



US Army Corps
of Engineers®

PUBLIC NOTICE

Applicant:
VIDI Aquam LLC
PN-25-18

Published: March 28, 2025
Expires: April 27, 2025

Baltimore District
Permit Application No. NAB-2024-61503-TREC (VIDI AQUAM
LLC-Living Shoreline

TO WHOM IT MAY CONCERN: The Baltimore District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403). The purpose of this public notice is to solicit comments from the public regarding the work described below:

APPLICANT:VIDI Aquam LLC
595 W. Gravers Lane
Philadelphia, Pennsylvania 19118

AGENT: Ellie Chetelat
Underwood & Associates
1753 Ebling Trail
Annapolis, Maryland 21919

WATERWAY AND LOCATION: The project would affect waters of the United States and navigable waters of the United States associated with Elk River. The project area is located at 2627 Grove Neck Road; at Latitude 39.404926° North and Longitude 76.026681° West; in Earville, Cecil County, Maryland.

EXISTING CONDITIONS: The privately owned waterfront property is located directly on the Chesapeake Bay, adjacent to the Grove Neck Wildlife Management Area which is managed by the Department of Natural Resources. The property includes residential structures, a manicured lawn with scattered canopy trees and forest (to be undisturbed by the project). The shoreline consists of a wooden bulkhead with large pipes placed perpendicular to the shoreline (as groins), and a small section of unarmored, eroding shoreline on the southwestern limit of the property. There is a thin strip of sand along the entire shoreline with large woody material throughout. The existing shoreline spans 631 linear feet, with a total of 554 linear feet of bulkhead, and the remaining 77 linear feet of shoreline remains unarmored. There is no existing tidal marsh on site and no mapped submerged aquatic vegetation within the last five years. There is an existing concrete boat ramp and pier with 3 boat lifts.

PROJECT PURPOSE:

Basic: Shoreline stabilization and aquatic habitat enhancement.

Overall: To provide shoreline erosion control through the year 2050 while maintaining recreational access to the waterway.

PROPOSED WORK: The applicant requests authorization to stabilize approximately 631 linear feet of shoreline using a living shoreline design employing a headland and bay style design within a 1.43 acre area extending 165 feet waterward of the Mean High Water Line as follows: construct a headland and bay style living shoreline structure by placing 2,855 cubic yards of stone within 19,928 square feet (0.46 acre) of open water and 2,148 cubic yards of clean sand within 25,376 square feet (0.58 acre) of open water area. The project is expected to result in 12,145 sf (0.28 acres) of native low to high marsh habitat and beach strand; all to extend a maximum of 165 feet waterward of the approximate mean high-water line, and to place 1,195 square feet of cobble to extend an existing boat ramp past the proposed structures.

The applicant also proposes to remove the existing pier, construct a new pier and boatlifts extending 175 feet waterward of the mean high-water line, and to relocate an existing osprey pole 155 feet waterward of the mean high-water line.

All work is proposed in accordance with the attached plans as prepared by Underwood and Associates dated February 10, 2025. Please refer to table 1 below for a summary of aquatic resource impacts.

EFFECTS ON AQUATIC RESOURCES:

Table 1:

Activity (i.e. culvert)	Elk River Open Water (sf)	Authority (Section 10/404/408)
Stone Fill	19,928	10/404
Sand Fill	25,376	10/404

AVOIDANCE AND MINIMIZATION: The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: As part of the planning process for the proposed project, steps were taken to ensure avoidance and minimization of impacts to aquatic resources to the maximum extent practicable based on the existing site and projected future site conditions, including minimizing the size and number of proposed headlands, grading as far upland as feasible while protecting the existing mature trees, incorporating large outcrops to allow for a steeper slope in order to minimizing channelward fill, and minimizing the project footprint.

COMPENSATORY MITIGATION: The applicant has provided the following explanation why compensatory mitigation should not be required: Impacts to waters of the United States will be compensated through the creation of diverse habitats in the area of open water that will be filled. Open water is recognized as the most rapidly growing habitat in the Chesapeake Bay due to rising sea levels. This project will transform one habitat (open water) into a variety of habitats, including submerged aquatic vegetation, low marsh, open beach strand, and high marsh. Additionally, the slope is designed to facilitate marsh migration opportunities beyond the project's design life, in response to ongoing sea level rise.

CULTURAL RESOURCES: The Corps evaluated the undertaking pursuant to Section 106 of the National Historic Preservation Act utilizing its existing program-specific regulations and procedures along with 36 CFR Part 800. The Corps' program-specific procedures include 33 CFR 325, Appendix C, and revised interim guidance issued in 2005 and 2007, respectively. The District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

No resources listed in or eligible for inclusion in the National Register of Historic Places are known to be present in the vicinity of the proposed work; however, the permit area has not been formally surveyed for the presence of cultural resources. Additional work may be necessary to identify and assess any cultural resources that may be present. This notice serves as a request to State Historic Preservation Office, Tribal Historic Preservation Office, and/or other interested parties to provide any information they may have regarding historic properties.

The District Engineer's final eligibility and effect determination will be based upon coordination with the State Historic Preservation Office and/or Tribal Historic Preservation Office, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

ENDANGERED SPECIES: The Corps has performed an initial review of the application, the United States Fish and Wildlife Service Information for Planning and Consultation (IPaC), National Marine Fisheries Service Greater Atlantic Regional Field Office Section 7 Mapper to determine if any threatened, endangered, proposed, or candidate species, as well as the proposed and final designated critical habitat may occur within the boundary of the proposed project. Based on this initial review, the Corps has made a preliminary determination that the proposed project may affect species and critical habitat listed in Table 2. No other ESA-listed species or critical habitat will be affected by the proposed action.

Table 2: ESA-listed species and/or critical habitat potentially present in the action area.

Species Common Name and/or Critical Habitat Name	Scientific Name	Federal Status
Puritan Tiger Beetle	<i>Ellipsoptera puritana</i>	Threatened
Tricolored bat	<i>Perimyotis subflavus</i>	Proposed Endangered
Monarch Butterfly	<i>Danaus Plexippus</i>	Proposed Threatened
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	Endangered
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Endangered

Pursuant to Section 7 ESA, any required consultation with the Service(s) will be conducted in accordance with 50 CFR part 402.

This notice serves as request to the United States Fish and Wildlife Service and National Marine Fisheries Service for any additional information on whether any listed or proposed to be listed endangered or threatened species or critical habitat may be present in the area which would be affected by the proposed activity.

ESSENTIAL FISH HABITAT: Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act 1996, the Corps reviewed the project area, examined information provided by the applicant, and consulted available species information.

This notice initiates the Essential Fish Habitat consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Our initial determination is that the proposed action may adversely affect Essential Fish Habitat and/or fisheries managed by Fishery Management Councils and the National Marine Fisheries Service. Implementation of the proposed project would directly impact approximately 1.04 acres of intertidal and open water habitat. The effects of the project are determined to be minimal and permanent. These habitat(s) are utilized by the following species and their various life stages:

Table 3: National Oceanic and Atmospheric Administration Essential Fish Habitat

Species	Life Stage
Bluefish	Adult
Summer Flounder	Adult
Windowpane Flounder	Juvenile
Atlantic Butterfish	Larvae
Clearnose Skate	Juvenile
Atlantic Herring	Juvenile
Atlantic Butterfish	Adult
Summer Flounder	Larvae
Red Hake	Adult
Bluefish	Juvenile
Black Sea Bass	Juvenile
Atlantic Butterfish	Eggs
Clearnose Skate	Adult
Black Sea Bass	Adult
Scup	Juvenile
Summer Flounder	Juvenile
Red Hake	Eggs/Larvae/Juvenile
Windowpane Flounder	Adult
Scup	Adult
Atlantic Herring	Adult

Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NAVIGATION: The proposed structure or activity is not located in the vicinity of a federal navigation channel.

SECTION 408: The applicant will not require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because the activity, in whole or in part, would not alter, occupy, or use a Corps Civil Works project.

WATER QUALITY CERTIFICATION: Water Quality Certification may be required from the Maryland Department of the Environment.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The geographic extent of aquatic resources within the proposed project area that either are, or are presumed to be, within the Corps jurisdiction has not been verified by Corps personnel.

