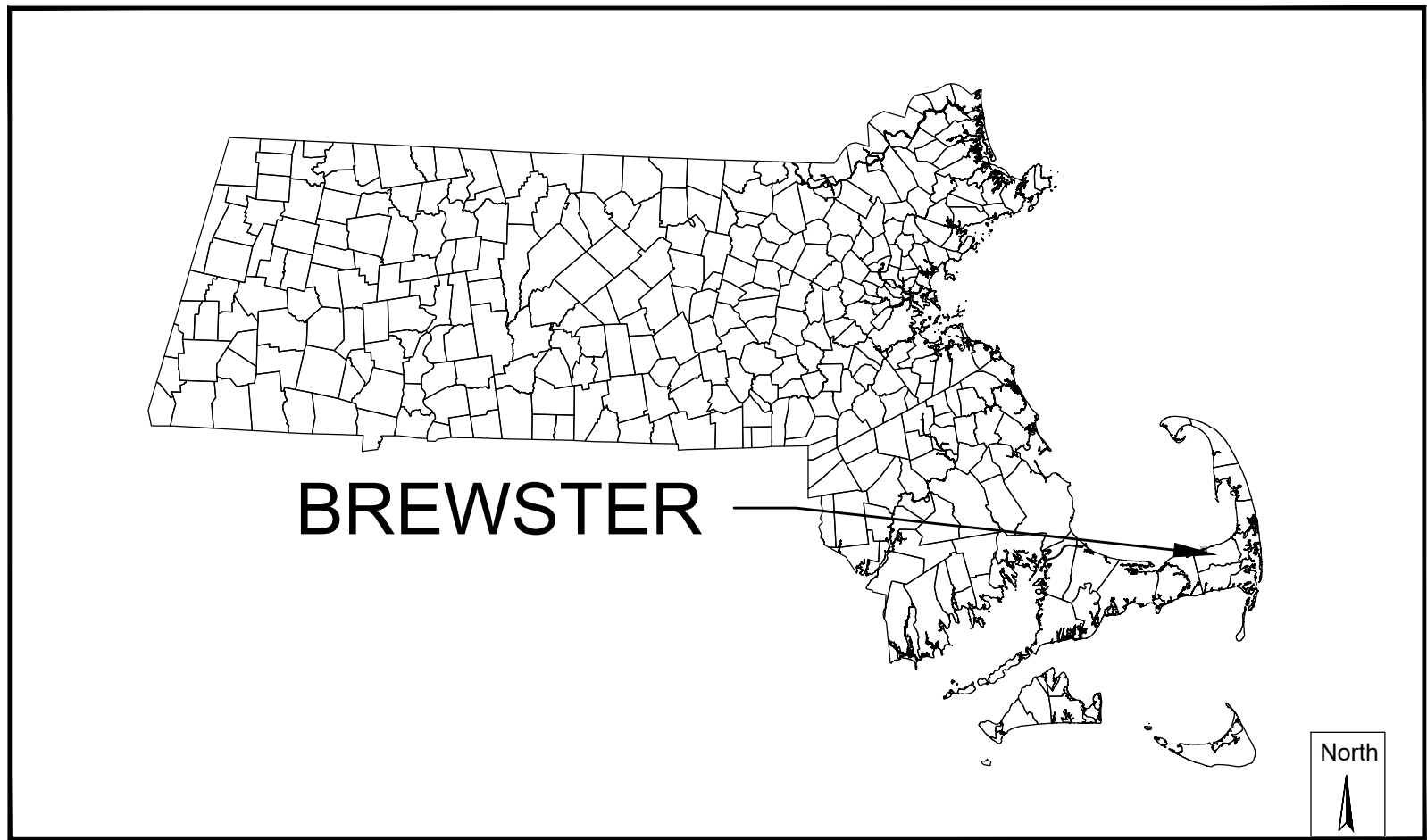


PAINE'S CREEK BANK STABILIZATION PERMITTING PLANS BREWSTER, MASSACHUSETTS FEBRUARY 22, 2024



MASSACHUSETTS

Graphic Scale
0 150000
SCALE IN FEET
1:150000



BREWSTER

Graphic Scale
0 10000
SCALE IN FEET
1:10000



VICINITY MAP

Graphic Scale
1-inch = 500-feet

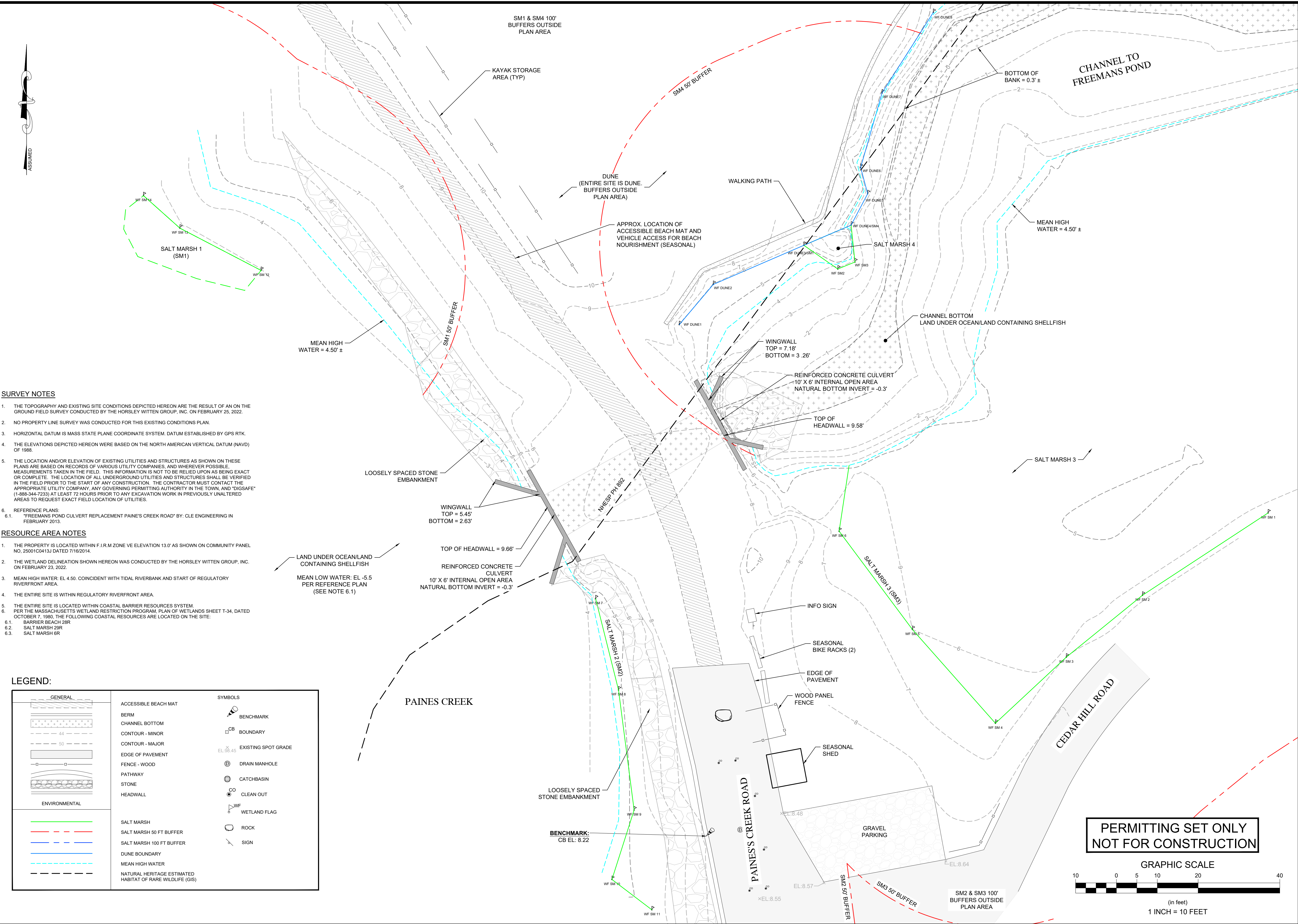
Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	EXISTING CONDITIONS
3	SITE PREP & EROSION CONTROL PLAN
4	SITE PLAN
5	DETAILS

