Wetlands and Dune Board

Public Hearing Agenda

February 29, 2012
6:00 P.M.

1. **Call to Order; Roll Call**

2. **Consent Agenda**
   A. Approval of Agenda Format
   B. Approval of Minutes

3. **Hearings on the matters of:**

   A. Review of Wetlands and Dune Board Jurisdiction and Procedures

   B. *Robert Rea, et al, JPA #12-0059* – 3 section breakwater and beach nourishment
      - Overview of application
      - Applicant's presentation
      - Public comment
      - Wetlands and Dune Board discussion/deliberation
      - Decision

   C. *Gamesa, JPA #12-0149* – Wind Turbine and submarine cable to Cape Charles Harbor
      - Overview of application
      - Applicant's presentation
      - Public comment
      - Wetlands and Dune Board discussion/deliberation
      - Decision

4. **Adjourn**

DRAFT
Wetlands/Coastal Dune Board
Public Hearing & Meeting
Town Hall
April 4, 2011
5:00 p.m.

At 5:02 p.m. in the Town Hall, Chairwoman Ann Hayward Walker called to order the Wetlands/Coastal Dune Board Public Hearing and Meeting. In attendance were board members Wayne Creed, Russ Dunton and Jim Weiner. Bruce Lindeman was unable to attend. Also present were Town Planner Tom Bonadeo, Town Clerk Libby Hume, Tom Langley from Langley & McDonald, Hank Badger from the VMRC and the applicants Maureen Bosheir and Robert Rea. There were two (2) members of the public in attendance.

CONSENT AGENDA

Motion made by Russ Dunton, seconded by Wayne Creed and unanimously approved to accept the agenda format as presented.

The Board reviewed the minutes from the August 6, 2009 Public Hearing and Meeting.

Motion made by Wayne, seconded by Jim Weiner and unanimously approved to accept the minutes as presented.

Ann Hayward Walker stated that the purpose of the Public Hearing was to hear public comments regarding the Joint Permit Application for Robert Rea, et al. to extend the existing offshore breakwater and beach nourishment to prevent further beach erosion of the Bay Vistas property.

PUBLIC COMMENTS
There were no comments to be heard nor were there any written comments submitted prior to this meeting.

Ann Hayward Walker asked Tom Langley to give an overview of the project.

Tom Langley stated that Bay Vistas was just outside the protection of the existing breakwaters which were installed by Bay Creek. There were three (3) properties along the shoreline and the property owners were the applicants. An interagency meeting was held on the site and the agencies represented were the Corps of Engineers, Virginia Marine Resources Commission (VMRC), Virginia Institute of Marine Science (VIMS), the US Fish & Wildlife Service and the Town of Cape Charles. Tom Langley reviewed two breakwater options provided by Scott Hardaway from VIMS. The first option suggested an additional breakwater be built, alongside the existing ones built by Bay Creek, with beach fill behind it with a revetment, and considered the entire area but Sea Breeze was not a party to this application. The three (3) property owners were looking to protect their beach and opted for the second option which suggested a breakwater more inshore and beach nourishment. The second option was also less costly than the first.

Tom Langley went on to explain that the US Fish & Wildlife Service was entitled to 135 days for research regarding the effect of the project on the wildlife in the area and it was expected that construction of the breakwater could not begin until after September 15th which was the end of the tiger beetle season.

Tom Bonadeo read the VIMS Recommendations Summary as follows:

- Verify submerged aquatic vegetation (SAV) habitat condition in breakwater footprint.
- Construct breakwater with sand fill as proposed if SAV habitat will be avoided.
- Allow sand fill to equilibrate before planting beach grasses.
- Restore vegetation buffer in riparian area.

Tom Bonadeo added that after the pre-application meeting, the US Fish & Wildlife Service now viewed the beach nourishment as a good thing in that it would promote the tiger beetle population. Also, the grain size of the sand was not as important anymore because it had been determined that tiger beetles could be found in sand of various grain sizes.

Tom Langley concluded by stating that the intent of the applicants was to have everything ready to begin construction as of September 15, 2011.

Ann Hayward Walker closed the Public Hearing portion of the meeting at approximately 5:15 p.m.

BOARD DISCUSSION

Tom Bonadeo stated that the owners of Sea Breeze had visited their property and had contacted the USDA, who is the mortgage holder for the Sea Breeze Apartments, for financial assistance to do something to stop the erosion. The USDA was interested in preserving the shoreline for this property which was mortgaged until 2033. A similar application was expected to be received from the owners of the Sea Breeze property.

Tom Bonadeo continued to state that the adjacent properties have eroded substantially and the top of the bank was now inside the Sea Breeze property and Mr. Robert Schlegel had lost a significant amount of his property.

Tom Bonadeo went on to state that no comments were received from any of the adjacent property owners.

Russ Dunton stated that the shoreline had been eroding his entire lifetime and a lot of shoreline had been lost over the last 50 years. It would have been great if the original breakwaters would have come around the beach to protect the entire area but since they did not, something needed to be done to protect these properties from further erosion.

Hank Badger asked how the applicants addressed the adjacent property owners who would get beach nourishment on their properties.

Ann Hayward Walker stated that she had spoken to Monika Bridgeforth, who was not able to attend this evening, and she did not express any objections to this plan.

Tom Bonadeo stated that he had spoken with Robert Schlegel and did not receive any negative comments. Mr. Schlegel had an oyster lease on his property and this project would not affect his oyster grounds.

Russ Dunton added that the adjacent property owners would benefit from the beach nourishment and in his opinion, the applicants were doing what VIMS and the VMRC wanted so he had no problem with the application.

Wayne Creed stated that he preferred the first option and expressed his concern for the area outside the breakwater area and asked how it would affect the Sea Breeze property with only one breakwater section being added. Ann Hayward Walker responded that the owners of Sea Breeze had been notified, made aware of the options and were working on their own project. Tom Bonadeo added that it was difficult with the owners of Sea Breeze being out of the area and the property being publicly financed and agreed that they were taking steps to do something in the near future to protect the property.

Tom Bonadeo went on to state that something needed to be done or everybody lose. Tom Bonadeo stated that he would love to see the first option as well but the applicants' concern was in protecting their properties.

Hank Badger reiterated that he did not see how the applicants could encroach on the adjacent properties without obtaining their written permission. Tom Bonadeo responded that he had been in contact with Mr. Schlegel and the Bay Creek Homeowners' Association and it should not be a problem to obtain written permission. Mr. Oral Lambert of Bay Creek had no objections but asked to be kept apprised of the progress of the application / project.

Motion made by Wayne Creed, seconded by Russ Dunton, to approve the JPA #11-0156 for Robert Rea, et al. pending receipt of written confirmation from the adjacent property owners (Bay Creek Homeowners' Association and Mr. Robert Schlegel) with additional replanting of the RPA and SAV areas as recommended by VIMS. The motion was unanimously approved.

Ann Hayward Walker adjourned the Wetlands / Coastal Dunes Board Meeting at approximately 5:35 p.m.

_____
Chairwoman Ann Hayward Walker

_____
Town Clerk

Purpose: ☐ Action
☑ Discussion

Wetlands and Dune Board Staff Report

From: Tom Bonadeo

Date: February 29, 2012

Item: 3. A. – Review of Wetlands and Dune Board Jurisdiction and Procedures

Attachments: None

Background

The Cape Charles Wetlands and Dune Board meets on an as-needed basis. The purpose of this item is to review the Board's jurisdiction and the criteria for making decisions.

Item Specifics

Diagrams will be presented to show examples of wetlands and dunes. There are two types of wetlands defined in the Town's Wetlands Ordinance – vegetated and non-vegetated wetlands. A dune definition can be found in the Town's Coastal Primary Sand Dune Ordinance.

- **Vegetated Wetlands –** "…land lying between and contiguous to mean low water and an elevation above mean low water equal to the factor 1.5 times the mean tide range at the site of the proposed project in this Town; and upon which is growing (given types of vegetation)"
- **Non-vegetated Wetlands** – "…land lying contiguous to mean low water and which land is between mean low water and mean high water not otherwise included in the term "vegetated wetlands" as defined…"
- **Coastal Primary Sand Dune** or **Dune –** "…a mound of unconsolidated sandy soil which is contiguous to mean high water, whose landward and lateral limits are marked by a change in grade from ten percent or greater to less than ten percent, and upon which is growing (given types of species)"

Certain activities can take place on wetlands and dunes without a permit. These activities are listed in Section 74.21 of the Town's Wetlands Ordinance and Section 3 of the Coastal Primary Sand Dune Ordinance. Both items ordinances have been attached to this item as reference.

Other activities cannot take place unless a permit is obtained from the Town's Wetlands and Dune Board. Three concurring votes are required from the Board in order to approve an application. The Board must make its decision within 30 days of the initial public hearing. When reviewing wetlands permit applications, the Board must base its decision on the following factors found in Section 74.33 D of the Wetlands Ordinance:

1. *Such matters raised through the testimony of any person in support of or in opposition to the permit application;*
2. *Impact of the development on the public health, safety, and welfare;*
3. *The proposed development's conformance with standards prescribed in Code of Virginia, 28.2-1308, and guidelines promulgated pursuant to Code of Virginia, 28.2-1301 (Code of Virginia sections are attached to this item)*

The same standards apply for dunes, except the applicable Code of Virginia sections are 28.3-1408 and 28.2-1401.

Purpose: ☑ Action
☐ Discussion

Wetlands and Dune Board Staff Report

From: Tom Bonadeo

Date: February 29, 2012

Item: 3B – Robert Rea, et al, JPA #12-0059

Attachments: Application materials, VIMS report, pictures

Application Summary

This JPA is requesting the placement of an offshore breakwater in addition to fill to restore the upland bank erosion that occurred as a result of pervious storms. Beach nourishment is also proposed channelward from the upland bank restoration. The applicant has installed emergency revetment following Hurricane Irene to prevent the further erosion. The hurricane caused erosion to within 8' of the Sea Breeze building and the electrical transformer fell down the bank. Any further erosion would have caused the evacuation and potential condemnation of the building.

