

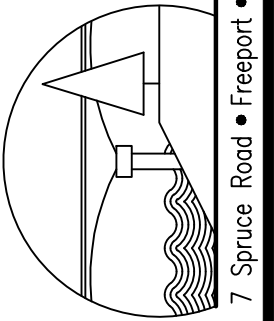
# TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I

BOWDOINHAM, MAINE  
PROJECT NO. 18-20



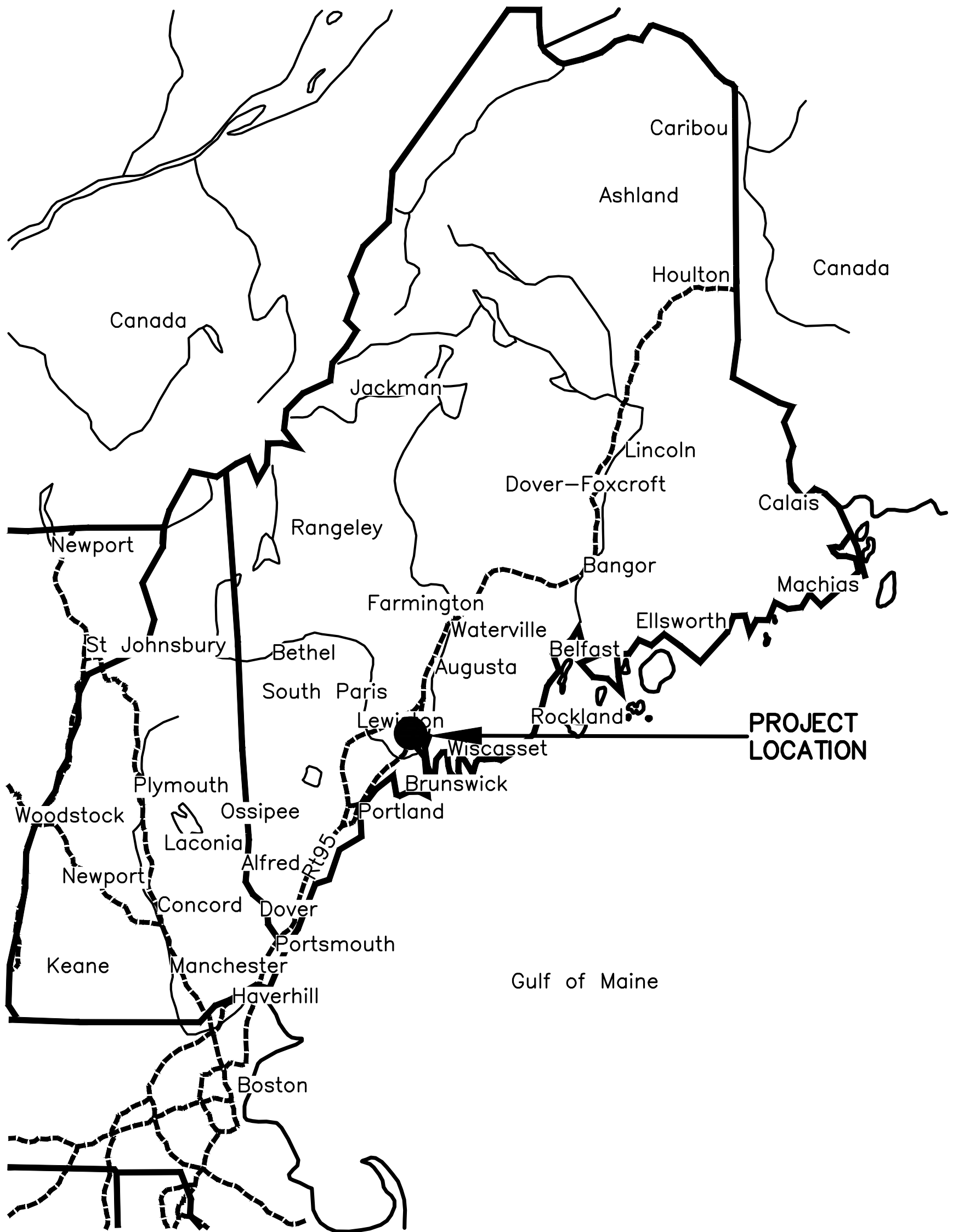
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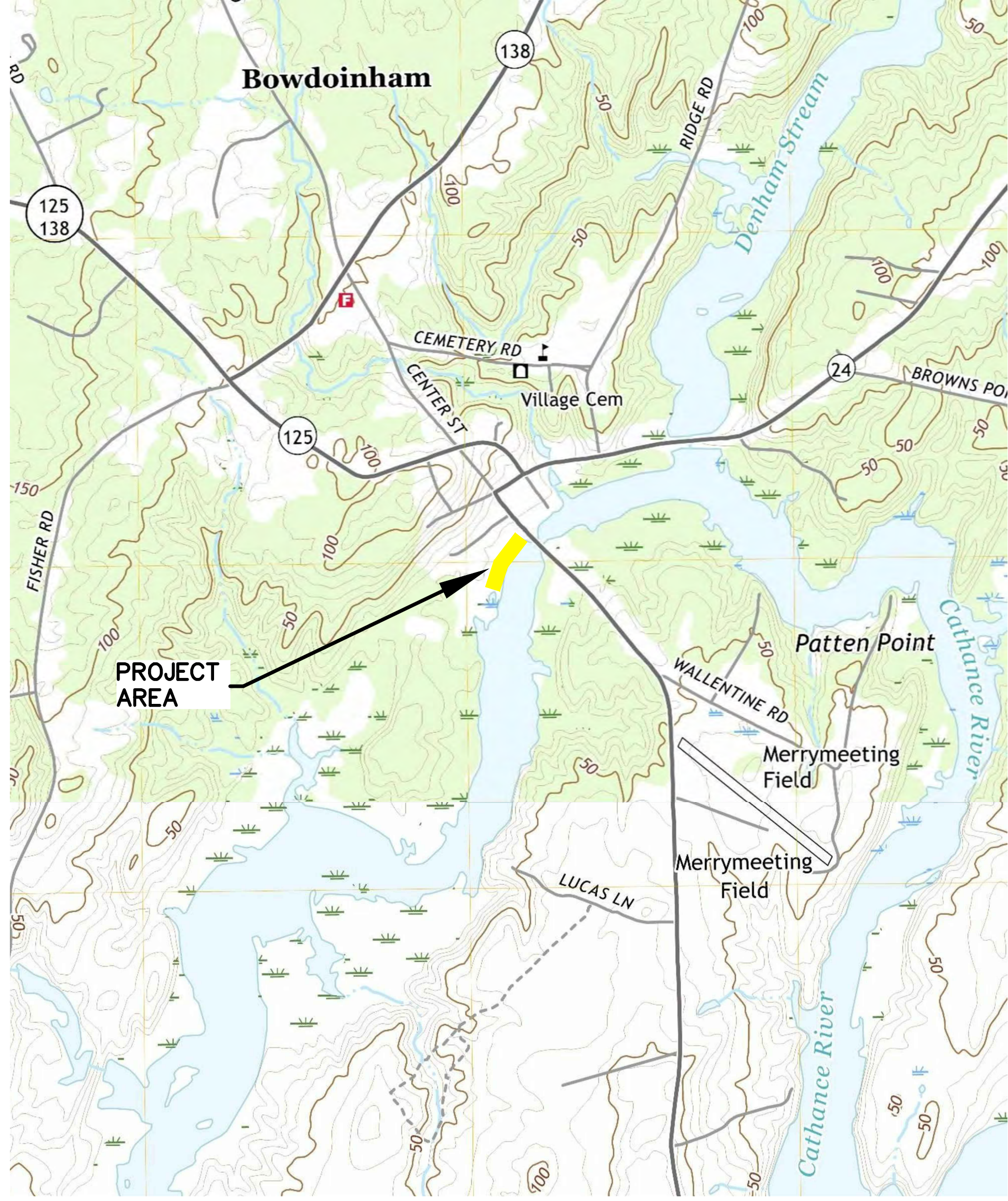
**LOCATION MAP**  
NOT TO SCALE

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
G-1	COVER SHEET
G-2	NOTES, SCHEDULES & EROSION CONTROL DETAILS
C-1	OVERVIEW PLAN
C-2	BOAT LAUNCH - EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
C-3	BOAT LAUNCH - LAYOUT PLAN
C-4	BOAT LAUNCH - GRADING PLAN & LAUNCH PROFILE
C-5	BOAT LAUNCH - DETAILS
C-6	SHORELINE STABILIZATION - EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
C-7	SHORELINE STABILIZATION - SITE PLAN
C-8	SHORELINE STABILIZATION - TYPICAL SECTIONS I
C-9	SHORELINE STABILIZATION - TYPICAL SECTIONS II
C-10	SHORELINE STABILIZATION - DETAILS
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L-2	LANDSCAPE & SITE AMENITIES PLAN
L-3	LANDSCAPE SITE AMENITIES DETAILS

PRELIMINARY  
FOR REVIEW ONLY

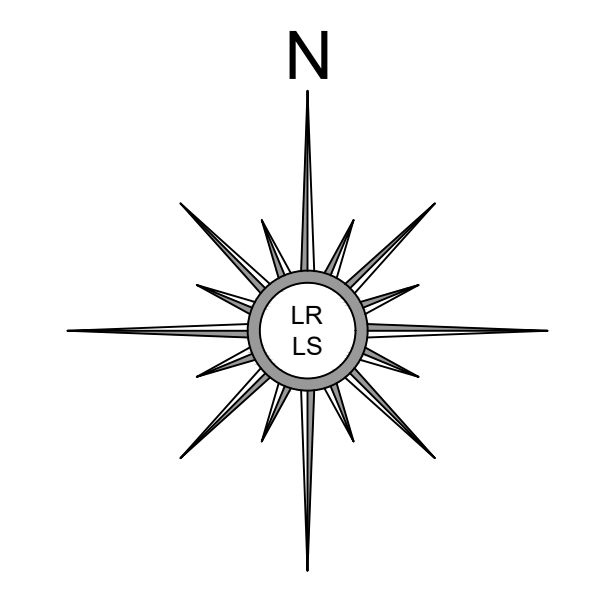
NOT FOR CONSTRUCTION



**USGS TOPO MAP - BOWDOINHAM/BRUNSWICK 2018 QUADRANGLES**  
SCALE: 1"=1,000'

x:\18\18-20 bowdoinham waterfront\phaseb-livingshorelines\cad\18-20-bowdoinham-gen.dwg 3/27/2020

DESIGNED BY:	TJP
DRAWN BY:	MMC
CHECKED BY:	BUB
SCALE:	AS SHOWN
COVER SHEET	
PROJECT: TOWN OF BOWDOINHAM	
WATERFRONT PLAN - PHASE I	
BOWDOINHAM, MAINE	
DATE:	MARCH 2020
CONTRACT NO.:	18-20
SHEET NO.:	G-1
REV.:	A
NO.:	NO.
DATE:	DATE
INT.:	INT.
TIP:	TIP
SET:	SET
SUBMISSION:	SUBMISSION
ACOE PERMITTING:	ACOE PERMITTING
MAINE DEP.:	MAINE DEP.



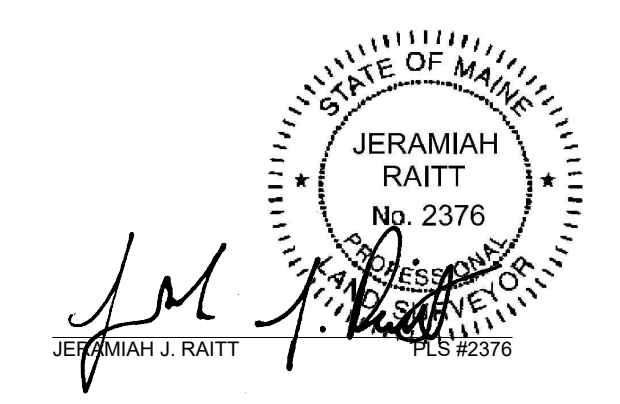
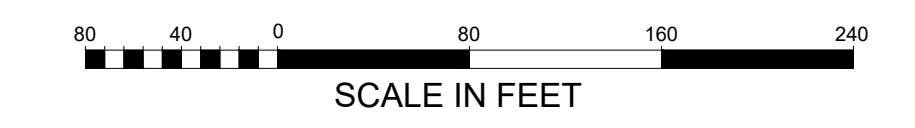
SOURCE  
SPCS - 1983 MAINE WEST

**NOTES**

- 1) RECORD OWNERS: INHABITANTS OF THE TOWN OF BOWDOINHAM  
REFERENCE DOCUMENTS: DEED BOOK 1615, PAGE 321 DATED SEPTEMBER 2, 1998  
DEED BOOK 1649, PAGE 157 DATED DECEMBER 14, 1998  
SEE ALSO: "STANDARD BOUNDARY SURVEY & TOPOGRAPHIC PLAN" FOR CENTRAL CHEMICAL CORPORATION DATED APRIL 24, 1998 BY HARTY LAND SURVEYING RECORDED IN PLAN BOOK 34, PAGE 25.
- 2) PROPERTY LINES AND A SIGNIFICANT PORTION OF THE AREA OUTSIDE OF THE DEFINED SCOPE OF WORK OF THIS PROJECT ARE DEPICTED ON THE HARTY PLAN CITED ABOVE. VARIOUS STORM WATER DRAINAGE STRUCTURES NOT OBSERVED BY THIS SURVEYOR DURING THE COURSE OF THE FIELD WORK CONDUCTED IN 2019 HAVE BEEN SHOWN AS DEPICTED ON THE HARTY PLAN. THE CURRENT STATUS OF SAID STRUCTURES IS UNKNOWN.
- 3) BEARINGS ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM OF 1983, MAINE WEST ZONE, AS DETERMINED BY REAL TIME KINEMATIC GNSS TECHNIQUES WITH CORRECTIONS APPLIED BY THE MAINE DOT VRS NETWORK.
- 4) ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS DETERMINED BY REAL TIME KINEMATIC GNSS TECHNIQUES WITH CORRECTIONS APPLIED BY THE MAINE DOT VRS NETWORK.
- 5) THE HIGHEST ANNUAL TIDE (HAT) ELEVATION OF 2.9 FEET (NAVD88) IS LISTED IN A TABLE PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AVAILABLE ONLINE. THE DATA FOR THE "BOWDOINHAM, CATHANCE RIVER" LOCATION IS DEPICTED HEREON.
- 6) A PORTION OF THE PROJECT AREA IS SHOWN IN A SPECIAL FLOOD HAZARD AREA, ZONE AE (AREAS OF 100 YEAR FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED) AS DEPICTED ON THE FLOOD INSURANCE RATE MAP FOR SAGADAHOCH COUNTY WITH MAP NUMBER 23023C0094F AND AN EFFECTIVE DATE OF JULY 16, 2015. THE BASE FLOOD ELEVATION OF 8 FEET (NAVD88) IS DEPICTED HEREON.

**LEGEND**

- PIPE OR ROD FOUND
- RIGHT OF WAY
- PROPERTY LINE
- ▨ BUILDING
- ▨ PAVEMENT
- ▨ CONCRETE
- ▨ GRANITE CURB
- ▨ GRAVEL
- ▨ TRAIL
- ⊠ CATCH BASIN
- ⊙ ELECTRIC OUTLET
- ⊙ UTILITY POLE AND ANCHOR
- - - CONTOURS - MAJOR
- - - CONTOURS - MINOR



<b>TOPOGRAPHIC SURVEY</b>	
FOR	TOWN OF BOWDOINHAM 8 RIVER ROAD, BOWDOINHAM, MAINE
SITE	8 RIVER ROAD BOWDOINHAM, MAINE
<b>LITTLE RIVER</b> LAND SURVEYING, INC. ME PLS #2376 NH LLS #957 PO BOX 332, LISBON FALLS MAINE 04252 (207) 841-0056	DATE: JUNE 28, 2019  SCALE: 1" = 80'  PROJECT #19-025 DRAWING #19-025  DRAWN BY: TJC CHECKED BY: JUR

**SCOPE OF WORK SUMMARY**

- SUBMIT SCHEDULE OF WORK FOR APPROVAL BY OWNER.
- VERIFY ON-SITE LIMITS OF WORK AND MATERIALS STAGING.
- PERFORM "DIG SAFE" UTILITY LOCATION.
- INSTALL EROSION CONTROL MEASURES.
- CONSTRUCTION SHORELINE STABILIZATION AND WATER ACCESS IMPROVEMENTS
- INSTALL PLANTING SOIL LAYERS & EROSION CONTROL BLANKET.
- INSTALL NEW PLANTINGS.
- COVER REVEGETATED AREAS WITH EROSION CONTROL MULCH MIX.
- REMOVE EXCESS MATERIAL FROM SITE AS NECESSARY.
- RESTORE ALL REMAINING DISTURBED AREAS.
- REMOVE EROSION CONTROL MEASURES

**PROJECT COORDINATION**

- CONTRACTOR SHALL COORDINATE ALL SHORELINE STABILIZATION WORK WITH OWNERS RESIDENTIAL BUILDING AND GROUNDS IMPROVEMENT PROJECT.
- A BRIEF LIST OF PERMIT CONDITIONS IS PROVIDE FOR CONTRACTOR REFERENCE. THIS LIST IS NOT COMPREHENSIVE. THE CONTRACTOR SHALL BE FAMILIAR WITH THE CONDITIONS OF ALL OWNER PROVIDED LOCAL, STATE AND FEDERAL PERMITS AND SHALL BE RESPONSIBLE FOR OBTAINING ALL ADDITIONAL PERMIT NECESSARY TO COMPLETE THE WORK.
  - (TBD PENDING MaineDEP, ACOE AND TOWN OF BOWDOINHAM PERMIT APPROVALS)
- COPIES OF ALL PERMITS SHALL BE MAINTAINED ON-SITE FOR THE DURATION OF THE CONSTRUCTION PERIOD.

**GENERAL NOTES**

- THE CONTRACTOR SHALL COMPLY WITH FEDERAL, STATE AND LOCAL REGULATORY REQUIREMENTS.
- THE CONTRACTOR SHALL BE GOVERNED BY THE CONSTRUCTION SAFETY RULES AS ADOPTED BY THE STATE BOARD OF CONSTRUCTION SAFETY, AUGUSTA, MAINE AND THE SAFETY AND HEALTH REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AS PROMULGATED BY THE US DEPARTMENT OF LABOR.
- THE OWNER IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS, RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH EACH PERMIT AND RIGHTS OF OWNERSHIP/ACCESS PRIOR TO BIDDING THE WORK, AND SHALL ABIDE BY THE PROVISIONS OF EACH FOR THE DURATION OF CONSTRUCTION. COPIES OF SUCH PERMITS AND OWNERSHIP/ACCESS RIGHTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID, COSTS FOR COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATORY REQUIREMENTS.
- THE CONTRACTOR SHALL TAKE PRE-CONSTRUCTION PHOTOGRAPHS AND PROVIDE COPIES TO THE OWNER PRIOR TO CONSTRUCTION. THIS WORK SHOULD INCLUDE ALL PROPERTY THAT MAY BE IMPACTED BY THE PROJECT.
- ALL AREAS AND SITE FEATURES (INCLUDING BUT NOT LIMITED TO BUILDINGS, RETAINING WALLS, FENCES, VEGETATION, ETC.) THAT ARE DISTURBED BY THE CONTRACTOR WHICH ARE NOT TO BE PAVED, SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER. THIS WORK IS CONSIDERED INCIDENTAL TO THE CONTRACT AND SHALL BE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STAGING AREAS SHALL BE REVIEWED BY, COORDINATE WITH AND FOUND ACCEPTABLE TO THE OWNER AND ENGINEER. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL STAGING AND STORAGE OF MATERIALS.

**EROSION CONTROL NOTES**

- THE CONTRACTOR IS RESPONSIBLE FOR PREVENTION OF EROSION FOR THE DURATION OF THE PROJECT.
- APPLICATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES FOR THE PROJECT SHALL BE IN ACCORDANCE WITH PROCEDURES AND SPECIFICATIONS OF THE CURRENT MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION; BEST MANAGEMENT PRACTICES. DETAILS OF KEY EROSION CONTROL BMPs ARE PROVIDED ON THE PLANS
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EXCAVATION TAKES PLACE.
- INSTALL EROSION CONTROL BLANKET ON ALL PROPOSED SLOPES 2:1 OR STEEPER, UNLESS SHOWN OR NOTED OTHERWISE.
- SLOPE STABILIZATION AND RECONSTRUCTION SHALL PROCEED IN A LINEAR FASHION TO ENSURE THAT PROGRESSIVE SECTIONS CAN BE STABILIZED.
- ALL EROSION CONTROL MEASURES, SEEDING AND MULCHING SHALL BE INSPECTED WEEKLY, AFTER RAINSTORMS AND DURING RUNOFF EVENTS. ALL MEASURES SHALL BE REPAIRED OR REPLACED WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DAMAGE.
- SEEDED AND MULCHED AREAS SHALL BE MAINTAINED UNTIL FINAL ACCEPTANCE OF THE WORK BY THE ENGINEER OR OWNERS REPRESENTATIVE.
- ALL WORK THAT EXTENDS BELOW THE HIGHEST ANNUAL TIDE ELEVATION SHALL BE COMPLETED IN THE DRY, EITHER DURING LOW TIDES OR BY UTILIZATION OF COFFER DAMS, AND SHALL BE STABILIZED AT THE END OF EACH WORK DAY DURING THE CONSTRUCTION PERIOD.
- EQUIPMENT WHICH CANNOT ACCESS THE SITE BY BARGE WILL NOT BE ALLOWED IN THE INTERTIDAL ZONE UNLESS AUTHORIZED BY THE OWNER.
- THE CONTRACTOR SHALL MONITOR WIND AND WAVE CONDITIONS AND SHALL TAKE APPROPRIATE ACTION TO PROTECT THE WORK FROM STORM DAMAGE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTROL DUST TO TOLERABLE LIMITS OF THE OWNER AND THE STATE. NO EARTH MATERIAL OR CONSTRUCTION DEBRIS SHALL BE TRACKED OR SPILLED ON PUBLIC STREETS OUTSIDE THE PROJECT AREA.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED UPON STABILIZATION AND FINAL COMPLETION OF SITE WORK AS ACCEPTED BY THE OWNER.
- THE CONTRACTOR SHALL BE CERTIFIED BY MaineDEP IN EROSION AND SEDIMENTATION CONTROL PRACTICES.

