



US Army Corps
of Engineers®

PUBLIC NOTICE

Applicant:
Ted Sensenbrenner
Indian Landing Boat Club

Published: April 22, 2025
Expires: May 22, 2025
PN-25-21

**Baltimore District Permit Application No. NAB-2025-60086-M54
(Indian Landing Boat Club/Living Shoreline).**

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 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: Ted Sensenbrenner
Indian Landing Boat Club
930 Indian Landing Road
Millersville, MD 21108

WATERWAY AND LOCATION: The project would affect waters of the United States and navigable waters of the United States associated with the Severn River. The project/review area is at the Indian Landing Boat Club, located at 930 Indian Landing Road, Millersville, Anne Arundel County, Maryland (Latitude: 39.080459, Longitude: -76.609731).

EXISTING CONDITIONS: The subject waterfront property is owned and operated by the Indian Landing Boat Club located in the Coastal Plain physiographic province of Maryland. The property features various outdoor amenities such a club house, swimming pool, tennis courts, marina, and beach area. The property includes a mix of maintained lawn areas with canopy trees and forest located along the western shoreline. The property contains approximately 2,400 linear feet of shoreline and includes two (2) islands located in the Severn River. Sections of the western shoreline are characterized with vertical unstable eroding slopes. There is no existing tidal/nontidal wetlands located within the project area or mapped submerged aquatic vegetation within the last five (5) years.

PROJECT PURPOSE:

Basic: To provide shoreline erosion protection and stability, improve coastal resiliency, provide ecological uplift, and improve water quality.

Overall: To provide shoreline erosion protection and stability, improve coastal resiliency, provide ecological uplift, and improve water quality along the shoreline at the

Indian Landing Boat Club, in the Severn River, Millersville, Anne Arundel County, Maryland.

PROPOSED WORK: The applicant requests authorization, in accordance with the attached plans, to provide shoreline protection along approximately 2,524 linear feet of eroding shoreline, including two islands, utilizing a living shoreline design within an approximate 27,109 square feet (0.62 acre) impact area as follows: to construct approximately 1,450 linear feet of stone toe protection and low-profile stone sill structures, 207 linear feet of living breakwater structures, and 280 linear feet of boulders by emplacing 205 cubic yards of stone, 175 cubic yards of cobble and sand mix, and 3,000 cubic yards of clean sand backfill stabilized with approximately 28,208 square feet of low marsh plantings and 11,578 square feet of high marsh plantings. All work and structures will extend a maximum of 54 feet channelward of the approximate mean high-water shoreline in the Severn River at the Indian Landing Boat Club, located at 930 Indian Landing Road, Millersville, Anne Arundel County, Maryland.

Table 1: Effects on aquatic resources.

Activity	Aquatic Resource Impact (SF)	Aquatic Resource Type	Authority (Section 10/404/408)
Stone toe protection and low-profile stone sill structures	12,722	Open Water/Intertidal	Section 10/404
Living Breakwater structures	1,275	Open Water/Intertidal	Section 10/404
Boulder structures	1,237	Open Water/Intertidal	Section 10/404
Sand/Cobble Fill	11,875	Open Water/Intertidal	Section 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: The applicant considered several alternative designs to meet the projects goals of providing long-term shoreline erosion protection and stability, improving coastal resiliency, creating net gains in ecological uplift, and improving water quality while also avoiding and minimizing impacts in the Severn River. Alternative designs included a revetment, a full profile living shoreline, and a partial profile living shoreline that includes low profile stone sills with planted marsh. The proposed living shoreline design described above achieves the project purpose while minimizing impacts to the Severn River to the maximum extent practicable.

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 intertidal habitats along the shoreline of the Indian Landing Boat Club. The project will stabilize the shoreline and create a variety of habitats, including net gains in approximately 28,208 square feet of

low marsh and 11,578 square feet of high marsh. Additionally, the slope design will facilitate marsh migration opportunities beyond the project's design to support coastal resiliency. No tidal/nontidal wetlands or submerged aquatic vegetation will be permanently impacted as a result of the project.

CULTURAL RESOURCES:

The Corps is evaluating the undertaking for effects to historic properties as required under Section 106 of the National Historic Preservation Act. This public notice serves to inform the public of the proposed undertaking and invites comments including those from local, State, and Federal government Agencies with respect to historic resources. Our final determination relative to historic resource impacts may be subject to additional coordination with the State Historic Preservation Officer (SHPO), federally recognized tribes and other interested parties.

Historic properties (i.e., properties listed in or eligible for inclusion in the National Register of Historic Places), are present within the Corps' permit area; however, the undertaking will have no adverse effect on these historic properties. The Corps subsequently requests concurrence from the SHPO and/or the Tribal Historic Preservation Officer (THPO).

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, 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 U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), National Marine Fisheries Service (NMFS) Section 7 Mapper, and the NMFS Critical Habitat 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
Tricolored Bat	<i>Perimyotis subflavus</i>	Candidate
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	Endangered

Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	Endangered
Loggerhead Sea Turtle	<i>Caretta caretta</i>	Threatened
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	Endangered
Leatherback Sea Turtle	<i>Dermochelys coriacea</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 U.S. 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 (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Our initial determination is that the proposed action may adversely affect EFH and/or fisheries managed by Fishery Management Councils and the National Marine Fisheries Service (NMFS). Implementation of the proposed project would directly impact approximately 0.62 acres of shoreline and shallow water habitats. 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:

Species/Management Unit	Life Stages
Red Hake	Adult, Eggs, Larvae, Juvenile
Scup	Adult, Juvenile
Summer Flounder	Adult, Juvenile, Larvae
Windowpane Flounder	Adult, Juvenile
Atlantic Butterfish	Adult, Eggs, Larvae

Atlantic Herring	Adult, Juvenile
Black Sea Bass	Adult, Juvenile
Bluefish	Adult, Juvenile
Clearence Skate	Adult, Juvenile

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 of 1899 (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 (EA) and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA). 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 May 22, 2025. Comments should be submitted electronically via the Regulatory Request System (RRS) at <https://rrs.usace.army.mil/rrs> or to Zachary Fry at Zachary.T.Fry@usace.army.mil. Alternatively, you may submit comments in writing to the Commander, U.S. Army Corps of Engineers, Baltimore District, Attention: Zachary Fry, 2 Hopkins Plaza, Baltimore, Maryland 21201-2930. 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.



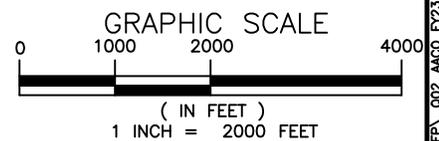
© OPEN STREETMAP (AND) CONTRIBUTORS, CC-BY-SA

**SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY**

APPL. BY: INDIAN LANDING BOAT CLUB

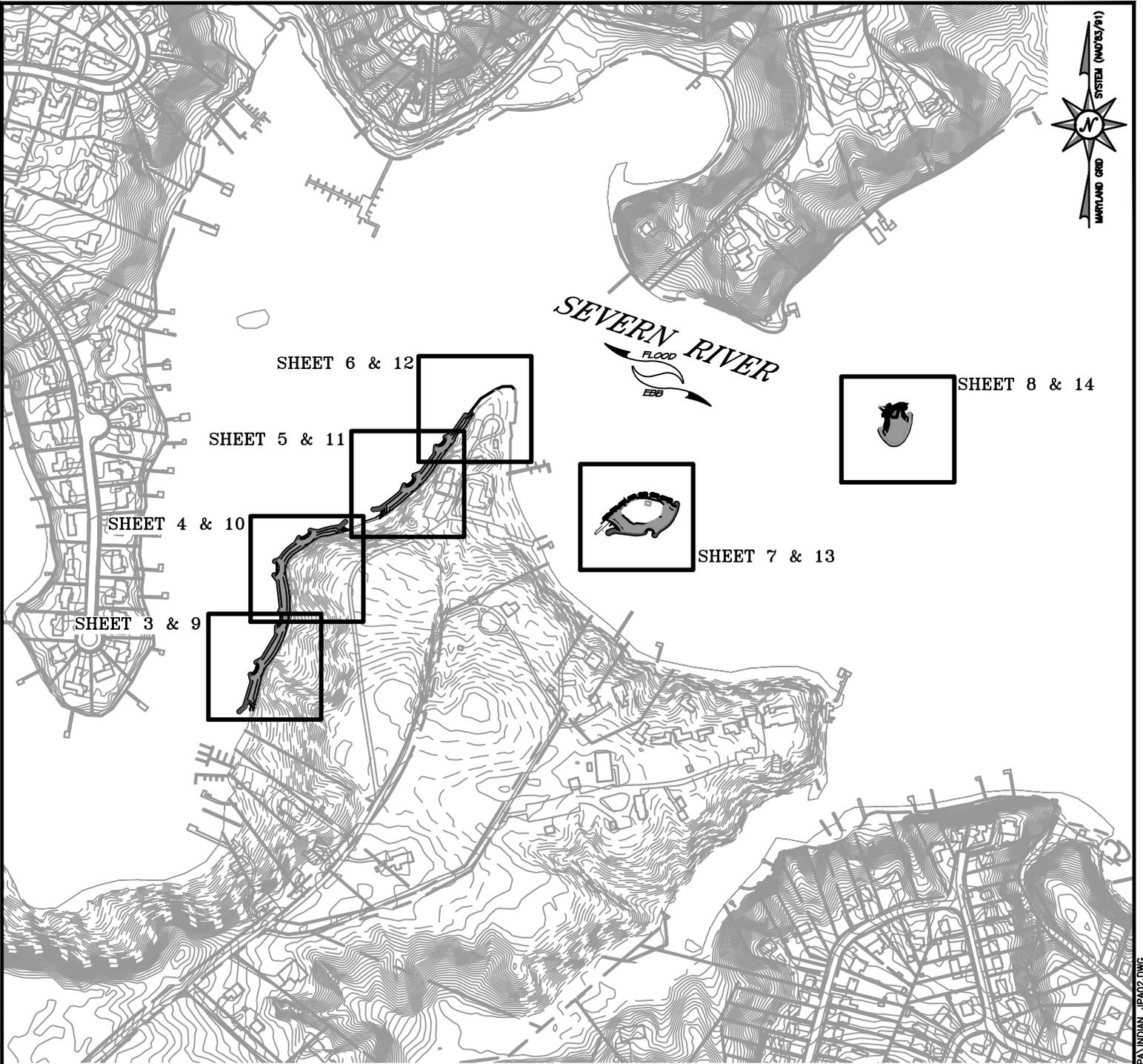
VICINITY MAP

DATE: APRIL 2025 SHEET 1 OF 17



Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

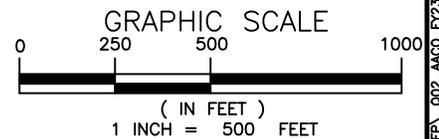


SHORELINE IMPROVEMENTS
 AT
 INDIAN LANDING BOAT CLUB
 ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

KEY SHEET

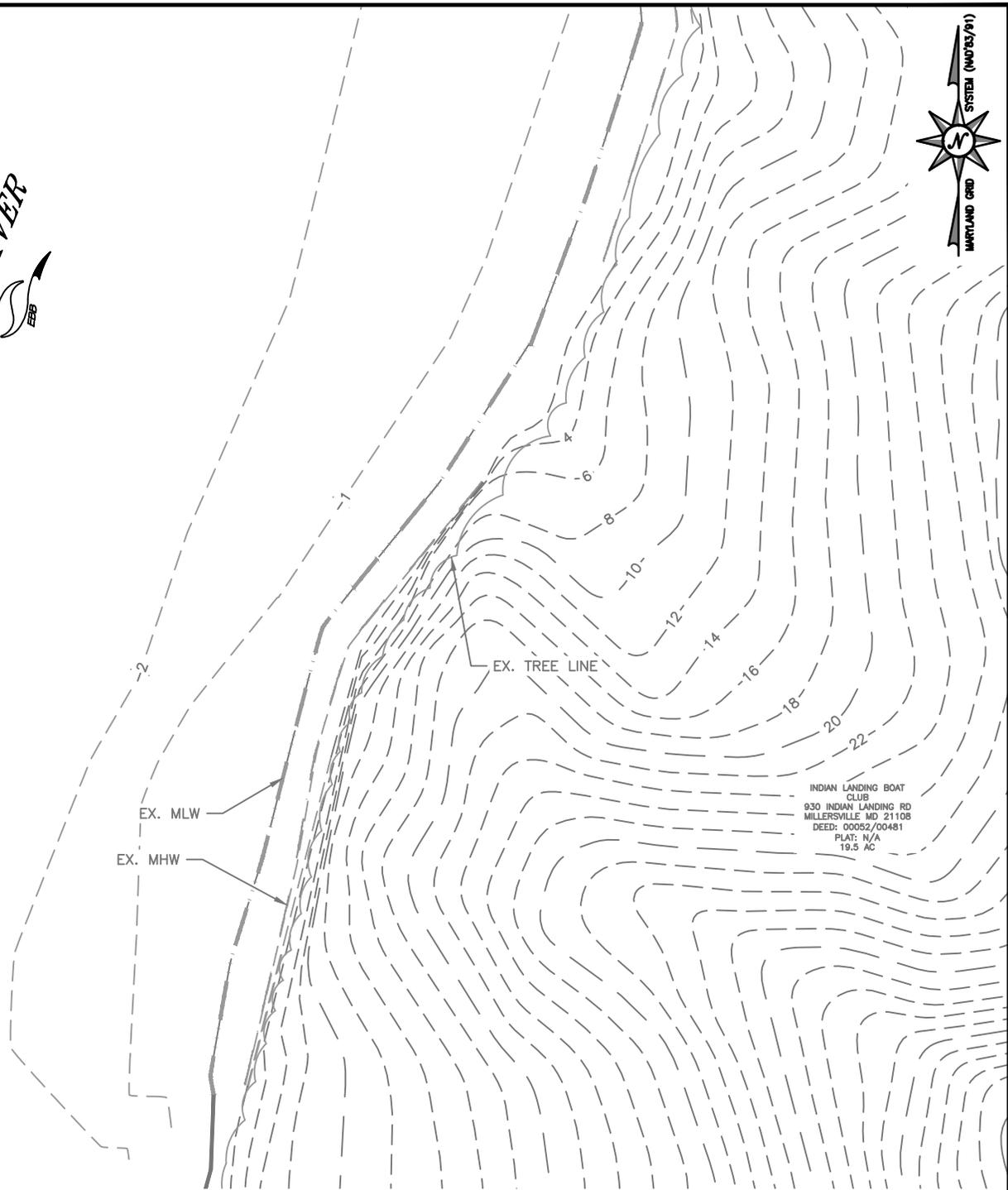
DATE: APRIL 2025 SHEET 2 OF 17



Bayland
 Consultants & Designers, Inc.
 "Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

G:\RFPs & QUALS\2023 RFP_CO2_AA02_FY23 TURNKEY CAD FILES\SHEET FILES\INDIAN_JPA02.DWG



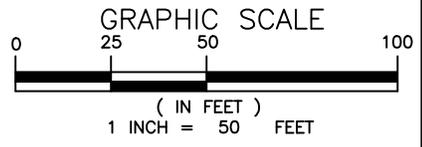
INDIAN LANDING BOAT CLUB
930 INDIAN LANDING RD
MILLERSVILLE MD 21108
DEED: 00052/00481
PLAT: N/A
19.5 AC

