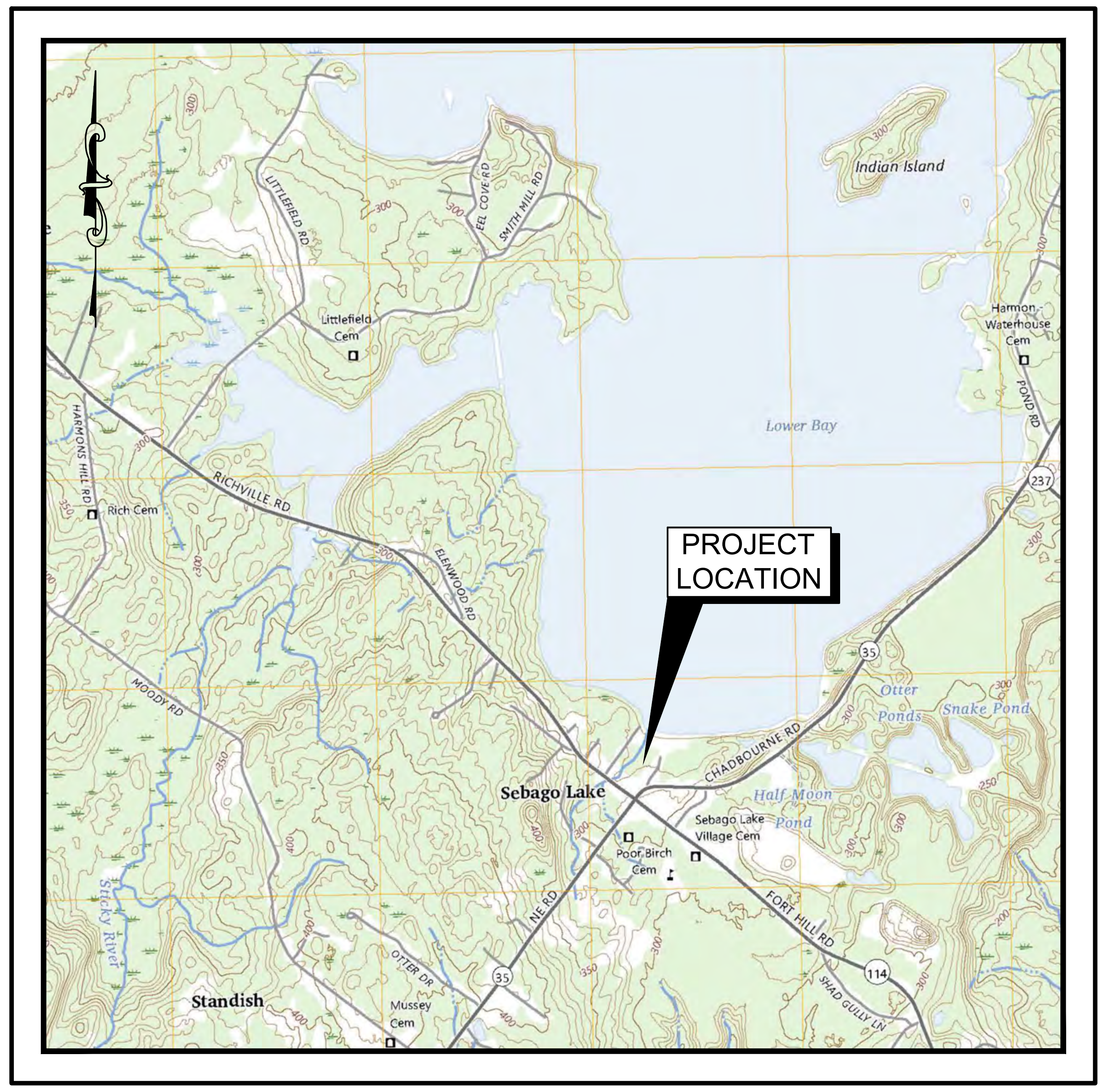
CONSTRUCTION DRAWINGS
FOR
STANDISH BROOK CULVERT REMOVAL
STANDISH, MAINE

PROFESSIONAL CONTACTS:

OWNER:
PORTLAND WATER DISTRICT
225 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, ME 04104-3553

MAINE DEPARTMENT OF TRANSPORTATION
24 CHILD STREET
AUGUSTA, ME 04330

ENGINEERING:
CUMBERLAND COUNTY SOIL & WATER CONSERVATION DISTRICT
CHRISTOPHER BALDWIN, P.E.
35 MAIN STREET, SUITE 3
WINDHAM, ME 04062
(207) 892-4700



SITE LOCATION MAP

SCALE: 1" = 2,000'±
SOURCE: USGS SEBAGO LAKE, 2024

DRAWING LIST:

C-1	COVER SHEET
C-2	EXISTING CONDITIONS, REMOVALS, AND EROSION & SEDIMENT CONTROL PLAN
C-3	PROPOSED GRADING AND SECTIONS
C-4	EROSION & SEDIMENT CONTROL NOTES & DETAILS

LEGEND:

EXISTING		PROPOSED	
—— – – ——	PROPERTY LINE	TURBITY CURTAIN	— · · — · · —
—— · —— · ——	EDGE OF WATER	SILT BARRIER	——SB——
┼┼┼┼┼┼┼┼	RAILROAD TRACKS	CONSTRUCTION ENTRANCE	▨
– – – – – – –	LIDAR CONTOUR (5' INT.)		
- - - - - - -	LIDAR CONTOUR (1' INT.)		
⊏ = = = = = ⊐	CULVERT		
⊠	BUILDING		

GRANITE CULVERT AT INLET (LOOKING UPSTREAM)

NOT TO SCALE

FORMER CHLORINE INJECTION BUILDING
TO BE REMOVED UNDER SEPARATE CONTRACT

NOT TO SCALE

GRANITE CULVERT AT OUTLET (LOOKING UPSTREAM)

NOT TO SCALE

APRIL 2025

ISSUED FOR BIDDING

REV.	DATE	DESCRIPTION

CHRISTOPHER BALDWIN
7047

Cumberland County Soil & Water
Conservation District
35 Main Street, Suite 3, Windham, ME 04062

PROJECT NO.:	223	DESIGNED BY:	CB	DATE:	2/19/2025
FILE NAME:	223 COVER.dwg	DRAWN BY:	DB	DATE:	2/19/2025
SCALE:	AS NOTED	REVIEWED BY:		DATE:	

COVER SHEET

STANDISH BROOK
CULVERT REMOVAL
STANDISH, MAINE

SHEET
C-1

FILE PATH: C:\Users\diana\Dropbox\DCS-Projects\CCSWCD\223 Standish - PWD\dwg\223 COVER.dwg PLOT DATE: 4/1/2025 7:35:02 AM

PLAN VIEW

SCALE: 1"=30'±

30 0 15 30 60

1 inch = 30' ft.

GENERAL AND CONSTRUCTION NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND OBTAINING A PERMIT FROM DIGSAFE PRIOR TO COMMENCEMENT OF ANY WORK ON-SITE.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL ON-SITE ABOVEGROUND AND BELOWGROUND UTILITIES.
3. CONTRACTOR TO TAKE SPECIAL CARE PROTECTING TREES UNLESS IDENTIFIED FOR REMOVAL.
4. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
5. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
6. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FILES
7. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2016 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
10. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
11. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A MAINEDOT PERMIT AS WELL AS PERMITS FROM THE TOWN AS APPLICABLE.
12. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
14. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF THE ENGINEER.
15. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR AND CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ENGINEER OR OWNER. BEFORE ACCEPTANCE OF PROJECT, CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR ANY DAMAGE, CLEAN PROJECT AREA AND LEAVE SITE NEAT AND PRESENTABLE.
16. ALL WORK WITHIN THE STREAM LIMITS WILL BE PERFORMED BETWEEN JULY 15 AND OCTOBER 1, 2025.
17. EXISTING CONTOURS FROM LIDAR DATED 2022. AERIAL PHOTO FROM GOOGLE EARTH DATED MAY 2016
18. CONTRACTOR TO PREVENT THE SPREAD OF INVASIVES AND DISTURBANCE OF GROUND MUST BE MINIMIZED AND CONSISTENT WITH THE MAINEDEP AND ARMY CORPS STANDARDS. THERE IS A REQUIREMENT TO USE TIMBER MATS AS NEEDED TO PREVENT EXCESSIVE SOIL DISTURBANCE IF TRACKED EQUIPMENT IS TO BE USED IN THE WET.
19. CONTRACTOR TO HAVE ON-SITE ADEQUATE SPILL RESPONSE MATERIALS WHENEVER WORKING IN THE FLOODPLAIN.
20. CONTRACTOR TO PROVIDE A WRITTEN SPILL PREVENTION CONTROL AND CONTAINMENT PLAN IN ACCORDANCE WITH MAINEDEP REQUIREMENTS.
21. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WORKING IN THE STREAM AND THE RIPARIAN AREAS IN THE IMMEDIATE VICINITY OF STREAM.
22. WETLAND VEGETATIVE LAYERS SHALL BE REMOVED AND SALVAGED FOR RESTORATION OF DISTURBED AREAS.
23. WHEELED OR TRACKED EQUIPMENT MAY NOT BE OPERATED WITHIN THE STREAM. EQUIPMENT OPERATING ON SHORE MAY REACH INTO THE STREAM WITH A BUCKET OR SIMILAR EXTENSION. EQUIPMENT MAY CROSS STREAM ON ROCK, LEDGE, OR GRAVEL BOTTOM.
24. TEMPORARY DIVERSION OF THE STREAM FLOW WITHIN THE CHANNEL TO MAINTAIN NORMAL FLOWS SHALL BE PROVIDED BY THE CONTRACTOR. PUMPS MAY BE USED FOR TEMPORARY DIVERSION BUT MUST BE EQUIPPED WITH PROTECTION AGAINST A SPILL OF FUEL.
25. TWO TEMPORARY COFFER DAMS SHALL BE CONSTRUCTED OF A STRUCTURAL OR EARTHEN MATERIAL TO BE DESIGNED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE ENGINEER WITH PLAN FOR CONTROLLING STREAM FLOWS DURING CONSTRUCTION PRIOR TO STARTING WORK.
26. PUMPING SYSTEMS REQUIRED DURING CONSTRUCTION WILL LIKELY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE PUMPING SYSTEMS THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT. THE PUMP AND PIPING PLAN SHOWN ON THE DEWATERING DETAIL IS GENERALLY SCHEMATIC IN NATURE.
27. DISPOSE OF WATER PUMPED OR DRAINED FROM THE CONSTRUCTION SITE IN A SUITABLE MANNER TO AVOID SILTATION OF ADJACENT RIPARIAN AREA OR STREAM. TREATMENT OF PUMPED WATER SHOULD BE THROUGH THE USE OF A SEDIMENT BAG ("DIRT BAG") OR BASIN AS DETAILED HEREIN.
28. ALL MATERIALS USED FOR STREAM DIVERSION AND FLOW CONTROL MUST BE COMPLETELY REMOVED FROM STREAM AREA UPON COMPLETION OF THE CULVERT REPLACEMENT.
29. CONTRACTOR TO RESTORE STREAM SUBSTRATE AS SHOWN IN THE STREAM BEDFORM PLAN SHEET C-3.

