State of Rhode Island
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879
(401)783-3370

State of Rhode Island
Department of Environmental Management
Office of Technical and Customer Asst.
235 Promenade Street
Providence, RI 02908-5767
(401)222-6822

JOINT PUBLIC NOTICE

CRMC File No.: 2022-08-043
Date: 9/8/2022

RIDEM Water Quality Certification Number: 22-154

These offices have under consideration the application of:

McAllister Towing & Transportation
1 India Street
Providence, RI 02903

for State of Rhode Island Assent (in accordance with the Coastal Resources Management Program), and State of Rhode Island Water Quality Certification (in accordance with Chapter 42-35 pursuant to Chapters 46-12 and 42-17.1 of the RIGL, as amended). Stabilize the failing concrete pens that are causing safety hazards on land and in water along the property. A portion of the north pen has failed and the south pen has large cracks in the walls and settlement. The project will construct a stone riprap/revetment within a portion of the north pen to match conditions immediately to the north and place granular back fill in the south pen to match existing grade. The project also includes extending the existing stormwater outfall pipe at the south pen, and at the north pen realigning a portion of the bulkhead and adding new sheetpile bulkhead to address slope stability.
Please note that the work will include filling in tidal waters.
Per RICMRP 1.3.1(J) (Filling in tidal waters). Filling in Type 6 water allowable if:
(1) The filling is made to accommodate a designated priority use for that water area;
(2) The applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; and
(3) The filling is the minimum necessary to support the priority use.

Project Location: 1 India Street

Street & Number: 1 India Street

City/Town: Providence

Plat Number: 18 Lot Number: 332,48

Plans of the proposed work may be seen at the CRMC office in Wakefield.

In accordance with the Administrative Procedures Act (Chapter 42-35 of the Rhode Island General Laws) you may request a hearing on this matter. You are advised that if you have good reason to enter protests against the proposed work it is your privilege to do so. It is expected that objectors will review the application and plans thoroughly, visit site of proposed work if necessary, to familiarize themselves with the conditions and cite what law or laws, if any, would in their opinion be violated by the work proposed.

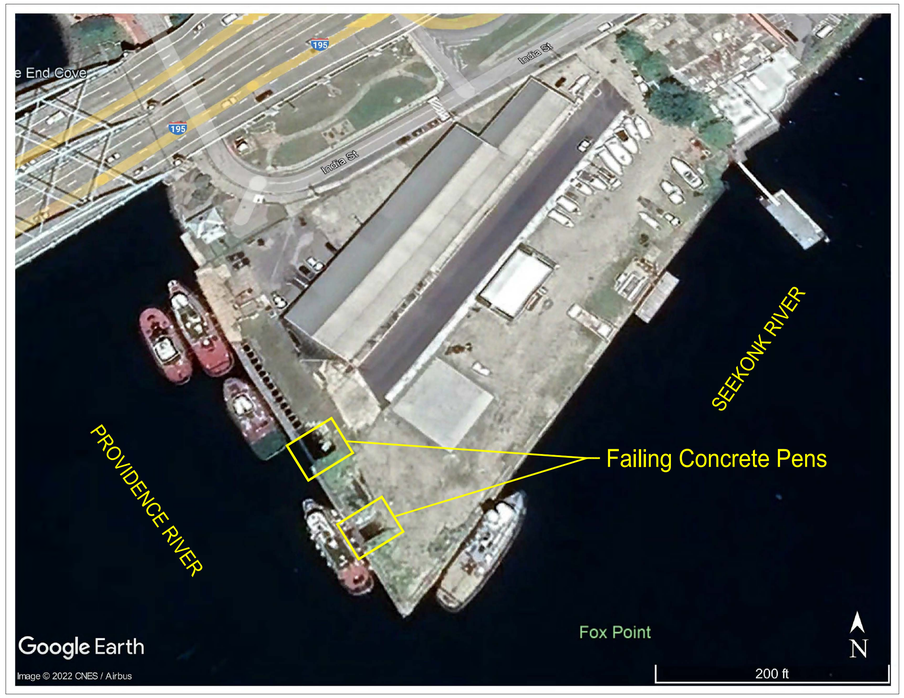
This also serves as notice that the Rhode Island Department of Environmental Management, Office of Water Resources, Water Quality Certification Program has under consideration and review the same proposed activity as described above for compliance with the State's Water Quality Regulations (AUTHORITY: in accordance with Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; Chapter 42-35 pursuant to Chapters 46-12 and 42-17.1 of the Rhode Island General Laws of 1956, as amended).

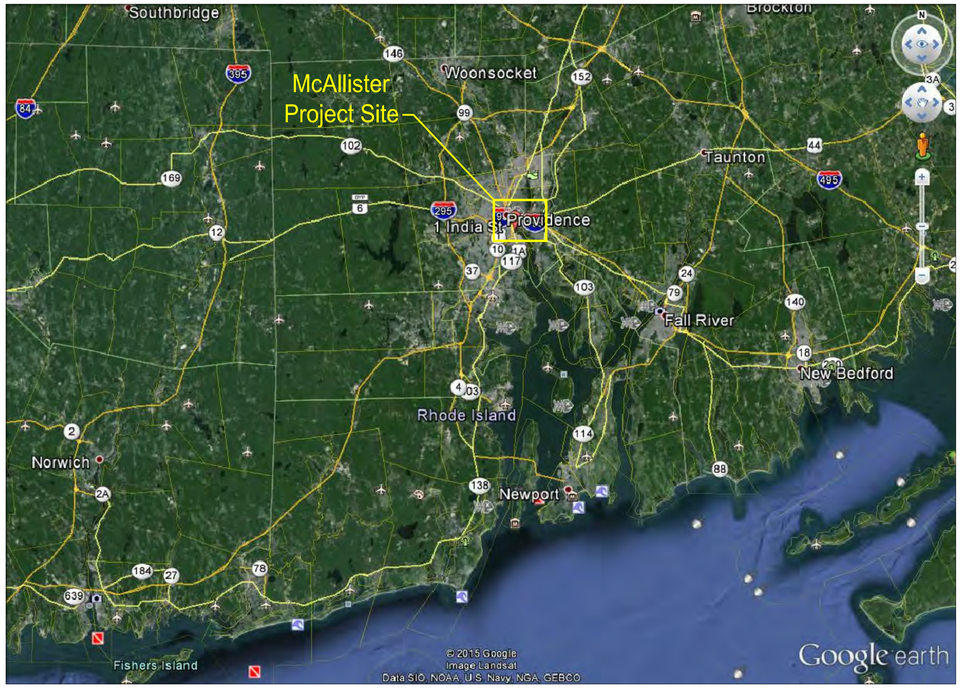
If you desire to protest, you must attend the scheduled hearing and give sworn testimony. A notice of the time and place of such hearing will be furnished you as soon as possible after receipt of your request for hearing. If you desire to request a hearing, to receive consideration, it should be in writing and be received at this office on or before **October 22, 2022**. Please provide comments via email at cstaff1@crmc.ri.gov or via USPS to Coastal Resources Management Council, O. S. Government Center, 4808 Tower Hill Road, Rm 116; Wakefield, RI 02879.

