Jason Hoover
National Railroad Passenger Corporation (Amtrak)
360 West 33rd Street
New York, NY 10001

SUBJECT: License #202304021-WQC FCC
Connecticut River Amtrak Bridge (MP 106.89), Old Lyme & Old Saybrook

Dear Mr. Hoover:

Please find attached a copy of your subject license and relevant enclosures which are being issued pursuant to your application of May 8, 2023. Your attention is directed to the conditions of the license. All work must conform to that which is specifically authorized.

Any work in regulated areas of the State which has not been authorized by a valid license is a violation of state law and subject to enforcement action by the Department of Energy & Environmental Protection and the Office of the Attorney General.

Your initiation of authorized activities will be relied upon as your agreement to comply with the terms and conditions of the license.

If you have not already done so, you should contact your local Planning and Zoning Office and the U. S. Army Corps of Engineers to determine local and federal permit requirements on your project, if any. Write the Corps' New England District, Regulatory Branch, 696 Virginia Road, Concord, MA 01742-2751; http://www.nae.usace.army.mil/ or call 1-800-343-4789.

If you should have any questions or concerns, please contact me at 860-424-3674 or micheal.grzywinski@ct.gov .

Sincerely,

Micheal P. Grzywinski, Environmental Analyst III
Land & Water Resources Division
Bureau of Water Protection & Land Reuse

Enclosure – License
Email to:
Jason Hoover, Amtrak, Jason.hoover@amtrak.com
Chris Vonderweidt, Stantec, Christopher.vonderweidt@stantec.com
Ryan Appanovich, AECOM, ryan.appanovich@aecom.com
Timothy Griswold, Old Lyme First Selectman, tgriswold@oldlyme-ct.gov
Carl Fortuna, Old Saybrook First Selectman, carl.fortuna@oldsaytbrookct.gov
Harry Plaut, Old Lyme Harbormaster, olhmhp@gmail.com
Scott Mitchell, Old Saybrook Harbormaster, ncdockmaster@hotmail.com
Roberta Budnik (Birdie), ACOE, Roberta.K.Budnik@usace.army.mil, NAE-2020-01064
Peter Francis, CT DEEP Boating Division, peter.francis@ct.gov
Karen Michaels, DEEP LWRD, karen.michaels@ct.gov

Connecticut Department of Energy and Environmental Protection License*

Section 401 Water Quality Certification
Federal Coastal Consistency Concurrence

Licensee(s):	National Railroad Passenger Corporation (Amtrak), c/o Jason Hoover
Licensee Address(s):	360 West 33rd Street New York, NY 10001
License Number(s):	202304021-WQC FCC
Municipality:	Town of Old Lyme and Town of Old Saybrook
Project Description:	Construction of a new railroad bridge and the removal of the existing Amtrak Connecticut River Bridge.
Project Address/Location:	Connecticut River Bridge No. MB 106.89
Waters:	Connecticut River and Lieutenant River
Authorizing CT Statute(s) and/or Federal Law:	CGS Section 22a-359 to 363g; CGS Section 22a-28 to 35; CGS Section 22a-90 to 112; Section 401 CWA (33 USC 1341); CZMA 307(c)(1), 15 CFR 930
Applicable Regulations of CT State Agencies:	22a-30-1 to 17, 22a-426-1 to 9
Agency Contact:	Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019
License Expiration:	Ten (10) years from the date of issuance of this license.

*Connecticut's Uniform Administrative Procedure Act defines License to include, "*the whole or part of any agency permit, certificate, approval, registration, charter or similar form of permission required by law . . .*"

Project Site Plan Set:	Three sets of plans prepared by Hardesty & Hanover, LLC and collectively totaling one hundred fifty-eight (158) sheets including: a plan set entitled "ENVIRONMENTAL AND PERMIT PLANS" dated May 2, 2023; a plan set entitled "Replacement of Amtrak Connecticut River Bridge (MP 106.89) Tidal Marsh Mitigation Design 3.25-Acre Site" dated April 7, 2023; and a plan set entitled "Replacement of Amtrak Connecticut River Bridge (MP 106.89) Tidal Marsh Mitigation Design 17 Shore Road Site" dated April 7, 2023.
License Enclosures:	LWRD Dredging and General Conditions; LWRD Dredging Report; LWRD Work Commencement Form; LWRD Compliance Certification Form; Site Plan Set

Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application # 202304021-WQC FCC and as depicted on any site plan sheets / sets cited herein:

Construct a new bascule railroad bridge over the Connecticut River between Old Saybrook and Old Lyme, 52 feet south of the existing bridge location, with a two-track, electrified railroad movable bridge, approach spans, and at-grade approaches on either side of the river that tie into the existing railroad. Remove the existing Amtrak Connecticut River bridge between Old Saybrook and Old Lyme, including the superstructure, substructure elements, submarine cables, overhead contact systems, and all decommissioned track and rail systems. Remove and rebuild the CTDEEP Ferry Landing State Park boardwalk within the Connecticut River. Conduct compensatory wetland restoration and invasive species control.

Construction Mobilization and Access Activities [Phase I A/B]

1. Mobilize, clear and grub site, begin setting up temporary environmental controls, and install security safeguards within areas identified on the plans;
2. Relocate 480V-60HZ power to north side of tracks on embankment in upland areas at Block Point (BP) 107.6;
3. Initiate temporary access from existing access points in Old Saybrook and Old Lyme consisting of the following elements:
    a. Old Saybrook (west) temporary access includes:
        i. Improve existing upland access from Route 1 (Boston Post Road) through 60 Boston Post Road (N/F Gladeview LLC) and 70 Mulcahy Road/80 Mulcahy Road (N/F Lab Realty LLC) to Amtrak right-of-way ("ROW");
        ii. Widen the existing upland access road to 14' wide by 3000' long along the north side of embankment within the Amtrak ROW to the temporary west abutment trestle work platform;
        iii. Using water-based equipment, perform dredging for a 50'wide by 200'long barge access and mooring adjacent to temporary trestle work platform located on the west side of the Connecticut River and dredge to the design depth of -10.11' MLLW (-12.00' NAVD88) with an

allowable 1' over-dredge depth to an elevation of -11.11' MLLW (-13.0' NAVD88). Remove approximately 1820 cubic yards of dredged material (excluding an approximately 310 cubic yards of allowable over-dredge);

iv. Construction of a temporary trestle work platform with a minimum deck elevation of +5.3' NAVD88 at the western abutment;

v. Construction of a temporary access road south of the existing embankment; including temporary impacts of approximately 7,199 square feet through a temporary easement at N/F State of Connecticut Ragged Rock Creek Wildlife Management Area ("WMA");

b. Old Lyme (east) temporary access includes:

i. Improve existing upland access road from Route 156 (Shore Road) through 17 Shore Road to Amtrak ROW;

ii. Construct a new temporary 14' wide by 7,400' long upland access road along the north side of embankment within the Amtrak ROW from 17 Shore Rd to east abutment temporary trestle work platform;

iii. Construct a temporary trestle bridge with a minimum low chord elevation of +12.5' NAVD88 over the Lieutenant River;

iv. Close and demolish the Ferry Landing State Park Boardwalk;

v. Using water-based equipment, perform dredging for a 50' wide by 200' long barge access and mooring adjacent to temporary trestle work platform located on the east side of the Connecticut River and dredge to the design depth of -10.11' MLLW (-12.00' NAVD88) with an allowable 1' over-dredge depth to an elevation of -11.11' MLLW (-13.0' NAVD88). Remove approximately 4,980 cubic yards of dredged material (excluding an approximately 940 cubic yards of allowable over-dredge);

vi. Temporarily impact approximately 5,312 square feet of wetlands for construction of a temporary trestle work platform (with a minimum deck elevation of +5.3' NAVD88) at east abutment and construction of temporary access road on south side of embankment accessed through a temporary easement at N/F State of Connecticut Ferry Landing State Park;

vii. Construct an upland temporary parking area as mitigation for planned use of existing parking areas during construction at CTDEEP Marine Headquarters at N/F State of Connecticut Ferry Landing State Park;

viii. Construct an upland temporary staging area at N/F State of Connecticut Ferry Landing State Park;

4. Begin implementation of mitigation measures defined under other phases which shall include, but not be limited to, the construction of exclusion barriers, excavation and transportation of state-listed plant species to an identified 3.25-acre mitigation site, the installation of fencing to protect sensitive areas, construction of measures to mitigate the loss of recreational fishing, treatment of *Phragmites australis*, and initial wetland mitigation activities to permit construction access;

Prepare Temporary Facilities Needed During Construction [Phase I B]

1. Install temporary facilities for the existing bridge and rail necessary to accommodate construction of the new bridge and rail on the south side of the existing bridge. This includes, but is not limited to:
    a. Install temporary movable bridge power and control systems;
    b. Install temporary bridge electrification and communications and signals ("C&S") cable rerouting via aerial cables;
    c. Install temporary aerial cable towers supported on existing bridge piers 5, 6 and 7;
    d. Install temporary case C on platform between existing pier 6 and 7;
    e. Install temporary C&S ESIC case on existing pier 5;
    f. Install additional temporary C&S equipment located on the existing bridge;
    g. Install temporary cable, trough, duct banks, vaults, and pull boxes on the existing bridge;
    h. Move and/or protect southside high voltage line that is mounted on the south fascia of the existing bridge approach spans;
    i. Install a temporary operator's shanty and access platforms between existing bridge piers 6 and 7;

Major Construction Phase (Navigation Channel Width Reduced) [Phase I C/D/E, Phase II, Phase III]

1. Initiate construction on the eastern approach embankment and western approach embankment including embankment scour protection, including:
    a. Install temporary erosion and sedimentation controls and temporary support of excavation;
    b. Excavate for riprap embankment scour protection key-in and for unsuitable material under embankment;
    c. Install free-draining material and construct embankment with embankment scour protection;
    d. Install surcharge material in sequencing as specified on plans on the western approach;
2. Construct cast-in-place concrete west abutment;
    a. Install turbidity curtain;
    b. Install a cofferdam and construct a 6' diameter drilled shaft foundation;
    c. Construct a 50' wide by 30' long cast-in-place concrete footing;
    d. Construct cast-in-place concrete abutment stem and wingwalls;
3. Construct cast-in-place concrete east abutment;
    a. Install turbidity curtain;
    b. Install cofferdam;
    c. Construct a 50' wide by 30' long cast-in-place concrete spread footing;
    d. Construct cast-in-place concrete abutment stem and wingwalls;
4. Construct Bridge Piers 1-5;
    a. Install turbidity curtains:
    b. Erect 14' wide by 54' long integral precast concrete cofferdams at Piers 1-5;
    c. Install 6' diameter drilled shafts for Piers 1-4 and an 8' diameter drilled shaft for Pier 5;
    d. Construct cast-in-place concrete pile caps, pier stems and pier caps;
5. Construct Pier 6;

a. Install turbidity curtains;
b. Erect a 30’ wide by 64’ long trapezoidal integral precast concrete cofferdam;
c. Install 8’ diameter drilled shafts;
d. Construct cast-in-place concrete pile caps, pier stems and pier caps;

6. Construct Pier 8 and control house pier;
    a. Install turbidity curtains;
    b. Erect a 14’ wide by 54’ long integral precast concrete cofferdam at Pier 8;
    c. Erect a 25’ wide by 32’ long integral precast concrete cofferdam at the Control House pier ;
    d. Install 8’ diameter drilled shafts for Pier 8 and 4’ diameter drilled shafts for control house pier;
    e. Construct cast-in-place concrete pile caps, pier stems and pier caps;
7. Construct Pier 9;
    a. Install turbidity curtain;
    b. Install cofferdam;
    c. Install rock anchors;
    d. Construct a 14’ wide by 54’ long cast-in-place concrete spread footing;
    e. Construct cast-in-place concrete pier stems and pier caps.
8. Construct West Approach Retaining Wall.
    a. Install turbidity curtain;
    b. Install cofferdam;
    c. Install five hundred forty-six (546) 14” wide steel H-piles over an approximately 14,000 square foot area;
    d. Construct a 36’ wide by 391’ long cast-in-place concrete footing;
    e. Construct cast-in-place concrete retaining wall stem;
    f. Excavate for riprap wall scour protection key-in at west abutment and retaining wall;
    g. Install riprap wall scour protection at west abutment and retaining wall;
9. Construct East Approach Retaining Wall
    a. Install turbidity curtain;
    b. Install cofferdam;
    c. Construct a 31’ wide by 433’ long cast-in-place concrete spread footing;
    d. Construct cast-in-place concrete retaining wall stem;
    e. Excavate for riprap wall scour protection key-in at east abutment and retaining wall;
    f. Install riprap wall scour protection at east abutment and retaining wall;
10. Reduce the width of the existing navigation channel at the bridge from approximately 139’ wide to 129’ wide;
11. Demolish a portion of the existing west side and east side timber fender systems behind turbidity curtain and fully remove the timber piles;
12. Construct portion of west side and east side concrete filled drilled shaft fender systems;
    a. Install turbidity curtain;
    b. Install approximately sixty-two (62) 3’ diameter drilled shafts;
    c. Construct a steel and composite lumber fender fencing;
13. Construct foundation and substructure of bascule Pier 7;
    a. Install turbidity curtain
    b. Erect a 48’ wide by 59’ long octagon-shaped precast concrete cofferdam;

c. Install 8’ diameter drilled shafts;
d. Construct cast-in-place concrete pile caps and pier stems including approach span bridge seat and corbels for outrigger column bases;

14. Construct bridge approach spans superstructure;
    a. Cast-in-place concrete composite deck on six (6) steel girders;
    b. Typical out-to-out structure width of 38’;
    c. Span lengths (measured from centerline of piers);
        i. Span 1: 156-ft;
        ii. Spans 2,3,4 and5: 158-ft;
        iii. Span 6: 135-ft;
        iv. Span 7 (bascule span): 206-ft-6-in
        v. Span 8: 173-ft-9in;
        vi. Span 9: 158-ft;
        vii. Span 10: 156-ft;
15. Construct a new cast-in-place concrete control house built on stand-alone pier adjacent to bridge Pier 8;
16. Install pre-assembled and wired signal enclosures on the ROW and construct C&S facilities on approaches and bridge approach spans. Install all permanent trough, cable, conduit, or duct banks necessary between new locations. Install all temporary cable routing between the new C&S Central Instrument House (“CIH”);
17. Erect two (2) steel box column trunnion towers (north and south) with seven (7) columns per tower anchored to the top surface of the concrete Pier 7;
18. Remove existing submarine cables and install permanent submarine and mounted cables. Submarine cables include two (2) bridge control cables, six (6) C&S cables, and an electric traction (ET) umbilical cable. Excavate and fill approximately 3,300 CY of material for submarine cable trench. Remove existing submarine cables and install permanent submarine and mounted cables, including two (2) bridge control cables, six (6) C&S cables, and an ET umbilical cable and excavate and fill approximately 3,300 CY of material for submarine cable trench;
19. Construct storm drainage systems at western approach including two (2) 24” reinforced concrete pipe (“RCP”) stormwater outfalls;
20. Construct approximately 10,900 linear feet of trackwork and overhead catenary systems on approaches (including concrete foundations, poles, portal structures, and contact structures) and bridge approach spans in upland area;
21. Float-in forward portion of bascule span and connect bascule forward and rear portions;
22. Construct, on the new upland approach embankments, the new 2 track, electrification and associated C&S tie-ins at east and west ends of project;

Demolition Phase (Phase IV)

1. Demolish the existing movable span counterweights;
2. Deconstruct and/or remove and float-out an existing bascule span using water-based equipment;
3. Demolish the existing nine (9) bridge approach spans using a combination of water-based and trestle-based equipment;
4. Demolish existing bridge substructures and foundations designated for removal;
    a. Install turbidity curtain;
    b. Demolish piers within previously installed cofferdams;

   c. Granite piers to be removed below the mudline to the vertical limits shown on the plans (minimum 2 ft below the mudline);
5. Complete fender system construction with a 150' wide navigation channel;
   a. Install turbidity curtain;
   b. Install approximately thirty-four (34) 3' diameter drilled shafts within previously installed cofferdams;
   c. Construct steel and composite lumber fender fencing;
6. Remove all remaining track and rail systems facilities no longer in service within the existing upland Amtrak ROW;
7. Remove an existing metal walkway and piles from the CT DEEP Ferry Landing parking lot to Amtrak ROW;
8. Install subsurface electrical, water, and sanitary utilities between the CT DEEP Ferry Landing parking lot and the Amtrak ROW;
9. Install a replacement metal walkway with piles from the CT DEEP Ferry Landing parking lot to the Amtrak ROW;
10. Install utility structures on grade and connect permanent electrical service for the new bridge consisting of the following elements:
    a. Water tank (below grade) in the upland area;
    b. Sanitary tank (below grade) in the upland area;
    c. Sanitary waste and water ports in the upland area;
    d. Stand-by generator and fuel tank (above grade) in the upland area;
    e. Incoming service transformer, disconnect switch and meters in the upland area.
11. Construct a new publicly accessible Ferry Landing State Park boardwalk as shown on plan sheet FM-01 and consisting of the following elements:
    a. Approximately twenty-three (23) spread footings;
    b. An approximately 12' wide by 1026' long boardwalk structure with a top of deck elevation of approximately + 9.1' NAVD88 and railings;
12. Remove all temporary construction facilities, including but not limited to construction trailers and parking, access roads, erosion and sedimentation controls, trestle bridges, and mooring facilities;
13. Restore site in accordance with the requirements of the project environmental permit applications:
    a. Evaluate temporary impacts to vegetated intertidal wetlands once temporary facilities have been removed based on existing condition data collected prior to beginning work;
    b. Perform any required remedial activities including placement of additional wetland topsoil to restore any areas that do not match restoration criteria in the permit applications and installation of native tidal vegetation;
    c. Conduct 3 years of post-construction monitoring of temporarily impacted tidal wetland impact areas and perform any remedial activities that may be required, including *Phragmites australis* treatment;

Barge Occupancy –

1. Barge operations shall be limited to occupancy zones delineated in the permit plans defined as extending approximately 250-feet to the north and 350-feet to the south of the centerline of the proposed tracks;

2. On-site barges will be moored in designated dredged areas south of the east and west abutments as shown on plan sheet SC-01;
3. Off-site barges mooring locations will be determined in accordance with United States Coast Guard regulations (CFR Title 33);

Mitigation Activities

17 Shore Road

1. Construct an 80' long box type culvert with an 8' height and 10' width hydraulic opening under the access road located at 17 Shore Road in Old Lyme, CT;
2. Decommission and fill the existing structurally deficient Amtrak culvert located under the existing Amtrak railroad embankment;
3. Construct an approximately 15' wide temporary access road;
4. Conduct herbicide control of *Phragmites australis*;
5. Excavation of approximately 1' of material from the entirety of the limits shown on the plans for the work on southeast side;
6. Excavation and grading for two (2) tidal pools and associated network of tidal creeks to connect with the new culvert in accordance with plan sheets C-101 and C-102 of the 17 Shore Road Tidal Marsh Mitigation Plan Set;
7. Placement of wetland topsoil to establish final lines and grades shown on the plans referenced in Item 6, above, for the appropriate tidal habitat to be restored;
8. Install native intertidal brackish wetland plants 18" on center within approximately 3.94 acres of restored habitat in accordance with planting plan C-103;
9. Perform monitoring of the mitigation site for 5 years with additional *Phragmites australis* treatment as determined necessary in annual monitoring;

3.25-Acre Mitigation Site

1. Utilize work boats and barges to mobilize equipment to the sites;
2. Conduct herbicide control of *Phragmites australis* and demarcate work areas;
3. Install environmental controls and establish temporary access routes and landing areas;
4. Plug three (3) existing mosquito ditches using salvaged marsh material or approved marsh substrate fill in accordance with plan sheet C-101 of the 3.25 Acre Site Tidal Marsh Mitigation Plan Set;
5. Excavate approximately 4,000 square feet of marsh edge to establish the transplant area for state-listed plant species;
6. Install state-listed plant species that were removed from bridge impact areas according to mitigation plan, with continued monitoring;
7. Restore temporarily disturbance areas to pre-construction conditions, including but not limited to remove temporary fill, stabilize disturbed areas, aerate compacted soil, and install native tidal wetland vegetation;
8. Perform monitoring of the mitigation site for 5 years with additional *Phragmites australis* treatment as determined necessary in annual monitoring; and

Phragmites Control at Ragged Rock Creek WMA

1. Survey Ragged Rock Creek Wildlife Management Area ("WMA") site for state-listed plant species, demarcate exclusion and buffer areas, and conduct herbicide control of *Phragmites australis* over a 3-year duration for the approximate 200-acre area WMA.

Conduct 1 year of monitoring during Year 4 and conduct 1 year of follow-up spot treatments if needed during Year 5.

Failure to comply with the terms and conditions of this license shall subject the Licensee and / or the Licensee's contractor(s) to enforcement actions and penalties as provided by law.

This license is subject to the following Terms and Conditions:

1. **License Enclosure(s) and Conditions.** The Licensee shall comply with all applicable terms and conditions as may be stipulated within the License Enclosure(s) listed above.
2. The Licensee shall dispose of the dredged material authorized herein in accordance with all applicable requirements of Chapter 446k Water Pollution Control, Chapter 445 Hazardous Waste, and Chapter 446d Solid Waste of the Connecticut General Statutes.
3. Prior to the driving of piles, steel sheeting or shaft casings authorized herein, the Licensee shall install full-depth turbidity curtains.
4. The Licensee shall only use vibratory hammers from April 1st through June 30th, inclusive of any calendar year in order to protect diadromous fish unless otherwise authorized in writing by the Commissioner. The Licensee may use impact hammers outside of this timeframe.
5. Construction or demolition of the piers shall be limited to either the western-most three (3) piers (Piers 1, 2 and 3) or the easternmost three (3) piers (Piers 7, 8 and 9) during the diadromous finfish spring migration period from April 1st through June 30th, inclusive of any calendar year unless otherwise authorized in writing by the Commissioner. At no time during this period shall in-water construction or demolition occur in the middle of the Connecticut River or simultaneously at more than three (3) piers.
6. The Licensee shall limit the use of artificial lighting to navigation lights and railroad operation lighting from April 1st through June 30th, inclusive of any calendar year unless otherwise authorized in writing by the Commissioner.
7. All non-vibratory pile driving and pile extraction (cutting/pulling) authorized herein is prohibited between April 1st through June 30th, inclusive, of any calendar year unless otherwise authorized in writing by the Commissioner.
8. The Licensee shall remove all timber piles and stone piers to a minimum of 2' below the existing mud line.
9. All unconfined dredging authorized herein shall be prohibited between April 1st through June 30th, inclusive of any calendar year to protect finfish unless otherwise authorized in writing by the Commissioner.
10. Use of a hoe ram shall be prohibited between April 1st through June 30th, inclusive of any calendar year to protect diadromous finfish unless otherwise authorized in writing by the Commissioner.
11. All work associated with the drilling of piles, driving sheet piles or shaft casing shall be prohibited from sunset to sunrise from April 1st through June 15th, inclusive of any calendar

year to protect commercial shad fishing unless otherwise authorized in writing by the Commissioner.

12. Prior to the commencement of the work authorized herein, the Licensee shall coordinate with DEEP Fisheries Division staff to obtain a list of shad fishermen and shall provide those fishermen with a schedule of planned activities that may impact the commercial shad fishery.
13. All construction-related activities, including, but not limited to drilling piles, driving sheet piles or shaft casing which exceed 90db (measured at the water surface) shall be prohibited from sunset to sunrise between April 1st through June 15th, inclusive of any calendar year to protect commercial shad fishing unless otherwise authorized in writing by the Commissioner.
14. The Licensee shall rebuild the Ferry Landing State Park public access boardwalk/fishing pier with observation deck and stairway in the location as shown on the plans attached hereto prior to the expiration of this license.
15. Installation and removal of the temporary trestle bridge over the Lieutenant River shall be prohibited between March 1st through June 1st, inclusive of any calendar year to protect diadromous finish unless otherwise authorized in writing by the Commissioner.
16. Prior to the commencement of the work authorized herein, the Licensee shall obtain all necessary approvals from the CT DEEP Land Acquisition & Management Unit.
17. Prior to the commencement of the work authorized herein the Licensee shall obtain all necessary approvals from the CT DEEP Stormwater Division.
18. Prior to the expiration of this License, the Licensee shall legally acquire the property identified as 17 Shore Road and perform the wetland mitigation measures authorized herein.
19. The Licensee shall follow the approved protocols to protect Northern diamondback terrapin (*Malaclemys t. terrapin*) during the active nesting season from April 1st through October 31st, inclusive of any calendar year in accordance with CT DOT Section 1.1 Environmental Compliance.
20. The issuance of this License does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, State, and local law, including discharge permits for water handling.
21. The Licensee shall ensure that no debris enters the Connecticut River during the work authorized herein and shall immediately remove any debris that enters the water.
22. The Licensee shall install and maintain the sedimentation and erosion controls and the debris shield in optimal condition during the work authorized herein.
23. The Licensee shall conduct the activities identified in the Mitigation Areas authorized herein. In addition, the Licensee shall for the duration of the construction project following completion of the tidal wetland planting work described in the **Authorized Activities**, above, conduct the following maintenance procedures: 1) remove any debris such as garbage, floatables or excessive decayed plant material from the mitigation areas during the duration of the construction activities; 2) replace dead or missing plants up to one-year after their planting which have not already been compensated for by a suitable volunteer

species. The Licensee shall submit to the Commissioner no later than December 15th of each year following such procedures, documentation that indicates that such work has been completed.

24. The Licensee shall post a Notice to Mariners identifying closures of the Connecticut River federal navigation channel in coordination with the United States Coast Guard.
25. The Licensee shall install temporary aids to navigation at each barge mooring location authorized herein in coordination with the United States Coast Guard.
26. At no time shall the Licensee allow the barge or equipment to rest on the substrate. Any such barge must move to deeper waters during periods of low water in the area of the proposed activity. It shall not be a defense to this provision for the Licensee to assert that it has no control over the operation of the barge.

Issued under the authority of the Commissioner of Energy and Environmental Protection on:

May 21, 2024
Date

Emma Cimino
Emma Cimino
Deputy Commissioner
Department of Energy & Environmental Protection

LWRD Dredging and General Conditions

1. **Time-of-Year Restriction.** Unless otherwise noted in the License, unconfined in-water excavation, dredging, filling or removal of debris or other material is prohibited, inclusive, in any year from June 1 through September 30 in order to protect spawning shellfish in the area unless otherwise authorized in writing by the Commissioner.

2. **Dredging Report.** Not later than two (2) weeks subsequent to the completion of any dredging activity authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov a completed Dredging Report. A separate form shall be submitted by the Licensee for each distinct dredging activity conducted pursuant to this license.

3. **Bottom Disturbance.** Dragging the bottom with a spoil barge, scow, vessel, beam or similar equipment outside of any authorized area is prohibited.

4. **Material Handling.** Sidecasting or in-water rehandling of dredged or excavated material is prohibited.

5. **Barge Control.** Spoil scows or barges shall be loaded and navigated in a manner which prevents uncontrollable motion or spillage and washout of dredged or excavated materials.

6. **Sale of Sediment.** Sediment dredged pursuant to the license shall not be sold nor shall any fee for its use be charged without the express prior written authorization of the Commissioner and payment of a $4.00 per yard royalty to the state of Connecticut Department of Energy & Environmental Protection, pursuant to CGS section 22a-361(e).

7. **Sediment Disposal.** The Licensee shall dispose of aquatic sediments in accordance with the terms and conditions of the license.

8. **Submission of As-Dredged Plans**. On or before ninety (90) days after completion of the work authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov an "as-dredged" survey of the work area showing contours, bathymetries, tidal datums and structures, as applicable. Such survey shall be the original one and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.

Open Water Disposal, if authorized in Project Description

1. **Material Disposal.** The Licensee shall dispose of dredged or excavated material in accordance with the requirements of the United States Army Corps of Engineers-New England District, except that if the authorized disposal site is modified, the Licensee shall submit a request for modification of the location to the Commissioner and shall not dispose of the material until such location modification has been approved in writing by the Commissioner.

2. **Disposal Site / Use Modification.** The Commissioner may modify the authorized disposal site

and direct dredged sediment to an alternate site for use as cap material, provided that no modification will take effect if such modification imposes uncompensated additional costs solely attributable to such modification on the Licensee.

3. **Disposal Monitoring.** The Licensee shall not dispose of dredged or excavated material unless said disposal is supervised and witnessed by an on-board inspector or documented by an automated disposal monitoring program approved by the United States Army Corps of Engineers-New England District.

4. **Barge Navigation.** Spoil scows or barges used by the Licensee for disposal of dredged or excavated material shall travel to and from the authorized disposal site utilizing sea lanes defined by the United States Army Corps of Engineers-New England District.

5. **Point Dumping.** The Licensee shall point-dump dredged or excavated materials at a specified buoy or set of coordinates identified by United States Army Corps of Engineers-New England District within the authorized disposal site.

LWRD General Conditions

1. **Land Record Filing.** The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to DEEP.LWRDRegulatory@ct.gov no later than sixty (60) days after license issuance. If a Land Record Filing form is not enclosed and the work site is not associated with an upland property, no filing is required.

2. **Contractor Notification.** The Licensee shall give a copy of the license and its attachments to the contractor(s) who will be carrying out the authorized activities prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Licensee's contractor(s) shall conduct all operations at the site in full compliance with the license and, to the extent provided by law, may be held liable for any violation of the terms and conditions of the license. At the work site, the contractor(s) shall, whenever work is being performed, have on site and make available for inspection a copy of the license and the authorized plans.

3. **Work Commencement.** Not later than two (2) weeks prior to the commencement of any work authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov, on the Work Commencement Form attached hereto, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.

    - For water diversion activities authorized pursuant to 22a-377(c)-1 of the Regulations of Connecticut State Agencies, the Licensee shall also notify the Commissioner in writing two weeks prior to initiating the authorized diversion.
    - For emergency activities authorized pursuant Connecticut General Statutes Section 22a-6k, the Licensee shall notify the Commissioner, in writing, of activity

commencement at least one (1) day prior to construction and of activity completion no later than five (5) days after conclusion.

4. **License Notice.** The Licensee shall post the first page of the License in a conspicuous place at the work area while the work authorized therein is undertaken.

5. **Unauthorized Activities.** Except as specifically authorized, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be deposited, placed or stored in any wetland or watercourse on or off-site. The Licensee may not conduct work within wetlands or watercourses other than as specifically authorized, unless otherwise authorized in writing by the Commissioner. Tidal wetlands means "wetland" as defined by section 22a-29 and "freshwater wetlands and watercourses" means "wetlands" and "watercourses" as defined by section 22a-38.

6. **Excavated Materials.** Unless otherwise authorized, all excavated material shall be staged and managed in a manner which prevents additional impacts to wetlands and watercourses.

7. **Best Management Practices.** The Licensee shall not cause or allow pollution of any wetlands or watercourses, including pollution resulting from sedimentation and erosion. In constructing or maintaining any authorized structure or facility or conducting any authorized activity, or in removing any such structure or facility, the Licensee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. For purposes of the license, "pollution" means "pollution" as that term is defined by CGS section 22a-423. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation's *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.

8. **In-Water Work Vessel Staging and Storage. (for Structures Dredging & Fill, Tidal *Wetlands*, *Certificate of Permission*, and *Long Island Sound General Permit* Licenses only).** For any barge, vessel, skiff or floating work platform ("work vessels") utilized in the execution of the work authorized herein, the Licensee shall ensure that such work vessels:
   - do not rest on, or come in contact with, the substrate at any time, unless specifically authorized in the license.
   - are not stored over intertidal flats, submerged aquatic vegetation or tidal wetland vegetation or in a location that interferes with navigation. In the event any work vessel is grounded, no dragging or prop dredging shall occur to free it.

9. **Work Site Restoration.** Upon completion of any authorized work, the Licensee shall restore all areas impacted by construction, or used as a staging area or accessway in connection with such work, to their condition prior to the commencement of such work.

10. **Inspection.** The Licensee shall allow any representative of the Commissioner to inspect the project location at reasonable times to ensure that work is being or has been conducted in accordance with the terms and conditions of this license.

11. Change of Use. (Applies only if a use is specified within the License "*Project Description*")

a. The work specified in the license is authorized solely for the purpose set forth in the license. No change in purpose or use of the authorized work or facilities as set forth in the license may occur without the prior written approval of the Commissioner. The Licensee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this license, request permission from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.

b. A change in the form of ownership of any structure authorized herein from a rental/lease commercial marina to a wholly-owned common interest community or dockominium may constitute a change in purpose as specified in paragraph (a) above.

12. De Minimis Alteration. The Licensee shall not deviate from the authorized activity without prior written approval from the Commissioner. The Licensee may request a de minimis change to any authorized structure, facility, or activity. A de minimis alteration means a change in the authorized design, construction or operation that individually and cumulatively has minimal additional environmental impact and does not substantively alter the project as authorized.

- For diversion activities authorized pursuant to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, a de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.

13. Extension Request. The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to DEEP.LWRDRegulatory@ct.gov at least thirty (30) days prior to the license expiration. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. The Commissioner may extend the expiration date of this license for a period of up to one year, in order for the Licensee to complete the authorized activities. It shall be at the Commissioner's sole discretion to grant or deny such request. No more than three (3) one-year extensions will be granted under this license.

14. No Work After License Expiration. Work conducted after the license expiration date is a violation of the license and may subject the licensee to enforcement action, including penalties, as provided by law.

15. License Transfer. The license is not transferable without prior written authorization of the Commissioner. A request to transfer a license shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Licensee's obligations under the license shall not be affected by the passage of title to the license site to any other person or municipality until such time as a transfer is approved by the Commissioner.

16. Document Submission. Any document required to be submitted to the Commissioner under the license or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

DEEP.LWRDRegulatory@ct.gov or

Regulatory Section
Land & Water Resources Division
Department of Energy and Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127
860-424-3019

17. **Date of Document Submission.** The date of submission to the Commissioner of any document required by the license shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under the license, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in the license, the word "day" as used in the license means calendar day. Any document or action which is required by the license to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.

18. **Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under the license shall be signed by the Licensee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

19. **Accuracy of Documentation.** In evaluating the application for the license, the Commissioner has relied on information and data provided by the Licensee and on the Licensee's representations concerning site conditions, design specifications and the proposed work, including but not limited to representations concerning the commercial, public or private nature of the work or structures, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, the license may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.

20. **Limits of Liability.** In granting the license, the Commissioner has relied on all representations of the Licensee, including information and data provided in support of the Licensee's application. Neither the Licensee's representations nor the issuance of the license shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.

21. **Reporting of Violations.** In the event that the Licensee becomes aware that they did not or

may not comply, or did not or may not comply on time, with any provision of this license or of any document incorporated into the license, the Licensee shall immediately notify the agency contact specified within the license and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the agency contact, the Licensee shall provide, for the agency's review and written approval, a report including the following information:

a. the provision(s) of the license that has been violated;

b. the date and time the violation(s) was first observed and by whom;

c. the cause of the violation(s), if known;

d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;

e. if the violation(s) has not ceased, the anticipated date when it will be corrected;

f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and

g. the signatures of the Licensee and of the individual(s) responsible for actually preparing such report.

If the violation occurs outside of normal business hours, the Licensee shall contact the Department of Energy and Environmental Protection Emergency Dispatch at 860-424-3333. The Licensee shall comply with any dates which may be approved in writing by the Commissioner.

22. Revocation/Suspension/Modification. The license may be revoked, suspended, or modified in accordance with applicable law.

23. Other Required Approvals. License issuance does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, state and local law.

24. Rights. The license is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

25. Condition Conflicts. In the case where a project specific special condition listed on the license differs from, or conflicts with, one of the general conditions listed herein, the project specific special condition language shall prevail. It is the licensee's responsibility to contact the agency contact person listed on the license for clarification if needed prior to conducting any further regulated activities.

LWRD Work Commencement Form

To: DEEP.LWRDRegulatory@ct.gov or
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Licensee Name: _____

Municipality in which the project is occurring: _____

DEEP License No(s): _____

CONTRACTOR(s):

1 Name: _____
Address: _____
Telephone: _____
E-mail: _____

2 Name: _____
Address: _____
Telephone: _____
E-mail: _____

3 Name: _____
Address: _____

Date Contractor(s) received a copy
of the license and approved plans: _____

EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

LICENSEE: _____ _____
(Signature) (Date)

LWRD DREDGING REPORT

(To be completed by Licensee)

License No(s).: _____
Licensee Name: _____
Address of Dredging Activity: _____
_____

Dredging Contractor Information:
Name: _____
Mailing Address: _____
Business Phone: _____
Contact Person: _____
E-mail: _____

Dates Dredged: _____
Total Volume Dredged during this period: _____
Disposal Volume(s) and Location(s): _____
_____

**If any portion of the dredged materials was used in a beneficial manner, please identify the beneficial use type (i.e. beach nourishment, habitat restoration, landfill cap, construction materials…), volume of dredged material utilized and the location of beneficial usage.

_____
_____
_____
_____

Document Certification:
"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

_____ _____
Signature of Licensee Date

If you have any questions pertaining to this form, please contact the Land & Water Resources Division at 860-424-3034.
Return to:
DEEP.LWRDRegulatory@ct.gov or
Land & Water Resources Division
State of Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Connecticut
Department of Energy &
Environmental Protection

Compliance Certification Form

The following certification must be signed by the licensee working in consultation with a Connecticut-licensed design professional and must be submitted to the address indicated at the end of this form within ninety (90) days of completion of the authorized work.

1. Licensee Name: _____

   DEEP License Number(s):_____

   Municipality in which project is occurring:_____

2. **Check one:**

   (a) ☐ "I certify that the final site conditions and / or structures are in general conformance with the approved site plans". Identify and describe any deviations and attach to this form.

   (b) ☐ "The final site conditions and / or structures are not in general conformance with the approved site plans. The enclosed "as-built" plans note the modifications".

3. "I understand that any false statement in this certification is punishable as a criminal offence under section 53a-157b of the General Statutes and under any other applicable law."

_____ _____
Signature of Licensee Date

_____
Name of Licensee (print or type)

_____ _____
Signature of CT-Licensed Design Professional Date

_____
Name of CT-Licensed Design Professional (print or type)

_____
Professional License Number (if applicable)

Affix Stamp Here

- As-built plans shall include: elevations or tidal datums, as applicable, and structures, including any proposed elevation views and cross sections included in the approved license plans. Such as-built plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.
- The Licensee will be notified by staff of the Land and Water Resources Division (LWRD) if further compliance review is necessary. Lack of response by LWRD staff does not imply compliance.

Submit this completed form to :
DEEP.LWRDRegulatory@ct.gov or
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Amtrak®

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
OLD SAYBROOK, CONNECTICUT

GENERAL NOTES

1. THESE PLANS ARE NOT FOR CONSTRUCTION AND ARE INTENDED ONLY FOR ENVIRONMENTAL PERMITTING PURPOSES. THESE PLANS HOLD AUTHORITY FOR ALL ACTIVITIES CONCERNING THE REGULATED AREA. FOR DETAILED PLANIMETRIC INFORMATION AND PAYMENT, REFER TO THE APPLICABLE CONTRACT DOCUMENTS.
2. AMTRAK WILL ONLY SUBMIT REVISIONS TO CTDEEP AND USACE FOR CHANGES TO THE DESIGN THAT WILL AFFECT REGULATED AREAS.
3. FOR A DESCRIPTION OF THE WATERCOURSES, WETLANDS, AND WETLAND SOILS SEE RELAVANT SECTIONS OF THE PERMIT APPLICATION.
4. THE HORIZONTAL CONTROLS REFERENCE THE NORTH AMERICAN DATUM OF 1983 (NAD83) AND THE CONNECTICUT STATE PLANE COORDINATE SYSTEM. THE VERTICAL DATUM REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
5. ALL CONSTRUCTION ACTIVITIES WILL BE CONDUCTED IN ACCORDANCE WITH THE CTDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818, SECTION 1.10 AND WILL ALSO FOLLOW REQUIRED BEST MANAGEMENT PRACTICES (BMPs) AND SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH THE 2002 EROSION & SEDIMENTATION CONTROL GUIDELINES AND THE 2004 STORMWATER QUALITY MANUAL.

ENVIRONMENTAL AND PERMIT PLANS

LOCATION PLAN

VICINITY MAP
SCALE: 1"=2000'

SEE IDX-01 FOR LIST OF DRAWINGS

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

TITLE SHEET

Designed – Drawn – Checked – Date 5/2/2023

Project Code	XXX.XXX
WBS	000.000
Sheet No.	1 OF 140
Dwg No.	TTL-01

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NOTE: SEE ATTACHMENT 14A FOR "3.25 AC MITIGATION SITE" AND "17 SHORE ROAD MITIGATION SITE" PLANS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

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CBS	CBS	BSH	5/2/2023

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WBS	000000
Sheet No.	2 OF 140
Dwg No.	IDX-01

DEFINITIONS

EOR = ENGINEER OF RECORD
REO = RESIDENT ENGINEER'S OFFICE

HORIZONTAL AND VERTICAL CONTROL DATUM

1. THE HORIZONTAL CONTROLS REFERENCE THE NORTH AMERICAN DATUM OF 1983, (NAD83) AND THE CONNECTICUT STATE PLANE COORDINATE SYSTEM.
2. THE VERTICAL DATUM REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

SAFETY TRAINING

1. ALL CONTRACTOR AND SUBCONTRACTORS ON-SITE PERSONNEL WILL BE REQUIRED TO ATTEND AMTRAK WORKER PROTECTION AND CONTRACTOR SAFETY TRAINING BEFORE ENTERING AMTRAK PROPERTY.
2. THE SAFETY TRAINING CONSISTS OF AN ONLINE COURSE HOSTED ON AMTRAK'S WEBSITE AND MUST BE RENEWED ON A YEARLY BASIS.

TRACK OUTAGES

1. CONSTRUCTION ON THIS CONTRACT SHALL MINIMIZE IMPACTS TO RAILROAD OPERATIONS. THE CONTRACTOR SHALL COORDINATE TRACK OUTAGES WITH THE CONSTRUCTION MANAGER.

KEY WATER ELEVATIONS AT PROJECT SITE (NAVD 88)

FEMA 100-YEAR FLOOD PLAIN BASE FLOOD ELEVATIONS (BFE):

WEST ABUTMENT, NORTH BANK (ZONE AE) =	11
WEST ABUTMENT, SOUTH BANK (ZONE VE) =	13
EAST ABUTMENT, NORTH BANK STA T2 106+3950± TO 106+4475± (ZONE VE) =	14
EAST ABUTMENT, NORTH BANK STA T2 106+4475± TO 107+0900± (ZONE AE) =	10
EAST ABUTMENT, NORTH BANK STA T2 107+0900± TO 107+1850± (ZONE AE) =	12
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EAST ABUTMENT, SOUTH BANK STA T2 106+3950± TO 106+4650± (ZONE VE) =	14
EAST ABUTMENT, SOUTH BANK STA T2 106+4650± TO 107+0390± (ZONE AE) =	10
EAST ABUTMENT, SOUTH BANK STA T2 107+0390± TO 107+1850± (ZONE VE) =	14
EAST ABUTMENT, SOUTH BANK STA T2 107+1850± TO EAST (ZONE VE) =	10

HYDRAULIC DATA	NAVD88	USACE
MINIMUM CABLE DEPTH	-29.89 FT	-28.9 FT
AUTHORIZED DREDGE DEPTH	-16.89 FT	-15.9 FT
MEAN LOWER LOW WATER (M.L.L.W.)	-1.89 FT (1)	0.0 FT
MEAN LOW WATER (M.L.W.)	-1.71 FT (1)	0.18 FT
MEAN HIGH WATER (M.H.W.)	1.60 FT (1)	3.49 FT
COASTAL JURISDICTION LINE (C.J.L.)	2.9 FT	4.8 FT
HIGH TIDE LINE (H.T.L.)	3.04 FT (2)	4.83 FT
10-YEAR TIDE	5.4 FT (3)	7.3 FT
100-YEAR TIDE	9.3 FT (3)	11.2 FT
DRAINAGE AREA	11,300 SQ MI	11,300 SQ MI
DESIGN FREQUENCY	100-YEAR	100-YEAR
DESIGN DISCHARGE	136,495 CFS (4)	136,495 CFS
DESIGN WATER SURFACE ELEVATION-UPSTREAM	8.41 FT (4)	10.30 FT
DESIGN WATER SURFACE ELEVATION-DOWNSTREAM	8.53 FT (4)	10.42 FT
MAXIMUM SCOUR ELEVATION		
FREQUENCY	500 YR W/ SPRING TIDE	500 YR W/ SPRING TIDE
DISCHARGE	195,553 CFS	195,553 CFS
WORST CASE SCOUR, SUBSTRUCTURE UNIT: DEPTH	WEST ABUTMENT: 24.9 PIER 7: 25.1	WEST ABUTMENT: 24.9 PIER 7: 25.1

(1) NOAA PUBLISHED DATA FOR TIDAL GAUGE STATION NO. 8462756, LYME HWY. BR. CT. RIVER CT
(2) UPDATED TIDAL PROFILES FOR THE NEW ENGLAND COASTLINE
(3) USACE NORTH ATLANTIC COAST COMPREHENSIVE STUDY (NACCS)
(4) CONNECTICUT RIVER BRIDGE REPLACEMENT, HYDROLOGIC, HYDRAULIC, AND SCOUR ANALYSIS REPORT, MARCH 2023

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

GENERAL NOTES

1. HAUL ROUTES MUST BE KEPT CLEAN AT ALL TIMES.
2. ALL WORK SHALL COMPLY WITH OSHA STANDARDS.
3. THE LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE APPROXIMATE.
   THE FOLLOWING SHALL BE PERFORMED:
   a. VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES WITHIN THE WORK AREA PRIOR TO CONSTRUCTION.
   b. EXERCISE EXTREME CAUTION WHEN WORKING ADJACENT TO EXISTING POWER, COMMUNICATIONS, WATER OR GAS LINES TO PREVENT DAMAGE TO THESE LINES.
   c. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR'S OPERATIONS IN A MANNER APPROVED BY THE UTILITY OWNER, AT NO COST TO AMTRAK.
3. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION THAT ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, SHALL BE IMMEDIATELY RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE RESIDENT ENGINEER'S OFFICE (REO) AT NO ADDITIONAL COST TO AMTRAK.
4. VERIFY ALL INDICATED CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE COMMENCING ANY FABRICATION, ORDERING OF MATERIAL, OR PERFORMING ANY WORK. NOTIFY THE REO OF ANY CONDITIONS OR DIMENSIONS THAT WOULD PREVENT OR HAMPER THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
5. UPON COMPLETION OF THE WORK, REMOVE ALL DEBRIS, EQUIPMENT AND UNUSED MATERIALS FROM AMTRAK'S PROPERTY AND RESTORE THE "AREA AVAILABLE FOR CONTRACTOR'S USE" TO ITS ORIGINAL CONDITION.
6. THE CONTRACTOR SHALL, THROUGH THE REO, COORDINATE WITH THE RAILROAD FORCE ACCOUNT CONSTRUCTION ACTIVITIES WITHIN THE RAILROAD PROPERTY.
7. AREAS THAT WILL REMAIN DISTURBED BUT INACTIVE FOR AT LEAST THIRTY DAYS SHALL RECEIVE TEMPORARY SEEDING OR SOIL PROTECTION WITHIN SEVEN DAYS. AREAS THAT WILL REMAIN DISTURBED BEYOND THE SEEDING SEASON, SHALL RECEIVE LONG-TERM, NON-VEGETATIVE STABILIZATION AND PROTECTION SUFFICIENT TO PROTECT THE SITE THROUGH THE WINTER. IN ALL CASES, STABILIZATION AND PROTECTION MEASURES SHALL BE IMPLEMENTED AS SOON AS POSSIBLE.PERMANENT SEEDING IS RECOMMENDED FROM APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 15.
8. EROSION CONTROL MATTING SHALL BE USED ON ALL SEEDED SLOPES OF 2:1 OR STEEPER AND ON ALL SEEDED SLOPES OF 3:1 OR STEEPER THAT EXCEED 15 FEET VERTICALLY.
9. FOR CONSTRUCTION AND TRACK MONITORING REQUIREMENTS SEE AMTRAK STANDARD SPECIFICATIONS EP 2031 AND EP 3014, LATEST EDITIONS.
10. THE CONTRACTOR SHALL NOT STORE BELOW THE 500-YEAR FLOOD LEVEL ANY MATERIALS THAT ARE BUOYANT, HAZARDOUS, FLAMMABLE, EXPLOSIVE, SOLUBLE, EXPANSIVE, RADIOACTIVE, OR ANY OTHER MATERIALS THAT COULD BE INJURIOUS TO HUMAN, ANIMAL OR PLANT LIFE IN THE EVENT OF A FLOOD. OTHER MATERIAL OR EQUIPMENT MAY BE STORED BELOW THE ELEVATION OF THE 500-YEAR FLOOD ELEVATION PROVIDED THAT SUCH MATERIAL OR EQUIPMENT IS NOT SUBJECT TO MAJOR DAMAGE BY FLOODS, AND PROVIDED THAT SUCH MATERIAL OR EQUIPMENT IS FIRMLY ANCHORED, RESTRAINED, OR ENCLOSED TO PREVENT IT FROM FLOATING AWAY OR IS REMOVED PRIOR TO FLOODING.
11. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE REO FOR APPROVAL, A WRITTEN FLOOD CONTINGENCY PLAN. THE PLAN SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
    a. A DESCRIPTION OF THE MEANS BY WHICH THE CONTRACTOR SHALL REMOVE FROM WITHIN THE FLOODPLAIN, ALL MATERIAL, EQUIPMENT AND PERSONNEL PRIOR TO A PREDICTED MAJOR STORM WITHIN A 24-HOUR PERIOD DURING THE WEEKDAY INCLUDING WEEKENDS AND HOLIDAYS. A SITE MAP SHALL BE PROVIDED TO IDENTIFY THE LOCATION OF WHERE ALL MATERIAL AND EQUIPMENT WILL BE STORED TEMPORARILY OUTSIDE OF THE FLOODPLAIN. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING LOCAL WEATHER CONDITIONS AND WILL SECURE THE WORKSITE BEFORE PREDICTED MAJOR STORMS. A MAJOR STORM SHALL BE DEFINED AS A STORM PREDICTED BY THE NOAA WEATHER SERVICE WITH WARNINGS OF FLOODING, SEVERE THUNDERSTORMS, OR SIMILARLY SEVERE WEATHER CONDITIONS OR EFFECTS.
    b. PROVISIONS FOR NOTIFYING WORKERS ENGAGED IN WORK ON OR NEAR THE BRIDGE OR WATERCOURSE OF AN IMPENDING STORM.
    c. PROVISIONS FOR REMOVING BUOYANT, HAZARDOUS OR INJURIOUS MATERIALS PRIOR TO MAJOR STORMS.
    d. CONTRACTOR'S EMERGENCY CONTACT INFORMATION.

CIVIL LEGEND

EXISTING	PROPOSED
	LIMIT OF DISTURBANCE
	AMTRAK R.O.W. LINE
	EASEMENT LINE
	PROPERTY LINE
	FEMA 100 YEAR FLOOD LINE - ELEVATION VARIES
	LAND CAPABLE OF SUPPORTING TIDAL VEGETATION - ELEVATION 4.1
	COASTAL JURISDICTION LINE (CJL) - ELEVATION 2.9'
HTL HTL	HIGH TIDE LINE (HTL) - ELEVATION 3.04'
	MEAN HIGH WATER (MHW) - ELEVATION 1.60'
MLW MLW	MEAN LOW WATER (MLW) - ELEVATION -1.71'
	WETLAND DELINEATION
	TRACK CENTERLINE
	CHAIN LINK FENCE
	TEMPORARY CONSTRUCTION FENCE
	FRA APPROVED TEMPORARY CONSTRUCTION BARRIER
	TEMPORARY PERIMETER EROSION & SEDIMENTATION CONTROL
	TEMPORARY TURBIDITY CURTAIN
	TEMPORARY SUPPORT OF EXCAVATION/COFFERDAM
	TEMPORARY TRESTLE STRUCTURE
	RETAINING WALL
	CATENARY STRUCTURE
	SINGLE ARM CANTILEVER
	DOUBLE ARM CANTILEVER CATENARY STRUCTURE
	SIGN
	UTILITY POLE
	SANITARY UTILITY
	WATER UTILITY
	BURIED ELECTRIC UTILITY
	OVERHEAD ELECTRIC UTILITY
	FIBEROPTIC UTILITY
	TREELINE
	LIMIT OF CUT
	LIMIT OF FILL

TRACK STAGING LEGEND

EXISTING TRACK
RAISE AND SURFACE
CONSTRUCT NEW
TRACK TO BE SHIFTED
REMOVE

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

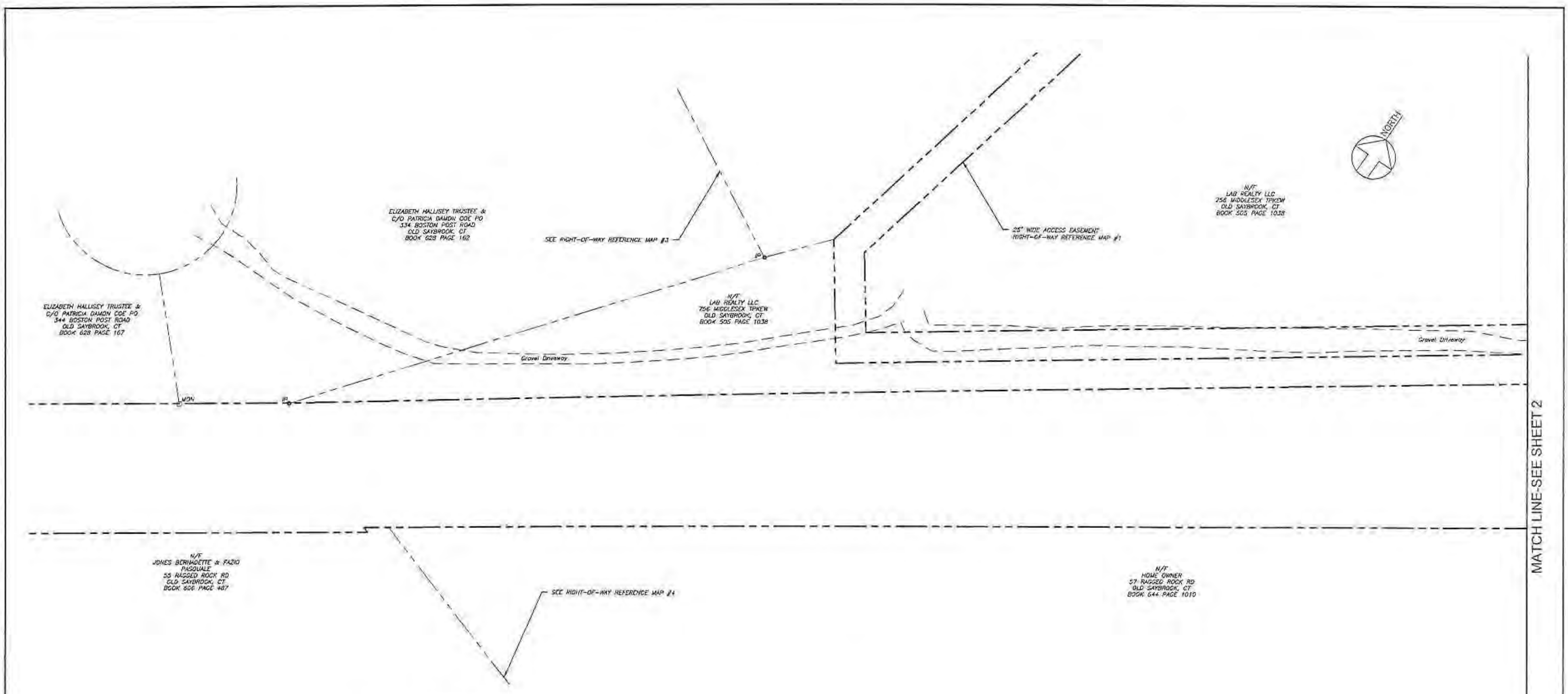
Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
GENERAL CIVIL NOTES & LEGEND
Designed CS Drawn DBMO Checked KM Date 5/2023

Project Code	XXX XXX
WBS	
Sheet No.	3 OF 140
Dwg No.	GEN-01



TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHWEST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

Symbol	Line	Description
Utility Post	X	Metal Fence
Sign	OH	Overhead Utility
CAT Tower	F/O	Fiber Optic Line (Buried)
Guy Anchor	C	Communication Line (Buried)
Deciduous Tree	E	Electric Line (Buried)
Coniferous Tree		Wetland Flags
Light Pole	MLW	Mean Low Water
9.8 Spot Grade	MHW	Mean High Water
Control Point	CJL	Coastal Jurisdiction Line
Property Line	LCSTV	Land Capable of Supporting Tidal Vegetation
100 Contour Line	HTL	High Tide Line
Water Line	FEMA 100	Fema 100Year Line
Gravel Drive		

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	CJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	6-11-2021	FV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JMW
5	3/4 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JMW
6	DEEP HQ TOPOGRAPHIC UPDATE	10-11-2022	JMW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

PERMIT PLANS

HARDESTY & HANOVER, LLC
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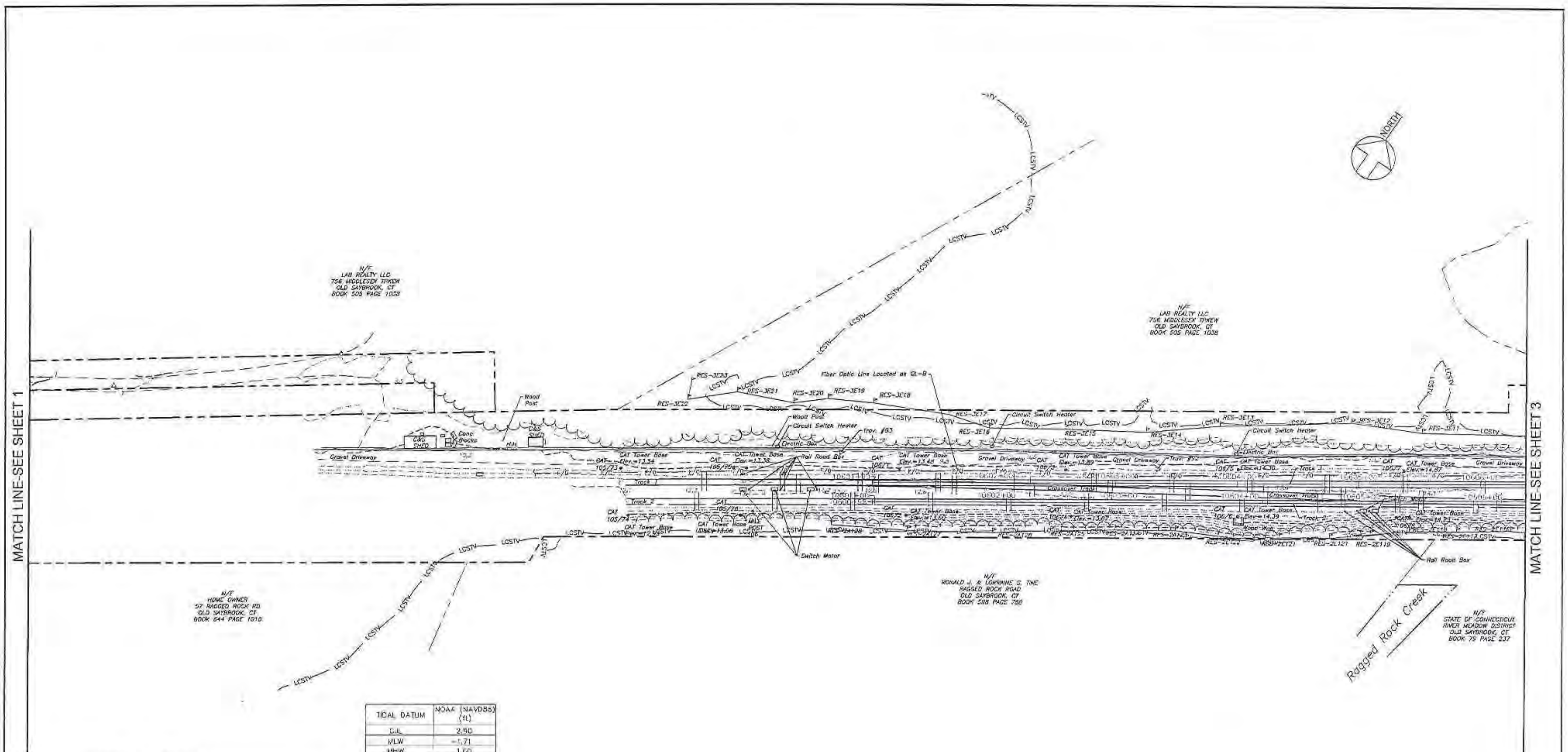
Fax: (860) 436-4426
www.martinezcouch.com

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARV | Date 032018

Project Code	XXX.XXX
WBS	
Sheet No.	4 OF 140
Dwg. No.	EX-1

FILE NAME:
PLOT SCALE:
STANDARD PEN TABLE



SYMBOLS LEGEND

Symbol	Description	Line	Description
⊙	Utility Post	—— x ——	Metal Fence
▭▭ ▭	Sign	—— OH ——	Overhead Utility
●	CAT Tower	—— F/O ——	Fiber Optic Line (Buried)
—	Guy Anchor	—— C ——	Communication Line (Buried)
○	Deciduous Tree	—— E ——	Electric Line (Buried)
☆	Coniferous Tree	▷—▷	Wetland Flags
○—⊐	Light Pole	—— MLW ——	Mean Low Water
x 9.8	Spot Grade	—— MHW ——	Mean High Water
△	Control Point	—— CJL ——	Coastal Jurisdiction Line
——— - ———	Property Line	—— LCSTV ——	Land Capable of Supporting Tidal Vegetation
— 100 —	Contour Line	—— HTL ——	High Tide Line
——···——	Water Line	—— FEMA 100 ——	Fema 100Year Line
————	Gravel Drive		

TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

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FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

SCALE IN FEET
SCALE 1" = 40'
40 20 0 40 80

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	CJN
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3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	PV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	19-1-2022	JMW
5	3rd AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	19-1-2022	JMW
6	DEEP HD TOPOGRAPHIC UPDATE	15-11-2022	JMW
7	AMTRAK PARCEL- CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: | Date

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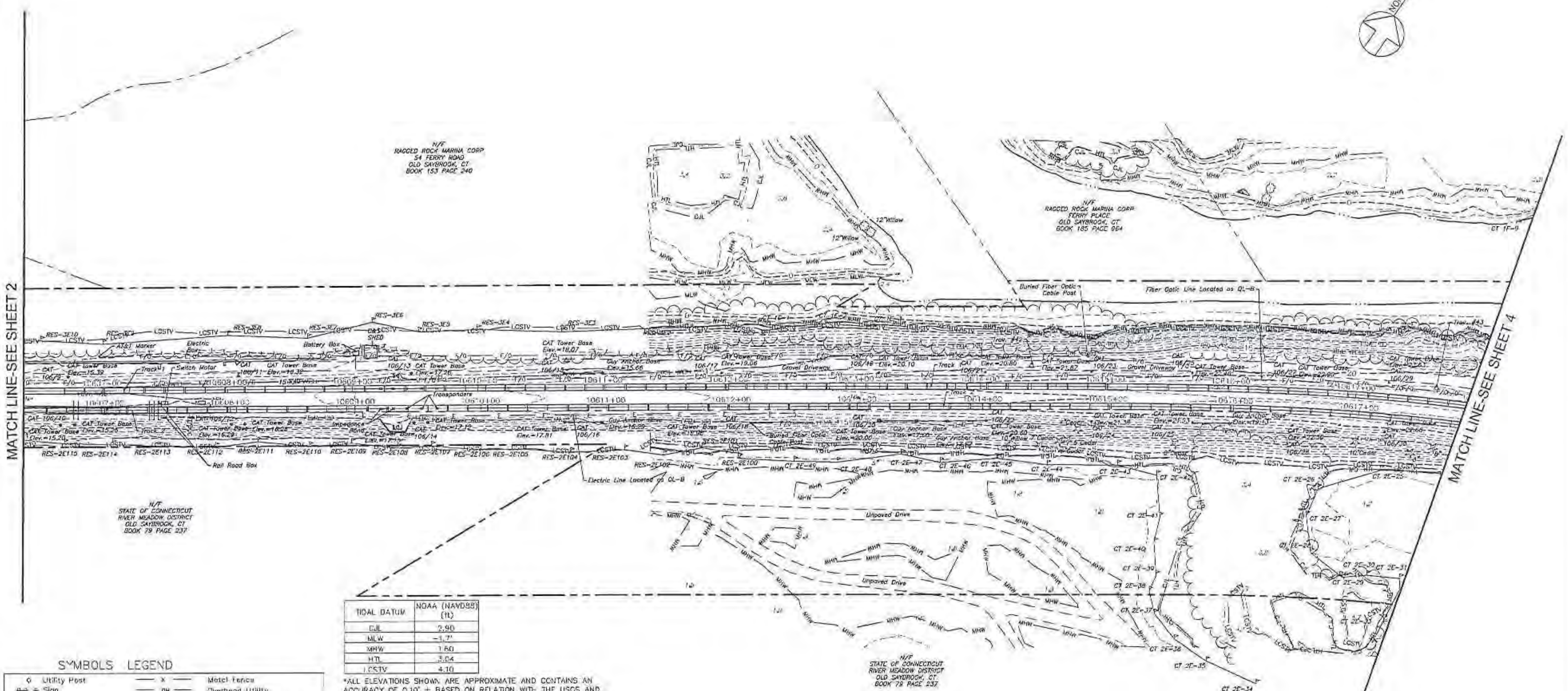
OLD SAYBROOK — CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
EXISTING SITE PLAN
Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code: XXX.XXX
WBS:
Sheet No. 5 OF 140
Dwg. No. EX-2



TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.7'
MHW	1.60
HTL	3.04
LCSTV	4.10

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REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

Symbol	Description	Symbol	Description
	Utility Post	—X—	Metal Fence
	Sign	—OH—	Overhead Utility
	CAT Tower	—F/O—	Fiber Optic Line (Buried)
	Guy Anchor	—C—	Communication Line (Buried)
	Deciduous Tree	—E—	Electric Line (Buried)
	Coniferous Tree		Wetland Flags
	Light Pole	—MLW—	Mean Low Water
0.8	Spot Grade	MHW	Mean High Water
	Control Point	—CJL—	Coastal Jurisdiction Line
	Property Line	—LCSTV—	Land Capable of Supporting Tidal Vegetation
—100—	Contour Line	—HTL—	High Tide Line
	Water Line	—FEMA 100—	Fema 100Year Line
	Gravel Drive		

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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5	34 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JMW
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7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

FILE NAME
PLOT SCALE
STANDARD PEN TABLE

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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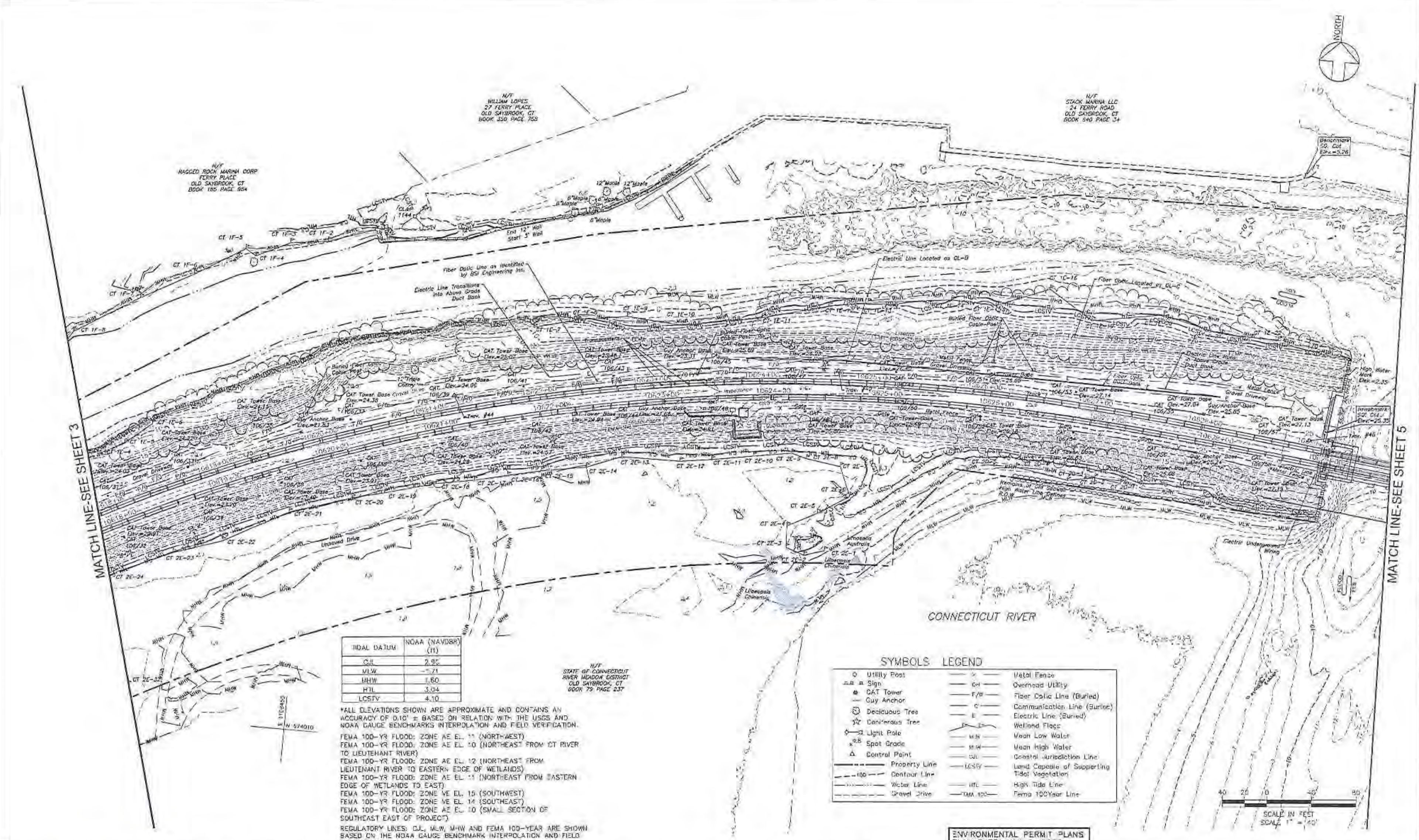
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed	Drawn JBR	Checked ARV	Date 02/2019

Project Code	XXX XXX
WBS	
Sheet No.	6 OF 140
Dwg No.	EX-3



TIDAL DATUM	NOAA (NAVD88) (ft)
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REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

- Utility Post
- Sign
- CAT Tower
- Guy Anchor
- Deciduous Tree
- Coniferous Tree
- Light Pole
- Spot Grade
- Control Point
- Property Line
- Contour Line
- Water Line
- Gravel Drive
- Metal Fence
- Overhead Utility
- Fiber Optic Line (Buried)
- Communication Line (Buried)
- Electric Line (Buried)
- Wetland Flags
- Mean Low Water
- Mean High Water
- Coastal Jurisdiction Line
- Land Capable of Supporting Tidal Vegetation
- High Tide Line
- Fema 100Year Line

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	MAW
5	0/A AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	MAW
6	DEEP HO TOPOGRAPHIC UPDATE	10-11-2022	MAW
7	AMTRAK PARCEL CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

PERMIT PLANS

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

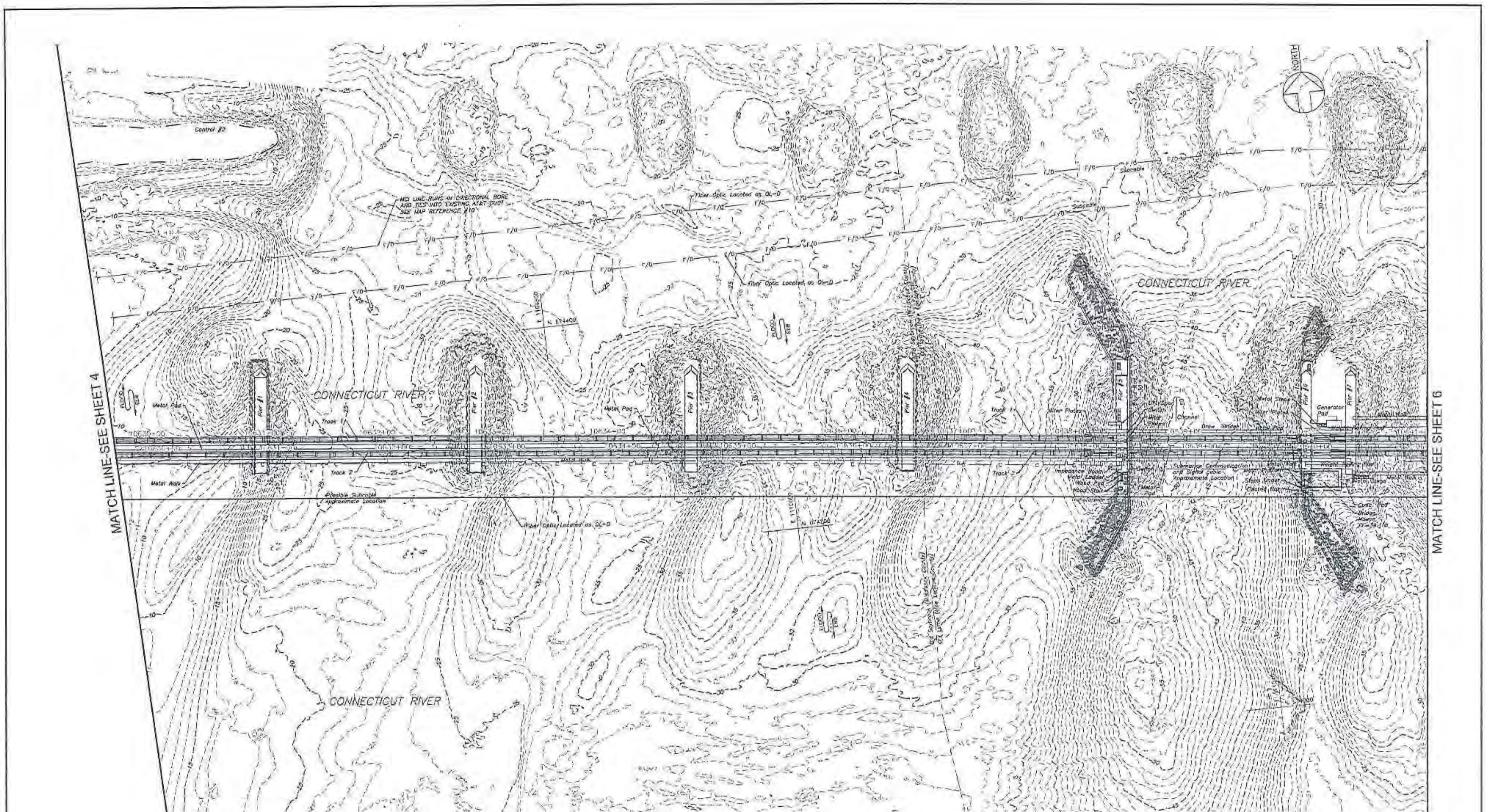
MCA Martinez Couch & Associates

OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code: XXX XXX
WBS:
Sheet No. 7 OF 145
Dwg No. EX-4



ENVIRONMENTAL PERMIT PLANS
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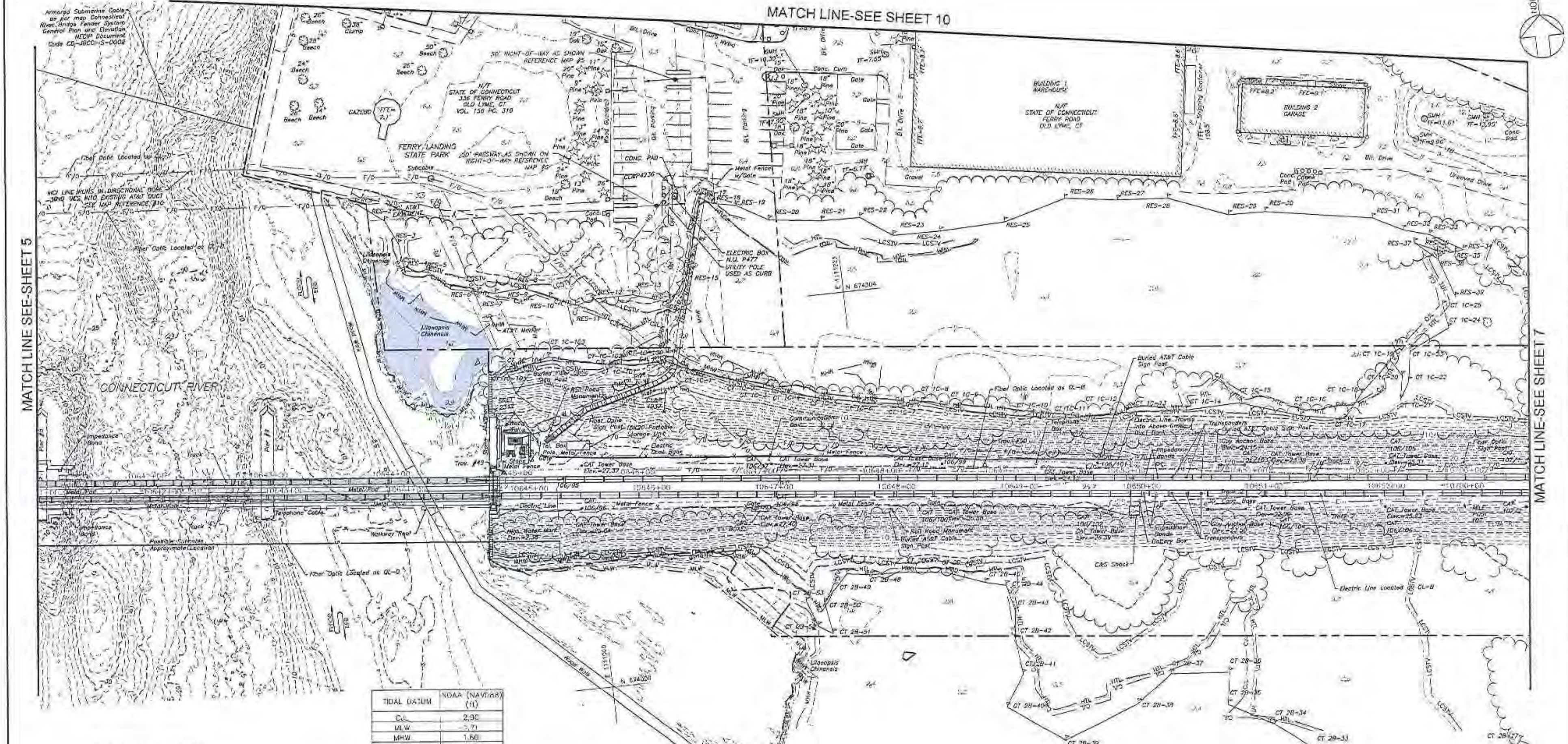
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code XXX XXX
WBS
Sheet No. 6 OF 140
Dwg No. EX-5



TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTH-WEST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

Utility Post		— X —	Metal Fence
Sign		— OH —	Overhead Utility
CAT Tower		— F/O —	Fiber Optic Line (Buried)
Guy Anchor		— C —	Communication Line (Buried)
Deciduous Tree		— E —	Electric Line (Buried)
Coniferous Tree			Wetland Flags
Light Pole		— MLW —	Mean Low Water
Spot Grade		— MHW —	Mean High Water
Control Point		— CJL —	Coastal Jurisdiction Line
	Property Line	— LCSTV —	Land Capable of Supporting Tidal Vegetation
— 100 —	Contour Line		
	Water Line	— HTL —	High Tide Line
	Gravel Drive	— FEMA 100 —	Fema 100Year Line

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

SCALE IN FEET
SCALE 1" = 40'

No	Revisions	Date	by
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-4-2020	EJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	FV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	MW
5	24 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	MW
6	DEEP HQ TOPOGRAPHIC UPDATE	10-11-2022	MW
7	AMTRAK PARCEL CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

PERMIT PLANS

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

MCA Martinez Couch & Associates

OLD SAYBROOK — CONNECTICUT

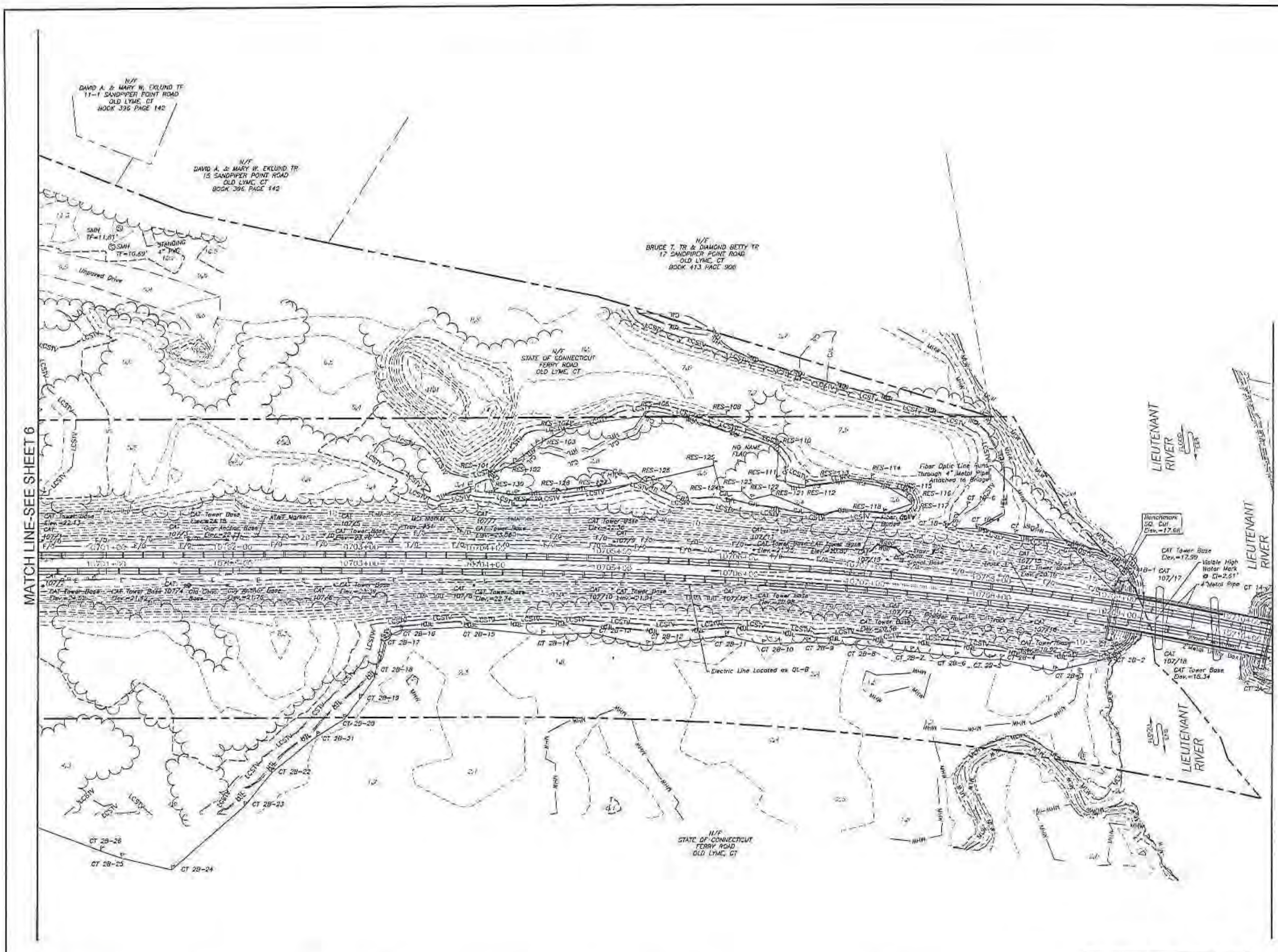
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed: | Drawn: JBR | Checked: ARM | Date: 02/2019

Project Code: XXX XXX
WBS:
Sheet No: 9 OF 140
Dwg No: EX-6

FILE NAME:
PLOT SCALE:
STAMPED PEN TABLE:



TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.80
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

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FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

Utility Post	Metal Fence
Sign	Overhead Utility
CAT Tower	Fiber Optic Line (Buried)
Guy Anchor	Communication Line (Buried)
Deciduous Tree	Electric Line (Buried)
Coniferous Tree	Wetland Flags
Light Pole	Mean Low Water
Spot Grade	Mean High Water
Control Point	Coastal Jurisdiction Line
Property Line	Land Capable of Supporting Tidal Vegetation
Contour Line	High Tide Line
Water Line	Fema 100Year Line
Gravel Drive	

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	EJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPG
3	ADDED MAINTENANCE METAL BOARDWALK	6-11-2021	TV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	WW
5	3/4 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	WW
6	DEEP NO TOPOGRAPHIC UPDATE	10-11-2022	WW
7	AMTRAK PARCEL CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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30th Street Station, Philadelphia, Pennsylvania 19104

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www.martinezcouch.com

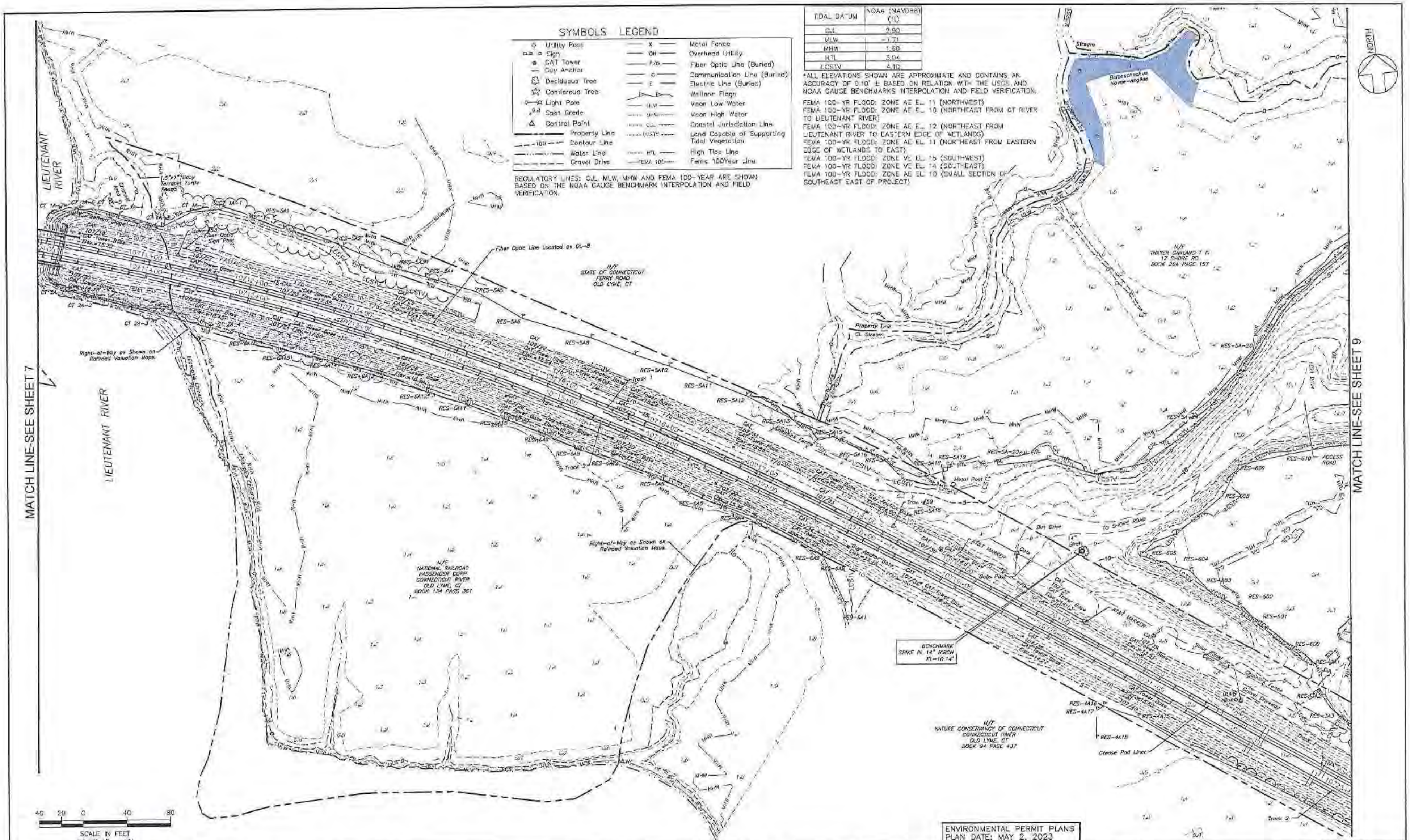
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code XXX.XXX
WBS
Sheet No. 10 OF 140
Dwg No. EX-7



No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	EJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-16-2021	UPR
3	ADDED MAINTENANCE METAL BOARDWALK	6-11-2021	PV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JWW
5	3H AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JWW
6	DEEP HD TOPOGRAPHIC UPDATE	10-11-2022	JWW
7	AMTRAK PARCEL CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

MCA Martinez Couch & Associates

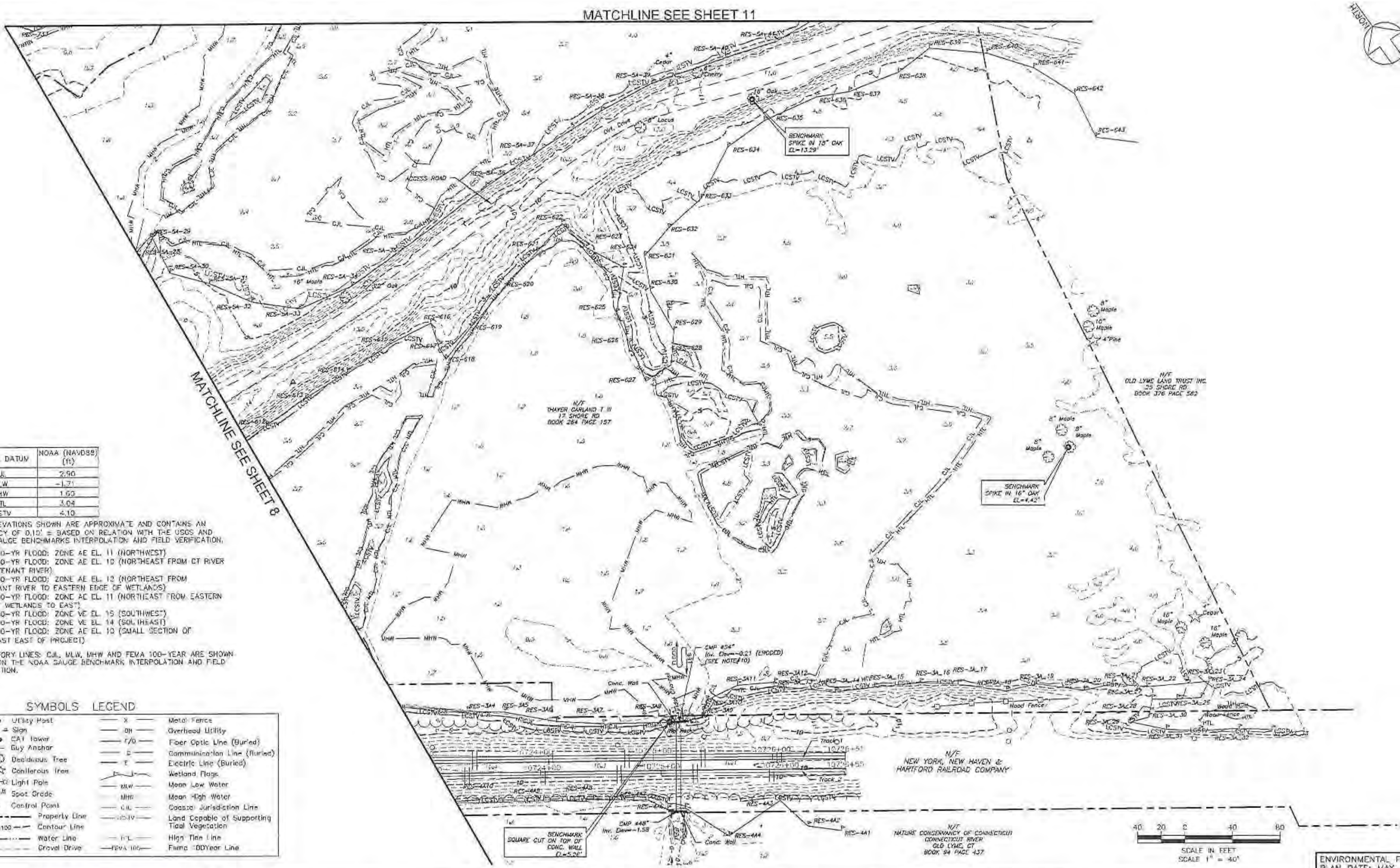
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
EXISTING SITE PLAN

Designed: | Drawn: JBR | Checked: ARM | Date: 10-28-2022

Project Code: XXX.XXX
WBS:
Sheet No. 11 OF 140
Dwg. No. EX-8

MATCHLINE SEE SHEET 11



TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

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FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

Symbol	Description	Line	Description
	Utility Post	X	Metal Fence
	Sign	OH	Overhead Utility
	CATV Tower	F/O	Fiber Optic Line (Buried)
	Guy Anchor	C	Communication Line (Buried)
	Deciduous Tree	E	Electric Line (Buried)
	Coniferous Tree		Wetland Flags
	Light Pole	MLW	Mean Low Water
9.8	Spot Grade	MHW	Mean High Water
	Control Point	CJL	Coastal Jurisdiction Line
	Property Line	LCSTV	Land Capable of Supporting Tidal Vegetation
100	Contour Line		Water Line
HTL	High Tide Line		Gravel Drive
FEMA 100	Fema 100Year Line		

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	EJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	TV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JWW
5	SW AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JWW
6	FERRY RD TOPOGRAPHIC UPDATE	10-11-2022	JWW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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Fax: (860) 436-4620
www.martinezcouch.com

OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed	Drawn JBR	Checked ARM	Date 02/2019

Project Code	XXX XXX
WBS	
Sheet No.	12 OF 140
Dwg. No.	EX-9

FILE NAME
PLOT SCALE
STANDARD PEN TABLE

TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

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FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

SYMBOLS LEGEND

◇	Utility Post	x	Metal Fence
	Sign	OH	Overhead Utility
	CAT Tower	F/O	Fiber Optic Line (Buried)
	Guy Anchor	C	Communication Line (Buried)
	Deciduous Tree	E	Electric Line (Buried)
	Coniferous Tree		Wetland Flags
	Light Pole	MLW	Mean Low Water
	Spot Grade	MHW	Mean High Water
△	Control Point	CJL	Coastal Jurisdiction Line
	Property Line	LCSTV	Land Capable of Supporting Tidal Vegetation
100	Contour Line	HTL	High Tide Line
	Water Line	FEMA 100	Fema 100Year Line
	Gravel Drive		

SCALE IN FEET
SCALE 1" = 40'

MATCHLINE SEE SHEET 6

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	EJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	PJ
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JMW
5	SH AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JMW
6	OCEPHO TOPOGRAPHIC UPDATE	10-11-2022	JMW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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PERMIT PLANS

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

MCA Martinez Couch & Associates

OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2010

Project Code: XXX.XXX
WBS:
Sheet No. 13 OF 140
Dwg No. EX-10

MATCHLINE SEE SHEET 9

TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LCSTV	4.10

SYMBOLS LEGEND

Utility Post	Metal Fence
Sign	Overhead Utility
CAT Tower	Fiber Optic Line (Buried)
Guy Anchor	Communication Line (Buried)
Deciduous Tree	Electric Line (Buried)
Coniferous Tree	Wetland Flags
Light Pole	Mean Low Water
Spot Grade	Mean High Water
Control Point	Coastal Jurisdiction Line
Property Line	Land Capable of Supporting Tidal Vegetation
Contour Line	High Tide Line
Water Line	Fema 100Year Line
Gravel Drive	

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' = BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHWEST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	LK
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	TV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JMW
5	3/4 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JMW
6	OFFPHQ TOPOGRAPHIC UPDATE	10-11-2022	JMW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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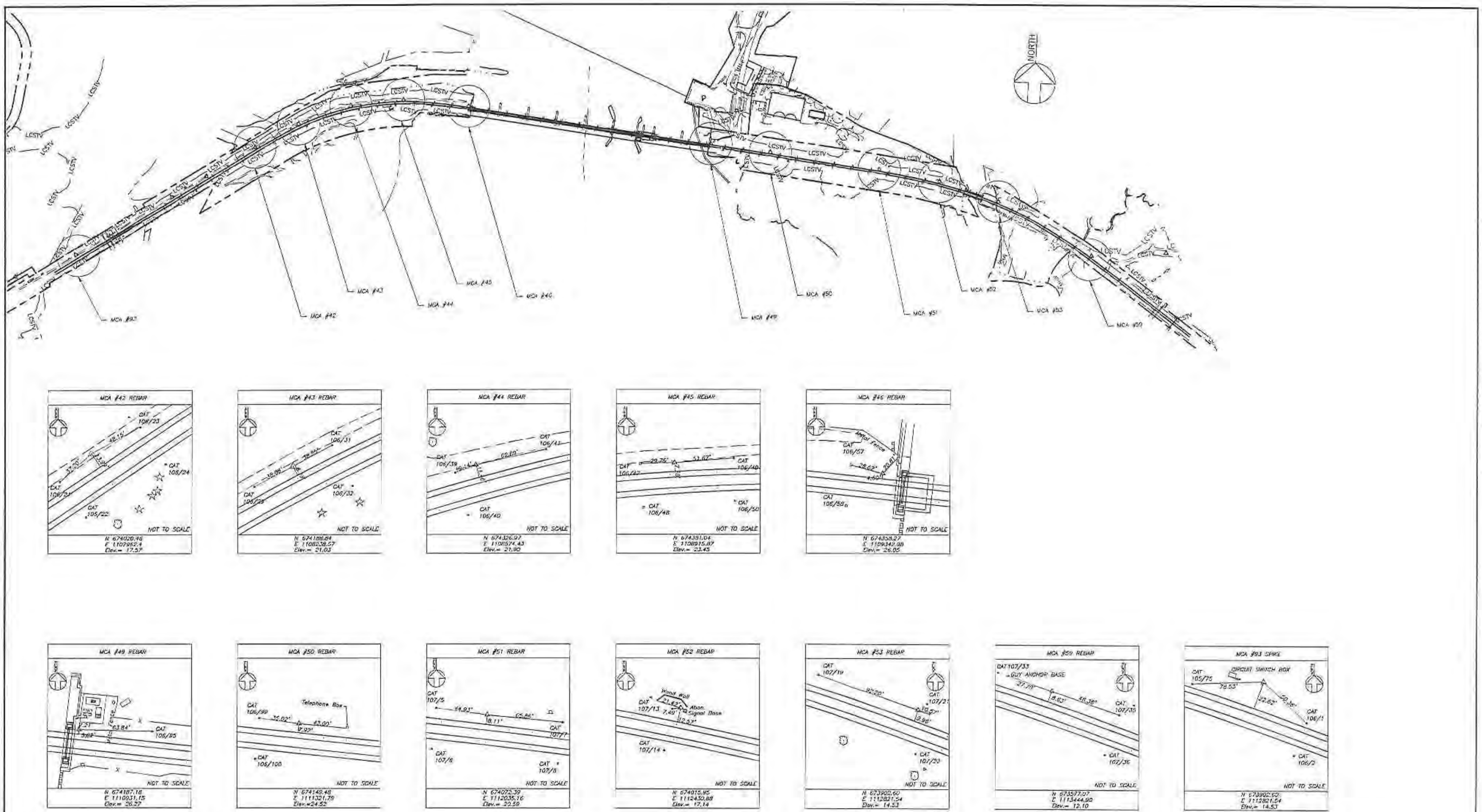
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2016

Project Code: XXX.XXX
WBS:
Sheet No. 14 OF 140
Dwg. No. EX-11



HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

100 50 0 100 200
SCALE IN FEET
SCALE 1" = 100'

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	EJV
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-15-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	FV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JMW
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6	DEEP HQ TOPOGRAPHIC UPDATE	10-11-2022	JMW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	JT

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OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code:	XXX.XXX
WBS:	
Sheet No.	15 OF 140
Dwg. No.	EX-12

MAP REFERENCES:

1) "EASEMENT MAP SHOWING ACCESS EASEMENTS ACROSS THE PROPERTIES OF MORTON H. SILBERSTEIN AND COURVILLE DEVELOPMENT, LLC BOSTON POST ROAD OLD SAYBROOK CONNECTICUT", SCALE: 1"=100', BY ANGUS McDONALD/GARY SHARPE & ASSOCIATES, INC., TOWN OF OLD SAYBROOK MAP # 2423 AND DATED OCT. 13, 1998.

2) "SURVEY PLAN SHOWING EASEMENT TO BE CONVEYED TO THE CONNECTICUT WATER COMPANY ON PROPERTY OF MORTON H. SILBERSTEIN, M.D. BOSTON POST ROAD OLD SAYBROOK, CONNECTICUT", SCALE: 1"=100', BY ANGUS McDONALD/GARY SHARPE & ASSOCIATES, INC., TOWN OF OLD SAYBROOK MAP # 1783 AND DATED OCTOBER 17, 1986.

3) "REVISED PLAN OF DEVELOPMENT ROAMTREE INDUSTRIAL PARK LAND OF MICHAEL HALLISEY & FRANK HEINEMANN BOSTON POST ROAD OLD SAYBROOK, CONNECTICUT", SCALE: 1"=50', BY ANGUS L. McDONALD & ASSOCIATES, INC., TOWN OF OLD SAYBROOK MAP # 1651, DATED APR. 26, 1976 AND LAST REVISED ON SEPT 1, 1977.

4) "MAP OF PROPERTY OF RUSSELL F. MULCAHY, DOUGLAS W. MULCAHY AND JANE E. NIHILL FERRY DISTRICT OLD SAYBROOK, CONN", SCALE: 1"=60', BY MERRITT B. CHALKER, SURVEYOR OLD SAYBROOK, CONN., TOWN OF OLD SAYBROOK MAP # 663, DATED OCT. 7, 1957 AND LAST REVISED ON AUG. 8, 1961.

5) "TITLE LAND TO BE ACQUIRED BY THE STATE OF CONNECTICUT FROM PRUDENTIAL PRESS INC. FERRY ROAD OLD LYME, CT.", SCALE: 1"=50', SHEET 1 OF 2 BY ROBERT M. BOWKER SR., TOWN OF OLD LYME MAP # 2133 AND DATED APRIL 23, 1985.

6) "LAND IN OLD LYME, CONN TO BE CONVEYED TO JAMES AND LOUISE VIVEIROS", SCALE: 1"=100', TOWN OF OLD LYME MAP # 10 AND DATED MARCH, 1951.

7) "RESUBDIVISION PLAN PROPERTY OF DAVID A. EKLUND & MARY W. EKLUND FERRY ROAD & SANDPIPER POINT ROAD OLD LYME, CONNECTICUT" SHEET 3 OF 6, SCALE: 1"=60', BY ANGUS McDONALD GARY SHARPE & ASSOCIATES, INC., TOWN OF OLD LYME MAP # 3727, DATED MARCH 17, 2009 AND LAST REVISED ON 11-4-09.

8) "PROPERTY SURVEY PLAN PROPERTY OF ROBERT S. VOLLAND & PATRICIA J. VOLLAND 17 SANDPIPER POINT ROAD OLD LYME, CONNECTICUT" SHEET 1 OF 1, SCALE: 1"=40', BY ANGUS McDONALD GARY SHARPE & ASSOCIATES, INC., TOWN OF OLD LYME MAP # 3906, DATED AUGUST 9, 2012 AND LAST REVISED ON OCTOBER 22, 2012.

9) "EASEMENT PROPERTY PLAN" D.E.P. MARINE HEADQUARTERS, OLD LYME, CONNECTICUT, EXHIBIT "A" SHEET 3 OF 4, SCALE: 1"=50', BY ANTHONY HENDRIKS, TOWN OF OLD LYME MAP # 2784.

10) "NORTHEND ELECTRIFICATION PROJECT AMTRAK, PROJECT # 013041-04 NEW LONDON TO NEW HAVEN", SCALE: 1"=80', BY MCI TELECOMMUNICATIONS CORPORATION LIGHTWAVE SYSTEMS, DATED 12/22/94.

NOTES:

1) THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. IT IS A TOPOGRAPHIC SURVEY WITH THE AREAS OF CONVENTIONAL SURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2, TOPOGRAPHIC ACCURACY CLASS T-2 AND VERTICAL ACCURACY CLASS V-2. CONVENTIONAL T-2 TOPOGRAPHIC SURVEY WAS PERFORMED FOR SPECIFIED RAIL SHOT LOCATIONS, UTILITY LOCATION AND STRUCTURE LOCATION CROSS SECTION SHOTS WERE TAKEN AT 20 INTERVALS AND DO NOT REPRESENT COMPLETE TOPOGRAPHY. SURVEY OF THE BOTTOM OF THE CONNECTICUT RIVER IS THE RESULT OF A HYDROGRAPHIC MULTIBEAM SURVEY PERFORMED ON JULY 9, 2018 BY OCEAN SURVEYS, INC. PHOTO CONTROL OF CLASS A-2 ACCURACY WAS USED TO PROCESS AERIAL SURVEY DATA ALONG THE RIVER. AREAS PERFORMED BY AERIAL SURVEY FORMAT CONFORM TO TOPOGRAPHIC ACCURACY CLASS T-3.

2) NORTH ORIENTATION REFERS TO CONNECTICUT GRID SYSTEM NAD 83.

3) ELEVATIONS ARE BASED ON NAVD 88.

4) THESE TIES WERE DEVELOPED FROM THE BASE CAD DRAWING AND ARE NOT FIELD GENERATED TIES. THE DISTANCES DEPICTED HEREON ARE BASED UPON THE DISTANCE FROM THE INDIVIDUAL CONTROL POINT(S) TO THE CENTER OF THE TIE OBJECT AS MEASURED FROM THE CAD DRAWING ONLY.

5) THE TIES DEPICTED HEREON ARE ACTING AS A REFERENCE IN THE RECOVERY OF THE CONTROL POINTS ONLY. THEY ARE NOT INTENDED AS A MEANS TO REPLACE OR RESET ANY OF THE CONTROL POINTS.