SIMULATED STREAM BED NOTES

1. INSTALLATION OF THE SIMULATED STREAMBED CONSISTS OF FURNISHING AND INSTALLING ALLUVIUM AND ROCK TO SIMULATE THE NATURAL STREAM PROFILE, GRADE CONTROL STRUCTURES, AND STREAMBED THROUGH THE PROPOSED CROSSING.
2. INSTREAM MATERIALS SHALL BE INSTALLED IN ACCORDANCE TO THE DESIGN AND SPECIFIED STREAM SIMULATION STREAMBED GRADATION.
3. SORT MATERIAL FOR THE STREAMBED SIMULATION MIX BY SCREENING. LARGE PARTICLES MAY BE MACHINE SORTED BY HEAVY EQUIPMENT OR HAND LABOR.
4. CONSTRUCTION OF THE STREAMBED SHALL BEGIN AT THE DOWNSTREAM END OF THE CONSTRUCTION LIMITS WORKING UPSTREAM.
5. MIX SHALL BE PLACED IN ONE OR MORE LAYERS WITH A MAXIMUM LAYER OF DEPTH LESS THAN 1.5 TIMES THE AVERAGE DIMENSION OF THE B-AXIS OF THE ROCK, BUT NO GREATER THAN 2 FEET.
6. REARRANGE INDIVIDUAL ROCKS, AS NEEDED, TO OBTAIN A UNIFORMLY DENSE, COMPACT, LOW PERMEABILITY MASS TO MATCH THE STREAMBED SIMULATION DESIGN.
7. VOIDS SHALL BE FILLED BY MACHINE OR BY HAND TAMPING BEFORE PLACING THE NEXT LIFT OF MATERIAL. COMPACT STREAMBED MATERIAL BY MECHANICAL MEANS SUCH AS HAND OR EXCAVATOR OPERATED VIBRATORY PLATE COMPACTORS OR JUMPING JACK TYPE COMPACTORS.
8. FILL VOIDS LEFT DURING THE PLACEMENT OF STREAMBED SIMULATION ROCK, BOULDERS, STEPS, RIBS, BANKS, AND MATERIALS ADJACENT TO THE PROPOSED STRUCTURE WITH FOUNDATION FILL. USE PRIMARILY WATER PRESSURE, AND ALSO METAL TAMPING RODS AND SIMILAR HAND OPERATED EQUIPMENT TO FORCE MATERIAL INTO ALL SURFACES AND SUBSURFACE VOIDS BETWEEN THE STRUCTURE AND ROCKS AND BETWEEN INDIVIDUAL ROCKS. ENSURE THE STREAMBED IS SEALED TO LIMIT PERMEABILITY.
9. MIX STREAMBED SIMULATION ROCK IN PROPORTIONS AS SHOWN IN THE GRADATION TABLE. ALL STREAMBED MATERIAL WILL BE SIMILAR IN SHAPE/ANGULARITY AS THOSE FOUND IN THE NATURAL STREAM CHANNEL. TOLERANCE FOR THE MATERIAL GRADATION IS +/- 5 PERCENT FOR EACH SCREEN SIZE LISTED IN THE GRADATION TABLE.

ISSUED FOR BIDDING

REV.	DATE	DESCRIPTION

CHRISTOPHER BALDWIN
7047

Cumberland County Soil & Water
Conservation District
35 Main Street, Suite 3, Windham, ME 04062

PROJECT NO.:	223	DESIGNED BY:	CB	DATE: 2/19/2025
FILE NAME:	223 EXCOND.dwg	DRAWN BY:	DB	DATE: 2/19/2025
SCALE:	AS NOTED	REVIEWED BY:		DATE:

EXISTING CONDITIONS, REMOVALS AND EROSION & SEDIMENT CONTROL PLAN

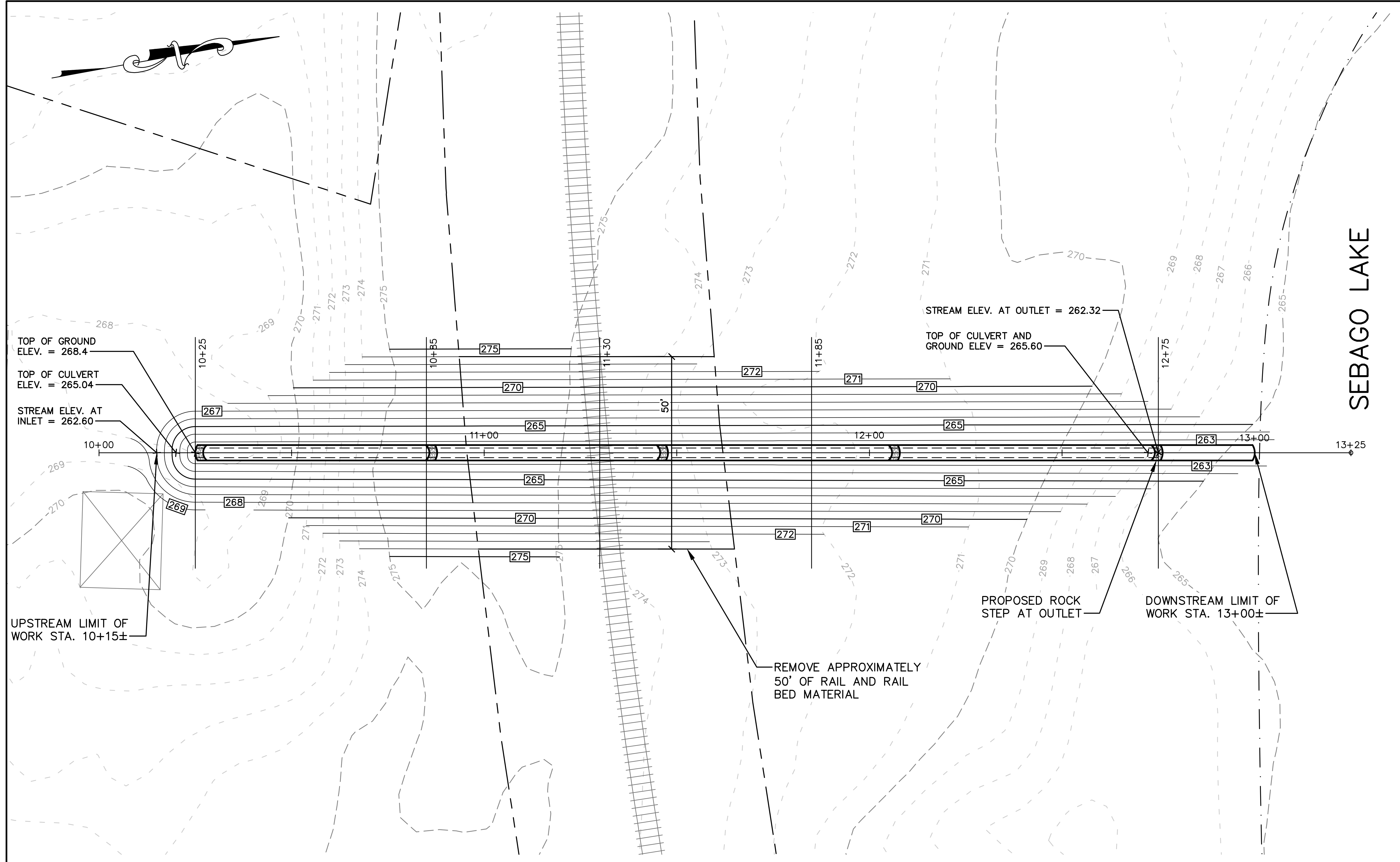
STANDISH BROOK
CULVERT REMOVAL

STANDISH, MAINE

SHEET

C-2

FILE PATH: C:\Users\diana\Dropbox\DCS-Projects\CCSWCD\223 Standish - PWD\dwg\223 EXCOND.dwg PLOT DATE: 4/1/2025 7:35:07 AM



