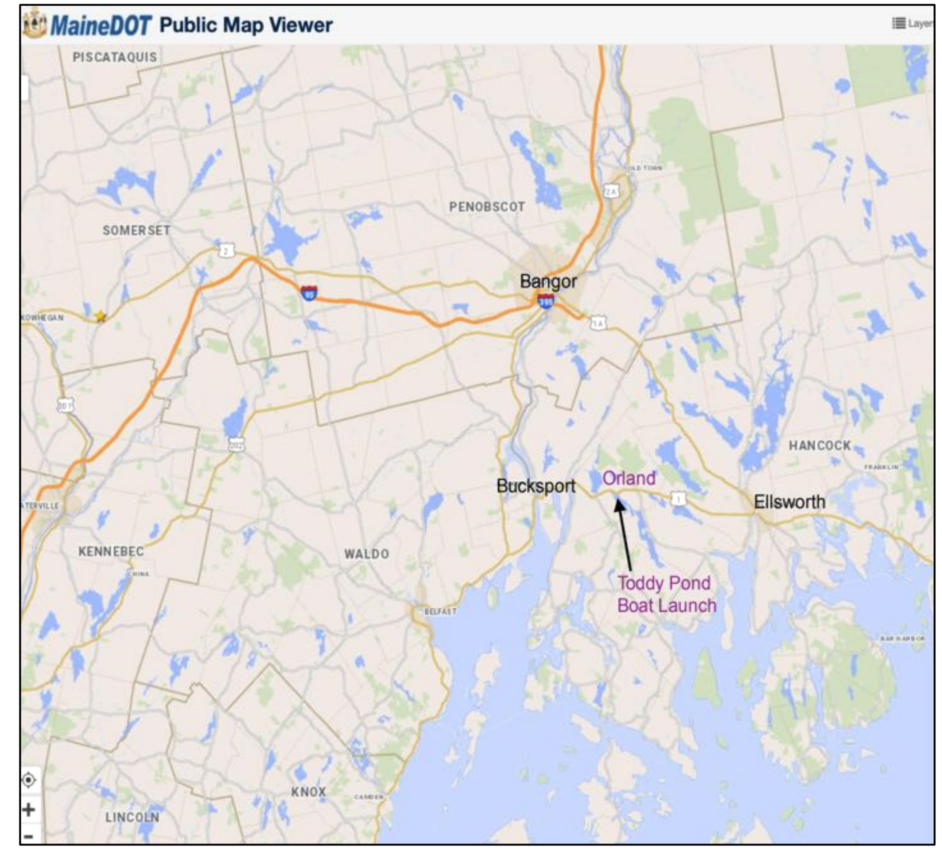
PHOTO MAP FROM GOOGLE EARTH

0 10 20 30 40 50
SCALE IN FEET

SITE PLAN

NORTH

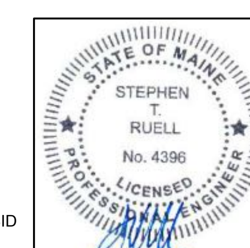


LOCATION PLAN

DRAWING LIST

1 Cover
2. Entrance Driveway Pavement
3. Ramp Plan and Profiles
4. Ranp Details
5. Specifications
6. 4x10 Panel Specs

ISSUED FOR BID
5-2-2024



RENOVATION OF TODDY POND BOAT LAUNCH

1117 ACADIA HIGHWAY, US RTE 1
ORLAND, MAINE 04472

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES
BGS PROJECT 3600

PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com

1
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Pavement Specifications:

1. Contractor is responsible for traffic control and coordination with highway officials.

2. Schedule work to minimize blocking the usage of Boat Launch facility, Coordinate with Owner,

3.Post signage announcing closure at least one week prior to closing facility. Provide barricades to block usage on the evening of the day prior to starting work.
Complete work in expeditious manner to minimize outage.

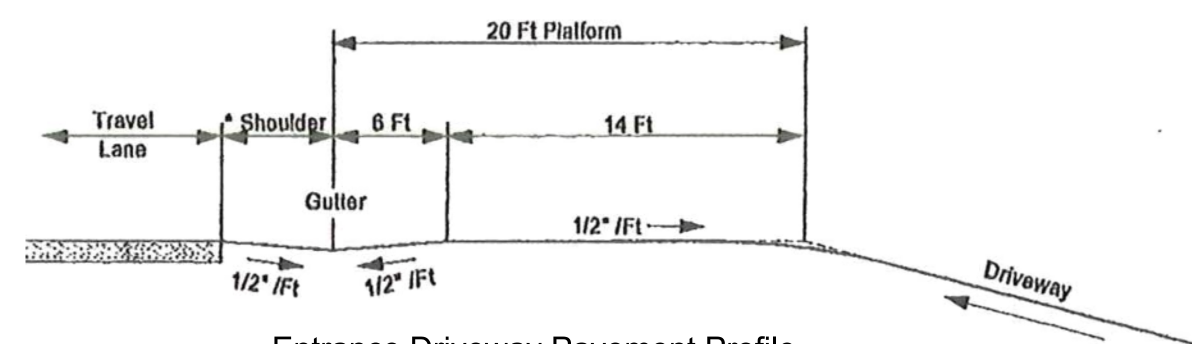
4. Remove existing pavement within the limits shown and remove from site. Recycle the material as reclaimed asphalt.