6) SUBMARINE CABLES SHOWN HEREON ARE BASED ON AVAILABLE MAPPING AND FIELD OBSERVATION. LOCATION OF CABLES AS DEPICTED ARE APPROXIMATE. NO FIELD EVIDENCE FOUND BY BSI ENGINEERING INC.

7) ACCESS TO AND FROM SHORE ROAD CURRENTLY IN USE. NO RIGHTS OR TRANSFER FOUND ON LAND RECORDS. LOCATION DEPICTED BY AERIAL IMAGERY.

8) ALL UTILITIES DEPICTED AT "QUALITY LEVEL C" UNLESS LABELED "QLB" OR "QLD".

9) REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION. ELEVATIONS SHOWN IN TABLE ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

10) BASED ON FIELD MEASUREMENT, THE CULVERT PIPE UNDER THE RAILBED APPEARS TO BE 54" ON THE NORTH SIDE OF THE BANK. DUE TO PIPE EROSION AND POTENTIAL COMPRESSION OF PIPE, ACTUAL PIPE DIAMETER IS DIFFICULT TO CONFIRM. THE PIPE ON THE SOUTH END OF THE CULVERT IS INTACT AND MEASURABLE.

TIDAL DATUM	NOAA (NAVD88) (ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04
LOSTV	4.10

SUBSURFACE UTILITY ENGINEERING NOTES:

1) THIS PLAN WAS PREPARED IN CONFORMANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD CI/ASCE 38-02 "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

2) CERTAIN UTILITIES SHOWN HAVE BEEN TRACED ON THE GROUND USING ELECTRONIC DESIGNATION TECHNIQUES. DESIGNATION, OR ELECTRONIC UTILITY LOCATION, IS DEFINED AS THE SURFACE LOCATION OF A UTILITY LINE BASED ON ELECTRONIC GEOPHYSICAL PROSPECTING TECHNIQUES AND IS APPROXIMATE IN RELATION TO THE ACTUAL LOCATION OF THE POSSIBLE UTILITY.

3) CERTAIN UTILITIES SHOWN HAVE BEEN TAKEN FROM AVAILABLE RECORD INFORMATION. THESE UTILITIES MAY NOT HAVE BEEN VERIFIED. (SEE NOTE #4 BELOW.)

4) ALL EXISTING DESIGNATED UTILITIES NEAR PROPOSED CONSTRUCTION SHOULD BE EXACTLY LOCATED USING NON-DESTRUCTIVE AIR-VACUUM EXCAVATION, IF NOT ALREADY LOCATED BY AIR-VACUUM EXCAVATION (SEE QUALITY LEVEL A ABOVE).

5) UNLESS NON-DESTRUCTIVE AIR-VACUUM EXCAVATION IS UTILIZED AT A PARTICULAR LOCATION, MCA AND BSIE DO NOT GUARANTEE THE EXISTENCE OR NON-EXISTANCE OF UTILITY LINES.

6) AT LOCATIONS, WHERE BSIE IS DIRECTED TO PERFORM NON-DESTRUCTIVE AIR-VACUUM EXCAVATION, THE TEST HOLE IS ADVANCED UNTIL A CONDITION OF PRACTICAL REFUSAL FOR AIR-VACUUM EXCAVATION IS REACHED OR HOLE IS ADVANCED TO A DEPTH OF 8.0' (EIGHT FEET). PRACTICAL REFUSAL BEING DEFINED AS ENCOUNTERING A UTILITY, BEDROCK, WATER TABLE, LARGE ROCKS/ COBBLES, SUSPECTED HAZARDOUS MATERIALS OR A CONDITION OF HOLE INSTABILITY.

7) WHERE BSIE IS DIRECTED TO PERFORM NON-DESTRUCTIVE AIR-VACUUM EXCAVATION TO CONFIRM THE NON-EXISTANCE OF UTILITIES, BSIE WILL ONLY REPORT NON-EXISTANCE OF UTILITIES WITHIN THE VISIBLE LIMITS OF THE EXCAVATION. BSIE IS NOT RESPONSIBLE FOR ENSURING THAT WORK BY OTHERS IS PERFORMED AT THE SAME LOCATION AS THE AIR-VACUUM EXCAVATION HOLE.

8) BELOW GROUND STRUCTURES UNLESS OTHERWISE DEPICTED ARE SYMBOLIC ONLY.

9) PRIOR TO ANY EXCAVATING, BSIE RECOMMENDS THAT ALL UTILITY OWNERS SHOULD REVIEW THIS DRAWING FOR ACCURACY AND COMPLETENESS.

UTILITY QUALITY LEVEL INFORMATION INDEX (SEE ASCE/CI 38-02):

QUALITY LEVEL D: "QL D". UTILITY INFORMATION PLOTTED ON THE DRAWING BASED SOLELY ON RECORD INFORMATION, INDIVIDUAL RECOLLECTIONS OR THE EXISTENCE OF UTILITY SERVICE. IT SHALL BE NOTED THAT ALL INFORMATION SHOWN (OTHER THAN AT TEST HOLE LOCATIONS, SEE QL A BELOW), INCLUDING BUT NOT LIMITED TO A UTILITIES SIZE, CAPACITY, MATERIAL COMPOSITION, CONDITION OR SERVICE STATUS SHALL BE CONSIDERED QL D EVEN THOUGH THE UTILITY MAY BE PLOTTED AND LABELED AS QL C OR QL B.

QUALITY LEVEL C: "QL C". UTILITY INFORMATION OBTAINED AND CATEGORIZED AS QL D, PLOTTED TO CORRELATE WITH SURFACE UTILITY FEATURES WHICH HAVE BEEN FIELD VERIFIED, SURVEY LOCATED AND ACCURATELY TRANSPOSED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS. INCLUDED IN THIS CATEGORY AERIAL UTILITY INFORMATION AND UTILITY DEPICTION'S, WHICH IN THE PROFESSIONAL OPINION OF THE SUBSURFACE UTILITY ENGINEER, REPRESENT THE MOST PROBABLE APPROXIMATE HORIZONTAL LOCATION, TYPE AND/OR EXISTENCE OF A UTILITY.

QUALITY LEVEL B: "QL B". UTILITY INFORMATION DERIVED BY ESTABLISHING THE APPROXIMATE SURFACE HORIZONTAL LOCATION OF A UTILITY USING ELECTRONIC METHODS. SAID INFORMATION IS SUBSEQUENTLY FIELD SURVEY LOCATED AND ACCURATELY REDUCED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS.

QUALITY LEVEL A: "QL A". UTILITY INFORMATION WHICH HAS BEEN VISUALLY VERIFIED, SURVEY LOCATED (BOTH HORIZONTALLY AND VERTICALLY) AND ACCURATELY REDUCED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS. THIS IS TYPICALLY SHOWN AS TEST HOLE OR OTHER DIMENSIONED INFORMATION.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	ADDED R.O.W. LINES & SUBSURFACE UTILITY DATA	1-9-2020	BJN
2	ADDED EVERSOURCE TRANSFORMER OFF R.O.W.	3-16-2021	JPB
3	ADDED MAINTENANCE METAL BOARDWALK	5-11-2021	FV
4	17 SHORE MITIGATION SITE TOPOGRAPHIC UPDATE	10-1-2022	JMW
5	24 AMTRAK PARCEL MITIGATION SITE TOPO UPDATE	10-1-2022	JMW
6	DEEP HQ TOPOGRAPHIC UPDATE	10-11-2022	JMW
7	AMTRAK PARCEL, CULVERT AND SHORE ROAD UPDATE	4-07-2023	LT

FILE NAME
PLOT SCALE
STANDARD PEN TABLE

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

PERMIT PLANS

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

MCA Martinez Couch & Associates
1084 Cromwell Avenue, Suite A-2
Rocky Hill, CT 06067
Telephone (860) 436-4364
Fax (860) 436-4626
www.martinezcouch.com

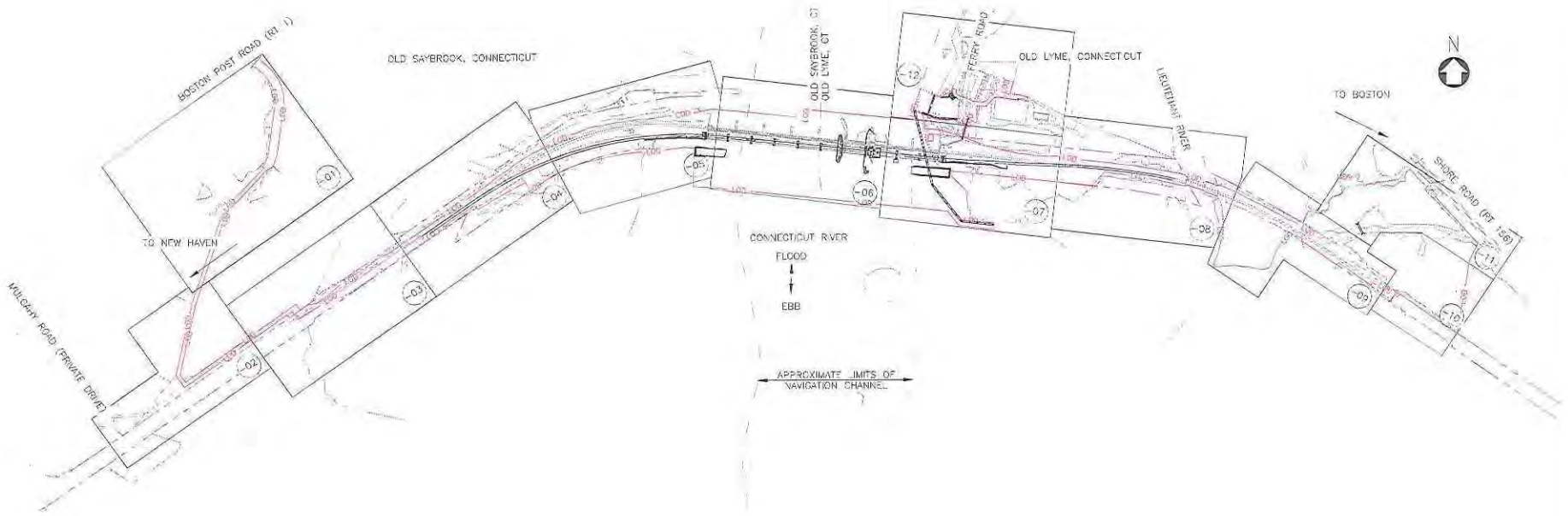
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

EXISTING SITE PLAN

Designed | Drawn JBR | Checked ARM | Date 02/2019

Project Code	XXX XXX
WBS	
Sheet No.	16 OF 140
Dwg. No.	EX-13



200 150 0 300 600

SCALE IN FEET
SCALE 1" = 300'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

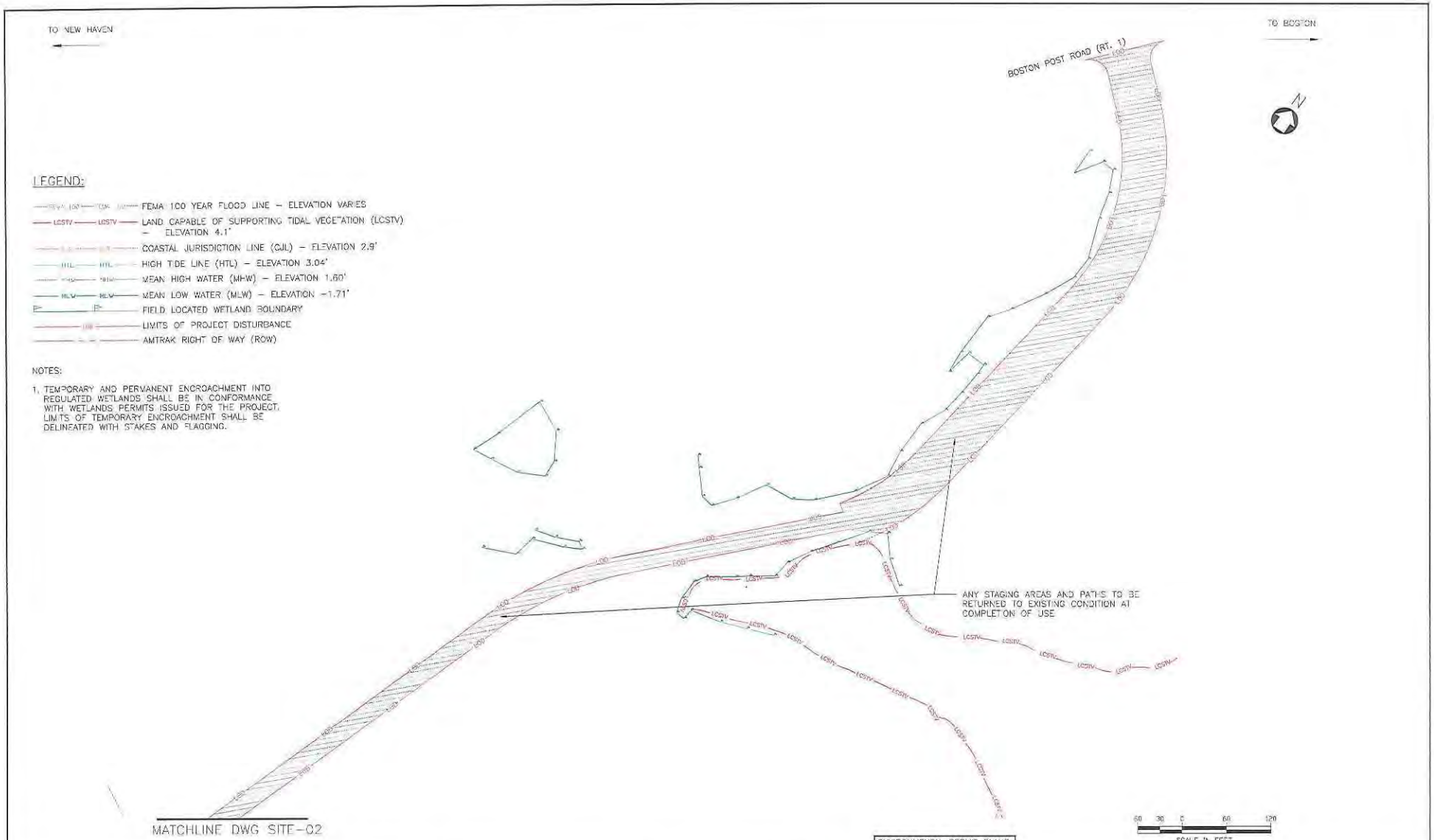
Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 East Broadway New York, NY 10038
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
KEY PLAN

Designed KM | Drawn ZB | Checked KF | Date 5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	17 OF 142
Dwg No.	KEY-01



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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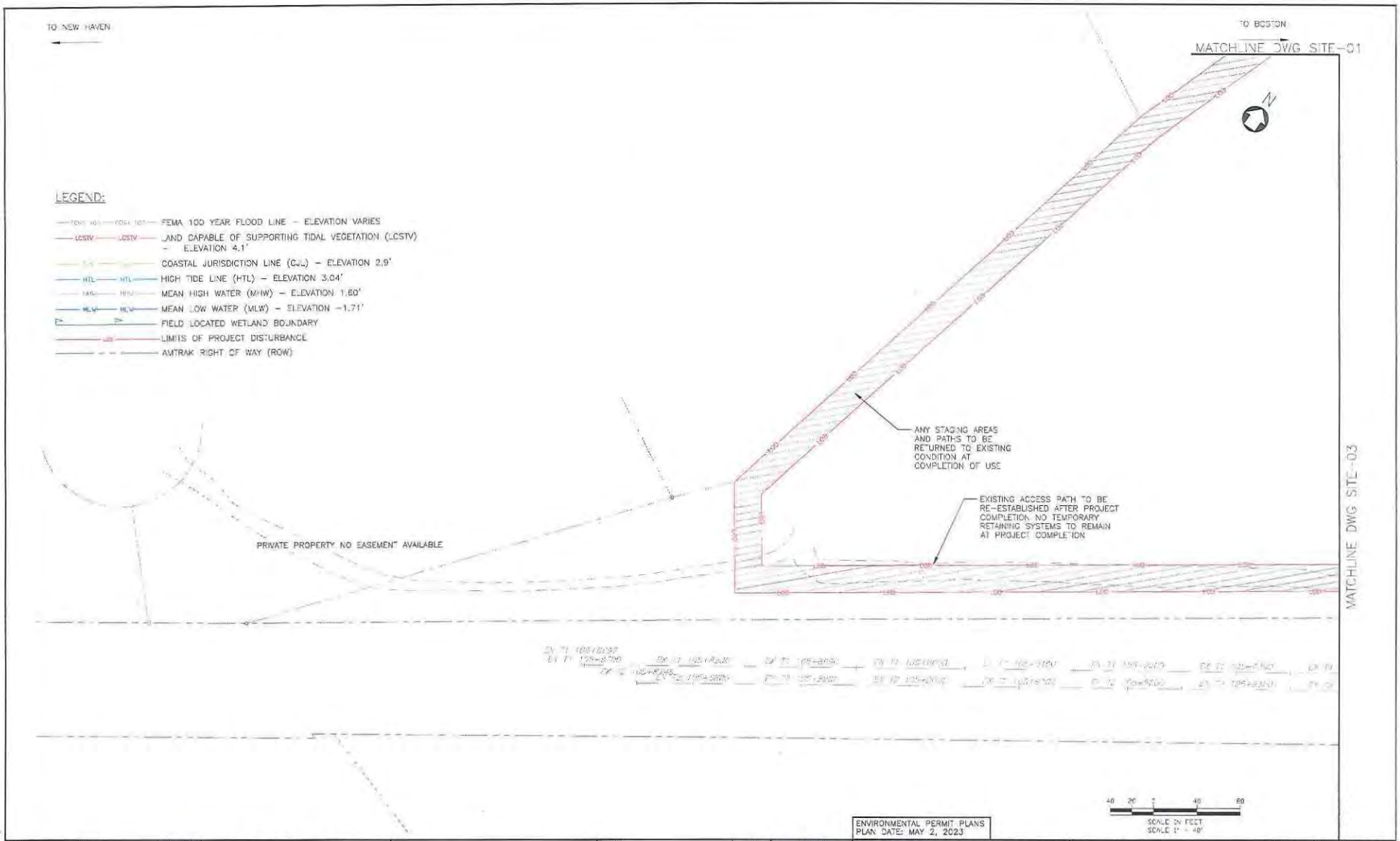
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

SITE PLAN

Designed CB Drawn CB/MD Checked KM Date 5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	18 OF 140
Dwg No.	SITE-01



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PLAN DATE: MAY 2, 2023

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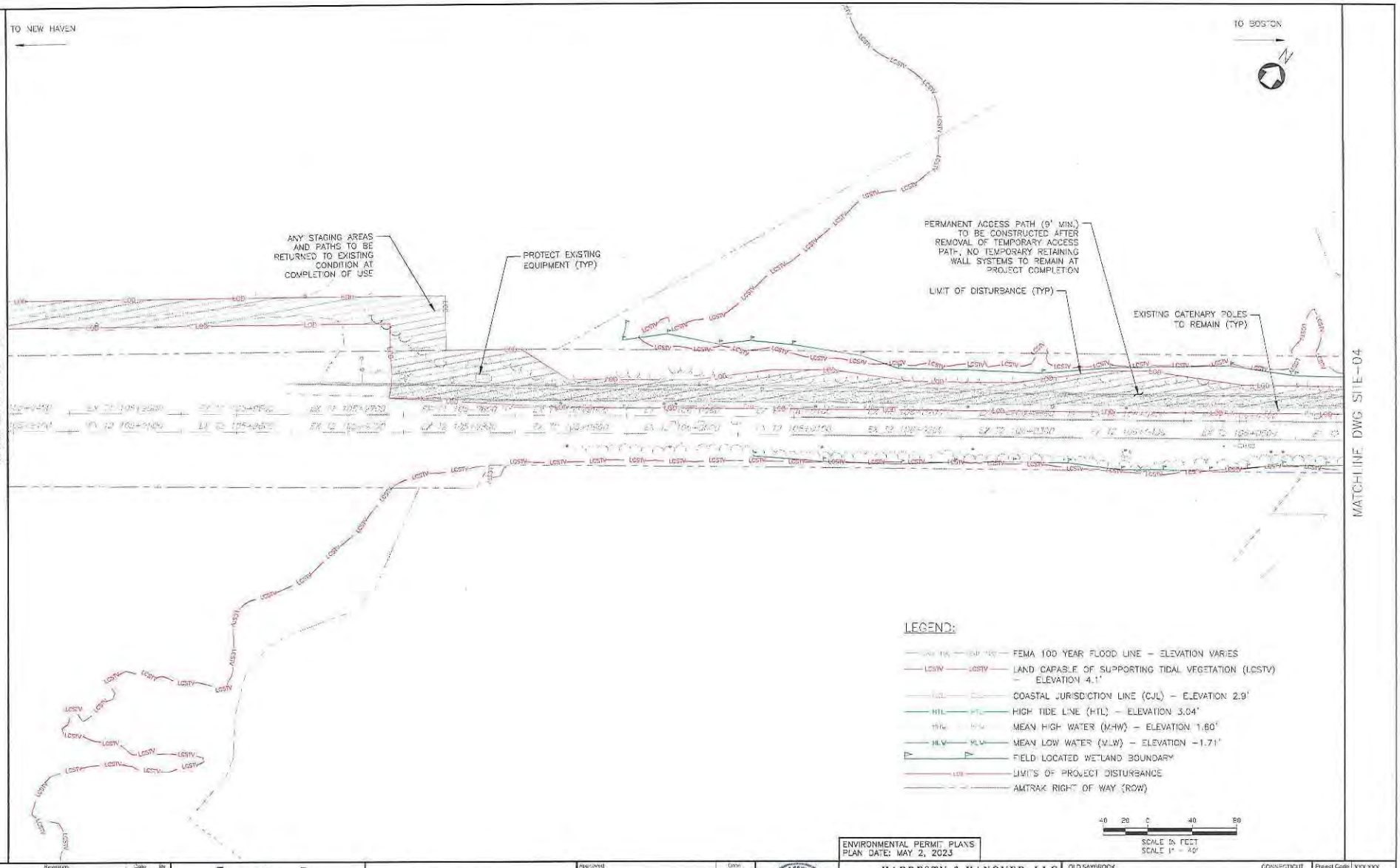
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN
Designed CB Drawn CB/VD Checked KM Date 5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	19 OF 143
Dwg No.	SITE-02



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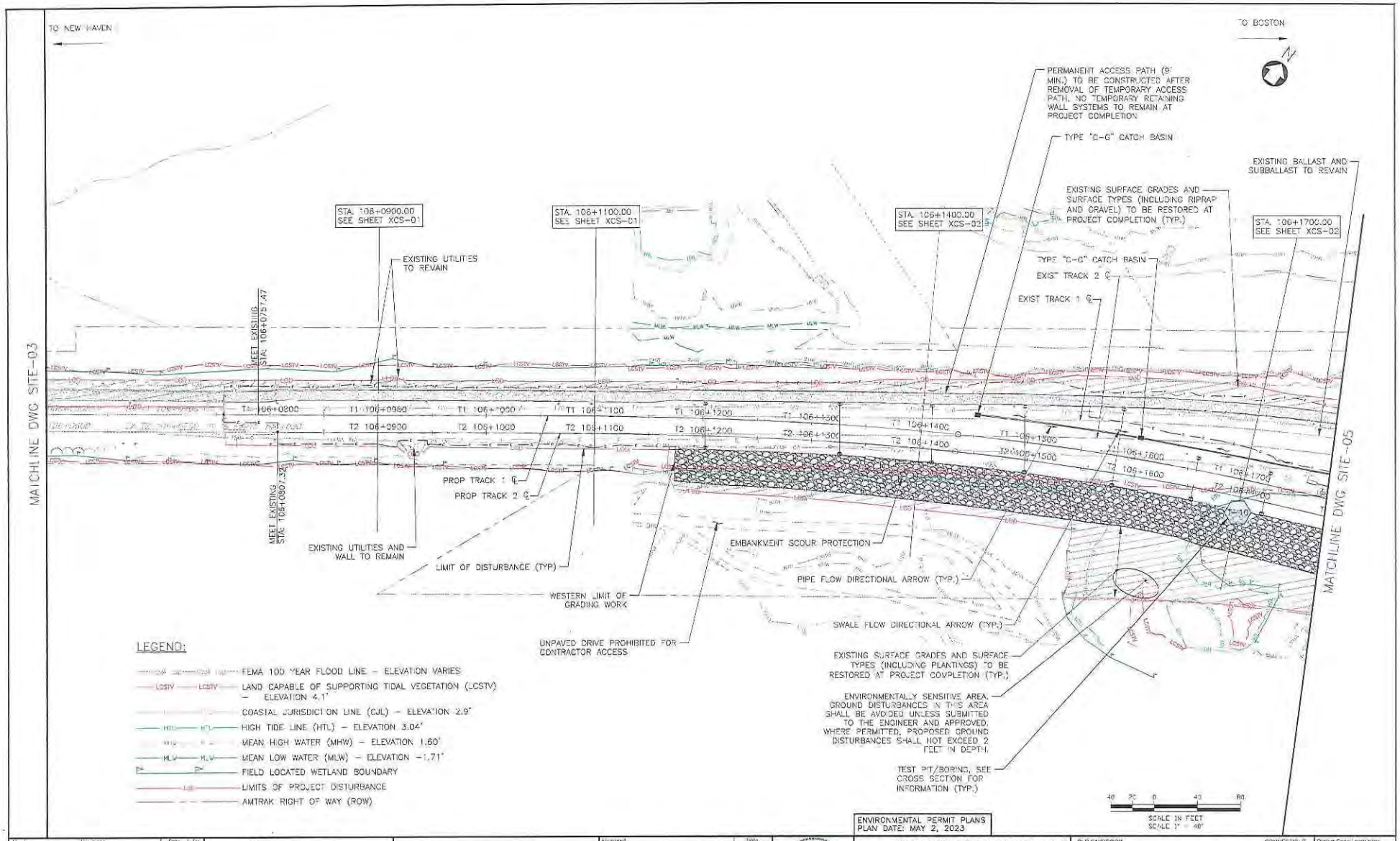
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN
Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	20 OF 140
Dwg No.	SITE-03



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PLAN DATE: MAY 2, 2023

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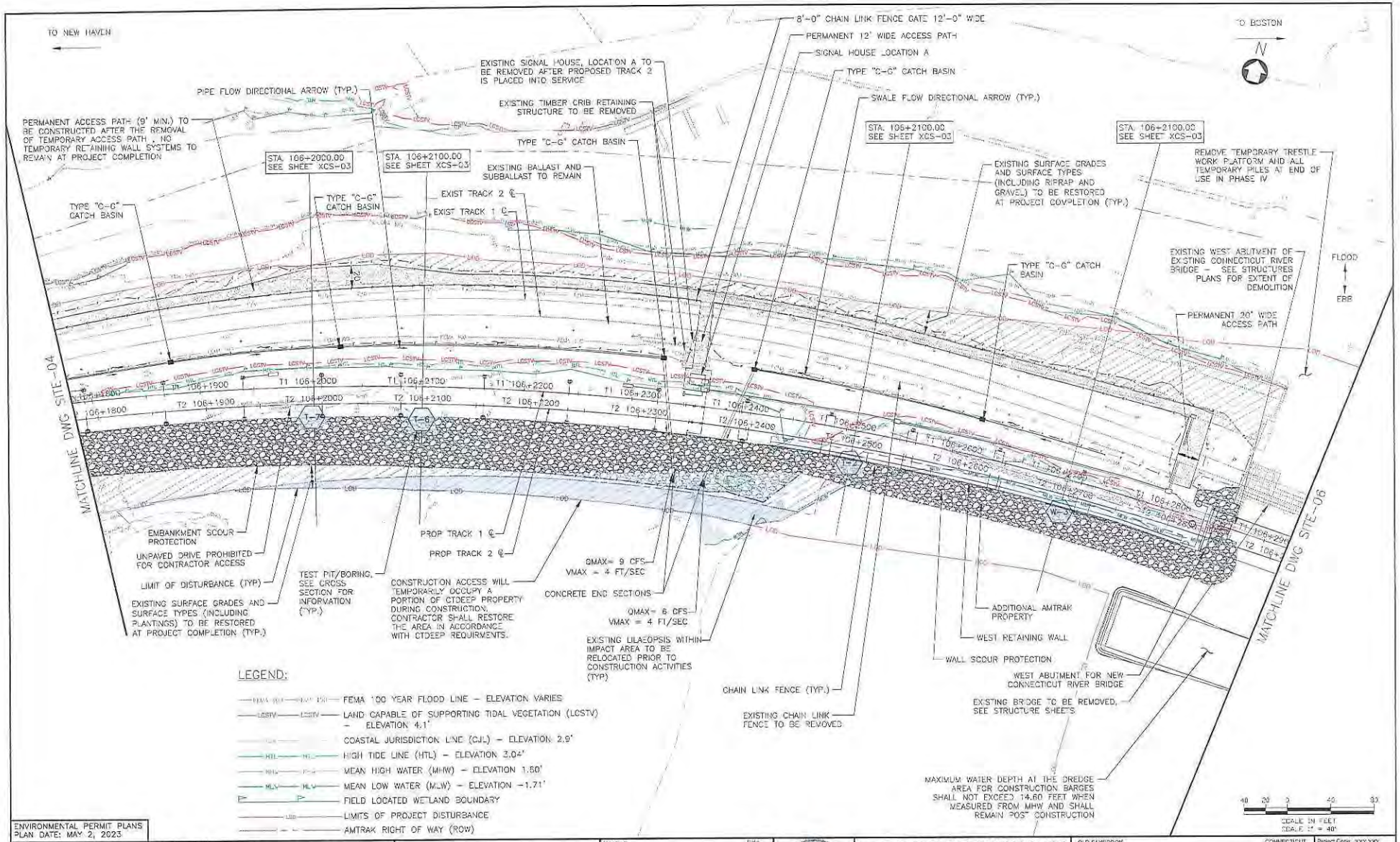
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

SITE PLAN

Designed CB Drawn CB/VD Checked KV Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	21 OF 149
Drg. No.	SITE-04



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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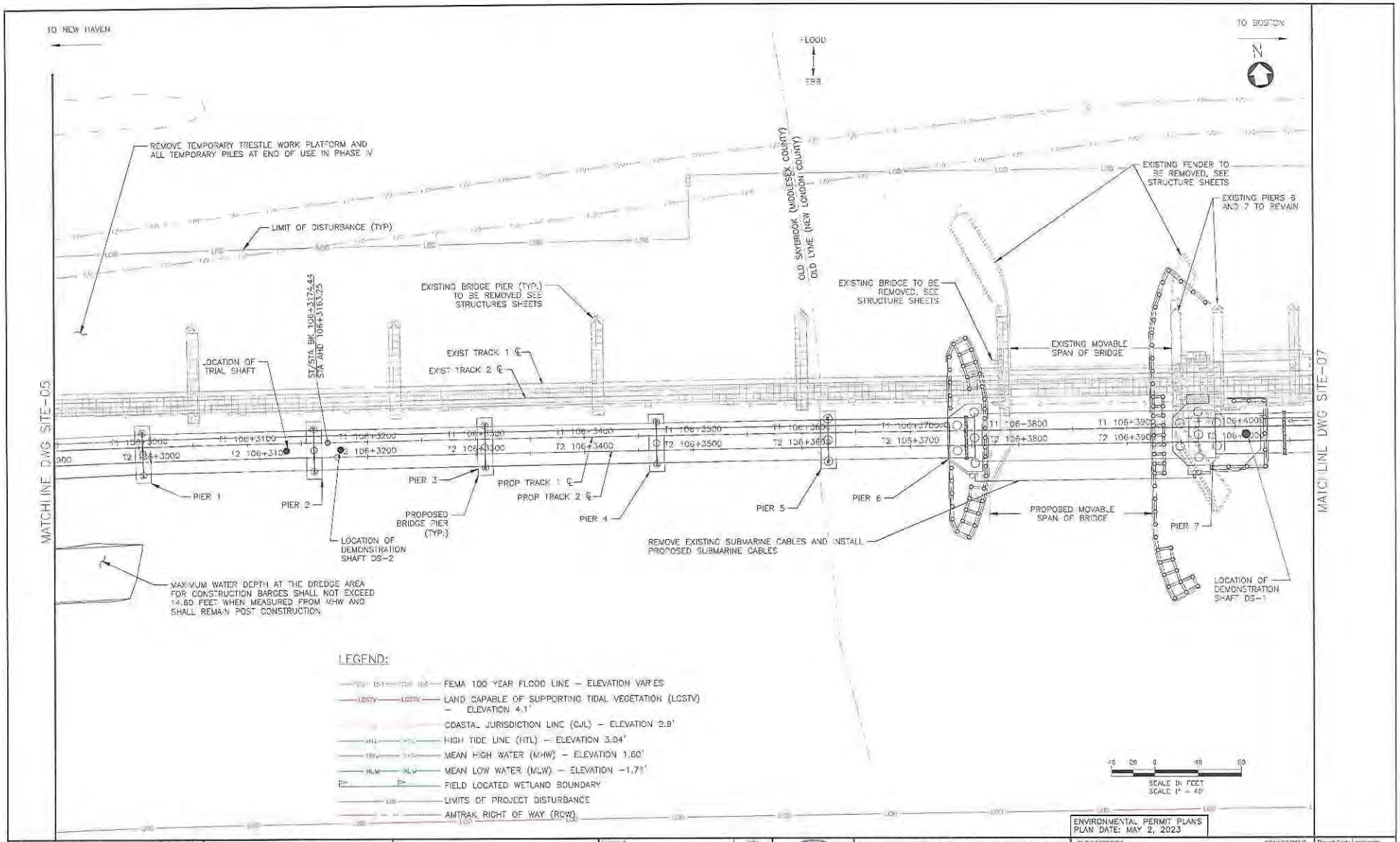
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN
Designed: CB Drawn: CB/MD Checked: KM Date: 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 22 OF 140
Dwg. No. SITE-05



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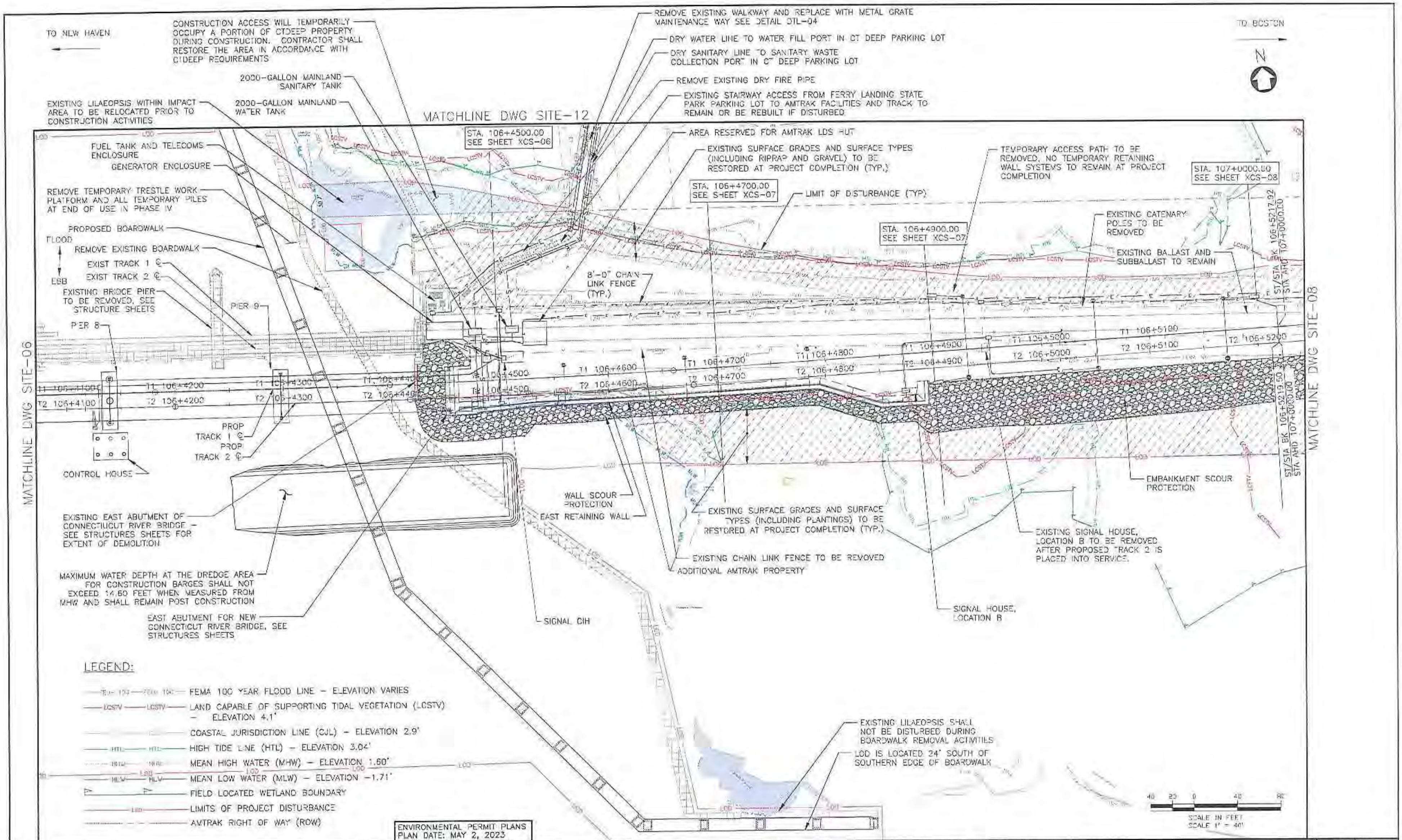
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN
Designed CB | Drawn CBMD | Checked KM | Date 5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	23 OF 142
Dwg No.	SITE-06



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PLAN DATE: MAY 2, 2023

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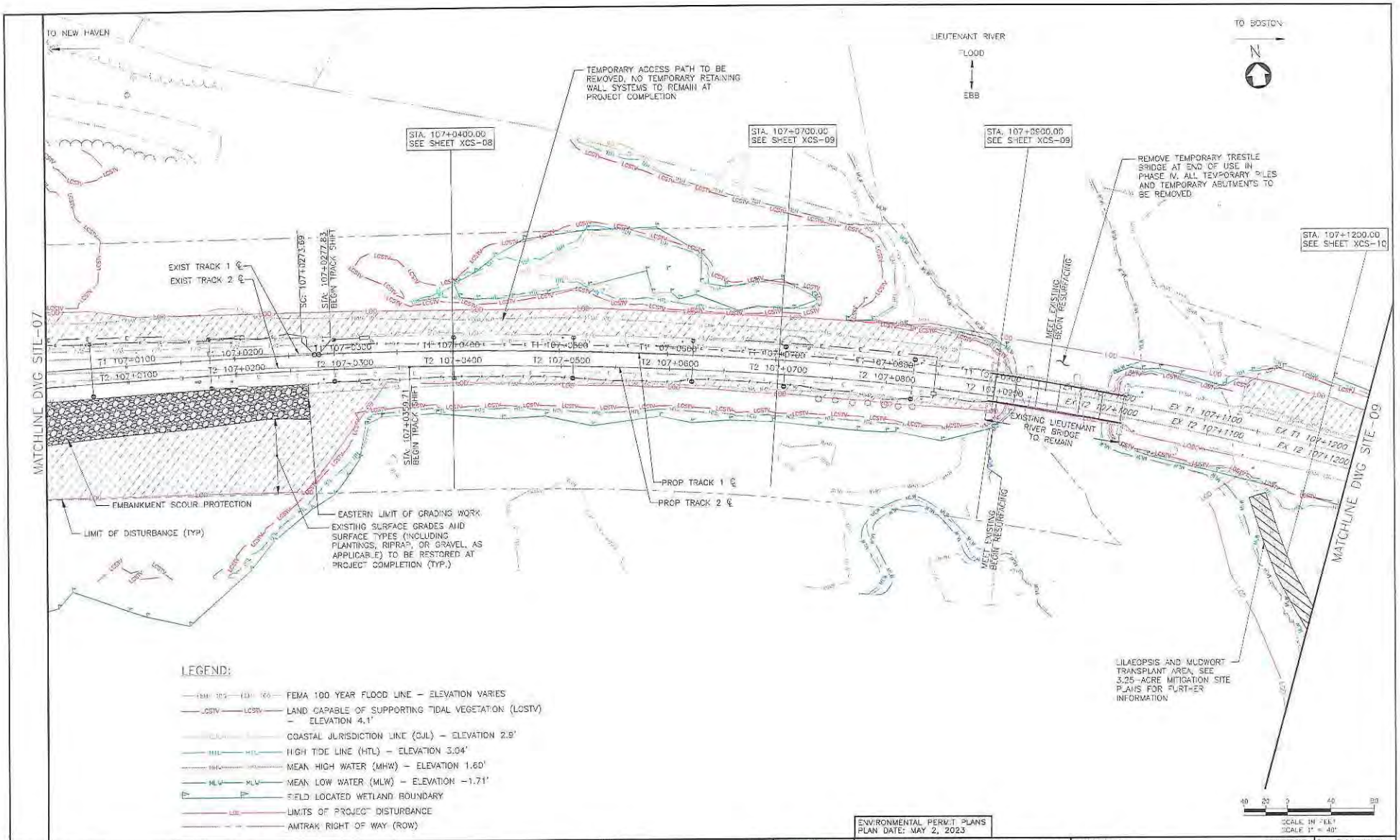
OLD SAYBROOK — CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
SITE PLAN

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code XXX.XXX
WBS
Sheet No. 24 OF 140
Dwg. No. SITE-07



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PLAN DATE: MAY 2, 2023

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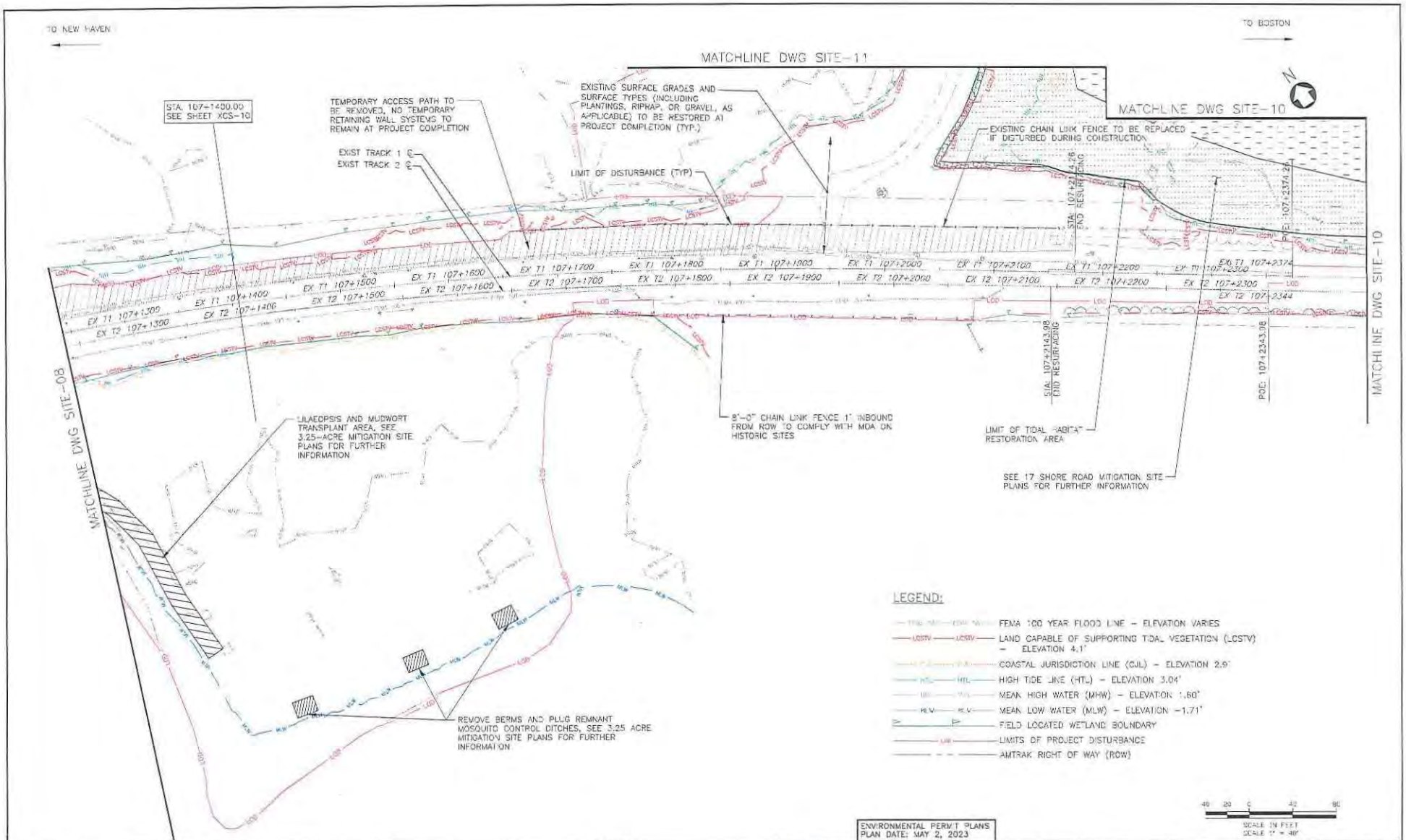
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	25 OF 140
Dwg No.	SITE-08



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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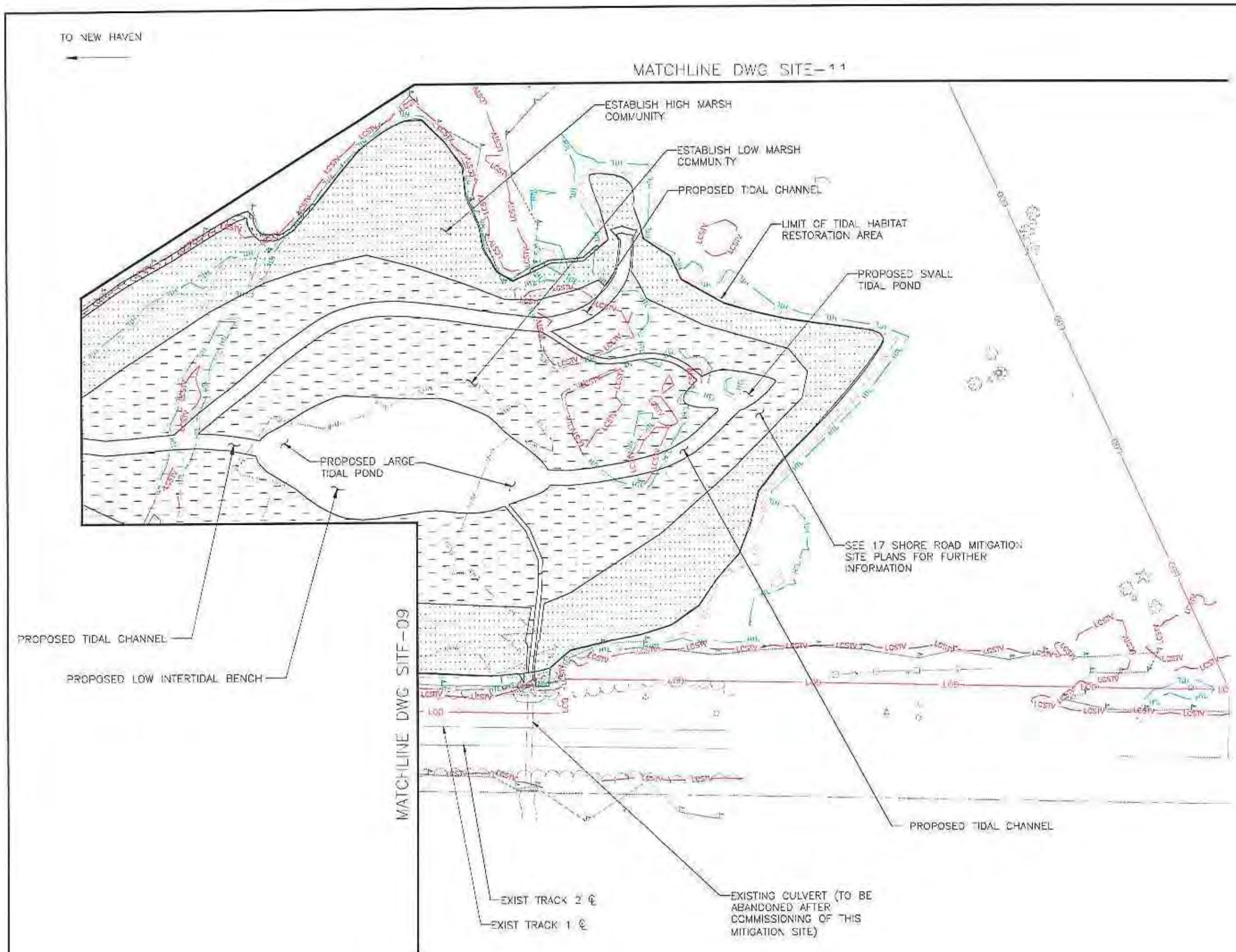
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
SITE PLAN

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code XXX XXX
WBS
Sheet No. 26 OF 140
Dwg. No. SITE-09



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MEAN LOW WATER (MLW) – ELEVATION –1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

40 20 0 40 80

SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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STATE OF CONNECTICUT — LICENSED PROFESSIONAL ENGINEER — 35327

HARDESTY & HANOVER, LLC
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1501 Broadway New York, NY 10036

WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

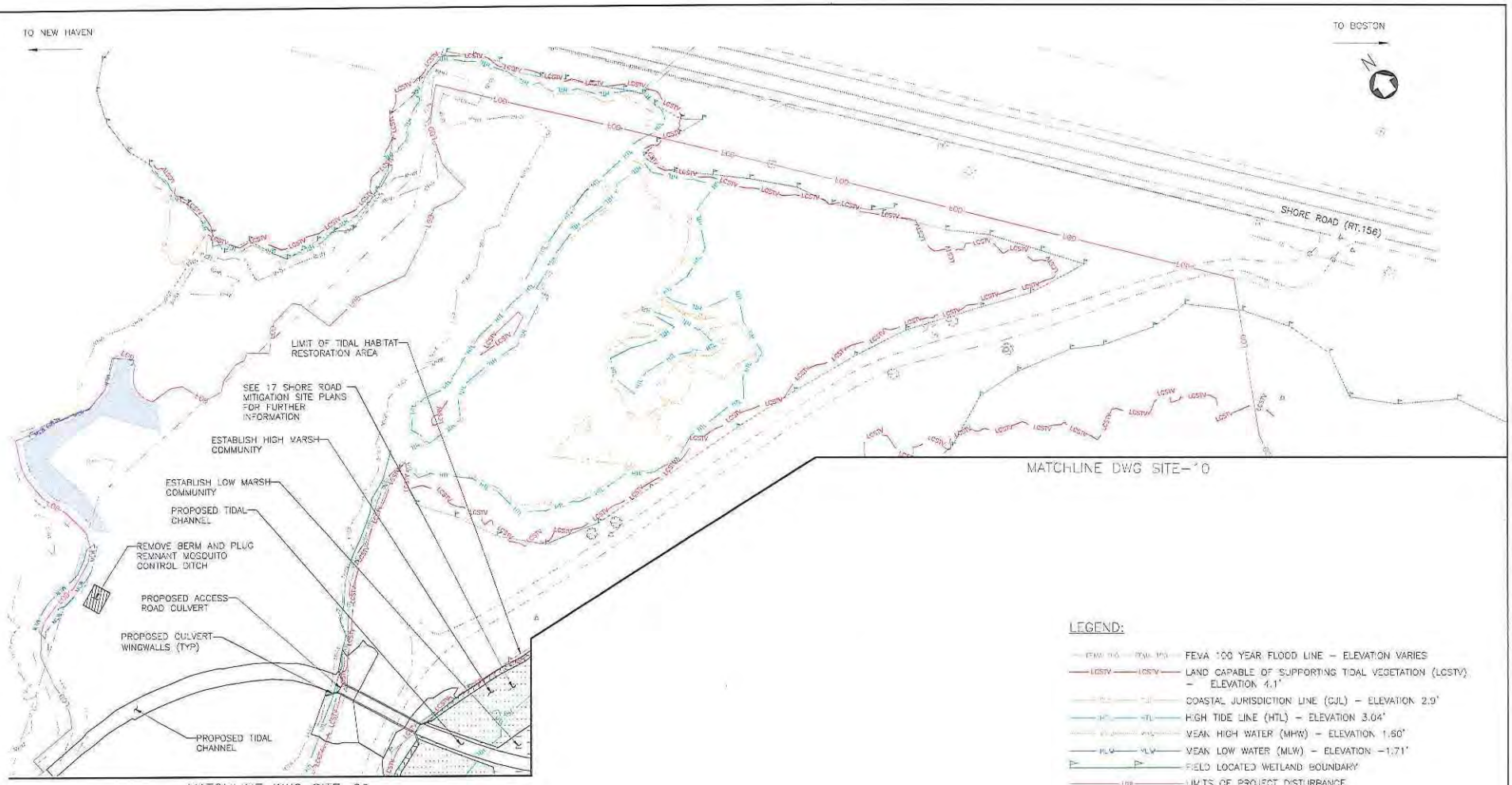
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

SITE PLAN

Designed: CB | Drawn: CB/MO | Checked: KM | Date: 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 27 OF 140
Dwg. No. SITE-10



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

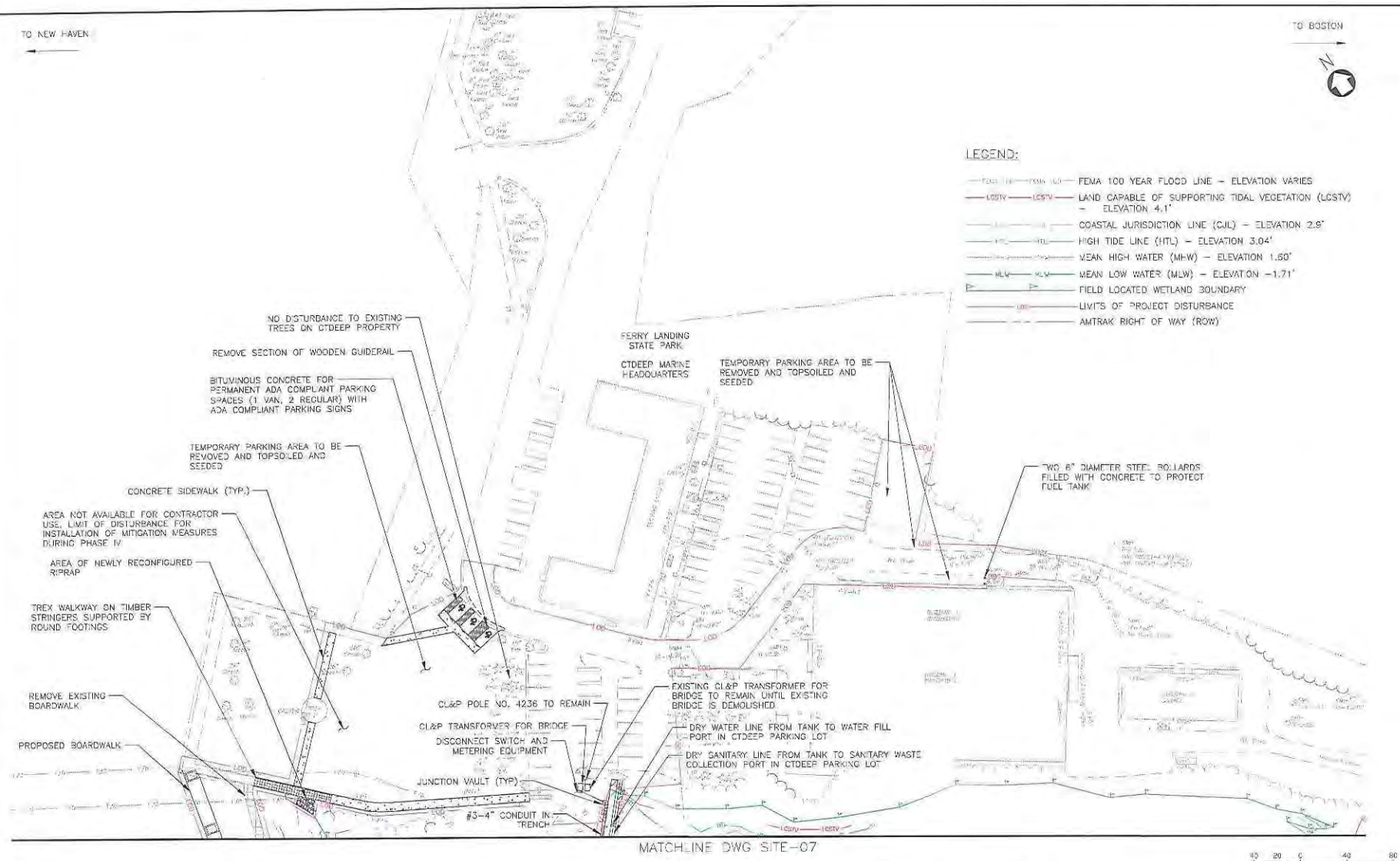
HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

WSP
1720 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
SITE PLAN

Designed: CB | Drawn: CB/MD | Checked: KM | Date: 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No 29 OF 140
Dwg No SITE-11



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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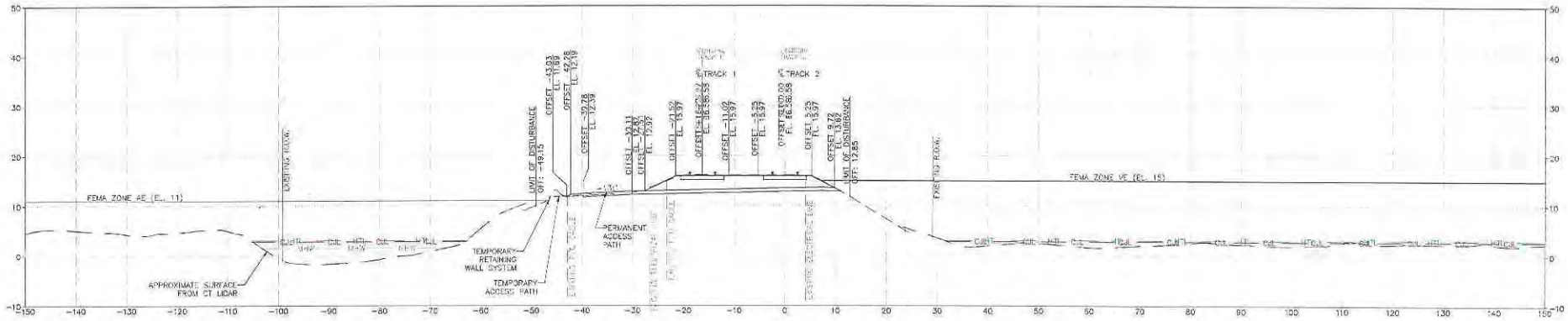
ENGINEERING
150 Broadway New York, NY 10038
wsp 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
SITE PLAN

Designed	DB	Drawn	DB/VD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS:	
Sheet No.	29 OF 140
Dwg No.	SITE-12



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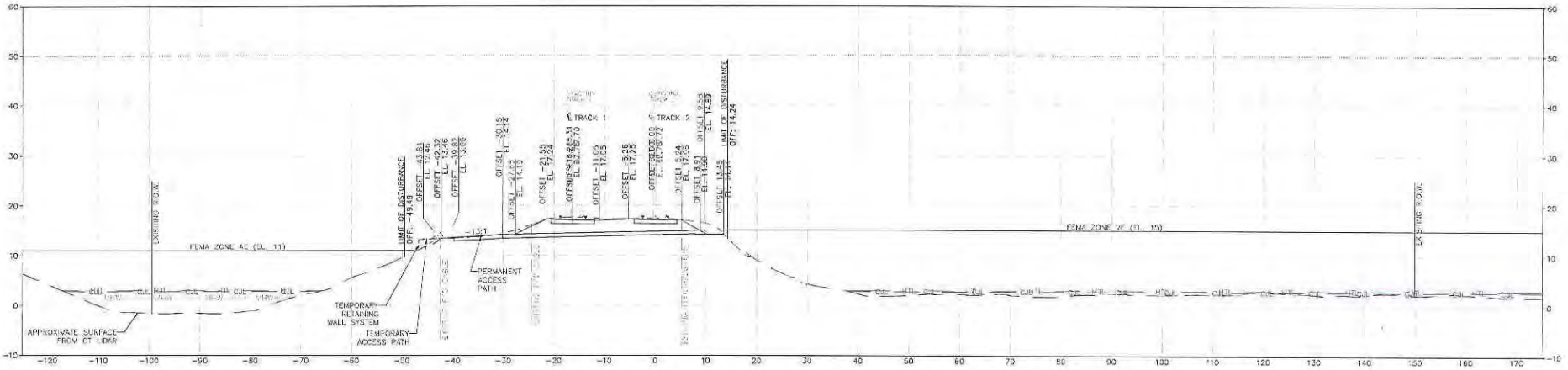

106+1100.00

NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

SCALE IN FEET: 0 10 20

No.	Revisions	Date	by

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30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

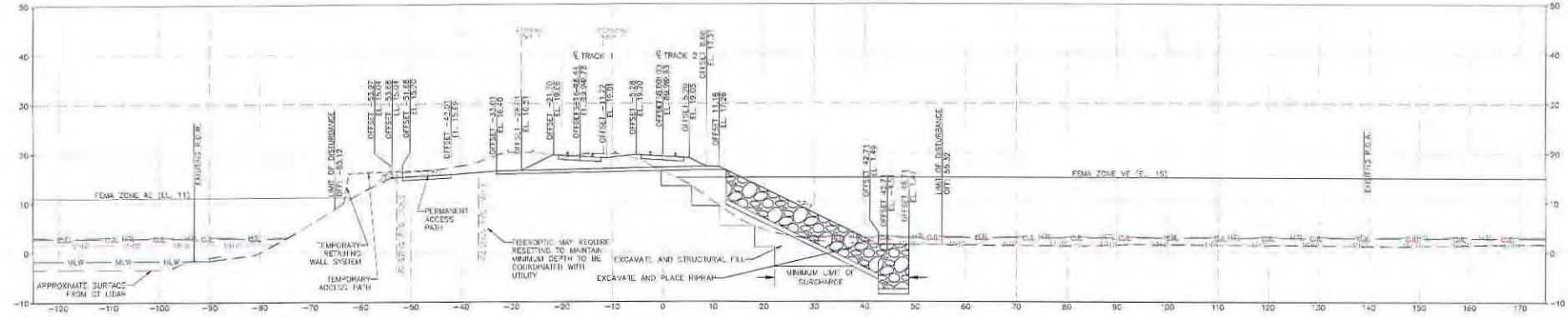
HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
1700 Market St. Suite 1050
Philadelphia, PA 19103

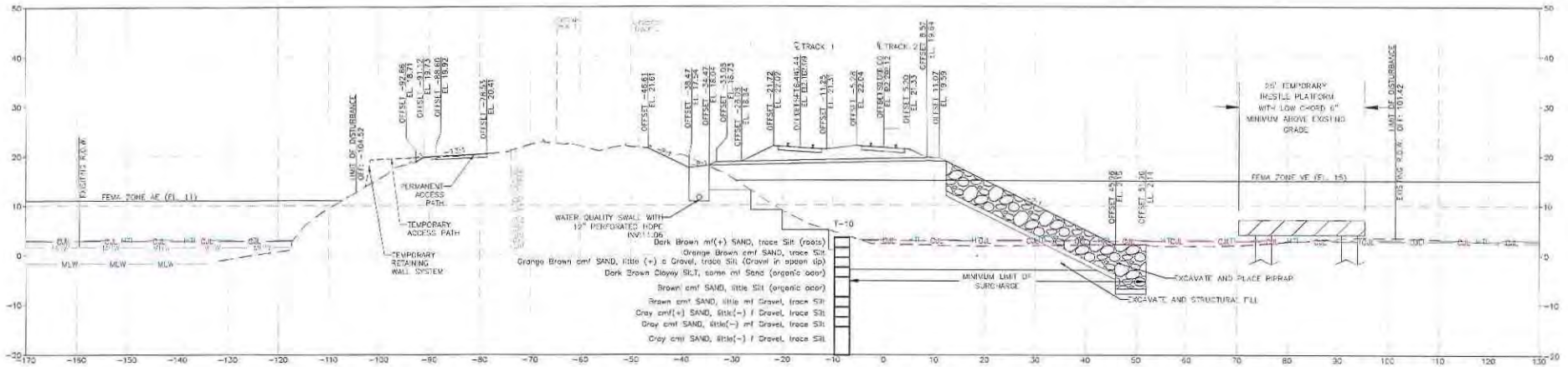
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code: XXX.XXX
WBS
Sheet No. 30 OF 140
Dwg No. XCS-01





NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

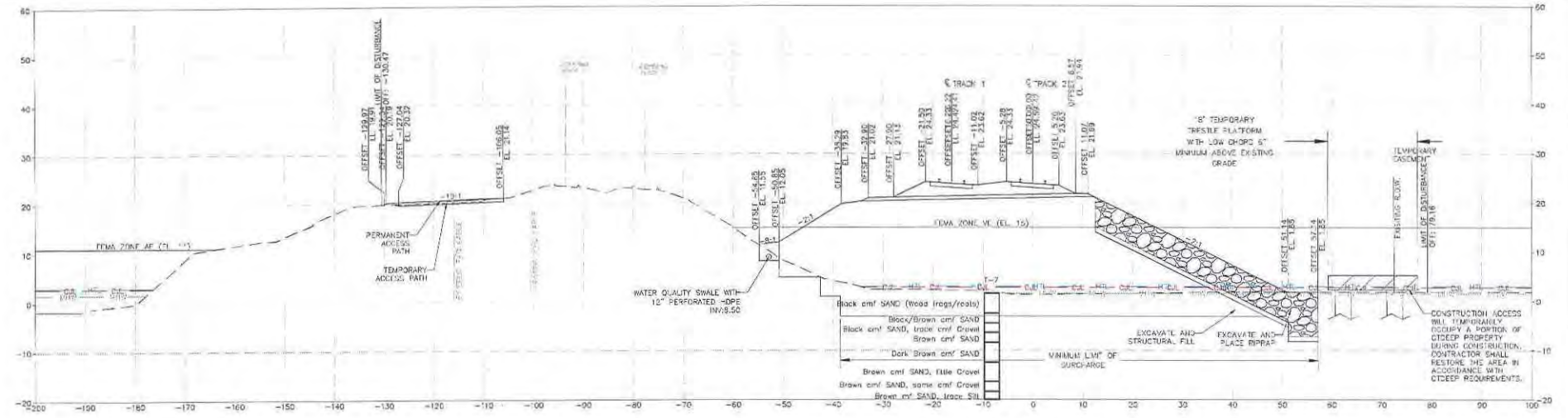
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

PROPOSED CROSS SECTIONS

Designed	KM	Drawn	CB	Checked	KF	Date	5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 31 OF 140
Dwg. No. XCS-02



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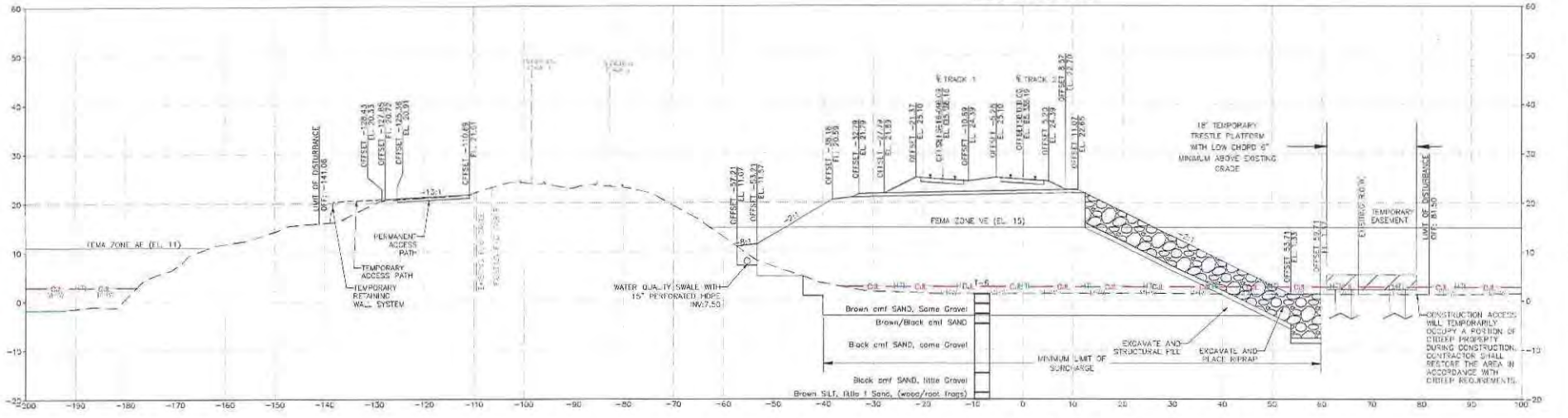

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NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

ENVIRONMENTAL PERMIT PLANS
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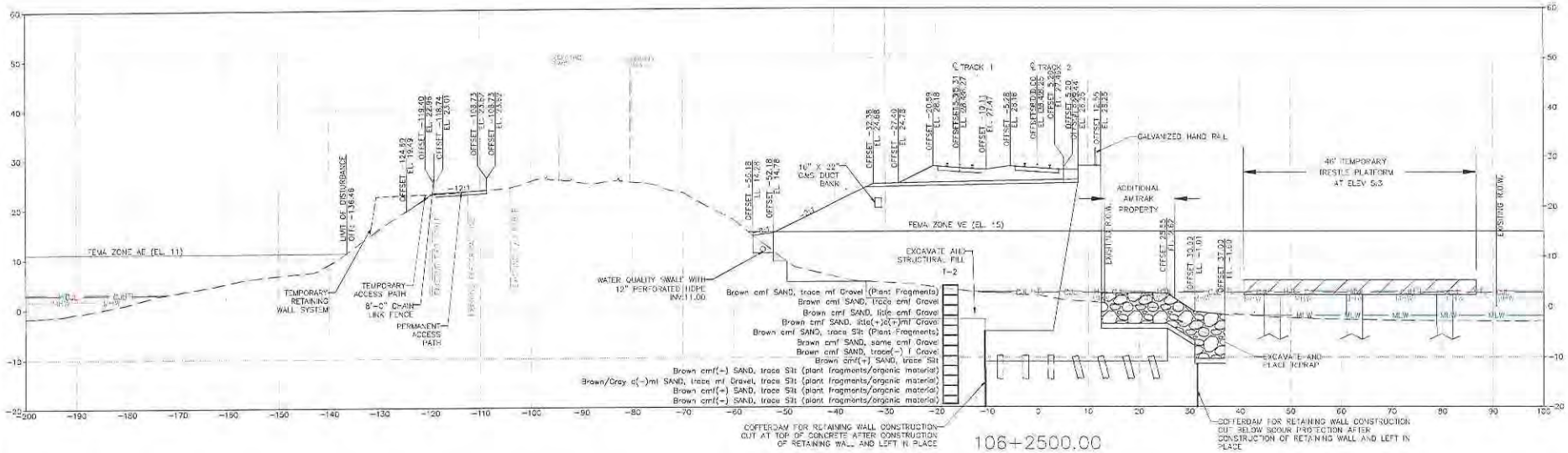
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code: 3XX XXX
WBS:
Sheet No. 30 OF 140
Dwg No. XCS-03



NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

PROPOSED CROSS SECTIONS

Designed	KM	Drawn	CS	Checked	KF	Date	5/2/2023

Project Code: XXX.XXX
WBS:
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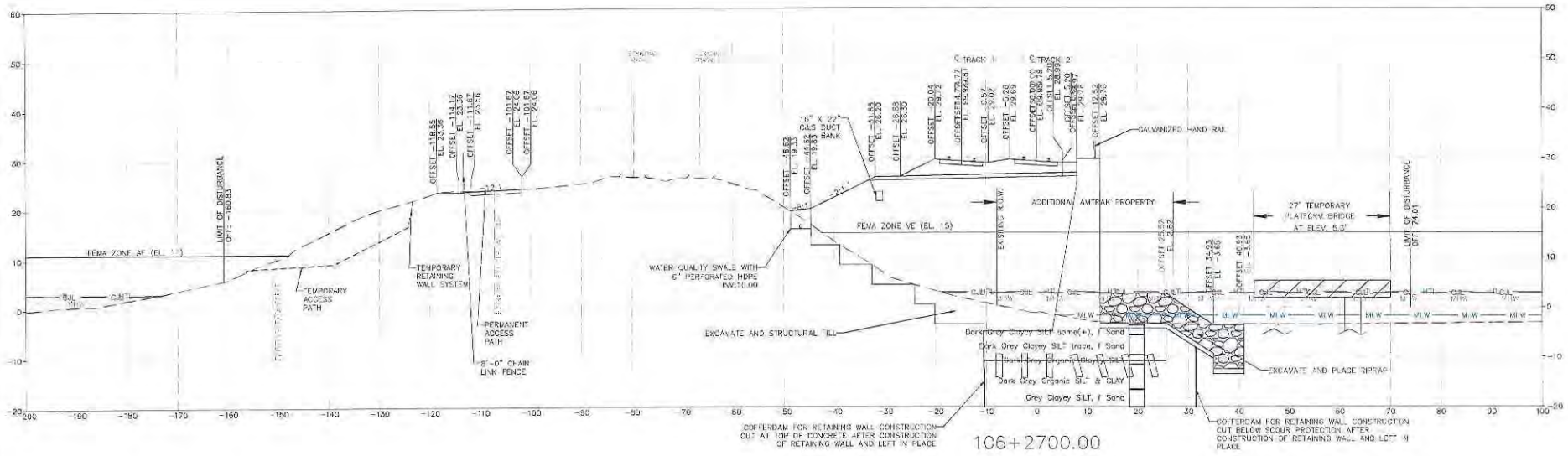
Dwg No. XCS-04



NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

PROPOSED CROSS SECTIONS

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Project Code: XXX XXX
WBS:
Sheet No. 34 OF 140
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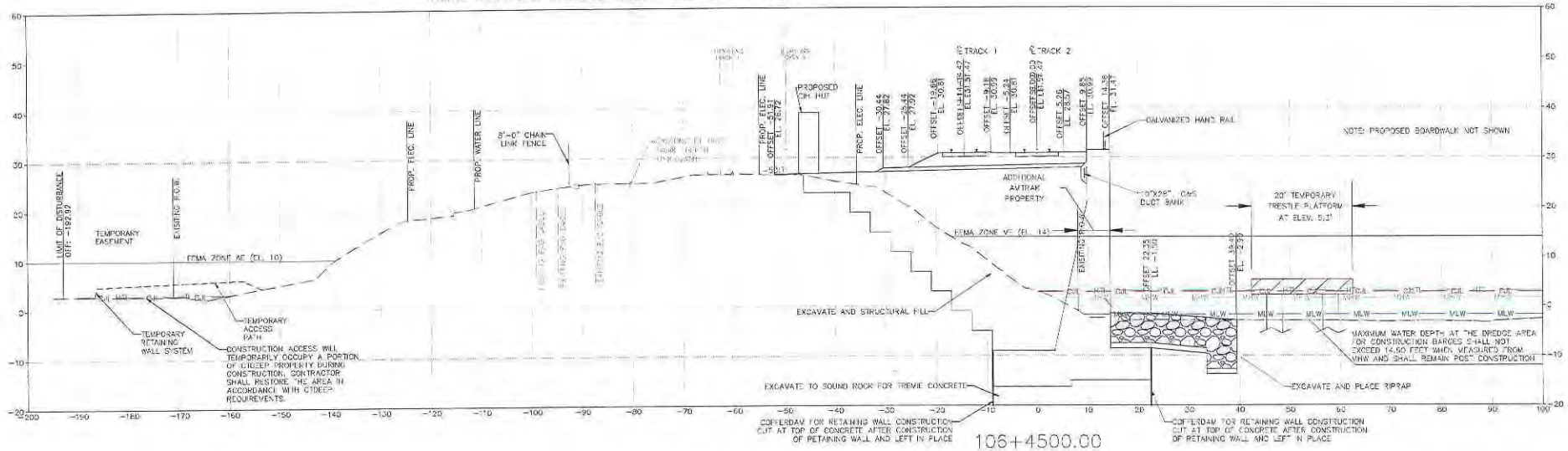
NOTE: SECTIONS ACROSS BRIDGE ARE NOT PROVIDED



NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REVOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

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PLAN DATE: MAY 2, 2023

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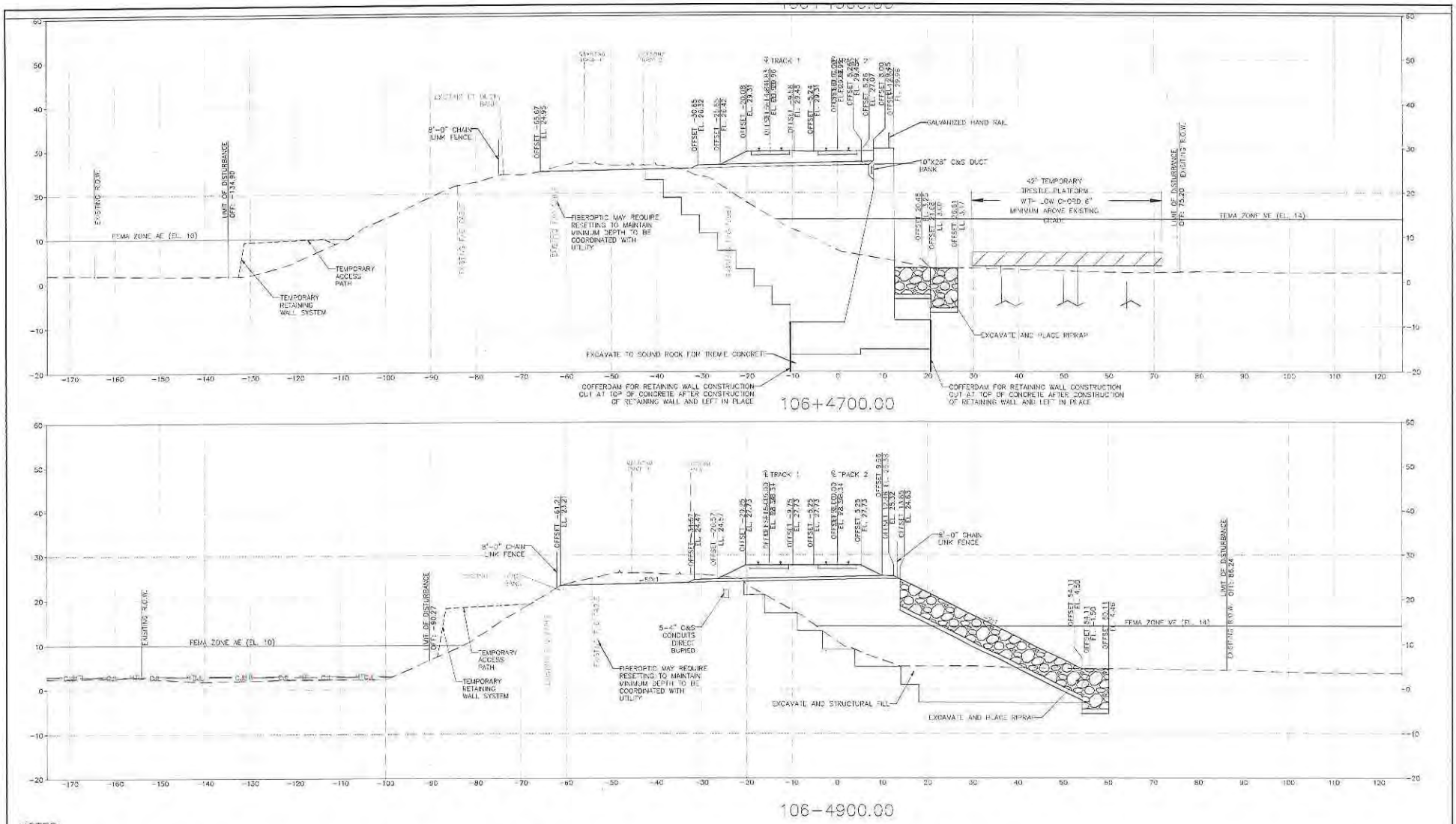
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code XXX XXX
WBS
Sheet No. 35 OF 140
Dwg No. XCS-06



NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

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National Railroad Passenger Corporation
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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KM Drawn CB Checked KF Date 5/2/2023

Project Code XXX.XXX
WBS
Sheet No. 35 OF 140
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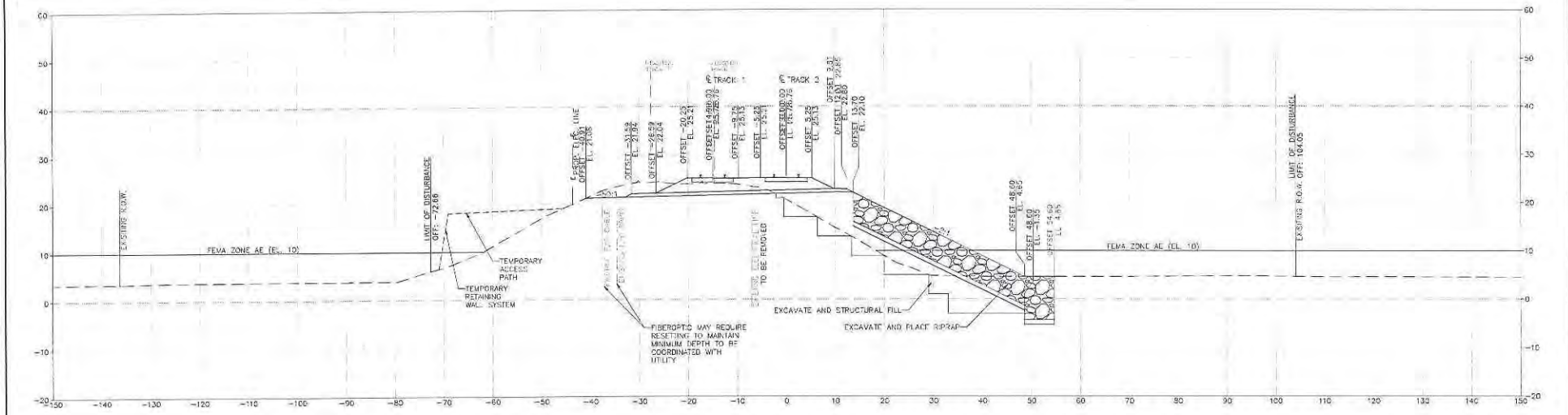

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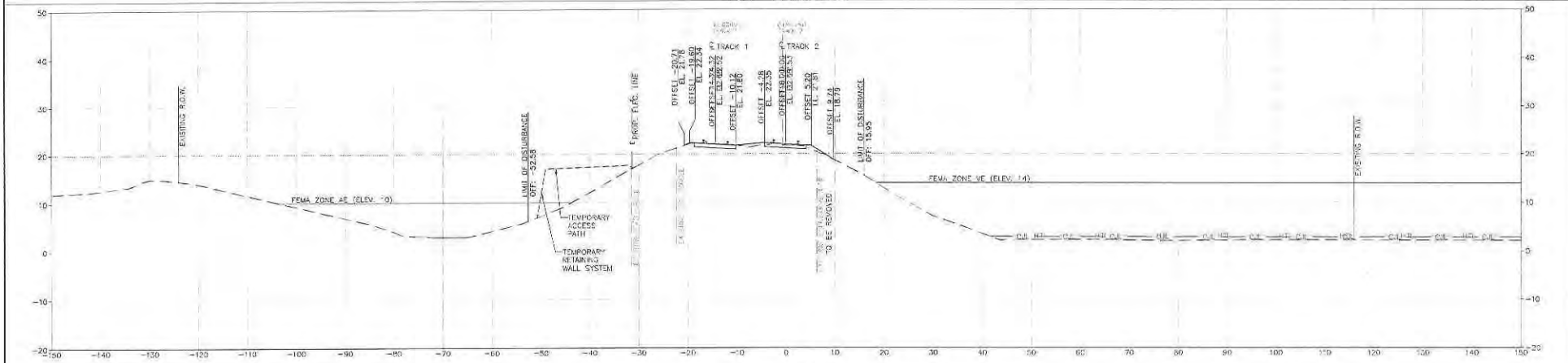

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NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.
2. SEE GEO-04 FOR EMBANKMENT CONSTRUCTION SCHEME AND BENCHING REQUIREMENTS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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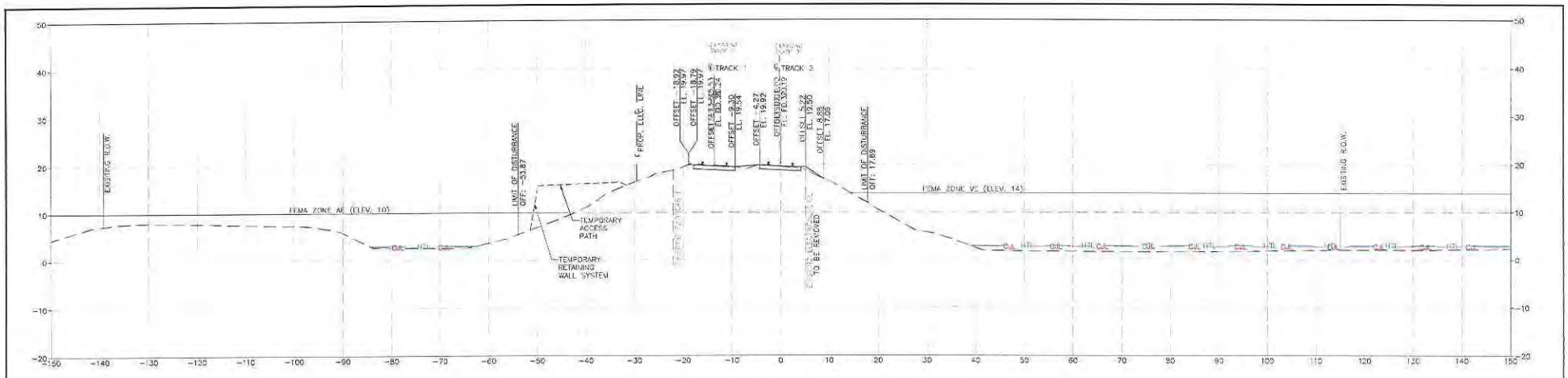
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

PROPOSED CROSS SECTIONS

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	37 OF 140
Dwg. No.	XCS-08



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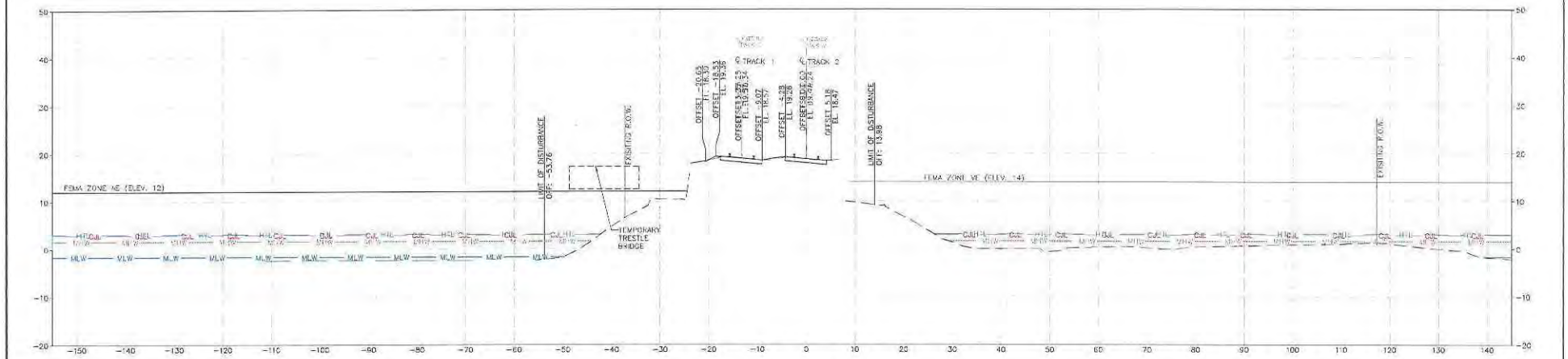

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NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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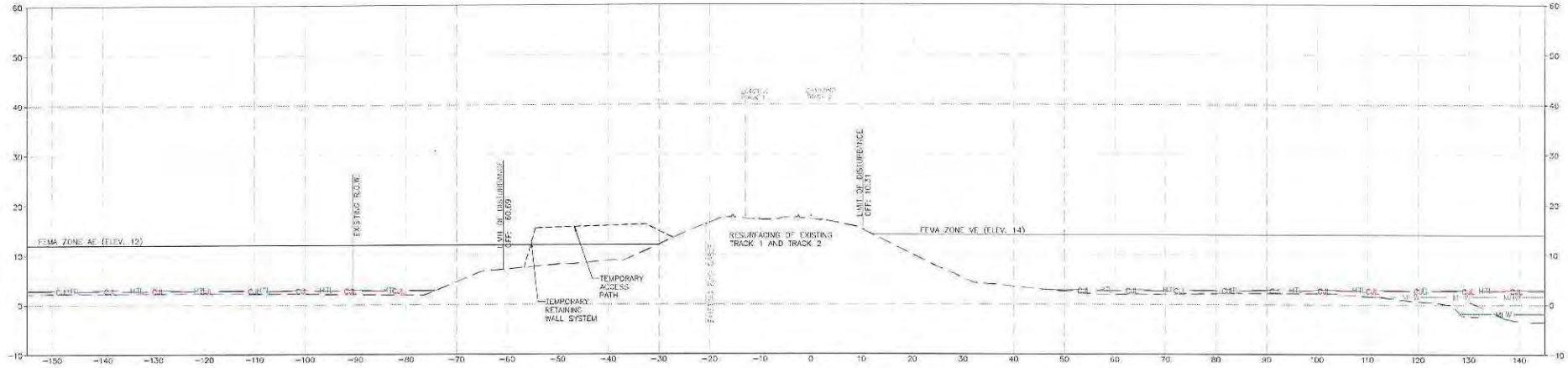
O.D SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 58 OF 140
Dwg. No. XCS-09



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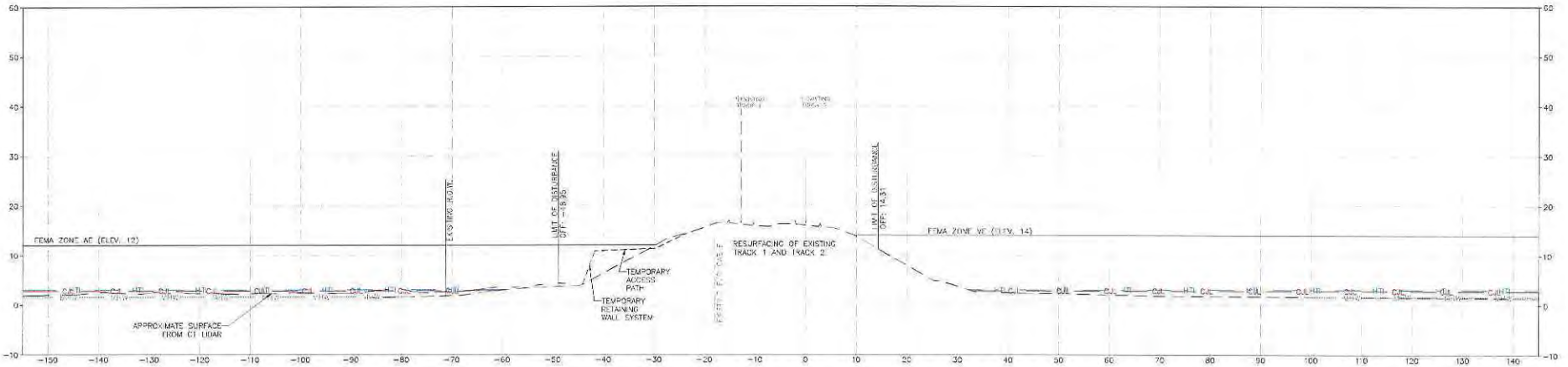

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NOTES:

1. PERMITTED LIMIT OF DISTURBANCE ALLOWS FOR CONSTRUCTION AND REMOVAL OF TEMPORARY TRESTLE WORK PLATFORMS AND TEMPORARY ACCESS PATH.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

SCALE IN FEET 0 10 20

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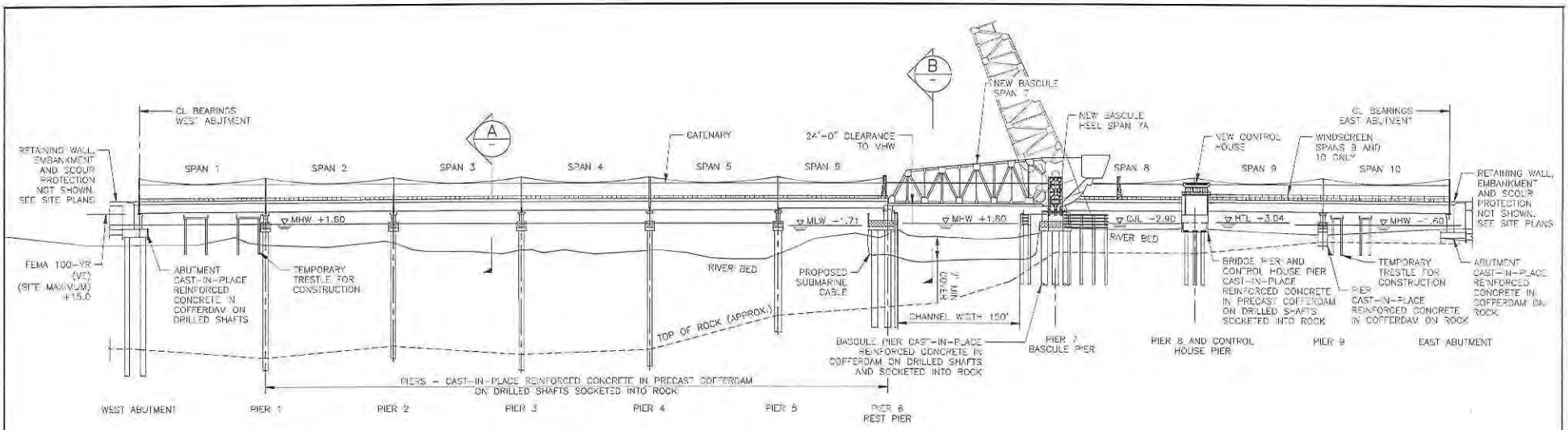
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
PROPOSED CROSS SECTIONS

Designed KW Drawn CB Checked KF Date 5/2/2023

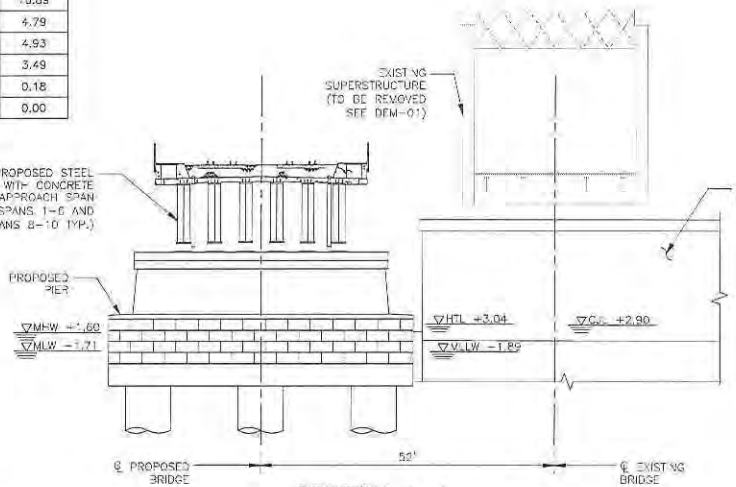
Project Code	XXX XXX
WBS	
Sheet No.	39 OF 140
Dwg No.	XCS-10



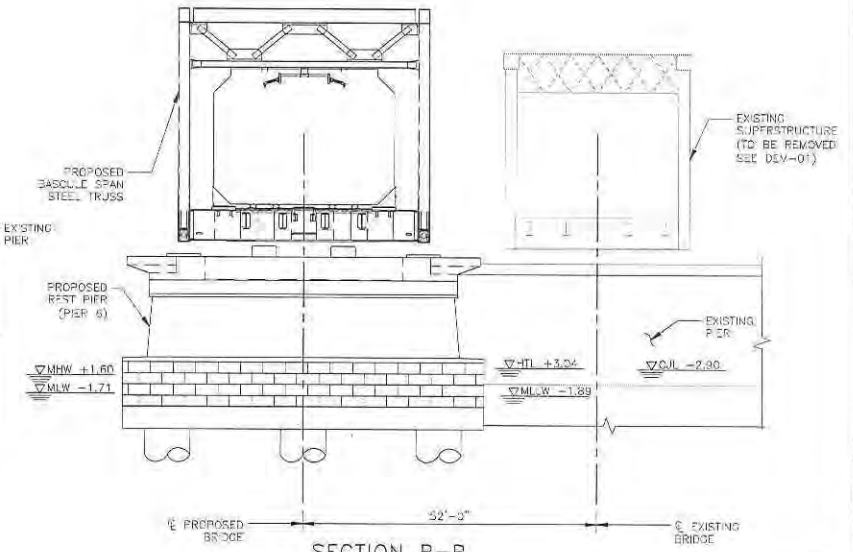
ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAV88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.89
CT COASTAL JURISDICTION LINE	CJL	2.90	4.79
HIGH TIDE LINE	HTL	3.04	4.93
MEAN HIGH WATER LINE	MHW	1.60	3.49
MEAN LOW WATER LINE	MLW	-1.71	0.18
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NOTES:

1. NEW PIERS ARE CONSIDERED A PERMANENT IMPACT.
2. THE PLAN AREA IMPACT OF THE NEW PIERS IS TAKEN AT THE PILE CAP SECTION WHERE THE REGULATORY LIMITS INTERCEPT THE STRUCTURAL ELEMENTS.
3. SEE SUM-01 FOR A QUANTIFICATION OF THE IMPACTS AND THE CJL, HTL, AND FEMA SERIES OF DRAWINGS FOR THE PLAN VIEW OF THE IMPACTS.
4. VOLUMETRIC IMPACTS INCLUDE THE DRILLED SHAFTS, PILE CAPS, AND PIER STEMS BELOW THE RELEVANT REGULATORY LINE.
5. FENDER SYSTEM DRILLED SHAFT AND FENCING STRUCTURE ARE QUANTIFIED IN A SIMILAR MANNER.
6. TEMPORARY IMPACTS DUE TO IN-WATER CONSTRUCTION ACTIVITIES ARE SUMMARIZING ON SUM-01 AND ILLUSTRATED ON THE SO SERIES OF DRAWINGS.



SECTION A-A
SCALE: 3/32" =1'-0"



SECTION B-B
SCALE: 3/32"=1'-0"

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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National Railroad Passenger Corporation
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1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

BRIDGE ELEVATION PROPOSED CONDITIONS

Designed	MY	Drawn	MY	Checked	SJT	Date	5/2/2023

Project Code	XXX.XXX
WBS	000000
Sheet No.	40 OF 140
Dwg. No.	EL-01

SUMMARY OF TEMPORARY IMPACTS (SF)				
	STATE (SEE CJL-## SHEETS)			FEDERAL (SEE HTL-## SHEETS)
SHEET (-##)	VEGETATED TIDAL WETLAND	BELOW CJL	BELOW LCSTV (ABOVE CJL)	BELOW HTL
-01	0	0	0	0
-02	0	0	0	0
-03	0	0	0	0
-04	6080	2000	7390	8630
-05	17200	30340	420	47940
-06	0	33910 (SEE NOTE 11)	0	33910 (SEE NOTE 11)
-07	21320	33460	9840	78050
-08	1060	3950	740	5270
-09	0	30	950	0
-10	0	0	0	0
-11	0	0	0	0
-12	460	10	140	3490
TOTAL	46120 SF (1.06 AC)	103700 SF (2.38 AC)	19510 SF (0.45 AC)	176690 SF (4.06 AC)

SUMMARY OF PERMANENT IMPACTS (SF)				
	STATE (SEE CJL-## SHEETS)			FEDERAL (SEE HTL-## SHEETS)
SHEET (-##)	VEGETATED TIDAL WETLAND	BELOW CJL	BELOW LCSTV (ABOVE CJL)	BELOW HTL
-01	0	0	0	0
-02	0	0	0	0
-03	0	0	0	0
-04	11760	3170	5440	15480
-05	57170	36540	6960	94710
-06	0	35990	0	35990
-07	150	29830	8900	31980
-08	0	0	0	0
-09	0	0	0	0
-10	0	0	0	0
-11	0	0	0	0
-12	0	0	0	160
TOTAL	69080 SF (1.59 AC)	105530 SF (2.42 AC)	22300 SF (0.51 AC)	178320 SF (4.09 AC)

SUMMARY OF IMPACTS (AC)		
	STATE	FEDERAL
TEMPORARY	3.89 AC	4.06 AC
PERMANENT	4.52 AC	4.09 AC

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

NOTES

1. VERTICAL DATUM IS NAVD 88. REGULATORY ELEVATIONS BASED ON NOAA GAUGE BENCHMARK.
2. IMPACTS BELOW THE VEGETATED TIDAL WETLANDS INCLUDE AREAS FLAGGED IN THE FIELD, SHORE TO SHORE.
3. IMPACTS BELOW THE CJL INCLUDE AREAS BELOW THE CJL ELEVATION, SHORE TO SHORE, THAT ARE NOT INCLUDED AS VEGETATED TIDAL WETLAND.
4. IMPACTS BELOW THE LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) INCLUDE AREAS BELOW THE LCSTV ELEVATION, SHORE TO SHORE, THAT ARE NOT INCLUDED AS BELOW CJL OR VEGETATED TIDAL WETLAND.
5. IMPACTS BELOW THE HTL INCLUDE ALL AREAS BELOW THE HTL ELEVATION, SHORE TO SHORE, INCLUDING THOSE DESIGNATED AS VEGETATED TIDAL WETLAND. WHILE NOT BELOW THE HTL, THE SMALL AREAS OF FLAGGED VEGETATED TIDAL WETLANDS LOCATED ABOVE THE HTL WHERE INCLUDED IN THESE IMPACT NUMBERS.
6. THE 100-YEAR FLOOD ELEVATION VARIES THROUGHOUT THE SITE. SEE FLOOD INSURANCE RATE MAP (FIRM) PANELS 09007C0361J (EFF. 2/6/2013), 09015C0461J (EFF. 8/5/2013), AND 09015C0452J (EFF. 8/5/2013) FOR ELEVATION VALUES AND LIMITS OF APPLICABILITY.
7. TURBIDITY CURTAINS ARE REQUIRED FOR ALL CONSTRUCTION ACTIVITIES DISTURBING THE RIVER BOTTOM INCLUDING, BUT NOT LIMITED TO, DRILLED SHAFT INSTALLATION, SUBMARINE CABLE REMOVAL AND INSTALLATION, EXISTING PIER REMOVAL, AND EXISTING FENDER REMOVAL.
8. TURBIDITY CURTAINS THAT ARE REQUIRED TO ENVELOPE LARGER WORK AREAS WITH MULTIPLE BARGES ARE ASSUMED TO BE SUPPORTED WITH 10" DIAMETER PIN PILES SPACED AT APPROXIMATELY 10 FEET ON CENTER. PIN PILES FOR TURBIDITY CURTAINS ARE NOT SHOWN. REMOVED PIN PILES ARE A TEMPORARY IMPACT. AREA OF IMPACT FOR EACH PIN PILE IS 0.55 SF.
9. TURBIDITY CURTAINS ARE REQUIRED FOR ANY ACTIVITIES REQUIRING BARGES TO BE SECURED TO THE RIVER BOTTOM WITH SPUD PILES. WHERE A TOTAL ENCLOSURE IS NOT REQUIRED, IT IS ASSUMED THAT TURBIDITY CURTAINS WILL BE SUPPORTED OFF OF THE SIDES OF THE WORK BARGES.
10. SEE DRAWING SC-01 THROUGH SC-04 FOR SUGGESTED BARGE LAYOUTS AND TURBIDITY CURTAIN LIMITS FOR IN-WATER WORK ACTIVITIES.
11. THE MAXIMUM TOTAL TEMPORARY IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES AND BARGE SPUD PILES IS APPROXIMATE 9,500 SF AND IS INCLUDED IN THE VALUES AT LEFT IN THE SHEET -06 IMPACTS. THIS IMPACT ACCOUNTS FOR WORK ASSOCIATED WITH DRILLED SHAFT INSTALLATION, PIER CONSTRUCTION, SPAN INSTALLATION, SUBMARINE CABLE REMOVAL AND INSTALLATION, EXISTING PIER REMOVAL, EXISTING SPAN REMOVAL, AND WORK ASSOCIATED WITH EXISTING AND NEW FISHING PIERS.