**SURVEY NOTES**

- ALL TOPOGRAPHIC INFORMATION PROVIDED IS REFERENCED TO NAVD88 ALL TOPOGRAPHIC INFORMATION PROVIDED IS REFERENCED TO:
  - VERTICAL DATUM – NAVD88, UNLESS OTHERWISE NOTED.
  - HORIZONTAL DATUM – MAINE STATE PLANE COORDINATE SYSTEM NAD83, WEST ZONE, U.S. FEET.
- BOUNDARY SURVEY PROVIDED FROM PLAN ENTITLED "STANDARD BOUNDARY SURVEY & TOPOGRAPHIC PLAN FOR CENTRAL CHEMICAL CORPORATION", DATED APRIL 24, 1998 AND RECORDED IN PLAN BOOK 34, PAGE 25.
- TOPOGRAPHIC SURVEY PROVIDED FROM PLAN ENTITLED "TOPOGRAPHIC FOR TOWN OF BOWDOINHAM, 8 RIVER ROAD, BOWDOINHAM, MAINE" BY LITTLE RIVER LAND SURVEYING, INC., DATED JUNE 28, 2019.
- PROJECT LOCATION APPEARS ON THE TOWN OF BOWDOINHAM'S TAX MAP U01 LOT 01.
- PROJECT LOCATION IS IN THE TOWN OF BOWDOINHAM'S VILLAGE I DISTRICT & SHORELAND GENERAL I DEVELOPMENT DISTRICT ZONES.
- THE CONTRACTOR IS RESPONSIBLE FOR RESETTling ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY HIS/HER OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE DONE BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF MAINE.
- BASE FLOOD / TIDAL INFORMATION IS AS NOTED ON THE FOLLOWING TABLE:

PROJECT ELEVATIONS (BY DATUM)			
ELEVATION	CHART (ft)	NAVD88 (ft)	Notes
Bowdoinham Ordinance - BF +3 FT	15.5	11.0	Local Zoning Ordinance for Building Structure FFE = 3 FT Above AE Zone BFE
Base Flood Elevation	12.5	8.0	FEMA July 16, 2015 FIRM, ZONE AE
500-Year Stillwater	None Available		FEMA July 16, 2015 Flood Insurance Study
100-Year Stillwater	None Available		
50-Year Stillwater	None Available		
10-Year Stillwater	None Available		
Highest Annual Tide	7.4	2.9	2018 MEDEP Predictions (Bowdoinham, Cathance River)
USGS BM "RESET 1952" AT NW COR RTE 24 BRIDGE ABUTMENT OVER CATHANCE RIVER	13.4	8.9	Common Reference Point Between LRLS Topographic Survey (NAVD88) & 1996 Philip-Mailly Boat Launch Plans by Pine Tree Engineering (NGVD29)
MHHW	6.3	1.8	BASED ON NOAA TIDAL BM 8417391 "Bowdoinham, Cathance River, ME" Subordinate Station and 8418150 "Portland" Reference Station
MHW	6.0	1.5	
NAVD88	4.5	0.0	
MLW	0.2	-4.3	
MLLW	0.0	-4.5	

**DEMOLITION NOTES**

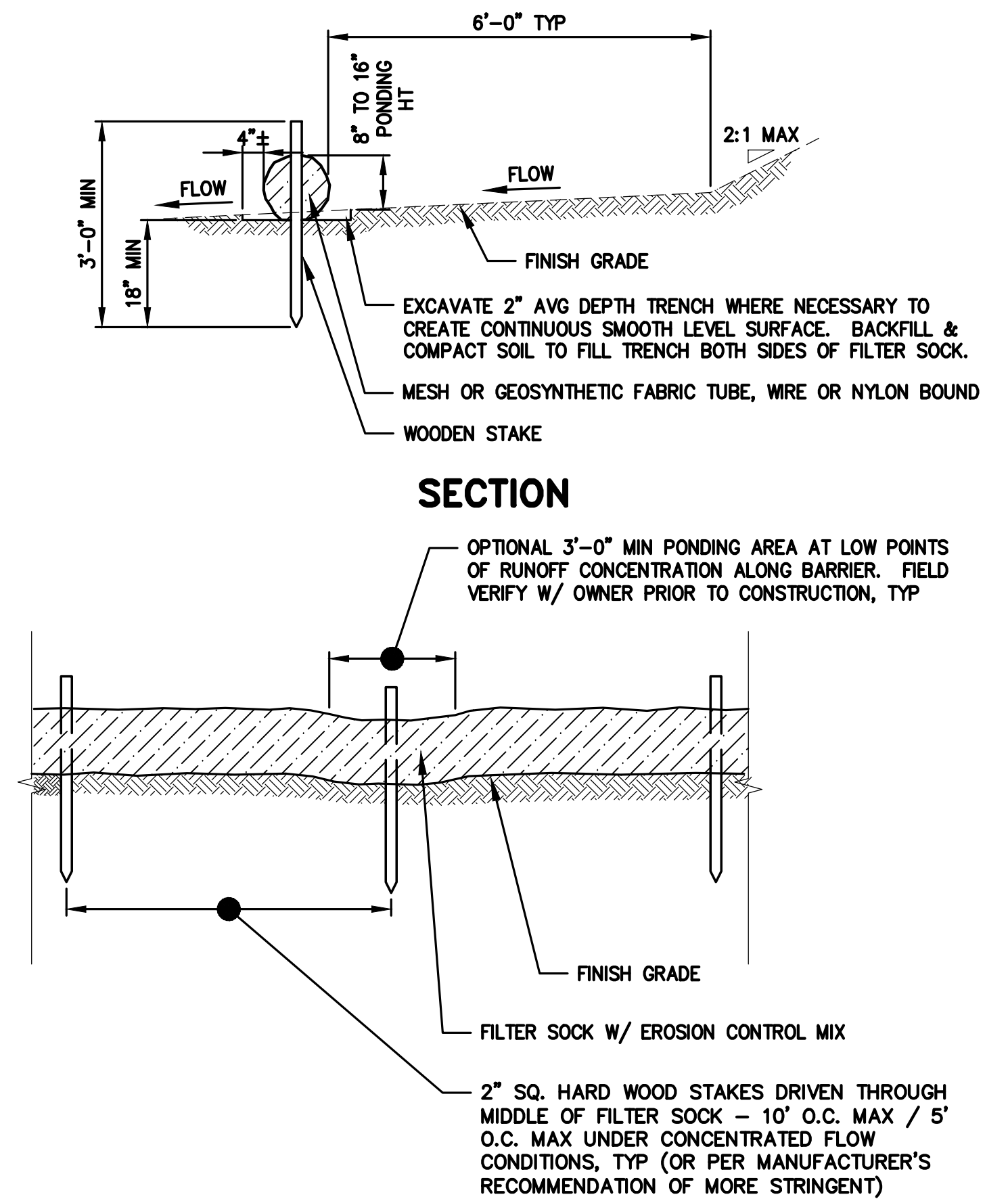
- THE CONTRACTOR SHALL NOT MAKE ANY OPENING OR EXCAVATION WITHIN THE PROJECT AREA UNTIL CONTACT HAS BEEN MADE WITH "DIG SAFE" AND ALL UTILITIES TO LOCATE ANY EXISTING POWER, TELEPHONE, CABLE TV, WATER OR OTHER UNDERGROUND SERVICES.
- THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN MATERIALS TAKE FROM ANY EXCAVATION AND DEMOLITION WORK.
- ALL SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED INTO THE PROJECT WITH WRITTEN APPROVAL FROM THE OWNER. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED, UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- TOPSOIL STRIPPED IN AREAS OF CONSTRUCTION THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED AT A LOCATION TO BE DESIGNATED BY THE OWNER. UNSUITABLE SOIL SHALL BE SEPARATED, REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFFSITE.

**UTILITY NOTES**

- THE UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE PROVIDED AS A GUIDE TO THE CONTRACTOR. NO GUARANTEE IS MADE THAT UTILITIES WILL BE ENCOUNTERED WHERE SHOWN OR THAT ALL UTILITIES ARE SHOWN. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS IN THE FIELD AND BE RESPONSIBLE FOR REPAIR OF UTILITIES DISTURBED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL NOT MAKE ANY OPENING OR EXCAVATION WITHIN THE PROJECT AREA UNTIL CONTACT HAS BEEN MADE WITH "DIG SAFE" AND ALL UTILITIES TO LOCATE ANY EXISTING POWER, TELEPHONE, CABLE TV, WATER OR OTHER UNDERGROUND SERVICES.
- NO DISRUPTION TO THE EXISTING UTILITIES ADJACENT THE PROJECT SITE SHALL BE ALLOWED DURING DEMOLITION OR CONSTRUCTION ACTIVITIES.
- ANY TEMPORARY UTILITY SERVICE, IF REQUIRED BY THE CONTRACTOR TO PERFORM HIS/HER WORK DURING THE DURATION OF CONSTRUCTION, IS THE RESPONSIBILITY OF THE CONTRACTOR.

**GRADING & DRAINAGE NOTES**

- ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- ALL PROPOSED ROAD, DRIVE, PARKING AND WALKWAY AREA SURFACES SHALL PITCH 1/4" PER FOOT (2%) MINIMUM IN ALL DIRECTIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL DRAINAGE STRUCTURES SHALL BE CLEAN AND FREE OF SEDIMENT OCCURRING DURING THE CONSTRUCTION PERIOD AT NO ADDITIONAL EXPENSE TO THE OWNER.



- NOTES:**
- FILTER SOCKS SHALL BE INSTALLED IN CONTINUOUS SEGMENTS AND IN FULL CONTACT WITH THE GROUND ON A SMOOTH LEVEL SURFACE.
  - FOLLOW MANUFACTURER'S REQUIREMENTS FOR INSTALLATION, MAINTENANCE AND REMOVAL OF FILTER SOCK MATERIALS.
  - AREAS DISTURBED BY EROSION BARRIERS SHALL BE STABILIZED AFTER REMOVAL.

**SEDIMENT BARRIER – FILTER SOCK**  
NOT TO SCALE

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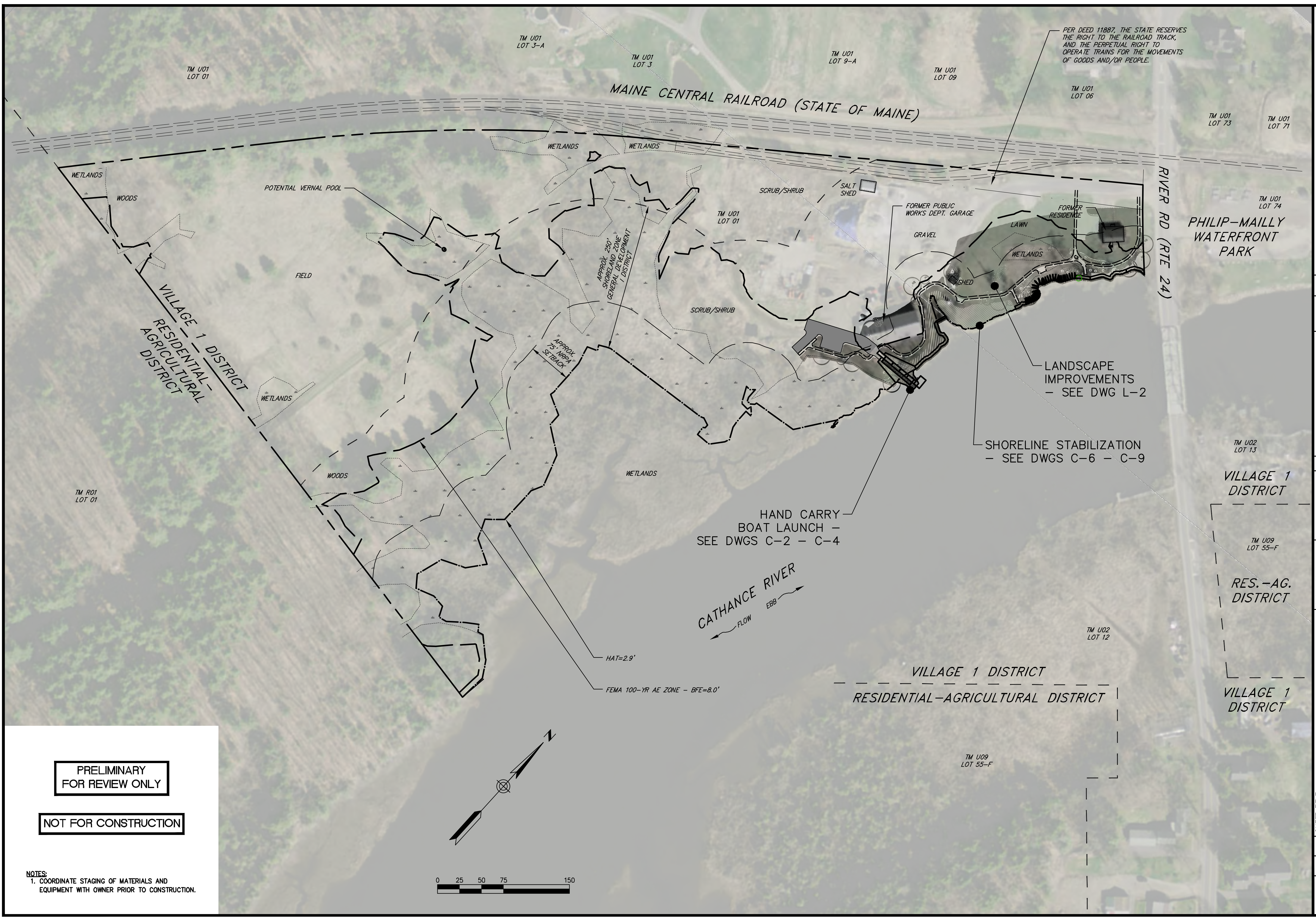
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DESIGNED BY:	TJP
DRAWN BY:	MMC
CHECKED BY:	BUB
SCALE:	AS SHOWN
DATE:	03.XX.20
TOWN:	MAINEDEP / ACOE PERMIT SET SUBMISSION
INT. NO.:	18-20

SHEET TITLE:	NOTES, SCHEDULES & EROSION CONTROL DETAILS
PROJECT:	TOWN OF BOWDOINHAM WATERFRONT PLAN PHASE I BOWDOINHAM, MAINE

DATE:	MARCH 2020
CONTRACT NO.:	18-20
SHEET NO.:	G-2
REV.:	A

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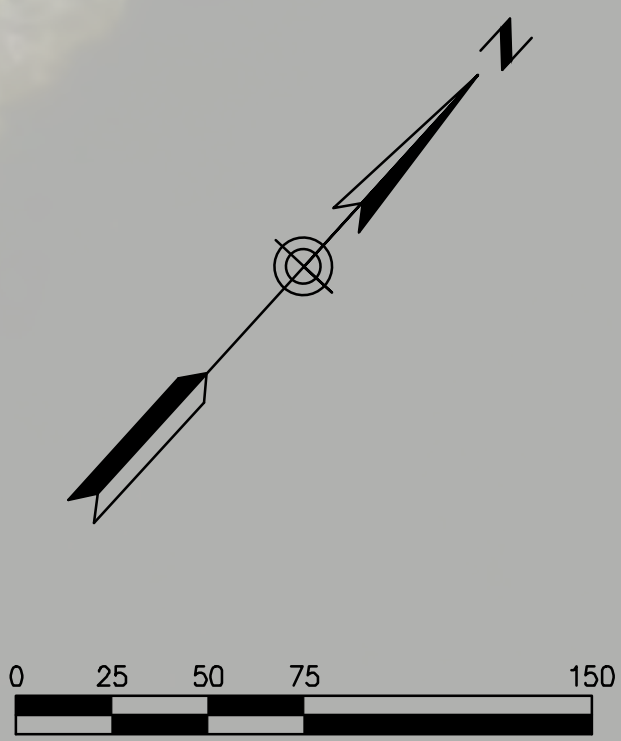


PER DEED 11887, THE STATE RESERVES THE RIGHT TO THE RAILROAD TRACK, AND THE PERPETUAL RIGHT TO OPERATE TRAINS FOR THE MOVEMENTS OF GOODS AND/OR PEOPLE.

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**NOTES:**  
1. COORDINATE STAGING OF MATERIALS AND EQUIPMENT WITH OWNER PRIOR TO CONSTRUCTION.



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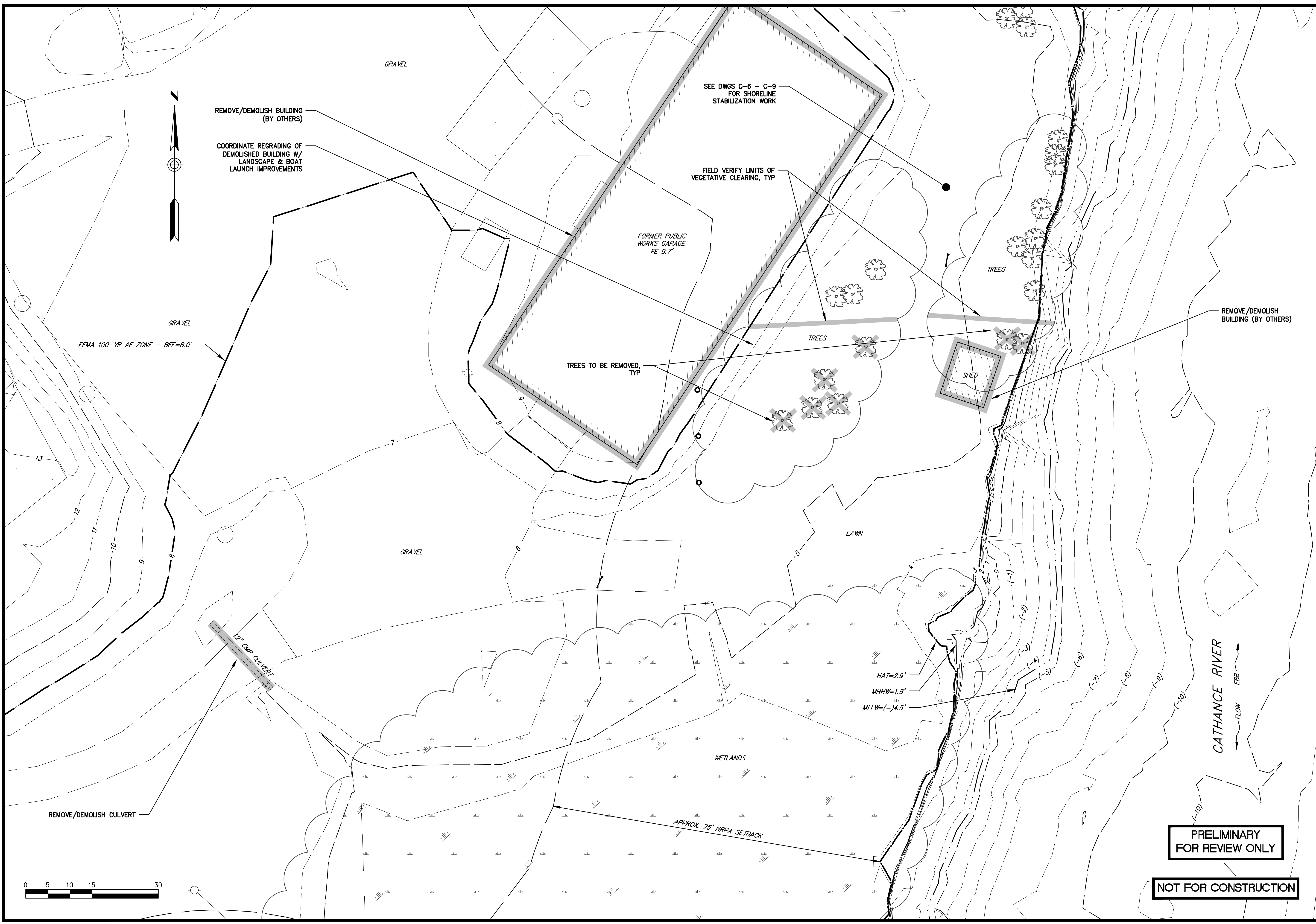
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MAINE DEP /			

DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BJB
SCALE:	AS SHOWN

**OVERVIEW PLAN**  
TOWN OF BOWDOINHAM  
**WATERFRONT PLAN - PHASE I**  
BOWDOINHAM, MAINE

DATE	MARCH 2020
CONTRACT NO.	18-20
SHEET NO.	REV.
<b>C-1</b>	<b>A</b>

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REMOVE/DEMOLISH BUILDING (BY OTHERS)  
 COORDINATE REGRADING OF DEMOLISHED BUILDING W/ LANDSCAPE & BOAT LAUNCH IMPROVEMENTS

SEE DWGS C-6 - C-9 FOR SHORELINE STABILIZATION WORK

FIELD VERIFY LIMITS OF VEGETATIVE CLEARING, TYP

FORMER PUBLIC WORKS GARAGE FE 9.7'

TRESSES TO BE REMOVED, TYP

SHED

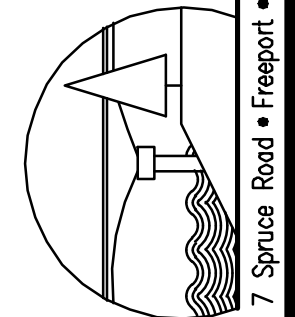
REMOVE/DEMOLISH BUILDING (BY OTHERS)

FEMA 100-YR AE ZONE - BFE=8.0'

HAT=2.9'  
 MHHW=1.8'  
 MLLW=(-)4.5'

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DESIGNED BY:	TJP												
DRAWN BY:	MWC												
CHECKED BY:	BJB												
SCALE:	AS SHOWN												
SHEET TITLE: <b>BOAT LAUNCH - EX CONDITIONS DEMOLITION &amp; ESC PLAN</b> PROJECT: <b>TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I</b> BOWDOINHAM, MAINE													
DATE:	MARCH 2020												
CONTRACT NO.:	18-20												
SHEET NO.:	REV. A												
<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>INT.</th> </tr> <tr> <td>A</td> <td>03.XX.20</td> <td>TJP</td> </tr> <tr> <td colspan="3">SUBMISSION</td> </tr> <tr> <td colspan="3">ACOE PERMITTING SET</td> </tr> </table>		NO.	DATE	INT.	A	03.XX.20	TJP	SUBMISSION			ACOE PERMITTING SET		
NO.	DATE	INT.											
A	03.XX.20	TJP											
SUBMISSION													
ACOE PERMITTING SET													

x:\18-20 bowdoinham waterfront\phaseb-livingshorelines\cad\18-20-bowdoinham-civ.dwg 4/10/2020



**NOTES:**  
1. LANDSCAPING (OTHER THAN RESTORATION OF DISTURBED LAWN AREAS), PEDESTRIAN PATHS, SITE AMENITIES AND SHORELINE STABILIZATION WORK ADJACENT TO THE BOAT LAUNCH ARE PART OF A SEPARATE CONSTRUCTION PROJECT.