It is expected that objectors will review the application and associates plans thoroughly. Comments that pertain to this Joint Notice must be submitted in writing and must be addressed to Rhode Island Coastal Resources Management Council and Rhode Island Department of Environmental Management at the above referenced addresses.

/ajt

CONCRETE PEN STABILIZATION PROJECT
McALLISTER TOWING FACILITY
1 India Street, Providence, RI





Prepared For:
McALLISTER TOWING OF NARRAGANSETT BAY, LLC
1 India Street
Providence, RI 02903

Index of Drawings:

Sht. No.	Dwg. No.	Description
1	C1	Project Notes & Legend
2	C2	Exist'g & Proposed Cond. Plan
3	C3	Section & Details

Prepared By:

Fairbanks Engineering Corporation
42 Cobblestone Hill Road
Exeter, Rhode Island 02822

ROBERT W. FAIRBANKS JR.
No. 5517
REGISTERED PROFESSIONAL ENGINEER
5-1-22

PERMIT PLANS
NOT FOR CONSTRUCTION

DESCRIPTION OF WORK

THE WORK COVERED UNDER THESE CONTRACT DOCUMENTS, INCLUDING THE DRAWINGS, GENERAL NOTES, SPECIFICATIONS AND ALL AMENDMENTS, CONSISTS OF PROVIDING ALL PLANT, LABOR, SUPERVISION, EQUIPMENT, APPLIANCES AND MATERIALS AND IN PERFORMING ALL OPERATIONS IN CONNECTION WITH THE STABILIZATION OF THE FAILING CONCRETE PENS ALONG THE PROVIDENCE RIVER AREA OF THE SHEET PILE BULKHEAD SYSTEM AT THE McALLISTER SITE IN PROVIDENCE, RI.

THE CONTRACTOR SHALL PROVIDE ALL ITEMS AND ACCESSORIES REQUIRED TO COMPLETE ALL ASPECTS OF THE WORK NEEDED FOR A COMPLETE AND PROPER INSTALLATION, ALL IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS.

GENERAL NOTES:

1. LANDSIDE TOPOGRAPHY AND EXISTING CONDITIONS PLAN INFORMATION FOR THE AREA WHERE THE WORK IS PROPOSED IS DEVELOPED FROM THE SURVEY PERFORMED AND PLAN DEVELOPED BY NATIONAL SURVEYORS-DEVELOPERS, INC. FOR THIS PROJECT.
2. LIMITED HYDROGRAPHIC INFORMATION IS AVAILABLE AS INDICATED ON THESE PLANS ALONG THE BULKHEAD FOR THIS SITE.
3. SOUNDINGS AND UPLAND TOPOGRAPHY ARE REFERENCED TO NAVD88. BENCHMARKS ARE INDICATED ON THE NATIONAL SURVEY-DEVELOPERS, INC. PLAN.
4. THIS PLAN WAS PRODUCED FOR PURPOSES OF DESIGN, PLANNING, PERMITTING, AND THE CONSTRUCTION NECESSARY TO ELIMINATE THE POTENTIAL LANDSIDE AND NAVIGATION HAZARDS RESULTING FROM THE TWO FAILING CONCRETE PENS ALONG THE WATERFRONT AS DESCRIBED HEREIN AT THE McALLISTER FACILITY. USE OF THIS PLAN FOR ANY OTHER WORK IS AT THE SOLE RISK OF THE END USER.
5. ANY UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES, GRADES, AND DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AND LOCAL UTILITIES TO VERIFY THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO START OF ANY CONSTRUCTION. REPORT TO THE ENGINEER ALL OBSERVATIONS AND DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.
6. ALL WORK SHALL COMPLY WITH LOCAL, STATE AND FEDERAL LAWS AND STATUTES AND THE REQUIREMENTS AND CONDITIONS OF ALL REGULATORY PERMITS ISSUED FOR THE WORK.
7. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT REGULATORY PERMITS AND ALL CONDITIONS OF THOSE PERMITS. THE CONTRACTOR IS ADVISED THAT THE REGULATORY PERMITS FOR THIS PROJECT MAY CONTAIN ADDITIONAL REQUIREMENTS THAT, AFTER ANY ADDENDUM, SUPERSEDE THE DRAWING NOTES. THE CONTRACTOR IS FURTHER ADVISED THAT IN THE CASE OF ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS FOUND BEFORE CONSTRUCTION, THE FINAL DECISION AS TO WHAT INFORMATION TAKES PRECEDENCE WILL BE MADE BY THE ENGINEER OF RECORD ON THE BASIS OF THAT INTENT.
8. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OR ORDERING OF ANY CONSTRUCTION MATERIALS.
9. ALL SECTIONS AND DETAILS APPLY TO SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN.
10. DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS.
12. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
13. THE CONTRACTOR SHALL USE EQUIPMENT ADEQUATE IN SIZE, CAPACITY, AND NUMBERS, AND PROPERLY MAINTAINED WITH REGARD TO THE SAFETY OF OPERATOR, OTHER WORKMEN, AND GENERAL PUBLIC.
14. THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND COASTAL RESOURCES FROM INTRUSION BY TURBID WATERS, CONSTRUCTION DEBRIS, CONSTRUCTION EQUIPMENT, OR PERSONNEL DURING ALL WORK ACTIVITIES.
15. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS, LICENSES, CERTIFICATES OF INSPECTION, AND PAY ALL LEGAL FEES IN CONNECTION WITH THE WORK OF THIS CONTRACT. THE OWNER HAS RECEIVED A CRMC ASSENT FOR THE PROJECT AND THE CONTRACTOR MAY REQUEST COPIES OF THE ASSENT. FAILURE TO CONSIDER ANY CONDITION OF THE REGULATORY PERMITS AS A PART OF THE BID SHALL NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO APPLY THOSE CONDITIONS TO HIS WORK AT NO ADDITIONAL COST TO THE OWNER.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT FROM DAMAGE ALL UTILITIES, UTILITY STRUCTURES, FUEL LINES & TANKS OR ANY UNKNOWN UTILITIES OR STRUCTURES PRIOR TO ANY WORK.
17. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE ALL LANDSCAPING , INCLUDING BUT NOT LIMITED TO LAWN, TREES, PLANTINGS, FENCES, ETC. DAMAGED BY THE CONTRACTOR DURING THE COURSE OF THE PROJECT.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT & POSITIONING OF ALL PROPOSED STRUCTURES AS SHOWN ON THE PROJECT DRAWINGS.
19. CONTRACTOR SHALL NOT REMOVE EXCESS SOIL MATERIALS FROM THE SITE. IF ANY EXCESS SOIL EXISTS IT SHALL BE STOCKPILES ONSITE AS DIRECTED BY THE OWNER.
20. CONTRACTOR SHALL NOT STORE ANY MATERIALS BELOW MHW ELEVATION.
21. PROTECT OPEN EXCAVATIONS AND STOCKPILED SOIL FROM EROSION.
22. THE OWNER HAS RECENTLY COMPLETED AN EXTENSIVE ENVIRONMENTAL CLEANUP INCLUDING INSTALLATION OF A CAP AT THE GROUND SURFACE ALONG A PORTION OF THE UPLAND SITE AREA. IN GENERAL, THE CONCRETE PEN AREA WORK IS OUT OF THIS AREA.