TIDAL DATUM	NOAA (NAVD88)(ft)
CJL	2.90
MLW	-1.71
MHW	1.60
HTL	3.04

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA FLOODPLAIN VOLUMES	CUT/REMOVAL	FILL/INSTALLATION	NET
EMBANKMENTS AND RIPRAP =	20500 ± CY	58770 ± CY	38270 ± CY
RETAINING WALLS, ABUTMENTS, AND RIPRAP =	27520 ± CY	43840 ± CY	16320 ± CY
BARGE ACCESS FOR TEMPORARY TRESTLE WORK PLATFORM =	6800 ± CY	0 ± CY	-6800 ± CY
NEW SUBSTRUCTURE AND FENDER =	10480 ± SY	21900 ± CY	11420 ± CY
REMOVAL OF EXISTING SUBSTRUCTURE =	9820 ± CY	0 ± CY	-9820 ± CY
NEW FISHING PIER BOARDWALK =	560 ± CY	1610 ± CY	1050 ± CY
REMOVAL OF FISHING PIER BOARDWALK =	710 ± CY	0 ± CY	-710 ± CY
SUBMARINE CABLES =	3300 ± CY	3300 ± CY	0 ± CY
TOTAL:	79790 ± CY	129420 ± CY	49630 ± CY

VOLUMES BELOW HTL	CUT/REMOVAL	FILL/INSTALLATION	NET
EMBANKMENTS AND RIPRAP =	14460 ± CY	17250 ± CY	2790 ± CY
RETAINING WALLS, ABUTMENTS, AND RIPRAP =	13240 ± CY	16690 ± CY	3450 ± CY
BARGE ACCESS FOR TEMPORARY TRESTLE WORK PLATFORM =	6800 ± CY	0 ± CY	-6800 ± CY
NEW SUBSTRUCTURE AND FENDER =	10480 ± CY	20010 ± CY	9530 ± CY
REMOVAL OF EXISTING SUBSTRUCTURE =	7010 ± CY	0 ± CY	-7010 ± CY
NEW FISHING PIER BOARDWALK =	560 ± CY	590 ± CY	30 ± CY
REMOVAL OF FISHING PIER BOARDWALK =	25 ± CY	0 ± CY	-25 ± CY
SUBMARINE CABLES =	3300 ± CY	3300 ± CY	0 ± CY
TOTAL:	55875 ± CY	57840 ± CY	1985 ± CY

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30th Street Station, Philadelphia, Pennsylvania 19104

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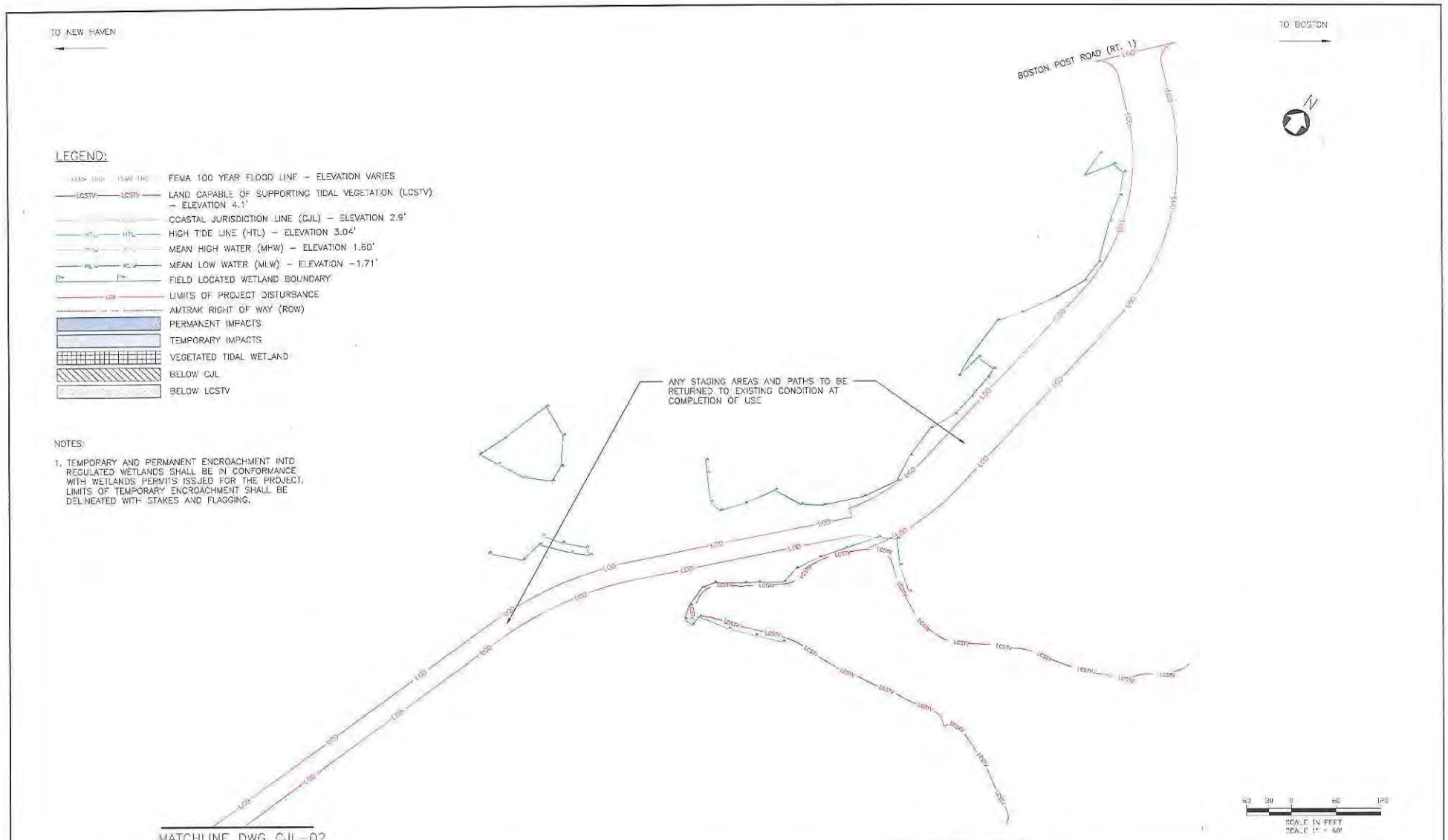
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

IMPACT SUMMARY SHEET

Designed	CS	Drawn	CBMD	Checked	KM	Date	SEP2023

Project Code	XXX XXX
WBS	
Sheet No.	41 OF 140
Dwg No.	SUM-01



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	by

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1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

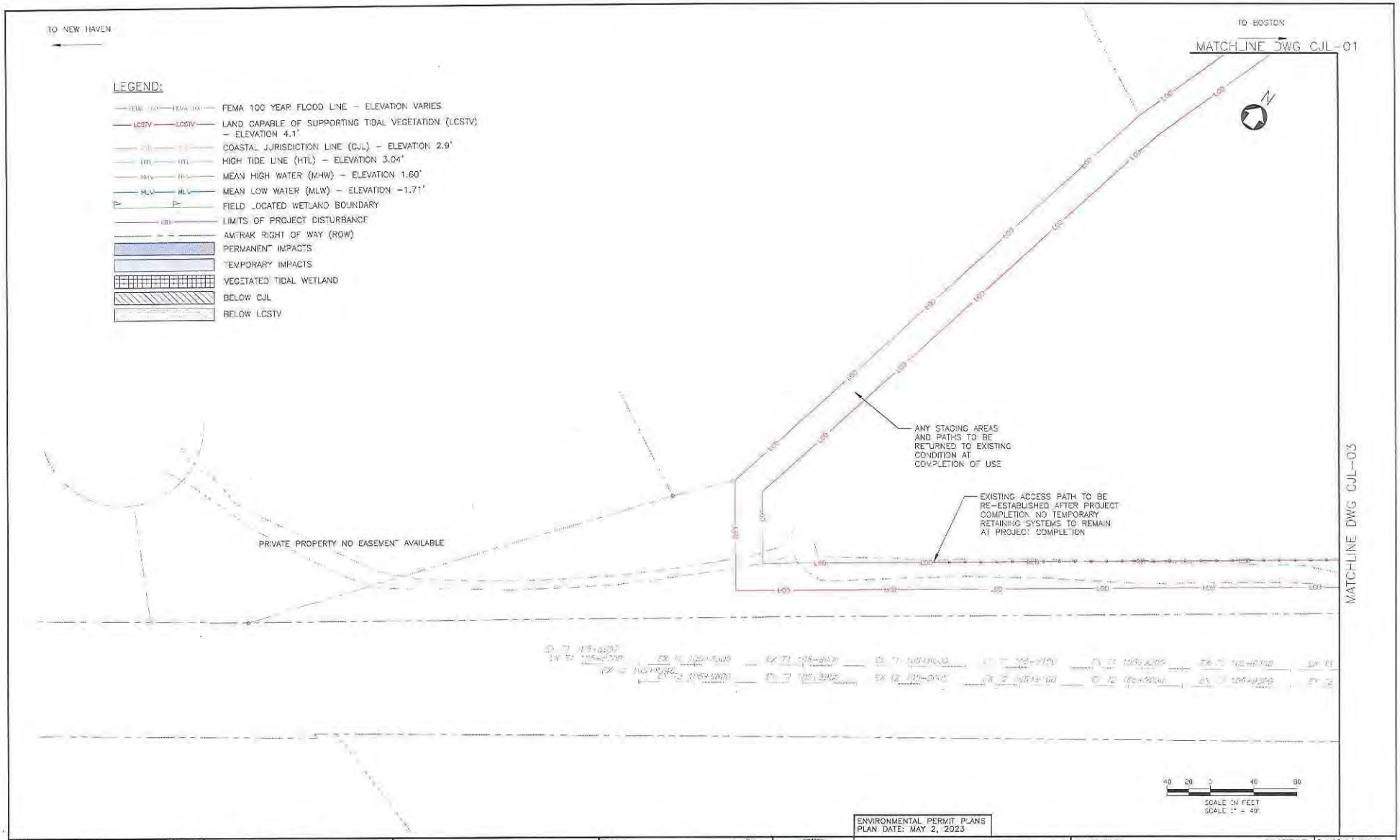
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 42 OF 140
Dwg No. CJL-01



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PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

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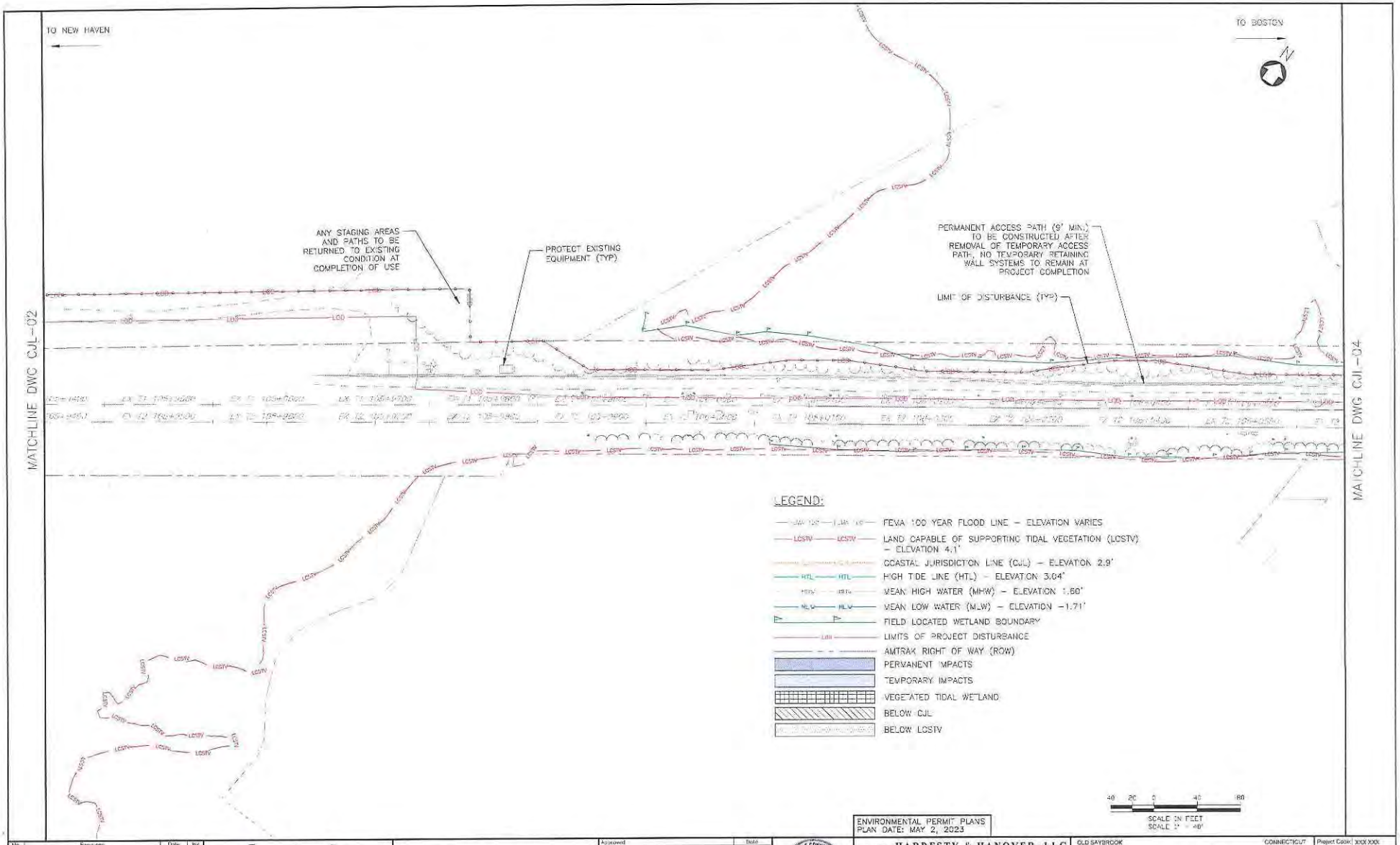
Project Code	XXX.XXX
WBS	
Sheet No.	43 OF 140
Dwg No.	CJL-02



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PLAN DATE: MAY 2, 2023

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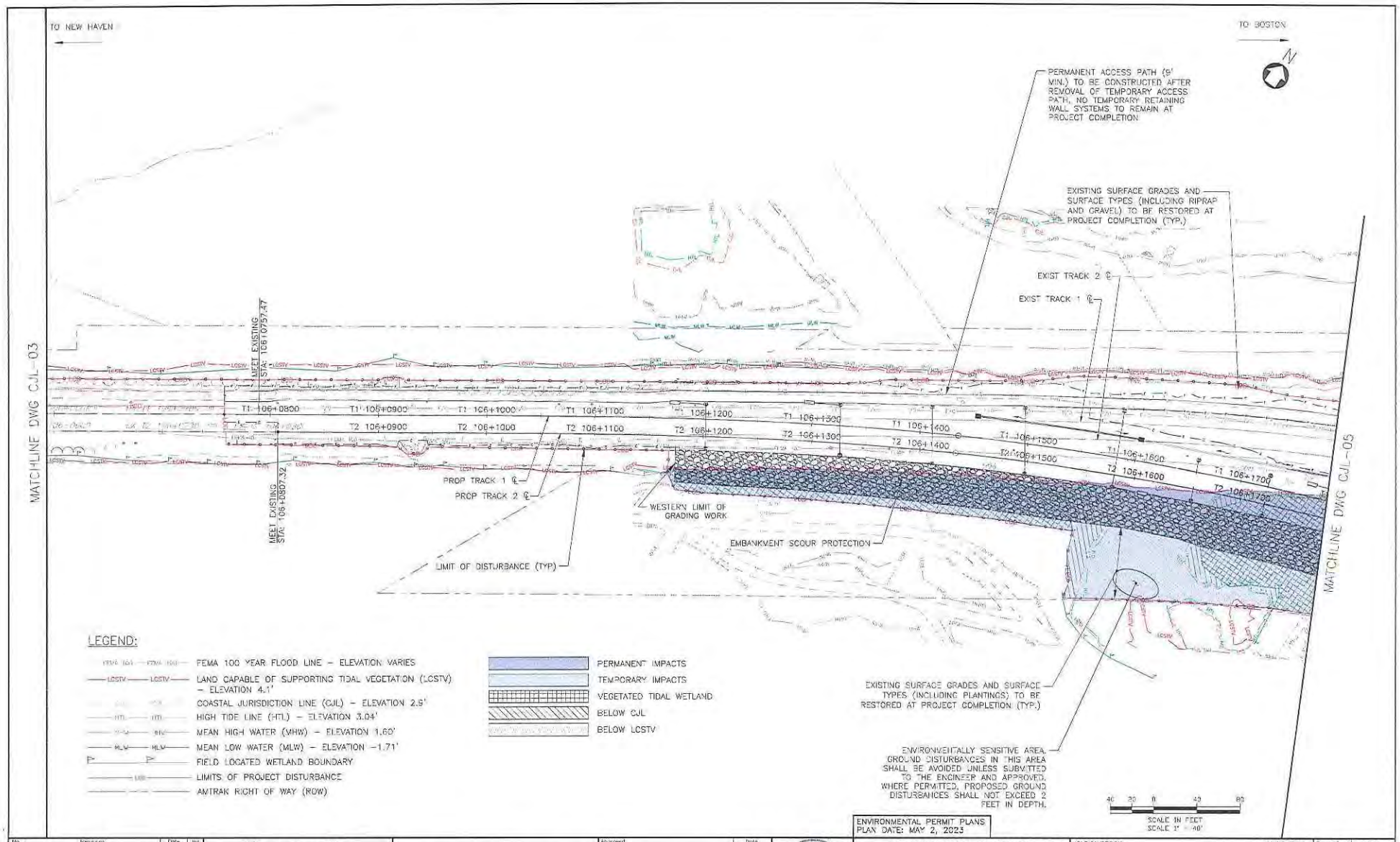
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN
Designed CB | Drawn CB/VD | Checked KV | Date 5/2/2023

Project Code:	XXX.XXX
WBS:	
Sheet No:	44 OF 140
Dwg No.	CJL-03



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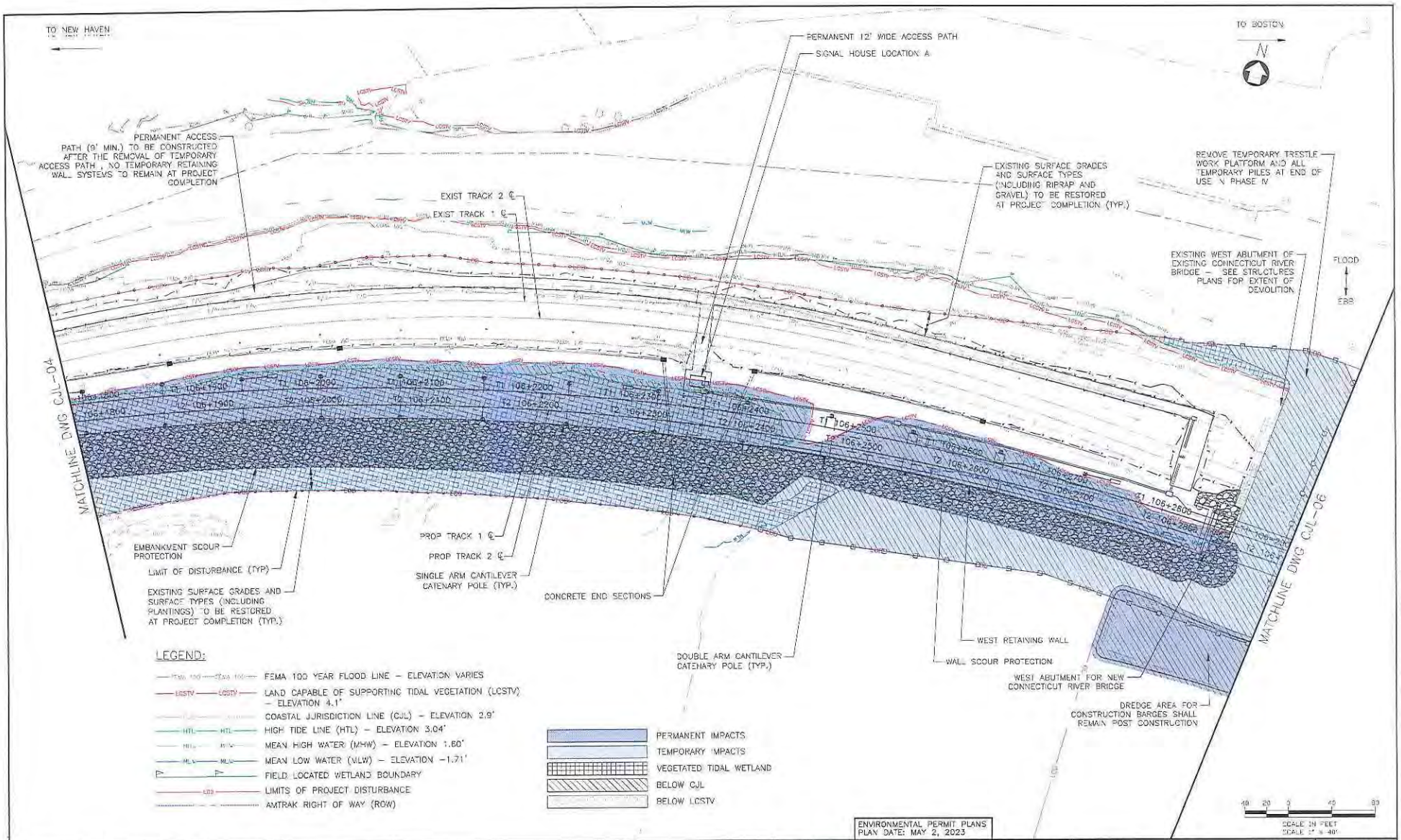
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

Designed: CB | Drawn: CBMD | Checked: KM | Date: 5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No.	45 OF 140
Dwg No.	CJL-04



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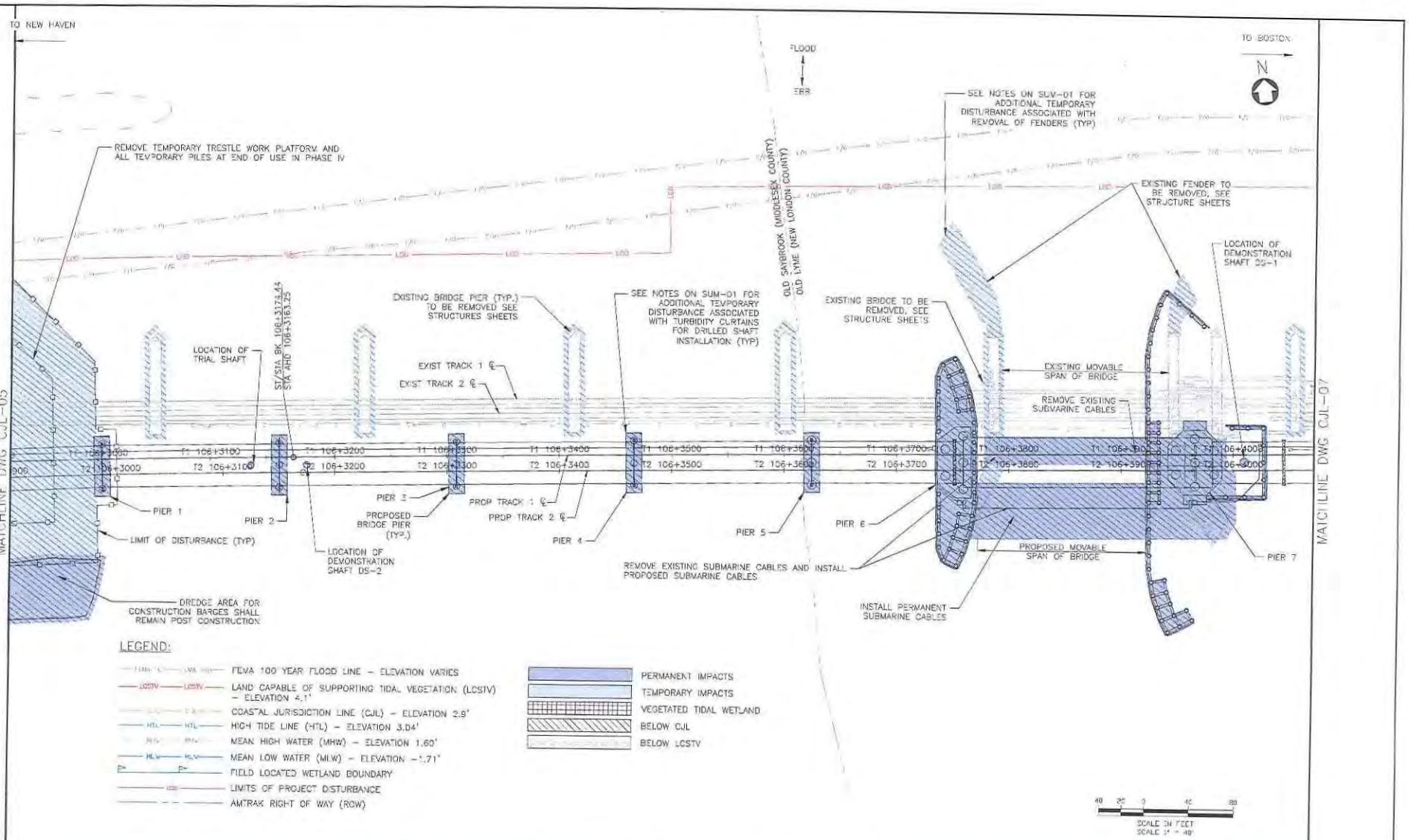
OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN

Designed CS | Drawn CBMD | Checked KM | Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 40 OF 140
Dwg No. CJL-05



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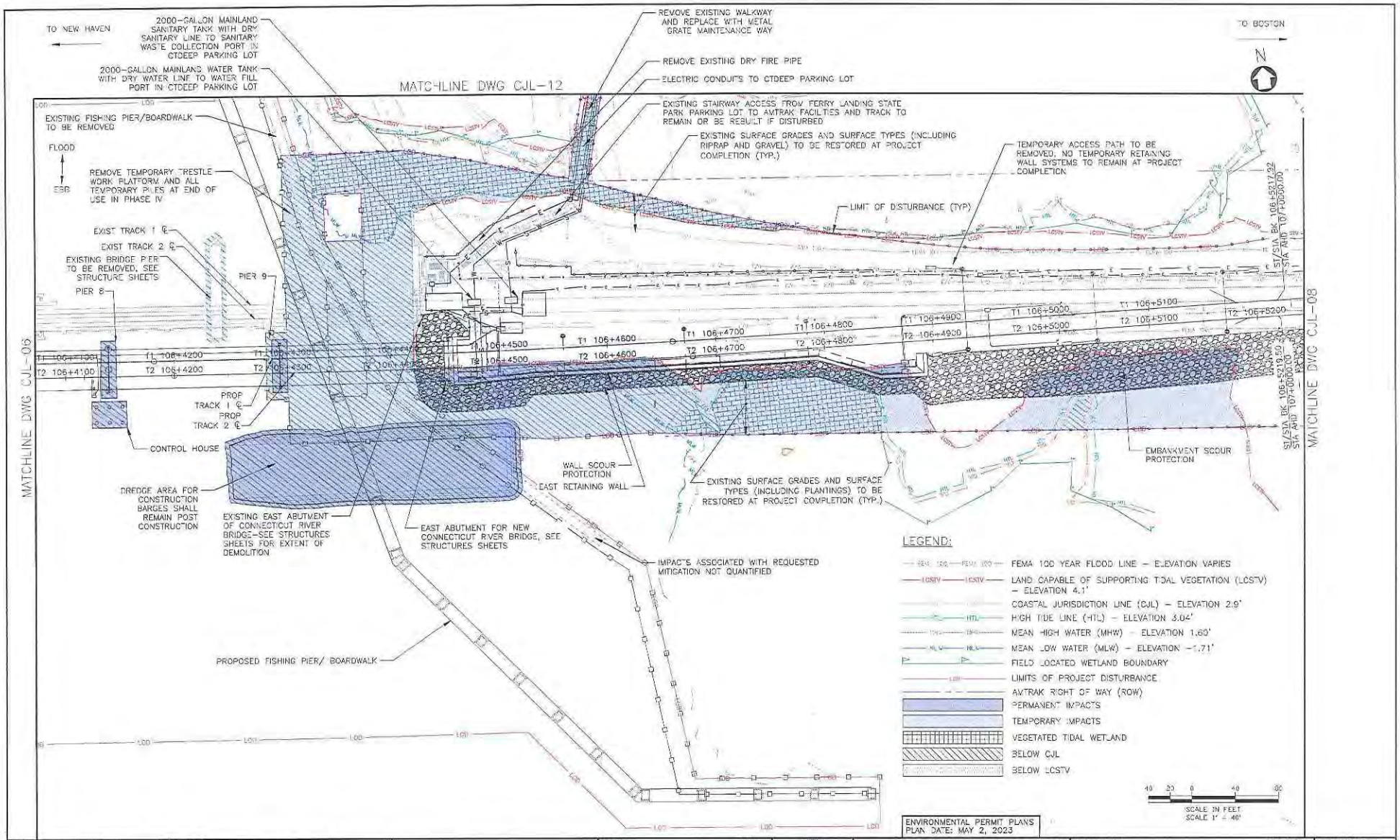
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN

Designed CD | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 47 OF 148
Dwg No. CJL-06



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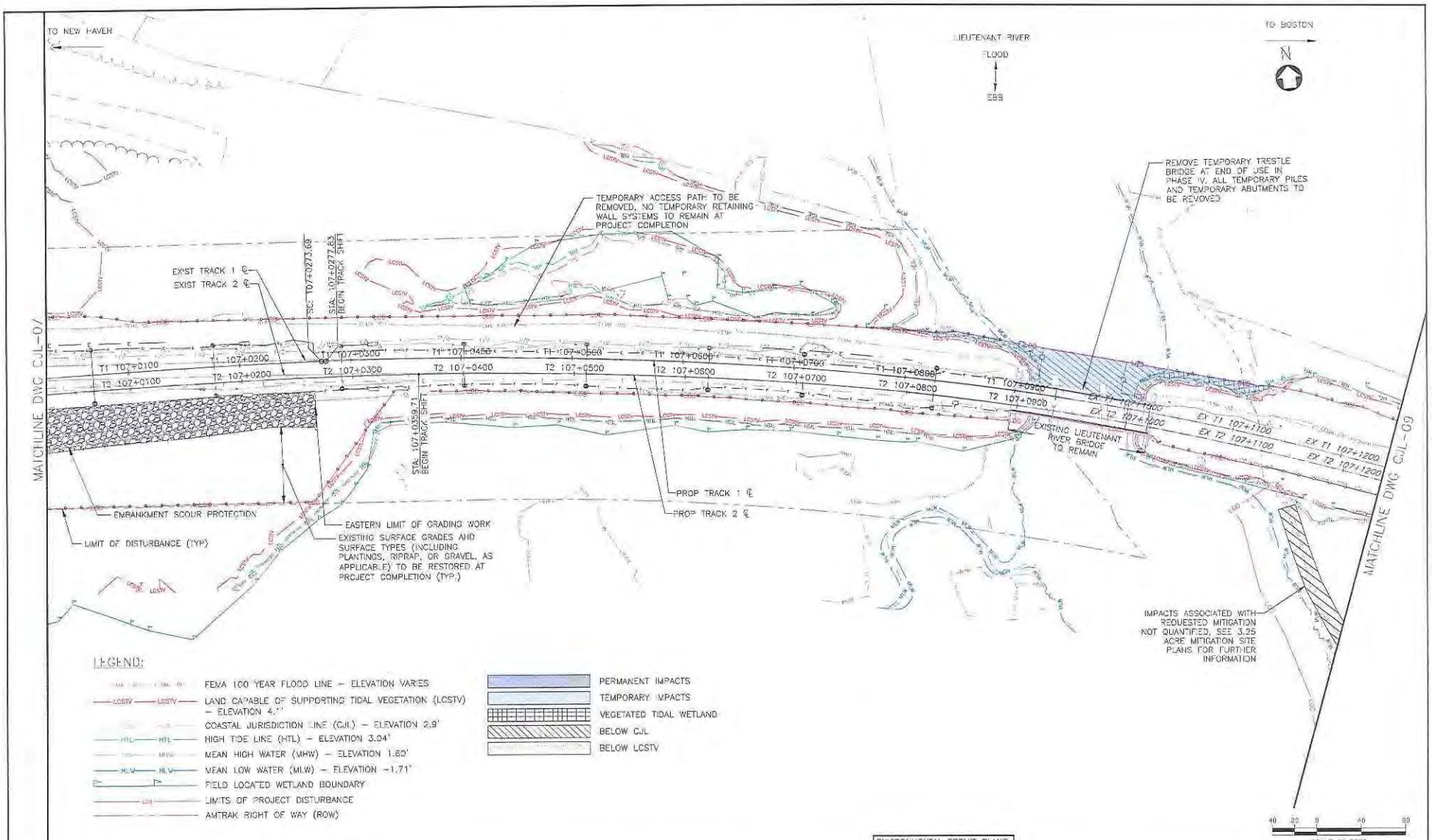
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	48 OF 140
Dwg. No.	CJL-07



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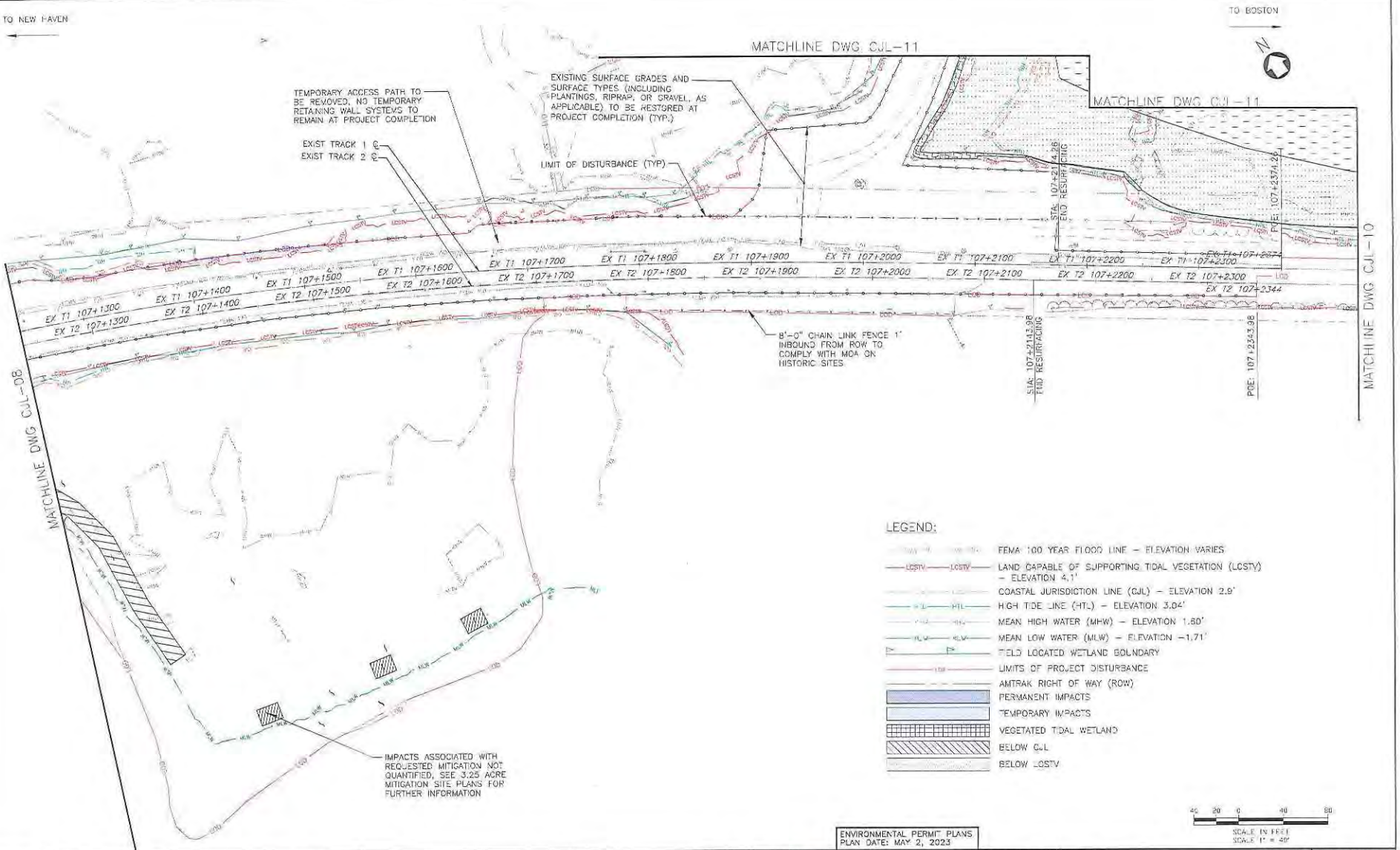
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	49 OF 140
Dwg No.	CJL-08



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PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN

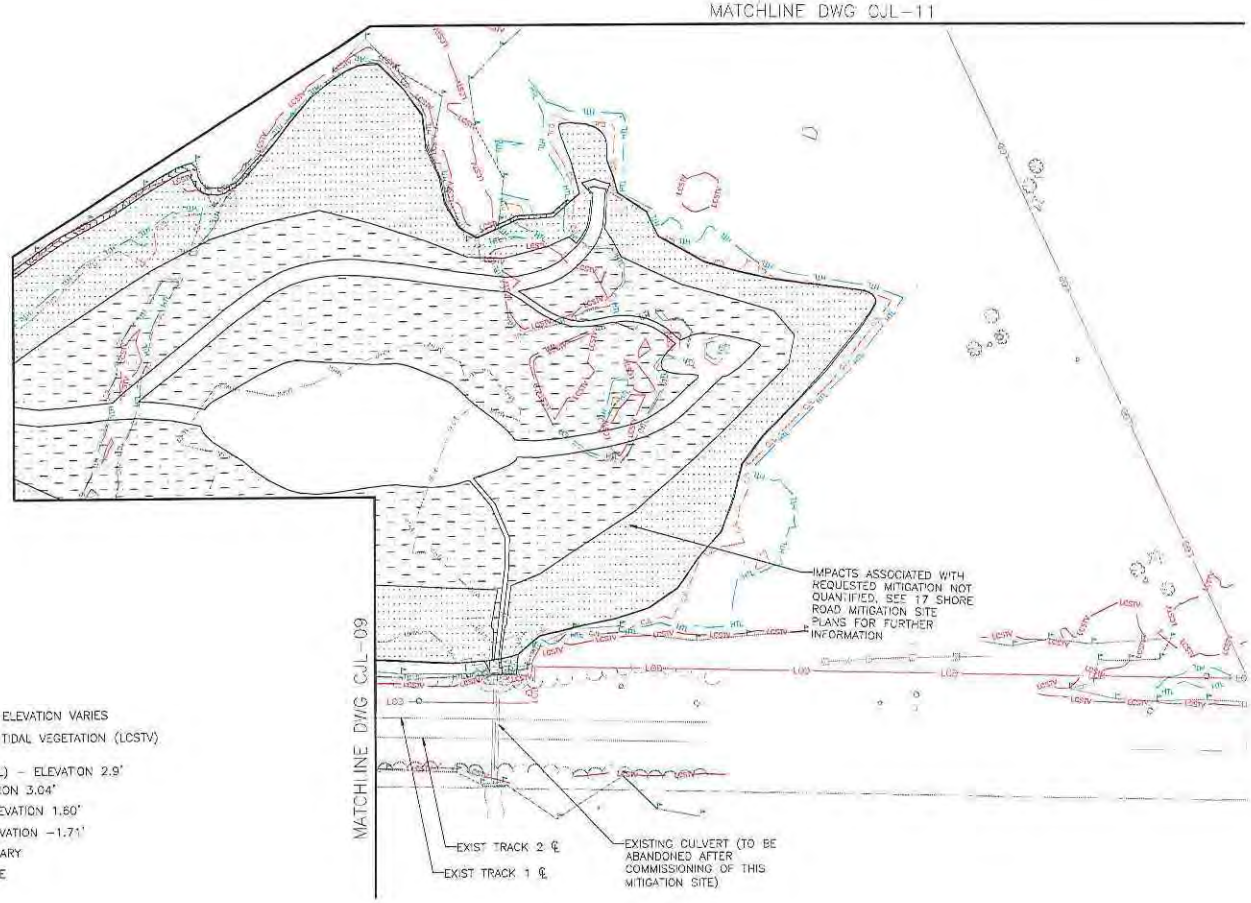
Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No	50 OF 140
Dwg No	CJL-09

TO NEW HAVEN

TO BOSTON

MATCHLINE DWG CJL-11



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WET_AND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)
- PERMANENT IMPACTS
- TEMPORARY IMPACTS
- VEGETATED TIDAL WETLAND
- BELOW CJL
- BELOW LCSTV

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No	51 OF 140
Dwg No	CJL-10

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)
- PERMANENT IMPACTS
- TEMPORARY IMPACTS
- VEGETATED TIDAL WETLAND
- BELOW CJL
- BELOW LCSTV

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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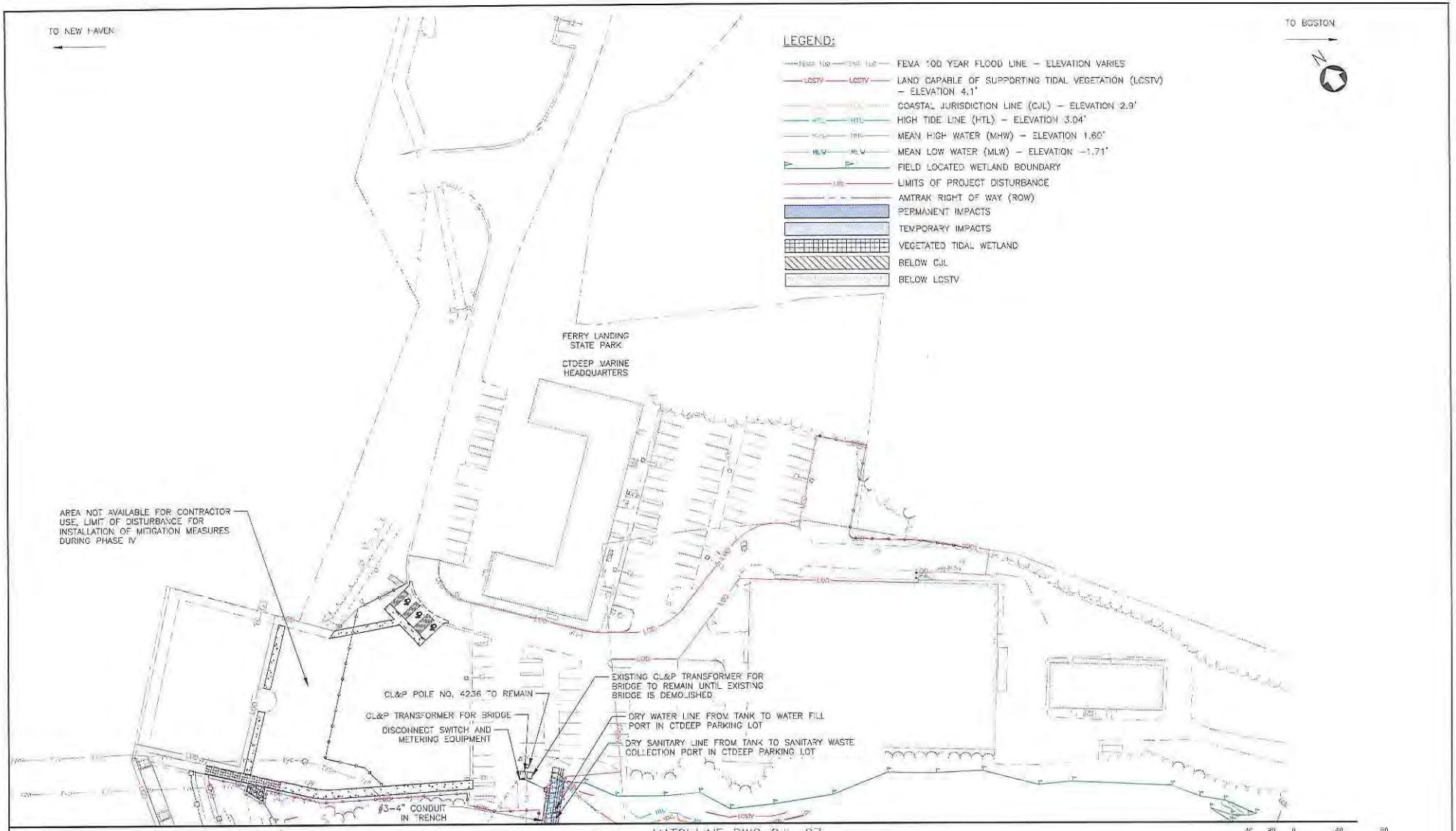
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CJL STATE IMPACT PLAN
Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXXXXX
WBS:
Sheet No. 52 OF 140
Dwg No. CJL-11



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PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CJL STATE IMPACT PLAN

Designed GB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No	53 OF 140
Dwg No	CJL-12

TO NEW HAVEN

TO BOSTON

BOSTON POST ROAD (RT. 1)

N

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)
- PERMANENT IMPACT BELOW HIGH TIDE LINE
- TEMPORARY IMPACT BELOW HIGH TIDE LINE

NOTES:

1. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.

ANY STAGING AREAS AND PATHS TO BE RETURNED TO EXISTING CONDITION AT COMPLETION OF USE

MATCHLINE DWG HTL-02

60 30 0 60 120
SCALE IN FEET
SCALE 1" = 60'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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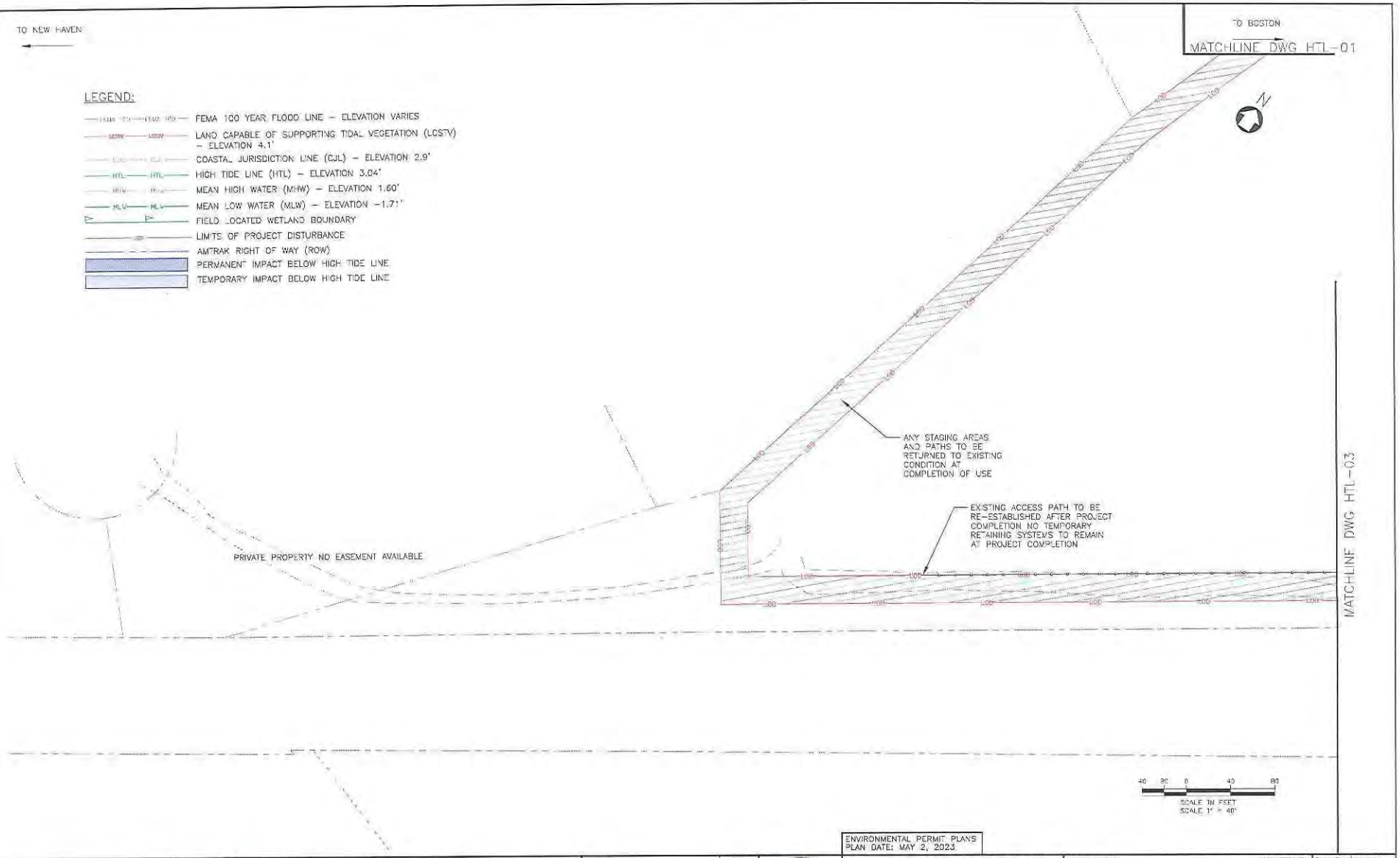
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed: CB | Drawn: CB/MD | Checked: KM | Date: 5/2/2023

Project Code	XXXXXX
WBS#	
Sheet No.	54 OF 140
Dwg No.	HTL-01



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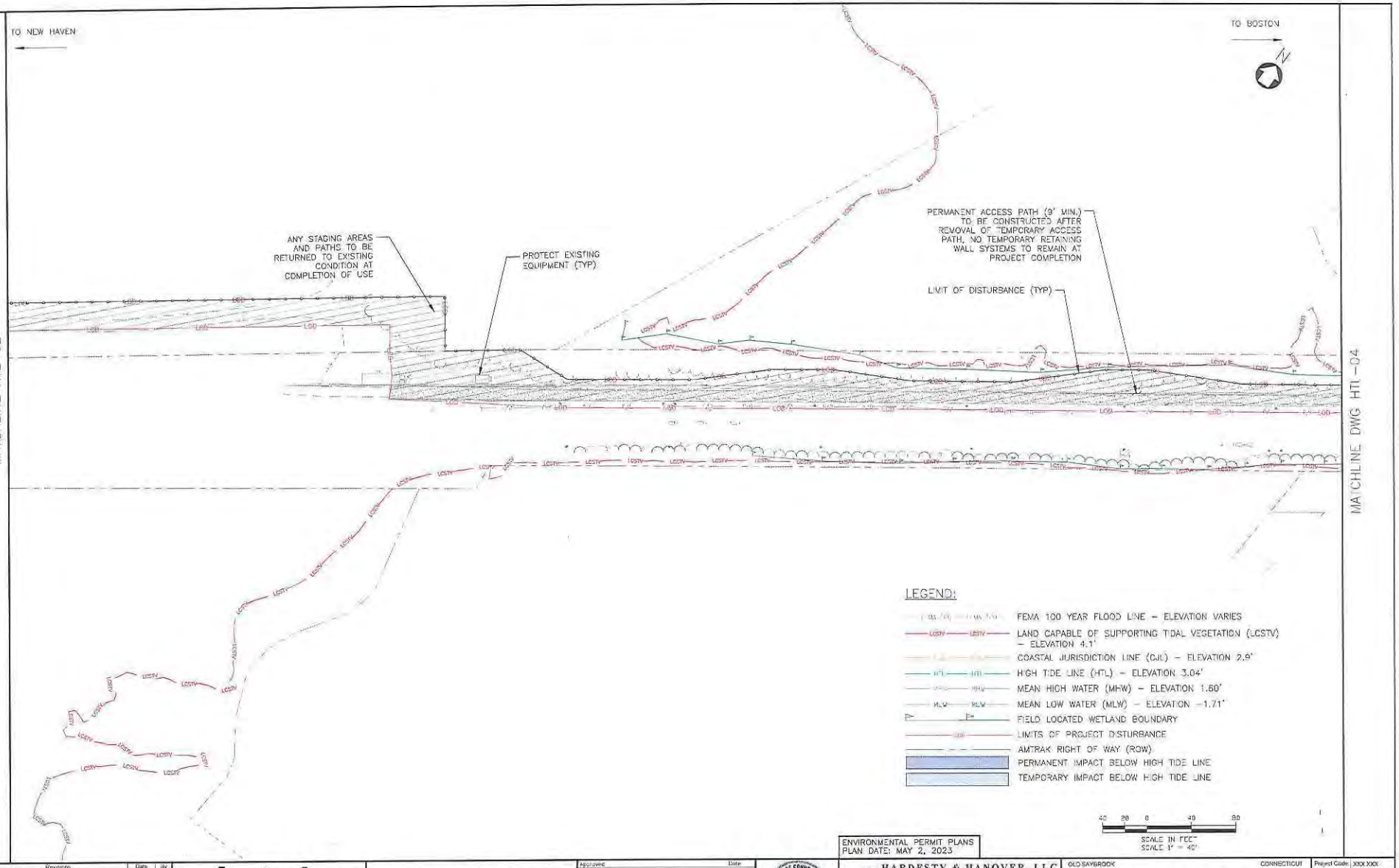
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed CB | Drawn CB/VD | Checked KV | Date 5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	55 OF 140
Dwg. No.	HTL-02



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PLAN DATE: MAY 2, 2023

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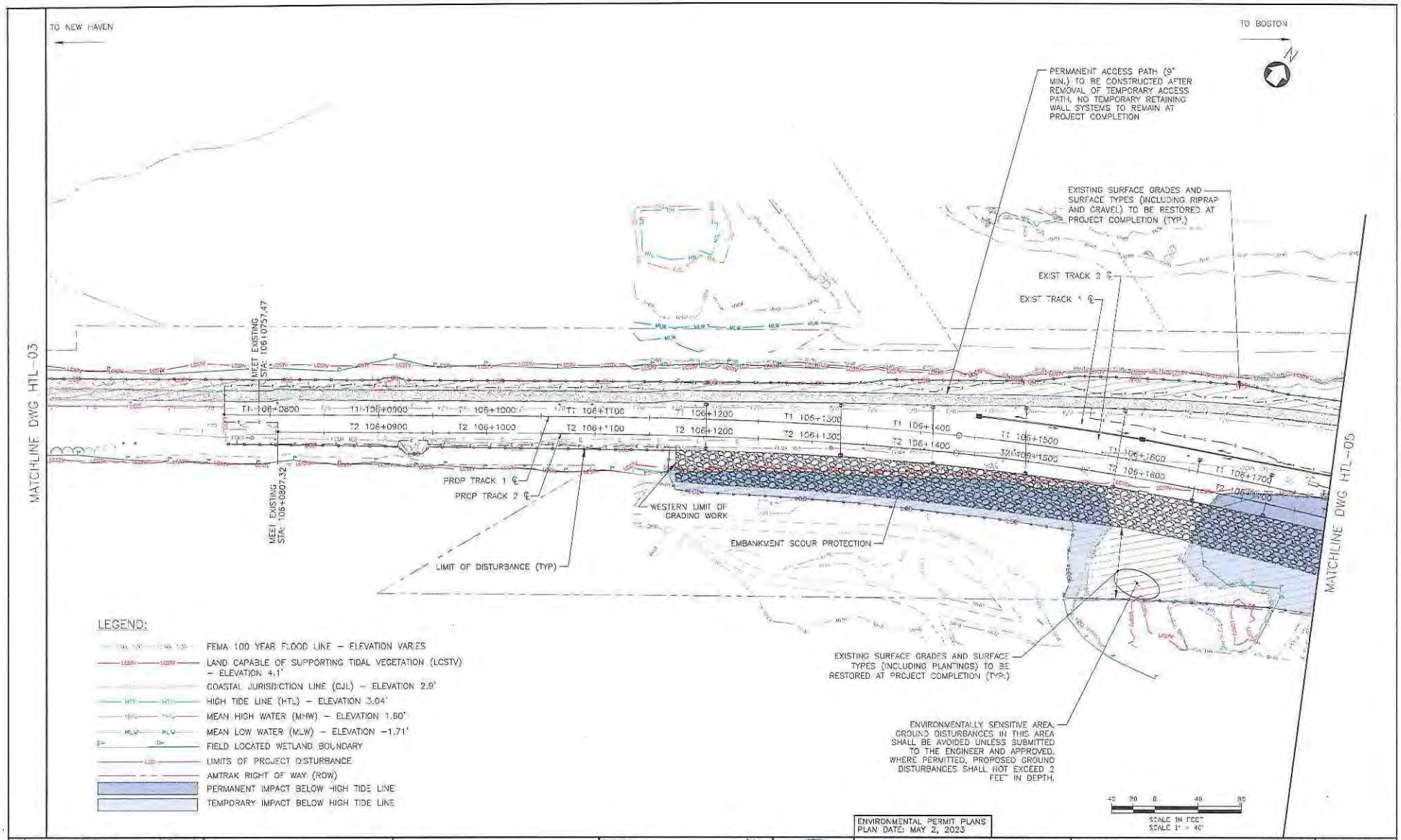
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.	56 OF 140
Dwg No.	HTL-03



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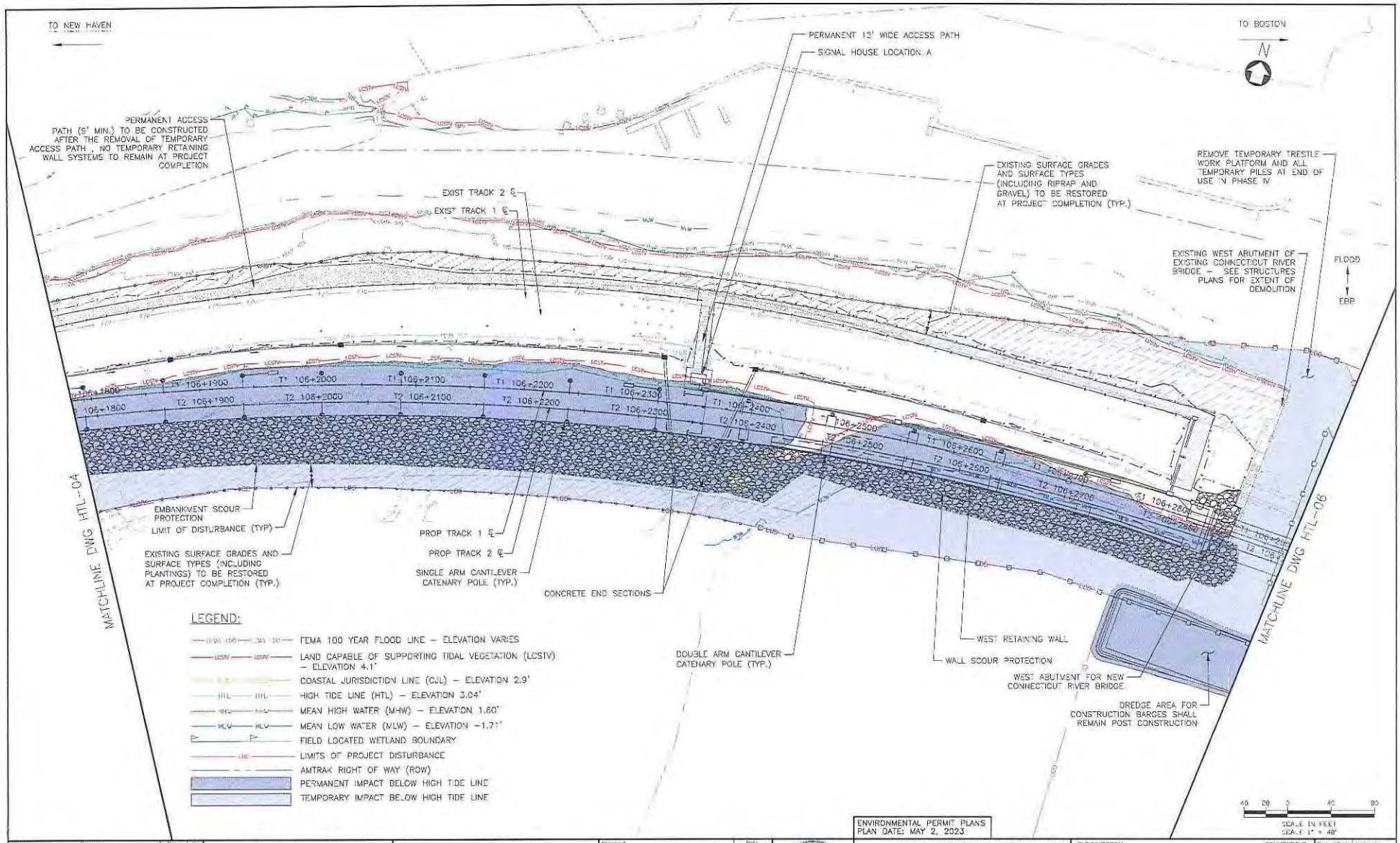
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed CB | Drawn CB/MD | Checked KV | Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 57 OF 128
Dwg No. HTL-04



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PLAN DATE: MAY 2, 2023

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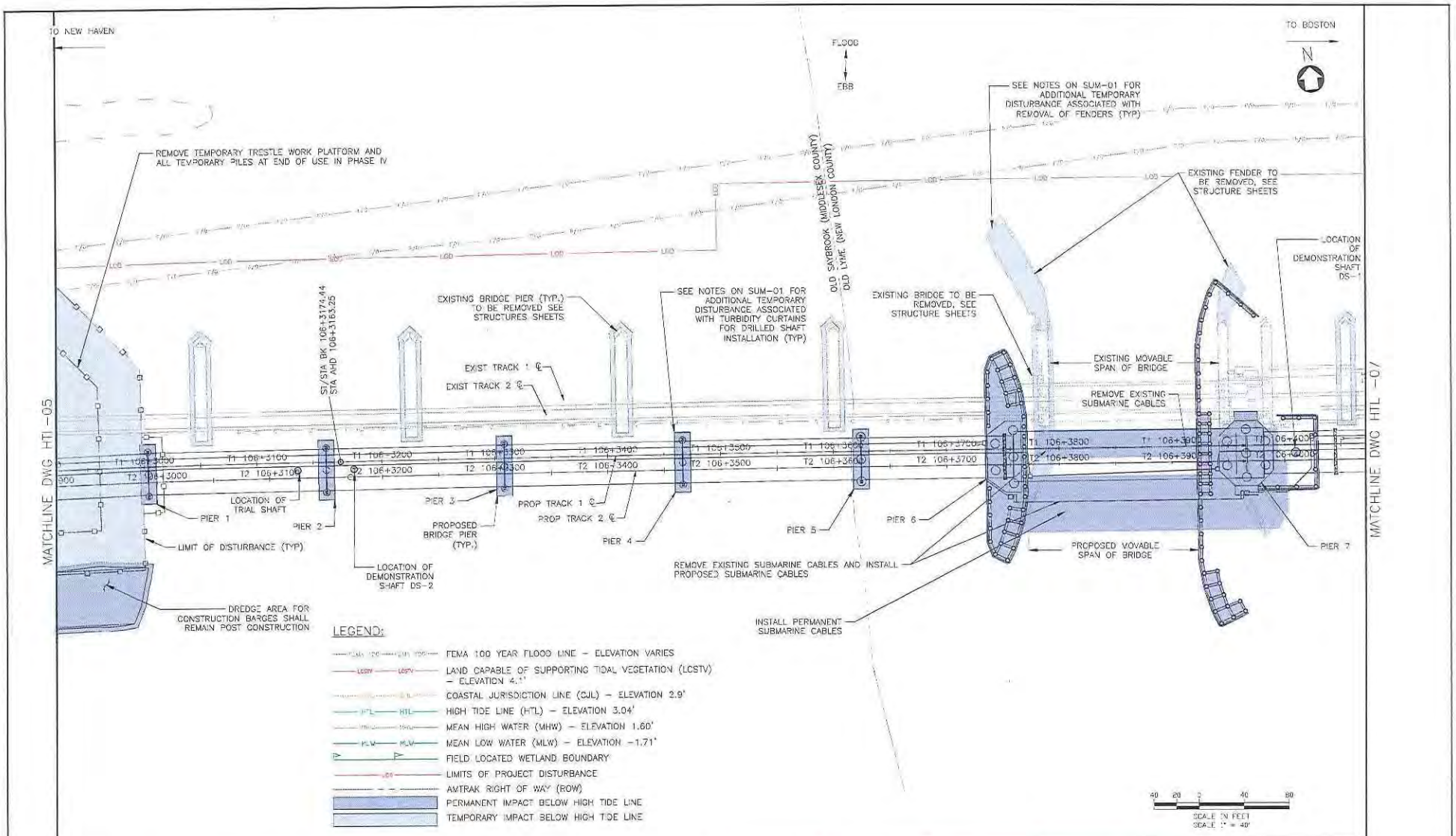
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS#	
Sheet No.	58 OF 145
Dwg No.	HTL-05



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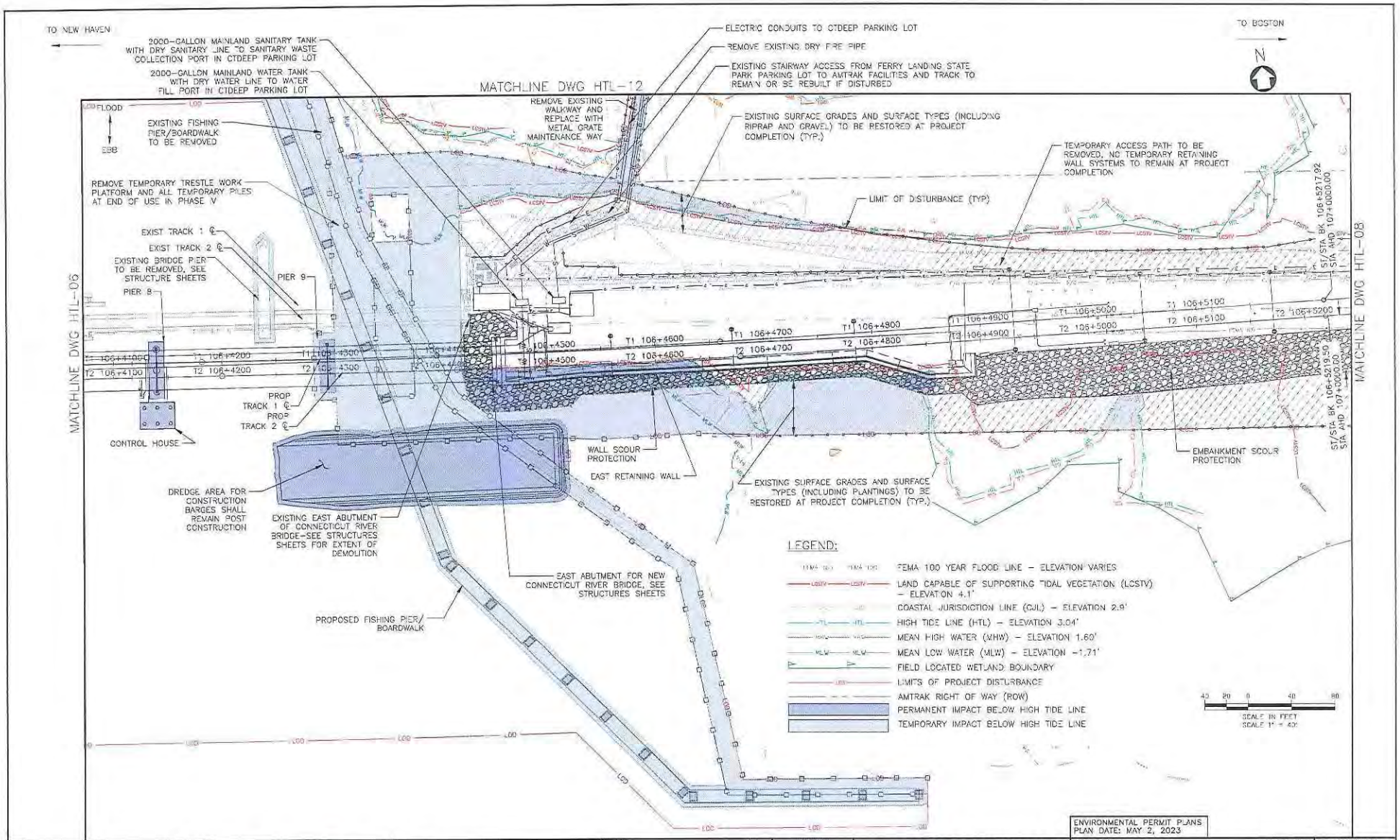
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.	59 OF 140
Dwg No.	HTL-06



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PLAN DATE: MAY 2, 2023

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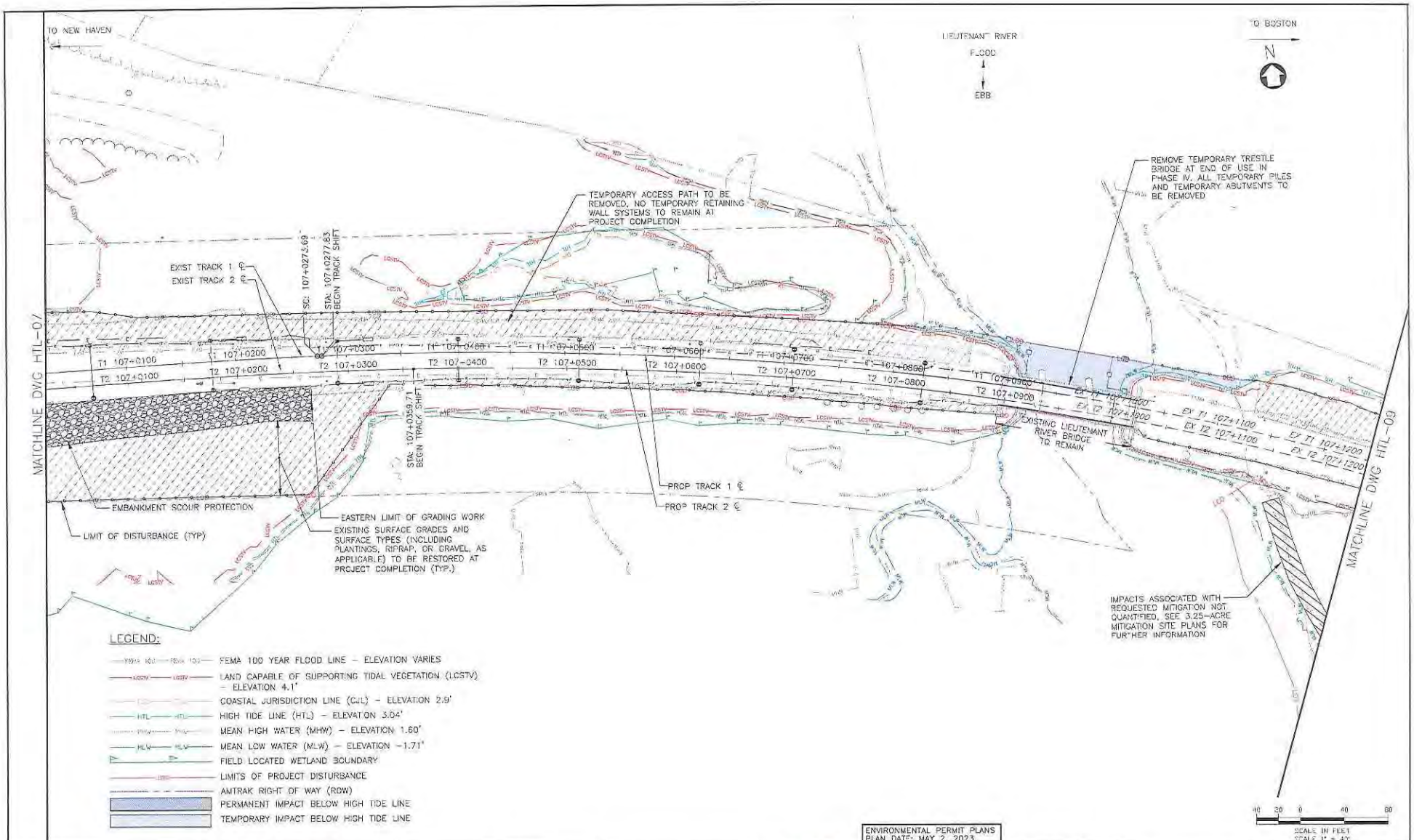
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 60 OF 120
Dwg No. HTL-07



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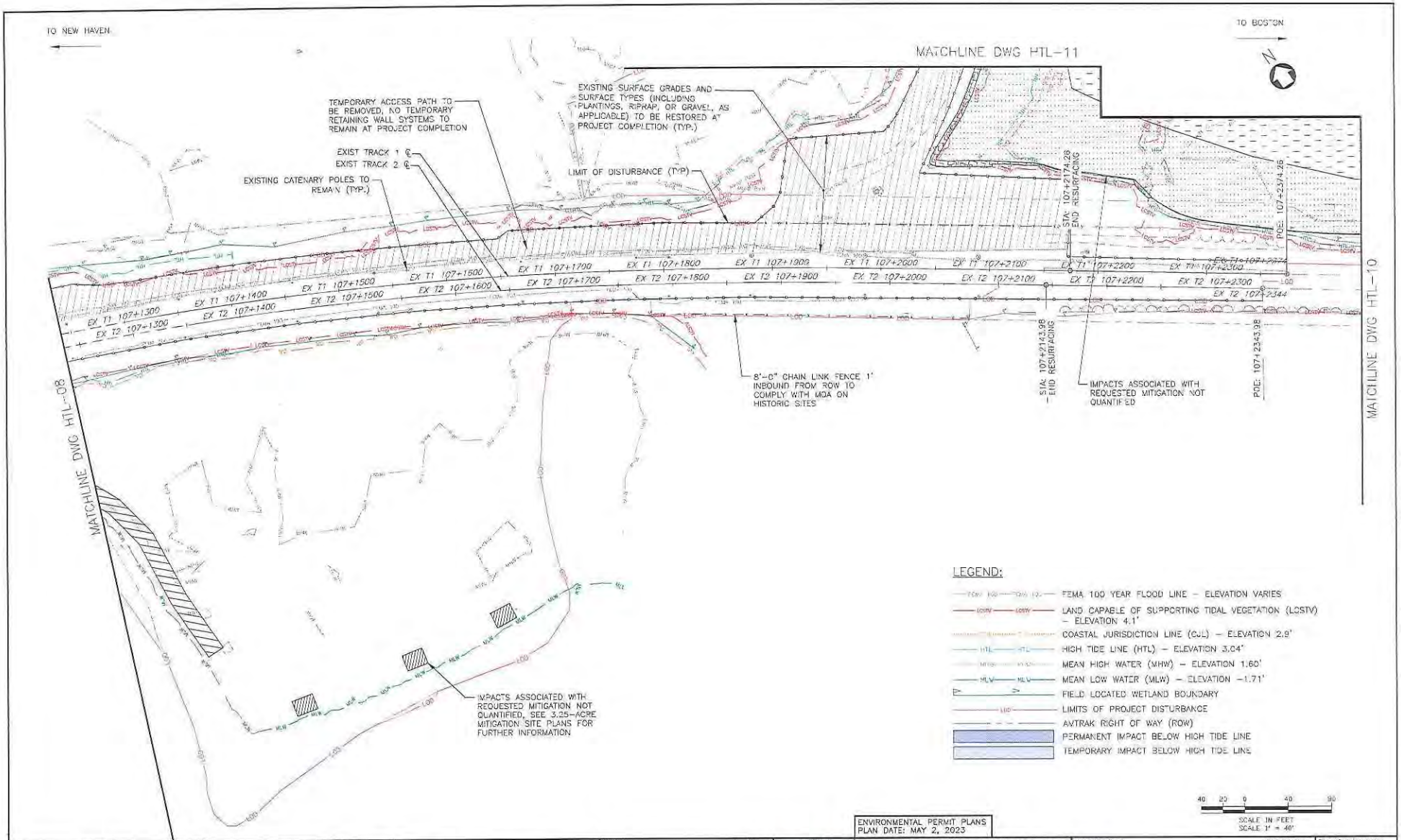
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	61 OF 140
Dwg No.	HTL-08



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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

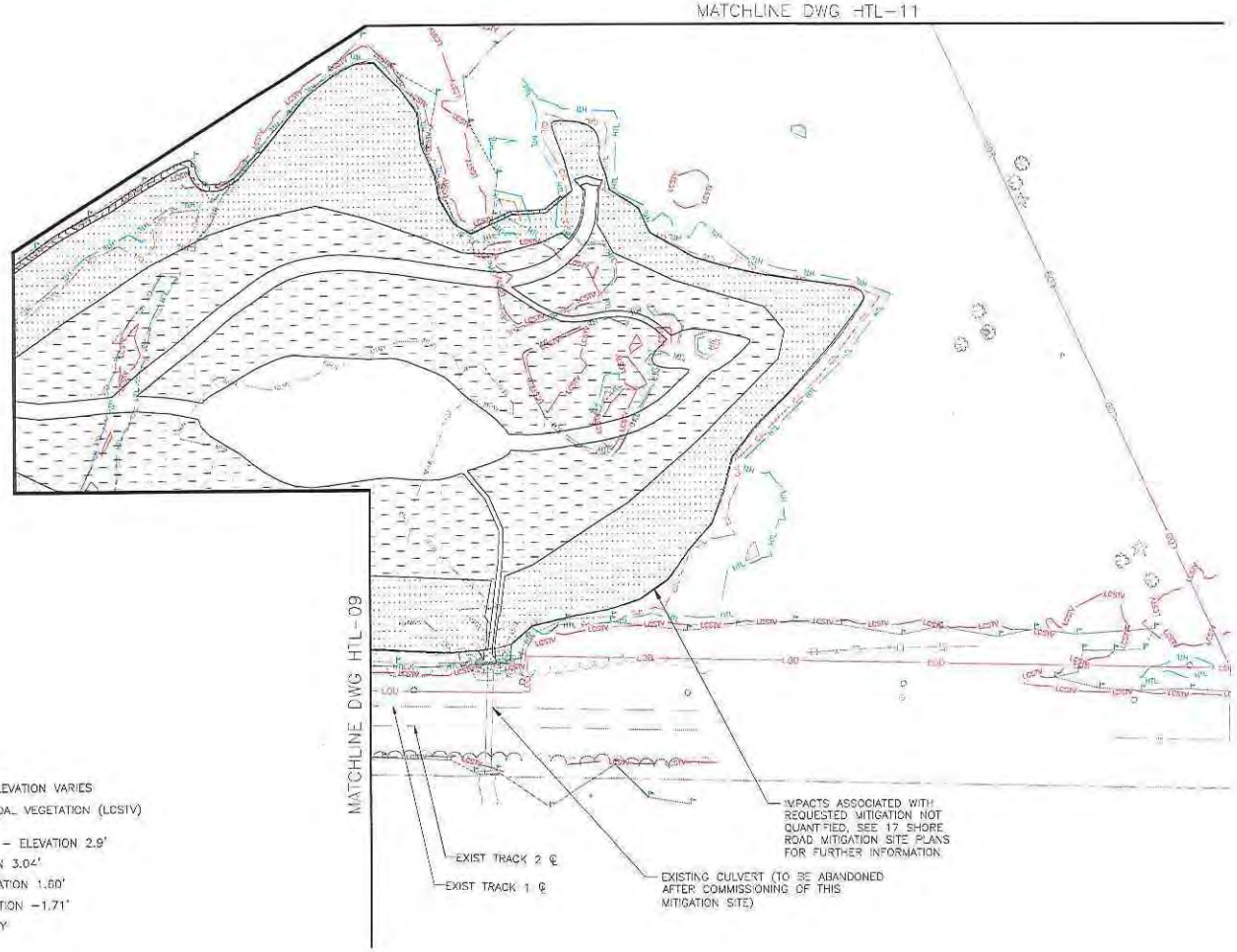
Designed CB | Drawn CBMD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	62 OF 140
Dwg No.	HTL-09

TO NEW HAVEN

TO BOSTON

MATCHLINE DWG HTL-11



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
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- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)
- PERMANENT IMPACT BELOW HIGH TIDE LINE
- TEMPORARY IMPACT BELOW HIGH TIDE LINE

40 20 0 40 80
SCALE IN FEET
SCALE: 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

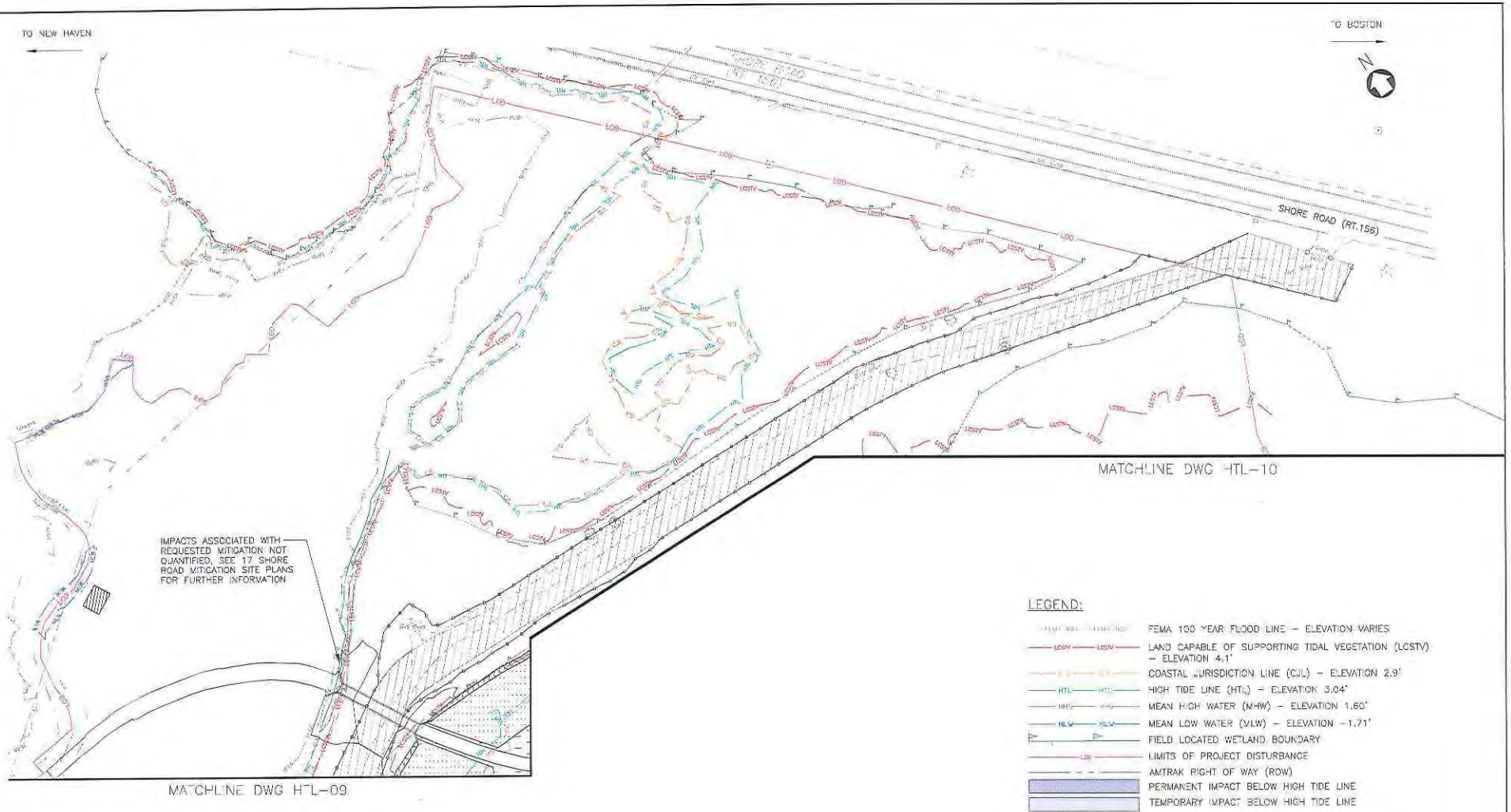
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No:	63 OF 140
Dwg No:	HTL-10



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

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1501 Broadway New York, NY 10036
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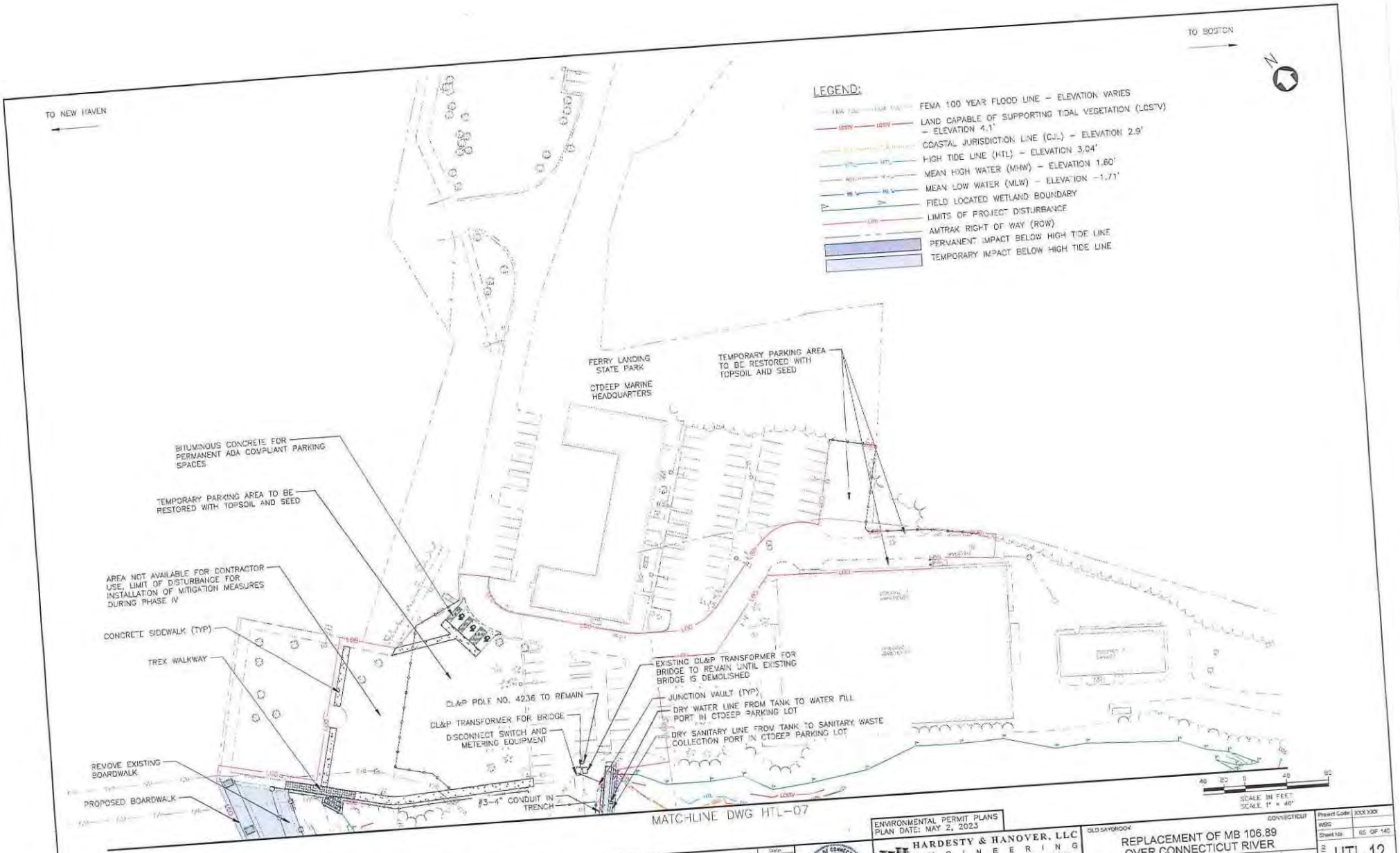
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

HIGH TIDE LINE IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No.	64 OF 140
Dwg No.	HTL-11



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

HARDESTY & HANOVER, LLC
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1501 Broadway New York, NY 10036
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OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
HIGH TIDE LINE IMPACT PLAN
Designed CB Drawn CB/VD Checked KM Date 5/2/2023

Project Code XXX.XXX
WBS
Sheet No. 65 OF 140
Dwg No. HTL-12

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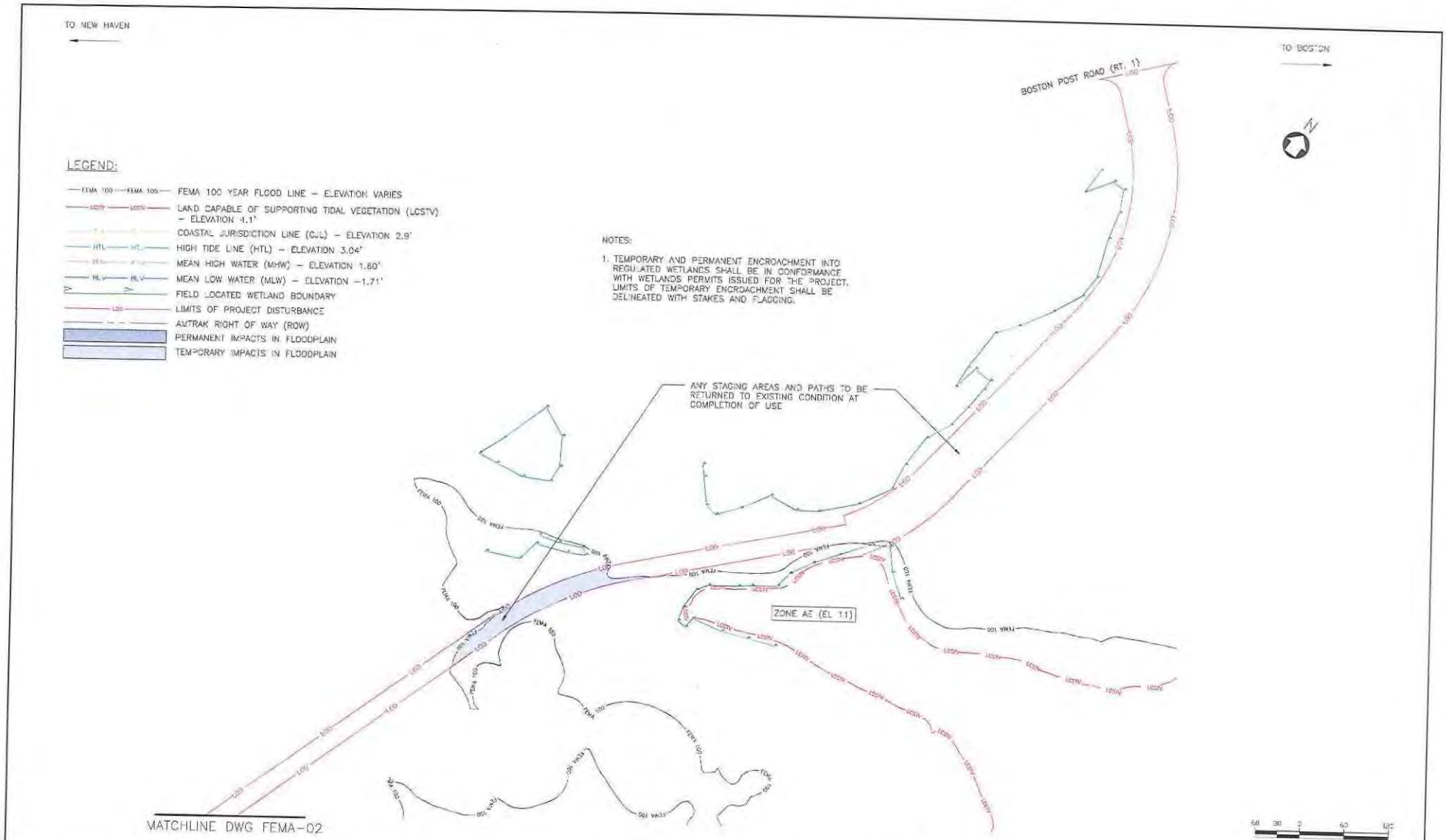

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PLAN DATE: MAY 2, 2023

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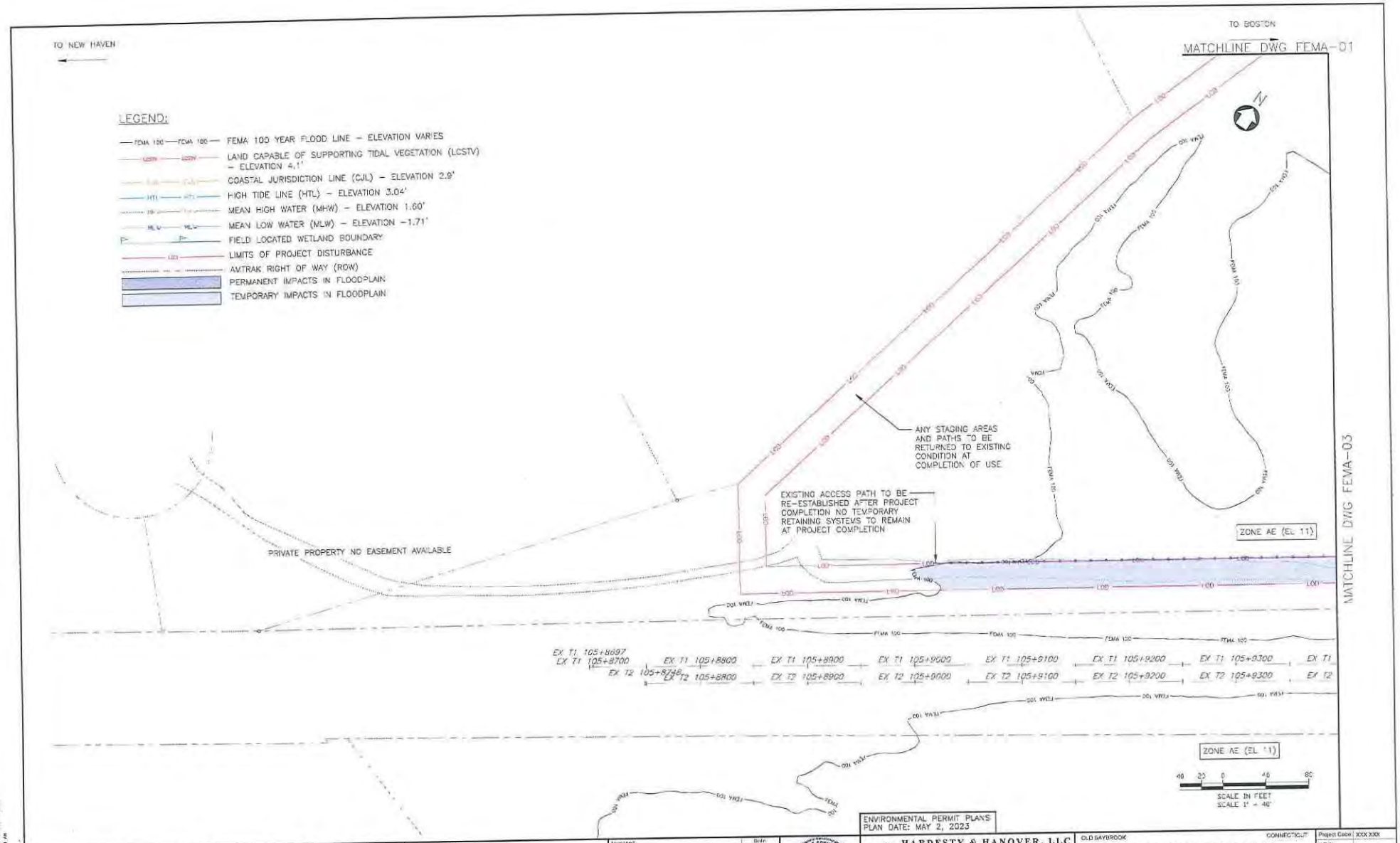
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXXJXXX
WBS:	
Sheet No.	02 OF 148
Dwg No.	FEMA-01



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PLAN DATE: MAY 2, 2023

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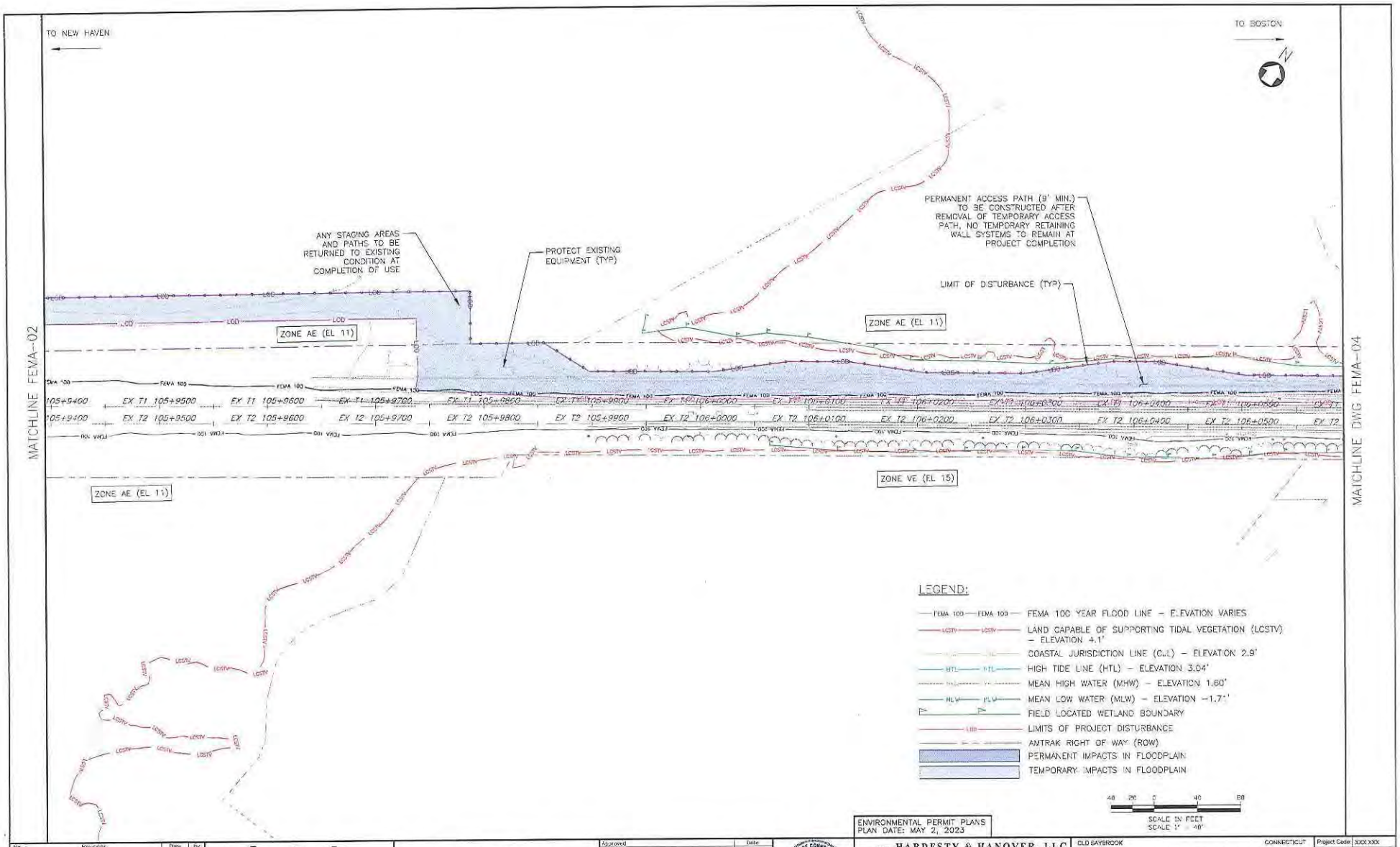
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 07 OF 140
Dwg No. FEMA-02



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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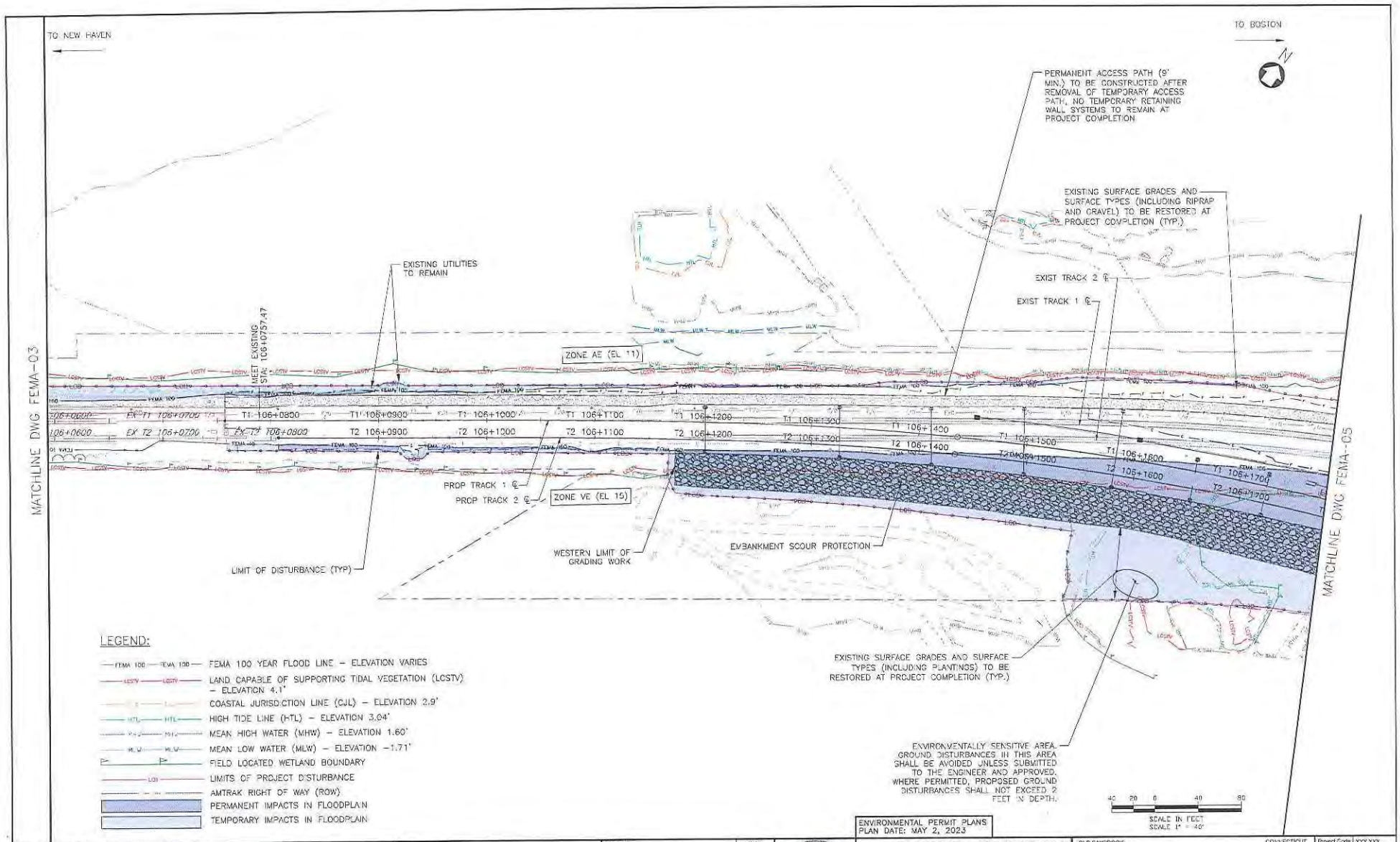
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KV	Date	5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No.	68 OF 140
Dwg No.	FEMA-03



LEGEND:

- FEMA 100 — FEMA 100 — FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
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- PERMANENT IMPACTS IN FLOODPLAIN
- TEMPORARY IMPACTS IN FLOODPLAIN

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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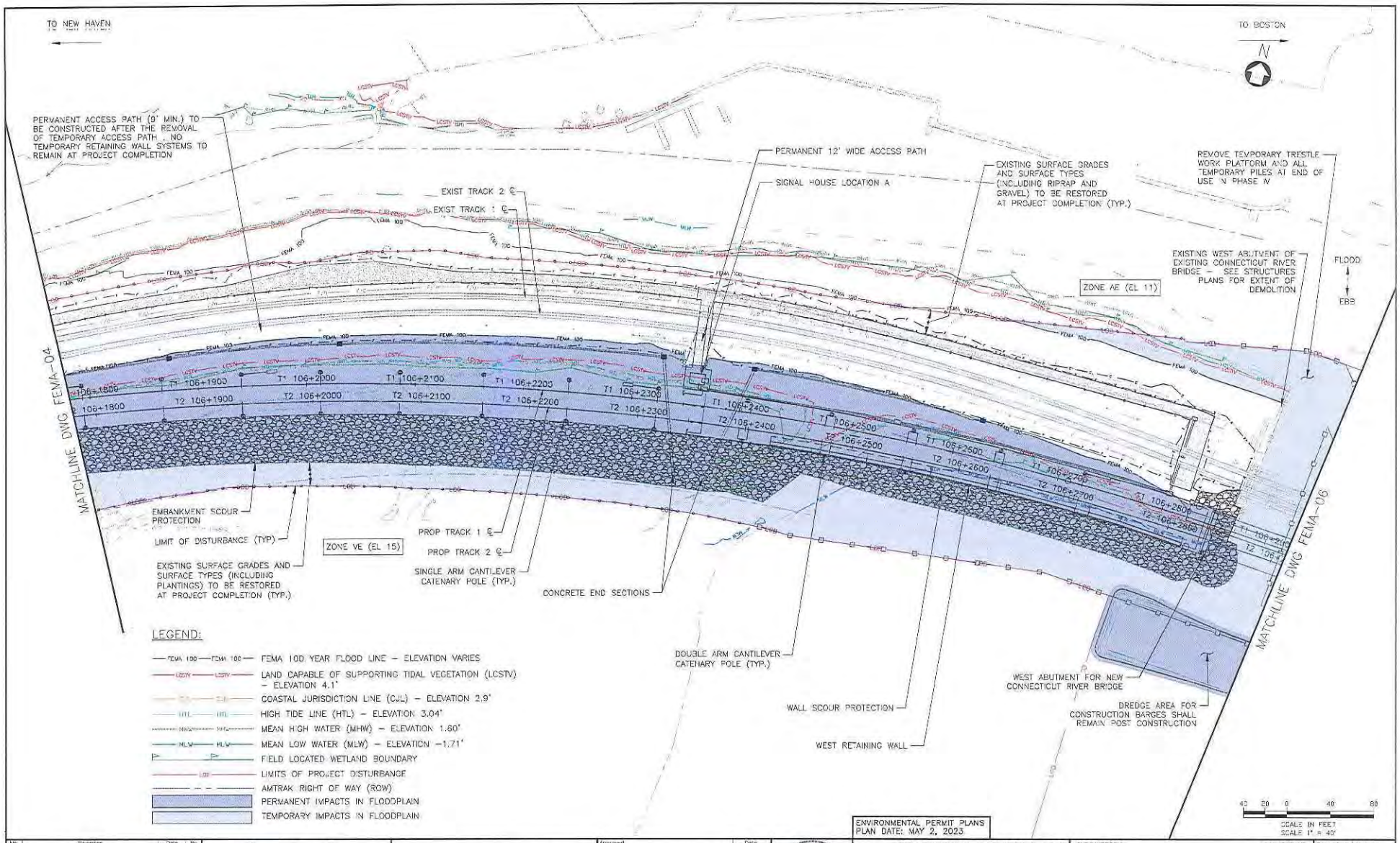
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/VD	Checked	KV	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	69 OF 145
Dwg No.	FEMA-04