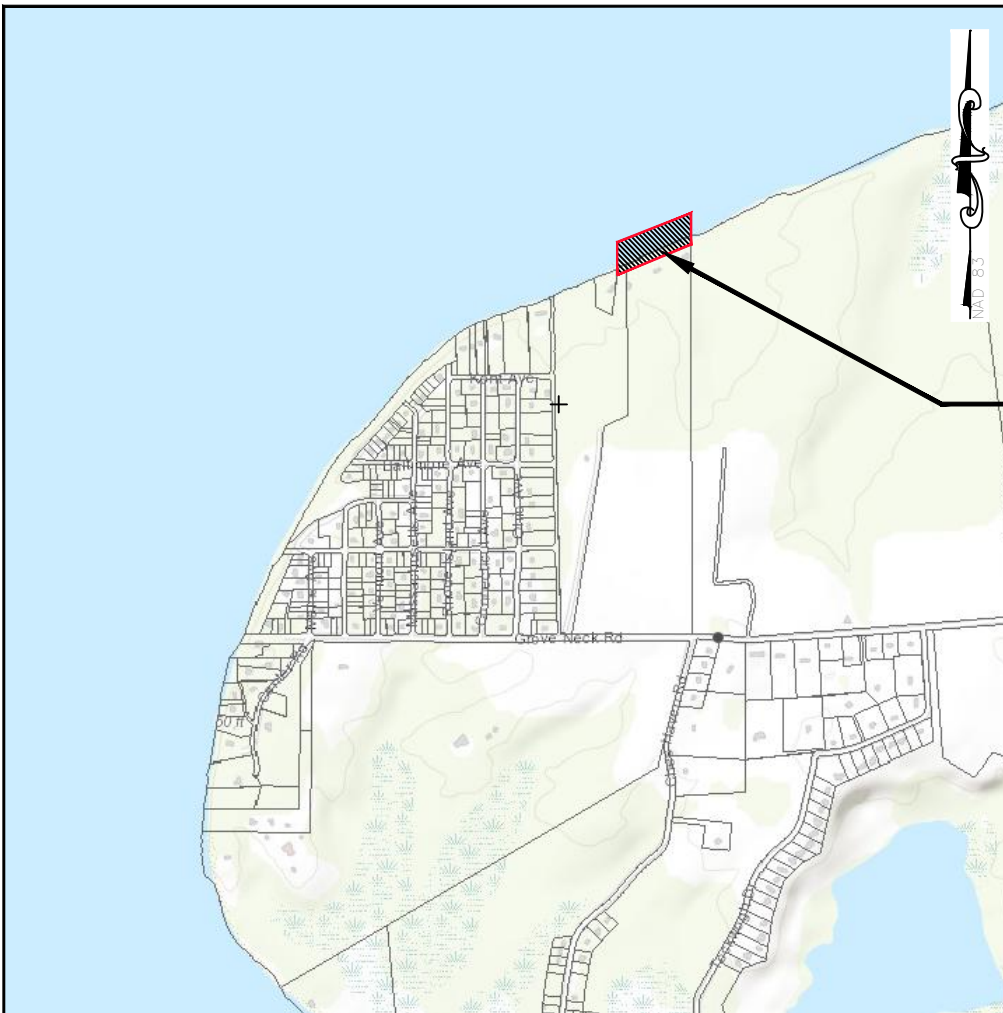
EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and

wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

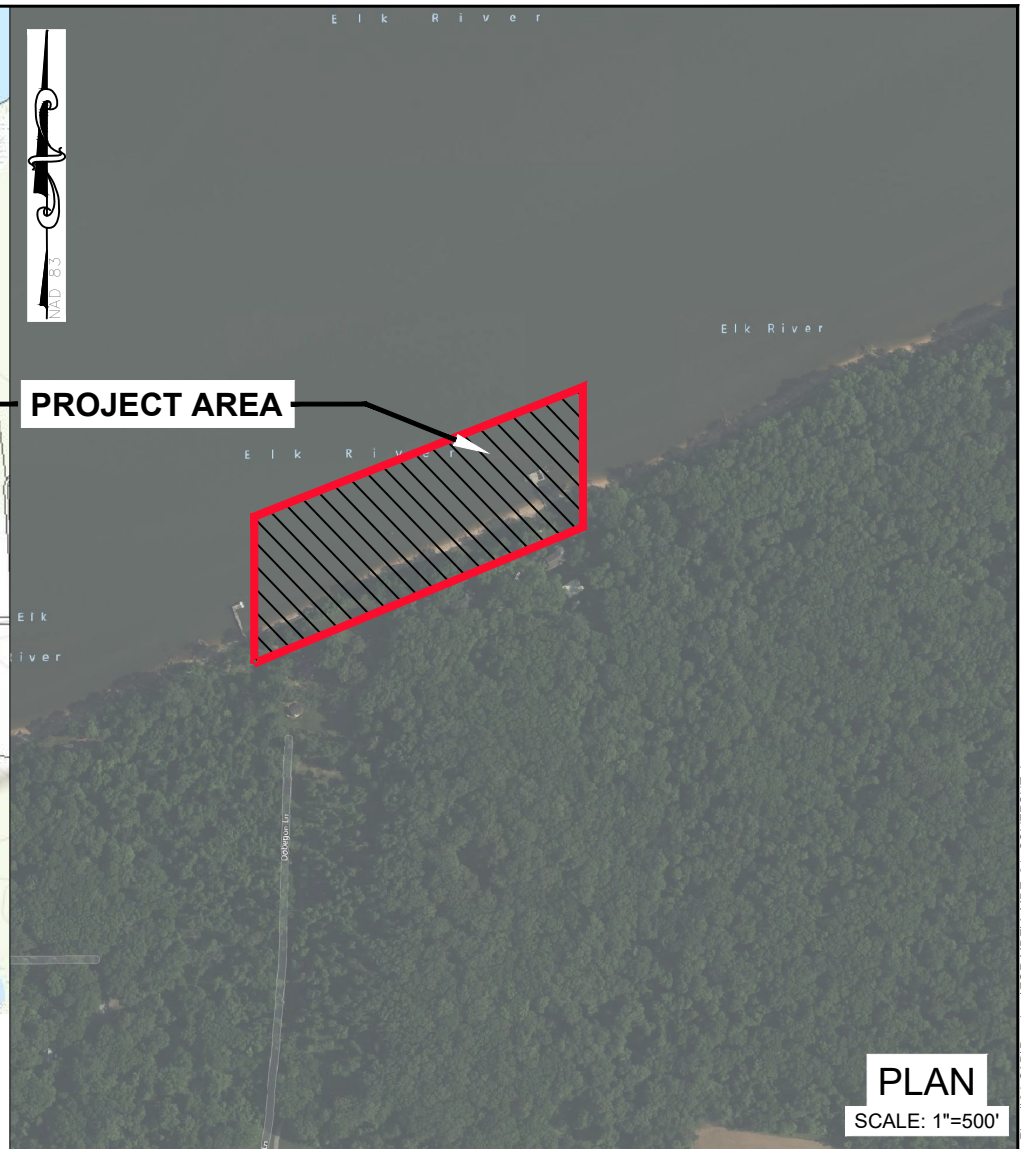
COMMENTS: The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The Baltimore District will receive written comments on the proposed work, as outlined above, until April 27, 2025. Comments should be submitted electronically via the Regulatory Request System (RRS) at <https://rrs.usace.army.mil/rrs> or to Mr. Adam Fannin at adam.e.fannin@usace.army.mil. Alternatively, you may submit comments in writing to the Commander, U.S. Army Corps of Engineers, Baltimore District, Attention: Mr. Adam Fannin, Regulatory Branch 2 Hopkins Plaza Baltimore, Maryland 21201. Please refer to the permit application number in your comments.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing will be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.



VICINITY MAP



PLAN
SCALE: 1"=500'

SHEET INDEX

DESCRIPTION	SHEET
VICINITY MAP AND AERIAL PHOTO	1
PROJECT VICINITY CONDITIONS	2
EXISTING CONDITIONS	3-4
PROPOSED CONDITIONS	5-7
PROJECT CROSS SECTIONS	8-10
PROJECT DETAILS	11-13
PROJECT DATA TABLES.....	14

UNDERWOOD & ASSOCIATES
 LANDSCAPE ARCHITECTURE ♦ ECOLOGICAL RESTORATION
 A DESIGN/BUILD Co.
 1753 EBLING TRAIL • ANNAPOLIS, MD 21401
 tel. 410-849-3211 fax. 410-849-2136

March 21, 2025	
Scale	AS SHOWN
Drawn By	J.K./E.C.
Approved By	D.W.
Sheet No.	1 Of 14
Project No.	22-098
Proposal No.	...

VICINITY MAP AND AERIAL PHOTO

**VIDI AQUAM
LIVING SHORELINE**

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
 FORMERLY MAP 0060, GRID 0002, PARCEL 0371
 1ST ELECTION DISTRICT, CECIL COUNTY

Code File: S:\006-Projects\Vidi Aquam Living Shoreline (Sassafras River)\04-CADD\Drawing\for MDE\A-MDE_01_COVERSHT.dwg Regenerative Stream Channel (RSC)

CHESAPEAKE BAY



FETCH CONTINUES
LONGEST FETCH IS 1.3 MILES

PROPERTY LINES

SHEET 3 & 5

SHEET 4 & 6



Cadd File: S:\006-Projects\Vidi Aquam Living Shoreline (Sassafas River)\04-CADD\Drawing\FOR MDE\A-MDE_02_PROJECT VICINITY.dwg

March 21, 2025

PLAN
SCALE: 1"=1000'

