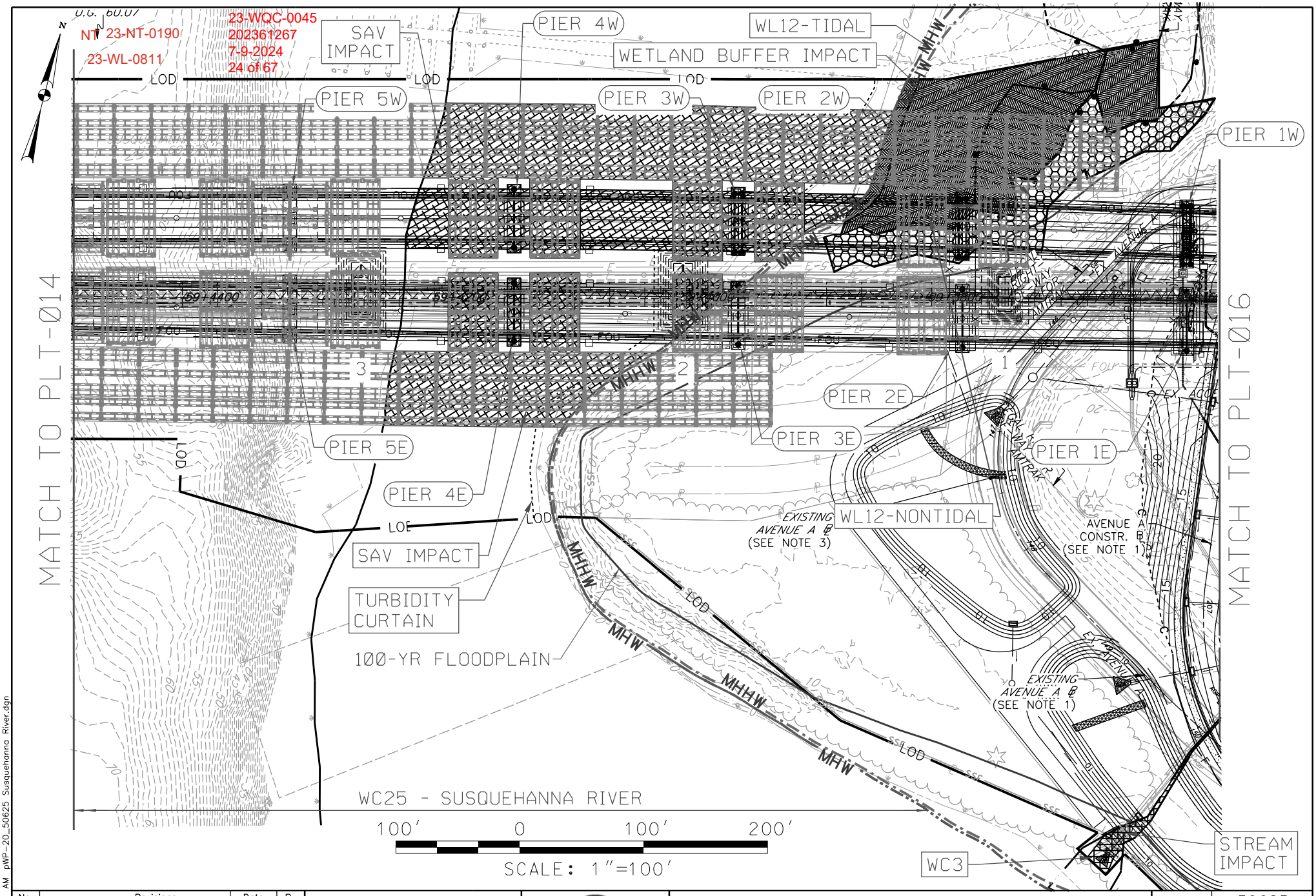
PLT-014A



No.	Revisions	Date	By
1	ADDED MHW AND MHHW BOUNDARIES	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

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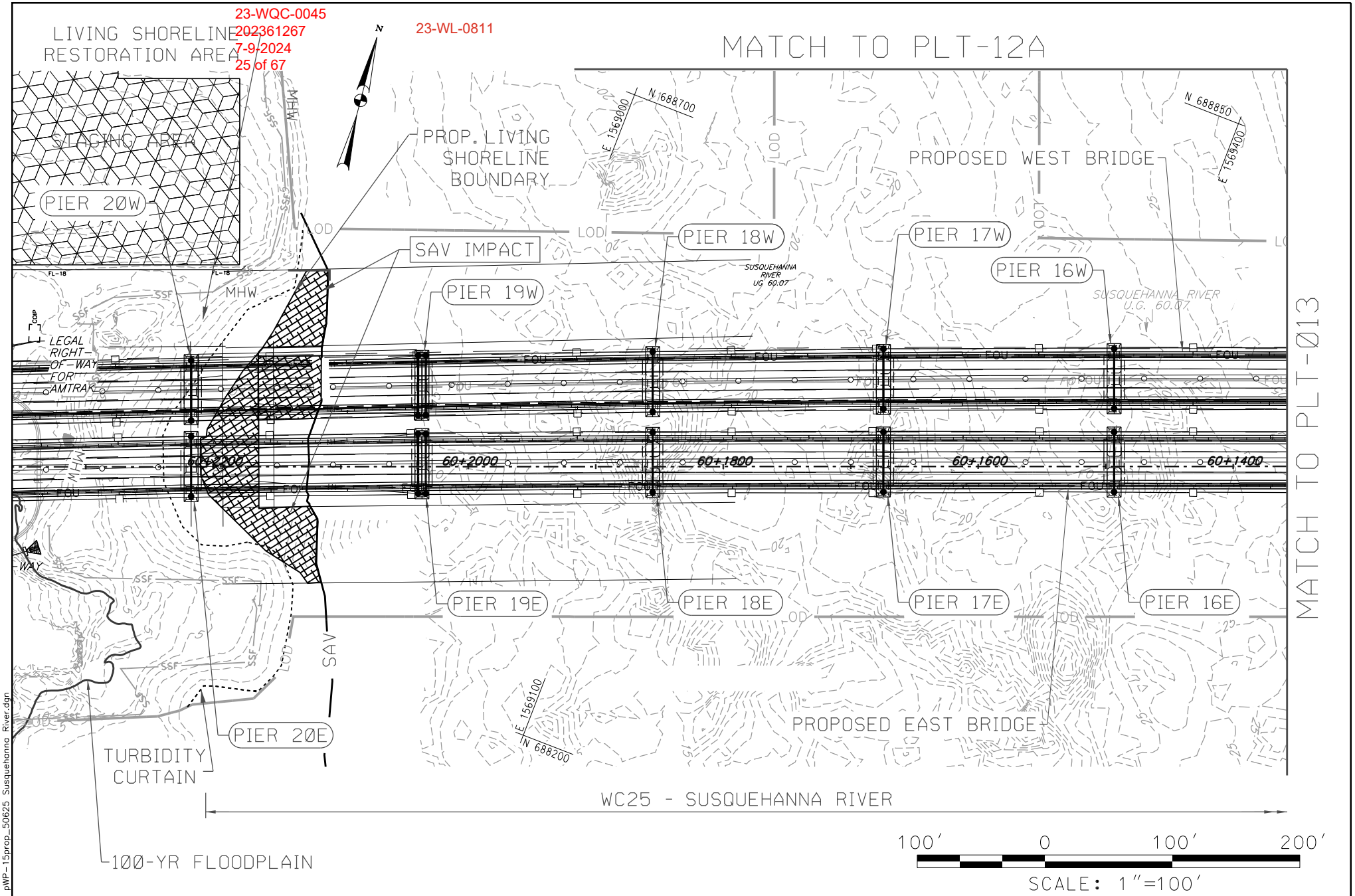

No.	Revisions	Date	By
1	ADDED MHHW AND MHW BOUNDARIES	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

PROPOSED CONDITIONS IMPACT PLATE

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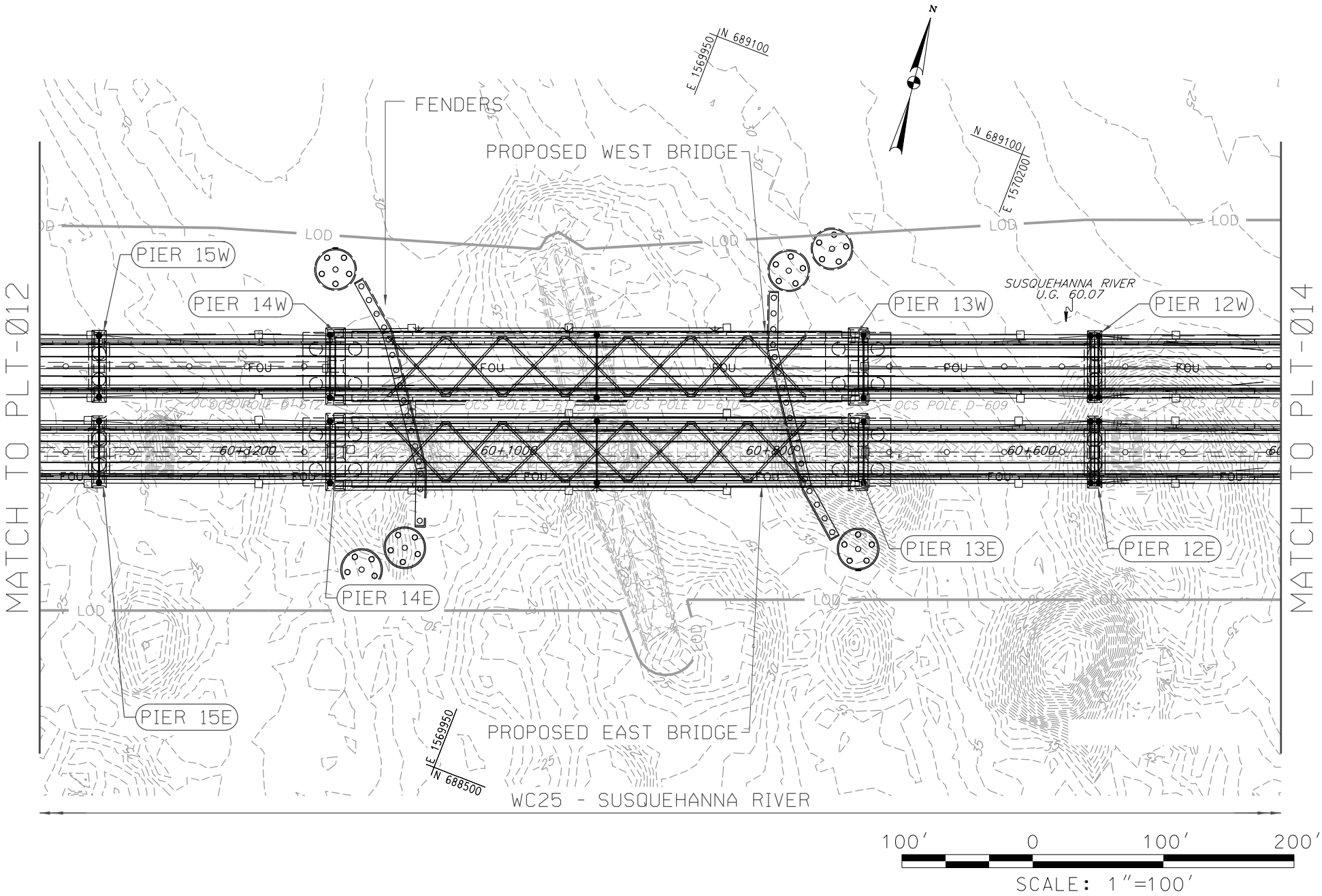

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

PROPOSED CONDITIONS IMPACT PLATE

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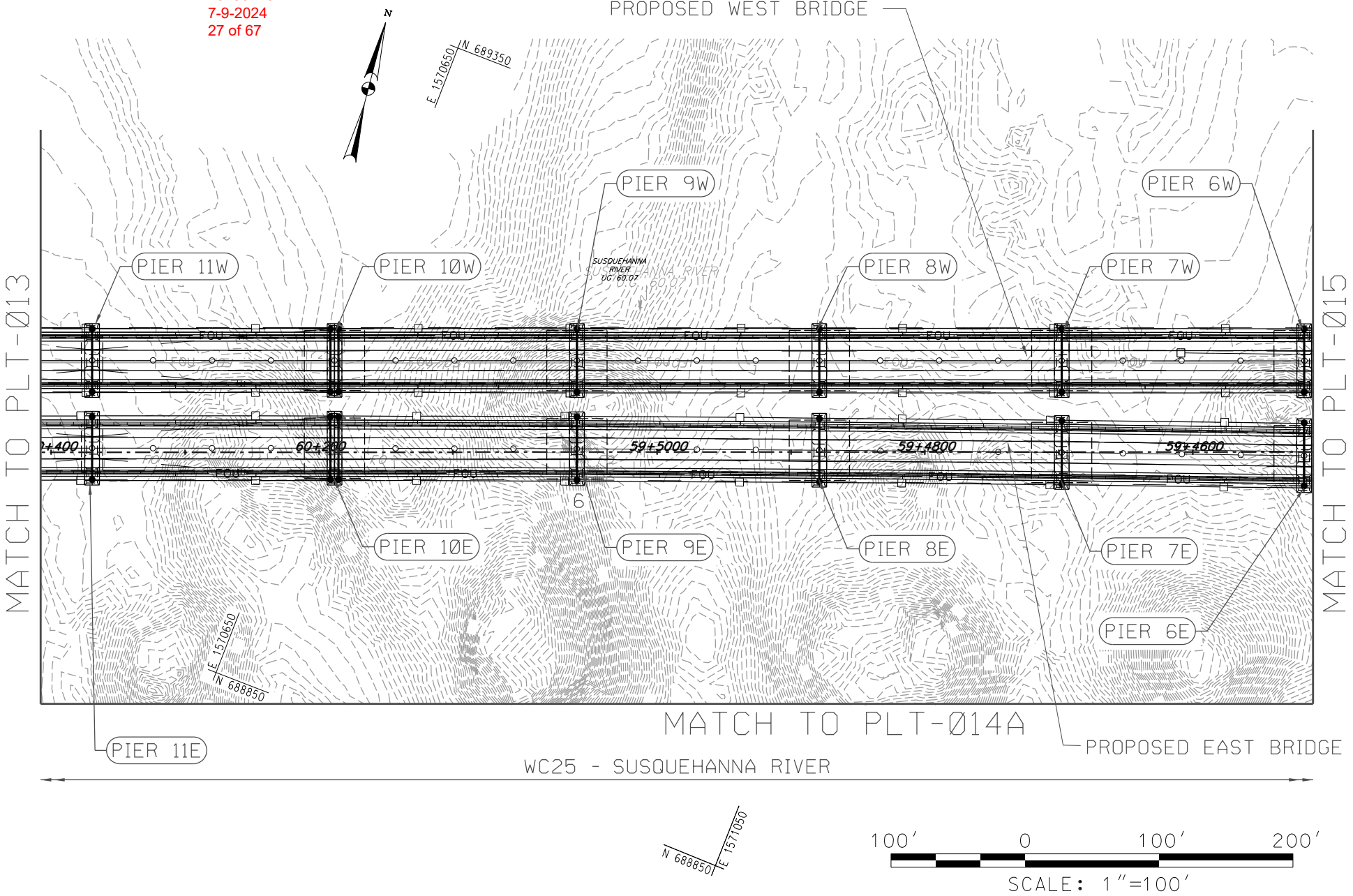

No.	Revisions	Date	By
1	ADDED MOORINGS	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

PROPOSED CONDITIONS IMPACT PLATE

Job No:	50625
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Date: May 2024	

PLT-014

PLOT SCALE: AS SHOWN
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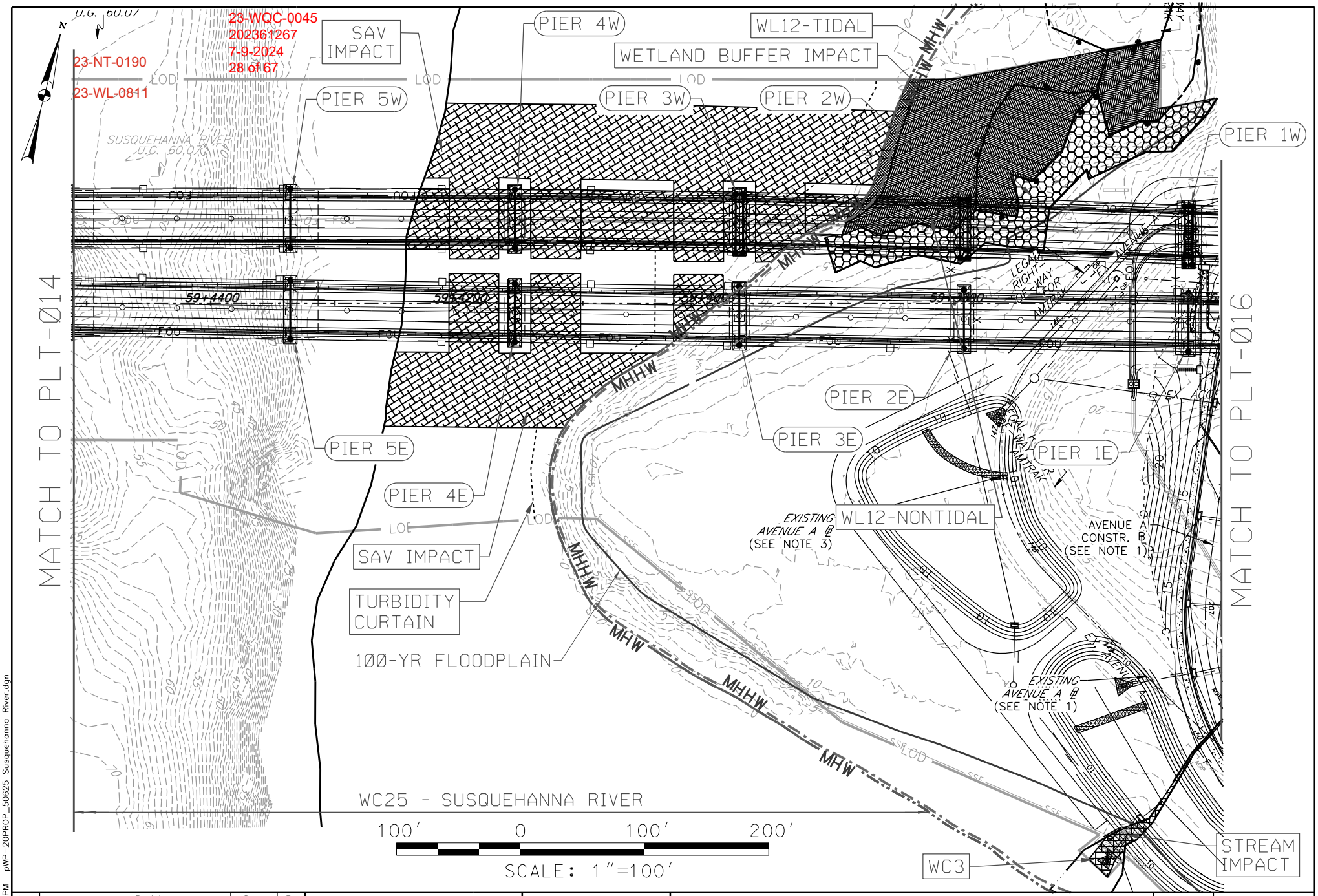

No.	Revisions	Date	By
1	ADDED MHW AND MHHW BOUNDARIES	11/13/23	MJF

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

PROPOSED CONDITIONS IMPACT PLATE

Job No:	50625
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Date: May 2024	

PLT-015

PLOT SCALE: AS SHOWN
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23-NT-0190

23-WQC-0045
202361267
7-9-2024
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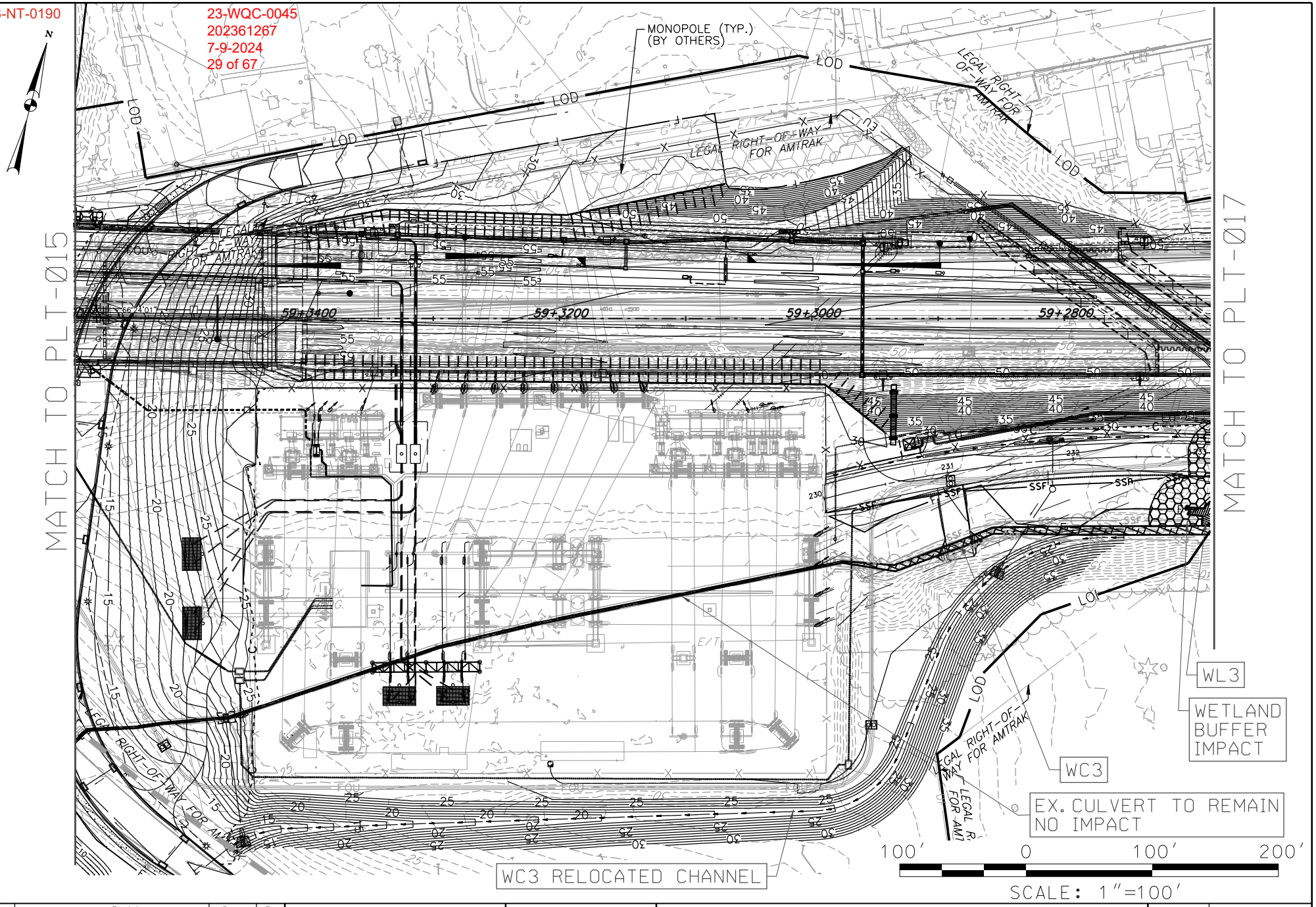