STRUCTURAL STEEL

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE "MANUAL OF STEEL CONSTRUCTION - ASD", LATEST EDITION, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE FOR STEEL" LATEST EDITION, AS ADOPTED BY THE AMERICAN WELDING SOCIETY (AWS). ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH AWS STANDARDS.
3. ALL CONNECTIONS SHALL BE DESIGNED BY A STEEL FABRICATOR EXCEPT THOSE SPECIFICALLY DETAILED ON THE CONTRACT DOCUMENTS.
4. STRUCTURAL STEEL MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS:

   STEEL SECTIONS AND MISC: ASTM A572 GRADE 50, A36, AND A328, AS APPLICABLE UNLESS OTHERWISE NOTED

   BOLTS: ASTM A325 OR A307 AS SPECIFIED WITH HEAVY HEXAGONAL HEADS

   NUTS: ASTM A563 WITH HEAVY HEXAGONAL HEADS

   WASHERS: ASTM F436 OVERSIZED DOCK WASHERS

   WELD RODS: ASTM A233, E70XX SERIES ELECTRODES AS REQ'D FOR CONDITIONS OF INTENDED USE

   BOLTS, NUTS, PLATES & WASHERS: ALL BOLTS, NUTS, PLATES AND WASHERS SHALL BE HOT DIPPED GALVANIZED FOR EXTREME SERVICE (MIN. 4 MIL THICKNESS U.O.N.) IN ACCORDANCE WITH ASTM A123 OR A153 AS APPLICABLE AND MEET MINIMUM TESTS OF ASTM A239.

EARTHWORK:

1. THE EARTHWORK REQUIRED TO SUPPORT THIS PROJECT IS GENERALLY RELATED TO EXCAVATION REQUIRED TO INSTALL STONE RIP RAP ON THE SLOPE AREA AT THE NORTH PEN AREA AND BACKFILLING WITHIN THE SOUTH PEN. THE PENS HAVE A CONCRETE BOTTOM.
2. All EXCAVATION AREAS SHALL BE UNDERTAKEN IN A MANNER THAT ENSURES A STABLE SUBGRADE HAS BEEN ADEQUATELY ACHIEVED BEFORE PLACING BACKFILL MATERIALS. THIS SHALL INCLUDE A SURVEY THAT VERIFIES DESIGN SUBGRADE ELEVATIONS ARE ACHIEVED.
3. ALL EXCAVATION AND BACKFILLING SHALL BE UNDERTAKEN IAT LOW TIDE ELEVATIONS TO ALLOW WORK TO BE DONE IN THE RELATIVE DRY. PERFORM ALL WORK IN A MANNER THAT ENSURES EXISTING STRUCTURES ADJACENT TO THE AREAS ARE PROTECTED.
4. AFTER THE SUBGRADE IS PREPARED AND APPROVED THE GEOTEXTILE REINFORCEMENT MATERIAL (AS APPLICABLE) SHALL BE PLACED AND SECURED TO ENSURE IT DOES NOT MOVE DURING THE BACKFILL MATERIAL PLACEMENT.
5. BACKFILL BORROW MATERIALS SHALL MEET THE REQUIREMENTS OF RIDOT M.01.09, TABLE 1, I, GRAVEL BORROW, GRADATION 1A.
6. FORMAL COMPACTION TESTING, IF REQUIRED BY THE OWNER, SHALL BE UNDERTAKEN BY AN INDEPENDENT FIRM QUALIFIED TO PERFORM THESE TYPES OF TESTS, ALL RESULTS SHALL BE SUBMITTED AND STAMPED BY A RI PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AND PAYING FOR THIS TESTING.

