



Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

April 25, 2024

Port Annapolis Associates LP
c/o Waterfront Engineering, Design, and Construction, Inc
Attn: Chris Snyder
8348 Governor Ritchie Hwy
Pasadena, MD 21122

Via email: Victoria.Payne@waterfrontedc.com

Re: Agency Interest Number: 106860
Tracking Number: 202361183
Tidal Authorization Number: 23-WQC-0047

Dear Port Annapolis Associates LP:

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 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 Mel Throckmorton at mel.throckmorton@maryland.gov or 410-375-2803 with any questions.

Sincerely,

Tammy Roberson

Tammy K. Roberson
Chief
Tidal Wetlands Division



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



23-WQC-0047

EFFECTIVE DATE: **April 25, 2024**
CERTIFICATION HOLDER: **Port Annapolis Associates LP**
ADDRESS: **7074 Bembe Beach Rd**
Annapolis, MD 21403
PROJECT LOCATION: **7074 Bembe Beach Road**
Annapolis, MD 21403

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 MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER AND SCIENCE ADMINISTRATION HAS DETERMINED THAT THE REGULATED ACTIVITIES DESCRIBED IN THE REQUEST FOR CERTIFICATION FOR THE PROPOSED PORT ANNAPOLIS MARINA EXPANSION AND MAINTENANCE PROJECT AND AS DESCRIBED IN THE ATTACHED PLAN SHEETS DATED FEBRUARY 21ST, 2024 AND ANY SUBSEQUENT MODIFICATIONS APPROVED BY THE DEPARTMENT WILL NOT VIOLATE MARYLAND'S WATER QUALITY STANDARDS, IF CONDUCTED IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION.

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.

The Maryland Department of the Environment satisfied the statutory and regulatory public notice requirements by placing the WQC on Public Notice from January 1, 2024 to February 1, 2024 on Maryland Department of the Environment's Public Notice webpage and advertising in the Capital Gazette on January 5, 2024.

PROJECT DESCRIPTION

1. Replace 460 linear feet of bulkhead within 18 inches of existing.
2. Expand an existing marina including the removal of all finger piers from Docks G, H, and I and proposing the following:
 - a. Access dock "G" - constructing a 40-foot long by 8-foot wide pier extension with a 8-foot wide by 216-foot wide "T-head" platform, two 50-foot long by 6-foot wide finger piers, one 70-foot long by 6-foot wide finger pier, five 50-foot long by 3-foot wide finger piers, three 70-foot long by 3-foot wide finger piers, and, emplace 16 new mooring piles and replace-in-kind 10 mooring piles; and,

- b. Dock "H" - construct four 35-foot long by 3-foot wide finger piers, three 30-foot long by 3-foot wide finger piers, two 45-foot long by 3-foot wide finger piers, three 50 foot long by 3-foot wide finger piers, eight boat lifts with associated pilings, and emplace 18 mooring piles; and,
 - c. Dock "I", construct seven 27-foot long by 3-foot wide finger piers, and fifteen boatlifts with associated pilings, with all work to take place within 357 feet channelward of the mean high water line.
3. Mechanically dredge a 10,390 square foot area to a depth of 8 feet, and a 14,284 square foot area to a depth of 7 feet, to deposit approximately 1,429 cubic yards of dredged material at an upland disposal site located at 5360 Brown's Way Rd., Churchton, MD 20733; and to provide for periodic maintenance dredging for six years.

GENERAL CONDITIONS

1. All water quality-related performance standards and conditions required by the Department in any state issued authorization for activities in tidal wetlands, nontidal wetlands, their 100-year floodplains, nontidal wetlands buffers, or nontidal wetland expanded buffers to ensure that any discharges will not result in a failure to comply with water quality standards in COMAR 26.08.02 or any other water quality requirements of state law or regulation shall be met.
2. This Certification does not obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.
3. All additional authorizations or approvals, including self-certifying General Permits issued by the Department, shall be obtained and all conditions shall be completed in compliance with such authorizations.
4. The proposed project shall be constructed in accordance with the approved final plan by the Department, or, if Department approval is not required, the plan approved by the U.S. Army Corps of Engineers, and its approved revisions.
5. 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.
6. This Certification does not authorize any injury to private property, any invasion of rights, or any infringement of federal, state, or local laws or regulations.
7. Authorized representatives of the Department shall be provided access to the site of authorized activities during normal business hours to conduct inspections and evaluations of the operations and records necessary to assure compliance with this Certification.
8. No stockpiles of any material shall be placed in Waters of the U.S. or state or private tidal wetlands.
9. Temporary construction trailers or structures, staging areas and stockpiles shall not be located within tidal wetlands, nontidal wetlands, nontidal wetlands buffers, or the 100-year floodplain unless specifically included on the Approved Plan.
10. This Certification is valid for the project identified herein and the associated U.S. Army Corps of Engineers authorization NAB-2023-61183 (Port Annapolis Associates) until such time that it expires or is not administratively extended.

SPECIAL CONDITIONS

1. All Critical Area requirements shall be followed and all necessary authorizations from the Critical Area Commission (“Commission”) shall be obtained. This Certificate 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.
2. All work performed under this Water Quality Certificate 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. Licensing by MCLB shall occur prior to the beginning of construction activities. 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.
3. The issuance of this Certificate is not a validation or authorization by the Department for any of the existing structures depicted on the plan sheets on the subject property that is not part of the authorized work description, nor does it relieve the Certificate Holder of the obligation to resolve any existing noncompliant structures and activities within tidal wetlands.
4. The Certificate Holder shall transport all dredged material in watertight trucks. No dredged material shall be discharged onto the roadways of the State.
5. The Certificate Holder shall conduct subsequent maintenance dredging within the scope of this license in terms of authorized dredge area and authorized depths. The Certificate Holder shall:
 - a. Dredge no more than 500 cubic yards of material at each maintenance dredging.
 - b. Comply with all applicable conditions of this license.
 - c. Submit a detailed dredged material disposal plan to be approved by the Water and Science Administration, Tidal Wetlands Division prior to the start of dredging.
 - d. Notify and receive approval from the Water and Science Administration, Compliance Program a minimum of 10 days prior to the start of each maintenance dredging operation.
 - e. The Certificate Holder shall stake the dredge area and receive approval from the Water and Science Administration’s, Compliance Division prior to the start of dredging.
6. The Certificate Holder shall stake the dredge area and receive approval from the Water and Science Administration’s, Compliance Division prior to the start of dredging.
7. The Certificate Holder shall conduct a post dredge bathymetric survey and forward to the Water and Science Administration, Tidal Wetlands Division within 45 days after the termination of any phase of dredging.
8. The Certificate Holder shall conduct maintenance dredging within the scope of this Certification in terms of authorized dredged area, volume of material and authorized depths.
9. The Certificate Holder shall dispose of dredged material only at the dredge disposal site approved by this Water Quality Certification. The Certificate Holder shall submit an application for modification of the Certificate to MDE for approval of any dredge disposal site not authorized within the Certificate.

10. The Certificate Holder shall complete construction of the bulkhead prior to filling behind the bulkhead. The bulkhead shall be designed and constructed to prevent the loss of fill material to waters of the State of Maryland. Only clean fill, which is free of organic, toxic, contaminated, or deleterious materials, shall be used.
11. The Certificate Holder shall not stockpile any material in State or private tidal wetlands.