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No.	Revisions	Date	By

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

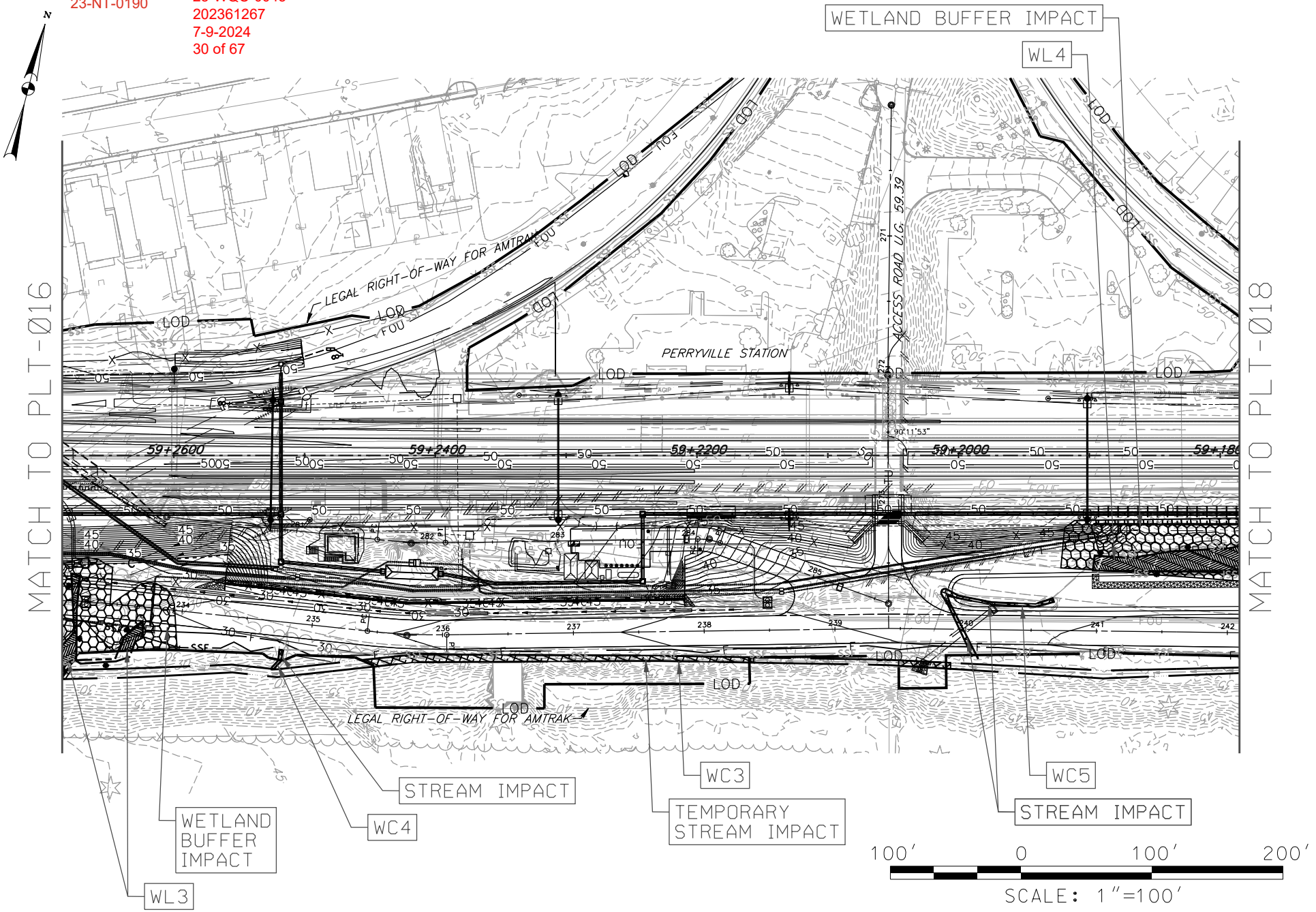
IMPACT PLATE

Job No:	50625
Sheet No.	21 OF 32
Date: May 2024	

PLT-016

23-NT-0190

23-WQC-0045
202361267
7-9-2024
30 of 67



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No.	Revisions	Date	By

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
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RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
Sheet No.	22 OF 32
Date: May 2024	

PLT-017

23-NT-0190

23-WQC-0045
202361267
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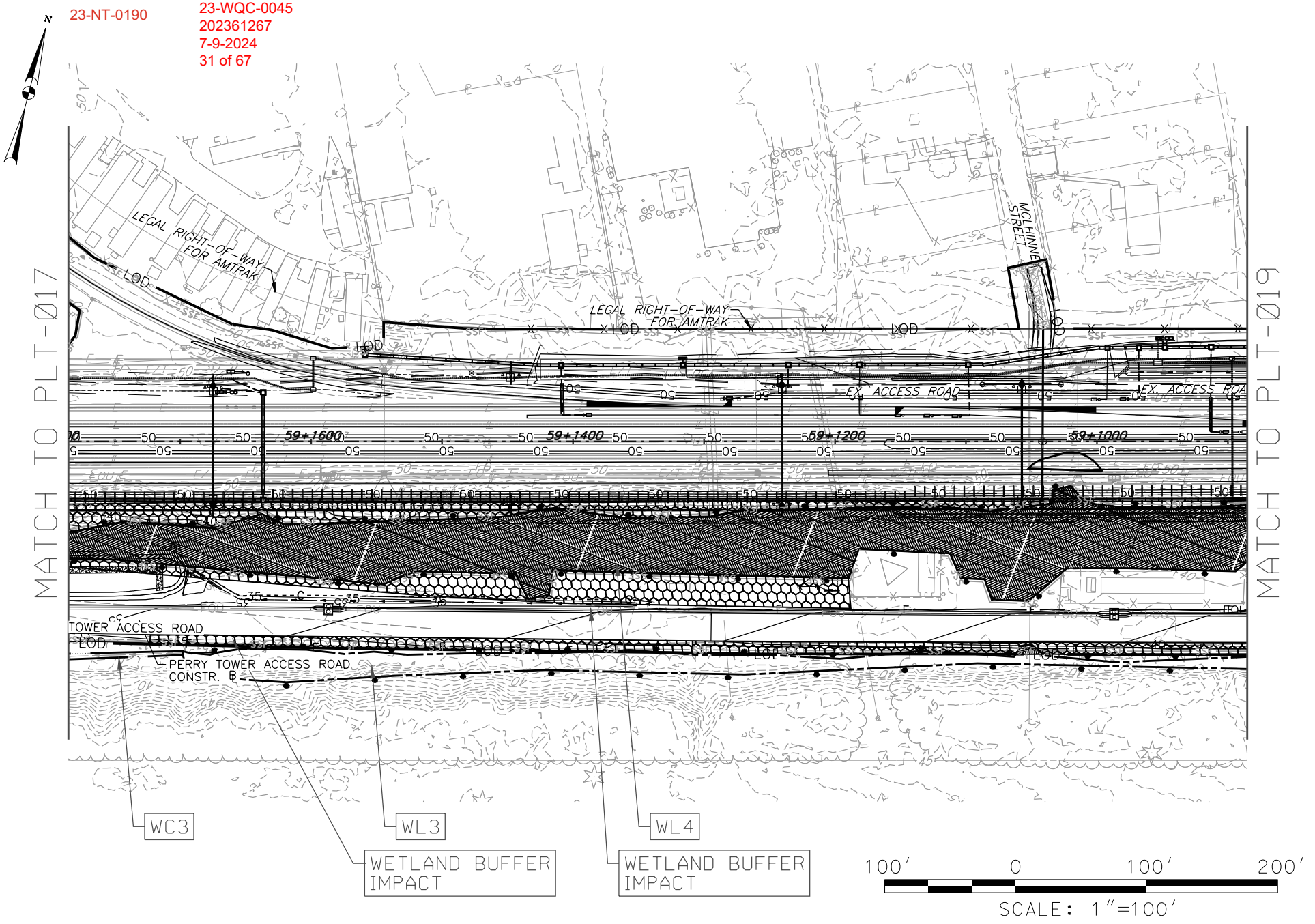

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No.	Revisions	Date	By

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

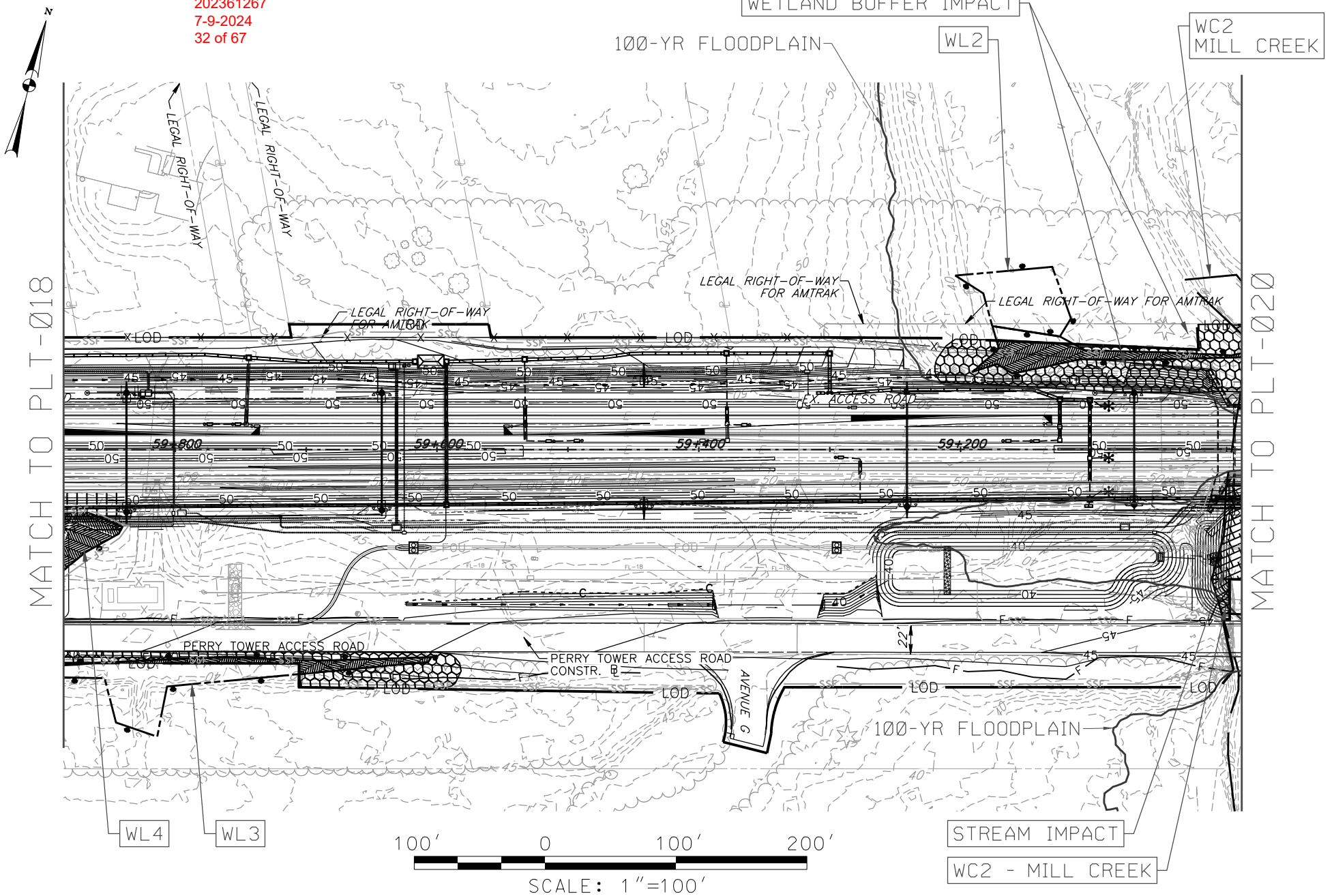
IMPACT PLATE

Job No:	50625
Sheet No.	23 OF 32
Date: May 2024	

PLT-018

23-NT-0190

23-WQC-0045
202361267
7-9-2024
32 of 67



No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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PLT-019

PLOT SCALE: AS SHOWN
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23-NT-0190

23-WQC-0045
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7-9-2024
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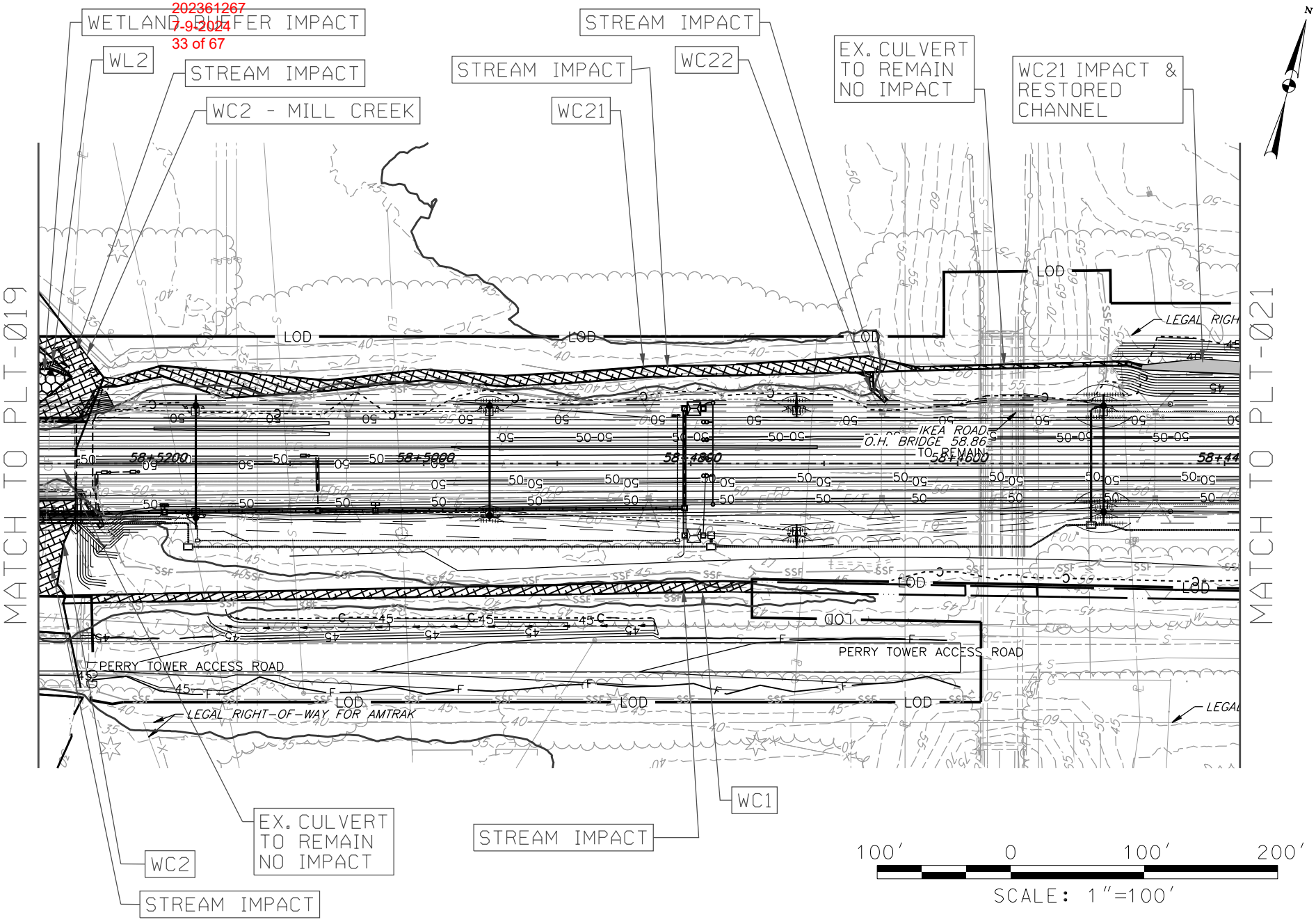

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No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

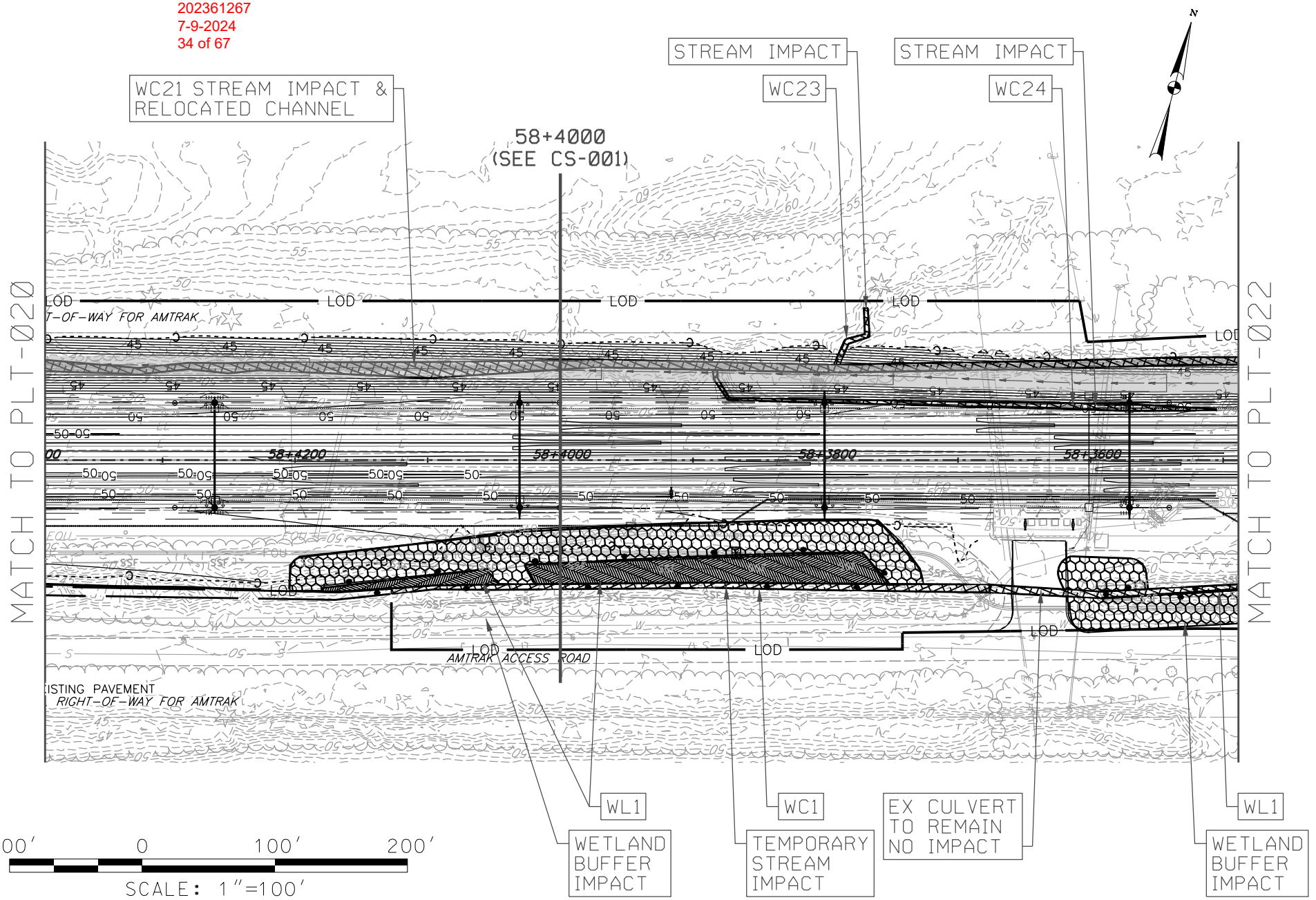
IMPACT PLATE

Job No:	50625
Sheet No.	25 OF 32
Date: May 2024	

PLT-020

23-NT-0190

23-WQC-0045
202361267
7-9-2024
34 of 67



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5/15/2024 7:49:50 AM pWP-26_50625_Susquehanna River.dgn

No.	Revisions	Date	By

HNTB

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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PLT-021

23-NT-0190

23-WQC-0045
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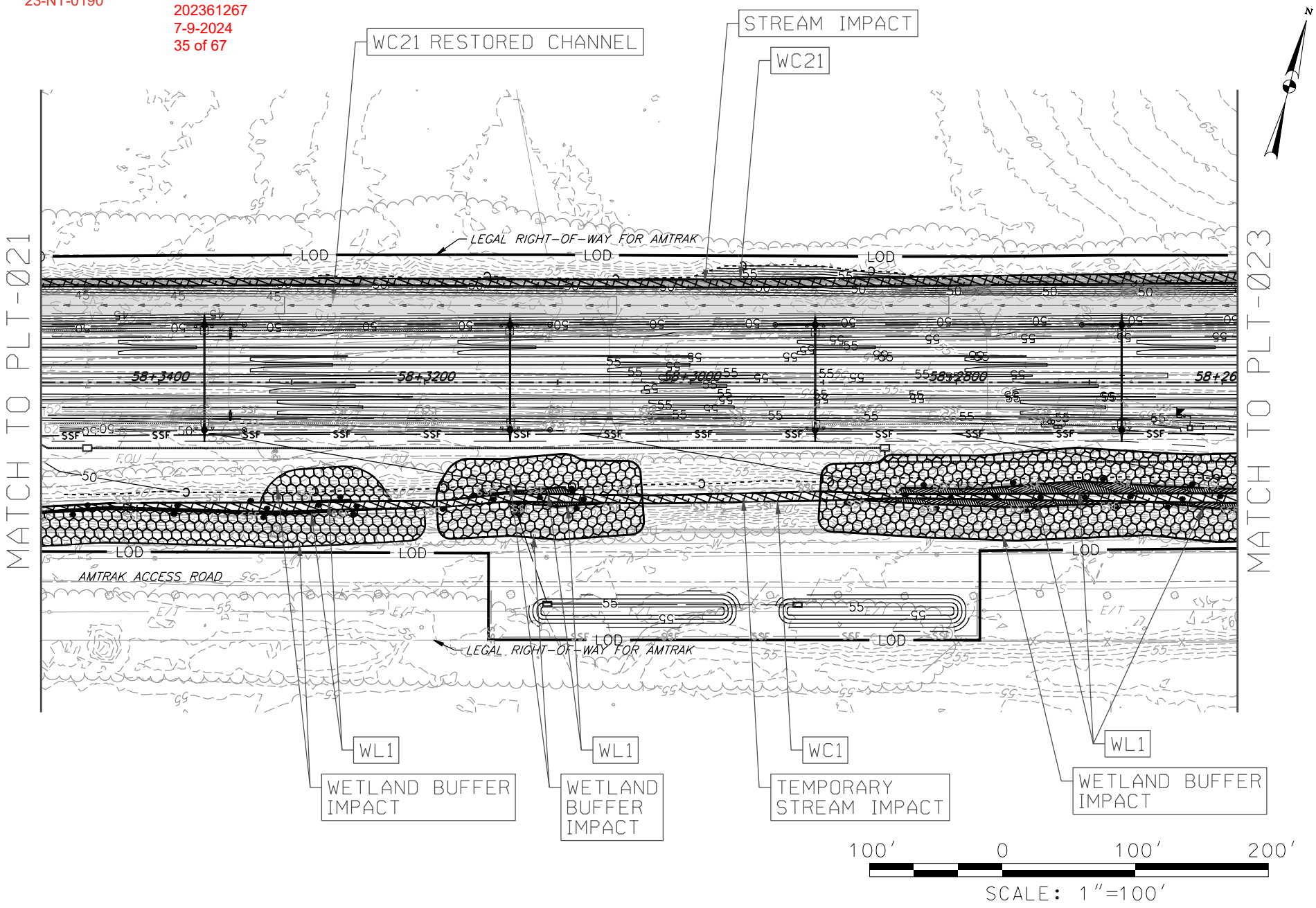

No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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PLT-022

PLOT SCALE: AS SHOWN
5/15/2024 8:11:25 AM pWP-27_50625_Susquehanna River.dgn

23-NT-0190

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23-WQC-0045
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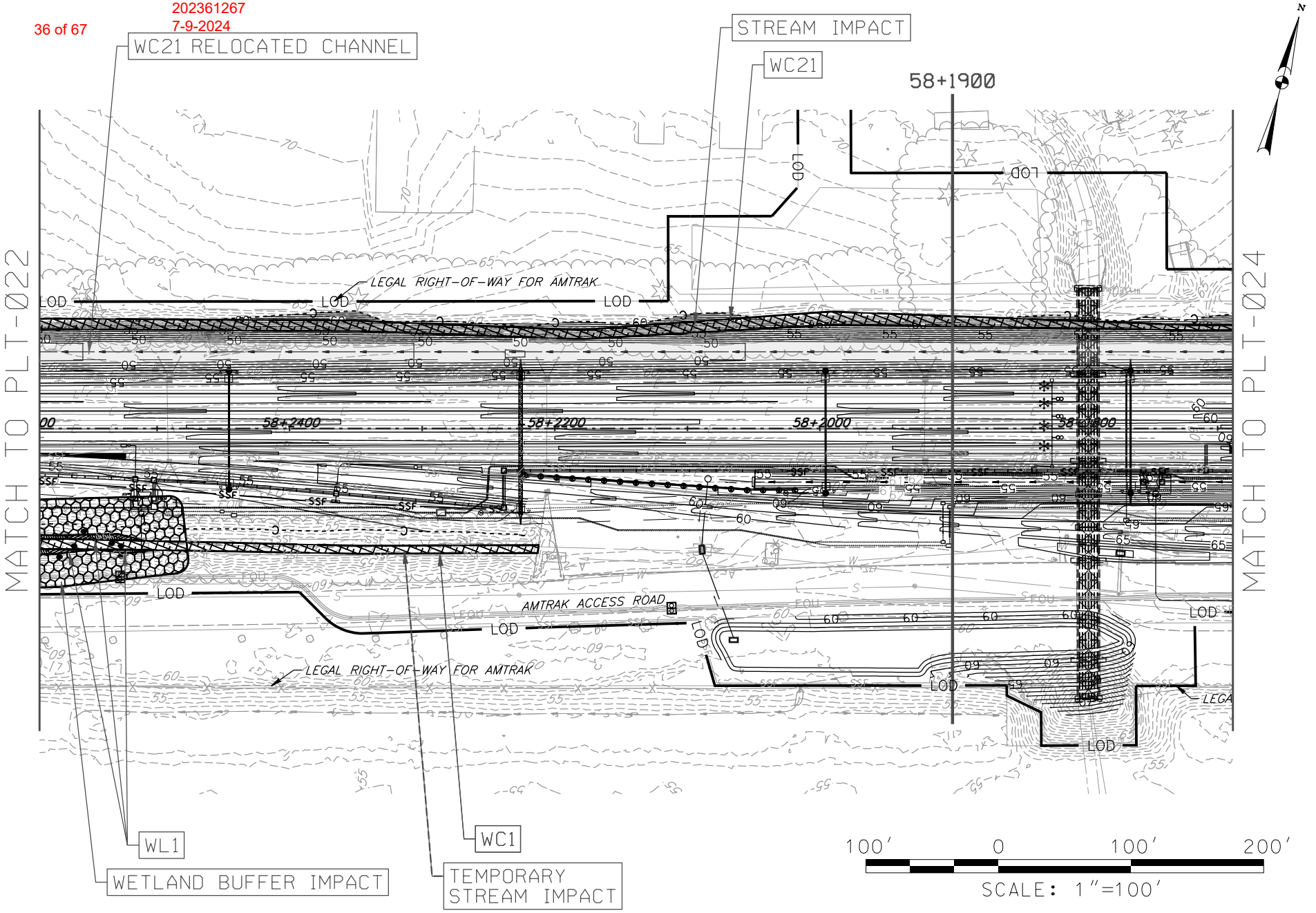
7-9-2024