This emergency fill should be removed as the upland bank is restored. In addition to the upland restoration the applicant has proposed beach nourishment. This area is in the Tiger Beetle habitat except for the fact that the beach (habitat) is no longer there. The nourishment would restore significant potential habitat and it has been observed that in this stretch of beach that the sand placed as nourishment tends to be filled or covered over by the bay sands that wash up over time. The more coarse sand is less likely to blow around, the lower end of the coarseness seems to work just as well.

Virginia Institute of Marine Science Report

Analysis from VIMS has been attached to this item. The report recommends careful consideration of the project as the WADS are considered "experimental since no experience is available from Virginia. The Cape Charles Wetlands Board has jurisdiction over the wetland areas as described earlier. The VIMS report on the WADS will not be permitted by our Board.

Public Comments

No written comments from the public have been received at this time. Letters have been sent to the neighboring property owners and some have not been returned. Mr. Schlegel is likely in Florida for the winter.

Staff Analysis

After review of the application, Town staff feels the Wetlands and Dune Board should consider the following strengths and weaknesses of the application:

Strengths

1. The removal of the emergency fill and restoration of the upland would protect the Sea Breeze apartment building. The loss of this building due to future erosion would jeopardize much needed subsidized housing.
2. The future of the newly constructed homes and home sites in Bay Vistas Subdivision are also in jeopardy.
3. Beach nourishment would create a larger area for Tiger Beetle habitat and make the beach much safer.

Weaknesses

1. While no wetlands would be filled, some potential SAV area may be covered with the WADS. This area is currently under lease for aquaculture. This is supported by the attached VIMS report.
2. The upland restoration does not contain buffer vegetation other than beach grass. Include native vegetation in the upland restoration. This is supported by the attached VIMS report.

Recommendation

Review the provided information and recommend the upland restoration and beach nourishment project including the VIMS recommendations with the required removal of the emergency stabilization (concrete) from the site.

PERMIT APPLICATION

BAY VISTAS BEACHFRONT OWNERS/SEABREEZE APARTMENTS WAVE ATTENUATION DEVICES AND BEACH REPLENISHMENT

TOWN OF CAPE CHARLES
NORTHAMPTON COUNTY, VIRGINIA

PREPARED FOR

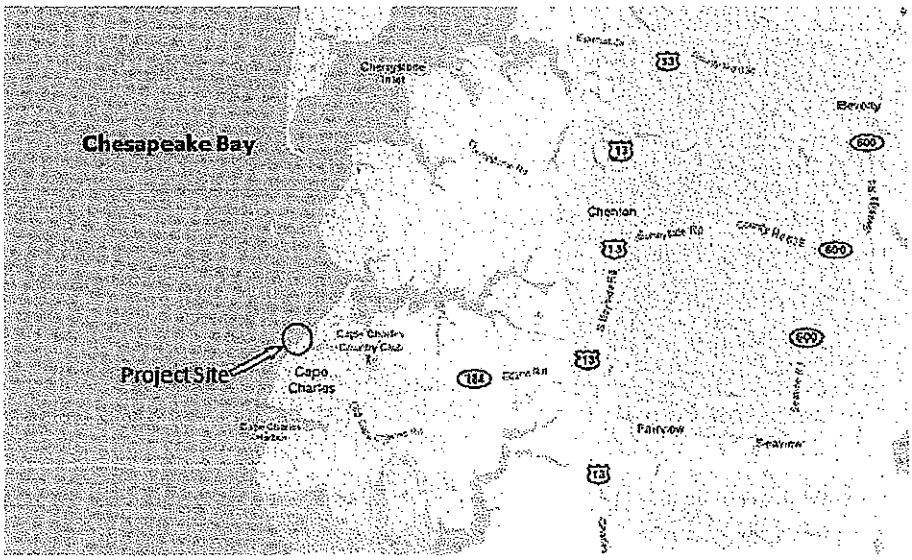
BAY VISTAS BEACHFRONT OWNERS &
SEABREEZE APARTMENTS
CAPE CHARLES, VIRGINIA

PREPARED BY

MID ATLANTIC ENVIRONMENTAL
1517 MIRASSOU LANE
VIRGINIA BEACH, VA 23454
757 560 5780

IN ASSOCIATION WITH

CGEM
COASTAL GEOLOGY & ENGINEERING MANAGEMENT
5048 DEVON PARK DR.
TAMPA, FL 33647
813 866 5175

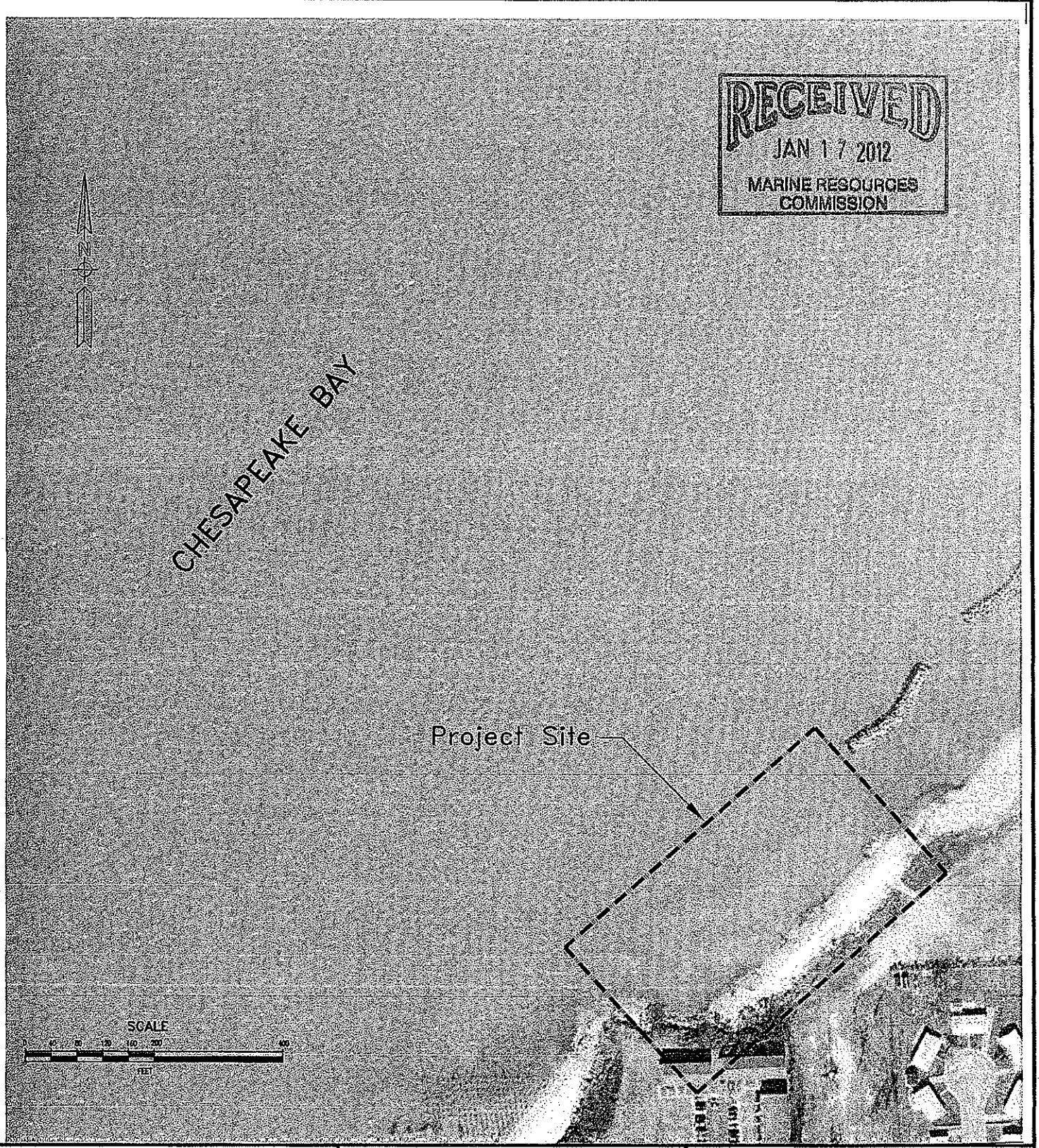


LOCATION MAP

PLAN SHEET INDEX

GENERAL NOTES

1. All elevations refer to the North American Vertical Datum (1988) in feet.
2. Horizontal coordinates are referenced to Virginia State Plane, South Zone North American Datum of 1983 (NAD 83) in feet.
3. Tidal datums (1983–2001 epoch) are based on NOAA station ID # 8632200, Kiptopeke, VA.



PURPOSE: WAVE ATTENUATION DEVICES AND BEACH REPLENISHMENT

VERTICAL DATUM: NAVD 88

ADJACENT PROPERTY OWNERS

1. ROBERT SCHLEGEL OYSTER GNDS.
2. ROBERT SCHLEGEL
3. UNITED STATES COAST GUARD
4. MONIKA BRIDGFORTH
5. PAUL GALLOWAY
6. BAY CREEK COMMUNITY ASSN.