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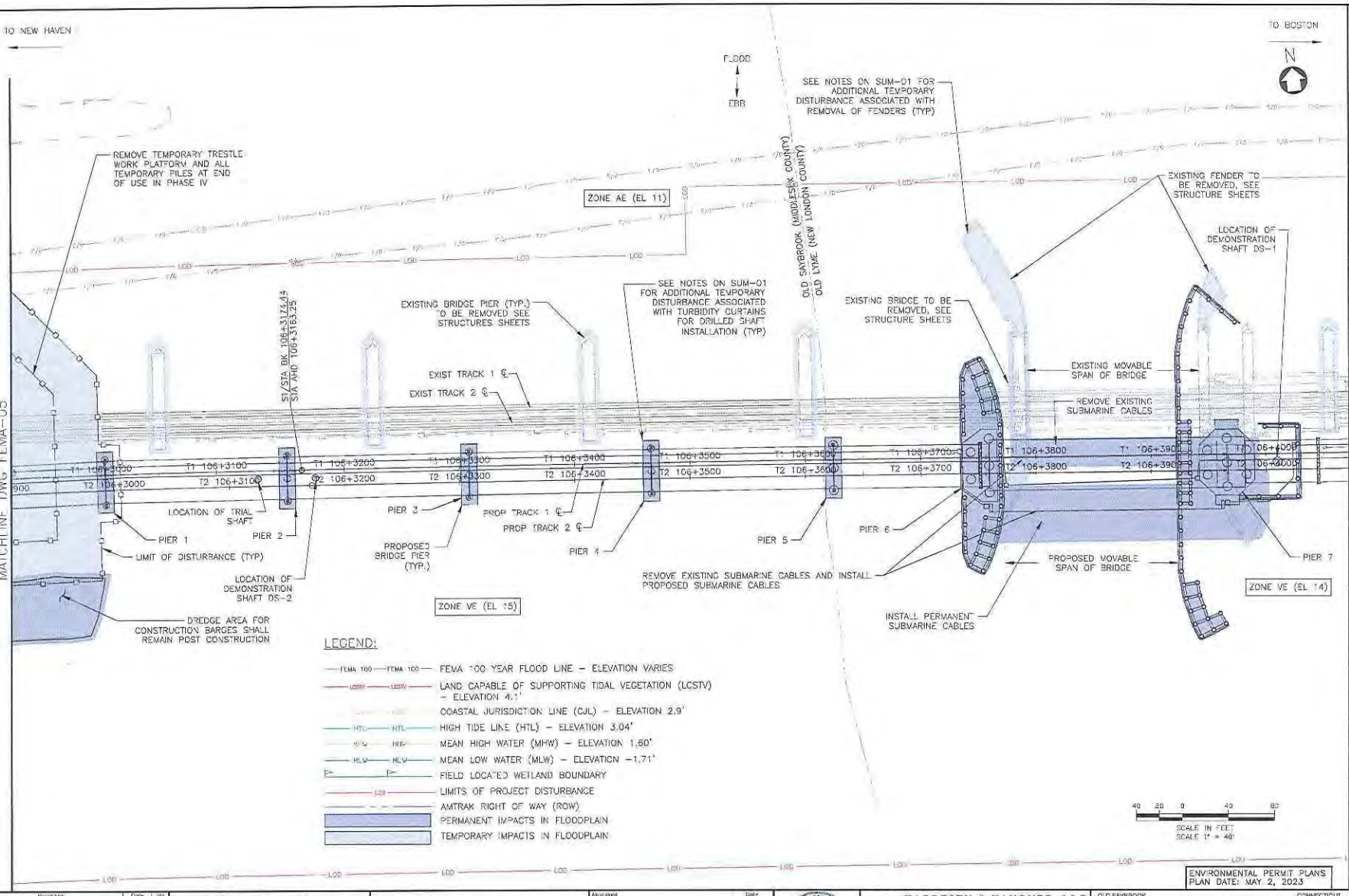
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CBMD	Checked	KV	Date	5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	70 OF 140
Dwg No.	FEMA-05



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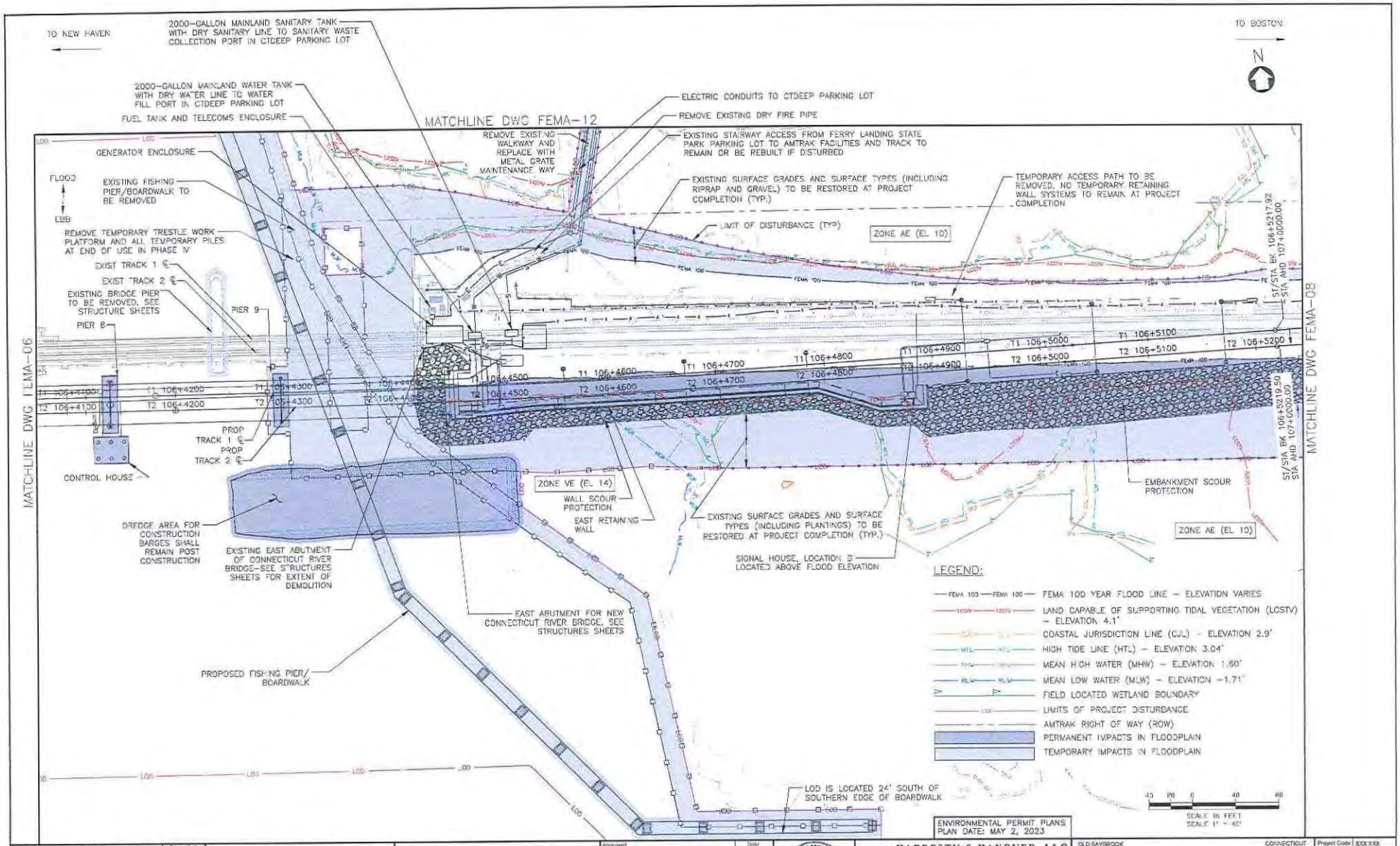
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Contr. XXX XXX
WBS
Sheet No. 71 OF 140
Dwg No. FEMA-06



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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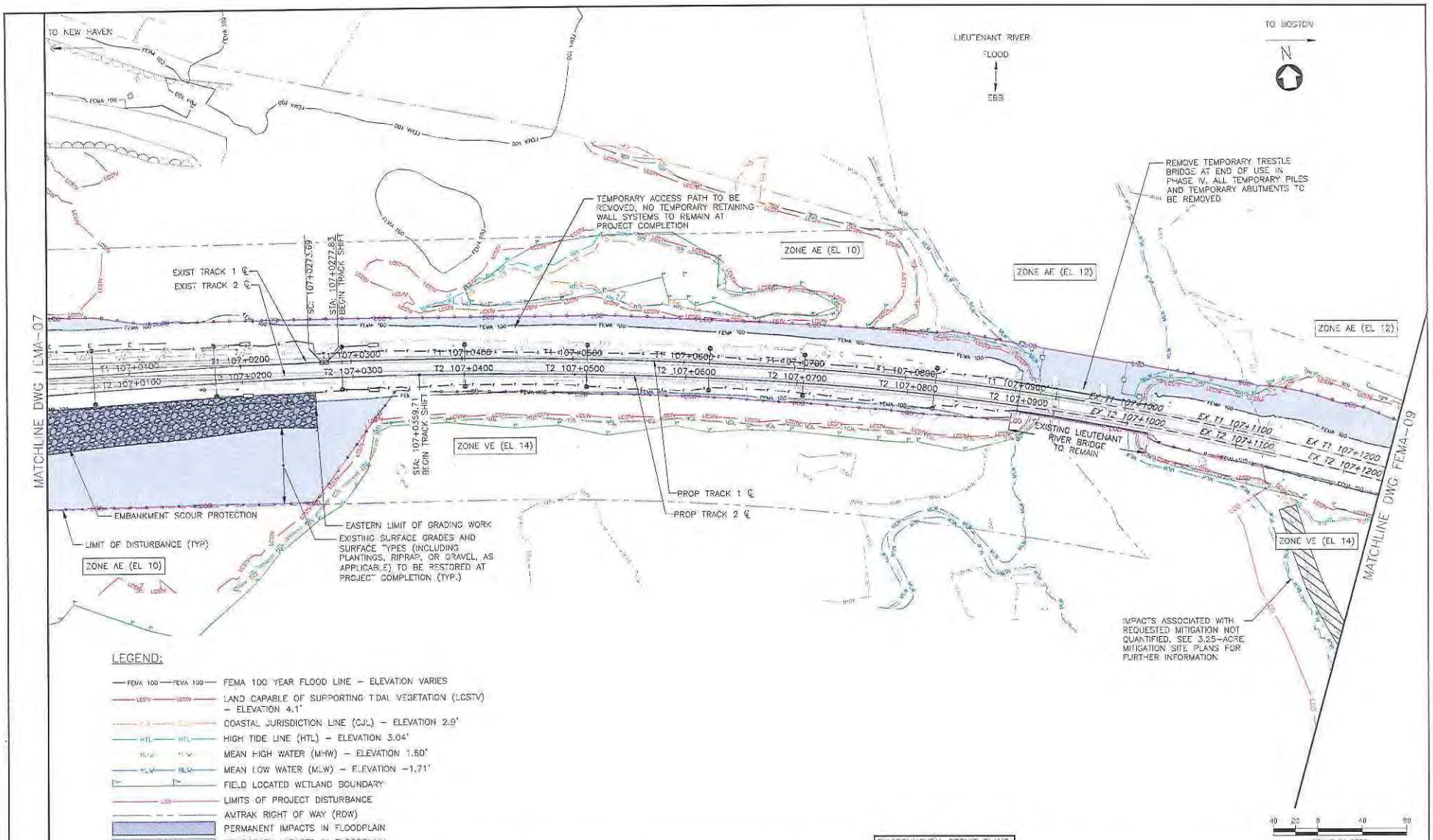
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CS/MD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	72 OF 140
Dwg No.	FEMA-07



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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1501 Broadway New York, NY 10036
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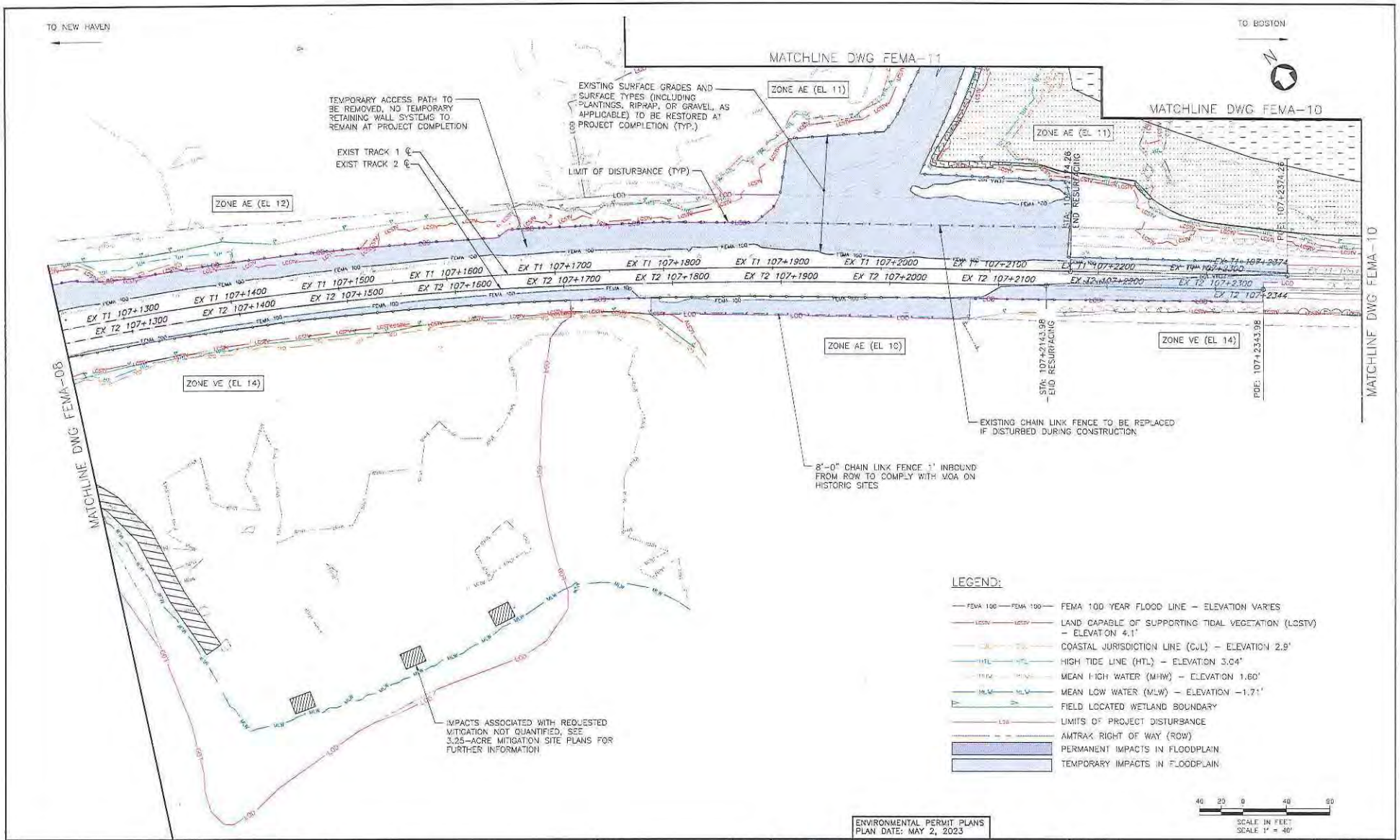
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.:	73 OF 140
Dwg No.:	FEMA-08



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

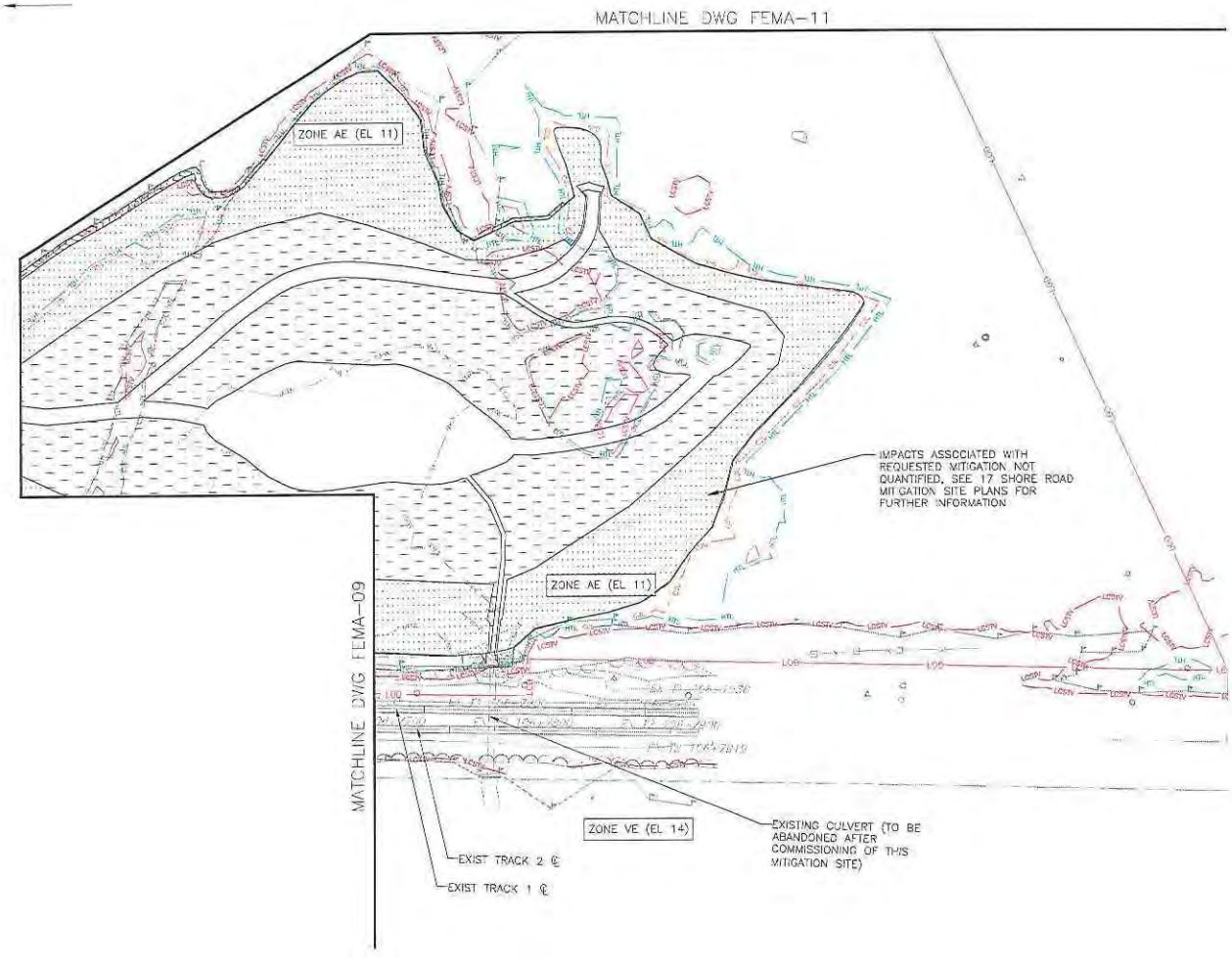
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.	74 OF 140
Dwg No.	FEMA-09



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- PERMANENT IMPACTS IN FLOODPLAIN
- TEMPORARY IMPACTS IN FLOODPLAIN

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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National Railroad Passenger Corporation
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1501 Broadway New York, NY 10036
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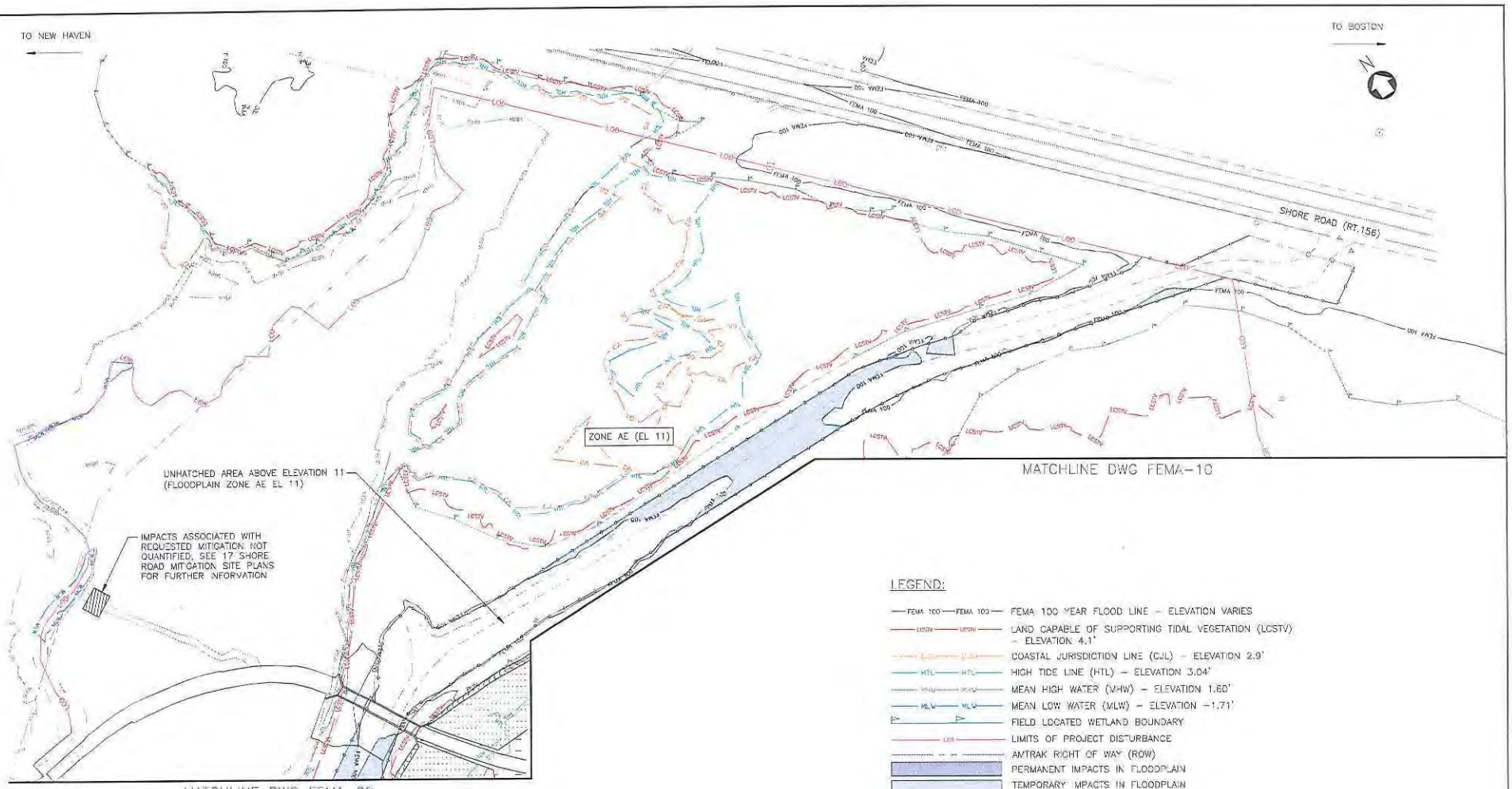
OLD SAYBROOK, CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed	CS	Drawn	CS/MD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	75 OF 140
Dwg No.	FEMA-10



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40 20 0 40 80
SCALE IN FEET
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ENVIRONMENTAL PERMIT PLANS
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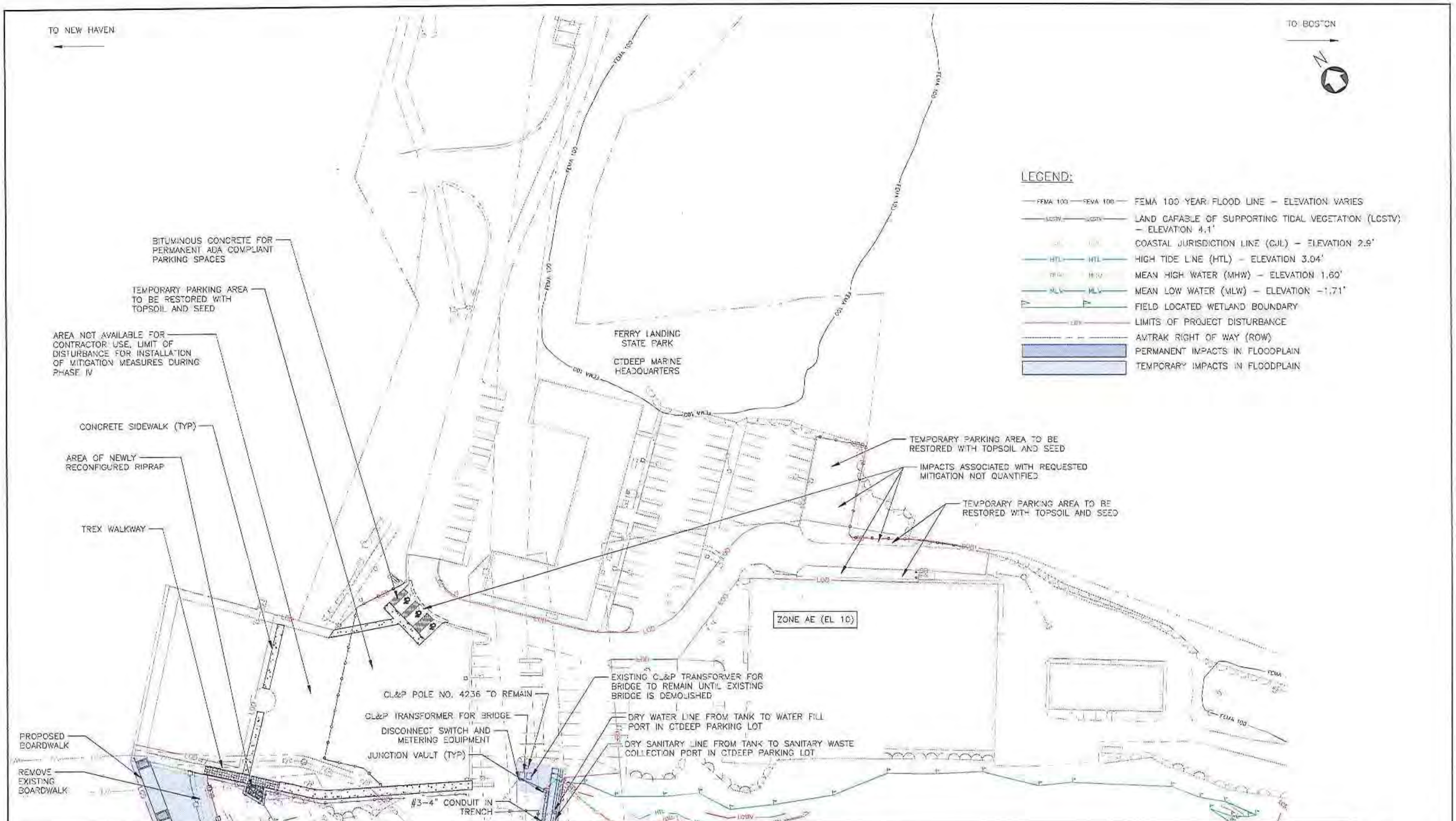
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
FLOODPLAIN IMPACT PLAN

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	76 OF 140
Dwg No.	FEMA-11



MATCHLINE DWG FEMA-07

SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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STATE OF CONNECTICUT – LICENSED PROFESSIONAL ENGINEER

HARDESTY & HANOVER, LLC
ENGINEERING
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Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

FLOODPLAIN IMPACT PLAN

Designed CB Drawn DB/MD Checked KM Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 77 OF 148
Dwg No. FEMA-12

SUGGESTED CONSTRUCTION SEQUENCE

THIS SUGGESTED CONSTRUCTION SEQUENCE PROVIDES A SUMMARY OUTLINE FOR A POTENTIAL SEQUENCE OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR ACTUAL CONSTRUCTION PLANNING, SCHEDULING AND COORDINATION AND ENSURING ALL REQUIRED TEMPORARY ENVIRONMENTAL SAFEGUARDS ARE INSTALLED AND MAINTAINED WITH ALL PERMITS.

PHASE I SUMMARY

PHASE I CONSISTS OF CONSTRUCTING THE NEW BRIDGE, ELECTRIFICATION AND C&S FACILITIES, PART OF THE FENDER SYSTEM AND SUBSTANTIAL PORTIONS OF THE NEAR-BRIDGE APPROACHES IN THEIR ENTIRETY. TWO TRACK RAILROAD SERVICE WILL CONTINUE UNIMPEDED ON THE EXISTING STRUCTURE AND APPROACHES FOR THE DURATION OF THIS PHASE, EXCEPT FOR WINDOWS OF SINGLE TRACK OPERATIONS AS MAY BE PERMITTED BY AMTRAK TO SAFELY ACCOMMODATE NEARBY CONTRACTOR OPERATIONS. TEMPORARY FACILITIES REQUIRED INCLUDE BUT ARE NOT LIMITED TO MOVABLE BRIDGE POWER AND CONTROL SYSTEMS, TEMPORARY ELECTRIFICATION AND C&S SUBMARINE CABLE REROUTING, TEMPORARY OPERATOR'S SHANTY AND ACCESS PLATFORMS. THE EXISTING FERRY PARK LANDING BOARDWALK WILL BE CLOSED FOR CONSTRUCTION. THE NAVIGATION CHANNEL WILL BE SLIGHTLY NARROWED DURING THIS PHASE CONSTRUCTION TO ACCOMMODATE CONSTRUCTION OF THE NEW MOVABLE SPAN NEXT TO THE EXISTING. NAVIGATION OUTAGES WILL BE REQUIRED FOR SUBMARINE CABLE WORK AND PROPOSED FLOAT-IN OF THE NEW MOVABLE SPAN.

PH IA: BEGIN CONSTRUCTION

IA1. MOBILIZE, CLEAR SITE, AND BEGIN SETTING UP TEMPORARY ENVIRONMENTAL AND SECURITY SAFEGUARDS. APPLICABLE TEMPORARY ENVIRONMENTAL SAFEGUARDS TO BE IMPLEMENTED PRIOR TO EACH APPLICABLE INSTALLATION AND DEMOLITION ACTIVITY AND TO REMAIN IN PLACE UNTIL LOCATION IS STABILIZED.

IA2. BEGIN PLANNING, FABRICATION AND PROCUREMENT OF FOUNDATION ELEMENTS, STRUCTURAL STEEL, BRIDGE MACHINERY, BRIDGE ELECTRICAL, ELECTRIFICATION COMPONENTS, AND ALL OTHER CONSTRUCTION ELEMENTS.

IA3. AMTRAK WILL RELOCATE 480V-60HZ POWER TO NORTH SIDE OF TRACKS AT BP 1076.

IA4. INITIATE TEMPORARY ACCESS FROM OLD SAYBROOK AND FROM OLD LYME AND BEGIN APPROACH EMBANKMENT CONSTRUCTION.

IA5. PERFORM APPROPRIATE MITIGATION MEASURES WHICH SHALL INCLUDE BUT NOT BE LIMITED TO THE CONSTRUCTION OF EXCLUSION BARRIERS, TRANSPORTATION OF STATE LISTED PLANT SPECIES, THE INSTALLATION OF FENCING TO PROTECT SENSITIVE AREAS, THE CONSTRUCTION OF MEASURES TO MITIGATE THE LOSS OF RECREATIONAL FISHING, AND INITIAL WETLAND MITIGATION ACTIVITIES TO PERMIT CONSTRUCTION ACCESS CONSTRUCTION.

PH IB: PREPARE TEMPORARY FACILITIES NEEDED DURING CONSTRUCTION

IB1. CONTINUE PHASE IA ACTIVITIES.

IB2. CLOSE FERRY PARK LANDING BOARDWALK TO PUBLIC USE, PERFORM BARGE ACCESS DREDGING ACTIVITIES, AND CONSTRUCT TEMPORARY WORK PLATFORMS.

IB3. INSTALL TEMPORARY FACILITIES FOR THE EXISTING BRIDGE AND RAIL NECESSARY TO ACCOMMODATE CONSTRUCTION OF THE NEW BRIDGE AND RAIL ON THE SOUTH SIDE OF THE EXISTING BRIDGE. THIS INCLUDES BUT IS NOT LIMITED TO: TEMPORARY MOVABLE BRIDGE POWER AND CONTROL SYSTEMS; TEMPORARY BRIDGE ELECTRIFICATION AND C&S CABLE REROUTING; TEMPORARY CASE C ON PLATFORM BETWEEN PIERS 6 AND 7, TEMPORARY C&S ESIC CASE ON PIER 5, AND ALL OTHER TEMPORARY C&S EQUIPMENT LOCATED ON THE EXISTING BRIDGE; ALL TEMPORARY CABLE, TROUGH, DUCT BANKS, VAULTS, AND PULL BOXES ON THE EXISTING BRIDGE; MOVING AND/OR PROTECTING SOUTH-SIDE HIGH VOLTAGE LINE THAT IS MOUNTED ON THE SOUTH FASCIA OF THE EXISTING BRIDGE APPROACH SPANS; AND TEMPORARY OPERATOR'S SHANTY AND ACCESS PLATFORMS. TEMPORARY SAFETY AND SECURITY EQUIPMENT IN THE OPERATOR'S SHANTY AND THE BRIDGE STRUCTURE. DECOMMISSIONING TEMPORARY OPERATING FACILITIES AND ABANDONING SOUTH-SIDE SUBMARINE CABLES.

PH IC: MAJOR CONSTRUCTION (NAVIGATION CHANNEL WIDTH REDUCED)

IC1. CONTINUE PHASE IA AND IB ACTIVITIES AS NEEDED.

IC2. INITIATE CONSTRUCTION ON EAST APPROACH EMBANKMENT AND WEST APPROACH EMBANKMENT. CONSTRUCT WEST APPROACH EMBANKMENT ALLOWING FOR ADEQUATE TIME FOR SURCHARGE CONSOLIDATION.

IC3. CONSTRUCT FOUNDATIONS FOR BRIDGE WEST AND EAST ABUTMENTS; PIERS 1 TO 6, 8 AND 9; AND RETAINING WALLS. CONSTRUCT ABUTMENT AND PIER SUBSTRUCTURES AND RETAINING WALLS.

IC4. CONSTRUCT PORTION OF WEST SIDE AND EAST SIDE FENDER SYSTEMS. NAVIGATION CHANNEL AT BRIDGE IS REDUCED FROM EXISTING APPROXIMATELY 136-FT TO 128-FT WIDTH. DEMOLISH PORTION OF EXISTING WEST SIDE AND EAST SIDE FENDER SYSTEMS.

IC5. CONSTRUCT FOUNDATION AND SUBSTRUCTURE OF BASCULE PIER 7.

IC6. CONSTRUCT BRIDGE APPROACH SPANS SUPERSTRUCTURE AND DECK, EXCEPT APPROACH SPAN 8, TO BE CONSTRUCTED AFTER INSTALLATION OF THE BASCULE SPAN REAR SECTION IN PHASE IC10.

IC7. CONSTRUCT NEW CONTROL HOUSE.

IC8. INSTALL PREASSEMBLED AND WIRED SIGNAL ENCLOSURES ON THE RIGHT-OF-WAY AND CONSTRUCT C&S FACILITIES ON APPROACHES AND BRIDGE APPROACH SPANS. INSTALL ALL PERMANENT TROUGH, CABLE, CONDUIT, OR DUCT BANKS NECESSARY BETWEEN NEW LOCATIONS. INSTALL ALL TEMPORARY CABLE ROUTING BETWEEN THE NEW C&S CH, THE NEW LOCATION A AND THE TEMPORARY CASES AND EQUIPMENT CONSTRUCTED TO PROVIDE TEMPORARY SIGNALING DURING CONSTRUCTION.

IC9. CONSTRUCT TRUNNION TOWERS AND REAR PORTION OF BASCULE SPAN WITH COUNTERWEIGHTS. COMPLETE CONSTRUCTION OF APPROACH SPANS. CONSTRUCT TEMPORARY SHORING TO SUPPORT REAR SECTION AND ALLOW FOR INSTALLATION OF COUNTERWEIGHT MATERIAL.

IC10. BEGIN BRIDGE MACHINERY AND ELECTRICAL SYSTEMS INSTALLATIONS.

IC11. CLOSE CHANNEL TO NAVIGATION.

IC12. INSTALL PERMANENT SUBMARINE AND MOUNTED CABLES.

IC13. REOPEN CHANNEL TO NAVIGATION.

IC14. COMPLETE APPROACH GRADING AND SUBBALLAST.

IC15. CONSTRUCT TRACKWORK, OVERHEAD CATENARY SYSTEMS ON APPROACHES AND BRIDGE APPROACH SPANS.

PH ID: BASCULE SPAN FLOAT-IN (NAVIGATION DURATION SUSPENSION)

ID1. CLOSE CHANNEL TO NAVIGATION.

ID2. FLOAT-IN FORWARD PORTION OF BASCULE SPAN.

ID3. CONNECT BASCULE FORWARD AND REAR PORTIONS. FORWARD AND REAR SPLICING INCLUDES TRUSS GUSSET PLATE CONNECTIONS, FLOOR SYSTEM CONNECTIONS, UPPER AND LOWER LATERAL BRACING CONNECTIONS, TRACK AND OTHER MISCELLANEOUS ATTACHMENTS.

ID4. RAISE BASCULE SPAN AND SECURE IN OPEN POSITION.

ID5. REOPEN CHANNEL TO NAVIGATION.

PH IE: COMPLETE MAJOR CONSTRUCTION WITH EXISTING BRIDGE STILL IN FULL SERVICE

IE1. COMPLETE PHASE IC ACTIVITIES AS NEEDED.

IE2. COMPLETE BASCULE SPAN TRUSS ASSEMBLY, INCLUDING TIES, TRACKS, MITER RAIL ASSEMBLIES, AND ELECTRICAL APPURTENANCES AND PERFORM FINAL BALANCING OF MOVABLE SPAN.

IE3. PERFORM INTERIM TESTING AND COMMISSION MOVABLE SPAN FOR FULL OPERABILITY. FINAL TESTING TO BE COMPLETED AFTER EXISTING BRIDGE REMOVAL AND WITH ALL PERMANENT ELEMENTS IN PLACE.

IE4. FINALIZE TRACK, RAIL ELECTRIFICATION FOR TRACK 2 AND C&S FACILITIES ON THE NEW BRIDGE FOR SIGNALING ON THE NEW BRIDGE (EXCEPT TIE INS).

PHASE II SUMMARY

PHASE II CONSISTS OF CONSTRUCTION OF TRACK, ELECTRIFICATION AND SIGNAL TIE-INS AT THE EAST AND WEST ENDS OF THE PROJECT TO ACTIVATE NEW TRACK 2 FOR RAIL SERVICE AT THE END OF THE WORK OF THIS PHASE. DURING TRACK 2 TIE-IN WORK, SINGLE TRACK SERVICE WILL CONTINUE ON TRACK 1.

PH II: TRACK 2 SWITCHOVER, ONE TRACK OPERATION ON TRACK 1

II-1. INITIATE ONE-TRACK SERVICE ON TRACK 1.

II-2. CONSTRUCT NEW TRACK 2 TRACK, ELECTRIFICATION AND ASSOCIATED C&S TIE-INS AT EAST AND WEST ENDS OF PROJECT.

II-3. OPEN TRACK 2 TO SERVICE (TRACK 1 IN SERVICE ON EXISTING BRIDGE, TRACK 2 IN SERVICE ON NEW BRIDGE).

II-4. INSTALL SAFETY AND SECURITY EQUIPMENT FOR TRACK 2 AND AT THE OPERATOR'S SHANTY (OR OTHER PROPOSED LOCATION FOR THIS EQUIPMENT).

II-5 REMOVE OLD LOCATION B AND SIGNAL 2W TO ALLOW THE BUILDOUT OF THE NEW TRACK 1.

II-6 FINALIZE ELECTRIFICATION FOR TRACK 1 (EXCEPT TIE INS).

PHASE III SUMMARY

PHASE III CONSISTS OF CONSTRUCTION OF TRACK, ELECTRIFICATION AND SIGNAL TIE-INS AT THE EAST AND WEST ENDS OF THE PROJECT TO ACTIVATE NEW TRACK 1 FOR RAIL SERVICE AT THE END OF THE WORK OF THIS PHASE. DURING TRACK 1 TIE-IN WORK, SINGLE TRACK SERVICE WILL CONTINUE ON TRACK 2.

PH III: TRACK 1 SWITCHOVER, ONE TRACK OPERATION ON TRACK 2

III-1. INITIATE ONE-TRACK SERVICE ON TRACK 2.

III-2. CONSTRUCT NEW TRACK 1 TRACK, ELECTRIFICATION AND ASSOCIATED C&S TIE-INS AT EAST AND WEST ENDS OF PROJECT.

III-3. OPEN TRACK 1 TO SERVICE (BOTH TRACKS IN SERVICE OVER NEW BRIDGE).

III-4. INSTALL SAFETY AND SECURITY EQUIPMENT FOR TRACK 1.

PHASE IV SUMMARY

DURING PHASE IV WITH RAIL SERVICE ENTIRELY ON THE NEW BRIDGE, THE EXISTING BRIDGE WILL BE DEMOLISHED, THE NEW FENDER SYSTEM COMPLETED, TEMPORARY FACILITIES DECOMMISSIONED AND REMOVED, FERRY PARK LANDING BOARDWALK RESTORED, FINAL ELECTRICAL SERVICE FOR THE NEW BRIDGE INSTALLED, CONTROL HOUSE UTILITIES ON EXISTING GRADE INSTALLED, AND SITE WORK WILL BE FINISHED. A NAVIGATION OUTAGE WILL BE REQUIRED FOR FLOAT-OUT OF THE EXISTING BRIDGE MOVABLE SPAN.

PH IVA: FLOAT-OUT EXISTING MOVABLE SPAN (NAVIGATION SHORT DURATION SUSPENSION)

IVA1. RAISE EXISTING BASCULE SPAN TO FULLY OPEN POSITION AND INSTALL TEMPORARY SUPPORTS.

IVA2. DEMOLISH EXISTING COUNTERWEIGHT.

IVA3. CLOSE CHANNEL TO NAVIGATION.

IVA4. LOWER EXISTING BASCULE SPAN TO CLOSED POSITION.

IVA5. PREPARE AND FLOAT-OUT EXISTING BASCULE SPAN.

IVA6. OPEN CHANNEL TO NAVIGATION.

PH IVB: DEMOLISH EXISTING BRIDGE AND FACILITIES

IVB1. DEMOLISH EXISTING BRIDGE APPROACH SPANS.

IVB2. DEMOLISH EXISTING BRIDGE SUBSTRUCTURES AND FOUNDATIONS DESIGNATED FOR REMOVAL.

IVB3. COMPLETE FENDER SYSTEM CONSTRUCTION (NAVIGATION CHANNEL WIDTH 150-FT).

IVB4. REMOVE ALL REMAINING TRACK AND RAIL SYSTEMS FACILITIES NO LONGER IN SERVICE.

IVB5. INSTALL UTILITY STRUCTURES ON GRADE AND CONNECT PERMANENT ELECTRICAL SERVICE FOR THE NEW BRIDGE.

IVB6. PERFORM FINAL TESTING OF THE NEW MOVABLE SPAN.

IVB7. CONSTRUCT NEW FERRY PARK LANDING BOARDWALK AND OPEN TO PUBLIC.

IVB8. REMOVE TEMPORARY CONSTRUCTION FACILITIES AND TEMPORARY ACCESS AND RESTORE SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT ENVIRONMENTAL PERMITS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	XXXX	MM/DD/YY	XXX

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

SUGGESTED CONSTRUCTION SEQUENCE

Designed	Drawn	Checked	Date
CJR	JC	SJT	5/2/2023

Project Code	XXX XXX
WBS	000000
Sheet No.	7th OF 140
Dwg No.	PH-01

CONSTRUCTION STAGING AND ENVIRONMENTAL SAFEGUARDS NOTES:

PHASE IA AND IB: INITIATE TEMPORARY ACCESS FROM OLD SAYBROOK AND FROM OLD LYME

1. MOBILIZE, CLEAR SITE, AND BEGIN SETTING UP TEMPORARY ENVIRONMENTAL AND SECURITY SAFEGUARDS.
2. STATE-LISTED PLANT SPECIES WITHIN IMPACT AREAS SHALL BE RELOCATED PRIOR TO ANY DISTURBANCE IN THEIR VICINITY AND TRANSPLANTED AT AN OFF-SITE LOCATION. SEE TIDAL WETLANDS MITIGATION PLAN REPORT FOR ADDITIONAL INFORMATION ON TRANSPLANTING.
3. INITIATE OLD SAYBROOK TEMPORARY ACCESS:
   - A. GAIN VEHICULAR SITE ACCESS FROM ROUTE 1 (BOSTON POST ROAD) THROUGH EASEMENTS IN OLD SAYBROOK TO AMTRAK RIGHT OF WAY.
   - B. INSTALL TEMPORARY ENVIRONMENTAL AND SECURITY SAFEGUARDS IN ADVANCE OF SEQUENTIAL PORTIONS OF CONSTRUCTION.
   - C. CONSTRUCT TEMPORARY RETAINING WALL SYSTEMS AND TEMPORARY ACCESS PATH STARTING AT WEST AND WORKING EASTWARD UTILIZING PATH AS CONSTRUCTION STAGING FOR NEXT PORTION OF PATH. NO DISRUPTION TO ADJACENT TRACK USAGE.
   - D. THE CONTRACTOR SHALL SUBMIT THE PLAN FOR TEMPORARY TRACK CROSSING TO THE ENGINEER FOR APPROVAL WHERE PERMITTED GROUND DISTURBANCES TO ENVIRONMENTALLY SENSITIVE AREA SHALL NOT EXCEED 2 FEET IN DEPTH.
   - E. IF APPROVED DESIGN OBTAINED BY CONTRACTOR FROM AMTRAK, INSTALL TEMPORARY TRACK CROSSING AND PLACE FILL AND TEMPORARY EARTH RETAINING SYSTEM TO PROVIDE TRAVERSABLE GRADE DOWN TO SOUTHERN TEMPORARY TRESTLE PLATFORM AREA.
   - F. PLACE TEMPORARY TRESTLE PIERS AND WORK PLATFORMS FROM THE TEMPORARY TRESTLE WORK PLATFORM AT THE LOCATION OF THE PROPOSED RETAINING WALL WESTERLY TOWARDS THE SOUTHERN TEMPORARY CONSTRUCTION LAY DOWN AREA. ALL WORK TO BE DONE BEHIND SEDIMENTATION CONTROL BARRIERS OR TURBIDITY CURTAINS.
   - G. INSTALL TURBIDITY CURTAINS AROUND AREA OF DREDGING FOR BARGE ACCESS. PERFORM DREDGING ACTIVITY ON THE WEST BANK OF THE CONNECTICUT RIVER FROM BARGE WORKING TOWARDS THE SHORE MAINTAINING TURBIDITY CURTAIN AROUND AREAS OF DISTURBANCE. DREDGED MATERIAL TO BE REMOVED FROM SITE VIA BARGE.
   - H. INSTALL TURBIDITY CURTAINS AROUND AREA OF TEMPORARY TRESTLE WORK PLATFORM.
   - I. INSTALL TEMPORARY TRESTLE PILINGS AND WORK PLATFORM WITHIN CONNECTICUT RIVER. INSTALLATION TO BE FROM A COMBINATION OF ACCESS FROM THE TEMPORARY ACCESS PATH PREVIOUSLY CONSTRUCTED AND PORTIONS OF THE TEMPORARY TRESTLE WORK PLATFORM COMPLETED, AND FROM BARGE LOCATED WITHIN CONNECTICUT RIVER WHERE DEPTH ACCESS ALLOWS.
   - J. TEMPORARY TRESTLE WORK PLATFORM UNDER EXISTING BRIDGE TO BE PROVIDED SUCH THAT A MINIMUM OF 14' OF VERTICAL CLEARANCE IS AVAILABLE FOR VEHICULAR TRAFFIC ON THE WORK PLATFORM. THIS VERTICAL CLEARANCE MAY NOT BE ABLE TO BE MAINTAINED ONCE THE PROPOSED BRIDGE SPANS ARE INSTALLED WITH A LOWER LOW CHORD ELEVATION AND CONTRACTOR'S SEQUENCING SHOULD TAKE THIS INTO ACCOUNT FOR WHEN THESE SPANS ARE INSTALLED COMPARED TO WHEN VEHICULAR ACCESS IS REQUIRED TO THE SOUTH PORTION OF THE TEMPORARY TRESTLE WORK PLATFORM. FOR THE PROPOSED SPANS THE CONTRACTOR MAY NEED TO ADJUST CONSTRUCTION SEQUENCING, LIMIT EQUIPMENT HEIGHTS, ADJUST THE TEMPORARY TRESTLE ROADWAY ELEVATION, INITIALLY SET THE NEW SPAN STEEL TEMPORARILY HIGHER, OR OTHERWISE ALLOW FOR CONSTRUCTION EQUIPMENT ACCESS.
4. INITIATE OLD LYME TEMPORARY ACCESS:
   - A. CONSTRUCT 17 SHORE ROAD CULVERT AND INSTALL MITIGATION MEASURES AT 17 SHORE ROAD AND THE 3.25 ACRE PARCEL. SEE MITIGATION PLANS FOR ADDITIONAL INFORMATION REGARDING SEQUENCING.
   - B. GAIN VEHICULAR SITE ACCESS FROM ROUTE 156 (SHORE ROAD) THROUGH EASEMENT IN OLD LYME TO AMTRAK RIGHT OF WAY. ANY WORK REQUIRED TO CONSTRUCT AN ACCESS ROAD OR LAYDOWN AREA WILL BE DONE WITH TEMPORARY ENVIRONMENTAL SAFEGUARDS IN PLACE.
   - C. INSTALL TEMPORARY ENVIRONMENTAL AND SECURITY SAFEGUARDS IN ADVANCE OF SEQUENTIAL PORTIONS OF CONSTRUCTION.
   - D. CONSTRUCT TEMPORARY RETAINING WALL SYSTEMS AND TEMPORARY ACCESS PATH STARTING AT EAST AND WORKING WESTWARD UTILIZING PATH AS CONSTRUCTION STAGING FOR NEXT PORTION OF PATH. NO DISRUPTION TO ADJACENT TRACK USAGE.
   - E. INSTALL TEMPORARY EASTERN ABUTMENT FOR TEMPORARY TRESTLE BRIDGE ACROSS THE LIEUTENANT RIVER FROM PREVIOUSLY CONSTRUCTED TEMPORARY ACCESS PATH.
   - F. INSTALL TEMPORARY WESTERN ABUTMENT AND ANY NECESSARY TEMPORARY PILINGS FOR TEMPORARY TRESTLE BRIDGE ACROSS THE LIEUTENANT RIVER FROM EXISTING TRACK 1 (MAY REQUIRE SHORT TRACK SERVICE DISRUPTION DUE TO LACK OF ACCESS FROM WEST AND SMALL BARGE ACCESS FROM LIEUTENANT RIVER TO BE COORDINATED WITH AMTRAK). NAVIGATION OF LIEUTENANT RIVER TO MATCH OR EXCEED OPENING OF EXISTING NAVIGATION RESTRICTIONS OF EXISTING LIEUTENANT RIVER BRIDGE.
   - G. INSTALL TEMPORARY TRESTLE BRIDGE OVER LIEUTENANT RIVER (MAY REQUIRE SHORT TRACK SERVICE DISRUPTION TO BE COORDINATED WITH AMTRAK).
   - H. CONTINUE WITH CONSTRUCTION OF TEMPORARY RETAINING WALLS AND TEMPORARY ACCESS PATH FROM EAST AND WORKING WESTWARD UTILIZING PATH AS CONSTRUCTION STAGING FOR NEXT PORTION OF PATH. NO DISRUPTION TO ADJACENT TRACK USAGE.
   - I. INSTALL NON-PUBLIC CONSTRUCTION PERSON USE PEDESTRIAN ACCESS MEASURES FROM CTDEEP EXISTING ACCESS POINT OVER THE EXISTING MAINTENANCE WALKWAY TO EXISTING ACCESS PATH AND STAIRS.
   - J. CONSTRUCT EAGLE LANDING BOARDWALK IN ADVANCE OF DECOMISSIONING FERRY LANDING BOARDWALK.
   - K. CLOSE FERRY PARK LANDING BOARDWALK TO PUBLIC USE PRIOR TO DREDGING ACTIVITY AND INSTALLATION OF TEMPORARY TRESTLE WORK PLATFORM ON OLD LYME SHORE. INSTALL TURBIDITY CURTAINS AROUND AREA OF BOARDWALK. REMOVE PORTIONS OF FERRY PARK LANDING BOARDWALK WHICH WILL CONFLICT WITH DREDGING ACTIVITY AND TEMPORARY TRESTLE WORK PLATFORMS.
   - L. INSTALL TURBIDITY CURTAINS AROUND AREA OF DREDGING FOR BARGE ACCESS. PERFORM DREDGING ACTIVITY ON THE EAST BANK OF THE CONNECTICUT RIVER FROM BARGE WORKING TOWARDS THE SHORE MAINTAINING TURBIDITY CURTAIN AROUND AREAS OF DISTURBANCE. DREDGED MATERIAL TO BE REMOVED FROM SITE VIA BARGE.
   - M. INSTALL TURBIDITY CURTAINS AROUND AREA OF TEMPORARY TRESTLE WORK PLATFORM.
   - N. INSTALL TEMPORARY TRESTLE PILINGS AND WORK PLATFORM. INSTALLATION TO BE FROM A COMBINATION OF ACCESS FROM THE TEMPORARY ACCESS PATH PREVIOUSLY CONSTRUCTED AND PORTIONS OF THE TEMPORARY TRESTLE WORK PLATFORM COMPLETE AS WELL AS FROM BARGE LOCATED WITHIN RIVER WHERE DEPTH ACCESS ALLOWS.
   - O. TEMPORARY TRESTLE WORK PLATFORM UNDER EXISTING BRIDGE TO BE PROVIDED SUCH THAT A MINIMUM OF 14' OF VERTICAL CLEARANCE IS AVAILABLE FOR VEHICULAR TRAFFIC ON THE WORK PLATFORM. THIS VERTICAL CLEARANCE MAY NOT BE ABLE TO BE MAINTAINED ONCE THE PROPOSED BRIDGE SPANS ARE INSTALLED WITH A LOWER LOW CHORD ELEVATION AND CONTRACTOR'S SEQUENCING SHOULD TAKE THIS INTO ACCOUNT FOR WHEN THESE SPANS ARE INSTALLED COMPARED TO WHEN VEHICULAR ACCESS IS REQUIRED TO THE SOUTH PORTION OF THE TEMPORARY TRESTLE WORK PLATFORM. FOR THE PROPOSED SPANS THE CONTRACTOR MAY NEED TO ADJUST CONSTRUCTION SEQUENCING, LIMIT EQUIPMENT HEIGHTS, ADJUST THE TEMPORARY TRESTLE ROADWAY ELEVATION, INITIALLY SET THE NEW SPAN STEEL TEMPORARILY HIGHER, OR OTHERWISE ALLOW FOR CONSTRUCTION EQUIPMENT ACCESS.
   - P. CONSTRUCTION ACCESS TO TEMPORARILY IMPACTED AREA TO SOUTH OF EMBANKMENT TO THE EAST OF THE TEMPORARY TRESTLE WORK PLATFORM MAY EITHER BE A CONTINUATION OF THE TEMPORARY TRESTLE WORK PLATFORMS OR TEMPORARY WOODEN MATS.

PHASE IC: INITIATE CONSTRUCTION ON EAST APPROACH EMBANKMENT AND WEST APPROACH EMBANKMENT

3. BEGIN APPROACH EMBANKMENT CONSTRUCTION IN OLD SAYBROOK AND OLD LYME. (SEE WEST EMBANKMENT CONSTRUCTION NOTES, SHEET GEO-04)
   - A. MAINTAIN CONTINUED TEMPORARY ENVIRONMENTAL AND SECURITY SAFEGUARDS IN ADVANCE OF SEQUENTIAL PORTIONS OF CONSTRUCTION.
   - B. INSTALL TEMPORARY EARTH RETAINING SYSTEM AT TOE OF PROPOSED RIPRAP PRIOR TO ANY EXCAVATION ACTIVITIES.
   - C. FOR BOTH APPROACHES, PERFORM EXCAVATION ACTIVITIES FROM TEMPORARY TRESTLE WORK PLATFORMS OR FROM PREVIOUSLY CONSTRUCTED APPROACH EMBANKMENT AREAS.
   - D. EXCAVATED MATERIAL WHICH IS ANTICIPATED AS UNSUITABLE FOR REUSE TO BE REMOVED FROM SITE EITHER VIA VEHICULAR ACCESS ON THE TEMPORARY ACCESS PATHS OR VIA BARGE FROM THE TEMPORARY TRESTLE WORK PLATFORMS.
   - E. SURCHARGED PORTIONS OF THE WEST EMBANKMENT SHALL NOT DISRUPT THE USE OF EXISTING TRACK 1.
   - F. REMOVE PORTIONS OF THE TEMPORARY TRESTLE WORK PLATFORMS AS REQUIRED FOR CONTINUED CONSTRUCTION OF THE EMBANKMENTS.
   - G. EXCAVATED MATERIAL FROM THE EXISTING EMBANKMENTS TO PROVIDE BENCHING BETWEEN THE EXISTING EMBANKMENT AND THE PROPOSED EMBANKMENT WILL BE REUSED ONSITE.
   - H. REMOVE TEMPORARY TRACK CROSSING PRIOR TO INITIATING PHASE II.

PHASE IC: TEMPORARY ENVIRONMENTAL SAFEGUARDS

1. INSTALL COFFERDAMS FOR BRIDGE WEST AND EAST ABUTMENTS; PIER 9; AND RETAINING WALLS.
2. INSTALL STEEL CASING WITH VIBRATORY HAMMERS AND DRILLED SHAFTS WITH CONCRETE CAPS FOR PIERS 1 TO 8 BEHIND TURBIDITY CURTAINS.
3. DREDGED MATERIAL FROM THE PIERS WILL BE REMOVED FROM SITE VIA BARGE AND DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.
4. CONSTRUCT ABUTMENT AND PIER SUBSTRUCTURES AND RETAINING WALLS ALL BEHIND COFFERDAMS, TEMPORARY EARTH RETAINING SYSTEMS, OR TURBIDITY CURTAINS AS PREVIOUSLY INSTALLED.
5. CONTINUE TO RELOCATE TURBIDITY CURTAINS AROUND AND/OR IMMEDIATELY ADJACENT TO THE WORK AREA DURING EACH CONSTRUCTION ACTIVITY EXPECTED TO PRODUCE DEBRIS AND/OR SEDIMENT. TO MINIMIZE CONSTRUCTION-RELATED TURBIDITY, A FULL-DEPTH TURBIDITY CURTAIN WILL BE DEPLOYED PRIOR TO DRIVING ANY SHEET PILE OR SHAFT CASINGS OR PERFORMING ANY DREDGING/EXCAVATING WORK. DUE TO STRONG TIDES AND CURRENTS, THE FABRIC FOR THE CURTAINS TO BE COMPOSED OF A HEAVY WOVEN PERVIOUS MATERIAL TO CREATE A FLOW-THROUGH MEDIA, WHICH WILL REDUCE THE PRESSURE ON THE CURTAINS AND KEEP THEM IN THE SAME RELATIVE SHAPE AND LOCATION AT ALL TIDES AND RIVER FLOWS. DEBRIS NETS, TURBIDITY CURTAINS AND/OR FLOATING BOOMS WILL BE PLACED AS NECESSARY. TURBIDITY LIMITS WILL BE ESTABLISHED, AND MONITORS DEPLOYED TO MEASURE LEVELS DURING CONSTRUCTION.
6. CONSTRUCT EAST SIDE FENDER SYSTEM AND DEMOLISH EXISTING EAST SIDE FENDER SYSTEM BEHIND TURBIDITY CURTAINS.
7. CLOSE CHANNEL TO NAVIGATION, SEE SC-05 FOR SUBMARINE CABLE SUGGESTED CONSTRUCTION PHASING.

PHASE IVB: DEMOLITION ENVIRONMENTAL SAFEGUARDS

1. INSTALL TEMPORARY ENVIRONMENTAL SAFEGUARDS INCLUDING TEMPORARY TURBIDITY CURTAINS AND DEBRIS NETS FOR DEMOLITION OF APPROACH SPANS AND DEMOLISH EXISTING BRIDGE APPROACH SPANS.
2. INSTALL COFFERDAMS AROUND EACH OF THE EXISTING BRIDGE SUBSTRUCTURES AND FOUNDATIONS DESIGNATED FOR REMOVAL.
3. DEMOLISH EXISTING BRIDGE SUBSTRUCTURES AND FOUNDATIONS DESIGNATED FOR REMOVAL. EXISTING STONE PIERS WILL BE DEMOLISHED BEHIND COFFERDAMS. THE EXISTING TIMBER PILES COMPRISING THE PIER FOUNDATIONS AND THE FENDER SYSTEM WILL BE EITHER PULLED OR CUT OFF TWO (2) FEET BELOW THE MUDLINE. ALL BRIDGE COMPONENTS AND DEBRIS WILL BE REMOVED BY BARGE. NO FOREIGN MATERIAL SHALL BE INSTALLED AT THE LOCATION OF THE PIER REMOVALS WITHIN THE CONNECTICUT RIVER. NO NEW MATERIAL SHALL BE PLACED IN THESE LOCATIONS. THE EXISTING MATERIAL FROM AROUND THE PIERS SHALL BE REDISTRIBUTED NATURALLY.

PHASE IVB6: REMOVE TEMPORARY CONSTRUCTION ACCESS AND RESTORE SITE

1. REMOVE TEMPORARY TRESTLE WORK PLATFORMS INLCUDING ALL TEMPORARY PILES FROM EACH ABUTMENT AS THEY ARE NO LONGER NECESSARY.
2. CONSTRUCT NEW FERRY PARK LANDING BOARDWALK AND CTDEEP PARKING LOT PERMANENT ADA PARKING SPACES, SIDEWALKS, AND TREX WALKWAYS AND OPEN TO PUBLIC.
3. REMOVE TEMPORARY ACCESS PATH FILL, TEMPORARY RETAINING WALL SYSTEMS, AND TEMPORARY TRESTLE BRIDGE INCLUDING TEMPORARY ABUTMENTS AND PILINGS AT LIEUTENANT RIVER IN A SIMILAR REVERSE SEQUENTIAL ORDER AS INSTALLED (MAY REQUIRE SHORT TRACK SERVICE DISRUPTION TO BE COORDINATED WITH AMTRAK).
4. RETURN AREA DISTURBED BY TEMPORARY ACCESS PATH TO PRE-EXISTING GRADES AND SURFACING. SEE TIDAL WETLANDS MITIGATION PLAN REPORT FOR ADDITIONAL INFORMATION ON SITE RESTORATION OF TEMPORARILY DISTURBED VEGETATED WETLAND AREAS.
5. REMOVE TEMPORARY CONSTRUCTION FACILITIES AND RESTORE SITE.
6. TEMPORARY ENVIRONMENTAL SAFEGUARDS TO BE MAINTAINED IN APPLICABLE AREAS UNTIL STABILIZATION OF AREA AND THEN REMOVED IN FULL.

NOTE:

1. CONTRACTOR IS RESPONSIBLE FOR ANY BORINGS NECESSARY TO FACILITATE THE DESIGN OF THE TEMPORARY RETAINING SYSTEMS FOR THE TEMPORARY ACCESS PATHS.
2. CONTRACTOR IS RESPONSIBLE FOR ANY BORINGS NECESSARY TO FACILITATE THE DESIGN OF THE TEMPORARY WORK PLATFORMS.
3. CONTRACTOR IS RESPONSIBLE FOR ANY BORINGS NECESSARY TO FACILITATE THE DESIGN OF THE TEMPORARY TRESTLE BRIDGE FOR THE OLD LYME TEMPORARY ACCESS PATH.

SEE SHEET PH-01 FOR SUGGESTED CONSTRUCTION SEQUENCE.

ENVIRONMENTAL COMPLIANCE NOTES

1. ALL ON-SITE CONSTRUCTION STAFF WILL ATTEND TRAINING BY A QUALIFIED ENVIRONMENTAL SCIENTIST AND RECEIVE A COPY OF FINAL WILDLIFE PROTECTION PLAN PRIOR TO BEGINNING WORK ON SITE.

2. A QUALIFIED ENVIRONMENTAL SCIENTIST WILL BE PRESENT WHEN WORK IS BEING CONDUCTED.

3. NOISE-GENERATING CONSTRUCTION ACTIVITIES MUST BEGIN PRIOR TO MAY 1 AND CONTINUE WITHOUT PROLONGED INTERRUPTION THROUGH AUGUST 31. IF A SIGNIFICANT NOISE-GENERATING CONSTRUCTION ACTIVITY DOES NOT START PRIOR TO MAY 1, THEN A TIME OF YEAR RESTRICTION WILL APPLY, AND WORK MAY NOT BEGIN UNTIL SEPTEMBER 1 WITHOUT THE APPROVAL OF CTDEEP TO PROTECT LEAST BITTERN AND SALTMARSH SHARP-TAILED SPARROW.

4. IF BALD EAGLE NESTING ACTIVITY IS OBSERVED WITHIN 600FT FROM CONSTRUCTION ACTIVITY, ALL CONSTRUCTION MUST STOP UNTIL NESTING OR ROOSTING ACTIVITY HAS CEASED.

5. CONSTRUCTION WITHIN TIDAL CREEKS OF SIMILAR CHANNELIZED AQUATIC HABITAT IS PROHIBITED BETWEEN NOVEMBER 1 – MARCH 31 TO PROTECT OVER-WINTERING STATE-LISTED TURTLES.

6. CONSTRUCTION IN AREAS THAT FLOOD DAILY WILL BE CONDUCTED DURING LOW TIDE TO THE GREATEST EXTENT PRACTICAL FROM APRIL 1 – OCTOBER 31.

7. WORK LIMITS MUST BE ENCLOSED BY A WILDLIFE BARRIER SYSTEM BETWEEN APRIL 1 – OCTOBER 31 (E.G., SILT FENCE OR ELEVATED WORK SURFACES) TO PREVENT ENTRY BY STATE-LISTED TURTLES. THE ISOLATED WORK LIMITS ARE TO BE INSPECTED DAILY BY TRAINED CONSTRUCTION STAFF OR ENVIRONMENTAL MONITORS FOR THE PRESENCE OF STATE-LISTED TURTLES PRIOR TO THE START OF WORK; TURTLES ARE TO BE RELOCATED IF OBSERVED IN WORK LIMITS AND REPORTED TO THE ON-SITE ENVIRONMENTAL MONITOR AND AMTRAK REPRESENTATIVE; DEFICIENCIES IN THE WILDLIFE BARRIER ARE TO BE PROMPTLY REPAIRED.

8. CONSTRUCTION AT TWO SANDY BEACHES AND ADJACENT DREDGING/EXCAVATION WILL BE INITIATED PRIOR TO JUNE 1 OR BEACHES WILL BE COVERED WITH DETERRENT FROM JUNE 1 – JULY 15.

9. SPEED LIMIT ALONG ACCESS ROADS IS NOT TO EXCEED 15 MPH.

10. REFUELING OR HANDLING OTHER BIO-TOXIC LIQUIDS IS PROHIBITED IN THE VICINITY OF LOW MARSH, RIVERBANKS, TIDAL CREEKS, OR DITCHES.

11. INACTIVE OSPREY NESTS MAY BE REMOVED FROM SEPTEMBER 1 – MARCH 1; CTDEEP IS TO BE NOTIFIED PRIOR TO REMOVING ANY OSPREY NEST.

12. OSPREY NESTING MATERIALS ALONG THE BRIDGE WILL BE REMOVED TO DISCOURAGE NESTING DURING THE MONTH OF MARCH.

13. TREE CLEARING IS PROHIBITED FROM JUNE 1 – JULY 31 TO PROTECT NORTHERN LONG-EARED BATS.

14. APPROPRIATE SOIL EROSION, SEDIMENT, AND TURBIDITY CONTROLS SHALL BE USED AND MAINTAINED DURING CONSTRUCTION; AND AREAS CAPABLE OF PRODUCING GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION WILL BE DONE DURING PERIODS OF LOW- OR NO-FLOW TO PROTECT FISHERIES RESOURCES.

15. WORK THAT PRODUCES GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION (DONE OUTSIDE OF TURBIDITY CURTAINS OR COFFERDAMS) IS PROHIBITED FROM FEBRUARY 1 – JUNE 30 TO PROTECT FISHERIES RESOURCES.

16. TO REDUCE THE NOISE IMPACTS FROM DRIVING SHEET PILE AND SHAFT CASINGS, ONLY VIBRATORY HAMMERS SHOULD BE USED DURING THE DIADROMOUS FISH MIGRATORY PERIOD FROM APRIL 1 – JUNE 30, INCLUSIVE.

17. CONSTRUCTION OR DEMOLITION OF PIERS SHOULD BE LIMITED TO EITHER THE WESTERN-MOST THREE PIERS (PIERS# 1, 2, AND 3) OR EASTERNMOST THREE PIERS (PIERS# 7, 8, 9) DURING THE DIADROMOUS FISH SPRING MIGRATION PERIOD FROM APRIL 1 – JUNE 30. AT NO TIME DURING THIS PERIOD SHOULD IN-WATER CONSTRUCTION OR DEMOLITION OCCUR IN THE MIDDLE OF THE RIVER OR SIMULTANEOUSLY AT MORE THAN THREE PIERS.

18. DURING THE SPRING MIGRATION PERIOD FROM APRIL 1 – JUNE 30, ARTIFICIAL LIGHTING OVER THE WATER SHALL BE LIMITED TO NAVIGATION LIGHTS AND ANY LIGHTING TYPICALLY REQUIRED FOR THE OPERATION OF THE BRIDGE.

19. TIMBER PILES AND STONE PIERS SHALL BE REMOVED FROM INSIDE COFFERDAMS, BELOW THE MUDLINE. PULLING AND CUTTING OF TIMBER PILES SHALL BE PROHIBITED FROM FEBRUARY 1 – JUNE 30.

20. TO MINIMIZE CONSTRUCTION RELATED TURBIDITY, FULL DEPTH TURBIDITY CURTAINS SHALL BE DEPLOYED PRIOR TO DRIVING ANY SHEET PILE OR SHAFT CASINGS. DUE TO STRONG TIES AND CURRENTS THE FABRIC FOR THE CURTAINS SHOULD BE COMPOSED OF A HEAVY WOVEN PERVIOUS MATERIAL TO CREATE A FLOW-THROUGH MEDIUM, WHICH WILL REDUCE THE PRESSURE ON THE CURTAINS AND KEEP THEM IN THE SAME RELATIVE SHAPE AND LOCATION AT ALL TIDES AND RIVER FLOWS.

21. DREDGING AND EXCAVATION OF BARGE DOCKING AREAS SHALL BE PROHIBITED FROM FEBRUARY 1 – JUNE 30.

22. HOE RAMS ARE PROHIBITED BETWEEN APRIL 1 – JUNE 30.

23. TO PREVENT DAMAGE TO BENTHIC AQUATIC ORGANISMS, ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. WORK DONE FROM BARGES SHOULD ONLY OCCUR WHEN SUFFICIENT TIDE TO PREVENT GROUNDING.

24. LOUD CONSTRUCTION ACTIVITIES INCLUDING DRILLING PILES AND DRIVING SHEET PILE OR SHAFT CASINGS (INCLUDING VIBRATORY WEANS) SHALL BE PROHIBITED FROM SUNSET TO SUNRISE DURING THE COMMERCIAL SHAD FISHING SEASON FROM APRIL 1 – JUNE 15.

25. AMTRAK AND THE CONTRACTOR WILL MINIMIZE INTERFERENCE WITH SHAD FISHERY ACTIVITY; COORDINATE WORK EQUIPMENT LOCATIONS AND TIMING WITH LOCAL FISHERMEN.

26. THE INSTALLATION AND REMOVAL OF THE TEMPORARY TRESTLE BRIDGE CROSSING LIEUTENANT RIVER SHALL BE PROHIBITED FROM MARCH 1 – JUNE 1, INCLUSIVE.

27. THE TEMPORARY TRESTLE BRIDGE CROSSING LIEUTENANT RIVER SHALL ALLOW PASSAGE OF RECREATIONAL BOATS. THE CONTRACTOR SHALL COORDINATE WITH AMTRAK TO NOTIFY CTDEEP AND THE PUBLIC OF CONSTRUCTION ACTIVITIES AFFECTING THE WATERWAY INCLUDING ADVANCED NOTICE OF ANY NAVIGATION CLOSURES.

28. SUBMARINE CABLE INSTALLATION AND REMOVAL SHALL BE DONE WITHIN TURBIDITY CURTAINS AND WILL BE PROHIBITED FROM FEBRUARY 1 – JUNE 30.

29. WORK TRESTLE AND COFFERDAM CONSTRUCTION WILL BE DONE WITHIN TURBIDITY CURTAINS AND WILL BE PROHIBITED FROM FEBRUARY 1 – JUNE 30.

30. PULLING OR CUTTING PILES (INCLUDING TEMPORARY WORK TRESTLE PILES AND TURBIDITY CURTAIN SUPPORT PILES) WILL BE PROHIBITED FROM FEBRUARY 1 – JUNE 30.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By
1	xxxx	MM/DD/YY	XXX

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30th Street Station, Philadelphia, Pennsylvania 19104

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HARDESTY & HANOVER, LLC
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1501 Broadway, New York, NY 10036

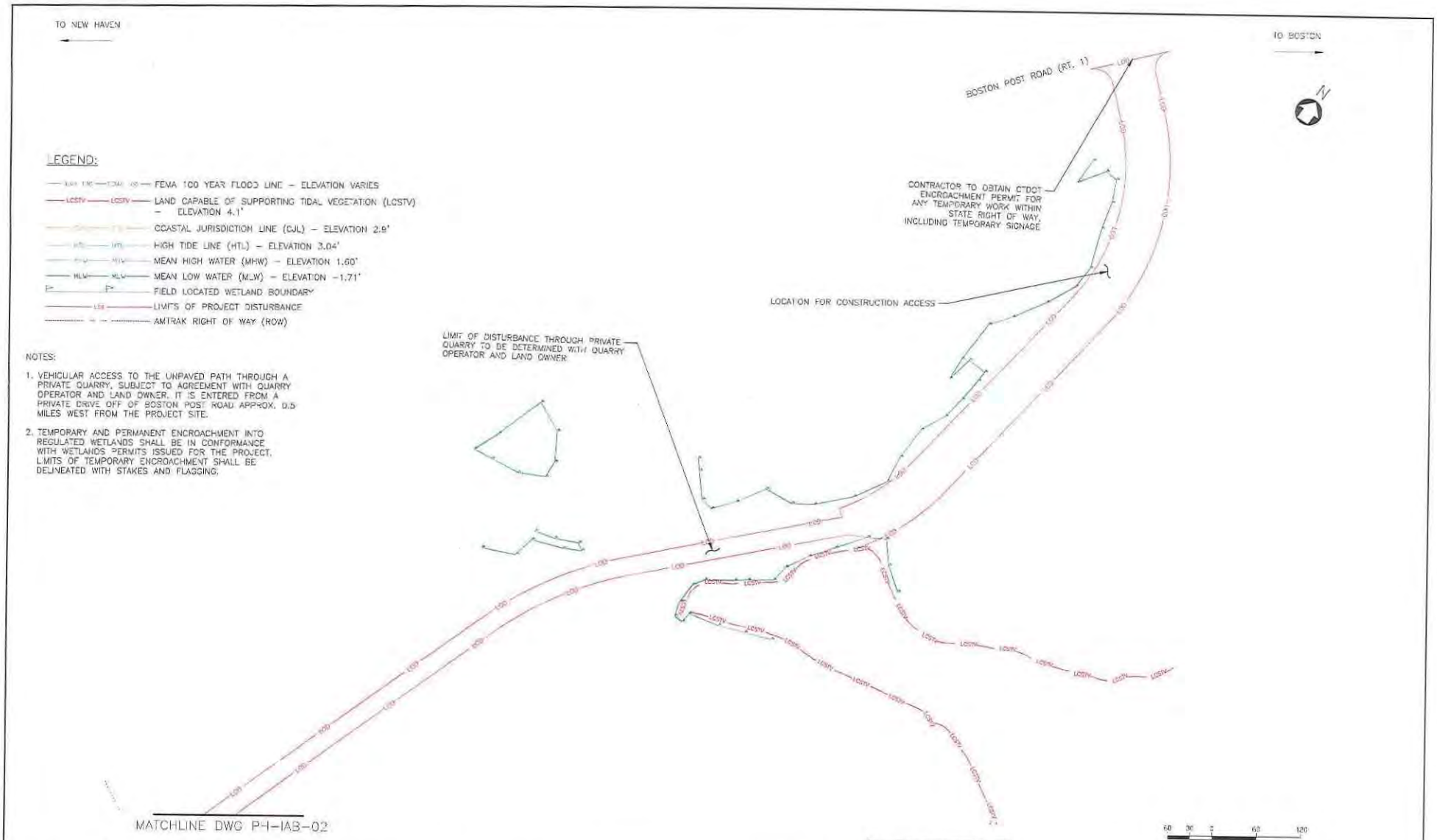
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

ENVIRONMENTAL COMPLIANCE NOTES

Designed	BSH	Drawn	CSS	Checked	BSH	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	38 OF 140
Dwg No.	PH-03



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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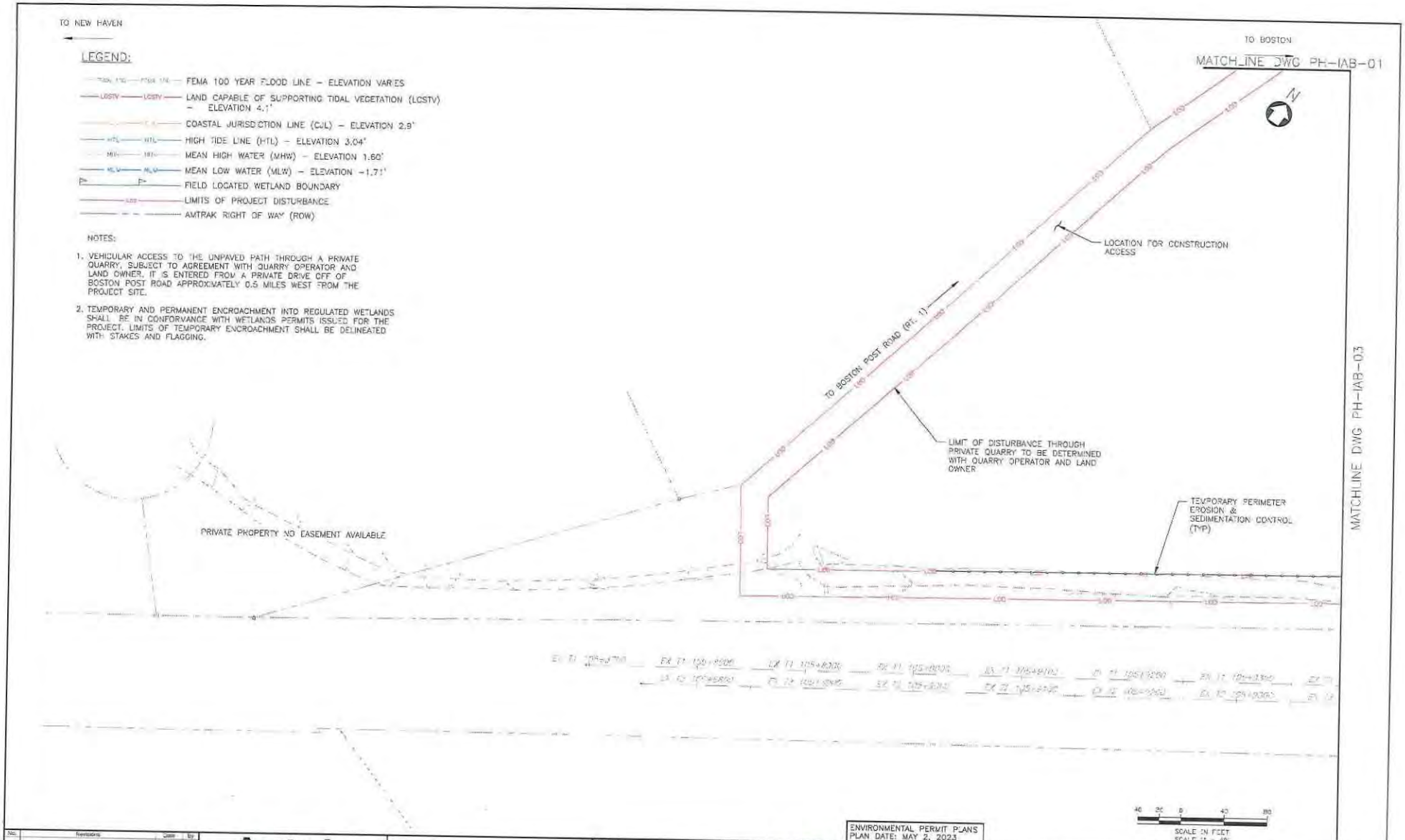
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	91 OF 140
Dwg No.	PH-IAB-01



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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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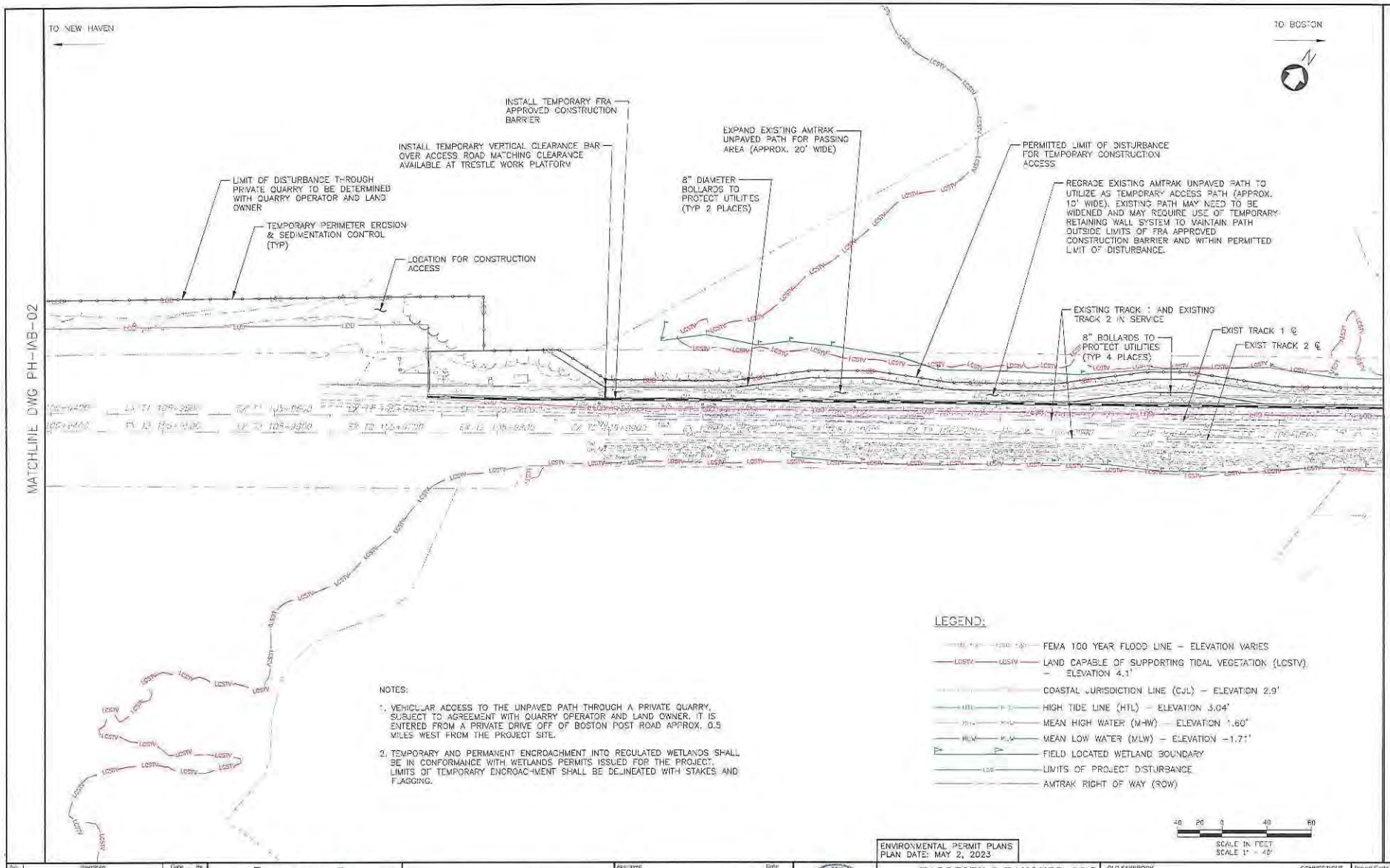
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	82 OF 140
Dwg No.	PH-IAB-02



NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATE QUARRY, SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER, IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROX. 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

40 20 0 40 60
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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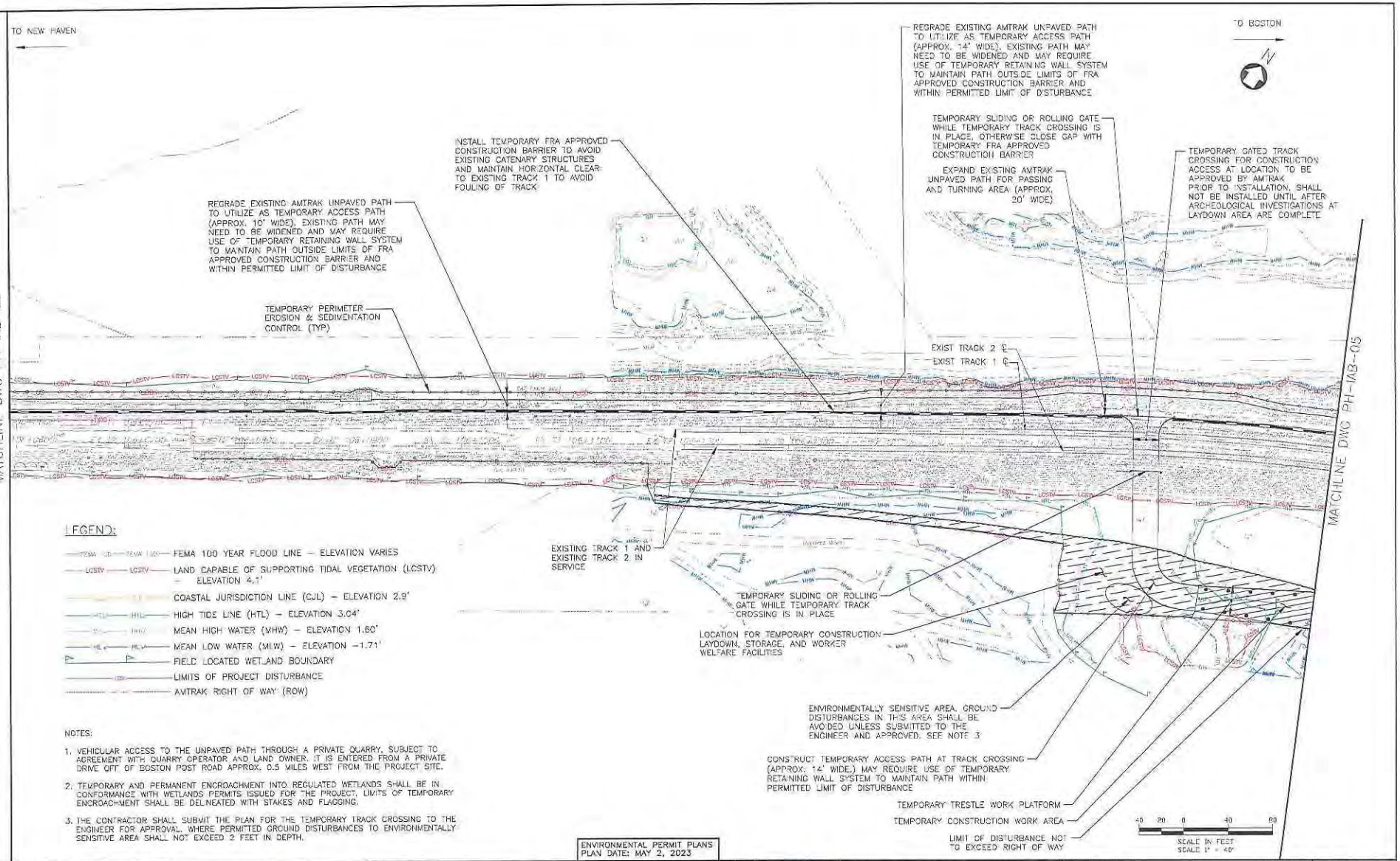
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 83 OF 140
Dwg No. PH-IAB-03



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3. THE CONTRACTOR SHALL SUBMIT THE PLAN FOR THE TEMPORARY TRACK CROSSING TO THE ENGINEER FOR APPROVAL. WHERE PERMITTED GROUND DISTURBANCES TO ENVIRONMENTALLY SENSITIVE AREA SHALL NOT EXCEED 2 FEET IN DEPTH.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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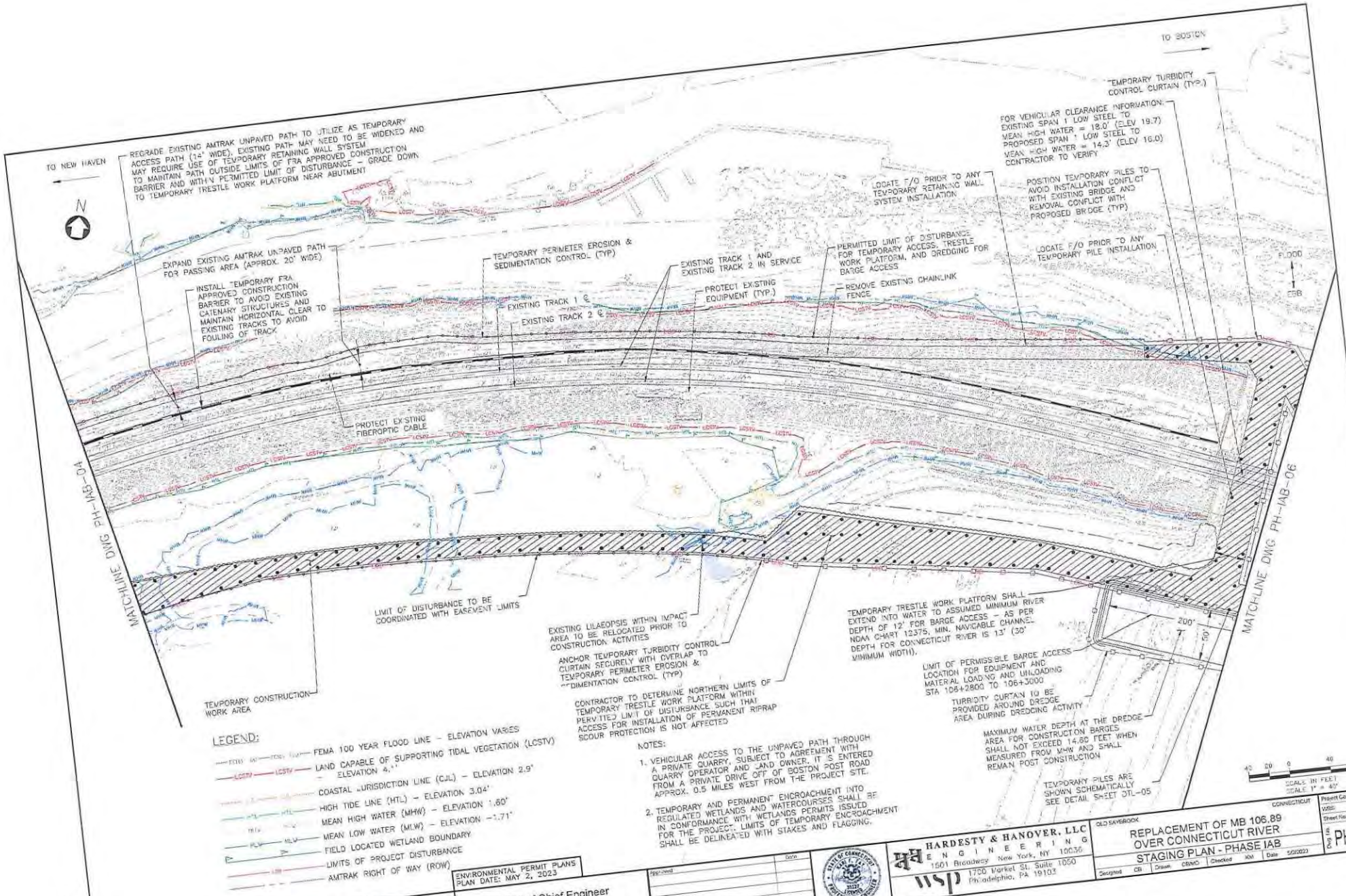
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXX.XXX
WBS
Sheet No. 84 OF 148
Dwg No. PH-IAB-04


TO NEW HAVEN
TO BOSTON
N
REGRADE EXISTING AMTRAK UNPAVED PATH TO UTILIZE AS TEMPORARY ACCESS PATH (12' WIDE). EXISTING PATH MAY NEED TO BE WIDENED AND MAY REQUIRE USE OF TEMPORARY RETAINING WALL SYSTEM TO MAINTAIN PATH OUTSIDE LIMITS OF FRA APPROVED CONSTRUCTION BARRIER AND WITHIN PERMITTED LIMIT OF DISTURBANCE – GRADE DOWN TO TEMPORARY TRESTLE WORK PLATFORM NEAR ABUTMENT
EXPAND EXISTING AMTRAK UNPAVED PATH FOR PASSING AREA (APPROX. 20' WIDE)
INSTALL TEMPORARY FRA APPROVED CONSTRUCTION BARRIER TO AVOID EXISTING CATENARY STRUCTURES AND MAINTAIN HORIZONTAL CLEAR TO EXISTING TRACKS TO AVOID FOULING OF TRACK
TEMPORARY PERIMETER EROSION & SEDIMENTATION CONTROL (TYP)
EXISTING TRACK 1 ℄
EXISTING TRACK 2 ℄
EXISTING TRACK 1 AND EXISTING TRACK 2 IN SERVICE
PROTECT EXISTING EQUIPMENT (TYP.)
PERMITTED LIMIT OF DISTURBANCE FOR TEMPORARY ACCESS, TRESTLE WORK PLATFORM, AND DREDGING FOR BARGE ACCESS
REMOVE EXISTING CHAINLINK FENCE
LOCATE F/O PRIOR TO ANY TEMPORARY RETAINING WALL SYSTEM INSTALLATION
TEMPORARY TURBIDITY CONTROL CURTAIN (TYP.)
FOR VEHICULAR CLEARANCE INFORMATION: EXISTING SPAN 1 LOW STEEL TO MEAN HIGH WATER = 18.0' (ELEV 19.7) PROPOSED SPAN 1 LOW STEEL TO MEAN HIGH WATER = 14.3' (ELEV 16.0) CONTRACTOR TO VERIFY
POSITION TEMPORARY PILES TO AVOID INSTALLATION CONFLICT WITH EXISTING BRIDGE AND REMOVAL CONFLICT WITH PROPOSED BRIDGE (TYP)
LOCATE F/O PRIOR TO ANY TEMPORARY PILE INSTALLATION
FLOOD
EBB
PROTECT EXISTING FIBEROPTIC CABLE
MATCHLINE DWG PH-IAB-04
MATCHLINE DWG PH-IAB-06
LIMIT OF DISTURBANCE TO BE COORDINATED WITH EASEMENT LIMITS
EXISTING LILAEOPSIS WITHIN IMPACT AREA TO BE RELOCATED PRIOR TO CONSTRUCTION ACTIVITIES
ANCHOR TEMPORARY TURBIDITY CONTROL CURTAIN SECURELY WITH OVERLAP TO TEMPORARY PERIMETER EROSION & SEDIMENTATION CONTROL (TYP)
CONTRACTOR TO DETERMINE NORTHERN LIMITS OF TEMPORARY TRESTLE WORK PLATFORM WITHIN PERMITTED LIMIT OF DISTURBANCE SUCH THAT ACCESS FOR INSTALLATION OF PERMANENT RIPRAP SCOUR PROTECTION IS NOT AFFECTED
TEMPORARY TRESTLE WORK PLATFORM SHALL EXTEND INTO WATER TO ASSUMED MINIMUM RIVER DEPTH OF 12' FOR BARGE ACCESS – AS PER NOAA CHART 12375, MIN. NAVIGABLE CHANNEL DEPTH FOR CONNECTICUT RIVER IS 13' (30' MINIMUM WIDTH).
200'
50'
LIMIT OF PERMISSIBLE BARGE ACCESS LOCATION FOR EQUIPMENT AND MATERIAL LOADING AND UNLOADING STA 106+2800 TO 106+3000
TURBIDITY CURTAIN TO BE PROVIDED AROUND DREDGE AREA DURING DREDGING ACTIVITY
MAXIMUM WATER DEPTH AT THE DREDGE AREA FOR CONSTRUCTION BARGES SHALL NOT EXCEED 14.60 FEET WHEN MEASURED FROM MHW AND SHALL REMAIN POST CONSTRUCTION
TEMPORARY PILES ARE SHOWN SCHEMATICALLY SEE DETAIL SHEET DTL-05
TEMPORARY CONSTRUCTION WORK AREA
LEGEND:
FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
HIGH TIDE LINE (HTL) – ELEVATION 3.04'
MEAN HIGH WATER (MHW) – ELEVATION 1.60'
MEAN LOW WATER (MLW) – ELEVATION -1.71'
FIELD LOCATED WETLAND BOUNDARY
LIMITS OF PROJECT DISTURBANCE
AMTRAK RIGHT OF WAY (ROW)
NOTES:
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SCALE: IN FEET
SCALE 1" = 40'
ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023
Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104
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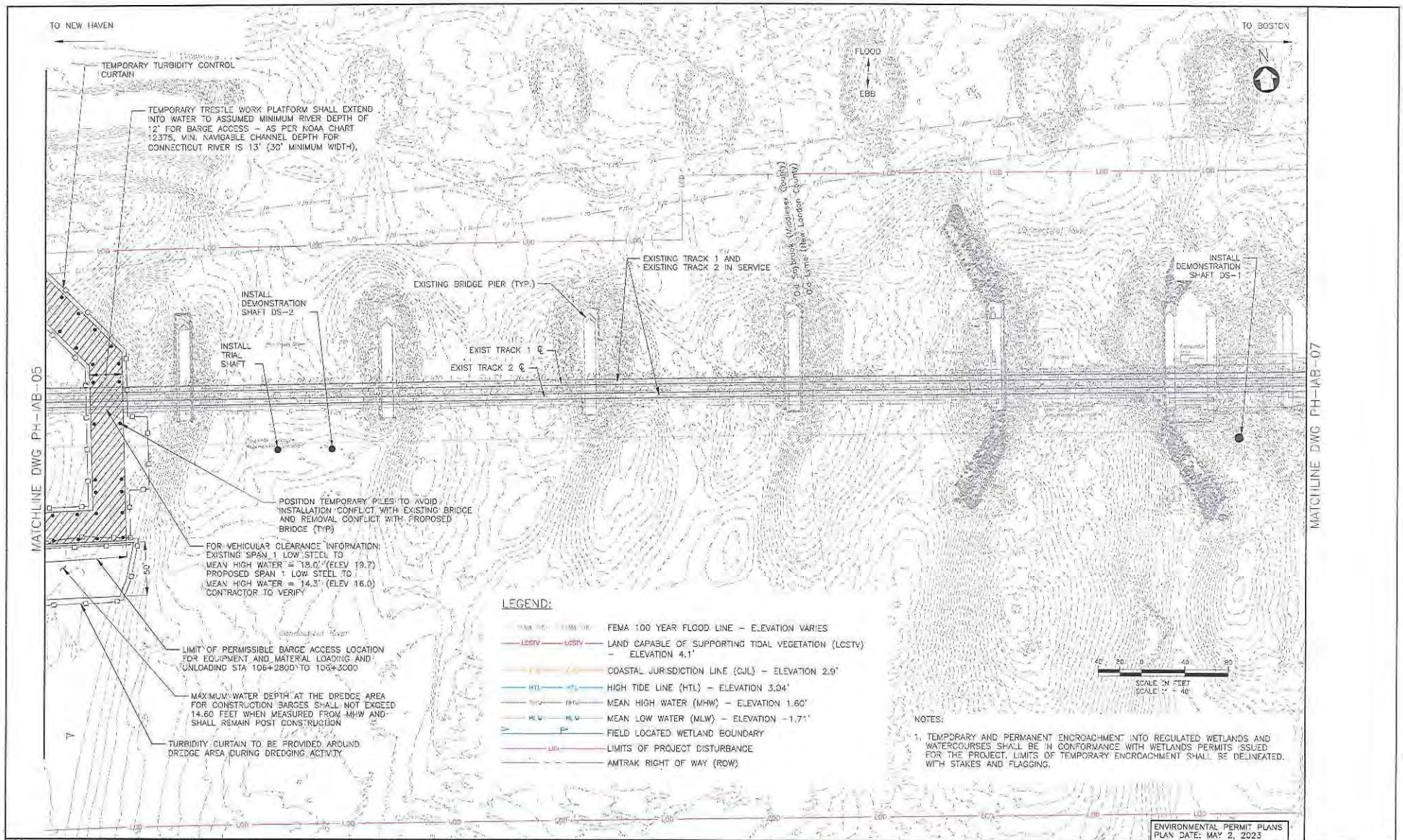
Philadelphia, PA 19103
OLD SAYBROOK
CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB
Designed CB Drawn CBMO Checked KM Date 5/2/2023
Project Code: XXX.XXX
WBS:
Sheet No: 85 OF
Dwg No: PH-IAB-0



No.	Revisions	Date	By

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038
1700 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

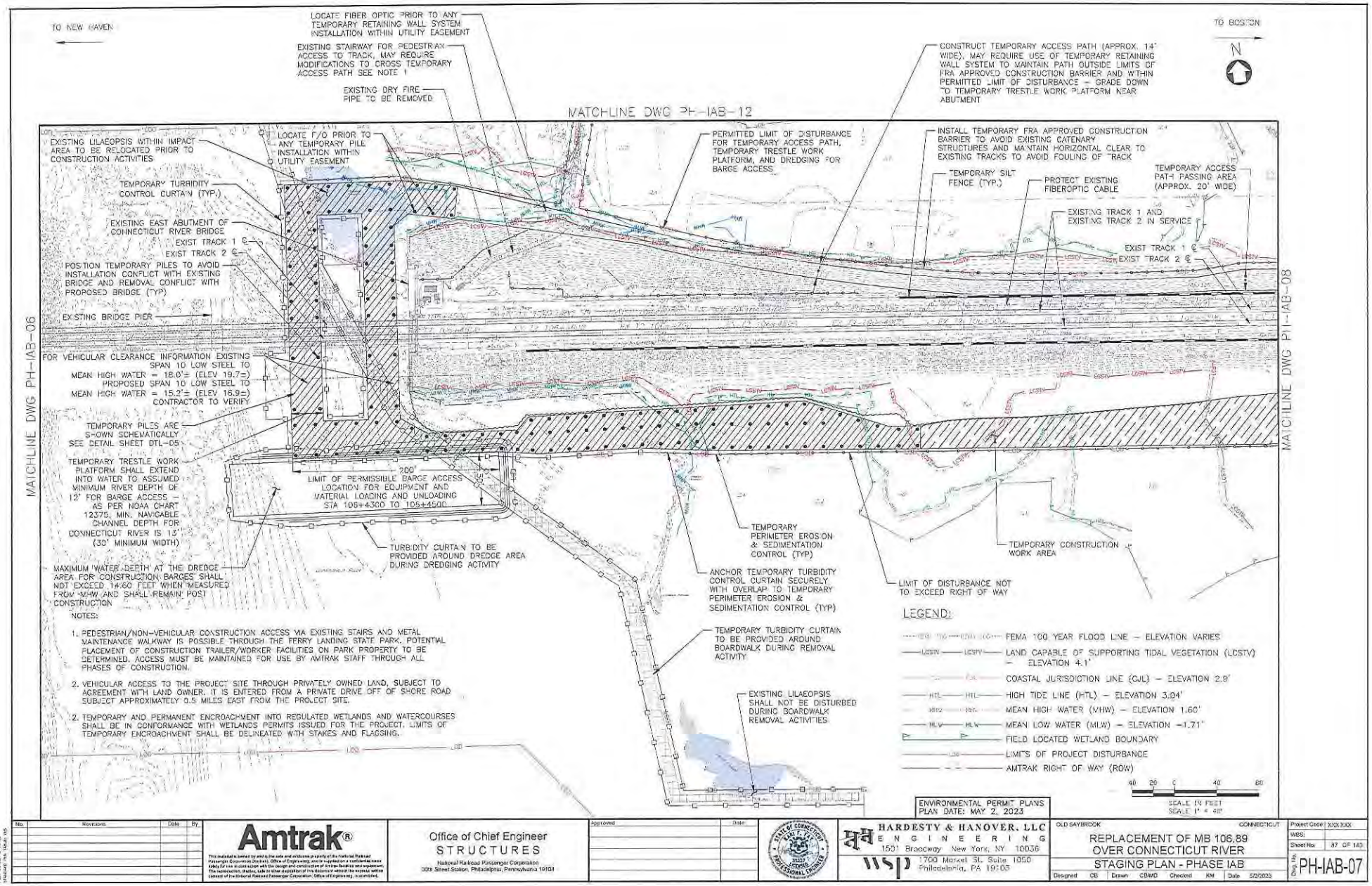
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXLXXX
WBS	
Sheet No.	86 OF 140
Dwg No.	PH-IAB-06

FILE NAME: 23250-PH-IAB-06.DGN
PLOT DATE/TIME: 5/2/2023 11:44:48
PLOT SCALE: 1" = 40'
PLOT BY: CB



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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Philadelphia, PA 19103

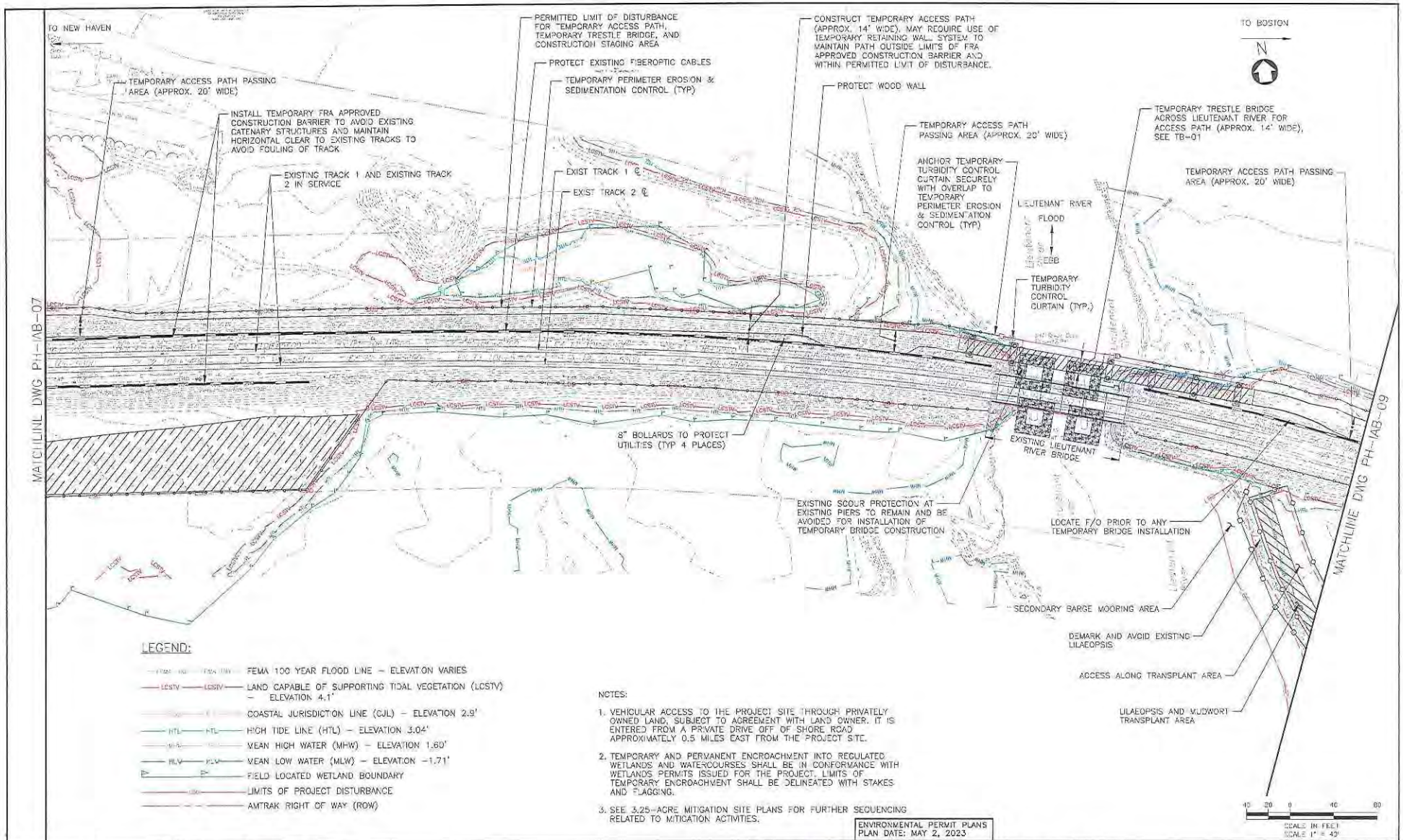
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No:	87 OF 140
Dwg No.	PH-IAB-07



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

NOTES:

1. VEHICULAR ACCESS TO THE PROJECT SITE THROUGH PRIVATELY OWNED LAND, SUBJECT TO AGREEMENT WITH LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF SHORE ROAD APPROXIMATELY 0.5 MILES EAST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. SEE 3.25-ACRE MITIGATION SITE PLANS FOR FURTHER SEQUENCING RELATED TO MITIGATION ACTIVITIES.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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30th Street Station, Philadelphia, Pennsylvania 19104

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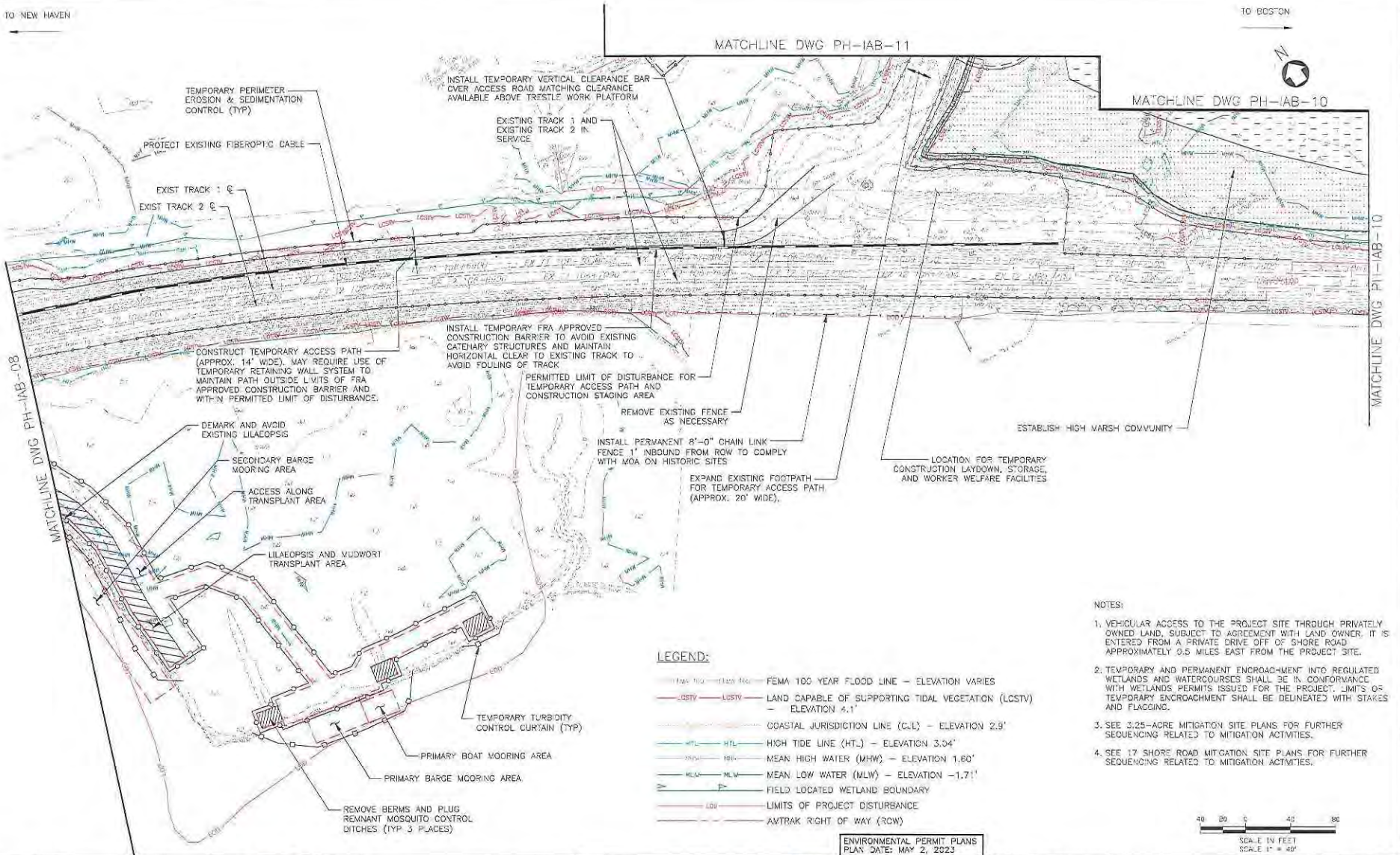
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code XXX.XXX
WBS:
Sheet No. 86 OF *40
Dwg No. PH-IAB-08



ENVIRONMENTAL PERMIT PLANS
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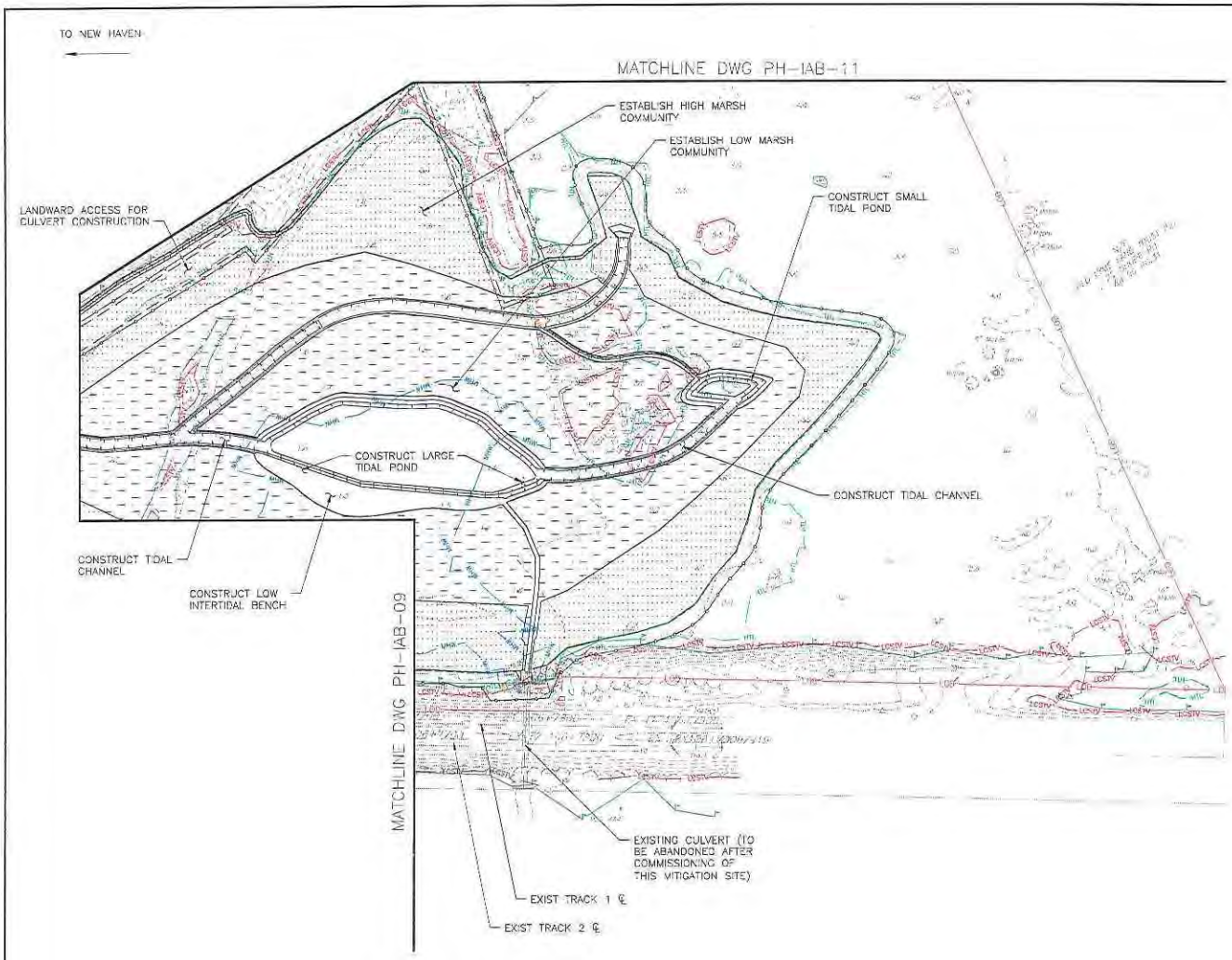
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code XXX XXX
WBS:
Sheet No. 39 OF 145
Dwg No. PH-IAB-09



LEGEND:

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- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

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3. SEE 17 SHORE ROAD MITIGATION SITE PLANS FOR FURTHER SEQUENCING RELATED TO MITIGATION ACTIVITIES.