No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

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PLT-023

PLOT SCALE: AS SHOWN
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23-NT-0190

23-WQC-0045
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7-9-2024
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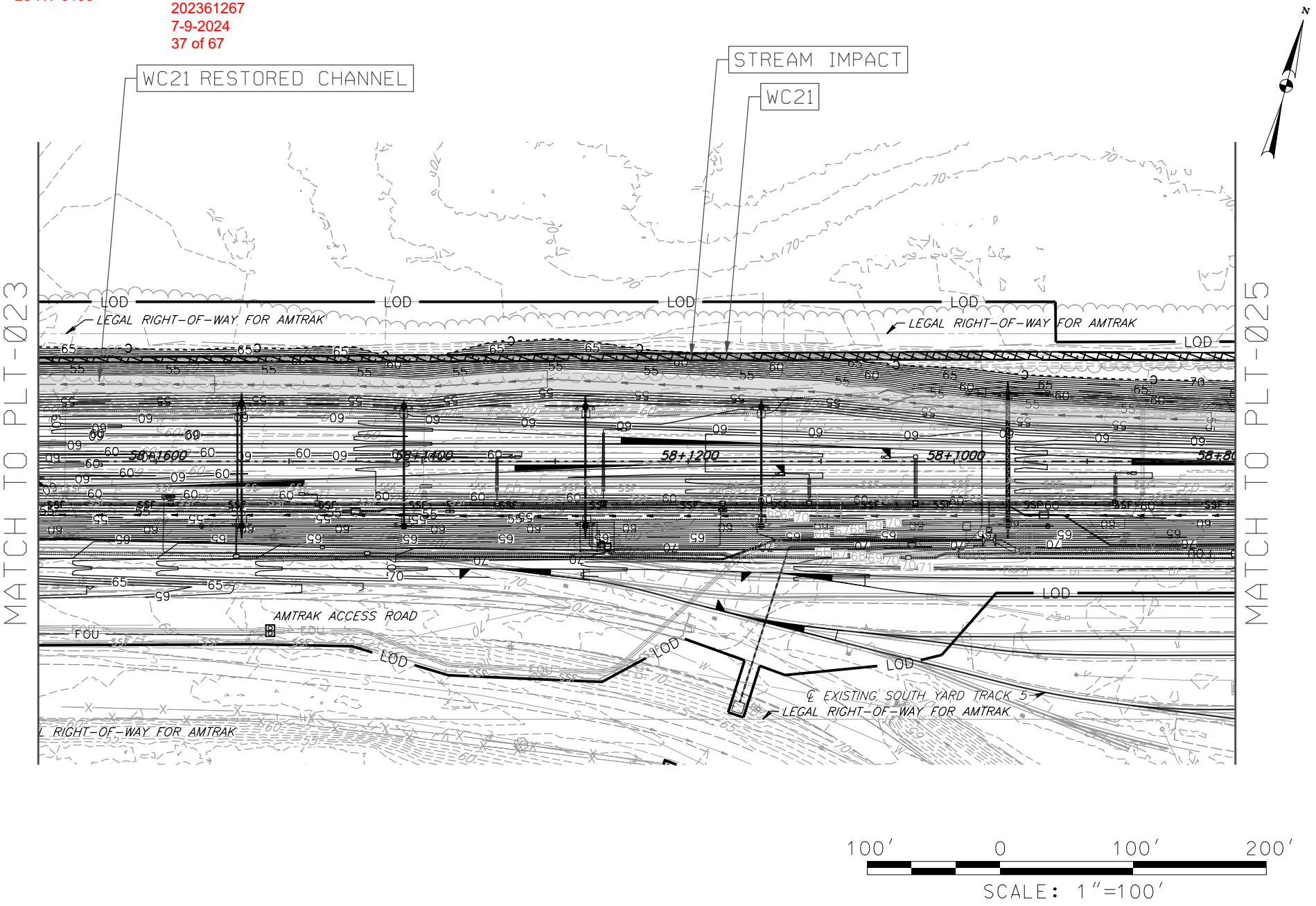

No.	Revisions	Date	By

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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PLT-024

PLOT SCALE: AS SHOWN
5/15/2024 8:27:15 AM pWP-29_50625_Susquehanna River.dgn

23-NT-0190

23-WQC-0045
202361267
7-9-2024
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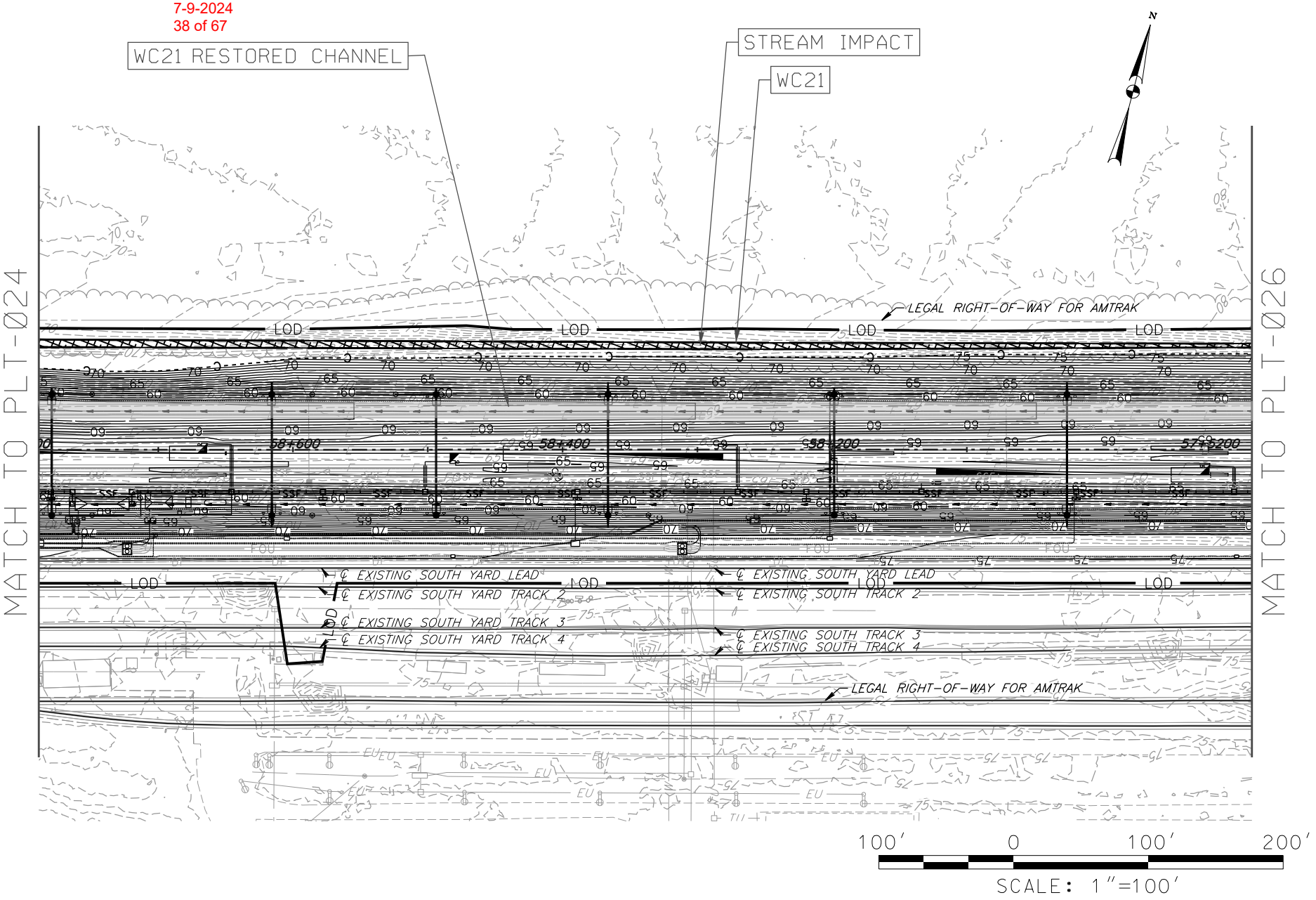

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No.	Revisions	Date	By

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COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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PLT-025

23-NT-0190

23-WQC-0045
202361267
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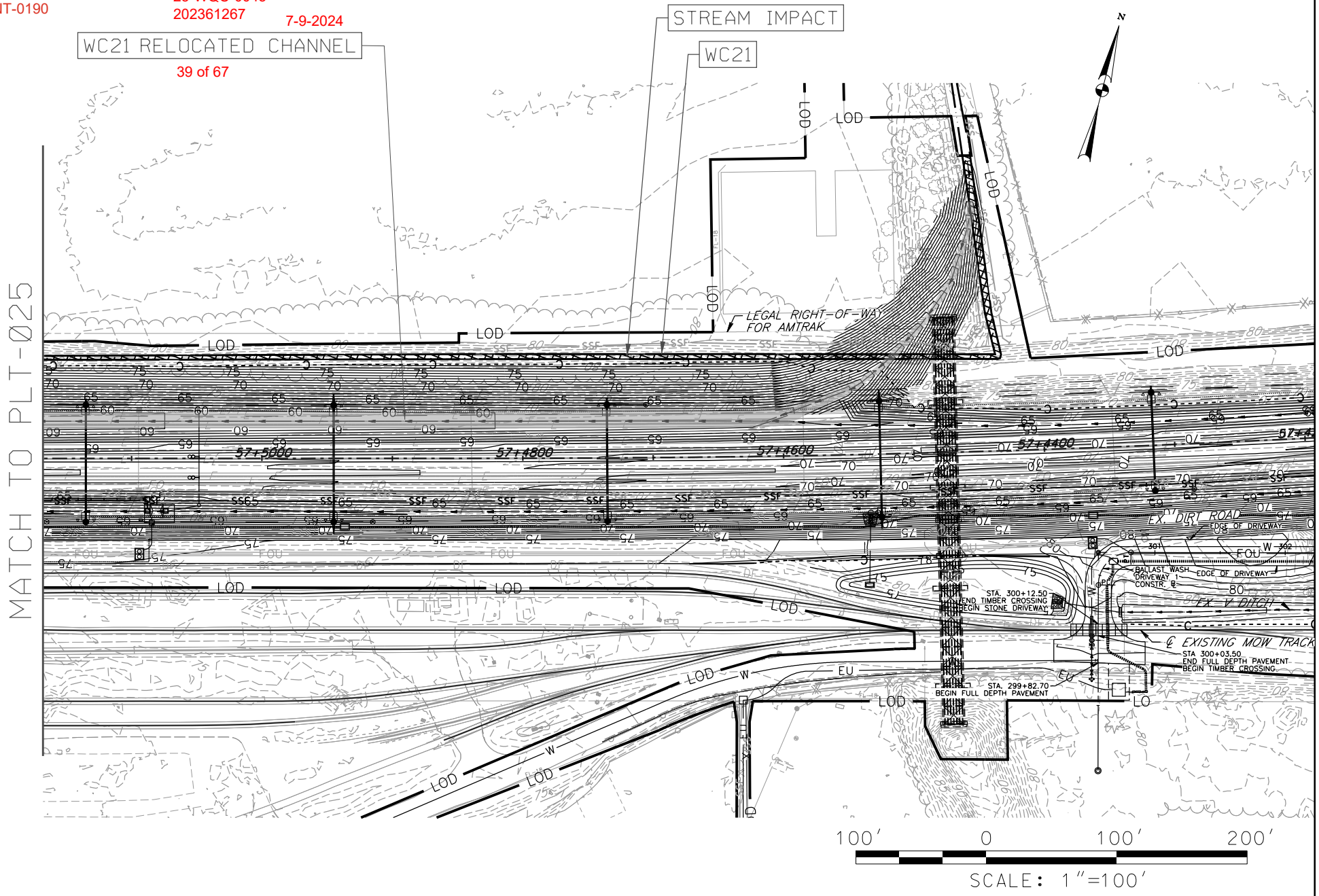

No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

IMPACT PLATE

Job No:	50625
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Date: May 2024	

PLT-026

PLOT SCALE: AS SHOWN
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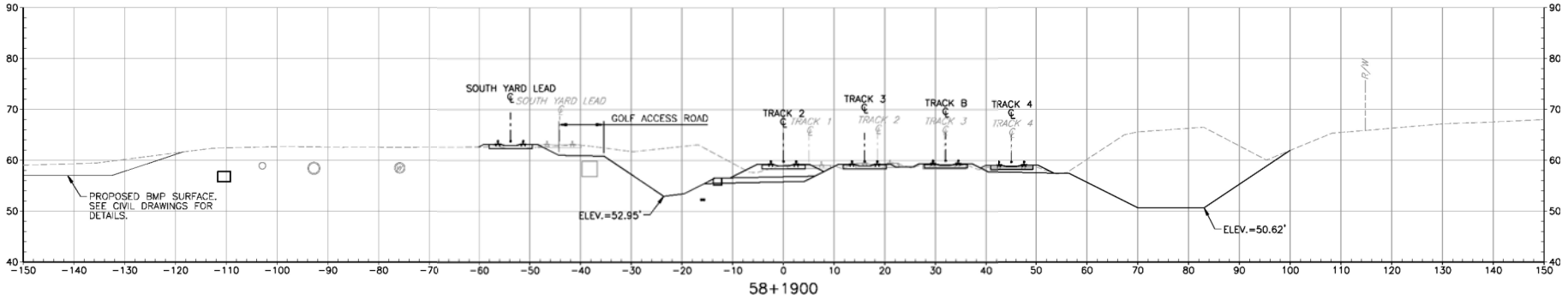

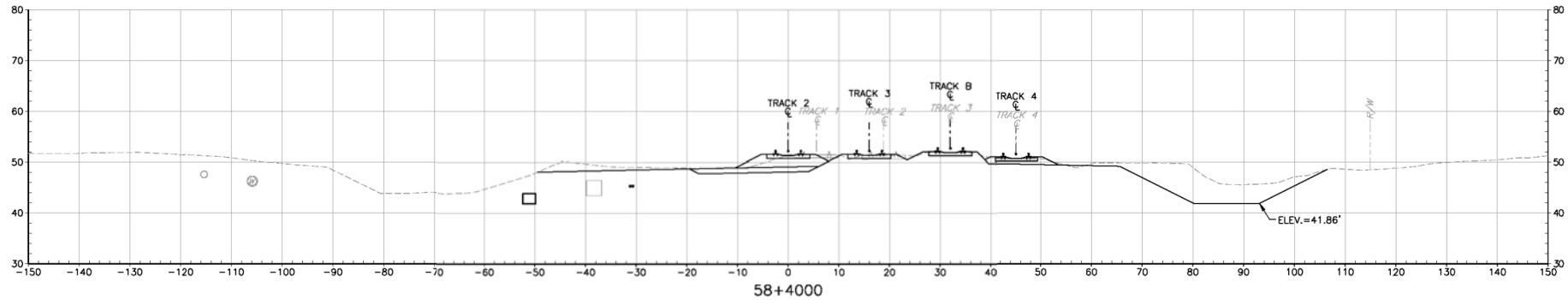

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4/27/2024 1:27:51 PM pWP-30_50625 Susquehanna River.dgn

No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

CROSS SECTIONS

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Date: May 2024

CS-001

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202361267
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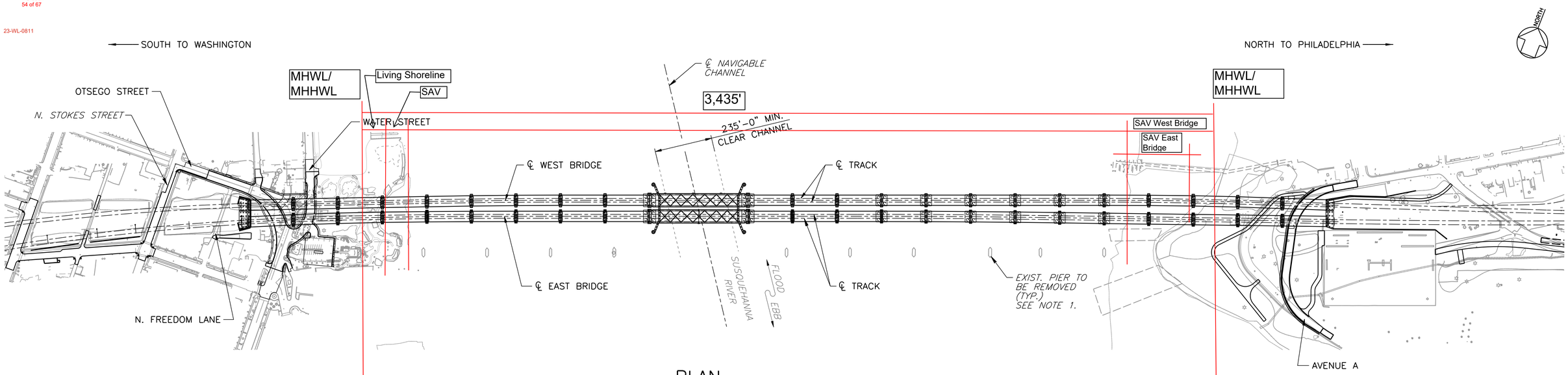
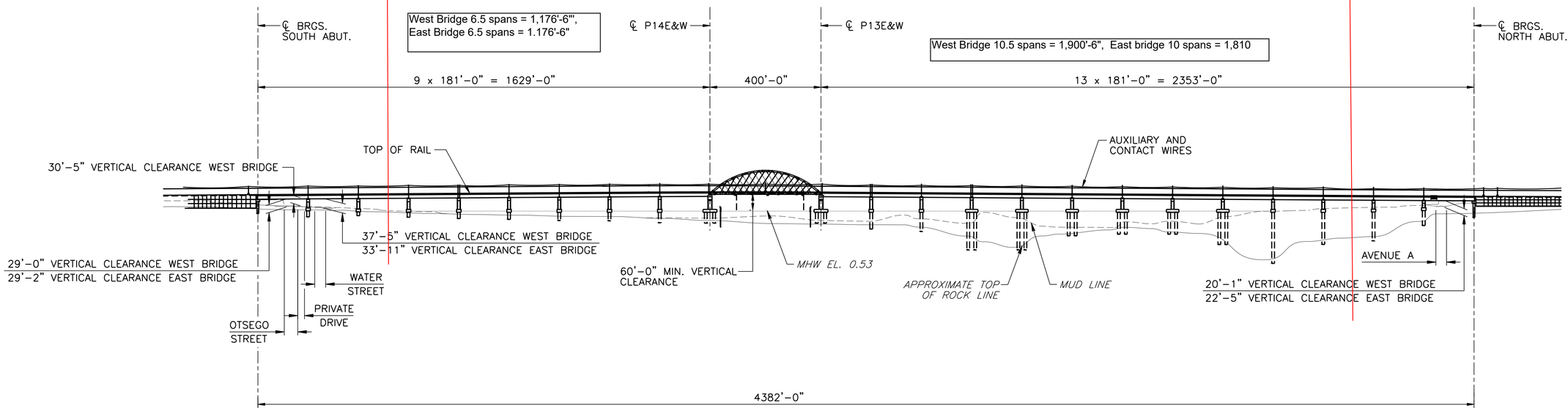
23-WL-0811



PLAN

SCALE: 1" = 200'-0"



ELEVATION

(EAST BRIDGE SHOWN)
SCALE: 1" = 200'-0"

NOTES:

1. THE REMNANT PIERS HAVE BEEN REMOVED UNDER A SEPARATE CONTRACT

0 200 400
SCALE: 1" = 200'

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

90% PROGRESS SUBMISSION NOT FOR CONSTRUCTION

HNTB

HNTB Corporation
1650 Arch Street, Suite 1700
Philadelphia, PA 19103
215-568-6500

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL - RIVER BRIDGE
KEY PLAN AND ELEVATION

Designed	Drawn	Checked	Date
BX	DS	GD	04/29/2024

Job No:	50625
File Name:	10-s-br-Pln000
Sheet No.	OF
Dwg. No.	S10-004

PLOT SCALE: AS SHOWN
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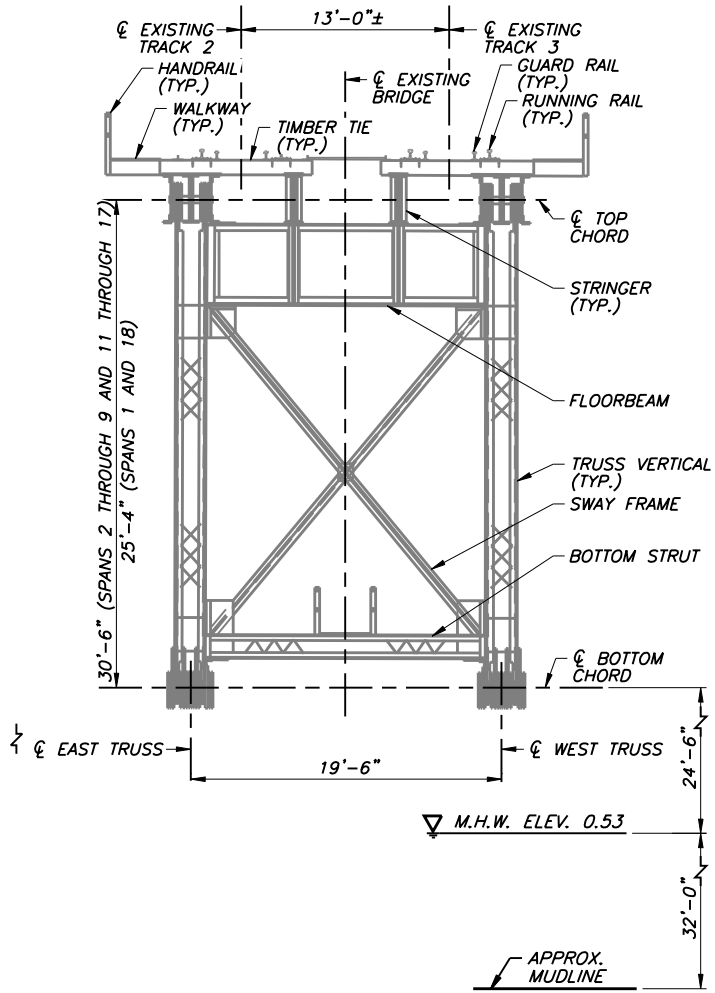
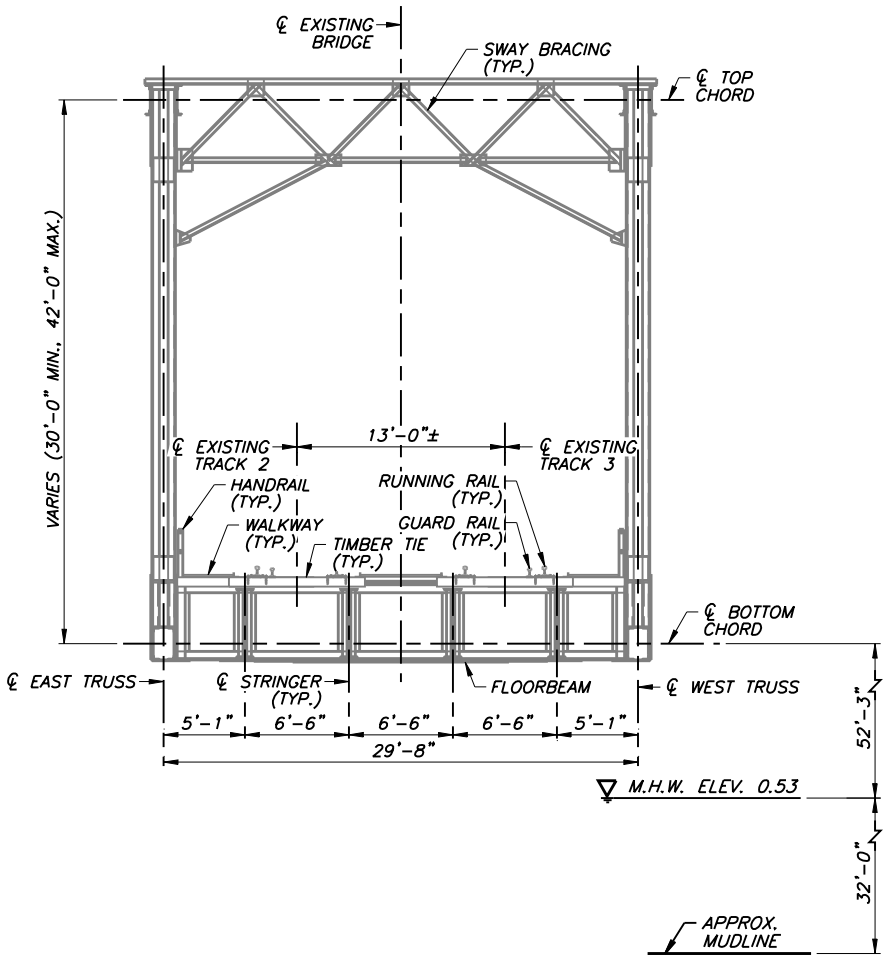