SOIL & COMPACTION:

1. AREAS SHALL BE EXCAVATED TO A FIRM HARD SUBGRADE. PROVIDE TRAP ROCK, CRUSHED STONE OR BORROW SOILS AS NEEDED TO ENSURE THIS CONDITION EXISTS PRIOR TO PLACING GEOTEXTILE FABRIC AND/OR BACKFILL ON THE SUBGRADE.
2. IF REQUIRED, BORROW SOIL MATERIALS SHALL MEET THE REQUIREMENTS OF RIDOT M.01.09, TABLE 1, I, GRAVEL BORROW, GRADATION 1A. CRUSHED STONE SHALL BE HARD, SOUND, ANGULAR, AND CLEAN IN A SIZE RANGING FROM $\frac{3}{4}$" TO 1".
3. THE CONTRACTOR SHALL PLACE ALL FILL IN LIFTS AND COMPACT USING CONSTRUCTION EQUIPMENT USED TO SPREAD THE MATERIAL INITIALLY. THE SOIL SHALL BE COMPACTED USING A LARGE VIBRATORY ROLLER, 20,000 LB MIN STATIC WEIGHT IN THE ROAD, HOWEVER A SMALLER WALK BEHIND PLATE TYPE COMPACTOR SHALL BE USED ABOVE, AND WITHIN 5 FT LATERALLY OF THE OUTSIDE EDGE OF THE OUTFALL PIPE EXTENSION AND ANY TIE RODS, AND ALSO WITHIN 10 FEET LATERALLY FROM THE EXISTING STEEL SHEETPILE BULKHEAD. THE PLATE COMPACTOR IS ANTICIPATED TO REQUIRE ADDITIONAL PASSES TO ACHIEVE COMPACTION. SOIL LIFTS SHALL NOT EXCEED 6 TO 12 INCHES. THE EXISTING SOILS MAY BE SILTY AND AS SUCH IT MAY BE NECESSARY TO COMPACT USING STATIC METHODS TO AVOID DEGRADING THE SUBGRADE. THE ENGINEER SHALL BE CONTACTED IF THIS CONDITION EXISTS TO ENSURE ADEQUATE COMPACTION IS ACHIEVED.
4. BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557, MODIFIED PROCTOR. THERE IS NO NEED TO TEST THE COMPACTION OF CRUSHED STONE BACKFILL BUT THE STONE SHALL BE COMPACTED TO ENSURE SUITABILITY TO SUPPORT THE NEW LOADS.
5. ALL LANDSCAPE/GRASS SOIL AREAS IMPACTED/DAMAGED BY EXCAVATION OR BY THE CONSTRUCTION, EXCEPT THE PLANTING AREAS DETAILED HEREIN, SHALL RECEIVE A MIN OF 4 INCHES OF NEW ORGANIC LOAM OF SUFFICIENT QUALITY TO GROW AND MAINTAIN GRASS. THE MATERIAL SHALL MEET RIDOT MATERIAL REQUIREMENTS FOR LOAM. PREPARE AREAS TO SUBGRADE, INCLUDING SCARIFYING AS NEEDED, TO ALLOW FOR THE NEW LOAM.
6. PLANT GRASS ON ALL DISTURBED/EXPOSED SOIL/LOAM AREAS RESULTING FROM THIS CONSTRUCTION WORK. SUBMIT PROPOSED MIX FOR APPROVAL. THIS DOES NOT APPLY TO THE NEW LANDSCAPE AREAS ALREADY DETAILED IN THE PLANS.

REFERENCE PLANS/DOCUMENTS:

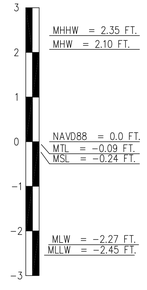
1. EXISTING TOPOGRAPHIC AND GENERAL CONDITIONS INFORMATION IN THE ANTICIPATED CONSTRUCTION AREA IS FROM A SURVEY PLAN TITLED "BULKHEAD PLAN", DATED SEPTEMBER 2015, PREPARED BY NATIONAL LAND SURVEYORS-DEVELOPERS, INC. THIS SURVEY WAS UNDERTAKEN IN AUGUST 2015; NLSD ACAD FILE 2015-146 WAS USED TO CREATE THE BASE PLAN FOR THESE DRAWINGS, ANOTHER SURVEY, PROPERTY LINE AND ELEVATION, FOR THIS PROPERTY, TITLED "EXISTING CONDITIONS SURVEY", DATED APRIL 4, 2013, PREPARED BY DIPRETE ENGINEERING FOR ESS GROUP, INC. IS ALSO REPORTEDLY AVAILABLE FOR THIS SITE.
2. HORIZONTAL CONDITIONS, PROPERTY LINES AND BUILDING LOCATIONS, ETC, ARE SHOWN ON THE SURVEY PLANS REFERENCED ABOVE. THE BUILDINGS AND FEATURES SHOWN ON THESE PLANS THAT ARE OUTSIDE OF THE NLSD SURVEY AREA HAVE BEEN ESTIMATED FROM A GOOGLE IMAGE AND SHOULD BE CONSIDERED APPROXIMATE.
3. FEMA FLOOD INSURANCE STUDY, PROVIDENCE COUNTY, RI, DATED OCTOBER 2, 2015.
4. RHODE ISLAND STATE BUILDING CODE, SBC-1
5. US ARMY CORPS OF ENGINEERS SHORE PROTECTION MANUAL, 1984
6. COASTAL CONSTRUCTION MANUAL, FEMA 55
7. USS STEEL SHEETPILE DESIGN MANUAL, JULY 1975
8. CITY OF PROVIDENCE CONSTRUCTION PLAN DATED JULY 16, 1902 FOR THE NBC OUTFALL PIPE (SEE SHEET 5)
9. CONSTRUCTION PLAN PREPARED BY SEABOARD MARINE DATED 1984, AND CONSTRUCTION PHOTOGRAPH, FOR THE STEEL BULKHEAD (SEE SHEET 5)
10. CRMC ASSENT M2020-09-003