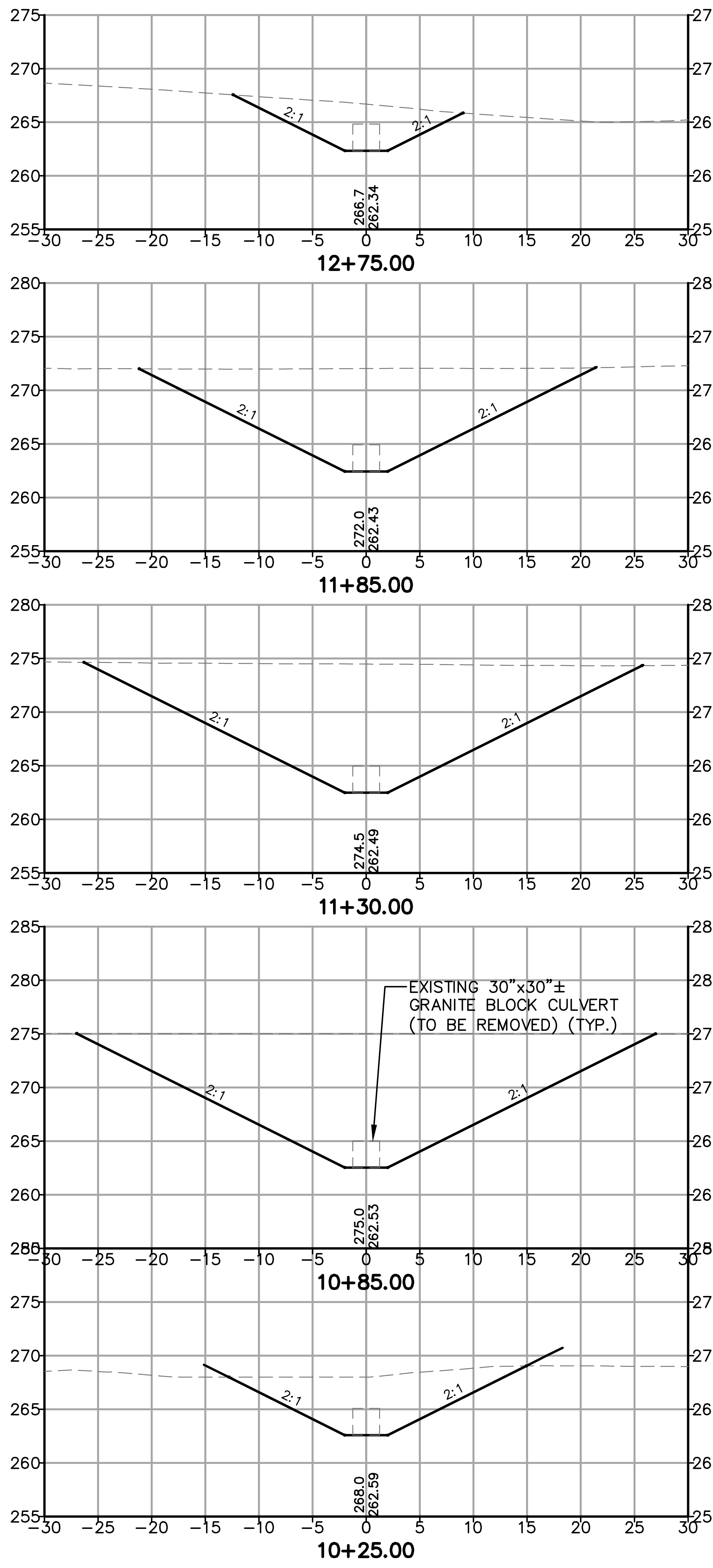
PLAN VIEW

SCALE: 1"=20'±

STREAMBED SIMULATION MATERIAL		
PERCENT PASSING	PARTICLE SIZE	STANDARD SIEVE
100%	12 INCHES	300mm
84%	6 INCHES	150mm
50%	2 INCHES	50mm
35%	3/4 INCHES	19mm
10%	1/4 INCHES	6.3 mm
100%	FILLER MATERIAL	NO. 6
≥50%	FILLER MATERIAL	NO. 8

NOTES:

1. > 5% OF FILLER MATERIAL MUST PASS THROUGH A #40 SIEVE.
2. COARSER MATERIAL (3/4" AND LARGER) TO BE A 50–50 MIX OF ANGULAR TO ROUND STONE.
3. SEE SIMULATED STREAMBED NOTES SHEET C-2.

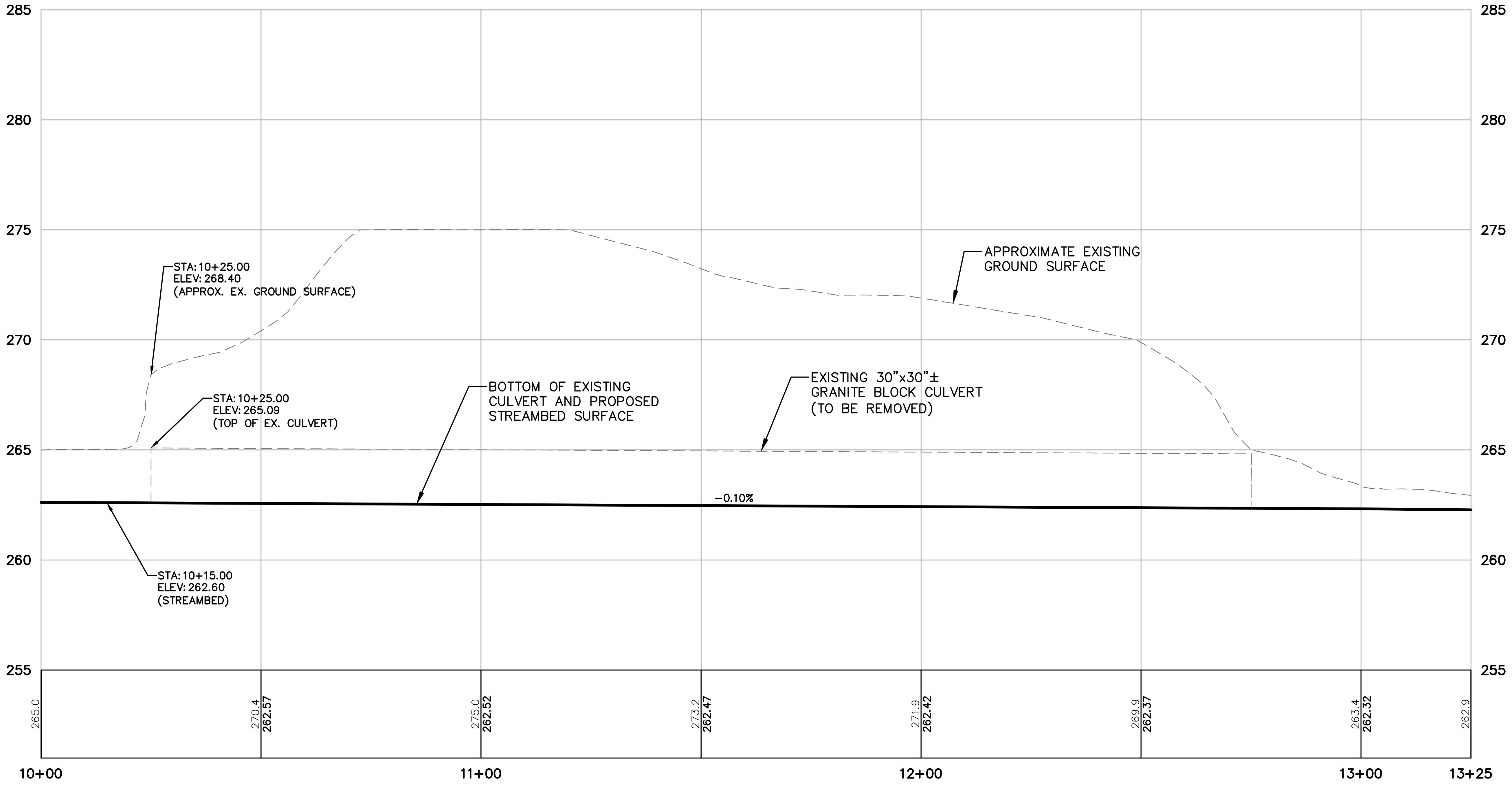


STREAMBED CENTERLINE CROSS SECTIONS

SCALE: 1" = 10' HORIZ. & VERT.