EXISTING APPROACH SPAN TYPICAL SECTION

NOT TO SCALE



EXISTING SWING SPAN TYPICAL SECTION

NOT TO SCALE

PLOT SCALE: AS SHOWN
12/1/2023 10:41:11 AM 50625-s-br-jp02.dgn

No.	Revisions	Date	By

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES

EXISTING BRIDGE SUPERSTRUCTURE SECTION

Job No:	50625
Sheet No.	2 OF 13

PLT-002

23-WL-0811
23-WQC-0045
202361267
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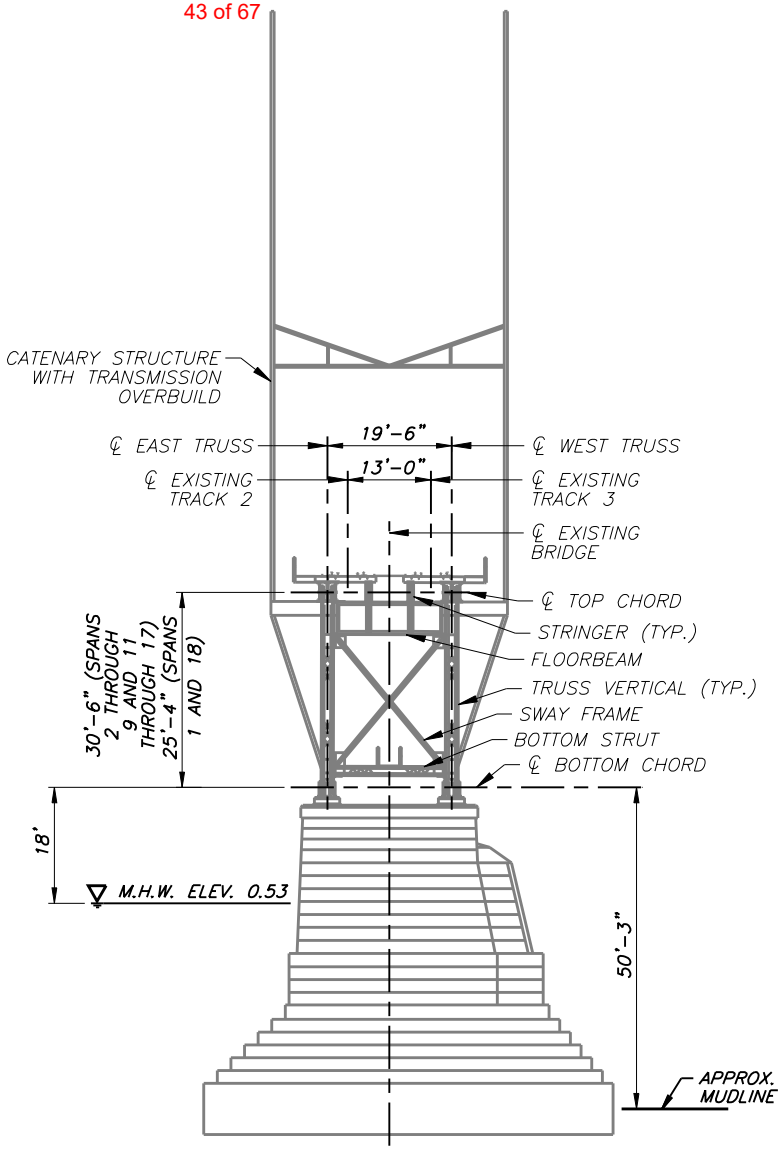

TYPICAL SECTION (RIVER PIER SHOWN)
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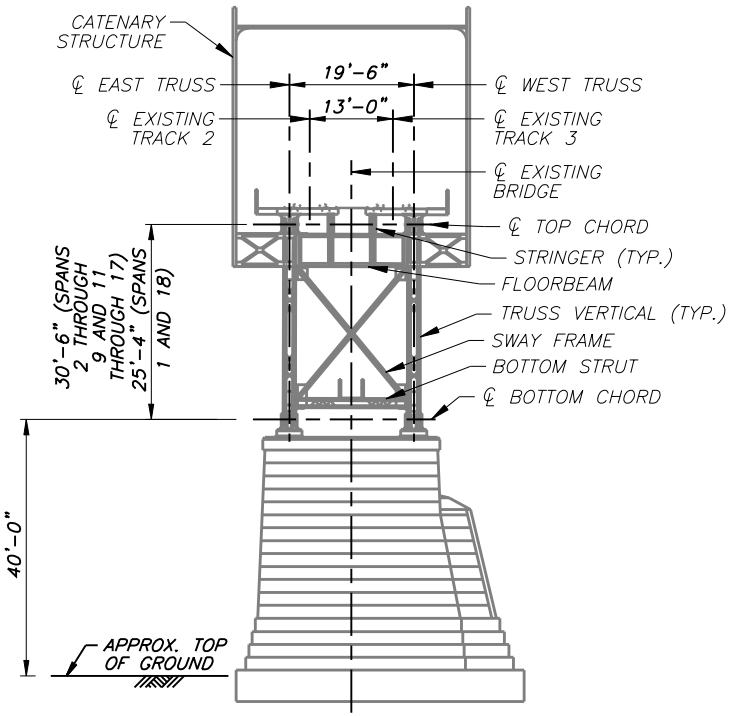

TYPICAL SECTION (LAND PIER SHOWN)
NOT TO SCALE

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215-568-6500

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES
EXISTING BRIDGE PIER SECTION

Job No:	50625
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PLT-003

PLOT SCALE: AS SHOWN
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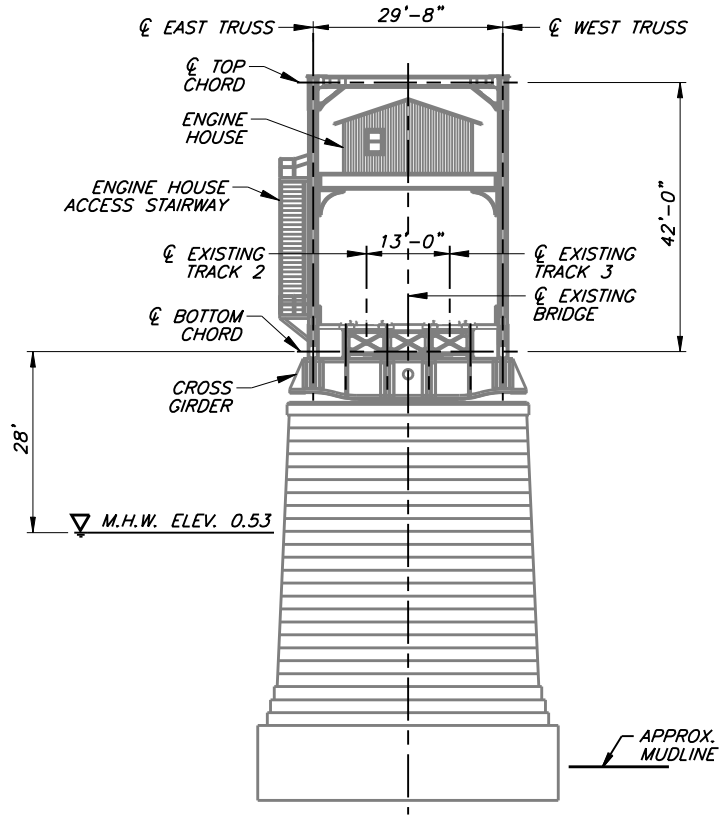

TYPICAL SECTION AT PIVOT PIER
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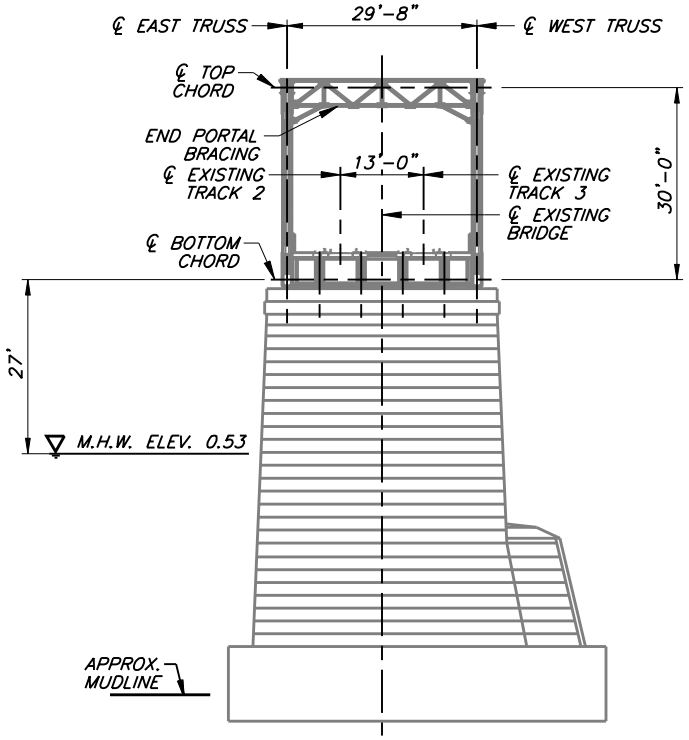

TYPICAL SECTION AT CHANNEL PIER
NOT TO SCALE

PLOT SCALE: AS SHOWN
12/1/2023 10:41:15 AM 50625-s-br-jp04.dgn

No.	Revisions	Date	By

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES
EXISTING BRIDGE PIVOT PIER SECTION

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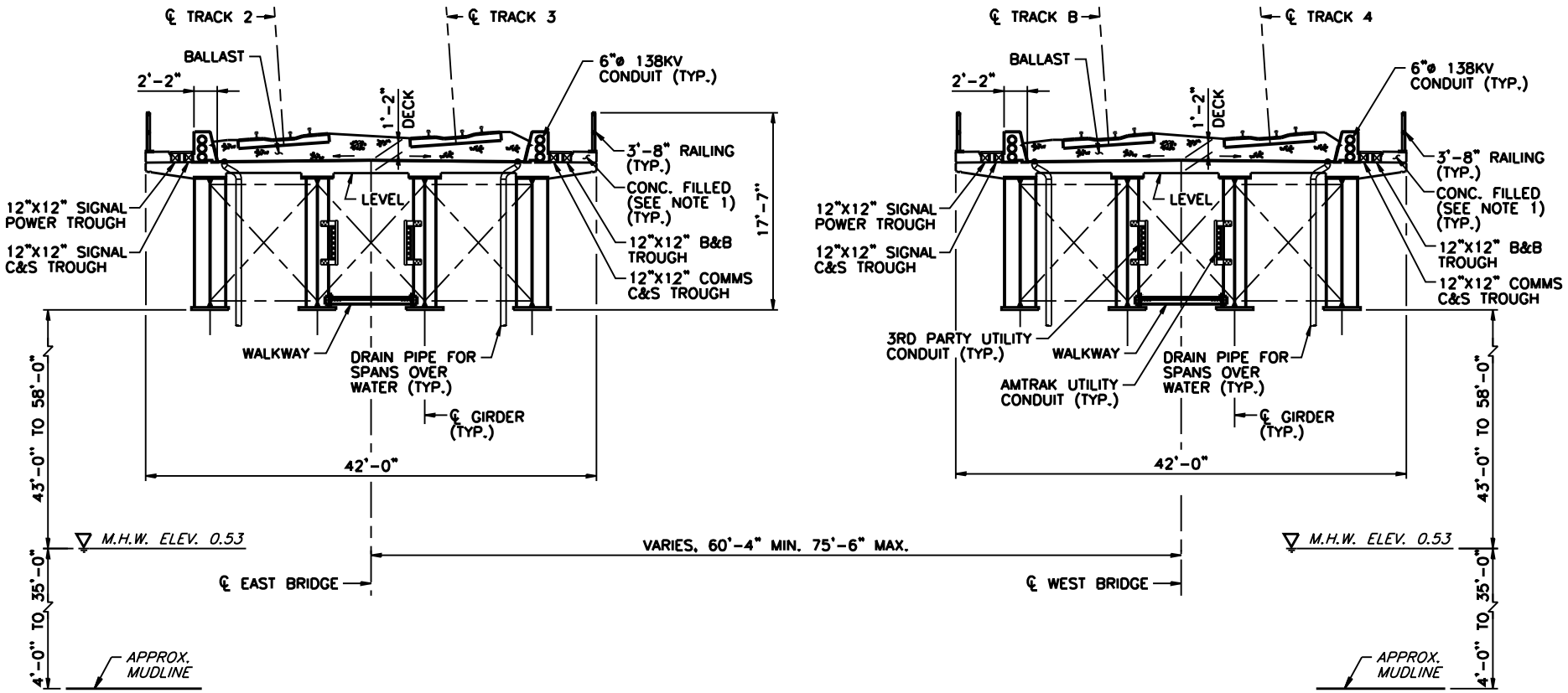
PLT-004



APPROACH TYPICAL CROSS SECTION (CURVED TRACKS)

(LOOKING WEST)
NOT TO SCALE

PLOT SCALE: AS SHOWN
12/1/2023 10:41:16 AM 50625-s-br-jp05.dgn

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES
PROPOSED BRIDGE SUPERSTRUCTURE SECTION

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PLT-005

23-WL-0811
23-WQC-0045
202361267
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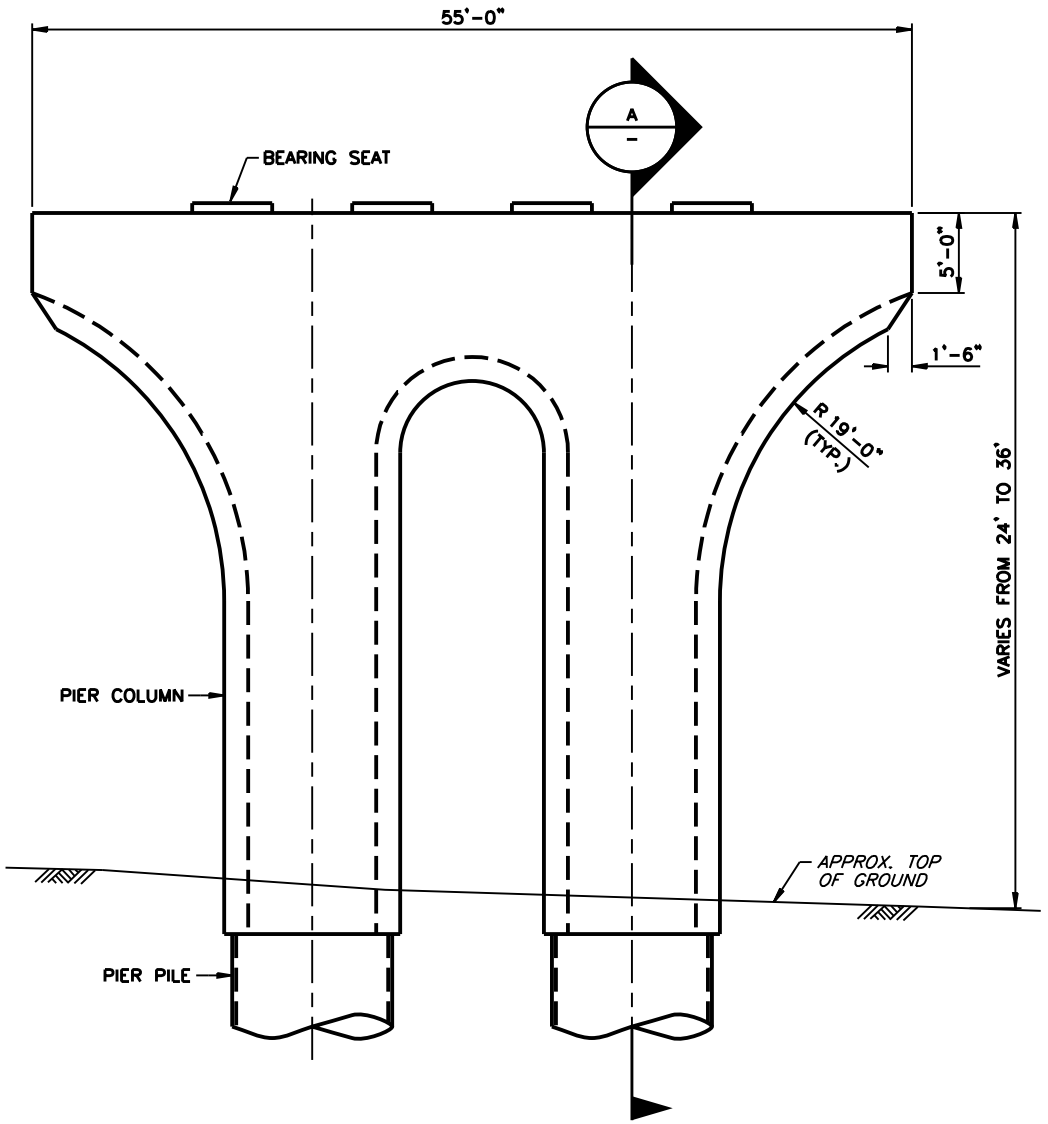
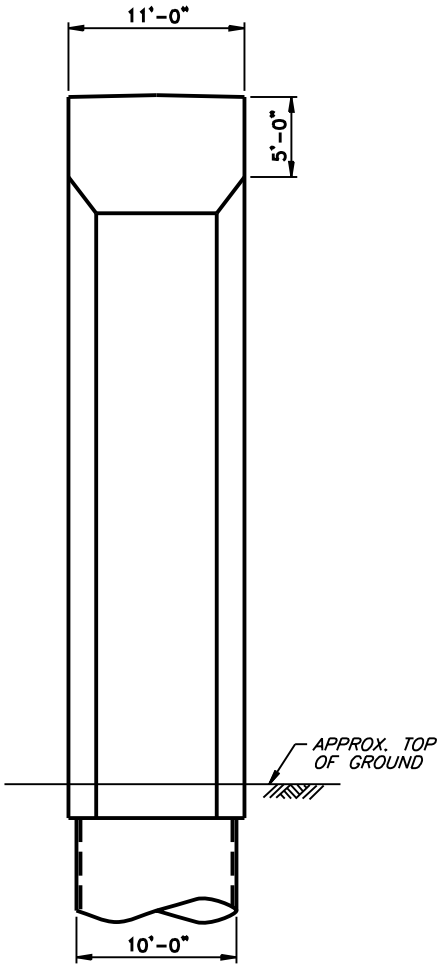


TYPICAL PIER A (LAND PIER)
(PIERS 1, 2, 21 AND 22)
NOT TO SCALE



A
–
SECTION
NOT TO SCALE

No.	Revisions	Date	By

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Philadelphia, PA 19103
215-568-6500

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES

PROPOSED BRIDGE PIER A SECTION

Job No:	50625
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PLT-006

PLOT SCALE: AS SHOWN
12/1/2023 10:41:18 AM 50625-s-br-jp06.dgn

23-WL-0811

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202361267
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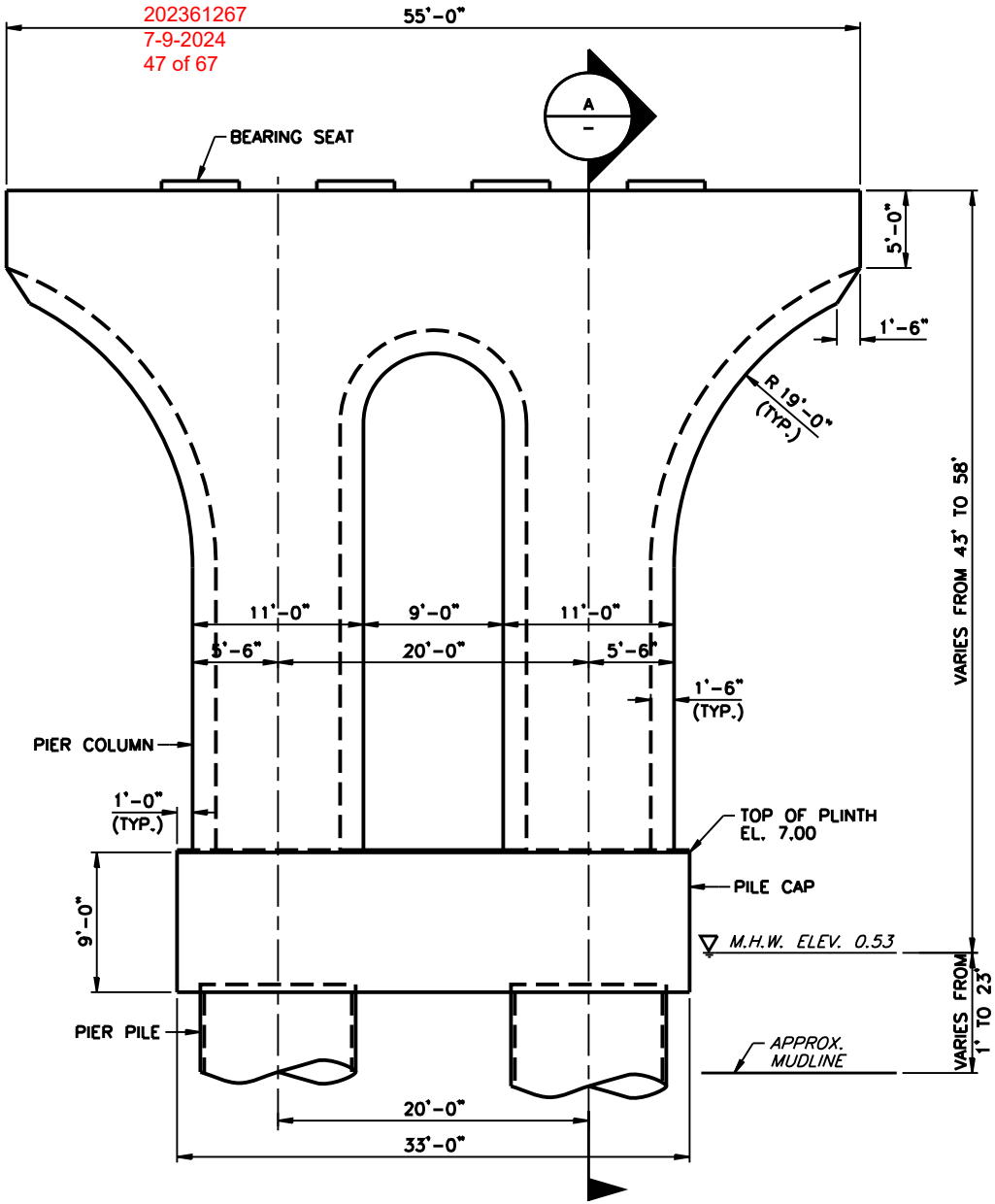
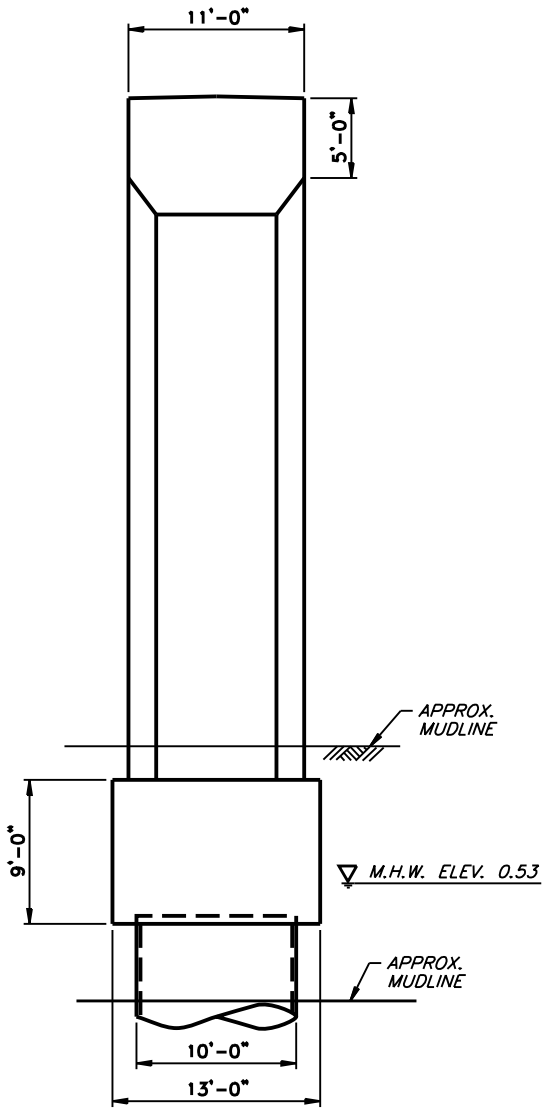