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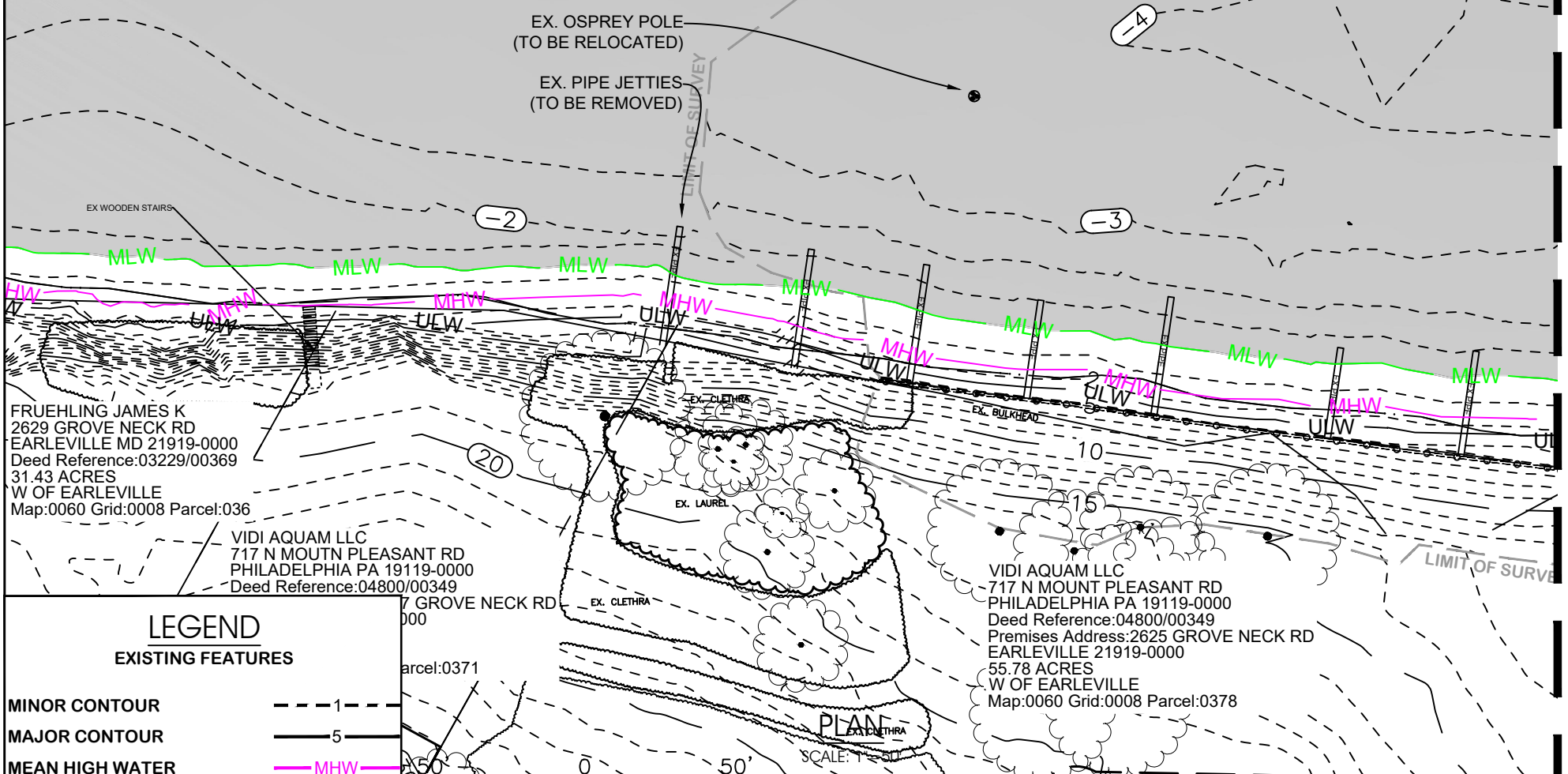
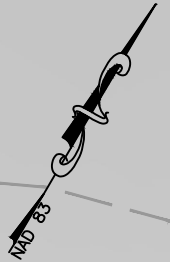
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Drawn By	J.K./E.C.
Approved By	D.W.
Sheet No.	2 Of 14
Project No.	22-098
Proposal No.	...

PROJECT VICINITY CONDITIONS

**VIDI AQUAM
LIVING SHORELINE**

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
FORMERLY MAP 0060, GRID 0002, PARCEL 0371
1ST ELECTION DISTRICT, CECIL COUNTY

CHESAPEAKE BAY



FRUEHLING JAMES K
2629 GROVE NECK RD
EARLEVILLE MD 21919-0000
Deed Reference:03229/00369
31.43 ACRES
W OF EARLEVILLE
Map:0060 Grid:0008 Parcel:036

VIDI AQUAM LLC
717 N MOUNT PLEASANT RD
PHILADELPHIA PA 19119-0000
Deed Reference:04800/00349

VIDI AQUAM LLC
717 N MOUNT PLEASANT RD
PHILADELPHIA PA 19119-0000
Deed Reference:04800/00349
Premises Address:2625 GROVE NECK RD
EARLEVILLE 21919-0000
55.78 ACRES
W OF EARLEVILLE
Map:0060 Grid:0008 Parcel:0378

LEGEND

EXISTING FEATURES

- MINOR CONTOUR 1
- MAJOR CONTOUR 5
- MEAN HIGH WATER MHW
- MEAN LOW WATER MLW
- TREE CANOPY
- PROPERTY LINE
- BULKHEAD

SCALE: 1"=50'

NOTES:
MHW = 1.6 / MLW = 0.0
MHW AND MLW ARE BASED ON NOAA
8573704 BETTERTON, MD
CRITICAL AREA DESIGNATION IS RCA
SAV NOT PRESENT

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Scale	AS SHOWN
Drawn By	J.K./E.C.
Approved By	D.W.
Sheet No.	3 Of 14
Project No.	22-098
Proposal No.	...

EXISTING CONDITIONS	
VIDI AQUAM LIVING SHORELINE	
2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919 FORMERLY MAP 0060, GRID 0002, PARCEL 0371 1ST ELECTION DISTRICT, CECIL COUNTY	

MATCHLINE SEE SHEET 4

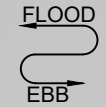
March 21, 2025

MATCHLINE SEE SHEET 3

CHESAPEAKE BAY

MAD 83

LIMIT OF SURVEY



EX. DOLPHIN PILINGS
(TO BE RELOCATED)

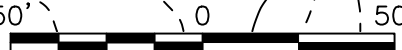
EX. PIPE JETTIES
(TO BE REMOVED)

LEGEND

EXISTING FEATURES

- MINOR CONTOUR -1-
- MAJOR CONTOUR -5-
- MEAN HIGH WATER MHW
- MEAN LOW WATER MLW
- TREE CANOPY
- PROPERTY LINE
- BULKHEAD

NOTES:
 MHW = 1.6 / MLW = 0.0
 MHW AND MLW ARE BASED ON NOAA
 8573704 BETTERTON, MD
 CRITICAL AREA DESIGNATION IS RCA
 SAV NOT PRESENT



SCALE: 1"=50'

PLAN

SCALE: 1"=60'

MARYLAND STATE OF DEPT
 OF NATURAL RESOURCES
 580 TAYLOR AVE SUITE E4
 ANNAPOLIS MD 21401-0000
 Deed Reference: 04955/00412
 Premises Address: 2615 GROVE NECK RD
 EARLEVILLE 21919-0000
 250 ACRES
 W OF EARLEVILLE
 Map: 0060 Grid: 0008 Parcel: 0005

March 21, 2025

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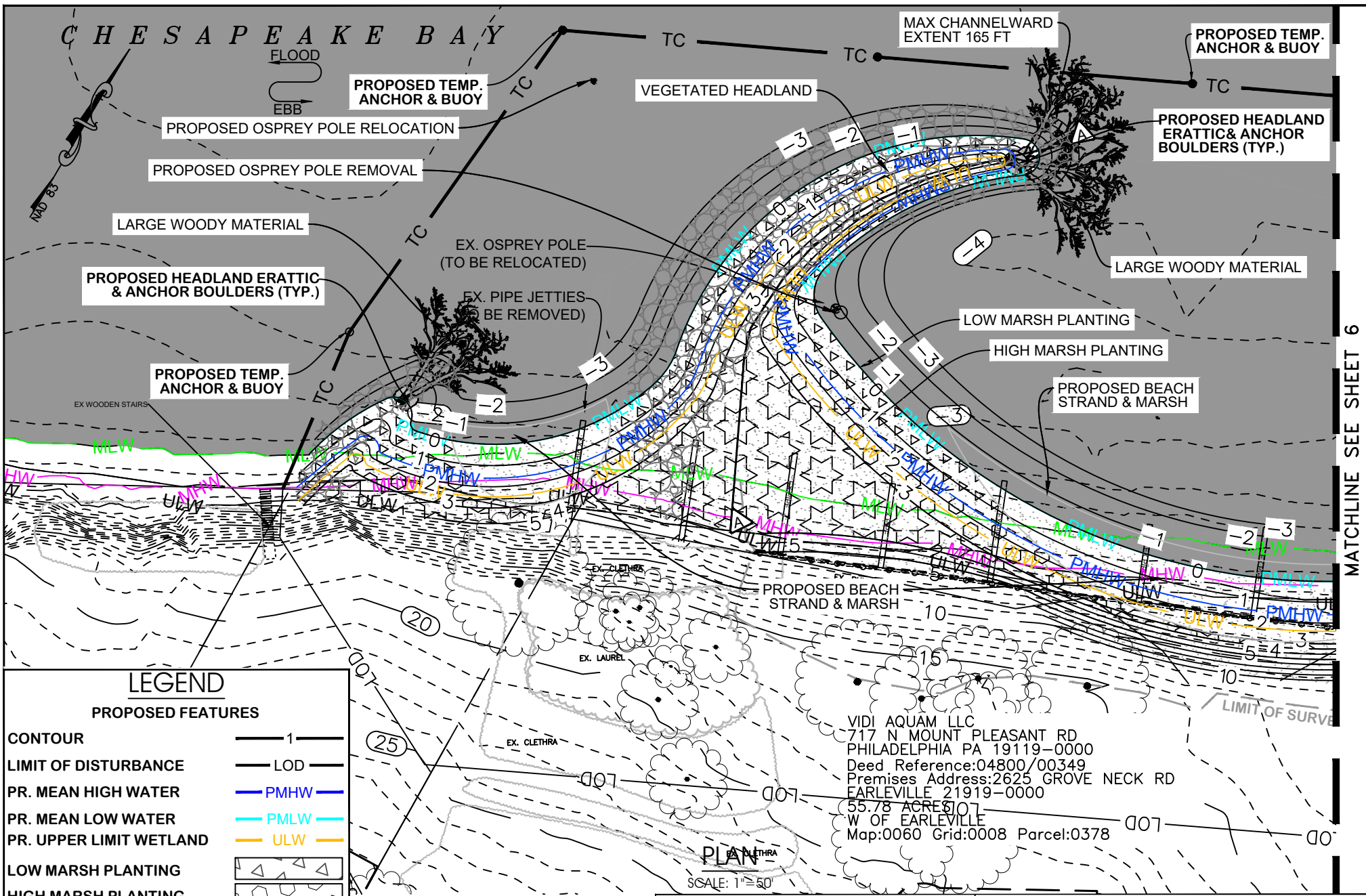
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Approved By	D.W.
Sheet No.	4 Of 14
Project No.	22-098
Proposal No.	...