STATEMENTS OF NECESSITY

1. Statement of Necessity for General Conditions 1, 2, 3, 4, and Special Conditions 1, 3: These conditions are necessary to ensure that water quality standards are met, and designated uses are maintained.

Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10G(3); COMAR 26.23.02.06; COMAR 26.17.01; COMAR 26.23; COMAR 26.24

2. Statement of Necessity for General Conditions 5, 8, 9, and Special Conditions 4, 9, 10, 11: Fill or construction material within or adjacent to regulated resources may cause discharges resulting in turbidity in excess of water quality standards and interfere with designated uses of growth and propagation of fish, other aquatic life, wildlife; and other designated uses; and fail to meet general water quality criteria that waters not be polluted by substances in amounts sufficient to be unsightly or create a nuisance.

Citation: 26.08.02.03B(1)-B(2); COMAR 26.23; COMAR 26.24; COMAR 26.17.04

3. Statement of Necessity for General Condition 6: This condition is necessary to clarify the scope of this certification to ensure compliance with water quality regulations, without limiting restrictions through other requirements.

Citation: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08, COMAR 26.08.02.10E; COMAR 26.23.02.06; COMAR 26.17.04; COMAR 26.23; COMAR 26.24

4. Statement of Necessity for General Condition 7: Conditions of certification involve precise actions to comply with water quality standards. Site inspection may be necessary to ensure that limits, methods, and other requirements are met to ensure that water quality standards are met and designated uses are maintained. These conditions are necessary to ensure that the activity was conducted, and project completed according to terms of the authorization/certification, while allowing for review of in-field modifications which may have resulted in discharges to ensure that water quality standards were met. Designated uses include support of estuarine and marine aquatic life and shellfish harvesting and for growth and propagation of fish, other aquatic life, and wildlife

Citation: Federal and state laws that authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR

26.08.02.03B(1)(b); COMAR 26.08.02.03B(2); COMAR 26.23.02.06; COMAR 26.23; COMAR 26.24; COMAR 26.17.04

5. Statement of Necessity for General Condition 10: This condition is necessary to qualify the period of applicability of the terms and conditions of this Certification to be protective of Maryland water quality standards.

Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; 40 C.F.R. 121, 15 C.F.R. 930, Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.17.04; COMAR 26.23; COMAR 26.24

6. Statement of Necessity for Special Condition 2: Expertise for conducting certain activities is required to ensure that there is no violation of water quality standards nor interference with designated uses. This condition is necessary to ensure that discharges will be conducted in a manner which does not violate water quality criteria nor interfere with designated uses.

Citation: COMAR 26.08.02.02B(2)- B(4); COMAR 26.08 02.03B(2)(d) – (e); COMAR 26.08.02.03B(1)(b); 26.08.02.03B(2); COMAR 23.02.04.04

7. Statement of Necessity for Special Conditions 4, 5, 6, 9, 10, 11: Unauthorized discharges may enter regulated waters as result of activity or structural failure. A plan to address inadvertent discharges will prevent or address further violations of water quality standards and failure of water to meet designated uses, including uses of growth and propagation of fish, other aquatic life, wildlife; and other designated uses; and fail to meet general water quality criteria that waters not be polluted by substances in amounts sufficient to be unsightly or create a nuisance.

Citation COMAR 26.08.02.02B(1)d; COMAR 26.08.02.02B(3); COMAR 26.08.02.03B(1) and B(2);26.08.02.01B(2); 26.08.02.02B(1)

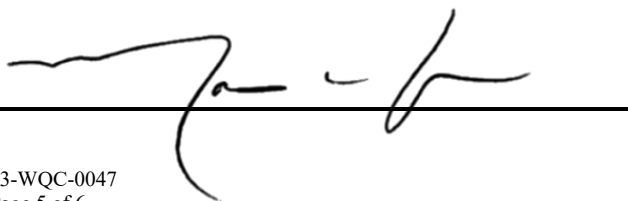
8. Statement of Necessity for Special Condition 7: The condition is necessary to ensure that the dredging results in water depths which are appropriate to support designated uses of fishing and water contact recreation and propagation of fish, other aquatic life and wildlife; and ensure that no discharges are unsightly, create a nuisance, change to an objectionable color or interferes with designated uses.

Citations: COMAR 26.08.02.01B(2); COMAR 26.08.02.02B(1); 26.08.02.02B(3); COMAR 26.08.02.03B

9. Statement of Necessity for Special Condition 8: The limits on the scope of maintenance dredging are necessary to ensure that no discharges would violate water quality standards and designated uses for water clarify, turbidity, growth and propagation of fish, other aquatic life, and wildlife; and water contact recreation

Citations: COMAR 26.08.02.02B(1)(d); COMAR 26.08.02.02B(3); COMAR 26.08.02.03B

CERTIFICATION APPROVED



4/29/2024

D. Lee Currey, Director
Water and Science Administration

Date

Tracking Number: 202361183
Agency Interest Number: 106860

Effective Date: April 25, 2024

Enclosure: Plan Sheets dated February 21, 2024

cc: WSA Inspection & Compliance Program
Army Corps of Engineers

VICINITY MAP 1" = 2000'



23-WQC-0047
 202361183
 106860
 2/21/24
 MT
 1 of 12

Tax Account No.:
 6000-9001-0863
 Tax Map: 052G
 Parcel: 284
 Deed Ref: 3004/60
 Lot: N/A
 Zoning: WM1
 Lot Size: 10.02 AC

VICINITY MAP

Waterfront Engineering,
 Design and Construction, Inc.
 8348 Ritchie Hwy.
 Pasadena, MD 21122
 (410) 798-1494
 waterfrontdesign@verizon.net

PROPOSED:
 Marina Work

in: Back Creek
 co: Anne Arundel
 Application by: Port Annapolis Associates

State: Maryland
 at: Bembe Beach



Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC



EXISTING SITE PLAN 1
SCALE: 1" = 100'
Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
(410) 798-1494
waterfrontdesign@verizon.net