TYPICAL PIER B
(PIERS 3, 4, 11, 12, 15, 16, 17, 18, 19 AND 20)
NOT TO SCALE



A – **SECTION**
NOT TO SCALE

No.	Revisions	Date	By

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215-568-6500

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES

PROPOSED BRIDGE PIER B SECTION

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PLT-007

PLOT SCALE: AS SHOWN
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23-WL-0811

23-WQC-0045
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7-9-2024
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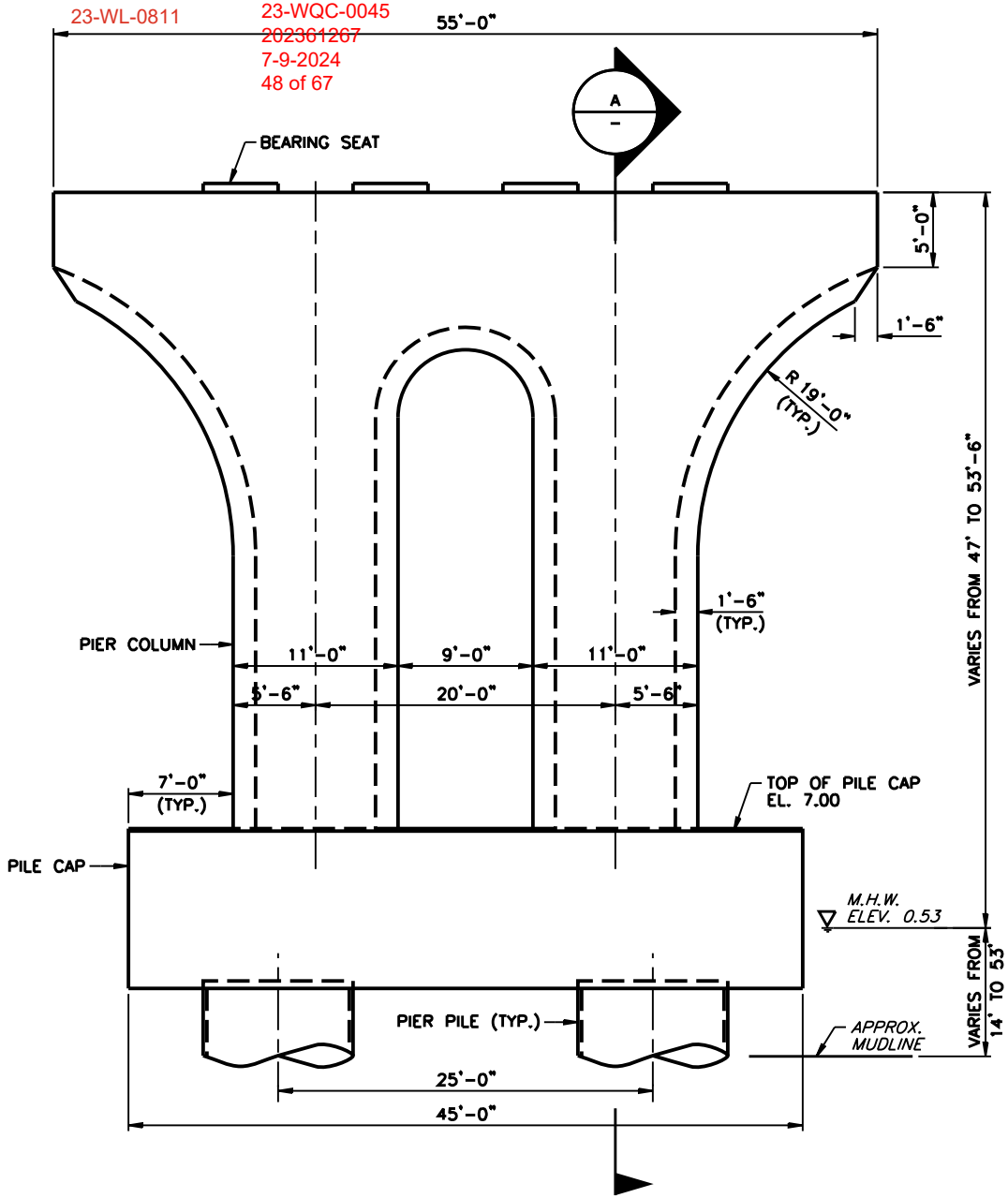
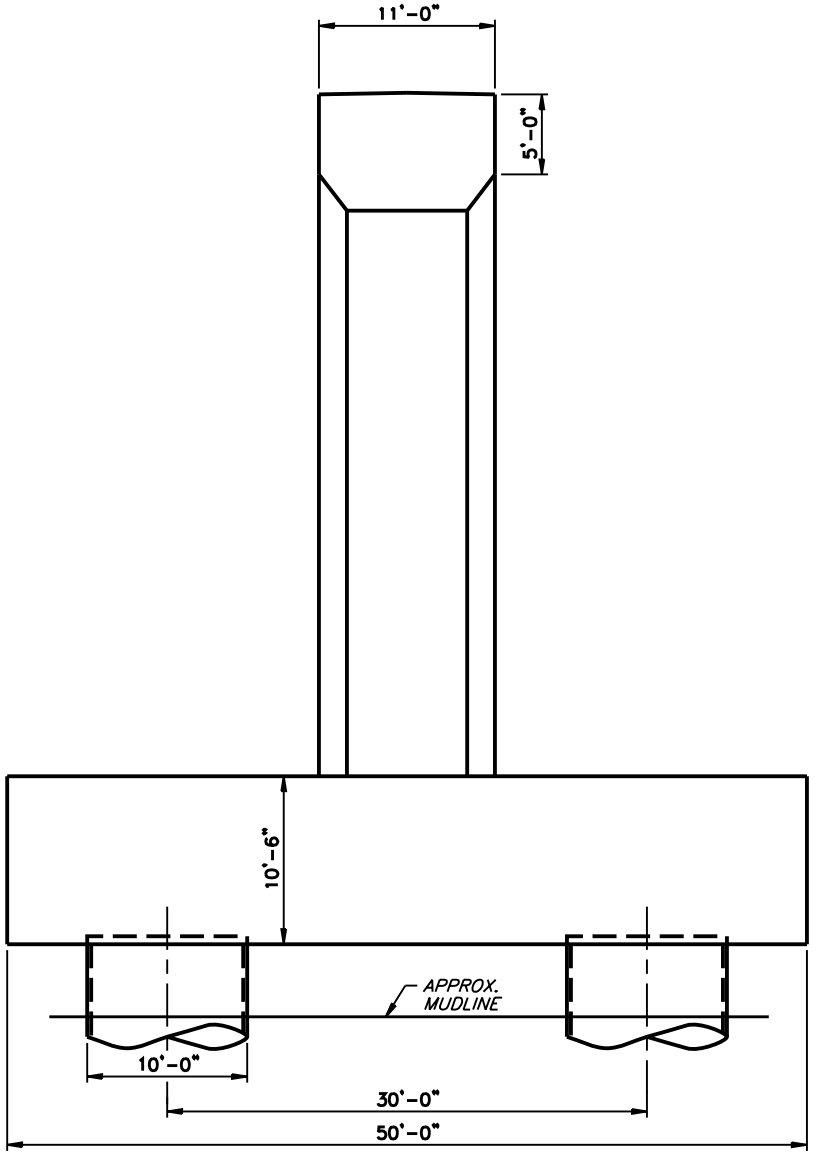


TYPICAL PIER C
(PIERS 5 THRU 10)
NOT TO SCALE



A
SECTION
NOT TO SCALE

PLOT SCALE: AS SHOWN
12/1/2023 10:41:19 AM 50625-s-br-jp08.dgn

No.	Revisions	Date	By

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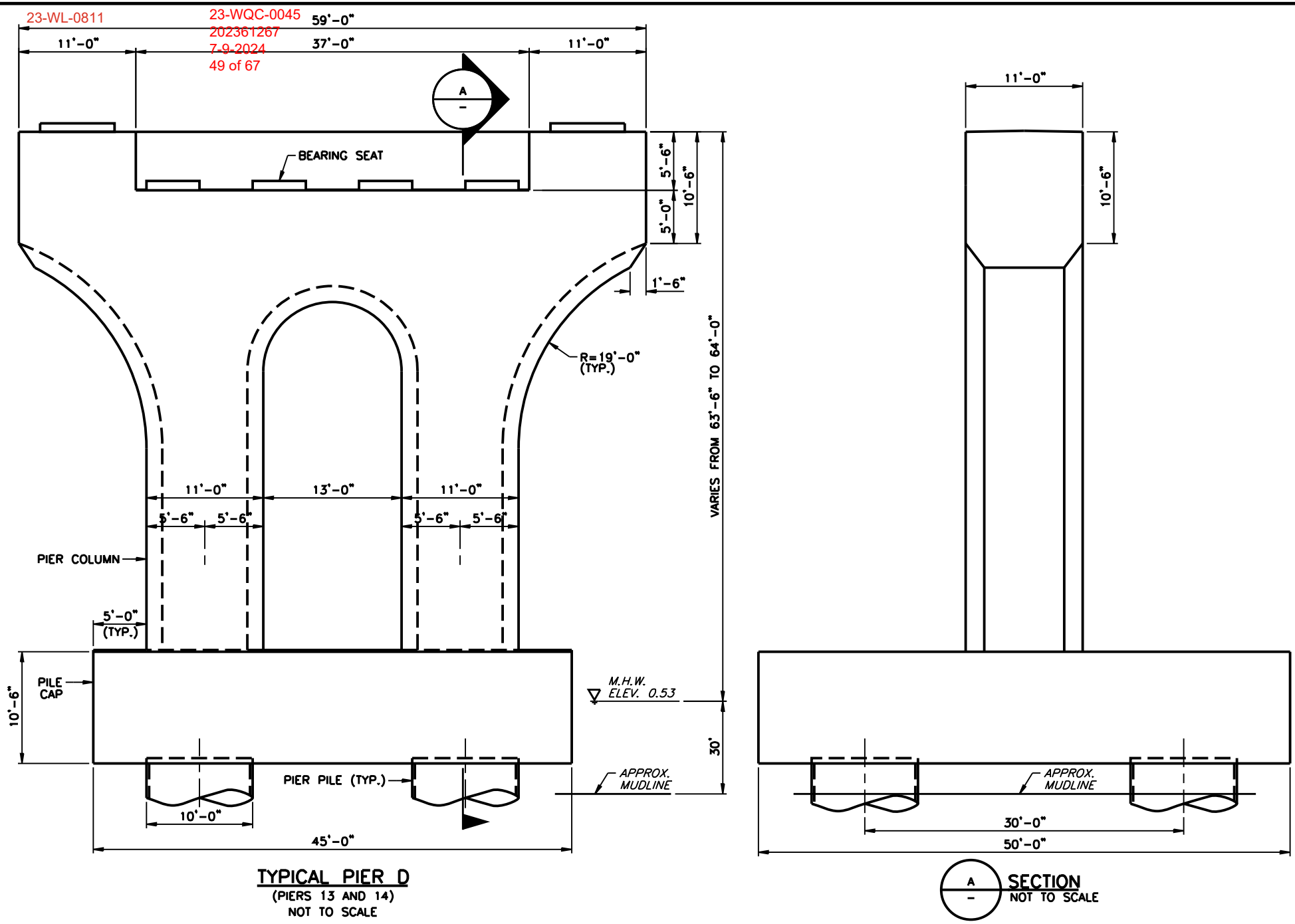
PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES
PROPOSED BRIDGE PIER C SECTION

Job No:	50625
Sheet No.	8 OF 13

PLT-008

23-WL-0811

23-WQC-0045
202361267
7-9-2024
49 of 67



TYPICAL PIER D
(PIERS 13 AND 14)
NOT TO SCALE

No.	Revisions	Date	By

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES

PROPOSED BRIDGE PIER D SECTION

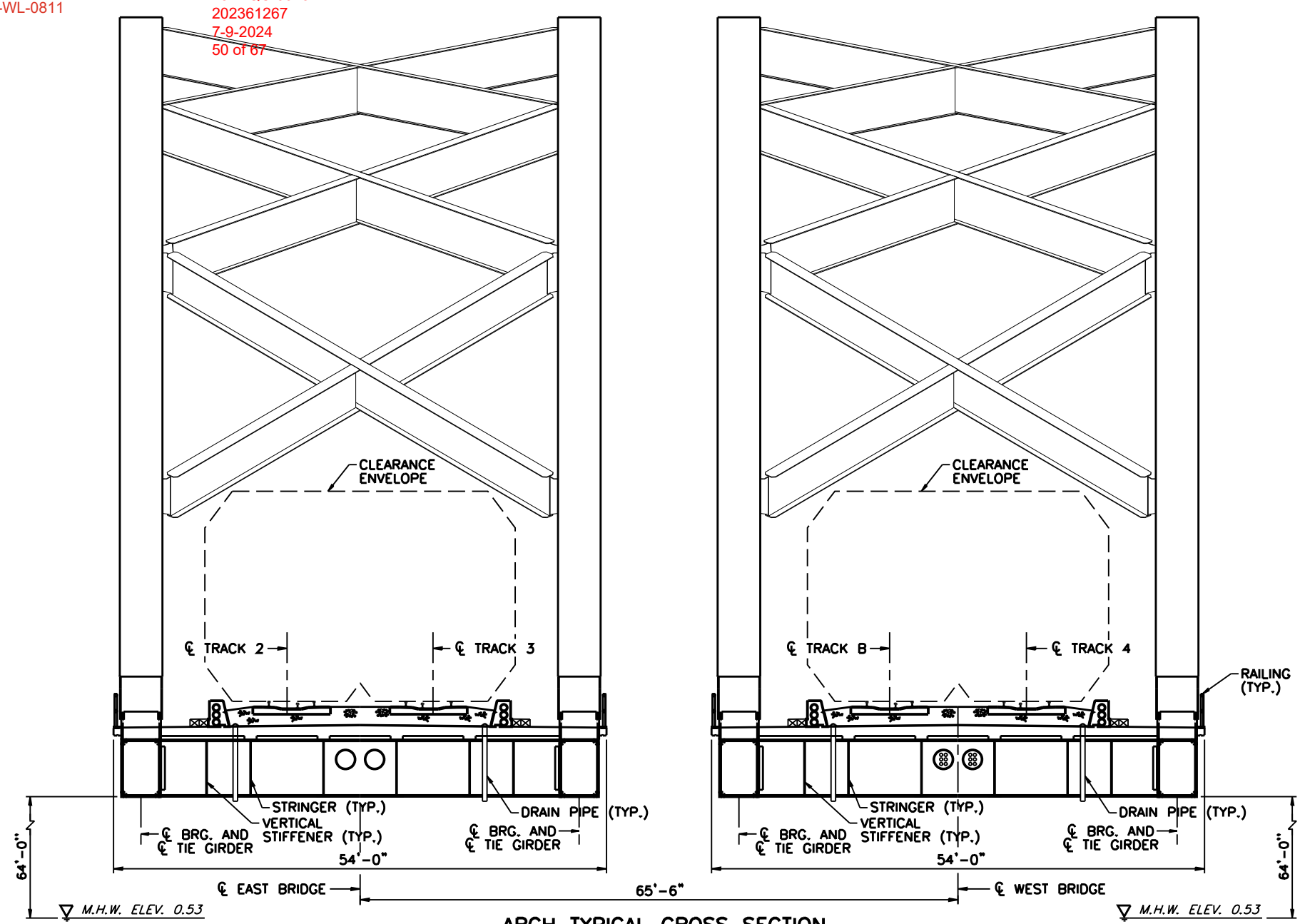
Job No:	50625
Sheet No.	9 OF 13

PLT-009

PLOT SCALE: AS SHOWN
12/1/2023 10:41:20 AM 50625-s-br-jp09.dgn

23-WL-0811

23-WQC-0045
202361267
7-9-2024
50 of 67



ARCH TYPICAL CROSS SECTION

(LOOKING WEST)
NOT TO SCALE

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PERRYVILLE/HAVRE DE GRACE, MARYLAND SUSQUEHANNA RIVER RAIL BRIDGE PROJECT SUPPLEMENTAL STRUCTURAL PLATES

PROPOSED NETWORK TIED ARCH TRUSS SECTION

Job No:	50625
Sheet No.	10 OF 13

PLT-010

PLOT SCALE: AS SHOWN
12/1/2023 10:41:23 AM 50625-s-br-jp10.dgn

23-WL-0811

23-WQC-0045
CONC.
TRUCK
51 of 67

15'-8¾"

PUMP TRUCK

R28' CW SWING RADIUS

MW 16000 OR SIM.

FRAC TANK

FRAC TANK

60' TRESTLE WIDTH (TYP)

TRESTLE "FINGERS", TYP

TRESTLE "FINGERS", TYP

TRESTLE "FINGERS", TYP

TRESTLE "FINGERS", TYP

TRESTLE "FINGERS", TYP

~66'-0"

1 A-A

1 B-B

PROPOSED BRIDGE LIMIT

15FT 134Kv CLR

25FT TRACK FOUL LIMIT

DRILL RIG BG 55 OR SIM

PROPOSED BRIDGE PIER (TYP)

40' (TYP)

PROPOSED BRIDGE PIER (TYP)

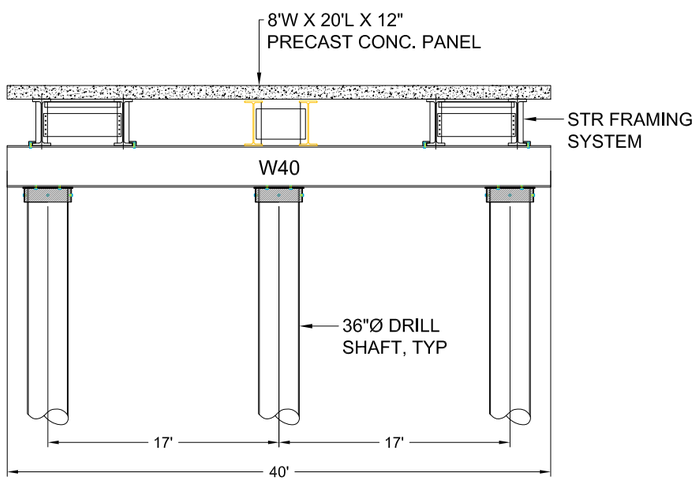
15FT 134Kv CLR

25FT TRACK FOUL LIMIT

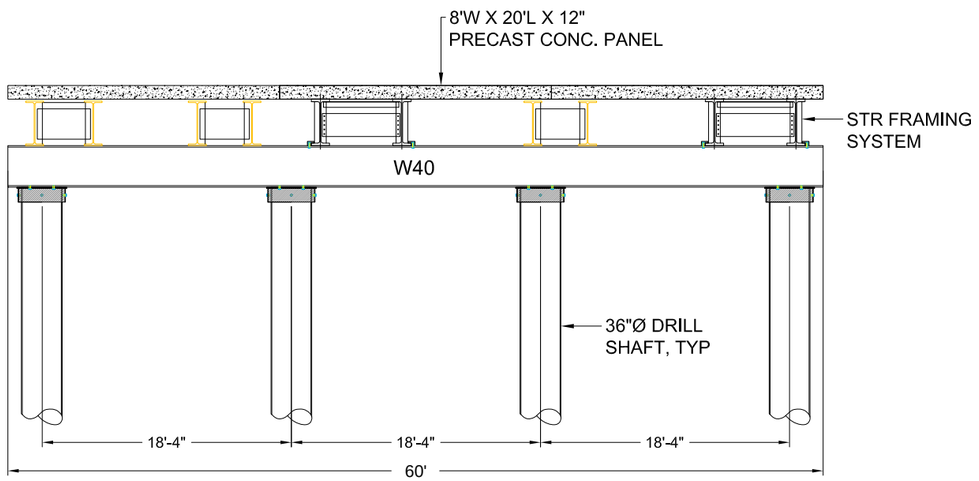
CRAWLER BOOM R118'

EXIST. BRIDGE LIMIT

TYPICAL PARTIAL PLAN
DETAIL WEST TEMPORARY TRESTLE



SECTION B-B
"FINGER" TRESTLE



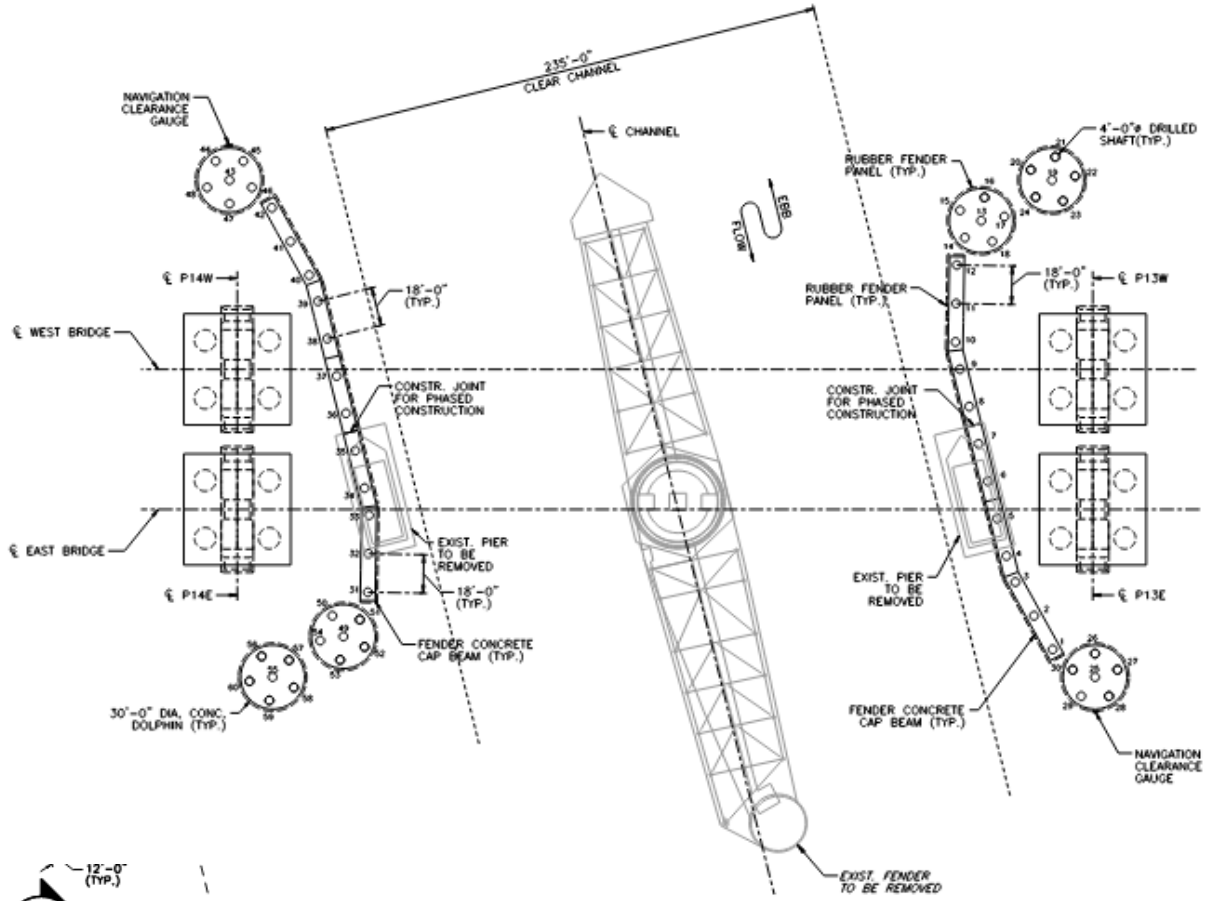
SECTION A-A
WEST TRESTLE

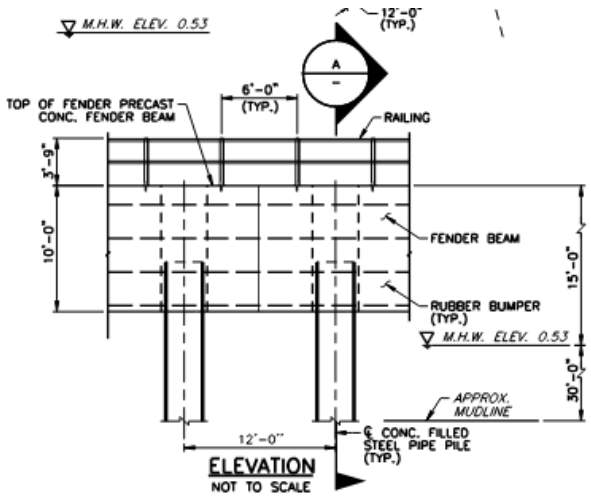
Contractor is not the designer of record. Nothing herein should be considered to constitute professional design or engineering services or be construed as an assumption of the Design Consultant's professional responsibility for the Design. Contractor's recommendations, advice, or input regarding design alternatives, constructability reviews, or design modifications are subject to the review and approval of VPRA and Design Consultant. Design Consultant shall decide all questions arising as to the interpretation of the Project Design, including any input or recommendations from Contractor.