SHORELINE IMPROVEMENTS AT INDIAN LANDING BOAT CLUB ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

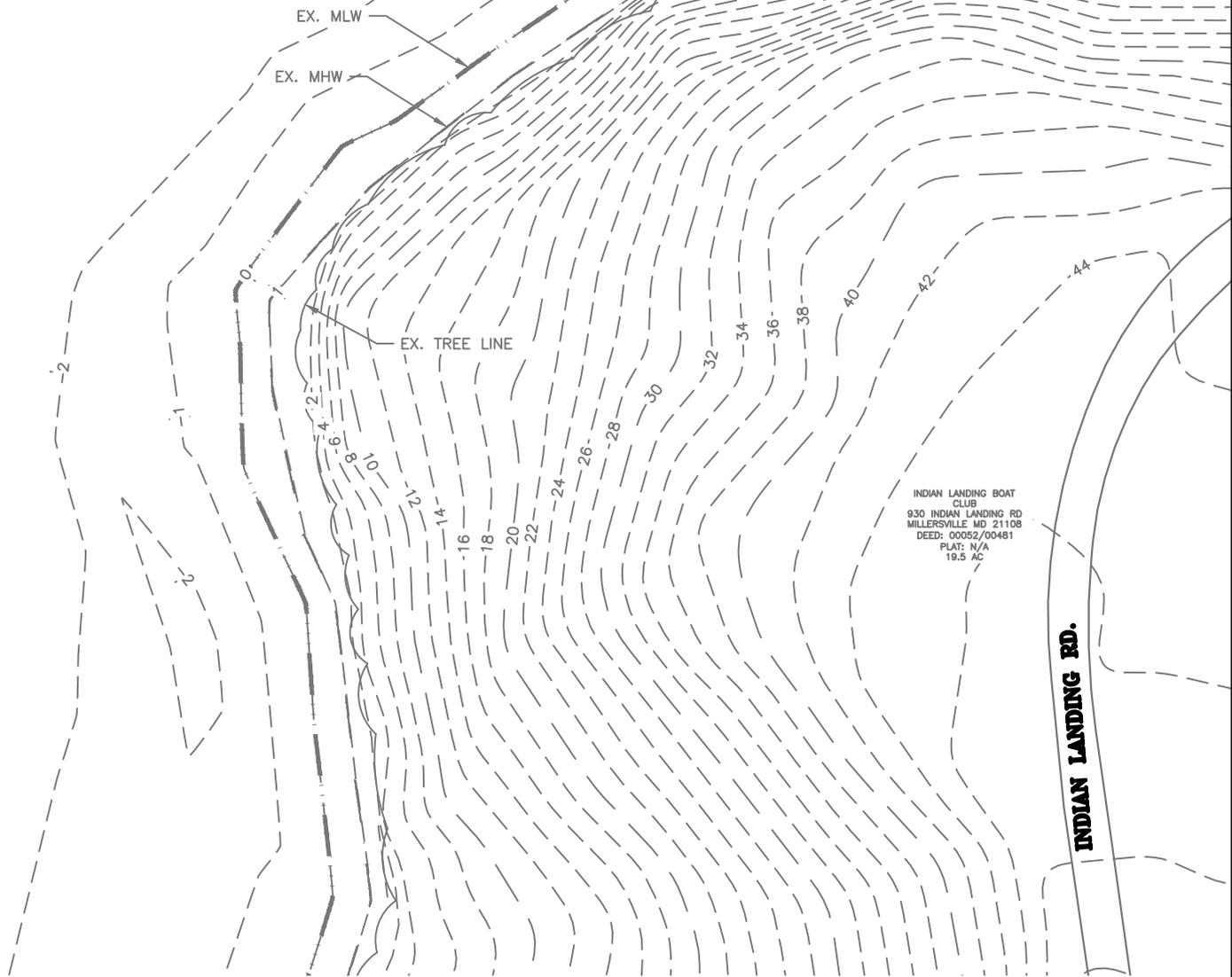
EXISTING CONDITIONS

DATE: APRIL 2025 SHEET 3 OF 17




Consultants & Designers, Inc.
"Integrating Engineering and Environment"
 7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_CO2_AA00_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA03.DWG

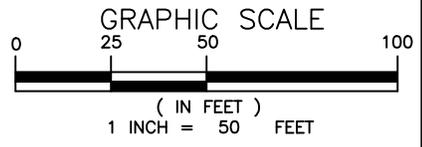


SHORELINE IMPROVEMENTS
 AT
 INDIAN LANDING BOAT CLUB
 ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

EXISTING CONDITIONS

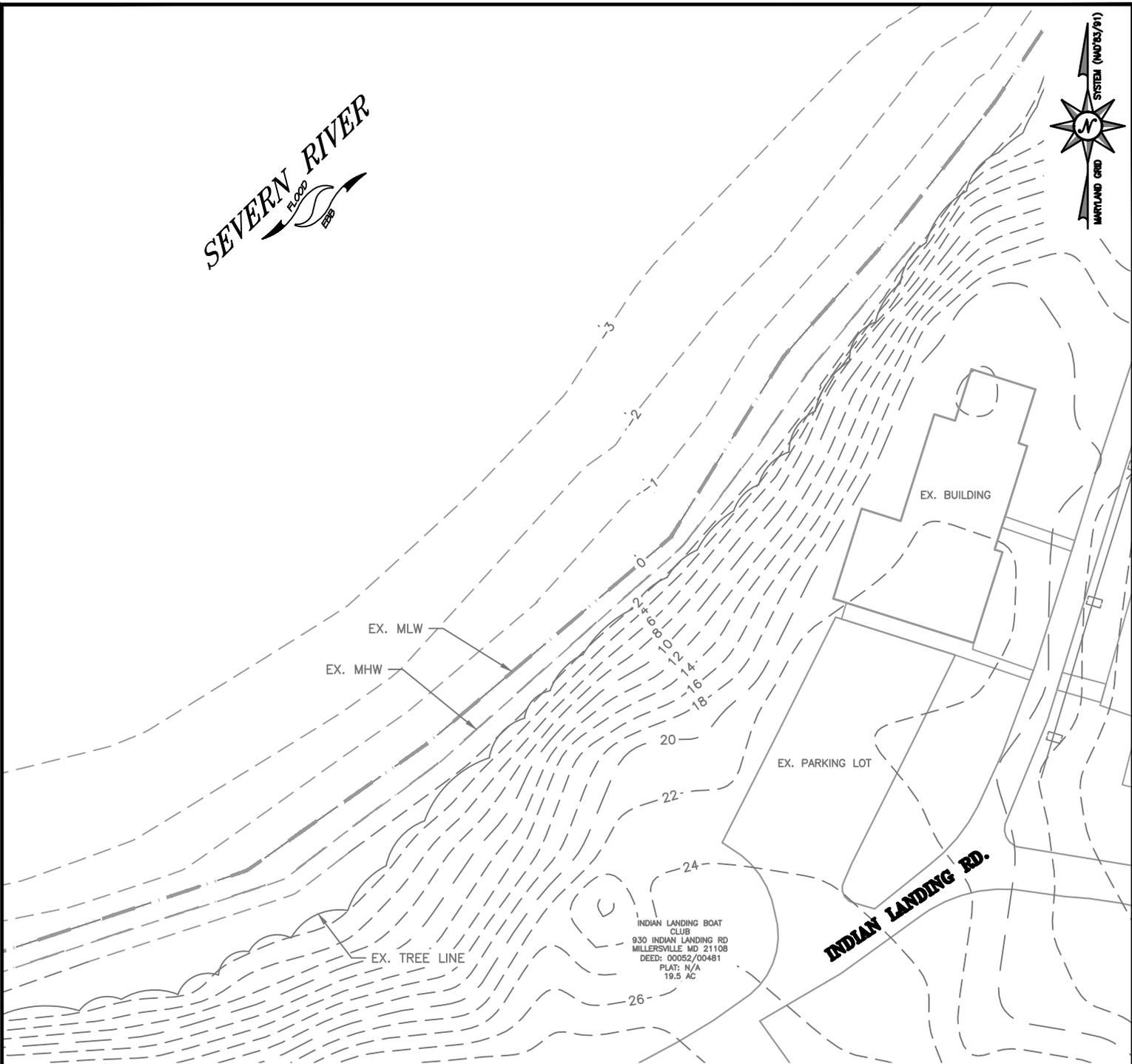
DATE: APRIL 2025 SHEET 4 OF 17



Bayland
 Consultants & Designers, Inc.
 "Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

