



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

September 23, 2020

Cape St Claire Improvement Association
c/o Ed Morgereth
Biohabitats, Inc
2081 Clipper Park Rd
Baltimore, MD 21211

Re: Agency Interest Number: 163289
Tracking Number: 201862001
Tidal Authorization Number: 20-WQC-0052

Dear Cape St. Claire Improvement Association:

Your project did not qualify for approval under the Maryland State Programmatic General Permit (MDSPGP); therefore a separate review and issuance of the federal permit will be required by the U.S. Army Corps of Engineers. The federal permit is not attached.

Additionally, your project required a Wetlands License to be approved and issued by the Maryland Board of Public Works (BPW). The Wetlands License will be sent to you by the BPW's Wetlands Administrator.

A project that does not qualify for approval under the MDSPGP requires an individual Water Quality Certification (WQC) to be issued by the Maryland Department of the Environment, which is attached. Please take a moment to read and review your WQC to ensure that you understand the limits of the authorized work and all of the general and special conditions.

You should not begin any work until you have obtained all necessary State, local, and federal authorizations. Please contact Matthew F Wallach at matthew.wallach@maryland.gov or 410-537-3527 with any questions.

Sincerely,

Danielle Spendiff, Chief
Western Region
Tidal Wetlands Division



STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
WATER QUALITY CERTIFICATION



20-WQC-0052

EFFECTIVE DATE: **September 23, 2020**
EXPIRATION DATE: **September 22, 2023**
CERTIFICATION HOLDER: **Cape St Claire Improvement Association**
ADDRESS: **1223 River Bay Rd**
Annapolis, Maryland 21401
PROJECT LOCATION: **Deep Creek channelward of Lake Claire and**
Lake Claire Drive, Cape St. Claire, Anne
Arundel County, MD 21409

UNDER AUTHORITY OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT AND ITS AMENDMENTS AND IN ACCORDANCE WITH §9-313 THROUGH §9-323, INCLUSIVE, OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND, THE WATER AND SCIENCE ADMINISTRATION (“ADMINISTRATION”) HAS DETERMINED THAT THE REGULATED ACTIVITY DESCRIBED IN STATE TIDAL WETLANDS LICENSE NUMBER 18-WL-1189 (“LICENSE”) WILL NOT VIOLATE MARYLAND’S WATER QUALITY STANDARDS, IF CONDUCTED IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION AND WITH ALL TERMS AND CONDITIONS OF THE LICENSE. A COPY OF THE LICENSE, INCLUDING APPROVED PROJECT DRAWINGS AND OTHER ATTACHMENTS, IS ATTACHED HERETO AND IS HEREBY INCORPORATED BY REFERENCE.

THIS CERTIFICATION DOES NOT RELIEVE THE APPLICANT OF RESPONSIBILITY FOR OBTAINING ANY OTHER APPROVALS, LICENSES, OR PERMITS IN ACCORDANCE WITH FEDERAL, STATE, OR LOCAL REQUIREMENTS AND DOES NOT AUTHORIZE COMMENCEMENT OF THE PROPOSED PROJECT. A COPY OF THIS REQUIRED CERTIFICATION HAS BEEN SENT TO THE CORPS OF ENGINEERS.

THE CERTIFICATION HOLDER SHALL COMPLY WITH THE CONDITIONS LISTED BELOW.

SPECIAL CONDITIONS

- A. The terms and conditions of Tidal Wetlands License No 18-WL-1189 are hereby incorporated, by reference, into this Water Quality Certification. The Certification Holder shall comply with these conditions to ensure that the authorized activities will not result in a violation of the State's water quality standards.

GENERAL CONDITIONS

- A. The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify this Department ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.
- B. The Maryland Department of the Environment has determined that the proposed activities comply with, and will be conducted in a manner consistent with the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- C. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537-3249, by e-mail at MDE.MCLB@maryland.gov or by accessing the Maryland Department of the Environment, Environmental Boards webpage.
- D. The Certification Holder shall ensure the proposed project shall be constructed in accordance with the authorized plan and any authorized revisions.
- E. The Certification Holder shall ensure that all fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
- F. The Certification Holder shall notify the Water and Science Administration, Tidal Wetlands Division, in writing, upon transferring property ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request, in writing, transfer of this Water Quality Certification to his/her name.
- G. The Certification Holder shall allow representatives of the Maryland Department of the Environment to inspect the authorized activities.
- H. The Certification Holder shall ensure that a copy of this Permit, including the approved plans, is available at the site until the authorized work is complete.
- I. The Certification does not relieve the Certification holder from the responsibility of obtaining all necessary federal, State, and local government authorizations.
- J. The Certification Holder shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This Certification does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification, and legal proceedings may be instituted against the Certification Holder in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime

CERTIFICATION APPROVED



D. Lee Currey, Director
Water and Science Administration

9/25/2020

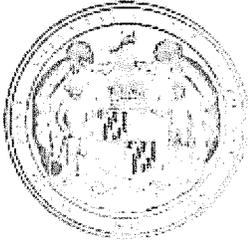
Date

Tracking Number: 201862001
Agency Interest Number: 163289

Effective Date: September 23, 2020

Enclosure: Executed Tidal Wetlands License No. 18-WL-1189 with all plans and attachments.

cc: WMA Inspection & Compliance Program



William Morgante, PWS
Wetlands Administrator

State of Maryland
Board of Public Works
Wetlands Administration
Post Office Box 1510 Annapolis, Maryland 21404
410-260-7791

Larry Hogan
Governor

Nancy K. Kopp
Treasurer

Peter Franchot
Comptroller

John T. Gontrum, Esq.
Executive Secretary

WETLANDS LICENSE NO. 18-1189

CAPE ST. CLAIRE IMPROVEMENT ASSOCIATION

The Maryland Board of Public Works authorizes you to:

- I. Construct an 80-foot long batten board growing adjacent to an existing pier extending a maximum of 80 feet channelward of the mean high water line.
- II. Place three oyster reef clusters consisting of twenty-five 24-inch structures and twenty 36-inch structures, to be seeded, within a maximum of 225 feet channelward of the mean high water line.
- III. Place two inverted rootwad clusters consisting of a total of 38 upsidedown trees driven into the substrate extending a maximum of 150 feet channelward of the mean high water line.
- IV. Place nine cubic yards of sand and plant a total of .05 acres of low marsh, .05 acres of high marsh, and .02 acres of dune habitat, as depicted on the attached plans.
- V. Place one pile to post warning signage.

*Deep Creek channelward of Lake Claire and Lake Claire Drive, Cape St. Claire,
Anne Arundel County, Maryland*

Issuance of this Tidal Wetlands License constitutes the State's determination that the authorized activities are consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended [16 U.S.C. §1456]. Accordingly, the State concurs with the Licensee's certification in the Joint Permit Application that the project complies with and will be conducted in a manner consistent with the Maryland CZMP.

**THIS LICENSE AUTHORIZES YOU TO PERFORM THE WORK ONLY IF YOU COMPLY
WITH THE FOLLOWING SPECIAL CONDITION(S):**

- A. Licensee shall install and maintain warning signage to inform boaters of hazards both below and above the water.
- B. Licensee shall construct the marsh establishment area in accordance with the following conditions:

- a. Licensee shall use clean substrate fill material, no more than 10% of which shall pass through a standard number 100 sieve.
 - b. The marsh establishment area shall be planted within one year following completion of the filling operation.
 - c. The marsh establishment project shall be maintained as a wetland, with non-nuisance species aerial coverage of at least 85% for three consecutive years. If 85% coverage is not attained, the reasons for failure shall be determined, corrective measures shall be taken, and the area shall be replanted.
 - d. If the fill is graded hydraulically, Licensee shall use a turbidity curtain around the perimeter of the instream work.
 - e. If the existing bank is to be cleared or graded;
 - i. Licensee shall perform all work under and in accordance with an approved Soil Erosion and Sediment Control Plan from the applicable sediment and erosion control agency; and
 - ii. Licensee shall perform all work under and in accordance with the Critical Area requirements of the local jurisdiction in the form of an approved Buffer Management plan.
- C. Licensee shall accept the terms of the attached Marsh Maintenance Plan by signing and returning the standard plan to the Department of the Environment's (MDE) Water and Science Administration, Compliance Division, prior to the commencement of any work authorized under this License. If the Licensee wishes to propose an alternative marsh maintenance plan, the alternative plan must be submitted to and approved by MDE's Water and Science Administration, Tidal Wetlands Division, prior to commencement of any work authorized under this License. Any alternative plan must provide assurances of success that are at least equivalent to those of the standard plan, in terms of the extent of native marsh plant coverage, elimination of invasive species and time frame for plant establishment.