PROPOSED:
Marina Work

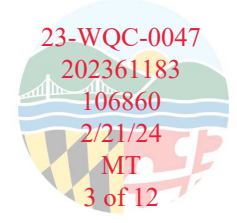
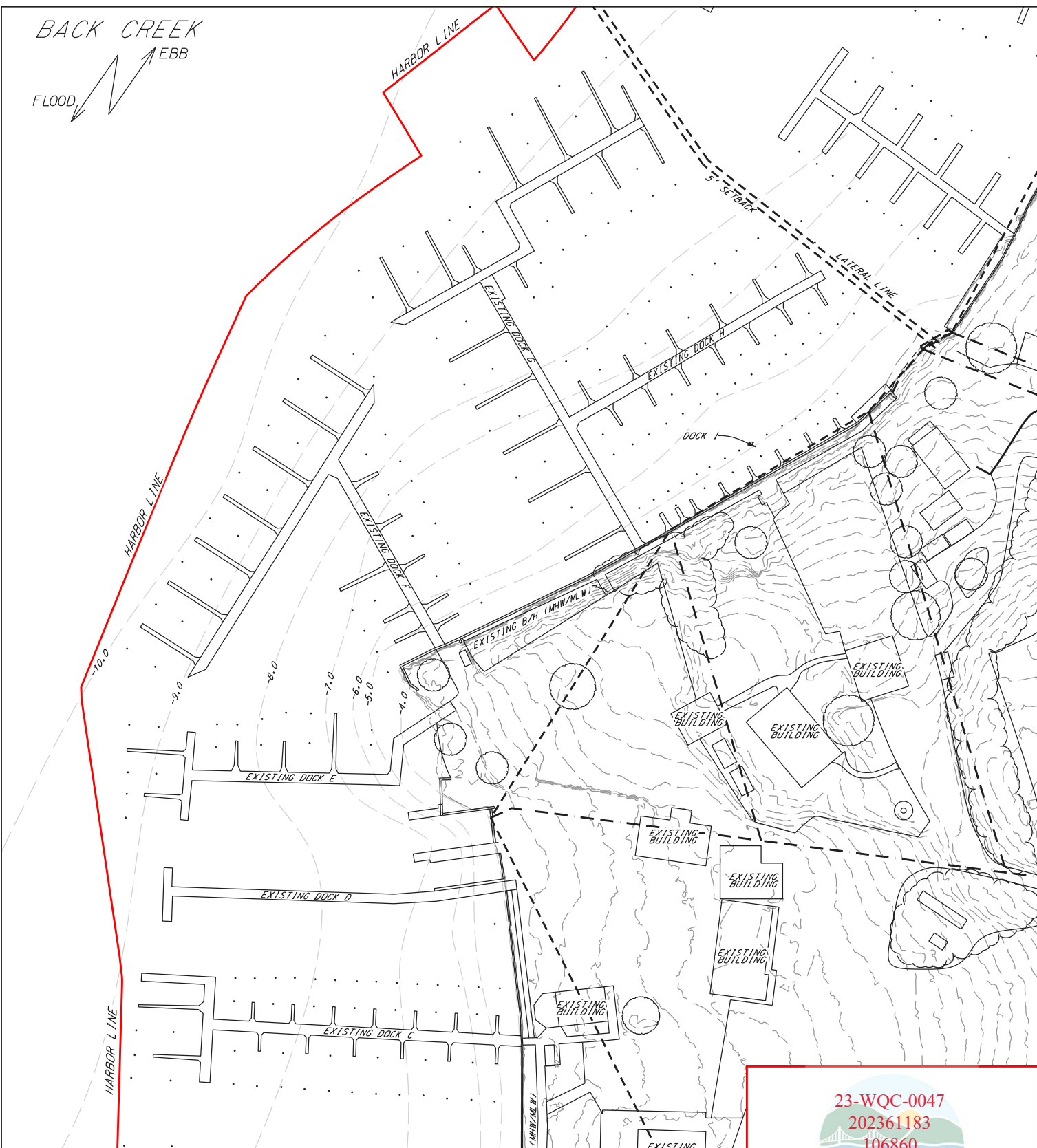
in: Back Creek
co: Anne Arundel
Application by: Port Annapolis Associates

State: Maryland
at: Bembe Beach

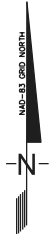
23-WQC-0047
202361183
106860
2/21/24
MT
2 of 12

NOTE: All dimensions and measurements shall be field verified by contractor.

BACK CREEK



Tax Account No.: 6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC

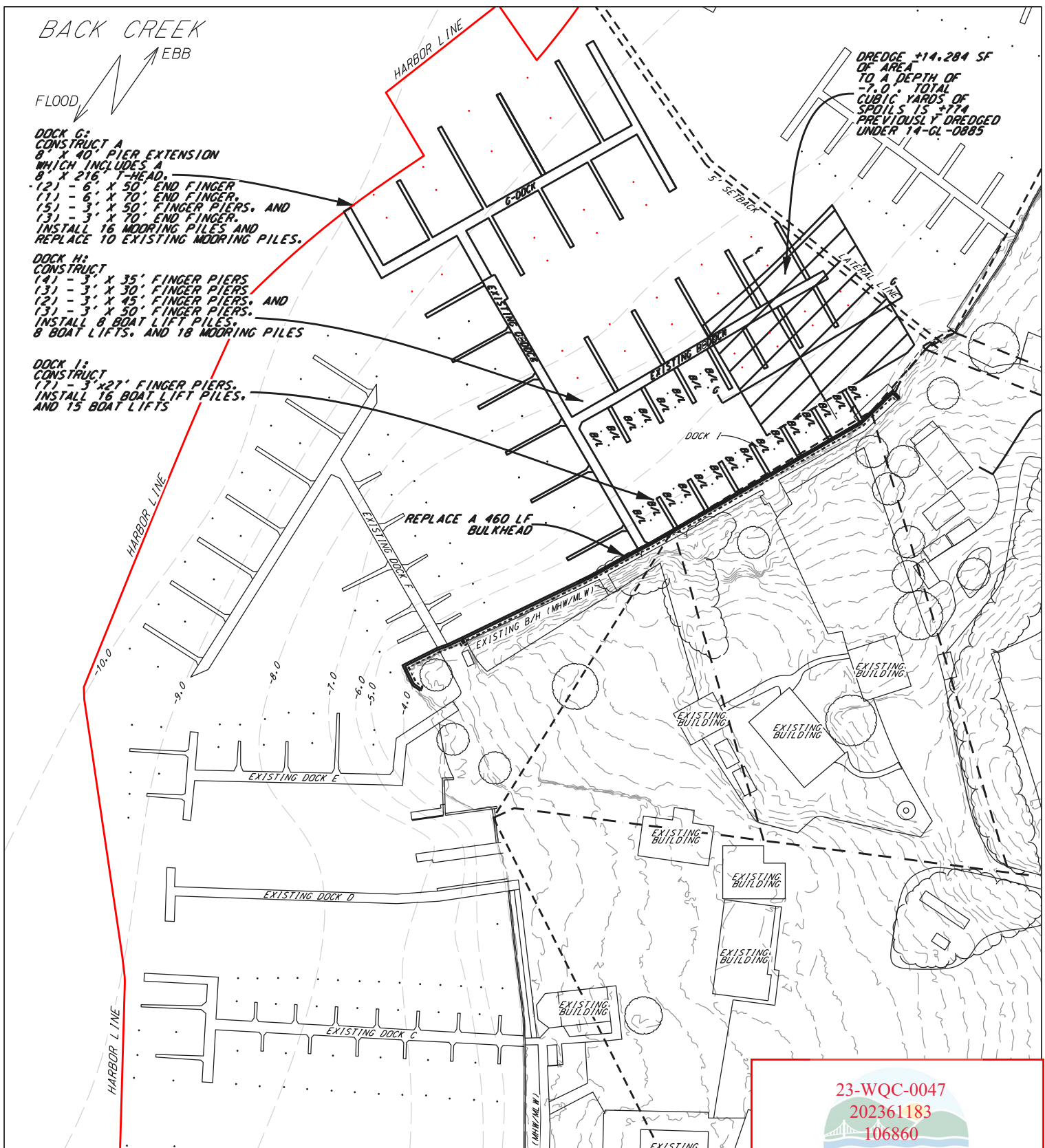


EXISTING SITE PLAN 2
SCALE: 1" = 100'
Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
(410) 798-1494
waterfrontdesign@verizon.net

PROPOSED:
Marina Work
in: Back Creek
co: Anne Arundel
Application by: Port Annapolis Associates

State: Maryland
at: Bembe Beach

NOTE: All dimensions and measurements shall be field verified by contractor.



BACK CREEK
 EBB
 FLOOD

DOCK G:
 CONSTRUCT A
 8' X 40' PIER EXTENSION
 WHICH INCLUDES A
 8' X 216' T-HEAD.
 (2) - 6' X 50' END FINGER
 (1) - 6' X 70' END FINGER.
 (5) - 3' X 50' FINGER PIERS, AND
 (3) - 3' X 70' END FINGER.
 INSTALL 16 MOORING PILES AND
 REPLACE 10 EXISTING MOORING PILES.