C:\RFPs & QUALS\2023 RFP_002_AACO_FY23 TURNKEY CAD FILES\SHEET FILES\INDIAN_JPA04.DWG



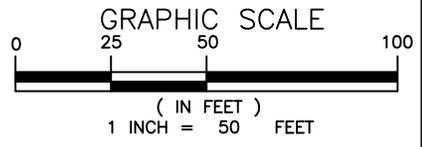
INDIAN LANDING BOAT CLUB
930 INDIAN LANDING RD
MILLERSVILLE MD 21108
DEED: 00052/00481
PLAT: N/A
19.5 AC

SHORELINE IMPROVEMENTS AT INDIAN LANDING BOAT CLUB ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

EXISTING CONDITIONS

DATE: APRIL 2025 SHEET 5 OF 17

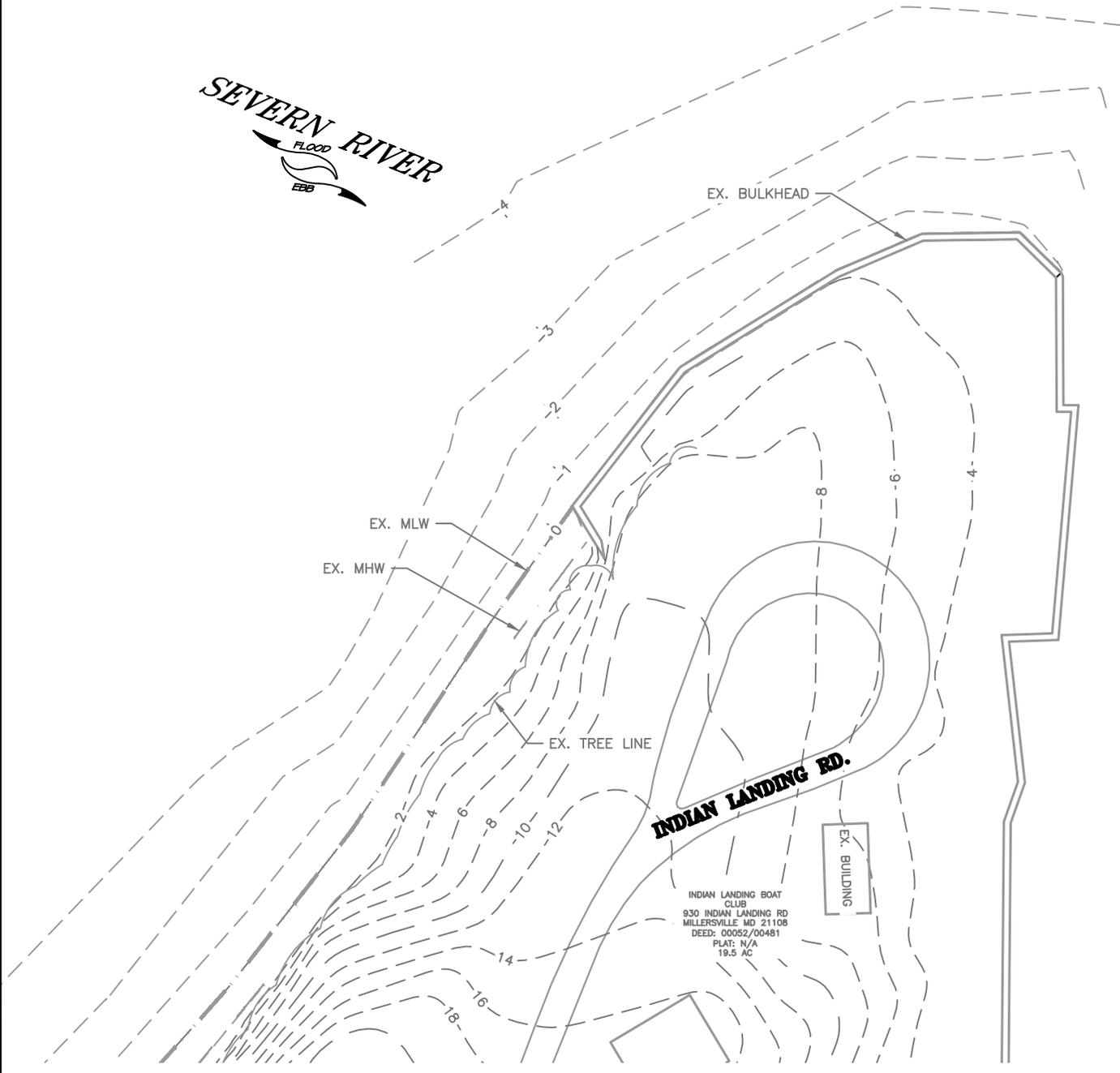



Consultants & Designers, Inc.
"Integrating Engineering and Environment"
 7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

C:\RFPs & QUALS\2023 RFP_002_AACO_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA05.DWG



SEVERN RIVER
FLOOD
EBB



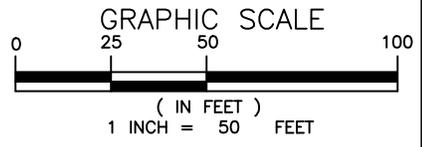
INDIAN LANDING BOAT CLUB
930 INDIAN LANDING RD
MILLERSVILLE MD 21108
DEED: 00052/00481
PLAT: N/A
19.5 AC

SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

EXISTING CONDITIONS

DATE: APRIL 2025 SHEET 6 OF 17



Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

C:\RFPs & QUALS\2023 RFP_002_AA02_FY23 TURNKEY CAD FILES\SHEET FILES\INDIAN_JPA06.DWG

SEVERN RIVER
 FLOOD
 EBB



EX. MLW
 EX. MHW
 INDIAN LANDING BOAT CLUB
 INDIAN LANDING RD
 MILLERSVILLE MD 21108
 DEED: N/A
 PLAT: N/A
 0.13 AC
 EX. BUILDING
 EX. TREE LINE

INDIAN LANDING BOAT CLUB
 INDIAN LANDING RD
 MILLERSVILLE MD 21108
 DEED: N/A
 PLAT: N/A
 0.13 AC

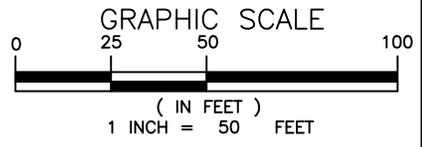
1
 0
 -1
 -2
 -3
 -4
 -5
 -6

**SHORELINE IMPROVEMENTS
 AT
 INDIAN LANDING BOAT CLUB
 ANNE ARUNDEL COUNTY**

APPL. BY: INDIAN LANDING BOAT CLUB

EXISTING CONDITIONS

DATE: APRIL 2025 SHEET 7 OF 17



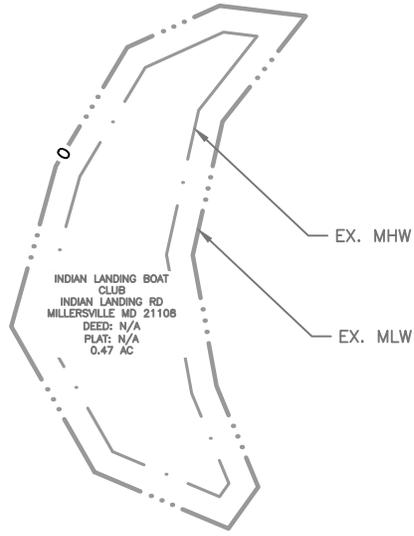
Bayland
 Consultants & Designers, Inc.
 "Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_CO2_AA00_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA07.DWG



SEVERN RIVER
FLOOD
EBB

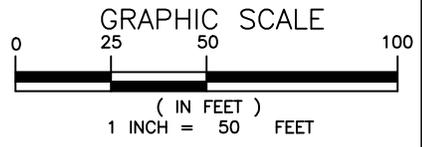


SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

EXISTING CONDITIONS

DATE: APRIL 2025 SHEET 8 OF 17




Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_CO2_AA00_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA08.DWG

SEVERN RIVER
FLOOD EBB



43' MAX.
CHANNELWARD
EXTENT

PR. LOW MARSH
(SPARTINA ALTERNIFLORA)
(15,850 SF SHEETS 9-12)

PR. HIGH MARSH
(SPARTINA PATENS)
(11,743 SF SHEETS 9-12)

PR. COIR LOG (117 LF) WITH
STONE TOE PROTECTION (163 LF)

PR. BEACH HABITAT
(6,237 SF SHEETS 9-12)

PR. MHW
PR. MLW
41' MAX.
CHANNELWARD
EXTENT

EX. TREE LINE

NO BUFFER DISTURBANCE, ALL
CONSTRUCTION TO BE VIA WATER.