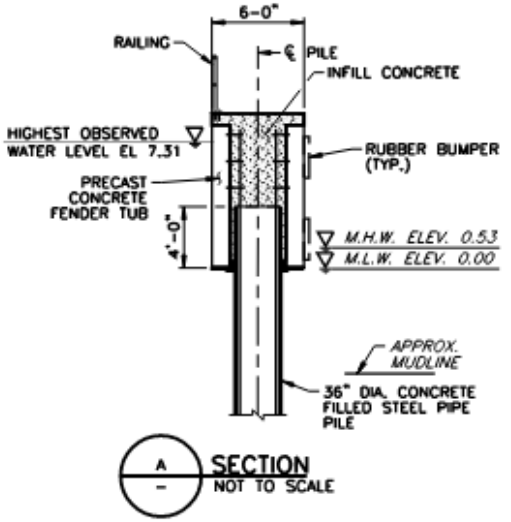
PLT-011

REVISIONS		
F		
E		
D		
C		
B		
A		

	FLATIRON CONSTRUCTORS INC. & HERZOG CONTRACTING CORP.		
OWNER	AMTRAK		
PROJECT	SUSQUEHANNA RIVER RAIL BRIDGE PROJECT PERRYVILLE/HAVRE DE GRACE, MD.		
BY: **FLATIRON/HERZOG**		PROJECT NO.: R05B	
DATE: **05/23/2024**		DRAWING NO.: XXXXX	
SHEET TITLE: SUSQUEHANNA - BRIDGE		SHEET 2	REV







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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
SUPPLEMENTAL STRUCTURAL PLATES

PROPOSED FENDER SYSTEMS

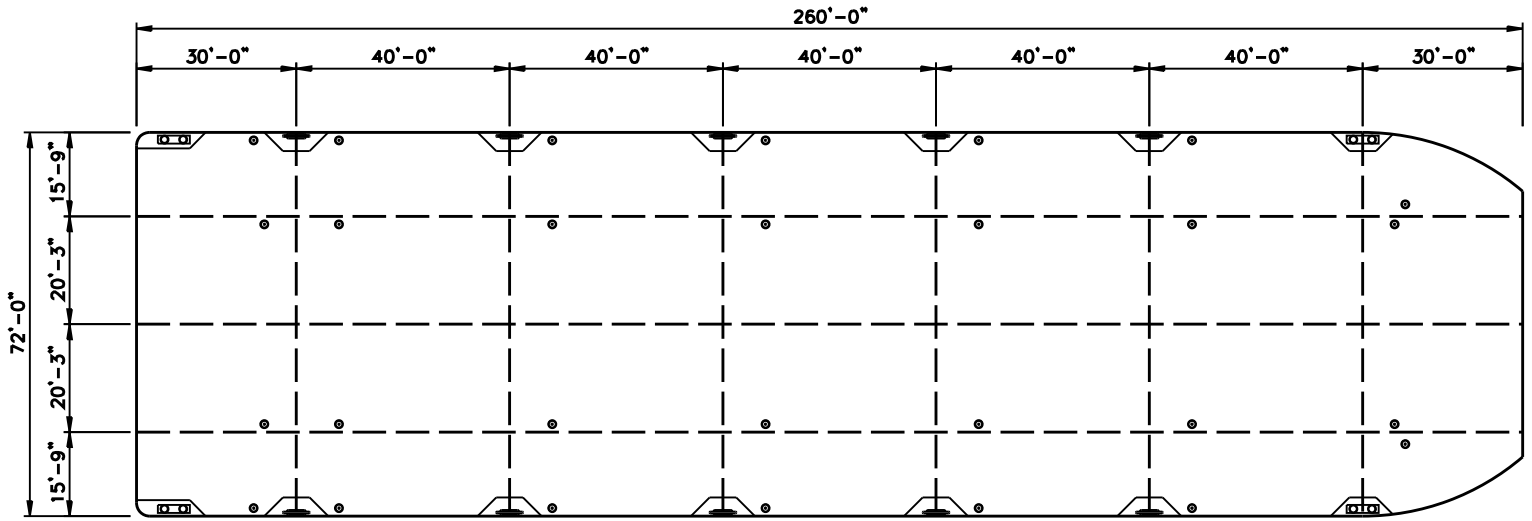
Job No:	50625
Sheet No.	12 OF 13

PLT-012

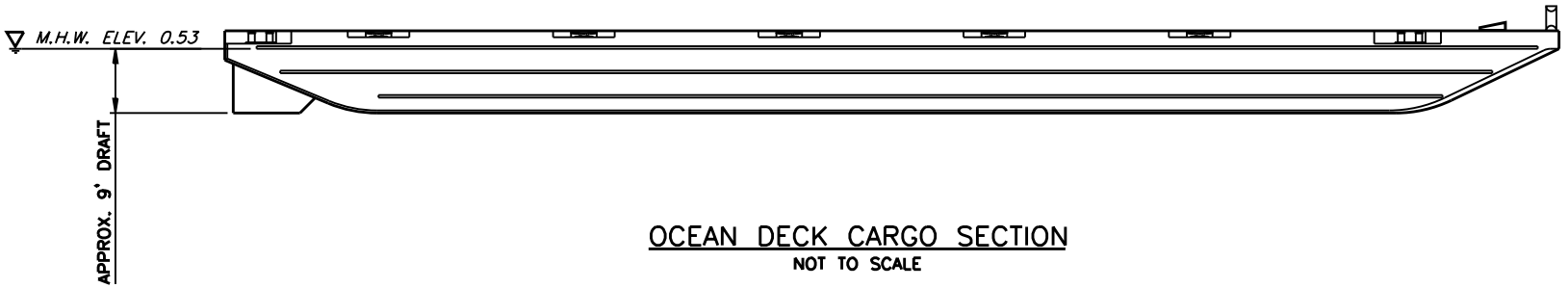
PLOT SCALE: AS SHOWN
12/1/2023 10:41:24 AM 50625-s-br-jp12.dgn

23-WL-0811

23-WQC-0045
202361267
7-9-2024
53 of 67



OCEAN DECK CARGO PLAN
NOT TO SCALE



OCEAN DECK CARGO SECTION
NOT TO SCALE

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PERRYVILLE/HAVRE DE GRACE, MARYLAND SUSQUEHANNA RIVER RAIL BRIDGE PROJECT SUPPLEMENTAL STRUCTURAL PLATES

BARGE DETAILS

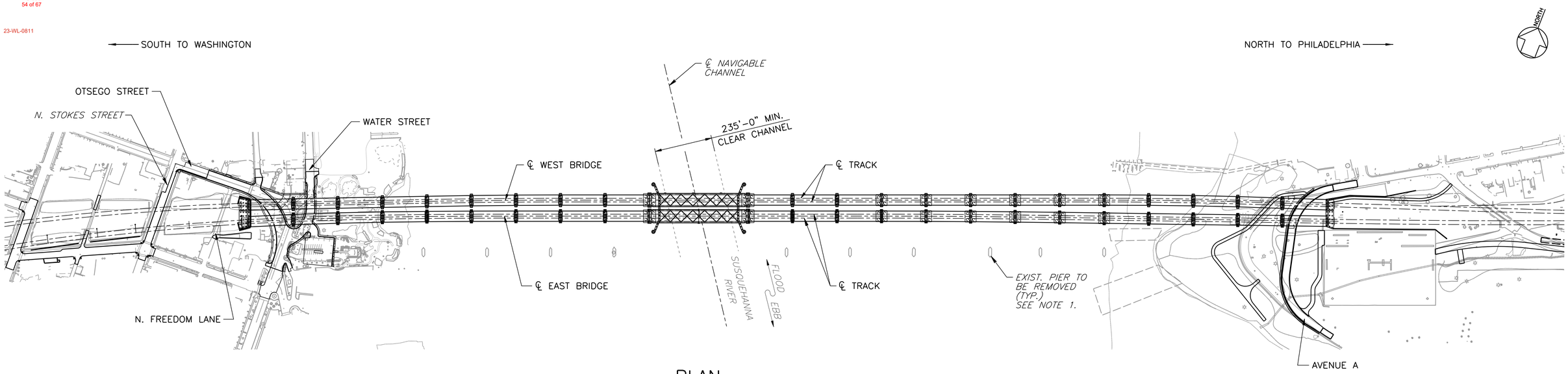
Job No:	50625
Sheet No.	13 OF 13

PLT-013

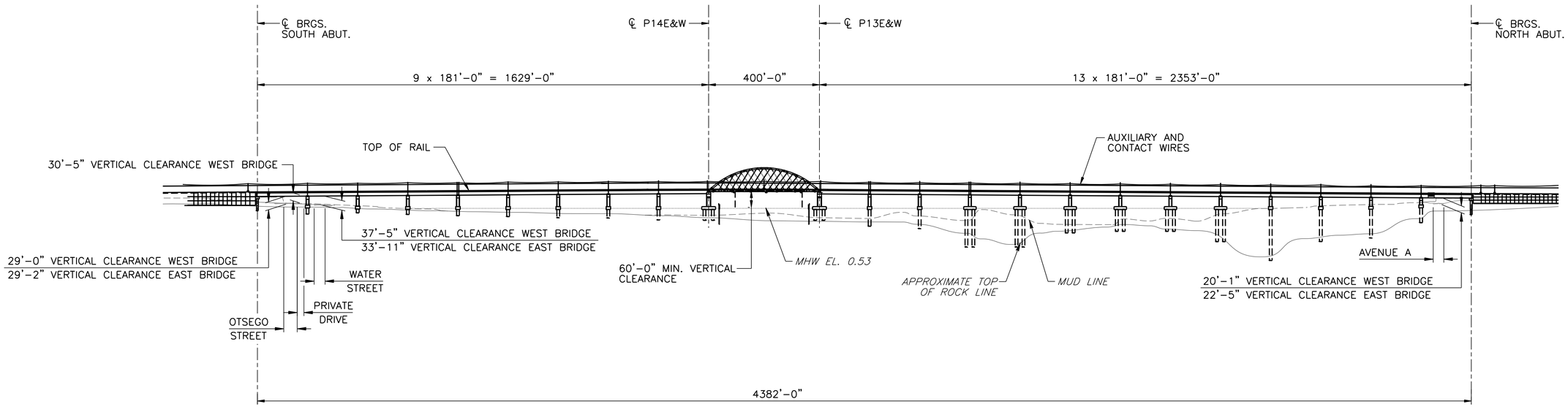
PLOT SCALE: AS SHOWN
12/1/2023 10:41:25 AM 50625-s-br-jp13.dgn

23-WQC-0045
20231361267
7-9-2024
54 of 67

23-WL-0811



PLAN
SCALE: 1" = 200'-0"



ELEVATION
(EAST BRIDGE SHOWN)
SCALE: 1" = 200'-0"

NOTES:

1. THE REMNANT PIERS HAVE BEEN REMOVED UNDER A SEPARATE CONTRACT

0 200 400
SCALE: 1" = 200'

No.	Revisions	Date	By

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Engineering Design
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL - RIVER BRIDGE
KEY PLAN AND ELEVATION

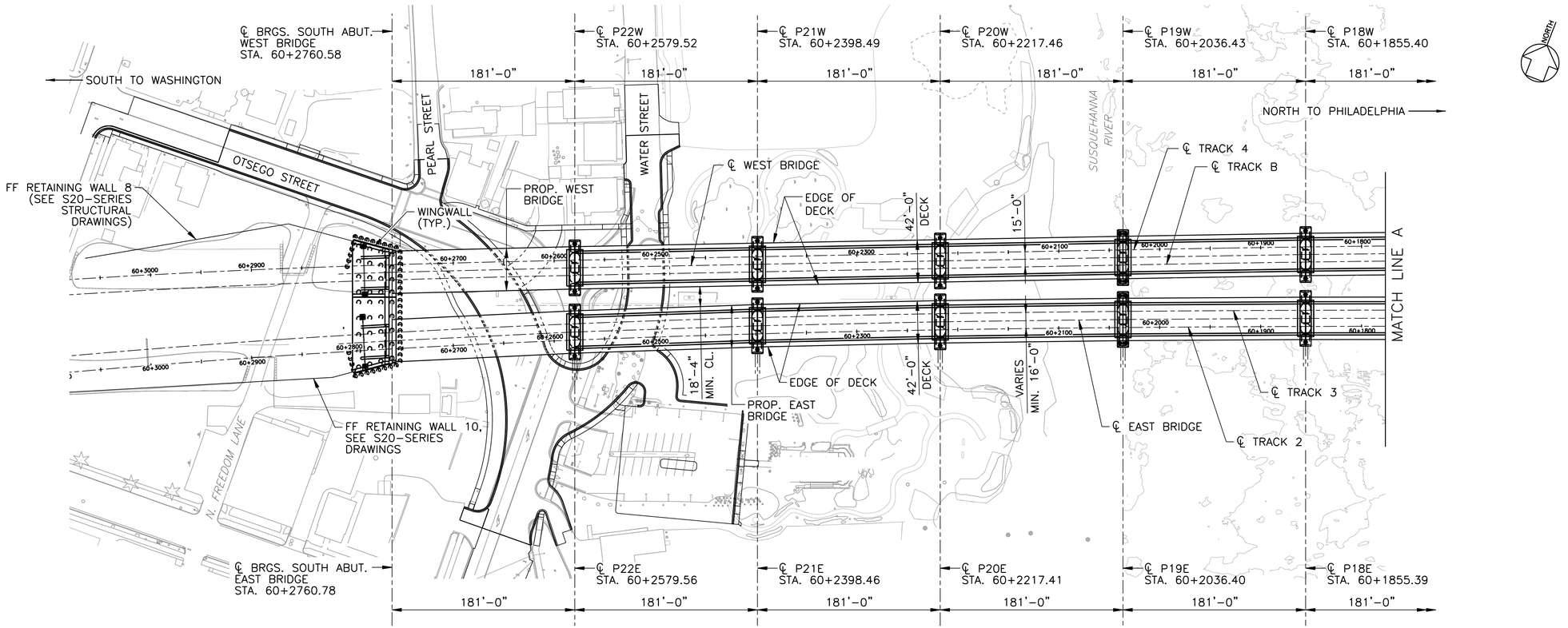
Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

Job No:	50625
File Name:	10-s-br-Pln000
Sheet No.	OF
Dwg. No.	S10-004

PLOT SCALE: AS SHOWN
4/26/2024 1:31:52 PM S10-004

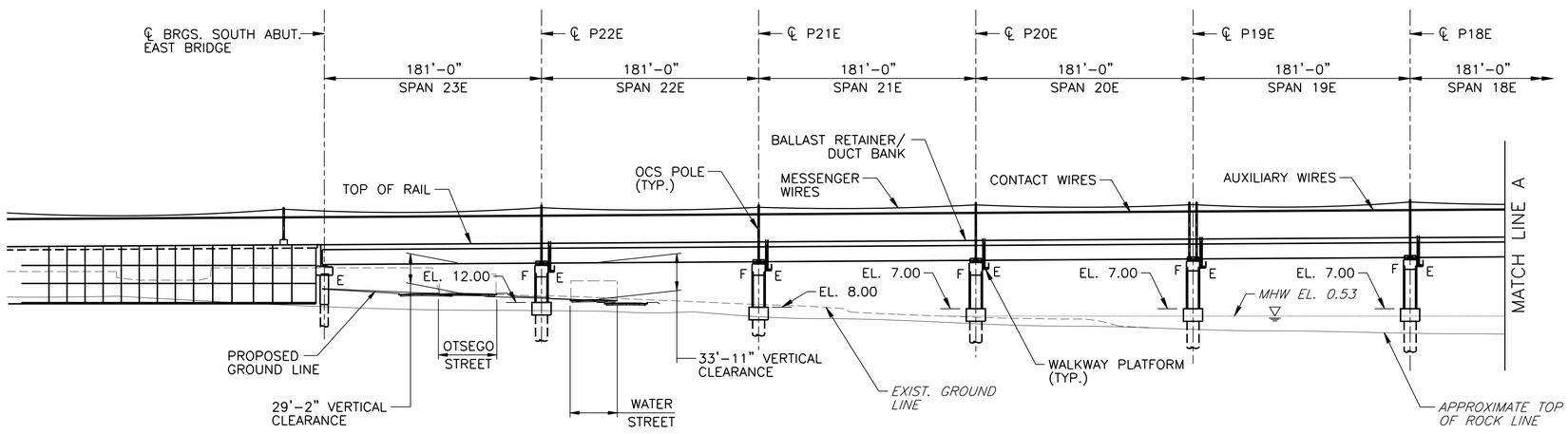
23-WQC-0045
202361267
7-9-2024
55 of 67

23-WL-0811



PLAN

SCALE: 1" = 60'-0"



ELEVATION

SCALE: 1" = 60'-0"

(EAST BRIDGE SHOWN, WEST BRIDGE SIMILAR)

NOTES:

1. STATIONS MEASURED ALONG ℄ TRACK 2 FOR EAST BRIDGE AND ALONG ℄ TRACK 4 FOR WEST BRIDGE, PHASE 2 ALIGNMENT.

0 60 120
SCALE: 1" = 60'

PLOT SCALE: AS SHOWN
4/26/2024 1:31:57 PM S10-005

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL - RIVER BRIDGE
GENERAL PLAN AND ELEVATION 1 OF 3

Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

Job No:	50625
File Name:	10-s-br-GPln04
Sheet No.	OF
Dwg. No.	S10-005

23-WQC-0045
202361267
7-9-2024
56 of 67

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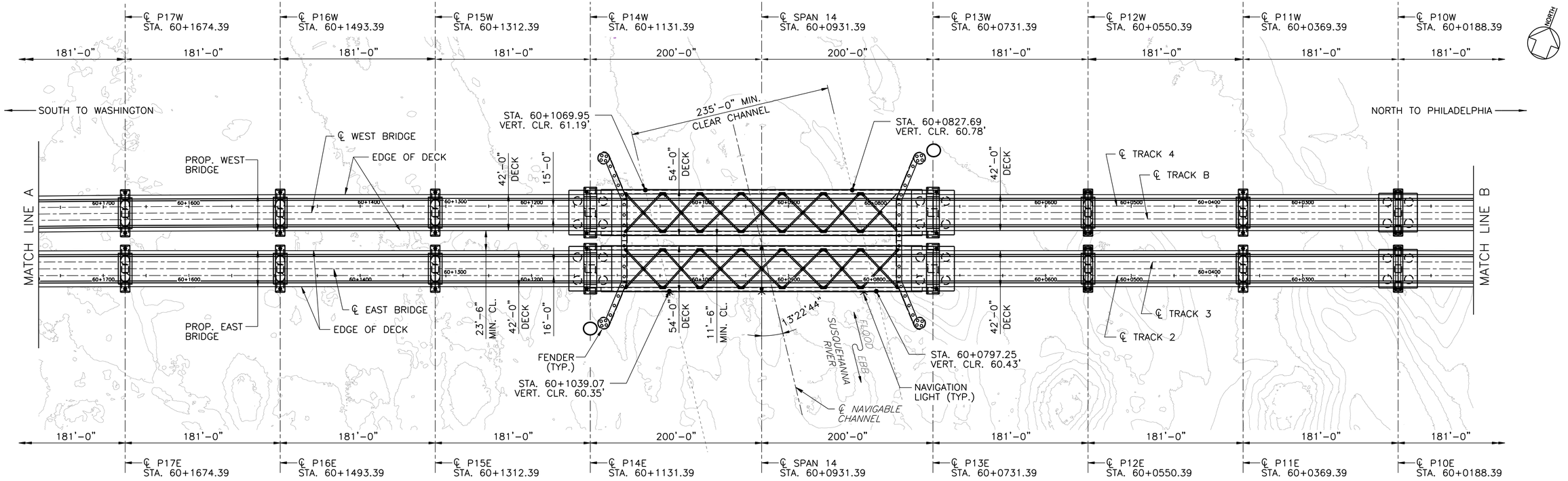
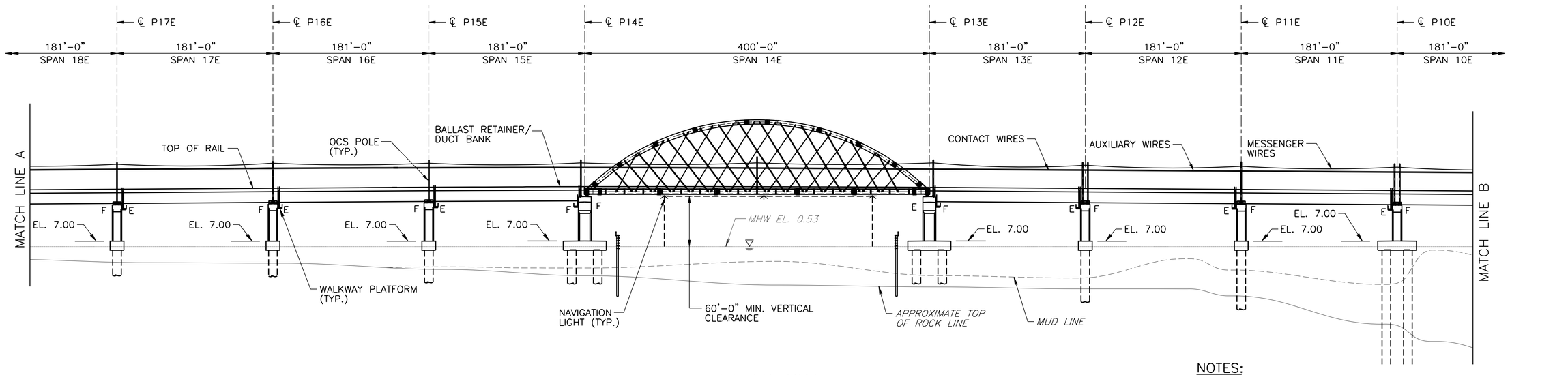


PLAN

SCALE: 1" = 60'–0"



ELEVATION

SCALE: 1" = 60'–0"

(EAST BRIDGE SHOWN, WEST BRIDGE SIMILAR)

NOTES:

1. STATIONS MEASURED ALONG ℄ TRACK 2 FOR EAST BRIDGE AND ALONG ℄ TRACK 4 FOR WEST BRIDGE, PHASE 2 ALIGNMENT.

0 60 120
SCALE: 1" = 60'