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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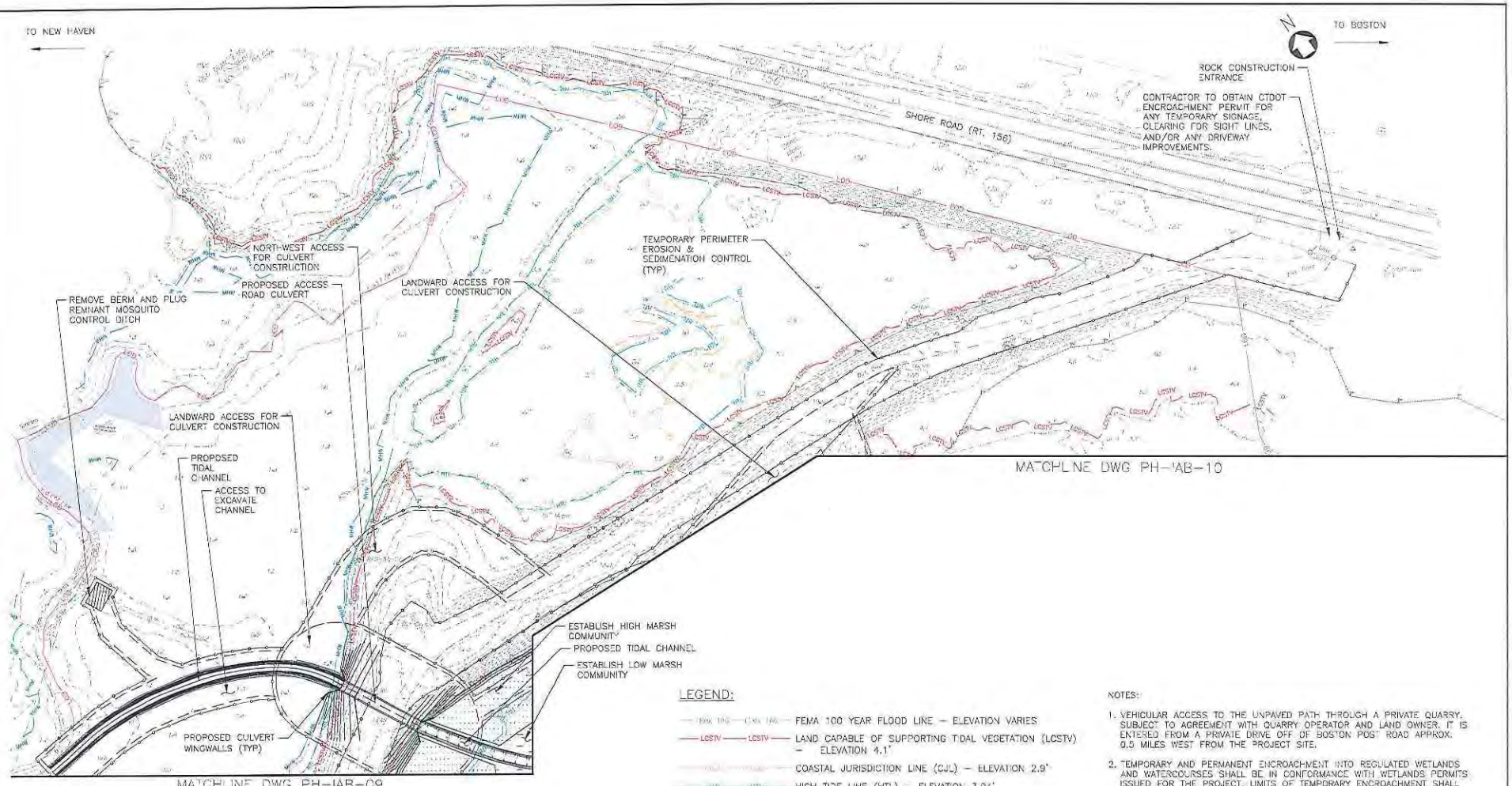
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	90 OF 140
Dwg No.	PH-IAB-10



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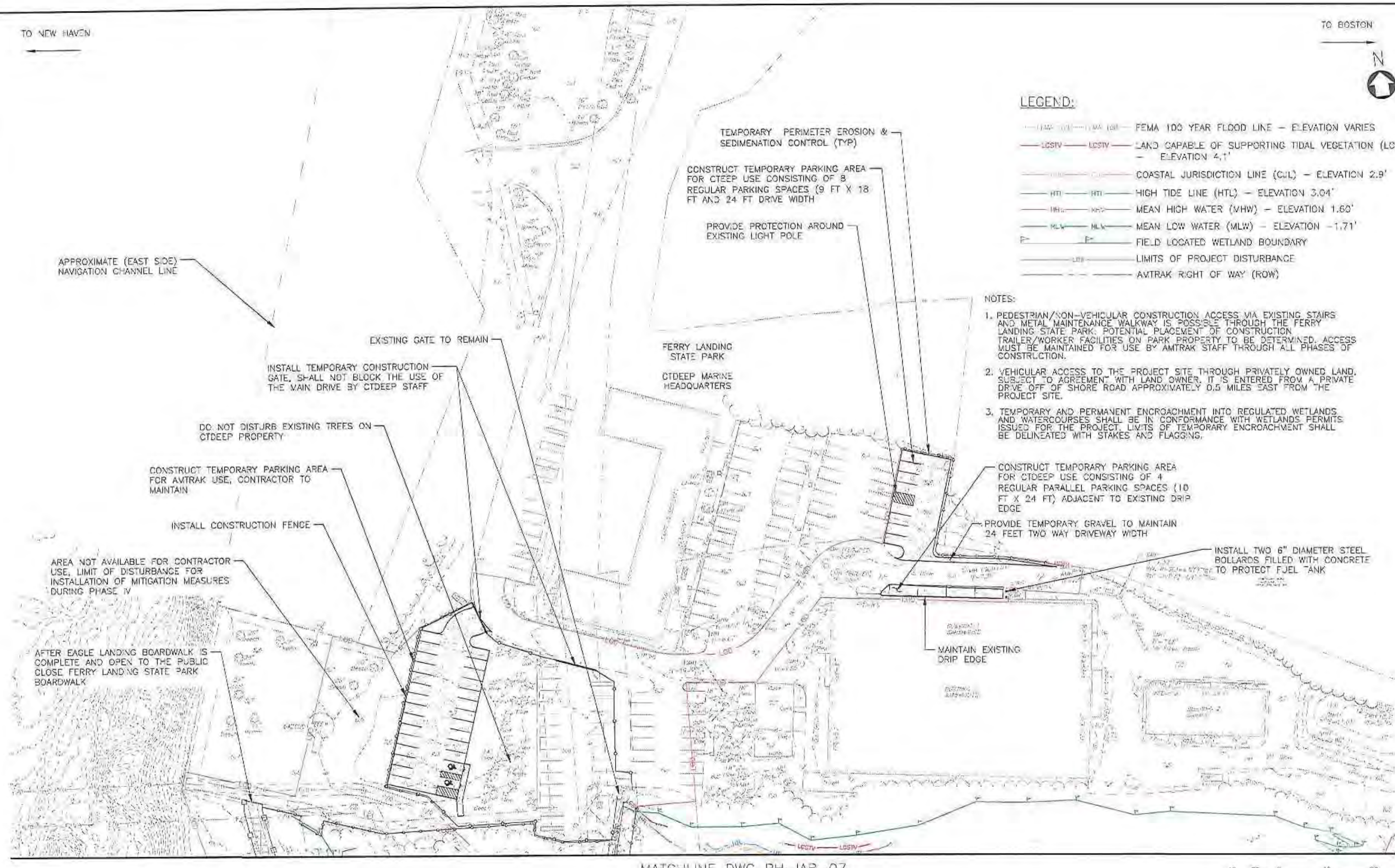
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	91 OF 140
Dwg No.	PH-IAB-11



NOTES:

1. PEDESTRIAN/NON-VEHICULAR CONSTRUCTION ACCESS VIA EXISTING STAIRS AND METAL MAINTENANCE WALKWAY IS POSSIBLE THROUGH THE FERRY LANDING STATE PARK. POTENTIAL PLACEMENT OF CONSTRUCTION TRAILER/WORKER FACILITIES ON PARK PROPERTY TO BE DETERMINED. ACCESS MUST BE MAINTAINED FOR USE BY AMTRAK STAFF THROUGH ALL PHASES OF CONSTRUCTION.
2. VEHICULAR ACCESS TO THE PROJECT SITE THROUGH PRIVATELY OWNED LAND, SUBJECT TO AGREEMENT WITH LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF SHORE ROAD APPROXIMATELY 0.5 MILES EAST FROM THE PROJECT SITE.
3. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

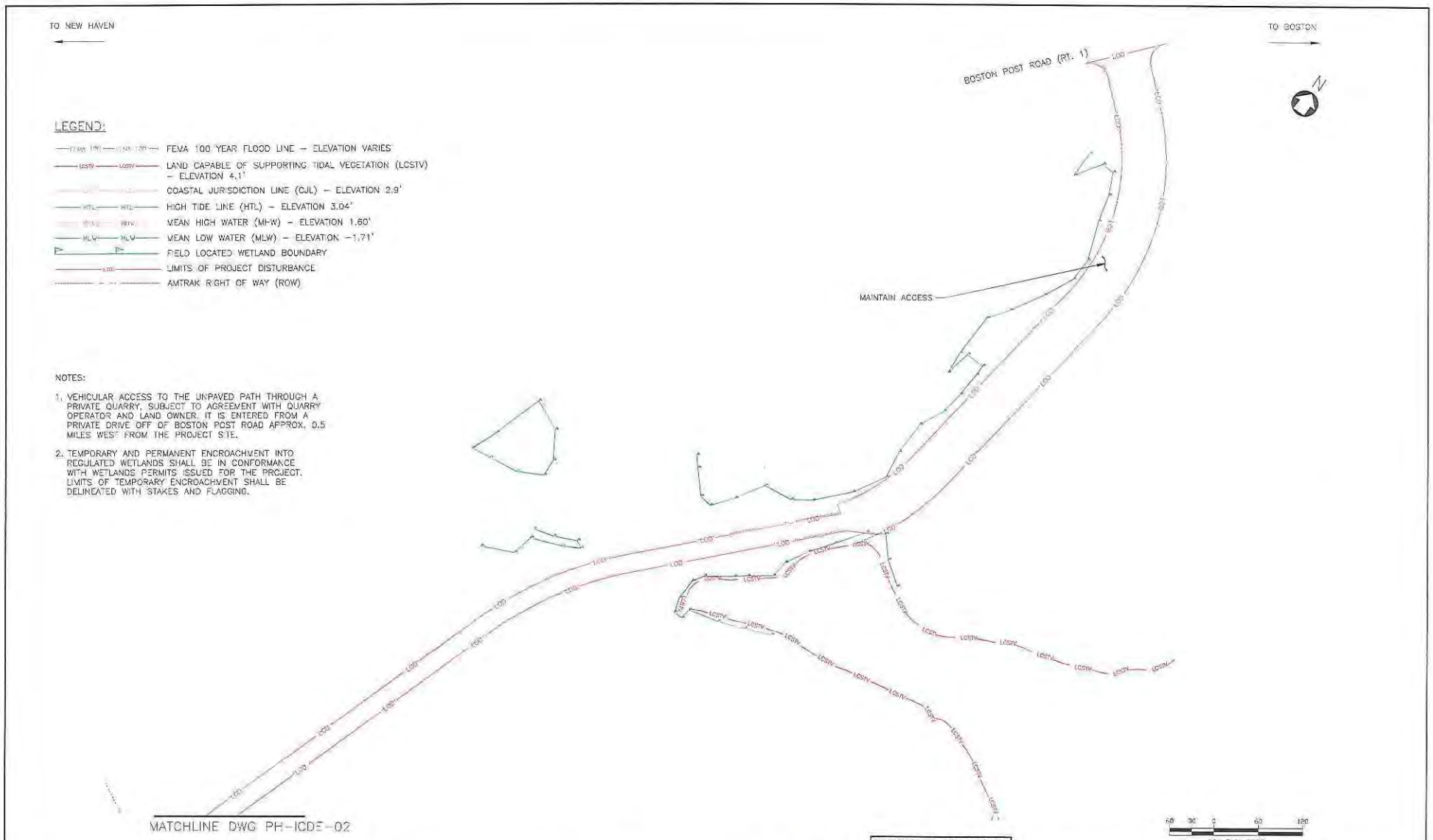
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IAB

Designed CB Drawn CB/MD Checked KV Date 5/2/2023

Project Code XXX XXX
WBS
Sheet No. 92 OF 140
Dwg No. PH-IAB-12

TO NEW HAVEN

TO BOSTON



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATE QUARRY, SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROX. 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.

60 30 0 60 120

SCALE IN FEET
SCALE 1" = 60'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

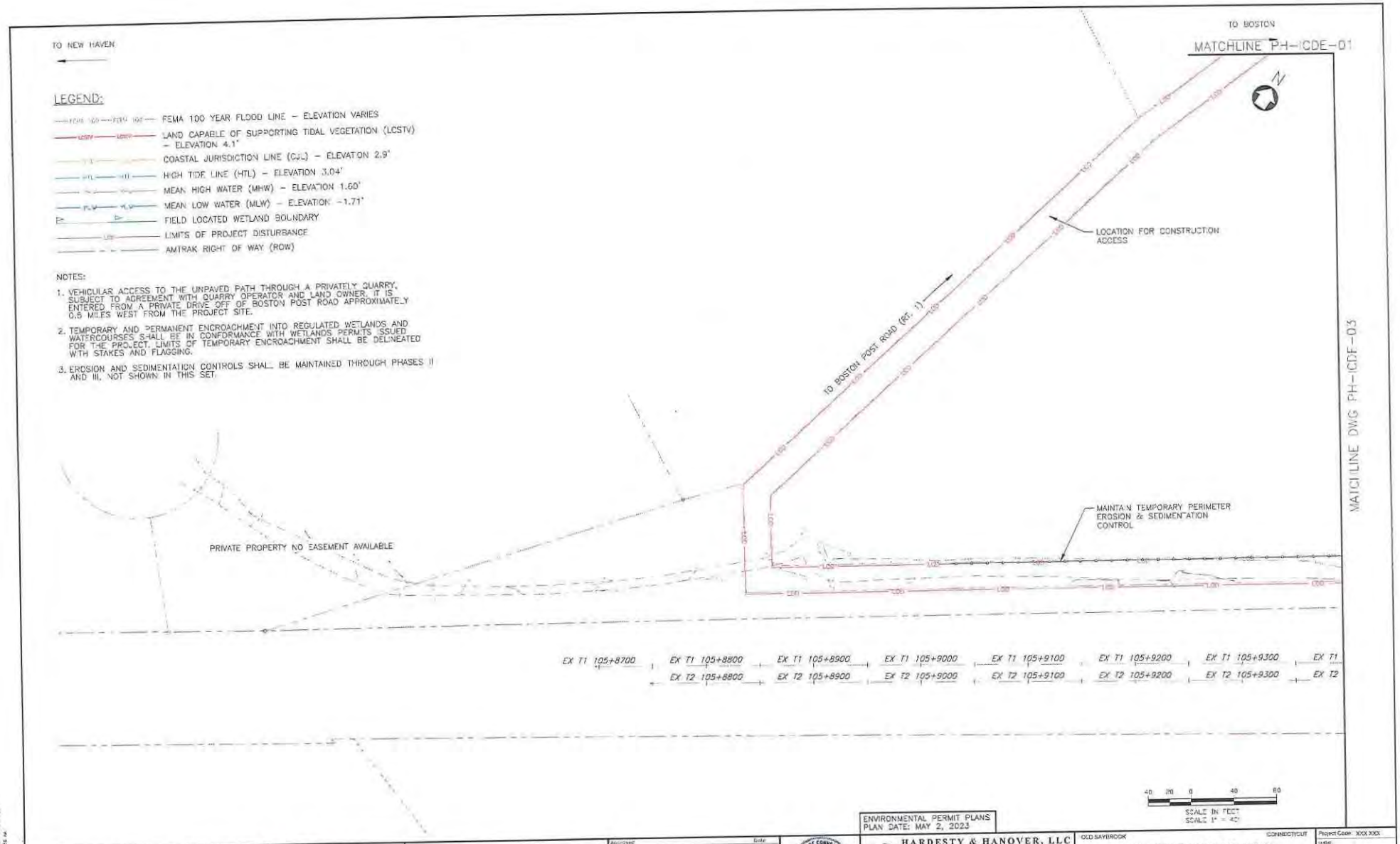
HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
1700 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No.	83 OF 140
Dwg No.	PH-ICDE-01



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions:	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved:	Date:

HARDESTY & HANOVER, LLC
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WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

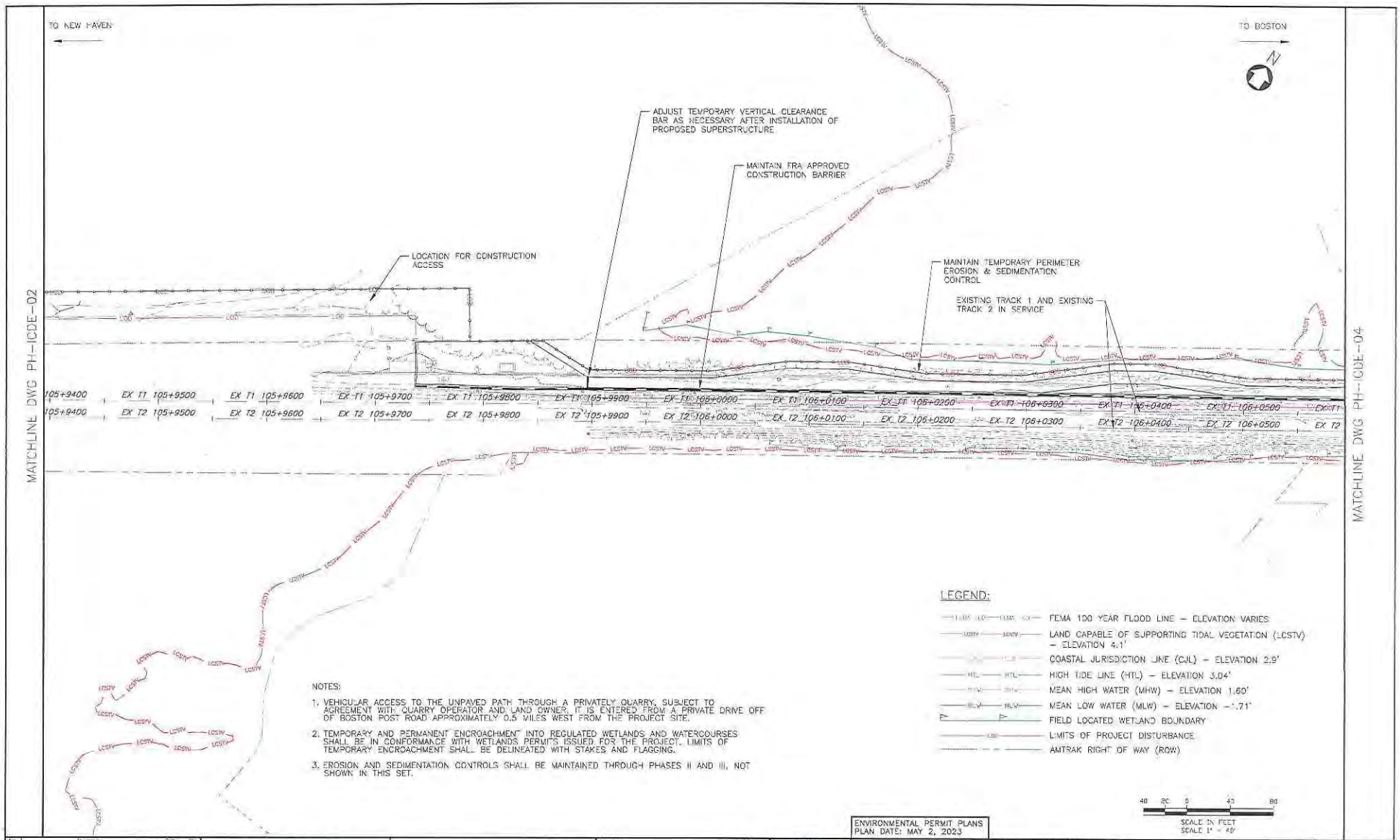
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No: 94 OF 140
Dwg No: PH-ICDE-02



NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATELY QUARRY, SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROXIMATELY 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND III, NOT SHOWN IN THIS SET.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

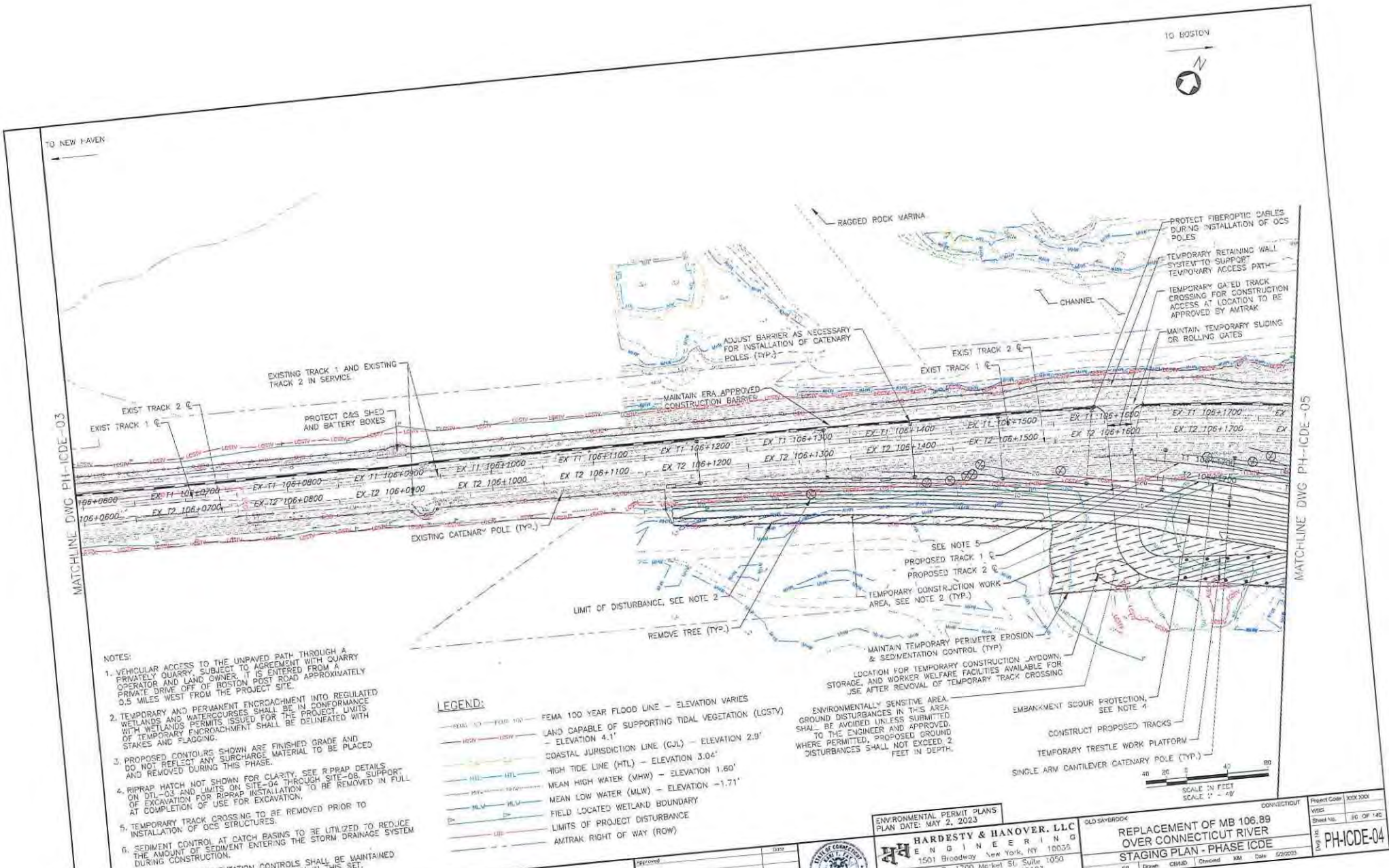
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.	95 OF 140
Dwg No.	PH-ICDE-03



NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATELY QUARRY SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROXIMATELY 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. PROPOSED CONTOURS SHOWN ARE FINISHED GRADE AND DO NOT REFLECT ANY SURCHARGE MATERIAL TO BE PLACED AND REMOVED DURING THIS PHASE.
4. RIPRAP HATCH NOT SHOWN FOR CLARITY. SEE RIPRAP DETAILS ON DTL-03 AND LIMITS ON SITE-04 THROUGH SITE-08. SUPPORT OF EXCAVATION FOR RIPRAP INSTALLATION TO BE REMOVED IN FULL AT COMPLETION OF USE FOR EXCAVATION.
5. TEMPORARY TRACK CROSSING TO BE REMOVED PRIOR TO INSTALLATION OF OCS STRUCTURES.
6. SEDIMENT CONTROL AT CATCH BASINS TO BE UTILIZED TO REDUCE THE AMOUNT OF SEDIMENT ENTERING THE STORM DRAINAGE SYSTEM DURING CONSTRUCTION.
7. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND III, NOT SHOWN IN THIS SET.

LEGEND:

- FEMA 100 — FEMA 100 — FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

Designed CB | Drawn CEMD | Checked KM | Date 5/2/2023

Project Code XXX XXX
WBS
Sheet No. 96 OF 140
Dwg No. PH-ICDE-04

No.	Revisions	Date	By

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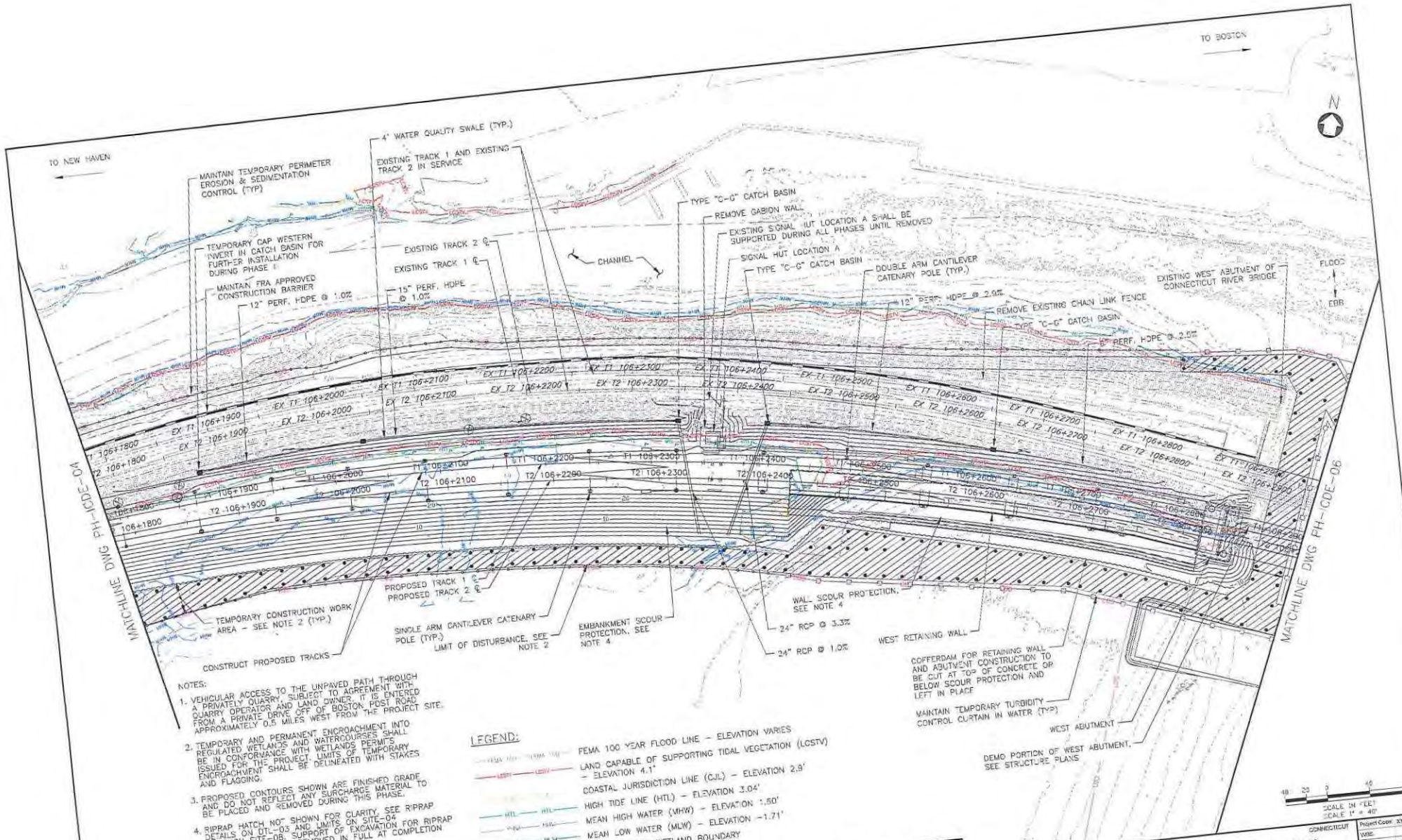
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date



NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATELY QUARRY, SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROXIMATELY 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. PROPOSED CONTOURS SHOWN ARE FINISHED GRADE AND DO NOT REFLECT ANY SURCHARGE MATERIAL TO BE PLACED AND REMOVED DURING THIS PHASE.
4. RIPRAP HATCH NOT SHOWN FOR CLARITY, SEE RIPRAP DETAILS ON DTL-03 AND LIMITS ON SITE-04 THROUGH SITE-08. SUPPORT OF EXCAVATION FOR RIPRAP INSTALLATION TO BE REMOVED IN FULL AT COMPLETION OF USE FOR EXCAVATION.
5. SEDIMENT CONTROL AT CATCH BASINS TO BE UTILIZED TO REDUCE THE AMOUNT OF SEDIMENT ENTERING THE STORM DRAINAGE SYSTEM DURING CONSTRUCTION.
6. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES I AND II, NOT SHOWN IN THIS SET.

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.50'
- MLW — MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code XXX.XXX
WBS
Sheet No. 97 OF 140
Dwg No. PH-ICDE-05

No.	Revisions	Date	By

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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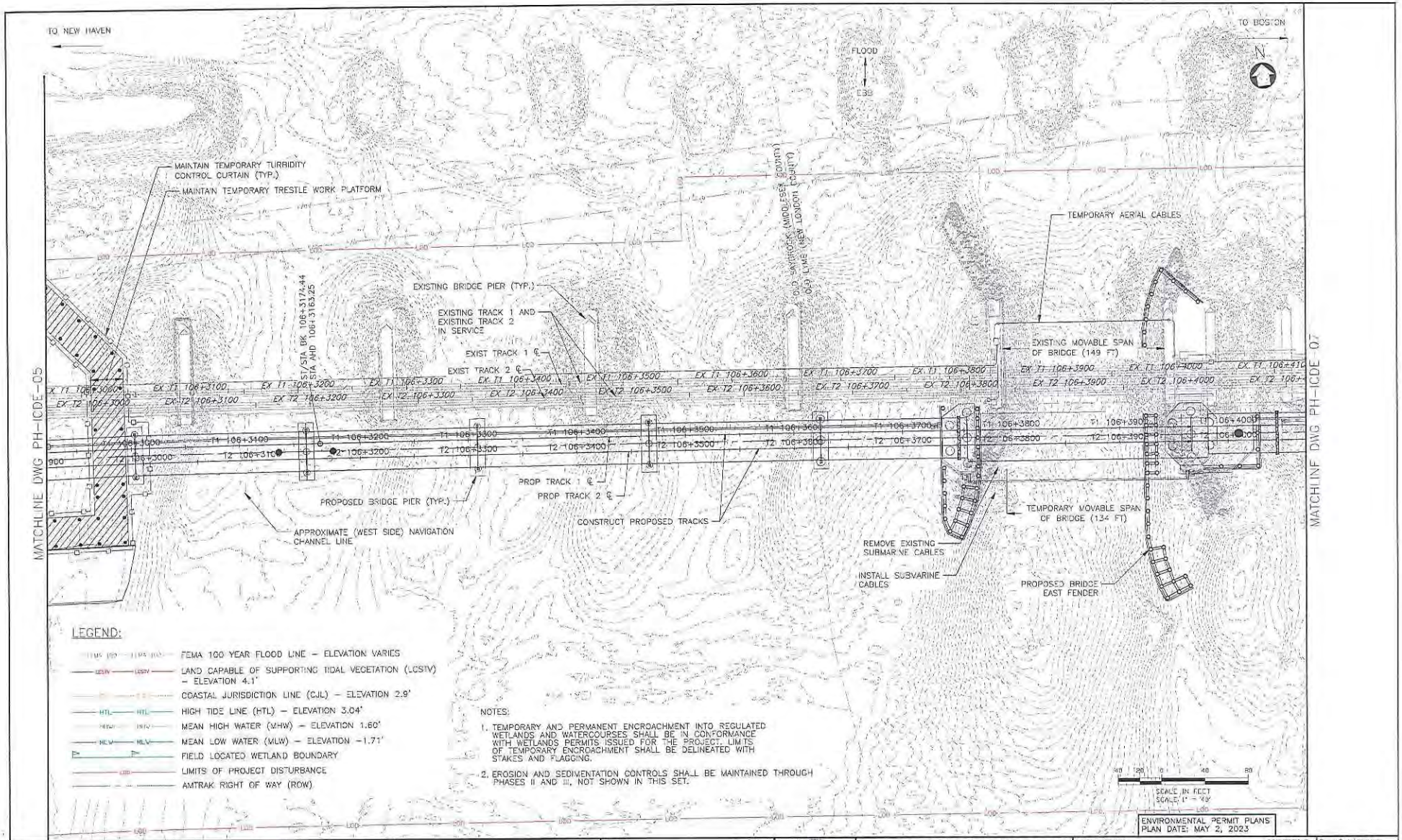

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
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- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

NOTES:

1. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
2. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND III, NOT SHOWN IN THIS SET.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

HARDESTY & HANOVER, LLC
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1501 Broadway New York, NY 10036
WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

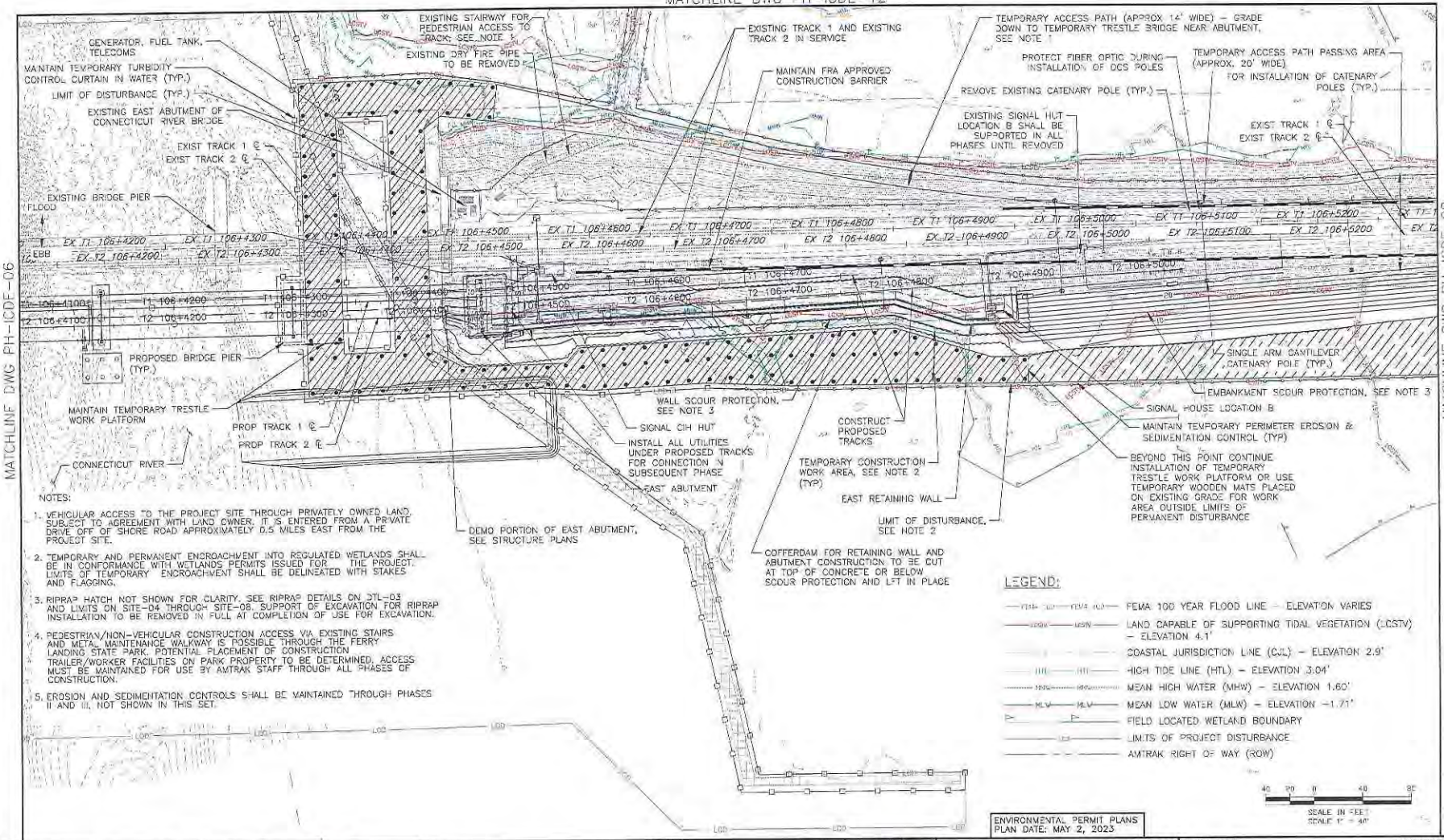
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed CB | Drawn CBMD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS:	
Sheet No.	98 OF 145
Dwg No.	PH-ICDE-06



No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038
1700 Market St. Suite 1050 Philadelphia, PA 19103

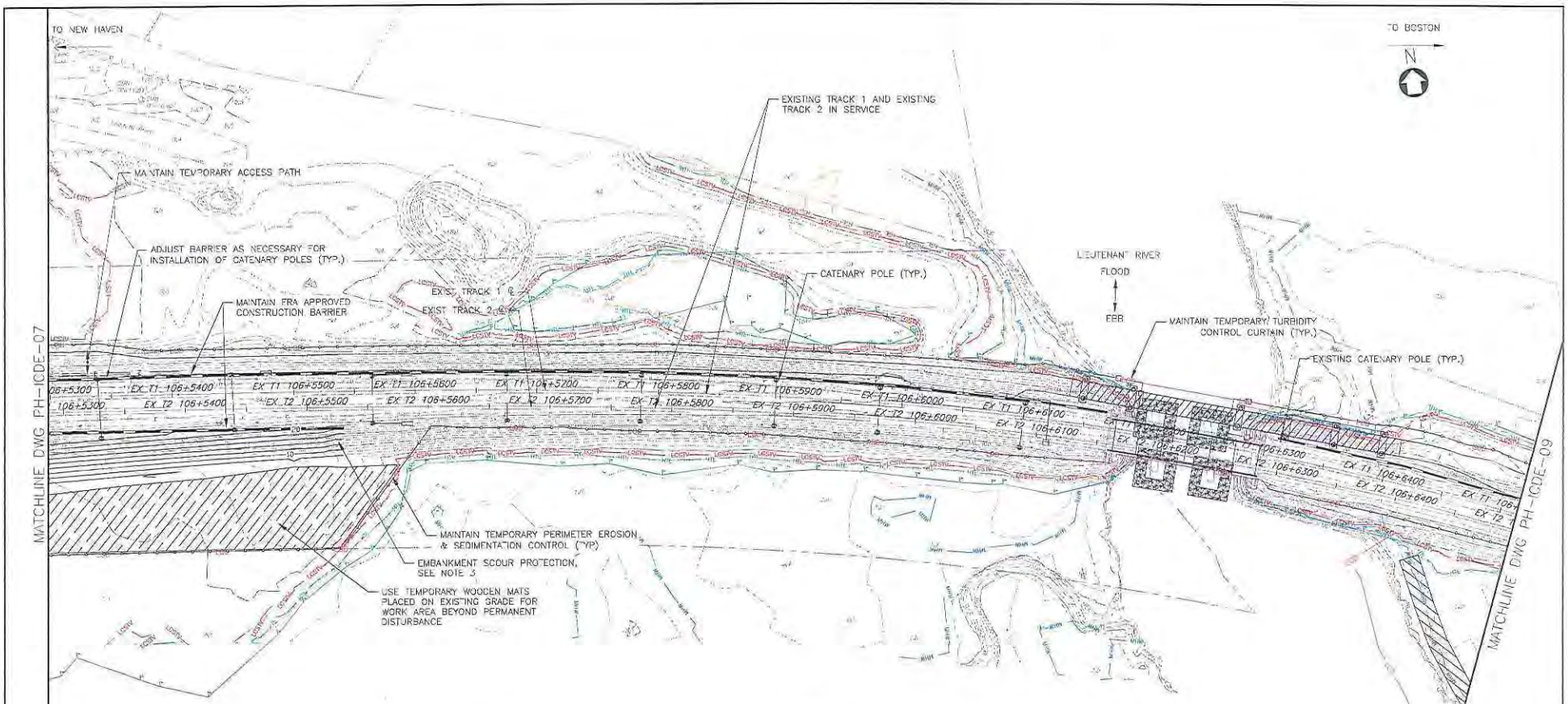
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed CB Drawn CBMD Checked KH Date 5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	99 OF 140
Dwg No.	PH-ICDE-07



NOTES:

1. VEHICULAR ACCESS TO THE PROJECT SITE THROUGH PRIVATELY OWNED LAND, SUBJECT TO AGREEMENT WITH LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF SHORE ROAD APPROXIMATELY 0.5 MILES EAST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. RIPRAP HATCH NOT SHOWN FOR CLARITY. SEE RIPRAP DETAILS ON DTL-03 AND LIMITS ON SITE-04 THROUGH SITE-08. SUPPORT OF EXCAVATION FOR RIPRAP INSTALLATION TO BE REMOVED IN FULL AT COMPLETION OF USE FOR EXCAVATION.
4. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND III, NOT SHOWN IN THIS SET.

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
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- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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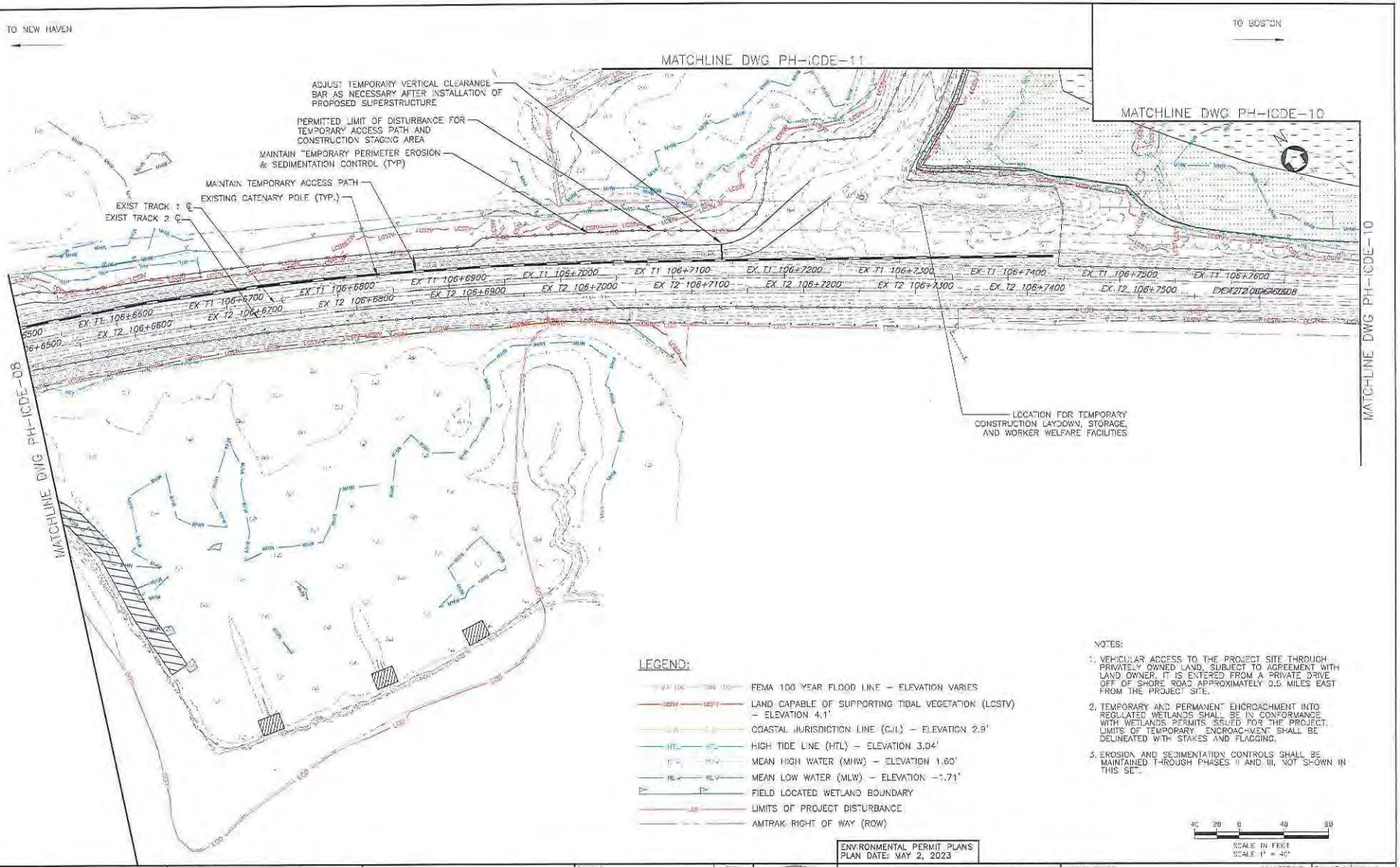
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

Designed	CB	Drawn	CBWD	Checked	KM	Date	5/2/2023

Project Code XXX XXX
WBS
Sheet No. 100 OF 140
Dwg No. PH-ICDE-08



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

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ENGINEERING
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WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

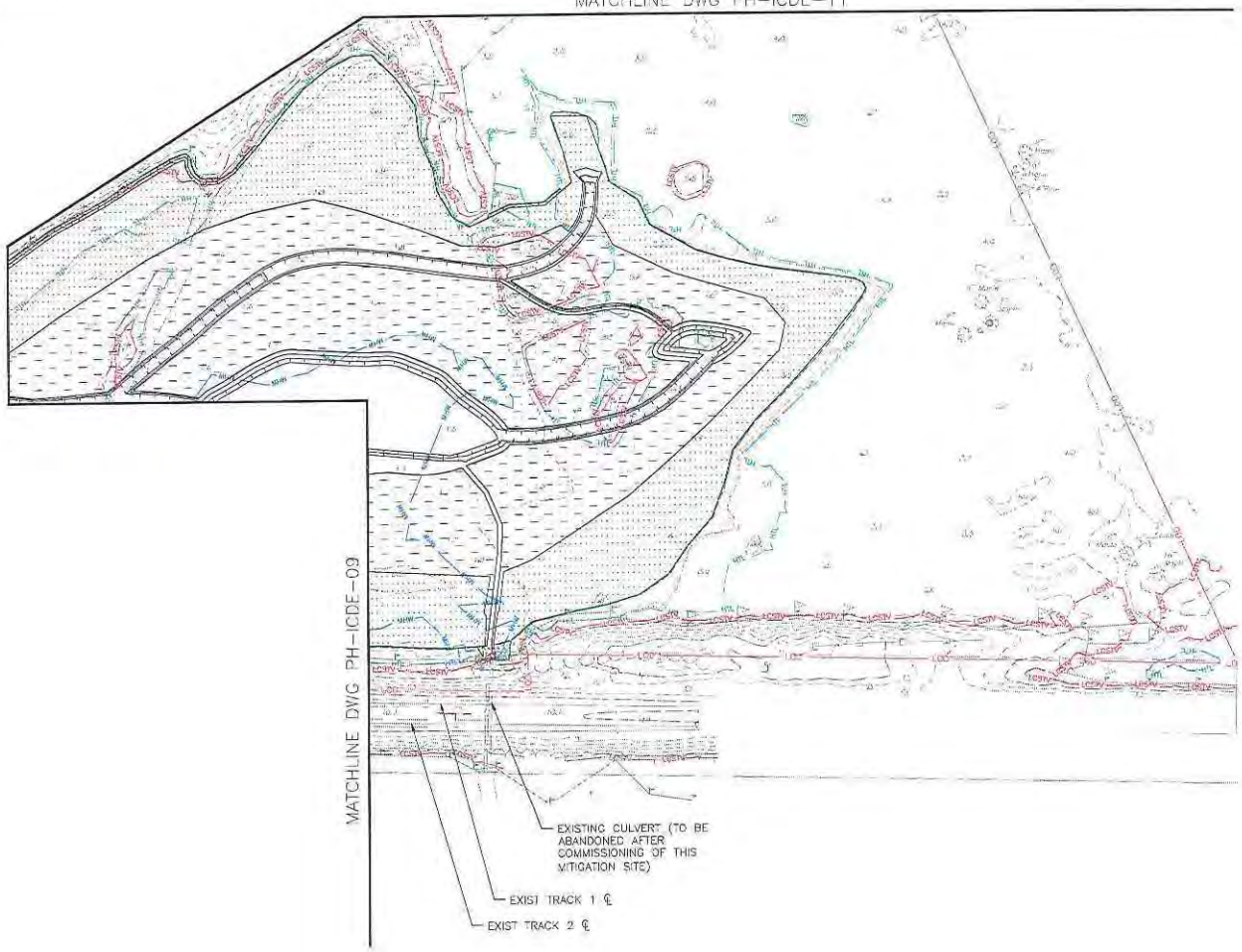
Designed	CB	Drawn	CDMD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	101 OF 140
Dwg No.	PH-ICDE-09

TO NEW HAVEN

TO BOSTON

MATCHLINE DWG PH-ICDE-11



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
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- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

NOTES:

1. VEHICULAR ACCESS TO THE PROJECT SITE THROUGH PRIVATELY OWNED LAND, SUBJECT TO AGREEMENT WITH LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF SHORE ROAD APPROXIMATELY 0.5 MILES EAST FROM THE PROJECT SITE.
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3. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND III, NOT SHOWN IN THIS SET.

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10036
WSP 1730 Market St. Suite 1050 Philadelphia, PA 19103

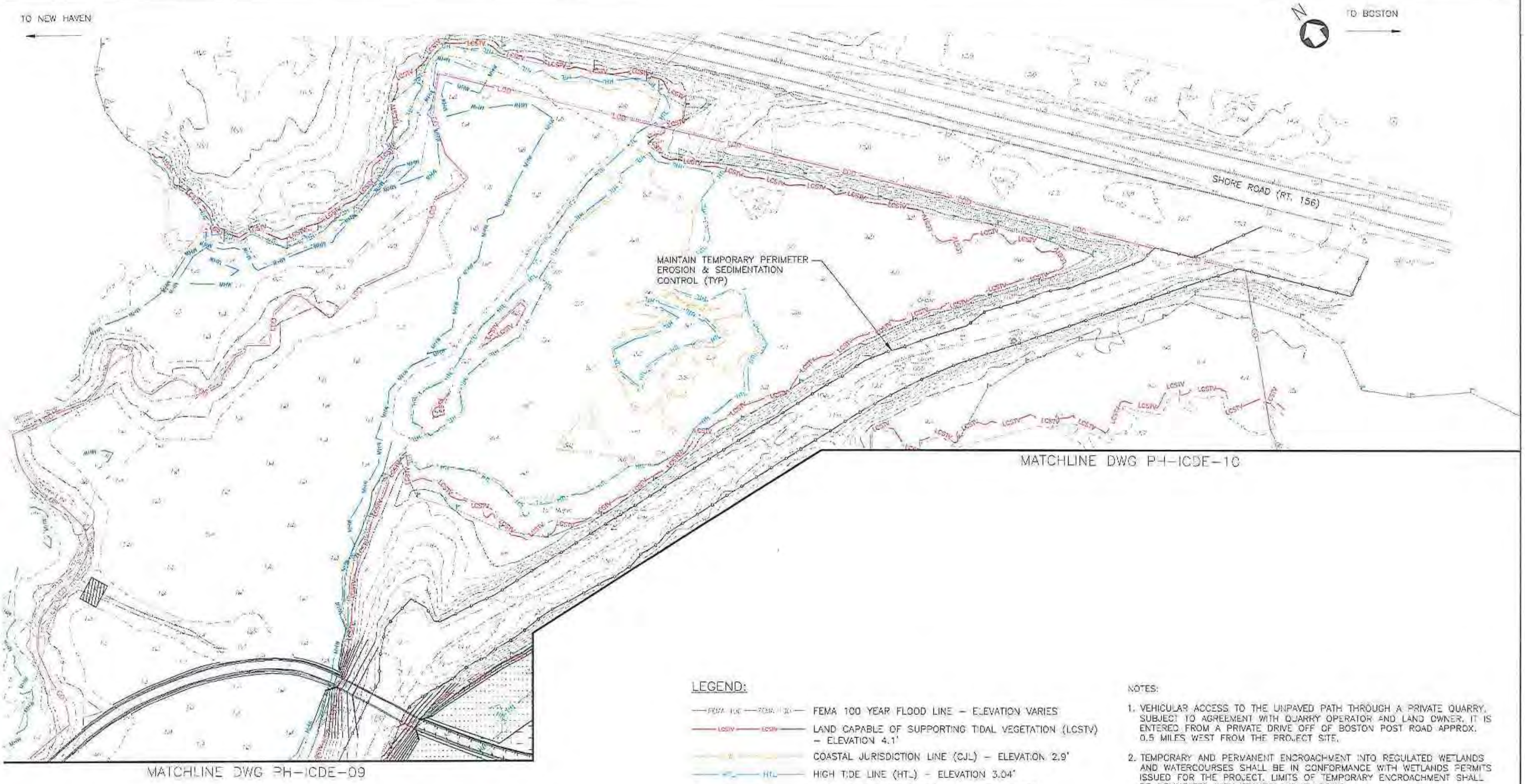
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed	CB	Drawn	CB/MD	Checked	KM	Date	5/2/2023

Project Code	XXX.XXX
WBS:	
Sheet No.	102 OF 140
Dwg No.	PH-ICDE-10



LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
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- FIELD LOCATED WETLAND BOUNDARY
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- AMTRAK RIGHT OF WAY (ROW)

NOTES:

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2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.
3. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGH PHASES II AND I, NOT SHOWN IN THIS SET.

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

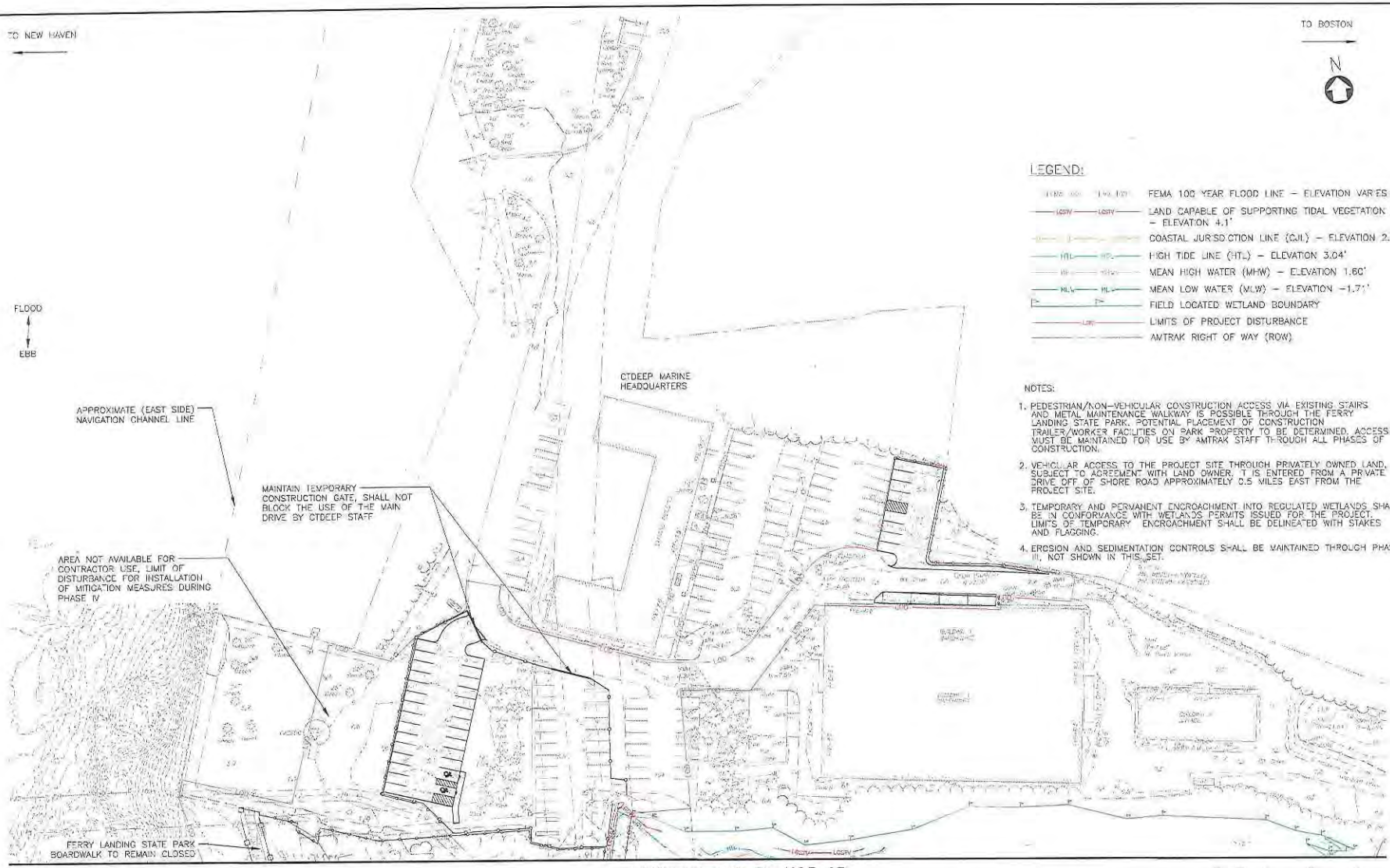
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE ICDE

Designed CB | Drawn CB/VD | Checked KM | Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 103 OF 140
Dwg. No. PH-ICDE-11



MATCH LINE DWG PH-ICDE-07

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	by

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

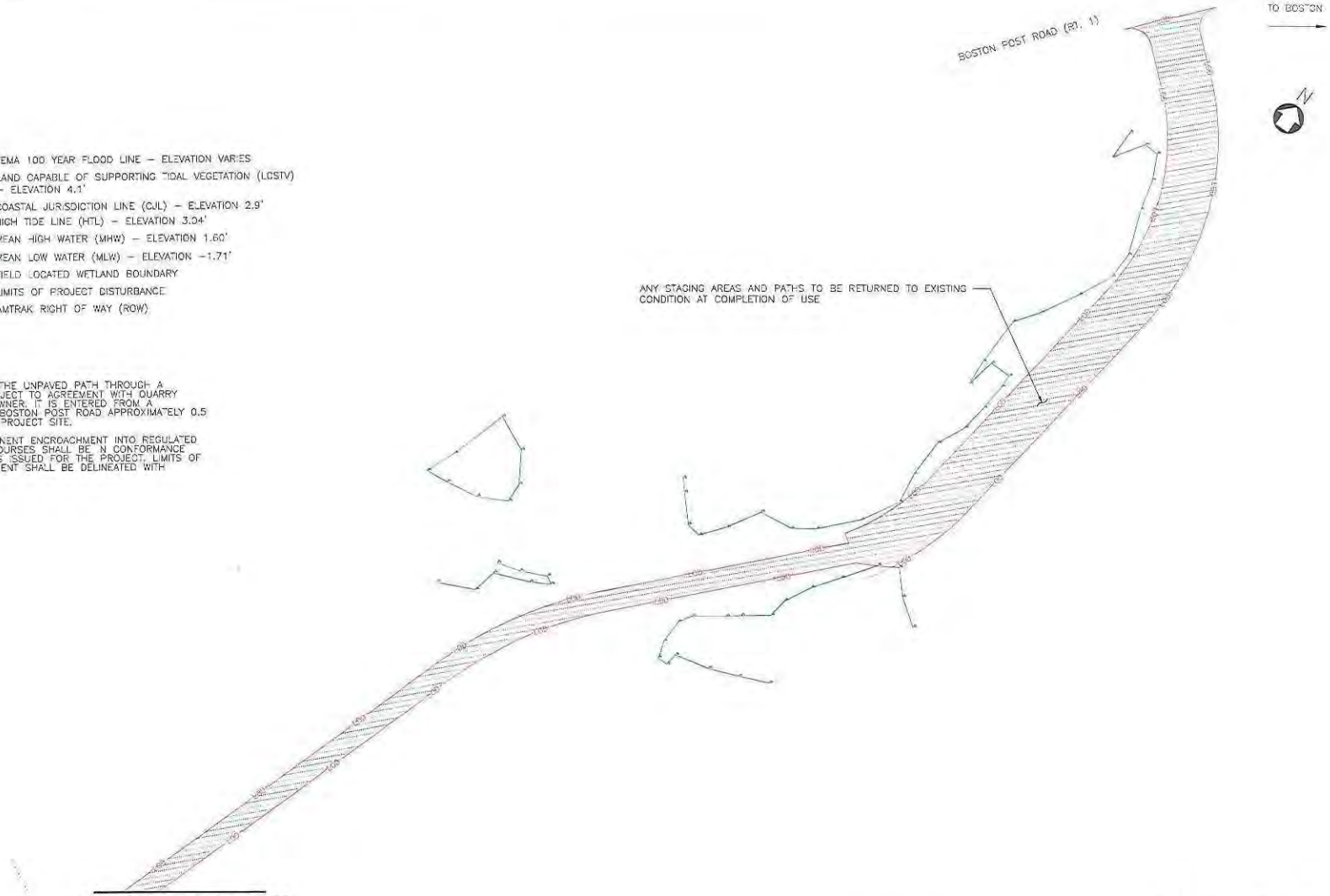
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE ICDE

Designed CB	Drawn CB/MD	Checked KM	Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	104 OF 120
Dwg. No.	PH-ICDE-12

TO NEW HAVEN

TO BOSTON



LEGEND:

- FEMA 100 — FEMA 100 — FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

NOTES:

1. VEHICULAR ACCESS TO THE UNPAVED PATH THROUGH A PRIVATELY QUARRY, SUBJECT TO AGREEMENT WITH QUARRY OPERATOR AND LAND OWNER. IT IS ENTERED FROM A PRIVATE DRIVE OFF OF BOSTON POST ROAD APPROXIMATELY 0.5 MILES WEST FROM THE PROJECT SITE.
2. TEMPORARY AND PERMANENT ENCROACHMENT INTO REGULATED WETLANDS AND WATERCOURSES SHALL BE IN CONFORMANCE WITH WETLANDS PERMITS ISSUED FOR THE PROJECT. LIMITS OF TEMPORARY ENCROACHMENT SHALL BE DELINEATED WITH STAKES AND FLAGGING.

60 30 0 60 120
SCALE IN FEET
SCALE 1" = 60'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	BY

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code:	XXX.XXX
WBS:	
Sheet No.	105 OF 140
Dwg No.	PH-IV-01

TO NEW HAVEN

TO BOSTON

MATCHLINE DWG PH-IV-01

LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
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- MLW — MEAN LOW WATER (MLW) – ELEVATION -1.71'
- FIELD LOCATED WETLAND BOUNDARY
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- AMTRAK RIGHT OF WAY (ROW)

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TO BOSTON POST ROAD (RT. 1)

ANY STAGING AREAS AND PATHS TO BE RETURNED TO EXISTING CONDITION AT COMPLETION OF USE

MAINTAIN TEMPORARY SILT FENCE UNTIL STABILIZATION

PRIVATE PROPERTY NO EASEMENT AVAILABLE

MATCHLINE DWG PH-IV-03

40 20 0 40 80

SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

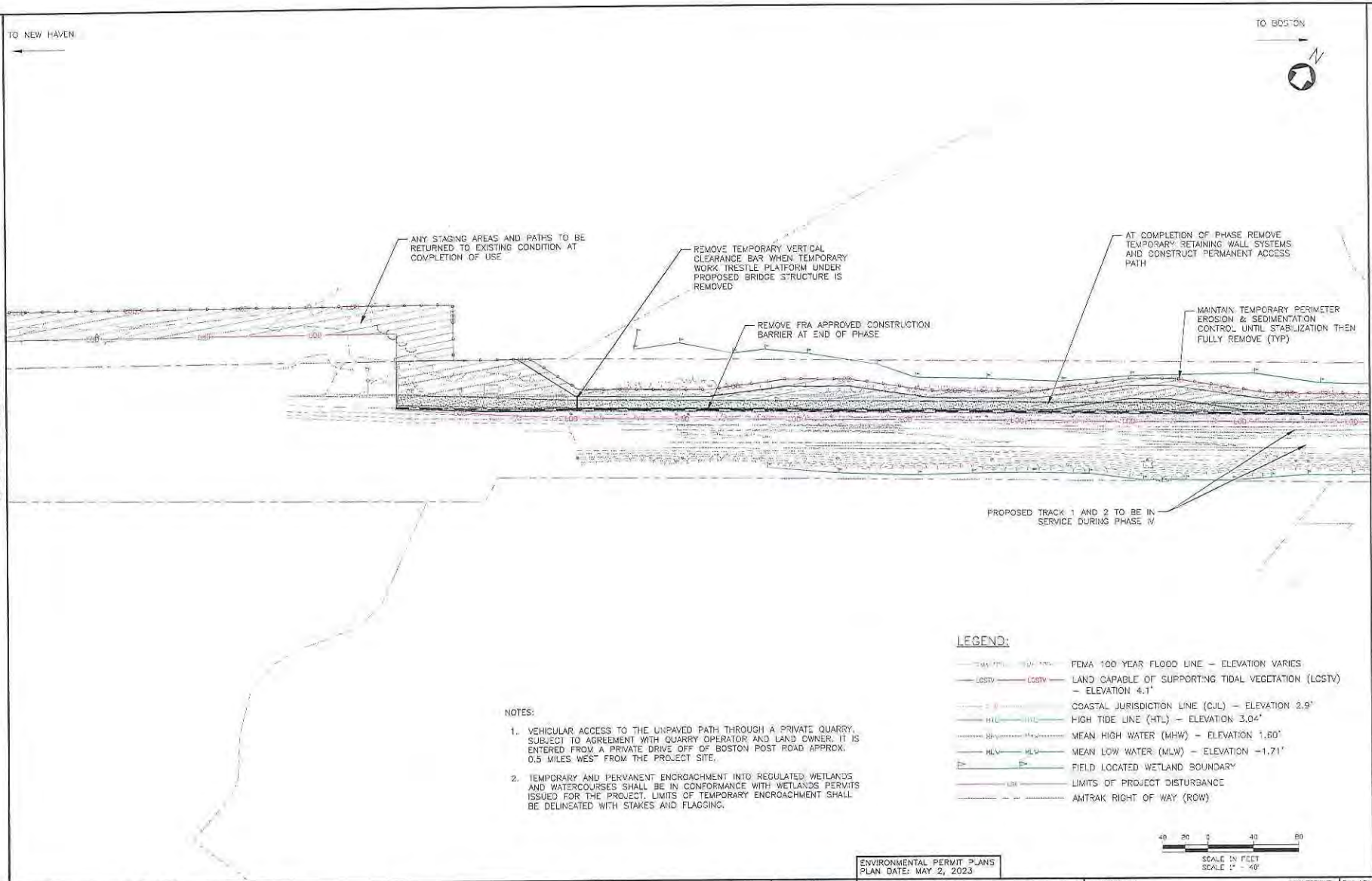
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed CB | Drawn CB/VD | Checked KM | Date 5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	106 OF 140
Dwg No.	PH-IV-02



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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
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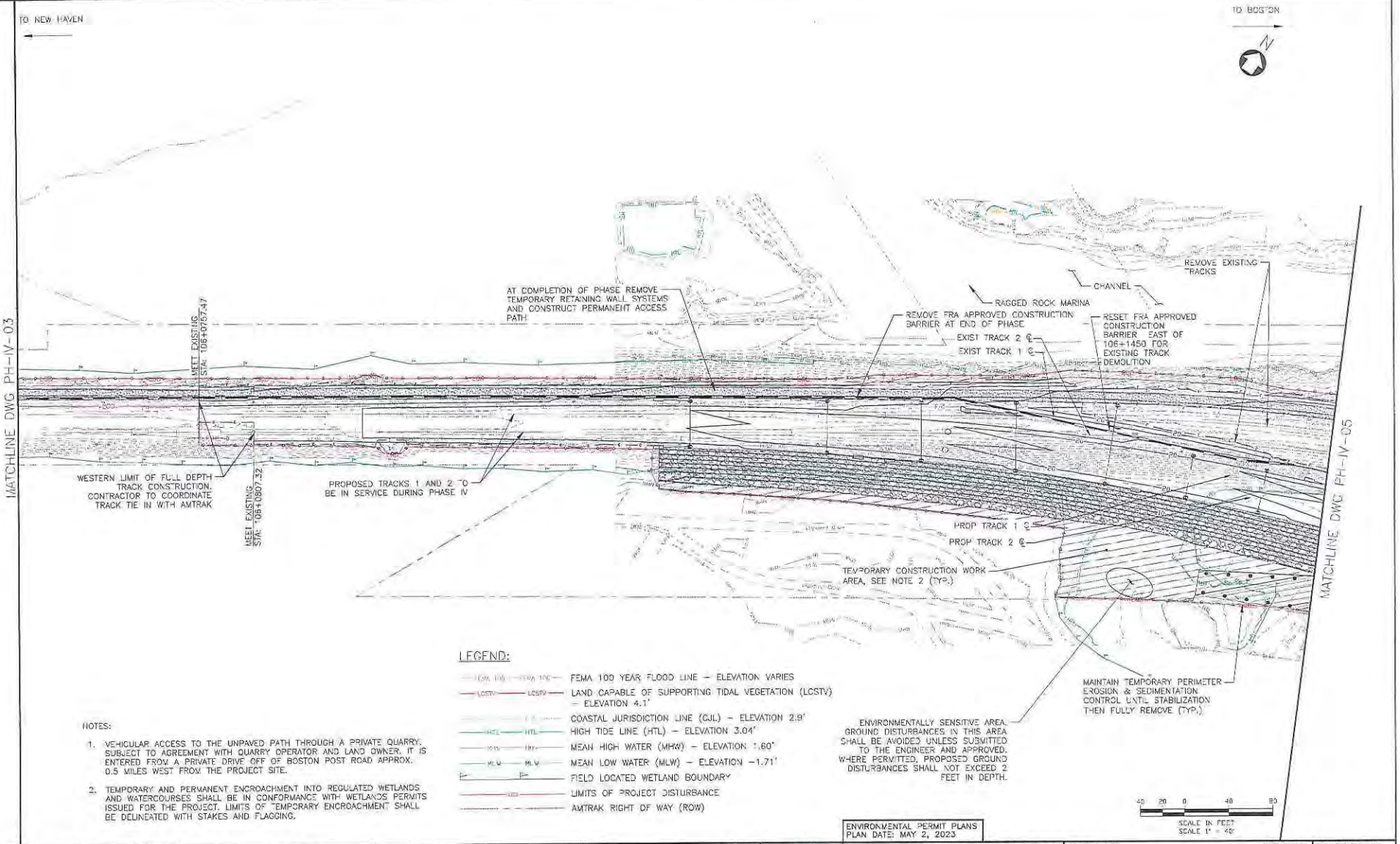
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed CB Drawn CB/VD Checked KV Date 5/2/2023

Project Code	XXX.XXX
WBS:	
Sheet No.	167 OF 143
Dwg. No.	PH-IV-03



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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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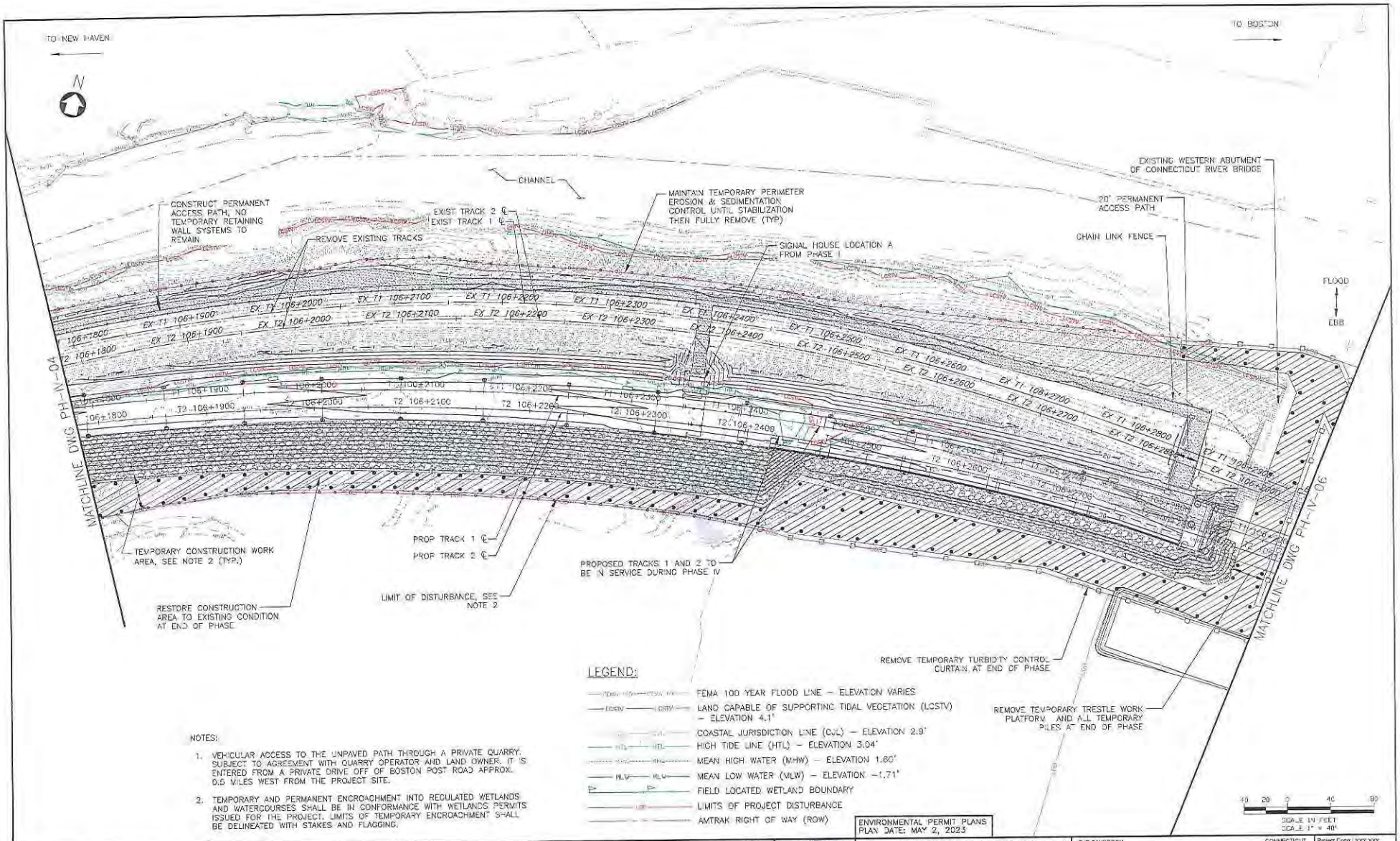
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN - PHASE IV

Designed KM | Drawn CB | Checked KF | Date 5/2/2023

Project Code: XXX XXX
WBS
Sheet No. 106 OF 140
Dwg No. PH-IV-04



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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1760 Market St. Suite 1050 Philadelphia, PA 19103

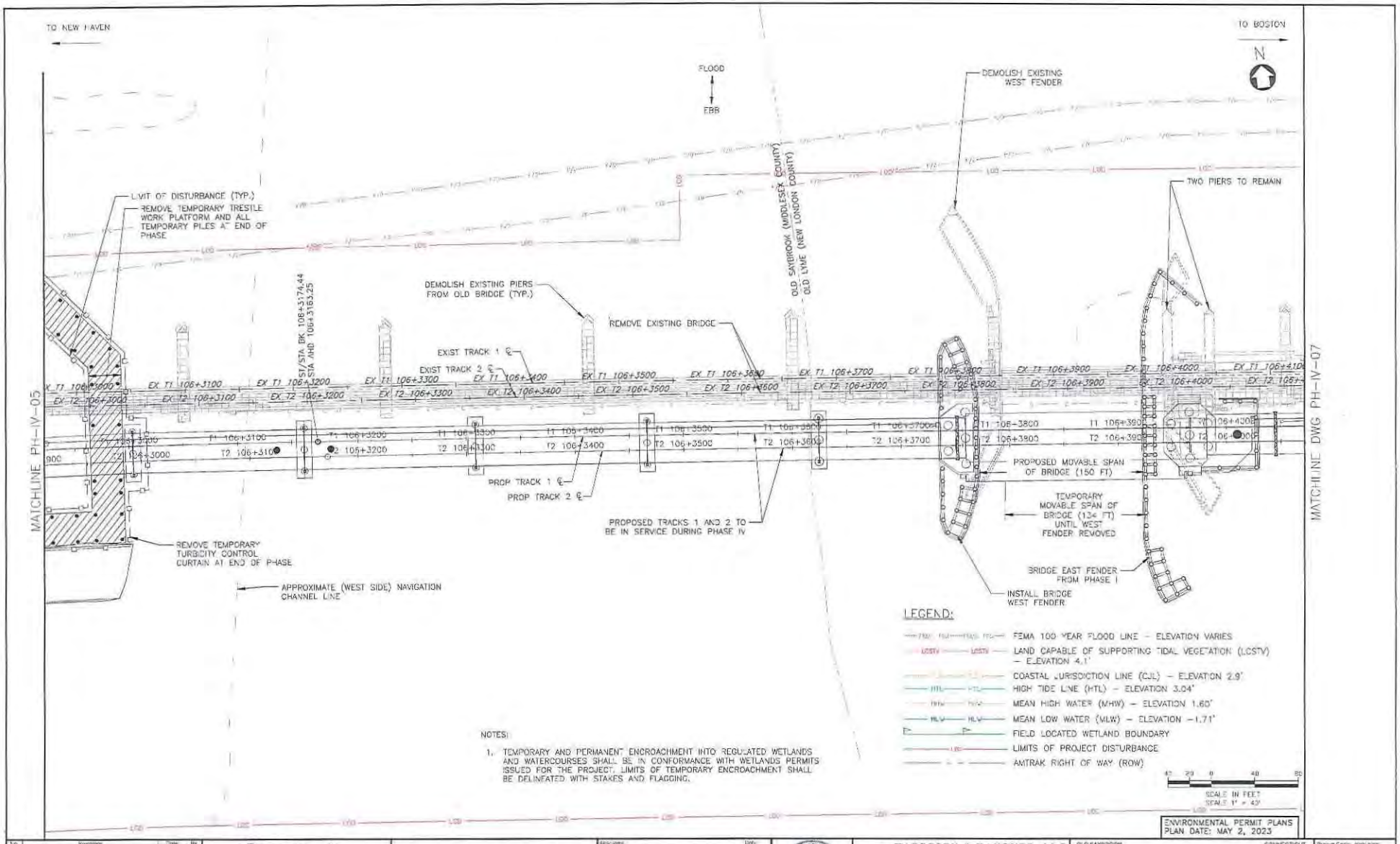
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed	KM	Drawn	CB	Checked	KF	Date	5/2/2023

Project Code: XXX.XXX
WBS
Sheet No. 109 OF 140
Dwg No. PH-IV-05



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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

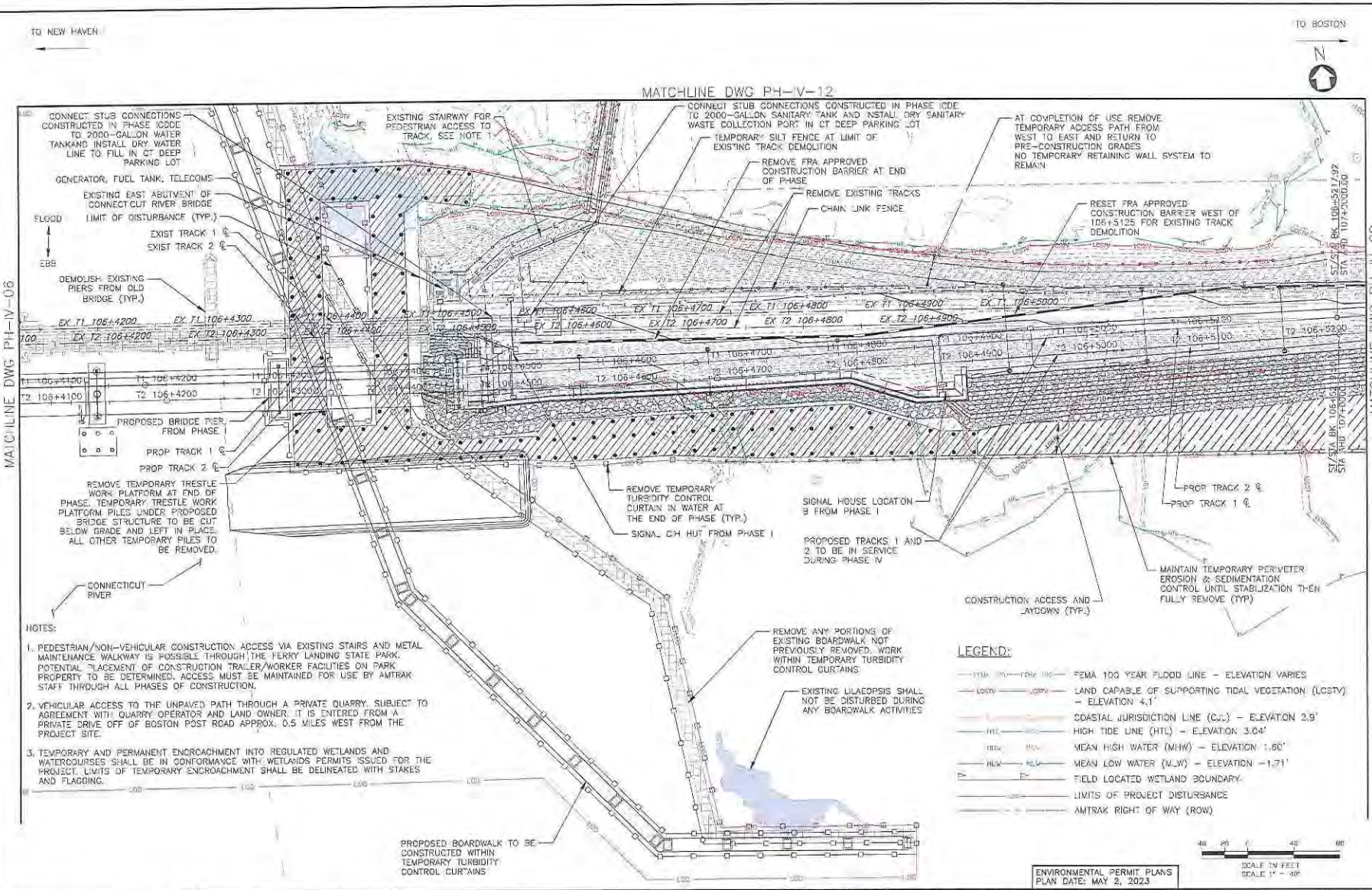
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed: CB | Drawn: CB/MD | Checked: KM | Date: 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 113 OF 140
Dwg No. PH-IV-06



NOTES:

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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

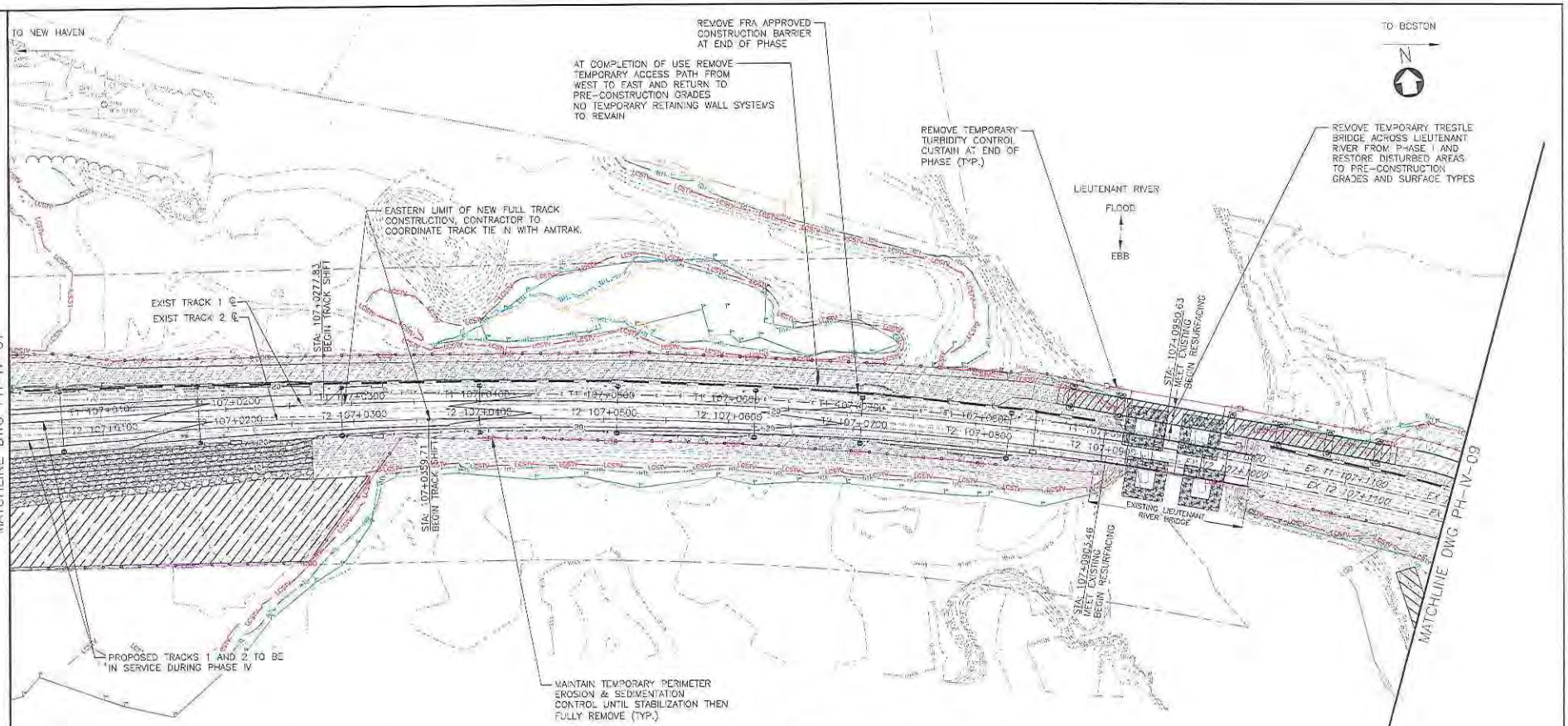
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Leader XXX XXX
Web:
Sheet No. 111 OF 143
Dwg No. PH-IV-07



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LEGEND:

- FEMA 100 — FEMA 100 — FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LCSTV — LCSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LCSTV) – ELEVATION 4.1'
- CJL — COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
- HTL — HIGH TIDE LINE (HTL) – ELEVATION 3.04'
- MHW — MEAN HIGH WATER (MHW) – ELEVATION 1.60'
- MLW — MEAN LOW WATER (MLW) – ELEVATION –1.71'
- FIELD LOCATED WETLAND BOUNDARY
- LOD — LIMITS OF PROJECT DISTURBANCE
- AMTRAK RIGHT OF WAY (ROW)

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

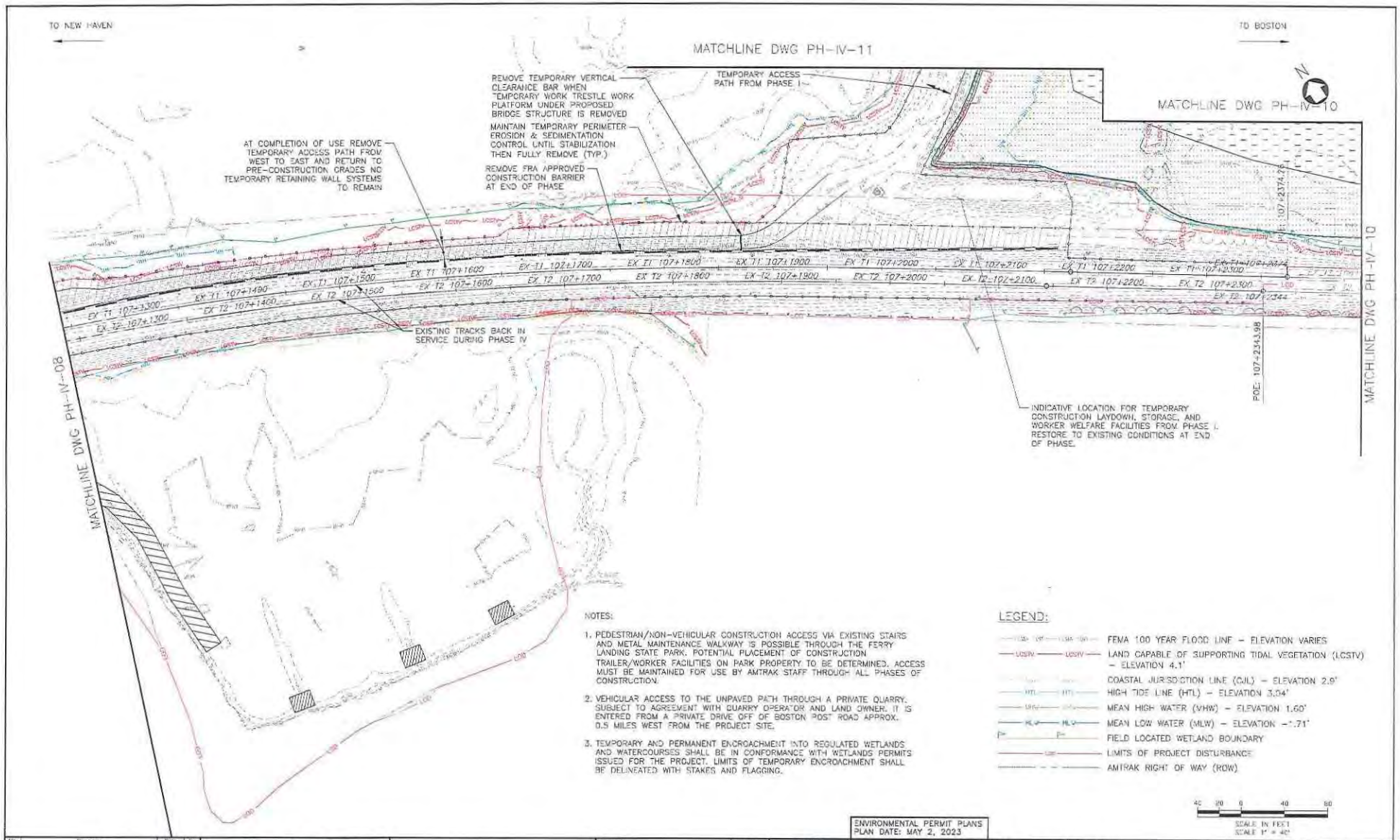
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN - PHASE IV

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	112 OF 140
Dwg No.	PH-IV-08



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LEGEND:

- FEMA 100 YEAR FLOOD LINE – ELEVATION VARIES
- LOSTV — LAND CAPABLE OF SUPPORTING TIDAL VEGETATION (LOSTV) – ELEVATION 4.1'
- COASTAL JURISDICTION LINE (CJL) – ELEVATION 2.9'
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- AMTRAK RIGHT OF WAY (ROW)

40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN -PHASE IV

Designed CB | Drawn CBMD | Checked KM | Date 5/2/2023

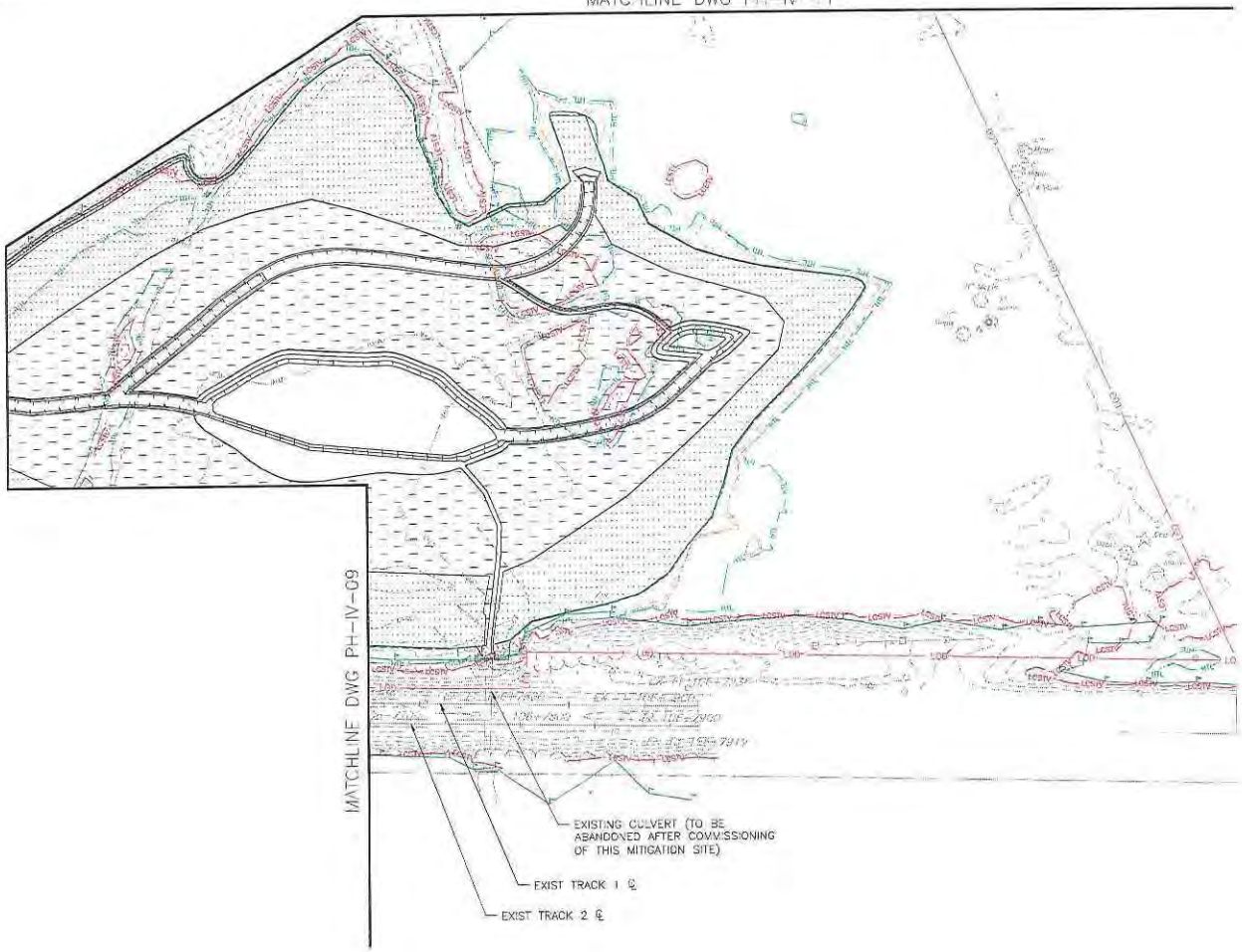
Project Code	XXX XXX
WBS	
Sheet No.	113 OF 140
Dwg No.	PH-IV-09

TO NEW HAVEN

MATCHLINE DWG PH-IV-11

TO BOSTON

N



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40 20 0 40 80

SCALE IN FEET
SCALE: 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	by

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
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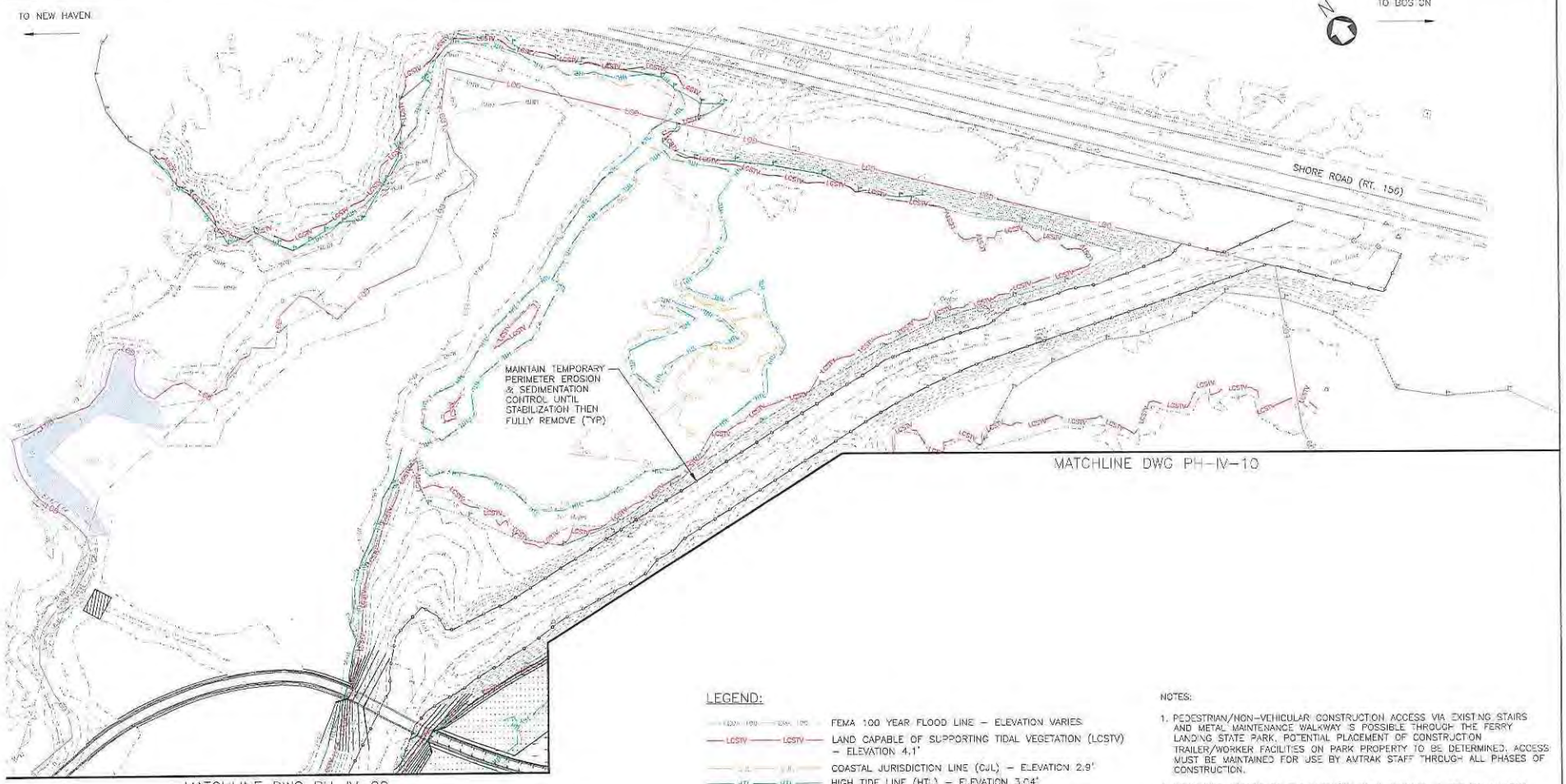
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

STAGING PLAN -PHASE IV

Designed	CB	Drawn	CBMD	Checked	KM	Date	5/2/2023

Project Code	XXXXXX
WBS	
Sheet No.	114 OF 140
Dwg No.	PH-IV-10



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40 20 0 40 80
SCALE IN FEET
SCALE 1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved | Date

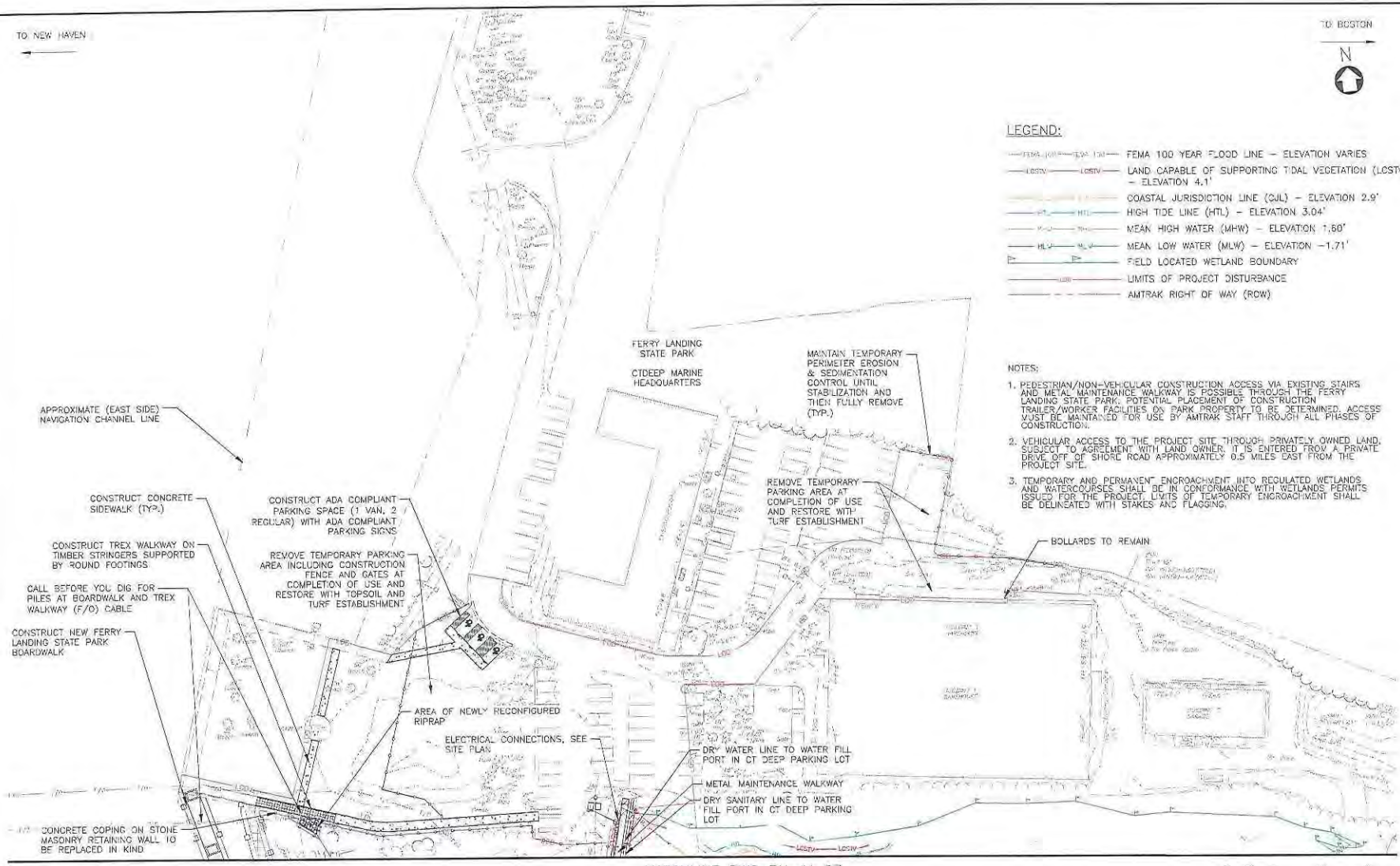
HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St. Suite 1050 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
STAGING PLAN -PHASE IV

Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code XXX.XXX
WBS:
Sheet No. 116 OF 140
Dwg No. PH-IV-11



ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: Date:

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1750 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

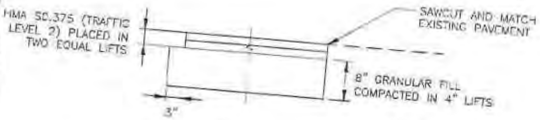
STAGING PLAN - PHASE IV

Designed CB | Drawn CB/MO | Checked KM | Date 5/2/2023

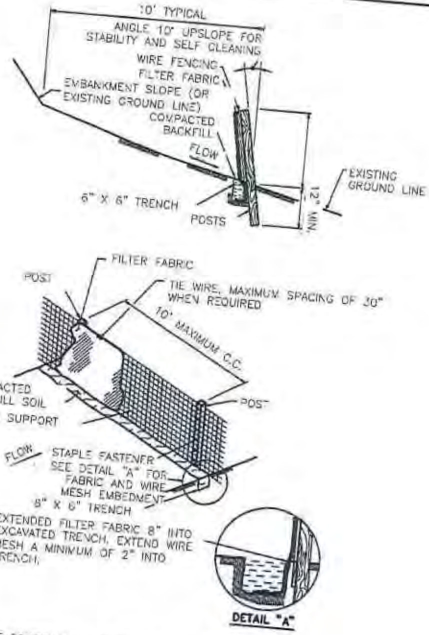
Project Code: XXX.XXX
WBS:
Sheet No. 110 OF 160
Dwg No. PH-IV-12

EROSION AND SEDIMENTATION CONTROL PLAN NOTES

A. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
B. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.
C. EROSION AND SEDIMENTATION CONTROLS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES IN ACCORDANCE SPECIFICATION 1399.1.11.
D. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.
E. THE CONTRACTOR MUST DEVELOP, AND HAVE APPROVED BY THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, A SEPARATE EROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPOIL, BORROW, OR OTHER WORK AREA NOT DETAILED IN THE PERMITTED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS.
F. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.
G. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED PER PERMIT REQUIREMENTS.
H. EROSION AND SEDIMENTATION CONTROLS SHALL CONFORM TO THE REQUIREMENTS OF THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL. CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION (GUIDELINES)."