FEMA 100-YR AE ZONE - BFE=8.0'

PROPOSED LANDSCAPE IMPROVEMENTS - SEE DWG L-2, TYP

(2) 11'x20' ADA PARKING SPACES W/ SIGNS

(1) 10'x20' PARKING SPACE

MAINTAIN EXISTING GRAVEL FOR ACCESS DRIVE, THIS AREA

LOAM & SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED

15'x40' ADA BOAT TRAILER PARKING SPACE W/ "HC PARKING" SIGN (FUTURE PHASE)



4' WIDE PEDESTRIAN PATH - SEE DWG L-2, TYP

INSTALL (2) "NO MOTOR BOATS" SIGNS

INSTALL (3) BOLLARDS TO DELINEATE VEHICLE/PEDESTRIAN TRAFFIC AREAS

PAVED PEDESTRIAN APPROACH (5% MAX SLOPE)

CONSTRUCT CONCRETE FLOAT ABUTMENT

SEE DWGS C-6 - C-9 FOR SHORELINE STABILIZATION WORK

PLACE HEAVY RIPRAP (D50=30") SHORELINE STABILIZATION, TYP

INSTALL (3) TIMBER GUIDE PILES

INSTALL (4) 6'x16' FLOATS

INSTALL (1) 12'x18' ADA BOAT LAUNCH FLOAT

EXTEND HEAVY RIPRAP 10'-0" BEYOND END OF RAMP

RIVERBED CLEANUP AREA

INSTALL 18"x12' PRECAST CONCRETE PLANKS

INSTALL VERTICAL CURB ENTIRE LENGTH OF EACH SIDE OF RAMP (APPROXIMATE 127 LF)

PLACE (3) 8-KAYAK TEMPORARY STORAGE RACKS. FINAL LOCATION TO BE APPROVED BY OWNER

HAT=2.9'  
MHHW=1.8'  
MLLW=(-)4.5'

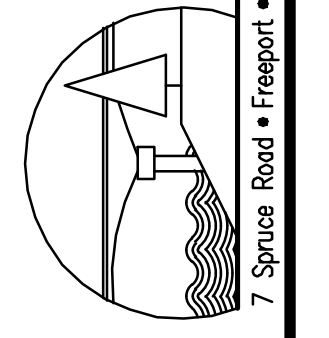
CATHANCE RIVER  
FLOW  
EBB

APPROX. 75' NRPA SETBACK

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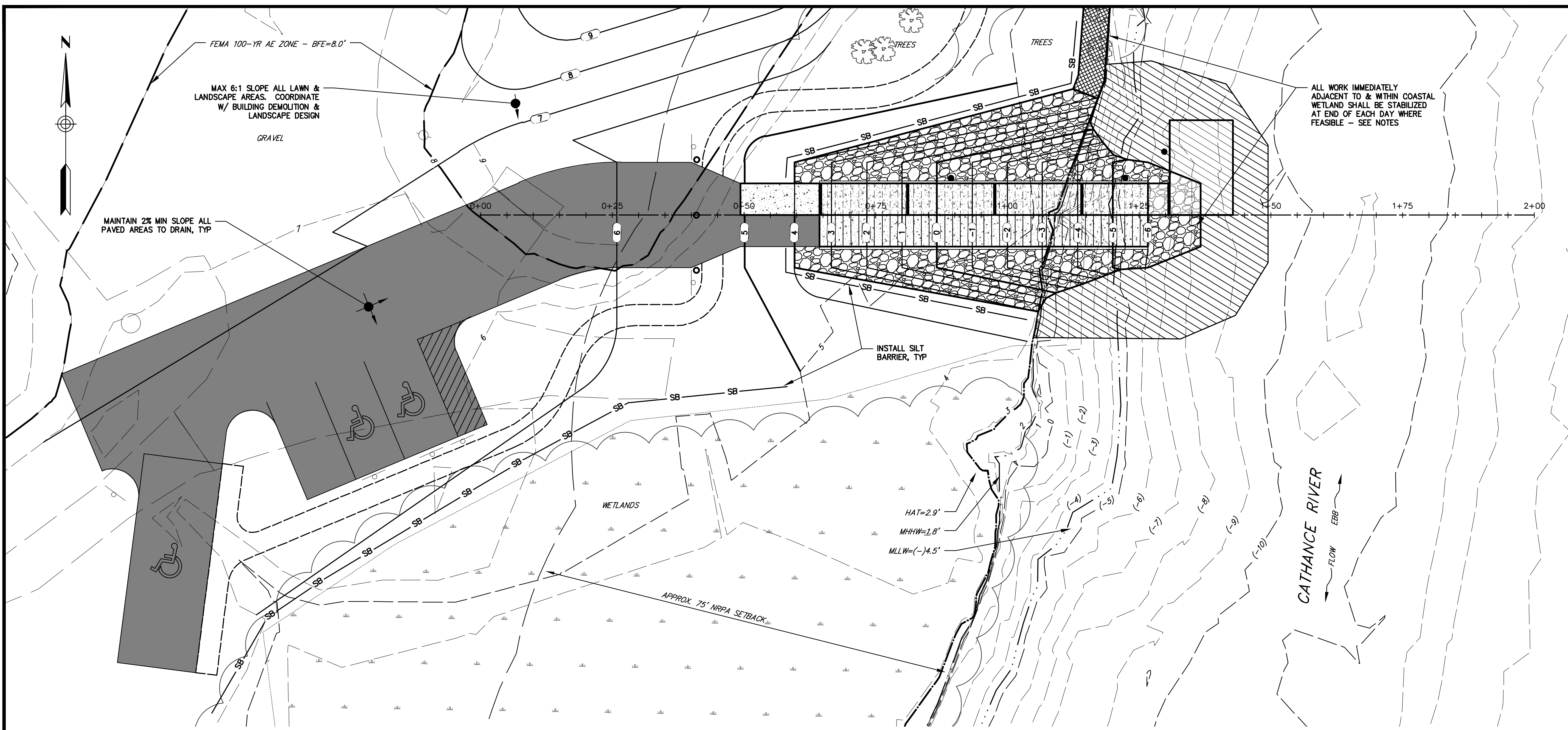


NO.	DATE	TYP	INT.
A	03.XX.20	TYP	INT.

DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BJB
SCALE:	AS SHOWN

SHEET TITLE: <b>BOAT LAUNCH - LAYOUT PLAN</b>	
PROJECT: TOWN OF BOWDOINHAM <b>WATERFRONT PLAN - PHASE I</b>	
DATE:	MARCH 2020
CONTRACT NO.:	18-20
SHEET NO.:	C-3
REV.:	A

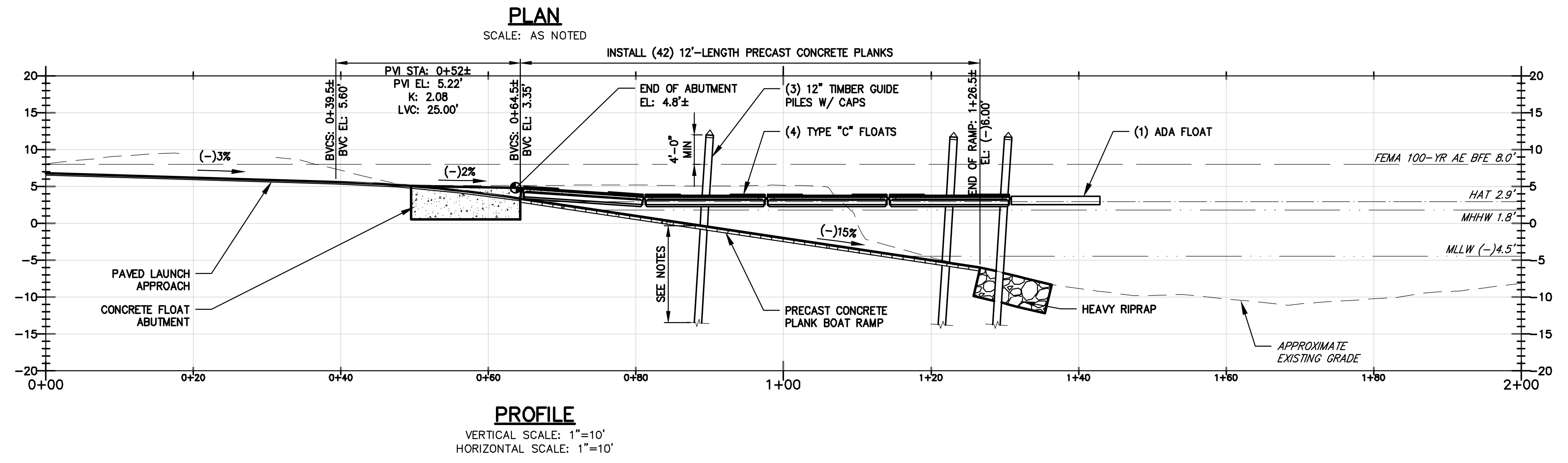
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NOT FOR CONSTRUCTION

- NOTES:**
- LANDSCAPING (OTHER THAN RESTORATION OF DISTURBED LAWN AREAS), PEDESTRIAN PATHS, SITE AMENITIES AND SHORELINE STABILIZATION WORK ADJACENT TO THE BOAT LAUNCH ARE PART OF A SEPARATE CONSTRUCTION PROJECT.
  - WHERE REQUIRED INSTALL TURBIDITY CURTAIN OR SHEET PILING FOR ALL PORTIONS OF WORK THAT CANNOT BE STABILIZED COMPLETE & IN PLACE BETWEEN TIDE CYCLES, TYP.
  - DRIVE PILES TO A MINIMUM DEPTH OR 30 FEET OR REFUSAL. IF REFUSAL IS LESS THAN 10 FEET, CONTACT ENGINEER.



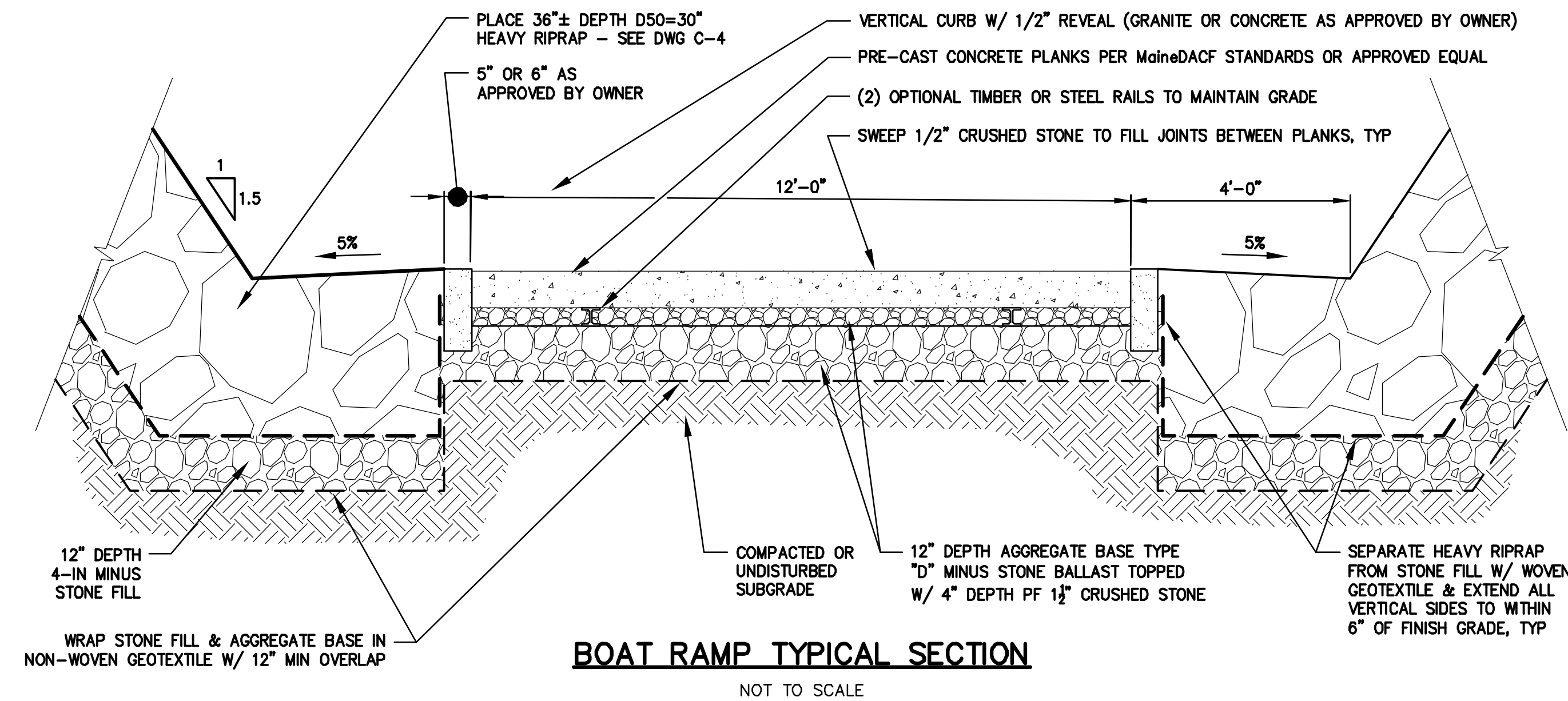
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<p>DESIGNED BY: TJP</p> <p>DRAWN BY: MMC</p> <p>CHECKED BY: BUB</p> <p>SCALE: AS SHOWN</p>	<p>DATE: 03.XX.20</p> <p>TYP: INT.</p> <p>NO.:</p>
<p><b>BOAT LAUNCH - GRADING PLAN &amp; LAUNCH PROFILE</b></p> <p>TOWN OF BOWDOINHAM</p> <p><b>WATERFRONT PLAN - PHASE I</b></p> <p>BOWDOINHAM, MAINE</p>	
<p>DATE: MARCH 2020</p> <p>CONTRACT NO.: 18-20</p> <p>SHEET NO.: <b>C-4</b> REV. <b>A</b></p>	

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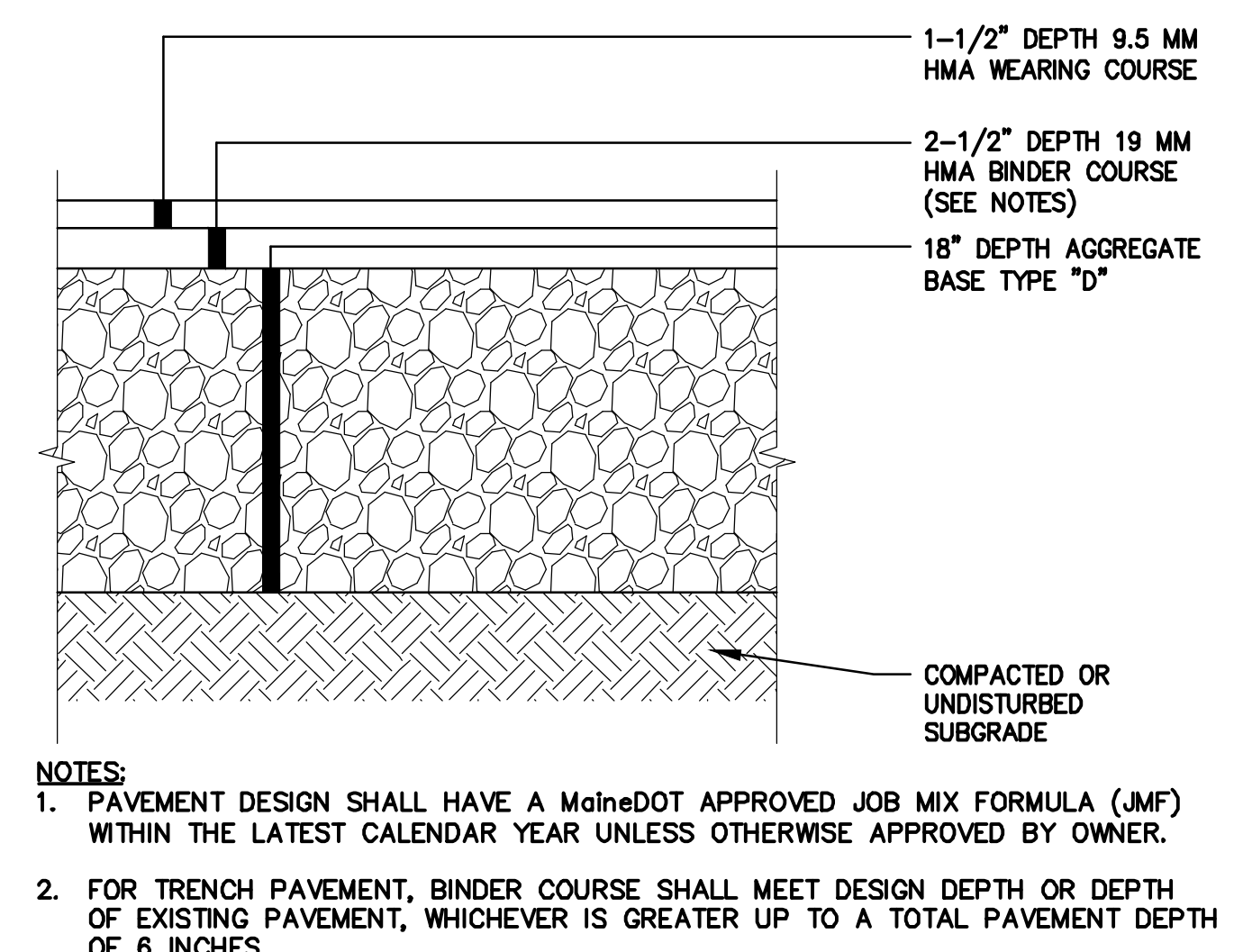
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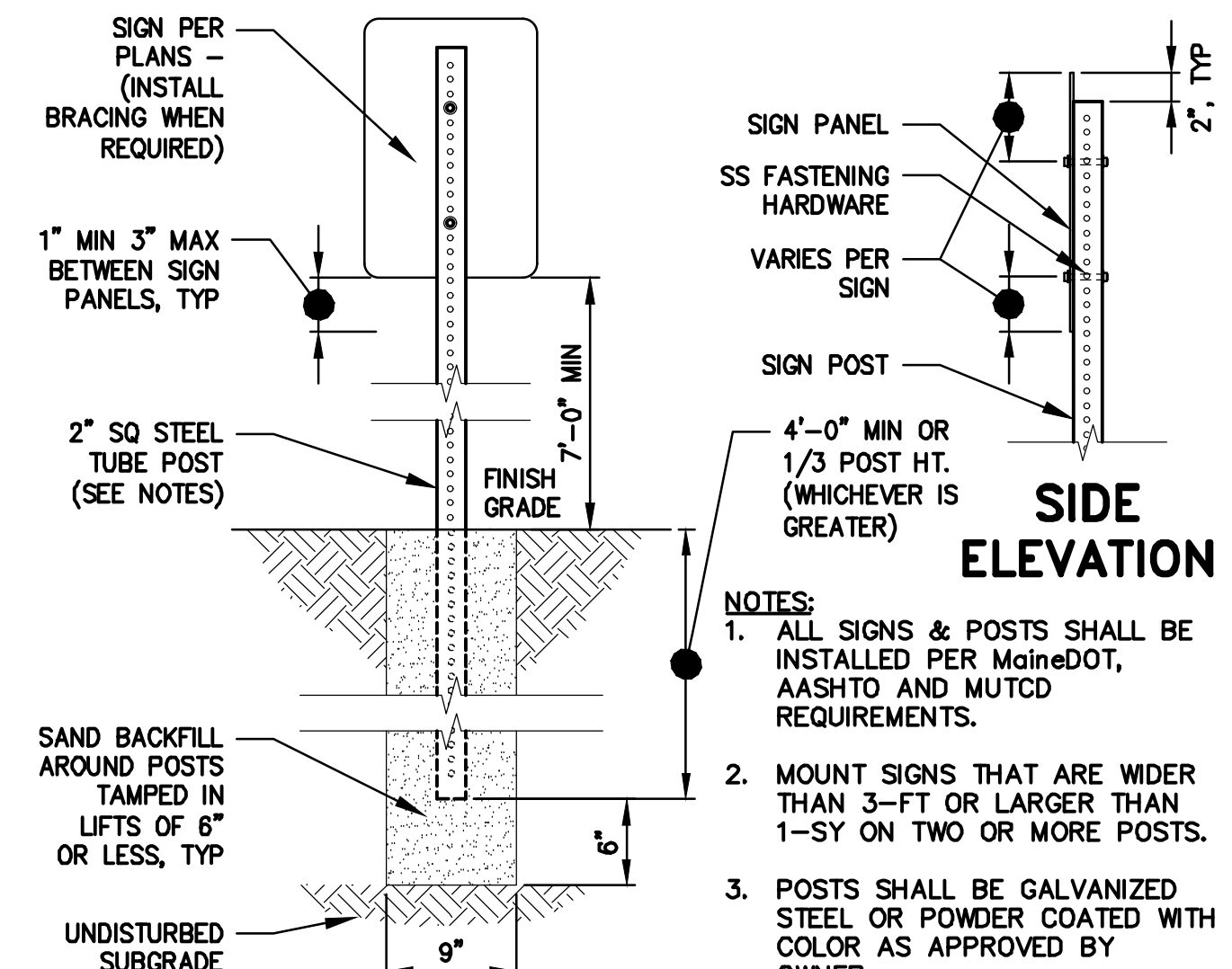
**BOAT RAMP TYPICAL SECTION**