PERMIT APPLICATION

AERIAL BASEMAP

MID ATLANTIC ENVIRONMENTAL
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in association with
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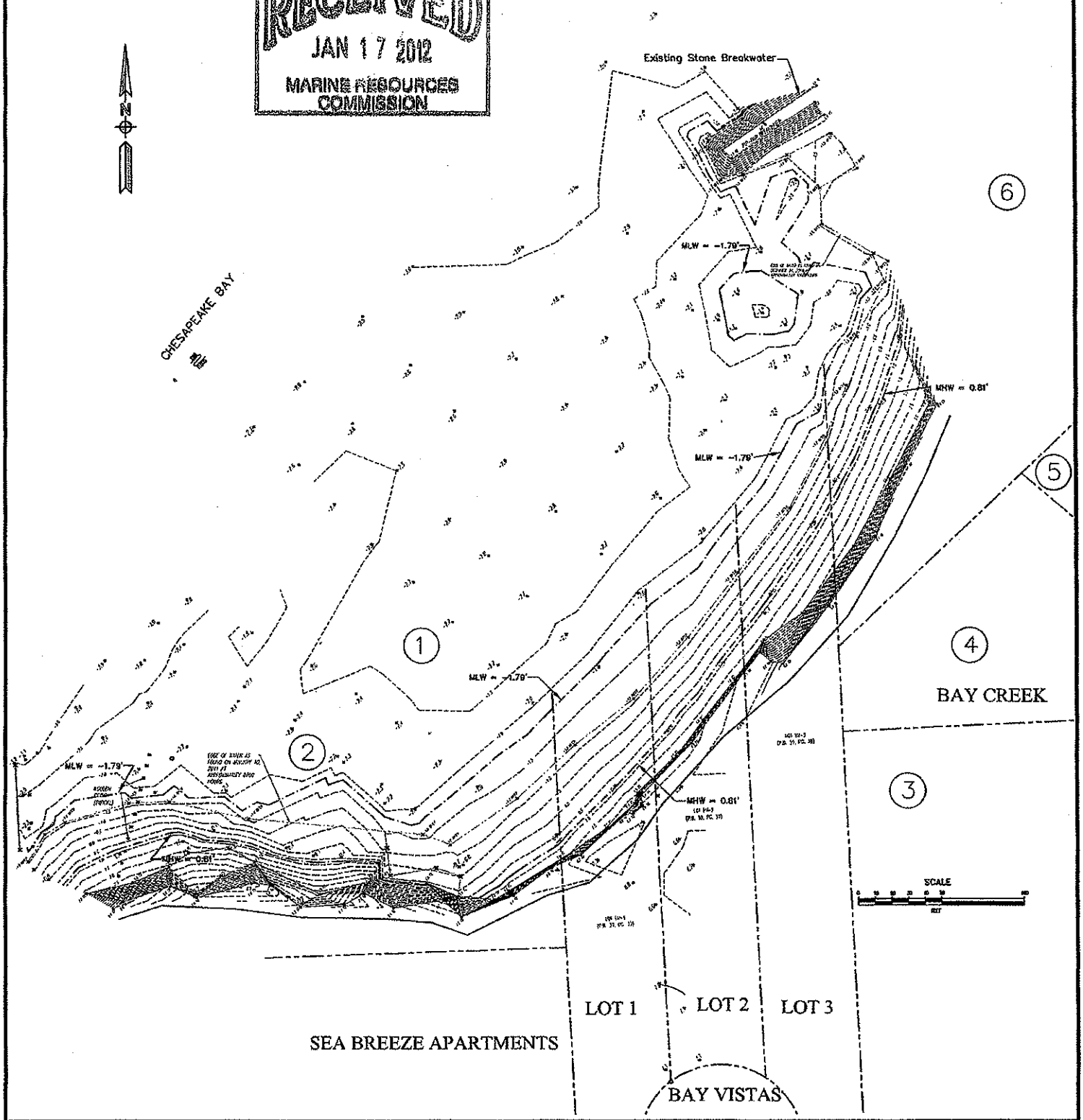
5048 DEVON PARK DR.
TAMPA, FL 33647
(813) 866-5175

IN: CHESAPEAKE BAY
AT: WASHINGTON AVENUE
CITY: TOWN OF CAPE CHARLES
COUNTY: NORTHAMPTON COUNTY, VA

APPLICATION BY:
BAY VISTA BEACHFRONT
OWNERS/SEABREEZE APARTMENTS

DATE: DEC. 2011



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PERMIT APPLICATION

EXISTING CONDITIONS

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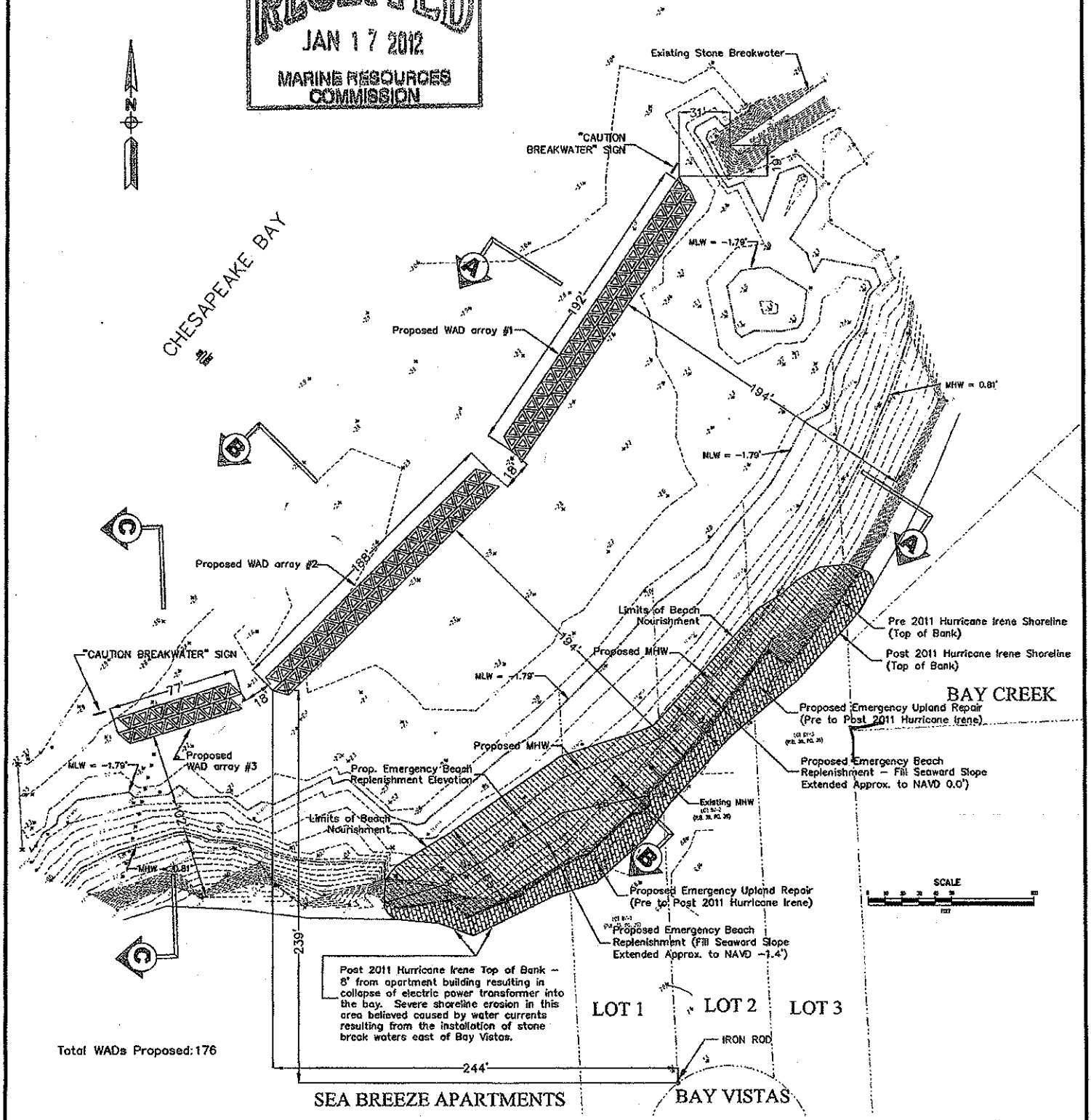

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PERMIT APPLICATION

PROPOSED CONDITIONS

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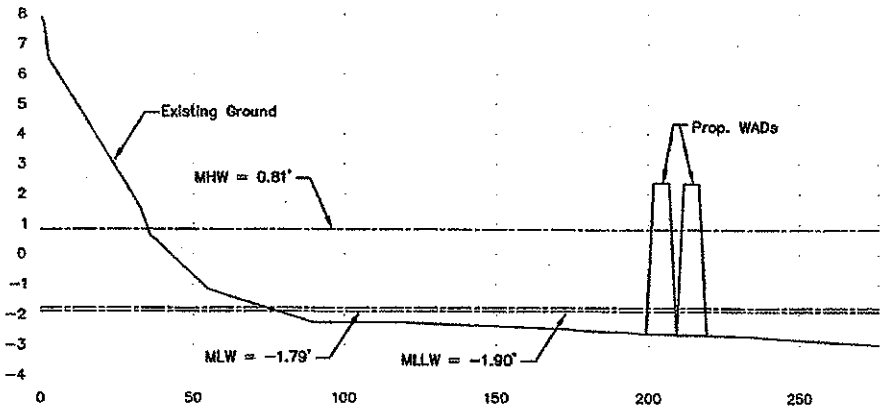

SECTION A–A

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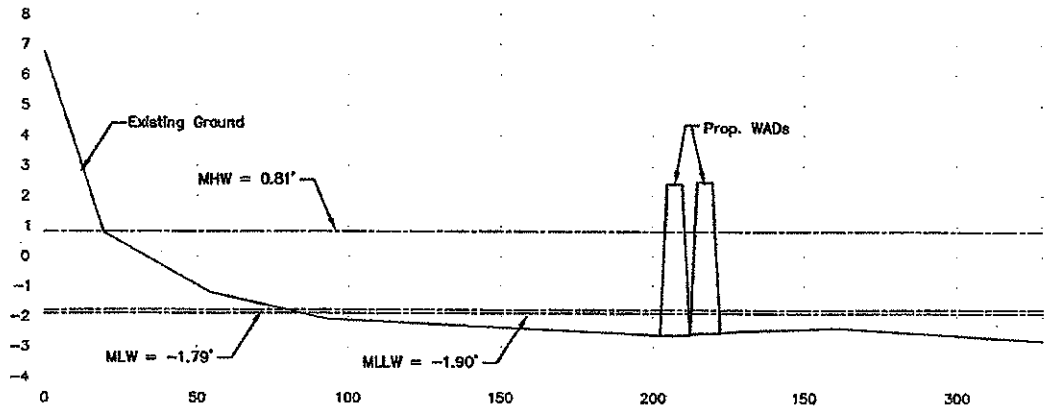