DOCK H:
 CONSTRUCT
 (4) - 3' X 35' FINGER PIERS
 (3) - 3' X 30' FINGER PIERS
 (2) - 3' X 45' FINGER PIERS, AND
 (3) - 3' X 50' FINGER PIERS.
 INSTALL 8 BOAT LIFT PILES,
 8 BOAT LIFTS, AND 18 MOORING PILES

DOCK I:
 CONSTRUCT
 (7) - 3' X 27' FINGER PIERS.
 INSTALL 16 BOAT LIFT PILES,
 AND 15 BOAT LIFTS

DREDGE 14,284 SF
 OF AREA
 TO A DEPTH OF
 -7.0' TOTAL
 CUBIC YARDS OF
 SPOILS IS
 PREVIOUSLY DREDGED
 UNDER 14-GL-0885

REPLACE A 460 LF
 BULKHEAD

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 106860
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 MT
 5 of 12

Tax Account No.:
 6000-9001-0863
 Tax Map: 052G
 Parcel: 284
 Deed Ref: 3004/60
 Lot: N/A
 Zoning: WMI
 Lot Size: 10.02 AC



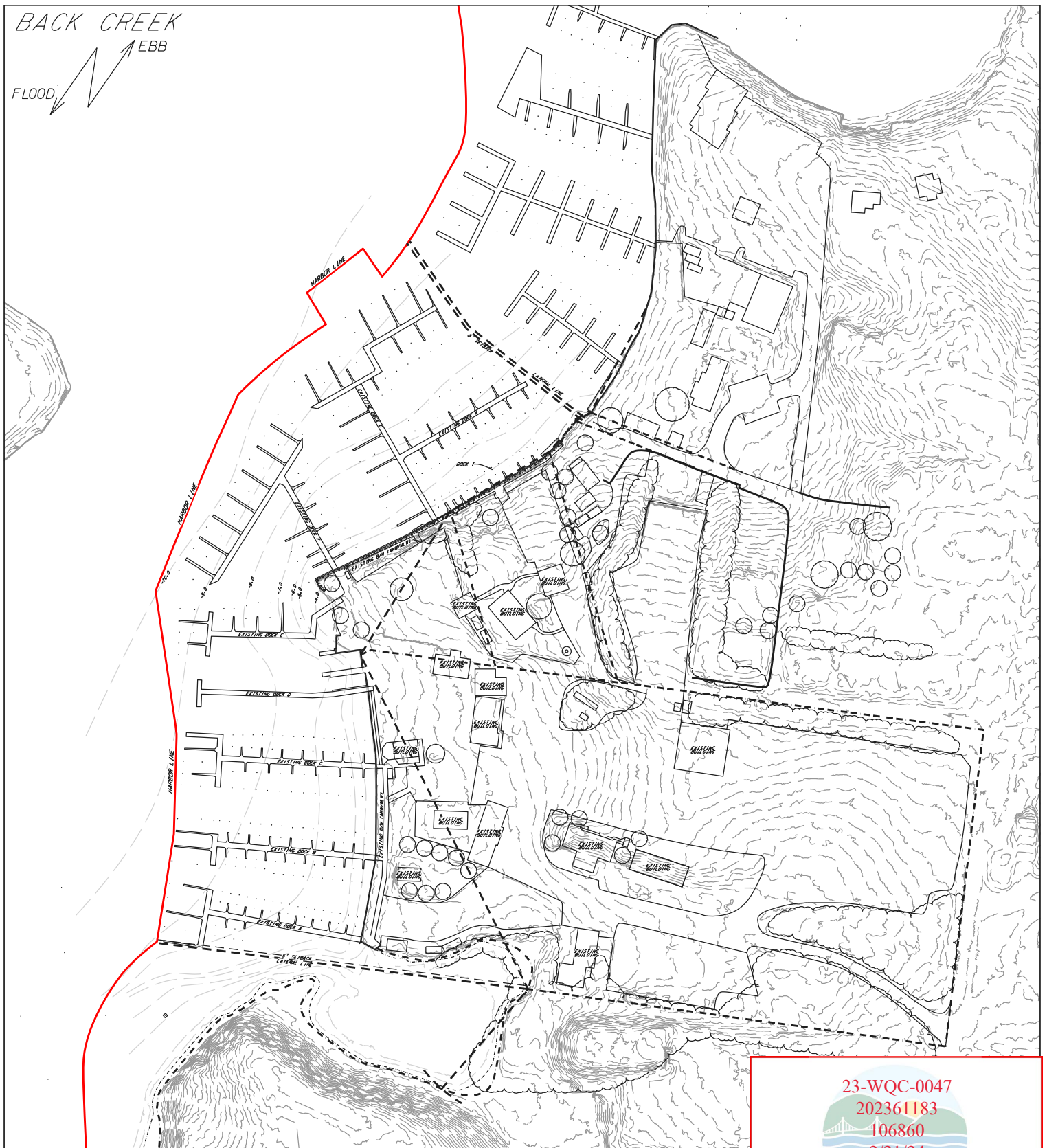
PROPOSED SITE PLAN 2
 SCALE: 1" = 100'
 Waterfront Engineering,
 Design and Construction, Inc.
 8348 Ritchie Hwy.
 Pasadena, MD 21122
 (410) 798-1494
 waterfrontdesign@verizon.net

PROPOSED:
 Marina Work
 in: Back Creek
 co: Anne Arundel
 Application by: Port Annapolis Associates

State: Maryland
 at: Bembe Beach

NOTE: All dimensions and measurements shall be field verified by contractor.

BACK CREEK



23-WQC-0047
 202361183
 106860
 2/21/24
 MT
 6 of 12

Tax Account No.:
 6000-9001-0863
 Tax Map: 052G
 Parcel: 284
 Deed Ref: 3004/60
 Lot: N/A
 Zoning: WMI
 Lot Size: 10.02 AC



LATERAL LINE PLAN
 SCALE: 1" = 200'

