

DIVISION 2 - SITE WORK SECTION 02230- MECHANICAL DREDGING

Part 1 - General

1-1 Scope:

- A. The work to be done under this Section includes furnishing all labor, materials, tools, equipment, superintendence, transportation, and performing all work in strict accordance with these Specifications and Drawings for mechanically dredging the designated area including transporting the dredged material to the designated Dredged Material Placement (DMP) site.
- B. The Contractor shall adhere to the terms of the various permits and approvals issued to this project. This shall include permits and approvals from U.S. Army Corps of Engineers (USACE), Maryland Department of the Environment (MDE), Worcester County (Owner), and any other applicable permits.
- C. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to work. If the Contractor observes that the Specifications and/or Drawings are at variance therewith, he will give the Owner prompt written notice thereof. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he will bear all costs arising therefrom.
- D. Definitions: "Dredging" consists of removal of material riverward of the high tide line and subsequent disposal of materials removed. "Excavation" consists of removal of material landward of the high tide line encountered to elevations specified and subsequent disposal of materials removed.
- E. Included elsewhere in these Specifications are copies of construction permits which are required to be available at the construction site. They are included for the Contractor's convenience, compliance and guidance, but the engineering sketches and notes are approximate and suitable only for permit purposes and the Contractor shall attach no significance to volumes mentioned in these permits, but shall compute his own.
- F. Related Documents: The general provisions of the Contract and all applicable supplements and addenda pertaining thereto apply to this section.

Part 2 - Products

None

Part 3 - Execution

3-1 Dredged Material Placement (DMP) Site:

- A. **General** - The Contractor shall provide all labor, material and equipment necessary to transport and place the dredged material at the DMP site.
- B. The Contractor shall ensure the adequacy of the approved existing DMP site.
- C. The Contractor shall maintain the structural integrity of the existing structures to remain at all times. Trucks hauling the dredged material to the DMP site shall have sealed beds to prevent leakage of dredged material on the roads. All costs associated for transporting the dredged material to the DMP site shall be borne by the Contractor.
- D. If the Contractor elects to use a DMP site other than that designated, he shall pay all costs associated with the site relocation and notify the USACE and MDE of the change at no additional cost to Owner.

3-2 DREDGING:

- A. **Stakeout**: The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, material and labor as may be required to layout any part of the work. The channel will be staked by the Contractor to square cut or to bottom width, selected at the Contractor's discretion. The Contractor shall be held responsible for the execution of the work to such lines and grades as indicated by the Plans. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established until authorized to remove them. If such marks are destroyed by the Contractor or through his negligence, prior to their authorized removal, they shall be replaced by the Contractor at his expense.
- B. **Depth**: The area specified on the drawings shall be dredged in such a manner that, upon completion of the Contract work, check surveys conducted by the Owner or the Owner's Representative, shall show the minimum depth required by the Plans. **It shall be the Contractor's responsibility to verify character, quantity and quality of the material to be dredged before submitting a proposal.** The dredged material quantities shown in the documents are approximations only and differences between those and the Contractor's measured quantities shall not be cause for a cost extra. Depths and elevations shall be measured from Mean Low Water (MLW) datum with MLW datum understood to mean zero depth and zero elevation. A dredge site bench mark (B.M.) will be provided prior to work commencing and will be related as closely as is possible to MLW datum. The Contractor shall understand before submitting his bid that this bench mark shall be the sole datum for measuring the Contract work and that no other bench marks which may be found in the area shall be used. To cover the inaccuracies of the dredging process, the Contractor may elect to dredge deeper than the required minimum depth. It shall be understood that the Contractor has included this excess in his lump sum base bid and that no additional payment shall be allowed. Overdredging shall be limited to six (6") inches maximum. Should the Contractor dredge to a depth greater than that shown on the plans in the vicinity of any existing and/or proposed structures, he shall be responsible for any costs required to construct a stronger structure than those specified on the contract drawings resulting from the excessive dredging.
- C. **Side Slopes**: The basin and channel shall be dredged to the bottom depth, width and length specified on the design drawings. The side slopes shall be dredged to or allowed to slough to produce a resultant rise from the dredged bottom on a slope no steeper than one foot vertically to three feet horizontally.
- D. **Obstruction of River and Basin**: The Owner will not undertake to keep the area free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of the Rivers and Harbors Appropriation Act of 1899 as amended. The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible. In case the Contractor's equipment so obstructs the waterway as to make it difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such extent as may be necessary to afford a practicable passage. Upon completion of the work, the Contractor shall promptly remove his equipment, including ranges, buoys, piles and other markers placed by him under the Contract in navigable water or on shore.
- E. **Signal Lights**: The Contractor shall display signal lights and conduct his operations in accordance with the General Regulations of the Department of the Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, excavators, and vessels engaged in submarine or bank protection operations, lights and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable channels, as approved by the Secretary of the Army, (Title 33 C.F.R. 201.1-201.16) and the Commandant, U.S. Coast Guard, (Title 33 C.F.R. 80.18-80.31a and 95.51-95.70).
- F. **Misplaced Equipment**: Should the Contractor, during the progress of the work, lose, dump, throw overboard, sink, or misplace any equipment, machinery, or appliance, which in the opinion of the Owner or Owner's Representative may be dangerous to or obstruct navigation, the Contractor shall remove the same with the utmost dispatch. The Contractor shall give immediate notice with description and location of such obstructions, to the Owner or Owner's Representative, and shall mark or buoy such obstructions until the same are removed. Should he refuse, neglect, or delay compliance with the above requirements, such obstructions may be removed by the Owner, and the cost of such removal may be deducted from any money due or to become due to the Contractor, or may be removed under his bond. The liability of the Contractor for the removal of a vessel wrecked or sunk without fault or negligence shall be limited to that provided in Sections 15, 19 and 20 of the River and Harbor Act of March 3, 1899.