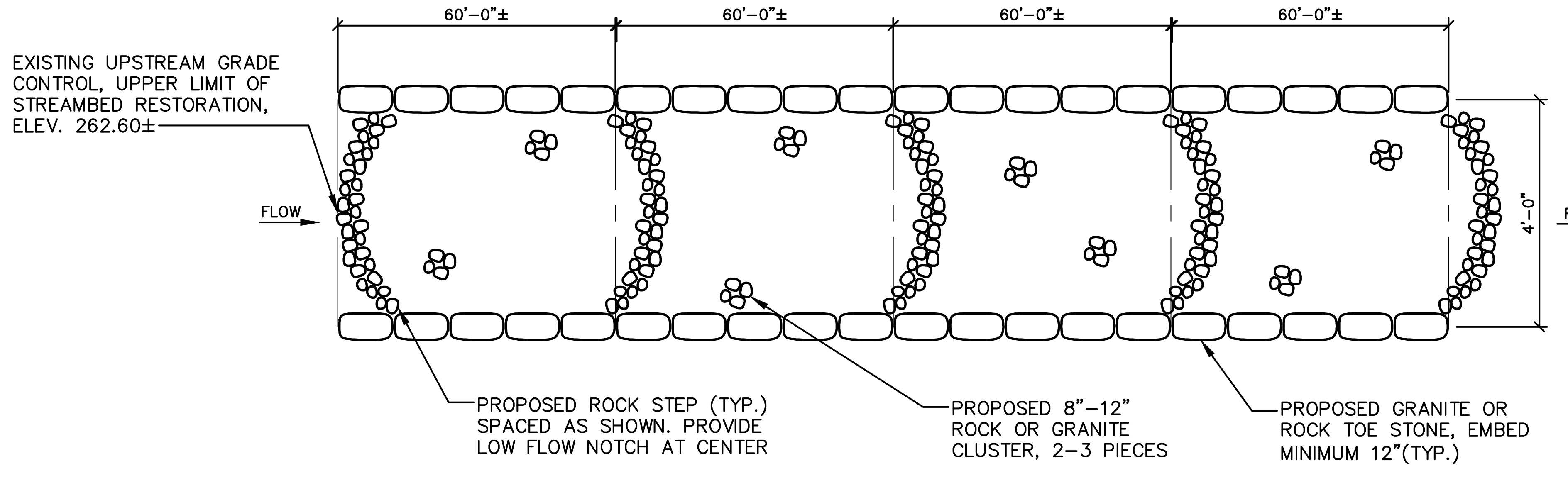
NOTE:
TOTAL AMOUNT OF SOIL MATERIAL TO BE REMOVED IS APPROXIMATELY 2,300* CU.YD.

*QUANTITY DOES NOT INCLUDE GRANITE CULVERT BLOCKS.



EXISTING CULVERT AND PROPOSED STREAMBED PROFILE

SCALE: 1" = 20' HORIZ.
1" = 4' VERT.



STREAM BEDFORM PLAN

NOT TO SCALE

ISSUED FOR BIDDING

FILE PATH: C:\Users\diana\Dropbox\DCS-Projects\CCSWCD\223 Standish - PWD\dwg\223 SITEPLAN.dwg PLOT DATE: 4/1/2025 7:35:09 AM

REV.	DATE	DESCRIPTION

CHRISTOPHER BALDWIN
7047

Cumberland County Soil & Water
Conservation District
35 Main Street, Suite 3, Windham, ME 04062

PROJECT NO.: 223	DESIGNED BY:	CB	DATE:	2/19/2025
FILE NAME: 223 SITEPLAN.dwg	DRAWN BY:	DB	DATE:	2/19/2025
SCALE: AS NOTED	REVIEWED BY:		DATE:	

PROPOSED GRADING
AND SECTIONS

STANDISH BROOK
CULVERT REMOVAL
STANDISH, MAINE

SHEET

C-3

EROSION AND SEDIMENTATION CONTROL NOTES

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF SEDIMENT BARRIER, EROSION CONTROL MIX, STONE CHECK DAMS, HAY BALE BARRIERS, CATCH BASIN INLET BARRIERS, CATCH BASIN SEDIMENT COLLECTION BAGS, EROSION CONTROL BLANKET, AND TEMPORARY SEEDING AND MULCHING AS REQUIRED. PERMANENT DEVICES INCLUDE THE USE OF RIP RAP AT EXPOSED STORM DRAIN AND CULVERT INLETS AND OUTLETS, RIP RAPPED SLOPES, AND PERMANENT VEGETATION.

A. GENERAL

1. IT IS ANTICIPATED THAT CONSTRUCTION WILL BEGIN IN SUMMER 2025 FOLLOWING RECEIPT OF NECESSARY PERMITS.

2. THE PROJECT SHALL CONFORM TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARDS PERFORMANCE FOR EXCAVATIONS FOR CLAY, TOPSOIL OR SILT.

3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES (BMP) PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MAY 2003, OR AS CURRENTLY REVISED.

4. ANY CONTRACTOR EROSION AND SEDIMENTATION CONTROL DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERSONNEL AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF ACCEPTABLE PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

A. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS 90%COVERAGE OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH MULCH. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE BMP APPLICATION RATES AND LIMITATIONS.

D. FOR AREAS STABILIZED WITH RIP RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP RAP. STONE MUST BE SIZED APPROPRIATELY.

E. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

F. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIP RAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

B. EROSION AND SEDIMENTATION CONTROL MEASURES

1. REMOVAL OF SOD, TREES, BUSHES AND OTHER VEGETATION AND SOIL DISTURBANCE WILL BE KEPT TO A MINIMUM WHILE ALLOWING PROPER SITE DEVELOPMENT.

2. GRUBBINGS AND ANY UNUSABLE TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN AN APPROVED MANNER.

3. ANY SUITABLE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR REUSE IN FINAL GRADING. TOPSOIL WILL BE STOCKPILED IN A MANNER SUCH THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE WILL RESULT. IF A STOCKPILE IS NECESSARY, THE SIDE SLOPES OF THE TOPSOIL STOCKPILE WILL NOT EXCEED 2:1. TOPSOIL STOCKPILES WILL BE TEMPORARILY SEEDED WITH AROOSTOOK RYE, ANNUAL OR PERENNIAL RYE GRASS (DEPENDING ON DATE SEEDED) WITHIN 7 DAYS OF FORMATION, OR TEMPORARILY MULCHED IF SEEDING CANNOT BE DONE WITHIN THE RECOMMENDED SEEDING DATES.

4. TEMPORARY DIVERSION BERMS AND DRAINAGE SWALES SHALL BE CONSTRUCTED AS NECESSARY.

5. TEMPORARY STABILIZATION SHALL BE CONDUCTED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, PRIOR TO ANY RAIN EVENT, AND PRIOR TO ANY WORK SHUT DOWN LASTING MORE THAN ONE DAY. TEMPORARY STABILIZATION INCLUDES SEED, MULCH, OR OTHER NON-ERODABLE COVER. AREAS WITHIN 75 FEET OF WETLANDS SHALL BE TEMPORARILY STABILIZED WITHIN 48 HOURS OR PRIOR TO RAIN EVENT.

6. APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.

7. TEMPORARY SEEDING SPECIFICATIONS. WHERE THE SEED BED HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 4 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED. APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND 10-10-10 (N-P205-K20) FERTILIZER AT A RATE OF 600 LBS. PER ACRE (13.8 LB. PER 1,000 SQUARE FEET). UNIFORMLY APPLY SEED AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.

RECOMMENDED TEMPORARY SEEDING DATES AND APPLICATION RATES ARE AS FOLLOWS:

AROOSTOOK RYE: RECOMMENDED SEEDING DATES: 8/15 – 10/1
APPLICATION RATE: 112 LBS./ACRE

ANNUAL RYE GRASS: RECOMMENDED SEEDING DATES: 4/1 – 7/1
APPLICATION RATE: 40 LBS./ACRE

PERENNIAL RYE GRASS: RECOMMENDED SEEDING DATES: 8/15 – 9/15
APPLICATION RATE: 40 LBS./ACRE

8. IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH OR RIP RAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED SUBSOIL WITH TOP SOIL OR OTHER ORGANIC AMENDMENTS, PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY EROSION CONTROL BLANKETS, AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT.

9. PERMANENT SEEDING SPECIFICATION. IF A LANDSCAPE PLAN HAS BEEN PREPARED FOR THE PROJECT, SOIL PREPARATION AND SEEDING SPECIFICATIONS OF THAT PLAN SHALL SUPERSEDE THESE GENERAL PERMANENT SEEDING SPECIFICATIONS. IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOOK RYE OR MULCHED AT RATES PREVIOUSLY SPECIFIED. SEE WINTER CONDITIONS NOTES FOR SEEDING STABILIZATION AFTER NOVEMBER 1.

A. APPLY TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES. MIX TOPSOIL WITH THE SUBSOIL TO A MINIMUM DEPTH OF 6 INCHES.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND GRANULAR, COMMERCIAL-GRADE, 10-10-10 (N-P2O5-K2O) FERTILIZER AT A RATE OF 800 LBS. PER ACRE (18.4 LBS. PER 1,000 SQUARE FEET).

C. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE, AND ANCHOR AS NECESSARY.

D. THE SEED MIXTURE FOR LAWN AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
10 % CREEPING RED FESCUE
30 % KENTUCKY BLUEGRASS
60 % PERENNIAL RYE GRASS

E. THE SEED MIXTURE FOR WET AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
50 % REED CANARY GRASS
25 % RED TOP
15 % CREEPING RED FESCUE
10 % PERENNIAL RYE GRASS

10. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH
13. DITCH LININGS, STONE CHECK DAMS, AND RIP RAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF CULVERT.

11. RIP RAP REQUIRED AT CULVERTS AND STORM DRAIN INLETS AND OUTLETS SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. STONES SHALL WEIGH FROM 10 LBS. TO 200 LBS. AND 50% OF THE STONES BY VOLUME SHALL EXCEED A UNIT WEIGHT OF APPROXIMATELY 50 LBS.

12. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1, IN THE BASE OF DITCHES NOT OTHERWISE PROTECTED, AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (E.G. WETLANDS AND WATER BODIES). EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

13. TEMPORARY CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

C. HOUSEKEEPING

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORM WATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

4. DEBRIS AND OTHER MATERIAL. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER, MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, MUST BE FILTERED THROUGH A DIRT BAG OR OTHER SILTATION BASIN PRIOR TO DISCHARGE.

D. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORM WATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AS WELL AS BEFORE AND AFTER STORM EVENTS, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORM WATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT AND ANY DEP OR MUNICIPAL COMPANION DOCUMENTS, MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

2. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME AND QUALIFICATIONS OF THE PERSON PERFORMING THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED, LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF THE INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED; INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

STREAM & DEWATERING NOTES

1. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WORKING IN THE STREAM AND THE RIPARIAN AREAS IN THE IMMEDIATE VICINITY OF STREAM.