PLOT SCALE: AS SHOWN
4/26/2024 1:32:00 PM S10-006

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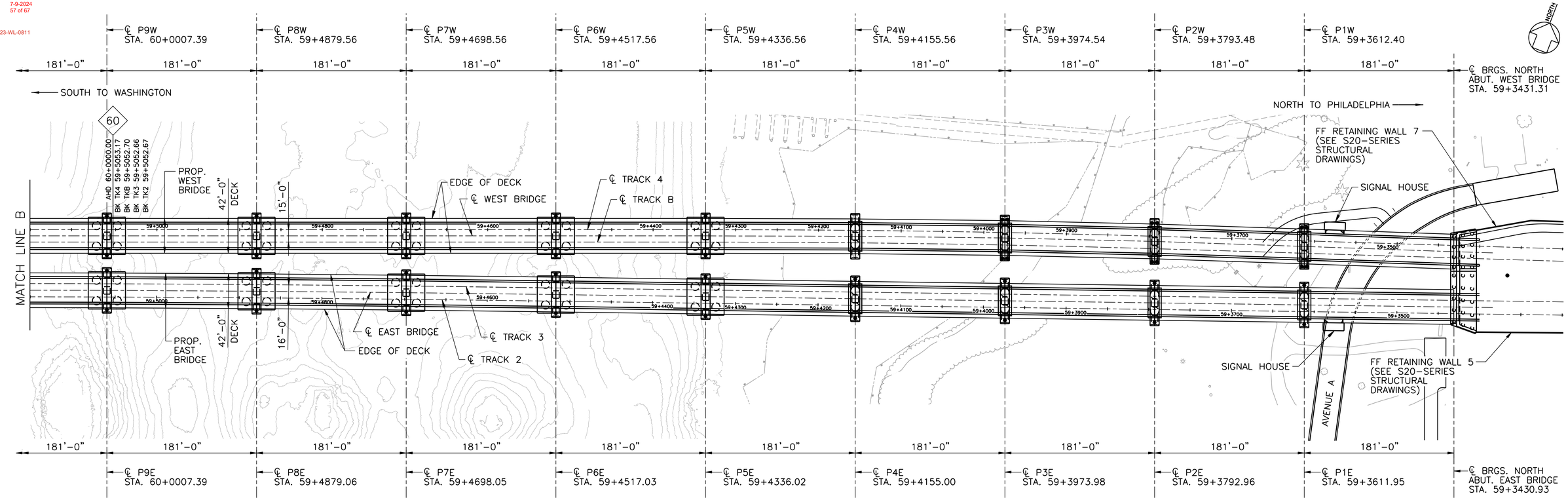
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL – RIVER BRIDGE
GENERAL PLAN AND ELEVATION 2 OF 3

Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

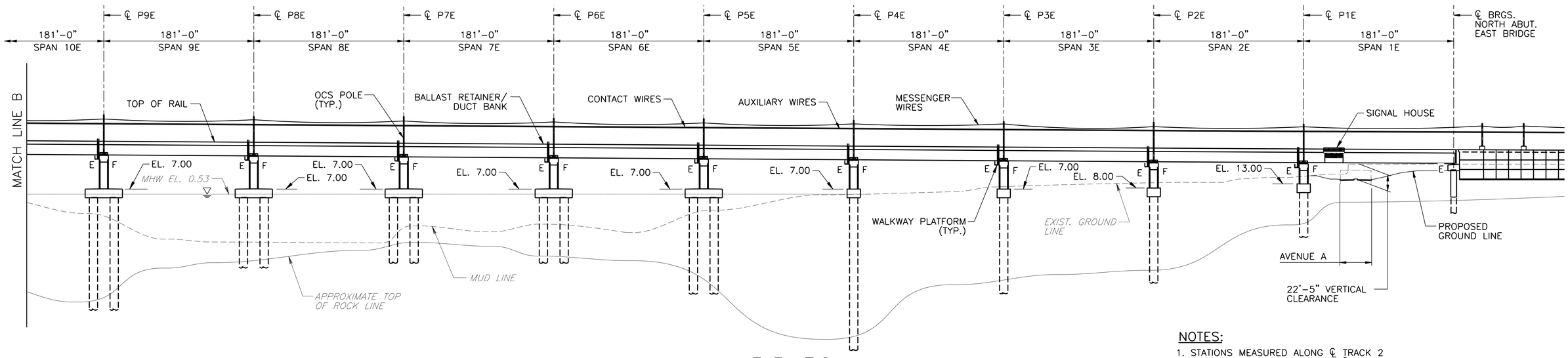
Job No:	50625
File Name:	10-s-br-GPln05
Sheet No.	OF
Dwg. No.	S10-006

23-WQC-0045
202361267
7-9-2024
57 of 67

23-WL-0811



PLAN
SCALE: 1" = 60'–0"



ELEVATION
SCALE: 1" = 60'–0"
(EAST BRIDGE SHOWN, WEST BRIDGE SIMILAR)

NOTES:

1. STATIONS MEASURED ALONG ℄ TRACK 2 FOR EAST BRIDGE AND ALONG ℄ TRACK 4 FOR WEST BRIDGE, PHASE 2 ALIGNMENT.

0 60 120
SCALE: 1" = 60'

No.	Revisions	Date	By

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SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL – RIVER BRIDGE
GENERAL PLAN AND ELEVATION 3 OF 3

Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

Job No:	50625
File Name:	10-s-br-GPln06
Sheet No.	OF
Dwg. No.	S10–007

PLOT SCALE: AS SHOWN
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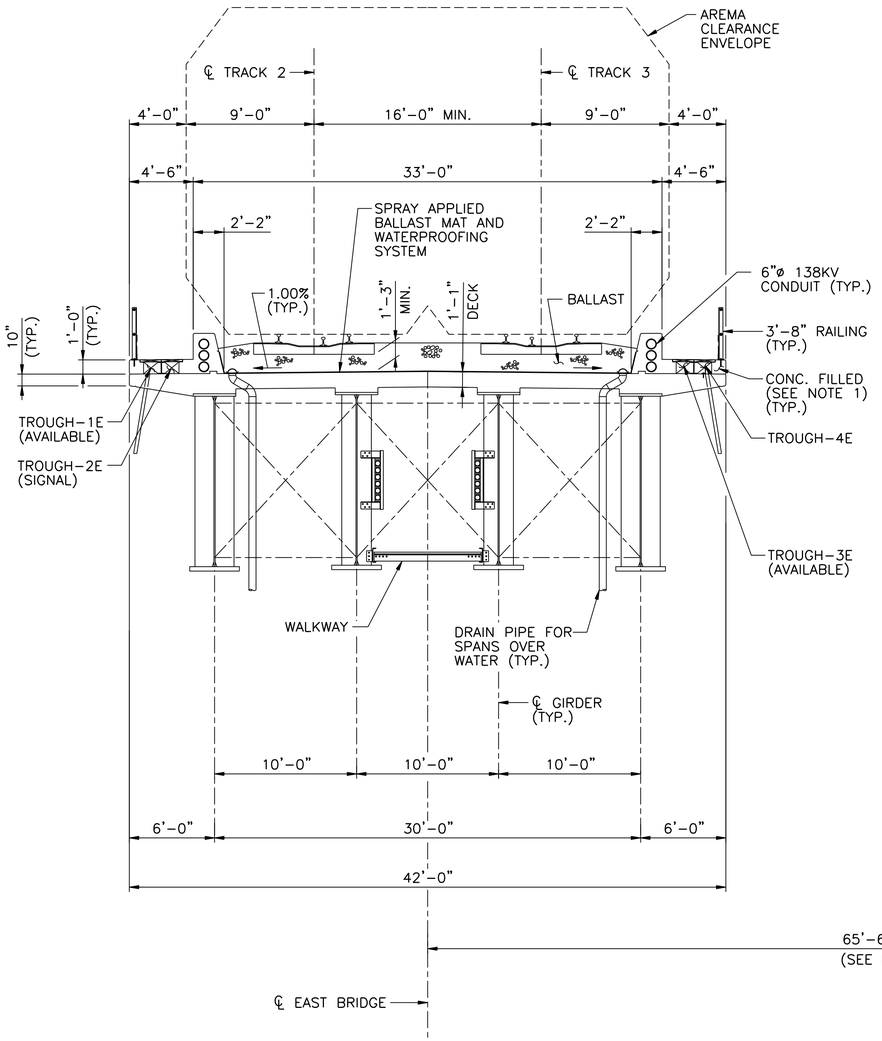
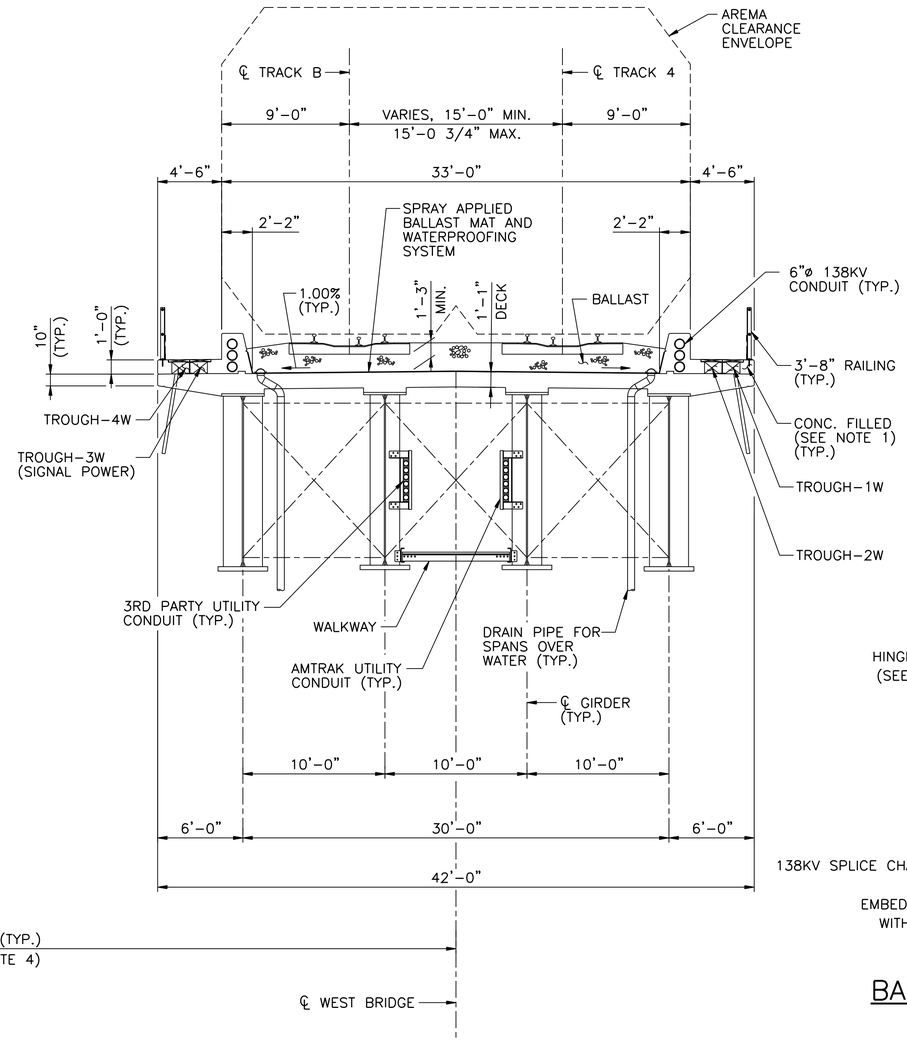
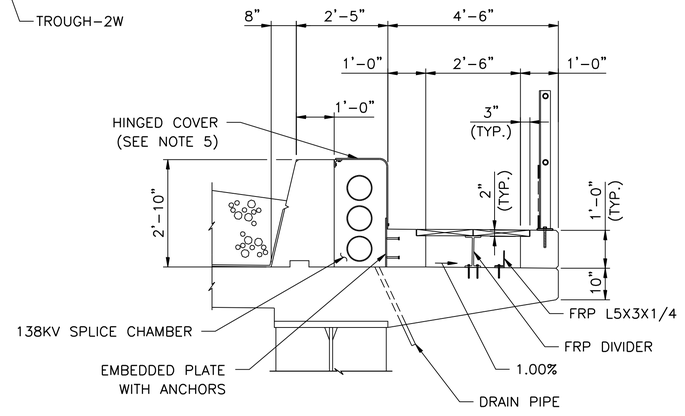
S10–007





GIRDER TYPICAL CROSS SECTION

(LOOKING UPSTATION)
SCALE: 3/16" = 1'-0"



BALLAST RETAINER AT JUNCTION BOX

SCALE: 1/2" = 1'-0"

NOTES:

1. AT 138KV PULL BOXES LOCATIONS, CONCRETE AREA TO BE BOXED OUT TO PROVIDE ACCESS TO PULL BOXES. VOID TO BE COVERED WITH ACCESS PANELS.
2. FOR TYPICAL BALLAST RETAINER DETAILS, SEE DWG. NO. S10-009.
3. FOR 138KV SPLICE CHAMBER LOCATIONS, SEE DWG. NO. TP-930.
4. MINIMUM DISTANCE 60'-4" AND MAXIMUM DISTANCE 75'-10 1/2". FOR DISTANCES BETWEEN EAST BRIDGE AND WEST BRIDGE ALONG RIVER BRIDGE SEE DWG. NOS. S10-004 TO S10-007.
5. 138KV SPLICE CHAMBER HINGED COVER IS TO BE CONTRACTOR DESIGNED. FOR ADDITIONAL DETAILS, SEE DWG. NO. TP-930.

0 2 4
SCALE: 1/2" = 1'-0"

0 6 12
SCALE: 3/16" = 1'-0"

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National Railroad Passenger Corporation
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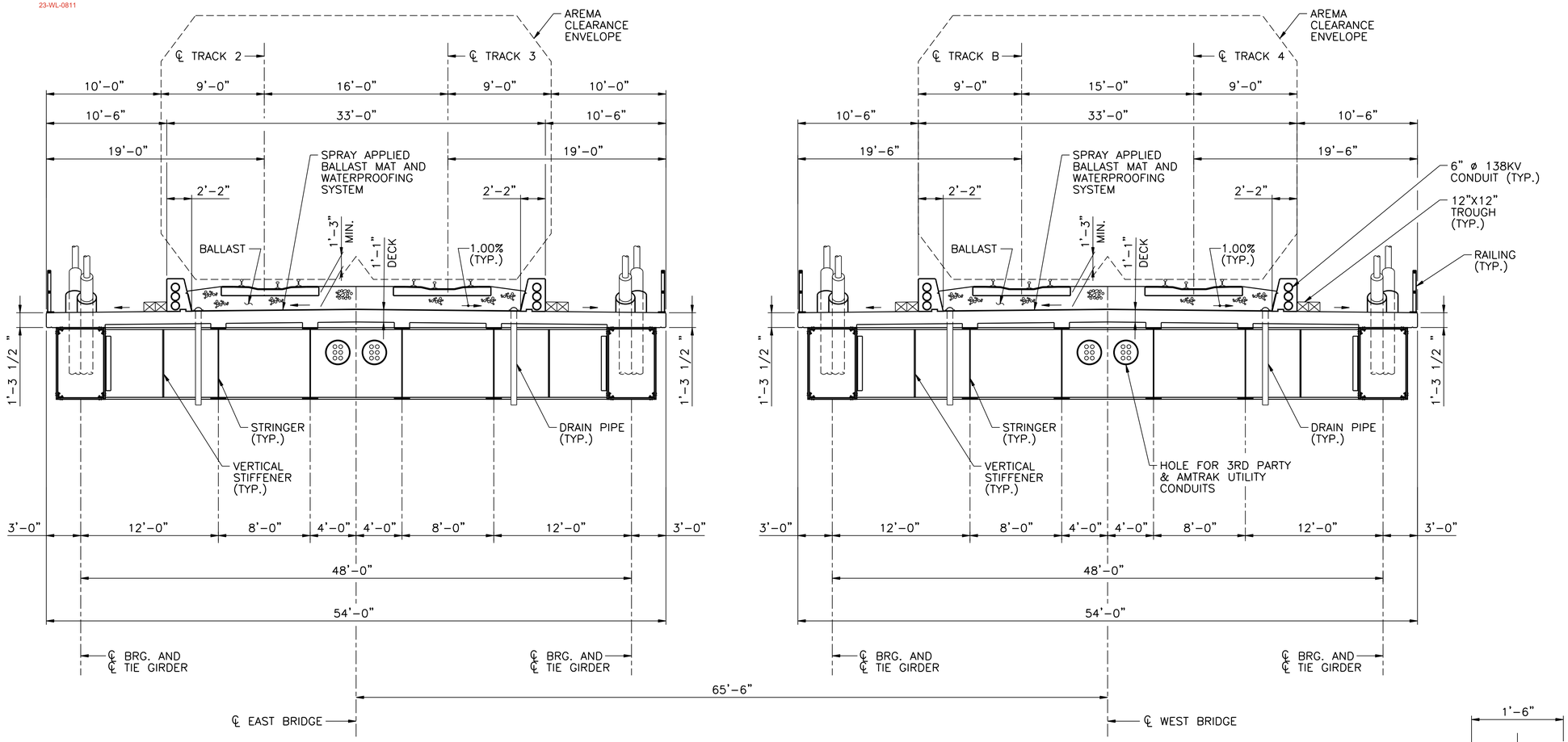
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL - RIVER BRIDGE
GIRDER TYPICAL CROSS SECTIONS

Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

Job No:	50625
File Name:	10-s-br-Sct02
Sheet No.	OF
Dwg. No.	S10-008

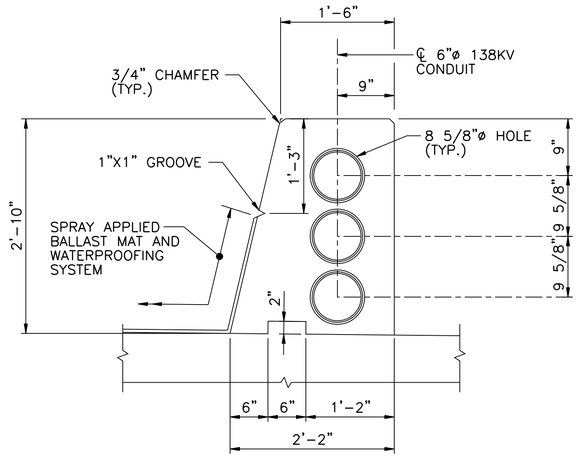
PLOT SCALE: AS SHOWN
4/26/2024 1:32:06 PM S10-008

23-WL-0811



ARCH TYPICAL CROSS SECTION

(LOOKING UPSTATION)
SCALE: 3/16" = 1'-0"



BALLAST RETAINER SECTION

SCALE: 1" = 1'-0"

0 1 2
SCALE: 1" = 1'-0"

0 6 12
SCALE: 3/16" = 1'-0"

No.	Revisions	Date	By

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Engineering Design
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER RAIL BRIDGE PROJECT
STRUCTURAL - RIVER BRIDGE
ARCH TYPICAL CROSS SECTIONS

Designed	BX	Drawn	DS	Checked	GD	Date	04/29/2024

Job No:	50625
File Name:	10-s-br-Sct03
Sheet No.	OF
Dwg. No.	S10-009

PLOT SCALE: AS SHOWN
4/26/2024 1:32:08 PM S10-009

23-WQC-0045
202361267
7-9-2024
60 of 67

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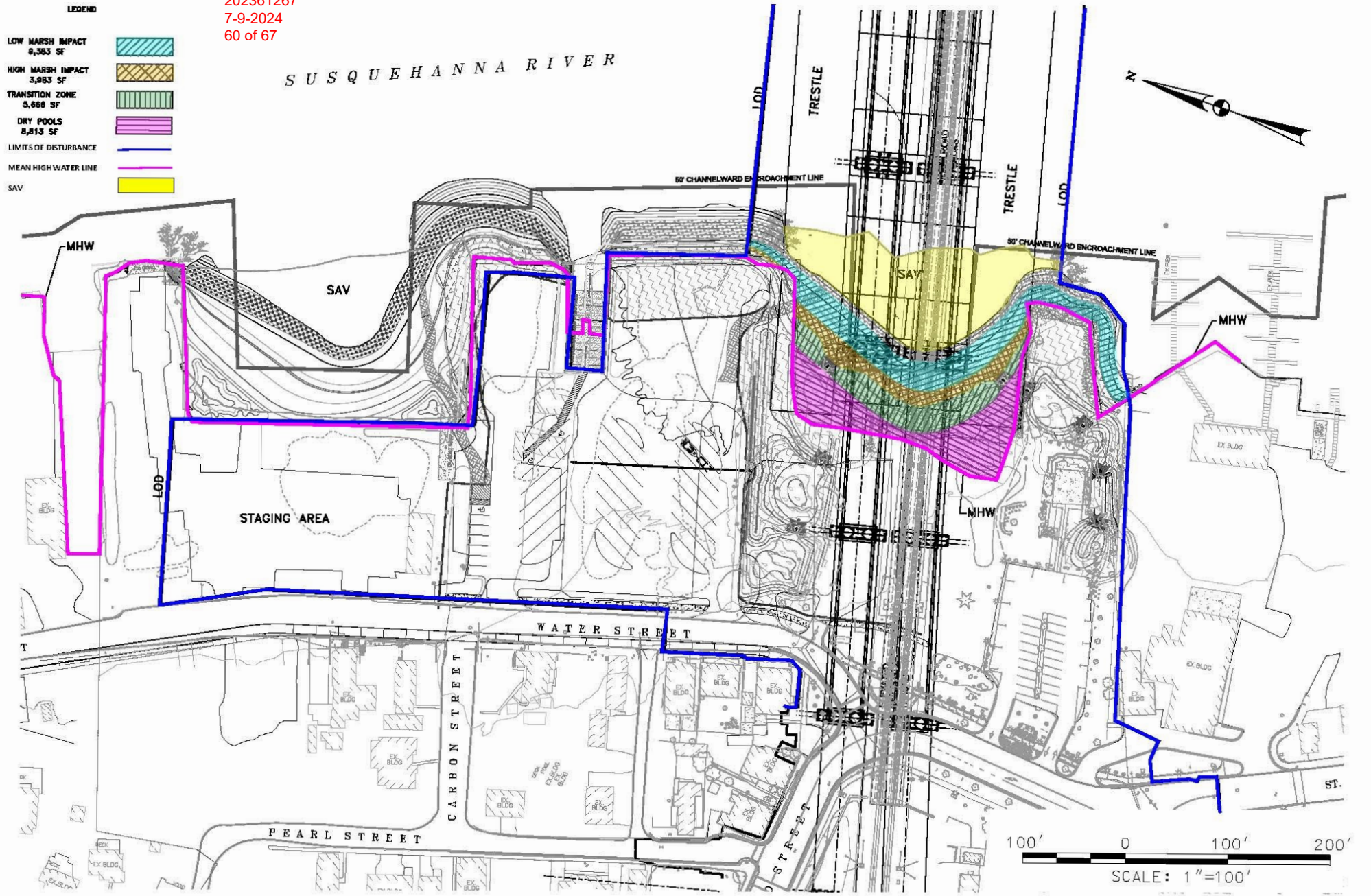

PLOT SCALE: AS SHOWN
5/9/2024 4:00:42 PM X-Living Shoreline plate

No.	Revisions	Date	By

HNTB

COASTAL RESOURCES INC.