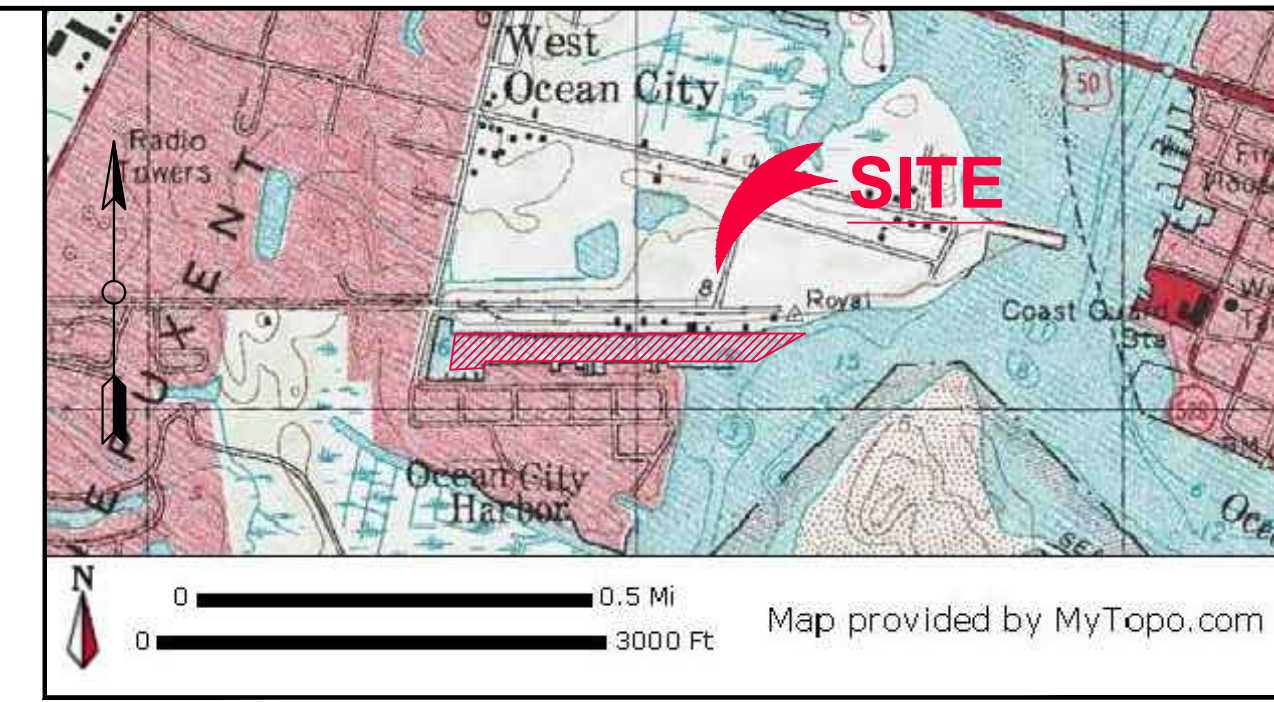
G. **Inspection**: The work is subject to inspection by the Owner or Owner's Representative as provided in the Contract, but the presence of the inspector shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications. The Contractor will be required:

- 1. To furnish, on the request of the Owner or Owner's Representative, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the plant as may be reasonably necessary in inspecting, examining partially completed work.
  - 2. To furnish, on the request of the Owner or Owner's Representative, suitable transportation from all points on shore designated by the Owner to and from the various pieces of plant. Should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Owner and the cost thereof will be deducted from any amounts due or to become due to the Contractor.
- H. **Final Examination and Acceptance**: The dredged area shall have a finished bottom depth as specified on the Contract Drawings. This shall be checked by a bathymetric survey performed by the Owner after completion of the dredging work and prior to final payment for dredging. It shall be the Contractor's responsibility to contact the Owner or Owner's Representative at least five (5) business days prior to the post dredge survey. In the event that a side slope has not been completely formed from a vertical cut by the time the Contract Work has been completed, and prior to the final payment, the Owner or Owner's Representative shall be the judge as to the sufficiency of the vertical cut to allow eventual slumping of this particular type of bottom material without encroachment on the channel or basin. When the site and the vicinity of the work are found to be in satisfactory condition and disposal has been completed in accordance with these Specifications, the dredging will be accepted finally.

Part 4 - MEASUREMENT:

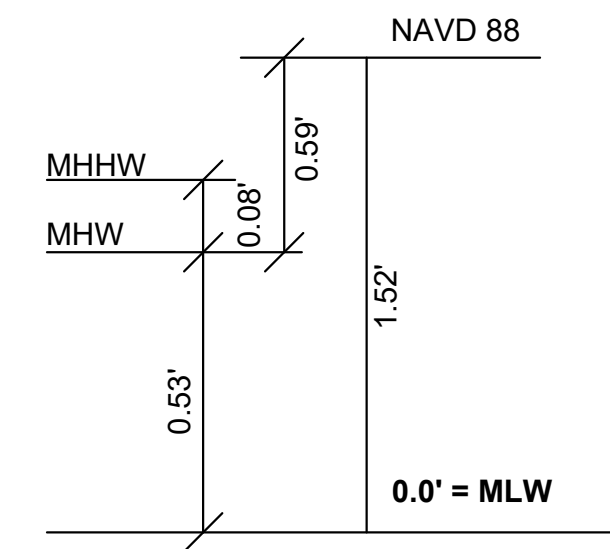
No measurement for payment for this item of work will be made, since the cost shall be included in the lump sum base bid.