EXISTING CONDITIONS

VIDI AQUAM LIVING SHORELINE

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
 FORMERLY MAP 0060, GRID 0002, PARCEL 0371
 1ST ELECTION DISTRICT, CECIL COUNTY

Code3 File: S:\006-Projects\VIDI Aquam Living Shoreline (Sassafas River)\04-CADD\Drawings\FOR MDE\A-MDE_03-04_EXISTING.dwg (Regenerative Stream Channel (RSC))



LEGEND

PROPOSED FEATURES

- CONTOUR: 1
- LIMIT OF DISTURBANCE: LOD
- PR. MEAN HIGH WATER: PMHW
- PR. MEAN LOW WATER: PMLW
- PR. UPPER LIMIT WETLAND: ULW
- LOW MARSH PLANTING: [Symbol]
- HIGH MARSH PLANTING: [Symbol]
- UPPER HIGHMARSH PLANTING: [Symbol]
- WELL-GRADED COBBLE MIX: [Symbol]
- SAND FILL: [Symbol]
- BOULDERS: [Symbol]
- LARGE WOODY MATERIAL: [Symbol]

NOTES:
 MHW = 1.6 / MLW = -0.0
 MHW AND MLW ARE BASED ON NOAA
 8573704 BETTERTON, MD

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 1753 EBLING TRAIL • ANNAPOLIS, MD 21401
 Tel. 410-849-3211 Fax. 410-849-2136

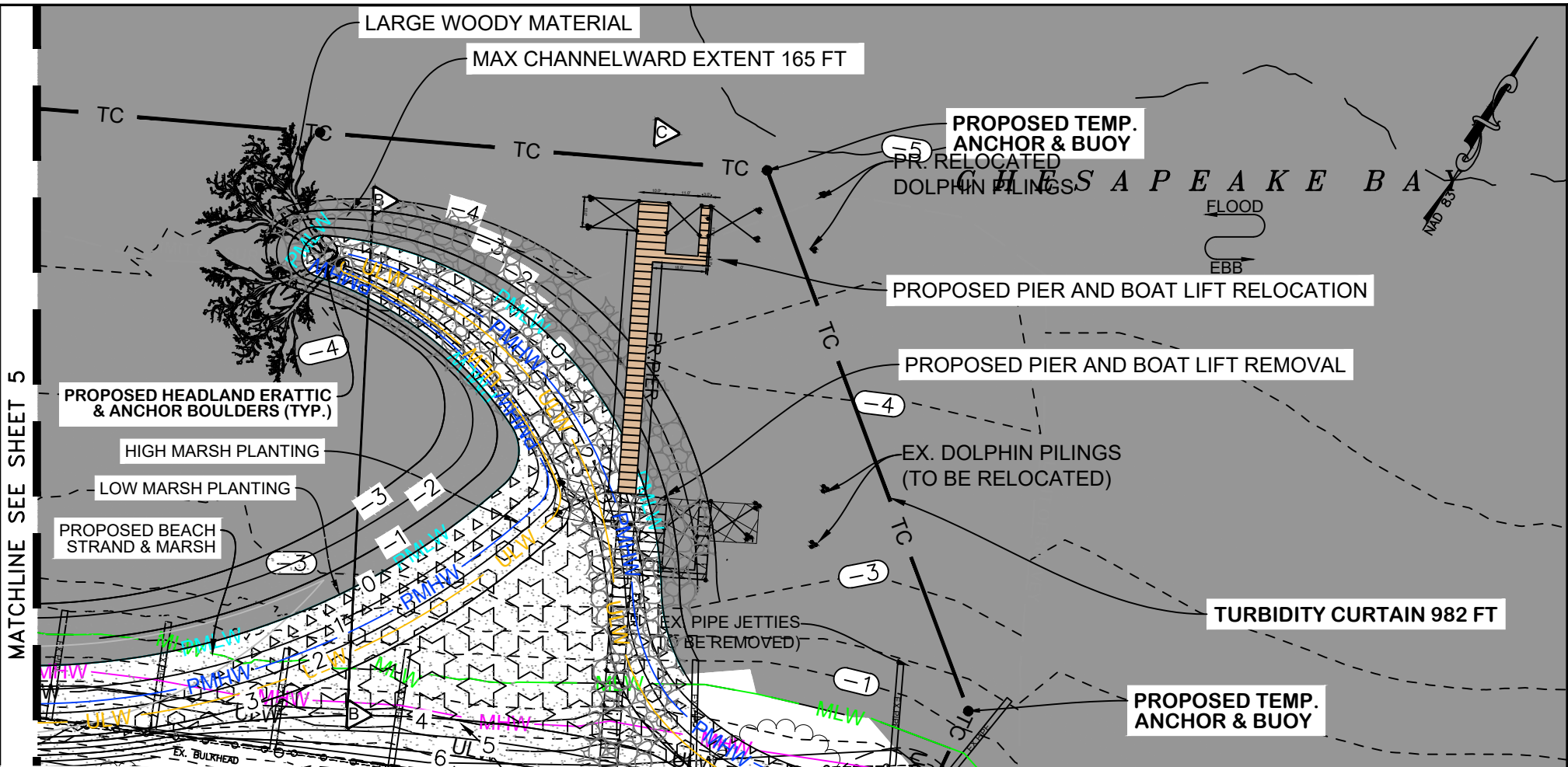
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Approved By	D.W.
Sheet No.	5 Of 14
Project No.	22-098
Proposal No.	...

PROPOSED CONDITIONS

VIDI AQUAM LIVING SHORELINE

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
 FORMERLY MAP 0060, GRID 0002, PARCEL 0371
 1ST ELECTION DISTRICT, CECIL COUNTY

MATCHLINE SEE SHEET 6



LEGEND

PROPOSED FEATURES

CONTOUR — 1 —

LIMIT OF DISTURBANCE — LOD —

PR. MEAN HIGH WATER — PMHW —

PR. MEAN LOW WATER — PMLW —

PR. UPPER LIMIT WETLAND — ULW —

LOW MARSH PLANTING [Symbol]

HIGH MARSH PLANTING [Symbol]

UPPER HIGHMARSH PLANTING [Symbol]

WELL-GRADED COBBLE MIX [Symbol]

SAND FILL [Symbol]

BOULDERS [Symbol]

LARGE WOODY MATERIAL [Symbol]

NOTES:

MHW = 1.6 / MLW = -0.0

MHW AND MLW ARE BASED ON NOAA 8573704 BETTERTON, MD

UNDERWOOD & ASSOCIATES

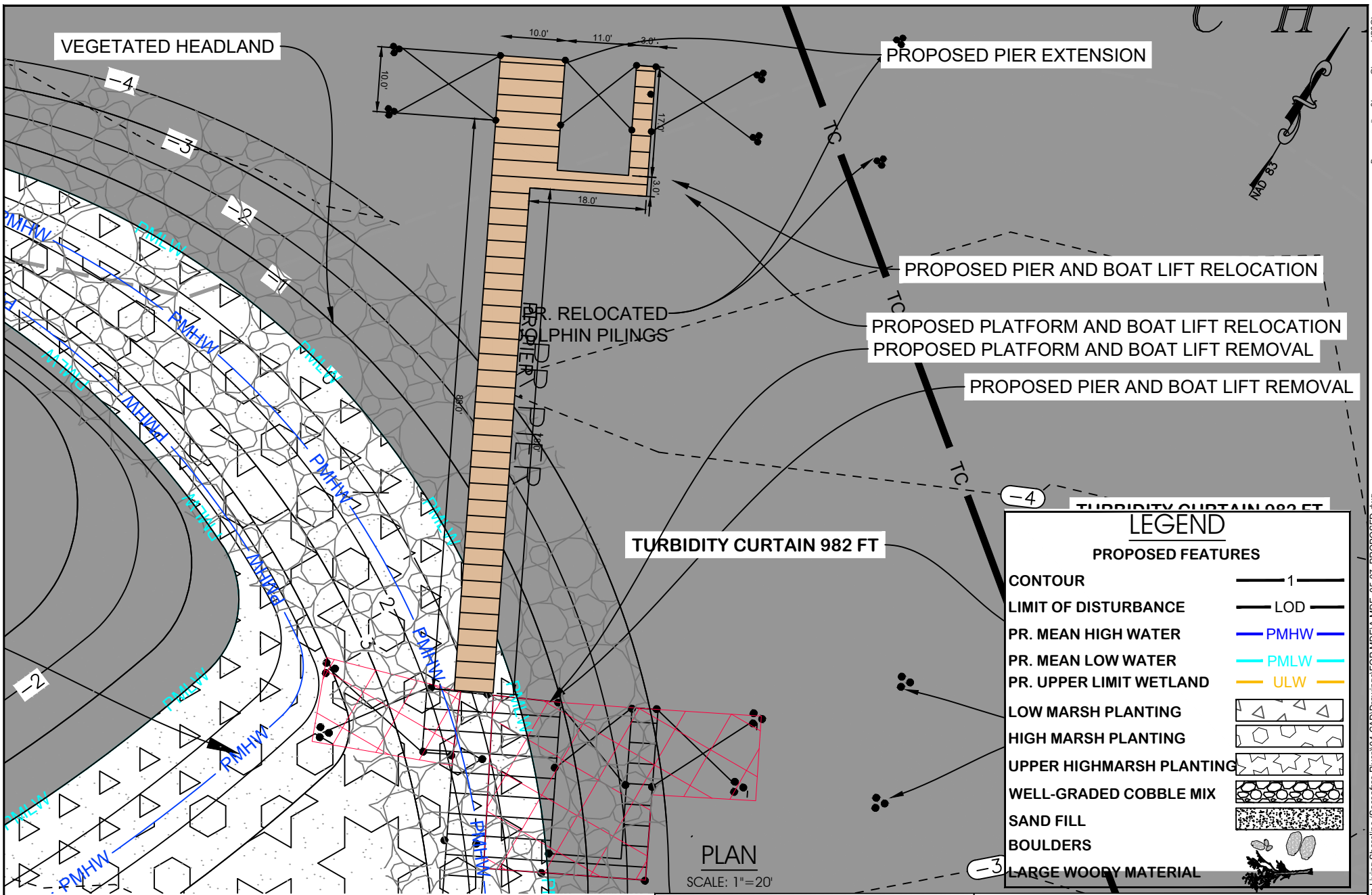
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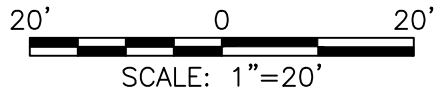
Scale	AS SHOWN	PROPOSED CONDITIONS VIDI AQUAM LIVING SHORELINE 2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919 FORMERLY MAP 0060, GRID 0002, PARCEL 0371 1ST ELECTION DISTRICT, CECIL COUNTY
Drawn By	J.K./E.C.	
Approved By	D.W.	
Sheet No.	6 Of 14	
Project No.	22-098	
Proposal No.	...	