2. WETLAND VEGETATIVE LAYERS SHALL BE REMOVED AND SALVAGED FOR RESTORATION OF DISTURBED AREAS.

3. WHEELED OR TRACKED EQUIPMENT MAY NOT BE OPERATED WITHIN THE STREAM. EQUIPMENT OPERATING ON SHORE MAY REACH INTO THE STREAM WITH A BUCKET OR SIMILAR EXTENSION. EQUIPMENT MAY CROSS STREAM ON ROCK, LEDGE, OR GRAVEL BOTTOM.

4. TEMPORARY DIVERSION OF THE STREAM FLOW WITHIN THE CHANNEL TO MAINTAIN NORMAL FLOWS SHALL BE PROVIDED BY THE CONTRACTOR. PUMPS MAY BE USED FOR TEMPORARY DIVERSION BUT MUST BE EQUIPPED WITH PROTECTION AGAINST A SPILL OF FUEL.

5. TWO TEMPORARY COFFER DAMS SHALL BE CONSTRUCTED OF A STRUCTURAL OR EARTHEN MATERIAL TO BE DESIGNED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE ENGINEER WITH PLAN FOR CONTROLLING STREAM FLOWS DURING CONSTRUCTION PRIOR TO STARTING WORK.

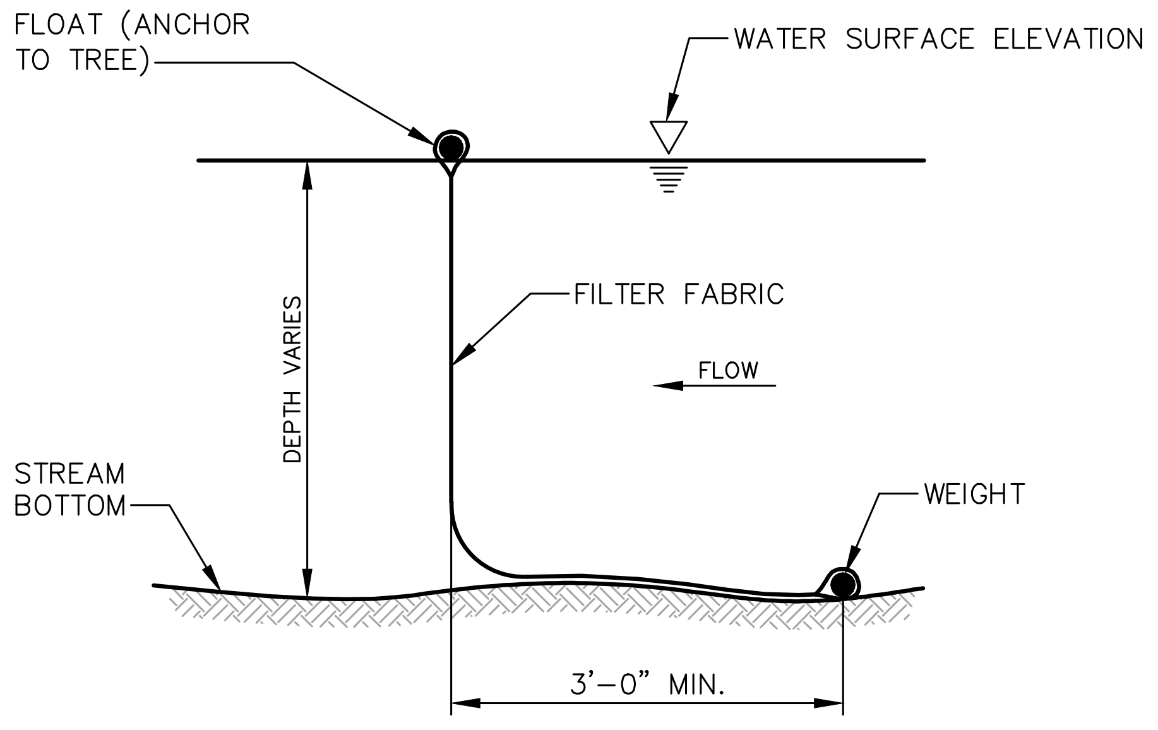
6. PUMPING SYSTEMS REQUIRED DURING CONSTRUCTION WILL LIKELY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE PUMPING SYSTEMS THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT. THE PUMP AND PIPING PLAN SHOWN ON THE DEWATERING DETAIL IS GENERALLY SCHEMATIC IN NATURE.

7. DISPOSE OF WATER PUMPED OR DRAINED FROM THE CONSTRUCTION SITE IN A SUITABLE MANNER TO AVOID SILTATION OF ADJACENT RIPARIAN AREA OR STREAM. TREATMENT OF PUMPED WATER SHOULD BE THROUGH THE USE OF A SEDIMENT BAG ("DIRT BAG") OR BASIN AS DETAILED HEREIN.

8. ALL MATERIALS USED FOR STREAM DIVERSION AND FLOW CONTROL MUST BE COMPLETELY REMOVED FROM STREAM AREA UPON COMPLETION OF THE CULVERT REPLACEMENT.

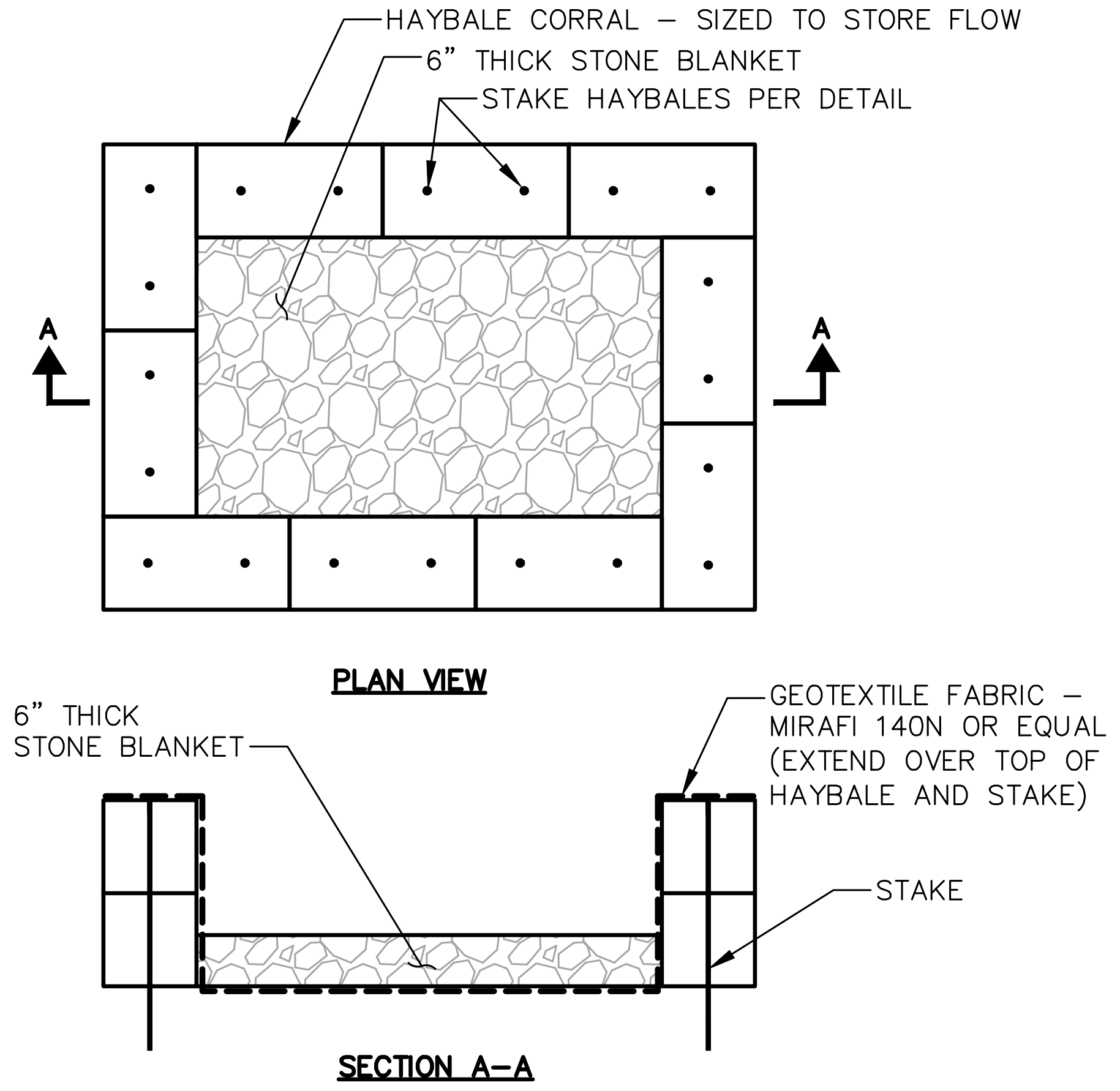
9. CONTRACTOR TO RESTORE STREAM SUBSTRATE AS SHOWN IN THE STREAM BEDFORM PLAN SHEET C-3.