DESIGN CRITERIA:

1. ALL DIMENSIONS ARE IN DECIMAL FEET UNLESS OTHERWISE NOTED. ELEVATIONS AREIN FEET REFERENCED TO NAVD88.
2. SEISMIC LOAD - NONE
3. LIVE LOAD NEW BULKHEAD - THIS DESIGN ASSUMES A UNIFORMLY DISTRIBUTED LOAD APPLIED AT THE GROUND SURFACE BEHIND THE BULKHEAD OF 400 PSF.
4. TIDAL RANGE - 4.37 FEET ACCORDING TO THE NOAA STATION IN PROVIDENCE.
5. FEMA 100 YEAR (1%) SWL IS EL 12 FT NAVD88.
6. FEMA 100 YEAR (1%) MAXIMUM WAVE CREST ELEVATION IS 14.8 TO 15.2 FT NAVD 88; THE CORRESPONDING 100 YEAR (1%) SIGNIFICANT WAVE HEIGHT IS 4 TO 4.5 FT.
7. WIND - FASTEST MILE WIND SPEED = 90 MPH.
8. TEMPERATURE RANGE = 60 DEGREES FAHRENHEIT ABOVE AND BELOW MEAN AMBIENT TEMPERATURE

SLOPE ARMORING CONSTRUCTION NOTES:

1. THE SLOPE ARMORING AT THE NORTH PEN AREA SHALL BE COMPRISED OF AN ARMOR LAYER AND AN UNDERLAYER WITH GEOTEXTILE FABRIC REQUIRED AS SPECIFIED.
2. ARMOR AND UNDERLAYER STONES SHALL BE PLACED IN AT LEAST A TWO LAYER THICKNESS.
3. ALL STONES USED IN THE CONSTRUCTION OF THE SLOPE ARMORING SHALL BE HARD, DURABLE, AND CLEAN, WITHOUT CRACKS, CLEAVAGES OR LAMINATIONS. THEY SHOULD BE CHEMICALLY STABLE IN FRESH OR SALT WATER AND SHOULD NOT WEATHER DUE TO TEMPERATURE CHANGES OR WET/DRY CYCLES. STONES FROM THE EXISTING REVETMENT MAY BE USED IN THE CONSTRUCTION WORK PROVIDED THEY MEET THE DESIGN SIZES FOR THE LAYER WHERE THE STONE IS PLACED.
4. ARMOR STONES SHALL BE GRADED SUCH THAT THE SMALLEST DIMENSION SHOULD NOT BE LESS THAN ONE-THIRD OF THE LARGEST DIMENSION.
5. THE SIZE OF THE ARMOR STONES SHALL BE A MAXIMUM OF 1.25 W (AVERAGE WEIGHT SPECIFIED) AND A MINIMUM OF 0.75 W. APPROXIMATELY 75 PERCENT OF THE STONES SHALL BE EQUAL TO, OR LARGER THAN, W.
6. THE SIZE OF THE UNDERLAYER STONE SHALL BE A MAXIMUM OF W/10 (ARMOR LAYER STONE WEIGHT) AND A MINIMUM OF W/15.
7. ARMOR UNITS IN THE COVER LAYER SHALL BE PLACED IN AN ORDERLY MANNER TO OBTAIN GOOD WEDGING OR INTERLOCKING ACTION BETWEEN INDIVIDUAL UNITS. THE SAME IS REQUIRED FOR THE UNDERLAYER PLACEMENT.
8. THREE LAYERS OF GEOTEXTILE FABRIC ARE REQUIRED AGAINST ALL SOIL INTERFACES ABOVE 0.0 FT MLW. THIS SHALL BE COMPRISE OF 2 LAYERS OF MIRAFI 140N OR EQUIVALENT PLACED ON THE SOIL WITH A LAYER OF MIRAFI 600X OR EQUIVALENT PLACED ABOVE. THE 140N IS REQUIRED TO ACT AS A FILTER TO STOP THE MIGRATION OF FINE SOIL INTO/THROUGH THE REVETMENT STONE. THE 600X IS REQUIRED TO PROTECT THE 140N FROM BEING DAMAGED BY THE LARGE STONES AND CONSTRUCTION ACTIVITY. ADDITIONAL LAYERS OF GEOTEXTILE FABRIC SHALL BE REQUIRED IF IT IS DETERMINED THAT THE 3 LAYER FABRIC SYSTEM IS BEING DAMAGED DURING CONSTRUCTION.



VERTICAL DATUM INFORMATION

INFORMATION FOR NOAA TIDAL ELEVATION STATION 8454000 LOCATED IN PROVIDENCE, RHODE ISLAND – VERTICAL DATUM IS NAVD88

ABBREVIATIONS

N. I. C.	NOT IN CONTRACT
U. O. N.	UNLESS OTHERWISE NOTED
N. T. S.	NOT TO SCALE
I. A. W.	IN ACCORDANCE WITH
TYP.	TYPICAL
R & D	REMOVE AND DISPOSE
BIT.	BITUMINOUS CONCRETE
N/F	NOW OR FORMERLY
F. F.	FINISH FLOOR
T. O. F.	TOP OF FOUNDATION
M. P. L.	MARINA PERIMETER LINE
FEC	FAIRBANKS ENGINEERING CORP.
S. F.	SQUARE FOOT
A. P.	ASSESSORS PLAT
EXTG.	EXISTING
SMH	SEWER MANHOLE
DMH	WATER MANHOLE
MIN.	MINIMUM
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
SWL	STILL WATER LEVEL
MHT	MEAN HIGH TIDE
TOW	TOP OF WALL
INV	INVERT

LEGEND

10	EXISTING CONTOUR
E	EXISTING UNDERGROUND ELECTRIC
S	EXISTING SEWER
W	EXISTING WATER LINE
SMH	EXISTING SEWER MANHOLE
DMH	EXISTING MANHOLE
CB	EXISTING CATCH BASIN
	EXISTING BUILDING
× 7.2	EXISTING SPOT GRADE
	EXISTING STONE WALL
UPOLE	EXISTING UTILITY POLE
LPOLE	EXISTING LIGHT POLE
WV	EXISTING WATER GATE
	EXISTING HYDRANT
B15−1	BORINGS PERFORMED BY NE BORING, INC. JULY 20 & 21, 2015 OBSERVED BY AN FEC TECHNICIAN.