NOT TO SCALE



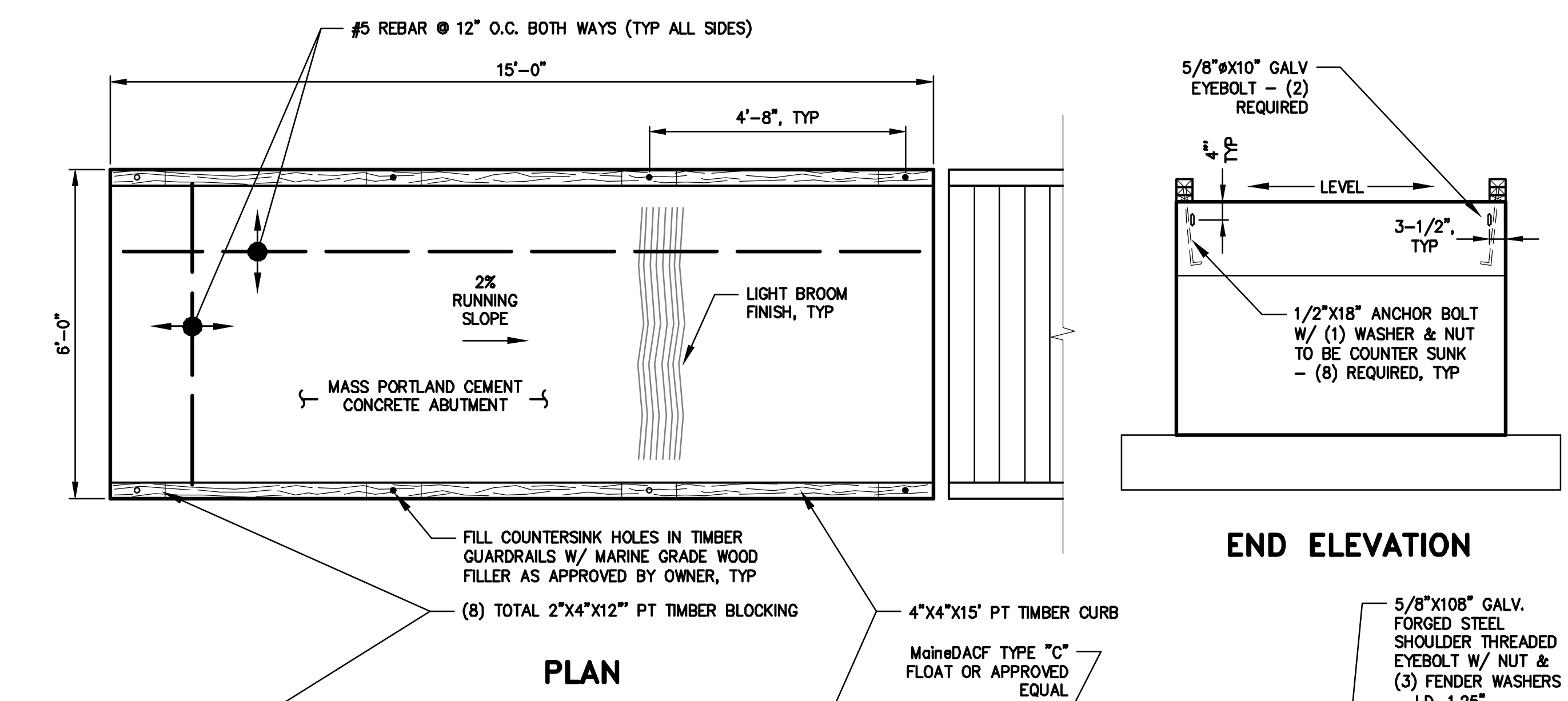
**HMA PARKING AREA TYPICAL SECTION**

NOT TO SCALE



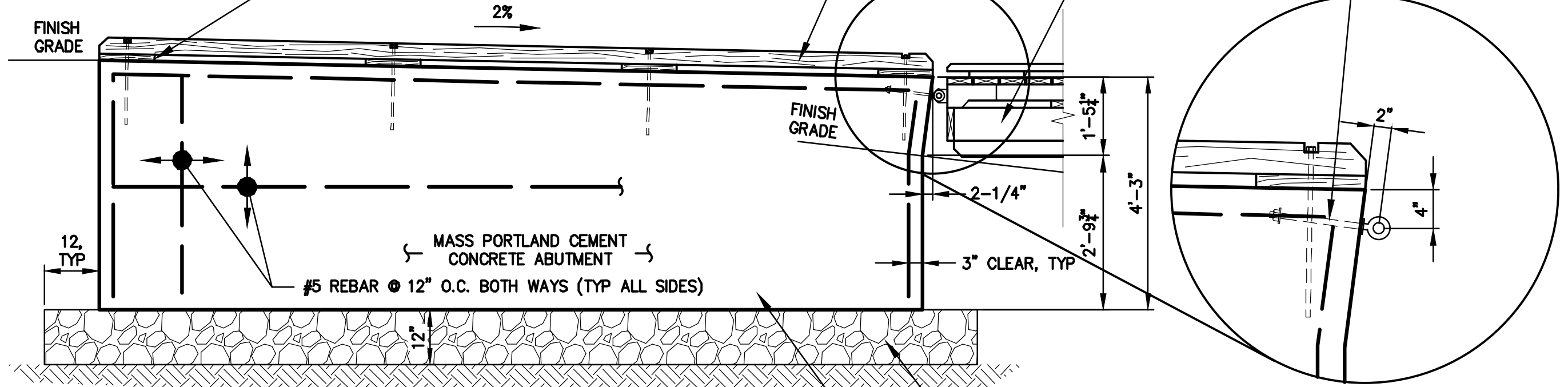
**STEEL SIGN POST - SQUARE TUBULAR**

NOT TO SCALE



**PLAN**

**END ELEVATION**



**SIDE ELEVATION**

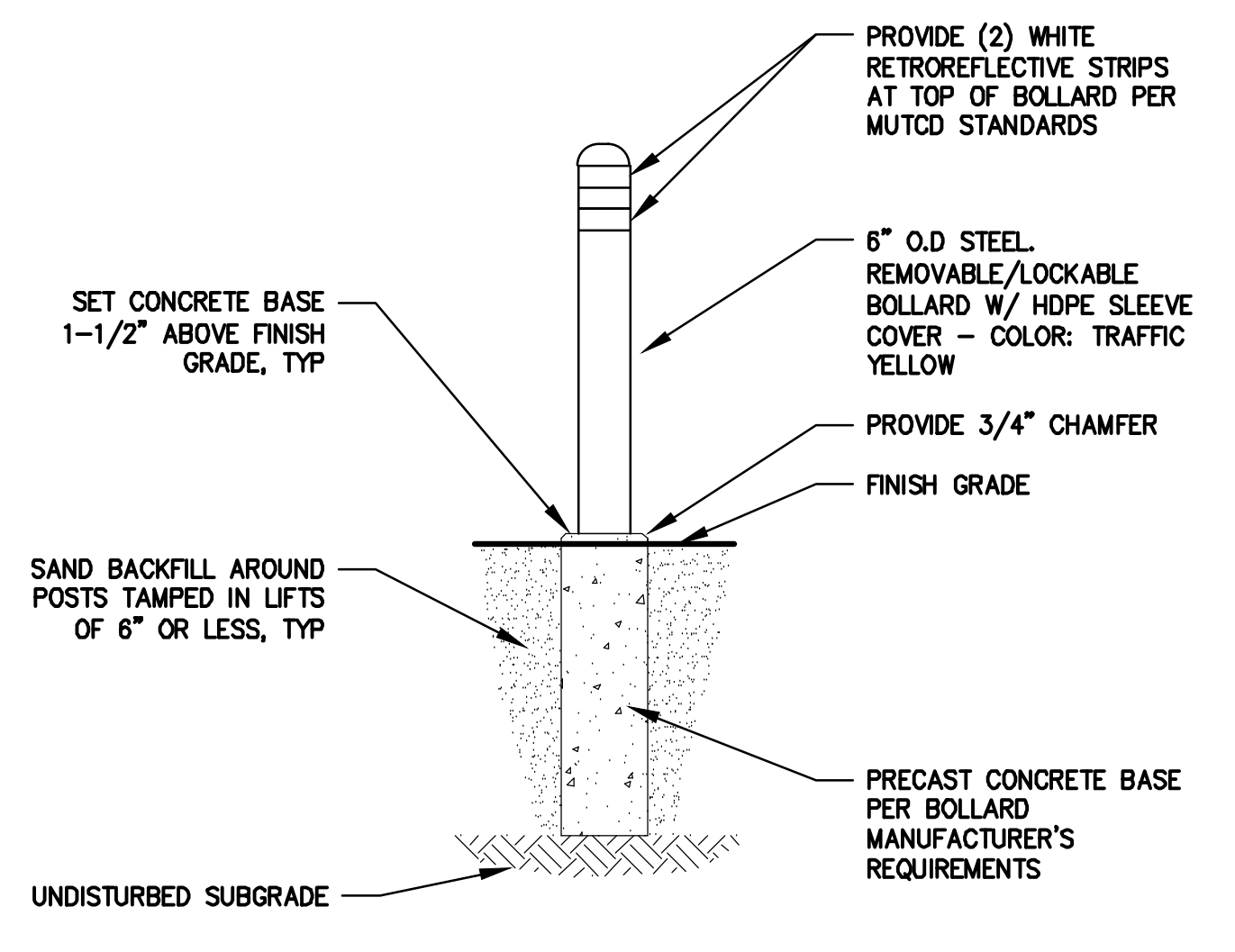
**EYEBOLT DETAIL**

**CONCRETE ABUTMENT**

NOT TO SCALE

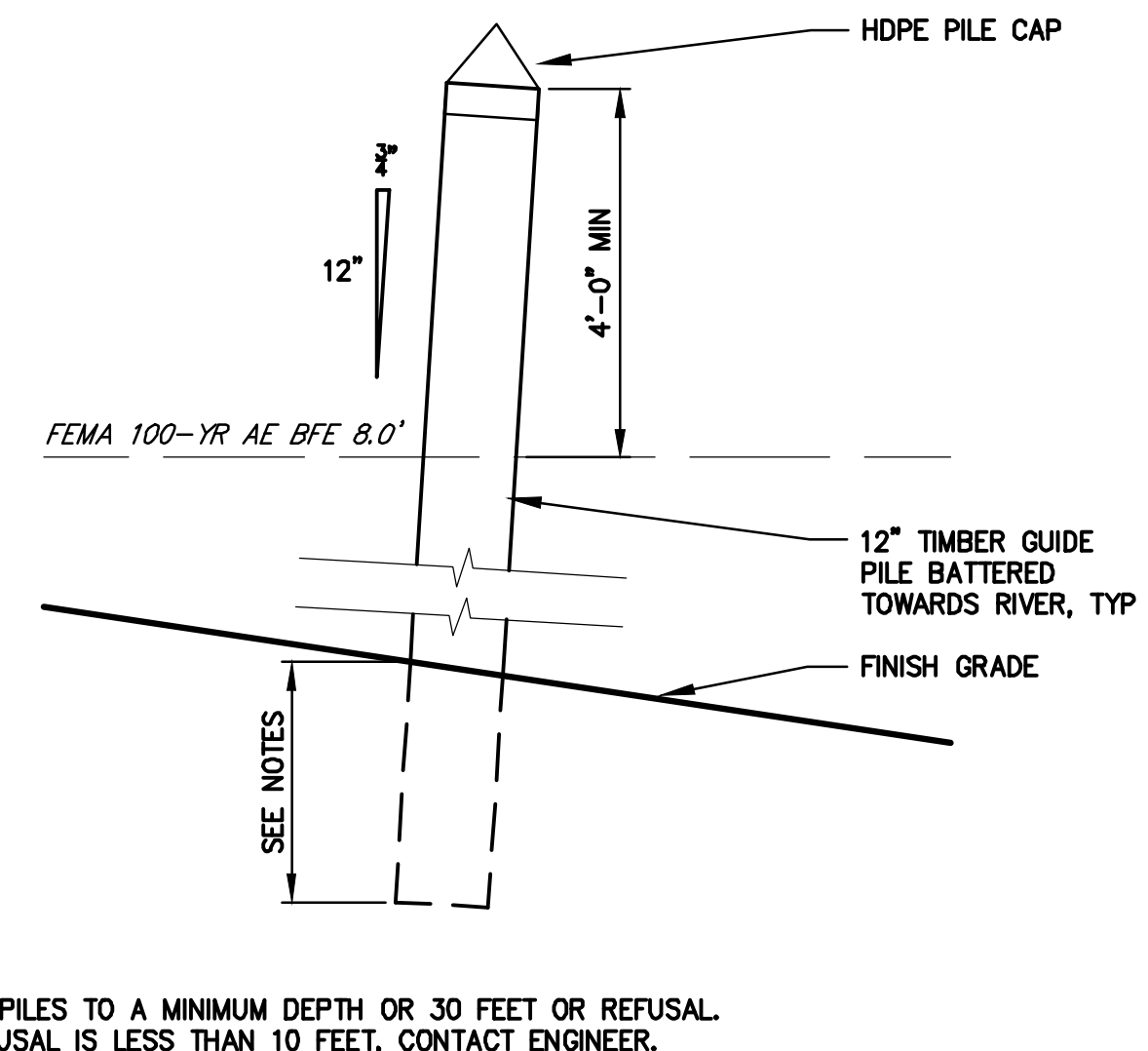
**NOTES:**

1. 3/4" CHAMFER ALL VERTICAL CONCRETE CORNER.
2. FINISH TOP EDGES OF CONCRETE WITH EDGING TOOL.
3. PROVIDE PLAIN DEFORMED REINFORCING STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M31.
4. PROVIDE CONCRETE MEETING THE FOLLOWING QUALITIES:
  - 4.1. 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
  - 4.2. 6 GAL. WATER MAX PER 94 LBS OF CEMENT (INCLUDING FREE WATER IN AGGREGATE).
  - 4.3. 4" MAX SLUMP.
  - 4.4. 6% ± 1% TOLERANCE AIR CONTENT ATTAINED WITH AN AIR ENTRAINING AGENT.



**METAL BOLLARD**

NOT TO SCALE



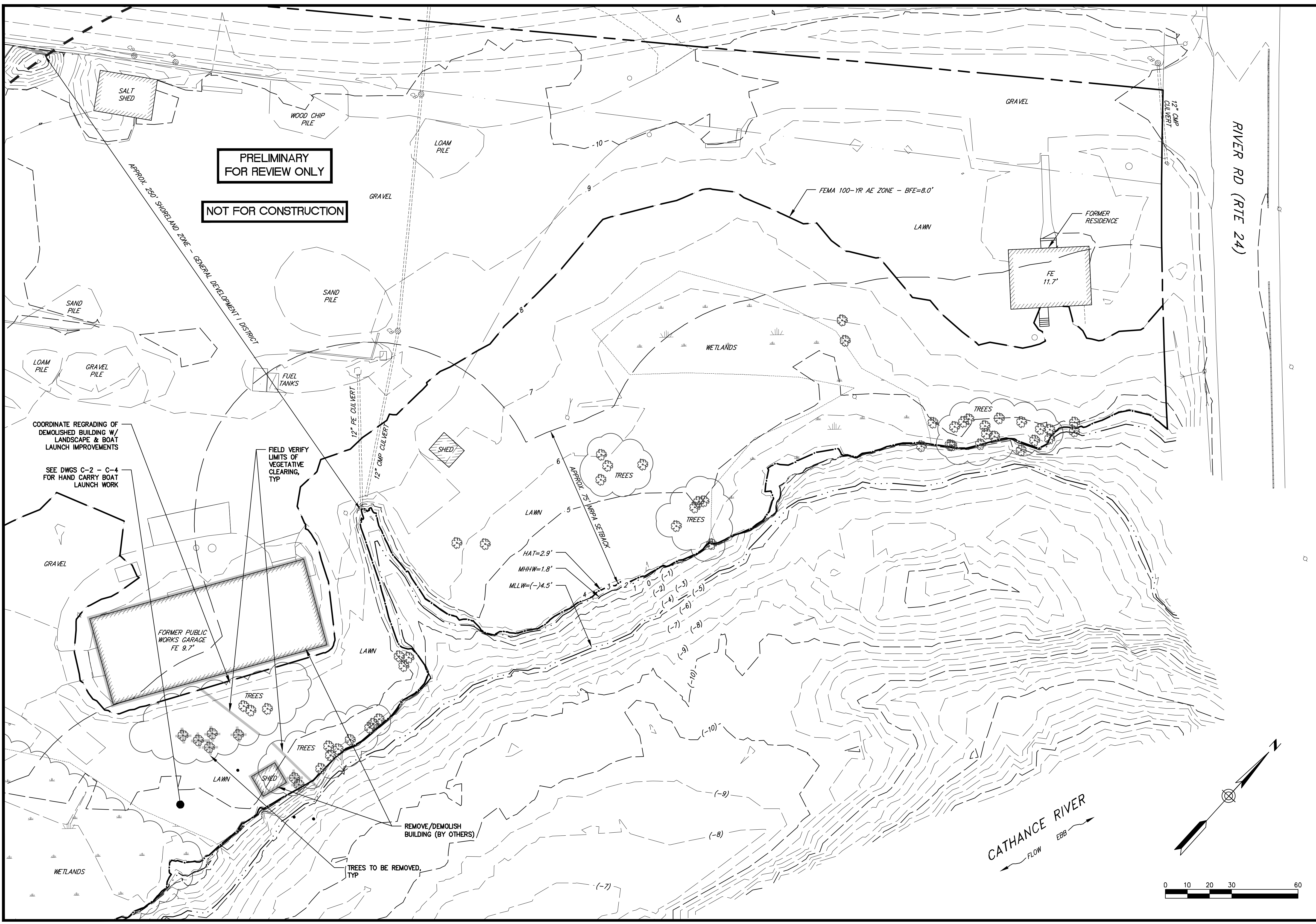
**BATTERED TIMBER GUIDE PILE**

NOT TO SCALE

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DESIGNED BY: TJP	DRAWN BY: MMC
CHECKED BY: BUB	SCALE: AS SHOWN
SUBMISSION SET	DATE
NO.	INT.
<b>BOAT LAUNCH - DETAILS</b>	
PROJECT: TOWN OF BOWDOINHAM	
<b>WATERFRONT PLAN - PHASE I</b>	
BOWDOINHAM, MAINE	
DATE	MARCH 2020
CONTRACT NO.	18-20
SHEET NO.	REV.
<b>C-5</b>	<b>A</b>



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COORDINATE REGRADING OF  
DEMOLISHED BUILDING W/  
LANDSCAPE & BOAT  
LAUNCH IMPROVEMENTS

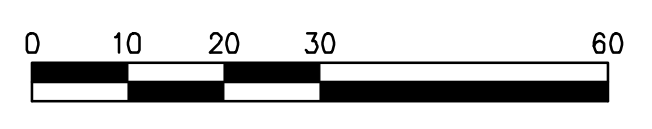
SEE DWGS C-2 - C-4  
FOR HAND CARRY BOAT  
LAUNCH WORK

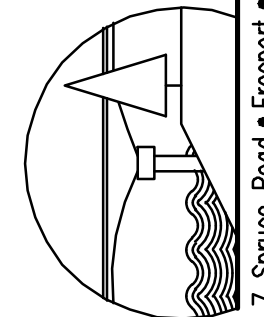
FIELD VERIFY  
LIMITS OF  
VEGETATIVE  
CLEARING,  
TYP

REMOVE/DEMOLISH  
BUILDING (BY OTHERS)