Regenerative Stream Channel (RSC) S:\006-Projects\Vidi Aquam Living Shoreline (Sassafas River)\04-CADD\Drawings\FOR MDEA\MDE_05-07_PROPOSED.dwg



TURBIDITY CURTAIN 982 FT

LEGEND	
PROPOSED FEATURES	
CONTOUR	— 1 —
LIMIT OF DISTURBANCE	— LOD —
PR. MEAN HIGH WATER	— PMHW —
PR. MEAN LOW WATER	— PMLW —
PR. UPPER LIMIT WETLAND	— ULW —
LOW MARSH PLANTING	
HIGH MARSH PLANTING	
UPPER HIGHMARSH PLANTING	
WELL-GRADED COBBLE MIX	
SAND FILL	
BOULDERS	
LARGE WOODY MATERIAL	



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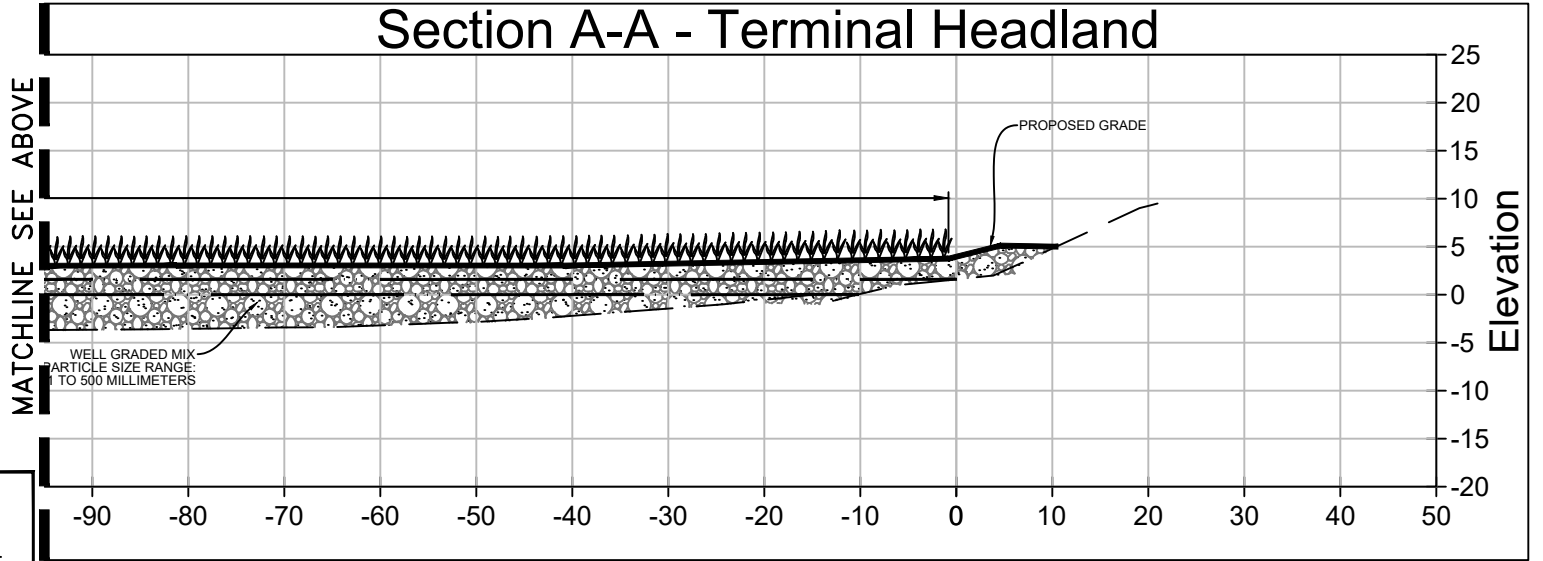
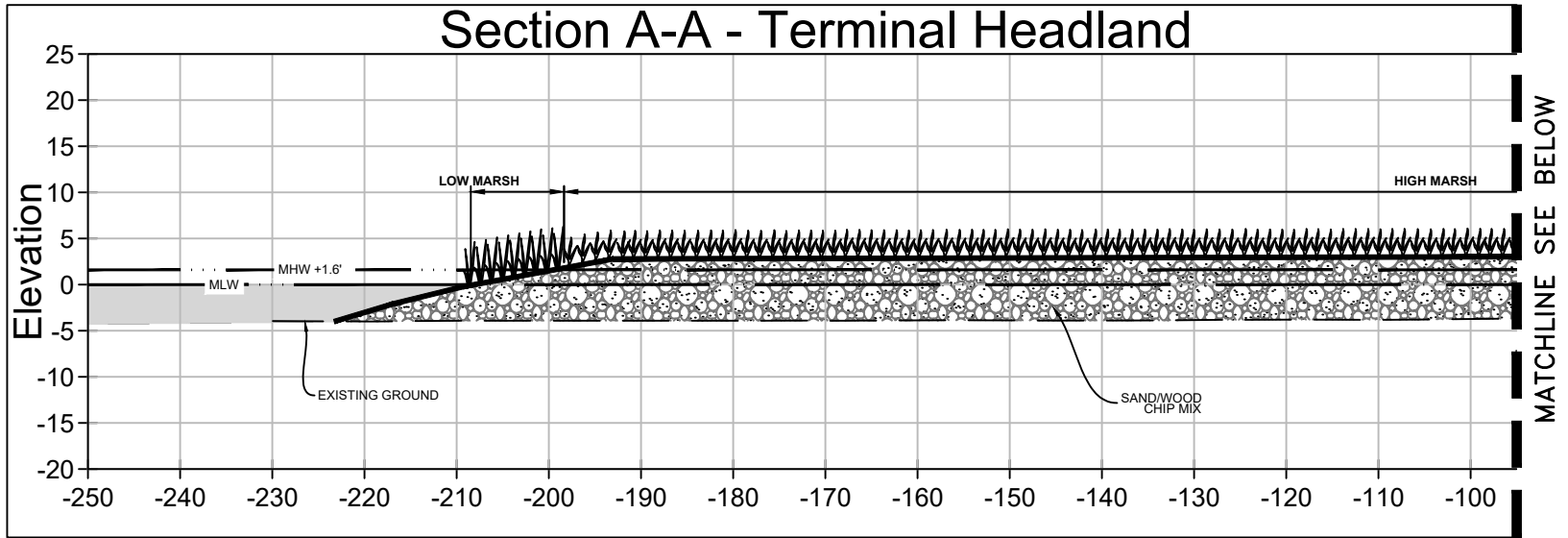
PLAN
 SCALE: 1"=20'

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Scale	AS SHOWN	PROPOSED CONDITIONS VIDI AQUAM LIVING SHORELINE 2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919 FORMERLY MAP 0060, GRID 0002, PARCEL 0371 1ST ELECTION DISTRICT, CECIL COUNTY
Drawn By	J.K./E.C.	
Approved By	D.W.	
Sheet No.	7 Of 14	
Project No.	22-098	
Proposal No.	...	

Regenerative Stream Channel (RSC)
 March 21, 2025
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LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- MEAN HIGH WATER (MHW)
- MEAN LOW WATER (MLW)
- SAND/WOOD CHIP MIX
- SUBMERGED COBBLE
- BOULDER OUTCROP
- SPARTINA PATENS
- SPARTINA ALTERNIFLORA

CROSS SECTIONS

SCALE: 1"=20'