GENERAL NOTES:
1. THIS PLAN SET IS FOR PERMITTING ONLY AND NOT FOR CONSTRUCTION.

Plan Set:		PAINE'S CREEK BANK STABILIZATION PERMITTING PLANS BREWSTER, MASSACHUSETTS	
Prepared For:		Town of Brewster 2198 Main Street Brewster, MA (508) 896-3701	
Prepared By:		Horsley Witten Group, Inc. <i>Sustainable Environmental Solutions</i> www.horsleywitten.com	
Headquarters 90 Route 6A Sandwich, MA 02563 (508) 833-6600 voice (508) 833-3150 fax		294 Washington Street, Suite 801 Boston, MA 02108 (857) 263-8193 voice (617) 574-4799 fax	
55 Dorrance Street, Suite 200 Providence, RI 02906 (401) 272-1717 voice (401) 439-8368 fax		113 Water Street, R2 Exeter, NH 03833 (603) 658-1660	
Registration:		Project Number: 21119	
Revisions		Sheet Number: 1 of 5	
Drawing Number: C - 1			
Rev.	Date	By	Appr.
			Description

PERMITTING SET ONLY
NOT FOR CONSTRUCTION

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SURVEY NOTES

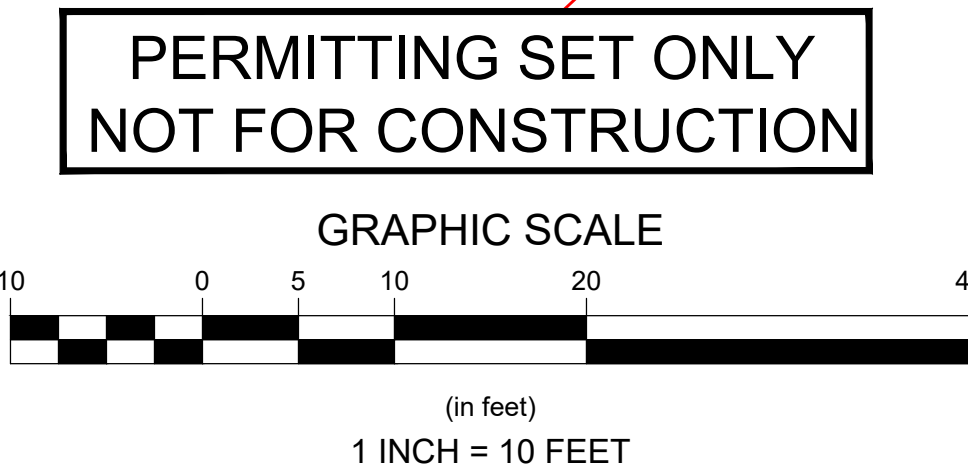
1. THE TOPOGRAPHY AND EXISTING SITE CONDITIONS DEPICTED HEREON ARE THE RESULT OF AN ON THE GROUND FIELD SURVEY CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON FEBRUARY 25, 2022.
2. NO PROPERTY LINE SURVEY WAS CONDUCTED FOR THIS EXISTING CONDITIONS PLAN.
3. HORIZONTAL DATUM IS MASS STATE PLANE COORDINATE SYSTEM. DATUM ESTABLISHED BY GPS RTK.
4. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
5. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
6. REFERENCE PLANS:
 - 6.1. FREEMANS POND CULVERT REPLACEMENT PAINE'S CREEK ROAD" BY: CLE ENGINEERING IN FEBRUARY 2013.

RESOURCE AREA NOTES

1. THE PROPERTY IS LOCATED WITHIN F.I.R.M ZONE VE ELEVATION 13.0' AS SHOWN ON COMMUNITY PANEL NO. 25001C0413J DATED 7/16/2014.
2. THE WETLAND DELINEATION SHOWN HEREON WAS CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON FEBRUARY 23, 2022.
3. MEAN HIGH WATER: EL 4.50. COINCIDENT WITH TIDAL RIVERBANK AND START OF REGULATORY RIVERFRONT AREA.
4. THE ENTIRE SITE IS WITHIN REGULATORY RIVERFRONT AREA.
5. THE ENTIRE SITE IS LOCATED WITHIN COASTAL BARRIER RESOURCES SYSTEM.
6. PER THE MASSACHUSETTS WETLAND RESTRICTION PROGRAM, PLAN OF WETLANDS SHEET T-34, DATED OCTOBER 7, 1980, THE FOLLOWING COASTAL RESOURCES ARE LOCATED ON THE SITE:
 - 6.1. BARRIER BEACH 28R
 - 6.2. SALT MARSH 29R
 - 6.3. SALT MARSH 6R

LEGEND:

GENERAL	ACCESSIBLE BEACH MAT	SYMBOLS
	BERM	BENCHMARK
	CHANNEL BOTTOM	BOUNDARY
	CONTOUR - MINOR	EXISTING SPOT GRADE
	CONTOUR - MAJOR	DRAIN MANHOLE
	EDGE OF PAVEMENT	CATCHBASIN
	FENCE - WOOD	CLEAN OUT
	PATHWAY	WETLAND FLAG
	STONE	ROCK
	HEADWALL	SIGN
ENVIRONMENTAL		
	SALT MARSH	
	SALT MARSH 50 FT BUFFER	
	SALT MARSH 100 FT BUFFER	
	DUNE BOUNDARY	
	MEAN HIGH WATER	
	NATURAL HERITAGE ESTIMATED HABITAT OF RARE WILDLIFE (GIS)	



Revisions

Rev	Date	By	Appr	Description
1				
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Fax: -

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Sandwich, MA 02563
Phone: (508) 833-6600
Fax: (508) 833-3150
Dated: February 22, 2022

Registration:

Project Number:

21119

Sheet :

2 of 5

Sheet Number:

C - 2

Plan Set:

**PAINE'S CREEK BANK STABILIZATION
PERMITTING PLANS
BREWSTER, MASSACHUSETTS**

Plan Title:

EXISTING CONDITIONS

Drawn By:

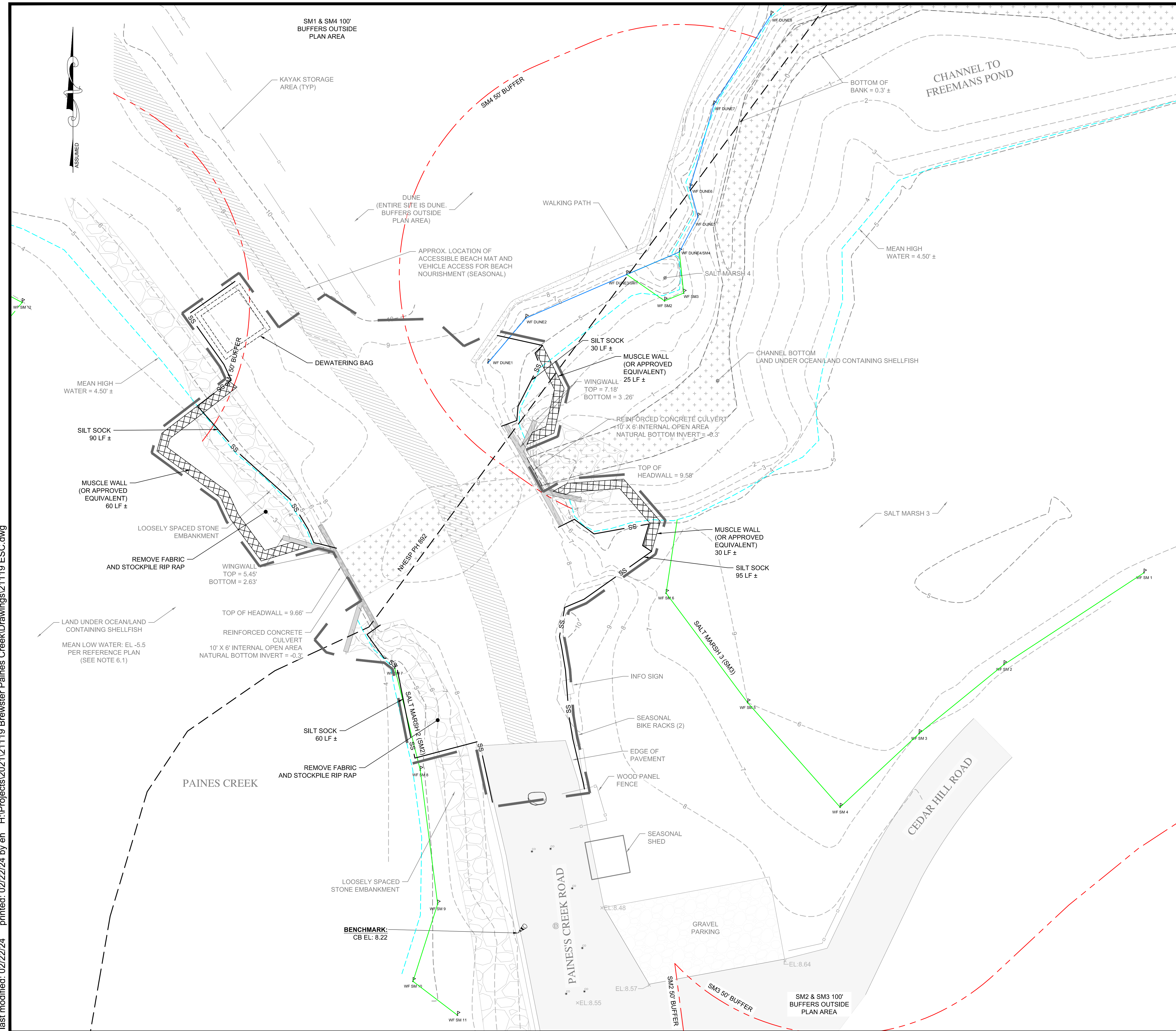
SSG/EVH

Checked By:

DM

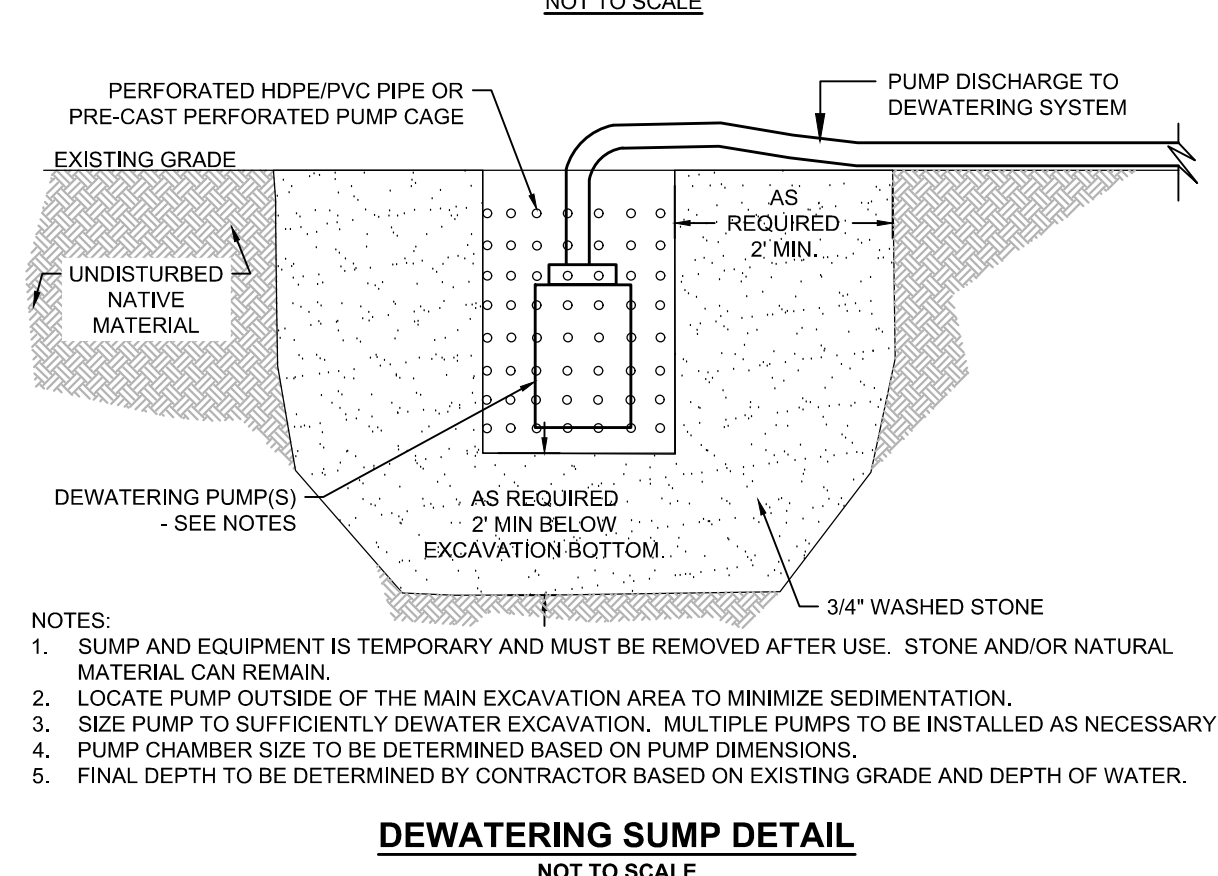
Date:

FEBRUARY 22, 2024

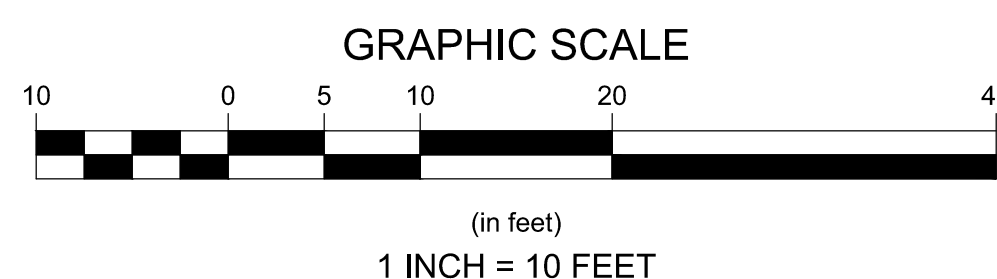


-
- INSTALLATION NOTES:**
1. PLACE LIFTING STRAPS (NOT INCLUDED) UNDER THE UNIT TO FACILITATE REMOVAL AFTER USAGE
 2. UNFOLD DANDY DEWATERING BAG ON STABILIZED AREA OVER DENSE VEGETATION, STRAW, OR GRAVEL (IF AN INCREASED DRAINAGE SURFACE IS NEEDED)
 3. INSERT DISCHARGE HOSE FROM PUMP INTO DANDY DEWATERING BAG A MINIMUM OF SIX INCHES AND TIGHTLY SECURE WITH ATTACHED TIE DOWN STRAP TO PREVENT WATER FROM FLOWING OUT OF THE UNIT WITHOUT BEING FILTERED
 4. IF USING OPTIONAL ABSORBENTS, PLACE ABSORBENT BOOM INTO THE DANDY DEWATERING BAG
- MAINTENANCE:**
5. REPLACE THE UNIT WHEN 1/2 FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE
 6. IF USING OPTIONAL OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION
- SECTION A - A**
- DEWATERING BAG DETAIL**
- NOT TO SCALE
- PLAN VIEW**
- SECTION**

- ### SEDIMENT SILT SOCK
- NOTES:
1. SILT SOCK MANUFACTURER WILL BE SILT SOXX OR ENGINEER APPROVED EQUIAL.
 2. ALL MATERIAL WILL MEET MANUFACTURER'S SPECIFICATIONS.
 3. SEDIMENT SILT SOCK WILL BE FILLED WITH LEAF COMPOST AND/OR WOODY MULCH PER MANUFACTURER'S REQUIREMENTS.
 4. FOLLOWING CONSTRUCTION & SITE STABILIZATION, COMPOST MATERIAL WILL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.
- SEDIMENT SILT SOCK**
NOT TO SCALE
-
- Diagram illustrating the installation of a Sediment Silt Sock. The sock is shown in cross-section, filled with water and material. The sock is placed on a substrate. The diagram includes labels for the sock's components and the surrounding environment, as well as dimensions for the sock's height and extension.
- NOTES:
1. MUSCLE WALL, OR APPROVED EQUIVANT, SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER RECOMMENDATIONS, BEGINNING AT THE MOST UPSTREAM LOCATION.
 2. ANY SANDBAGS USED IN THE DEWATERING PROCESS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEAR AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL. (I.E. SAND, FINE GRAVEL).
 3. ALL DEWATERING CONTAINMENT AREAS AND EROSION/SEDIMENT CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONSTRUCTION PLANS AND DETAILS.
 4. EROSION/SEDIMENT CONTROL DEVICES AND TEMPORARY WALLS ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. CONCRETE HAS CURED AND ALL DISTURBED AREAS ARE STABILIZED IN ACCORDANCE WITH THE SPECIFICATIONS
- TEMPORARY WATER DIVERSION (MUSCLE WALL)**
NOT TO SCALE



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- REVESTMENT STONE CONSTRUCTION NOTES**
1. REMOVE EXISTING RIP RAP AND FABRIC FROM AREAS INDICATED.
 2. INSTALL ACB MAT.
 3. REPLACE STONES AS A TIGHTLY FITTED REVESTMENT. SUPPLEMENT WITH STONE FROM OTHER AREAS OF SITE AS DIRECTED BY TOWN.
 4. INFILL SAND.