5. Grade and recompact the existing subbase. Reshape the entrance driveway to the Maine DOT standard profile shown below. If required repair and extend the existing subbase using MaineDOT Type D Gravel Subbase. Provide 3" of MaineDOT Type A Gravel Base and finish grade and compact to final dimensions.

6. Pavement shall be installed per Maine DOT Standard Specifications
   1.5" MaineDOT 12.5 mm Surface Course over
   2.5' MaineDOT 19.0 mm Binder Course

7. Loam and seed shoulders and repair any damage in mowed areas of property disturbed by Contractor, to provide a mowable lawn surface.

NOTE :
Grade of Existing Shoulder Should Be Maintained To Create A Gutter With a Minimum Of Three Inches Below The Edge Of Traveled Way.
*** Distance Of The Gutter From The Edge Of Traveled Way Should Be The Same As Existing Shoulder Or A Minimum Of 4 Feet.**



Entrance Driveway Pavement Profile

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED
PROFESSIONAL ENGINEER

NO.	REVISION	DATE

DESIGNED BY STR
DRAWN BY STR
BGS 3600
DATE REVISED 5-2-2024

Maine Bureau of Parks and Lands
Renovation of Toddy Pond Boat Launch

Entrance Driveway Pavement

PINNACLE HILL ENGINEERING
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2
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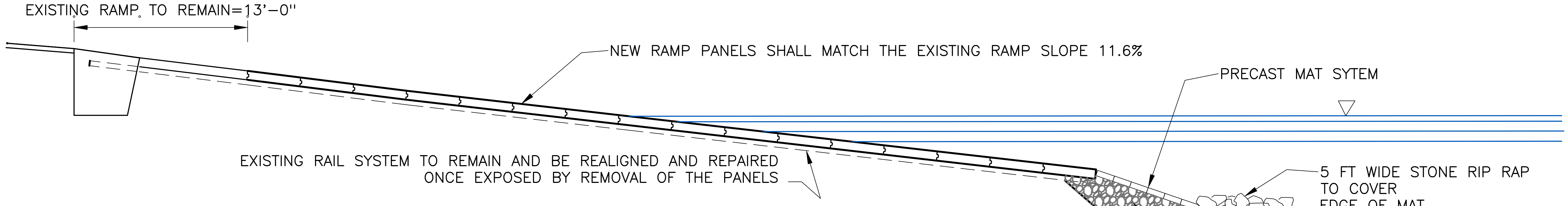
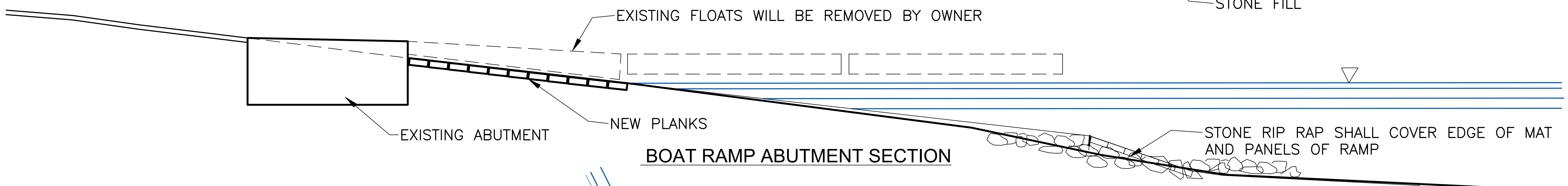
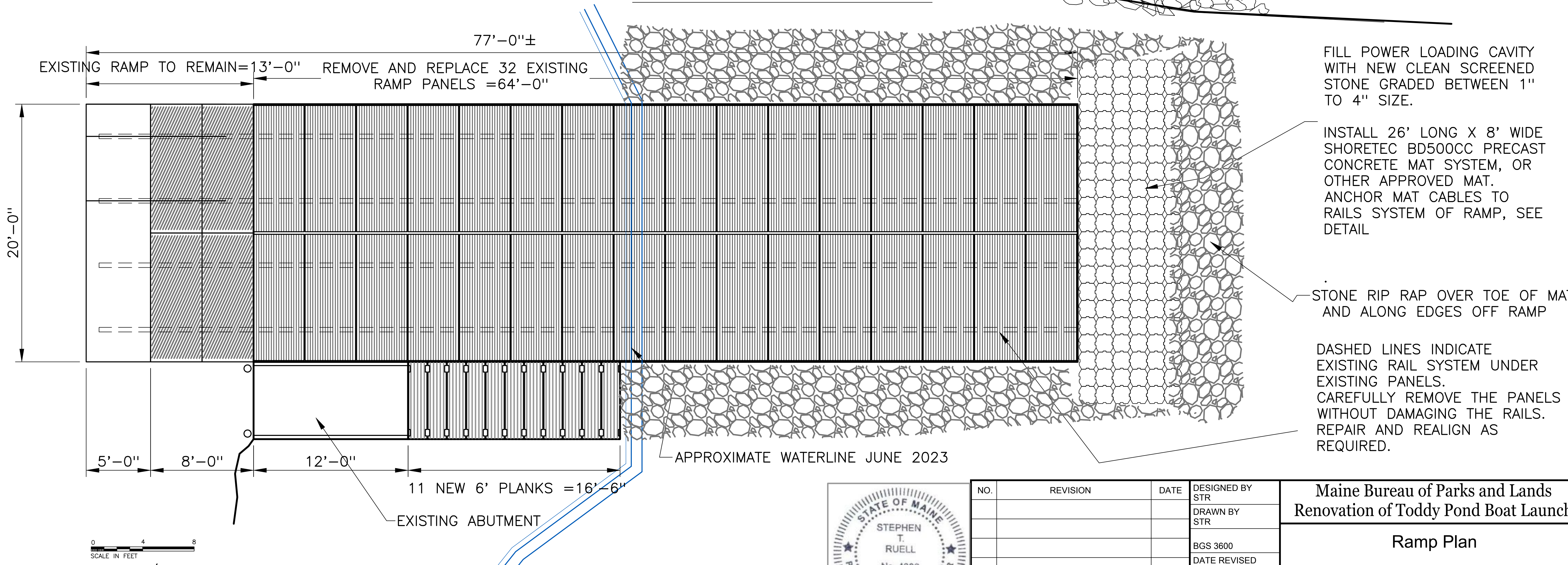