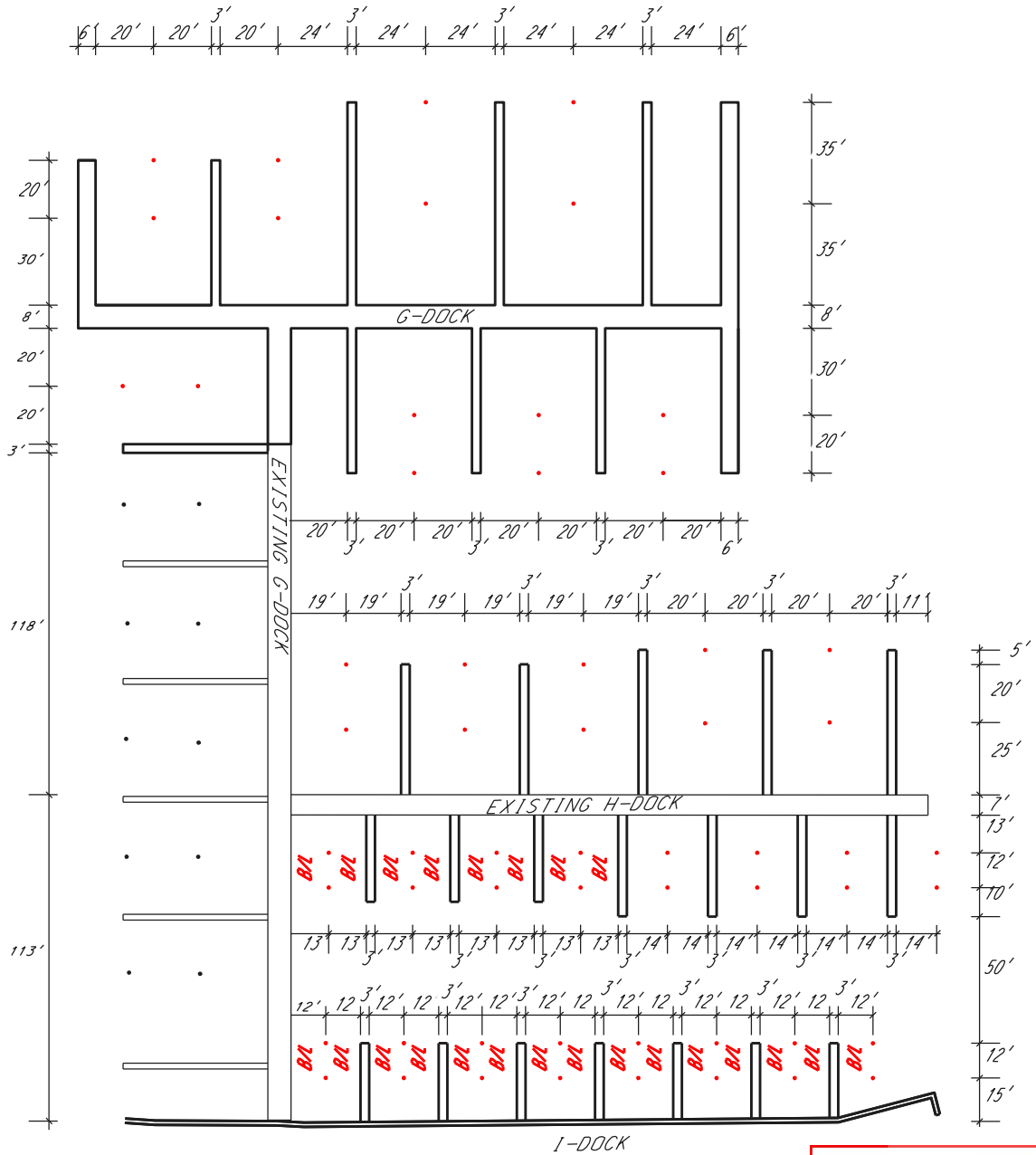
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PROPOSED:
 Marina Work

in: Back Creek
 co: Anne Arundel
 Application by: Port Annapolis Associates
 4/29/2024

State: Maryland
 at: Bembe Beach Associates

NOTE: All dimensions and measurements shall be field verified by contractor.



Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC



PIER G, H AND I DIMENSIONS
SCALE: 1" = 60'

Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
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PROPOSED:
Marina Work

in: Back Creek
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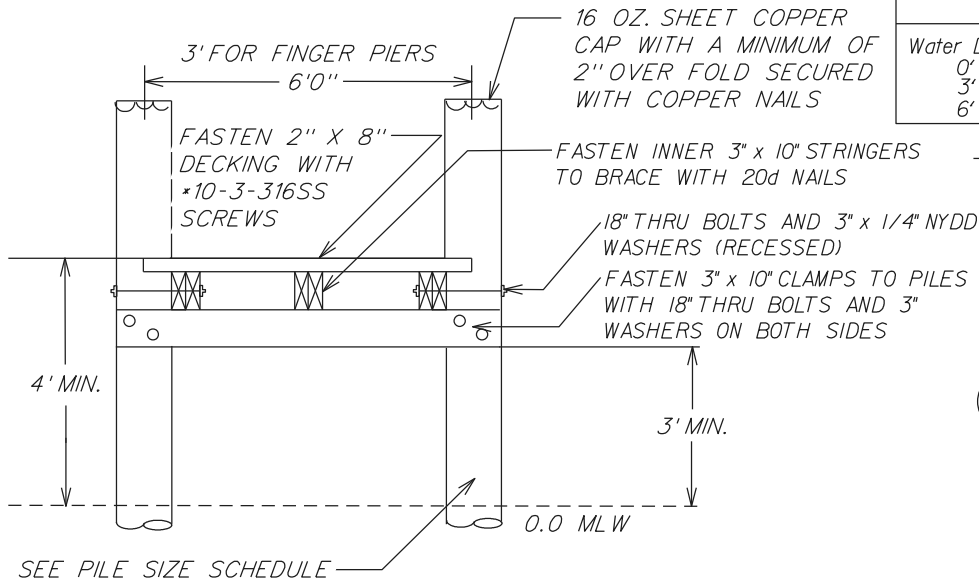
23-WQC-0047
202361183
106860
2/21/24
MT
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NOTE: All dimensions and measurements shall be field verified by contractor.

NOTE: ALL PILES MUST BE DRIVEN OR VIBRATED IN WHERE POSSIBLE.

PILE SIZE SCHEDULE

Water Depth (MLW)	Pile Diameter	Pile Length
0' - 3'	10"	30'
3' - 6'	12"	40'
6' - 9'	14"	50'



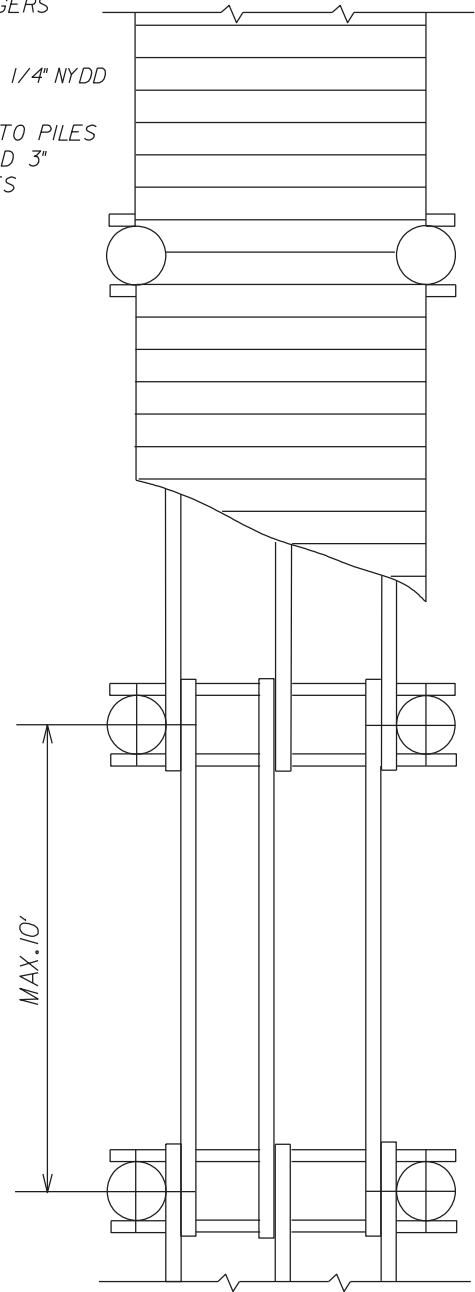
TYPICAL PIER SECTION

NOT TO SCALE

COPYRIGHT 2019

NOTES:

- All wood shall be grade #1 or better per S.P.I.B. Standards. Treatment shall be per AWWA Standards:
Piles - 2.5 lb/cu. ft. CCA Type C is required.
Stringers - 2.5 lb/cu. ft. CCA Type C is required.
Decking - 1.5 lb/cu. ft. CCA Type C is required.
- All steel hardware shall be hot dip galvanized after fabrication and must be specified for marine use.
- For pilings extending more than 6 ft. above MLW, the pile length must be increased accordingly.
- For pier widths of 3' or less a center stringer is not required unless composite decking is being utilized.
- This standard is for typical river conditions with firm granular soil. It does not take into account excessive water depth, poor soil conditions, scouring due to currents or waves, or heavy loads. Where site conditions differ the structure shall be designed and sealed by a Licensed Professional Engineer registered to practice in the State of Maryland.
- The details on this drawing are to be considered as the minimum standards for specific conditions. It shall be the responsibility of the applicant's contractor to determine if conditions require design modifications. Waterfront Engineering, Design and Construction, Inc. assume no responsibility or liability for performance of the structure on this drawing.
- All bolts to be thru bolted and recessed on outboard side. Minimum size of hardware is 1" diameter bolts with 3" x 1/4" NYDD washer and nut.
- Use #10-3-316SS screws when attaching decking to pier. Two screws on each stringer across the entire width of the pier.
- WEDC, Inc. reserves the right to prosecute violators of Federal copyright laws.



TYPICAL PIER PLAN

NOT TO SCALE

Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC

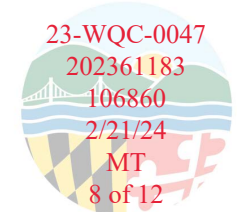
PIER DETAIL SHEET

Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
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waterfrontdesign@verizon.net

PROPOSED:
Marina Work

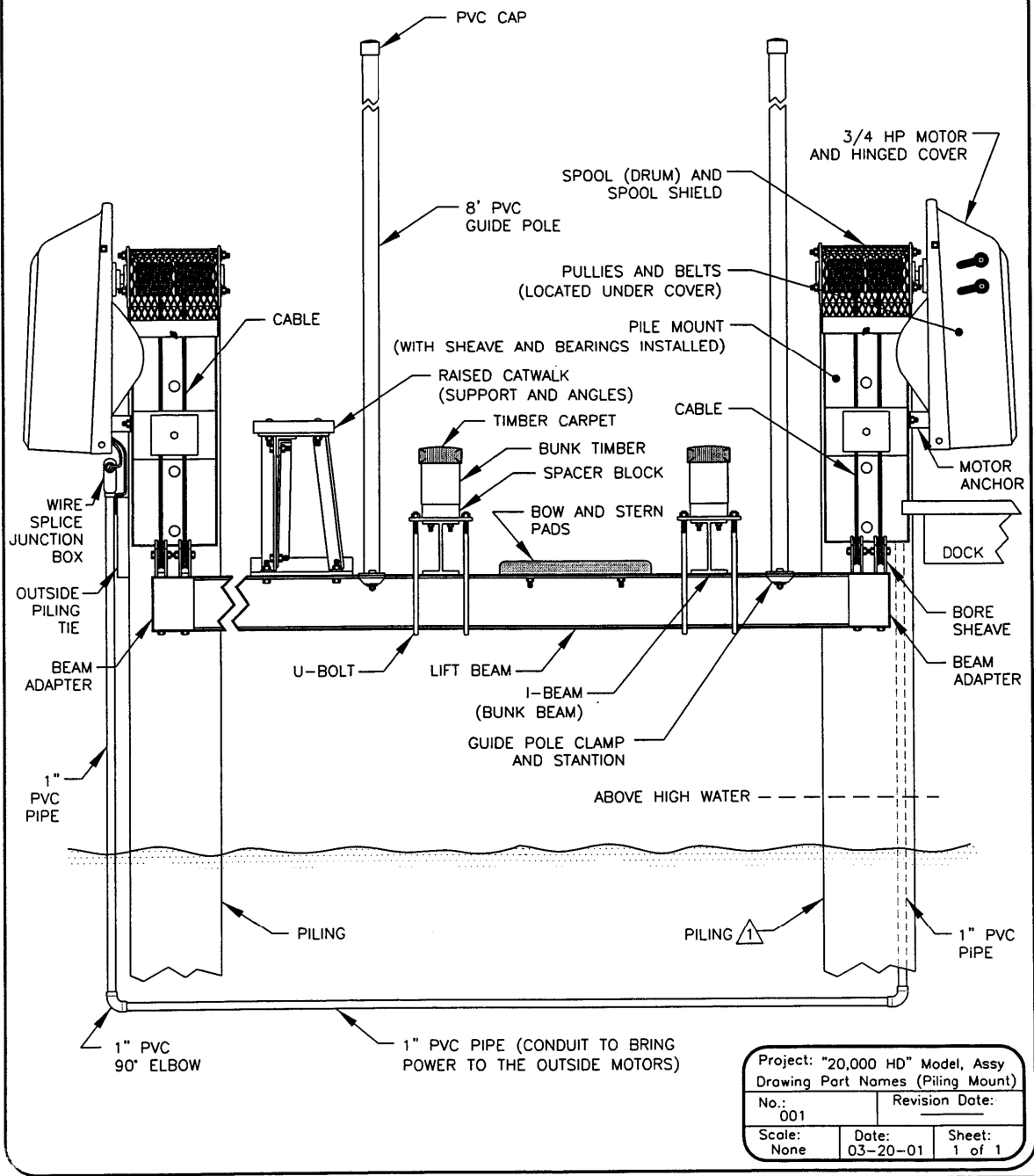
in: Back Creek
co: Anne Arunde
Application by: P

4/29/2



GENERAL NOTES:

⚠ IMPORTANT—PILINGS SHOULD BE SECURELY ANCHORED TO A SEAWALL OR INTEGRATED INTO A DOCK.



Project: "20,000 HD" Model, Assy		
Drawing Part Names (Piling Mount)		
No.: 001	Revision Date:	
Scale: None	Date: 03-20-01	Sheet: 1 of 1

TYPICAL BOAT LIFT DETAIL

Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 436,471 SF

BOAT LIFT DETAIL

Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
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(410) 798-1494
waterfrontdesign@verizon.net