RESOURCE AREA IMPACTS
TOTAL PROJECT LIMIT OF WORK: 6,750 SF

1. SALT MARSH:	0 SF
2. COASTAL BEACH:	0 SF
3. COASTAL DUNE:	6,245 SF
4. LAND UNDER THE OCEAN/ LAND CONTAINING SHELLFISH:	505 SF
5. RIVERFRONT AREA:	6,750 SF
6. LAND SUBJECT TO COASTAL STORM FLOWAGE:	6,750 SF

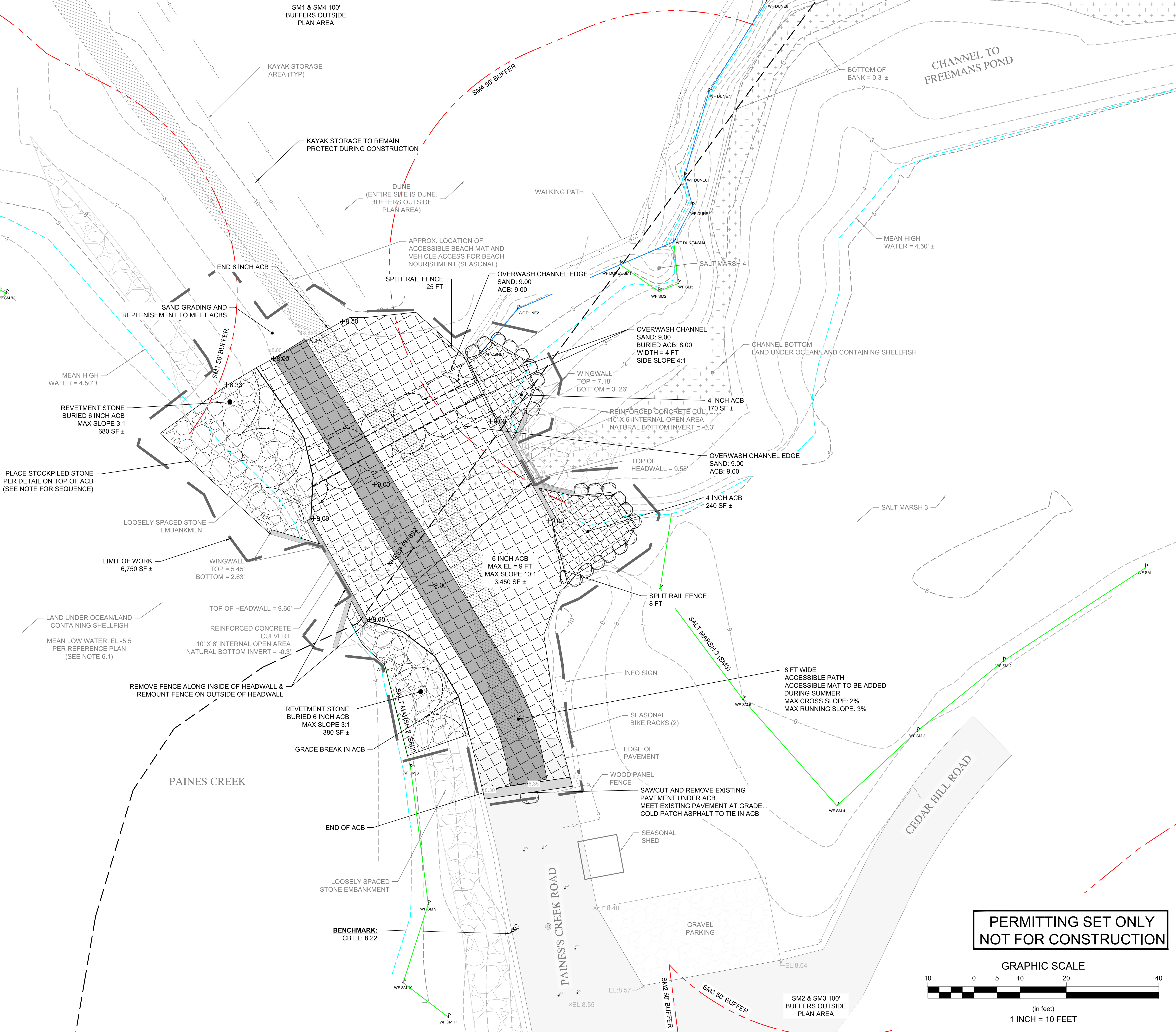
HARD SCAPE AREAS

	EXISTING	PROPOSED (LOW)
CULVERT:	1,150 SF	1,150 SF
REVESTMENT STONE:	710 SF	10,030 SF*
ACBs (BURIED):	0 SF	4,100 SF
TOTAL:	1,860 SF	15,280 SF

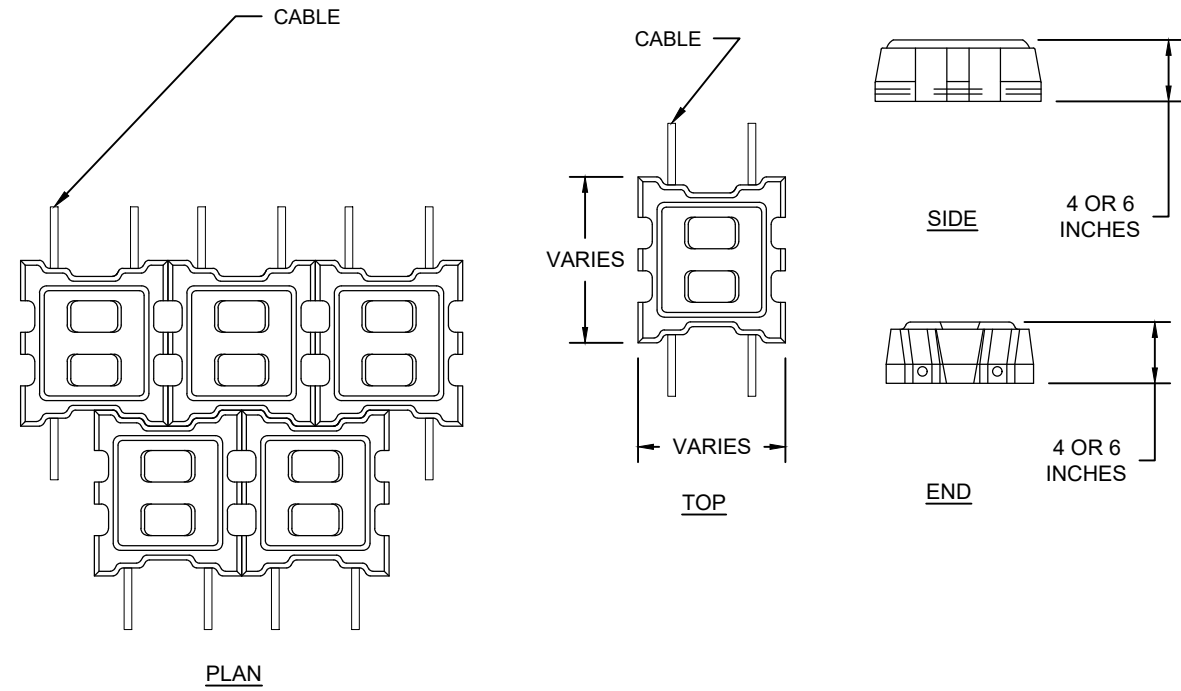
*ADDITIONAL STONE PROVIDED FROM ELSEWHERE ON THE SITE (OUTSIDE LOW) AS REQUESTED BY CZM DURING PRE-PERMITTING MEETING.