EXISTING RAMP TO REMAIN=13'–0"
NEW RAMP PANELS SHALL MATCH THE EXISTING RAMP SLOPE 11.6%
PRECAST MAT SYTEM
EXISTING RAIL SYSTEM TO REMAIN AND BE REALIGNED AND REPAIRED ONCE EXPOSED BY REMOVAL OF THE PANELS
5 FT WIDE STONE RIP RAP TO COVER EDGE OF MAT
STONE FILL

BOAT RAMP SECTION



BOAT RAMP ABUTMENT SECTION



77'–0"±
EXISTING RAMP TO REMAIN=13'–0"
REMOVE AND REPLACE 32 EXISTING RAMP PANELS =64'–0"
20'–0"
FILL POWER LOADING CAVITY WITH NEW CLEAN SCREENED STONE GRADED BETWEEN 1" TO 4" SIZE.
INSTALL 26' LONG X 8' WIDE SHORETEC BD500CC PRECAST CONCRETE MAT SYSTEM, OR OTHER APPROVED MAT. ANCHOR MAT CABLES TO RAILS SYSTEM OF RAMP, SEE DETAIL
STONE RIP RAP OVER TOE OF MAT AND ALONG EDGES OFF RAMP
DASHED LINES INDICATE EXISTING RAIL SYSTEM UNDER EXISTING PANELS. CAREFULLY REMOVE THE PANELS WITHOUT DAMAGING THE RAILS. REPAIR AND REALIGN AS REQUIRED.
5'–0"
8'–0"
12'–0"
11 NEW 6' PLANKS =16'–6"
APPROXIMATE WATERLINE JUNE 2023
EXISTING ABUTMENT
0 4 8
SCALE IN FEET

Scale 1/8"=1'–0"