# COMMERCIAL HARBOR DREDGING



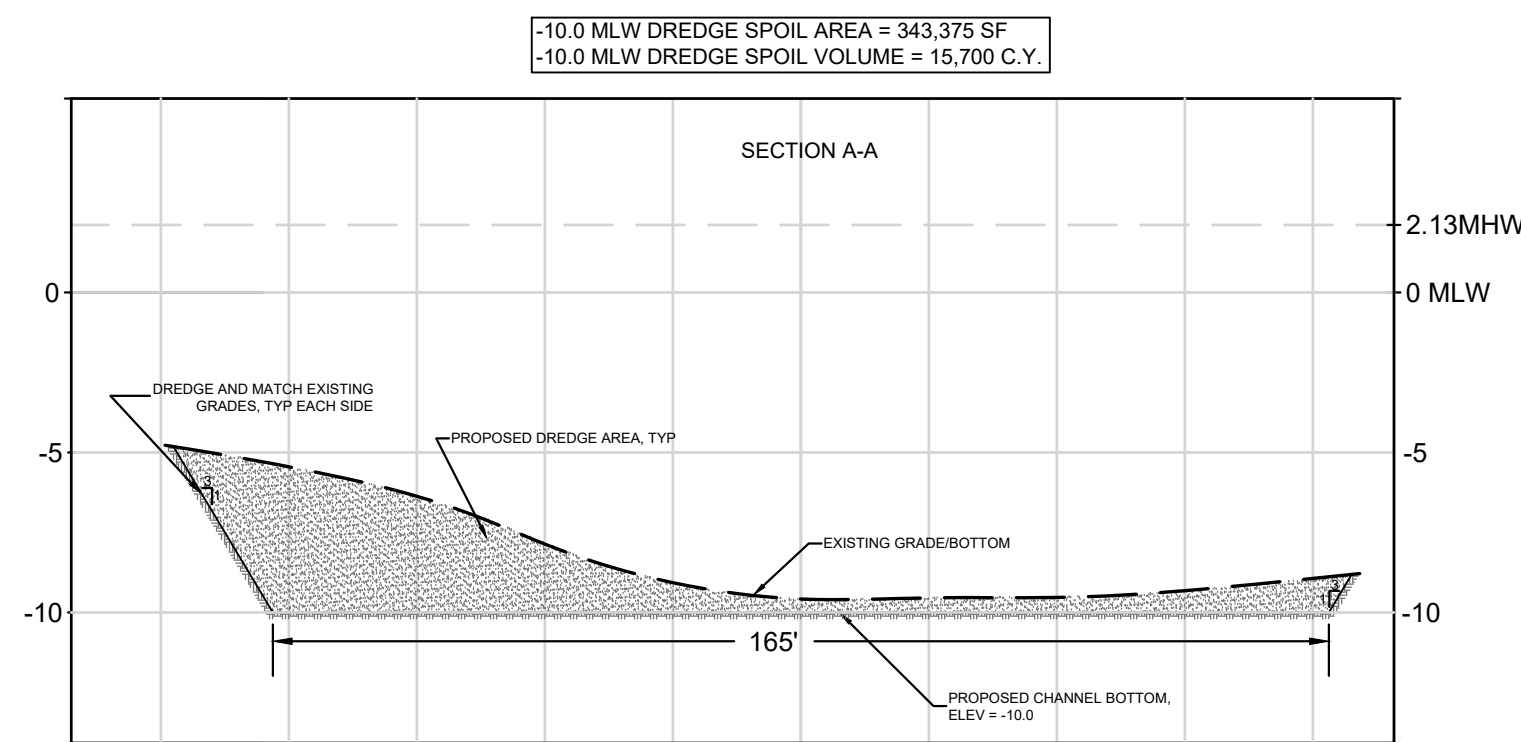
SHEET INDEX:

- C1 COVER / SPECIFICATIONS / DETAILS
- C2 OVERALL DREDGE PLAN



DATUM COMPARISONS  
SCALE: NONE

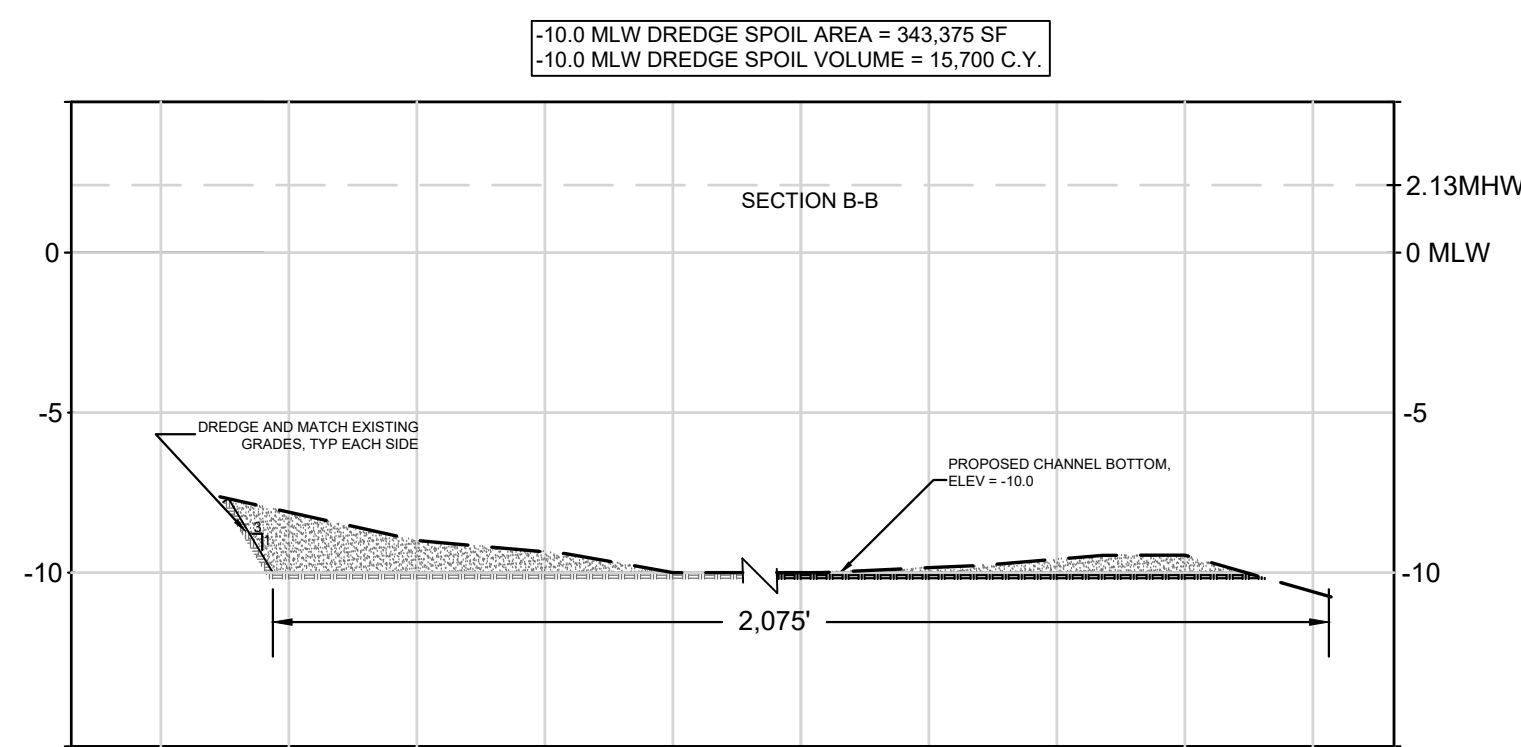
DATUM COMPARISONS WERE OBTAINED FROM NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) INFORMATION INTERPOLATED FROM STATION ID# 8570649.