SECTION B–B

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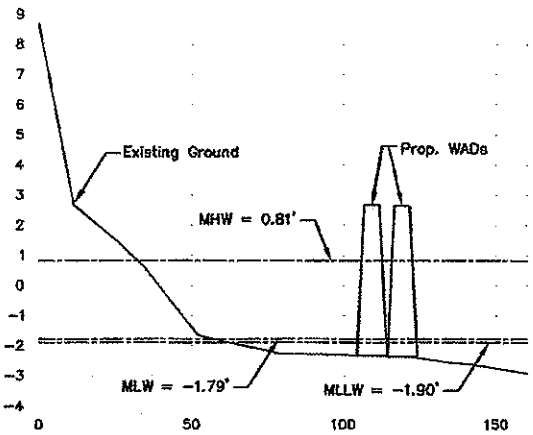

SECTION C–C

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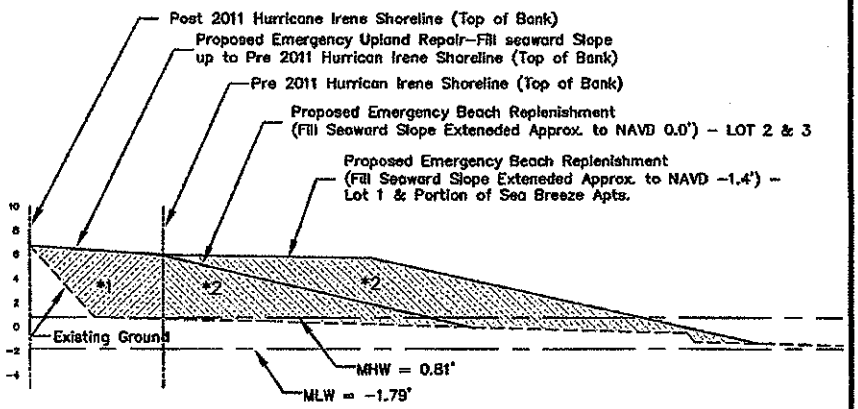

TYPICAL EMERGENCY UPLAND REPAIR AND BEACH REPLENISHMENT SECTION

N.T.S

*1 Fill: Select Fill Topped with 6" Top Soil (Planted)
*2 Fill: Sand

PURPOSE: WAVE ATTENUATION DEVICES AND BEACH REPLENISHMENT

VERTICAL DATUM: NAVD 88

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PERMIT APPLICATION

CROSS SECTIONS

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IN: CHESAPEAKE BAY
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COUNTY: NORTHAMPTON COUNTY, VA

APPLICATION BY:
BAY VISTA BEACHFRONT
OWNERS/SEABREEZE APARTMENTS

DATE: DEC. 2011

GENERAL CONSTRUCTION NOTES:

1. All elevations refer to the North American Vertical Datum (1988) in feet.

2. Horizontal coordinates are referenced to Virginia State Plane, South Zone North American Datum of 1983 (NAD 83) in feet.

3. The Contractor shall make their own determination of the quantities of work required to complete the construction shown on the plans. The Contractor shall also make their own assessment of the site and the work required prior to bidding and any discrepancies, errors or omissions shall be brought to the attention of the Bay Vistas Beachfront Owners/Seabreeze Apartments before the bid due date.

4. The Contractor is responsible for verifying the location of all underground utilities or other objects prior to commencing work at the site. Any utilities or other items damaged during construction shall be repaired at no cost to the Bay Vistas Beachfront Owners/Seabreeze Apartments.

5. All areas or items outside the limits of construction that are damaged or disturbed by the contractor shall be restored to their original or better condition at no cost to the Bay Vistas Beachfront Owners/Seabreeze Apartments.

6. The Contractor shall check plans for conflicts and discrepancies prior to construction. The Contractor shall notify the engineer of record of any conflict before performing any work in the affected area.

7. It is the Contractor's responsibility to become familiar with the permit and inspection requirements of the various governmental agencies. The Contractor shall comply with all necessary permits and permit conditions prior to construction and schedule inspections according to agency instruction.

8. All specifications and documents referred to shall be of latest revisions and/or latest edition unless otherwise noted.

9. All work performed shall comply with the regulations and ordinances of the various governmental agencies having jurisdiction over the work.

10. Record drawings: The Contractor shall be responsible for having a registered land surveyor to record information on a set of the approved plans concurrently with construction progress. One (1) set of the final record drawings shall be submitted to the engineer. Record drawings shall comply with the requirements in the Contract Agreement.

11. WADs construction under this Contract shall include procurement, transportation, and placement of breakwater materials described herein and shown on the Contract Drawings. The Work consists of furnishing all labor, material, equipment, and incidentals necessary for performing the Work specified by the Contract. All Work shall be in accordance with the Plans, Specifications and requirements set forth within the Contract and Project permits. All Work is to be conducted in accordance with all federal, state and local permits and authorizations issued for this Project.

12. Site preparation: The contractor shall not disturb the existing seabed. The WADS shall be carefully placed on the existing seabed surface.

13. The placement of materials and the construction will be completed to minimize loud or sudden noise and disturbance to any nesting birds

SAFETY NOTES:

1. It shall be the sole responsibility of the Contractor to comply and enforce all applicable safety regulations. The information herein has been provided for the Contractor's information only and does not imply that the owner, owner's engineer, or engineer of record will inspect/or enforce safety regulations.

2. During the construction and/or maintenance of the project, all safety regulations are to be enforced. The Contractor or Representative shall be responsible for the control and safety of personnel. Labor safety regulations shall conform to the provisions set forth by OSHA in the Federal Register of the Department of Transportation.

PURPOSE: WAVE ATTENUATION DEVICES AND BEACH REPLENISHMENT

VERTICAL DATUM: NAVD 88

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PERMIT APPLICATION

CONSTRUCTION NOTES

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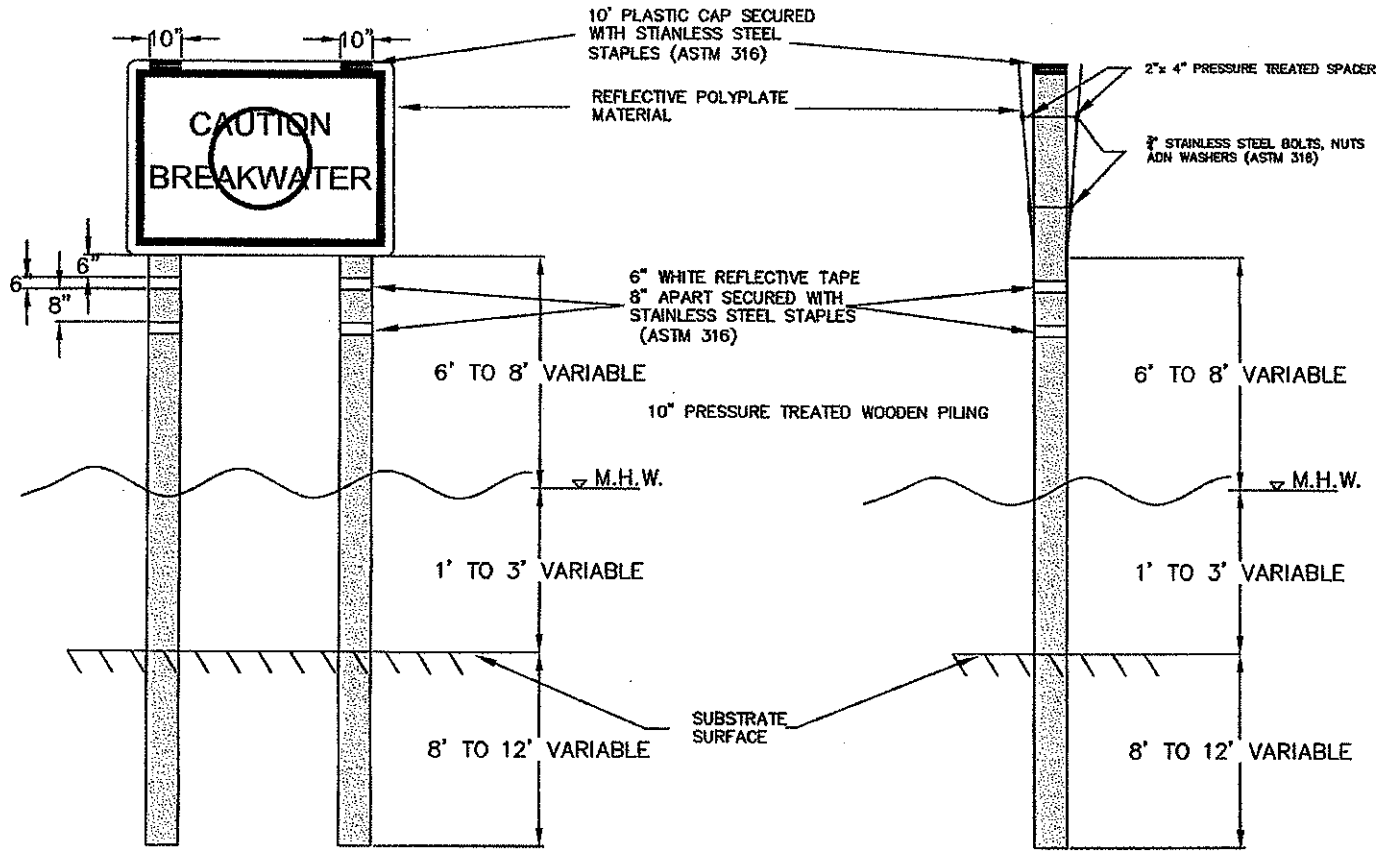
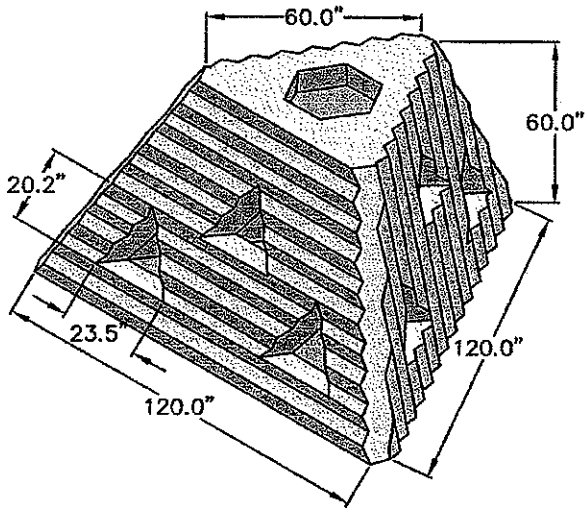


'CAUTION BREAKWATER' SIGN

N.T.S.