BOAT RAMP PLAN

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED
PROFESSIONAL ENGINEER

NO.	REVISION	DATE

DESIGNED BY STR
DRAWN BY STR
BGS 3600
DATE REVISED 5-2-2024

Maine Bureau of Parks and Lands
Renovation of Toddy Pond Boat Launch

Ramp Plan

PINNACLE HILL ENGINEERING
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3
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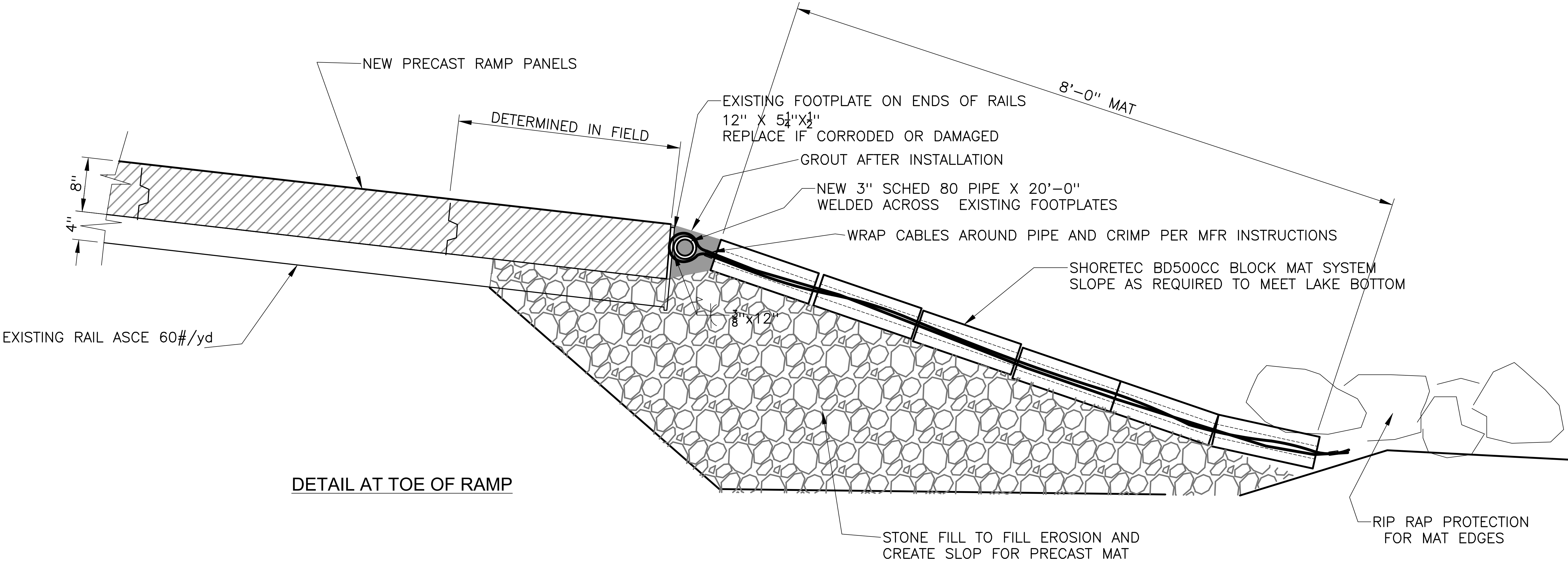
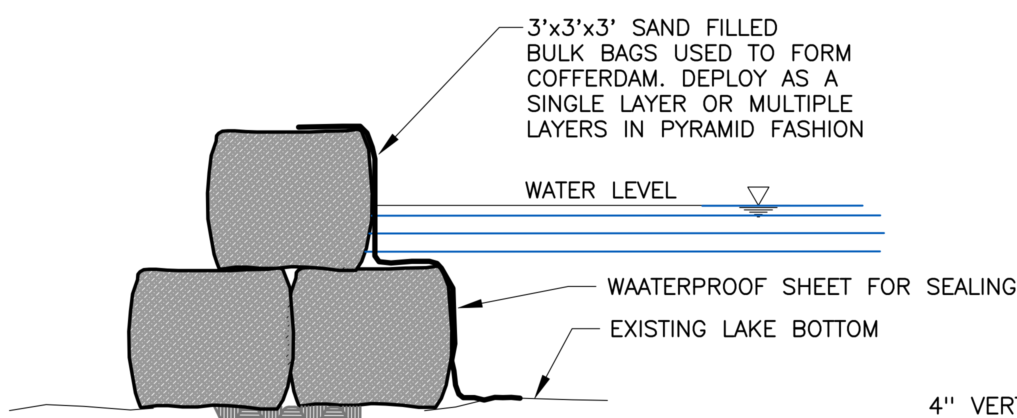
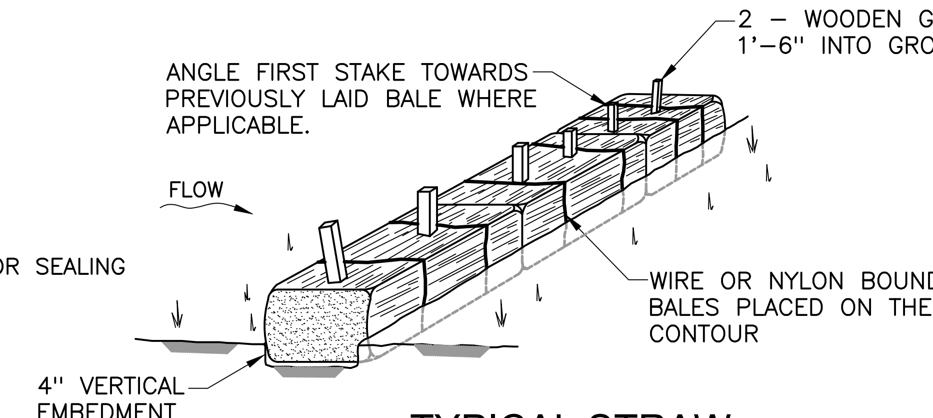
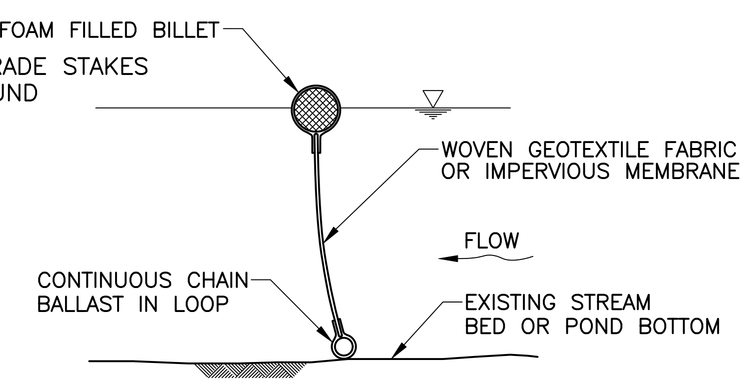