PR. COIR LOG (76 LF) WITH
STONE TOE PROTECTION (154 LF)

EX. MLW

EX. MHW

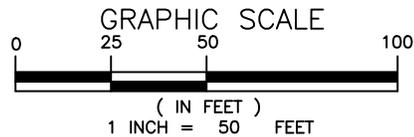
INDIAN LANDING BOAT
CLUB
930 INDIAN LANDING RD
MILLERSVILLE MD 21108
DEED: 00052/00481
PLAT: N/A
19.5 AC

SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

DATE: APRIL 2025 SHEET 9 OF 17

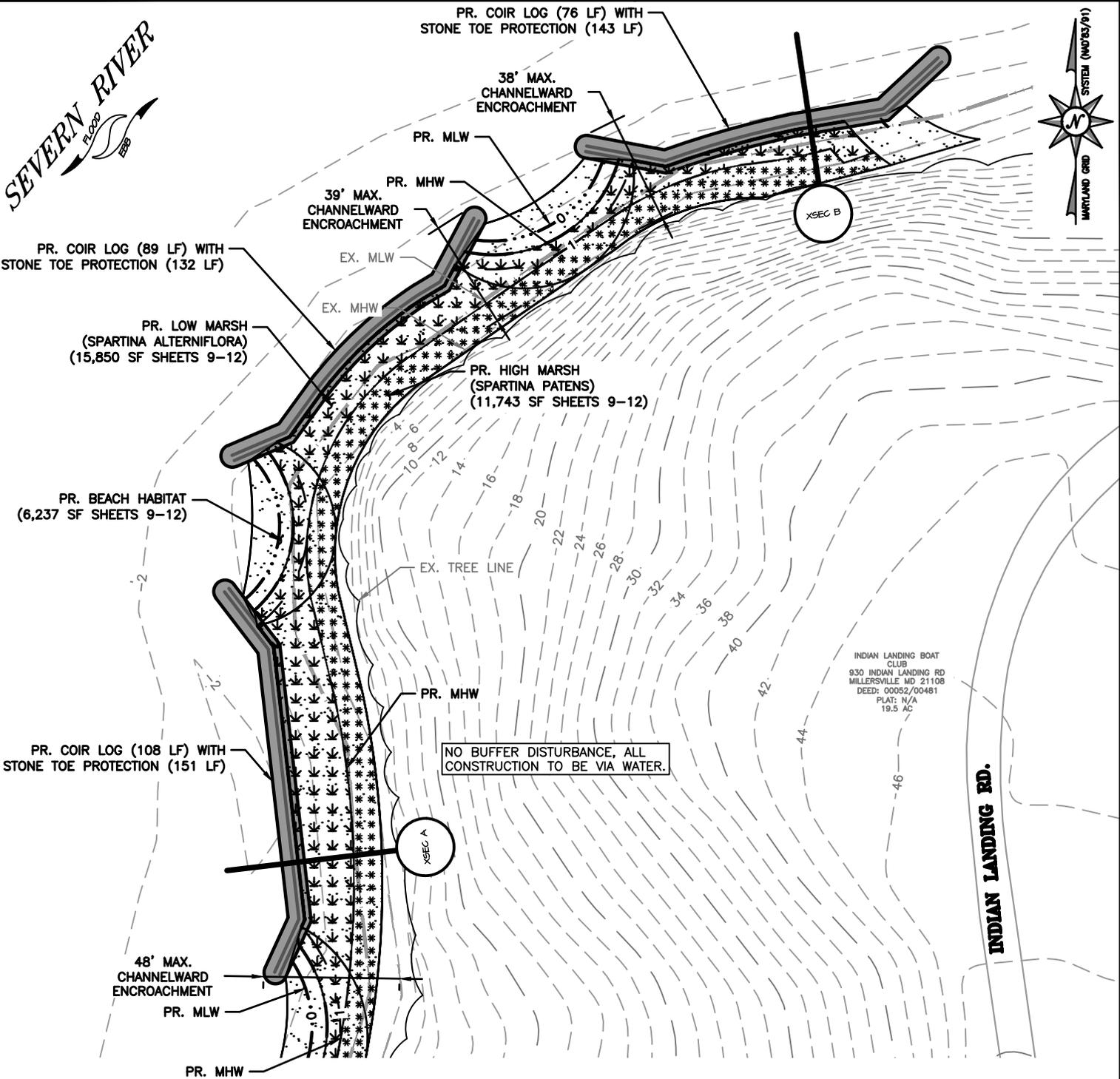


Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_002_AACO_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA09.DWG

SEVERN RIVER
2000
EBB

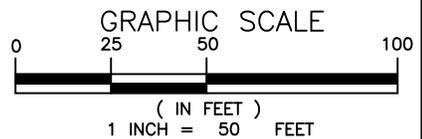


**SHORELINE IMPROVEMENTS
 AT
 INDIAN LANDING BOAT CLUB
 ANNE ARUNDEL COUNTY**

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

DATE: APRIL 2025 SHEET 10 OF 17



Bayland
 Consultants & Designers, Inc.
"Integrating Engineering and Environment"
 7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_CO2_AA02_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA10.DWG

SEVERN RIVER
FLOOD
EBS



PR. COIR LOG (105 LF) WITH
STONE TOE PROTECTION (145 LF)

41' MAX.
CHANNELWARD
EXTENT

PR. LOW MARSH
(SPARTINA ALTERNIFLORA)
(15,850 SF SHEETS 9-12)

PR. HIGH MARSH
(SPARTINA PATENS)
(11,743 SF SHEETS 9-12)

PR. MHW

PR. MLW

PR. BEACH HABITAT
(6,237 SF SHEETS 9-12)

EX. MLW

EX. MHW

PR. COIR LOG (79 LF) WITH
STONE TOE PROTECTION (154 LF)

41' MAX.
CHANNELWARD
EXTENT

EX. BUILDING

EX. PARKING LOT

EX. TREE LINE

INDIAN LANDING RD.

INDIAN LANDING BOAT CLUB
930 INDIAN LANDING RD
MILLERSVILLE MD 21108
DEED: 00052/00481
PLAT: N/A
19.5 AC

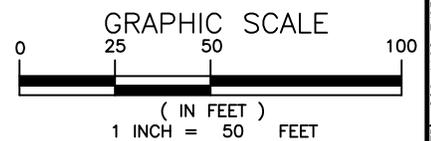
NO BUFFER DISTURBANCE, ALL
CONSTRUCTION TO BE VIA WATER.

**SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY**

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

DATE: APRIL 2025 SHEET 11 OF 17



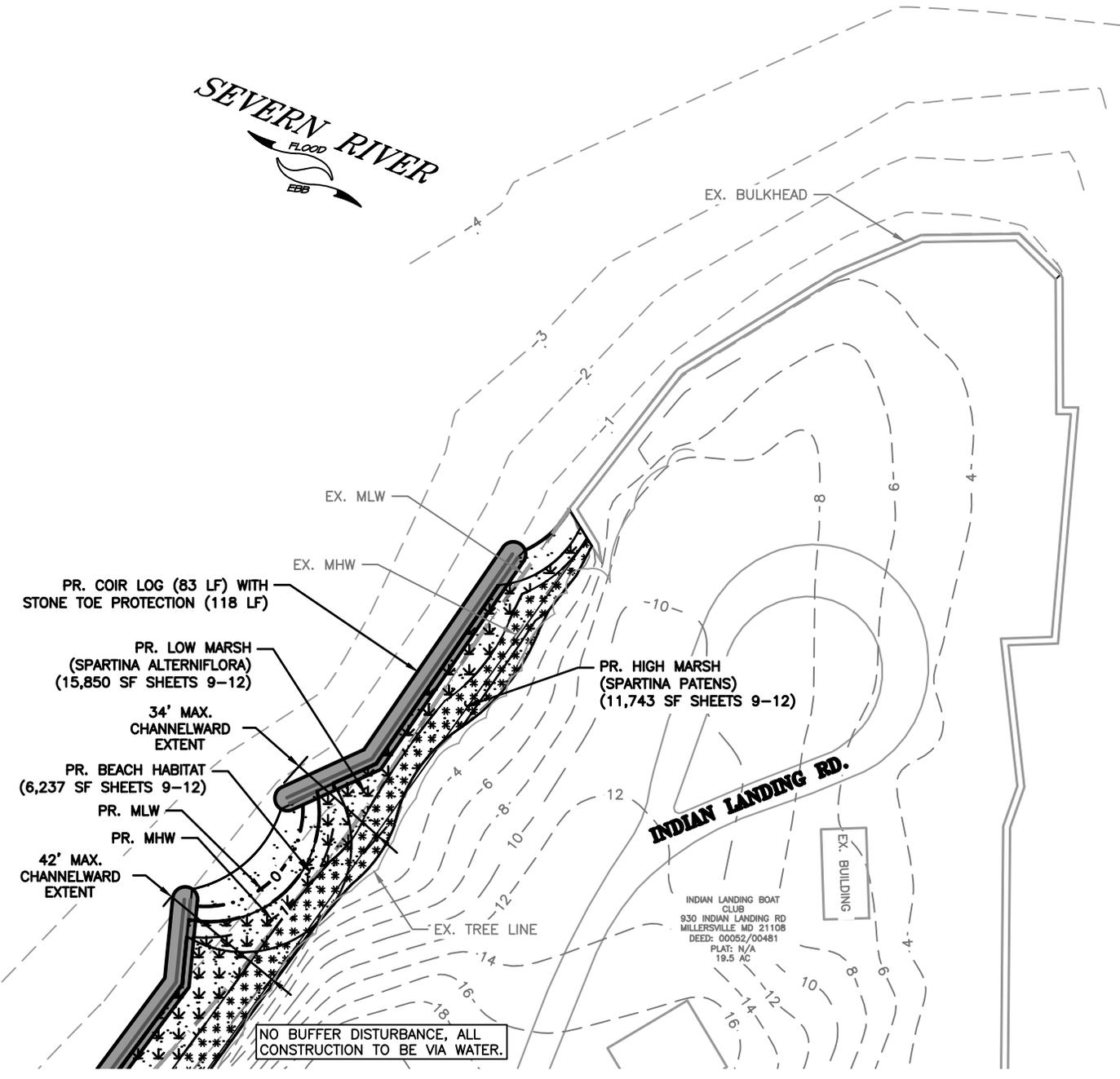
Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

C:\RFPs & QUALS\2023 RFP_CO2_AACO_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA11.DWG