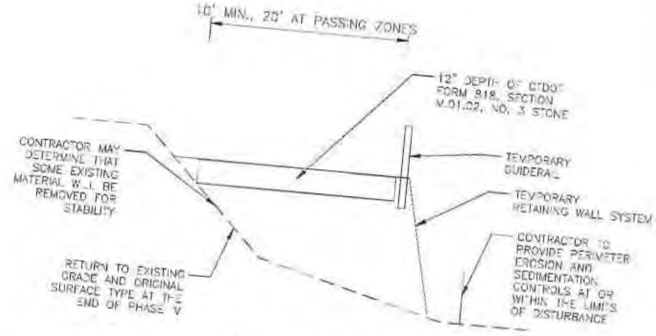


TEMPORARY PARKING
N.T.S



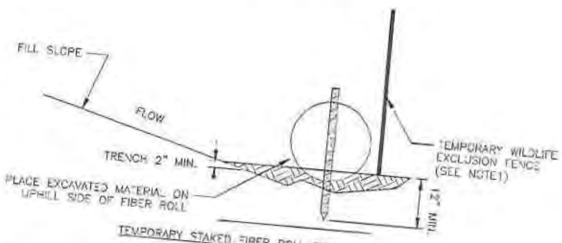
SEE CONSTRUCTION GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002) FOR ADDITIONAL FILTER FENCE REQUIREMENTS.

TEMPORARY SILT FENCE DETAIL
N.T.S



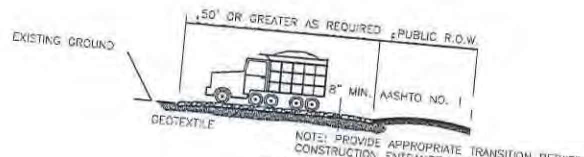
TEMPORARY ACCESS PATH
N.T.S

NOTE:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ANY BORINGS NECESSARY TO FACILITATE THE DESIGN OF THE TEMPORARY RETAINING WALL SYSTEMS.



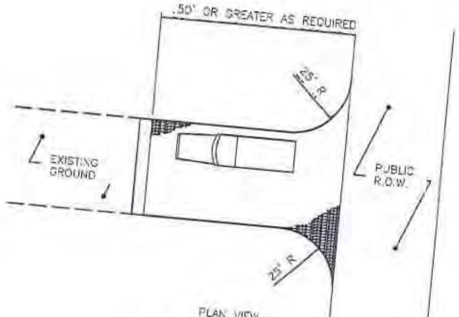
TEMPORARY STAKED FIBER ROLL DETAIL
N.T.S

NOTE:
1. USE TEMPORARY STAKED FIBER ROLL WITH TEMPORARY WILDLIFE EXCLUSION FENCE WHERE REQUIRED BY PERMITS.



NOTE: PROVIDE APPROPRIATE TRANSITION BETWEEN CONSTRUCTION ENTRANCE AND PUBLIC R.O.W.

PROFILE VIEW



PLAN VIEW

ROCK CONSTRUCTION ENTRANCE
N.T.S

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approvals: Date

HARDESTY & HANOVER, LLC
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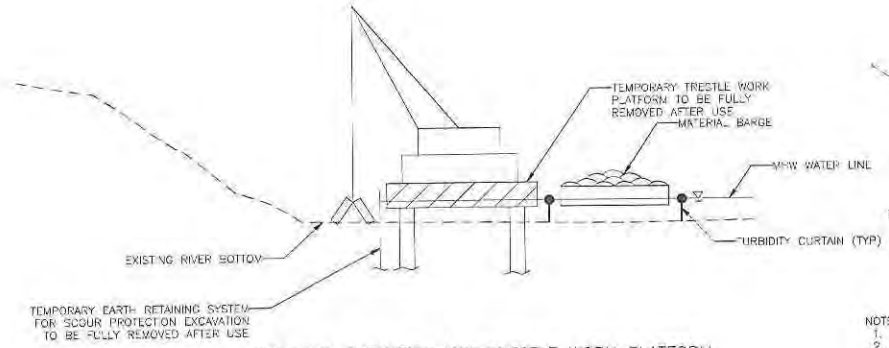
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CIVIL DETAILS

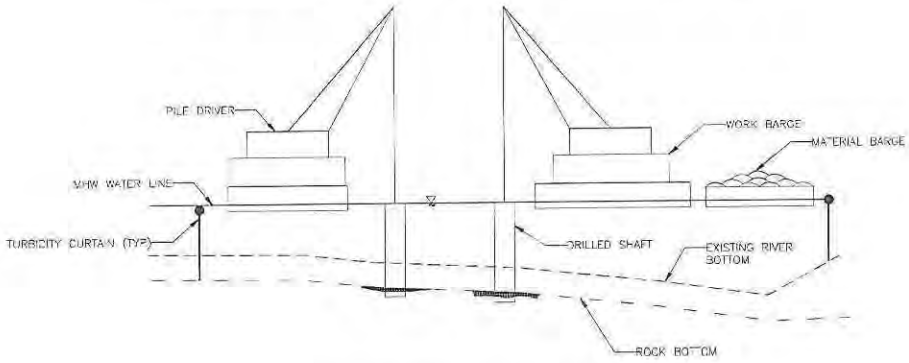
Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 117 OF 145
Dwg. No. DTL-01



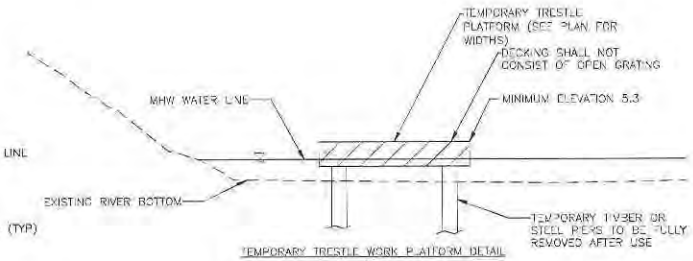
DREDGING OPERATION OFF TRESTLE WORK PLATFORM
N.T.S

NOTE:
1. MATERIAL TO BE PLACED ON MATERIAL BARGE, AS SHOWN, OR ON CONSTRUCTION VEHICLES LOCATED ON TRESTORM WORK PLATFORM, NOT SHOWN.



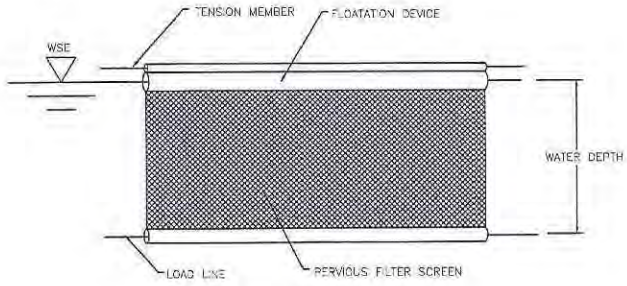
DREDGING OPERATION OFF OF WORK BARGE
N.T.S

NOTE:
1. SEE SC-01 THROUGH SC-05 FOR ADDITIONAL WORK BARGE INFORMATION.



TEMPORARY TRESTLE WORK PLATFORM DETAIL
N.T.S

NOTES:
1. INSTALLATION TO OCCUR BEHIND TURBIDITY CURTAINS.
2. TEMPORARY PILES INSTALLED IN VICINITY OF EXISTING BRIDGE FOUNDATION OR BOARDWALK SHALL BE LOCATED SO AS TO AVOID POTENTIAL CONFLICTS WITH EXISTING PILES AND OTHER OBSTRUCTIONS ABOVE OR BELOW.
3. SIZE OF PIERS, SPACING OF PIERS, AND DEPTH OF SUBSTRUCTURE (DEFINING LOW CHORD) TO BE DESIGNED BY CONTRACTOR. TOTAL NUMBER OF PIERS TO BE NO MORE THAN THOSE SHOWN ON PERMIT PLANS.
4. TEMPORARY TRESTLE WORK PLATFORM TO BE REMOVED IN FULL AFTER COMPLETION OF USE FOR CONSTRUCTION ACCESS AND SITE RESTORED TO PRE-EXISTING CONDITIONS.
5. CONTRACTOR TO CONFIRM AVAILABLE VERTICAL CLEARANCE UNDER EXISTING BRIDGE SUPERSTRUCTURE AND PROPOSED BRIDGE SUPERSTRUCTURE. INSTALLATION AT ELEVATION 5.30 WILL PROVIDE APPROXIMATELY 14'-0" UNDER EXISTING BRIDGE STRUCTURE AND APPROXIMATELY 10'-6" UNDER PROPOSED BRIDGE SUPERSTRUCTURE.



TURBIDITY CONTROL CURTAIN DETAIL
N.T.S

TURBIDITY CURTAIN TO MEET CTDEEP CLASS IV STANDARDS

NOTES:
1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTY	REQUIREMENTS
FILTERING EFFICIENCY	75% (M.N.)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION	EXTRA STRENGTH – 50 lbs./ lin. in. (MIN.) STANDARD STRENGTH – 30 lbs./ lin. in. (M.N.)
FLOW RATE	9.3 gal./sq. ft./ (M.N.)

2. PROVIDE FILTER FABRIC ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

ENVIRONMENTAL PERMIT PLANS
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30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
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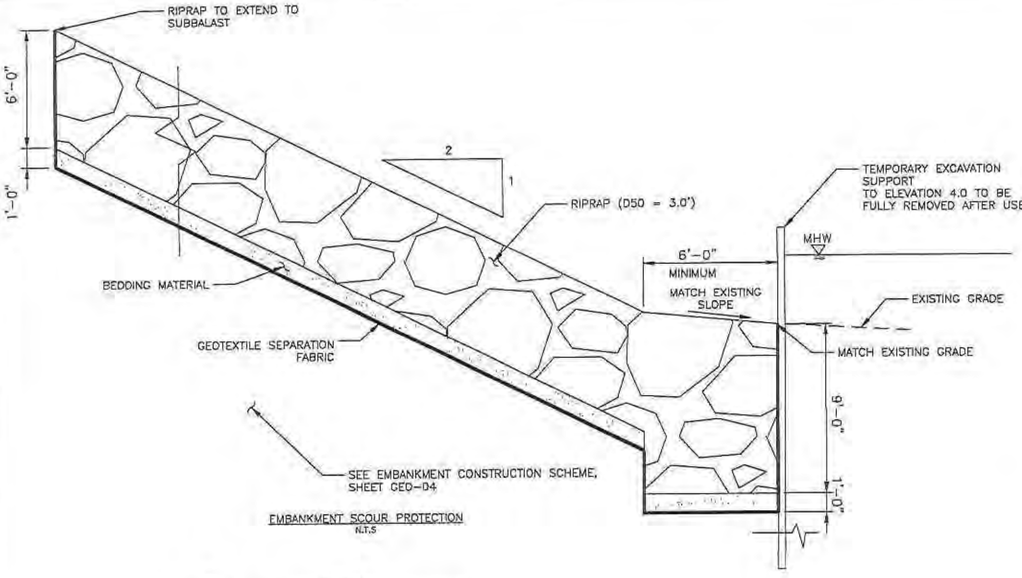
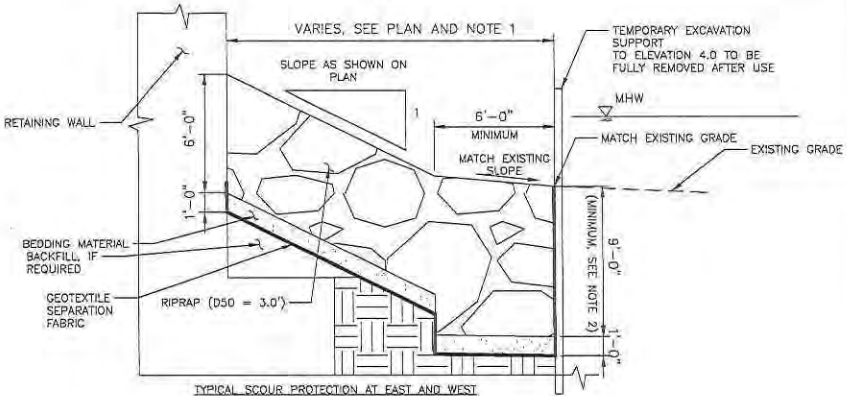
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
CIVIL DETAILS
Designed CB | Drawn CB/VD | Checked KV | Date 5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	118 OF 148
Dwg No.	DTL-02

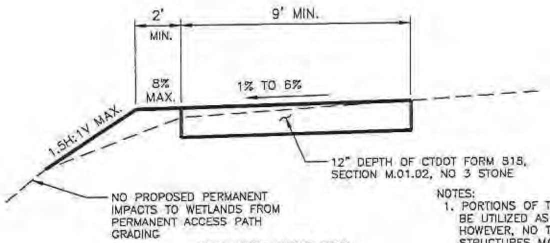


EMBANKMENT SCOUR PROTECTION
N.T.S



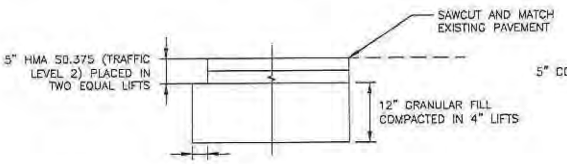
TYPICAL SCOUR PROTECTION AT EAST AND WEST APPROACH RETAINING WALLS
N.T.S

NOTES:
1. 25'-0" MINIMUM DIMENSION TO BE HELD WITHIN 40' OF WEST ABUTMENT AND WITHIN 28' OF EAST ABUTMENT. BEYOND THOSE LIMITS THE RIPRAP AT WALLS CAN TAPER IN TO BE A MINIMUM OF 6'-0" BEYOND LIMIT OF WALL TOE. SEE SITE PLANS AND TRACK SECTIONS.
2. RIPRAP KEY-IN SHALL BE 15'-0" IN FRONT OF AND SOUTH SIDE OF ABUTMENTS AND TAPER TO 9'-0" ALONG A 30'-0" DISTANCE IN FRONT OF THE RETAINING WALLS AFTER WHICH THE 9'-0" DIMENSION APPLIES.
3. SLOPES SHALL NOT EXCEED 1.5H:1V

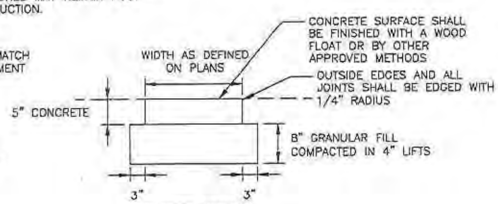


PERMANENT ACCESS PATH
N.T.S

NOTES:
1. PORTIONS OF TEMPORARY ACCESS PATH MAY BE UTILIZED AS PERMANENT ACCESS PATH. HOWEVER, NO TEMPORARY RETAINING STRUCTURES MAY REMAIN POST CONSTRUCTION.

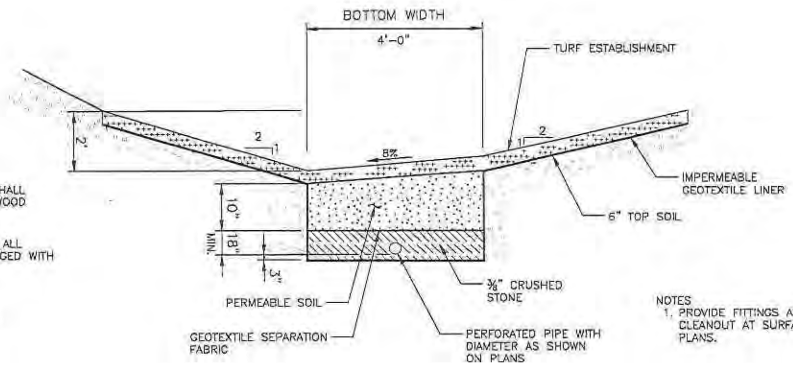


PERMANENT PARKING
N.T.S



CONCRETE SIDEWALK
N.T.S

NOTES:
1. DUMMY JOINTS TO BE 4' TYPICAL
2. EXPANSION JOINT TO BE 12" OR AS DIRECTED



NOTES
1. PROVIDE FITTINGS AND CAP TO PROVIDE CLEANOUT AT SURFACE AS SHOWN ON PLANS.

SWALE
N.T.S

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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STRUCTURES
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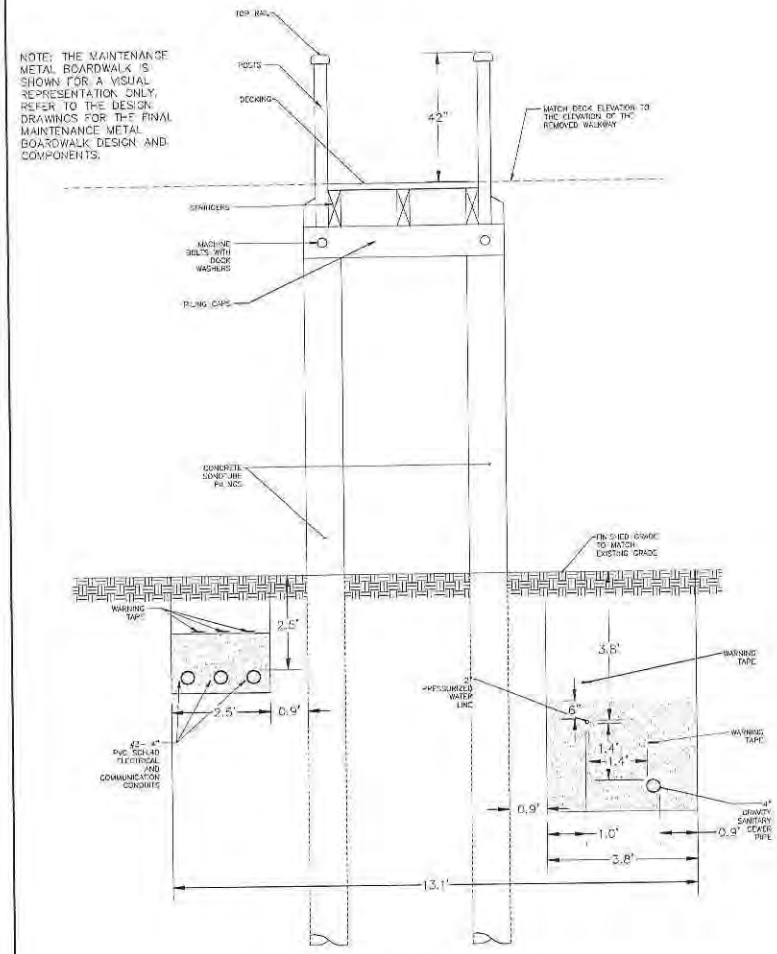
OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

CIVIL DETAILS

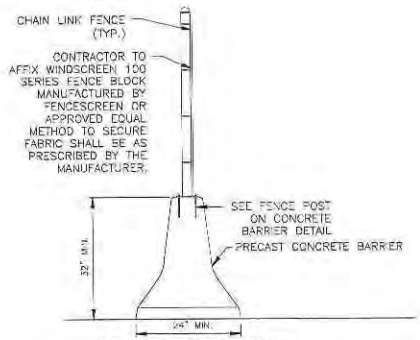
Designed CB | Drawn CB/MD | Checked KM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	110 OF 140
Dwg. No.	DTL-03



METAL GRATE MAINTENANCE WAY
N.T.S

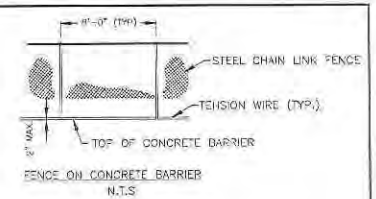
NOTE:
1. SEE P-100 PLUMBING DRAWINGS



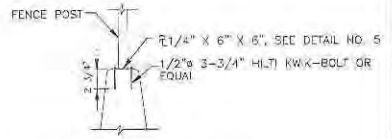
TYPICAL FRA APPROVED BARRIER
N.T.S

NOTES:

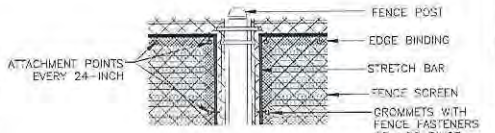
1. FRA APPROVED BARRIER SHALL BE CONTINUOUS BARRIER OF SEMI-PERMANENT NATURE THAT SPANS THE ENTIRE WORK AREA, THAT IS AT LEAST FOUR FEET IN HEIGHT, AND IS OF SUFFICIENT STRENGTH TO PREVENT A ROADWAY WORKER FROM FOULING THE ADJACENT TRACK.
2. ALL CONCRETE BARRIERS AND TEMPORARY FENCING TO BE REMOVED UPON COMPLETION OF PROJECT OR AS DIRECTED BY THE REO.
3. SEE GROUNDING REQUIREMENTS FOR FENCING ON CV-404.



FENCE ON CONCRETE BARRIER
N.T.S



FENCE POST ON CONCRETE BARRIER
N.T.S



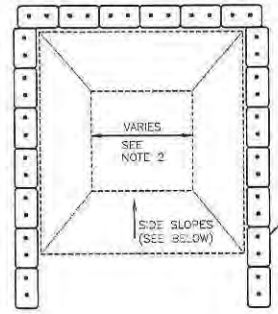
FENCE SCREEN ATTACHMENT
N.T.S

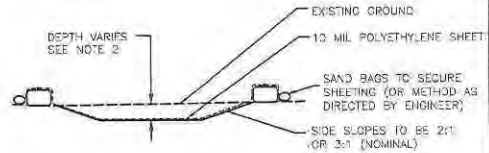
NOTES:

1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER.

   LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AT LEAST 50 FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR SENSITIVE RESOURCE. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

   SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS INCLUDING, BUT NOT LIMITED TO, OPERATIONS ASSOCIATED WITH GROUT AND MORTAR.
3. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.
4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHOD.
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEACS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONSTRUCTION SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS.
6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.





CONCRETE WASHOUT AREA
N.T.S
(SEE NOTE 2)

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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Amtrak®

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: Date:

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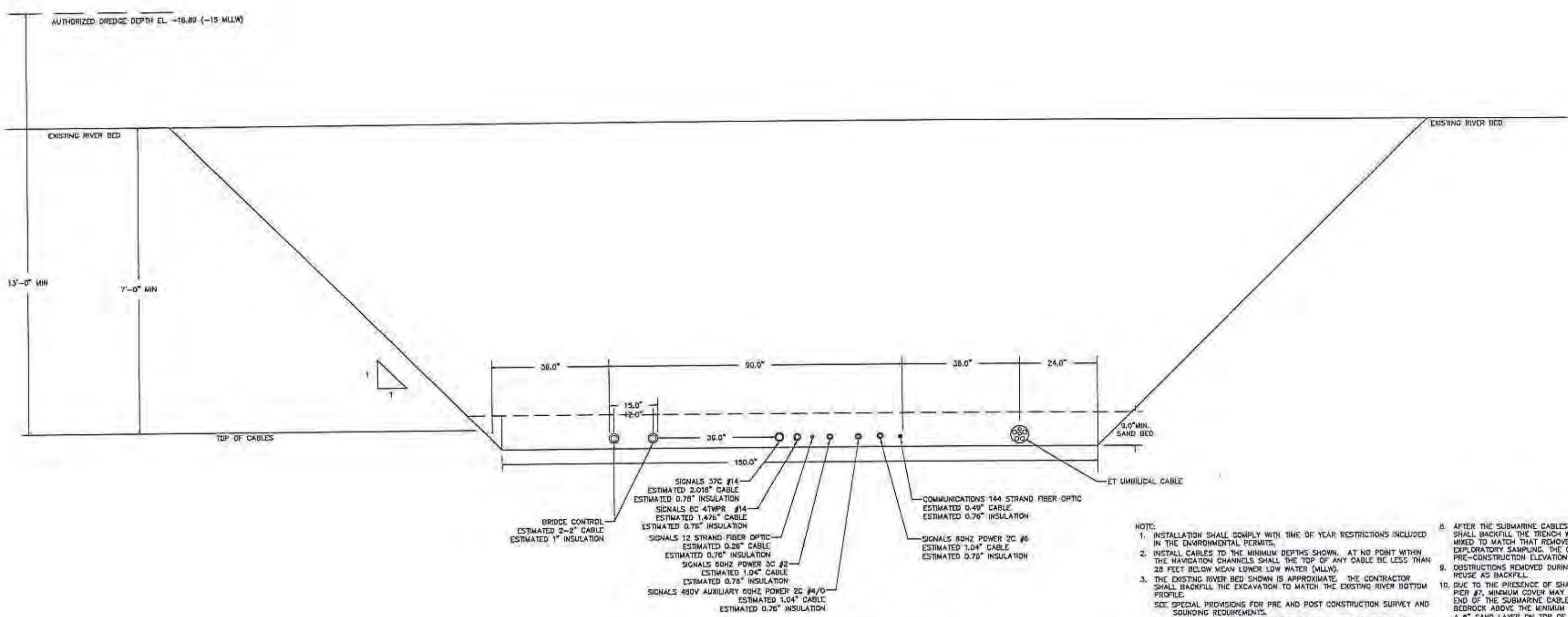
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CIVIL DETAILS

Designed: CB | Drawn: CB/MD | Checked: KM | Date: 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No.: 120 OF 140
Dwg No.: DTL-04



SUBMARINE CABLE DETAIL
N.T.S

NOTE:
1. INSTALLATION SHALL COMPLY WITH TIME OF YEAR RESTRICTIONS INCLUDED IN THE ENVIRONMENTAL PERMITS.
2. INSTALL CABLES TO THE MINIMUM DEPTHS SHOWN. AT NO POINT WITHIN THE NAVIGATION CHANNELS SHALL THE TOP OF ANY CABLE BE LESS THAN 28 FEET BELOW MEAN LOWER LOW WATER (MLLW).
3. THE EXISTING RIVER BED SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL BACKFILL THE EXCAVATION TO MATCH THE EXISTING RIVER BOTTOM PROFILE.
   SEE SPECIAL PROVISIONS FOR PRE AND POST CONSTRUCTION SURVEY AND SOUNDING REQUIREMENTS.
4. THE CONTRACTOR SHALL COORDINATE ALL INSTALLATIONS WITH THE USCG.
5. ALL WORK BARGES SHALL HAVE A TURBIDITY CURTAIN AROUND THE PERIMETER OF THE WORK AREA. THE CONTRACTOR SHALL SUBMIT DETAILS TO THE ENGINEER FOR APPROVAL.
6. TURBIDITY CURTAIN AND SUPPORTING PILES OR ANCHORS SHALL BE DESIGNED BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL MAINTAIN THE TURBIDTY CURTAINS AND MAKE REPAIRS AS NECESSARY FOR THE DURATION OF USE. A DEBRIS BOOM MAY BE EMPLOYED BY THE CONTRACTOR TO PROTECT THE TURBIDITY CURTAINS.
8. AFTER THE SUBMARINE CABLES HAVE BEEN INSTALLED, THE CONTRACTOR SHALL BACKFILL THE TRENCH WITH NEW GRANULAR BACKFILL MATERIAL MIXED TO MATCH THAT REMOVED DURING RIVER CHANNEL EXCAVATION EXPLORATORY SAMPLING. THE CHANNEL WILL BE BACKFILLED TO MATCH THE PRE-CONSTRUCTION ELEVATION OF THE RIVER BOTTOM.
9. OBSTRUCTIONS REMOVED DURING EXCAVATION ARE NOT SUITABLE FOR REUSE AS BACKFILL.
10. DUE TO THE PRESENCE OF SHALLOW BEDROCK IN THE VICINTY OF BRIDGE PIER #7, MINIMUM COVER MAY NOT BE ACHIEVABLE OVER THE EASTERN END OF THE SUBMARINE CABLES. WHERE THE CONTRACTOR ENCOUNTERS BEDROCK ABOVE THE MINIMUM CABLE DEPTH, THE CABLE WILL BE LAID ON A 6" SAND LAYER ON TOP OF THE BEDROCK AND THE TRENCH BACKFILLED TO MATCH THE EXISTING MUDLINE.

ENVIRONMENTAL PERMIT PLANS
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OLD SAYBROOK — CONNECTICUT
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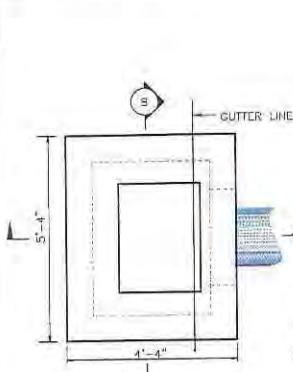
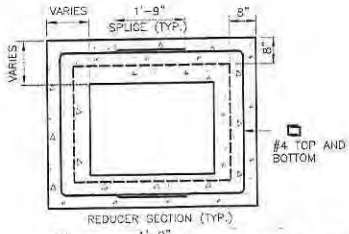
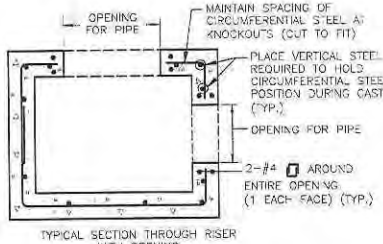
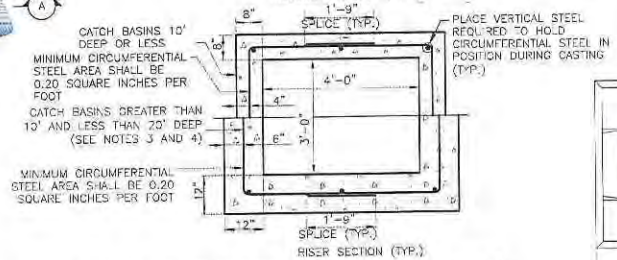
Designed: CB | Drawn: CB/MD | Checked: KM | Date: 5/2/2023

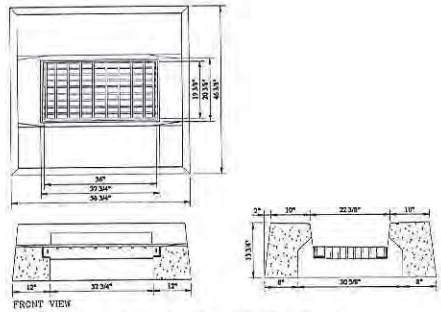
Project Code: XXX.XXX
WBS:
Sheet No. 121 OF 140
Dwg No. DTL-05



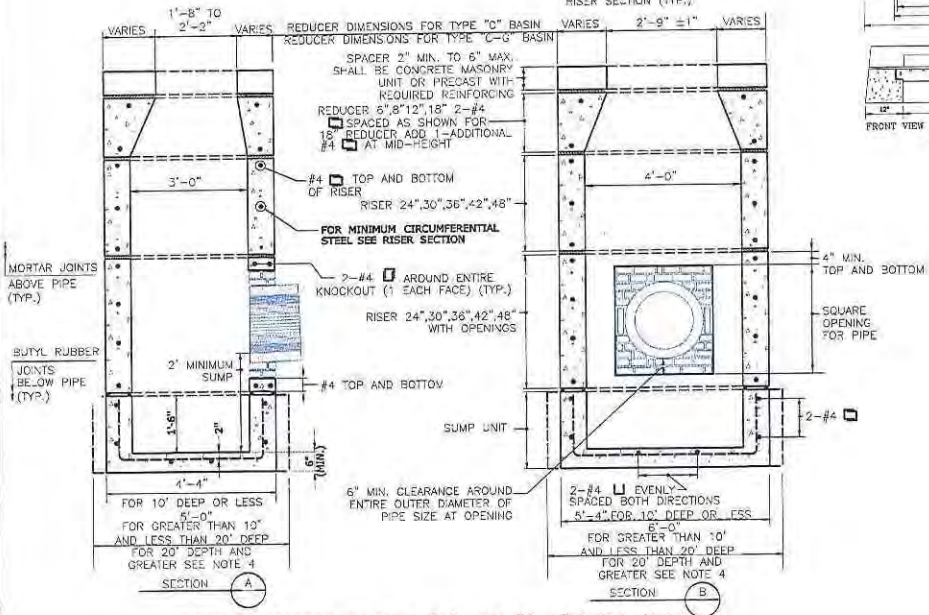






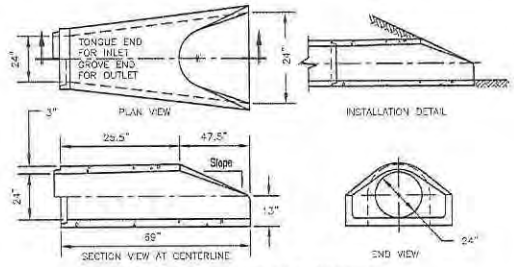


TYPE C-G TOP CATCH BASIN
N.T.S

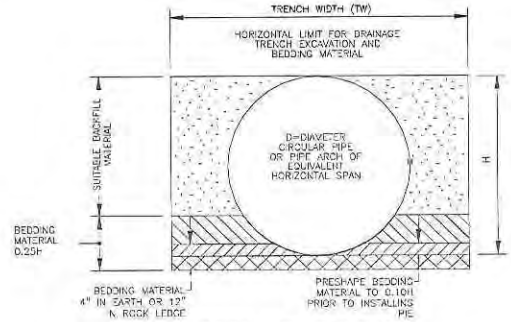


PRECAST CONCRETE TYPE "C" AND "C-L" CATCH BASIN
(UNDER 10' DEEP SHOWN)

NOTE:
1. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2 INCHES EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1½ INCHES.
3. WALL THICKNESS OF ALL CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12 INCHES. INSIDE DIMENSIONS SHALL REMAIN THE SAME. THE 12 INCH THICKENS SHALL START AFTER THE FIRST 10 FEET.
4. BASES AND RISER AT A DEPTH OF 20 FEET AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
5. RISERS MAY BE PREFABRICATED WITH PIPE OPENINGS IN ALL FOUR WALLS. ADEQUATE REINFORCING AROUND PIPE OPENINGS SHALL BE PROVIDED. RISERS USED WHERE A PIPE OPENING IS TO REMAIN IN PLACE MUST BE FORMED UP WITH BRICK AS DIRECTED BY THE ENGINEER.
6. RISERS SHALL NEVER HAVE A CORNER PIPE ENTRIES. ROUND STRUCTURES SHALL BE USED WHEN PIPES CANNOT ALIGN WITH A RECTANGULAR STRUCTURE KNOCKOUT.
7. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED IN THE TOPS OF SLABS. THE TOTAL AREA OF REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 SQUARE INCHES PER FOOT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
8. THE DETAILS SHOWN IN THE PLAN VIEW FOR PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.
9. FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586_07 FOR RECTANGULAR OPENING OR SHEET NOS. HW-586-10a, HW-586-10b OR HW-586-10c FOR CIRCULAR OPENING.



24" CONCRETE END SECTION
N.T.S



TRENCH WIDTH (TW) CHART

PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 36"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OF FOUNDATION WALLS

PIPE TRENCH DETAIL
N.T.S

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

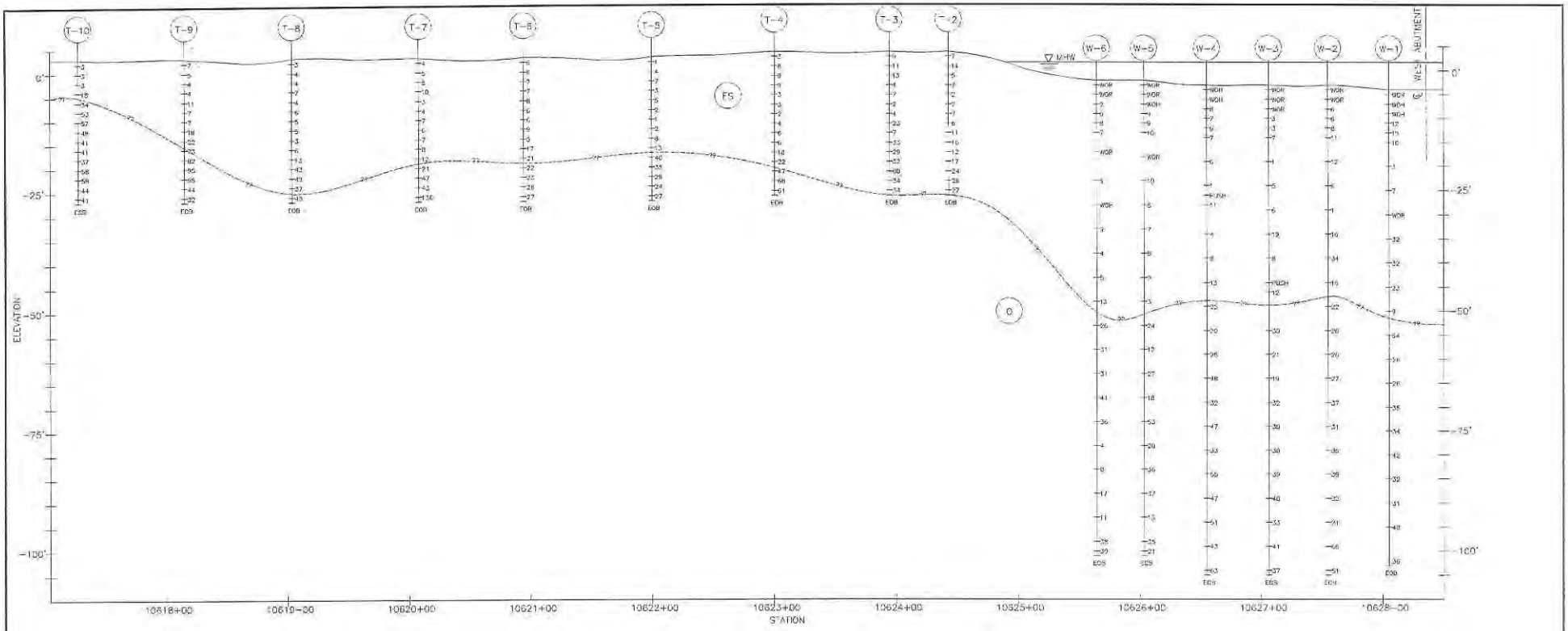
Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
WSP 1700 Market St, Suite 1650 Philadelphia, PA 19103

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
CIVIL DETAILS

Designed CB | Drawn CRWD | Checked KV | Date 5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No.	122 OF 140
Dwg No.	DTL-06



WEST APPROACH SOIL PROFILE LOOKING NORTH

HORIZONTAL 0 40' 80' 1" = 40'

VERTICAL 0 10 20 1" = 10'

LEGEND

(ES) ESTUARINE SEDIMENTS

(O) OUTWASH

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAV88)(FT)	USACE (NAV88)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.8900
CT COASTAL JURISDICTION LINE	CJL	2.90	4.7900
HIGH TIDE LINE	HTL	3.04	4.9300
MEAN HIGH WATER LINE	MHW	1.60	3.4900
MEAN LOW WATER LINE	MLW	-1.71	0.1800
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NOTES

1. TOP OF ROCK ELEVATIONS ARE APPROXIMATE, ACTUAL TOP OF ROCK ELEVATION WILL VARY.

2. GRAPHIC LOGS MAY HAVE BEEN SHIFTED FROM THEIR TRUE STATION FOR CLARITY.

3. BORING LOCATIONS AND ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. SEE BORING LOGS IN THE GEOTECHNICAL AND FOUNDATION RECOMMENDATIONS REPORT FOR ACTUAL COORDINATES AND ELEVATIONS.

4. THIS GENERALIZED INTERPRETATIVE SOIL PROFILE IS INTENDED TO CONVEY TRENDS IN SUBSURFACE CONDITIONS. THE BOUNDARIES BETWEEN THE STRATA ARE APPROXIMATE AND IDEALIZED, AND HAVE BEEN DEVELOPED BY INTERPRETATIONS OF WIDELY SPACED EXPLORATION AND SAMPLES. ACTUAL SOIL AND ROCK TRANSITIONS MAY VARY AND ARE PROBABLY MORE ERRATIC. FOR MORE SPECIFIC INFORMATION, REFER TO THE GEOTECHNICAL AND FOUNDATION RECOMMENDATION REPORT.

5. SUITABLE ROCK IS DEFINED AS THE TOP OF THE SHALLOWEST CORE RUN WITH THE ROCK QUALITY DESIGNATION (RQD) EQUAL TO 25% OR GREATER AS DETERMINED BY THE FIELD INSPECTOR.

6. ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV088). FEMA 100 YEAR FLOOD ELEVATIONS VARY ACROSS THE PROJECT. VALUE SHOWN IN THE ELEVATION TABLE IS THE MAXIMUM ELEVATION THROUGHOUT THE PROJECT.

7. STATIONS SHOWN ARE BASED ON PROPOSED PROJECT TRACK 1.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

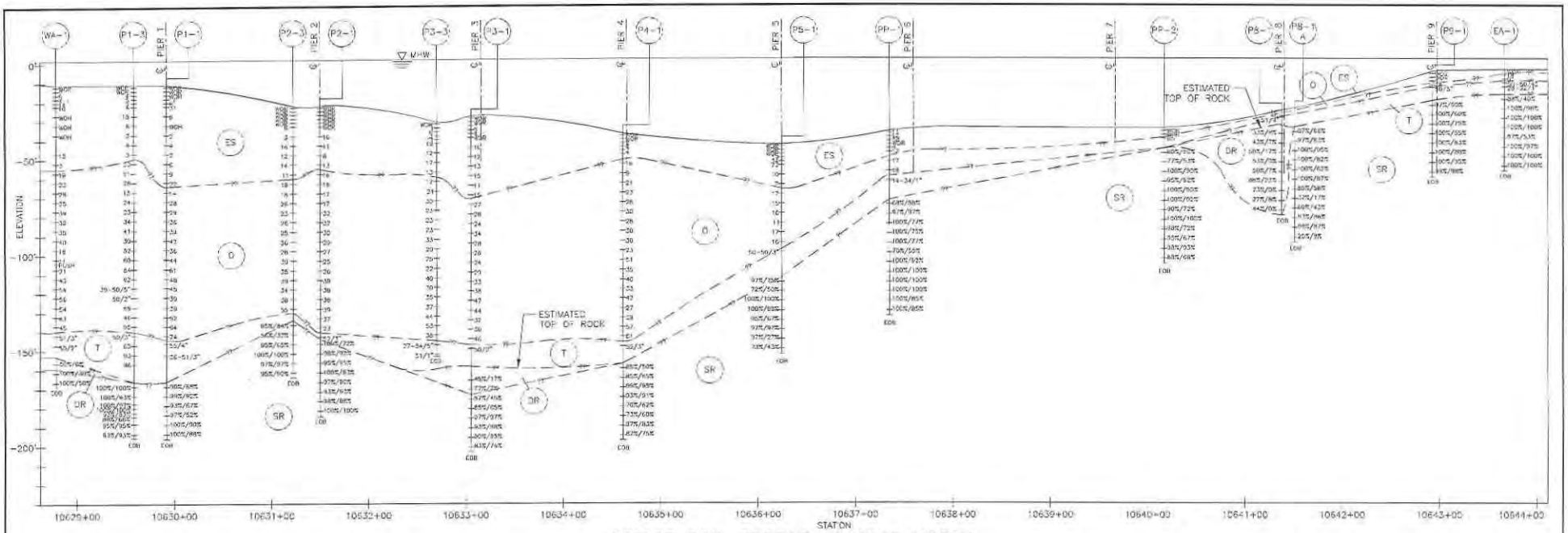
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

SUBSURFACE PROFILE 1

Designed KC | Drawn KC | Checked AR/RM | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	123 OF 140
Dwg. No.	GEO-01



BRIDGE SOIL PROFILE LOOKING NORTH

HORIZONTAL 0 50 100
1" = 50'

VERTICAL 0 25 50
1" = 25'

LEGEND

- (ES) ESTUARINE SEDIMENTS
- (O) OUTWASH
- (T) TILL
- (DR) DECOMPOSED ROCK
- (SR) SUITABLE ROCK

ELEVATION TABLE

DESCRIPTION	CONTOUR	NOAA (NAV88)(FT)	USACE (NAV88)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.8900
CT COASTAL JURISDICTION LINE	CJL	2.90	4.7900
HIGH TIDE LINE	HTL	3.04	4.9300
MEAN HIGH WATER LINE	MHW	1.60	3.4900
MEAN LOW WATER LINE	MLW	-1.71	0.1800
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NOTES

1. ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88).
2. STATIONS SHOWN ARE BASED ON PROPOSED PROJECT TRACK 1.
3. SEE INTERPRETIVE SUBSURFACE PROFILE SHEET GEO-01 FOR NOTES AND LEGEND.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	by

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038

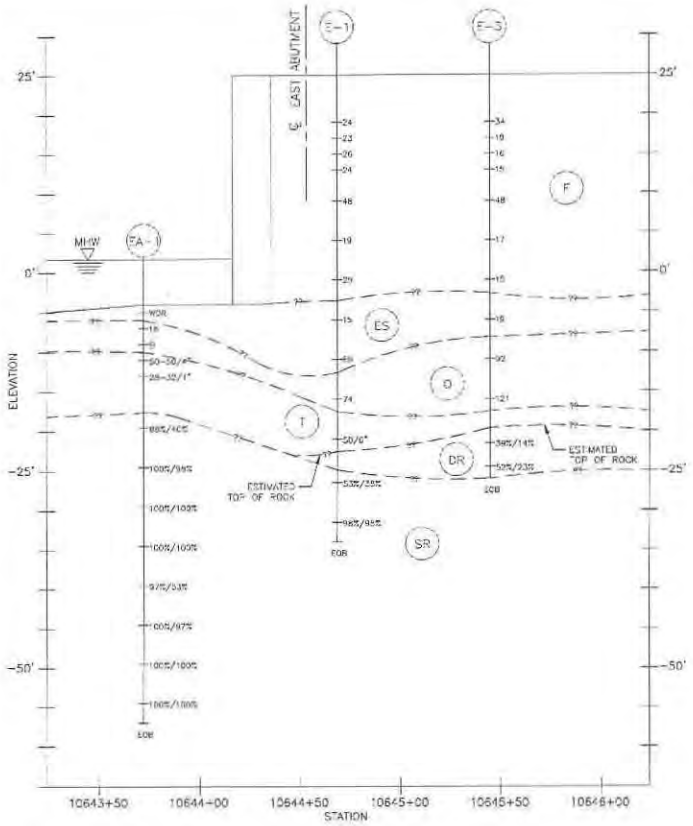
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

SUBSURFACE PROFILE 2

Designed KG | Drawn KG | Checked AR/RM | Date 5/2/2023

Project Code: XXX XXX
WBS
Sheet No. 124 OF 149
Drawing No. GEO-02



LEGEND

- F FILL
- ES ESTUARINE SEDIMENTS
- O OUTWASH
- T TILL
- DR DECOMPOSED ROCK
- SR SUITABLE ROCK

EAST APPROACH SOIL PROFILE
LOOKING NORTH

HORIZONTAL 0 30 60
1" = 30'

VERTICAL 0 7.5 15
1" = 7.5'

ELEVATION TABLE

DESCRIPTION	CONTOUR	NOAA (NAV88)(FT)	USACE (NAV88)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.8900
CT COASTAL JURISDICTION LINE	CJL	2.90	4.7900
HIGH TIDE LINE	HTL	3.04	4.9300
MEAN HIGH WATER LINE	MHW	1.60	3.4900
MEAN LOW WATER LINE	MLW	-1.71	0.1800
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NOTES:

1. ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. STATIONS SHOWN ARE BASED ON PROPOSED PROJECT TRACK 1.
3. SEE INTERPRETIVE SUBSURFACE PROFILE SHEET GEO-01 FOR NOTES AND LEGEND.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

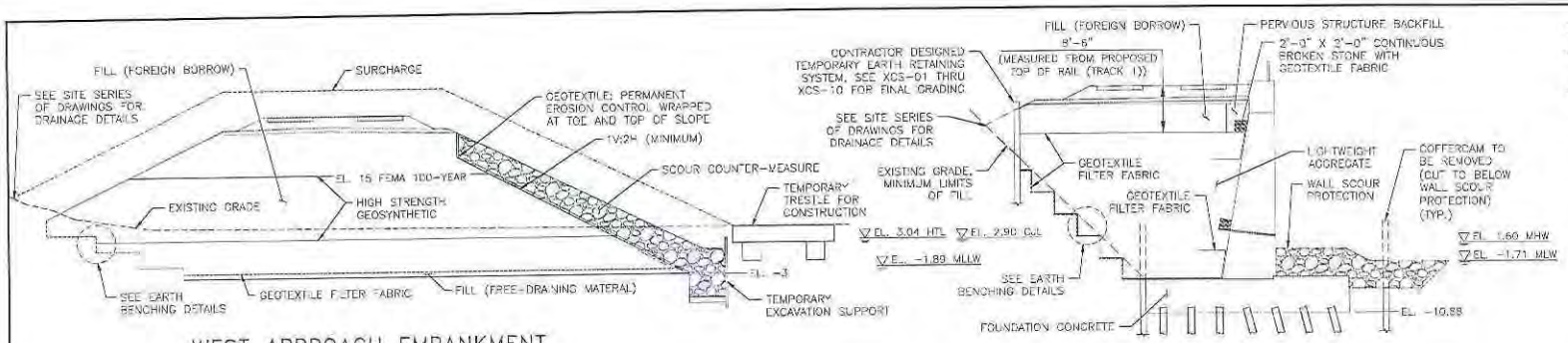
Approved Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
SUBSURFACE PROFILE 3

Designed KG Drawn KG Checked AR/RM Date 5/2/2023

Project Code | XXX XXX
WBS
Sheet No. 125 OF 142
Dwg No. GEO-03

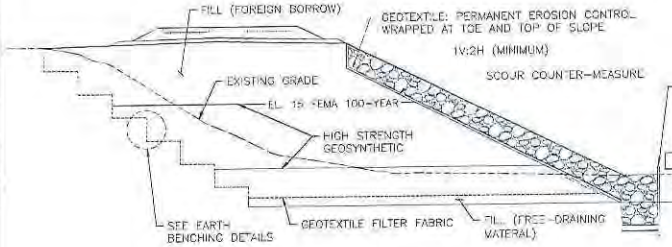


WEST APPROACH EMBANKMENT

SCALE: NOT TO SCALE

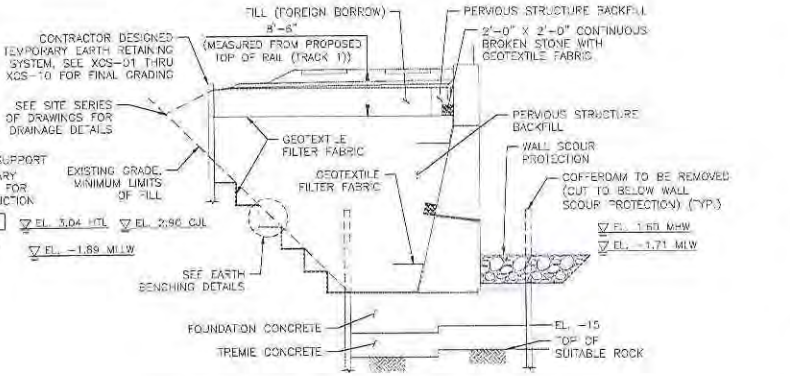
WEST APPROACH RETAINING WALL

SCALE: NOT TO SCALE



EAST APPROACH EMBANKMENT

SCALE: NOT TO SCALE



EAST APPROACH RETAINING WALL

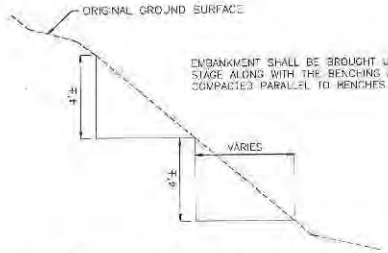
SCALE: NOT TO SCALE

NOTES:

1. USE LIGHTWEIGHT AGGREGATE, AS SHOWN, WITHIN THE LIMITS OF THE WEST APPROACH RETAINING WALL.
2. CONSTRUCT THE APPROACH EMBANKMENTS IN SEQUENTIAL STEPS AS FOLLOWS:
   - 2.1. EXCAVATE TO REMOVE THE TOP SOFT SOIL ON THE WETLAND LIMITS WITHIN THE FOOTPRINT OF THE EMBANKMENT FILL TO ELEVATION -3.0 FEET, OR AS DIRECTED BY THE ENGINEER.
   - 2.2. BACKFILL WITH FREE-DRAINING MATERIAL TO ELEVATION -1.0 FEET TO CONSTRUCT WORKING PLATFORM. FREE-DRAINING MATERIAL SHALL MEET THE REQUIREMENTS OF CONNDOT FORM 818, SECTION M.02.07.
   - 2.3. DEWATER TO CREATE DRY WORK AREA.
   - 2.4. PLACE THE GEOTEXTILE FILTER FABRIC ON ALL WETLAND SURFACES. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS OF 7.55 AND M.08.01-19 OF THE CONNDOT FORM 818 AND CONFORM TO THE REQUIREMENTS FOR SEPARATION HAVING HIGH SURVIVABILITY.
   - 2.5. CONSTRUCT EMBANKMENT FILLS TO ELEVATION +5.0 FEET USING FOREIGN BORROW. ALLOW FOR A 21-DAY CONSOLIDATION PERIOD, OR AS ORDERED BY THE ENGINEER BEFORE ADDING NEW FILL. FOREIGN BORROW SHALL CONFORM TO THE PROVISION CONNDOT FORM 818 SECTION 2.07.02 AND SHALL ALSO COMPLY WITH THE PROJECT SPECIFICATIONS.
   - 2.6. CONSTRUCT EMBANKMENT FILLS TO ELEVATION +12.0 FEET USING FOREIGN BORROW AFTER PLACING GEOTEXTILE EMBANKMENT REINFORCEMENT AT ELEVATION +5.0 FEET ALONG THE ENTIRE FOOTPRINT OF THE FILL AREA. ALLOW FOR A 21-DAY CONSOLIDATION PERIOD, OR AS ORDERED BY THE ENGINEER BEFORE ADDING NEW FILL. GEOTEXTILE EMBANKMENT REINFORCEMENT SHALL MEET THE REQUIREMENTS OF 7.55 AND M.08.01-19 OF CONNDOT FORM 818 AND SHALL COMPLY WITH THE PROJECT SPECIFICATIONS.
   - 2.7. CONTINUE CONSTRUCTION OF THE EMBANKMENT TO THE FINAL GRADE AFTER PLACING A GEOTEXTILE EMBANKMENT REINFORCEMENT AT ELEVATION +15.0 FEET ACROSS THE ENTIRE FOOTPRINT OF THE EMBANKMENT. ALLOW FOR A 21-DAY CONSOLIDATION PERIOD, OR AS ORDERED BY THE ENGINEER BEFORE ADDING THE NEW SURCHARGE FILL.
   - 2.8. AT THE WEST APPROACH EMBANKMENT, PLACE AN ADDITONAL 5 FEET OF SURCHARGE. SURCHARGE SHALL BE PLACED SUCH THAT THE TEMPORARY ACCESS ROADS REMAIN ACCESSIBLE THROUGHOUT THE CONSOLIDATION PERIOD.
   - 2.9. ALLOW FOR A 180-DAY CONSOLIDATION PERIOD AT THE WEST APPROACH EMBANKMENT AND A 75-DAY CONSOLIDATION PERIOD AT THE EAST APPROACH EMBANKMENT TO ACHIEVE THE COMPLETION OF PRIMARY CONSOLIDATION PRIOR TO THE PLACEMENT OF THE RAILROAD BALLAST. THE ACTUAL WAITING PERIOD WILL BE DETERMINED BY THE ENGINEER BASED ON THE SETTLEMENT PLATFORM AND SLOPE INCLINOMETER READINGS. DURING THE WAITING PERIOD, ALL CONSTRUCTION EQUIPMENT WILL BE PERMITTED. SEE CV-408 FOR SETTLEMENT MONITORING INSTRUMENTATION DETAILS.
   - 2.10. RE-GRADE THE SITE TO FINAL GRADE AND CONSTRUCT THE RAILROAD TRACKS.
3. PRIOR TO COMMENCEMENT OF WEST APPROACH RETAINING WALL OR EMBANKMENT CONSTRUCTION, CONFIRMATORY BORINGS SHALL BE CONDUCTED AT A MAXIMUM SPACING OF 150 FEET OR A TOTAL OF 10 BORINGS, WHICHEVER IS LARGER. MINIMUM BORING DEPTH SHALL BE 75 FEET BELOW EXISTING GRADE.
4. DETAILS SHOWN ON THIS SHEET NOT TO SCALE FOR CLARITY

BORING ON LAND		
DESCRIPTION	UNIT	QUANTITES
SOIL SAMPLING	LF	700

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAVB8)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.89
CT COASTAL JURISDICTION LINE	CJL	2.90	4.79
HIGH TIDE LINE	HTL	3.04	4.93
MEAN HIGH WATER LINE	MHW	1.60	3.49
MEAN LOW WATER LINE	MLW	-1.71	0.18
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00



EARTH BENCHING DETAILS

SCALE: NOT TO SCALE

NOTE: THE FACE OF THE EXISTING EMBANKMENT SHALL BE BENCHED SUCH THAT THE TOP BENCH BEGINS AT THE TOP OF SLOPE OF THE EXISTING EMBANKMENT. WHERE EXCAVATION IS REQUIRED BELOW THE THEORETICAL RAILROAD EMBANKMENT LINE, CONTRACTOR SHALL DESIGN AND PLACE TEMPORARY SHEETING TO ENSURE STABILITY OF THE EXISTING EMBANKMENT AND TRACK STRUCTURE THROUGHOUT CONSTRUCTION.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	XXXX	Revisions	Initial	Date

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: Date:

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

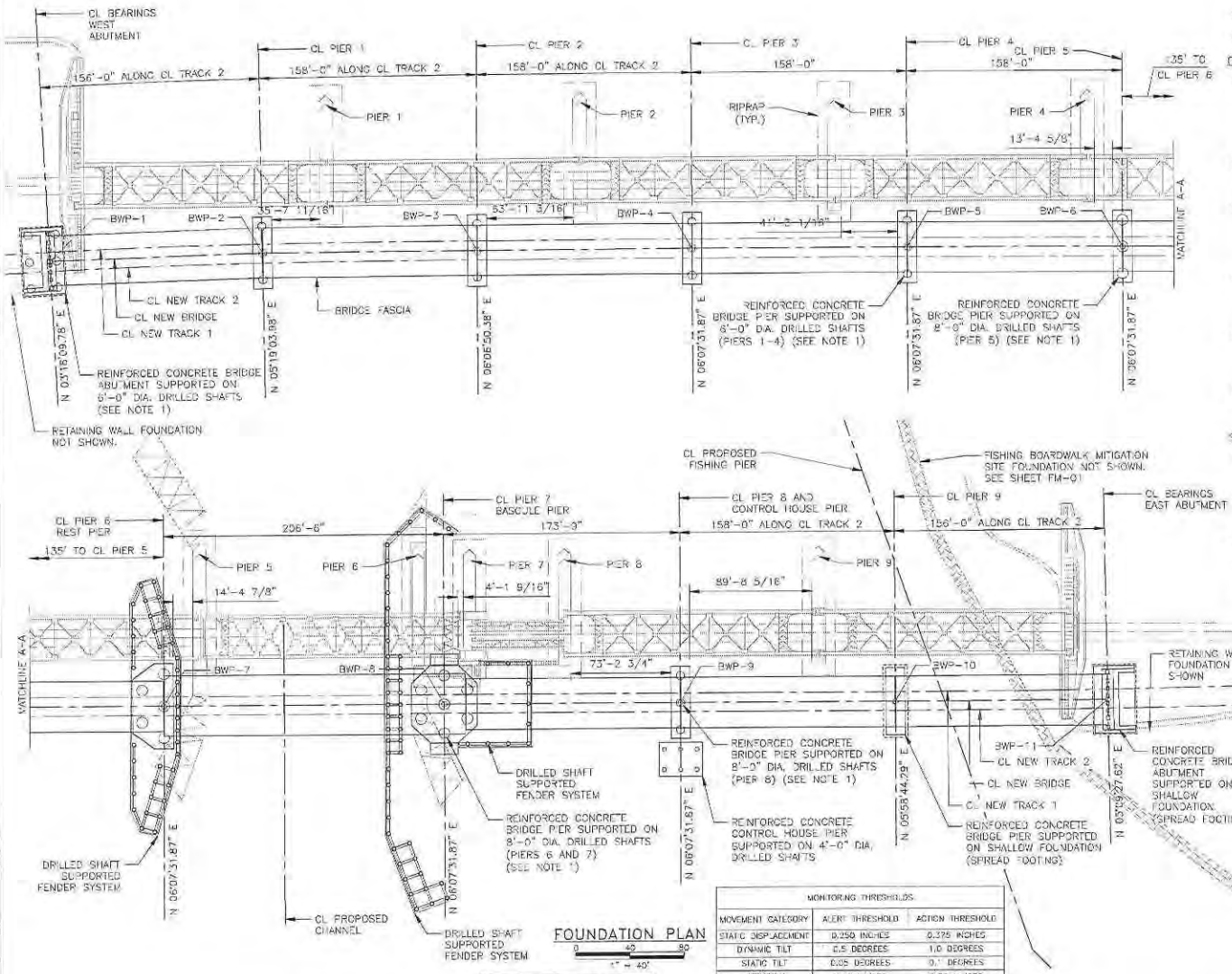
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

EMBANKMENT CONSTRUCTION SCHEME

Designed KG | Drawn KG | Checked AR/RM | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No.: 126 OF 140
Dwg No.: GEO-04



FOUNDATION PLAN

0 40 80
1" = 40'

MONITORING THRESHOLDS		
MOVEMENT CATEGORY	ALERT THRESHOLD	ACTION THRESHOLD
STATIC DISPLACEMENT	0.250 INCHES	0.375 INCHES
DYNAMIC TILT	0.5 DEGREES	1.0 DEGREES
STATIC TILT	0.05 DEGREES	0.1 DEGREES
VIBRATION	0.40 IN/SEC	0.50 IN/SEC

NOTES:

1. SEE DRAWINGS GEO-06 AND GEO-07 FOR DRILLED SHAFT DEEP FOUNDATION AND SPREAD FOOTING SHALLOW FOUNDATION DETAILS AND NOTES.
2. EXISTING BRIDGE STRUCTURE SHOWN FOR INFORMATION ONLY. EXISTING STRUCTURE TO BE DEMOLISHED PER THE DETAILS SHOWN ON DRAWING DEM-01.
3. PROPOSED FISHING PIER NOT SHOWN FOR CLARITY.

CONSTRUCTION NOTES:

1. CARE SHALL BE EXERCISED TO AVOID UNDERMINING NEARBY SOIL SUPPORTING THE FOUNDATION OF EXISTING BRIDGE AND TO PROTECT UTILITIES DURING INSTALLATION AND CONSTRUCTION OF ANY TEMPORARY STRUCTURE, DRILLED SHAFTS, PILES AND/OR SPREAD FOOTING. THE CONTRACTOR SHOULD COMMENCE CONSTRUCTION OPERATIONS FOR THE DRILLED SHAFTS FOR EACH SUBSTRUCTURE UNIT AT THE POINT CLOSEST TO THE EXISTING BRIDGE STRUCTURE.
2. CARE SHALL BE EXERCISED TO AVOID UNDERMINING NEARBY SOIL SUPPORTING THE FOUNDATION OF THE NEWLY CONSTRUCTED BRIDGE AND TO PROTECT UTILITIES DURING DEMOLITION OF THE EXISTING BRIDGE.
3. THE EXISTING FEATURES SHOWN ON THE PLAN (IF ANY) ARE FOR INFORMATION ONLY. THERE MAY BE ADDITIONAL UTILITIES, OBSTRUCTIONS (REMNANT FROM PREVIOUS CONSTRUCTION ACTIVITIES) AND EXISTING RIPRAP AT PROPOSED FOUNDATION LOCATION. CONTRACTOR SHALL LOCATE ANY FEATURES AND REMOVE OBSTRUCTIONS/RIPRAP PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
4. CONTRACTOR SHALL EXERCISE CAUTION WHILE REMOVING OBSTRUCTIONS AND RIPRAP TO AVOID UNDERMINING THE SOIL SUPPORTING THE FOUNDATION OF THE EXISTING BRIDGE. SCOPE OF OBSTRUCTION AND RIPRAP REMOVAL SHALL BE LIMITED TO PERMIT INSTALLATION OF DRILLED SHAFTS AND SPREAD FOOTINGS.
5. THE DIMENSIONS SHOWN ON THIS SHEET INDICATING THE CLEARANCE DISTANCES BETWEEN THE EXISTING PIER CAPS AND THE PROPOSED DRILLED SHAFTS AND SPREAD FOOTINGS ARE APPROXIMATE, AND SHALL BE VERIFIED BY THE CONTRACTOR, WHERE REQUIRED.
6. CONTRACTOR SHALL PROTECT EXISTING UTILITIES NOT ABANDONED FROM DAMAGE, DISTURBANCE, AND/OR EXCESSIVE VIBRATION THROUGHOUT THE CONSTRUCTION OF THE PROPOSED STRUCTURE AND DEMOLITION OF THE EXISTING STRUCTURE.

STRUCTURE MONITORING NOTES:

1. THE EXISTING BRIDGE'S PIERS AND ABUTMENTS SHALL BE MONITORED PER THE CONTRACT SPECIFICATIONS.
2. LIMIT EXISTING BRIDGE DISPLACEMENT AND TILT MEASUREMENTS AS LISTED IN MONITORING THRESHOLDS TABLE BELOW. THRESHOLDS SUBJECT TO REVIEW AND REVISION BASED ON RESULTS OF THE BASELINE SURVEY.
3. VIBRATION/TILT SENSORS PER EACH PIER (MINIMUM):
   - 3.1. PIERS 1 THROUGH 4, PIER 9, AND ABUTMENTS: TWO SURVEY TARGETS, ONE TILT SENSOR, AND ONE VIBRATION SENSOR PER PIER.
   - 3.2. PIERS 5 THROUGH 8: FOUR SURVEY TARGETS, TWO TILT SENSORS, AND TWO VIBRATION SENSORS PER PIER. FOR SURVEY TARGETS: TWO SETS OF MONITORING POINTS ON THE UPSTREAM AND DOWNSTREAM SIDES OF THE PIER. FOR TILT: ONE TILT SENSOR ON THE UPSTREAM AND DOWNSTREAM SIDES OF THE PIER. FOR VIBRATION: ONE VIBRATION SENSOR ON THE UPSTREAM AND DOWNSTREAM SIDES OF THE PIER.

BRIDGE CENTERLINE WORKING POINTS

WORKING POINT	STATION ALONG TRACK 2	OFFSET	NORTHING	EASTING
BWP-1	106+2836.4857	7.74' LT.	674288.9932	1109335.4415
BWP-2	106+2992.4857	7.61' LT.	674276.7387	1109491.2302
BWP-3	106+3150.4857	7.00' LT.	674260.1025	1109648.4550
BWP-4	106+3308.4857	7.00' LT.	674243.2426	1109805.5543
BWP-5	106+3466.4857	7.00' LT.	674226.3829	1109962.6522
BWP-6	106+3624.4857	7.00' LT.	674209.5233	1110119.7501
BWP-7	106+3759.4857	7.00' LT.	674195.1178	1110253.9793
BWP-8	106+3965.9857	7.00' LT.	674173.0828	1110459.3003
BWP-9	106+4139.7357	7.00' LT.	674154.5425	1110632.0583
BWP-10	106+4297.7357	6.96' LT.	674137.7275	1110789.1430
BWP-11	106+4453.7357	6.62' LT.	674122.1158	1110944.2614

NOTE: BRIDGE CENTERLINE WORKING POINTS ARE PROVIDED AT INTERSECTIONS OF CL SUBSTRUCTURES AND CL BRIDGE.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

As-Noted	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

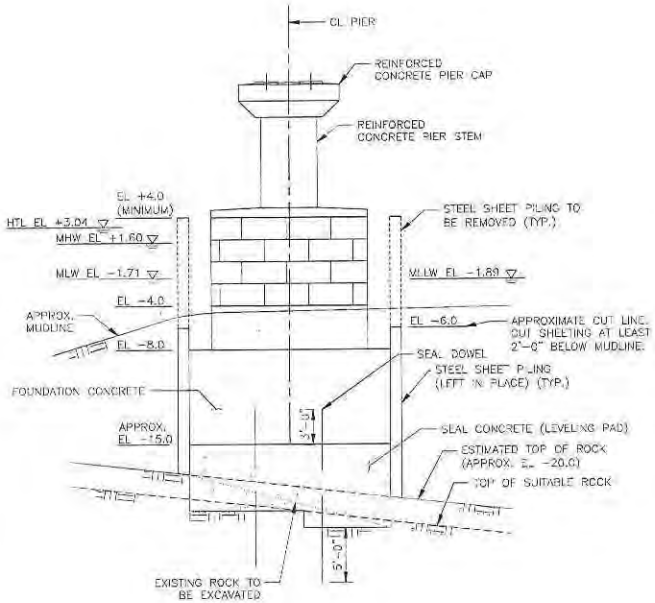
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

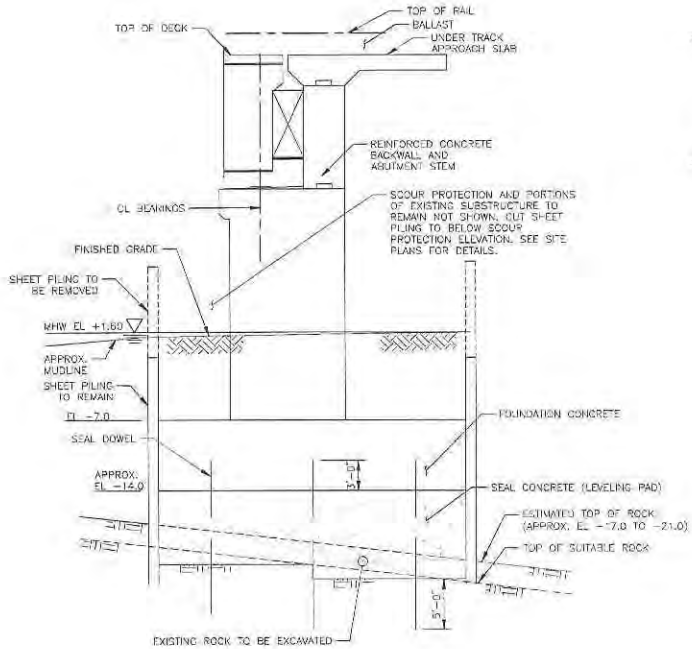
FOUNDATION PLAN

Designed KG | Drawn KG | Checked AR/RM | Date 5/2/2023

Project Code XXX.XXX
WBS
Sheet No. 127 OF 140
Dwg No. GEO-05



PIER 9
N.T.S



EAST ABUTMENT
N.T.S

SHALLOW FOUNDATION NOTES:

1. THE BEDROCK WILL VARY IN NATURE, SLOPE, AND DEGREE OF FRACTURING. AFTER THE FOUNDATION EXCAVATIONS ARE COMPLETED AND ALL DECOMPOSED BEDROCK REMOVED, THE CONTRACTOR SHALL SURVEY THE FOUNDATION BEDROCK AND PROVIDE THE EXACT BEDROCK ELEVATIONS TO THE PROJECT ENGINEER.

2. SEAL CONCRETE (LEVELING PAD) SHALL BE PLACED ON NON-ERODIBLE SUITABLE BEDROCK CLEANED OF ALL WEATHERED OR FRACTURED ROCK OR LOOSE SOIL. PRIOR TO PLACING THE FOOTING, THE BEARING SURFACE SHALL BE WASHED WITH HIGH PRESSURE WATER AND AIR, AND SMOOTH BEDROCK SHALL BE ROUGHENED. WHERE THE BEDROCK SURFACE SLOPE EXCEEDS 4H:1V THE BEDROCK SURFACE SHALL BE BENCHED IN LEVEL STEPS OR MADE COMPLETELY LEVEL. THE BEDROCK BEARING SURFACE BENEATH THE NEAR FACE OF ABUTMENTS AND WALLS SHALL HAVE A LEVEL SURFACE OF 5 FEET MINIMUM, MEASURED PERPENDICULAR TO THE FACE.

3. WHEN BEDROCK PROTRUDES ABOVE THE BOTTOM OF THE FOOTING/LEVELING PAD, THE FOOTING/LEVELING PAD MAY BE RAISED AND VERTICAL REINFORCING MAY BE CUT IN THE FIELD WITH THE APPROVAL OF THE PROJECT ENGINEER. THE MINIMUM ALLOWABLE FOOTING THICKNESS IS SHOWN ON THE PLANS. PAYMENT FOR ADJUSTING FOOTING DEPTH AND ADJUSTING REINFORCING STEEL WILL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS. NO SEPARATE PAYMENT WILL BE MADE.

4. AT THE OPTION OF THE PROJECT ENGINEER, BEDROCK THAT PROTRUDES ABOVE THE BOTTOM OF FOOTING/SEAL CONCRETE (LEVELING PAD) ELEVATION MAY BE REMOVED.

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAVD88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.8900
CT COASTAL JURISDICTION LINE	CJL	2.90	4.7900
HIGH TIDE LINE	HTL	3.04	4.9300
MEAN HIGH WATER LINE	MHW	1.60	3.4900
MEAN LOW WATER LINE	MLW	-1.71	0.1800
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	BY

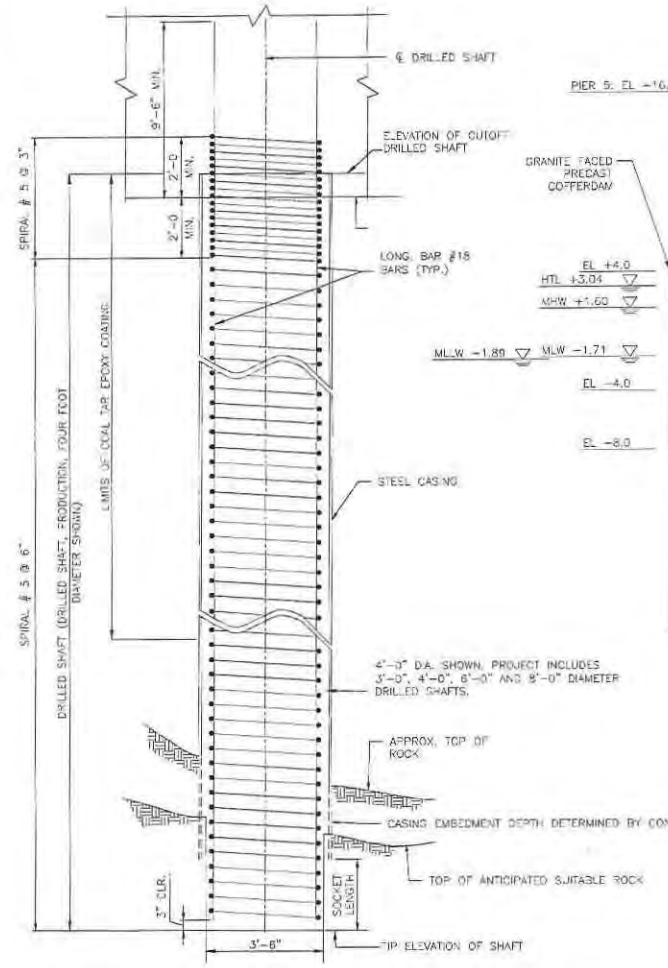
Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: Date:

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

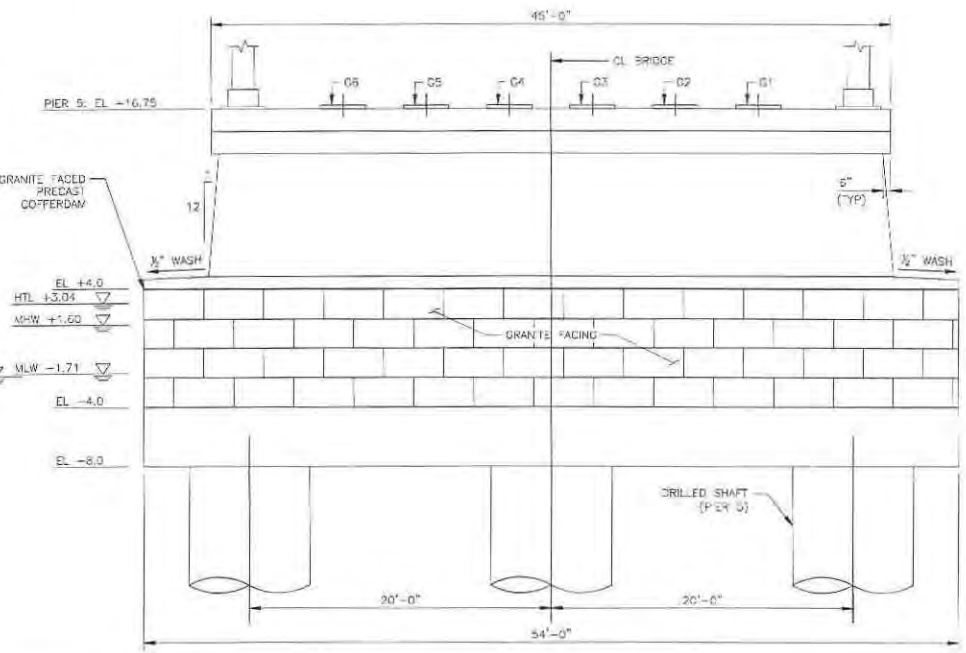
OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
PIER 9 AND EAST ABUTMENT
Designed: KG | Drawn: KG | Checked: AR/RM | Date: 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No.: 126 OF 140
GEO-06



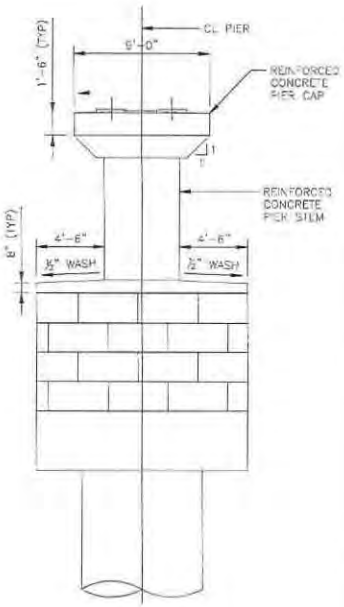
TYPICAL DRILLED SHAFT DETAIL

SCALE: NOT TO SCALE



TYPICAL DRILLED SHAFT PIER ELEVATION

(PIER 5 SHOWN, OTHERS SIMILAR)



TYPICAL PIER SECTION

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAVD88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.8900
CT COASTAL JURISDICTION LINE	CJL	2.90	4.7900
HIGH TIDE LINE	HTL	3.04	4.9300
MEAN HIGH WATER LINE	MHW	1.60	3.4900
MEAN LOW WATER LINE	MLW	-1.71	0.1800
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NOTES:

1. THE CONTRACTOR SHALL CONSTRUCT THE DRILLED SHAFTS CONFORMING TO THE REQUIREMENTS OF THIS DRAWING AND THE PROJECT SPECIFICATIONS.
2. PERMANENT STEEL CASING SHALL CONFORM TO ASTM A572, GR60.
3. REINFORCEMENT STEEL FOR CONCRETE SHALL BE HOT DIP GALVANIZED. SEE STRUCTURAL GENERAL NOTES.
4. SEE DRAWING CE0-05 FOR LOCATIONS OF DRILLED SHAFTS.
5. PRIOR TO COMMENCEMENT OF DRILLED SHAFT EXCAVATION, CONFIRMATORY BORINGS SHALL BE CONDUCTED AT EACH SHAFT LOCATION FOR ALL PIERS AND CONTROL HOUSE TO CONFIRM TOP OF BEDROCK AND TYPE AND QUALITY OF BEDROCK. CONFIRMATORY BORINGS FOR FENDERS SHALL BE CONDUCTED AT 50-FOOT INTERVALS OR A TOTAL OF 15 BORINGS FOR BOTH FENDERS, WHICHEVER IS LARGER. CONFIRMATORY ROCK CORING SHALL EXTEND AT LEAST 10 FEET DEEPER THAN THE ESTIMATED SOCKET LENGTH OF THE SUBSTRUCTURE.
6. DUE TO TIDAL FACTORS, FLUCTUATIONS OF SEVERAL FEET IN NORMAL ELEVATION OF RIVE LEVEL MAY OCCUR. THIS FLUCTUATION IN WATER CAN OCCUR OVER SHORT PERIODS OR TIME FRAMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SAFEGUARD THE DRILLED SHAFT CONSTRUCTION ACTIVITIES AND OPERATION AGAINST THE CONSEQUENCE AND IMPACT OF TIDAL FLUCTUATIONS.
7. DUE TO STRONG RIVER CURRENTS, DIFFICULT CONDITIONS ARE ANTICIPATED DURING INSTALLATION OF THE CASING IN THE CORRECT LOCATION, VERTICAL ALIGNMENT, AND SEATING CASING INTO THE BEDROCK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW THE CASING TO BE INSTALLED IN THE CORRECT LOCATION AND MAINTAIN ITS POSITION WHILE MEETING PROJECT SPECIFICATION LOCATION TOLERANCES.
8. SLOPING BEDROCK CONDITIONS ARE ANTICIPATED AT THE LOCATIONS OF THE DEMONSTRATION DRILLED SHAFTS, WEST ABUTMENT, AND PIERS 1 TO 7.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	XXXX	Revisions	MM/DD/YY	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

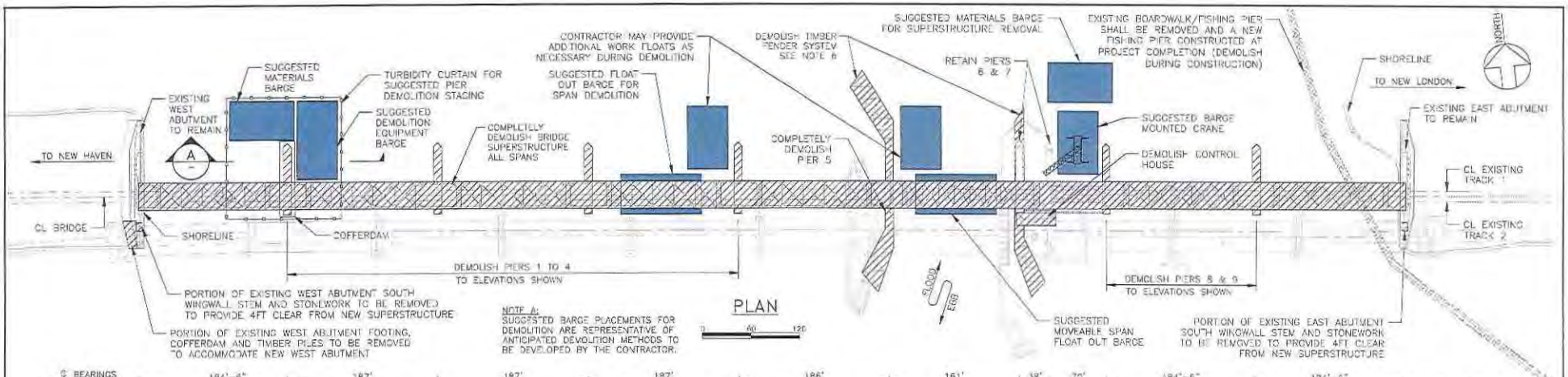
OLD SAYBROOK CONNECTICUT

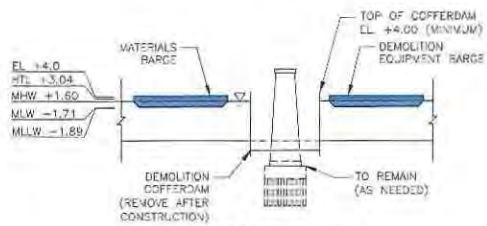
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

DRILLED SHAFT TYPICAL DETAILS

Designed	HF	Drawn	GW	Checked	RS	Date	5/2/2023

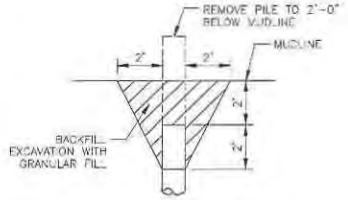
Project Code	XXX.XXX
WBS	
Sheet No.	120 OF 140
Drg. No.	GEO-07



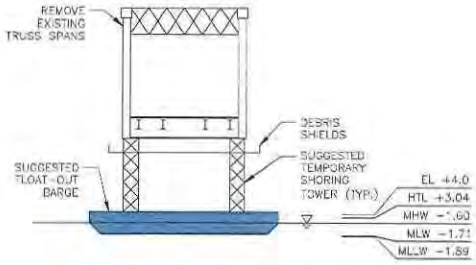


SECTION A-A

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAVD88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.89
CT COASTAL JURISDICTION LINE	CJL	2.90	4.79
HIGH TIDE LINE	HTL	3.04	4.93
MEAN HIGH WATER LINE	MHW	1.60	3.49
MEAN LOW WATER LINE	MLW	-1.71	0.18
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00



CUT-OFF PILE DETAIL



SECTION B-B

NOTES:

1. ALL EXISTING UNDERWATER AMTRAK OWNED BRIDGE, ET AND O&S CABLES SHALL BE DEMOLISHED OR ABANDONED.
2. ALL EXISTING ELECTRIFICATION CATENARY FACILITIES SHALL BE DEMOLISHED.
3. AMTRAK WILL SALVAGE SOME MATERIALS THAT ARE DEMOLISHED BY THE CONTRACTOR. SEE SPECIFICATIONS FOR MORE INFORMATION. THE CONTRACTOR SHALL SUBMIT ITS SCHEDULE OF DEMOLITION ITEMS FOR AMTRAK REVIEW AND APPROVAL PRIOR TO DEMOLITION.
4. DEMOLISH PIERS WITHIN COFFERDAMS. ALL COFFERDAMS WHETHER TEMPORARY OR PERMANENT WILL BE DESIGNED AND CONSTRUCTED UNDER THE DISCRETION OF THE CONTRACTOR IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. TEMPORARY IMPACTS DUE TO COFFERDAMS ARE IDENTIFIED ON THE IMPACT PLANS AND SUMMARIZED ON SUM-01.
5. CONTRACTOR TO PROVIDE DEBRIS NETTING BELOW SPANS DURING DEMOLITION ACTIVITIES.
6. DEMOLITION OF EXISTING TIMBER FENDER SYSTEMS SHALL BE PERFORMED WITHIN A TURBIDITY CURTAIN. THE DESIGN OF THE TURBIDITY CURTAIN SHALL ACCOMMODATE BARGE MOVEMENTS AS NECESSARY. SEE SC-03 FOR PHASING OF EXISTING TIMBER FENDER SYSTEM DEMOLITION.
7. TURBIDITY CURTAINS ARE REQUIRED DURING CONSTRUCTION FOR ALL IN-WATER WORK CAPABLE OF GENERATING TURBIDITY, IN ACCORDANCE WITH ENVIRONMENTAL PERMIT APPROVALS. CT DEEP REQUIRES THAT FULL DEPTH TURBIDITY CURTAINS MUST BE DEPLOYED PRIOR TO SHAFT CASING INSTALLATION.
8. PIN PILE SUPPORTED TURBIDITY CURTAIN LIMITS SHOWN ARE APPROXIMATE. TEMPORARY RIVER BOTTOM IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES SHALL BE WITHIN THE TOTAL AREA LIMITS IDENTIFIED ON SUM-01.
9. ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. DRIVING OF BARGE SPUD PILES IS CONSIDERED A TEMPORARY IMPACT AND INCLUDED IN THE TOTAL TEMPORARY IMPACT AREAS IDENTIFIED ON SUM-01. BARGES NOT LOCATED WITHIN LARGER PIN PILE SUPPORTED TURBIDITY CURTAIN ZONES SHALL BE PROTECTED WITH INDIVIDUAL BARGE MOUNTED CURTAINS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

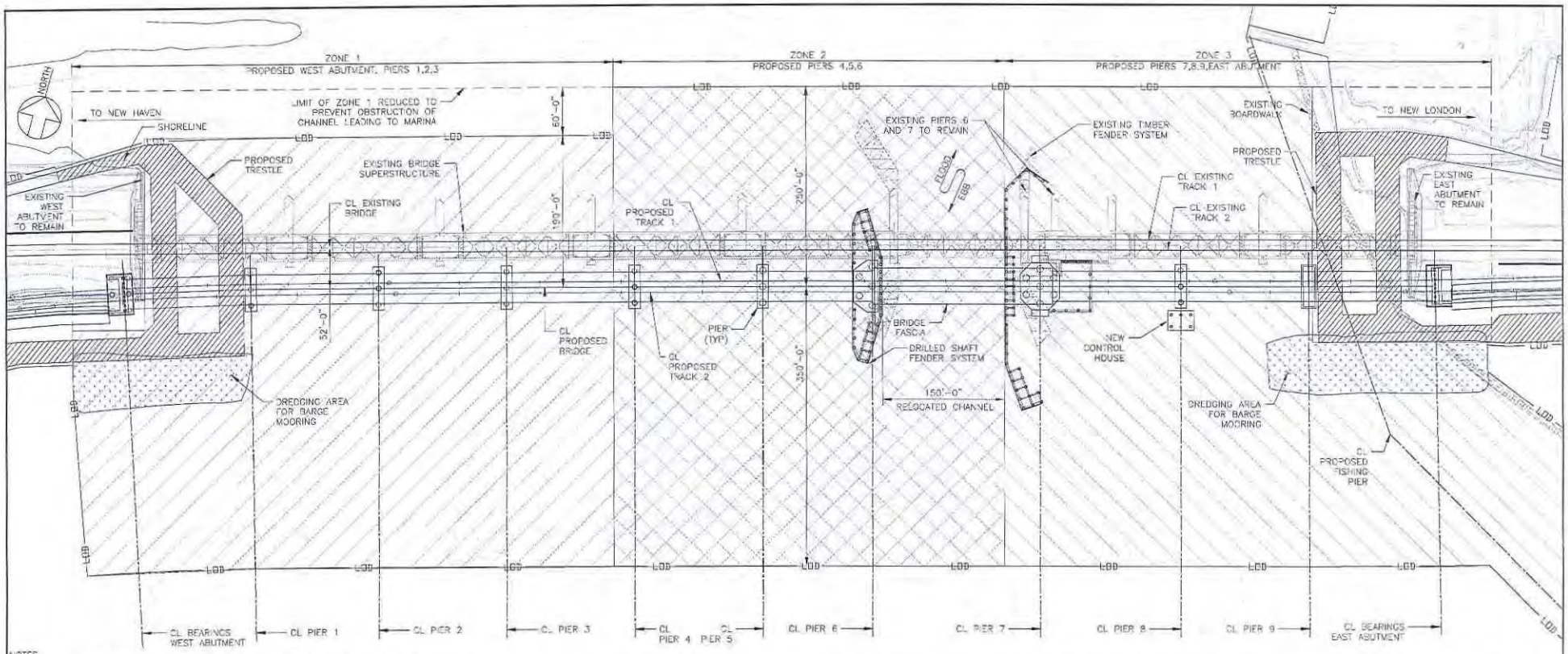
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

DEMOLITION PLAN

Designed MY Drawn MY Checked SJT Date 5/2/2023

Project Code	XXX XXX
WBS#	
Sheet No.	130 OF 140
Dwg No.	DEM-01



NOTES

1. THE LIMITS OF DISTURBANCE SHOWN REPRESENT ANTICIPATED BOUNDARY OF BARGE OPERATIONS WITHIN THE PROJECT LIMITS. THE TOTAL BARGE OCCUPANCY ZONE AREA OUTLINED IN THE ABOVE PLAN VIEW IS 920,000 SF (21.12 ACRES).
2. THE BARGE OCCUPANCY ZONES SHOWN ON THIS SHEET HAVE BEEN DEVELOPED IN CONSULTATION WITH CTDEEP. THE RESTRICTIONS ON WORK WITHIN PARTICULAR ZONES ARE GOVERNED BY THE APPLICABLE TIME OF YEAR RESTRICTION DESCRIBED IN THE PERMIT AND HEREIN.
3. BARGES USED FOR CONSTRUCTION OR DEMOLITION WILL BE LOCATED WITHIN THE BOUNDARIES SHOWN ON THIS SHEET. ZONES ARE INTENDED TO LIMIT THE WORK TO A MAXIMUM OF 3 PIERS SIMULTANEOUSLY DURING THE PERIOD OF APRIL 1 TO JUNE 30. LATERAL BOUNDS OF THE ZONES ARE APPROXIMATE AND IT IS UNDERSTOOD THAT BARGES OR TURBIDITY CURTAINS MAY OVERLAP ZONES. THE ZONES ARE AS FOLLOWS:
   3.a. ZONE 1– AREA FROM WEST ABUTMENT TO PIER 3
   3.b. ZONE 2– AREA BETWEEN PIER 4 AND PIER 6
   3.c. ZONE 3– AREA FROM PIER 7 TO EAST ABUTMENT
4. AT NO TIME DURING THE PERIOD OF APRIL 1 TO JUNE 30 SHALL IN-WATER CONSTRUCTION OR DEMOLITION OCCUR IN THE MIDDLE OF THE RIVER (ZONE 2) OR SIMULTANEOUSLY AT MORE THAN THREE PIERS (ZONES 1 OR 3). DIADROMOUS FISH CAN UTILIZE THE ENTIRE WIDTH OF THE CONNECTICUT RIVER DURING THEIR MIGRATION BUT PRIMARILY MIGRATE UP THE NAVIGATION CHANNEL IN THE MIDDLE OF THE RIVER (ZONE 2). TO ENSURE THE MIDDLE OF THE RIVER IS RELATIVELY UNDISTURBED DURING THE SPRING MIGRATION, APRIL 1 TO JUNE 30, CONSTRUCTION AND DEMOLITION OF PIERS WILL BE LIMITED TO EITHER THE THREE WESTERN-MOST (ZONE 1) OR THREE EASTERN-MOST (ZONE 3) PIERS. DURING THE SPRING MIGRATION, NO CONSTRUCTION OR DEMOLITION OF PIERS SHALL OCCUR WITHIN THE MIDDLE THREE PIERS (ZONE 2).
5. VIBRATORY HAMMERS SHALL BE USED DURING THE DIADROMOUS FISH MIGRATORY PERIOD FROM APRIL 1 TO JUNE 30, IN ORDER TO REDUCE THE NOISE IMPACTS FROM DRIVING SHEET PILE SHAFT CASINGS. THE USE OF IMPACT HAMMERS IS ACCEPTABLE OUTSIDE OF THIS TIMEFRAME.
6. TO MINIMIZE CONSTRUCTION RELATED TURBIDITY, FULL DEPTH TURBIDITY CURTAINS SHALL BE DEPLOYED PRIOR TO DRIVING ANY SHEET PILE OR SHAFT CASINGS. DUE TO STRONG TIDES AND CURRENTS, THE FABRIC FOR THE CURTAINS WILL BE SELECTED TO BE COMPOSED OF HEAVY WOVEN PERVIOUS MATERIALS TO CREATE A FLOW THROUGH MEDIUM. THIS WILL REDUCE THE PRESSURE ON THE CURTAINS AND KEEP THEM IN THE SAME RELATIVE SHAPE AND LOCATION AT ALL TIDES AND RIVER FLOWS.
7. ARTIFICIAL LIGHTING OVER THE WATER SHALL BE LIMITED TO NAVIGATION LIGHTS AND ANY LIGHTING TYPICALLY REQUIRED FOR THE OPERATION OF THE RAILROAD BRIDGE DURING THE SPRING MIGRATION PERIOD FROM APRIL 1 TO JUNE 30. DIADROMOUS FISH OFTEN MIGRATE AT NIGHT, AND BRIGHT ARTIFICIAL LIGHTS CAN INTERFERE WITH THEIR MIGRATION.
8. THE PULLING OR CUTTING OF TIMBER PILES SHALL BE PROHIBITED FROM FEBRUARY 1 TO JUNE 30.
9. ALL TIMBER PILES AND STONE PIERS SHALL BE REMOVED TO AT LEAST TWO FEET BELOW THE MUD LINE.
10. ALL DREDGING AND SUBCABLE INSTALLATION SHALL BE PROHIBITED FROM FEBRUARY 1 TO JUNE 30 INCLUSIVE.
11. DUE TO THE NOISE CONCERNS, THE USE OF HOE RAMS SHALL BE PROHIBITED APRIL 1 TO JUNE 30, INCLUSIVE.
12. ANY WORK DONE FROM BARGES SHALL ONLY OCCUR WHEN THERE IS SUFFICIENT TIDE TO PREVENT VESSELS FROM GROUNDING IN ORDER TO PREVENT DAMAGE TO BENTHIC AQUATIC ORGANISMS, PERMANENT DREDGE AREAS WILL BE PROVIDED FOR BARGE MOORING ADJACENT TO TEMPORARY TRESTLE PLATFORMS.
13. ALL LOUD CONSTRUCTION RELATED ACTIVITIES, INCLUDING DRILLING PILES OR SHAFT CASINGS (EVEN BY VIBRATORY MEANS), SHALL BE PROHIBITED FROM SUNSET TO SUNRISE DURING THE COMMERCIAL SHAD FISHING SEASON FROM APRIL 1 TO JUNE 15, INCLUSIVE.
14. PROPOSED FISHING PIER NOT SHOWN DUE TO CLARITY. FISHING PIER TO BE CONSTRUCTED AFTER CONSTRUCTION OF THE NEW BRIDGE HAS BEEN COMPLETED AND THE EXISTING BRIDGE HAS BEEN DEMOLISHED. LOW-DRAFT WORK FLOATS ANTICIPATED FOR USE CONSTRUCTING THE NEW FISHING PIER WILL NOT OCCUPY THE RIVER CONCURRENT WITH THE BARGE BASED ACTIVITIES PRESENTED ON SC-02 THROUGH SC-05. SEE EM-01 FOR PIER DETAILS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

0 60 120

No.	Revisions	Date	By

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

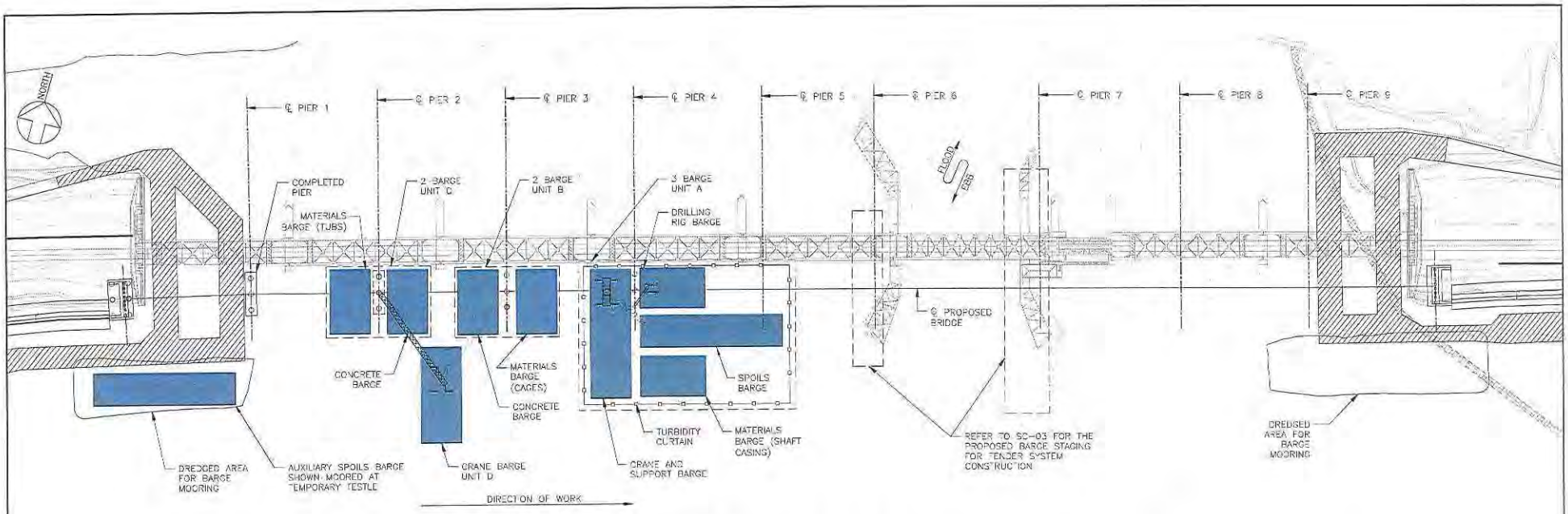
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

BARGE OCCUPANY ZONES

Designed	Drawn	Checked	Date
BSH	CBS	BSH	5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 13 OF 140
Dwg No. SC-01



BARGE STAGING FOR PIER CONSTRUCTION

0 60 120

NOTES

1. THE PIER CONSTRUCTION SEQUENCE SHOWN IS A CONCEPTUAL BARGE BASED CONSTRUCTION SCHEME FOR IN-WATER WORK ACTIVITIES. SEE DRAWING PH-02 FOR SUGGESTED CONSTRUCTION PHASING.
2. BARGE PLACEMENTS ARE CONCEPTUAL AND WILL BE DESIGNED BY THE CONTRACTOR.
3. PIER CONSTRUCTION IS ANTICIPATED TO REQUIRE 3 GROUPS OF BARGES FOR CONSTRUCTION:
   - 3.1. BARGE GROUP A IS ANTICIPATED FOR DRILLED SHAFT CASING
   - 3.2. BARGE GROUP B IS ANTICIPATED FOR DRILLED SHAFT REINFORCEMENT AND CONCRETE INSTALLATION
   - 3.3. BARGE GROUP C IS ANTICIPATED FOR PIER CAP AND CONCRETE CONSTRUCTION
   - 3.4. BARGE GROUP D IS ANTICIPATED TO BE A SINGULAR CRANE BARGE THAT WILL ASSIST BOTH GROUPS B AND C
4. NEW SUPERSTRUCTURE ELEMENTS ARE SHOWN IN VARIOUS STATES OF COMPLETION BASED ON THE CONCEPTUAL SEQUENCE. WORK IS SHOWN TO PROGRESS FROM WEST TO EAST AND THEREFORE THE NEW STRUCTURES WEST OF PIER 4 ARE NOT SHOWN. DEEP FOUNDATION PIER CONSTRUCTION WILL GENERALLY FOLLOW THE PROCEDURE OF DRILLED SHAFT CASING INSTALLATION, EXCAVATION AND DRILLING, INSTALLATION OF SHAFT REINFORCEMENT AND CONCRETE, FOLLOWED BY CONCRETE PILE CAP, PIER STEM AND PIER CAP CONSTRUCTION.
5. STAGES ARE SHOWN TO PROGRESS FROM WEST TO EAST, BUT WILL BE SUBJECT TO THE FINAL PLAN DEVELOPED BY THE CONTRACTOR, IN ACCORDANCE WITH THE TIME OF THE YEAR RESTRICTIONS ON THE TYPE OF WORK PERMITTED AND AREAS OF THE RIVER THAT MAY BE OCCUPIED. SEE DRAWING SC-01 AND PH-02 FOR ENVIRONMENTAL SAFEGUARDS.
6. THE CONTRACTOR SHALL PROVIDE MEASURES, IN ACCORDANCE WITH THE CONTRACT PLANS, SPECIFICATIONS, AND ENVIRONMENTAL PERMITS TO PROTECT THE WATERWAY DURING EXCAVATION CONSTRUCTION, CONCRETE PLACEMENT AND CURING.
7. TURBIDITY CURTAINS ARE REQUIRED DURING CONSTRUCTION FOR ALL IN-WATER WORK CAPABLE OF GENERATING TURBIDITY, IN ACCORDANCE WITH ENVIRONMENTAL PERMIT APPROVALS. CT DEEP REQUIRES THAT FULL DEPTH TURBIDITY CURTAINS MUST BE DEPLOYED PRIOR TO SHAFT CASING INSTALLATION.
8. PIN PILE SUPPORTED TURBIDITY CURTAIN LIMITS SHOWN ARE APPROXIMATE. TEMPORARY RIVER BOTTOM IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES SHALL BE WITHIN THE TOTAL AREA LIMITS IDENTIFIED ON SUM-01.
9. ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. DRIVING OF BARGE SPUD PILES IS CONSIDERED A TEMPORARY IMPACT AND INCLUDED IN THE TOTAL TEMPORARY IMPACT AREAS IDENTIFIED ON SUM-01. BARGES NOT LOCATED WITHIN LARGER PIN PILE SUPPORTED TURBIDITY CURTAIN ZONES SHALL BE PROTECTED WITH INDIVIDUAL BARGE MOUNTED CURTAINS.
10. NAVIGATIONAL IMPEDIMENTS ARE TO BE MARKED WITH WARNING LIGHTS.
11. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN ICE MANAGEMENT PLAN.
12. ALL TEMPORARY WORK AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF USCG AND DEEP BOATING.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	XXXX	Revisions	MM/DD/YY	XXX

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Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

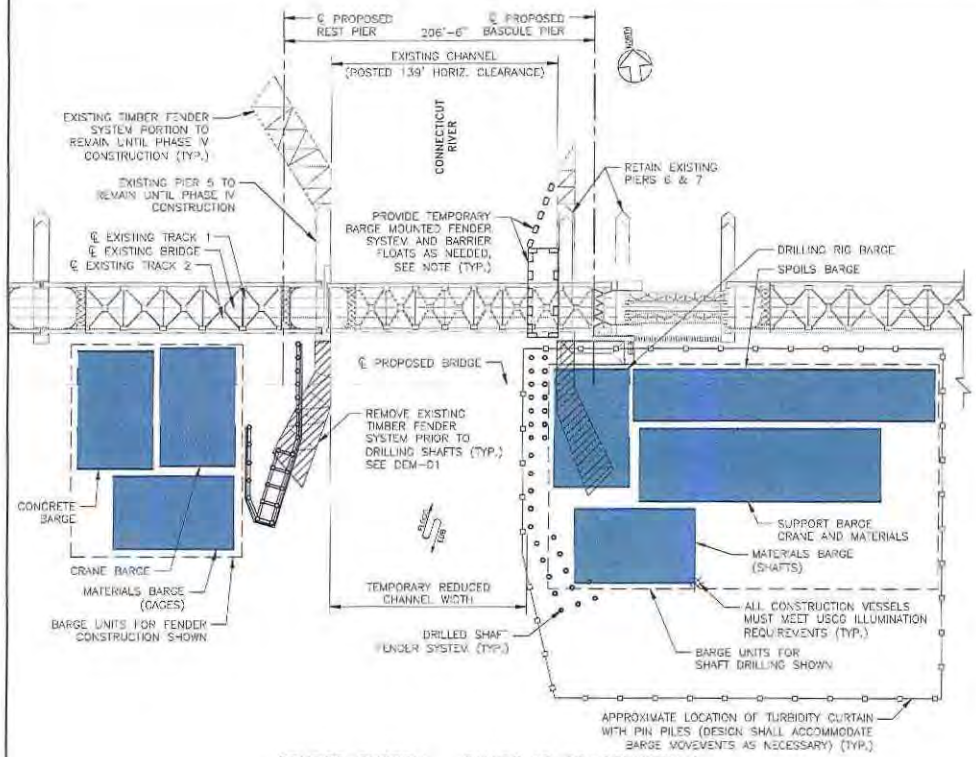
Approved: Date:

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
BARGE BERTHING 1 – PIER CONSTRUCTION

Designed BSH | Drawn CBS | Checked BSH | Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No.: 132 OF 140
Dwg. No.: SC-02



FENDER SYSTEM – PHASE IC CONSTRUCTION

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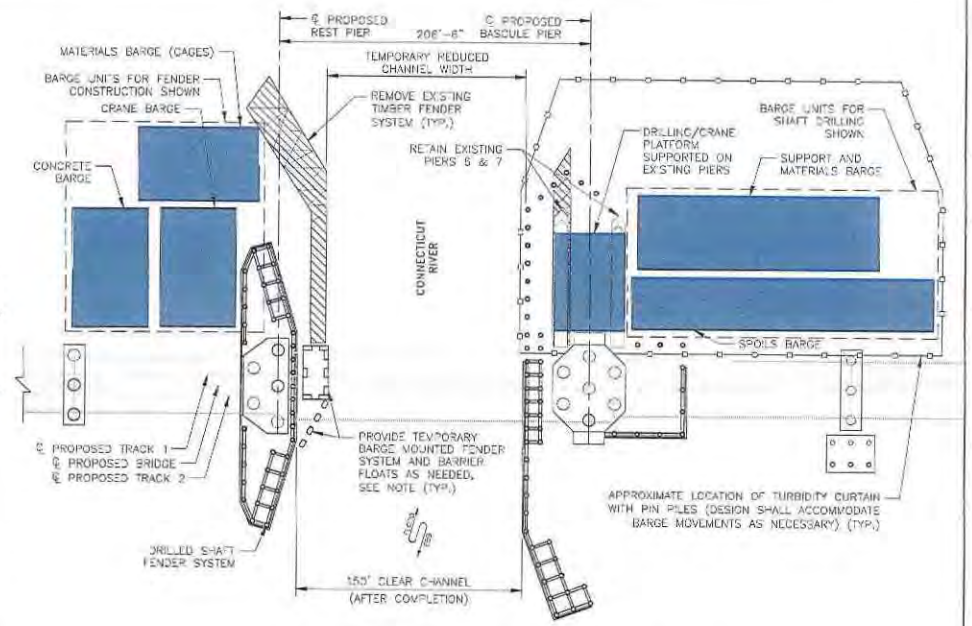

FENDER SYSTEM – PHASE IV CONSTRUCTION

0 25 50

NOTE ON FENDER CONSTRUCTION DURING PHASE IV:

EXISTING BRIDGE STRUCTURE DEVOLITION MUST BE COMPLETED BEFORE THE INITIATION OF FENDER CONSTRUCTION. ADDITIONALLY, ALL NEW BRIDGE STRUCTURE CONSTRUCTION MUST BE COMPLETED BEFORE THE INITIATION OF FENDER CONSTRUCTION, INCLUDING SUBSTRUCTURE AND SUPERSTRUCTURE (SUPERSTRUCTURE NOT SHOWN FOR CLARITY).