PERRYVILLE/HAVRE DE GRACE, MARYLAND
SUSQUEHANNA RIVER
RAIL BRIDGE PROJECT

HAVRE DE GRACE LIVING SHORELNE IMPACT PLATE

Job No:	50625
Sheet No.	1 OF 1
Date: May 2024	
LVS-001	

PERMANENT NONTIDAL AND TIDAL WETLAND IMPACTS

Plate No.	Nontidal PFO Wetland		Nontidal PSS Wetland		Nontidal PEM Wetland		Nontidal Open Water (Isolated)		Nontidal PFO Wetland (Isolated)		Nontidal PEM Wetland (Isolated)		Tidal PSS Wetland		Wetland buffer		City
	SF	AC	SF	AC	SF	AC	SF	AC	SF	AC	SF	AC	SF	AC	SF	AC	
1	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Havre de Grace
2	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Havre de Grace
3	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Havre de Grace
4	0	0.000	0	0.000	1,506	0.035	0	0.000	0	0.000	0	0.000	0	0.000	10,273	0.236	Havre de Grace
5	0	0.000	0	0.000	6,203	0.142	0	0.000	0	0.000	0	0.000	0	0.000	23,897	0.549	Havre de Grace
6	0	0.000	0	0.000	2,326	0.053	0	0.000	0	0.000	0	0.000	0	0.000	16,941	0.389	Havre de Grace
7	0	0.000	0	0.000	693	0.016	0	0.000	6,333	0.145	0	0.000	0	0.000	17,590	0.404	Havre de Grace
8	0	0.000	0	0.000	120	0.003	0	0.000	0	0.000	0	0.000	0	0.000	1,848	0.042	Havre de Grace
9	10,122	0.232	0	0.000	7,449	0.171	0	0.000	0	0.000	0	0.000	0	0.000	38,830	0.891	Havre de Grace
10	10,852	0.249	0	0.000	0	0.000	205	0.005	2,286	0.052	2,488	0.057	0	0.000	51,404	1.180	Havre de Grace
11	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	2,358	0.054	Havre de Grace
12	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Havre de Grace
SUBTOTAL	**20,974**	**0.481**	**0**	**0.000**	**18,297**	**0.420**	**205**	**0.005**	**8,619**	**0.198**	**2,488**	**0.057**	**0**	**0.000**	**163,141**	**3.745**	**HAVRE DE GRACE**
13	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	N/A
14	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	N/A
15	8,587	0.197	10,944	0.251	22	0.001	0	0.000	0	0.000	0	0.000	852	0.020	9,526	0.219	Perryville
16	209	0.005	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	2,193	0.050	Perryville
17	512	0.012	0	0.000	1,638	0.038	0	0.000	0	0.000	0	0.000	0	0.000	8,246	0.189	Perryville
18	267	0.006	0	0.000	40,045	0.919	0	0.000	0	0.000	0	0.000	0	0.000	38,169	0.876	Perryville
19	1,151	0.026	0	0.000	2,856	0.066	0	0.000	0	0.000	0	0.000	0	0.000	15,136	0.347	Perryville
20	0	0.000	0	0.000	92	0.002	0	0.000	0	0.000	0	0.000	0	0.000	309	0.007	Perryville
21	6,178	0.142	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	15,136	0.347	Perryville
22	3,118	0.072	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	30,648	0.704	Perryville
23	380	0.009	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	5,029	0.115	Perryville
24	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
25	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
26	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
27	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
28	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
29	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
30	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	Perryville
SUBTOTAL	**20,402**	**0.468**	**10,944**	**0.251**	**44,653**	**1.025**	**0**	**0.000**	**0**	**0.000**	**0**	**0.000**	**852**	**0.020**	**124,392**	**2.856**	**PERRYVILLE**
TOTAL	**41,376**	**0.95**	**10,944**	**0.25**	**62,950**	**1.45**	**205**	**0.01**	**8,619**	**0.20**	**2,488**	**0.06**	**852**	**0.02**	**287,533**	**6.60**	

NOTE: THERE ARE NO TEMPORARY WETLAND IMPACTS

NONTIDAL WATERS OF THE US

Plate No.	Permanent Nontidal Perennial Stream		Permanent Nontidal Intemittent Stream		Permanent Nontidal Ephemeral Stream		Temporary Nontidal Perennial Stream		Temporary Nontidal Intermittent Stream		Permanent 100 year Floodplain (nontidal)		City
	LF	SF	LF	SF	LF	SF	LF	SF	LF	SF	SF	AC	
1	0	0	0	0	0	0	0	0	277	622	12,043	0.276	Havre de Grace
2	0	0	0	0	0	0	0	0	0	0	91,376	2.098	Havre de Grace
3	0	0	0	0	0	0	0	0	0	0	0	0.000	Havre de Grace
4	0	0	0	0	0	0	639	3,307	312	685	0	0.000	Havre de Grace
5	0	0	32	85	63	171	783	2,385	252	499	0	0.000	Havre de Grace
6	604	2,711	0	0	0	0	34	90	0	0	99,865	2.293	Havre de Grace
7	591	2,334	0	0	0	0	83	481	0	0	45,802	1.051	Havre de Grace
8	0	0	546	4,477	0	0	0	0	0	0	0	0.000	Havre de Grace
9	733	3,324	585	2,429	0	0	91	865	60	357	0	0.000	Havre de Grace
10	412	2,309	134	595	0	0	103	590	38	128	0	0.000	Havre de Grace
11	200	3,462	0	0	0	0	90	1,507	0	0	37,245	0.855	Havre de Grace
12	0	0	0	0	0	0	0	0	0	0	0	0.000	Havre de Grace
SUBTOTAL	**2,540**	**14,140**	**1,297**	**7,586**	**63**	**171**	**1,823**	**9,225**	**939**	**2,291**	**286,331**	**6.573**	**HAVRE DE GRACE**
12	0	0	0	0	0	0	0	0	0	0	0	0.000	N/A
13	0	0	0	0	0	0	0	0	0	0	0	0.000	N/A
14	0	0	0	0	0	0	0	0	0	0	0	0.000	N/A
15	56	972	0	0	0	0	100	230	0	0	0	0.000	Perryville
16	301	1,673	0	0	0	0	0	0	0	0	0	0.000	Perryville
17	0	0	146	354	0	0	329	1,588	0	0	0	0.000	Perryville
18	0	0	0	0	0	0	0	0	0	0	0	0.000	Perryville
19	46	1,809	0	0	0	0	0	0	0	0	15,559	0.357	Perryville
20	1,213	12,328	0	0	28	94	89	612	0	0	23,042	0.529	Perryville
21	0	0	447	1,462	0	0	1,036	6,274	418	2,302	0	0.000	Perryville
22	0	0	0	0	0	0	0	0	1,799	10,403	0	0.000	Perryville
23	0	0	0	0	0	0	0	0	1,274	9,146	0	0.000	Perryville
24	0	0	0	0	0	0	0	0	900	4,647	0	0.000	Perryville
25	0	0	0	0	0	0	0	0	900	4,263	0	0.000	Perryville
26	0	0	0	0	0	0	0	0	884	3,500	0	0.000	Perryville
SUBTOTAL	**1,616**	**16,782**	**593**	**1,816**	**28**	**94**	**1,554**	**8,704**	**6,175**	**34,261**	**38,601**	**0.886**	**PERRYVILLE**
TOTAL	**4,156**	**30,922**	**1,890**	**9,402**	**91**	**265**	**3,377**	**17,929**	**7,114**	**36,552**	**324,932**	**7.46**	

6,137

TIDAL WATERS OF THE US

Plate No.	Tidal waters (perm proposed piers)		Tidal Waters (temp trestle piers and moorings)		SAV (prop piers, west bridge footprint and trestle footprint)	
	SF	AC	SF	AC	SF	AC
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12&12a	1,256	0.029	4,533	0.104	10777	0.247
13	1,432	0.033	3,534	0.081	0	0
14&14A	1,922	0.044	5,891	0.135	0	0
14 & 15	716	0.016	1,357	0.031	57580	1.322
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
TOTAL	**5,325**	**0.12**	**15,316**	**0.35**	**68,357**	**1.57**

NONTIDAL WETLAND IMPACT PEM (CONNECTED)					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
4	WL 14	WC14, UNT Gashey's Creek	1506	0.035	Havre de Grace
5	WL10	WC12, UNT Gashey's Creek	2195	0.050	Havre de Grace
5	WL14	WC14, UNT Gashey's Creek	1466	0.034	Havre de Grace
5	WL21	WC12, UNT Gashey's Creek	2542	0.058	Havre de Grace
6	WL14	WC14, UNT Gashey's Creek	2326	0.053	Havre de Grace
7	WL14	WC14, UNT Gashey's Creek	557	0.013	Havre de Grace
7	WL16	WC16, UNT Gashey's Creek	136	0.003	Havre de Grace
SUBTOTAL			10728	0.246	
8	WL20	WC9, UNT Lilly Run	120	0.003	Havre de Grace
9	WL7	WC10, UNT Lilly Run	7449	0.171	Havre de Grace
SUBTOTAL			7569	0.174	
15	WL12	Susquehanna River	22	0.001	Perryville
17	WL4	WC3, UNT to Susquehanna River	1638	0.038	Perryville
18	WL4	WC3, UNT to Susquehanna River	40045	0.919	Perryville
19	WL4	WC3, UNT to Susquehanna River	954	0.022	Perryville
SUBTOTAL			42659	0.979	
19	WL2	WC2, Mill Creek	1902	0.044	Perryville
20	WL2	WC2, Mill Creek	92	0.002	Perryville
SUBTOTAL			1994	0.046	
TOTAL			62950	1.45	

ND IMPACT PSS (CONNECTED)					
Plate No.	WETLAND		SF	AC	CITY
15	WL12	Susquehanna River	10944	0.251	Perryville
TOTAL			10944	0.25	

NONTIDAL WETLAND IMPACT PFO (CONNECTED)					
Plate No.	WETLAND		SF	AC	CITY
9	WL18	WC9, UNT Lilly Run	8277	0.190	Havre de Grace
9	WL7	WC10, UNT Lilly Run	1845	0.042	Havre de Grace
10	WL8	WC8, W9, WC10, UNT Lilly Run	2408	0.055	Havre de Grace
10	WL17	WC7, UNT Lilly Run	4143	0.095	Havre de Grace
10	WL18	WC9, UNT Lilly Run	3367	0.077	Havre de Grace
10	WL7	WC10, UNT Lilly Run	934	0.021	Havre de Grace
SUBTOTAL			20974	0.481	
15	WL12	Susquehanna River	8587	0.197	Perryville
SUBTOTAL			8587	0.197	
16	WL3	WC3, UNT to Susquehanna River	209	0.005	Perryville
17	WL3	WC3, UNT to Susquehanna River	512	0.012	Perryville
18	WL3	WC3, UNT to Susquehanna River	267	0.006	Perryville
19	WL3	WC3, UNT to Susquehanna River	1151	0.026	Perryville
21	WL1	WC1, UNT to Mill Creek	6178	0.142	Perryville
22	WL1	WC1, UNT to Mill Creek	3118	0.072	Perryville
23	WL1	WC1, UNT to Mill Creek	380	0.009	Perryville
SUBTOTAL			11815	0.271	
TOTAL			41376	0.95	

NONTIDAL WETLAND IMPACT PEM (ISOLATED)					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
10	WL6	N/A	2488	0.057	Havre de Grace
TOTAL			2488	0.06	

NONTIDAL WETLAND IMPACT PFO (ISOLATED)					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
7	WL9	N/A	6333	0.145	Havre de Grace
10	WL15	N/A	2286	0.052	Havre de Grace
TOTAL			8619	0.20	

NONTIDAL WETLAND IMPACT OPEN WATER (ISOLATED)					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
10	WL6	N/A	205	0.005	Havre de Grace
TOTAL			205	0.01	

TIDAL WETLAND IMPACT PSS					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
15	WL12	Susquehanna River	852	0.020	Perryville
TOTAL			852	0.02	

TIDAL IMPACT LIVING SHORELINE TEMPORARY					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
1	Low Marsh	Susquehanna River	9383	0.215	Havre de Grace
1	High Marsh	Susquehanna River	3983	0.091	Havre de Grace
1	Transition Zone	Susquehanna River	5666	0.130	Havre de Grace
1	Dry Pools	Susquehanna River	8813	0.202	Havre de Grace
TOTAL			27845	0.64	

TIDAL CREDIT LIVING SHORELINE EXISTING PIER					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
1	High Marsh	Susquehanna River	314	0.007	Havre de Grace
1	Transition Zone	Susquehanna River	246	0.006	Havre de Grace
TOTAL			560	0.013	

TIDAL IMPACT LIVING SHORELINE PERMANENT PIER					
Plate No.	WETLAND	Nearest Waterway	SF	AC	CITY
1	Low Marsh	Susquehanna River	157	0.004	Havre de Grace
TOTAL			157	0.004	

PERMANENT NONTIDAL PERENNIAL WUS IMPACT						
Plate No.	WUS	CLASSIFICATION	STREAM NAME	LF	SF	CITY
6	WC14	Perennial	UNT Gashey's Creek	604	2711	Havre de Grace
7	WC14	Perennial	UNT Gashey's Creek	473	1254	Havre de Grace
SUBTOTAL				1077	3965	
7	WC11	Perennial	Lewis Run	118	1080	Havre de Grace
SUBTOTAL				118	1080	
9	WC9	Perennial	UNT Lilly Run	683	3168	Havre de Grace
9	WC19	Perennial	UNT Lilly Run	50	156	Havre de Grace
10	WC7	Perennial	UNT Lilly Run	95	601	Havre de Grace
10	WC9	Perennial	UNT Lilly Run	317	1708	Havre de Grace
11	WC6	Perennial	UNT Lily Run	200	3462	Havre de Grace
SUBTOTAL				1345	9095	
15	WC3	Perennial	UNT to Susquehanna River	56	972	Perryville
16	WC3	Perennial	UNT to Susquehanna River	301	1673	Perryville
SUBTOTAL				357	2645	
19	WC2	Perennial	UNT Mill Creek	46	1809	Perryville
20	WC2	Perennial	UNT Mill Creek	105	3135	Perryville
20	WC1	Perennial	UNT to Mill Creek	495	3449	Perryville
20	WC21	Perennial	UNT to Mill Creek	613	5744	Perryville
SUBTOTAL				1259	14137	
TOTAL				4156	30922	

PERMANENT NONTIDAL INTERMITTENT WUS IMPACT						
Plate No.	WUS	CLASSIFICATION	STREAM NAME	LF	SF	CITY
5	WC15	Intermittent	UNT Gashey's Creek	12	25	Havre de Grace
SUBTOTAL				12	25	
5	WC20	Intermittent	UNT Lilly Run	20	60	Havre de Grace
8	WC9	Intermittent	UNT Lilly Run	546	4477	Havre de Grace
9	WC9	Intermittent	UNT Lilly Run	206	1292	Havre de Grace
9	WC10	Intermittent	UNT Lilly Run	379	1137	Havre de Grace
10	WC10	Intermittent	UNT Lilly Run	50	152	Havre de Grace
10	WC7	Intermittent	UNT Lilly Run	70	399	Havre de Grace
10	WC8	Intermittent	UNT Lilly Run	14	44	Havre de Grace
SUBTOTAL				1285	7561	
17	WC4	Intermittent	UNT to Susquehanna River	8	20	Perryville
17	WC5C	Intermittent	UNT to Susquehanna River	44	113	Perryville
17	WC5	Intermittent	UNT to Susquehanna River	94	221	Perryville
SUBTOTAL				146	354	
21	WC23	Intermittent	UNT to Mill Creek	55	198	Perryville
21	WC24	Intermittent	UNT to Mill Creek	392	1264	Perryville
SUBTOTAL				447	1462	
TOTAL				1890	9402	

PERMANENT NONTIDAL EPHEMERAL WUS IMPACT						
Plate No.	WUS	CLASSIFICATION	STREAM NAME	LF	SF	CITY
5	WC20	Ephemeral	UNT Gashey's Creek	63	171	Havre de Grace
SUBTOTAL				63	171	
20	WC22	Ephemeral	UNT to Mill Creek	28	94	Perryville
SUBTOTAL				28	94	
TOTAL				91	265	

TEMPORARY NONTIDAL PERENNIAL WUS IMPACT						
Plate No.	WUS	CLASSIFICATION	STREAM NAME	LF	SF	CITY
4	WC12	Perennial	UNT Gashey's Creek	500	2857	Havre de Grace
4	WC14	Perennial	UNT Gashey's Creek	139	450	Havre de Grace
5	WC12	Perennial	UNT Gashey's Creek	199	393	Havre de Grace
5	WC14	Perennial	UNT Gashey's Creek	418	1434	Havre de Grace
5	WC14C	Perennial	UNT Gashey's Creek	166	558	Havre de Grace
6	WC16	Perennial	UNT Gashey's Creek	13	37	Havre de Grace
6	WC16C	Perennial	UNT Gashey's Creek	21	53	Havre de Grace
SUBTOTAL				1456	5782	
7	WC11C	Perennial	Lewis Run	83	481	Havre de Grace
SUBTOTAL				83	481	
9	WC9C1	Perennial	UNT Lilly Run	91	865	Havre de Grace
10	WC9C	Perennial	UNT Lilly Run	42	234	Havre de Grace
10	WC7C1	Perennial	UNT Lilly Run	61	356	Havre de Grace
11	WC6C	Perennial	Lily Run	90	1507	Havre de Grace
SUBTOTAL				284	2962	
15	WC3C	Perennial	UNT to Susquehanna River	100	230	Perryville
17	WC3	Perennial	UNT to Susquehanna River	329	1588	Perryville
SUBTOTAL				429	1818	
20	WC21	Perennial	UNT to Mill Creek	89	612	Perryville
21	WC1	Perennial	UNT to Mill Creek	448	1974	Perryville
21	WC21	Perennial	UNT to Mill Creek	588	4300	Perryville
SUBTOTAL				1125	6886	
TOTAL				3377	17929	

TEMPORARY NONTIDAL INTERMITTENT WUS IMPACT						
Plate No.	WUS	CLASSIFICATION	STREAM NAME	LF	SF	CITY
1	WC18	Intermittent	UNT Gashey's Creek	277	622	Havre de Grace
4	WC14	Intermittent	UNT Gashey's Creek	312	685	Havre de Grace
5	WC12	Intermittent	UNT Gashey's Creek	136	270	Havre de Grace
5	WC12C	Intermittent	UNT Gashey's Creek	116	229	Havre de Grace
SUBTOTAL				841	1806	
9	WC9C2	Intermittent	UNT Lilly Run	60	357	Havre de Grace
10	WC7C2	Intermittent	UNT Lilly Run	38	128	Havre de Grace
SUBTOTAL				98	485	
21	WC21	Intermittent	UNT to Mill Creek	314	1860	Perryville
21	WC1	Intermittent	UNT to Mill Creek	104	442	Perryville
22	WC1	Intermittent	UNT to Mill Creek	900	4939	Perryville
22	WC21	Intermittent	UNT to Mill Creek	899	5464	Perryville
23	WC1	Intermittent	UNT to Mill Creek	373	2412	Perryville
23	WC21	Intermittent	UNT to Mill Creek	901	6734	Perryville
24	WC21	Intermittent	UNT to Mill Creek	900	4647	Perryville
25	WC21	Intermittent	UNT to Mill Creek	900	4263	Perryville
26	WC21	Intermittent	UNT to Mill Creek	884	3500	Perryville
SUBTOTAL				6175	34261	
TOTAL				7114	36552	

Existing Piers Impacts Summary Table				
Plate No.	Pier No	Tidal Waters		Location
		SF	AC	
15	1	0.00	0.000	Land
15	2	2560.00	0.059	River
15	3	2560.00	0.059	River
14	4	1456.00	0.033	River
14	5	1456.00	0.033	River
14	6	1456.00	0.033	River
14	7	1456.00	0.033	River
13	8	1456.00	0.033	River
13	9	1416.00	0.033	River
13	10	1750.00	0.040	River
13	11	1416.00	0.033	River
13	12	1456.00	0.033	River
12	13	1018.50	0.023	River
12	14	1018.50	0.023	River
12	15	1018.50	0.023	River
12	16	807.80	0.019	River
12	17	0.00	0.000	Land
TOTAL		**22301**	**0.51**	

Trestle Piers and Mooring Piles								
Plate No.	Temporary Tidal Waters Trestel Piers		Temporary Tidal Waters Moorings		SAV		Location	Notes
	SF	AC	SF	AC	SF	AC		
12 & 12a	4194.17	0.096	339.26	0.008	8362	0.192	East, West and Pier Trestles	60" Mainline w/ (2) 60'L x 40" fingers + (4) reaction piles @ 36". Fingers standard pier fingers + arch erection trestle Impact + arch Erection bent Impact Piers 16-19 + 48 3' diameter mooring piles
13	3534.32	0.081	0	0.000	0	0.000	East, West and Pier Trestles	0" Mainline w/ (2) 60'L x 40" fingers + (4) reaction piles @ 36". Finger @ P13E & W 60' wide vs typ 40' b/c of Existing Fender; (9) reaction piles @ 36". Finger @ P14E & W 60' wide vs typ 40' b/c of Existing Fender; (9) reaction piles @ 36".
14 & 14A	5551.35	0.127	339.26	0.008	0	0.000	East, West and Pier Trestles	60" Mainline w/ (2) 60'L x 40" fingers + (4) reaction piles @ 36". Fingers standard pier fingers + arch erection trestle Impact + arch Erection bent Impact + + 48 3' diameter mooring piles
15	1357.18	0.0312	0	0.0000	48678	1.117	East, West and Pier Trestles	60" Mainline w/ (2) 60'L x 40" fingers + (4) reaction piles @ 36"
TOTAL	**14637**	**0.34**	**679**	**0.01**	**57040**	**1.31**		

Main Span Proposed Dolphins and Fenders						
Plate No.	Tidal Waters Shade		Tidal Waters Fill		Location	Notes
	SF	AC	SF	AC		
13	3360.00	0.077	452.16	0.010	Main Span	Fenders
13	4239.00	0.097	452.16	0.010	Main Span	Dolphins
TOTAL	**7599**	**0.17**	**904**	**0.02**		

Proposed Bridge Spans Permanent Impact Summary Table										
Plate No.	Pier Span	Span length	Tidal Water Shade		SAV Shade		Living Shoreline		Location	Notes
			SF	AC	SF	AC	SF	AC		
15	1E-2E	181.0'	0.00	0.000	0.00	0.000	0.00	0.000	Land	
15	1W-2W	181.0'	0.00	0.000	0.00	0.000	0.00	0.000	Land	included in the nontidal wetland and buffer impacts
15	2E-3E	181.0'	0.00	0.000	4.00	0.000	0.00	0.000	SAV/Land	
15	2W-3W	181.0'	0.00	0.000	2954.00	0.068	0.00	0.000	SAV/Wetland/Buffer	included in the nontidal wetland and buffer impacts
15	3E-4E	181.0'	0.00	0.000	6453.00	0.148	0.00	0.000	SAV	
15	3W-4W	181.0'	0.00	0.000	7602.00	0.175	0.00	0.000	SAV	
15	4E-5E	181.0'	3810.00	0.087	3792.00	0.087	0.00	0.000	River/SAV	
15	4W-5W	181.0'	4127.00	0.095	3475.00	0.080	0.00	0.000	River/SAV	
15 & 14	5E-6E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
15 & 14	5W-6W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	6E-7E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	6W-7W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	7E-8E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	7W-8W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	8E-9E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	8W-9W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	9E-10E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	9W-10W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	10E-11E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14	10W-11W	181.0'	7602.00	0.175	0.00	0.00	0.00	0.000	River	
14 & 13	11E-12E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
14 & 13	11W-12W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13	12E-13E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13	12W-13W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13	13E-14E	400.0'	21600.00	0.496	0.00	0.000	0.00	0.000	River	
13	13W-14W	400.0'	21600.00	0.496	0.00	0.000	0.00	0.000	River	
13	14E-15E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13	14W-15W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13 & 12	15E-16E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
13 & 12	15W-16W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	16E-17E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	16W-17W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	17E-18E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	17E-18W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	18E-19E	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	18W-19W	181.0'	7602.00	0.175	0.00	0.000	0.00	0.000	River	
12	19E-20E	181.0'	3818.00	0.088	3447.00	0.079	337.00	0.008	living shoreline/River/SAV	
12	19W-20W	181.0'	3344.00	0.077	2943.00	0.068	1315.00	0.030	living shoreline/River/SAV	
12	20E-21E	181.0'	0	0.000	0.00	0.000	3519.00	0.081	living shoreline	
12	20W-21W	181.0'	0	0.000	0.00	0.000	3042.00	0.070	living shoreline	
TOTAL			**255951**	**5.88**	**30670**	**0.70**	**8213**	**0.19**		

Proposed Piers Permanent Impact Summary Table							
Plate No.	**Pier No**	**Tidal Water Fill**		**SAV Fill**		**Location**	**Notes**
		SF	**AC**	**SF**	**AC**		
15	1E	0.00	0.000	0.00	0.000	Land	
15	1W	0.00	0.000	0.00	0.000	Land	
15	2E	0.00	0.000	0.00	0.000	Land	
15	2W	0.00	0.000	0.00	0.000	Land	included in the nontidal wetland and buffer impacts
15	3E	0.00	0.000	78.5	0.002	SAV	(1) 10' diameter round pier - 78.5 SF each
15	3W	0.00	0.000	157.00	0.004	SAV	(2) 10' diameter round pier - 78.5 SF each
15	4E	0.00	0.000	157.00	0.004	SAV	(2) 10' diameter round pier - 78.5 SF each
15	4W	0.00	0.000	157.00	0.004	SAV	(2) 10' diameter round pier - 78.5 SF each
15	5E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
15	5W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
15/14	6E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
15/14	6W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	7E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	7W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	8E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	8W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	9E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	9W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	10E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
14	10W	200.96	0.005	0.00	0.00	River	(4) 8' diameter round pier - 50.24 SF each
14	11E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
14	11W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
13	12E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
13	12W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
13	13E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
13	13W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
13	14E	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
13	14W	200.96	0.005	0.00	0.000	River	(4) 8' diameter round pier - 50.24 SF each
13	15E	157.00	0.004	0.00	0.00	River	(2) 10' diameter round pier - 78.5 SF each
13	15W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	16E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	16W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	17E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	17W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	18E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	18W	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	19E	157.00	0.004	0.00	0.000	River	(2) 10' diameter round pier - 78.5 SF each
12	19W	157.00	0.004	0.00	0.00	River	(2) 10' diameter round pier - 78.5 SF each
TOTAL		**5325**	**0.12**	**550**	**0.01**		
12	20E	157.00	0.004	0.00	0.00	living shoreline	(2) 10' diameter round pier - 78.5 SF each, previously authorized no mitigation required
12	20W	0.00	0.000	0.00	0.00	living shoreline	included in living shoreline low marxh impact summary table
TOTAL		**157**	**0.004**	**0**	**0.00**		