SEVERN RIVER
FLOOD
EBB

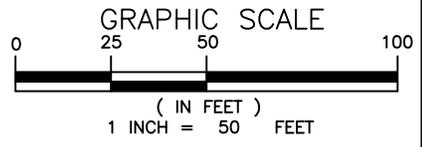


SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

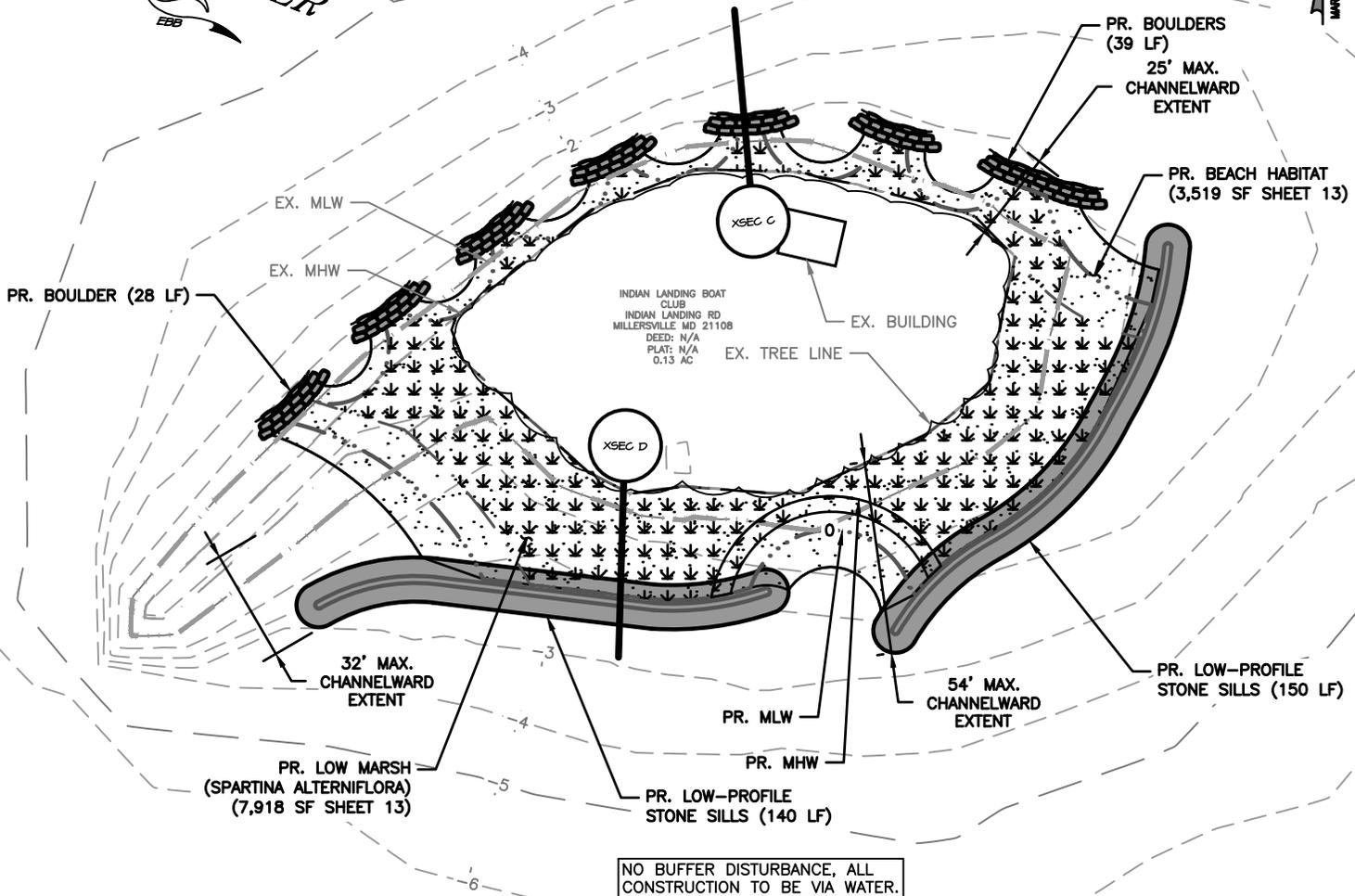
DATE: APRIL 2025 SHEET 12 OF 17



Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

C:\RFPs & QUALS\2023\RFP_002_AA00_FY23_TURNKEY\CAD FILES\SHEET FILES\INDIAN_JPA12.DWG

SEVERN RIVER
FLOOD
EBB

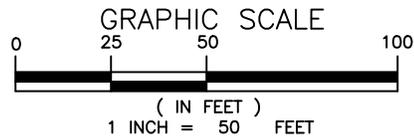


SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

DATE: APRIL 2025 SHEET 13 OF 17



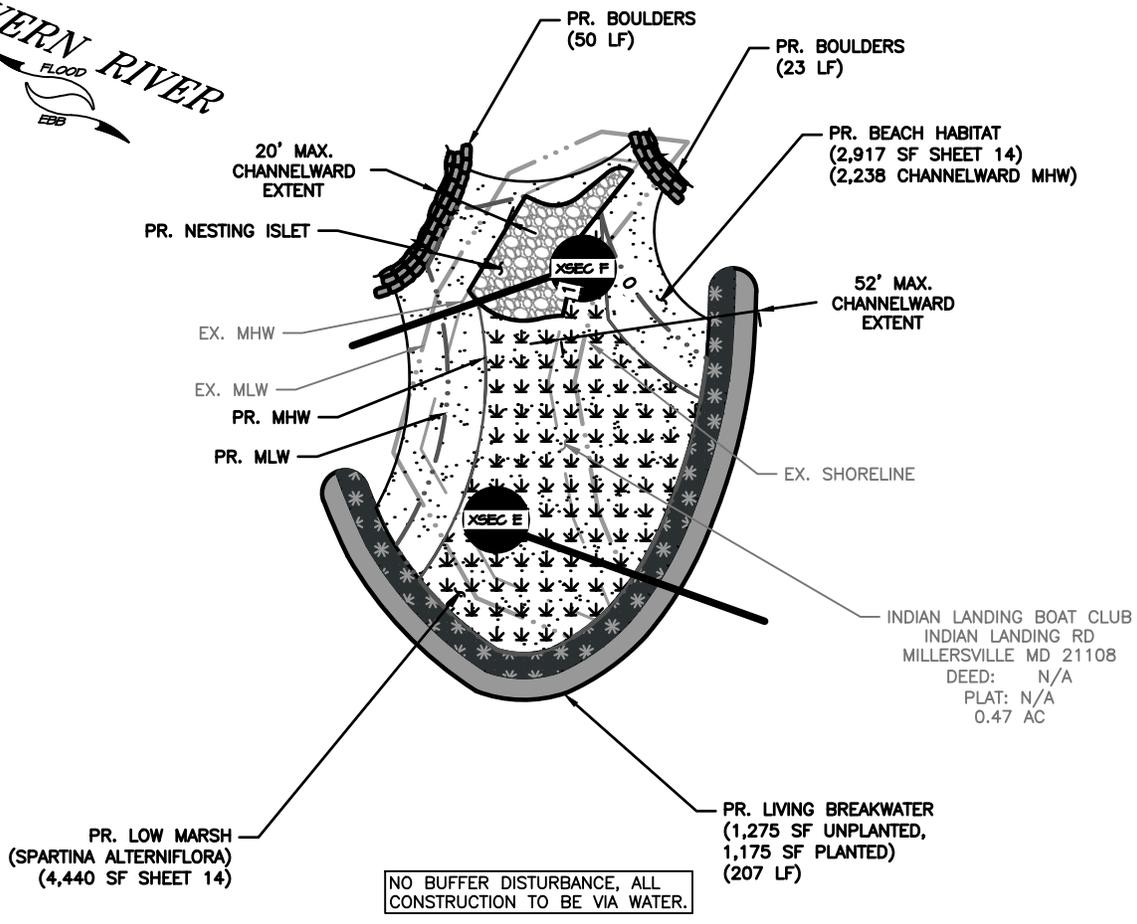
Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

O:\RFPs & QUALS\2023 RFP_CO2_AA00_FY23 TURNKEY CAD FILES\SHEET FILES\INDIAN_JPA\INDIAN_JPA13.DWG



SEVERN RIVER
 FLOOD
 EBB

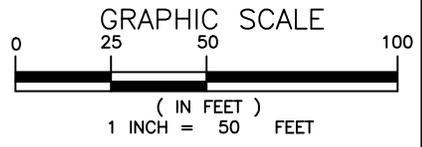


**SHORELINE IMPROVEMENTS
 AT
 INDIAN LANDING BOAT CLUB
 ANNE ARUNDEL COUNTY**

APPL. BY: INDIAN LANDING BOAT CLUB

SITE PLAN

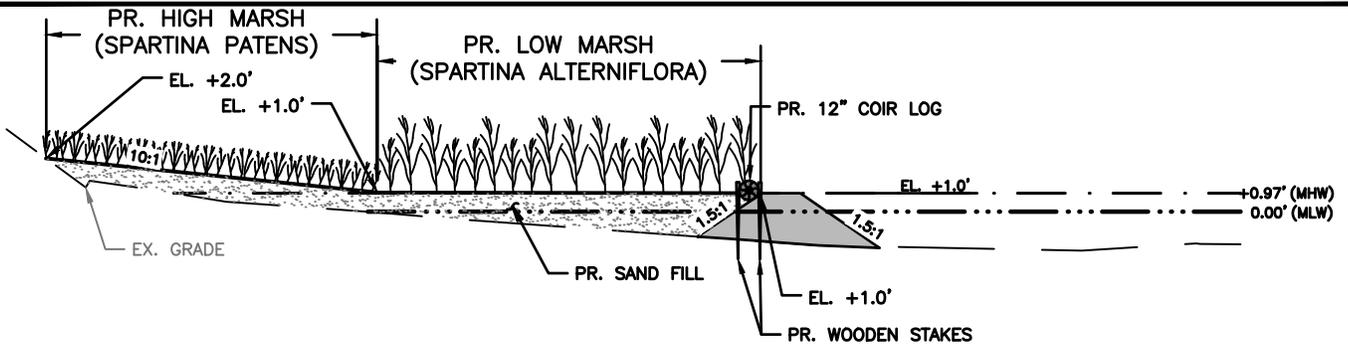
DATE: APRIL 2025 SHEET 14 OF 17



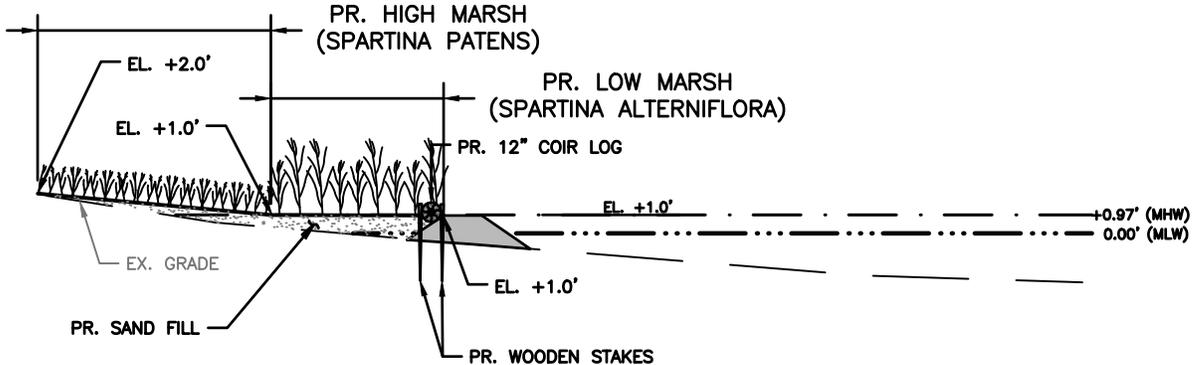
Bayland
 Consultants & Designers, Inc.
 "Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 www.baylandinc.com

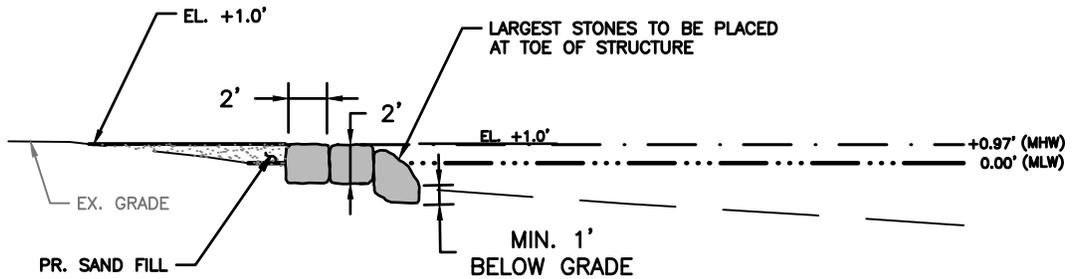
O:\RFPs & QUALS\2023 RFP_CO2_AA00_FY23 TURNKEY CAD FILES\SHEET FILES\JPA\INDIAN_JPA14.DWG



SECTION A
SCALE: 1" = 10'