1. THE FENDER CONSTRUCTION SEQUENCE SHOWN IS A CONCEPTUAL BARGE BASED CONSTRUCTION SCHEME FOR IN-WATER WORK ACTIVITIES. SEE DRAWING PH-02 FOR SUGGESTED CONSTRUCTION PHASING.
2. BARGE PLACEMENTS ARE CONCEPTUAL AND WILL BE DESIGNED BY THE CONTRACTOR.
3. THE IN-WATER WORK ACTIVITIES SHOWN ABOVE ARE NOT INDICATIVE OF PROPOSED CONCURRENT WORK. ALL IN-WATER WORK MUST BE PERFORMED IN ACCORDANCE WITH THE LIMITATIONS IDENTIFIED ON SC-01.
3. FENDER CONSTRUCTION IS ANTICIPATED TO REQUIRE 3 GROUPS OF BARGES FOR CONSTRUCTION, SIMILAR TO DRILLED SHAFT PIER CONSTRUCTION, SEE DRAWING SC-02:
   - 3.1. FENDER DRILLED SHAFT CASING INSTALLATION BARGE CONFIGURATION SIMILAR TO BARGE GROUP A ON SC-02.
   - 3.1. FENDER DRILLED SHAFT REINFORCING AND CONCRETE INSTALLATION BARGE CONFIGURATION SIMILAR TO BARGE GROUP B ON SC-02.
   - 3.2. BARGE LAYOUTS FOR FINAL FENDER APPURTENANCE INSTALLATION SIMILAR CONFIGURATION AS BARGE GROUP C ON SC-02. CRANE BARGES FOR SUPPORT ARE ALSO ANTICIPATED.
4. NEW FENDER ELEMENTS ARE SHOWN IN VARIOUS STATES OF COMPLETION BASED ON THE CONCEPTUAL SEQUENCES PRESENTED.
5. EXISTING FENDER SYSTEM DEVOLITION, SHAFT DRILLING AND FENDER CONSTRUCTION SOUTH OF THE EXISTING BRIDGE SHALL BE PERFORMED DURING PHASE IC. CONSTRUCTION OF THE REMAINING FENDER SYSTEM ELEMENTS SHALL BE PERFORMED AFTER DEMOLITION OF THE EXISTING BRIDGE, DURING PHASE IV. SEE DETAILS ON THIS SHEET FOR SUGGESTED PHASING OF FENDER SYSTEM CONSTRUCTION.
5. PROGRESSION OF FENDER CONSTRUCTION WILL BE SUBJECT TO THE FINAL PLAN DEVELOPED BY THE CONTRACTOR, IN ACCORDANCE WITH THE TIME OF THE YEAR RESTRICTIONS ON THE TYPE OF WORK PERMITTED AND AREAS OF THE RIVER THAT MAY BE OCCUPIED. SEE DRAWING SC-01 AND PH-02 FOR ENVIRONMENTAL SAFEGUARDS.
6. FENDER SYSTEM CONSTRUCTION SEQUENCING MAY REQUIRE UNIQUE BARGE UNITS AND BARGE BERTHING LOCATIONS TO PERFORM INDIVIDUAL TASKS. MULTIPLE CONSTRUCTION SEQUENCING TASKS MAY BE PERFORMED SIMULTANEOUSLY AT DIFFERENT LOCATIONS WITHIN THE CONSTRUCTION PHASE, AS SHOWN ON THE DETAILS ON THIS SHEET.
7. TEMPORARY FENDER SYSTEM SHALL BE INSTALLED AS SHOWN. TEMPORARY FENDER SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE DESIGN AND WORKING DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT AND SUBMITTED TO THE ENGINEER FOR APPROVAL. TEMPORARY FENDER SYSTEM TO INCLUDE LIGHTING PER USCG STANDARDS.
8. FENDER SYSTEM CONSTRUCTION DURING STAGE IV SHOWS CONCEPTUAL DRILLING RIG AND/OR CRANE PLACEMENT ON A PLATFORM SUPPORTED BY EXISTING PIERS TO REMAIN AS A FEASIBLE CONSTRUCTION ALTERNATIVE TO MINIMIZE CHANNEL IMPACTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF PLATFORM AND ALL NECESSARY SHIELDING AND ENVIRONMENTAL CONTROLS.
9. THE CONTRACTOR SHALL PROVIDE MEASURES, IN ACCORDANCE WITH THE CONTRACT PLANS, SPECIFICATIONS, AND ENVIRONMENTAL PERMITS TO PROTECT THE WATERWAY DURING EXCAVATION CONSTRUCTION, CONCRETE PLACEMENT AND CURING.
10. CONTRACTOR SHALL AVOID SUBMARINE CABLES AND OBSTRUCTIONS WHEN INSTALLING AND REMOVING PIN PILES. THE METHODS USED TO DETERMINE THE LOCATION OF EXISTING CABLES AND OBSTRUCTIONS MUST COMPLY WITH THE PERMITS FOR THE PROJECT. USE NON-INVASIVE METHODS TO LOCATE EXISTING CABLES.
11. CONTRACTOR SHALL USE MEANS AND METHODS OF BARGE SPUDDING AND PIN PILE INSTALLATION AND REMOVAL THAT WILL NOT DAMAGE SUBMARINE CABLES.
12. TURBIDITY CURTAINS ARE REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ENVIRONMENTAL PERMIT APPROVALS. CT DEEP REQUIRES THAT FULL DEPTH TURBIDITY CURTAINS MUST BE DEPLOYED PRIOR TO SHAFT CASING INSTALLATION.
13. PIN PILE SUPPORTED TURBIDITY CURTAIN LIMITS SHOWN ARE APPROXIMATE. TEMPORARY RIVER BOTTOM IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES SHALL BE WITHIN THE TOTAL AREA LIMITS IDENTIFIED ON SUM-01.
14. ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. DRIVING OF BARGE SPUD PILES IS CONSIDERED A TEMPORARY IMPACT AND INCLUDED IN THE TOTAL TEMPORARY IMPACT AREAS IDENTIFIED ON SUM-01. BARGES NOT LOCATED WITHIN LARGER PIN PILE SUPPORTED TURBIDITY CURTAIN ZONES SHALL BE PROTECTED WITH INDIVIDUAL BARGE MOUNTED CURTAINS.
15. NAVIGATIONAL IMPEDIMENTS ARE TO BE MARKED WITH WARNING LIGHTS.
16. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN ICE MANAGEMENT PLAN.
17. ALL TEMPORARY WORK AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF USCG AND DEEP BOATING.

No.	Revisions	Date	By

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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HARDESTY & HANOVER, LLC
ENGINEERING
*501 Broadway New York, NY 10036

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

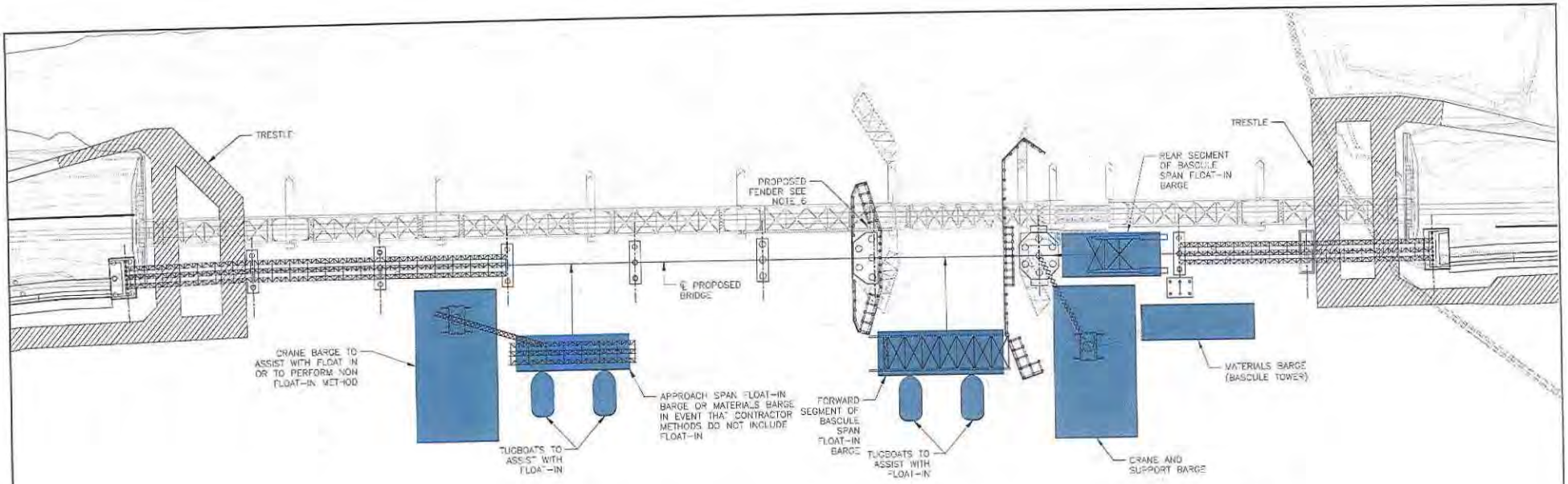
OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

BARGE BERTHING 2 – FENDER CONSTRUCTION

Designed SRM | Drawn SRM | Checked BNK | Date 5/2/2023

Project Code	XXX XXX
WBS	
Sheet No.	133 OF 140
Dwg No.	SC-03



APPROACH SPAN SUPERSTRUCTURE ERECTION PHASE IC

MOVEABLE SPAN FORWARD SECTION FLOAT-IN PHASE ID

MOVEABLE SPAN REAR SECTION FLOAT-IN PHASE ID

BARGE STAGING FOR SUPERSTRUCTURE CONSTRUCTION

0 60 120

NOTES

1. THE SUPERSTRUCTURE CONSTRUCTION SEQUENCE SHOWN IS A CONCEPTUAL BARGE BASED CONSTRUCTION SCHEME FOR IN-WATER WORK ACTIVITIES. SEE DRAWING PH-02 FOR SUGGESTED CONSTRUCTION PHASING.
2. BARGE PLACEMENTS ARE CONCEPTUAL AND WILL BE DESIGNED BY THE CONTRACTOR.
3. THE IN-WATER WORK ACTIVITIES SHOWN ABOVE ARE NOT INDICATIVE OF PROPOSED CONCURRENT WORK. ALL IN-WATER WORK MUST BE PERFORMED IN ACCORDANCE WITH THE LIMITATIONS IDENTIFIED ON SC-01.
4. SUPERSTRUCTURE CONSTRUCTION BARGE BASED ACTIVITIES ARE ANTICIPATED TO INCLUDE:
   - 4.1. DELIVERY OF APPROACH SPAN STEEL SUPERSTRUCTURE COMPONENTS.
   - 4.2. BARGE BASED CRANE LIFT-IN OR BARGE FLOAT-IN OF APPROACH SPAN SUPERSTRUCTURE STEEL.
   - 4.3. DELIVERY OF BASCULE PIER TRUNNION TOWERS STEEL COMPONENTS. BARGE BASED CRANE ERECTION OF TRUNNION TOWERS.
   - 4.4. DELIVERY OF BASCULE SPAN REAR SECTION. CONCEPTUAL ERECTION PROCEDURE FOR REAR BOX SHOWN UTILIZES A BARGE TO FLOAT-IN THE PRE-ASSEMBLED STEEL COMPONENTS TO THE REAR OF PIER 7 AND LONGITUDINAL SLIDE THE COMPONENTS INTO PLACE ON THE TRUNNION TOWERS.
   - 4.5. FLOAT-IN OF THE BASCULE SPAN FORWARD TRUSS SECTION. TEMPORARY NAVIGATION CLOSURE REQUIRED FOR THIS ACTIVITY, SEE NOTES THIS SHEET.
5. NEW SUPERSTRUCTURE ELEMENTS ARE SHOWN IN VARIOUS STATES OF COMPLETION BASED ON THE CONCEPTUAL SEQUENCES PRESENTED. A FULLY CONSTRUCTED FENDER SYSTEM IS SHOWN IN THE PLAN VIEW ABOVE. HOWEVER NOTE THAT DURING SUPERSTRUCTURE ERECTION THE FENDER WILL ONLY BE PARTIALLY COMPLETE. SEE SC-03 FOR DETAILS.
6. PROGRESSION OF SUPERSTRUCTURE CONSTRUCTION WILL BE SUBJECT TO THE FINAL PLAN DEVELOPED BY THE CONTRACTOR, IN ACCORDANCE WITH THE TIME OF THE YEAR RESTRICTIONS ON THE TYPE OF WORK PERMITTED AND AREAS OF THE RIVER THAT MAY BE OCCUPIED. SEE DRAWING SC-01 AND PH-02 FOR ENVIRONMENTAL SAFEGUARDS.
7. THESE PLANS DO NOT IDENTIFY AREAS SUITABLE FOR OFFSITE SPAN ERECTION. THE CONTRACTOR SHALL DETERMINE THE METHODS OF CONSTRUCTION AND SHALL MEET ALL FEDERAL, STATE, AND LOCAL LAWS PERTAINING TO THE CONSTRUCTION AND TRANSPORT OF THE SPANS IF CONSTRUCTED IN THIS MANNER.
8. THE CONTRACTOR SHALL PROVIDE MEASURES, IN ACCORDANCE WITH THE CONTRACT PLANS, SPECIFICATIONS, AND ENVIRONMENTAL PERMITS TO PROTECT THE WATERWAY DURING EXCAVATION CONSTRUCTION, CONCRETE PLACEMENT AND CURING.
9. TURBIDITY CURTAINS ARE REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ENVIRONMENTAL PERMIT APPROVALS. CT DEEP REQUIRES THAT FULL DEPTH TURBIDITY CURTAINS MUST BE DEPLOYED PRIOR TO SHAFT CASING INSTALLATION.
10. PIN PILE SUPPORTED TURBIDITY CURTAIN LIMITS SHOWN ARE APPROXIMATE. TEMPORARY RIVER BOTTOM IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES SHALL BE WITHIN THE TOTAL AREA LIMITS IDENTIFIED ON SUM-01.
11. ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. DRIVING OF BARGE SPUD PILES IS CONSIDERED A TEMPORARY IMPACT AND INCLUDED IN THE TOTAL TEMPORARY IMPACT AREAS IDENTIFIED ON SUM-01. BARGES NOT LOCATED WITHIN LARGER PIN PILE SUPPORTED TURBIDITY CURTAIN ZONES SHALL BE PROTECTED WITH INDIVIDUAL BARGE MOUNTED CURTAINS.
12. NAVIGATIONAL IMPEDIMENTS ARE TO BE MARKED WITH WARNING LIGHTS.
13. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN ICE MANAGEMENT PLAN.
14. ALL TEMPORARY WORK AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF USCG AND DEEP BOATING.

NAVIGATION CHANNEL CLOSURE NOTES

1. A FULL NAVIGATION CHANNEL CLOSURE WILL BE REQUIRED FOR THE FLOAT-IN OF THE BASCULE SPAN FORWARD SECTION. THE ANTICIPATED 10 DAY CHANNEL CLOSURE WILL OCCUR DURING THE OFF-PEAK BOATING SEASON.
2. WORK TO ENABLE THE MOVABLE SPAN TO ROTATE TO THE OPEN POSITION WITHIN 10 DAYS IS EXPECTED TO REQUIRE FULL DAYS AND NIGHTS. NIGHTTIME ILLUMINATION WILL BE REQUIRED AND SHALL NOT BE SCHEDULED DURING SPRING MIGRATORY PERIODS WHEN LIMITATIONS ON ARTIFICIAL LIGHTING ARE IN EFFECT.
3. ADVANCE COORDINATION WITH USCG AND EMERGENCY VESSELS WILL BE CONDUCTED AS TO THE NEED AND PROCEDURES FOR VESSEL PASSAGE DURING FULL CHANNEL CLOSURES.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	XXXX Revisions	mo/day/yr xxx

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved: Date:

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

BARGE BERTHING 3 – SUPERSTRUCT. CONSTRUCT.

Designed BSH Drawn CBS Checked BSH Date 5/2/2023

Project Code	XXX.XXX
WBS#	
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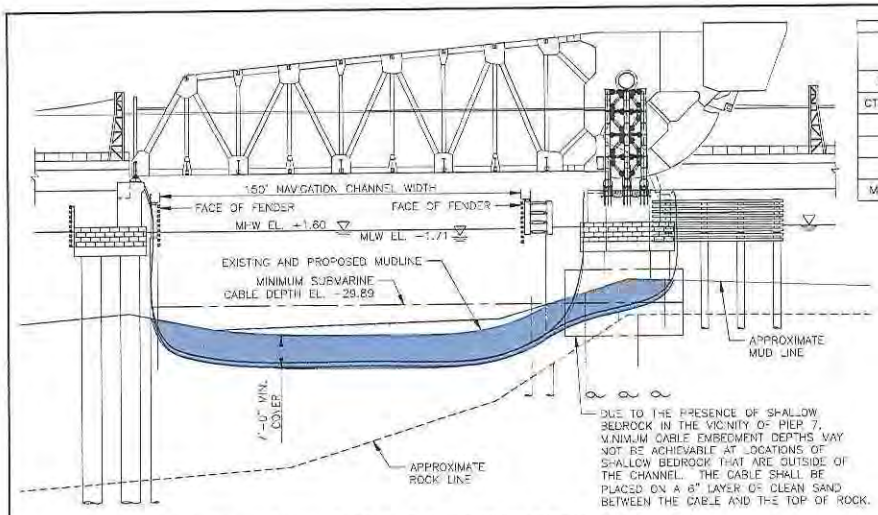
Dwg. No.	SC-04



BARGE STAGING – SUBMARINE CABLE CONSTRUCTION ELEVATION

0 25 50
1" = 25'

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAV88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.89
CT COASTAL JURISDICTION LINE	CJL	2.90	4.79
HIGH TIDE LINE	HTL	3.04	4.93
MEAN HIGH WATER LINE	MHW	1.60	3.49
MEAN LOW WATER LINE	MLW	-1.71	0.18
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NAVIGATION CHANNEL CLOSURE NOTES:

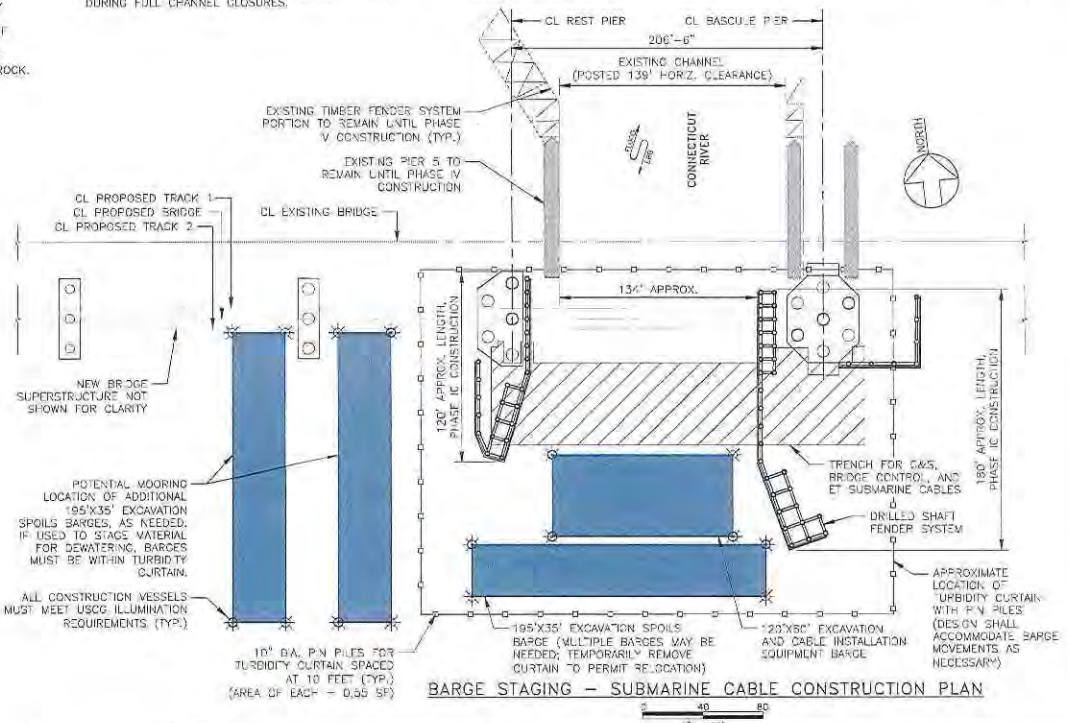
1. A FULL NAVIGATION CHANNEL CLOSURE WILL BE REQUIRED FOR THE SUBMARINE CABLE CONSTRUCTION AND REMOVAL. THE ANTICIPATED 28 DAY CHANNEL CLOSURE WILL OCCUR WITHIN A SIX (6) WEEK PERIOD DURING THE WINTER MONTHS OF DECEMBER AND JANUARY OUTSIDE OF PEAK BOATING SEASON AND WHEN ENVIRONMENTAL PERMITTING RESTRICTIONS ALLOW. SEE PP-01, PH-02 AND SC-01 FOR SUGGESTED STAGING AND ENVIRONMENTAL CONTROLS AND TIME OF YEAR RESTRICTIONS.
2. ADVANCE COORDINATION WITH USCG AND EMERGENCY VESSELS WILL BE CONDUCTED AS TO THE NEED AND PROCEDURES FOR VESSEL PASSAGE DURING FULL CHANNEL CLOSURES.

NOTES:

1. EXCAVATION AND SUBMARINE CABLE LAYING UTILIZES CONVENTIONAL EXCAVATION TECHNIQUES AND WILL OCCUR DURING A SIX (6) WEEK WINTER PERIOD, WHEN A CHANNEL CLOSURE IS PERMITTED. THE NEW SUBMARINE CABLE LAY IS TO BE PERFORMED DURING THE MONTHS OF DECEMBER AND JANUARY. THE FINAL SUBMARINE CABLE LAYOUT WILL BE DETERMINED BY THE CONTRACTOR TO AVOID OBSTRUCTIONS THAT MAY BE IDENTIFIED DURING PRE-EXCAVATION RIVER SURVEYS.
2. CONTRACTOR TO CONFIRM MINIMUM DEPTHS DURING SUBMARINE CABLE INSTALLATION USING A VERIFIABLE MEANS OF RECORDING EMBEDMENT DEPTH. CONTRACTOR TO PROVIDE EMBEDMENT DEPTH DATA AS PART OF THE PROJECT RECORD.
3. IF INVASIVE MEANS ARE USED TO PERFORM THE PRE-CABLE LAYING SURVEY, THE WORK MUST BE CONFINED, OR PERFORMED DURING THE APPROPRIATE TIME OF YEAR LIMITS.
4. SEE STL-05 FOR SUBMARINE CABLE TRENCH DETAILS.
5. NAVIGATIONAL IMPEDIMENTS ARE TO BE MARKED WITH WARNING LIGHTS.
6. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN ICE MANAGEMENT PLAN.
7. ALL TEMPORARY WORK AND EQUIPMENT SHALL MEET THE REQUIREMENT OF USCG AND DEEP BOATING.
8. BARGE STAGING DETAILS BELOW SHOW CONCEPTUAL STAGING FOR NEW SUBMARINE CABLE INSTALLATION ACTIVITIES. REMOVAL OF EXISTING CABLES ANTICIPATED TO BE PERFORMED IN SIMILAR TURBIDITY CURTAIN LIMITS WITH REDUCED EQUIPMENT NEEDS.
9. THE CONTRACTOR SHALL PROVIDE MEASURES, IN ACCORDANCE WITH THE CONTRACT PLANS, SPECIFICATIONS, AND ENVIRONMENTAL PERMITS TO PROTECT THE WATERWAY DURING EXCAVATION CONSTRUCTION, CONCRETE PLACEMENT AND CURING.
10. TURBIDITY CURTAINS ARE REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ENVIRONMENTAL PERMIT APPROVALS. CT DEEP REQUIRES THAT FULL DEPTH TURBIDITY CURTAINS MUST BE DEPLOYED PRIOR TO SHAFT CASING INSTALLATION.
11. PIN PILE SUPPORTED TURBIDITY CURTAIN LIMITS SHOWN ARE APPROXIMATE. TEMPORARY RIVER BOTTOM IMPACTS DUE TO TURBIDITY CURTAIN PIN PILES SHALL BE WITHIN THE TOTAL AREA LIMITS IDENTIFIED ON SUM-01.
12. ALL BARGE MOVEMENTS SHALL TAKE PLACE DURING CONDITIONS THAT MINIMIZE OR DO NOT CREATE RIVER BOTTOM DISTURBANCE. DRIVING OF BARGE SPUD PILES IS CONSIDERED A TEMPORARY IMPACT AND INCLUDED IN THE TOTAL TEMPORARY IMPACT AREAS IDENTIFIED ON SUM-01. BARGES NOT LOCATED WITHIN LARGER PIN PILE SUPPORTED TURBIDITY CURTAIN ZONES SHALL BE PROTECTED WITH INDIVIDUAL BARGE MOUNTED CURTAINS.

SUGGESTED CONSTRUCTION PHASING:

1. THE CONTRACTOR SHALL PERFORM A PRE-CABLE LAYING SURVEY (INCLUDING SUBSURFACE PROBES) ALONG THE PROPOSED CABLE CENTERLINE TO IDENTIFY ALL OBSTRUCTIONS THAT MAY PROHIBIT CABLE EMBEDMENT TO THE LIMITS IDENTIFIED ON THIS PLAN. SEE NOTE 4.
2. BARGE AND EQUIPMENT MOBILIZATION.
3. SPUDDING OF BARGE.
4. INSTALLATION OF PIN PILES, CONTAINMENT, DEBRIS BARRIER, TURBIDITY CURTAIN, AND ASSOCIATED PILES.
5. EXCAVATION OF TRENCH AND REMOVAL OF CHANNEL BOTTOM MATERIAL FOR REUSE, OBSTRUCTION REMOVAL AS NECESSARY.
   - 5.1. THE CONTRACTOR SHALL HANDLE THE DREDGED MATERIAL IN ACCORDANCE WITH THE LIMITS OF THE PERMIT. DO NOT USE SIDE-CASTING OR IN-WATER RE-HANDLING OF EXCAVATED OR DREDGED MATERIAL.
   - 5.2. THE CONTRACTOR SHALL PROVIDE SHIELDING WHICH SHALL INCLUDE, AT A MINIMUM, RIGID SURFACES AND POLYMER SHEETING TO PREVENT SPILLAGE DURING TRANSFER OF EXCAVATED SEDIMENT TO DREDGE SPOILS BARGES AND FROM DREDGE SPOILS BARGES TO TRUCKS FOR HAULING. THE SHIELDING SHALL BE ADEQUATELY SIZED AND CONSTRUCTED FOR THE INTENDED PURPOSE AND SHALL BE MAINTAINED OR REPLACED IN THE EVENT ELEMENTS OF THE SHIELDING BECOME DAMAGED.
   - 5.3. THE DREDGED MATERIAL SHALL BE DRIED OR OTHERWISE SOLIDIFIED ON-SITE, IN PREPARATION FOR TRANSPORTATION TO A PERMITTED UPLAND LOCATION. THE DREDGED MATERIAL SHALL BE DEWATERED EITHER ON A BARGE OR ON SHORE WITHIN A CONTAINMENT AREA. DEWATERING AND DISPOSAL OF THE DREDGED MATERIALS SHALL BE PERFORMED IN STAGES SUCH THAT THE CAPACITY OF THE DEWATERING SITE WILL NOT BE EXCEEDED UNDER ANY CIRCUMSTANCES.
   - 5.4. BARGE BASED DEWATERING OF EXCAVATED MATERIAL SHALL BE PERFORMED WITHIN TURBIDITY CURTAINS.
6. INSTALL SUBMARINE CABLES.
7. AFTER SUBMARINE CABLES HAVE BEEN INSTALLED, THE CONTRACTOR SHALL BACKFILL THE TRENCH WITH SUITABLE GRANULAR BACKFILL CONFORMING TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS.
8. BACKFILL MATERIAL SHALL BE PLACED UNDERWATER AT THE BOTTOM OF THE EXCAVATED TRENCH OR REMOVAL AREA BY CLAMSHELL OR OTHER MEANS TO REDUCE SEGREGATION OF THE BACKFILL MATERIAL AND TO MINIMIZE TURBIDITY OF THE WATER.
9. REMOVE PIN PILES, DEBRIS BOOMS, AND TURBIDITY CURTAINS.
10. NOTE THAT REMOVAL OF EXISTING ABANDONED SUBMARINE CABLES MAY HAPPEN AT ANYTIME DURING THE SEQUENCE, AND WITHIN THE TURBIDITY CURTAIN LIMITS SHOWN. IF POWER AND SIGNALS IS PROVIDED THROUGH TEMPORARY AERIAL CABLES, SEE AC-01.



BARGE STAGING – SUBMARINE CABLE CONSTRUCTION PLAN

0 40 80
1" = 40'

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

BARGE BERTHING 4 – SUB CABLE CONSTRUCTION

Designed BSH | Drawn SRM | Checked BSH | Date 5/2/2023

Project Code: XXX XXX
WBS:
Sheet No. 135 OF 140
Dwg. No. SC-05

NOTES:

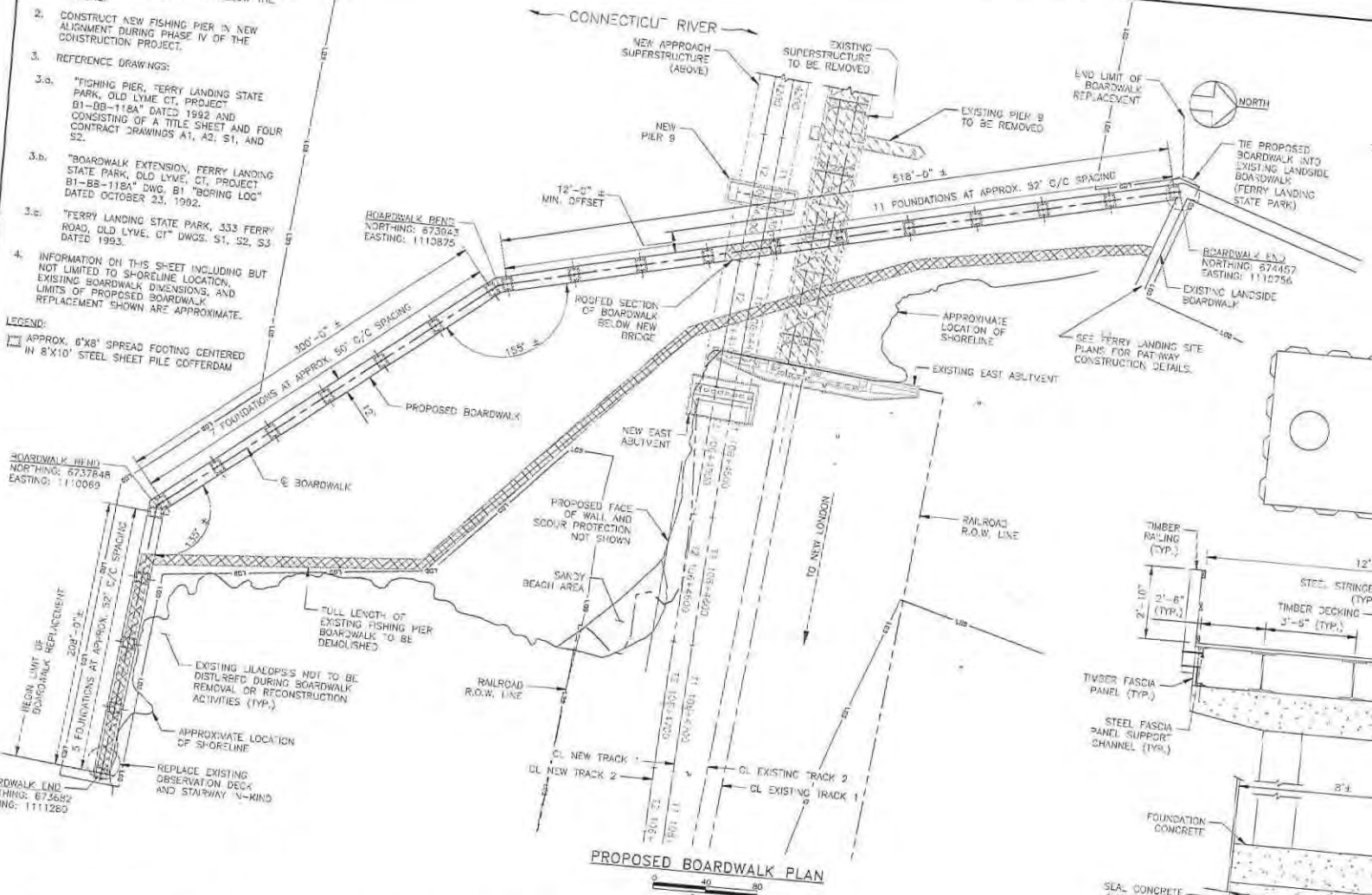
1. DEMOLISH THE EXISTING FERRY LANDING PARK FISHING PIER BOARDWALK DURING PHASE I OF BRIDGE CONSTRUCTION. REMOVE EXISTING TIMBER PILES TO 2' BELOW THE MUDLINE.
2. CONSTRUCT NEW FISHING PIER IN NEW ALIGNMENT DURING PHASE IV OF THE CONSTRUCTION PROJECT.
3. REFERENCE DRAWINGS:
   - 3.a. "FISHING PIER, FERRY LANDING STATE PARK, OLD LYME CT, PROJECT B1-BB-118A" DATED 1992 AND CONSISTING OF A TITLE SHEET AND FOUR CONTRACT DRAWINGS A1, A2, S1, AND S2.
   - 3.b. "BOARDWALK EXTENSION, FERRY LANDING STATE PARK, OLD LYME, CT, PROJECT B1-BB-118A" DWG. B1 "BORING LOG" DATED OCTOBER 23, 1992.
   - 3.c. "FERRY LANDING STATE PARK, 333 FERRY ROAD, OLD LYME, CT" DWGS. S1, S2, S3 DATED 1993.
4. INFORMATION ON THIS SHEET INCLUDING BUT NOT LIMITED TO SHORELINE LOCATION, EXISTING BOARDWALK DIMENSIONS, AND LIMITS OF PROPOSED BOARDWALK REPLACEMENT SHOWN ARE APPROXIMATE.

LEGEND:

APPROX. 6'X8' SPREAD FOOTING CENTERED IN 8'X10' STEEL SHEET PILE COFFERDAM

NOTES (CONT.):

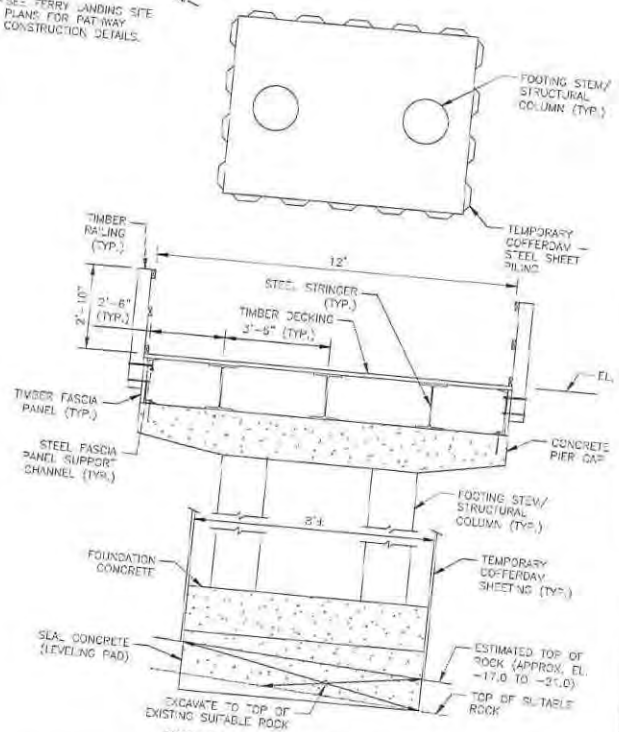
5. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. THE REPLACEMENT FISHING PIER WILL NOT BE SUPPORTED BY EXISTING BRIDGE PIER NO. 9. THIS PIER WILL BE REMOVED TO A MINIMUM DEPTH OF 2 FEET BELOW THE MUDLINE.
7. ALL ELEVATIONS SHOWN ARE IN NAVD 88 DATUM.



PROPOSED BOARDWALK PLAN

0 40 80

1" = 40'



TYPICAL PLAN AND SECTION

N.T.S.

No.	Revisions	Date	By

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER
FERRY LANDING FISHING PIER

Designed DR | Drawn PD | Checked DR | Date 5/2/2023

Project Code 300.3001
WBS
Sheet No. 136 OF 140
Dwg. No. FM-01

AERIAL PHOTO OF SITE
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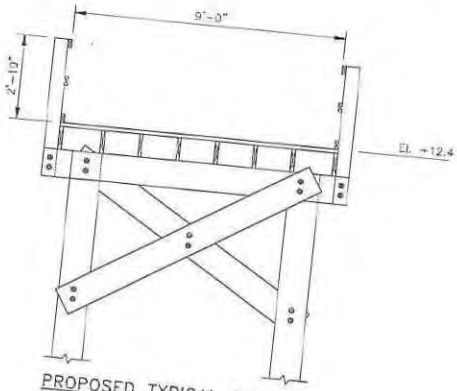
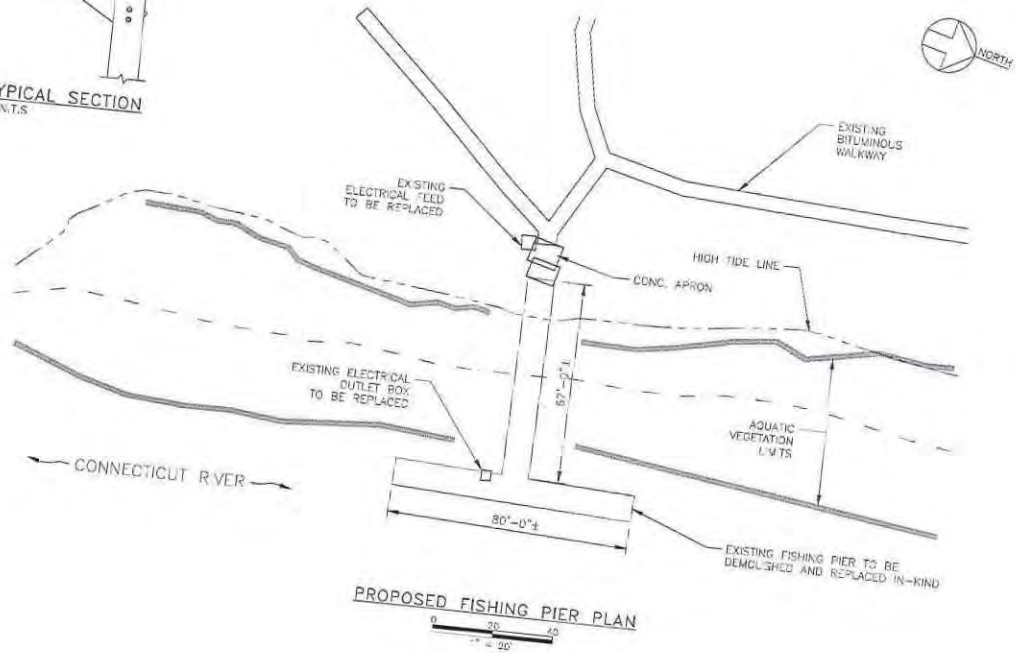


PROPOSED TYPICAL SECTION
N.T.S

NOTES:

1. DEVOLISH THE EXISTING EAGLE LANDING PIER AND REPLACE IN-KIND WITH NEW MATERIALS.
2. REFERENCE DOCUMENTS:
   - 2.a. "PROPOSED "T" PIER PERMIT APPLICATION" HADDAM, CONNECTICUT DATED JUNE 25, 1984.
   - 2.b. "TOPOGRAPHIC SURVEY" PREPARED FOR CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, EAGLE LANDING, HADDAM, CONNECTICUT DATED DECEMBER 23, 2008.
3. INFORMATION ON THIS SHEET INCLUDING BUT NOT LIMITED TO TOP OF BANK LOCATION, EXISTING PIER DIMENSIONS, AND LIMITS OF PROPOSED PIER REPLACEMENT SHOWN ARE APPROXIMATE.
4. ELEVATIONS SHOWN ON THIS DRAWING REFERENCE THE NAVD 88 DATUM.



PROPOSED FISHING PIER PLAN
0 20 40
1" = 20'

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ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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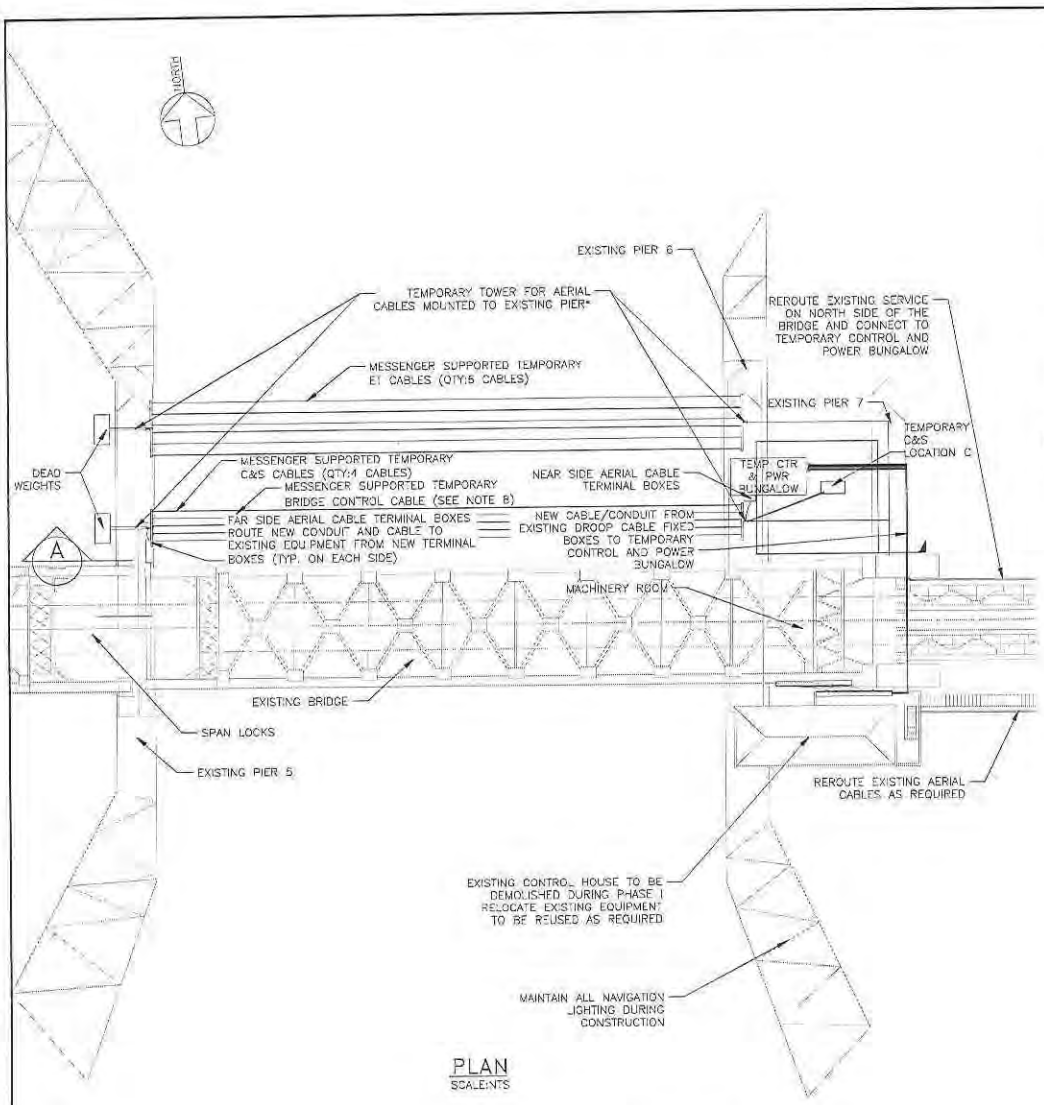
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

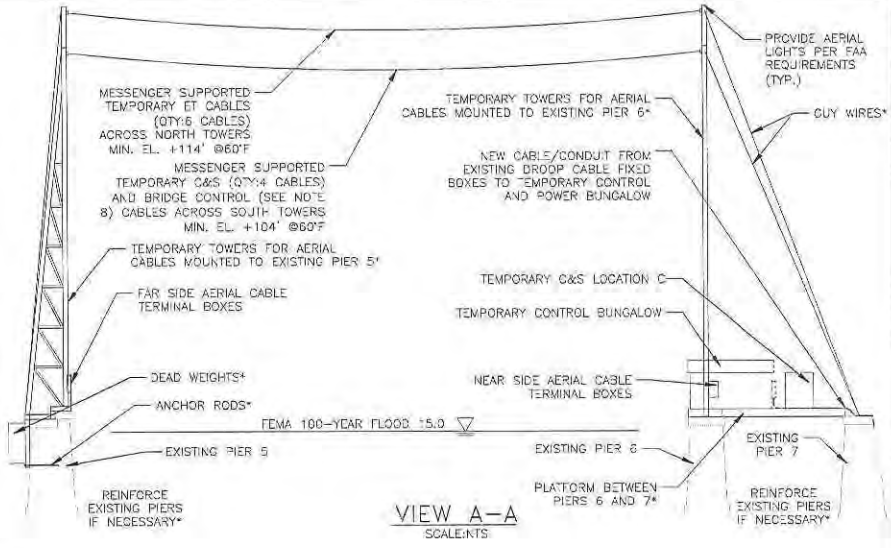
REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
EAGLE LANDING FISHING PIER

Designed DR Drawn PD Checked DR Date 5/2/2023

Project Code: XXX.XXX
WBS:
Sheet No. 137 OF 140
Dwg No. FM-02



PLAN
SCALE: NTS



VIEW A-A
SCALE: NTS

NOTES

1. A TEMPORARY AERIAL CABLE SYSTEM IS PROPOSED AS A FEASIBLE OPTION FOR THE CONTRACTOR TO MAINTAIN RAIL AND NAVIGATION CHANNEL SERVICE WHILE ABANDONING THE EXISTING CABLE SYSTEM AND PRIOR TO INSTALLATION OF THE NEW BRIDGE SUBMARINE CABLES.
2. AERIAL CABLES SHALL BE INSTALLED TO THE MINIMUM ELEVATIONS SHOWN ON THIS SHEET.
3. TEMPORARY AERIAL CABLES FOR THIS PROJECT SHALL MEET THE REQUIREMENTS OF USACE CFR-2011 TITLE 33 VOLUME 3 PART 322.
4. CONTRACTOR SHALL PROVIDE MAINTENANCE FOR ALL TEMPORARY AND EXISTING EQUIPMENT DURING CONSTRUCTION.
5. CONTRACTOR SHALL PROVIDE SECURITY/CAMERA SYSTEM FOR THE EXISTING BRIDGE DURING CONSTRUCTION.
6. CONTRACTOR TO PROVIDE LIGHTING, HEATING, AND AC IN THE TEMPORARY CONTROL AND POWER BUNGALOW.
7. CONTRACTOR SHALL PROVIDE TEMPORARY RESTROOM FACILITIES FOR OPERATOR USE.
8. AERIAL CABLES ALONG WITH MESSENGER CABLES SHALL BE FURNISHED AND INSTALLED FOR CONNECTION OF WIRING ACROSS THE CHANNEL AS SHOWN ON THE PLANS. UTILIZE AVAILABLE STANDARD TRAY CABLE(S) TO INCLUDE THE SAME CONDUCTOR QUANTITY AND SIZING AS THE EXISTING SUBMARINE CABLES.

*INDICATES TO BE DESIGNED BY BRIDGE CONTRACTOR

SCALE: NTS (UNO)

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

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OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

TEMPORARY AERIAL CABLES

Designed	MJT	Drawn	JVA	Checked	CS	Date	5/2/2023

Project Code	XXX.XXX
WBS	
Sheet No.	138 OF 140
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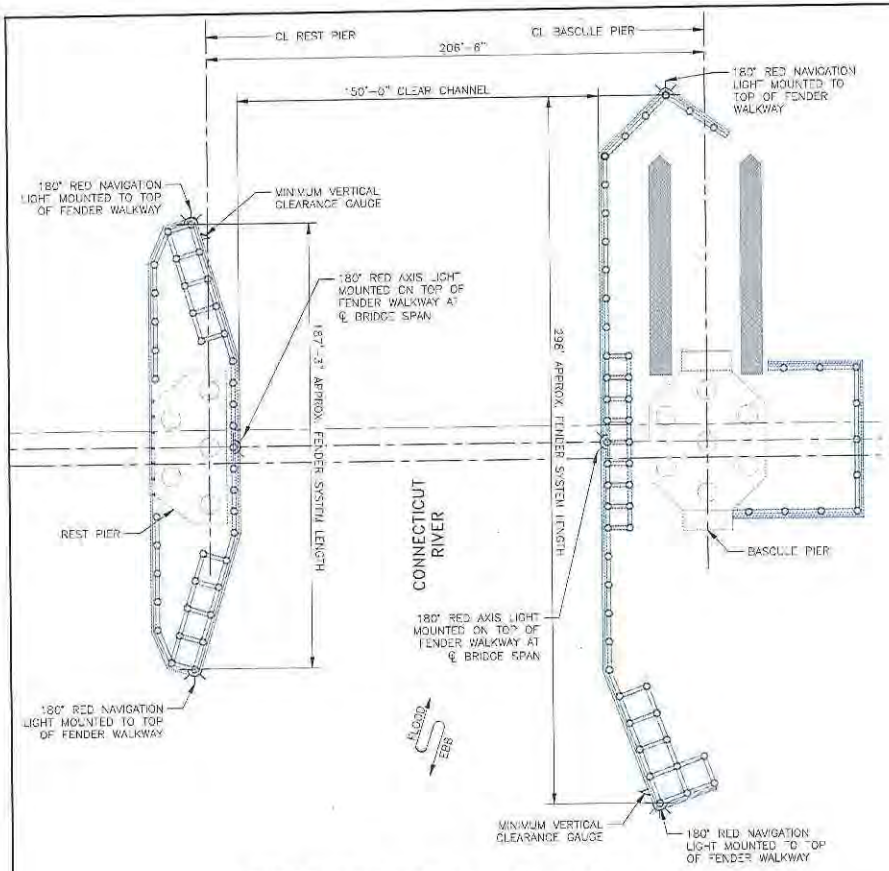
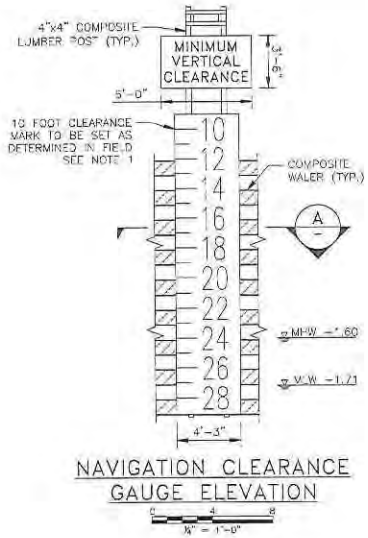


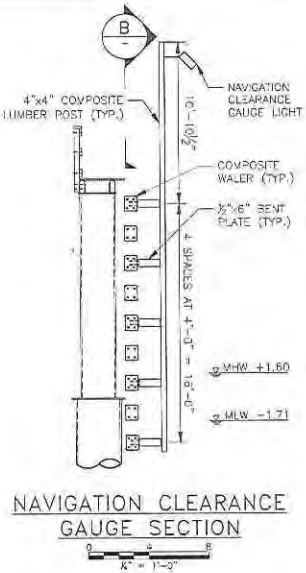
FENDER NAVIGATIONAL AID PLAN

0 25 50
1" = 25'



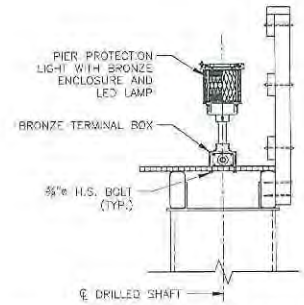
NAVIGATION CLEARANCE GAUGE ELEVATION

0 4 8
1/4" = 1'-0"



NAVIGATION CLEARANCE GAUGE SECTION

0 4 8
1/4" = 1'-0"



NAVIGATION LIGHT ELEVATION

0 1 2 3
3/4" = 1'-0"

CLEARANCE GAUGE NOTES:

1. CONTRACTOR TO SURVEY LOW STEEL OVER CHANNEL AT COMPLETION OF BRIDGE CONSTRUCTION, AND SET NAVIGATION CLEARANCE GAUGE WITH CENTER OF MARK AT 10 FEET EXACTLY 10 FEET BELOW LOW STEEL.
2. ALL BOLTS, NUTS AND WASHERS USED FOR THE CONNECTION OF THE CLEARANCE GAUGE PANELS TO FRPL POSTS SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH THE TECHNICAL PROVISIONS.
3. ALL TEXT FOR CLEARANCE GAUGE SHALL BE IN BLACK ON WHITE BACKGROUND, LETTERS AND NUMBERS SHALL CONFORM TO THE CURRENT MANUAL PER SPECIAL PROVISIONS.
4. THE "MINIMUM VERTICAL CLEARANCE" SIGN PANEL FOR BOTH THE NORTH AND SOUTH END OF THE FENDER SYSTEM SHALL BE A 3/16" THICK S.S. PANEL CONFORMING TO ASTM A666, TYPE 316 AND TYPE III REFLECTIVE SHEETING, WHITE BACKGROUND WITH BLACK LETTERING AND NUMBERING.
5. THE CLEARANCE GAUGE SIGN PANEL AT BOTH THE NORTH AND SOUTH END OF THE FENDER SYSTEM SHALL BE A 3/16" THICK S.S. PANEL CONFORMING TO ASTM A666, TYPE 316 AND TYPE III REFLECTIVE SHEETING, WHITE BACKGROUND WITH BLACK LETTERING AND NUMBERING.
6. SEE SPECIAL PROVISIONS FOR INFORMATION REGARDING SIZING AND PLACEMENT OF LETTERING, NUMBERING AND FOOT MARKS.

NAVIGATION LIGHT NOTES:

1. SEE ELECTRICAL PLANS AND SPECIAL PROVISIONS FOR INFORMATION REGARDING NAVIGATION CLEARANCE GAUGE LIGHT, NAVIGATION LIGHT AND AND ELECTRICAL WORK.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

OLD SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER
FENDER SYSTEM DETAILS

Designed SRM Drawn SRM Checked BNK Date 5/2/2023

Project Code	XXX.XXX
WBS:	
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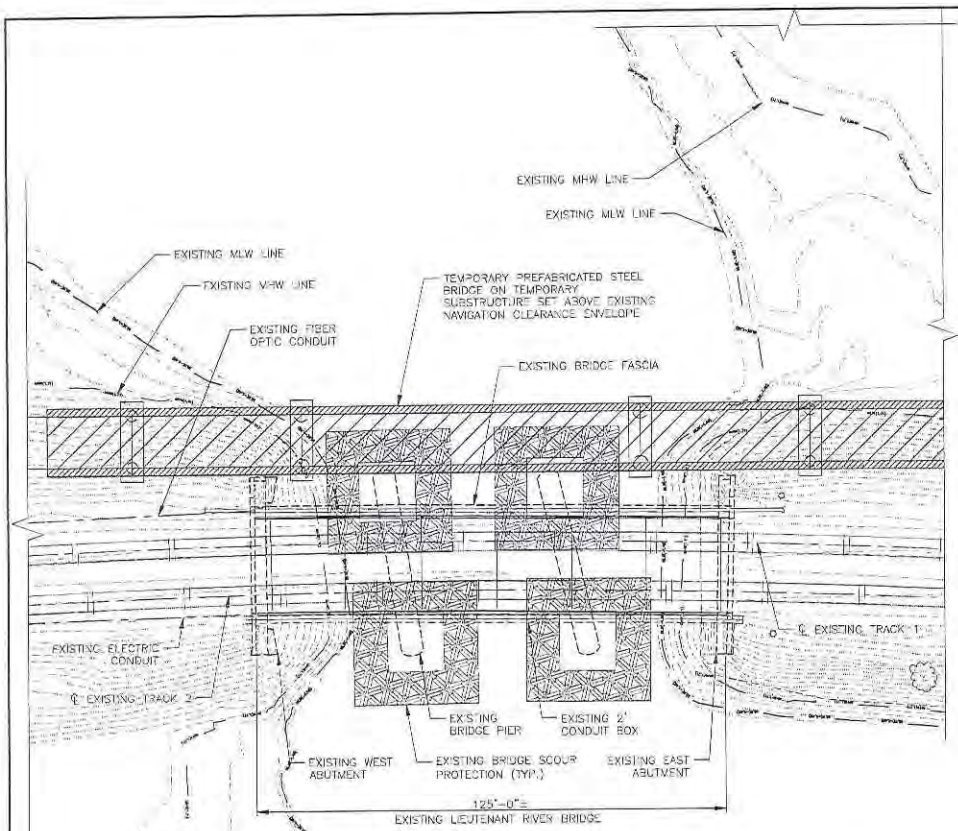
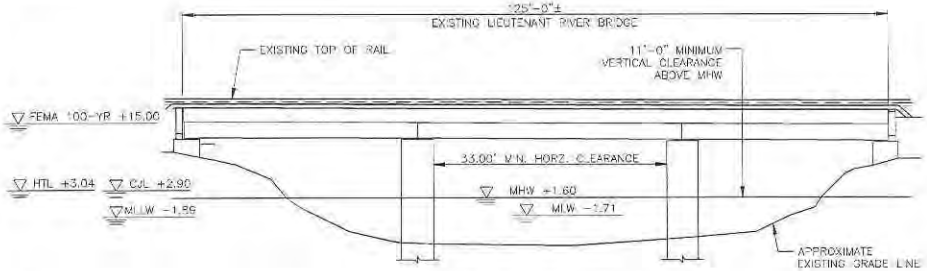
Dwg No.	FEN-01



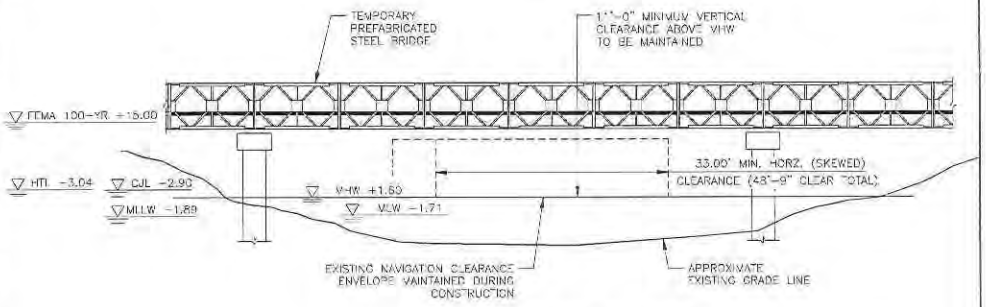
LIEUTENANT RIVER BRIDGE
TEMPORARY CROSSING DURING CONSTRUCTION — PLAN

0 16 32
1/16" = 1'-0"



LIEUTENANT RIVER BRIDGE
EXISTING BRIDGE ELEVATION

0 12 24
1/32" = 1'-0"



LIEUTENANT RIVER BRIDGE
TEMPORARY CROSSING DURING CONSTRUCTION — ELEVATION

0 12 24
1/32" = 1'-0"

ELEVATION TABLE			
DESCRIPTION	CONTOUR	NOAA (NAVD88)(FT)	USACE (MLLW)(FT)
FEMA 100-YEAR (ZONE VE)	100 YR	15.00	16.89
CT COASTAL JURISDICTION LINE	CJL	2.90	4.79
HIGH TIDE LINE	HTL	3.04	4.93
MEAN HIGH WATER LINE	MHW	1.60	3.49
MEAN LOW WATER LINE	MLW	-1.71	0.18
MEAN LOWER LOW WATER LINE	MLLW	-1.89	0.00

NAVIGATION CHANNEL CLOSURE NOTES:

1. AN ANTICIPATED 7 DAY FULL NAVIGATION CHANNEL CLOSURE WILL BE REQUIRED FOR THE INSTALLATION AND REMOVAL OF THE LIEUTENANT RIVER BRIDGE TEMPORARY CROSSING.
2. ADVANCE COORDINATION WITH USCG AND EMERGENCY VESSELS WILL BE CONDUCTED AS TO THE NEED AND PROCEDURES FOR VESSEL PASSAGE DURING FULL CHANNEL CLOSURES. ALL TEMPORARY WORK AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF USCG AND DEEP BOATING.

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING A TEMPORARY BRIDGE ADEQUATE FOR CROSSING THE LIEUTENANT RIVER BRIDGE AND REMOVING THE TEMPORARY BRIDGE WHEN NO LONGER REQUIRED FOR USE.
2. THE TEMPORARY BRIDGE SHALL MEET OR EXCEED THE MINIMUM CLEARANCES SHOWN ON THIS PLAN.
3. THE PREFABRICATED STEEL BRIDGE SYSTEM SHOWN IS A SUGGESTED STRUCTURAL SOLUTION.
4. THE TEMPORARY BRIDGE SHALL HAVE A SOLID FLOOR TO KEEP DEBRIS FROM ENTERING THE RIVER BELOW.
5. INSTALLATION OF TEMPORARY BRIDGE SHALL OCCUR BEHIND TURBIDITY CURTAINS.
6. THE TEMPORARY BRIDGE CROSSING SHALL NOT RESTRICT THE EXISTING LIEUTENANT RIVER NAVIGATION CLEARANCES.
7. TEMPORARY PILES IN THE VICINITY OF THE EXISTING BRIDGE FOUNDATION OR EXISTING SCOUR PROTECTION SHALL BE LOCATED SO AS TO AVOID POTENTIAL CONFLICTS WITH EXISTING PILES AND OTHER OBSTRUCTIONS.
8. SIZE OF PIERS, SPACING, AND DEPTH OF SUPERSTRUCTURE (DEFINING HIGH CHORD) TO BE DESIGNED BY CONTRACTOR. PIER SPACING TO BE NO CLOSER SPACED THAN THOSE SHOWN ON THE PERMIT PLANS.
9. TEMPORARY TRESTLE BRIDGE TO BE REMOVED IN FULL AFTER COMPLETION OF USE FOR CONSTRUCTION ACCESS AND SITE RESTORED TO PRE-EXISTING CONDITIONS.

ENVIRONMENTAL PERMIT PLANS
PLAN DATE: MAY 2, 2023

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
150 Broadway New York, NY 10038

OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

LIEUTENANT RIVER TEMPORARY CROSSING

Designed	MY	Drawn	MY	Checked	SJT	Date	5/2/2023

Project Code:	XXX XXX
WBS:	
Sheet No:	140 OF 140
Dwg No.	TB-01

Stantec

AMTRAK

Replacement of Amtrak Connecticut River Bridge (MP 106.89) Tidal Marsh Mitigation Design 17 Shore Road Site

Old Lyme and Old Saybrook, CT

LOCATION MAP

VICINITY MAP
1"=2000'

INDEX OF SHEETS

DRAWING NO.	TITLE
G-100	COVER SHEET
G-002	GENERAL NOTES AND LEGEND
C-100	EXISTING CONDITIONS PLAN
C-101	PROPOSED GRADING PLAN
C-102	PROPOSED CONSTRUCTION ACCESS, SITE PREPARATION AND STAGING/LAYDOWN PLAN
C-103	PLANTING PLAN
C-104	PROPOSED CULVERT GRADING PLAN
C-200	SECTIONS AND PROFILES
C-300	EROSION AND SEDIMENT CONTROL NOTES & DETAILS

2023.04.07
PROJECT NUMBER: 195602497

PLANS FOR PERMITTING
APRIL 2023

DIG SAFE NOTE:
UTILITIES ARE PLOTTED FROM FIELD LOCATION AND SHOULD BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST. CONTRACTORS MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO, CALL THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER AT 1 (800) 922-4455 OR 811
WEBSITE: WWW.CBYD.COM

H&H
Hardesty & Hanover, LLC
850 Bear Tavern Road, Suite 206
West Trenton, NJ

PROJECT DESCRIPTION

THE OBJECTIVE OF THE 17 SHORE ROAD SITE MITIGATION DESIGN IS TO RESTORE NATURAL RESOURCES ON THE 17 SHORE ROAD SITE AS MITIGATION FOR IMPACTS AS PART OF THE AMTRAK CONNECTICUT RIVER BRIDGE REPLACEMENT PROJECT. THE GENERAL SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES, ESTABLISHING CONSTRUCTION ACCESS, WATER MANAGEMENT, INSTALLATION OF THE PROPOSED CULVERT UNDER THE EXISTING ACCESS ROAD, CONSTRUCTION OF TIDAL MARSH AND ADJACENT UPLAND RESTORATION AND PLUGGING OF A REMNANT MOSQUITO CONTROL DITCH.

FISHERIES/WILDLIFE HABITAT NOTES

1. ALL ON-SITE CONSTRUCTION STAFF WILL ATTEND TRAINING BY AN QUALIFIED ENVIRONMENTAL SCIENTIST AND RECEIVE A COPY OF FINAL WILDLIFE PROTECTION PLAN PRIOR TO BEGINNING WORK ON SITE.
2. A QUALIFIED ENVIRONMENTAL SCIENTIST WILL BE PRESENT WHEN WORK IS BEING CONDUCTED.
3. NOISE-GENERATING CONSTRUCTION ACTIVITIES MUST BEGIN PRIOR TO MAY 1 AND CONTINUE WITHOUT PROLONGED INTERRUPTION THROUGH AUGUST 31. IF A SIGNIFICANT NOISE-GENERATING CONSTRUCTION ACTIVITY DOES NOT START PRIOR TO MAY 1, THEN A TIME OF YEAR RESTRICTION WILL APPLY, AND WORK MAY NOT BEGIN UNTIL SEPTEMBER 1 WITHOUT THE APPROVAL OF CTDEEP TO PROTECT LEAST BITTERN AND SALTMARSH SHARP-TAILED SPARROW.
4. IF BALD EAGLE NESTING ACTIVITY IS OBSERVED WITHIN 600 FT FROM CONSTRUCTION ACTIVITY ALL CONSTRUCTION MUST STOP UNTIL NESTING ACTIVITY HAS CEASED.
5. CONSTRUCTION WITHIN TIDAL CREEKS OR SIMILAR CHANNELIZED AQUATIC HABITAT IS PROHIBITED FROM NOVEMBER 1 - MARCH 31 TO PROTECT OVER-WINTERING STATE-LISTED TURTLES.
6. WORK LIMITS MUST BE ENCLOSED BY A WILDLIFE BARRIER SYSTEM BETWEEN APRIL 1 AND OCTOBER 31 (E.G., SILT FENCE OR ELEVATED WORK SURFACES) TO PREVENT ENTRY BY STATE-LISTED TURTLES. THE ISOLATED WORK LIMITS ARE TO BE INSPECTED DAILY BY TRAINED CONSTRUCTION STAFF OR ENVIRONMENTAL MONITORS FOR THE PRESENCE OF STATE-LISTED TURTLES PRIOR TO THE START OF WORK; TURTLES ARE TO BE RELOCATED IF OBSERVED IN WORK LIMITS AND REPORTED TO THE ON-SITE ENVIRONMENTAL MONITOR AND AMTRAK REPRESENTATIVE; DEFICIENCIES IN THE WILDLIFE BARRIER ARE TO BE PROMPTLY REPAIRED.
7. SPEED LIMIT ALONG ACCESS ROADS IS NOT TO EXCEED 10 MPH.
8. REFUELING OR HANDLING OTHER BIO-TOXIC LIQUIDS IS PROHIBITED IN THE VICINITY OF LOW MARSH, RIVERBANKS, TIDAL CREEKS, OR DITCHES.
9. INACTIVE OSPREY NESTS MAY BE REMOVED FROM SEPTEMBER 1 - MARCH 1; CTDEEP IS TO BE NOTIFIED PRIOR TO REMOVING ANY OSPREY NEST.
10. TREE CLEARING IS PROHIBITED FROM JUNE 1 - JULY 31 TO PROTECT NORTHERN LONG-EARED BATS.
11. APPROPRIATE SOIL EROSION, SEDIMENT, AND TURBIDITY CONTROLS WILL BE USED AND MAINTAINED DURING CONSTRUCTION; AND AREAS CAPABLE OF PRODUCING GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION WILL BE DONE DURING PERIODS OF LOW- OR NO-FLOW TO PROTECT FISHERY RESOURCES.
12. WORK THAT PRODUCES GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION (DONE OUTSIDE OF TURBIDITY CURTAINS OR COFFERDAMS) IS PROHIBITED FROM FEBRUARY 1 - JUNE 30 TO PROTECT FISHERY RESOURCES.
13. EROSION AND SEDIMENT CONTROL MATERIALS CANNOT CONTAIN PLASTIC OR MONOFILAMENT MESHES TO REDUCE POTENTIAL WILDLIFE ENTANGLEMENT.

GENERAL NOTES

1. INFORMATION DEPICTED ON THESE PLANS DOES NOT CONSTITUTE AN AGREEMENT TO ACCESS OR WORK ON PROPERTIES DEPICTED ON THESE PLANS. ACCESS PERMISSION IS THE RESPONSIBILITY OF THE PROJECT OWNER AND MUST BE CONFIRMED BY THE CONTRACTOR.
2. EXISTING UTILITY EASEMENTS ARE NOT DEPICTED.
3. TOPOGRAPHIC AND SITE FEATURES ARE BASED UPON SURVEYS CONDUCTED BY MARTINEZ COUCH & ASSOCIATES, LLC.
4. ALL CONTOURS AND ELEVATIONS ARE PRESENTED IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
5. NORTH ARROW, BEARINGS, AND COORDINATES ARE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD 1983) CONNECTICUT STATE PLANE COORDINATE SYSTEM FEET UNITS.
6. EXISTING CONTOURS ARE COMPUTER-GENERATED INTERPOLATIONS, EDITED TO GENERALLY CONFORM TO FIELD OBSERVATIONS.
7. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES IS BASED UPON AVAILABLE INFORMATION, MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHALL BE CONFIRMED PRIOR TO BEGINNING OF CONSTRUCTION. CALL THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
8. STANTEC ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA THAT HAVE BEEN SUPPLIED BY OTHERS.
9. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS AND GRADES IN THE FIELD PRIOR TO CONSTRUCTION.
10. IF CONTRACTOR OBSERVES FIELD CONDITIONS WHICH VARY SIGNIFICANTLY FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR RESOLUTION OF THE CONFLICTING INFORMATION.
11. EXCEPT WHERE SPECIFICALLY NOTED, THE LOCATIONS AND INFORMATION ABOUT UNDERGROUND PIPES, UTILITIES OR OTHER STRUCTURES ARE COMPILED FROM AVAILABLE RECORD DATA AND VISIBLE FIELD EVIDENCE AND ARE NOT REPRESENTED AS BEING EXACT OR COMPLETE.
12. PRIOR TO MOBILIZING TO THE PROJECT SITE, CONTRACTOR SHALL GIVE ADEQUATE ADVANCE NOTICE TO THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER, THE TOWN OF OLD LYME, AND PRIVATE UTILITY COMPANIES TO ALLOW FOR FIELD LOCATION OF FACILITIES IN THE VICINITY OF THE PROJECT.
13. COORDINATE WITH AMTRAK AND OBTAIN APPROVALS FOR ACCESS WITHIN RAILROAD RIGHT-OF-WAY.
14. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES AS NECESSARY TO ADEQUATELY PROTECT AND PRESERVE BURIED UTILITIES AND INFRASTRUCTURE WITHIN AND ADJACENT TO PROJECT WORK AREAS.
15. CONTRACTOR IS RESPONSIBLE FOR EVALUATING THE CONDITION OF EXISTING ROADS AND CULVERTS AND INSTALLATION OF TEMPORARY MEASURES FOR USE OF ROADS AND CULVERTS DURING CONSTRUCTION.
16. THROUGHOUT THE DURATION OF THE WORK, THE CONTRACTOR SHALL PROTECT AND PRESERVE UTILITIES AND ALL RELATED INFRASTRUCTURE AND APPURTENANCES WITHIN THE VICINITY OF WORK, ACCESS/EGRESS, AND STAGING AND STORAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPAIRING UTILITIES AND RELATED INFRASTRUCTURE AND APPURTENANCES IF DAMAGED AS A PART OF CONSTRUCTION OF THIS PROJECT.
17. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DAMAGE TO EXISTING PIPES, UTILITIES, OR STRUCTURES TO THE OWNER AND ENGINEER, AND OBTAIN DIRECTIONS AS TO REPAIR, REPLACEMENT OR ABANDONMENT.
18. REFERENCE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, OR SUBSEQUENT VERSIONS.
19. THE CONTRACTOR SHALL RECORD THE MEASUREMENTS, DEPTHS, DIMENSIONS, MATERIALS, FIELD CONDITIONS, AND OTHER PERTINENT DATA ABOUT ALL PIPES, UTILITIES, AND STRUCTURES ENCOUNTERED DURING THE WORK, BOTH EXISTING AND CONSTRUCTED. CONTRACTOR SHALL SUBMIT RECORD DRAWINGS WITH THIS INFORMATION TO THE OWNER AND ENGINEER PRIOR TO COMPLETION OF THE WORK.
20. CONTRACTOR IS RESPONSIBLE FOR WATER MANAGEMENT DURING CONSTRUCTION INCLUDING PREPARATION OF A WATER MANAGEMENT PLAN TO BE APPROVED BY THE ENGINEER AND OWNER, WHICH SHALL INCLUDE AN OUTLINE OF PROTOCOLS AND PROCEDURES ASSOCIATED WITH HIGH-WATER CONDITIONS. THE OWNER AND ENGINEER WILL NOT BE HELD RESPONSIBLE FOR DAMAGES INCURRED TO CONTRACTOR'S EQUIPMENT OR CONSTRUCTION PROJECT MATERIALS FROM HIGH-WATER CONDITIONS.
21. CONSTRUCTION EQUIPMENT CANNOT BE OPERATED ON THE MARSH SURFACE OR IN OTHER REGULATED RESOURCE AREAS EXCEPT AS APPROVED IN PROJECT PERMITS. CONSTRUCTION EQUIPMENT THAT IS APPROVED FOR OPERATION ON THE MARSH SURFACE CANNOT BE OPERATED WHEN THE MARSH SURFACE IS TIDALLY INUNDATED.
22. DURING ALL NON-WORK PERIODS EXCEEDING A DURATION OF 24 HOURS, CONTRACTOR'S EQUIPMENT SHALL BE DEMOBILIZED AS SPECIFIED IN PROJECT PERMITS.
23. ALL TEMPORARY AND PERMANENT MATERIALS FOR CONSTRUCTION SHALL BE CLEAN AND FREE OF DEBRIS.
24. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN EQUIPMENT PRIOR TO MOBILIZATION TO THE PROJECT SITE TO AVOID INTRODUCTION OF INVASIVE PLANT PROPAGULES TO THE PROJECT SITE.
25. CONTRACTOR'S EQUIPMENT SHALL BE SOUND, CLEAN, AND LEAK FREE PRIOR TO MOBILIZING TO THE PROJECT SITE AND SHALL BE MAINTAINED IN LEAK-FREE CONDITION WHILE ON SITE.
26. A COMPLETE SPILL KIT SHALL BE MAINTAINED AT THE PROJECT AREA. ALL CONSTRUCTION EQUIPMENT SHALL HAVE A MOUNTED FIRE EXTINGUISHER.
27. PERIMETER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING FURTHER WORK AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF WORK.
28. ON-SITE REFUELING SHALL OCCUR ONLY AS ALLOWED BY PROJECT PERMITS. A DRIP PAN OR ABSORBENT PADS SHALL BE USED DURING ALL DISPENSING OPERATIONS.
29. ALL MATERIAL REMOVED FROM THE PROJECT SITE SHALL BE DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.
30. WORK SHALL COMPLY WITH ALL APPLICABLE ENVIRONMENTAL REGULATIONS AND PROJECT PERMIT CONDITIONS.

GENERAL CONSTRUCTION SEQUENCE

THE GENERAL CONSTRUCTION SEQUENCING SHALL BE AS DESCRIBED BELOW

1. PRE-MOBILIZATION
   - 1.1. DEVELOP WORK PLANS
     - 1.1.1.1. REVIEW DESIGN
     - 1.1.1.2. REVIEW PERMITS
     - 1.1.1.3. DEVELOP WORK PLANS
   - 1.2. CONDUCT HERBICIDE CONTROL OF COMMON REED (PHRAGMITES AUSTRALIS) IN TRANSPLANT AREA AT LEAST 6-8 WEEKS PRIOR TO EQUIPMENT MOBILIZATION
2. FIELD DEMARCATION OF RESOURCES AND WORK AREAS
   - 2.1. IDENTIFY AND DEMARK SENSITIVE PLANT COMMUNITIES TO BE AVOIDED
   - 2.2. DEMARK BOUNDARIES OF TEMPORARY WORK AREAS
     - 2.2.1. STAGING AREAS
     - 2.2.2. ACCESS ROUTES
   - 2.3. DEMARK PERMANENT WORK AREAS (STAGED BASED ON FINAL SEQUENCE OF WORK)
     - 2.3.1. CULVERT WORK AREA
     - 2.3.2. DITCH PLUGGING AREA
     - 2.3.3. TIDAL CHANNEL ON NORTHWEST SIDE OF EXISTING ACCESS ROAD AND PROPOSED CULVERT
     - 2.3.4. MITIGATION AREA ON SOUTHEAST SIDE OF EXISTING ACCESS ROAD AND PROPOSED CULVERT
3. MOBILIZATION
   - 3.1. INSTALL TURTLE EXCLUSIONARY BARRIER MEASURES AND CONDUCT WORKSITE SWEEP FOR TURTLES
   - 3.2. ESTABLISH STAGING AREAS AND ASSOCIATED EROSION AND SEDIMENT CONTROLS
   - 3.3. ESTABLISH TEMPORARY ACCESS ROUTES AND ASSOCIATED EROSION AND SEDIMENT CONTROLS
   - 3.4. ESTABLISH EROSION AND SEDIMENT CONTROLS ADJACENT TO PERMANENT WORK AREAS
4. CONSTRUCTION - CULVERT
   - 4.1. DAILY PLANNING AND COORDINATION (E.G., MONITOR WEATHER FORECASTS)
   - 4.2. DAILY MOBILIZATION/DEMOBILIZATION OF CONSTRUCTION EQUIPMENT FROM WORK AREA
   - 4.3. CONDUCT PRE-CONSTRUCTION TURTLE SWEEP
   - 4.4. INSTALL AND MAINTAIN OIL BOOMS (ONGOING)
   - 4.5. MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS (ONGOING)
   - 4.6. MONITORING AND MAINTENANCE OF WATER MANAGEMENT SYSTEMS (ONGOING)
   - 4.7. CONSTRUCTION
   - 4.8. COMPLETION OF CULVERT CONSTRUCTION
   - 4.9. RESTORATION OF CULVERT WORK AREA
   - 4.10. RECEIPT OF OWNER'S ACCEPTANCE PRIOR TO COMPLETION OF DEMOBILIZATION FROM WORK AREA
   - 4.11. INSTALLATION OF TEMPORARY BARRIER(S) TO PREVENT TIDAL INTRUSION PRIOR TO CONSTRUCTION OF MITIGATION AREA SOUTHEAST FROM ACCESS ROAD AND CULVERT
   - 4.12. DEMOBILIZATION FROM CULVERT WORK AREA
5. MITIGATION AREA NORTHWEST FROM ACCESS ROAD AND CULVERT
   - 5.1. DAILY PLANNING AND COORDINATION (E.G., MONITOR WEATHER FORECASTS, TIDES)
   - 5.2. DAILY MOBILIZATION/DEMOBILIZATION OF CONSTRUCTION EQUIPMENT FROM WORK AREA
   - 5.3. CONDUCT PRE-CONSTRUCTION TURTLE SWEEP
   - 5.4. INSTALL AND MAINTAIN OIL BOOMS (ONGOING)
   - 5.5. MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS (ONGOING)
   - 5.6. MONITORING AND MAINTENANCE OF WATER MANAGEMENT SYSTEMS (ONGOING)
   - 5.7. ESTABLISH TEMPORARY ACCESS ROUTES
   - 5.8. CONSTRUCTION
     - 5.8.1. PLUG DITCH
     - 5.8.2. CONSTRUCTION TIDAL CHANNEL
   - 5.9. RECEIPT OF OWNER'S ACCEPTANCE PRIOR TO COMPLETION OF DEMOBILIZATION FROM WORK AREA
   - 5.10. REMOVE TEMPORARY ACCESS ROUTES IN INTERTIDAL AREAS AND RESTORE IMPACTED AREAS
   - 5.11. REMOVE EROSION AND SEDIMENT CONTROLS
   - 5.12. DEMOBILIZATION FROM THIS WORK AREA
6. MITIGATION AREA SOUTHEAST FROM ACCESS ROAD AND CULVERT
   - 6.1. DAILY PLANNING AND COORDINATION (E.G., MONITOR WEATHER FORECASTS, TIDES)
   - 6.2. DAILY MOBILIZATION/DEMOBILIZATION OF CONSTRUCTION EQUIPMENT FROM WORK AREA
   - 6.3. CONDUCT PRE-CONSTRUCTION TURTLE SWEEP
   - 6.4. INSTALL AND MAINTAIN OIL BOOMS (ONGOING)
   - 6.5. MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS (ONGOING)
   - 6.6. MONITORING AND MAINTENANCE OF WATER MANAGEMENT SYSTEMS (ONGOING)
   - 6.7. ESTABLISH TEMPORARY ACCESS ROUTES
   - 6.8. INSTALL TIDAL BARRIER ON LANDWARD (NORTH) SIDE OF AMTRAK CULVERT UNDER RAILROAD EMBANKMENT
   - 6.9. EXCAVATION AND GRADING
   - 6.10. INSTALLATION OF PLANT STOCK
   - 6.11. INSTALLATION OF TEMPORARY MEASURES TO CONTROL EROSION AND SUPPORT ESTABLISHMENT OF PLANT STOCK
   - 6.12. RECEIPT OF OWNER'S ACCEPTANCE PRIOR TO COMPLETION OF DEMOBILIZATION FROM WORK AREA
   - 6.13. REMOVE EROSION AND SEDIMENT CONTROLS
   - 6.14. DEMOBILIZATION FROM THIS WORK AREA
7. COMMISSIONING
   - 7.1. COMMISSION MITIGATION SITE
   - 7.2. REMOVE BARRIERS FROM ACCESS ROAD AND AMTRAK RAILROAD EMBANKMENT CULVERTS
   - 7.3. MONITORING AND MAINTENANCE
8. FINAL DEMOBILIZATION
   - 8.1. RECEIPT OF OWNER'S ACCEPTANCE PRIOR TO INITIATING FINAL DEMOBILIZATION FROM WORK AREA
   - 8.2. REFERENCE PROJECT CONSTRUCTION AGREEMENT AND PERMITS
   - 8.3. FINAL DEMOBILIZATION

Legend

Symbol	Description
	EXISTING 5' MAJOR CONTOUR
	EXISTING 1' MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIVER EDGE (APPROX.)
MLW	MEAN LOW WATER
MHW	MEAN HIGH WATER
CJL	COASTAL JURISDICTION LINE
HTL	HIGH TIDE LINE
FEMA 100	FEMA 100YR LINE
OH	EXISTING OVERHEAD UTILITY
C	EXISTING COMMUNICATION LINE
E	EXISTING ELECTRIC LINE
F/O	EXISTING FIBER OPTICS
X	EXISTING METAL FENCE
	EXISTING GRAVEL DRIVE
	EXISTING STONE WALL
	EXISTING DRAINAGE SWALE
	PROPOSED DRAINAGE SWALE
	LIMITS OF CONSTRUCTION
	CONSTRUCTION ACCESS ROUTE
	RESTORED CONSTRUCTION ACCESS ROAD AREAS
	SEDIMENT CONTROL BARRIER
O	OIL BOOM
	PHASED FLOW DIVERSION
	SEDIMENT CONTROL BARRIER
	TEMPORARY STAKED TURBIDITY CURTAIN
	TEMPORARY COFFER DAM
	WETLAND FLAG
	LIMITS OF DISTURBANCE
	LIMIT OF TIDAL HABITAT RESTORATION - SOUTHEAST MITIGATION AREA

PLANS FOR PERMITTING
APRIL 2023

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Notes

Revision

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Client/Project Logo

AMTRAK

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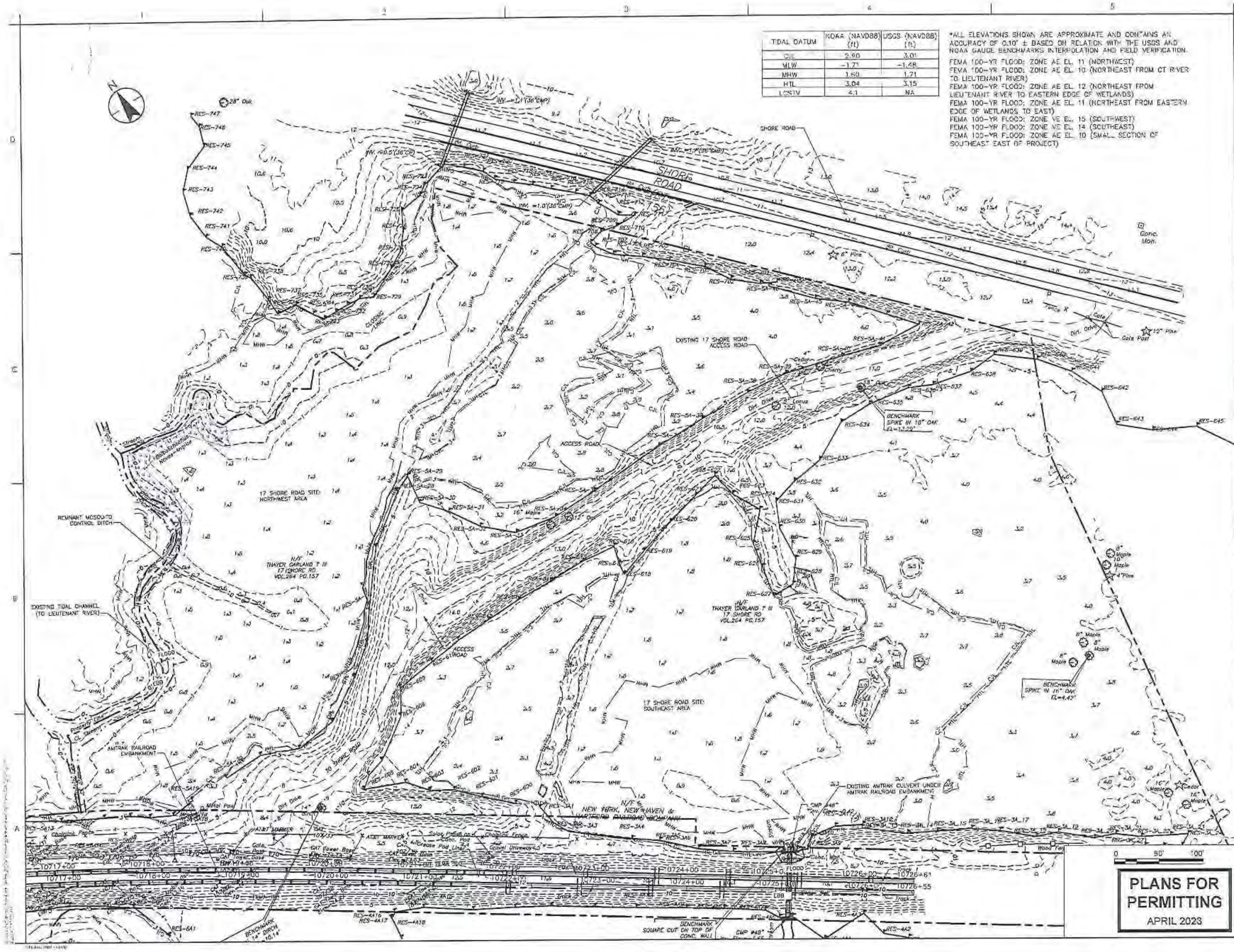
Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site

Replacement of Amtrak Connecticut River Bridge (MB 106.89)

Old Saybrook and Old Lyme, Connecticut

Title
GENERAL NOTES AND LEGEND

Project No.	Scale
195602497	AS SHOWN
Revision 0 / Sheet 2 of 9	Drawing No. G-002



TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.01
MLW	-1.71	-1.48
MHW	1.60	1.71
HTL	3.04	3.15
LCSTV	4.1	NA

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHWEST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

PLANS FOR PERMITTING
APRIL 2023

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Notes

1. EXISTING CONDITIONS PLAN DEVELOPED USING INFORMATION IN AUTOCAD FILE "2017-272 C3D SURVEY-CURRENT(2022)-Merged.dwg" BY MCA.
2. HORIZONTAL DATUM IS IN REFERENCE TO CONNECTICUT STATE PLANE MAIN AND NORTH AMERICAN DATUM 1983 (NAD83).
3. REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

Revision

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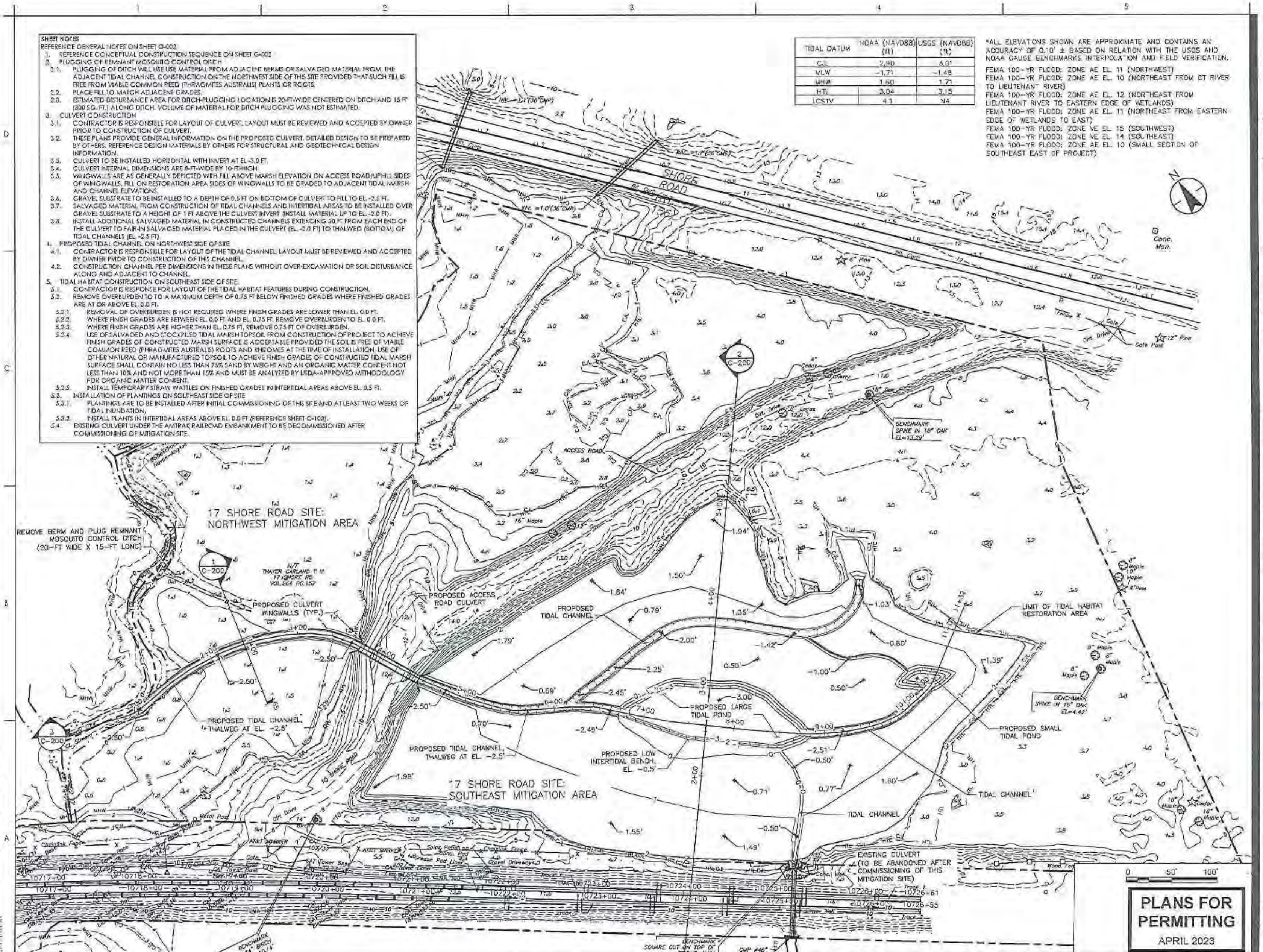
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
EXISTING CONDITIONS PLAN

Project No.	Scale
195602497	AS SHOWN

Revision	Sheet	Drawing No.
0	3 of 9	C-100



SHEET NOTES

REFERENCE GENERAL NOTES ON SHEET G-002.