**THIS LICENSE AUTHORIZES YOU TO PERFORM THE WORK ONLY IF YOU
COMPLY WITH THE FOLLOWING STANDARD CONDITIONS:**

1. Licensee shall conduct the authorized work in accordance with the plans and drawings dated April 1, 2019, which are hereby incorporated into this License.
2. Until the authorized work is complete, Licensee shall have available at the site a copy of this License including the plans and drawings.
3. This License constitutes Maryland's authorization to conduct the authorized work under the State Tidal Wetlands Law. This License does not bestow any other federal, State, or local government authorization.
4. Licensee shall have all proposed work above Mean High Water reviewed and authorized by the local county Department of Planning and Zoning or applicable agency.
5. Licensee shall notify MDE's Inspection and Compliance Program by phone (410-537-3510) AND in writing (MDE, Inspection and Compliance Program, 1800 Washington Boulevard, Baltimore, MD 21230) of the following:
 - start date at least five business days before beginning work; and
 - completion date no more than five business days after project completion.

6. If MDE has issued a Water Quality Certification with respect to the authorized work, Licensee shall comply with all conditions of that certification.
7. Licensee shall conduct the authorized work in accordance with Critical Area Commission requirements. This License does not authorize disturbance in the Buffer. If authorized work will disturb the Buffer, Licensee shall have a Commission-approved or locally-approved Buffer Management Plan before beginning the authorized work.
“Buffer” means the 100-foot Critical Area Buffer and any expanded area that is immediately landward of the mean high-water line of the tidal waters or is immediately landward of tidal wetlands. The Buffer includes expanded contiguous area if the contiguous area includes steep slopes, hydric soil, or highly erodible soil, or otherwise meets the criteria of COMAR 27.01.09.01.E(7). “Disturbance” means any alteration or change to the land including any amount of clearing. Clearing includes vegetation removal, grading, and construction activity.
8. Licensee may not fill, dredge, or otherwise alter or destroy tidal marsh or its vegetation unless this License specifically authorizes the activity.
9. Licensee may not stockpile material in State tidal wetlands/State tidal waters of the U.S.
10. Licensee shall allow unfettered public use of State wetlands/State tidal waters of the U.S.
11. This License does not transfer a property interest of the State.
12. Licensee shall file a Miss Utility ticket for the proposed work at least 10 days before beginning work. *Miss Utility: 800-257-7777*
13. Licensee shall ensure that structures (for example, piers and piles) removed from the site are taken to an upland disposal facility approved by MDE’s Inspection and Compliance Program.
14. If the authorized work impacts more than 5,000 square feet or includes 100 or more cubic yards of fill, Licensee shall conduct the authorized work in accordance with a locally-approved Soil Erosion and Sediment Control Plan.
15. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537-3249, by email at *MDE.MCLB@maryland.gov* or by accessing the *Maryland Department of the Environment, Environmental Boards webpage*.
16. Licensee shall allow State officials and employees to make inspections at reasonable times and cooperate with those inspections.
17. This License is granted only to the Licensee. Licensee may transfer the license only with written approval from the Board of Public Works. If the Board of Public Works approves the transfer, the transferee is subject to all License terms and conditions.
18. Licensee shall indemnify, defend, and save harmless the State of Maryland, its officials, officers, and employees from and against any and all liability, suits, claims, and actions of whatever kind, caused by or arising from, the work this License authorizes.
19. The Board of Public Works or its Wetlands Administrator may modify, suspend, or revoke this License in its reasonable discretion.
20. This License expires July 22, 2023. If the authorized work is not completed by the expiration date, all activity must stop.

Note: A three-year license may be renewed for one additional three-year term if the Licensee requests an extension before the expiration date and all other conditions are met. A six-year license may not be renewed; instead Licensee must reapply to MDE for a new license. Contact the Board of Public Works to determine if this License may be extended.
Board of Public Works: 410-260-7791

By the authority of the Board of Public Works:

 Digitally signed by
John T. Gontrum
Date: 2020.07.28
11:59:56 -04'00'

John T. Gontrum
Executive Secretary

Effective Date: July 22, 2020
Approved as: Secretary's Agenda Item 2
Board of Public Works Meeting Date: July 22, 2020

I accept this License and all its conditions.

7-27-2020
Date



Licensee (Signature)

G. Beau Breeden
Name (Printed)

CSCIA Beaches & Parks Chair
Title

beaubreeden@cscia.org
Email (to receive completed license)

CAPE ST CLAIRE SHORELINE ENHANCEMENT - SITE 2

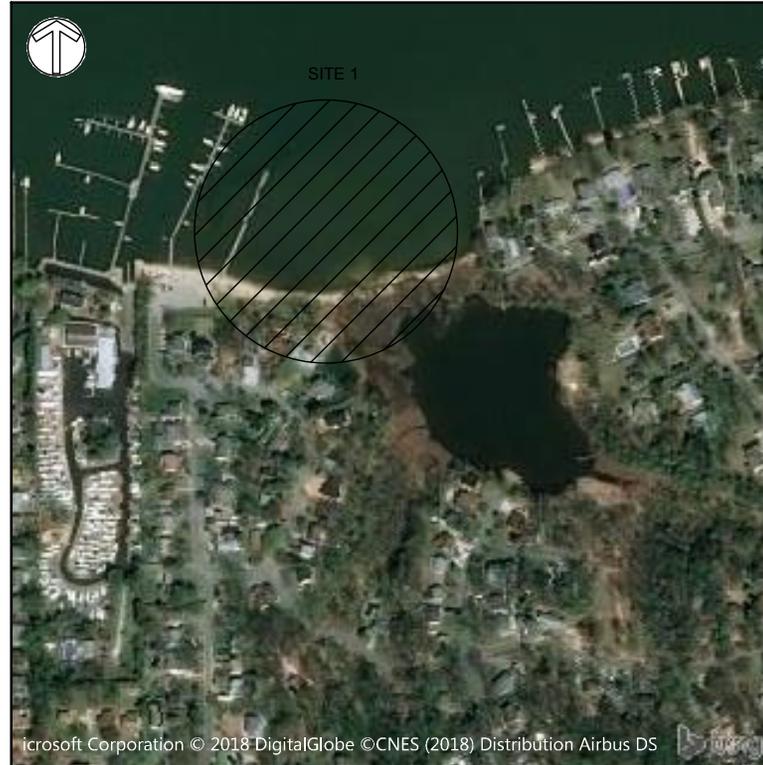
ANNE ARUNDEL COUNTY, MD

VICINITY MAP

SITE MAP



SCALE: 1" = 2000'



SCALE: 1" = 500'

SHEET LIST TABLE

Sheet Number	Sheet Title
1	VICINITY MAP AND AERIAL PHOTO
2	SITE INDEX
3	EXISTING CONDITIONS
4	EXISTING CONDITIONS
5	PROPOSED CONDITIONS
6	PROPOSED CONDITIONS
7	IMPACT PLATES
8	IMPACT PLATES
9	DETAILS
10	DETAILS
11	DETAILS
12	CROSS SECTION

PERMANENT IMPACTS:	
TIDAL OPEN WATER (LIVING SHORELINE)	= 1,990 SF
TIDAL OPEN WATER (GROIN)	= 12 SF
TIDAL OPEN WATER (INVERTED ROOT WAD)	= 461 SF
TIDAL OPEN WATER (FORMED OYSTER REEF STRUCTURES)	= 1,951 SF
TOTAL OPEN WATER (PERMANENT)	= 4,414 SF