DETAIL AT TOE OF RAMP







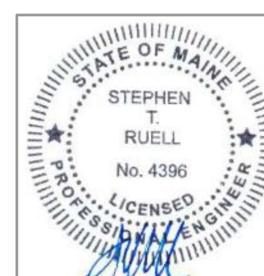
TURBIDITY CURTAIN DETAIL

TYPICAL STRAW
OR HAY BALE DIKE

COFFERDAM DETAIL

THE CONTRACTOR IS RESPONSIBLE TO PROPOSE THE TYPE OF COFFERDAM THAT THEY WISH TO USE, SUBJECT TO OWNER REVIEW.

THIS DETAIL OF SAND FILLED BULK BAGS USED TO FORM A COFFERDAM IS PROVIDED AS AN EXAMPLE OF ONE POSSIBLE METHOD THAT HAS MINIMAL ENVIRONMENTAL IMPACT, THE CONTRACTOR MAY USE OTHER METHODS OR PROPRIETARY SYSTEMS TO DEWATER THE SITE. AN EARTH FILL COFFERDAM IS NOT ACCEPTABLE DUE TO SEDIMENTATION AND PERMITTING ISSUES..



NO.	REVISION	DATE

DESIGNED BY STR	Maine Bureau of Parks and Lands Renovation of Toddy Pond Boat Launch
DRAWN BY STR	
BGS 3600	Ramp Details
DATE REVISED 5-2-2024	

PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
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4
REV. O

A. SCOPE OF WORK

a. Work items include the following plus related and incidental items required to make a complete and functional facility. All labor, materials, and equipment are supplied by the Contractor.

b. Procure all required and incidental element, tools and personnel before work on site begins, to maximum extent possible. Schedule as one continuous operation once started to minimize effect of boating facility closure or disruptions, and minimize the risk from the dewatering requirements.

c. Traffic Control and Roadway Maintenance- Coordinate road closures with local and state jurisdictions. Post barricades, signage and provide flaggers or other provisions required by the work at the entrance. Closure should be avoided during high boater use periods to the extent practical.

d. After completion of the project the facility shall be returned to a condition equal or better than it was prior to the project, as judged by the Owner.

e Provide erosion control measures, including silt fences and turbidity curtains as required and maintain until no longer needed.

f. Dewatering

1. Provide cofferdams as needed to complete work. It is expected that a cofferdam will be required. Contractor is responsible for design and construction of the cofferdam. Do not use earth fill type of cofferdam which can introduce sediment.
2. Remove cofferdam as soon as practical. Remove all components of the cofferdam from the water body.

g. Demolition:
1. Remove the existing concrete ramp slabs by lifting out vertically, them loading in a truck and removing from site. Remove the ramp under the float system as well.
2. Examine, realign and repair the rail system under the slabs. Regrade the gravel and add new graveel for the new structure
3. Confirm all measurements of existing remaining structures after exposing them. Notify Owner of any issues found. Notify Owner when ready for inspection which must be done before placement of the new structure.
4. Materials removed during demolition is property of Contractor and must be removed from site.

h. Construct New Ramp
1. The new ramp slabs will be supplied by the Owner, but the Contractor will be responsible to transport them to the site. The location will be provided during bidding.
2. Lift the panels as instructed by the slab manufacturer. Lower the precast structure into place without damage. Damage caused by Contractor may require replacement of panels by the Contractor.
3. Form and place ready mix concrete to connect the new precast where indicated on the drawings.

i. VAULT TOILET WORK SCOPE

1. The Owner will be engaging a commercial port-a-john service in the future.

2. Contractor shall have the tank contents removed and disposed of properly. Demolish, remove, and dispose of the existing vault toilet including concrete vault. Saw cut the edge of the parking lot and remove the existing approach sidewalk and the culvert.
3. Replace the existing culvert with a matching diameter and length. Fill and compact the vault excavation. Grade for slope of 2% from the parking area to the top of the slab.
4. Place a new 6-6" x 6'-6" x 6" concrete slab for the portable units.
5. Replace the sidewalk with 6'-0" x ~10'-0" approach sidewalk,
6. All concrete 3000 psi at 28 days, air entrained, reinforced with #4 bar at 12" each way. Broom finish. Meet ADA Guidelines.