WAVE ATTENUATION DEVICE (WADS)

N.T.S.

WWW.LIVINGSHORELINESOLUTIONS.COM

PURPOSE: WAVE ATTENUATION DEVICE AND BEACH REPLENISHMENT

VERTICAL DATUM: NAVD 88

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PERMIT APPLICATION

DETAILS

MIDATLANTIC ENVIRONMENTAL
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APPLICATION BY:
BAY VISTA BEACHFRONT
OWNERS/SEABREEZE APARTMENTS

DATE: DEC. 2011

Mid Atlantic
ENVIRONMENTAL
Where Science Meets Solutions

Bay Vistas / Seabreeze Apartments
Joint Permit Application
Cape Charles, Virginia

Dear Reviewer,

The Applicants are submitting a new JPA in response to extensive shoreline erosion. A prior application was approved; however, when the Applicants received the proposals for the work, they found that they could not afford to proceed. MAE was tasked with finding an alternative project, which offered them relief from the erosion issue, but was affordable. We are therefore submitting this application that utilizes Wave Attenuating Devices (WADS). This technology has been used in high wave velocity both in the United States and abroad. We are excited about utilizing this technology, as it has multiple benefits. The most obvious is that it reduces wave energy, prior to the eroding shoreline, thus reducing the loss of land and the amount of sediments discharged into the waterway. Secondly, it potentially builds up the sand level behind the structure. Thirdly and most uniquely, it creates oyster and fish habitat. Unlike stone, these structures are hollow on the inside. In addition to the usual exterior surface area of stone material, the WADS interior is available for colonization. In addition, this area serves as a potential shelter for smaller fishes. Should you need further information on this system, please contact me at midatlanticenvironmental@yahoo.com or at the phone number listed below.

Regards,

Wayne D. McCoy
President

A Limited Liability Corporation
1517 Mirassou Lane, Virginia Beach, VA 23454
757 560-5780 midatlanticenvironmental.com Fax 757 496-8744

VIMS Shoreline Permit Application Report # 12-0059

APPLICANT:	**ROBERT REA, ET AL**
Locality:	TOWN OF CAPE CHARLES
Immediate Waterway:	Chesapeake Bay
Report Date:	2/21/12

EXISTING SITE CONDITIONS AND PROPOSED ACTIONS:

The applicants propose to install 3 sections of wave attenuation device breakwaters (WADs), instead of a recently approved stone breakwater (VMRC #11-0156). The project site includes three single-family parcels and the adjacent multi-family parcel (Seabreeze Apartments). The existing shoreline at the project site is a non-vegetated beach with a low upland bank. There is no primary sand dune feature. The residential parcels have no existing shore protection and active erosion. There is scattered rubble on the shoreline next to the apartments and bank erosion.

The proposed WAD breakwaters are 2 rows of pyramid-shaped, pre-cast concrete structures. There are three sections proposed with 18-ft gaps between the sections. The 192-ft and 188-ft sections are located offshore 194 ft channelward from the upland bank. The third 77-ft section is located 102 ft channelward from the bank. Each breakwater section is approximately 20 ft wide. The WADs are to be placed directly on the bottom with no filter fabric or anchoring system. The total estimated footprint on subaqueous bottom will be 9,140 sq ft.

The current proposal also includes fill to restore upland bank erosion that occurred during Hurricane Irene in late August 2011. This area is referred to as proposed emergency upland repair-fill (Area #1 in cross-section). Beach nourishment is also proposed channelward from the restored upland bank along about 380 linear feet of shoreline (Area #2). The beach nourishment will cover approximately 4,020 sq ft landward from MLW.

As reported in previous VIMS assessments, the shallow water area where the WAD breakwaters are proposed is potential submerged aquatic vegetation (SAV) habitat. The VIMS SAV inventory maps from 2003 to 2011 shows ephemeral or changing SAV cover from year to year from Kings Creek to Cape Charles Harbor. Most recently, the 2010 VIMS inventory shows SAV habitat at 0-10% density in the nearshore area, while the 2011 inventory does not show any SAV present. This indicates that the shallow water area with water depths 2-6 ft below MLW will support SAV growth if water clarity, temperature, and other conditions are suitable.

This shoreline area was also previously designated by the U.S. Fish and Wildlife Service as habitat for the endangered Northeastern beach tiger beetle.

THE PREFERRED APPROACH FROM AN INTEGRATED MARINE ENVIRONMENTAL VIEWPOINT:

We consider the proposed WAD breakwaters to be an innovative, experimental approach. We

are not aware of any other deployments using this particular type of wave attenuation device in the Commonwealth of Virginia. There is supporting information about projects in Maryland, the Gulf of Mexico region, and elsewhere. These projects include fisheries, SAV and wetland habitat restoration efforts as well as protection of upland structures threatened by erosion and storms in high energy settings. There is both published and anecdotal evidence that these WAD detached breakwaters can reduce wave energy and improve habitat conditions without shifting out of place during storms (Swann, 2008; K. Smith, MDNR, personal communication).

However, we could not find an existing project that is comparable to the proposed site and situation. In this case, there is active erosion with upland buildings at close proximity and high risk from storm events. While habitat conditions for oysters, fish, and SAV may be improved as a result of these breakwater structures, the level of protection needed for the upland improvements should also be carefully considered.

It is uncertain if the proposed WAD breakwaters located almost 200 ft offshore will be sufficient to prevent continued bank erosion, particularly during extreme storm events when this shoreline is most vulnerable. It is not clear how the wave height used for modeling at this site compares to actual wave heights experienced during recent storms. The proposed WAD breakwaters may be overtopped frequently by waves and storm surges based on information about the frequency of tide elevations above MHW and MHHW at the Kiptopeke tide station (NOAA Inundation Analysis tool). It should also be noted that coarse-grained sand does not appear to be plentiful at this location for accretion in the lee of these structures.

The preferred approach from an environmental perspective for sites like this with active erosion and upland buildings at relatively high risk is to use a proven method for shore protection. With construction cost considerations aside, gapped stone breakwaters with substantial beach nourishment or a properly sized revetment placed at the eroding bank are proven techniques that could be re-considered.

If the WAD breakwaters are approved, then we recommend an SAV ground survey in late April or May prior to installation to verify if this resource is present or absent. Only clean sand that is compatible with the existing beach should be used for beach nourishment. We suggest letting the bank repair and sand fill equilibrate before planting beach grasses. Adequate erosion and sediment control measures should be maintained until a permanent vegetation cover can be established, particularly if topsoil will be used for upland bank repair.

It is not exactly clear where American beach grass will be planted. The best time of year to plant this cool-season dune grass is November to April. Planting saltmeadow hay (Spartina patens) and switch grass (Panicum virgatum) should also be considered for deep-rooted, warm-season grasses. A densely planted riparian buffer between the sand fill and the upland development would also improve erosion and flood protection, rather than regular mowing and turf grass. This vegetation buffer could contain salt-tolerant native ornamental grasses and low-growing native shrubs.

A comprehensive monitoring plan is also recommended similar to other recently approved experimental wave attenuation structures (e.g. VMRC #07-1141). The goal of monitoring is to determine whether the modular concrete structures are effective at preventing further erosion of the shoreline, holding sand in place and building up additional sand for erosion control, and whether the structures themselves are stable. The presence or absence of SAV and oysters and the success of new vegetation planting should also be included with the monitoring plan.

A baseline located landward from the proposed bank repair area should be established with horizontal (local) and vertical (MLW) controls. The baseline should be marked by permanently driven steel or concrete pipes on the upland. Several transects along this baseline that extend landward from the proposed bank repair and channelward from the proposed breakwater structures should be surveyed periodically for a minimum of 5 years. Photographs should be taken from fixed stations and also close-ups of the structures and attached biota.

Time of year restrictions for construction may be required for the Northeastern beach tiger beetle.

RECOMMENDATIONS SUMMARY:

*Re-consider using proven erosion stabilization methods
*If WAD structures are permitted, verify SAV habitat condition prior to construction
*Verify source and grain size of beach fill material prior to placement
*Allow sand fill to equilibrate before planting beach grasses
*Restore riparian buffer vegetation instead of turf grass
*Maintain adequate erosion and sediment control measures as needed
*Develop comprehensive monitoring plan to verify WAD breakwater performance and effects