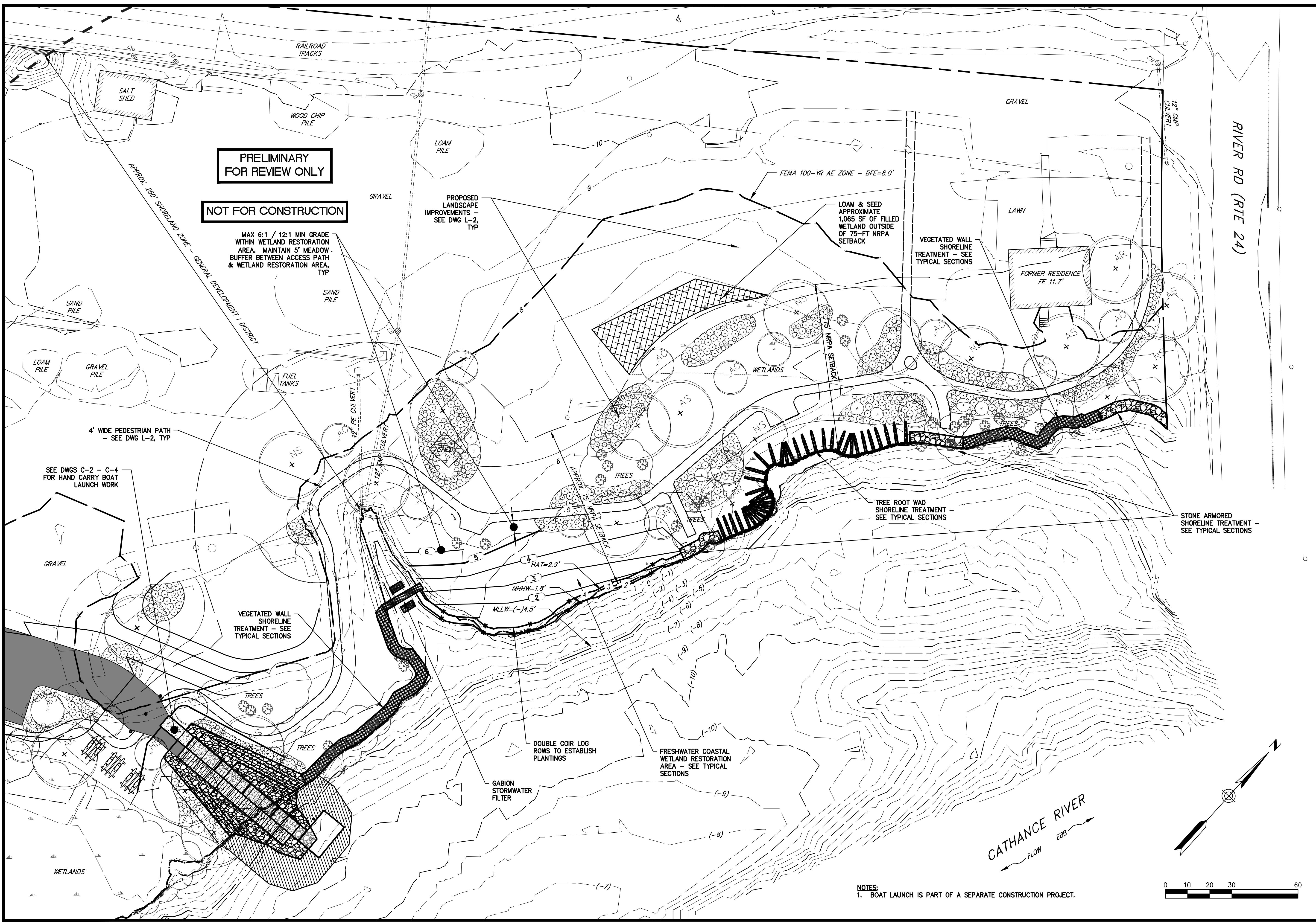
TREES TO BE REMOVED,  
TYP

CATHANCE RIVER  
FLOW  
EBB



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DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BUB
SCALE:	AS SHOWN
<p>SHEET TITLE: <b>SHORELINE STABILIZATION PLAN</b></p> <p>PROJECT: TOWN OF BOWDOINHAM, MAINE <b>WATERFRONT PLAN - PHASE I</b> BOWDOINHAM, MAINE</p>	
DATE:	MARCH 2020
CONTRACT NO.:	18-20
SHEET NO.:	<b>C-6</b>
REV.:	<b>A</b>
NO.:	NO.
DATE:	DATE
TYP:	TYP
INT.:	INT.
03.XX.20:	03.XX.20
ACOE PERMITTING SET:	ACOE PERMITTING SET
SUBMISSION:	SUBMISSION

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MAX 6:1 / 12:1 MIN GRADE WITHIN WETLAND RESTORATION AREA. MAINTAIN 5' MEADOW BUFFER BETWEEN ACCESS PATH & WETLAND RESTORATION AREA, TYP

PROPOSED LANDSCAPE IMPROVEMENTS - SEE DWG L-2, TYP

LOAM & SEED APPROXIMATE 1,065 SF OF FILLED WETLAND OUTSIDE OF 75-FT NRPA SETBACK

VEGETATED WALL SHORELINE TREATMENT - SEE TYPICAL SECTIONS

4' WIDE PEDESTRIAN PATH - SEE DWG L-2, TYP

SEE DWGS C-2 - C-4 FOR HAND CARRY BOAT LAUNCH WORK

VEGETATED WALL SHORELINE TREATMENT - SEE TYPICAL SECTIONS

TREE ROOT WAD SHORELINE TREATMENT - SEE TYPICAL SECTIONS

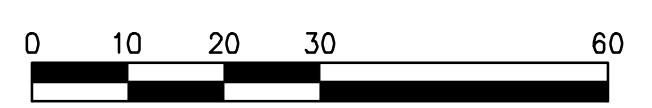
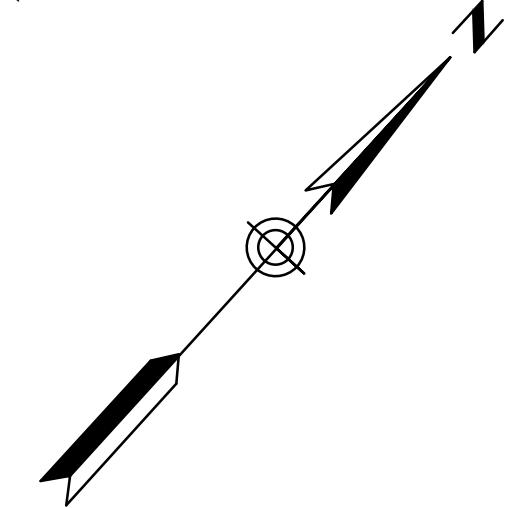
STONE ARMORED SHORELINE TREATMENT - SEE TYPICAL SECTIONS

DOUBLE COIR LOG ROWS TO ESTABLISH PLANTINGS

FRESHWATER COASTAL WETLAND RESTORATION AREA - SEE TYPICAL SECTIONS

GABION STORMWATER FILTER

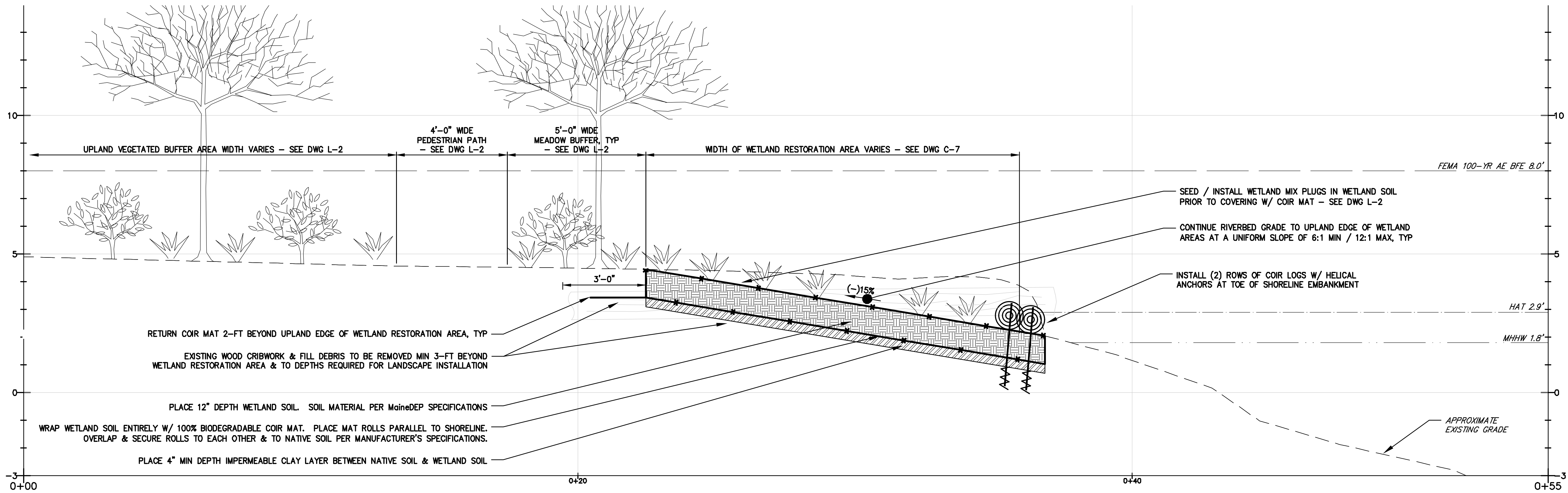
CATHANCE RIVER  
FLOW  
EBB



**NOTES**  
1. BOAT LAUNCH IS PART OF A SEPARATE CONSTRUCTION PROJECT.

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DESIGNED BY:	TJP	DATE:	INT.
DRAWN BY:	MWC	ACOE PERMITTING SET	03.XX.20
CHECKED BY:	BJB	SUBMISSION	NO.
SCALE:	AS SHOWN		
<b>SHEET TITLE: SHORELINE STABILIZATION SITE PLAN</b>			
<b>PROJECT: TOWN OF BOWDOINHAM, MAINE WATERFRONT PLAN - PHASE I</b>			
DATE:	MARCH 2020		
CONTRACT NO.:	18-20		
SHEET NO.:	C-7	REV.:	A

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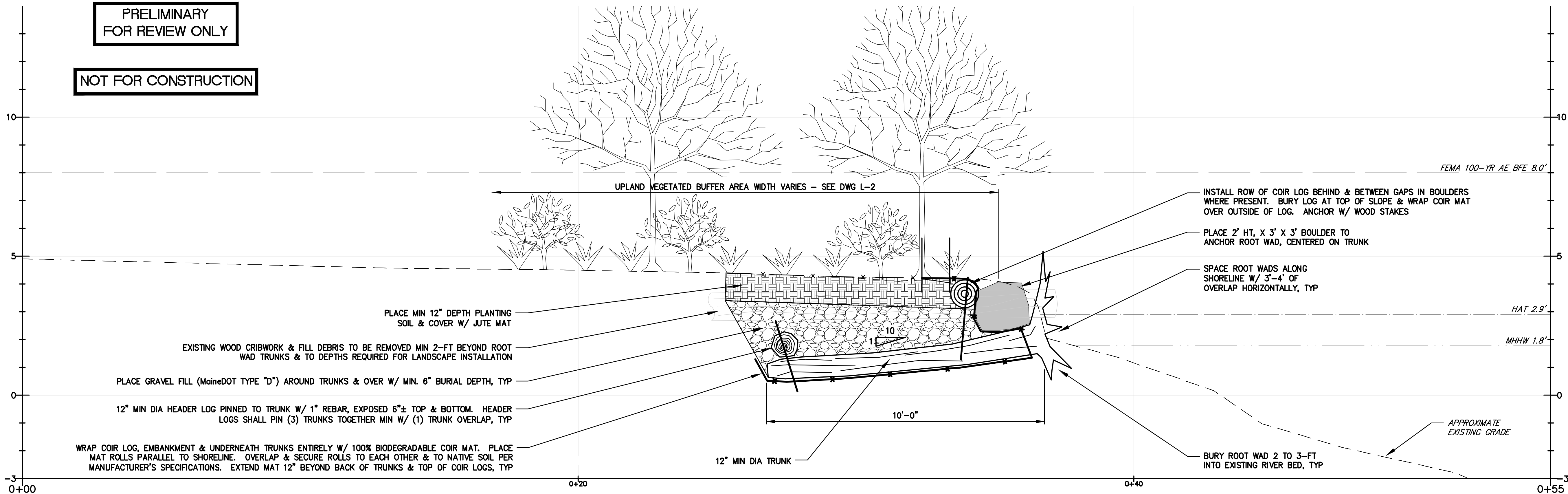


**FRESHWATER COASTAL WETLAND SHORELINE TREATMENT**

VERTICAL SCALE: 1"=2'  
HORIZONTAL SCALE: 1"=2'

**PRELIMINARY  
FOR REVIEW ONLY**

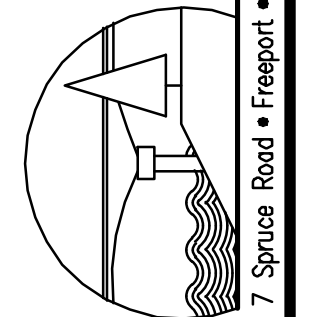
**NOT FOR CONSTRUCTION**



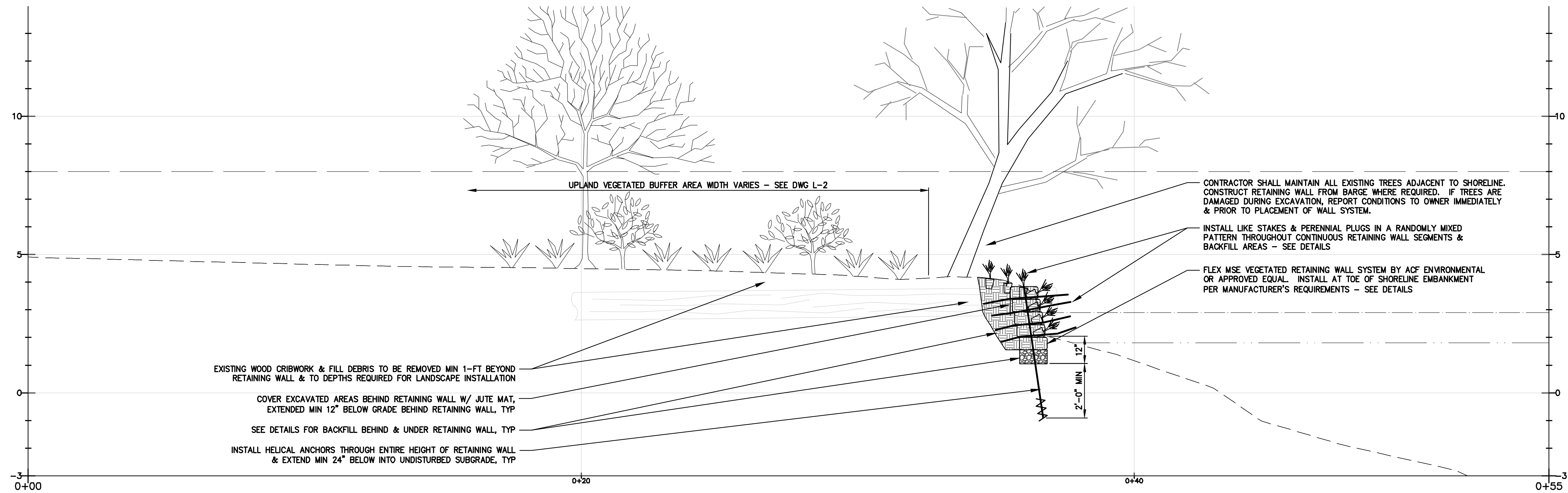
**TREE ROOT WAD SHORELINE TREATMENT**

VERTICAL SCALE: 1"=2'  
HORIZONTAL SCALE: 1"=2'

- NOTES:**
- ALL COIR AND JUTE MATTING SHALL BE STAKED OR STAPLED TO SURFACE PER MAINE DEP BEST MANAGEMENT PRACTICES & PER MANUFACTURER'S REQUIREMENTS.
  - ALL SLOPE STABILIZATION WORK SHALL BE INSTALLED AND STABILIZED COMPLETE AND IN PLACE AT THE END OF EACH WORKDAY AND PRIOR TO FORECAST STORMS.

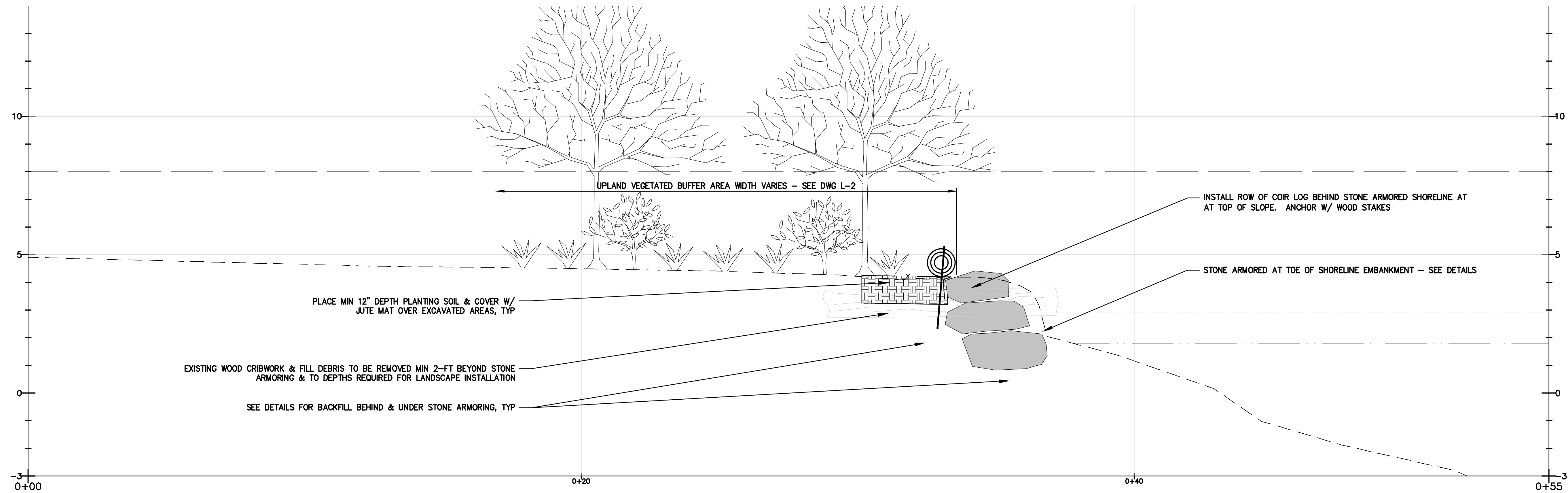
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<p>DESIGNED BY: TJP DRAWN BY: MMC CHECKED BY: BJB SCALE: AS SHOWN</p>	<p>DATE: MARCH 2020 CONTRACT NO.: 18-20 SHEET NO.: C-8 REV.: A</p>
<p>SHEET TITLE: <b>SHORELINE STABILIZATION TYPICAL SECTIONS I</b> PROJECT: <b>TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I</b> BOWDOINHAM, MAINE</p>	
<p>DATE: MARCH 2020 CONTRACT NO.: 18-20 SHEET NO.: C-8 REV.: A</p>	

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**VEGETATED WALL SHORELINE TREATMENT**

VERTICAL SCALE: 1"=2'  
HORIZONTAL SCALE: 1"=2'



**STONE ARMOR SHORELINE TREATMENT**

VERTICAL SCALE: 1"=2'  
HORIZONTAL SCALE: 1"=2'

**NOTES:**

1. ALL COIR AND JUTE MATTING SHALL BE STAKED OR STAPLED TO SURFACE PER Maine DEP BEST MANAGEMENT PRACTICES & PER MANUFACTURER'S REQUIREMENTS.
2. ALL SLOPE STABILIZATION WORK SHALL BE INSTALLED AND STABILIZED COMPLETE AND IN PLACE AT THE END OF EACH WORKDAY AND PRIOR TO FORECAST STORMS.