SCALE

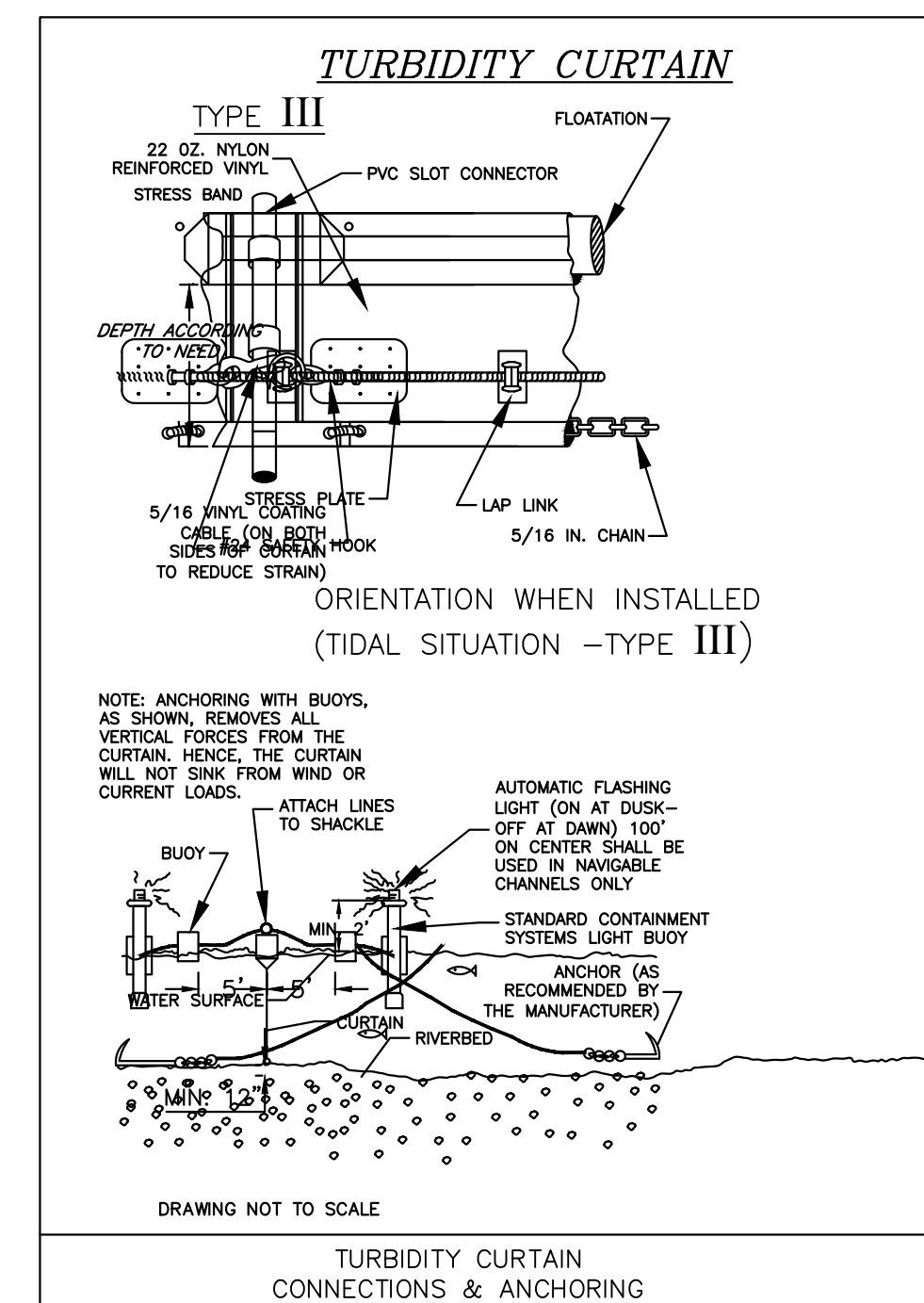
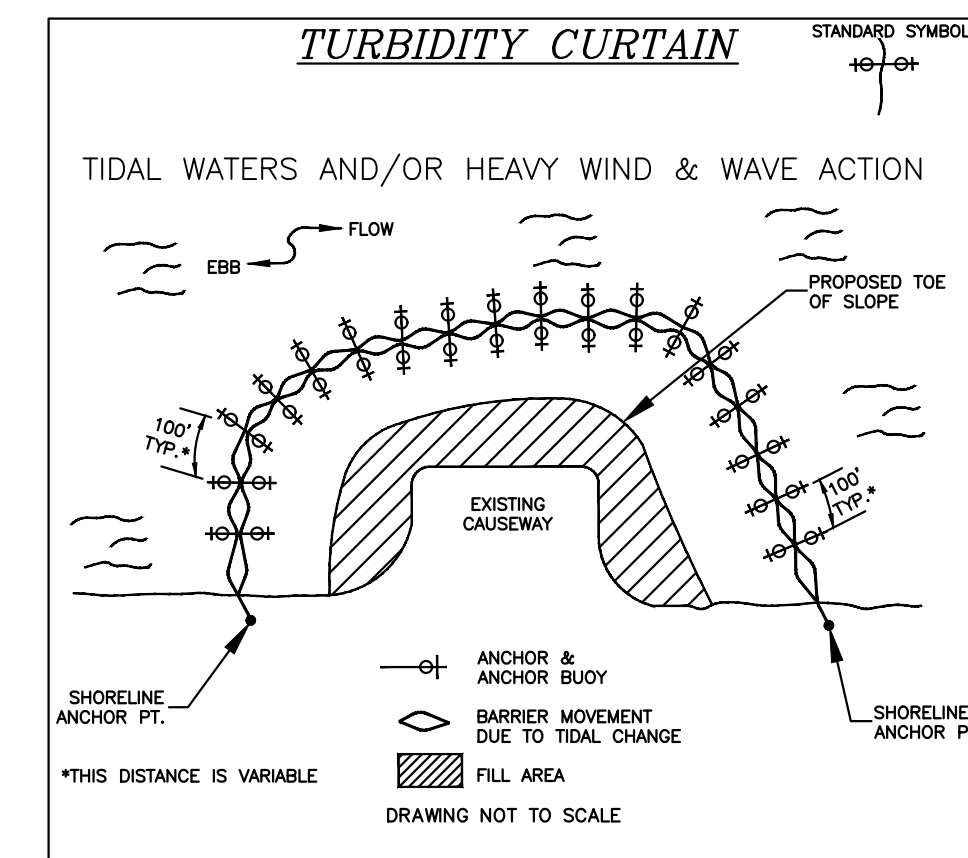
H: 1"=30'