PERMIT PLANS
NOT FOR CONSTRUCTION

REVISIONS

ROBERT W. FAIRBANKS JR.
No. 5517
REGISTERED PROFESSIONAL ENGINEER
P-I-R2

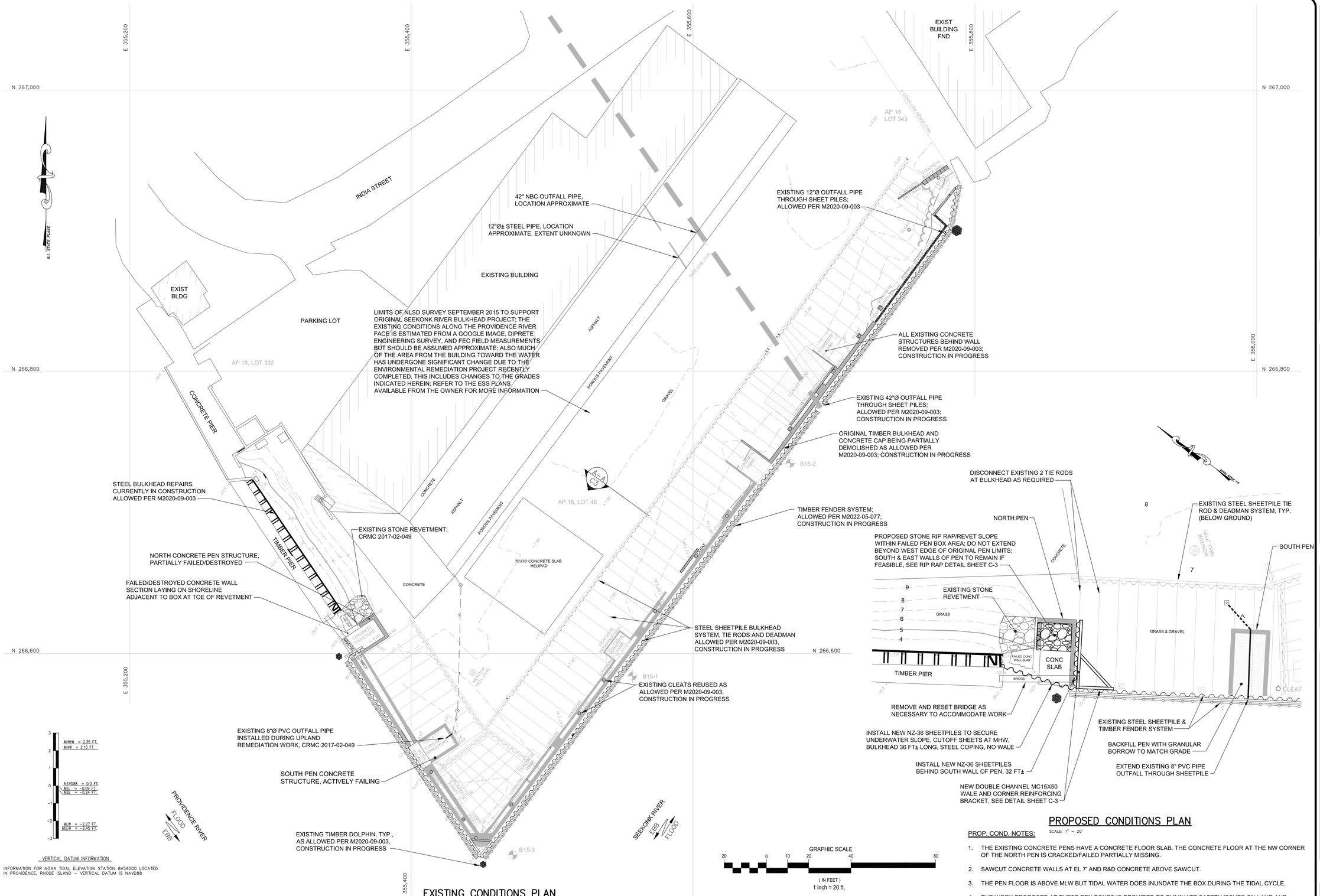
FAIRBANKS ENGINEERING CORP.
GEOTECHNICAL & MARINE ENGINEERS
42 Cobblestone Hill Road
Exeter, RI 02822
Office: 401.294.3464/Cell: 401.474.2361
rfairbanks@fairbankseng.com

Drawn: RWF
Checked: RWF
Scale: N.T.S.
DATE: 8-1-22

Concrete Pen Stabilization Project
McAllister Facility, Providence, RI
PREPARED FOR:
McAllister Towing of Narragansett Bay, LLC
1 India Street, Providence, RI 02903

PROJECT NOTES &LEGEND

DWG. NO.
C1
SHEET 1 OF 3



EXISTING CONDITIONS PLAN

SCALE: 1" = 30'

EXIST. COND. NOTES:

1. THE SURVEY TO SUPPORT THIS PROJECT WAS PERFORMED PRIOR TO THE REMEDIATION WORK (CRMC ASSENT 2017-02-049) AND THE BULKHEAD MAINTENANCE PROJECT (CRMC ASSENT M2020-09-003) AND SOME OF THE EXISTING UPLAND GRADES MAY HAVE CHANGED SLIGHTLY AS A RESULT.
2. MUDLINE ELEVATIONS AT TIMBER PIER AND PEN AREAS ESTIMATED FROM LEADLINE SURVEY 7-15-22.