LEGEND:

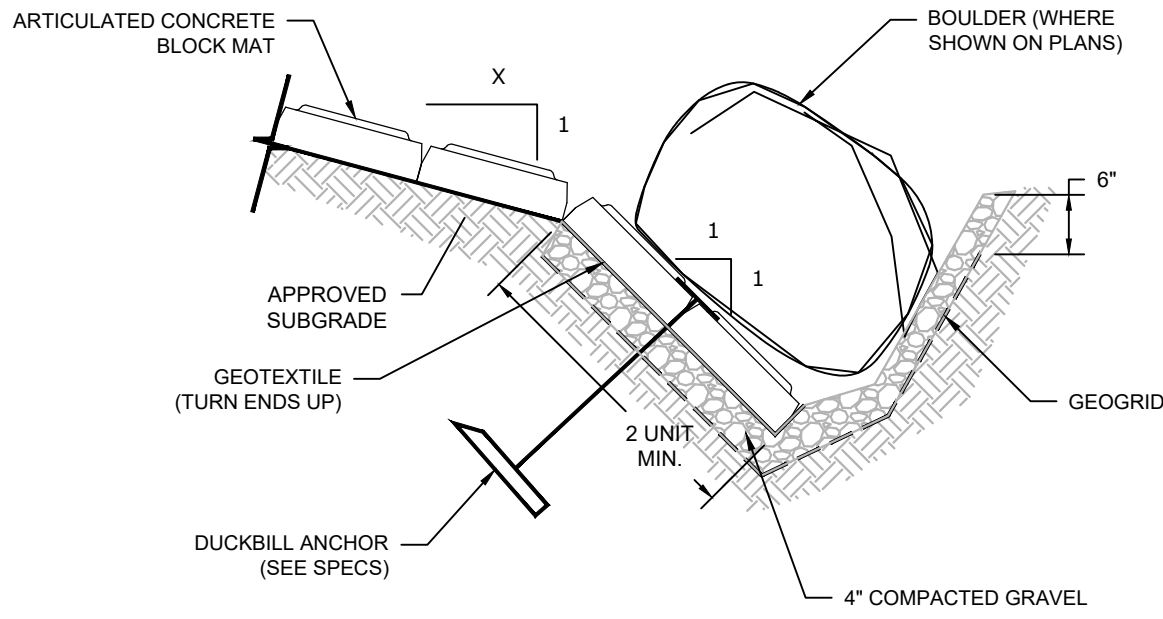
	6 INCH ARTICULATED CONCRETE BLOCK (ACB)
	4 INCH ARTICULATED CONCRETE BLOCK (ACB)
	EDGE OF PAVEMENT
	FENCE - WOOD
	LIMIT OF WORK
	PATHWAY
	STONE
	ROCK



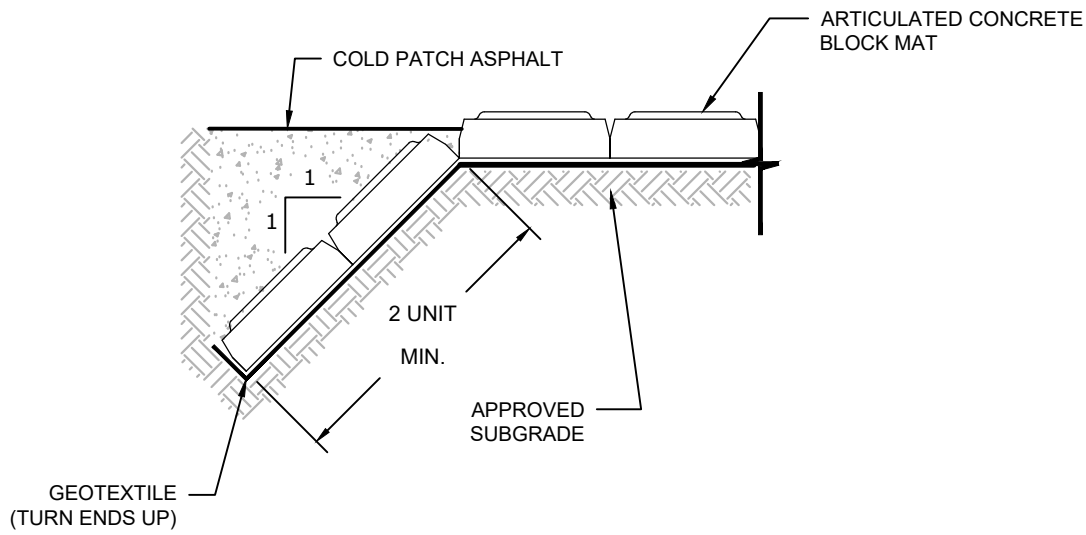
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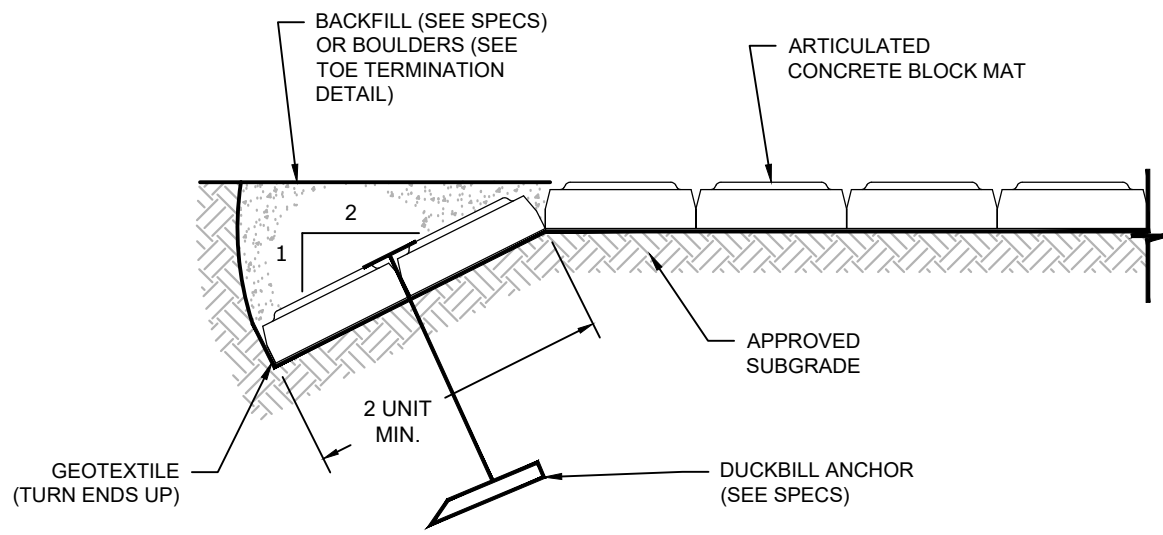
TYP. BLOCK
NOT TO SCALE