V: 1"=6'



TURBIDITY CURTAIN:

1. INSPECT DAILY AND REPAIR IF NECESSARY.
2. REMOVE ANY FLOATING CONSTRUCTION OR NATURAL DEBRIS IMMEDIATELY TO PREVENT DAMAGE.
3. IF NECESSARY, REMOVE SEDIMENT DEPOSITED BEHIND THE CURTAIN BY HAND PRIOR TO REMOVAL.
4. REMOVE CURTAIN CAREFULLY PULLING IT TOWARDS THE CONSTRUCTION SITE TO MINIMIZE THE RELEASE OF ATTACHED SEDIMENT.



GENERAL NOTES:

1. VERTICAL DATUM IS MEAN LOW WATER (MLW).
2. MEAN TIDAL RANGE VARIES.
3. HYDROGRAPHIC INFORMATION BASED ON FIELD DATA COLLECTED IN MAY 2023.
4. PROPOSED CHANNEL TO BE MECHANICALLY DREDGED PER CHANNEL CROSS-SECTIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF THE PLACEMENT OF DREDGED MATERIAL AS SPECIFIED IN WATERTIGHT TRUCKS.
5. ALL CONSTRUCTION CONDUCTED WATERWARD OF THE MEAN HIGH WATER (MHW) LINE SHALL BE PERFORMED BY A MARINE CONTRACTOR WHO IS REGISTERED WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN ACCORDANCE WITH SECTION 17-301 OF THE ENVIRONMENTAL ARTICLE, ANNOTATED CODE OF MARYLAND.

**J. STACEY HART & ASSOCIATES, INC.**

**JSH ENGINEERING**

POST OFFICE BOX 6  
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PHONE: 410-390-8096  
EMAIL: stacey@staceyhart.com

REVISIONS	DATE	REVISED FOR:

**WEST OCEAN CITY HARBOR PROPOSED DREDGING**

SUNSET AVENUE/HARBOR ROAD  
WEST OCEAN CITY  
WORCESTER COUNTY

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THIS STATE.