PROPOSED CONDITIONS PLAN

SCALE: 1" = 20'

PROP. COND. NOTES:

1. THE EXISTING CONCRETE PENS HAVE A CONCRETE FLOOR SLAB. THE CONCRETE FLOOR AT THE NW CORNER OF THE NORTH PEN IS CRACKED/FAILED PARTIALLY MISSING.
2. SAWCUT CONCRETE WALLS AT EL 7' AND R&D CONCRETE ABOVE SAWCUT.
3. THE PEN FLOOR IS ABOVE MLW BUT TIDAL WATER DOES INUNDATE THE BOX DURING THE TIDAL CYCLE.
4. THE WORK PROPOSED AT THESE PEN BOXES IS REQUIRED TO ELIMINATE SAFETY ISSUES ON LAND AND WATER ADJACENT TO THE STRUCTURES, INCLUDING POTENTIAL HAZARD TO NAVIGATION ISSUES IN THE ADJACENT BERTH AREA; FAILURE OF A PORTION OF THE NORTH PEN HAS ALREADY RESULTED IN THESE ISSUES.
5. MUDLINE WEST OF NORTH PEN HAS CONCRETE PIECES AND DEBRIS VISIBLE FROM SURFACE. REMOVE THESE AS NECESSARY TO INSTALL NEW SHEETPILES.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

PERMIT PLANS
NOT FOR CONSTRUCTION

REVISIONS

ROBERT W. FAIRBANKS JR.
No. 5517
REGISTERED PROFESSIONAL ENGINEER
4-21-22

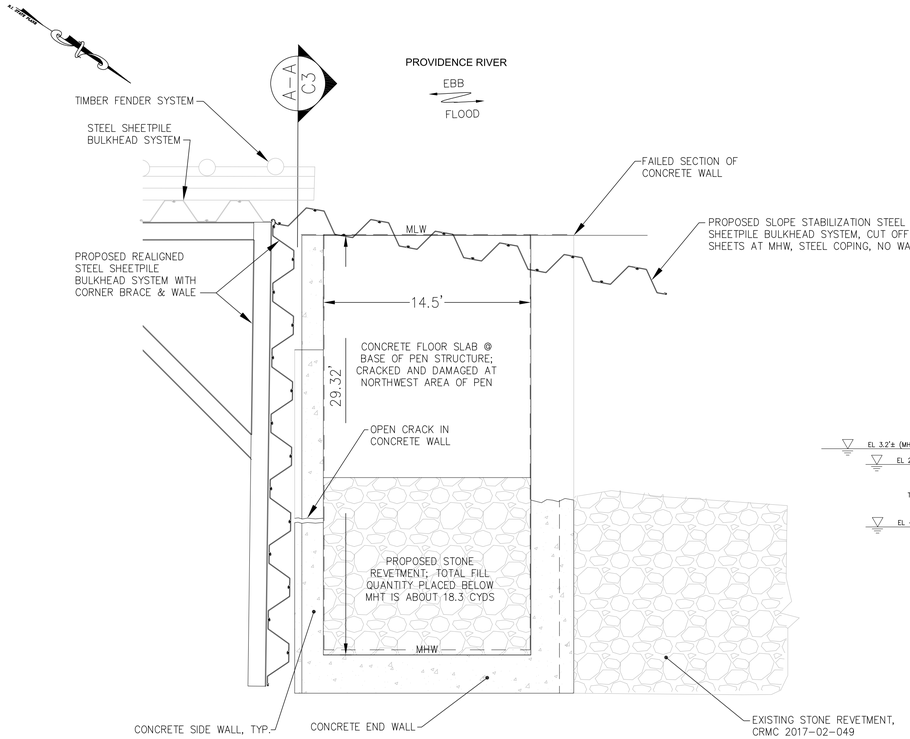
FAIRBANKS ENGINEERING CORP.
GEOTECHNICAL & MARINE ENGINEERS
42 Cobblestone Hill Road
Exeter, RI 02822
Office: 401.294.3484/Cell: 401.474.2361
rfairbanks@fairbankseng.com

Drawn: RWF
Checked: RWF
Scale: AS NOTED
DATE: 8-1-22

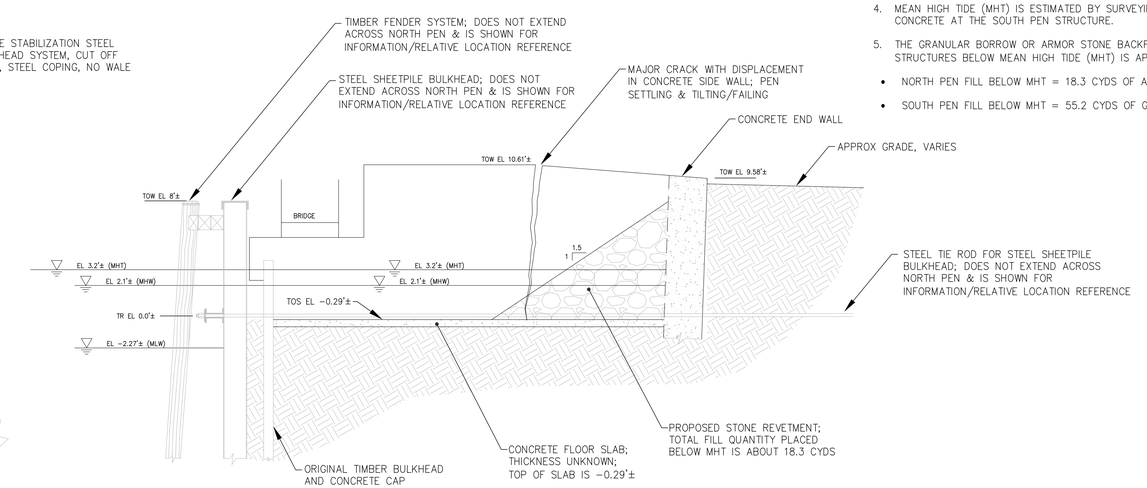
Concrete Pen Stabilization Project
McAllister Facility, Providence, RI
PREPARED FOR:
McAllister Towing of Narragansett Bay, LLC
1 India Street, Providence, RI 02903