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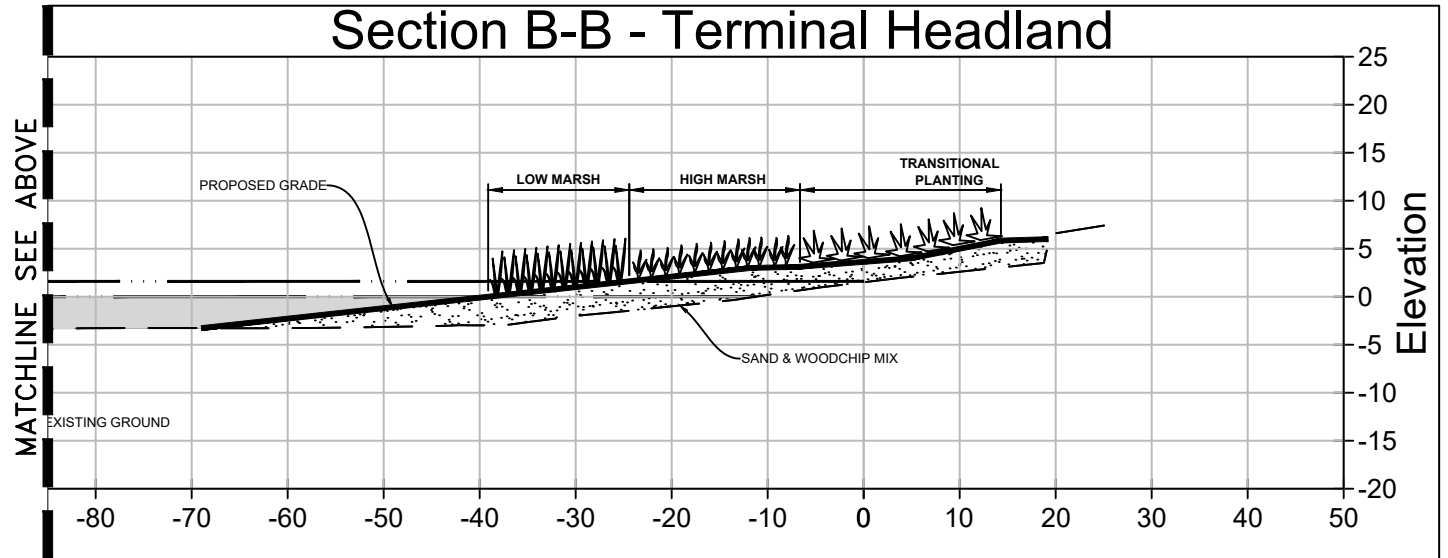
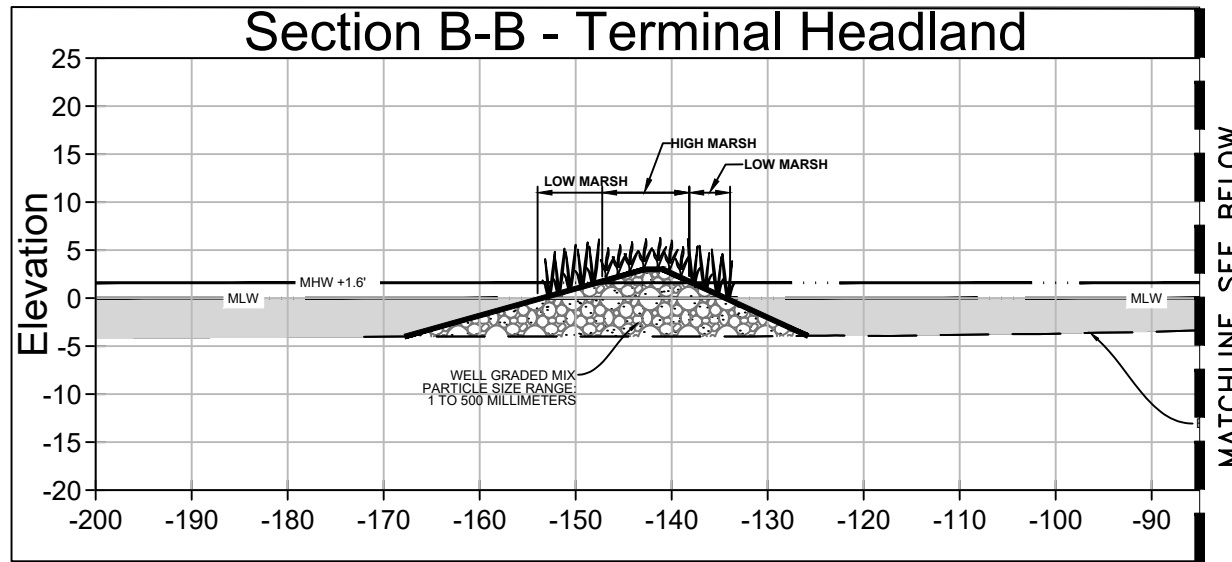
March 21, 2025	
Scale	AS SHOWN
Drawn By	J.K./E.C.
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Sheet No.	8 Of 14
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PROJECT CROSS SECTION

VIDI AQUAM LIVING SHORELINE

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
FORMERLY MAP 0060, GRID 0002, PARCEL 0371
1ST ELECTION DISTRICT, CECIL COUNTY

(Regenerative Stream Channel) (RSC)
Code: File: S:\006-Projects\Vidi Aquam Living Shoreline (Sassafras River)\04-CADD\Drawings\FOR MDE\A-MDE_08-010_X-SECTIONS.dwg



CROSS SECTIONS

SCALE: 1"=20'

LEGEND

EXISTING GRADE	---
PROPOSED GRADE	—
MEAN HIGH WATER (MHW)	— · · ·
MEAN LOW WATER (MLW)	— · · · · ·
SAND/WOOD CHIP MIX	
SUBMERGED COBBLE	
BOULDER OUTCROP	
SPARTINA PATENS	
SPARTINA ALTERNIFLORA	

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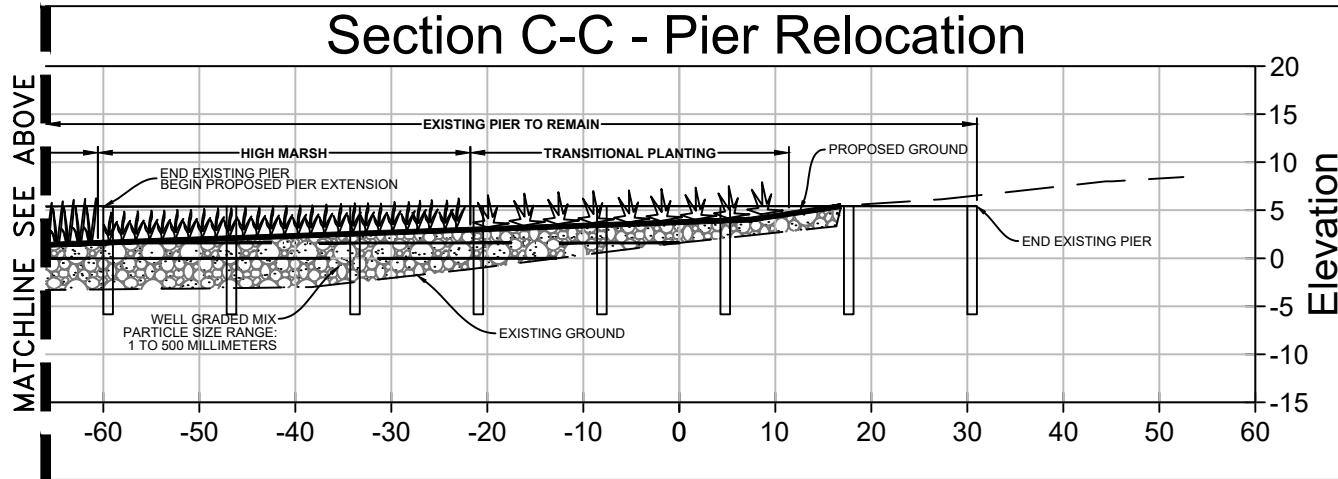
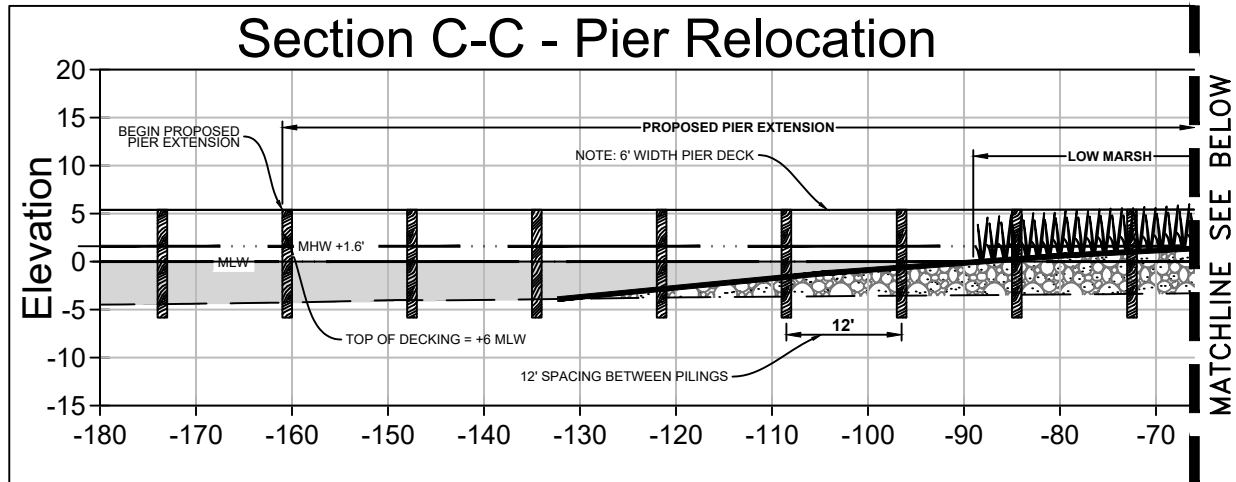
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tel. 410-849-3211 fax. 410-849-2136

March 21, 2025	
Scale	AS SHOWN
Drawn By	J.K./E.C.
Approved By	D.W.
Sheet No.	9 Of 14
Project No.	22-098
Proposal No.	...

PROJECT CROSS SECTION

**VIDI AQUAM
LIVING SHORELINE**

2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
FORMERLY MAP 0060, GRID 0002, PARCEL 0371
1ST ELECTION DISTRICT, CECIL COUNTY



LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- MEAN HIGH WATER (MHW)
- MEAN LOW WATER (MLW)
- SAND/WOOD CHIP MIX
- SUBMERGED COBBLE
- BOULDER OUTCROP
- SPARTINA PATENS
- SPARTINA ALTERNIFLORA

CROSS SECTIONS

SCALE: 1"=20'

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Sheet No.	10 Of 14
Project No.	22-098
Proposal No.	...