CAPE ST CLAIRE COMMUNITY
IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL

 **Biohabitats**
The Stables Building 2081 Clipper Park Road
Baltimore, MD 21211 / ph: 410.554.0156
fx: 410.554.0168 / www.biohabitats.com
Restore the Earth & Inspire Ecological Stewardship

 **SUSTAINABLE
SCIENCE LLC**
410 South Second St. Denton, MD 21629
ph:4109244316
http://www.sustainablescience.com

CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: VICINITY MAP AND
AERIAL PHOTO

PROJECT NO. : 17023.01

SCALE: AS SHOWN

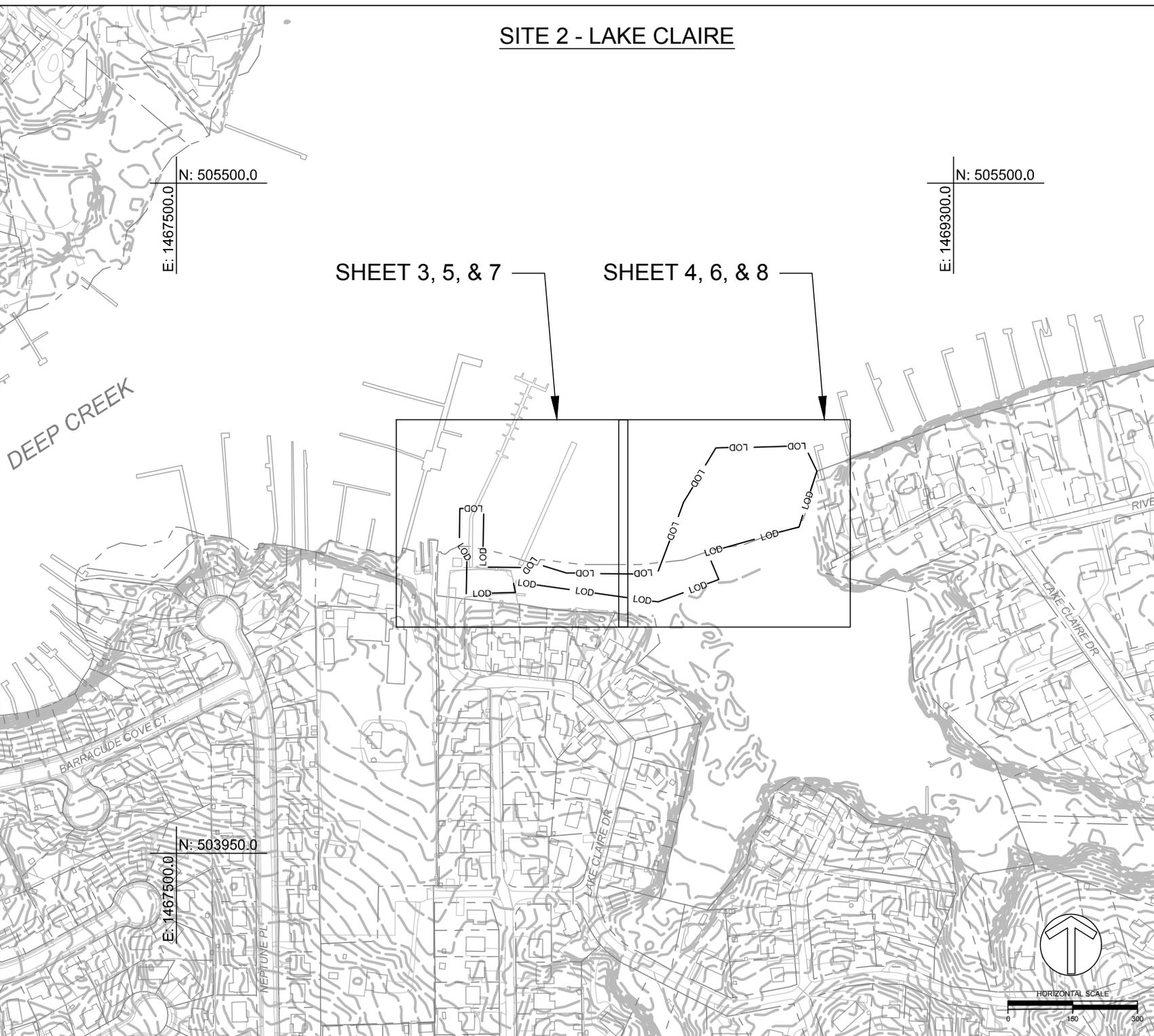
BY: AM, TB	CHECK: EM
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DWG. NO. : 1 OF 12

SITE 2 - LAKE CLAIRE

CAPE ST CLAIRE COMMUNITY
IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
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http://www.sustainablescience.com

**CAPE ST CLAIRE
SHORELINE
ENHANCEMENT
SITE 2**

TITLE: **SITE INDEX**

PROJECT NO.: **17023.01**

SCALE: **1" = 300'**

BY: AM, TB	CHECK: EM
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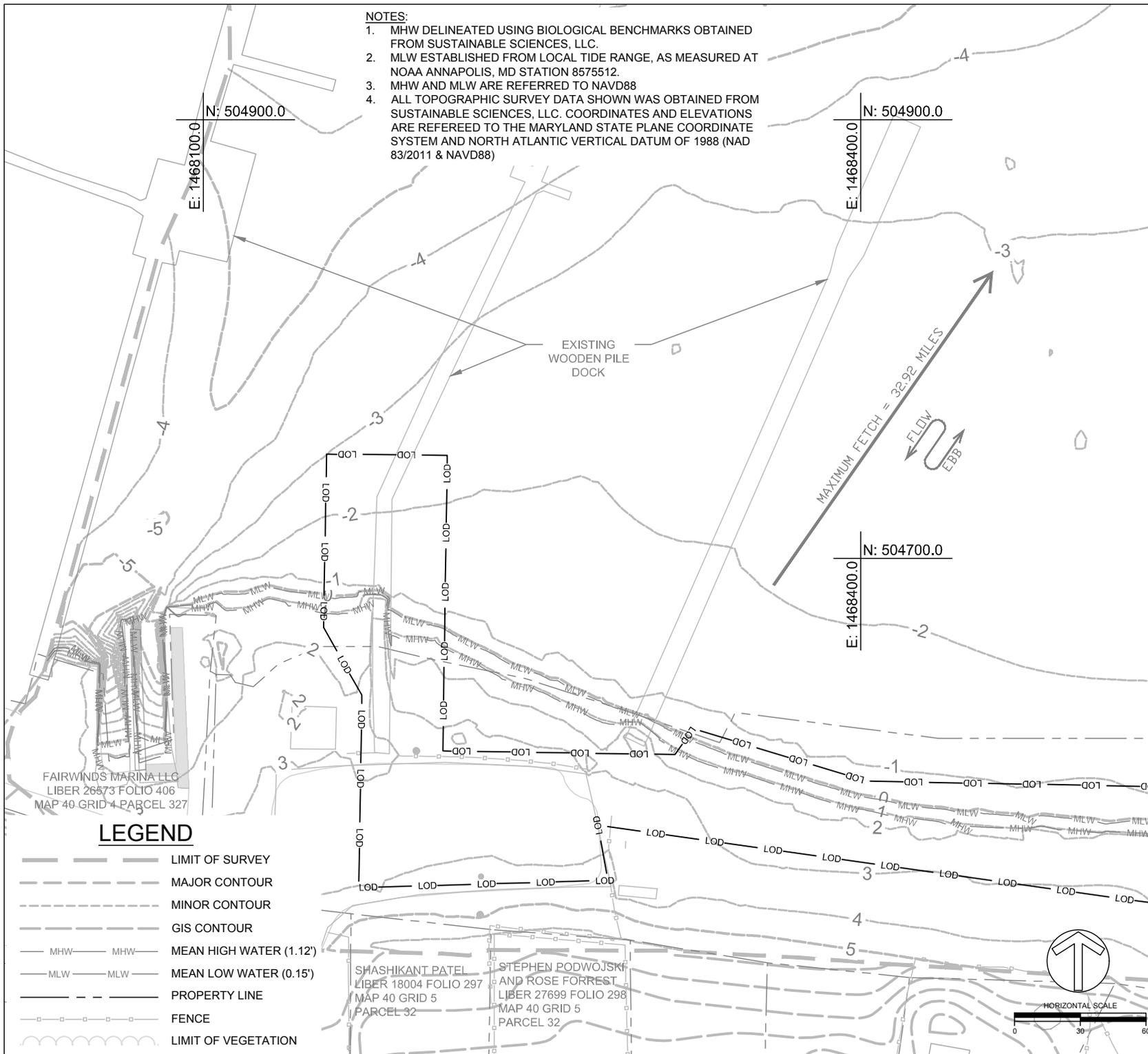
DWG. NO.: **2 OF 12**

NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
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04/01/2019	PRE-FINAL SUBMITTAL



MATCHLINE - SHEET 4

Biohabitats
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CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

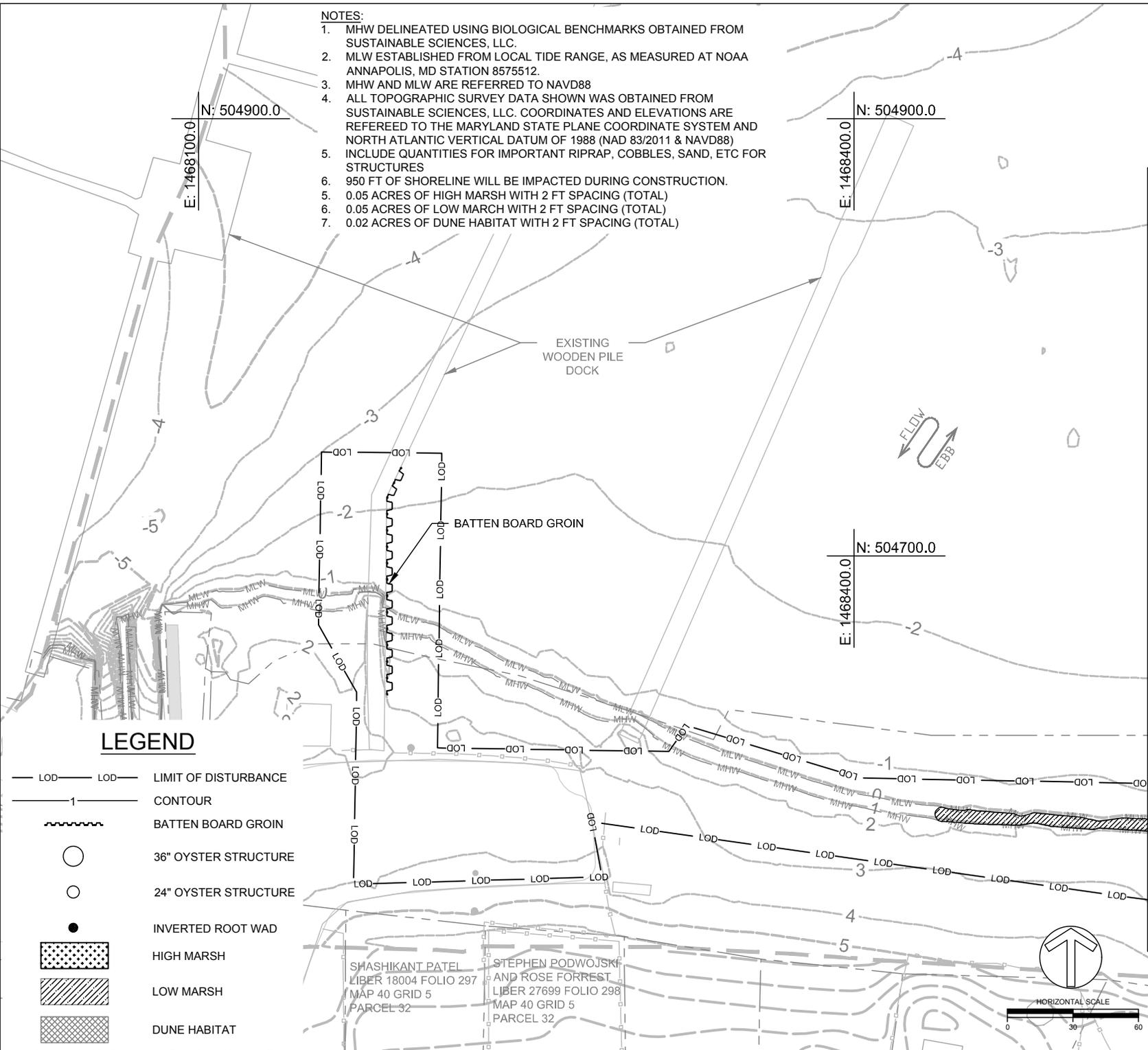
TITLE: EXISTING CONDITIONS	
PROJECT NO. :	17023.01
SCALE:	1" = 60'
BY:	CHECK:
AM, TB	EM
DWG. NO. : 3 OF 12	

LEGEND

- LIMIT OF SURVEY
- - - MAJOR CONTOUR
- - - MINOR CONTOUR
- - - GIS CONTOUR
- MHW — MHW — MEAN HIGH WATER (1.12')
- MLW — MLW — MEAN LOW WATER (0.15')
- — — PROPERTY LINE
- — — FENCE
- ~ ~ ~ LIMIT OF VEGETATION

NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)
5. INCLUDE QUANTITIES FOR IMPORTANT RIPRAP, COBBLES, SAND, ETC FOR STRUCTURES
6. 950 FT OF SHORELINE WILL BE IMPACTED DURING CONSTRUCTION.
5. 0.05 ACRES OF HIGH MARSH WITH 2 FT SPACING (TOTAL)
6. 0.05 ACRES OF LOW MARCH WITH 2 FT SPACING (TOTAL)
7. 0.02 ACRES OF DUNE HABITAT WITH 2 FT SPACING (TOTAL)