EXIST'G & PROPOSED COND. PLAN

DWG. NO.
C2
SHEET 2 OF 3



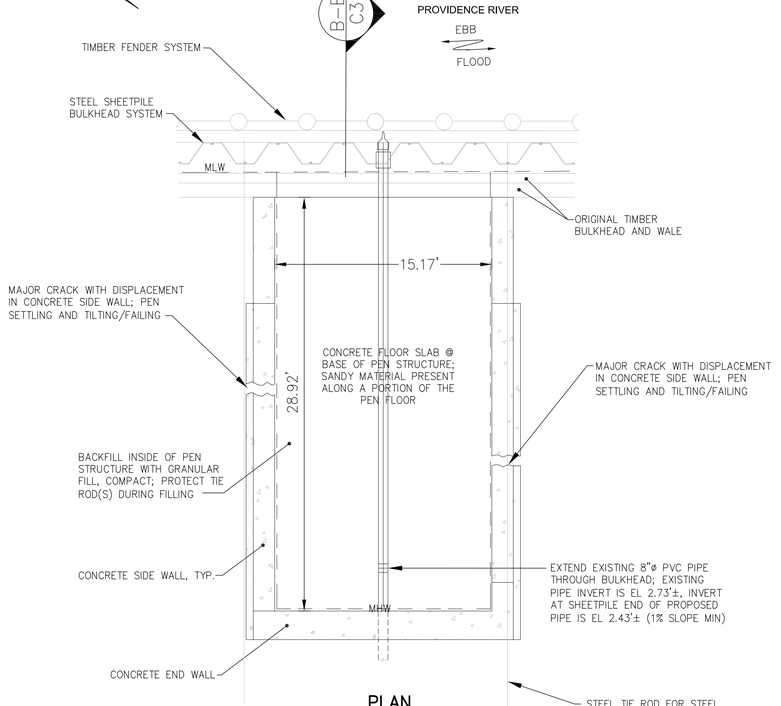
PLAN



SECTION A–A

PEN STABILIZATION NOTES:

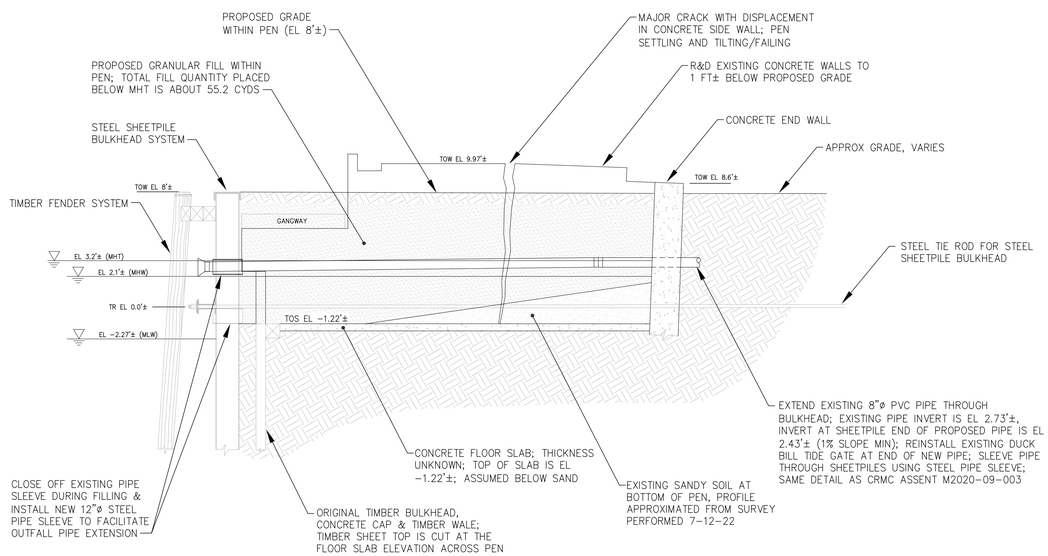
1. THE CONCRETE PENS WERE CONSTRUCTED IN THE LATE 1800'S/EARLY 1900'S TO FACILITATE SHIP CARGO TRANSFER FROM RAIL.
2. THE PENS ARE CONCRETE STRUCTURES (WALLS AND FLOOR) IN POOR CONDITION. THEY ARE ACTIVELY FAILING WITH CREATES SAFETY HAZARDS BOTH ONSHORE AND IMMEDIATELY OFFSHORE. A PORTION OF THE NORTH PEN WALL FAILED RECENTLY AND A LARGE PIECE OF CONCRETE WALL SECTION FELL INTO THE ADJACENT SHIP BERTH CAUSING A HAZARD TO NAVIGATION.
3. THE INTENT OF THIS PROJECT IS TO BACKFILL THESE STRUCTURES WITH GRANULAR SOIL AS A MEANS TO STABILIZE THEM AND REMOVE THE SAFETY RISKS THAT CURRENTLY EXIST.
4. MEAN HIGH TIDE (MHT) IS ESTIMATED BY SURVEYING THE BLACK STAIN LINE ON THE CONCRETE AT THE SOUTH PEN STRUCTURE.
5. THE GRANULAR BORROW OR ARMOR STONE BACKFILL PROPOSED TO BE PLACED WITHIN THE STRUCTURES BELOW MEAN HIGH TIDE (MHT) IS APPROXIMATELY:
   - NORTH PEN FILL BELOW MHT = 18.3 CYDS OF ARMOR STONE
   - SOUTH PEN FILL BELOW MHT = 55.2 CYDS OF GRANULAR BORROW



PLAN

NORTH CONCRETE PEN

SCALE: 1" = 5'



SECTION B–B

SOUTH CONCRETE PEN

SCALE: 1" = 5'

PERMIT PLANS
NOT FOR CONSTRUCTION

REVISIONS

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Scale: AS NOTED
DATE: 8-1-22

Concrete Pen Stabilization Project
McAllister Facility, Providence, RI
PREPARED FOR:
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SECTIONS & DETAILS

DWG. NO.
C3
SHEET 3 OF 3