NO.	DATE	TYP	INT.
A	03.XX.20	TYP	INT.
SUBMISSION		DATE	
ACOE PERMITTING SET		DATE	
Maine DEP /		DATE	

DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BJB
SCALE:	AS SHOWN

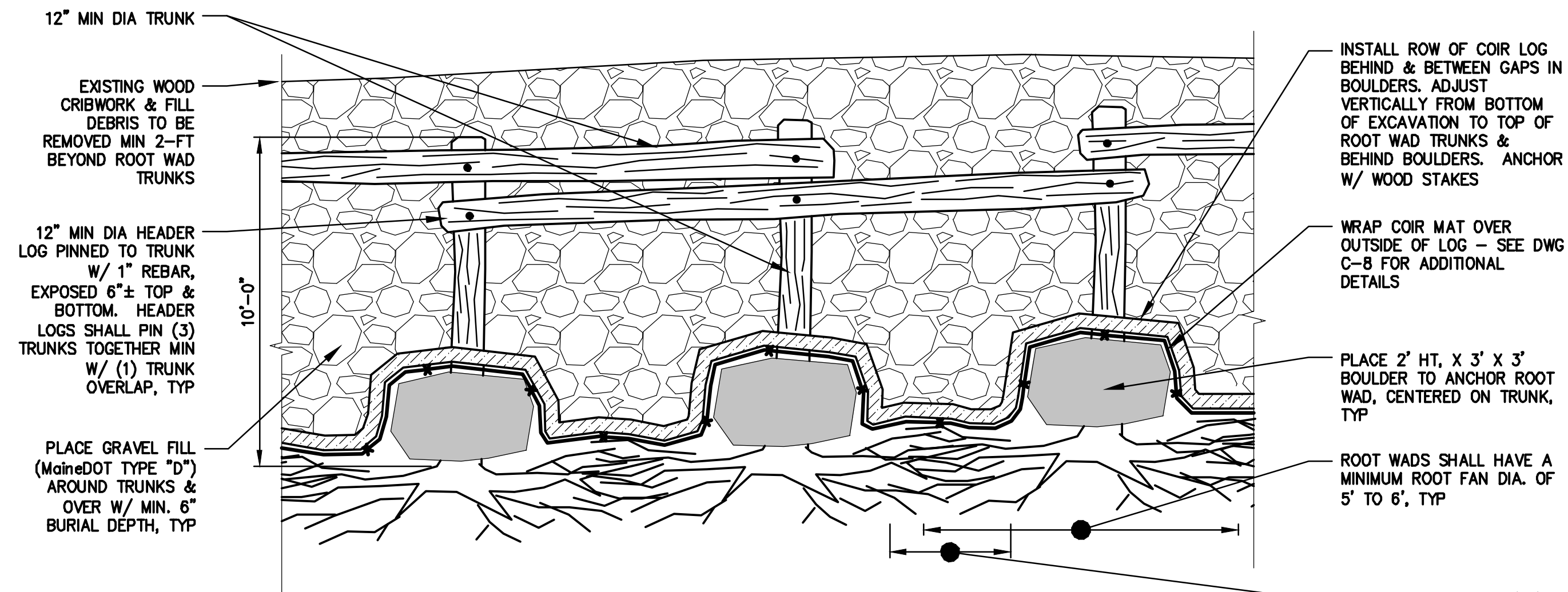
SHEET TITLE: **SHORELINE STABILIZATION II**  
OPTIONS TYPICAL SECTIONS II  
PROJECT: TOWN OF BOWDOINHAM  
**WATERFRONT PLAN - PHASE I**  
BOWDOINHAM, MAINE

DATE: MARCH 2020

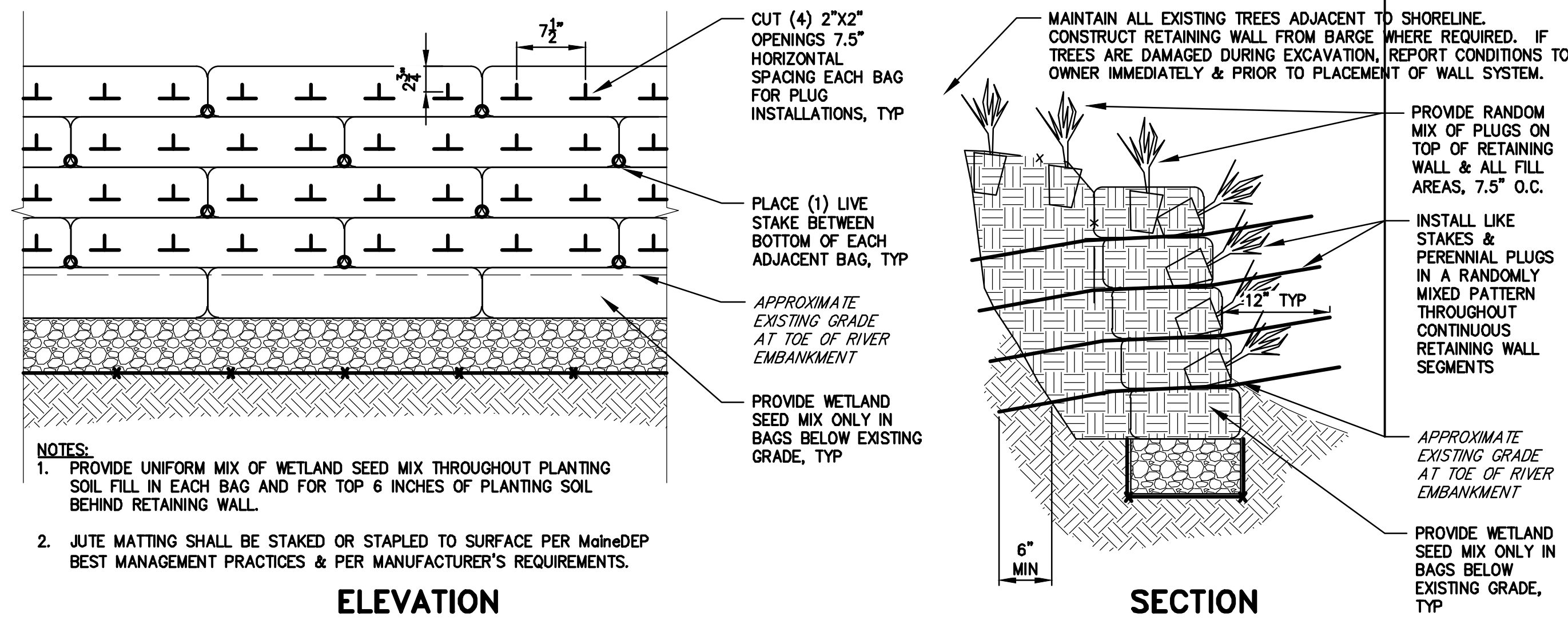
CONTRACT NO. 18-20

SHEET NO. **C-9** REV. **A**

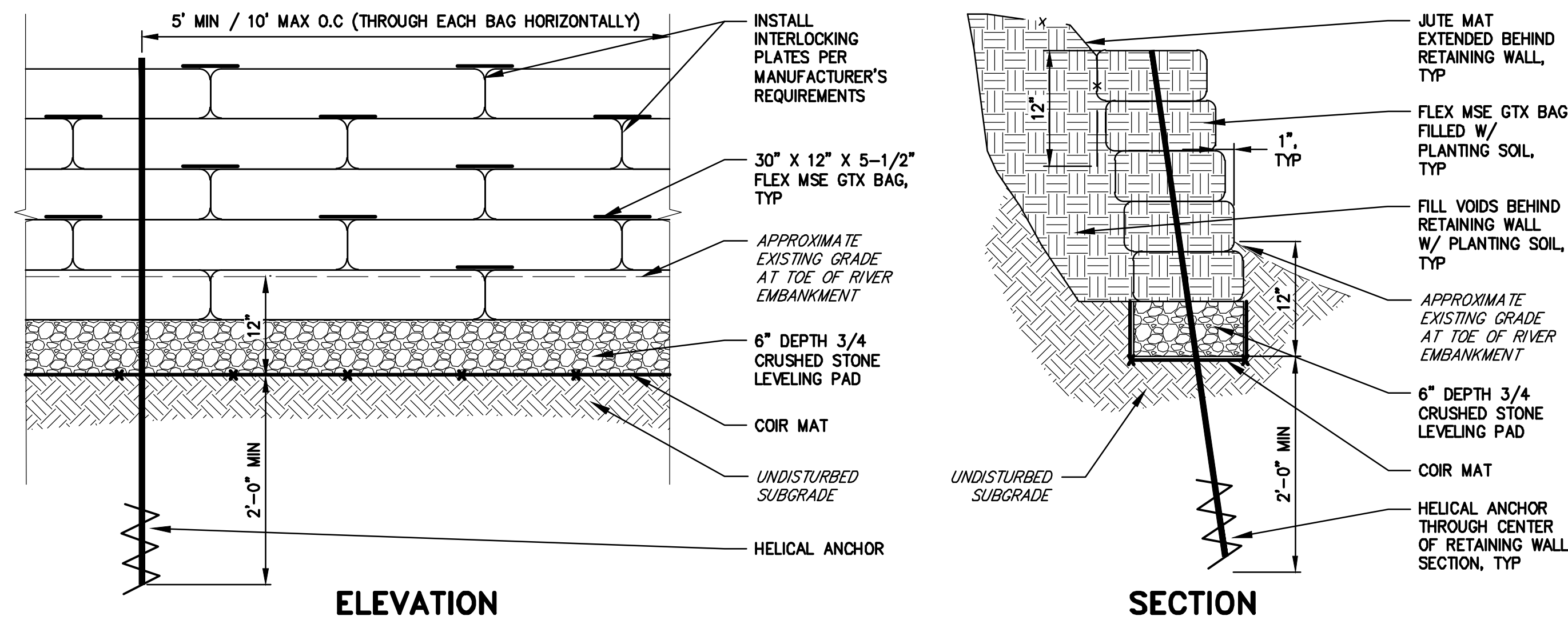
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**CATHANCE RIVER  
TREE ROOT WAD LAYOUT**  
NOT TO SCALE



**MSE RETAINING WALL PLANTING**  
NOT TO SCALE

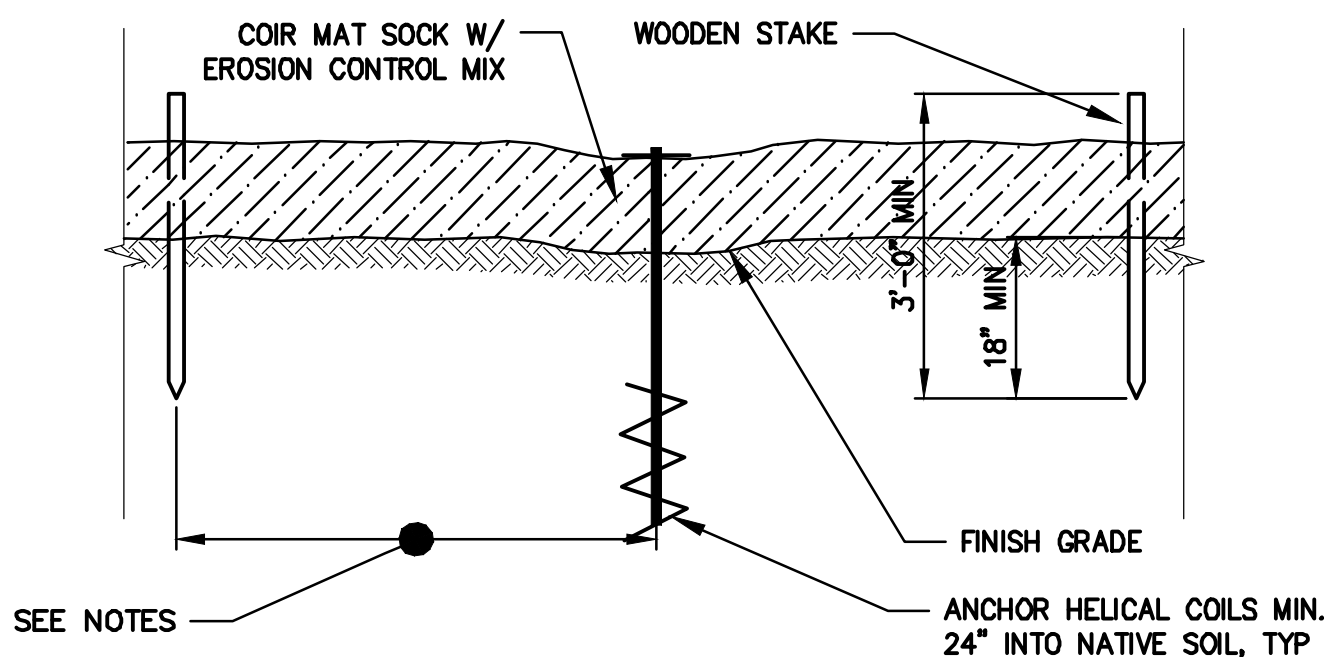


**MSE RETAINING WALL**  
NOT TO SCALE

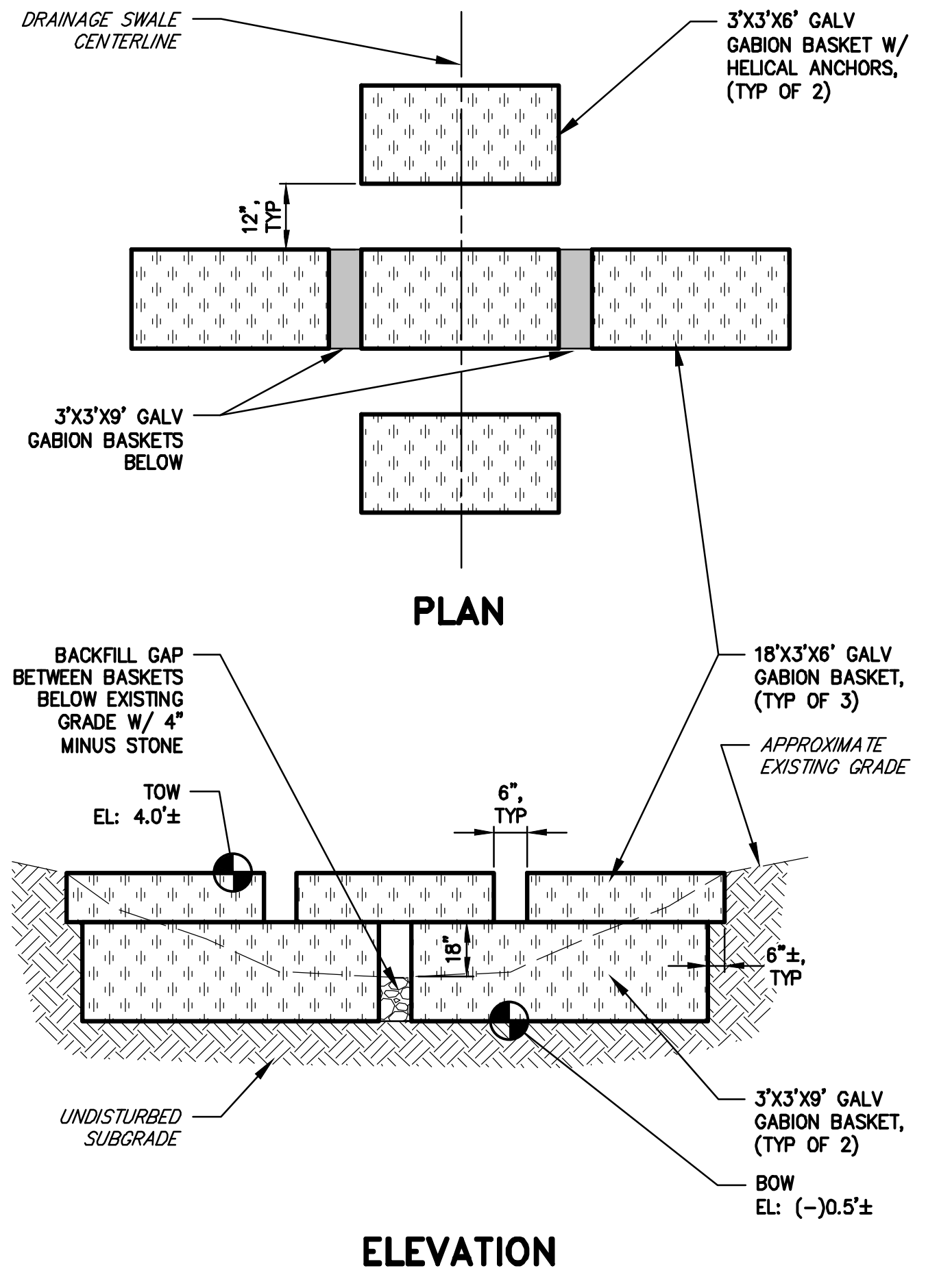
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PLANT LIST						
KEY	QTY	SCIENTIFIC NAME COMMON NAME	SIZE	SPACING	ROOTING	NOTES
LIVE STAKES						
CA	X	CORNUS AMOMUM SILKY DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
CR	X	CORNUS RACEMOSA GRAY DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
CS	X	CORNUS SERICEA REDOSIER DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SB	X	SALIX CINEREA GREY WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SD	X	SALIX DISCOLOR PUSSY WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SP	X	SALIX PUPUREA VAR. 'NANA' DWARF ARTIC WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
PLUGS						
AA	X	CALAMAGROSTIS CANADENSIS BLUEJOINT GRASS	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
JC	X	CAREX GYNANDRA NODDING SEDGE	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
JH	X	CAREX VULPINOIDEA BROWN FOX SEDGE	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
MP	X	SCHOENOPLECTUS AMERICANUS THREE-SQUARE BULRUSH	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
PM	X	SCIRPUS CYPERINUS COTTONGRASS BULRUSH	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
PQ	X	SPARTINA PECTINATA CORD GRASS	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
OTHER						
		WETLAND SEED MIX				SEE DWG L-1

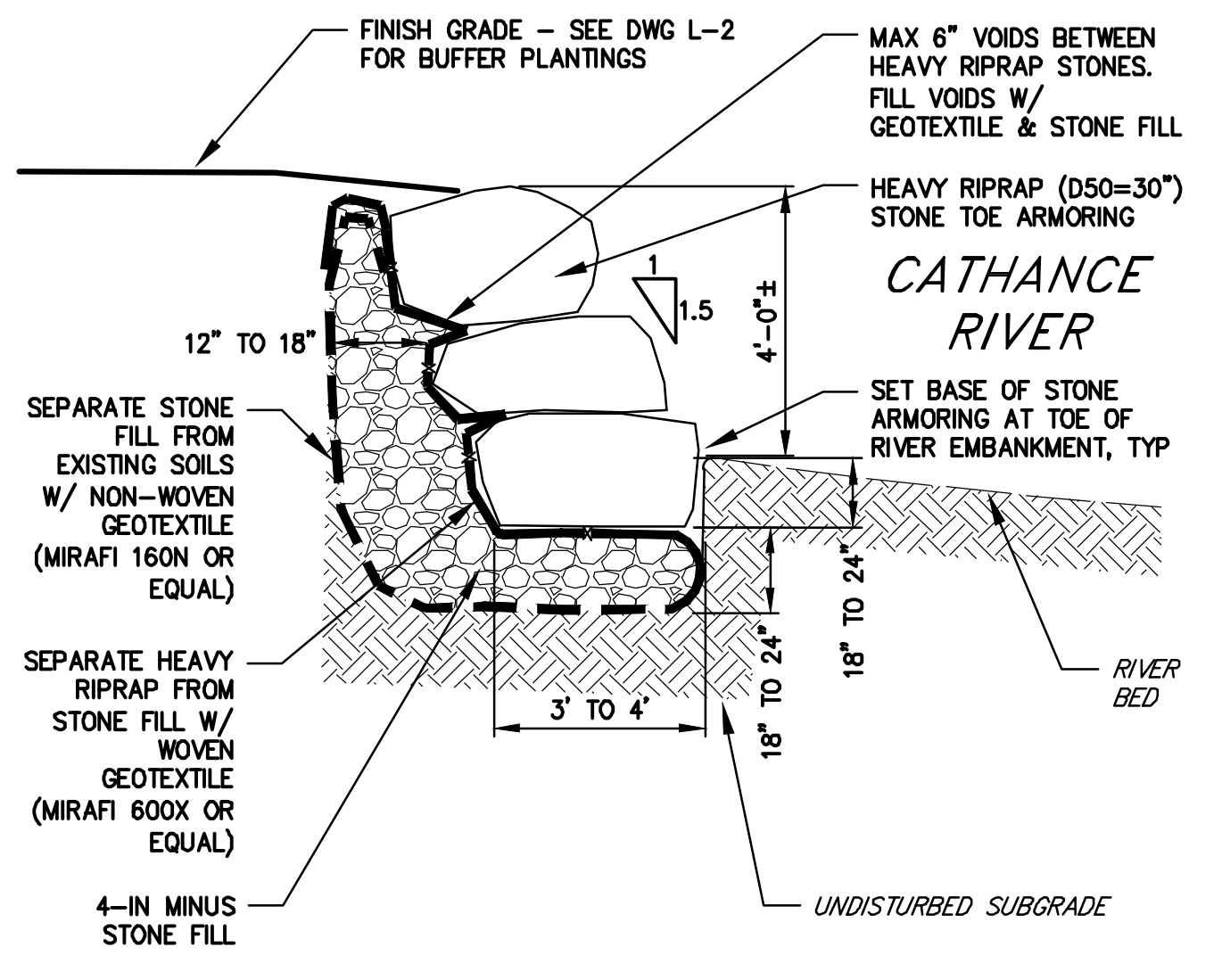


**SEDIMENT BARRIER - COIR LOG**  
NOT TO SCALE



**GABION STORMWATER FILTER**  
NOT TO SCALE

- NOTES:**
- CENTER WALL WITHIN DRAINAGE SWALE CROSS SECTION.
  - GALVANIZED GABIONS SHALL MEET NRCS SPECIFICATION 64 STANDARDS AT A MINIMUM.
  - ALL BASKETS SHALL BE FASTENED TO ADJACENT BASKETS PER SPECIFICATIONS
  - OYSTER SHELL FILL MATERIAL SHALL HAVE AN AVERAGE SHELL WIDTH OF 4 INCHES AND SHALL BE HARVESTED FROM MAINE COASTAL WATERS
  - 3'X3'X6" BASKETS IMMEDIATELY UPSTREAM AND DOWNSTREAM OF THE GABION WALL SHALL BE ANCHORED MIN 24" DEPTH INTO EXISTING SUBGRADE WITH (2) HELICAL ANCHORS PER BASKET.