LEGEND

- LOD — LOD — LIMIT OF DISTURBANCE
- 1 — CONTOUR
- ~~~~~ BATTEN BOARD GROIN
- 36" OYSTER STRUCTURE
- 24" OYSTER STRUCTURE
- INVERTED ROOT WAD
- [Stippled Box] HIGH MARSH
- [Hatched Box] LOW MARSH
- [Cross-hatched Box] DUNE HABITAT

SHASHIKANT PATEL
LIBER 18004 FOLIO 297
MAP 40 GRID 5
PARCEL 32

STEPHEN PODWOJSKI
AND ROSE FORREST
LIBER 27699 FOLIO 298
MAP 40 GRID 5
PARCEL 32



CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

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12/21/2018	INITIAL SUBMITTAL
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fx: 410.554.0168 / www.biohabitats.com

Restore the Earth & Inspire Ecological Stewardship

SUSTAINABLE SCIENCE LLC

410 South Second St. Denton, MD 21629
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http://www.sustainablescience.com

MATCHLINE - SHEET 6

CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: PROPOSED CONDITIONS

PROJECT NO. : 17023.01

SCALE: 1" = 60'

BY: AM, TB CHECK: EM

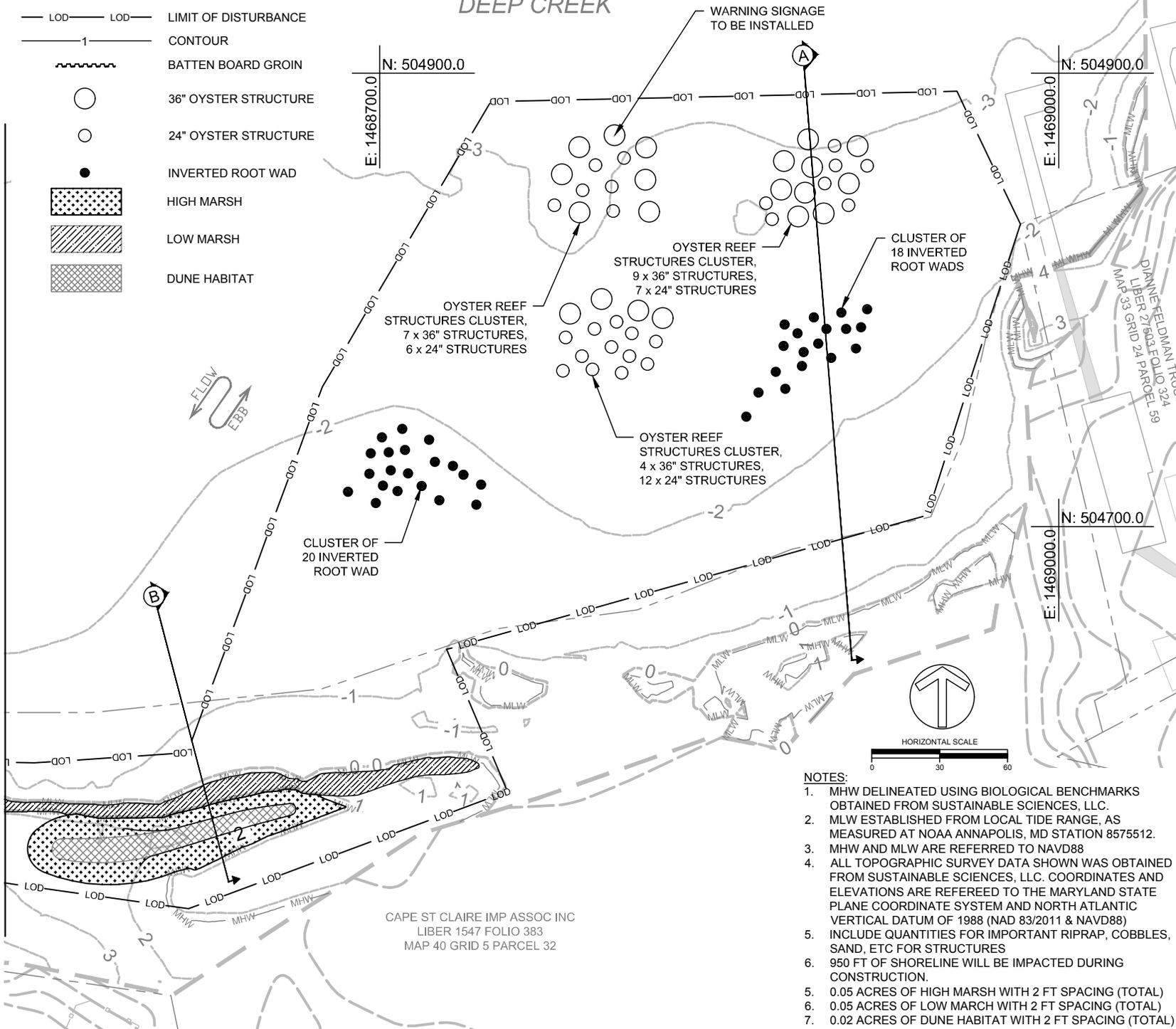
DWG. NO. : 5 OF 12

LEGEND

- LOD — LOD — LIMIT OF DISTURBANCE
- 1 — CONTOUR
- ~~~~~ BATTEN BOARD GROIN
- 36" OYSTER STRUCTURE
- 24" OYSTER STRUCTURE
- INVERTED ROOT WAD
- [Pattern: Dotted] HIGH MARSH
- [Pattern: Diagonal Lines] LOW MARSH
- [Pattern: Cross-hatch] DUNE HABITAT

DEEP CREEK

MATCHLINE - SHEET 5



NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)
5. INCLUDE QUANTITIES FOR IMPORTANT RIPRAP, COBBLES, SAND, ETC FOR STRUCTURES
6. 950 FT OF SHORELINE WILL BE IMPACTED DURING CONSTRUCTION.
5. 0.05 ACRES OF HIGH MARSH WITH 2 FT SPACING (TOTAL)
6. 0.05 ACRES OF LOW MARCH WITH 2 FT SPACING (TOTAL)
7. 0.02 ACRES OF DUNE HABITAT WITH 2 FT SPACING (TOTAL)

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
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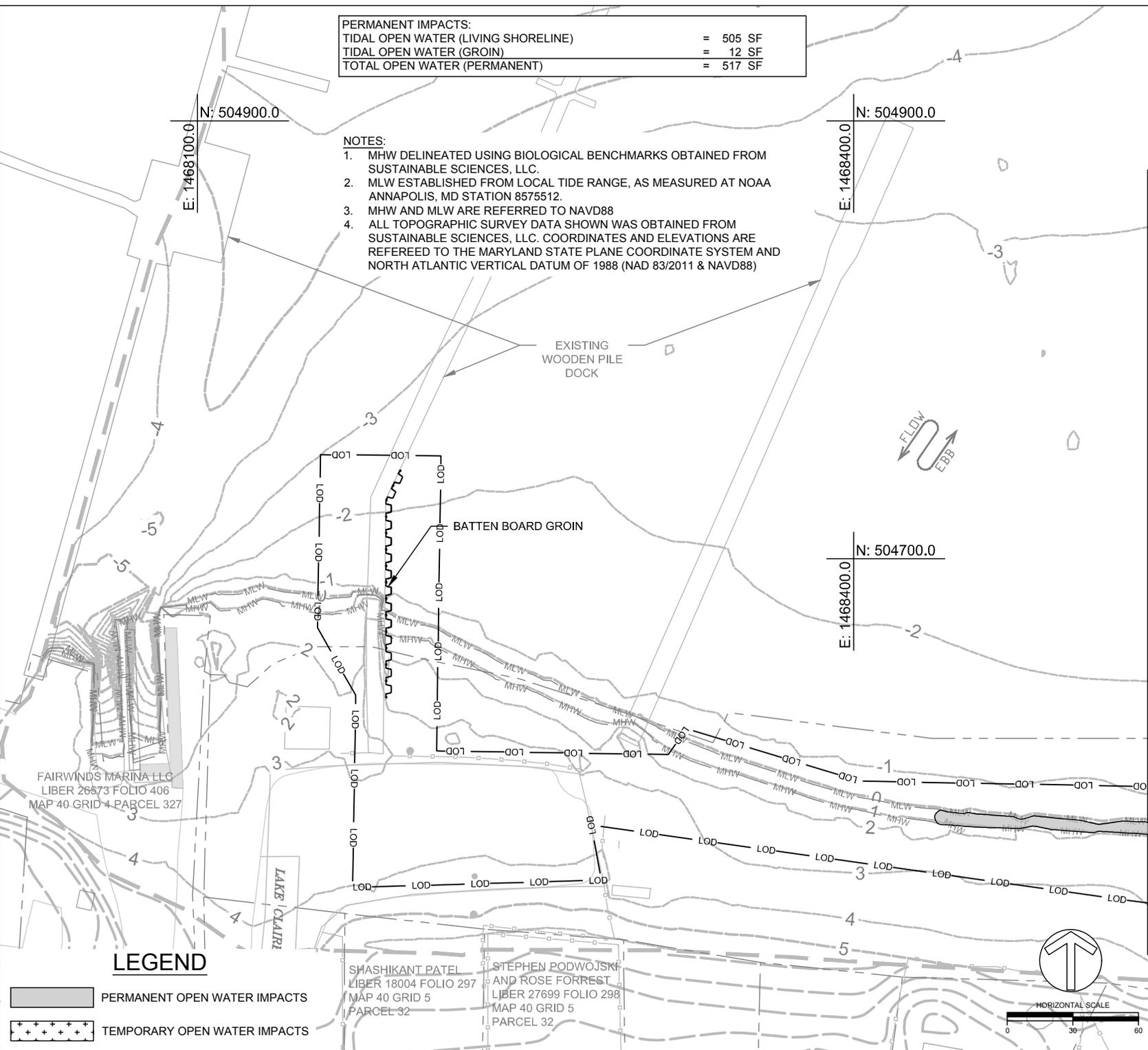
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CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: PROPOSED CONDITIONS	
PROJECT NO.:	17023.01
SCALE:	1" = 60'
BY:	CHECK:
AM, TB	EM
DWG. NO.:	
6 OF 12	