B. JOB CONDITIONS

a. Do not cross property lines of adjacent property owners, contain all work, equipment and travel to stay within the road ROW and BPL lands.

b. The work shown is intended to be performed during the late summer and fall season. Discuss plan of operations and coordinate with the Owner to allow the work to be done in dry conditions to the extent practical. Contractor shall schedule work around water level changes due to rainfall events, to allow placing concrete work if any is required, in dry conditions, and to avoid damage to the work in progress.
c. Provide construction temporary facilities as required to support the work. Remove as soon as practical.
d. Clean up site to as-found or better condition, ready for final acceptance.
e. Final payment will be made only after final acceptance.

C. FLOODING DAMAGE -The Contractor shall schedule work around water level changes to allow placing work in dry conditions, and to avoid damage to the work in progress due to high rainfall events. Damage to partially completed work is Contractors responsibility

D. EROSION CONTROL
a. Provide all required soil erosion provisions required to meet Maine DEP and U.S. Army Corps of Engineers requirements under the permits obtained by the Owner. Meet or exceed the standards of the Maine Soil Erosion Control Best Management Practice guidelines.
b. Prior to start of soil disturbance, encircle the downslope side of the work area and any stockpiles with a silt fence, or if it is a waterbody, with a turbidity curtain. Install hay bale dikes to trap sedimentation in ditches and swales that carry drainage and which might receive sediment. Remove sediment as required before removal of silt fences and hay bale dikes.
c. Install a turbidity curtain outside the perimeter of any excavations which could result in sediment plumes in the upstream or downstream water bodies.

d. Maintain soil erosion control measures until the permanent vegetation has been reestablished.

G. EARTHWORK MATERIALS
Provide materials with the following Percentage by Weight Passing the Soil Sieve Designated,

Granular Borrow	Stone Fill for Toe of Ramp
4-inch 100%	4-inch 100%
1.5-inch 45%--100%	1.5-inch 0%--10%
No. 4 10%-45%	
No. 40 0%-15%	

f. Riprap -Comply with Maine DOT 703.26 Plain and Hand Laid Riprap
Stone for riprap shall consist of hard, sound durable rock that will not disintegrate by exposure to water or weather. Stone for riprap shall be angular and rough. Rounded, subrounded or long thin stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (200 lbs) shall have an average dimension of approximately 12 inches. Larger stones may be used if approved by the Owner. Fifty percent of the stones by volume shall have an average dimension greater than 9 inches (50 lbs).

g. Loam: Satisfactory loamy soil materials free of clay lumps, rock or debris, capable of being placed and compacted.

h. Geotextile for rip rap filter: High strength geocomposite with a high apparent opening size meeting the requirements of Tensar GC-654050 or equal. Anchor to subgrade with anchor pins or ground staples.

i. COMPACTION -Percentage of Maximum Density Requirements: Compact soil to not less than 95% of maximum in accordance with ASTM D 1557 or ASTM D 2049. Backfill placed within 5-feet horizontally of structures shall be compacted with hand operated equipment.
j. The riprap placement method should avoid segregation. The riprap should be placed with a clam shell or bucket lowered to the slope. Material should not be dumped or dropped through air or water. Placement should begin at the bottom of slopes and proceed up slope so that all material is placed with support from below.

H. LOAM AND SEEDING MATERIALS

a. In general the work should disturb limited areas of the existng shoreline, and the Owner intends that these areas will be stabilized with Riprap. In any other areas disturbed by the Contractor that are subject to erosion, Contractor shall clean up, rake, seed and mulch the surface.

b. Seed mixture will be provided by Contractor, subject to approval of Owner for the location.
used in other areas.

c. Mulch provided by Contractor -Hay or Straw: two 90 lb bales per 1,000 sq ft.

d. Seeding shall occur as soon as practical. After September 15, use Dormant Seeding of the permanent mixture.

e. Keep all areas watered and in good condition, reseeding if and when necessary until a good, healthy, uniform growth is established over the entire area. Maintain the seeded area in an approved condition until final acceptance of the Contract.

f. On slopes, protect against washouts by an approved method. At the Contractor's expense, regrade and reseed washouts, if any.