PROPOSED:
Marina Work

in: Back Creek
co: Anne Arunde
Application by: Port Annapolis Associates

4/29/

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MT
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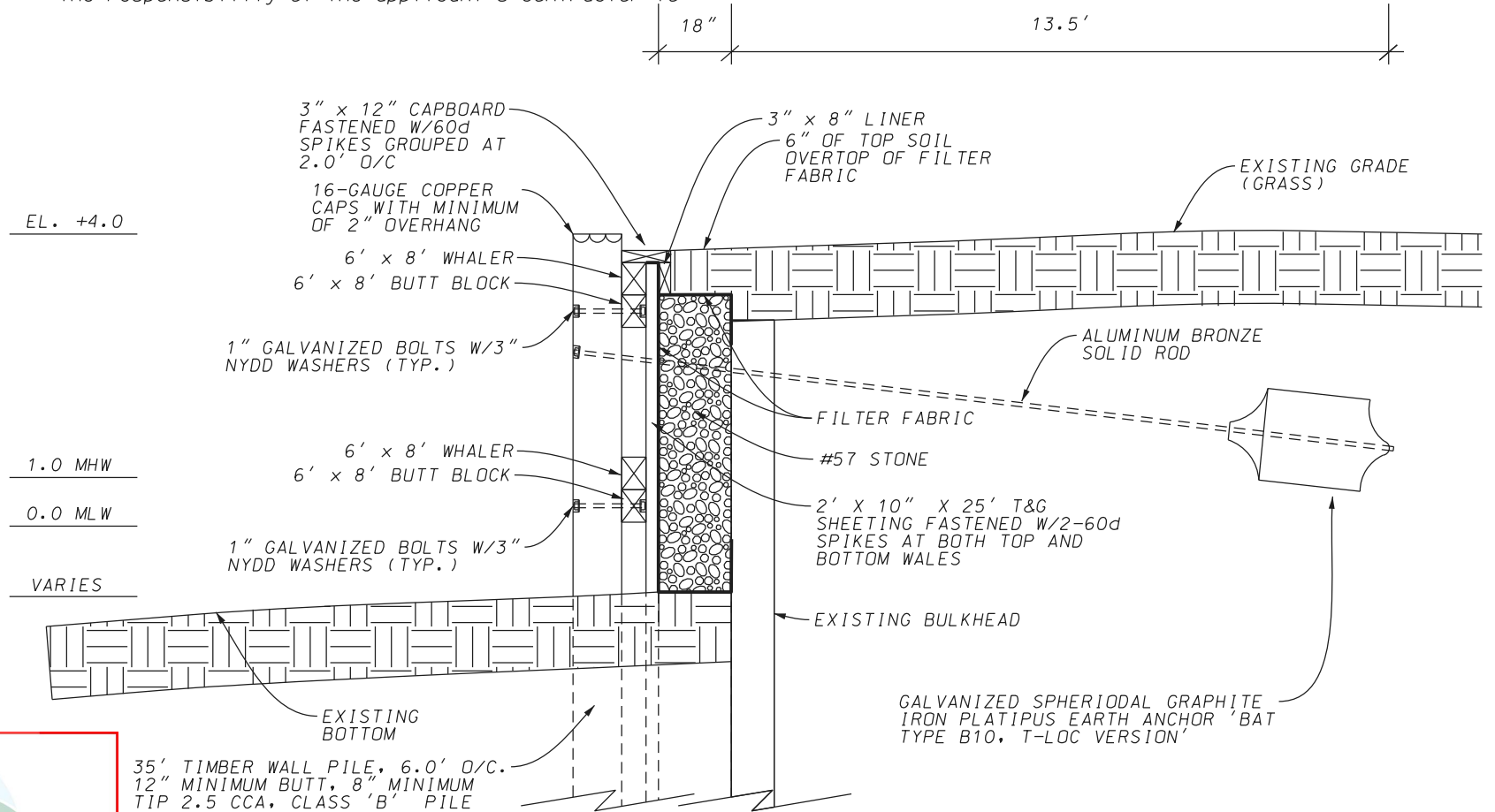
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6000-9001-0863
Tax Map: 052C
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC

**TIMBER BULKHEAD
DETAIL SHEET**
Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
(410) 798-1494
waterfrontdesign@verizon.net

**PROPOSED:
Marina Work**
in: Back Creek
co: Anne Arundel
Application by: Port Annapolis

NOTES:

1. Wood shall be grade #1 or better per S.P.I.B. Standards Treatment shall be per AWWPA Standards
(1) Piles - 2.5 lb/cu. ft. CCA Type C is required.
(2) Wales, Cap-Boards, and Sheeting - 2.5 lb/cu. ft. CCA Type C is required.
2. All steel hardware shall be hot dip galvanized after fabrication and must be specified for marine use.
3. All wall piles must be a minimum length of 35' with 12" minimum butt, 8" minimum tip, 6.0' O/C.
4. This standard is for typical river conditions with firm granular soil. It does not take into account excessive water depth, poor soil conditions, scouring due to currents or waves, or heavy loads. Where site conditions differ the structure shall be designed and sealed by a Licensed Professional Engineer registered to practice in the State of Maryland.
5. The details on this drawing are to be considered as the minimum standards for specific conditions. It shall be the responsibility of the applicant's contractor to
5. Continued: determine if conditions require design modifications. Waterfront Engineering, Design and Construction, Inc. assume no responsibility or liability for performance of the structure on this drawing.
6. All bolts to be thru bolted and recessed on outboard side. Minimum size of hardware is 1" diameter bolts with 3" x 1/4" NYDD washer and nut.
7. Use 60d spikes for attaching sheeting to wales and 20d nails to attach cap to wales.
8. All piles must be driven or vibrated in where possible
9. Use minimum of 16 gauge copper w/2" overlap for wall pile caps.
10. All existing plumbing and electric to be extended through new bulkhead.
11. This is not an engineered or sealed construction detail. This detail is for general permitting purposes only.



TYPICAL REPLACEMENT BULKHEAD SECTION (PLATIPUS ANCHORS)

NOT TO SCALE

23-WQC-0047

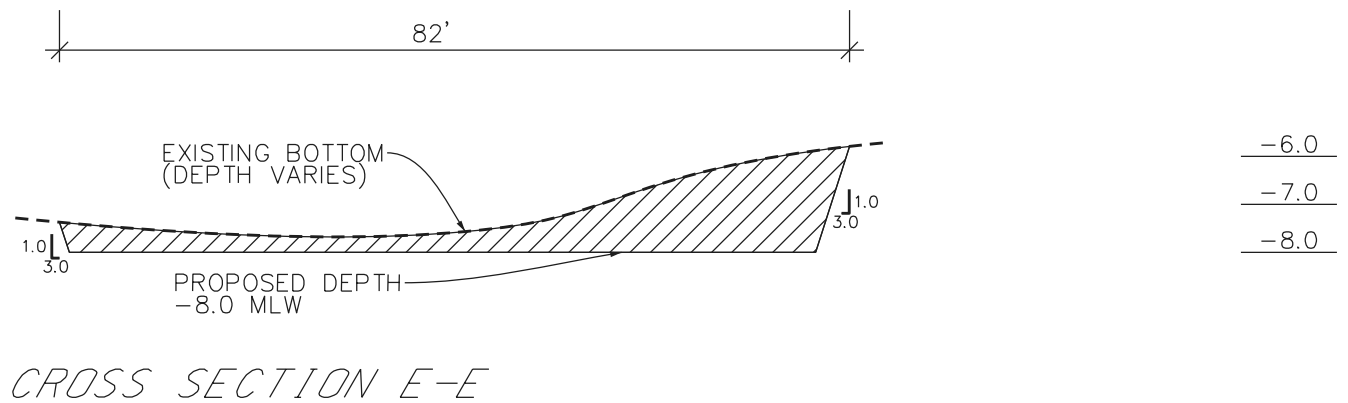
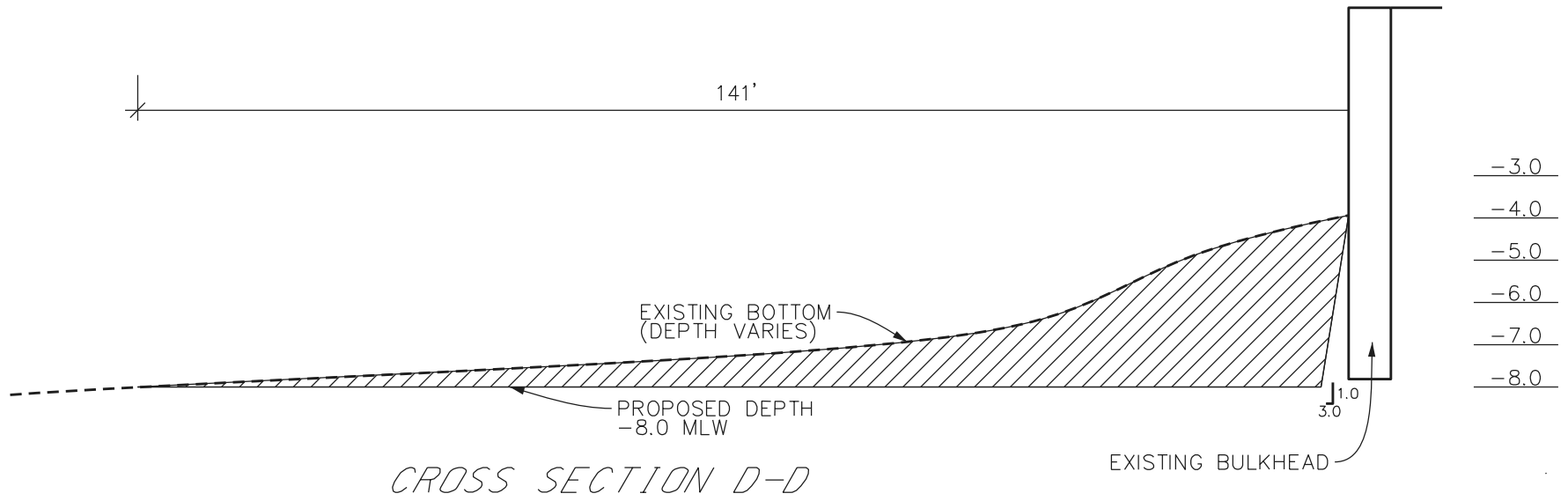
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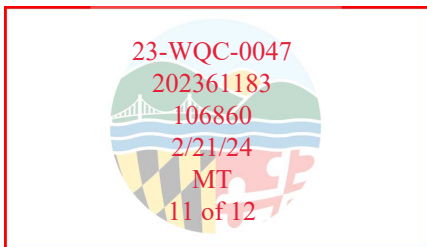
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DREDGING CROSS SECTIONS

Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
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Lot: N/A
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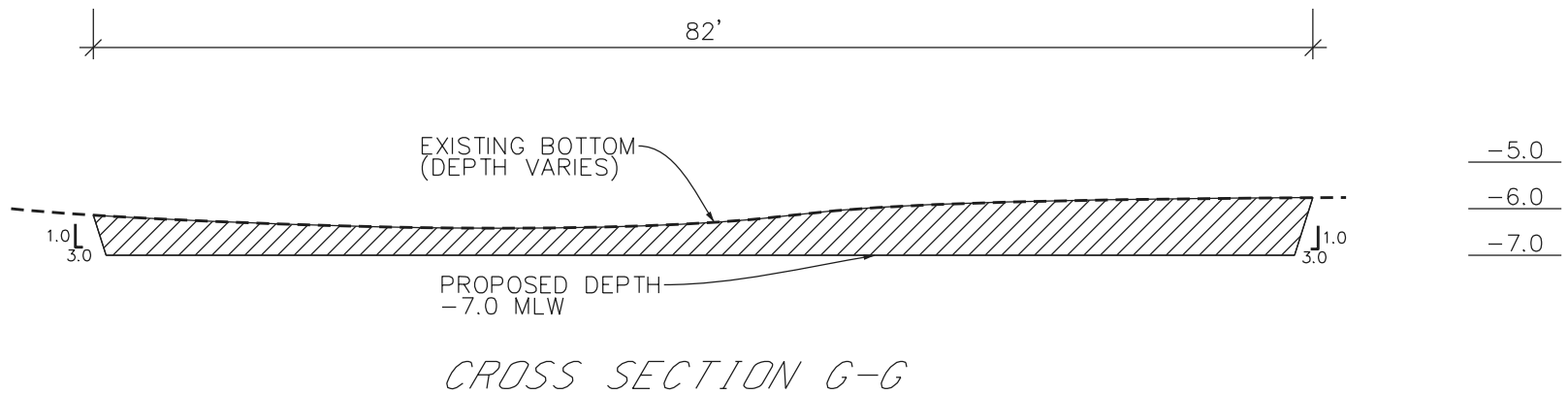
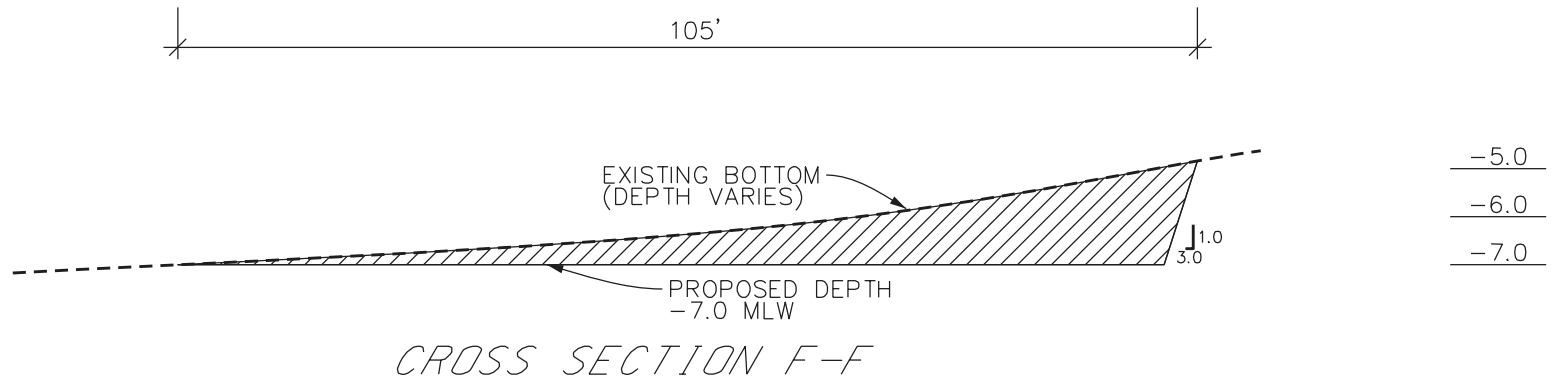


DREDGING CROSS
SECTION D-D AND E-E
Waterfront Engineering,
Design and Construction, Inc.
8348 Ritchie Hwy.
Pasadena, MD 21122
(410) 798-1494
waterfrontdesign@verizon.net

Marina Work

in: Back Creek
co: Anne Arundel
Application by: Port Annapolis Associates

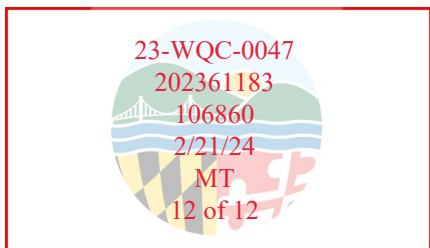
State: Maryland
at: Bembe Beach



DREDGING CROSS SECTIONS

NOT TO SCALE

Tax Account No.:
6000-9001-0863
Tax Map: 052G
Parcel: 284
Deed Ref: 3004/60
Lot: N/A
Zoning: WMI
Lot Size: 10.02 AC



DREDGING CROSS
SECTION F-F AND G-G

Waterfront Engineering,
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8348 Ritchie Hwy.
Pasadena, MD 21122
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waterfrontdesign@verizon.net

PROPOSED:
Marina Work

in: Back Creek
co: Anne Arundel
Application by: Port Annapolis Associates

State: Maryland
at: Bembe Beach