1. REFERENCE CONCEPTUAL CONSTRUCTION SEQUENCE ON SHEET G-002
2. PLUGGING OF REMNANT MOSQUITO CONTROL DITCH
   - 2.1. PLUGGING OF DITCH WILL USE USE MATERIAL FROM ADJACENT BERMS OR SALVAGED MATERIAL FROM THE ADJACENT TIDAL CHANNEL CONSTRUCTION ON THE NORTHWEST SIDE OF THIS SITE PROVIDED THAT SUCH FILL IS FREE FROM VIABLE COMMON REED (PHRAGMITES AUSTRALIS) PLANTS OR ROOTS.
   - 2.2. PLACE FILL TO MATCH ADJACENT GRADES.
   - 2.3. ESTIMATED DISTURBANCE AREA FOR DITCH-PLUGGING LOCATION IS 20-FT-WIDE CENTERED ON DITCH AND 15 FT (300 SQ. FT.) ALONG DITCH. VOLUME OF MATERIAL FOR DITCH PLUGGING WAS NOT ESTIMATED.
3. CULVERT CONSTRUCTION
   - 3.1. CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF CULVERT. LAYOUT MUST BE REVIEWED AND ACCEPTED BY OWNER PRIOR TO CONSTRUCTION OF CULVERT.
   - 3.2. THESE PLANS PROVIDE GENERAL INFORMATION ON THE PROPOSED CULVERT. DETAILED DESIGN TO BE PREPARED BY OTHERS. REFERENCE DESIGN MATERIALS BY OTHERS FOR STRUCTURAL AND GEOTECHNICAL DESIGN INFORMATION.
   - 3.3. CULVERT TO BE INSTALLED HORIZONTAL WITH INVERT AT EL -3.0 FT.
   - 3.4. CULVERT INTERNAL DIMENSIONS ARE 8-FT-WIDE BY 10-FT-HIGH.
   - 3.5. WINGWALLS ARE AS GENERALLY DEPICTED WITH FILL ABOVE MARSH ELEVATION ON ACCESS ROAD/UPHILL SIDES OF WINGWALLS. FILL ON RESTORATION AREA SIDES OF WINGWALLS TO BE GRADED TO ADJACENT TIDAL MARSH AND CHANNEL ELEVATIONS.
   - 3.6. GRAVEL SUBSTRATE TO BE INSTALLED TO A DEPTH OF 0.5 FT ON BOTTOM OF CULVERT TO FILL TO EL. -2.5 FT.
   - 3.7. SALVAGED MATERIAL FROM CONSTRUCTION OF TIDAL CHANNELS AND INTERTIDAL AREAS TO BE INSTALLED OVER GRAVEL SUBSTRATE TO A HEIGHT OF 1 FT ABOVE THE CULVERT INVERT (INSTALL MATERIAL UP TO EL. -2.0 FT).
   - 3.8. INSTALL ADDITIONAL SALVAGED MATERIAL IN CONSTRUCTED CHANNELS EXTENDING 30 FT FROM EACH END OF THE CULVERT TO FAIR-IN SALVAGED MATERIAL PLACED IN THE CULVERT (EL. -2.0 FT) TO THALWEG (BOTTOM) OF TIDAL CHANNELS (EL. -2.5 FT)
4. PROPOSED TIDAL CHANNEL ON NORTHWEST SIDE OF SITE
   - 4.1. CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF THE TIDAL CHANNEL. LAYOUT MUST BE REVIEWED AND ACCEPTED BY OWNER PRIOR TO CONSTRUCTION OF THIS CHANNEL.
   - 4.2. CONSTRUCTION CHANNEL PER DIMENSIONS IN THESE PLANS WITHOUT OVER-EXCAVATION OR SOIL DISTURBANCE ALONG AND ADJACENT TO CHANNEL.
5. TIDAL HABITAT CONSTRUCTION ON SOUTHEAST SIDE OF SITE.
   - 5.1. CONTRACTOR IS RESPONSE FOR LAYOUT OF THE TIDAL HABITAT FEATURES DURING CONSTRUCTION.
   - 5.2. REMOVE OVERBURDEN TO TO A MAXIMUM DEPTH OF 0.75 FT BELOW FINISHED GRADES WHERE FINISHED GRADES ARE AT OR ABOVE EL. 0.0 FT.
     - 5.2.1. REMOVAL OF OVERBURDEN IS NOT REQUIRED WHERE FINISH GRADES ARE LOWER THAN EL. 0.0 FT.
     - 5.2.2. WHERE FINISH GRADES ARE BETWEEN EL. 0.0 FT AND EL. 0.75 FT, REMOVE OVERBURDEN TO EL. 0.0 FT.
     - 5.2.3. WHERE FINISH GRADES ARE HIGHER THAN EL. 0.75 FT, REMOVE 0.75 FT OF OVERBURDEN.
     - 5.2.4. USE OF SALVAGED AND STOCKPILED TIDAL MARSH TOPSOIL FROM CONSTRUCTION OF PROJECT TO ACHIEVE FINISH GRADES OF CONSTRUCTED MARSH SURFACE IS ACCEPTABLE PROVIDED THE SOIL IS FREE OF VIABLE COMMON REED (PHRAGMITES AUSTRALIS) ROOTS AND RHIZOMES AT THE TIME OF INSTALLATION. USE OF OTHER NATURAL OR MANUFACTURED TOPSOIL TO ACHIEVE FINISH GRADES OF CONSTRUCTED TIDAL MARSH SURFACE SHALL CONTAIN NO LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC MATTER CONTENT NOT LESS THAN 10% AND NOT MORE THAN 15% AND MUST BE ANALYZED BY USDA-APPROVED METHODOLOGY FOR ORGANIC MATTER CONTENT.
     - 5.2.5. INSTALL TEMPORARY STRAW WATTLES ON FINISHED GRADES IN INTERTIDAL AREAS ABOVE EL. 0.5 FT.
   - 5.3. INSTALLATION OF PLANTINGS ON SOUTHEAST SIDE OF SITE
     - 5.3.1. PLANTINGS ARE TO BE INSTALLED AFTER INITIAL COMMISSIONING OF THIS SITE AND AT LEAST TWO WEEKS OF TIDAL INUNDATION.
     - 5.3.2. INSTALL PLANTS IN INTERTIDAL AREAS ABOVE EL. 0.0 FT (REFERENCE SHEET C-103).
   - 5.4. EXISTING CULVERT UNDER THE AMTRAK RAILROAD EMBANKMENT TO BE DECOMMISSIONED AFTER COMMISSIONING OF MITIGATION SITE.

TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
C.J.L	2.90	3.01
MLW	-1.71	-1.48
MHW	1.60	1.71
HTL	3.04	3.15
LCSTV	4.1	NA

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

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FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

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Notes

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2. HORIZONTAL DATUM IS IN REFERENCE TO CONNECTICUT STATE PLANE MAINLAND NORTH AMERICAN DATUM 1983 (NAD83).
3. REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.
4. EXISTING CONDITIONS RESOURCE AREAS ARE NOT DEPICTED WITHIN THE 17 SHORE ROAD SOUTHEAST MITIGATION AREA ON THIS SHEET.

Revision

Issued

Permit/Seal

Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
PROPOSED GRADING PLAN

Project No.	Scale
195602497	AS SHOWN
Revision 0 / Sheet 4 of 9	Drawing No. C-101

SHEET NOTES

ESTIMATED MATERIAL VOLUMES

1. ESTIMATED EXCAVATION VOLUMES FOR WETLAND RESTORATION; PROPOSED GRADES.
2. NORTHWEST MITIGATION AREA
   - 2.1. EXCAVATION FOR CONSTRUCTION OF TIDAL CHANNEL BETWEEN NORTHWEST SIDE OF PROPOSED CULVERT AND EXISTING TIDAL CHANNEL: 306 CY
   - 2.2. VOLUME OF FILL FOR DITCH PLUGGING NOT ESTIMATED.
   - 2.3. EXCAVATION FOR CONSTRUCTION OF PROPOSED CULVERT BY OTHERS.
   - 2.4. EXCAVATION FOR CONSTRUCTION OF TEMPORARY ACCESS ROADS BY OTHERS.
3. SOUTHEAST MITIGATION AREA
   - 3.1. EXCAVATION TO PROPOSED GRADES: 10,500 CY
   - 3.2. OVER-EXCAVATION FOR PLACEMENT OF SALVAGED MARSH SUBSTRATE AND TOPSOIL: 4,100 CY
   - 3.3. TOTAL EXCAVATION: 14,600 CY
   - 3.4. IMPORTED SUBSTRATE (SALVAGED MARSH SUBSTRATE AND TOPSOIL): 4,100 CY.
   - 3.5. EXCAVATED MATERIAL FROM CONSTRUCTION OF TIDAL CHANNEL ON NORTHWEST MITIGATION AREA MAY BE SALVAGED AND USED IN SOUTHEAST MITIGATION AREA IF FREE OF VIABLE INVASIVE PLANT MATERIALS.
   - 3.6. EXCAVATION FOR CONSTRUCTION OF PROPOSED CULVERT BY OTHERS.
   - 3.7. EXCAVATION FOR CONSTRUCTION OF TEMPORARY ACCESS ROADS BY OTHERS.

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MHW	1.60	1.71
HTL	3.04	3.15
LCSTV	4.1	NA

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.'0' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

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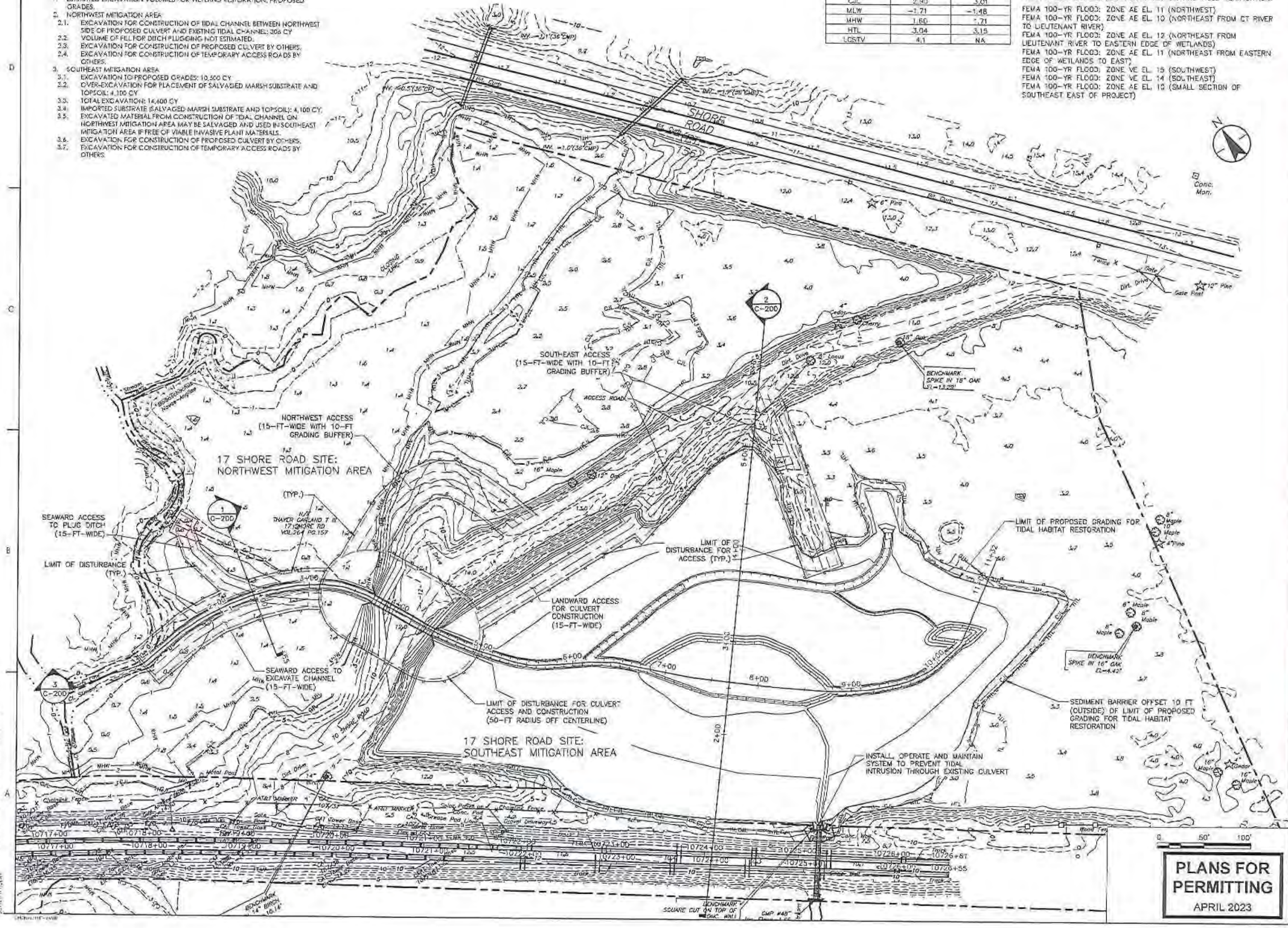

PLANS FOR PERMITTING
APRIL 2023

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Notes

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3. REGULATORY LINES: C.L., MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.
4. EXISTING CONDITIONS RESOURCE AREAS ARE NOT DEPICTED WITHIN THE 17 SHORE ROAD SOUTHEAST MITIGATION AREA ON THIS SHEET.

Revision

Issued

Permit/Seal

Client/Project Logo

AMTRAK

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Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
PROPOSED CONSTRUCTION ACCESS, SITE PREPARATION AND STAGING/LAYDOWN PLAN

Project No.	Scale
195602497	AS SHOWN

Revision	Sheet	Drawing No.
0	5 of 9	C-102

SHEET NOTES
1. TOTAL AREA OF 17 SHORE ROAD SOUTHEAST MITIGATION AREA BELOW EL.2.0 FT IS 169,246 SQ. FT. (3.885 ACRES)
2. TOTAL AREA OF INTERTIDAL HABITAT BETWEEN EL. 0.0 FT AND EL. 2.0 FT IS 145,113 SQ. FT. (3.331 ACRES)
  2.1. TOTAL AREA OF INTERTIDAL HABITAT BETWEEN EL. 0.0 FT AND EL. 1.0 FT IS 72,117 SQ. FT. (1.656 ACRES)
  2.2. TOTAL AREA OF INTERTIDAL HABITAT BETWEEN EL. 1.0 FT AND EL. 2.0 FT IS 72,996 SQ. FT. (1.676 ACRES)
3. TOTAL AREA OF INTERTIDAL AND SUBTIDAL HABITAT LOWER THAN EL. 0.0 FT 24,135 SQ. FT. (0.554 ACRES)
4. TOTAL AREA OF MARSH EDGE COMMUNITY BETWEEN EL. 2.0 FT AND EL. 4.1 FT IS 2,515 SQ. FT. (0.058 ACRES)

PLANT QUANTITIES
1. *NOTE IN TABLE: TWO (2) CULMS ARE TO BE PLANTED IN EACH HOLE; THE NUMBERS PRESENTED IN TABLE BELOW ASSUMES PLANT PLUG STOCK MATERIAL CONTAIN 1 CULM PER PLUG.
2. 1.0-2.0' ZONE TO BE PLANTED AS A MOSAIC OF VEGETATION; DUE TO RHIZOMATOUS GROWTH, DISCRETE PATCHES OR ZONES OF PLANTINGS PER SPECIES ARE RECOMMENDED OVER RANDOM DISTRIBUTION. SINGLE-SPECIES PATCHES ARE TO RANGE FROM APPROXIMATELY 100 SQ. FT. TO 500 SQ. FT.
3. WAND PANIC GRASS (PANICUM VIRGATUM) TO BE PLANTED IN DISTURBED AREAS AND WHERE OTHERWISE IDENTIFIED BY OWNER. PLANT TWO (2) 2-INCH PLUGS IN SINGLE HOLE 24-INCHES ON CENTER.

Legend	Planting Group	Species	Elevation Zone (feet, NAVD88)	Size*	Spacing	Percent of Area	Number
	Low Marsh Community (0.0' to 1.0')	Smooth cord grass / Spartina alterniflora	0.0'-1.0'	2" plug	18" OC	80%	51,283
		Seaside club-rush / Bolboschoenus robustus	0.0'-1.0'	2" plug	18" OC	10%	6,410
		Big cord grass / Spartina cynosuroides	0.0'-1.0'	2" plug	18" OC	10%	6,410
	High Marsh Community (1.0' to 2.0')	Salt-meadow cord grass / Spartina patens	1.0'-2.0'	2" plug	18" OC	35%	51,097
		Seaside club-rush / Bolboschoenus robustus	1.0'-2.0'	2" plug	18" OC	25%	16,221
		Big cord grass / Spartina cynosuroides	1.0'-2.0'	2" plug	18" OC	15%	9,733
		Three-square / chairmaker's club-rush / Schoenoplectus pungens / S. americanus	1.0'-2.0'	2" plug	18" OC	25%	16,221
	Marsh Edge Community (2.0' to 4.1')	Wand panic grass / Panicum virgatum	2.0'-4.1'	2" plug	24" OC	100%	1,258

TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.0'
MLW	-1.71	-1.48
MHW	1.88	1.71
HTL	3.04	3.15
LCSTV	4.1	NA

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION:

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FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
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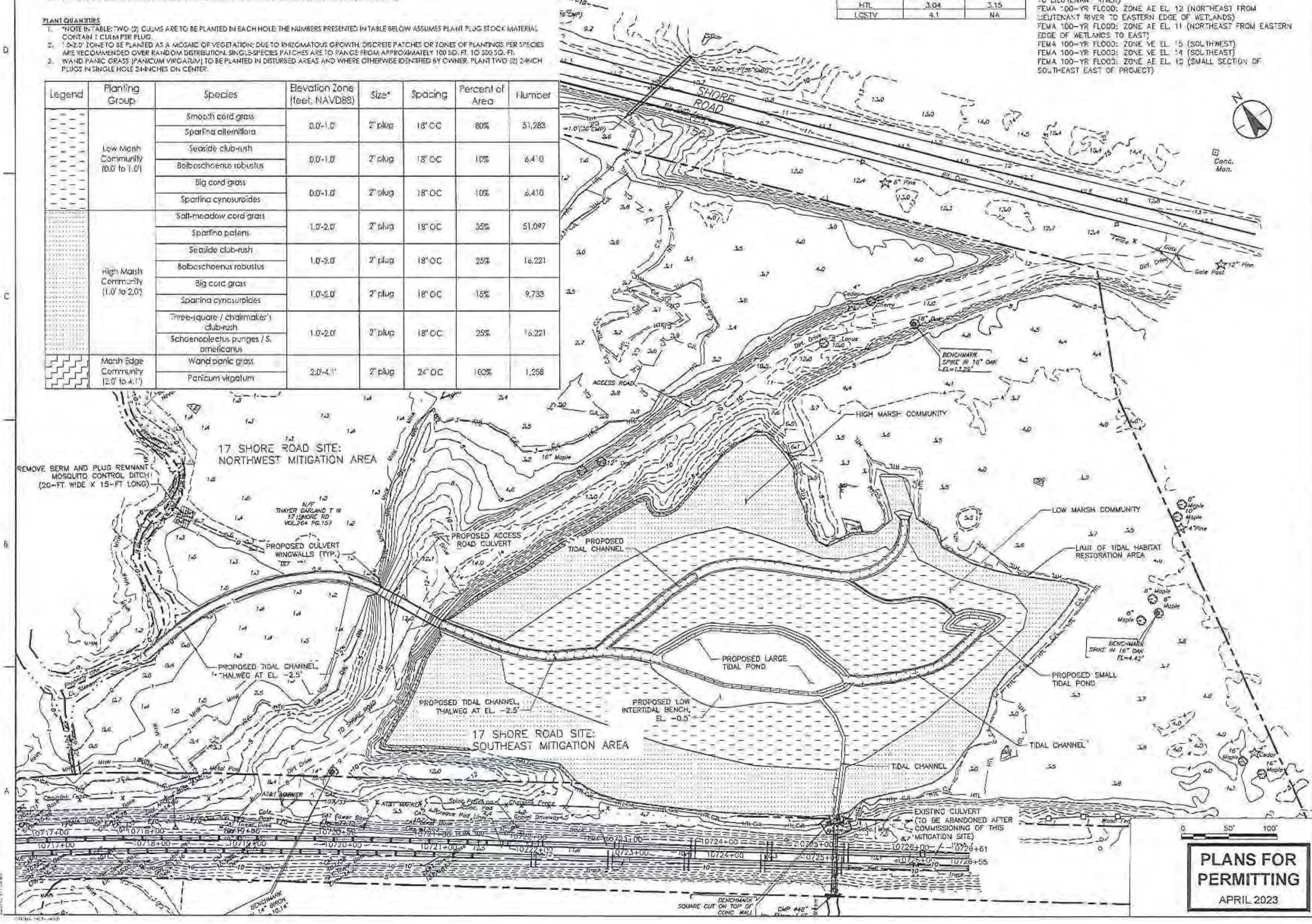

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4. EXISTING CONDITIONS RESOURCE AREAS ARE NOT DEPICTED WITHIN THE 17 SHORE ROAD SOUTHEAST MITIGATION AREA ON THIS SHEET.

Revision

Issued

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Client/Project Logo

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Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site

Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
PLANTING PLAN

Project No.	Scale
195602497	AS SHOWN
Revision: 0 / Sheet: 6 of 9	Drawing No. C-103

TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
C.L	2.90	3.01
MLW	-1.71	-1.48
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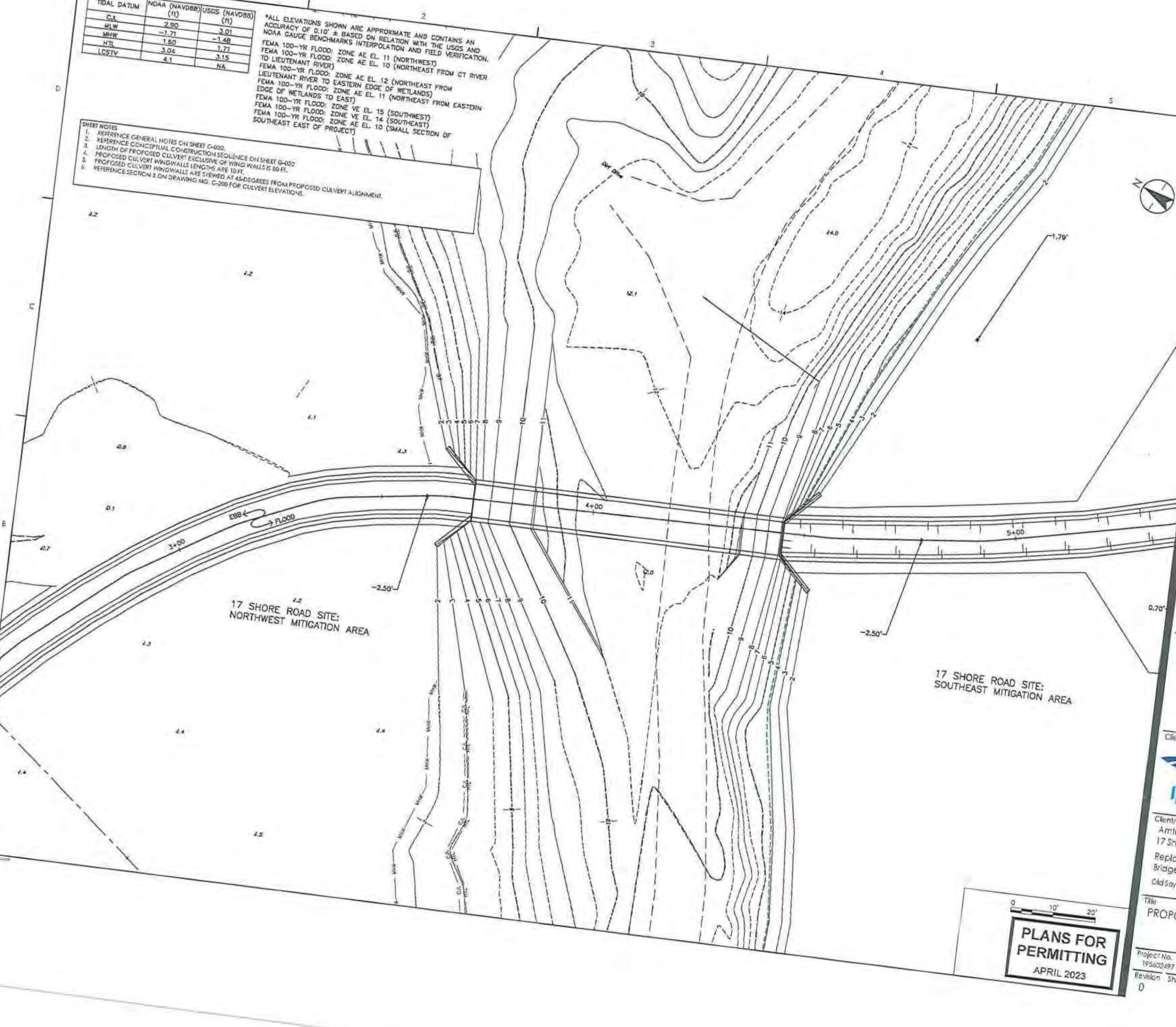
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

SHEET NOTES
1. REFERENCE GENERAL NOTES ON SHEET G-002.
2. REFERENCE CONCEPTUAL CONSTRUCTION SEQUENCE ON SHEET G-002.
3. LENGTH OF PROPOSED CULVERT EXCLUSIVE OF WING WALLS IS 80 FT.
4. PROPOSED CULVERT WINGWALLS LENGTHS ARE 10 FT.
5. PROPOSED CULVERT WINGWALLS ARE SKEWED AT 45-DEGREES FROM PROPOSED CULVERT ALIGNMENT.
6. REFERENCE SECTION 3 ON DRAWING NO. C-200 FOR CULVERT ELEVATIONS.



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Revision

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17 Shore Road Mitigation Site

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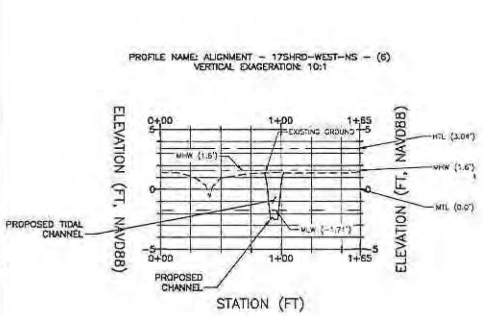
Old Saybrook and Old Lyme, Connecticut

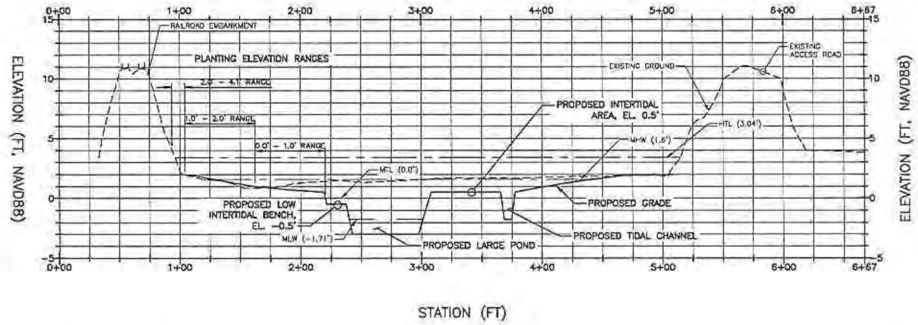
Title
PROPOSED CULVERT GRADING PLAN

Project No.	Scale
195602497	AS SHOWN

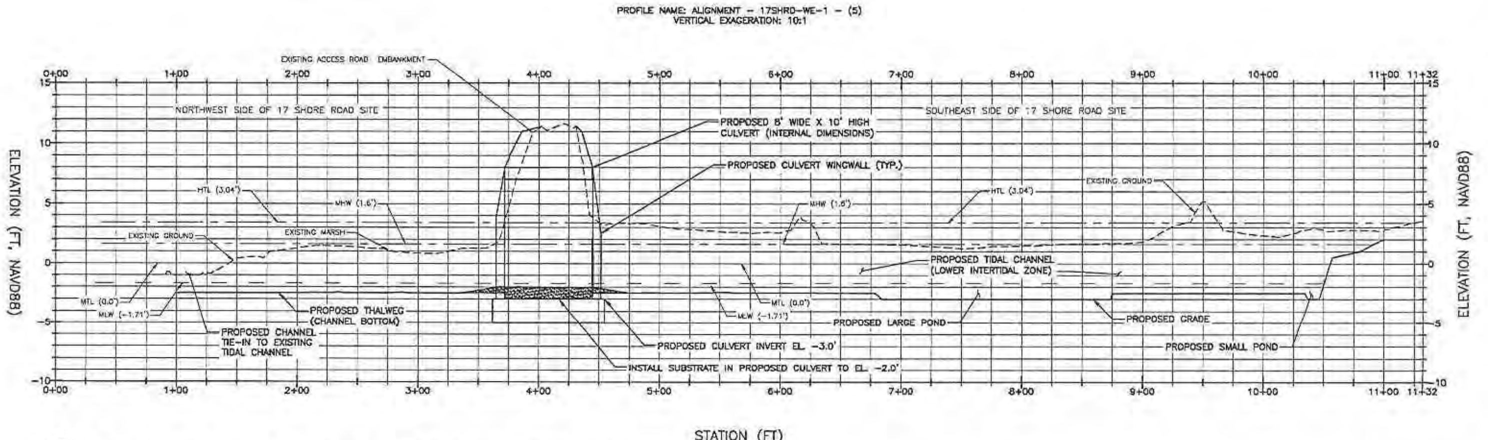
Revision	Sheet	Drawing No.
D	7 of 9	C-104



1 C-101 SECTION 1 – EXISTING AND PROPOSED TERRAIN – EAST
HORIZONTAL SCALE: 1"=50' / VERTICAL SCALE: 1"=5'



2 C-101 SECTION 2 – EXISTING AND PROPOSED TERRAIN – WEST
HORIZONTAL SCALE: 1"=50' / VERTICAL SCALE: 1"=5'



3 C-101 SECTION 3 – EXISTING AND PROPOSED TERRAIN – TIDAL CHANNEL – NORTH
HORIZONTAL SCALE: 1"=50' / VERTICAL SCALE: 1"=5'

PLANS FOR PERMITTING
APRIL 2023

Stantec

Stantec Consulting Services Inc.
136 West Street, Suite 203
Northampton, MA 01060 U.S.A.
Tel. 413.387.4776
www.stantec.com

Consultant

Notes

1. EXISTING CONDITIONS PLAN DEVELOPED USING INFORMATION IN AUTOCAD FILE "2017-272 C3D SURVEY-CURRENT(2022)-Merged.dwg" BY MCA.
2. HORIZONTAL DATUM IS IN REFERENCE TO CONNECTICUT STATE PLANE MAINLAND NORTH AMERICAN DATUM 1983 (NAD83).
3. REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

Revision

Issued

Permit/Seal

Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site

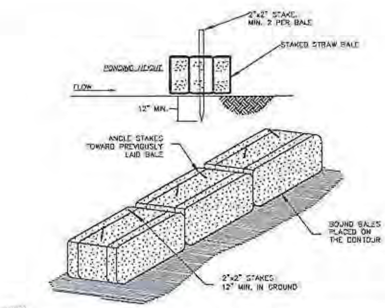
Replacement of Amtrak Connecticut River Bridge (MB 106.89)

Old Saybrook and Old Lyme, Connecticut

Title
SECTIONS AND PROFILES

Project No.	Scale
195602497	AS SHOWN

Revision	Sheet	Drawing No.
0	8 of 9	C-200



NOTES:

1. "STAKED EROSION CONTROL BARRIER: STRAW BALES" SHALL BE CONSTRUCTED WITH STRAW BALES OR BALES SHALL BE CERTIFIED FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.

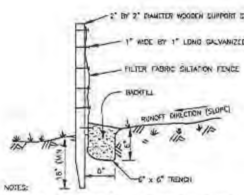
2. TO THE EXTENT PRACTICABLE, BALES SHALL BE PLACED ALONG THE SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

3. EACH STRAW BALE SHALL BE STAKED WITH AT LEAST 2 STAKES. BUTT BALES TOGETHER TO CREATE A TIGHT FIT. IN THAT CONDITIONS PREVENTING A TIGHT FIT BETWEEN BALES, OR BETWEEN BALES AND THE GROUND, ARE ENCOUNTERED (E.G., EXCESSIVE ROOTS, BEDROCK, OR FROZEN GROUND) THE CONTRACTOR SHALL UTILIZE ALTERNATIVE EROSION AND SEDIMENT CONTROL METHODS (E.G., FILTER BERM; SEE DETAIL, THIS SHEET).

4. STRAW BALES SHALL BE REMOVED AND REPLACED WHEN CLOGGED WITH SOIL PARTICLES OR AS DIRECTED BY THE ENGINEER.

5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN STORAGE HEIGHT HAS BEEN REDUCED TO 9 INCHES. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT IS NOT WITHIN JURISDICTIONAL RESOURCE AREA, WILL NOT CONTRIBUTE SEDIMENT OFF-SITE, AND CAN BE PERMANENTLY STABILIZED.

STAKED EROSION CONTROL BARRIER: STRAW BALE
NOT TO SCALE



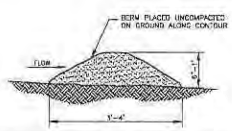
NOTES:

1. FENCE SHALL EXTEND 24" HIGH (MINIMUM) ABOVE GROUND.

2. EXTEND FILTER FABRIC A MINIMUM OF 6" INTO TRENCH AND BACKFILL TRENCH.

3. SILT FENCE MATERIAL SHALL BE ATTACHED TO THE SUPPORT STAKES WITH A MINIMUM OF SIX 1" WIDE BY 1" LONG GALVANIZED STAPLES.

STAKED EROSION CONTROL BARRIER: SILT FENCE
NOT TO SCALE



NOTES:

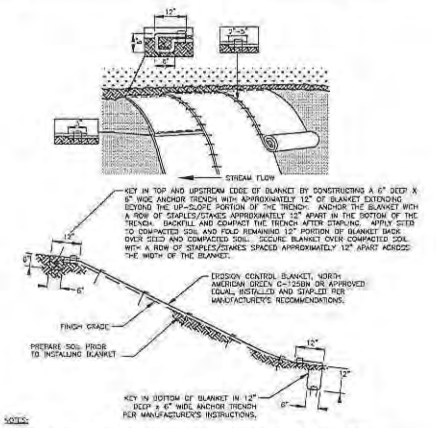
1. FILTER BERM SHALL BE PLACED ALONG SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

2. BERM MATERIAL SHALL BE BARK MULCH, STUMP GRINDINGS, OR OTHER APPROVED, BIODEGRADABLE MATERIAL, FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.

3. BERM MATERIALS SHALL BE REPLACED AND/OR REPLENISHED AS REQUIRED TO MAINTAIN FUNCTIONALITY OF FILTER BERM.

4. FILTER BERM SHALL NOT BE USED ADJACENT TO STREAMS OR STREAMBANKS. CONTRACTOR SHALL USE AN ALTERNATE EROSION CONTROL BARRIER (E.G., STAKED BALES OR STRAW WATTLE) WHEN EROSION CONTROL BARRIER IS REQUIRED IN THESE LOCATIONS.

FILTER BERM
NOT TO SCALE



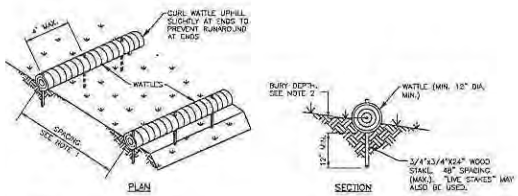
NOTES:

1. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN C-125BN OR APPROVED EQUAL.

2. EROSION CONTROL BLANKET SHALL BE INSTALLED IN AREAS DISTURBED BY CONSTRUCTION WITH SLOPES ≥ 4:1 (H:V) ABOVE MAHW ELEV. EXCEPT AS NOTED.

3. WHEN INSTALLING ADJACENT TO STREAM CHANNELS, BEGIN INSTALLATION AT DOWNSTREAM LIMIT AND WORK UPSTREAM SUCH THAT VERTICAL SEAM OVERLAPS ARE SHINGLED APPROPRIATELY IN RELATION TO STREAM FLOW DIRECTION.

EROSION CONTROL BLANKET
NOT TO SCALE



NOTES:

1. WATTLE SPACING:
   1:1 SLOPES = 10 FEET APART
   2:1 SLOPES = 20 FEET APART
   3:1 SLOPES = 30 FEET APART
   4:1 SLOPES = 40 FEET APART

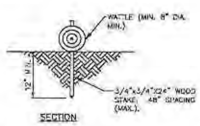
2. INSTALL WATTLE IN TRENCH DUG 2 TO 3 INCHES DEEP. COMPACT SOIL EXCAVATED FROM TRENCH AT UPSLOPE SIDE OF WATTLE. BACKFILL TRENCH AND RECOMPACT/TAMP SOIL WHEN ROLLS ARE REMOVED.

3. INSTALL WATTLES ALONG THE CONTOUR.

4. WHEN INSTALLING WATTLES END TO END, ENSURE THAT ENDS TIGHTLY ABUT.

6. FOR SLOPE GREATER THAN 5:1 WATTLE SHALL BE MIN. 20 INCHES IN DIAMETER. SMALLER-DIAMETER WATTLES MAY BE STACKED TO ACHIEVE SIMILAR LEVEL OF PROTECTION.

STAKED EROSION CONTROL BARRIER: STRAW WATTLE ON SLOPE
NOT TO SCALE



NOTES:

1. INSTALL WATTLE ON GROUND.

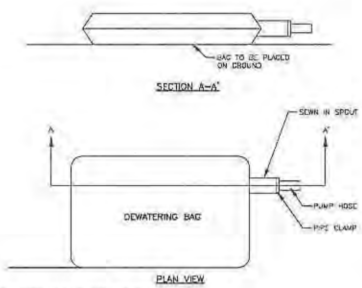
2. INSTALL WATTLES ALONG CONTOUR.

3. WHEN INSTALLING WATTLES END TO END, ENSURE THAT ENDS TIGHTLY ABUT.

STAKED EROSION CONTROL BARRIER: STRAW WATTLE ON SHALLOW GRADE
NOT TO SCALE

General Notes

1. THIS PLAN IS TO BE USED AS A GUIDELINE ONLY. ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MAY BE DICTATED BY FIELD CONDITIONS, PERMIT CONDITIONS, ENVIRONMENTAL REGULATORS, AND/OR THE ENGINEER, AND SHALL BE INSTALLED AT THE CONTRACTOR'S EXPENSE. OTHER ESC MEASURES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL. IN ADDITION TO ESC MEASURES SHOWN ON THE PLANS, ESC MEASURES SHALL BE UTILIZED AT THE BASE OF ALL TEMPORARY SOIL STOCKPILES.
2. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND PERMIT CONDITIONS.
3. ESC MEASURES SHALL BE INSTALLED PRIOR TO THE ONSET OF OTHER CONSTRUCTION ACTIVITIES AND SHALL BE ADEQUATE TO PREVENT EROSION AND SEDIMENT TRANSPORT BEYOND THE LIMITS OF WORK. ESC MEASURES SHALL BE INSPECTED, REPAIRED, AND MAINTAINED AS NECESSARY TO COMPLY WITH APPLICABLE REGULATIONS AND PROJECT PERMIT CONDITIONS.
4. THE CONTRACTOR SHALL STORE ON SITE ALL MATERIALS NECESSARY TO MAKE REPAIRS TO ALL ESC MEASURES. REPAIRS AND MAINTENANCE OF ESC MEASURES SHALL BE MADE IMMEDIATELY FOLLOWING IDENTIFICATION OF DEFICIENCIES AND AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES AT LOCATIONS DEPICTED ON THE PLANS AND AT ANY ALTERNATE APPROVED LOCATIONS USED TO ACCESS THE WORK AREA . ALTERNATE LOCATIONS MUST BE APPROVED BY THE OWNER PRIOR TO USE BY THE CONTRACTOR.
6. REFERENCE '2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL' AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, OR SUBSEQUENT VERSIONS.
7. WATTLES MUST CONSIST OF BIODEGRADABLE FABRIC OR MESH AND NOT INCLUDE PLASTIC OR MONOFILAMENT NETTING TO REDUCE POTENTIAL WILDLIFE ENTANGLEMENT.



DEWATERING BAG STRUCTURE
NOT TO SCALE

PLANS FOR PERMITTING
APRIL 2023

Stantec

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www.stantec.com

Consultant

Notes

Revision | By | Appd. | YYYY.MM.DD

Issued | By | Appd. | YYYY.MM.DD

Permit/Seal

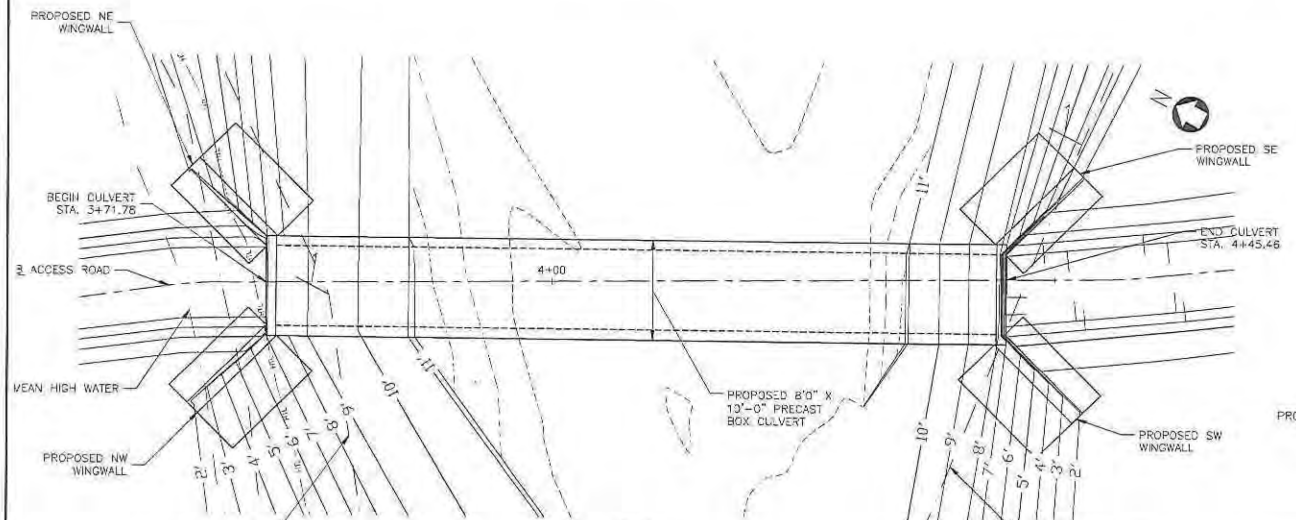
Client/Project Logo

AMTRAK
H&H

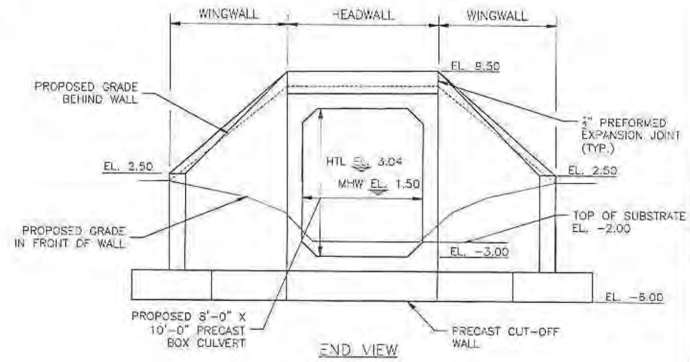
Client/Project
Amtrak, Hardesty & Hanover
17 Shore Road Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MP 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
EROSION AND SEDIMENT CONTROL NOTES & DETAILS

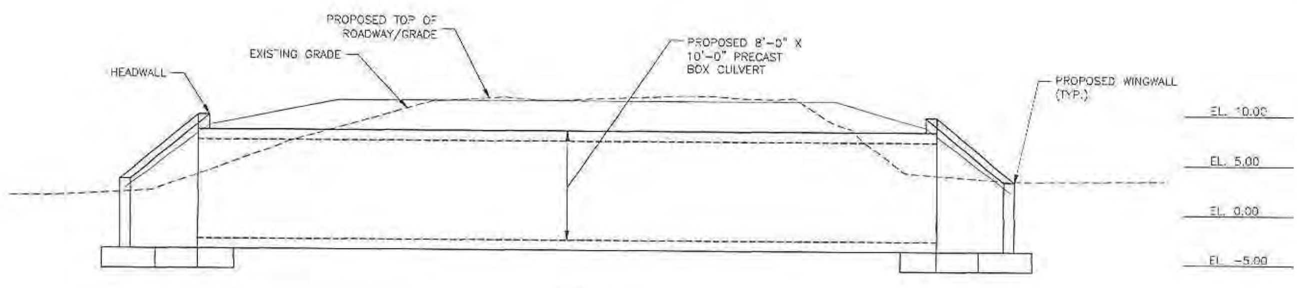
Project No. 195602497
Scale AS SHOWN
Revision 0
Sheet 9 of 9
Drawing No. C-300



PLAN
SCALE 2" = 1'-0"



END VIEW
SCALE 3" = 1'-0"



ELEVATION
SCALE 2" = 1'-0"

30% PERMIT SET-NOT FOR CONSTRUCTION

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036

WSP
1700 Market St. Suite 1050
Philadelphia, PA 19103

OLD SAYBROOK — CONNECTICUT

REPLACEMENT OF MB 106.89
OVER CONNECTICUT RIVER

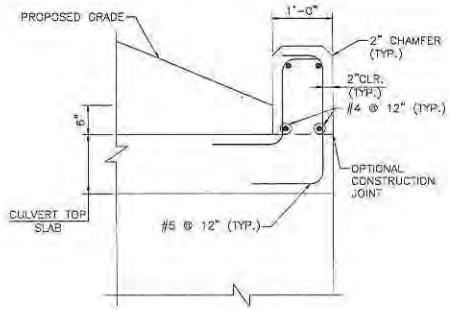
17 SHORE ROAD – ACCESS ROAD CULVERT
GENERAL PLAN, ELEVATION & SECTION

Designed JV	Drawn CC	Checked BTS	Date 4/6/23

Project Code	XXX XXX
WBS	000000
Sheet No.	OF 000
Drg. No.	

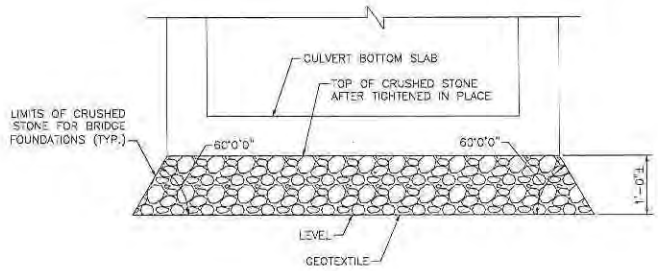
NOTES:

1. SUBSTRUCTURE TYPE AND DEPTH OF FOUNDATION MATERIAL SUBJECT TO CHANGE FOLLOWING GEOTECHNICAL EXPLORATION AND ANALYSIS.



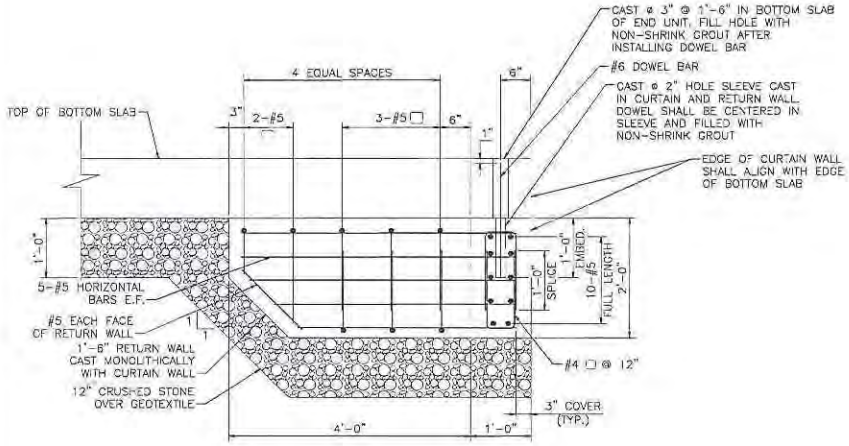
HEADWALL DETAIL

SCALE: 1" = 1'-0"



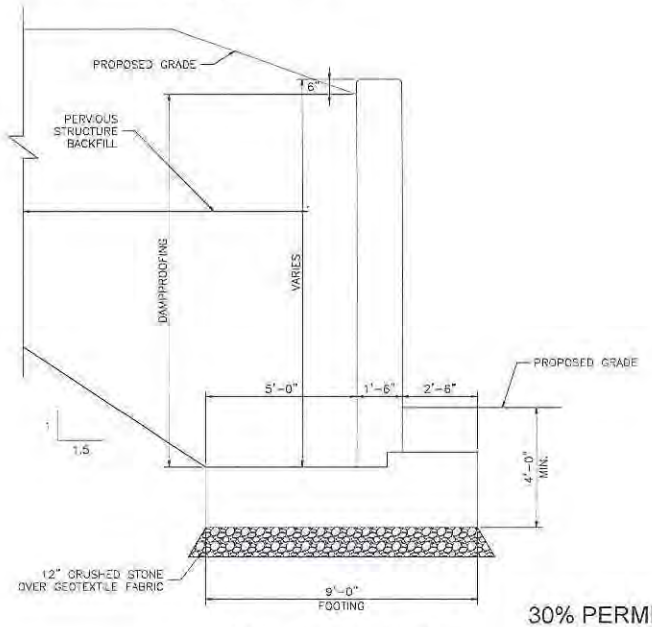
LIMITS OF CRUSHED STONE

NOT TO SCALE



CUT-OFF AND RETURN WALL SECTION

SCALE: 1" = 1'-0"



TYPICAL WINGWALL SECTION

SCALE: 1/2" = 1'-0"

30% PERMIT SET-NOT FOR CONSTRUCTION

No.	Revisions	Date	By

Amtrak®

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date

HARDESTY & HANOVER, LLC
ENGINEERING
1501 Broadway New York, NY 10036
1700 Market St. Suite 1050 Philadelphia, PA 19103

O.D SAYBROOK CONNECTICUT

REPLACEMENT OF MB 106.89 OVER CONNECTICUT RIVER

17 SHORE ROAD - ACCESS ROAD CULVERT DETAILS

Designed JV | Drawn CC | Checked BCB | Date 4/8/13

Project Code	XXXXXX
WBS	000000
Sheet No.	OF 000
Dwg No.	

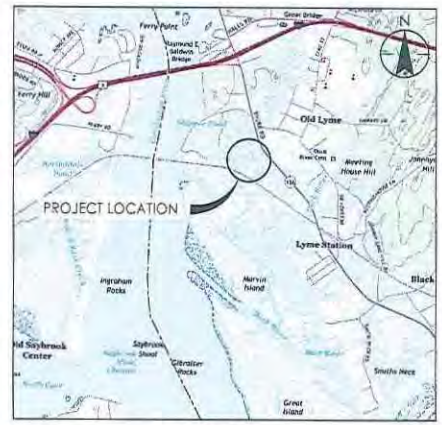
Stantec

AMTRAK

Replacement of Amtrak Connecticut River Bridge (MP 106.89) Tidal Marsh Mitigation Design 3.25-Acre Site

Old Lyme and Old Saybrook, CT

LOCATION MAP



VICINITY MAP
1"=2000'

INDEX OF SHEETS

DRAWING NO.	TITLE
	COVER SHEET
G-002	GENERAL NOTES AND LEGEND
C-100	EXISTING CONDITIONS PLAN
C-101	PROPOSED CONDITIONS PLAN
C-102	CONSTRUCTION ACCESS, SITE PREPARATION AND STAGING/LAYDOWN PLAN
C-200	SECTIONS AND SECTION DETAILS
C-300	EROSION AND SEDIMENT CONTROL NOTES & DETAILS

2023.04.07
PROJECT NUMBER: 195602497

PLANS FOR PERMITTING
APRIL 2023

DIG SAFE NOTE:
UTILITIES ARE PLOTTED FROM FIELD LOCATION AND SHOULD BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST. CONTRACTORS MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO, CALL THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER AT 1 (800) 922-4455 OR 811
WEBSITE: WWW.CBYD.COM

H&H
Hardesty & Hanover, LLC
850 Bear Tavern Road, Suite 206
West Trenton, NJ

PROJECT DESCRIPTION

THE OBJECTIVE OF THE 3.25-ACRE SITE MITIGATION DESIGN IS TO RESTORE NATURAL RESOURCES ON THE 3.25-ACRE SITE AS MITIGATION FOR IMPACTS AS PART OF THE AMTRAK CONNECTICUT RIVER BRIDGE REPLACEMENT PROJECT. THE GENERAL SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES, ESTABLISHING CONSTRUCTION ACCESS, PREPARATION AND CONSTRUCTION OF THE TRANSPLANT AREA, AND PLUGGING OF THREE REMNANT MOSQUITO CONTROL DITCHES.

FISHERIES/WILDLIFE HABITAT NOTES

1. ALL ON-SITE CONSTRUCTION STAFF WILL ATTEND TRAINING BY AN QUALIFIED ENVIRONMENTAL SCIENTIST AND RECEIVE A COPY OF FINAL WILDLIFE PROTECTION PLAN PRIOR TO BEGINNING WORK ON SITE.
2. A QUALIFIED ENVIRONMENT SCIENTIST WILL BE PRESENT WHEN WORK IS BEING CONDUCTED.
3. NOISE-GENERATING CONSTRUCTION ACTIVITIES MUST BEGIN PRIOR TO MAY 1 AND CONTINUE WITHOUT PROLONGED INTERRUPTION THROUGH AUGUST 31. IF A SIGNIFICANT NOISE-GENERATING CONSTRUCTION ACTIVITY DOES NOT START PRIOR TO MAY 1, THEN A TIME OF YEAR RESTRICTION WILL APPLY, AND WORK MAY NOT BEGIN UNTIL SEPTEMBER 1 WITHOUT THE APPROVAL OF CTDEEP TO PROTECT LEAST BITTERN AND SALTMARSH SHARP-TAILED SPARROW.
4. IF BALD EAGLE NESTING ACTIVITY IS OBSERVED WITHIN 600 FT FROM CONSTRUCTION ACTIVITY ALL CONSTRUCTION MUST STOP UNTIL NESTING ACTIVITY HAS CEASED.
5. CONSTRUCTION WITHIN TIDAL CREEKS OR SIMILAR CHANNELIZED AQUATIC HABITAT IS PROHIBITED FROM NOVEMBER 1- MARCH 31 TO PROTECT OVER-WINTERING STATE-LISTED TURTLES.
6. WORK LIMITS MUST BE ENCLOSED BY A WILDLIFE BARRIER SYSTEM BETWEEN APRIL 1 AND OCTOBER 31 (E.G., SILT FENCE OR ELEVATED WORK SURFACES) TO PREVENT ENTRY BY STATE-LISTED TURTLES. THE ISOLATED WORK LIMITS ARE TO BE INSPECTED DAILY BY TRAINED CONSTRUCTION STAFF OR ENVIRONMENTAL MONITORS FOR THE PRESENCE OF STATE-LISTED TURTLES PRIOR TO THE START OF WORK; TURTLES ARE TO BE RELOCATED IF OBSERVED IN WORK LIMITS AND REPORTED TO THE ON-SITE ENVIRONMENTAL MONITOR AND AMTRAK REPRESENTATIVE; DEFICIENCIES IN THE WILDLIFE BARRIER ARE TO BE PROMPTLY REPAIRED.
7. SPEED LIMIT ALONG ACCESS ROADS IS NOT TO EXCEED 10 MPH.
8. REFUELING OR HANDLING OTHER BIO-TOXIC LIQUIDS IS PROHIBITED IN THE VICINITY OF LOW MARSH, RIVERBANKS, TIDAL CREEKS, OR DITCHES.
9. INACTIVE OSPREY NESTS MAY BE REMOVED FROM SEPTEMBER 1 - MARCH 1; CTDEEP IS TO BE NOTIFIED PRIOR TO REMOVING ANY OSPREY NEST.
10. TREE CLEARING IS PROHIBITED FROM JUNE 1 - JULY 31 TO PROTECT NORTHERN LONG-EARED BATS.
11. APPROPRIATE SOIL EROSION, SEDIMENT, AND TURBIDITY CONTROLS WILL BE USED AND MAINTAINED DURING CONSTRUCTION; AND AREAS CAPABLE OF PRODUCING GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION WILL BE DONE DURING PERIODS OF LOW- OR NO-FLOW TO PROTECT FISHERY RESOURCES.
12. WORK THAT PRODUCES GREATER THAN MINIMAL TURBIDITY OR SEDIMENTATION (DONE OUTSIDE OF TURBIDITY CURTAINS OR COFFERDAMS) IS PROHIBITED FROM FEBRUARY 1 - JUNE 30 TO PROTECT FISHERY RESOURCES.
13. EROSION AND SEDIMENT CONTROL MATERIALS CANNOT CONTAIN PLASTIC OR MONOFILAMENT MESHES TO REDUCE POTENTIAL WILDLIFE ENTANGLEMENT.

GENERAL NOTES

1. INFORMATION DEPICTED ON THESE PLANS DOES NOT CONSTITUTE AN AGREEMENT TO ACCESS OR WORK ON PROPERTIES DEPICTED ON THESE PLANS. ACCESS PERMISSION IS THE RESPONSIBILITY OF THE PROJECT OWNER AND MUST BE CONFIRMED BY THE CONTRACTOR.
2. EXISTING UTILITY EASEMENTS ARE NOT DEPICTED.
3. TOPOGRAPHIC AND SITE FEATURES ARE BASED UPON SURVEYS CONDUCTED BY MARTINEZ COUCH & ASSOCIATES, LLC.
4. ALL CONTOURS AND ELEVATIONS ARE PRESENTED IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
5. NORTH ARROW, BEARINGS, AND COORDINATES ARE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD 1983) CONNECTICUT STATE PLANE COORDINATE SYSTEM FEET UNITS.
6. EXISTING CONTOURS ARE COMPUTER-GENERATED INTERPOLATIONS, EDITED TO GENERALLY CONFORM TO FIELD OBSERVATIONS.
7. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES IS BASED UPON AVAILABLE INFORMATION, MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHALL BE CONFIRMED PRIOR TO BEGINNING OF CONSTRUCTION. CALL THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
8. STANTEC ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA THAT HAVE BEEN SUPPLIED BY OTHERS.
9. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS AND GRADES IN THE FIELD PRIOR TO CONSTRUCTION.
10. IF CONTRACTOR OBSERVES FIELD CONDITIONS WHICH VARY SIGNIFICANTLY FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR RESOLUTION OF THE CONFLICTING INFORMATION.
11. EXCEPT WHERE SPECIFICALLY NOTED, THE LOCATIONS AND INFORMATION ABOUT UNDERGROUND PIPES, UTILITIES OR OTHER STRUCTURES ARE COMPILED FROM AVAILABLE RECORD DATA AND VISIBLE FIELD EVIDENCE AND ARE NOT REPRESENTED AS BEING EXACT OR COMPLETE.
12. PRIOR TO MOBILIZING TO THE PROJECT SITE, CONTRACTOR SHALL GIVE ADEQUATE ADVANCE NOTICE TO THE CONNECTICUT "CALL BEFORE YOU DIG" CENTER, THE TOWN OF OLD LYME, AND PRIVATE UTILITY COMPANIES TO ALLOW FOR FIELD LOCATION OF FACILITIES IN THE VICINITY OF THE PROJECT.
13. COORDINATE WITH AMTRAK AND OBTAIN APPROVALS FOR ACCESS WITHIN RAILROAD RIGHT-OF-WAY.
14. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES AS NECESSARY TO ADEQUATELY PROTECT AND PRESERVE BURIED UTILITIES AND INFRASTRUCTURE WITHIN AND ADJACENT TO PROJECT WORK AREAS.
15. CONTRACTOR IS RESPONSIBLE FOR EVALUATING THE CONDITION OF EXISTING ROADS AND CULVERTS AND INSTALLATION OF TEMPORARY MEASURES FOR USE OF ROADS AND CULVERTS DURING CONSTRUCTION.
16. THROUGHOUT THE DURATION OF THE WORK, THE CONTRACTOR SHALL PROTECT AND PRESERVE UTILITIES AND ALL RELATED INFRASTRUCTURE AND APPURTENANCES WITHIN THE VICINITY OF WORK, ACCESS/EGRESS, AND STAGING AND STORAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPAIRING UTILITIES AND RELATED INFRASTRUCTURE AND APPURTENANCES IF DAMAGED AS A PART OF CONSTRUCTION OF THIS PROJECT.
17. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DAMAGE TO EXISTING PIPES, UTILITIES, OR STRUCTURES TO THE OWNER AND ENGINEER, AND OBTAIN DIRECTIONS AS TO REPAIR, REPLACEMENT OR ABANDONMENT.
18. REFERENCE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, OR SUBSEQUENT VERSIONS.
19. THE CONTRACTOR SHALL RECORD THE MEASUREMENTS, DEPTHS, DIMENSIONS, MATERIALS, FIELD CONDITIONS, AND OTHER PERTINENT DATA ABOUT ALL PIPES, UTILITIES, AND STRUCTURES ENCOUNTERED DURING THE WORK, BOTH EXISTING AND CONSTRUCTED. CONTRACTOR SHALL SUBMIT RECORD DRAWINGS WITH THIS INFORMATION TO THE OWNER AND ENGINEER PRIOR TO COMPLETION OF THE WORK.
20. CONTRACTOR IS RESPONSIBLE FOR WATER MANAGEMENT DURING CONSTRUCTION INCLUDING PREPARATION OF A WATER MANAGEMENT PLAN TO BE APPROVED BY THE ENGINEER AND OWNER, WHICH SHALL INCLUDE AN OUTLINE OF PROTOCOLS AND PROCEDURES ASSOCIATED WITH HIGH-WATER CONDITIONS IN THE LIEUTENANT RIVER. THE OWNER AND ENGINEER WILL NOT BE HELD RESPONSIBLE FOR DAMAGES INCURRED TO CONTRACTOR'S EQUIPMENT OR CONSTRUCTION PROJECT MATERIALS FROM HIGH-WATER CONDITIONS.
21. CONSTRUCTION EQUIPMENT CANNOT BE OPERATED ON THE MARSH SURFACE EXCEPT AS APPROVED IN PROJECT PERMITS. CONSTRUCTION EQUIPMENT THAT IS APPROVED FOR OPERATION ON THE MARSH SURFACE CANNOT BE OPERATED WHEN THE MARSH SURFACE IS TIDALLY INUNDATED.
22. DURING ALL NON-WORK PERIODS EXCEEDING A DURATION OF 24 HOURS, CONTRACTOR'S EQUIPMENT SHALL BE DEMOBILIZED AS SPECIFIED IN PROJECT PERMITS.
23. ALL TEMPORARY AND PERMANENT MATERIALS FOR CONSTRUCTION SHALL BE CLEAN AND FREE OF DEBRIS.
24. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN EQUIPMENT PRIOR TO MOBILIZATION TO THE PROJECT SITE TO AVOID INTRODUCTION OF INVASIVE PLANT PROPAGULES TO THE PROJECT SITE.
25. CONTRACTOR'S EQUIPMENT SHALL BE SOUND, CLEAN, AND LEAK FREE PRIOR TO MOBILIZING TO THE PROJECT SITE AND SHALL BE MAINTAINED IN LEAK-FREE CONDITION WHILE ON SITE.
26. A COMPLETE SPILL KIT SHALL BE MAINTAINED AT THE PROJECT AREA. ALL CONSTRUCTION EQUIPMENT SHALL HAVE A MOUNTED FIRE EXTINGUISHER.
27. PERIMETER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING FURTHER WORK AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF WORK.
28. ON-SITE REFUELING SHALL OCCUR ONLY AS ALLOWED BY PROJECT PERMITS. A DRIP PAN OR ABSORBENT PADS SHALL BE USED DURING ALL DISPENSING OPERATIONS.
29. ALL MATERIAL REMOVED FROM THE PROJECT SITE SHALL BE DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.
30. WORK SHALL COMPLY WITH ALL APPLICABLE ENVIRONMENTAL REGULATIONS AND PROJECT PERMIT CONDITIONS.

CONCEPTUAL CONSTRUCTION SEQUENCE

1. PRE-MOBILIZATION
   - 1.1. DEVELOP WORK PLANS
     - 1.1.1. REVIEW DESIGN
     - 1.1.2. REVIEW PERMITS
     - 1.1.3. DEVELOP WORK PLAN
   - 1.2. A. CONDUCT HERBICIDE CONTROL OF COMMON REED (PHRAGMITES AUSTRALIS) IN TRANSPLANT AREA AT LEAST 6-8 WEEKS PRIOR TO EQUIPMENT MOBILIZATION
   - 1.3. MOBILIZE WORK BOATS AND BARGES TO OFFSITE STAGING AREA(S)
2. FIELD DEMARCATION OF RESOURCES AND WORK AREAS
   - 2.1. IDENTIFY AND DEMARK SENSITIVE PLANT COMMUNITIES TO BE AVOIDED
   - 2.2. DEMARK BOUNDARIES OF PERMANENT WORK AREAS
     - 2.2.1. TRANSPLANT AREA
     - 2.2.2. DITCH PLUGGING AREAS
   - 2.3. DEMARK TEMPORARY WORK AREAS
     - 2.3.1. PRIMARY LANDING
     - 2.3.2. ACCESS ROUTES
     - 2.3.3. IF REQUIRED, INSTALL BUOYS TO DEMARK PRIMARY AND SECONDARY BARGE MOORING AREAS AND THE PRIMARY BOAT MOORING AREAS.
3. MOBILIZATION
   - 3.1. BOAT(S) AND BARGE(S) MOBILIZED ADJACENT TO PRIMARY MOORING AREA
   - 3.2. INSTALL TURTLE EXCLUSIONARY BARRIER MEASURES AND CONDUCT WORKSITE SWEEP FOR TURTLES
   - 3.3. INSTALL AND MAINTAIN OIL BOOMS
   - 3.4. ESTABLISH LANDING AREA AND ASSOCIATED EROSION AND SEDIMENT CONTROLS
   - 3.5. ESTABLISH TEMPORARY ACCESS ROUTES AND ASSOCIATED EROSION AND SEDIMENT CONTROLS
   - 3.6. ESTABLISH EROSION AND SEDIMENT CONTROLS ADJACENT TO PERMANENT WORK AREAS
4. CONSTRUCTION
   - 4.1. DAILY MOBILIZATION/DEMOBILIZATION OF CONSTRUCTION EQUIPMENT (ONSITE OR OFFSITE AS REQUIRED BY PROJECT PERMITS)
   - 4.2. CONDUCT PRE-CONSTRUCTION TURTLE SWEEP
   - 4.3. PLUG DITCHES
   - 4.4. PERFORM PRE-EXCAVATION IN TRANSPLANT AREA
   - 4.5. COORDINATE TRANSPLANT SITE PREPARATION WITH PLANT SALVAGE AND TRANSPORT
   - 4.6. STOCKPILE AND OFFSITE TRANSPORT OF EXCAVATED MATERIAL FROM TRANSPLANT AREA (ONGOING)
   - 4.7. INSTALLATION OF TRANSPLANT STOCK (ONGOING)
   - 4.8. MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS (ONGOING)
   - 4.9. COMPLETION OF PRIMARY CONSTRUCTION
   - 4.10. RECEIPT OF OWNER'S ACCEPTANCE OF PRIMARY CONSTRUCTION WORK
5. DEMOBILIZATION
   - 5.1. REMOVE TEMPORARY ACCESS ROUTES
   - 5.2. RESTORE IMPACTED AREAS ALONG TEMPORARY ACCESS ROUTES
   - 5.3. ESTABLISH LONGER-TERM WATTLES ADJACENT TO TRANSPLANT AREA (IF USED)
   - 5.4. REMOVE EROSION AND SEDIMENT CONTROLS ALONG TEMPORARY ACCESS ROUTES
   - 5.5. REMOVAL OF LANDING AREA
   - 5.6. REMOVE OIL BOOMS
   - 5.7. RESTORE IMPACTS IN LANDING AREA
   - 5.8. REMOVE TEMPORARY DEMARCATION BUOYS
   - 5.9. RECEIPT OF OWNER'S ACCEPTANCE PRIOR TO COMPLETION OF DEMOBILIZATION
6. MONITORING AND MAINTENANCE
   - 6.1. REFERENCE PROJECT CONSTRUCTION AGREEMENT AND PERMITS

Legend

Line label	Description
	EXISTING 5' MAJOR CONTOUR
	EXISTING 1' MINOR CONTOUR
	PROPOSED 5' MAJOR CONTOUR
	PROPOSED 1' MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIVER EDGE (APPROX.)
MLW	MEAN LOW WATER
MHW	MEAN HIGH WATER
CJL	COASTAL JURISDICTION LINE
HTL	HIGH TIDE LINE
FEMA 100	FEMA 100YR LINE
OH	EXISTING OVERHEAD UTILITY
C	EXISTING COMMUNICATION LINE
E	EXISTING ELECTRIC LINE
F/O	EXISTING FIBER OPTICS
X	EXISTING METAL FENCE
	EXISTING GRAVEL DRIVE
	EXISTING STONE WALL
	EXISTING DRAINAGE SWALE
	PROPOSED DRAINAGE SWALE
	LIMITS OF CONSTRUCTION
	CONSTRUCTION ACCESS ROUTE
	RESTORED CONSTRUCTION ACCESS ROAD AREAS
	SEDIMENT CONTROL BARRIER
	OIL BOOM
	PHASED FLOW DIVERSION
	SEDIMENT CONTROL BARRIER
	TEMPORARY STAKED TURBIDITY CURTAIN
	TEMPORARY COFFER DAM
	WETLAND FLAG
	LIMITS OF DISTURBANCE

PLANS FOR PERMITTING
APRIL 2023

Stantec

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136 West Street, Suite 203
Northampton, MA 01060 U.S.A.
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Notes

Revision | By | Appd. | YY.MM.DD

PLANS FOR PERMITTING | MPC | MWC | 23.03.07

Issued | By | Appd. | YY.MM.DD

| MPC | MPC/DAT | MPA | 2023.04.07
Dwn. | Dsgn. | Chkd. | YY.MM.DD

Permit/Seal

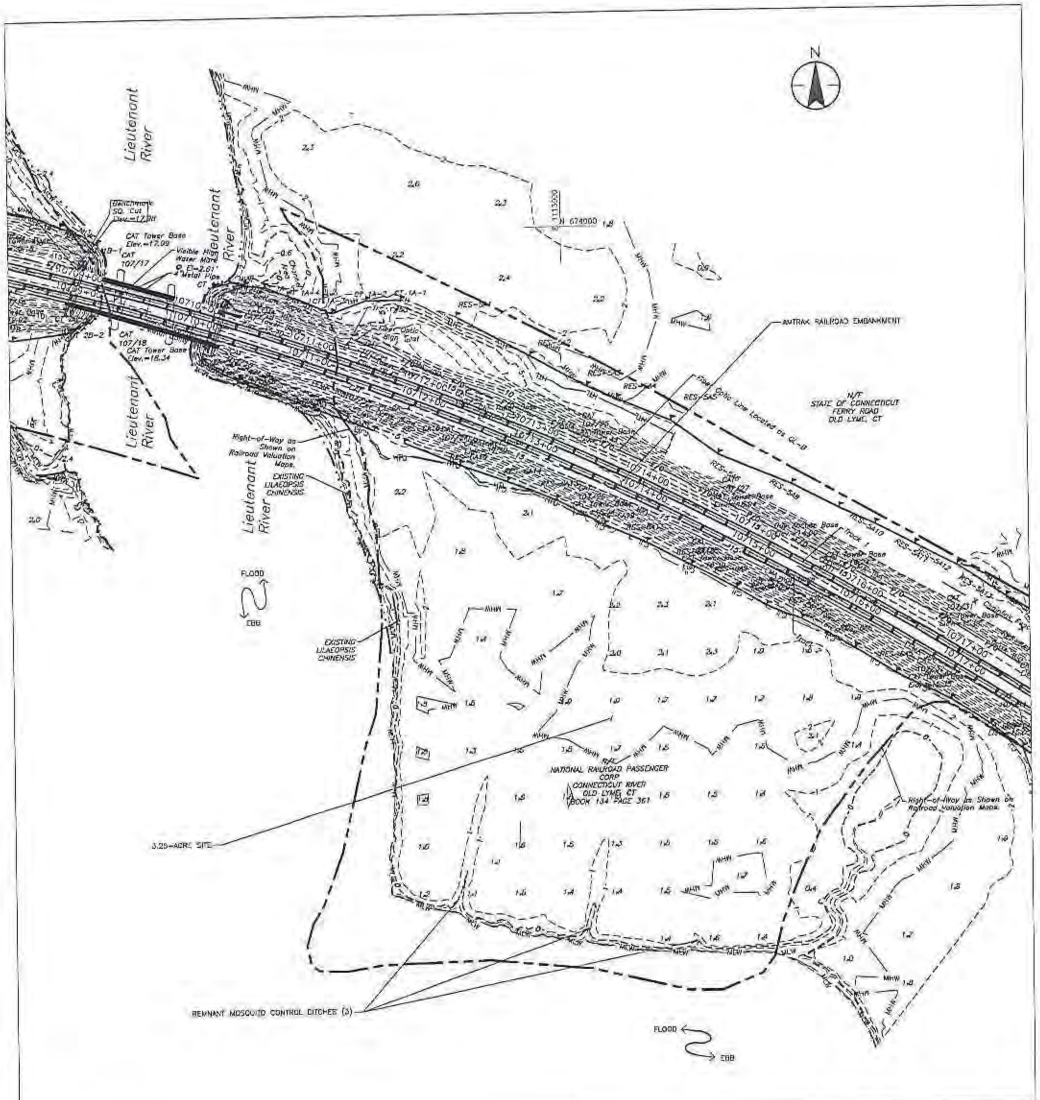
Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
GENERAL NOTES AND LEGEND

Project No. 195602497
Scale AS SHOWN
Revision 0
Sheet 2 of 7
Drawing No. G-002



TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.01
MLW	-1.71	-1.48
MHW	1.60	1.71
HTL	3.04	3.15
LGSTV	4.1	NA

*ALL ELEVATIONS SHOWN ARE APPROXIMATE AND CONTAINS AN ACCURACY OF 0.10' ± BASED ON RELATION WITH THE USGS AND NOAA GAUGE BENCHMARKS INTERPOLATION AND FIELD VERIFICATION.

FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHWEST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (NORTHEAST FROM CT RIVER TO LIEUTENANT RIVER)
FEMA 100-YR FLOOD: ZONE AE EL. 12 (NORTHEAST FROM LIEUTENANT RIVER TO EASTERN EDGE OF WETLANDS)
FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHEAST FROM EASTERN EDGE OF WETLANDS TO EAST)
FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

0 50' 100'

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APRIL 2023

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Notes

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3. REGULATORY LINES: CJL, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

Revision

Issued

Permit/Seal

Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site

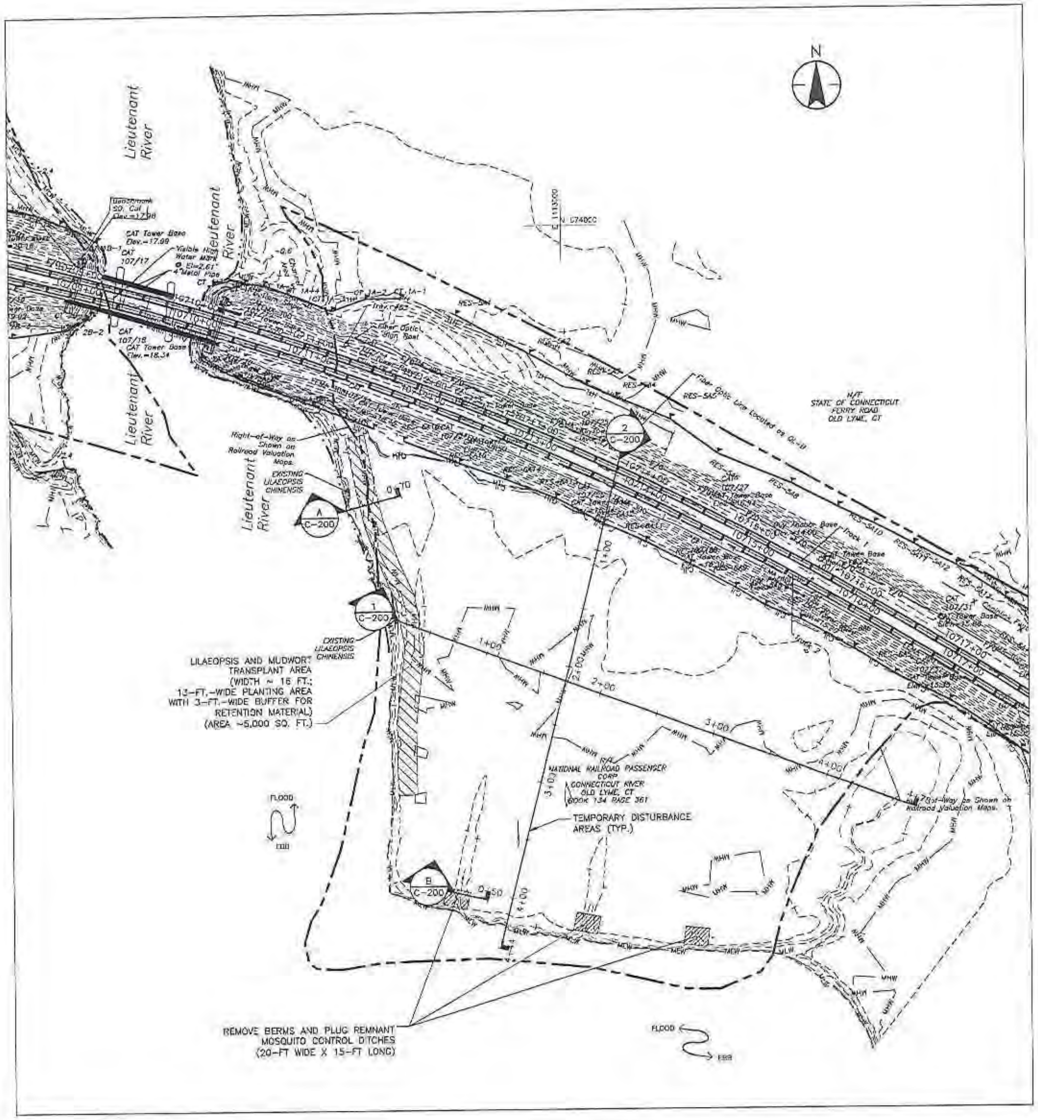
Replacement of Amtrak Connecticut River Bridge (MB 106.89)

Old Saybrook and Old Lyme, Connecticut

Title
EXISTING CONDITIONS PLAN

Project No.	Scale
195602497	AS SHOWN

Revision	Sheet	Drawing No.
0	2 of 7	C-100



TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.01
MLW	−1.71	−1.48
MHW	1.60	1.71
HT	3.04	3.15
LCSTV	4.1	NA

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FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

SHEET NOTES

1. TRANSPLANT AREA
   - 1.1. LILAEOPSIS AND MUDWORT TRANSPLANT AREA TO BE FIELD-LOCATED BY QUALIFIED PROFESSIONAL DESIGNATED IN PROJECT PERMITS.
   - 1.2. PREPARATION OF TRANSPLANT AREA WILL INCLUDE IDENTIFICATION OF EXISTING LILAEOPSIS AND AVOIDANCE OF IMPACTS TO EXISTING PLANTS.
   - 1.3. TRANSPLANT AREA WILL HOST SALVAGED LILAEOPSIS AND MUDWORT FROM BRIDGE WORK AREA.
   - 1.4. TARGET RANGE OF FINISHED GRADE ELEVATIONS FOR TRANSPLANT AREA IS 1.5 FT TO 1.8 FT.
   - 1.5. APPROXIMATE THICKNESS OF TRANSPLANT STOCK WITH SOIL IS 6 TO 8 INCHES.
   - 1.6. APPROXIMATE AVERAGE DEPTH OF EXCAVATION IN TRANSPLANT AREA IS 1 FT.
   - 1.7. ESTIMATED VOLUME OF MATERIAL TO BE EXCAVATED IN TRANSPLANT AREA IS 4,000 CUBIC FT (~150 CUBIC YARDS).
   - 1.8. THE ESTIMATED VOLUME OF THE TRANSPLANT STOCK AND SOIL IS 100 CUBIC YARDS BASED ON A TRANSPLANT SOIL THICKNESS OF 8 INCHES.
2. PLUGGING OF REMNANT MOSQUITO CONTROL DITCHES
   - 2.1. PLUGGING OF DITCHES WILL USE USE MATERIAL FROM ADJACENT BERMS OR SALVAGED MATERIAL FROM TRANSPLANTING ACTIVITIES ON THIS SITE PROVIDED THAT SUCH FILL IS FREE FROM VIABLE COMMON REED (PHRAGMITES AUSTRALIS) PLANTS OR ROOTS.
   - 2.2. PLACE FILL TO MATCH ADJACENT GRADES.
   - 2.3. ESTIMATED DISTURBANCE AREA FOR EACH DITCH-PLUGGING LOCATION IS 20-FT-WIDE CENTERED ON DITCH AND 15 FT (300 SQ. FT.) ALONG EACH DITCH. VOLUMES OF MATERIAL FOR DITCH PLUGGING WERE NOT ESTIMATED.

0 50' 100'

PLANS FOR PERMITTING
APRIL 2023

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Notes

1. EXISTING CONDITIONS PLAN DEVELOPED USING INFORMATION IN AUTOCAD FILE "2017-272 C3D SURVEY-CURRENT(2022)-Merged.dwg" BY MCA.
2. EXISTING CONDITIONS DATA WAS NOT VERIFIED BY STANTEC.
3. HORIZONTAL DATUM IS IN REFERENCE TO CONNECTICUT STATE PLANE MAINLAND NORTH AMERICAN DATUM 1983 (NAD83).
4. DEPICTED REGULATORY INFORMATION (CJL, MLW, MHW AND FEMA 100-YEAR) ARE BASED ON INFORMATION BY MCA AND WERE NOT VERIFIED BY STANTEC.

Revision

Issued

Permit/Seal

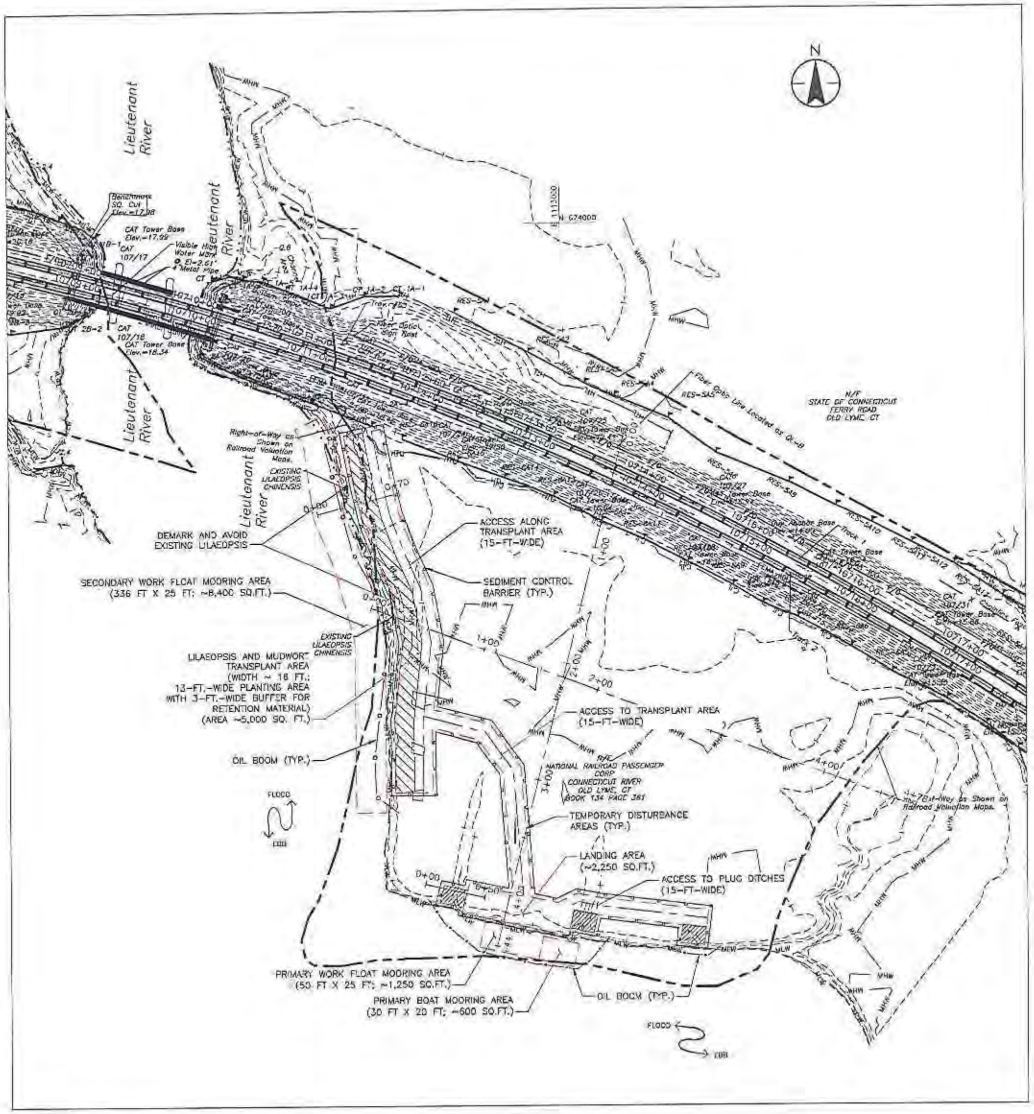
Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
PROPOSED CONDITIONS PLAN

Project No. 195602497
Scale 1" = 50 FT
Revision 0
Sheet 4 of 7
Drawing No. C-101



TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.0*
MLW	-1.71	-1.48
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HT	3.04	3.15
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FEMA 100-YR FLOOD: ZONE AE EL. 11 (NORTHWEST)
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FEMA 100-YR FLOOD: ZONE VE EL. 15 (SOUTHWEST)
FEMA 100-YR FLOOD: ZONE VE EL. 14 (SOUTHEAST)
FEMA 100-YR FLOOD: ZONE AE EL. 10 (SMALL SECTION OF SOUTHEAST EAST OF PROJECT)

MITIGATION AREAS

1. ENTIRE PARCEL WILL HAVE COMMON REED CONTROL.
2. DISTURBANCE AREAS DO NOT INCLUDE AREAS FOR COMMON REED CONTROL
3. WETLAND CONVERSION AREAS
   - 3.1. INTERTIDAL TRANSPLANT AREA: 5,000 SQ. FT. (16-FT-WIDE X 640-FT-LONG)
   - 3.2. INTERTIDAL DITCH PLUGGING: THREE AREAS = 20 FT X 15 FT EACH = 900 SQ. FT.
4. TEMPORARY DISTURBANCE AREAS (ESTIMATED)
   - 4.1. INTERTIDAL AREAS: 11,450 SQ. FT.
   - 4.2. SUBTIDAL PRIMARY WORK FLOAT MOORING AREA: 1,250 SQ. FT.
   - 4.3. SUBTIDAL PRIMARY BOAT MOORING AREA: 600 SQ. FT.
   - 4.4. SUBTIDAL SECONDARY WORK FLOAT MOORING AREA: 8,400 SQ. FT.
5. TOTAL DISTURBANCE FOR MITIGATION ACTIVITIES (TEMPORARY + PERMANENT DISTURBANCE)
   - 5.1. INTERTIDAL AREA: 17,350 SQ. FT.
   - 5.2. SUBTIDAL AREA: 10,250 SQ. FT.

EROSION AND SEDIMENT CONTROL

1. THIS DRAWING PRESENTS TYPICAL EROSION AND SEDIMENT CONTROLS. CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL PROJECT PERMITS AND ASSOCIATED REQUIREMENTS.
5. SENSITIVE AREAS WILL BE DEMARKED PRIOR TO MOBILIZATION OF CONSTRUCTION EQUIPMENT TO THIS SITE.
6. LANDING AREA TO BE DEMARKED PRIOR TO MOBILIZATION TO THIS SITE.
7. LOCATIONS OF TEMPORARY ACCESS ROUTES ARE APPROXIMATE AND HAVE WIDTHS OF 15 FT. ACTUAL LAYOUT OF TEMPORARY ACCESS WILL BE DETERMINED IN THE FIELD.
8. DEMARCATION IS IDENTIFIED AS "SEDIMENT CONTROL (TYP.)". USE OF ORANGE BARRIER FENCE IN LIEU OF SEDIMENT CONTROL BARRIER MAY BE USED IF SPECIFICALLY IDENTIFIED IN PROJECT PERMITS.
9. INCREASES IN THE AREA OF TEMPORARY IMPACTS MUST BE APPROVED IN WRITING BY OWNER AND ENGINEER.
10. SEDIMENT CONTROL BARRIER IS INTENDED TO DEMARK WORK AREA, IS SET 3 FT FROM THE LIMIT OF DISTURBANCE AND IS NOT INCLUDED IN TEMPORARY WORK AREAS.
11. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROLS THAT ARE REQUIRED FOR CONFORMANCE WITH PROJECT PERMITS AND APPLICABLE LAWS, RULES AND REGULATIONS.

0 50' 100'

PLANS FOR PERMITTING
APRIL 2023

Stantec

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Notes

1. EXISTING CONDITIONS PLAN DEVELOPED USING INFORMATION IN AUTOCAD FILE "2017-272 C3D SURVEY-CURRENT(2022)-Merged.dwg" BY MCA.
2. EXISTING CONDITIONS DATA WAS NOT VERIFIED BY STANTEC.
3. HORIZONTAL DATUM IS IN REFERENCE TO CONNECTICUT STATE PLANE MAINLAND NORTH AMERICAN DATUM 1983 (NAD83).
4. DEPICTED REGULATORY INFORMATION (CJL, MLW, MHW AND FEMA 100-YEAR) ARE BASED ON INFORMATION BY MCA AND WERE NOT VERIFIED BY STANTEC.

Revision

Issued

Permit/Seal

Client/Project Logo

AMTRAK

H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site

Replacement of Amtrak Connecticut River Bridge (MB 106.89)

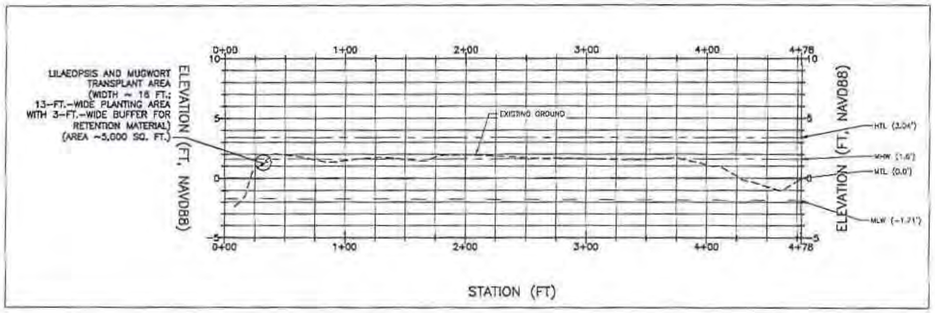
Old Saybrook and Old Lyme, Connecticut

Title
PROPOSED CONSTRUCTION ACCESS, SITE PREPARATION AND STAGING/LAYDOWN PLAN

Project No.	Scale
195602497	1"= 50 FT

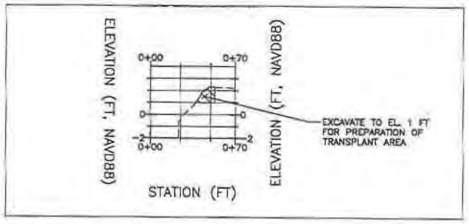
Revision	Sheet	Drawing No.
0	5 of 7	C-102

TIDAL DATUM	NOAA (NAVD88) (ft)	USGS (NAVD88) (ft)
CJL	2.90	3.01
MLW	-1.71	-1.48
MHW	1.60	1.71
HTL	3.04	3.15
LCSTV	4.1	NA



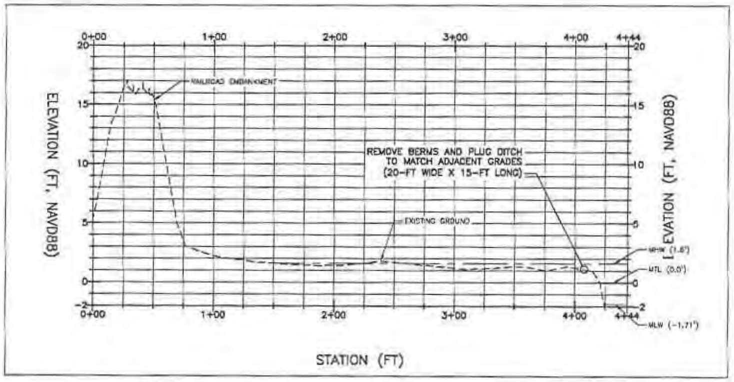
1 / C-101 SECTION – EXISTING TERRAIN – NORTH
VERTICAL = 1"=5' / HORIZONTAL = 1"=50'

NOTES:
1. REFERENCE SECTION DETAIL "B" (TRANSPLANT AREA (TYP.)) ON THIS SHEET.



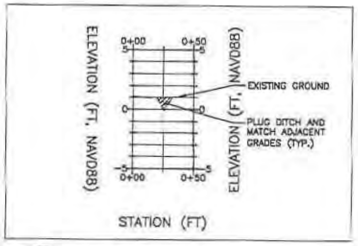
A / C-101 SECTION DETAIL – TRANSPLANT AREA (TYP.)
VERTICAL = 1"=5' / HORIZONTAL = 1"=50'

TRANSPLANT AREA NOTES:
1. REFERENCE SECTION 1 ON THIS SHEET FOR REFERENCE WATER SURFACE ELEVATIONS.
2. TOTAL WIDTH OF TRANSPLANT AREA IS ~16 FT.
   2.1. ~13 FT. WIDTH IS FOR TRANSPLANT STOCK
   2.2. ~3 FT. WIDTH FOR RETENTION MATERIAL ON DOWN-GRADIENT (WEST) SIDE ALONG LIEUTENANT RIVER FOR RETENTION MATERIAL (E.G., COIR LOG OR WATTLE)
3. EXCAVATE EXISTING MATERIAL TO EL. ~1 FT
4. LAY BACK CUT ABOVE FINISH GRADE A 1H:1V
5. INSTALL TRANSPLANT STOCK
6. FINISH ELEVATION OF TRANSPLANT STOCK IS EL. ~1.6 FT



2 / C-101 SECTION – EXISTING TERRAIN – EAST
VERTICAL = 1"=5' / HORIZONTAL = 1"=50'

NOTES:
1. REFERENCE SECTION 1 ON THIS SHEET FOR REFERENCE WATER SURFACE ELEVATIONS.
2. REFERENCE SECTION DETAIL "B" (DITCH PLUGGING (TYP.)) ON THIS SHEET.



B / C-101 SECTION DETAIL – DITCH PLUGGING (TYP.)
VERTICAL = 1"=5' / HORIZONTAL = 1"=50'

DITCH PLUGGING NOTES:
1. REFERENCE SECTION 1 ON THIS SHEET FOR REFERENCE WATER SURFACE ELEVATIONS.
2. PLUG DITCH WITH MATERIAL FROM ADJACENT BERMS OR MATERIAL EXCAVATED FROM TRANSPLANT AREA.
3. MATCH ADJACENT GRADES WITH DITCH PLUG MATERIAL.

0 50' 100' | 0' 5' 10' VERTICAL

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APRIL 2023

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3. REGULATORY LINES: C.L, MLW, MHW AND FEMA 100-YEAR ARE SHOWN BASED ON THE NOAA GAUGE BENCHMARK INTERPOLATION AND FIELD VERIFICATION.

Revision

Issued

Permit/Seal

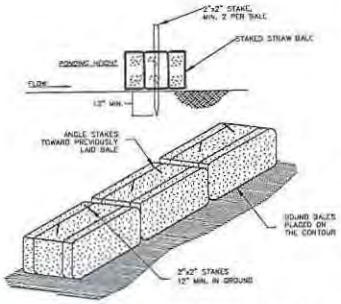
Client/Project Logo

AMTRAK
H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site
Replacement of Amtrak Connecticut River Bridge (MB 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
SECTIONS AND SECTION DETAILS

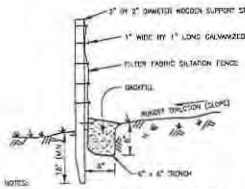
Project No. 195602497
Scale AS SHOWN
Revision 0
Sheet 4 of 7
Drawing No. C-200



NOTES:

1. "STAKED EROSION CONTROL BARRIER: STRAW BALES" SHALL BE CONSTRUCTED WITH STRAW BALES OR BALES SHALL BE CERTIFIED FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.
2. TO THE EXTENT PRACTICABLE, BALES SHALL BE PLACED ALONG THE SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
3. EACH STRAW BALE SHALL BE STAKED WITH AT LEAST 2 STAKES. BUTT BALES TOGETHER TO CREATE A TIGHT FIT. IN THAT CONDITIONS PREVENTING A TIGHT FIT BETWEEN BALES, OR BETWEEN BALES AND THE GROUND, ARE ENCOUNTERED (E.G., EXCESSIVE ROCKS, BEDROCK, OR FROZEN GROUND) THE CONTRACTOR SHALL UTILIZE ALTERNATIVE EROSION AND SEDIMENT CONTROL METHODS (E.G., FILTER BERM; SEE DETAIL, THIS SHEET).
4. STRAW BALES SHALL BE REMOVED AND REPLACED WHEN CLOGGED WITH SOIL PARTICLES OR AS DIRECTED BY THE ENGINEER.
5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN STORAGE HEIGHT HAS BEEN REDUCED TO 8 INCHES. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT IS NOT WITHIN JURISDICTIONAL RESOURCE AREA, WILL NOT CONTRIBUTE SEDIMENT OFF-SITE, AND CAN BE PERMANENTLY STABILIZED.

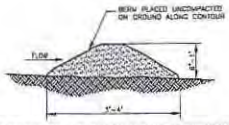
STAKED EROSION CONTROL BARRIER: STRAW BALE
NOT TO SCALE



NOTES:

1. FENCE SHALL EXTEND 24" HIGH (MINIMUM) ABOVE GROUND.
2. EXTEND FILTER FABRIC A MINIMUM OF 6" INTO TRENCH AND BACKFILL TRENCH.
3. SILT FENCE MATERIAL SHALL BE ATTACHED TO THE SUPPORT STAKES WITH A MINIMUM OF SIX 1" WIDE BY 1" LONG GALVANIZED STAPLES.

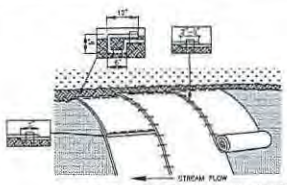
STAKED EROSION CONTROL BARRIER: SILT FENCE
NOT TO SCALE

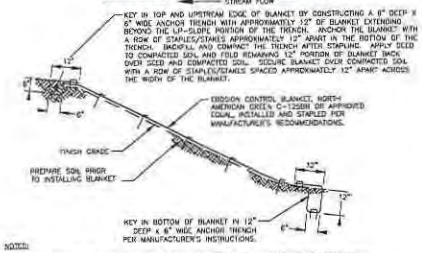


NOTES:

1. FILTER BERM SHALL BE PLACED ALONG SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. BERM MATERIAL SHALL BE BARK MULCH, STUMP GRINDINGS, OR OTHER APPROVED, BIODEGRADABLE MATERIAL, FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.
3. BERM MATERIALS SHALL BE REPLACED AND/OR REPLENISHED AS REQUIRED TO MAINTAIN FUNCTIONALITY OF FILTER BERM.
4. FILTER BERM SHALL NOT BE USED ADJACENT TO STREAMS OR STREAMBANKS. CONTRACTOR SHALL USE AN ALTERNATE EROSION CONTROL BARRIER (E.G., STAKED BALES OR STRAW WATTLE) WHEN EROSION CONTROL BARRIER IS REQUIRED IN THESE LOCATIONS.

FILTER BERM
NOT TO SCALE

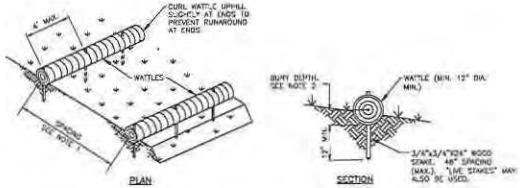




NOTES:

1. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN C-125BN OR APPROVED EQUAL.
2. EROSION CONTROL BLANKET SHALL BE INSTALLED IN AREAS DISTURBED BY CONSTRUCTION WITH SLOPES ≥ 4:1 (4H:1V) ABOVE MARSH ELEV. EXCEPT AS NOTED.
3. WHEN INSTALLING ADJACENT TO STREAM CHANNELS, BEGIN INSTALLATION AT DOWNSTREAM LIMIT AND WORK UPSTREAM SUCH THAT VERTICAL SEAM OVERLAPS ARE SHINGLED APPROPRIATELY IN RELATION TO STREAM FLOW DIRECTION.

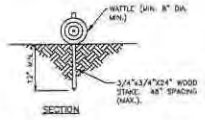
EROSION CONTROL BLANKET
NOT TO SCALE



NOTES:

1. WATTLE SPACING:
   1:1 SLOPES = 10 FEET APART
   2:1 SLOPES = 20 FEET APART
   3:1 SLOPES = 30 FEET APART
   4:1 SLOPES = 40 FEET APART
2. INSTALL WATTLE IN TRENCH DUG 2 TO 3 INCHES DEEP. COMPACT SOIL EXCAVATED FROM TRENCH AT UPSLOPE SIDE OF WATTLE. BACKFILL TRENCH AND RECOMPACT/TAMP SOIL WHEN ROLLS ARE REMOVED.
3. INSTALL WATTLES ALONG THE CONTOUR.
4. WHEN INSTALLING WATTLES END TO END, ENSURE THAT ENDS TIGHTLY ABUT.
5. FOR SLOPE GREATER THAN 5:1 WATTLE SHALL BE MIN. 20 INCHES IN DIAMETER. SMALLER-DIAMETER WATTLES MAY BE STACKED TO ACHIEVE SIMILAR LEVEL OF PROTECTION.

STAKED EROSION CONTROL BARRIER: STRAW WATTLE ON SLOPE
NOT TO SCALE



NOTES:

1. INSTALL WATTLE ON GROUND.
2. INSTALL WATTLES ALONG CONTOUR.
3. WHEN INSTALLING WATTLES END TO END, ENSURE THAT ENDS TIGHTLY ABUT.

STAKED EROSION CONTROL BARRIER: STRAW WATTLE ON SHALLOW GRADE
NOT TO SCALE

General Notes:

1. THIS PLAN IS TO BE USED AS A GUIDELINE ONLY. ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MAY BE DICTATED BY FIELD CONDITIONS, PERMIT CONDITIONS, ENVIRONMENTAL REGULATORS, AND/OR THE ENGINEER, AND SHALL BE INSTALLED AT THE CONTRACTOR'S EXPENSE. OTHER ESC MEASURES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL. IN ADDITION TO ESC MEASURES SHOWN ON THE PLANS, ESC MEASURES SHALL BE UTILIZED AT THE BASE OF ALL TEMPORARY SOIL STOCKPILES.
2. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND PERMIT CONDITIONS.
3. ESC MEASURES SHALL BE INSTALLED PRIOR TO THE ONSET OF OTHER CONSTRUCTION ACTIVITIES AND SHALL BE ADEQUATE TO PREVENT EROSION AND SEDIMENT TRANSPORT BEYOND THE LIMITS OF WORK. ESC MEASURES SHALL BE INSPECTED, REPAIRED, AND MAINTAINED AS NECESSARY TO COMPLY WITH APPLICABLE REGULATIONS AND PROJECT PERMIT CONDITIONS.
4. THE CONTRACTOR SHALL STORE ON SITE ALL MATERIALS NECESSARY TO MAKE REPAIRS TO ALL ESC MEASURES. REPAIRS AND MAINTENANCE OF ESC MEASURES SHALL BE MADE IMMEDIATELY FOLLOWING IDENTIFICATION OF DEFICIENCIES AND AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES AT LOCATIONS DEPICTED ON THE PLANS AND AT ANY ALTERNATE APPROVED LOCATIONS USED TO ACCESS THE WORK AREA . ALTERNATE LOCATIONS MUST BE APPROVED BY THE OWNER PRIOR TO USE BY THE CONTRACTOR.
6. REFERENCE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, OR SUBSEQUENT VERSIONS.
7. WATTLES MUST CONSIST OF BIODEGRADABLE FABRIC OR MESH AND NOT INCLUDE PLASTIC OR MONOFILAMENT NETTING TO REDUCE POTENTIAL WILDLIFE ENTANGLEMENT.

PLANS FOR PERMITTING
APRIL 2023

Stantec

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Consultant

Notes

Revision	By	Appd	YY/MM/DD
[illegible]	[illegible]	[illegible]	[illegible]
Issued	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Permit/Seal

Client/Project Logo

AMTRAK

H&H

Client/Project
Amtrak, Hardesty & Hanover
3.25-Acre Mitigation Site
Replacement of Amtrak Connecticut River Bridge (M8 106.89)
Old Saybrook and Old Lyme, Connecticut

Title
EROSION AND SEDIMENT CONTROL NOTES & DETAILS

Project No.	Scale
195602497	AS SHOWN
Revision	Sheet
0	7 of 7

Drawing No.
C-300