PERMANENT IMPACTS:	
TIDAL OPEN WATER (LIVING SHORELINE)	= 505 SF
TIDAL OPEN WATER (GROIN)	= 12 SF
TOTAL OPEN WATER (PERMANENT)	= 517 SF

- NOTES:
1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
 2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
 3. MHW AND MLW ARE REFERRED TO NAVD88
 4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)



CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
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http://www.sustainablescience.com

MATCHLINE - SHEET 8

CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: **IMPACT PLATES**

PROJECT NO.: **17023.01**

SCALE: **1" = 60'**

BY: AM, TB	CHECK: EM
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DWG. NO.: **7 OF 12**

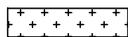
LEGEND

PERMANENT OPEN WATER IMPACTS

TEMPORARY OPEN WATER IMPACTS

HORIZONTAL SCALE

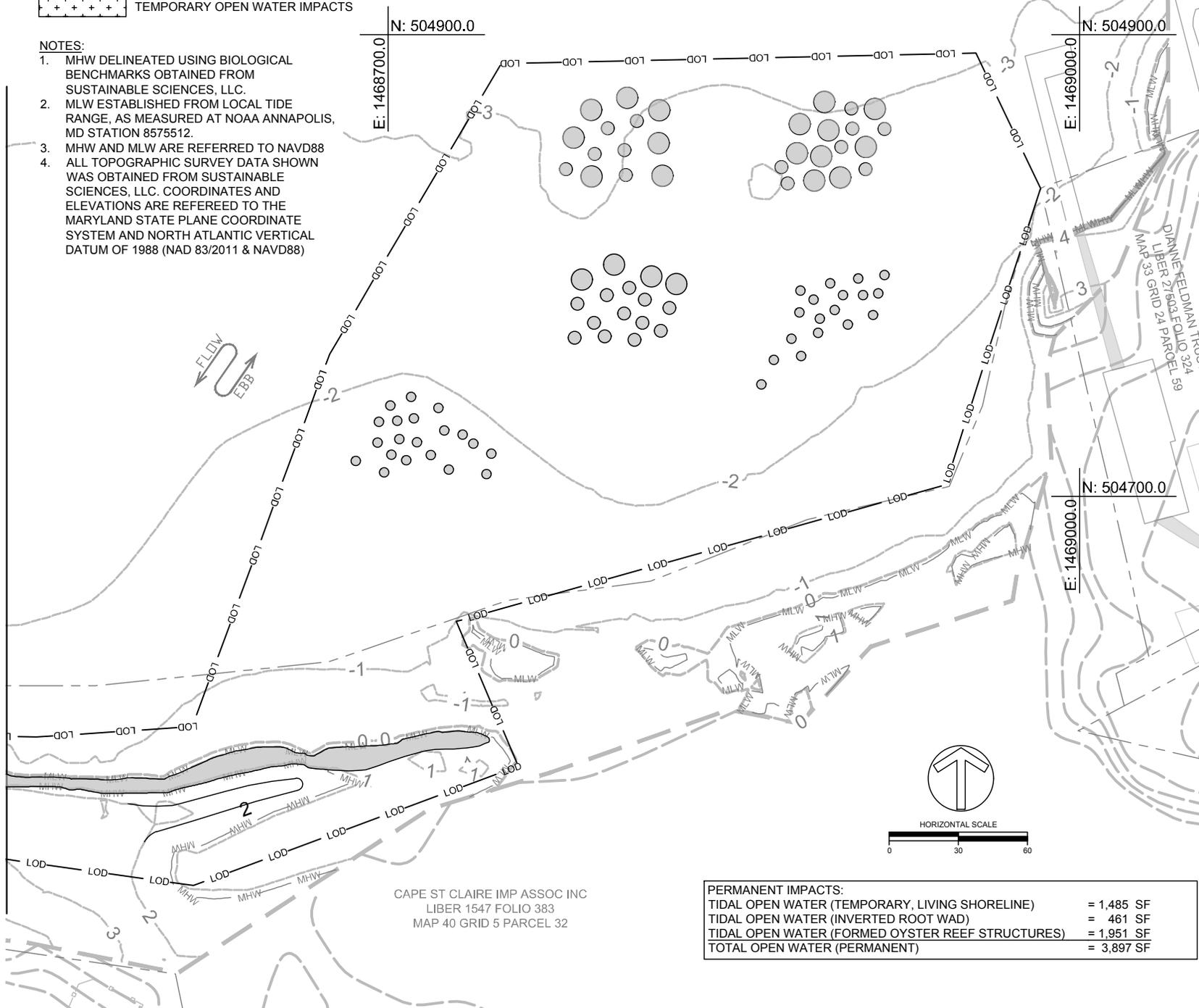
LEGEND

-  PERMANENT OPEN WATER IMPACTS
-  TEMPORARY OPEN WATER IMPACTS

- NOTES:**
1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
 2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
 3. MHW AND MLW ARE REFERRED TO NAVD88
 4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFEREED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)

DEEP CREEK

MATCHLINE - SHEET 7



CAPE ST CLAIRE IMP ASSOC INC
LIBER 1547 FOLIO 383
MAP 40 GRID 5 PARCEL 32

PERMANENT IMPACTS:	
TIDAL OPEN WATER (TEMPORARY, LIVING SHORELINE)	= 1,485 SF
TIDAL OPEN WATER (INVERTED ROOT WAD)	= 461 SF
TIDAL OPEN WATER (FORMED OYSTER REEF STRUCTURES)	= 1,951 SF
TOTAL OPEN WATER (PERMANENT)	= 3,897 SF

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL



The Stables Building 2081 Clipper Park Road
Baltimore, MD 21211 / ph: 410.554.0156
fx: 410.554.0168 / www.biohabitats.com
Restore the Earth & Inspire Ecological Stewardship