10. ALL WORK WITHIN THE STREAM LIMITS MUST BE PERFORMED BETWEEN JULY 15 AND OCTOBER 1, 2025.



FLOATING SEDIMENT TURBIDITY CURTAIN

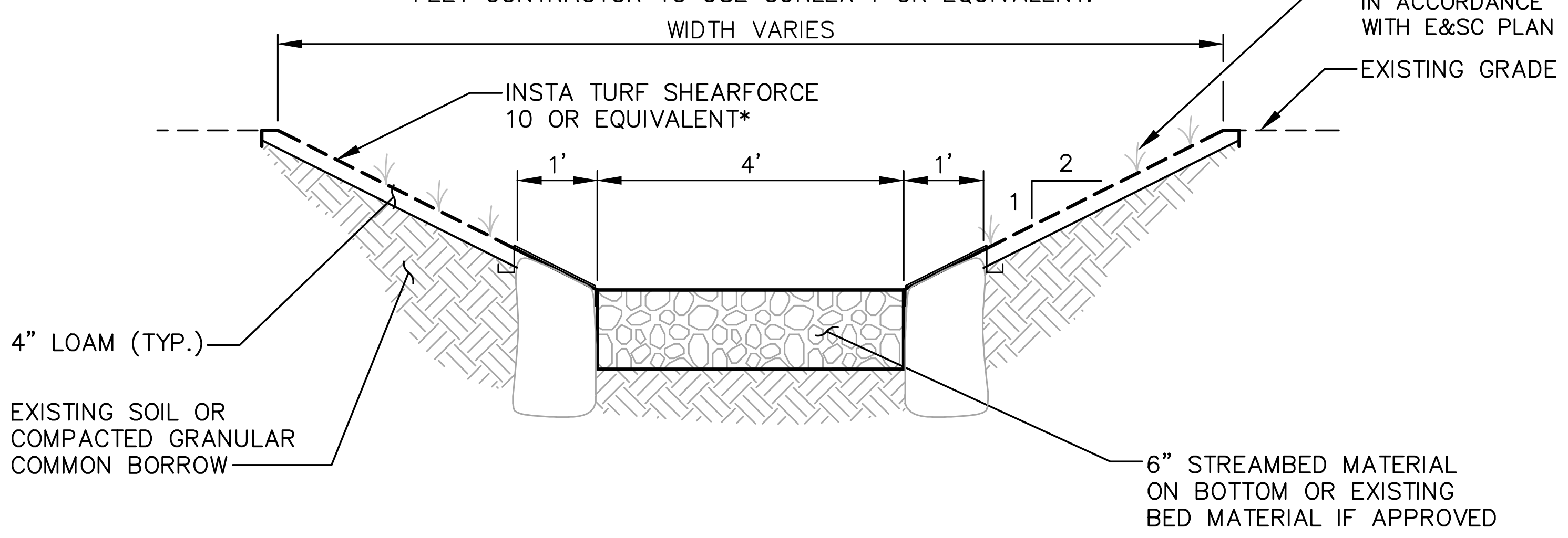
NOT TO SCALE



TEMPORARY HAYBALE CONTROL SEDIMENT BASIN

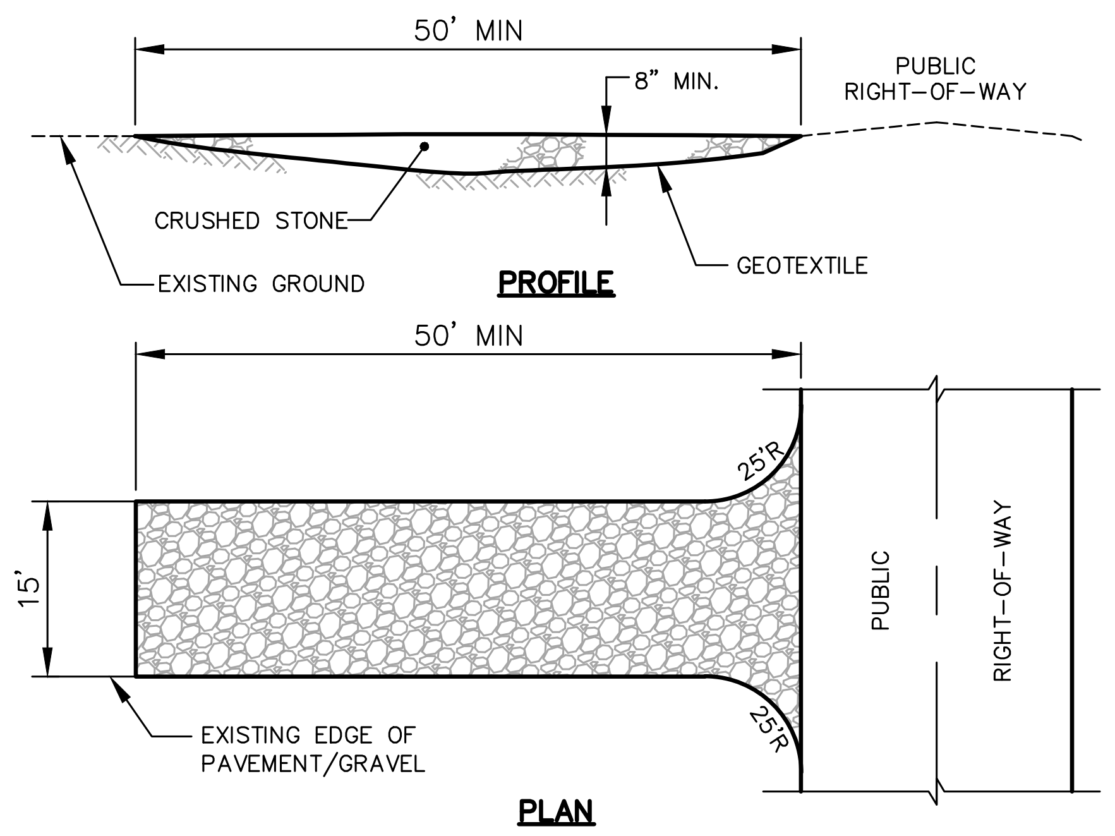
NOT TO SCALE

*SHEARFORCE 10 TO BE INSTALLED ON LOWER 6-FEET OF CHANNEL ONLY. (FOR PRODUCT INFORMATION CONTACT TONY TOCCI AT **TONI.TOCCI@FERGUSON.COM**.) ABOVE SIX FEET CONTRACTOR TO USE CURLEX 1 OR EQUIVALENT.



TYPICAL STREAMBED DETAIL

NOT TO SCALE



NOTES:

1. USE CRUSHED STONE. STONE AGGREGATE SIZE – AASHTO DESIGNATION M 43, SIZE NO. 2 (2 1/2" TO 1 1/2").

2. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE. ACCEPTABLE MATERIALS ARE TREVIRA SPUNBOND 1135 MIRAFI 600X, OR EQUIVALENT.

3. LENGTH – AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.

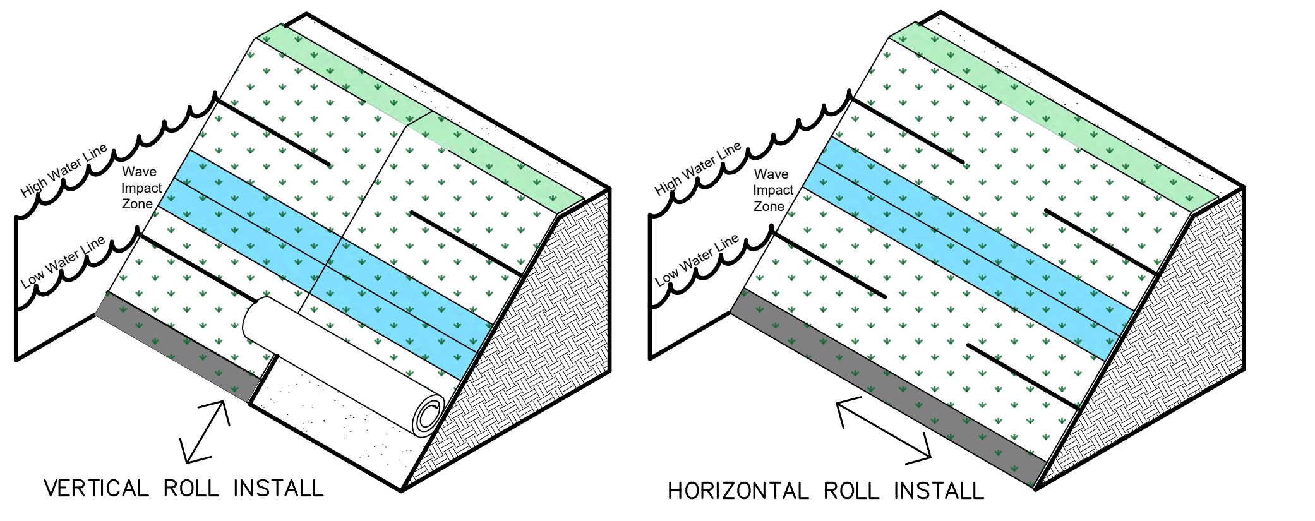
4. THICKNESS – NOT LESS THAN EIGHT (8) INCHES.