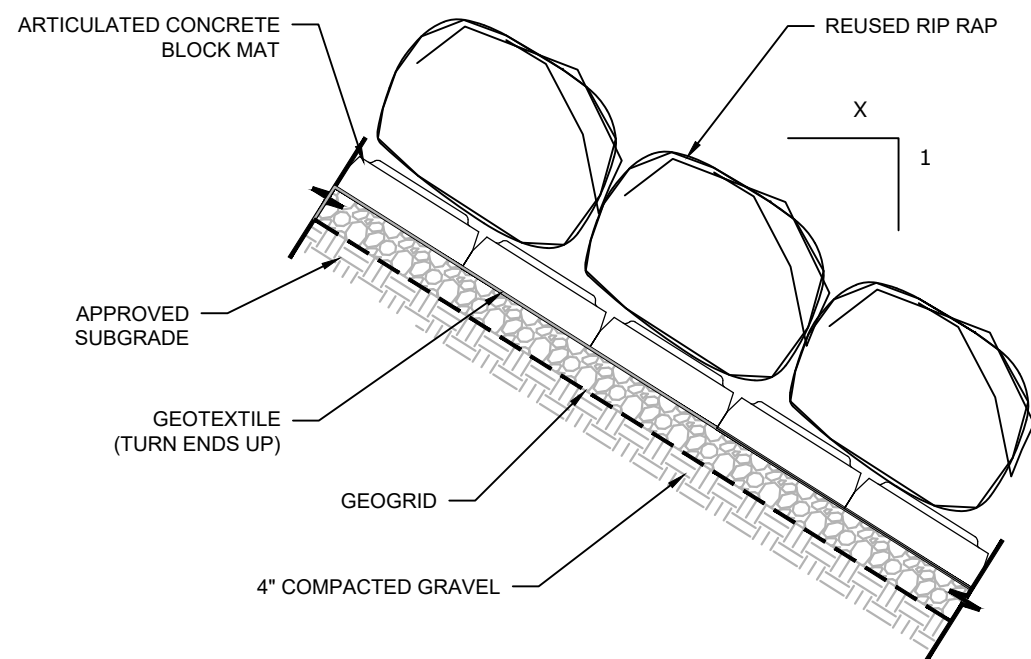
TOE TERMINATION
NOT TO SCALE



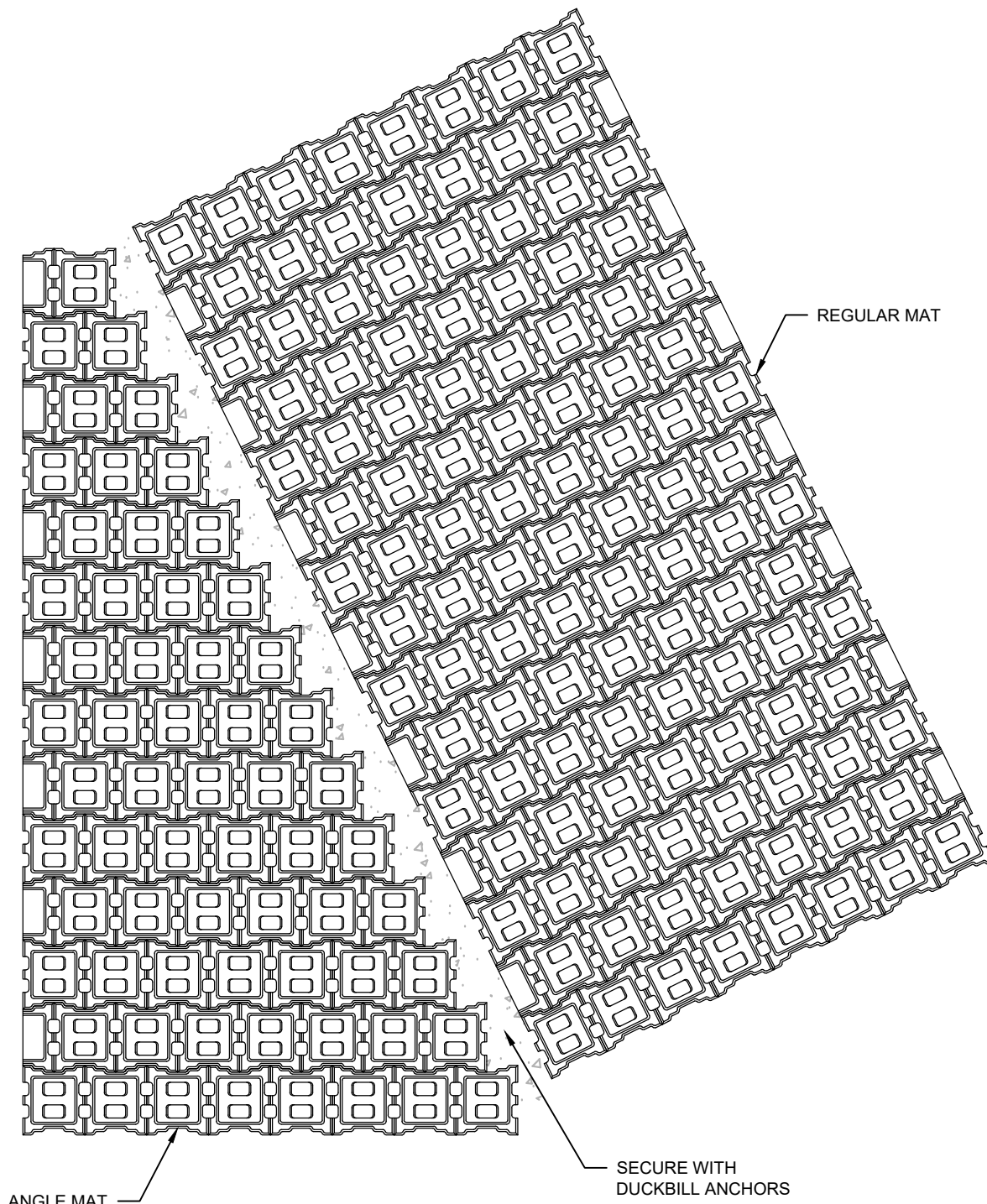
ACB MAT TERMINATION AT ASPHALT
NOT TO SCALE



FLANK TERMINATION
NOT TO SCALE

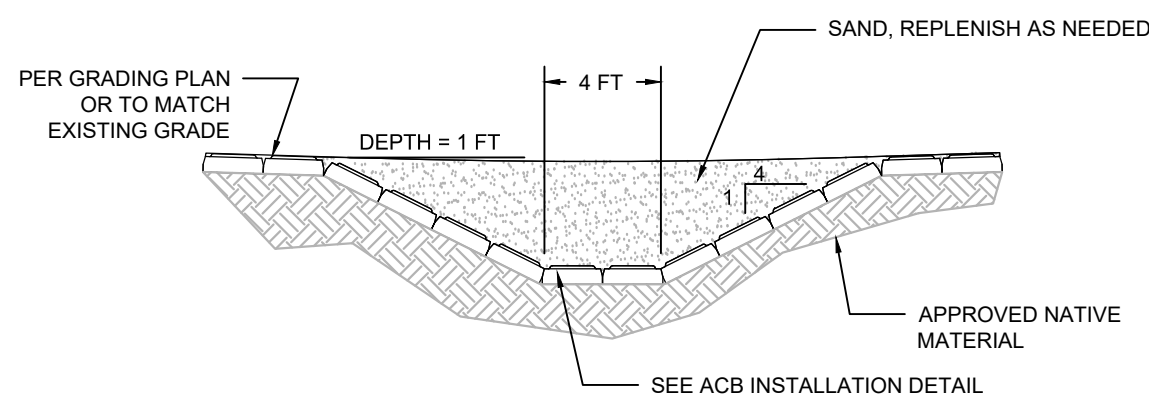


REVTMENT STONE ON ACB MAT
NOT TO SCALE



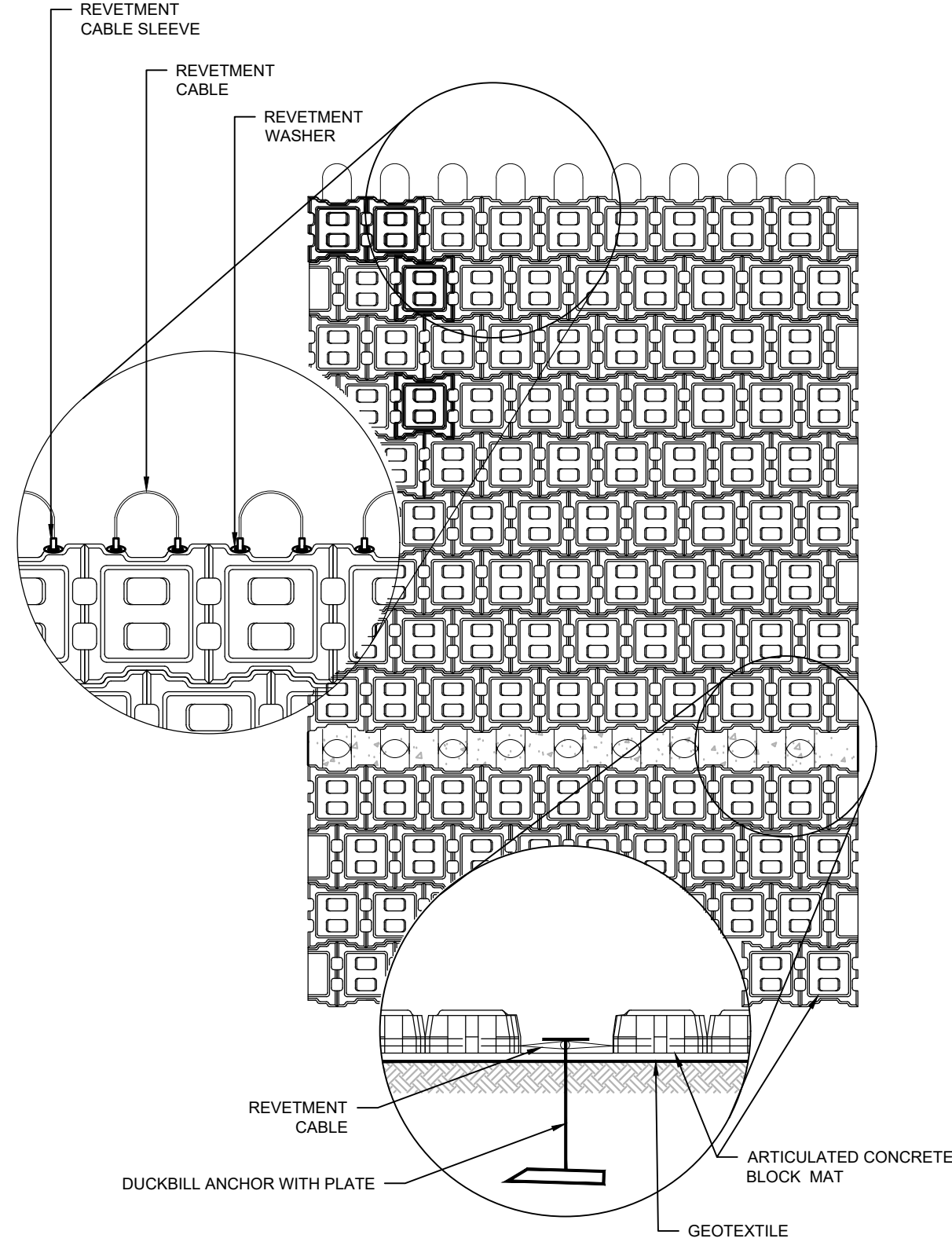
NOTE:
ANGLE MATS WILL BE CONSTRUCTED BY OMITTING THE REQUIRED UNITS SO THE REQUIRED MAT DIMENSIONS CAN BE OBTAINED.

TYP. ANGLE MAT
NOT TO SCALE




NOTE:
ADJUST SIDESLOPE AS NECESSARY TO MEET EXISTING GRADE. MAX. SLOPE = 2:1

OVERWASH CHANNEL
NOT TO SCALE



TYP. MAT TO MAT
NOT TO SCALE

Revisions			
Rev	Date	By	Description
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Horsley Witten Group, Inc.
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Date: FEBRUARY 22, 2024

Designed By: EVH

Drawn By: EVH

Checked By: RAC/VP

Plan Set:

**PAINES CREEK BANK STABILIZATION
PERMITTING PLANS**

BREWSTER, MASSACHUSETTS

Plan Title:

DETAILS

Prepared For:

Town of Brewster
2198 Main Street
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Sheet :

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5 of 5

Sheet Number:

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