410 South Second St. Denton, MD 21629
ph: 410.924.4316
http://www.sustainablescience.com

CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: **IMPACT PLATES**

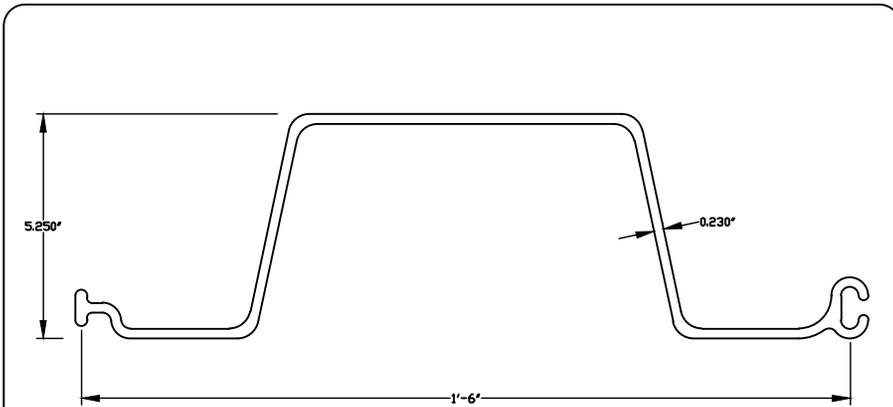
PROJECT NO.: **17023.01**

SCALE: **1" = 60'**

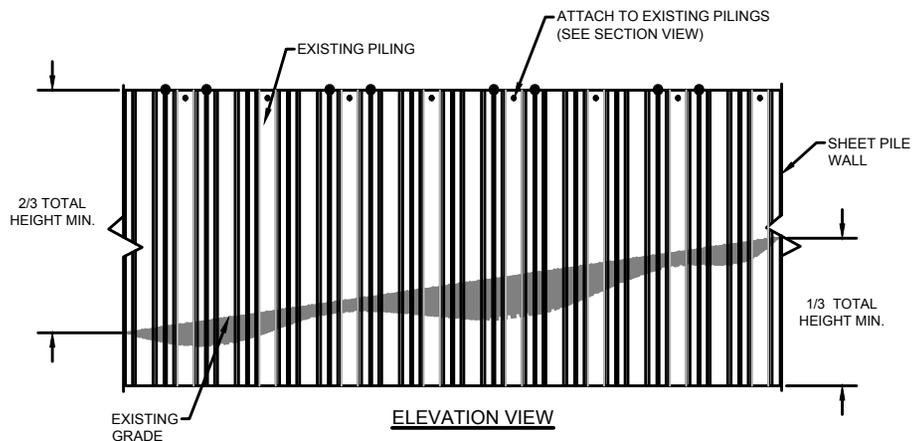
BY:	CHECK:
AM, TB	EM

DWG. NO.: **8 OF 12**

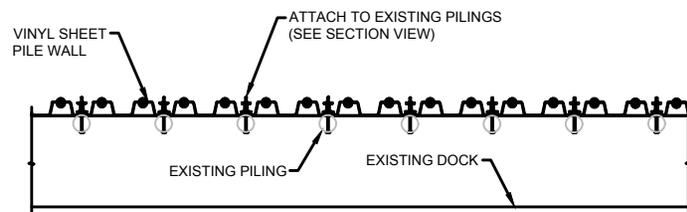
DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL



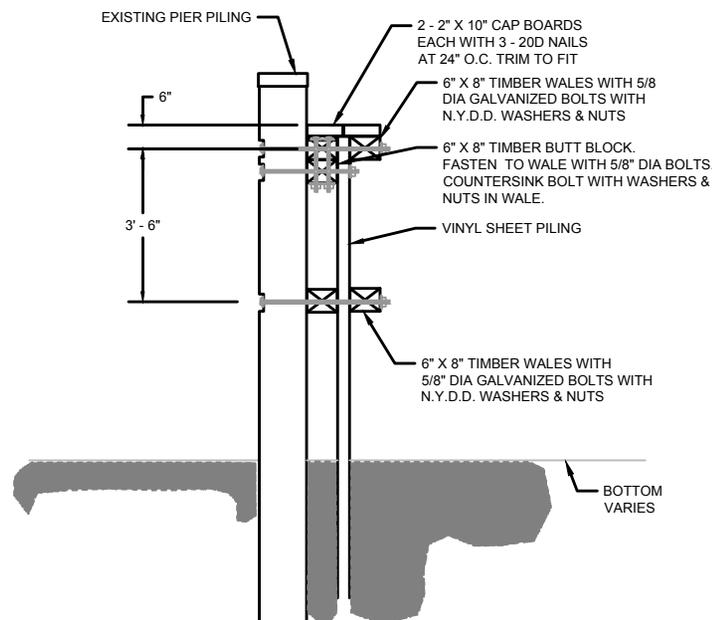
 Everlast Synthetic Products, LLC 1000 Wyngate Pkwy, S-100 Woodstock, GA 30189 (678)388-7781	Scale: 6" = 1' Date: 12/11/06	THIS DRAWING CONTAINS PROPRIETARY INFORMATION, WHICH IS THE PROPERTY OF EVERLAST SYNTHETIC PRODUCTS, LLC AND SHALL NOT BE COPIED, REPRODUCED, OR MADE AVAILABLE TO THIRD PARTIES WITHOUT PRIOR WRITTEN PERMISSION FROM EVERLAST SYNTHETIC PRODUCTS, LLC.	Certified only with seal, signature, and date
	Product: ESP 2.1 Vinyl Sheet Pile		



ELEVATION VIEW



PLAN VIEW



SECTION VIEW

NOT TO SCALE



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**CAPE ST CLAIRE
SHORELINE
ENHANCEMENT
SITE 2**

TITLE: **DETAILS**

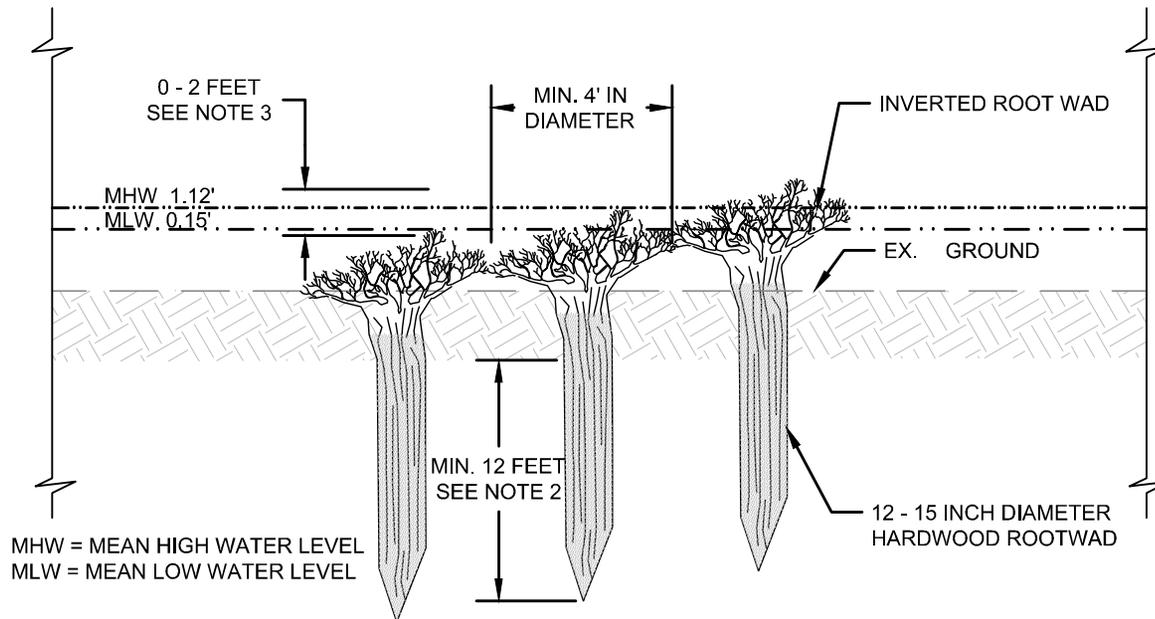
PROJECT NO.: **17023.01**

SCALE: **NTS**

BY: **AM, TB** CHECK: **EM**

DWG. NO.: **9 OF 12**

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL



MHW = MEAN HIGH WATER LEVEL
MLW = MEAN LOW WATER LEVEL

NOTES:

1. INVERTED ROOT WADS TO BE A HARDWOOD SPECIES 12 TO 18 INCHES IN DIAMETER.
2. ROOT WADS SHALL BE JETTED INTO EXISTING SUBSTRATE.
3. AS DIRECTED BY ENGINEER, VARIATIONS AT, ABOVE, AND BELOW MHW.
4. MIN. 8' SPACING O.C.
5. CONTRACTOR SHALL LEAVE LARGE ROOT INTACT, WASHED FREE OF ROCK AND SOIL.