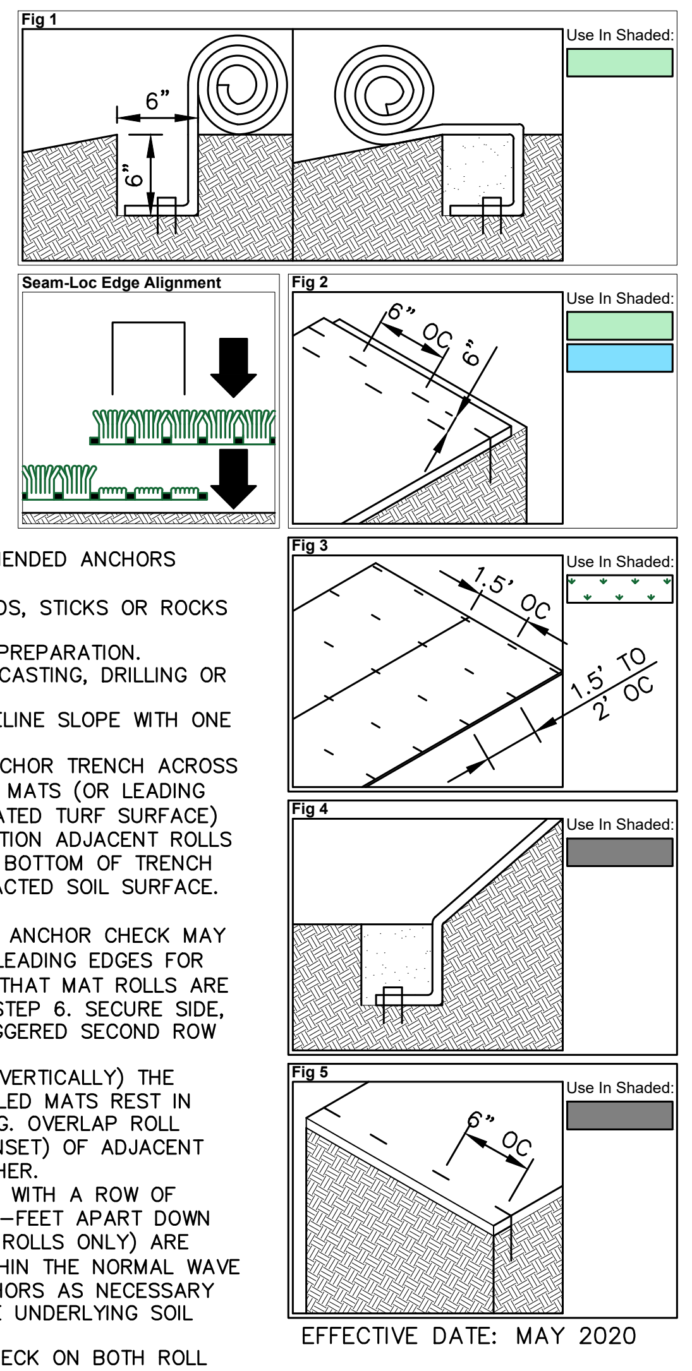
5. PROVIDE APPROPRIATE TRANSISTION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY. INGRESS OR EGRESS, SLOPES NO STEEPER THAN 5:1 SLOPE.

6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC REPAIR AND TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE





EFFECTIVE DATE: MAY 2020

INSTALLATION GUIDELINES
1. SELECT APPROPRIATE ANCHORS FOR MATTING BASED ON SOIL TYPE AND CONSISTENCY (SEE RECOMMENDED ANCHORS TABLE).
2. PREPARE SEEDBED, CREATE A SMOOTH SOIL SURFACE AND ELIMINATE ANY EXISTING RILLS, SOIL CLODS, STICKS OR ROCKS LARGER THAN 2-INCHES IN DIAMETER.
ANY SOIL USED TO RILL RILLS OR LOW SPOTS MUST BE ADEQUATELY COMPACTED BEFORE SEEDBED PREPARATION.
3. APPLY SEED AND FERTILIZER, AND OTHER AMENDMENTS AT THE SPECIFIED RATES, EITHER BY BROADCASTING, DRILLING OR HYDRO-SEEDING.
4. POSITION AND ANCHOR LEADING EDGE OF MATS AT THE TOP OF, OR OVER THE SHOULDER OF SHORELINE SLOPE WITH ONE OF THE FOLLOWING ACCEPTABLE METHODS:
    4.1. 6-INCH COVERED ANCHOR TRENCH (FIGURE 1). CONSTRUCT A 6-INCH WIDE BY 6-INCH DEEP ANCHOR TRENCH ACROSS THE TOP WIDTH OF THE SHORELINE SLOPE. POSITION THE NUBBED SEAM-LOC SIDE EDGE OF THE MATS (OR LEADING EDGE FOR VERTICAL INSTALLATIONS) IN THE BOTTOM OF THE TRENCH, WITH THE TOPSIDE (SIMULATED TURF SURFACE) FACING DOWN. MAKE SURE MAT ROLLS ARE PROPERLY ALIGNED WITH SHORELINE DIRECTION. POSITION ADJACENT ROLLS ACCORDING TO STEP 5 (TO ENSURE PROPER OVERLAP), AND ANCHOR EDGES OF ALL MATS INTO BOTTOM OF TRENCH ON 1-FOOT CENTERS. BACKFILL TRENCH, COMPACT SOIL AND APPLY ADDITIONAL SEED TO COMPACTED SOIL SURFACE. UNROLL MATERIAL OVER COMPACTED ANCHOR TRENCH (FIG 1).
    4.2. DOUBLE ROW ANCHOR CHECK (FIGURE 2). WHERE TRENCHING IS NOT PRACTICAL OR DESIRED, AN ANCHOR CHECK MAY BE USED TO SECURE THE LEADING EDGE OF THE MATS. POSITION SIDE EDGE OF THE MATS (OR LEADING EDGES FOR VERTICAL INSTALLATIONS) WITH THE TOPSIDE (SIMULATED TURF SURFACE) FACING UP, ENSURING THAT MAT ROLLS ARE PROPERLY ALIGNED WITH SHORELINE DIRECTION. POSITION ANY ADJACENT ROLLS ACCORDING TO STEP 6. SECURE SIDE, OR LEADING EDGES, OF MATS WITH A ROW OF ANCHORS SPACED 6-INCHES APART, WITH A STAGGERED SECOND ROW OF ANCHORS SPACED 6-INCHES APART, APPROX. 6-INCHES BEHIND THE FIRST ROW.
5. SEAM ADJACENT ROLLS (SEAM-LOC DETAIL), UNROLL MATERIAL ACROSS (HORIZONTALLY) OR DOWN (VERTICALLY) THE SHORELINE SLOPE FACE, SLIGHTLY STRETCH AND RELAX MAT TO REMOVE ANY WRINKLES. LET UNROLLED MATS REST IN SUNLIGHT FOR A MINIMUM OF 15 MINUTES TO NORMALIZE SURFACE TEMPERATURE BEFORE ANCHORING. OVERLAP ROLL EDGES BY PLACING FULL-TURF ROLL EDGES ON TOP OF NUBBED SEAM-LOC EDGES (2-INCH TURF INSET) OF ADJACENT ROLLS. IF NECESSARY, SIMPLY STEP ON OVERLAPS TO FLATTEN AND SNAP SEAM-LOC EDGES TOGETHER.
6. ANCHOR MATS TO SOIL (FIGURE 3). STARTING AT THE TOP AND WORKING DOWNSLOPE, FASTEN MATS WITH A ROW OF ANCHORS SPACED 1.5-FEET APART ACROSS THE MAT WIDTH, AND ANCHOR ROWS SPACED 1.5 – 2.0-FEET APART DOWN THE MAT LENGTH, MAKING SURE ALL OVERLAPS AND FACTORY PRE-FABRICATED SEAMS (6-FT WIDE ROLLS ONLY) ARE SECURED, ACCORDING TO FIG. 3. INSTALLATIONS ON NON-COHESIVE SANDY SOILS AND/OR MATS WITHIN THE NORMAL WAVE IMPACT ZONE, SHOULD USE THE 1.5-FOOT ROW SPACING ALONG MAT LENGTH. USE ADDITIONAL ANCHORS AS NECESSARY TO SMOOTH ANY REMAINING WRINKLES AND ENSURE THAT MATS ARE IN INTIMATE CONTACT WITH THE UNDERLYING SOIL SURFACE..
7. ANCHOR ALL SEAMS LOCATED DIRECTLY IN THE WAVE IMPACT ZONE WITH A SINGLE ROW ANCHOR CHECK ON BOTH ROLL ENDS FOR VERTICAL INSTALLATIONS OR ON THE SEAM-LOC OVERLAP FOR HORIZONTAL INSTALLATIONS (SEE FIGURE 5).
8. ANCHOR TERMINAL ROLL EDGES OR ENDS AT, OR BELOW, LOW WATERLINE WITH ONE OF THE FOLLOWING ACCEPTABLE METHODS:
    8.1. 6-INCH ANCHOR TRENCH (FIGURE 4). CONSTRUCT A 6-INCH WIDE BY 6-INCH DEEP ANCHOR TRENCH AND FASTEN EDGE OF MATS INTO THE BOTTOM WITH ANCHORS SPACED 1-FOOT APART. BACKFILL TRENCH, COMPACT SOIL AND APPLY ADDITIONAL SEED (IF DESIRED) TO COMPACTED SOIL SURFACE. (FIGURE 4)
    8.2. SINGLE ROW ANCHOR CHECK (FIGURE 5). WHERE TRENCHING IS NOT PRACTICAL OR DESIRED, AN ANCHOR CHECK MAT BE USED TO SECURE THE MAT EDGES. SECURE EDGES OF MATS WITH A SINGLE ROW OF ANCHORS SPACED 6-INCHES APART. (FIGURE 5)