LICENSE NO: MD 22798  
EXPIRATION DATE: AUGUST 10, 2024

06/09/2024

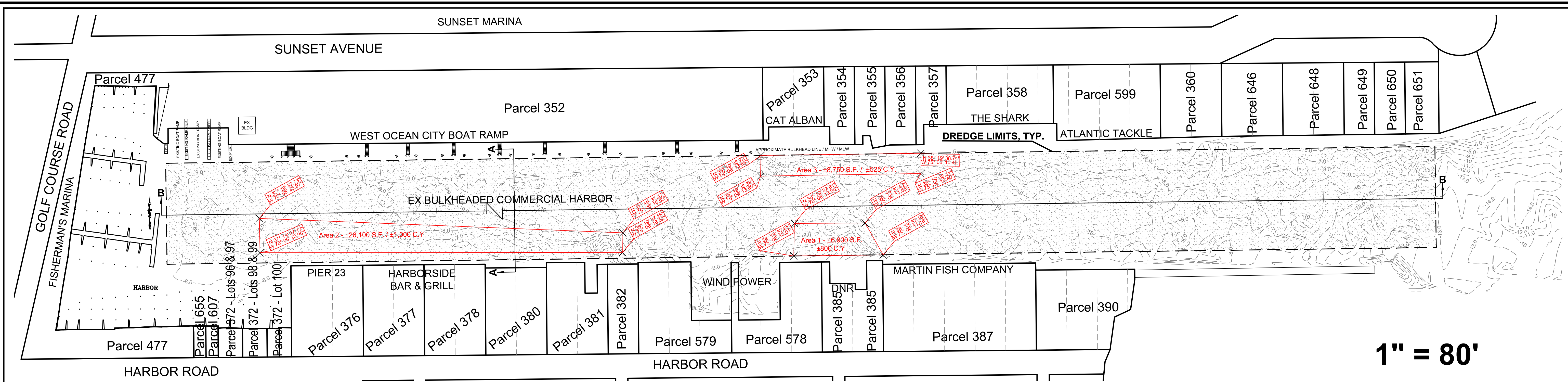
**COVER**

DRAWN BY: j.s.h.      DATE: 05/2024

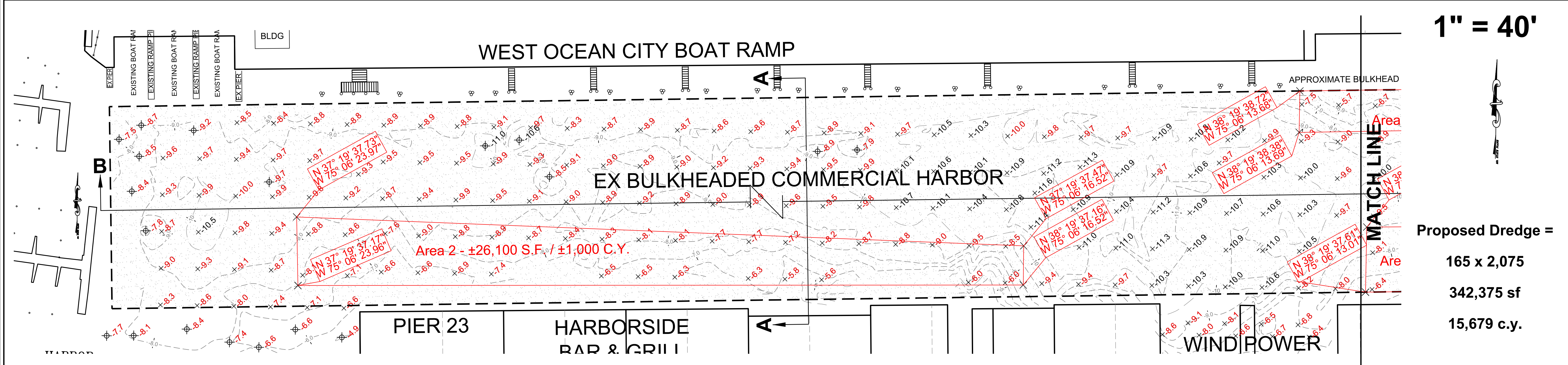
JOB NUMBER: 2023-021

SCALE: NONE

1 of 2

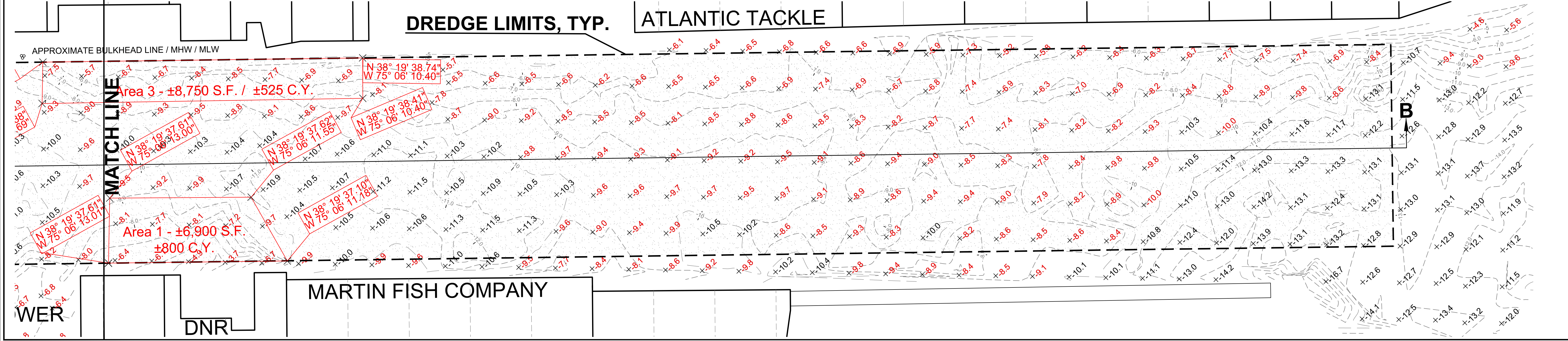


1" = 80'



1" = 40'

Proposed Dredge =  
 165 x 2,075  
 342,375 sf  
 15,679 c.y.



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 PROPOSED DREDGING**  
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**OVERALL DREDGE PLAN**

DRAWN BY: j.s.h.	DATE: 05/2024
JOB NUMBER: 2023-021	2 of 2
SCALE: AS NOTED	