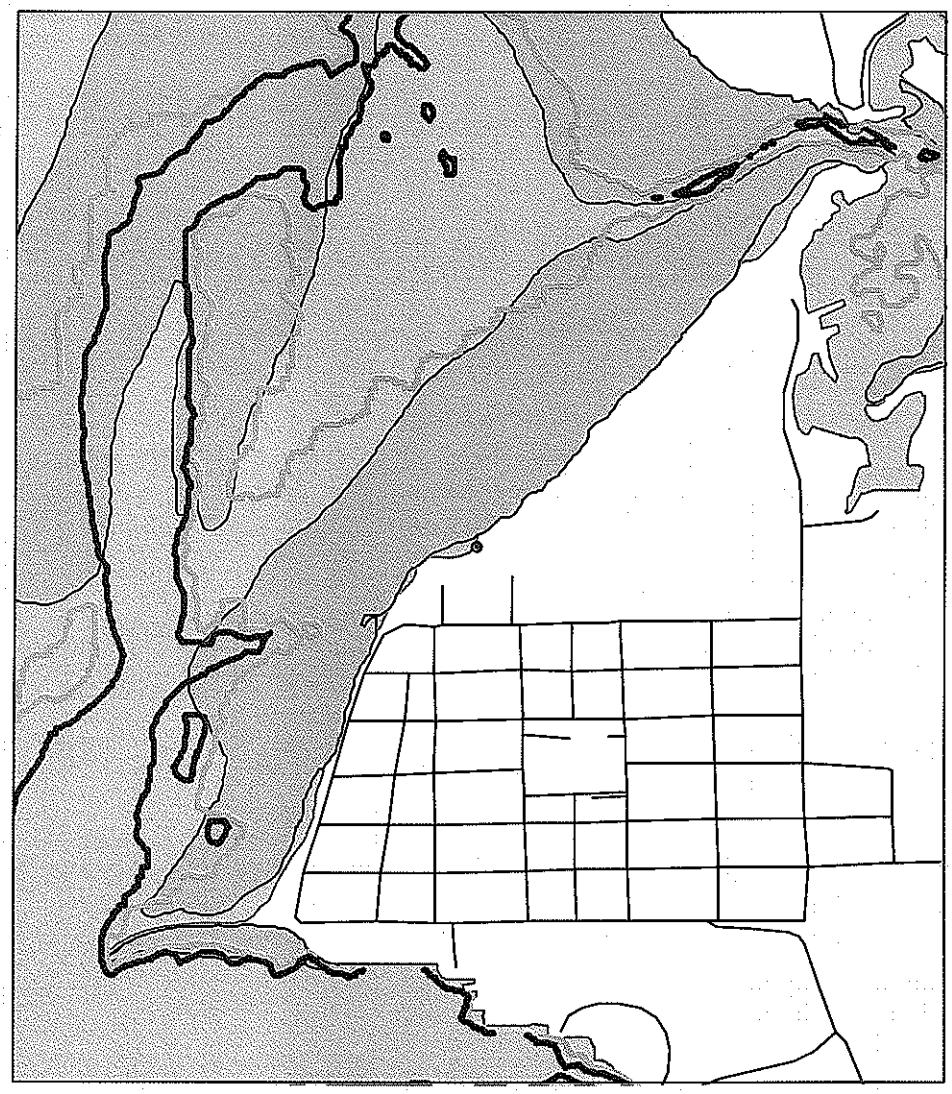
NOTE

The Virginia Institute of Marine Science (VIMS) applies an integrated coastal management perspective during the review of proposed activities on tidal shorelines. The coastal ecosystem has dynamic connections between wetlands, coastal waters and the surrounding landscape. This provides valuable ecosystem services, such as maintaining water quality, shoreline stability, and wildlife habitat. Activities should be designed to avoid adverse impacts to coastal resources. When impacts are unavoidable, every effort should be made to minimize impacts and provide compensation as required.

VIMS Shoreline Permit Application Report # 12-0059

Permit Site Study Area

Chesapeake Bay
Town of Cape Charles



Project site

Roads

Shoreline access structures
STRUCTURE
- Boathouse
- Dilapidated dock
- Dock
- Ramp

Shoreline erosion structures
STRUCTURE
- Breakwater
- Bulkhead
- Dilapidated bulkhead
- Groin
- Jetty
- Marina
- Miscellaneous
- Riprap
- Seawall
- Wharf

Oyster reefs
TYPE
- Completed
- Proposed

Bathymetric contours
DEPTH
- -1 meters
- -2 meters

SAV habitat

Open water

N

0 0.1 0.2 Miles

VIMS Shoreline Permit Application Report # 12-0059

APPLICANT:	**ROBERT REA, ET AL**
Locality:	TOWN OF CAPE CHARLES
Immediate Waterway:	Chesapeake Bay
Report Date:	2/21/12

A site visit and impact assessment were conducted by VIMS on 2/3/2011. These impact estimates are based on observations made and information provided in the Joint Permit Application.

Type of Activity	Permanent Loss/Fill Area (SF)	Impact Area (SF)
Breakwater (457 LF, 3 Unit(s))		
Vegetated	0	0
Non-vegetated	0	0
Beach and Dune	0	0
Sub-aqueous	9140	9140
Beach Nourishment (350 LF, 4020 SF)		
Vegetated	0	0
Non-vegetated	0	2107
Beach and Dune	0	1913
Sub-aqueous	0	0
Totals (807 LF, 4020 SF, 3 Unit(s))		
Vegetated	0	0
Non-vegetated	0	2107
Beach and Dune	0	1913
Sub-aqueous	9140	9140

wetlands@vims.edu

Center for Coastal Resources Management
P.O. Box 1346
Gloucester Point, VA 23062-1346
(804)684-7792, fax: (804)684-7179, http://ccrm.vims.edu/

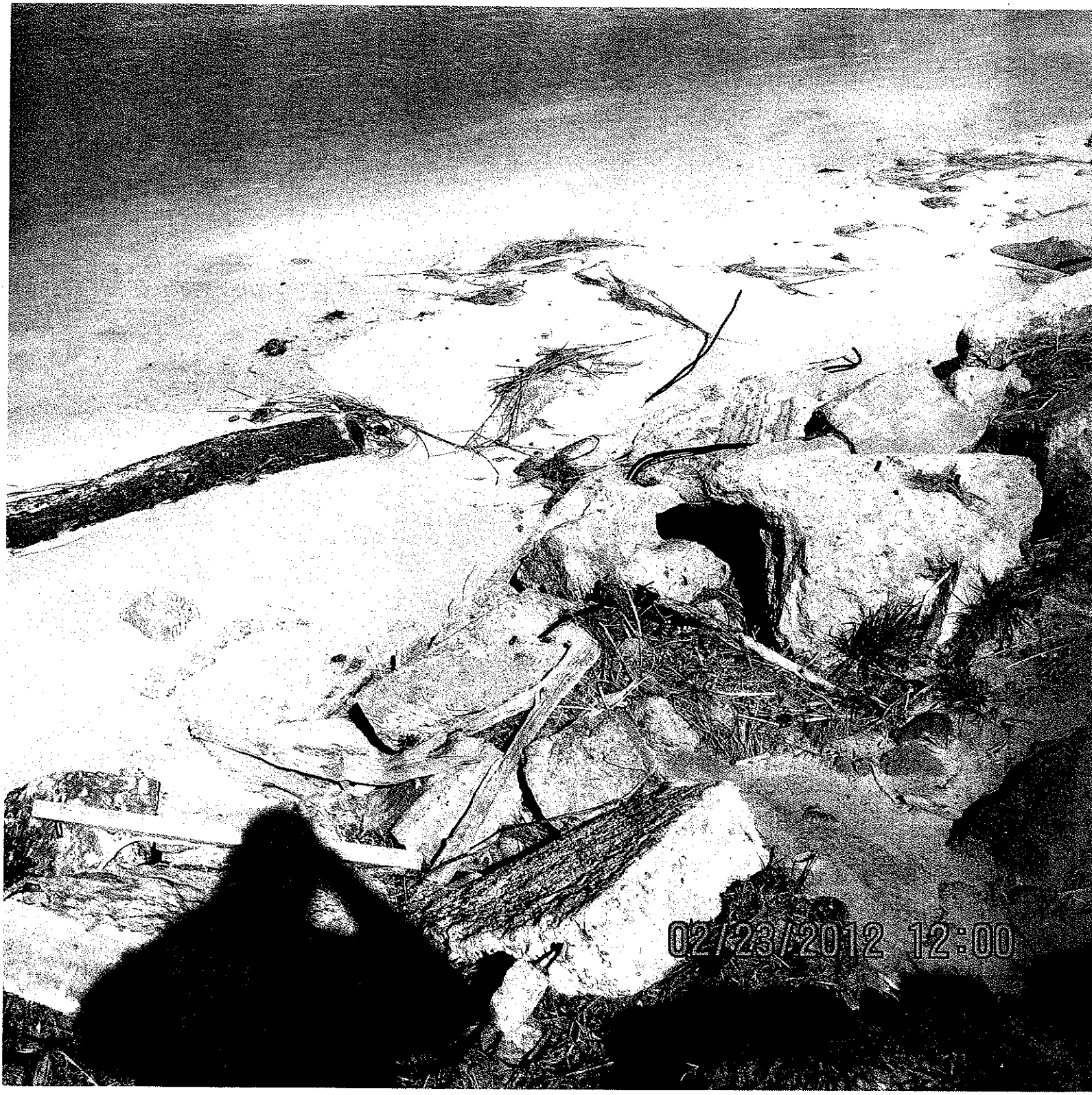
William & Mary VIMS
Virginia Institute of Marine Science
School of Marine Science

Public Notification of USDA Rural Development's Finding of No Significant Environmental Impact

The USDA Rural Development has received an application for Section 515 Rural Rental Housing financial assistance from Seabreeze Associates LP. The specific element of this proposed action is to perform repairs to restore the shoreline at the rear of the property, install a system of Wave Attenuation Devices to stabilize the shoreline of the property and replace the roofs on the four residential buildings on the property which is located at 201 Washington Avenue in Cape Charles, Virginia.

USDA Rural Development has assessed the potential environmental impacts of this proposed action and has determined that it will not significantly affect the quality of the human environment. Therefore, USDA Rural Development will not prepare an environmental-impact statement for this proposed action.

Any written comments regarding this determination should be provided within fifteen (15) days of this publication to Mrs. Ellen M. Davis, 1606 Santa Rosa Road, Suite 238, Richmond, VA 23229-5014. USDA Rural Development will make no further decisions regarding this proposed action during this fifteen-day comment period. Requests to receive a copy of, or to review the USDA Rural Development environmental assessment upon which this determination is based, should be directed to Mary Jones, 22329 Main Street, Southampton Office Building 2, Courtland, VA 23837-1026.


02/23/2012 12:00


02/23/2012 12:00


02/23/2012 11:59

Purpose: ☑ Action
☐ Discussion

Wetlands and Dune Board Staff Report

From: Tom Bonadeo

Date: February 29, 2012

Item: 3C – Gamesa, JPA #12-0149

Attachments: Application materials, pictures

Application Summary

This JPA is requesting the placement of a submarine cable through the bulkhead on the Bay Coast Railroad property has been received. This is only a portion of the larger application for the placement of a wind turbine in the vicinity of buoy 36A just off the Cape Charles Harbor. The Wetlands board only has jurisdiction in the intertidal zone where the cable makes landfall through the fragmented bulkhead.

Virginia Institute of Marine Science Report

No Analysis has been received from VIMS at the time of this writing. Staff has worked with VIMS staff on the review and will provide the report as it is available.

Public Comments

No written comments from the public have been received at this time. Letters have been sent to the neighboring property owners.

Staff Analysis

After review of the application, Town staff feels the Wetlands and Dune Board should consider the following strengths and weaknesses of the application:

Strengths

1. The design of the bulkhead installation should minimize the disruption to the harbor during construction.
2. The existing rubble will be replaced with a stable and secure bulkhead that should eliminate washout in this area. The detail of the installation methods have been well thought out.
3. The repair of the old bulkhead will help stop unauthorized dumping in the area.