J. CONCRETE
a. Ready Mix Concrete: Fc' = 4000 PSI at 28 days,
b. Precast Concrete: Fc' = 5000 PSI at 28 days
c. Air entrainment 4% to 6%.
d. Maximum water cement ratio 0.40.
e. Mix design submittal required prior to placement.
f. Reinforcement bars ASTM A615, grade 60 KSI.
g. All fasteners and hardware hot-dipped galvanized.
h. Chamfer all edges and corners of concrete, 1" X 1"
i. Minimum Concrete Cover over Reinforcement
Top and bottom surface slabs - 2"
Walls Exterior faces exposed to water - 3"
Walls Exterior faces backfilled - 2"
Cast against earth or rock surfaces - 3"

L. STEEL-
a. Plates and shapes -ASTM A36 or better.
b. Steel Finish- Unless noted otherise exposed steel items should be be hot dipped galvanized after fabrication, or epoxy coated with 20 mils of approved epoxy.
c. Bolts- ASTM A307 or A325 galvanized, unless noted otherwise.
d. All exposed bolts, fasteners, washers and hardware shall be hot dipped galvanized.

NO.

REVISION	DATE

DESIGNED BY STR
DRAWN BY STR
BGS 3600
DATE REVISED 5-2-2024

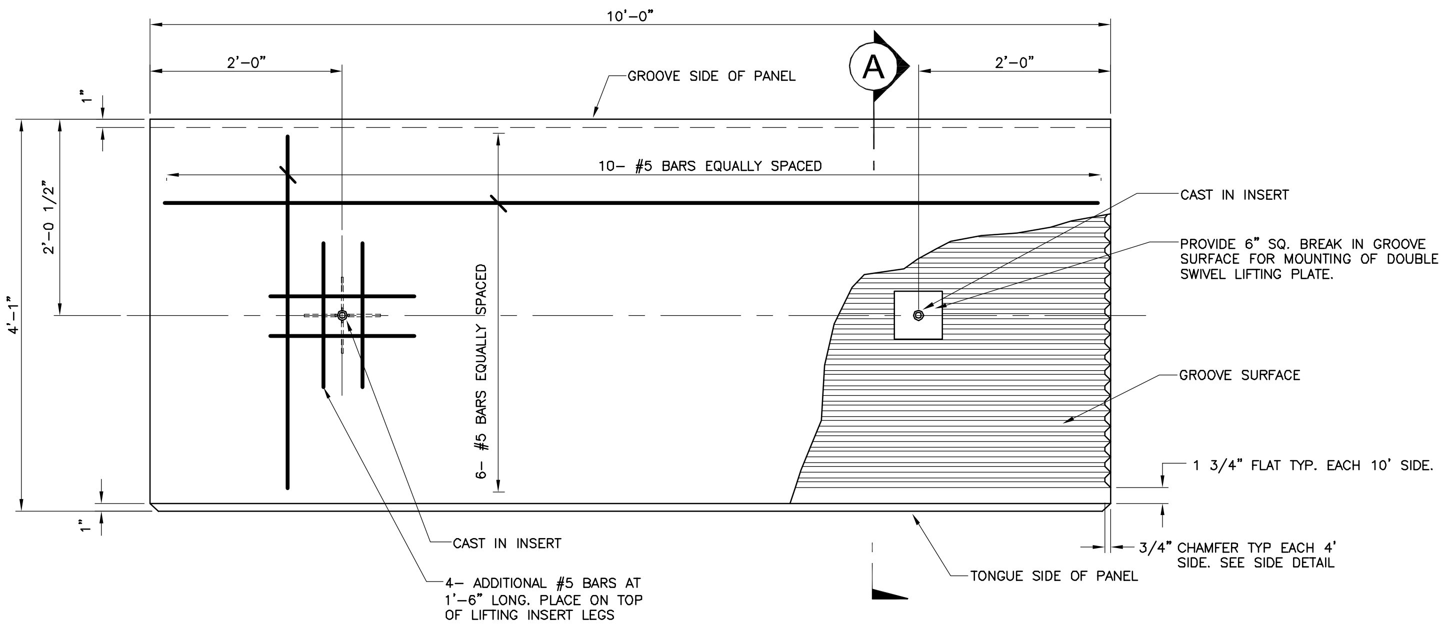
Maine Bureau of Parks and Lands
Renovation of Toddy Pond Boat Launch