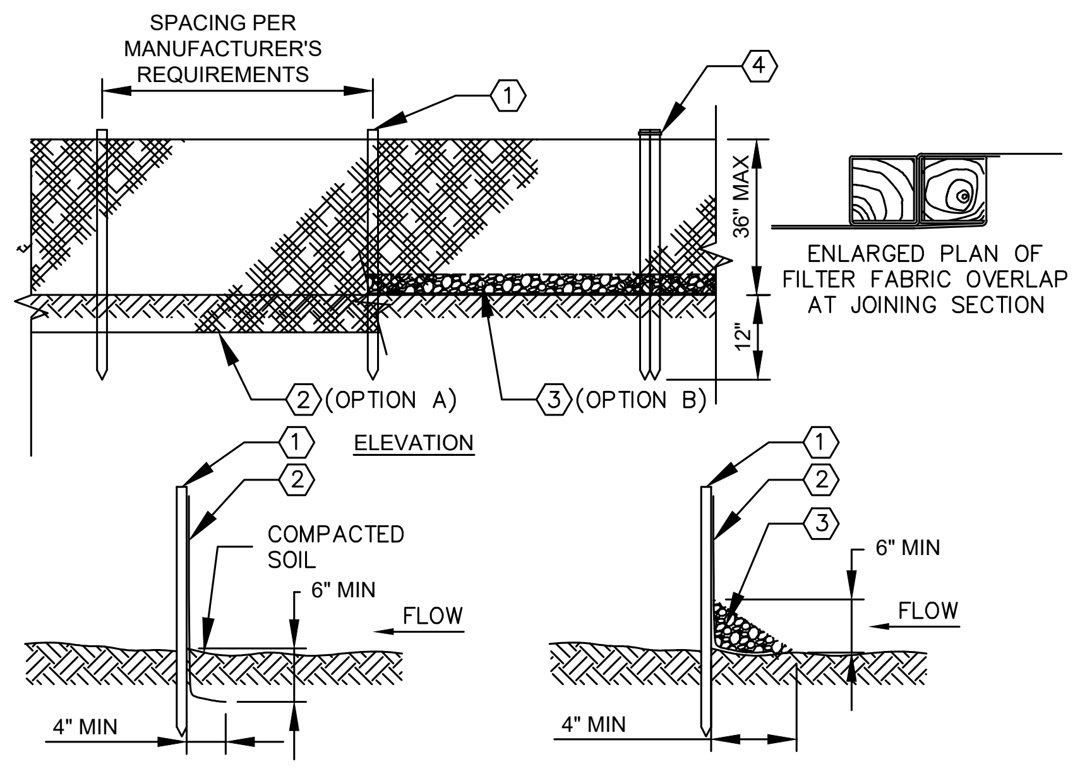
ShearForce10 Recommended Anchors		
Soil Type	***Minimum Anchor**	**Alternate Anchors**
Cohesive, well compacted or undisturbed	8"x2"x8" wire U-staple	12" Fabric Pin, 8" Plastic Stake
Cohesive, loose	12"x2"x12" wire U-staple	18" Fabric Pin, 12" Plastic Stake
Non-Cohesive, well compacted or undisturbed	12"x2"x12" ⅜" Rebar U-staple	24" Fabric Pin, 18" Earth Anchor
Non-Cohesive, loose	18"x2"x18", ⅜" Rebar U-staple	36" Percussion Earth Anchor

*U-shaped anchors are recommended as they can be shared between adjacent rolls when seaming, reducing total anchors needed during installation.

ADDITIONAL TIPS FOR FAST & EFFECTIVE INSTALLATION
- INSTALL MAT WITH SIMULATED TURF ON TOP AND FABRIC BACKING AGAINST SOIL SURFACE.
- FOR BEST VEGETATIVE RESULTS, DO NOT INSTALL ON TOP OF ANY ADDITIONAL EROSION CONTROL BLANKET, TRM, OR FABRIC.
- OVERLAP ADJACENT ROLLS BY PLACING FULL-TURF ROLL EDGES ON TOP OF NUBBED SEAM-LOC ROLL EDGES (2-INCH TURF INSET). ENSURE THAT ALL OVERLAPS AND SEAMS ARE PROPERLY ANCHORED AND SECURE. IF NECESSARY, SIMPLY STEP ON OVERLAPS TO FLATTEN AND SNAP SEAM-LOC EDGES TOGETHER.
- CONTINUOUS FABRIC CONTACT WITH THE UNDERLYING SOIL SURFACE IS VERY IMPORTANT FOR EFFECTIVE PRODUCT PERFORMANCE. UNROLL MAT AND LET REST IN SUNLIGHT FOR A MINIMUM OF 15 MINUTES TO NORMALIZE SURFACE TEMPERATURE BEFORE ANCHORING THE MAT BODY. WORK OUT ANY WRINKLES IN THE MATERIAL BEFORE ANCHORING. IF WRINKLES REMAIN, ADDITIONAL ANCHORS MAY BE NECESSARY TO ENSURE GOOD FABRIC-TO-SOIL CONTACT.
- IN BENDS OR REACHES THAT ARE NOT STRAIGHT, MITER CUT ROLL JOINTS TO PREVENT WRINKLES IN MATERIAL.
- USE A HEAVY-DUTY UTILITY KNIFE OR COMMERCIAL-GRADE SHEARS TO CUT MATERIAL AS NECESSARY.
- WHEN SEAMING CUT ROLL ENDS OR EDGES, DO NOT OVERLAP. SIMPLY BUTT TOGETHER CUT ENDS OR EDGES AND SEAM TOGETHER WITH A SINGLE ROW OF ANCHORS, SPACED 6-INCHES APART.

SHEAR FORCE 10 HYBRID TURF INSTANT ARMOR MAT

NOT TO SCALE



NOTES:
1. 1.25"X1.25" OAK STAKES EMBEDED A MINIMUM OF 12" INTO THE GROUND.

2. FILTER FABRIC TO BE SEDIMENTATION CONTROL FABRIC MIRAFI 100X OR EQUIVALENT.

3. 1" CRUSHED STONE ANCHORING MATERIAL.

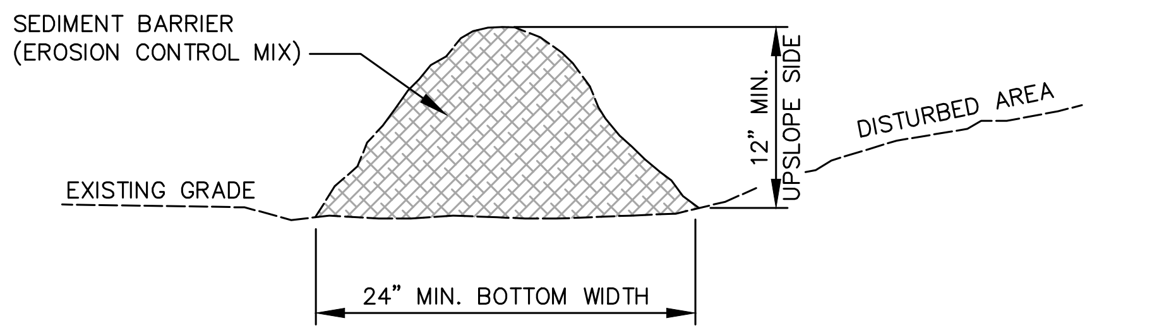
4. OVERLAP AT JOINING SECTION AS SHOWN. A COUPLER CAN BE AN ACCEPTABLE DEVICE USED TO TIE THE OAK STAKES TOGETHER.

5. INSTALLATION/PLACEMENT OF THE PERIMETER SILT FENCE SHALL BE IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES AND SOIL EROSION & SEDIMENT CONTROL PLAN, LATEST EDITION.

6. CONTRACTOR TO LOCATE SILT FENCE IN FIELD WITH ENGINEER. ALTERNATIVE SEDIMENT BARRIER MAY BE APPROVED BY THE ENGINEER.

SILT FENCE

NOT TO SCALE



IN ORDER FOR EROSION CONTROL MIX TO BE USED IN LIEU OF SILT FENCE IT MUST MEET THE FOLLOWING STANDARDS:

1. THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 50 AND 100%, DRY WEIGHT BASIS.

2. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.

3. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.

4. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.

5. SOLUBLE SALTS CONTENT SHALL BE <4.0 mmhos/cm.

6. THE pH SHOULD FALL BETWEEN 5.0 AND 8.0.

7. THE EROSION CONTROL MIX SHALL CONTAIN A WELL GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.

8. PLACE BARRIER ALONG A RELATIVELY FLAT CONTOUR. CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES WHERE FINES CAN WASH UNDER THE BARRIER THROUGH GRASS BLADES AND BRANCHES.

9. PLACEMENT OF BARRIER SHOULD BE:
   - AT TOE OF THE SLOPE.
   - ON FROZEN GROUND, BEDROCK OR ROOTED FORESTED AREAS.
   - AT THE EDGE OF GRAVEL AND AREAS UNDER CONSTRUCTION.

10. BARRIER SHALL NOT BE USED ADJACENT TO WETLANDS

11. REMOVE SEDIMENT DEPOSITS WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.

12. WHEN BARRIER IS DECOMPOSED, CLOGGED WITH SEDIMENT, ERODED OR INEFFECTIVE, IT MUST BE REPLACED OR REPAIRED. THE BARRIER SHOULD BE RESHAPED AS NECESSARY.

ISSUED FOR BIDDING

REV.	DATE	DESCRIPTION
1	4/2/2025	REVISED SLOPE STABILIZATION DETAIL

CHRISTOPHER BALDWIN
7047

Cumberland County Soil & Water
Conservation District
35 Main Street, Suite 3, Windham, ME 04062

PROJECT NO.:	223	DESIGNED BY:	CB	DATE:	2/19/2025
FILE NAME:	223 DETAILS.dwg	DRAWN BY:	DB	DATE:	2/19/2025
SCALE:	AS NOTED	REVIEWED BY:		DATE:	

EROSION & SEDIMENT CONTROL
NOTES & DETAILS

STANDISH BROOK
CULVERT REMOVAL
STANDISH, MAINE

SHEET
C-4

FILE PATH: C:\Users\diana\Dropbox\DCS-Projects\CCSWCD\223 Standish - PWD\dwg\223 DETAILS.dwg PLOT DATE: 4/9/2025 12:56:08 PM