PROJECT CROSS SECTION

VIDI AQUAM LIVING SHORELINE

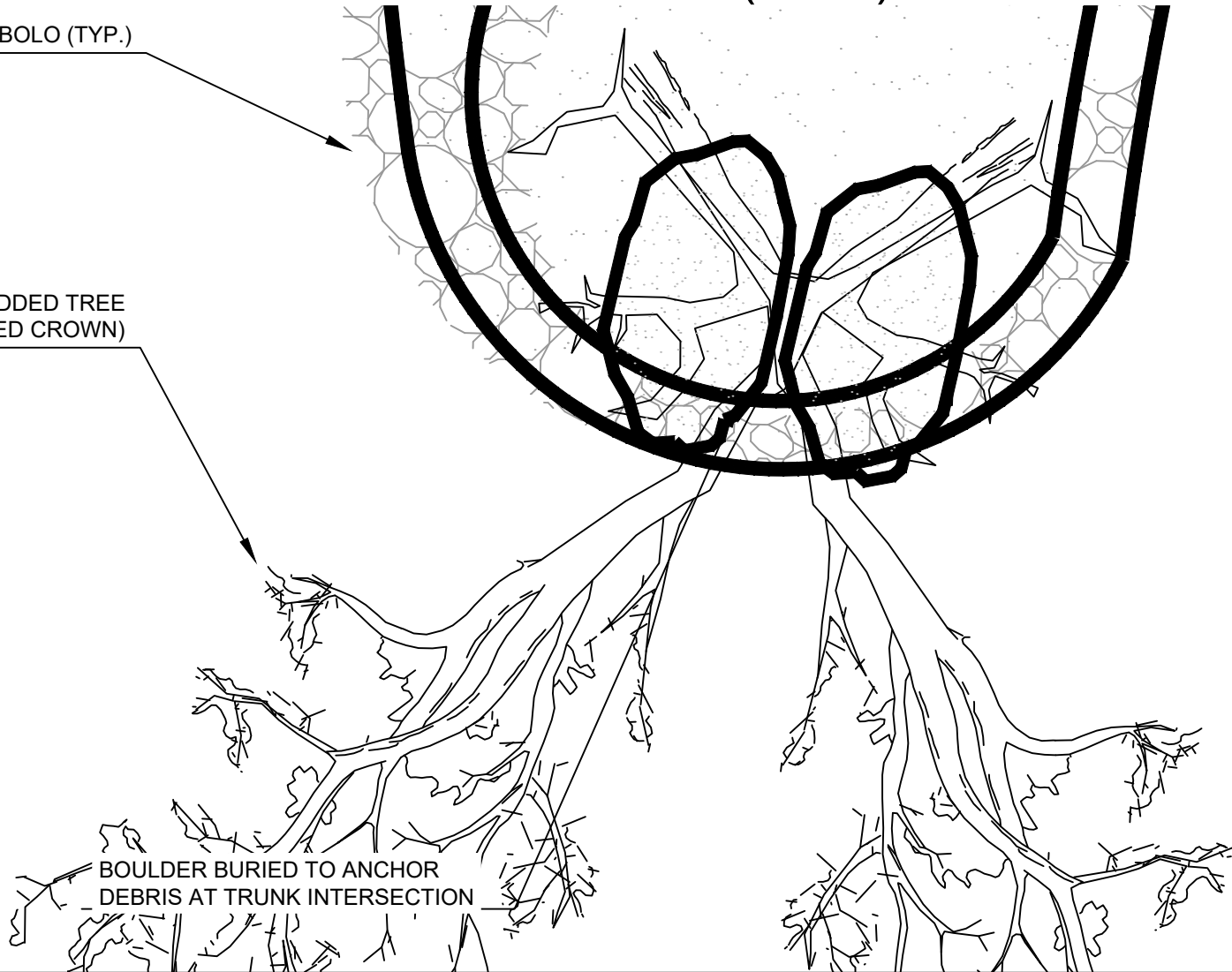
2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919
FORMERLY MAP 0060, GRID 0002, PARCEL 0371
1ST ELECTION DISTRICT, CECIL COUNTY

WOODY MATERIAL ANCHORING (TYP.) - PLAN VIEW

TOMBOLO (TYP.)

EMBEDDED TREE
(EXPOSED CROWN)

BOULDER BURIED TO ANCHOR
DEBRIS AT TRUNK INTERSECTION

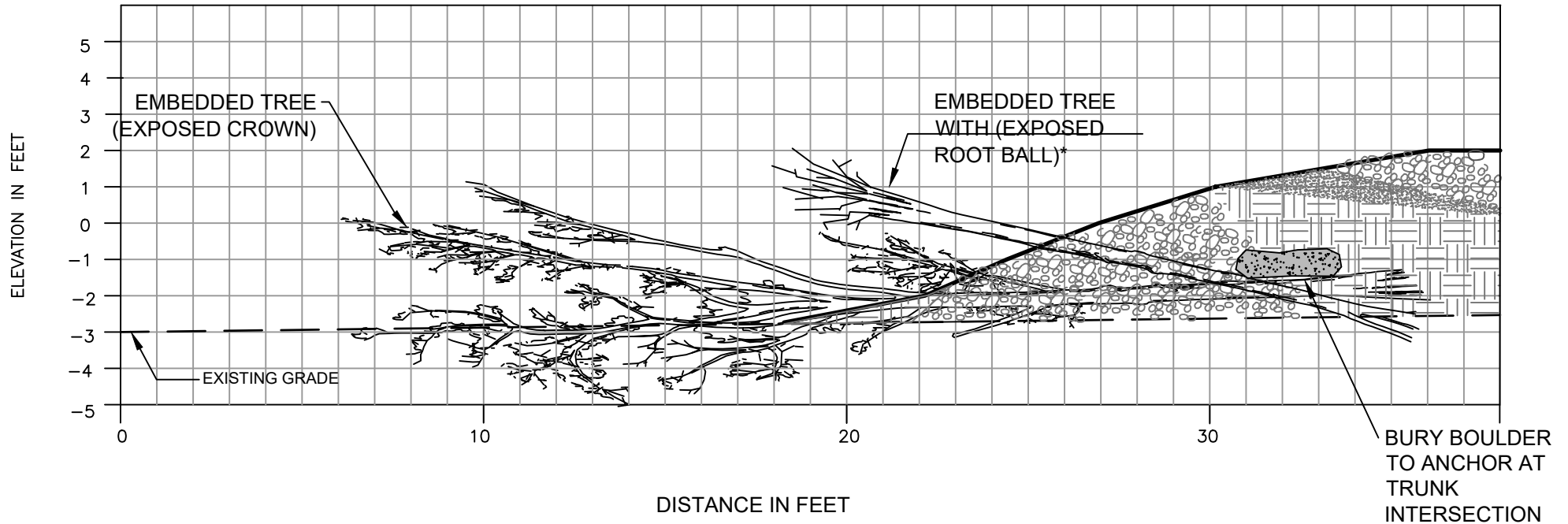


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Drawn By	J.K./E.C.	
Approved By	D.W.	
Sheet No.	11 Of 14	
Project No.	22-098	
Proposal No.	...	

WOODY MATERIAL ANCHORING (TYP.) - PROFILE VIEW

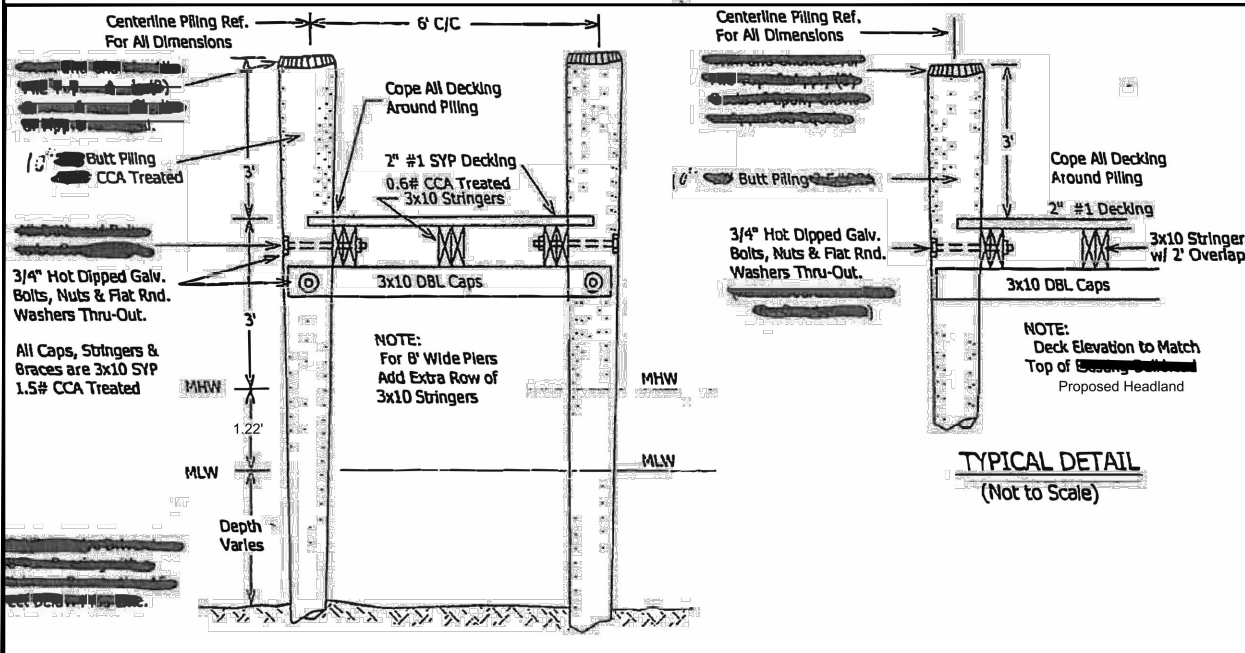


*NOTE: THE EMBEDDED TREE WITH EXPOSED ROOT BALL IS SET AT THE EXISTING GRADE. THIS DETAIL SHOWS THE ROOT BALL SLIGHTLY ELEVATED IN ORDER TO DISPLAY BOTH TREES. SEE PLAN VIEW FOR ALIGNMENT.