Weaknesses

1. The intertidal zone behind the current bulkhead is approximately 50 feet long (new bulkhead). This eroded bulkhead allows surface sediment to wash through the bulkhead rather than being filtered.
2. There will be some small loss of intertidal zone behind the bulkhead most of which is marginal.

Recommendation

Review the provided information and recommend the permit to install the submarine cable through the bulkhead in accordance with the installation procedures provided and with the proper E&S measures on the upland.

RECEIVED FEB 08 2012

COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Douglas W. Domenech
Secretary of Natural Resources

Steven G. Bowman
Commissioner

February 7, 2012

Town of Cape Charles
2 Plum Street
Cape Charles, VA 23310

Re: VMRC #12-0149

Dear Sir/Madam:

We have received an application from Gamesa Energy USA, LLC to install a single 5-Megawatt offshore wind turbine generator prototype and its supporting infrastructure approximately 3 miles south west of Cape Charles Harbor in the lower Chesapeake Bay, west of Northampton County.

The project includes the installation of a steel monopile foundation and tower with a maximum blade tip height of 479 feet above mean sea level, stone riprap scour protection around the foundation base, and the installation of 15,219 linear feet of submerged power cable buried a minimum 6 feet below the seabed. The cable will connect the proposed wind turbine to the Cape Charles electrical grid through the Bay Coastal Railroad property in Cape Charles Harbor. The proposed wind turbine will be located at N 37°14'37.4", W 76°03'47.3" in approximately 53 feet of water.

Your name was given as an adjacent property owner, therefore, we are advising you of this project. Attached is a copy of the drawings indicating the proposed work to be done.

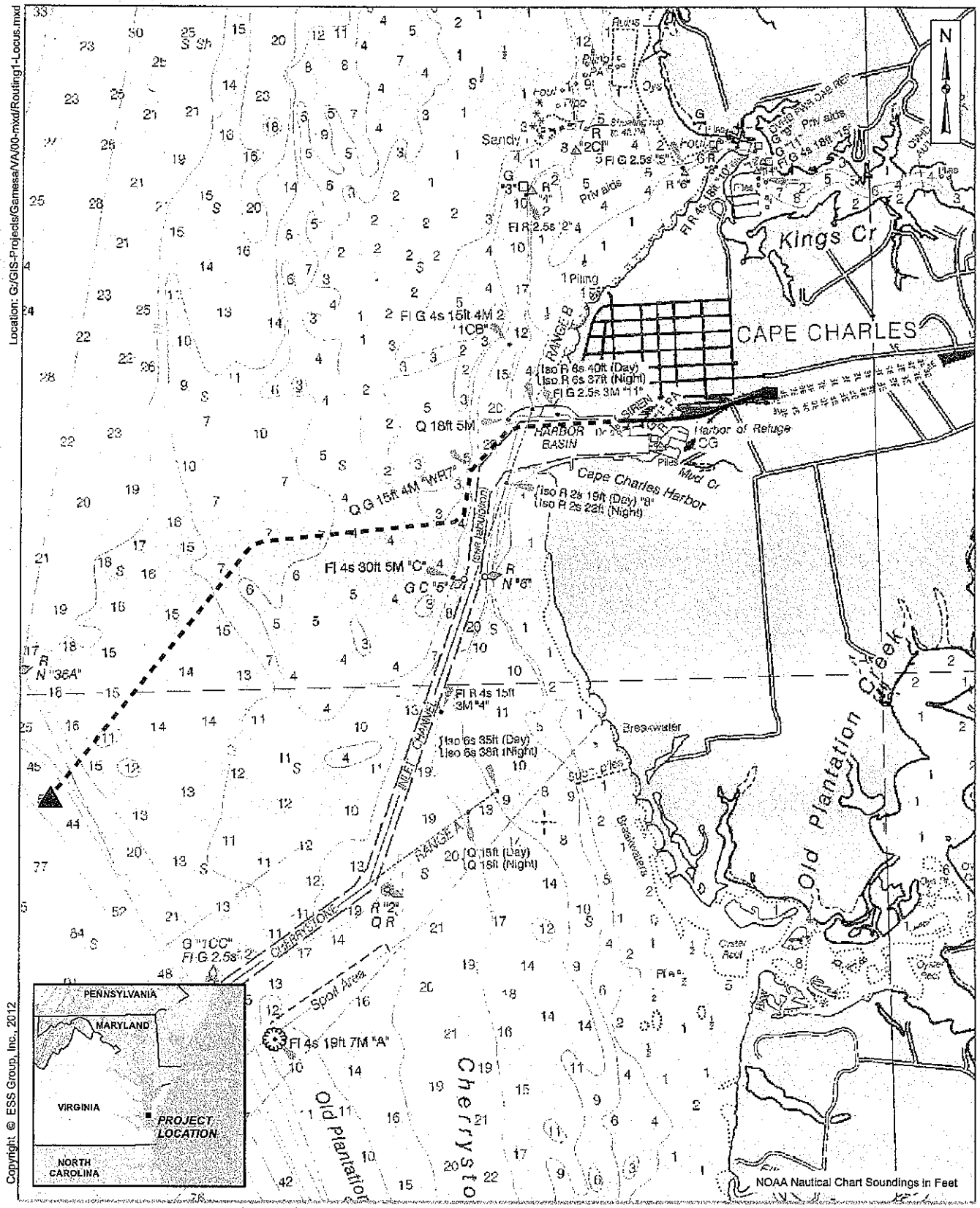
If you have any questions about the details of this project, please feel free to contact me at (757) 414-0710. If I cannot answer your questions, I may need to refer you to their agent, ESS Group Inc., c/o Mr. Stephen Wood, Vice President, 401 Wampanoag Trail, Suite 400, East Providence, Rhode Island 02915. Mr. Wood can be reached at work (401) 330-1206.

If we do not hear from you by February 22, 2012, we will assume that you have no objections to the project.

Sincerely,

George H. Badger, III
Environmental Engineer

GHB/lra
HM
Attachment
cc: Applicant
Agent



GAMESA ENERGY USA, LLC
Offshore Cape Charles, Virginia

Scale: 1" = 3,000'

0 3,000 Feet

Source: 1) ESS, Siting Area & Routing, 2011
2) NOAA, Nautical Chart, 2011

Legend

- Substation Easement
- Proposed G11X WTG Location
- Submarine Cable Route
- Upland Cable Route

Site Locus

Figure 1.0-1

ess group

GAMESA ENERGY USA, LLC
Offshore Cape Charles, Virginia

Scale: 1" = 800'

0 800 Feet

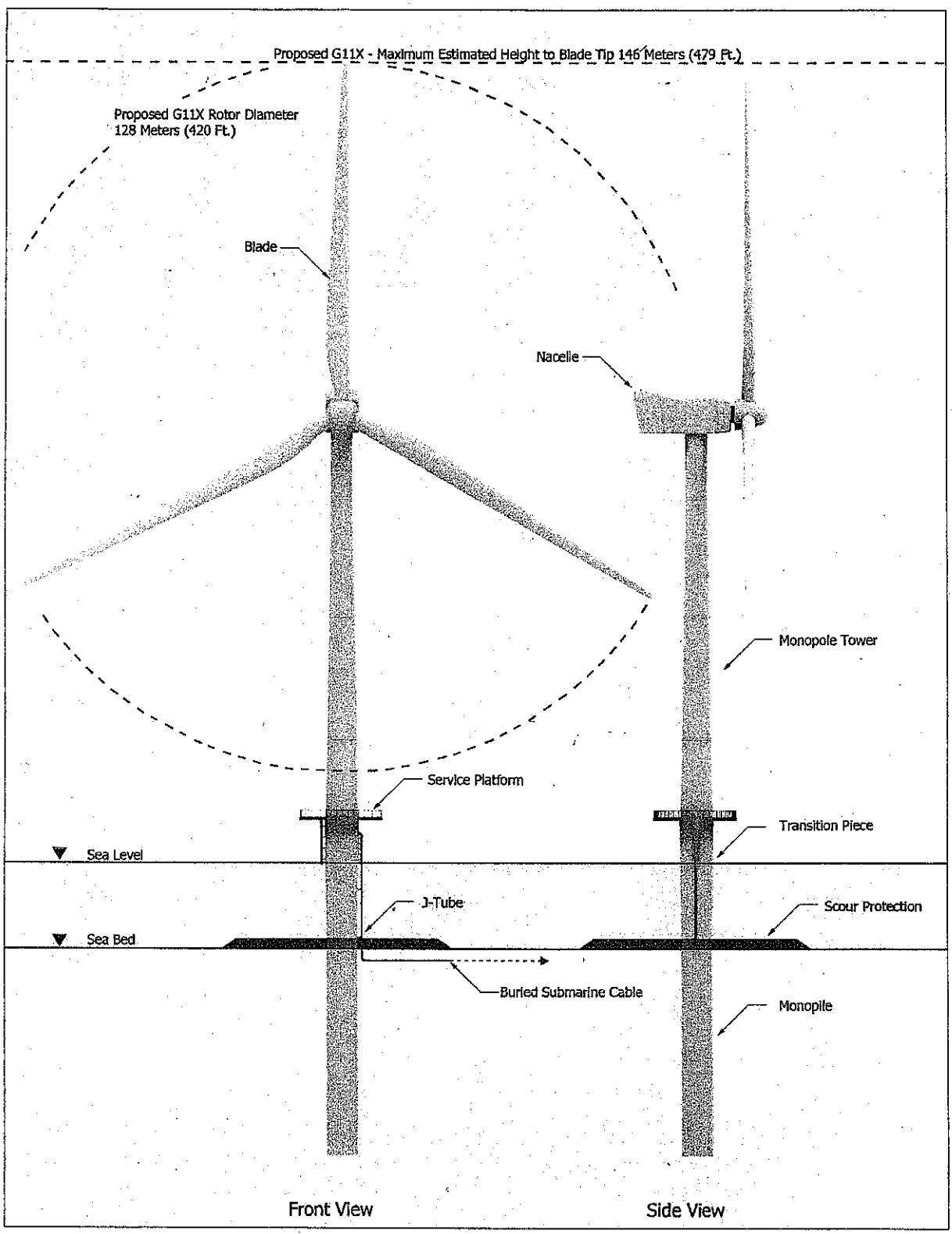
Source: 1) ESS, Siting Area & Routing, 2011
2) USDA, Ortho, 2011