**STONE ARMORING TYPICAL SECTION**  
NOT TO SCALE

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DESIGNED BY:	TJP	DRAWN BY:	MVC	CHECKED BY:	BUB	SCALE:	AS SHOWN
SHEET TITLE:		SHORELINE STABILIZATION DETAILS		PROJECT:		TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I	
DATE:		MARCH 2020		CONTRACT NO.:		18-20	
SHEET NO.:		C-10		REV.:		A	

# PLANTING SCHEDULE:

Symbol	Quantity	Scientific Name	Common Name	Size	Root Size	Notes
<b>Trees 44 Trees</b>						
NS	8	<i>Nyssa sylvatica</i>	Blackgum	1.5" - 2" dia (10'-14')	20" - 24"	
SN	2	<i>Salix nigra</i>	Black Willow	1" dia (6'-10')	12" - 18"	
AS	7	<i>Acer saccharum</i>	Sugar Maple	2" dia (10'-14')	20" - 24"	
AR	7	<i>Acer rubrum</i>	Red Maple	2" dia (10'-14')	20" - 24"	
AC	18	<i>Amelanchier canadensis</i>	Shadblow / Serviceberry	1" dia (6'-10')	12" - 18"	
HIA	2	<i>Hamamelis X intermedia 'Arnold Promise'</i>	Witchhazel	1" dia (6'-10')	12" - 18"	
<b>Shrub Mix 1 328 shrubs</b>						
KA	195	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	
IVN	84	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	
IVJ	11	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	
AM	38	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	
<b>Shrub Mix 2 84 shrubs</b>						
KA	5	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	Sunny/Part Shade Areas
VA	5	<i>Vaccinium angustifolium</i>	Lowbush Blueberry	1 gal	1 gal	Sunny/Part Shade Areas
VP	8	<i>Vaccinium parvifolium</i>	Huckleberry	1 gal	1 gal	Sunny/Part Shade Areas
CC	33	<i>Cornus canadensis</i>	Bunchberry	1 gal	1 gal	Shady Areas
IVN	14	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	
IVJ	2	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	
CA	12	<i>Clethra alnifolia 'Tom's Compact'</i>	Summersweet Clethra	3 gal	3 gal	
VD	5	<i>Viburnum dentatum 'Blue Muffin'</i>	Arrowwood viburnum	3 gal	3 gal	
<b>Shrub Mix 3 468 shrubs</b>						
LB	14	<i>Lindera Benzoin</i>	Spicebush	5 gal	5 gal	
AM	108	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	
AB	55	<i>Aronia arbutifolia 'brilliantissima'</i>	Chokeberry	3 gal	3 gal	
VA	125	<i>Vaccinium angustifolia</i>	Lowbush Blueberry	1 gal	1 gal	Sunny/Part Shade Areas
CC	166	<i>Cornus canadensis</i>	Bunchberry	1 gal	1 gal	Shady Areas
<b>Upland Mix 7040 SF.</b>						
		<i>Festuca rubra</i>	Red Fescue			
		<i>Elymus virginicus</i>	Virginia Rye			
		<i>Heliopsis helianthoides</i>	Smooth Oxeye			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Sorghastrum nutans</i>	Indian Grass			
		<i>Coreopsis lanceolata</i>	Lance-leaf Coreopsis			
		<i>Verbena hastata</i>	Blue Vervain			
		<i>Solidago juncea</i>	Early Goldenrod			
<b>Bottomland Mix 3740 SF.</b>						
		<i>Elymus riparius</i>	Riverbank Wild Rye			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Carex vulpinoidea</i>	Fox Sedge			
		<i>Carex lurida</i>	Lurid Sedge			
		<i>Carex scoparia</i>	Blunt Broom Sedge			
		<i>Verbena hastata</i>	Blue Vervain			
		<i>Poa palustris</i>	Fowl Bluegrass			
		<i>Carex lupulina</i>	Hop Sedge			
		<i>Schoenoplectus tabernaemontani</i>	Soft-stem bulrush			
		<i>Acorus americanus</i>	American Sweetflag			
		<i>Pontederia cordata</i>	Pickelweed			
		<i>Symphotrichum puniceum</i>	Purplestem Aster			
		<i>Iris versicolor</i>	Iris versicolor			
		<i>Symphotrichum novae-angliae</i>	New England Aster			
		<i>Rudbeckia hirta</i>	Black Eyed Susan			
		<i>Liatris spicata</i>	Marsh Blazing Star			
		<i>Solidago juncea</i>	Early Goldenrod			
<b>Wetland Mix 3920 SF.</b>						
		<i>Asclepias incarnata</i>	Rose Milkweed			
		<i>Bidens cernua</i>	Nodding Bur Marigold			
		<i>Calamagrostis canadensis</i>	Bluejoint Grass			
		<i>Carex bicknellii</i>	Copper-Shouldered Oval Sedge			
		<i>Carex lupulina</i>	Common Hop Sedge			
		<i>Carex lurida</i>	Sallow Sedge			
		<i>Carex scoparia</i>	Lance-Fruited Oval Sedge			
		<i>Carex vulpinoidea</i>	Brown Fox Sedge			
		<i>Eleocharis palustris</i>	Great Spike Rush			
		<i>Eutrochium maculatum</i>	Joe-pye Weed			
		<i>Iris versicolor</i>	Northern Blue Flag			
		<i>Liatris spicata</i>	Marsh Blazing Star			
		<i>Mimulus ringens</i>	Monkey Flower			
		<i>Schoenoplectus tabernaemontani</i>	Soft-stem bulrush			
		<i>Schoenoplectus americanus</i>	Three-square bulrush			
		<i>Symphotrichum puniceum</i>	Swamp Aster			
		<i>Symphotrichum novae-angliae</i>	New England Aster			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Solidago uliginosa</i>	Bog Goldenrod			
		<i>Verbena hastata</i>	Blue Vervain			
<b>Aquatic Plants 190 perennial plants</b>						
	120	<i>Iris versicolor</i>	Blue Flag Iris	Plug	Plug	
	25	<i>Lobelia siphilitica</i>	Great Blue Lobelia	Plug	Plug	
	25	<i>Lobelia cardinalis</i>	Lobelia / Cardinal Flower	Plug	Plug	
	20	<i>Pontederia cordata</i>	Pickelweed	Plug	Plug	
<b>Lawn 30825 SF.</b>						

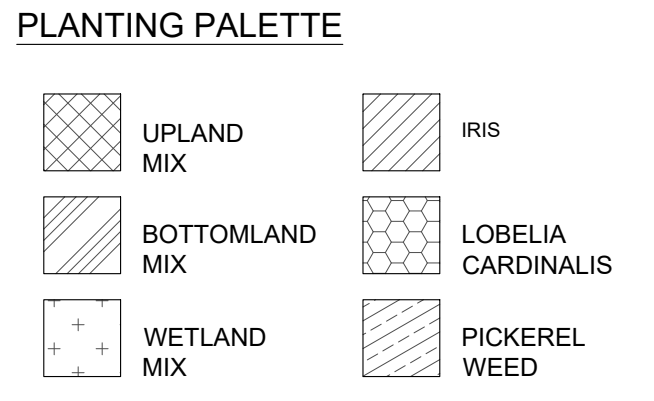
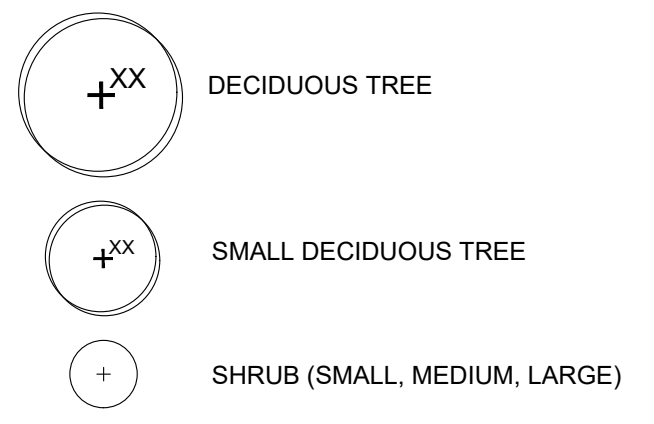
**General Notes:**

- All topographic and existing base information provided by David Dolan and Associates
- Limit of work shall be at property lines unless otherwise noted.
- No grading, construction or materials storage shall occur within tree protection areas or within drip-line of existing trees.
- All disturbed areas not otherwise developed shall be loamed with a minimum depth of 6" of topsoil and be seeded as specified.
- All areas not requiring grading shall be left undisturbed. Contractor shall keep out of these areas and preserve existing plantings.
- Underground and above ground utility locations are based upon best available evidence and are not field verified. Locating and protecting any above ground or underground utilities is the sole responsibility of the contractor.
- Utility conflicts shall be reported immediately to the landscape architect.
- Utility information shown is approximate only. Prior to any construction, appropriate utility companies shall be contacted and Dig-Safe Center shall be called at 1-800-DIG-SAFE, at least 72 hours (3 working days) in advance.

# PLANTING NOTES:

- PLANT QUANTITIES, SIZES, SPACING, SPECIES, VARIETIES AND CULTIVARS, AS WELL AS PLANT BED EXTENTS MAY BE ADJUSTED DURING CONSTRUCTION.
- ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE OWNER.
- PLANTS TO BE INSTALLED IN A RANDOMLY MIXED DISTRIBUTED THROUGHOUT THE RESTORATION AREA.
- WHERE POSSIBLE, SHRUB AND PERENNIAL AREAS SHOULD STRIVE TO INCLUDE GROUPINGS OF A MINIMUM OF FIVE SIMILAR SPECIES.
- CONTRACTOR SHALL REFERENCE THE FOLLOWING RESOURCES FOR SHORELINE PLANTING MEANS, METHODS AND MATERIALS:
  - UNIVERSITY OF MAINE COOPERATIVE EXTENSION
  - THE WILD SEED PROJECT
  - CUMBERLAND COUNTY SOIL & WATER CONSERVATION DISTRICT - COASTAL PLANTING GUIDE

# PLANTING KEY:



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Drawn By:	TK, RM
Checked By:	
Date:	03-24-2020
Issued For:	FOR REVIEW

LANDSCAPE NOTES & SCHEDULES

Bowdoinham Master Plan  
Bowdoinham, ME



PLANTING NOTES:

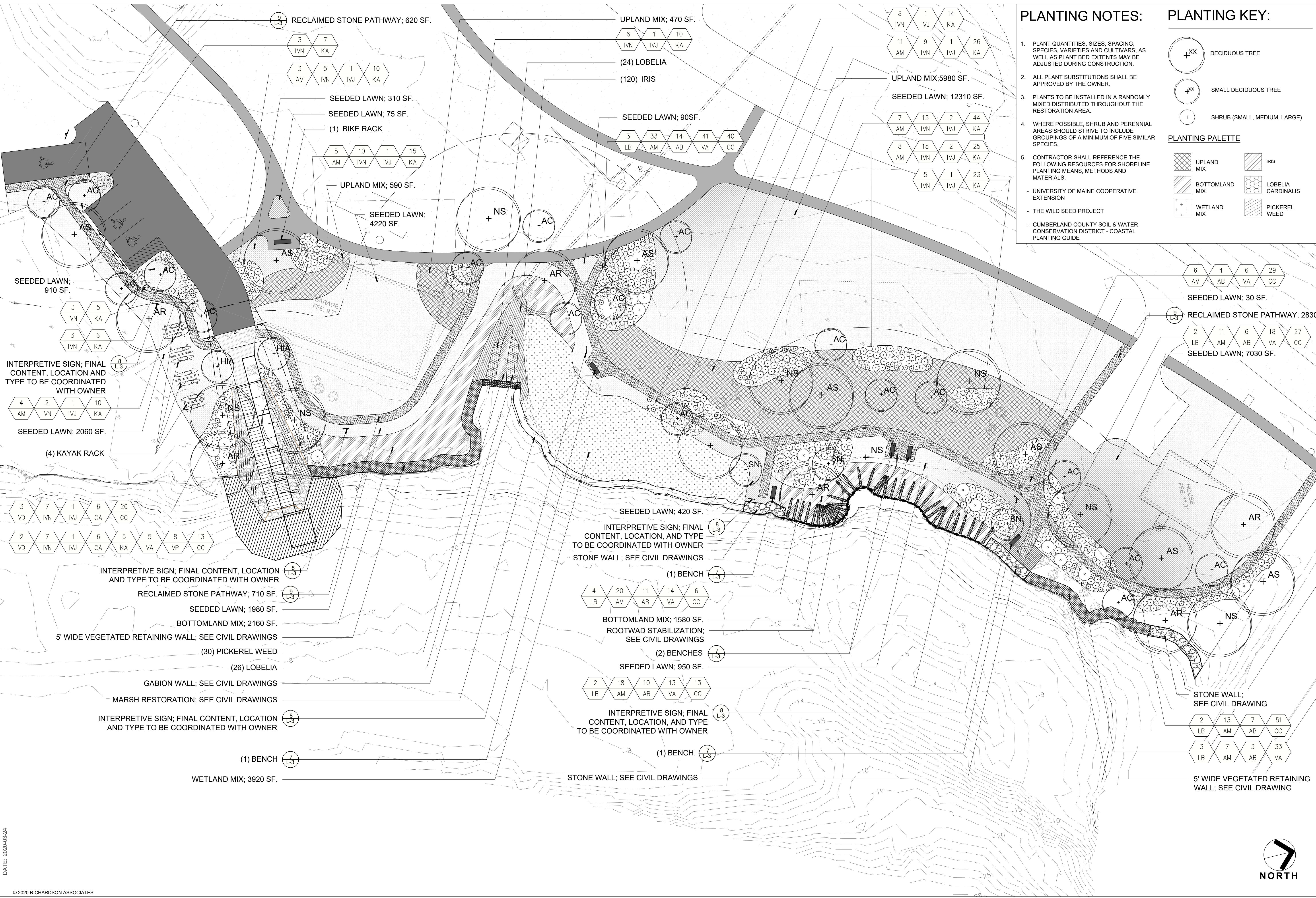
1. PLANT QUANTITIES, SIZES, SPACING, SPECIES, VARIETIES AND CULTIVARS, AS WELL AS PLANT BED EXTENTS MAY BE ADJUSTED DURING CONSTRUCTION.
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PLANTING KEY:

- DECIDUOUS TREE
- SMALL DECIDUOUS TREE
- SHRUB (SMALL, MEDIUM, LARGE)

PLANTING PALETTE

- UPLAND MIX
- IRIS
- BOTTOMLAND MIX
- LOBELIA CARDINALIS
- WETLAND MIX
- PICKEREL WEED



9 L-3 RECLAIMED STONE PATHWAY; 620 SF.

UPLAND MIX; 470 SF.

8	1	14	
IVN	IVJ	KA	
11	9	1	26
AM	IVN	IVJ	KA

UPLAND MIX; 590 SF.

SEEDDED LAWN; 12310 SF.

7	15	2	44
AM	IVN	IVJ	KA
8	15	2	25
AM	IVN	IVJ	KA
5	1	23	
IVN	IVJ	KA	

SEEDDED LAWN; 310 SF.

SEEDDED LAWN; 75 SF.

3	7		
IVN	KA		
3	5	1	10
AM	IVN	IVJ	KA
5	10	1	15
AM	IVN	IVJ	KA

UPLAND MIX; 590 SF.

SEEDDED LAWN; 4220 SF.

SEEDDED LAWN; 90SF.

3	33	14	41	40
LB	AM	AB	VA	CC

SEEDDED LAWN; 910 SF.

3	5
IVN	KA
3	6
IVN	KA

INTERPRETIVE SIGN; FINAL CONTENT, LOCATION AND TYPE TO BE COORDINATED WITH OWNER

4	2	1	10
AM	IVN	IVJ	KA

SEEDDED LAWN; 2060 SF.

(4) KAYAK RACK

3	7	1	6	20			
VD	IVN	IVJ	CA	CC			
2	7	1	6	5	5	8	13
VD	IVN	IVJ	CA	KA	VA	VP	CC

INTERPRETIVE SIGN; FINAL CONTENT, LOCATION AND TYPE TO BE COORDINATED WITH OWNER

RECLAIMED STONE PATHWAY; 710 SF.

SEEDDED LAWN; 1980 SF.

BOTTOMLAND MIX; 2160 SF.

5' WIDE VEGETATED RETAINING WALL; SEE CIVIL DRAWINGS

(30) PICKEREL WEED

(26) LOBELIA

GABION WALL; SEE CIVIL DRAWINGS

MARSH RESTORATION; SEE CIVIL DRAWINGS

INTERPRETIVE SIGN; FINAL CONTENT, LOCATION AND TYPE TO BE COORDINATED WITH OWNER

(1) BENCH

WETLAND MIX; 3920 SF.

SEEDDED LAWN; 420 SF.

INTERPRETIVE SIGN; FINAL CONTENT, LOCATION, AND TYPE TO BE COORDINATED WITH OWNER  
STONE WALL; SEE CIVIL DRAWINGS

(1) BENCH

4	20	11	14	6
LB	AM	AB	VA	CC

BOTTOMLAND MIX; 1580 SF.  
ROOTWAD STABILIZATION;  
SEE CIVIL DRAWINGS

(2) BENCHES

SEEDDED LAWN; 950 SF.

2	18	10	13	13
LB	AM	AB	VA	CC

INTERPRETIVE SIGN; FINAL CONTENT, LOCATION, AND TYPE TO BE COORDINATED WITH OWNER

(1) BENCH

STONE WALL; SEE CIVIL DRAWINGS

SEEDDED LAWN; 30 SF.

6	4	6	29	
AM	AB	VA	CC	
2	11	6	18	27
LB	AM	AB	VA	CC

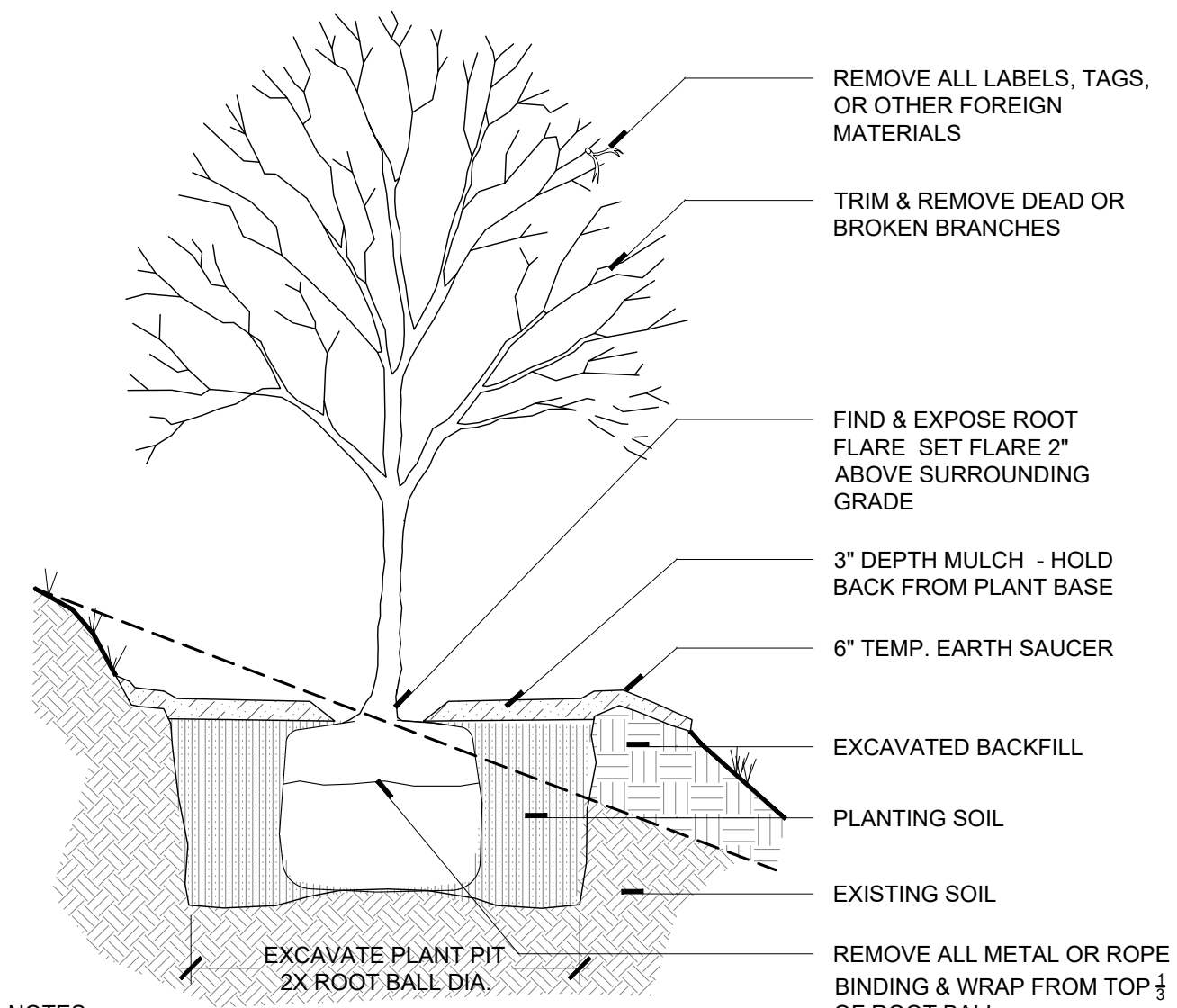
SEEDDED LAWN; 7030 SF.