SECTION B
SCALE: 1" = 10'



SECTION C
SCALE: 1" = 10'

SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

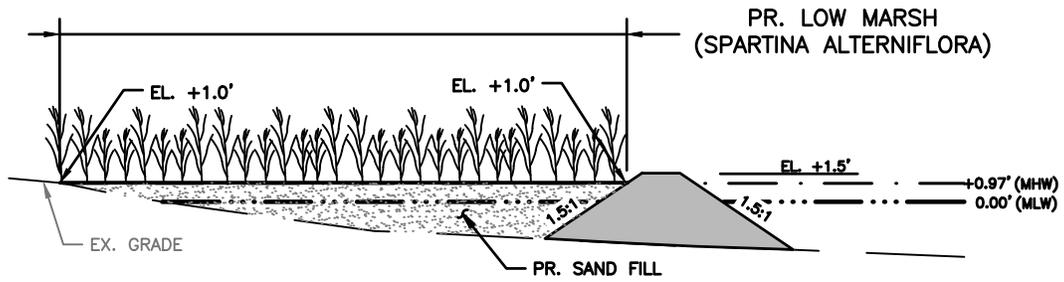
APPL. BY: INDIAN LANDING BOAT CLUB

CROSS SECTIONS

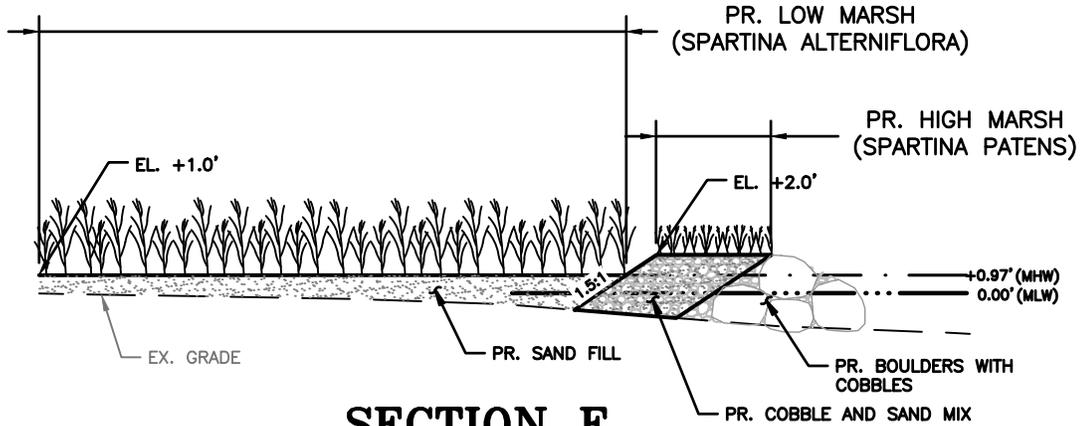
DATE: APRIL 2025 SHEET 15 OF 17

Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"

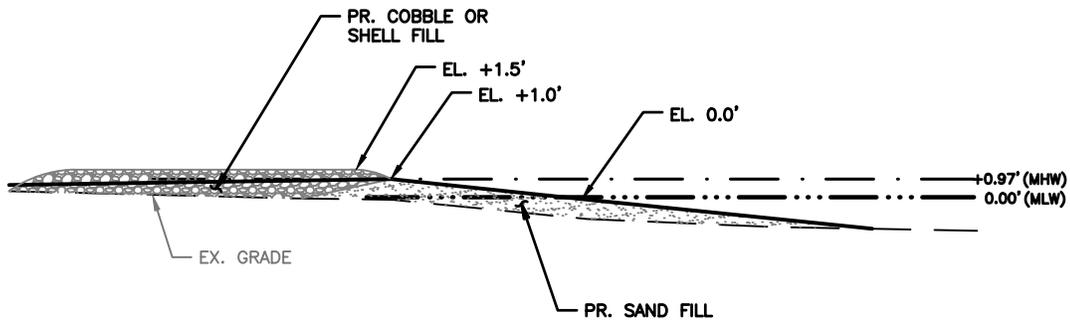
7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com



SECTION D
SCALE: 1" = 10'



SECTION E
SCALE: 1" = 10'



SECTION F
SCALE: 1" = 10'

SHORELINE IMPROVEMENTS
AT
INDIAN LANDING BOAT CLUB
ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

CROSS SECTIONS

DATE: APRIL 2025 SHEET 16 OF 17

Bayland
Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com

PROJECT SUMMARY

PROPOSED STRUCTURES:

LOW-PROFILE STONE TOE PROTECTION - 12,722 SF (12,722 SF IMPACT CHANNELWARD MHW)

MAINLAND STONE TOE PROTECTION - 9,150 SF (9,150 SF IMPACT CHANNELWARD MHW)

LENGTH : 1,160 LF

AVG. WIDTH : 8 LF

ISLAND LOW PROFILE STONE SILLS - 3,572 SF (3,572 SF IMPACT CHANNELWARD MHW)

LENGTH : 290 LF

AVG. WIDTH : 12.5 LF

BOULDERS - 1,237 SF (1,237 SF IMPACT CHANNELWARD MHW)

NESTING ISLET - 747 SF (0 SF IMPACT CHANNELWARD MHW)

UNPLANTED SECTION OF LIVING BREAKWATER - 1,275 SF (1,275 SF IMPACT CHANNELWARD MHW)

MARSH PLANTINGS - 41,126 SF (37,759 SF IMPACT CHANNELWARD MHW)

HIGH MARSH PLANTINGS - 11,743 SF (8,376 SF IMPACT CHANNELWARD MHW)

LOW MARSH PLANTINGS - 28,208 SF (28,208 SF IMPACT CHANNELWARD MHW)

PLANTED SECTION OF LIVING BREAKWATER - 1,175 SF (1,175 SF IMPACT CHANNELWARD MHW)

VOLUME OF SAND FILL - 3,000 CY TOTAL (2,900 CY CHANNELWARD MHW)(53,001 SF TOTAL)(11,875 SF UNPLANTED CHANNELWARD OF MHW)

MARSH PLANTINGS CHANNELWARD OF 1.5X TIDE RANGE - 40,961 SF

HIGH MARSH - 11,578 SF

LOW MARSH - 28,208 SF

PLANTED LIVING BREAKWATER - 1,175 SF

RATIO OF TIDAL MARSH TO TIDAL IMPACTS INCLUDING UNPLANTED SAND - 1.51:1 (40,961 SF : 27,109 SF)

RATIO OF TIDAL MARSH TO TIDAL IMPACTS NOT INCLUDING UNPLANTED SAND - 2.69:1 (40,961 SF : 15,234 SF)

IMPACT SUMMARY

TOTAL AREA OF IMPACT FROM MHW INTO TIDAL WATERS = 27,109 SF

TOTAL AREA OF PERMANENT IMPACT TO SHALLOW WATER HABITAT = 27,109 SF

TOTAL AREA OF IMPACT TO PRIVATE TIDAL WETLANDS = 0 SF

TOTAL AREA OF IMPACT TO SAV = 0 SF

NOTES

1. BASEMAP COMPILED FROM ANNE ARUNDEL COUNTY 2020 PLANIMETRICS AND AERIAL PHOTOGRAPHY.
2. SOUNDINGS AND CONTOURS ARE IN FEET AND REFER TO MLW.
3. TIDAL RANGE IS 0.97'
4. BATHYMETRIC & TOPOGRAPHIC SURVEY PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS NOVEMBER 2021.
5. THESE ARE PERMIT DRAWINGS ONLY AND SUBJECT TO CHANGE DURING THE PERMIT PROCESS. DESIGN DRAWINGS ARE TO BE PREPARED SEPARATELY.

SHORELINE IMPROVEMENTS AT INDIAN LANDING BOAT CLUB ANNE ARUNDEL COUNTY

APPL. BY: INDIAN LANDING BOAT CLUB

SITE NOTES

DATE: APRIL 2025 SHEET 17 OF 17



Consultants & Designers, Inc.

"Integrating Engineering and Environment"

7455 New Ridge Road, Suite 1 Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
www.baylandinc.com