INVERTED ROOTWAD SECTION

NOT TO SCALE

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CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: **DETAILS**

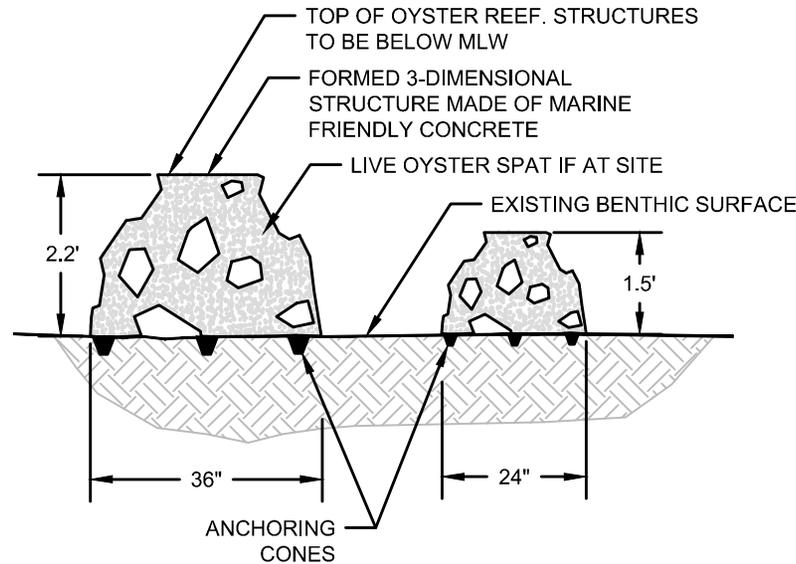
PROJECT NO.: **17023.01**

SCALE: **NTS**

BY: AM, TB	CHECK: EM
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DWG. NO.: **10 OF 12**

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL



NOTES:

1. OYSTER REEF STRUCTURES TO BE PROVIDED BY OWNER.
2. CONTRACTOR SHALL INSTALL OYSTER REEF STRUCTURES AS DIRECTED BY ENGINEER. TOTAL QUANTITY AND APPROXIMATE LOCATIONS SHOWN ON PLANS.
3. OYSTER SPAT SET TO BE COMPLETED BY OWNER PRIOR TO PROVIDING TO CONTRACTOR.

36" & 24" FORMED OYSTER REEF STRUCTURES
SECTION VIEW NOT TO SCALE

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**CAPE ST CLAIRE
SHORELINE
ENHANCEMENT
SITE 2**

TITLE: **DETAILS**

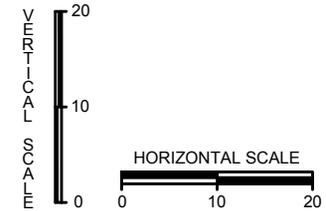
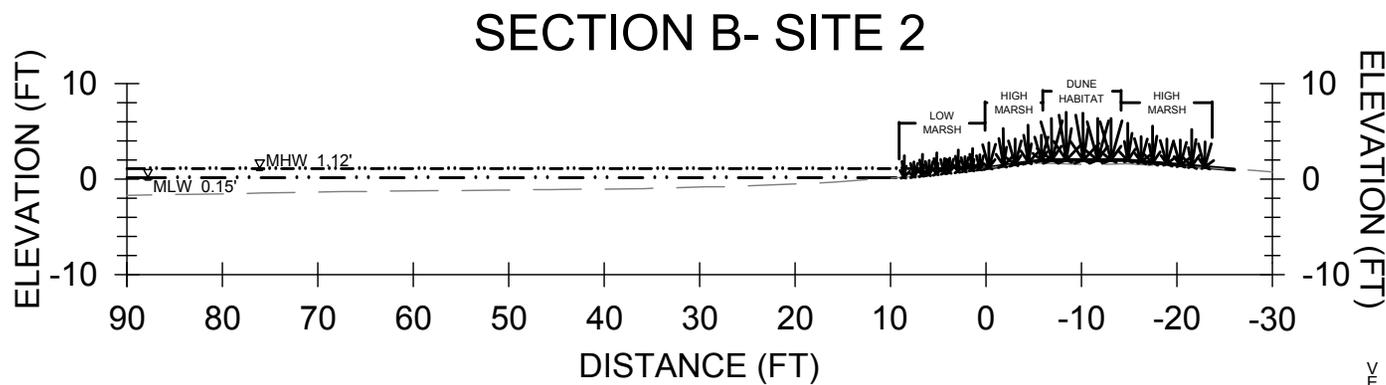
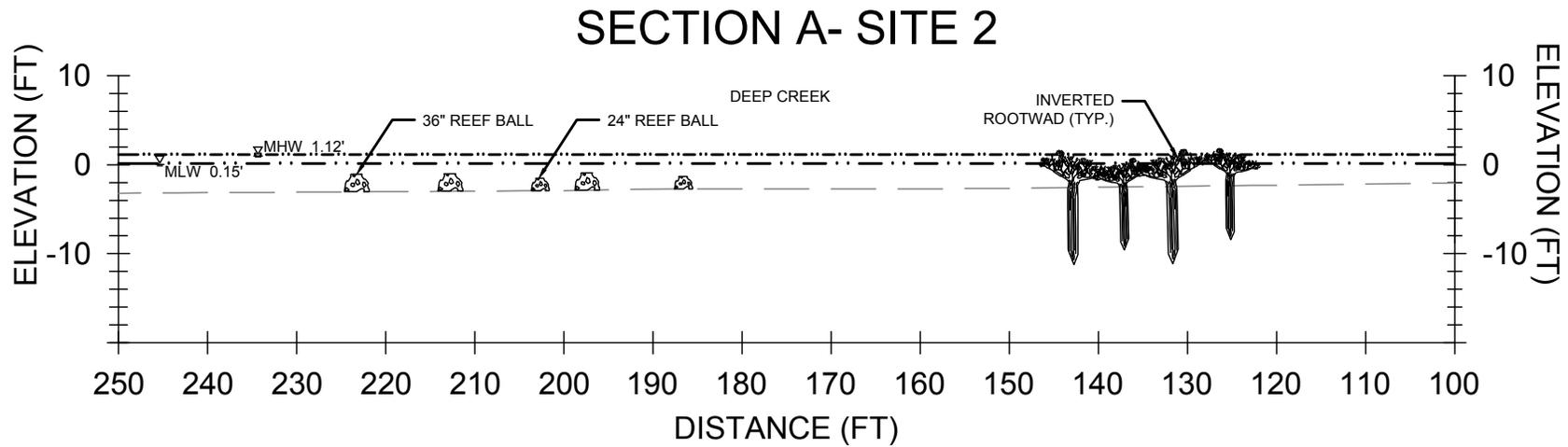
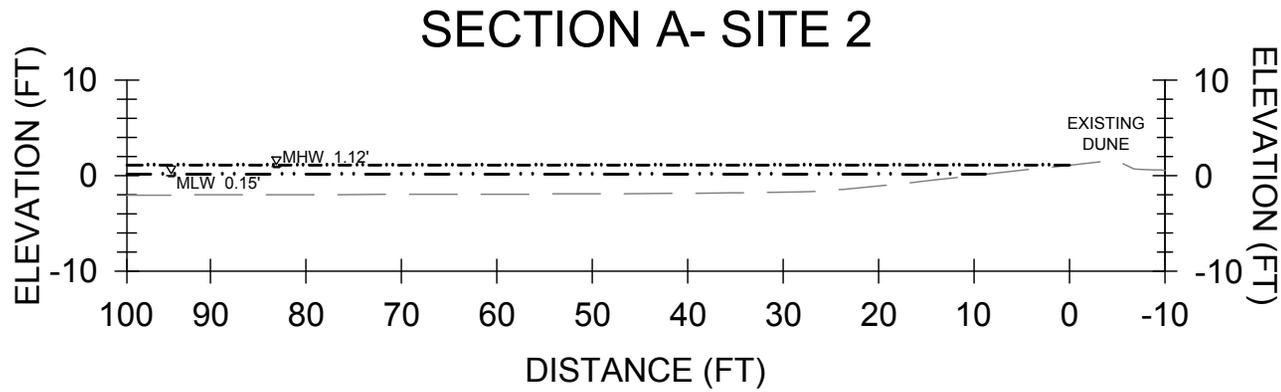
PROJECT NO. : **17023.01**

SCALE: **NTS**

BY: AM, TB	CHECK: EM
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DWG. NO. : **11 OF 12**

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL



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CAPE ST CLAIRE SHORELINE ENHANCEMENT SITE 2

TITLE: CROSS SECTION	
PROJECT NO. : 17023.01	
SCALE: AS SHOWN	
BY: AM, TB	CHECK: EM
DWG. NO. : 12 OF 12	