STONE WALL;  
SEE CIVIL DRAWING

2	13	7	51
LB	AM	AB	CC
3	7	3	33
LB	AM	AB	VA

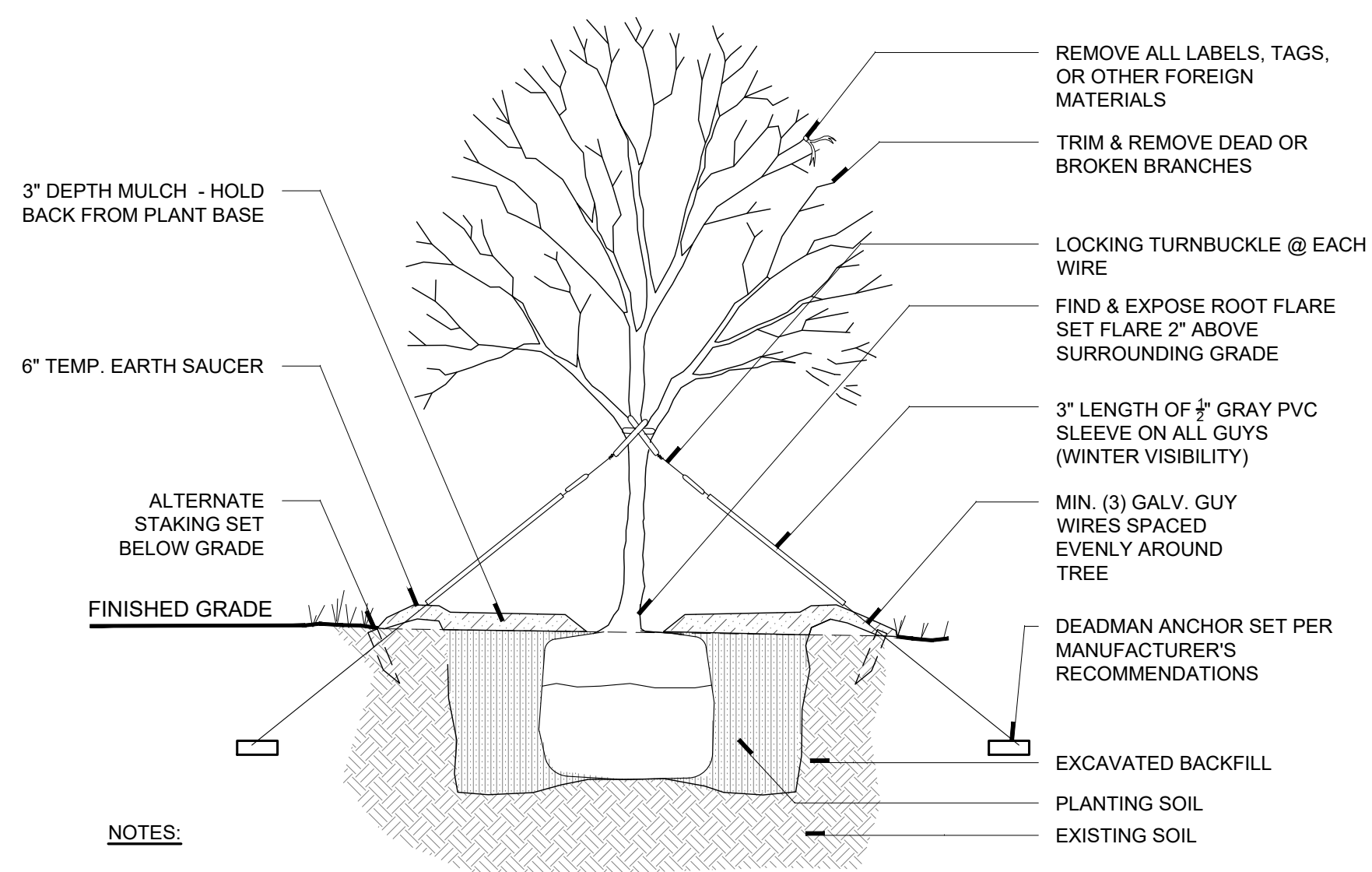
5' WIDE VEGETATED RETAINING WALL; SEE CIVIL DRAWING





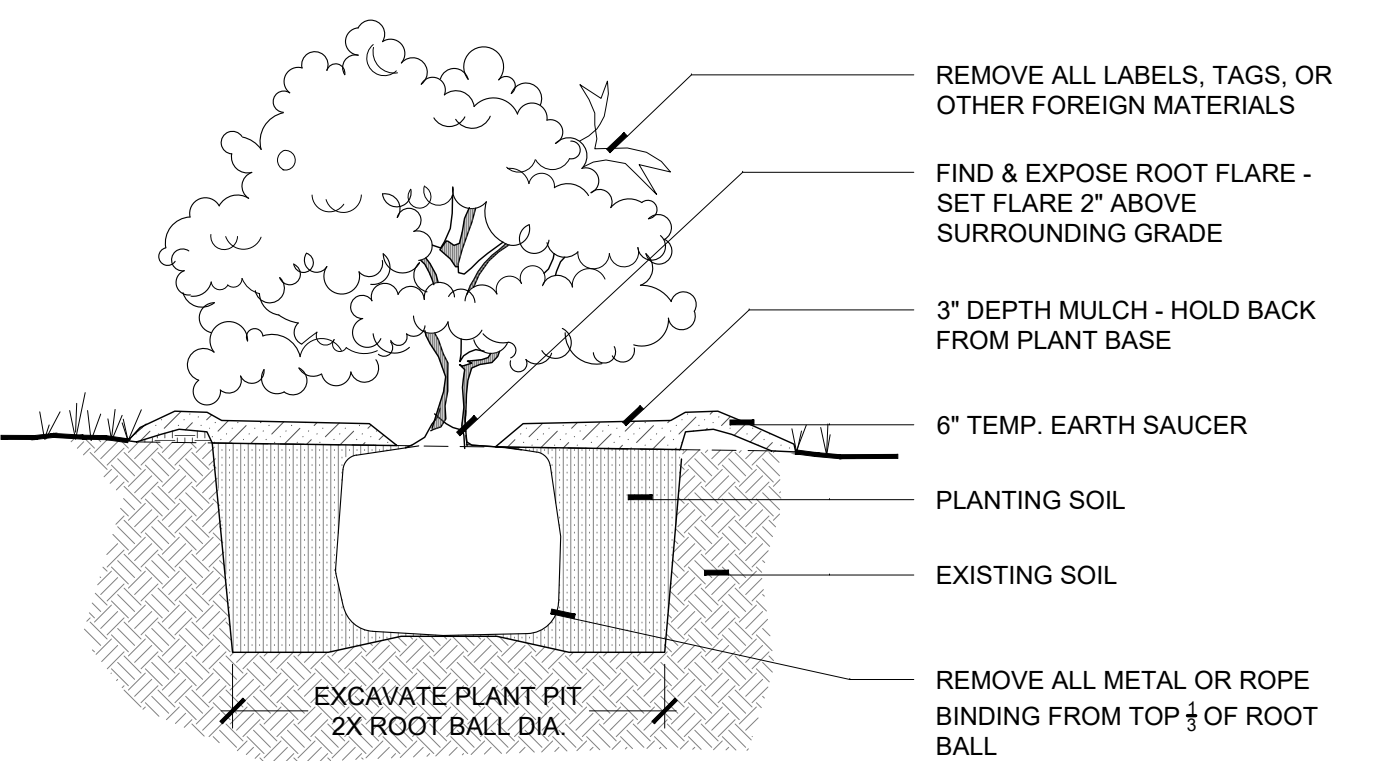
- NOTES:**
- TREE TO BE SET PLUMB.
  - SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
  - IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

**1 TREE PLANTING ON SLOPE**  
NTS



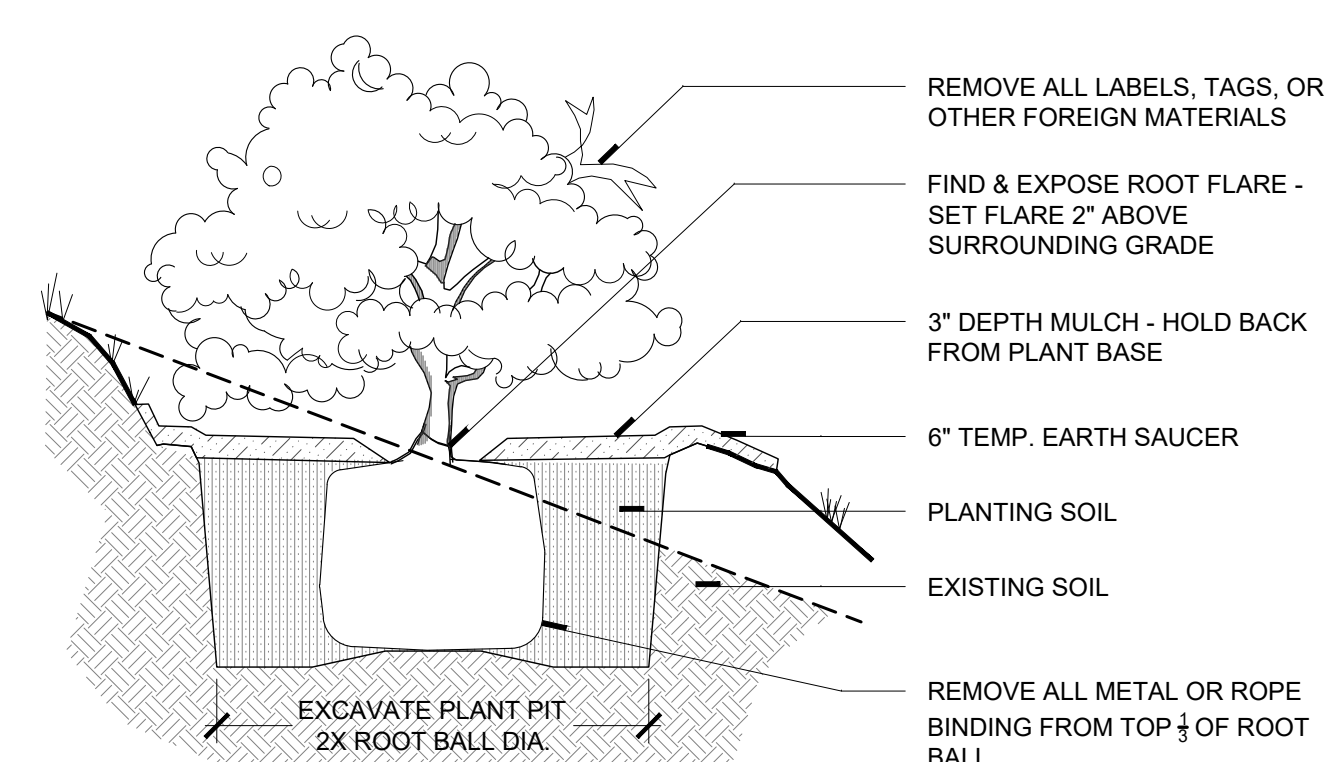
- NOTES:**
- TREE TO BE SET PLUMB.
  - SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
  - IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

**2 TREE PLANTING**  
NTS



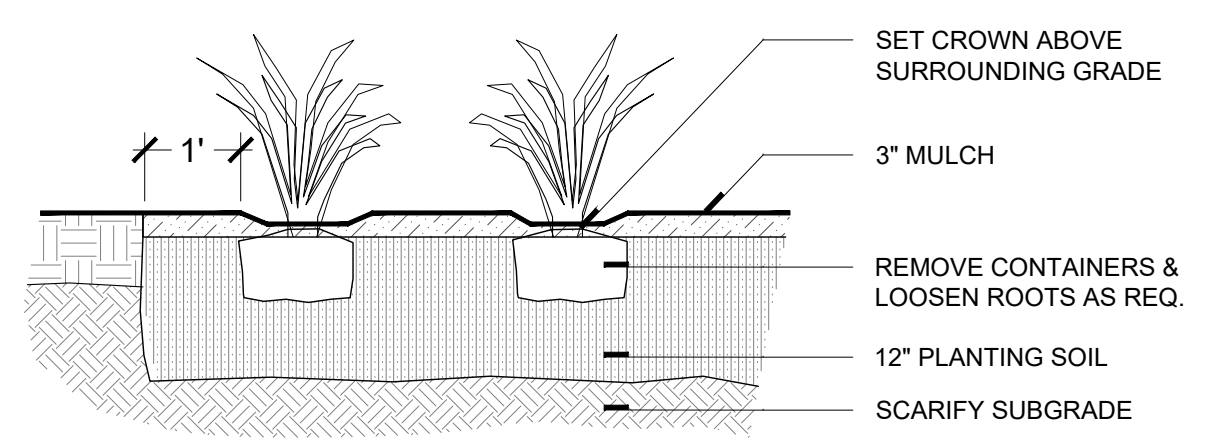
- NOTES:**
- SHRUB TO BE SET PLUMB.
  - SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER COND.
  - IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

**4 SHRUB PLANTING**  
NTS

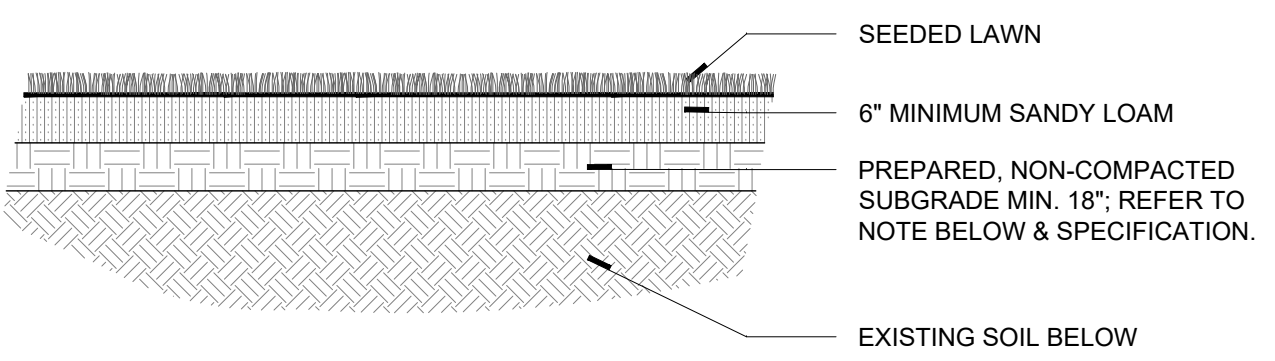


- NOTES:**
- SHRUB TO BE SET PLUMB.
  - SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER COND.
  - IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

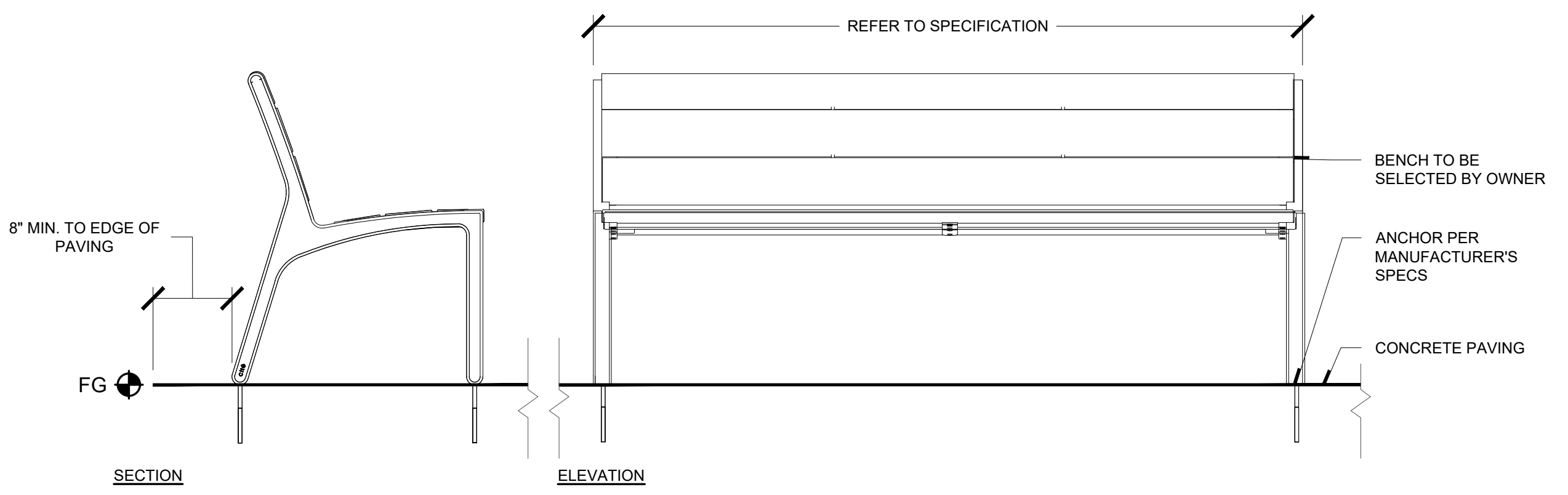
**3 SHRUB PLANTING ON SLOPE**  
NTS



**5 PERENNIAL PLANTING**  
1/2"=1"

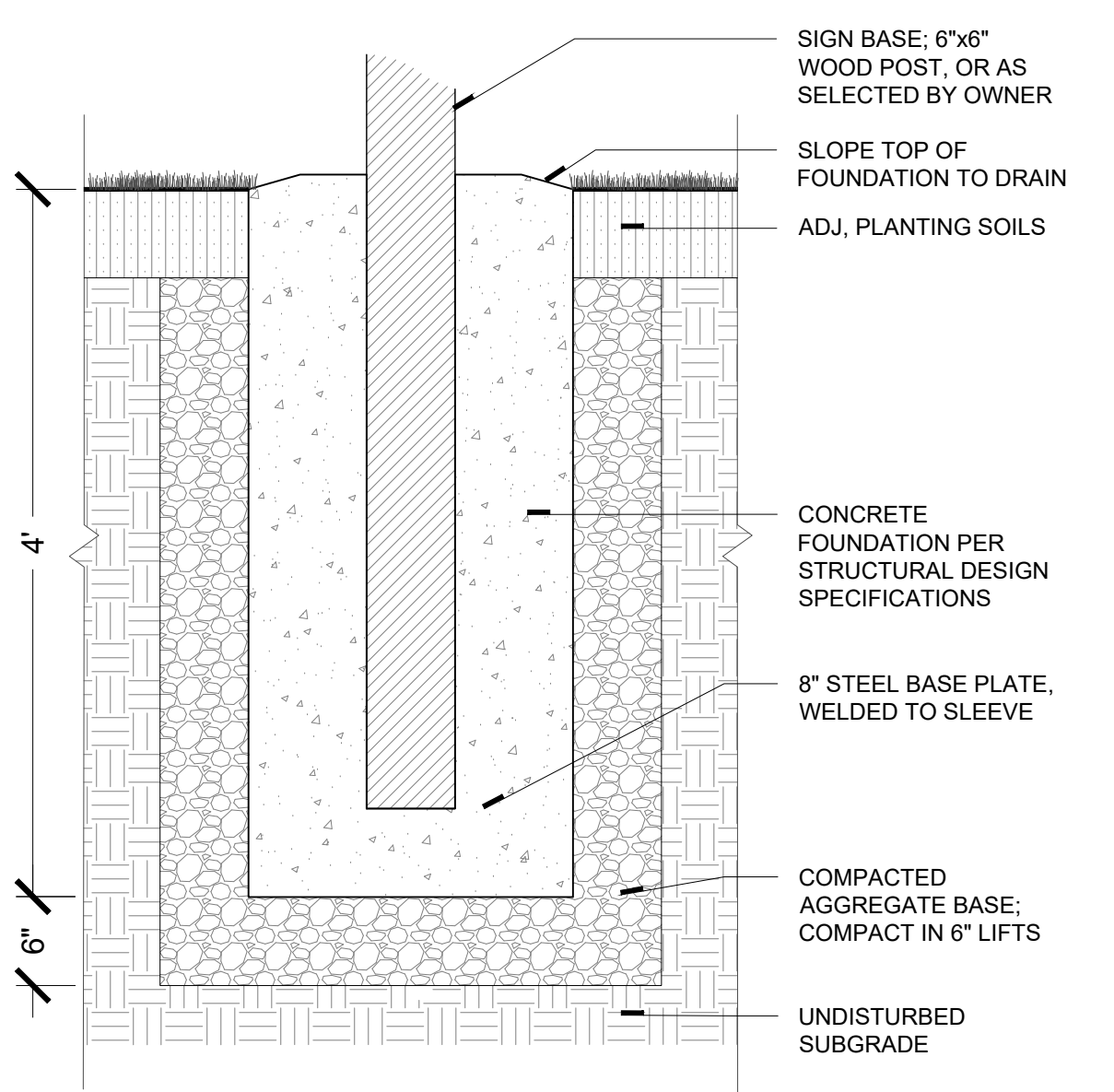


**6 LAWN (SEEDED) - TYPICAL SECTION**  
1/2"=1"



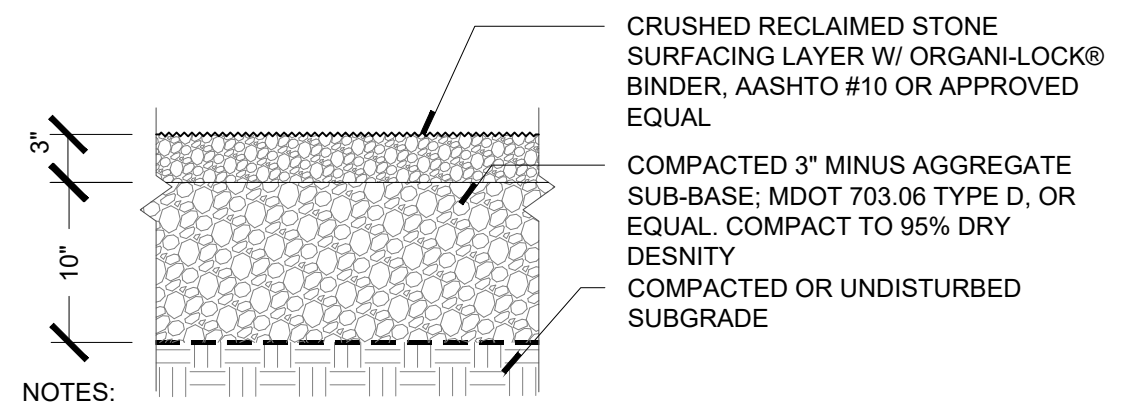
- NOTES:**
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  - MODEL AND FINISH OF BENCH TO BE SELECTED BY OWNER.

**7 PREFABRICATED BENCH**  
1" = 1'-0"



- NOTES:**
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, OR AS DESIGNATED BY SHOP DRAWINGS.
  - ALL MATERIALS SHALL CONFORM WITH THE MOST CURRENT MAINE DOT STANDARDS.
  - CONTRACTOR SHALL SUBMIT ALL MIX DESIGNS TO LANDSCAPE ARCHITECT FOR APPROVAL.
  - CONTRACTOR IS RESPONSIBLE FOR ENSURING FOOTING IS APPROPRIATELY SIZED TO MEET ALL STRUCTURAL REQUIREMENTS FOR SELECTED SIGNAGE.

**8 SIGN POST BASE**  
1"=1'-0"



- NOTES:**
- ORGANIC-LOCK PATHWAY AGGREGATE MUST ALWAYS BE PRE-WET FOR INSTALLATION.
  - ALL MATERIALS SHALL CONFORM WITH THE MOST CURRENT PREVAILING MAINE DOT/AASHTO STANDARDS.
  - CONTRACTOR SHALL SUBMIT SAMPLES OF ALL SURFACE MATERIALS AND EDGING TO LANDSCAPE ARCHITECT OR OWNER FOR APPROVAL.
  - CONTRACTOR SHALL PROVIDE IN-PLACE MOCK-UP, NO LESS THAN 5'x10' ILLUSTRATING A VARIETY OF CONDITIONS FOR REVIEW AND APPROVAL BY OWNER.

**9 STABILIZED RECLAIMED STONE PATHWAY**  
1"=1'-0"

- NOTE:**
- UPON REMOVAL OF EXISTING PAVING, SUB BASE MATERIAL OF LAWN AREAS MUST BE ASSESSED TO DETERMINE COMPOSITION, COMPACTION, AND INFILTRATION RATE.
  - PERFORM SITE TESTING TO DETERMINE COMPOSITION, COMPACTION AND INFILTRATION RATE OF EXISTING SUB-BASE.
  - SOIL STRUCTURE FOR LAWN TO BE COMPOSED OF WELL DRAINING SANDY-LOAM, WITH pH RANGE OF 6.0 TO 7.0.

DATE: 2020-03-24

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