SPECIFICATIONS

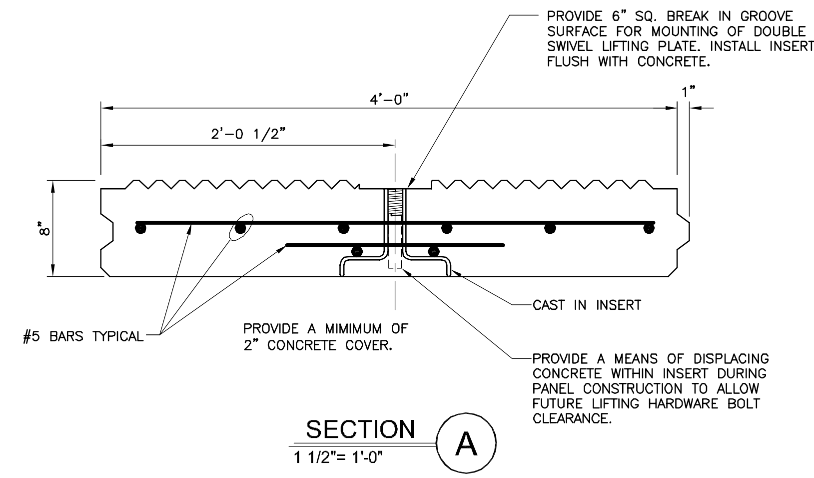
PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com

NOTES,

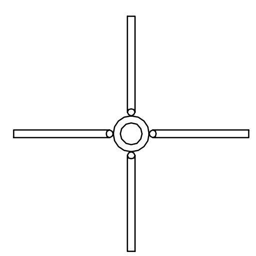
1. CONCRETE– Fc'= 5000 PSI AT 28 DAYS, AIR ENTRANMENT 4% TO 6%. MAXIMUM WATER CEMENT RATIO 0.45. MIX DESIGN SUBMITTAL REQUIRED PRIOR TO PLACEMENT.
2. REINFORCEMENT BARS– ASTM A615, GRADE 60 KSI.
3. APPROXIMATE PANEL WIEGHT = 4,000 LBS.



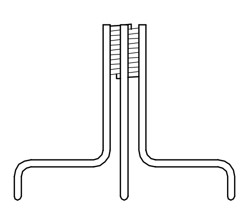
TYPICAL PANEL PLAN
1"= 1'-0"



SECTION A
1 1/2"= 1'-0"



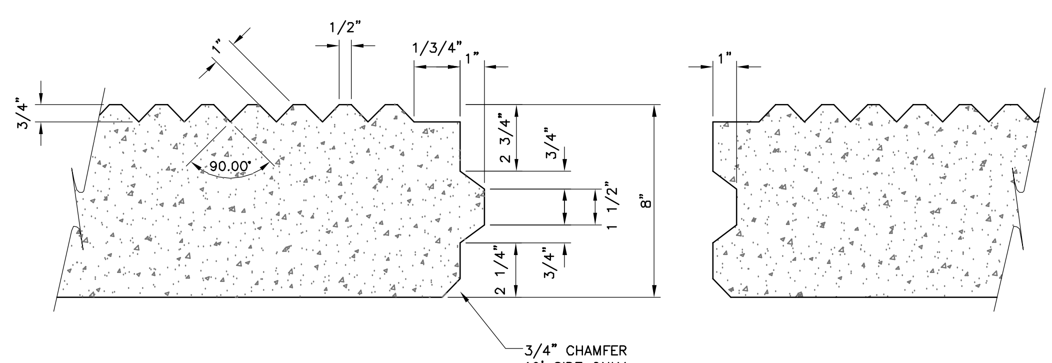
TOP VIEW



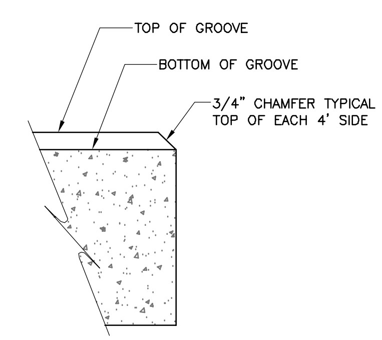
SIDE VIEW

DAYTON/RICHMOND T-1
SINGLE PICKUP INSERT
1" BOLT DIAMETER FOR 7"
PANEL THICKNESS. 2 PER PANEL
CONTRACTOR SUPPLIED.

CAST IN INSERT DETAIL
3"= 1'-0"



TYPICAL TONGUE AND GROOVE DETAIL
3"= 1'-0"



SIDE DETAIL
3"= 1'-0"

DATE	REVISION	CHKD.
04-13-06	ISSUED FOR BID	

Kleinschmidt
Energy & Water Resource Consultants

STATE OF MAINE
DEPARTMENT OF CONSERVATION
BUREAU OF PARKS AND LANDS

DRAWN BY:	D. QUA
CHECKED BY:	STR
DATE:	03-21-06
SCALE:	AS SHOWN
PROJECT NO:	314-043
FILE NAME:	314043PLANKDETAILS.dwg
SHEET	1 OF 1

CONCRETE BOAT RAMP PANEL PLAN AND DETAILS

Toddy Pond Sht 6

DIRECTOR PARKS AND LANDS	DATE	DIRECTOR B.G.S	DATE

J:\314\043\Drawings\working drawings\plank details.dwg