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Sheet No.	12 Of 14
Project No.	22-098
Proposal No.	...
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2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919 FORMERLY MAP 0060, GRID 0002, PARCEL 0371 1ST ELECTION DISTRICT, CECIL COUNTY	

PIER AND BOAT LIFT DETAILS

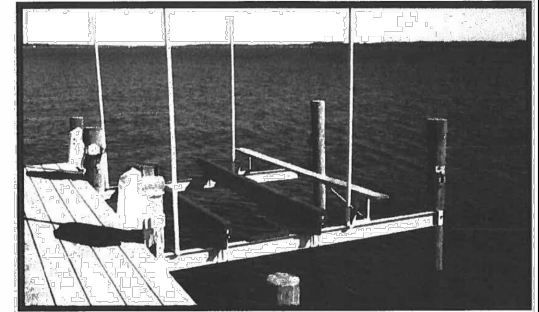


PIER DETAIL (TYP.)

MAGNUM MODEL 'HD' BOAT LIFT

HD Model Features

- GFCI protected motors
- Molded UHMW drive enclosures
- Complete guide pole package
- Elevated outside walkway
- Galvanized steel construction
- 2/3/5 year warranty
- Stainless steel cables
- Worm gear driven winches
- Optional remote controls
- Optional E gear drives



The 'HD' model is designed to afford maximum hull support while keeping a low profile appearance. Its design allows for easy access to your vessel because it is positioned inches away from your dock. Stand to the 'HD' model is a fully adjustable "I" beam bunking system to gently cradle your boat. The worm gear driven winches are located on the dock*, allowing for quick and easy maintenance. An elevated outside walkway allows access to both sides of your vessel for easy cleaning and maintenance.

*For capacities 15,000 lbs and less

HD MODEL SPECS

WEIGHT CAPACITIES:.....8,000 lbs, 10,000 lbs, 12,500 lbs, 15,000 lbs, 20,000 lbs
 CRADLE TRAVEL:.....9' standard, optional to 13'
 POWER REQUIREMENTS:.....110 volt/30 amp-220volt/15 amp
 PILING SIZE REQUIREMENTS:.....8" diameter minimum
 PILING HEIGHT ABOVE DECK:.....18" minimum
 PILING SPACING:.....see general brochure or call

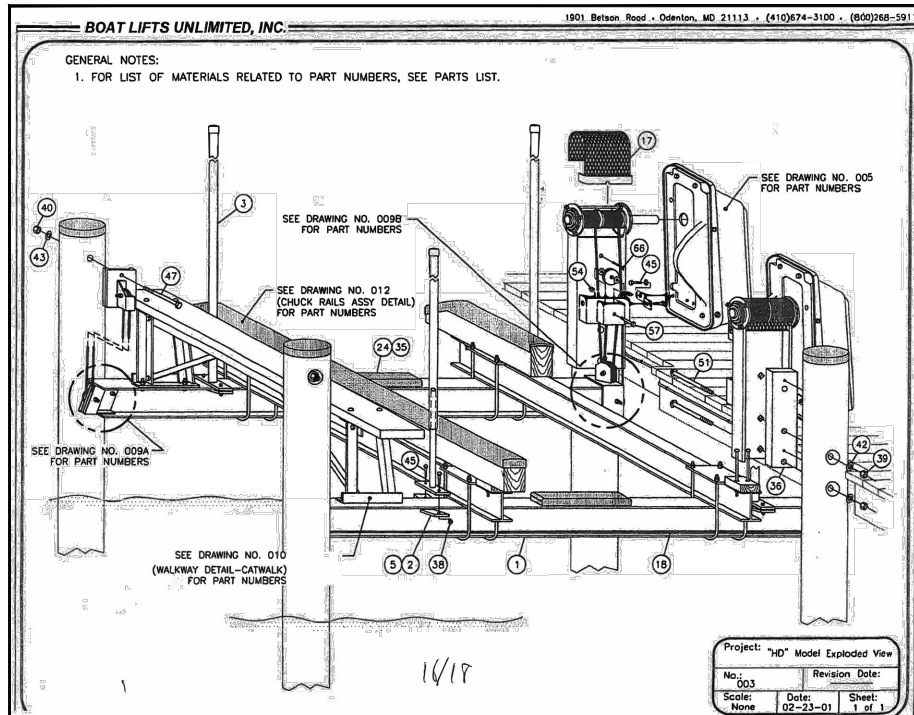
YOUR LOCAL DEALER:

17/17

Manufactured by

BOAT LIFTS UNLIMITED
 Odenton, Maryland
1-800-268-5911

HD BOAT LIFT MANUFACTURER SPECIFICATIONS



HD BOAT LIFT MODEL VIEW

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PROJECT DETAILS
VIDI AQUAM LIVING SHORELINE
2627 GROVE NECK ROAD EARLEVILLE MARYLAND 21919 FORMERLY MAP 0060, GRID 0002, PARCEL 0371 1ST ELECTION DISTRICT, CECIL COUNTY

Vidi Aquam Living Shoreline - Project Information (Impacts below MHW)

Feature	Existing	Proposed	Difference
High marsh- <i>S. patens</i> (SF) *Planted areas between proposed MHW & 1.5 x Tidal Range	0	4141	+4141
Low marsh - <i>S. alterniflora</i> (SF) *Planted areas between proposed MLW & MHW	0	8821	+8821
Total Tidal Wetlands (SF)	0	12962	+12962
Bulkhead (LF)	554	0	-554
Shoreline at MHW (LF)	631	1206	+575
Total fill area (SF)	0	45304	+45304
Sand Fill Area (SF)	0	25376	+25376
Sand Fill Volume (CY)	0	2148	+2148
Rock Fill Area (SF)	0	19928	+19928
Rock Fill Volume (CY)	0	2855	+2855

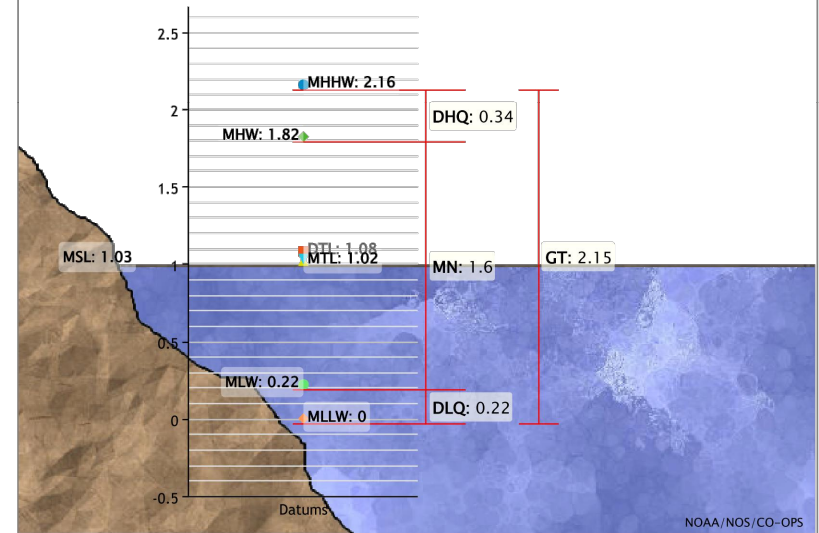
NOTE: NO SAV ON SITE OR ADJACENT TO SITE

NOTES:

- SAV NOT PRESENT AT SITE ACCORDING TO VIMS SAV REPORTS (2017- 2023)

Datums for 8573704, Betterton, MD

All figures in feet relative to MLLW



Regenerative Stream Channel (RSC)

Planting Schedule and Mitigation Calculations

Planting Zone	Symbol	Total Area (SF)	Common Name	Scientific Name	Type	Size	Distribution	Avg Spacing (ft)	Quantity	Credit Area (SF per plant)	Total Credit Area (SF)	Description
Lowmarsh Cordgrass	Triangles	8,821	Lowmarsh Cordgrass	<i>Spartina Alterniflora</i>	Herbaceous	Gal	Random	1.5	3,920	0	0	Between MLW (El. 0) and MHW (El. 1.6).
Highmarsh Cordgrass	Hexagons	9,740	Highmarsh Cordgrass	<i>Spartina Patens</i>	Herbaceous	Gal	Random	1.5	4,329	0	0	Between MHW (El 1.6) to ULW (El. 2.4)
Upper high marsh	Stars	12,197	Wax Myrtle	<i>Myrica cerifera</i>	Shrub	Gal	Random	15	54	50	2,750	Above ULW
			Broomsedge	<i>Andropogon glomeratus</i>	Herbaceous	Qt	Random	3	452	2	904	
			Highmarsh Cordgrass	<i>Spartina Patens</i>	Herbaceous	Qt	Random	3	452	2	904	
			Switchgrass	<i>Panicum virgatum</i>	Herbaceous	Qt	Random	3	452	2	904	
Critical Area Mitigation Calculations			Total Area of Disturbed Canopy (SF)		Mitigation Ratio		Total Mitigation Credit Required (SF)		Total Credit Area (SF)		Percent Mitigation (%)	
			2,077		2:1		4,154		5,462		131.49%	

Code: File - S:\006-Projects\Vidi Aquam Living Shoreline (Sassafras River)\04-CAD\Drawings\FOR MDE\A-MDE_14_TABLES.dwg

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PROJECT DATA TABLES

VIDI AQUAM LIVING SHORELINE

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