Legend

- Proposed G11X WTG Location
- Submarine Cable Route
- Upland Cable Route
- Limit of Privately Held Submerged Lands
- Permitted Breakwaters (Not yet Built)
- Substation Easement

Submarine Cable Landall and Upland Cable Route

Figure 1.0-2

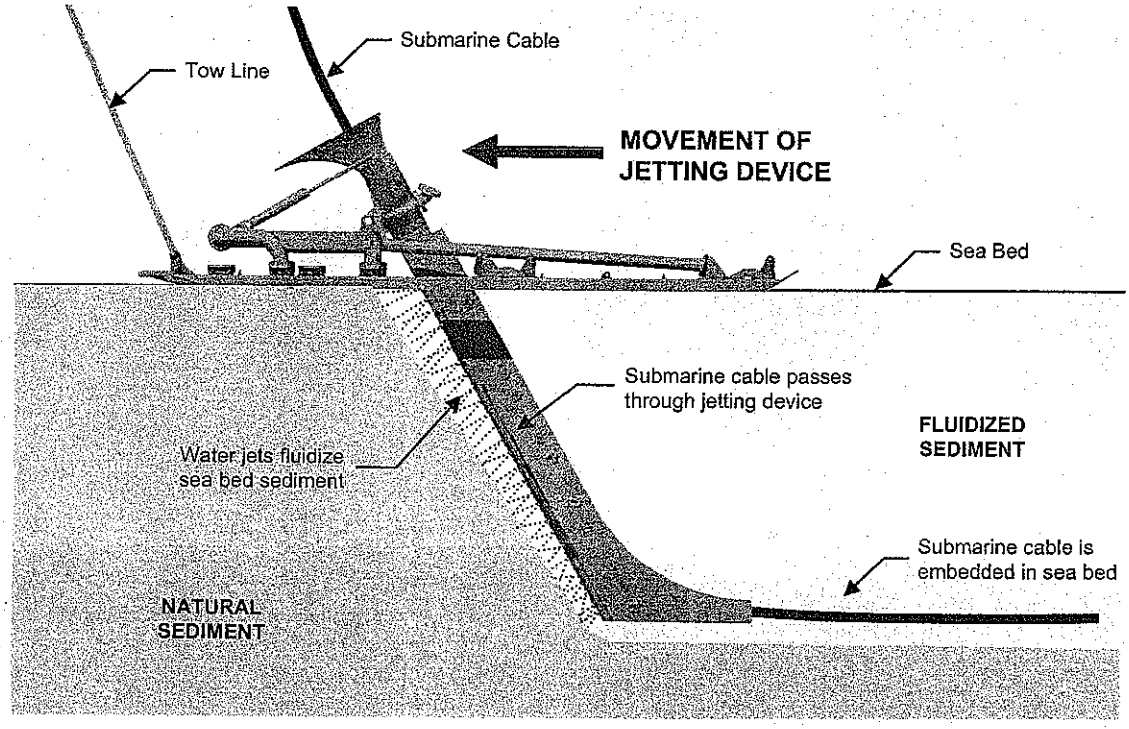


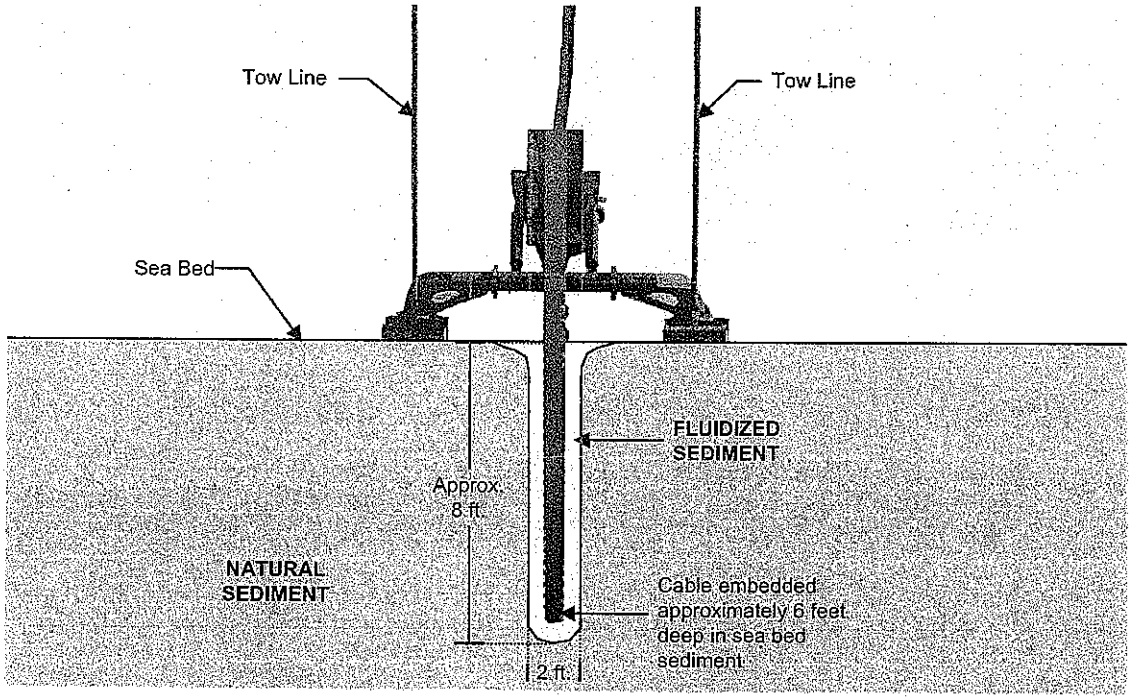
GAMESA ENERGY USA, LLC
Offshore Cape Charles, Virginia

Scale: Not to Scale

Typical Offshore Wind Turbine Schematic

Figure 1.2-1





GAMESA ENERGY USA, LLC
Offshore Cape Charles, Virginia

Scale: Not to Scale

Source: ESS Group, Inc.

Typical Hydraulic Jetting Device for Submarine Cable Installation

Figure 1.3-2


02/23/2012 11:52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4410 East Claiborne Square, Suite 334
Hampton, Virginia 23666
p 757.251.3790
www.essgroup.com

MEMORANDUM

TO:	Tom Bonadeo, Planner, Town of Cape Charles, VA	DATE:	February 10, 2012
FROM:	Payson Whitney, PE	ESS PROJECT NO.:	G216-000.01
SUBJECT:	Gamesa Joint Permit Application – G11X WTG Submarine Cable Landfall Transition Construction Sequence – Cape Charles Harbor		
COPY TO:	Dan Renshaw; Todd Hopper,- Charlie Natale, Steve Wood		

As requested during out calls earlier this week, ESS Group, Inc. (ESS) has prepared the following description of the general sequence and methods of construction to install the submarine cable landfall design as shown on Sheet 13 of 18 of the Joint Permit Application – Landfall Transition - G11X Offshore Wind Turbine Project. The purpose of this supplemental information to the JPA is to provide the Cape Charles Wetlands Board with more detailed descriptions of anticipated construction means and methods to evaluate the type and extent of its jurisdiction and permitting authority under their Wetlands Protection Bylaw. It should be noted that this description is for permitting review purposes, and that the final sequence of construction and means and methods will be determined by the selected contractor in accordance with the project permits and actual conditions found in the field.

The design of the landfall transition presented in the JPA was selected specifically to minimize direct impacts to and isolate this construction from affecting the remaining sections of the existing deteriorated steel bulkhead structure which currently delineates the site area's intertidal zone. Presently, some intertidal flow occurs between the harbor and the existing steel bulkhead eroding the adjacent fastland behind it, requiring further erosion protection by dumped riprap behind the bulkhead's landward side. The new steel bulkhead wall will be a stand-alone, cofferdam cell structure that will be constructed and maintained independent of the existing old bulkhead structure. New steel sheeting will be driven seaward of the existing bulkhead alignment as close as possible to the current bulkhead alignment as a "replacement" section, which will then be independently supported by the attached cofferdam structure to be installed landward of the new steel bulkhead. Also, as shown in the attached annotated JPA Plans, it is proposed to conduct this shoreline structure stabilization work from the adjacent upland. This will be accomplished by constructing a dry "cofferdam cell" behind the new section of steel bulkhead serving to replace the existing deteriorated bulkhead section. All work has been designed to minimize potential impacts to the shoreline area and its intertidal zone.

ANTICIPATED SEQUENCE OF CONSTRUCTION ACTIVITIES

Refer to the attached Construction Sequence Figures 1, 2a, 2b and 3, which are annotated to correspond with the steps described below. All construction activities excluding dredging will occur landward of the existing bulkhead.

STEP 1. Install appropriate erosion control measures and then remove debris and obstructions from the cofferdam work zone behind the existing steel bulkhead. Pre-characterize the soil volume to be removed from behind the existing bulkhead to determine its bulk physical and environmental characteristics that will direct proper excavation, handling, and storage/removal during construction. A soil/groundwater Test Pit will also be dug at time of high tide to better understand groundwater/tidal flow elevations and interactions at the area of proposed construction. Refer to Figure 1.

STEP 2. Construct the new steel sheet pile bulkhead, the seawall (approx. length, 55 feet), approximately 2 feet seaward (or as close as possible) of the existing steel bulkhead between Points E1 and E2. Leave the existing bulkhead in place until the proposed steel bulkhead is properly anchored and relatively watertight. Refer to Figure 1.

STEP 3. Excavate existing upland soils in an area behind existing bulkhead Sections A and B to a depth of 12' (EL. -2.50) to facilitate removing a full section (or sections) of existing steel bulkhead at Points A and B shown on Figure 2a. These existing bulkhead sections need to be removed to make way for the new steel bulkhead (Line 1-2, and Line 3-4). Remove full section (or sections) of existing bulkhead at Points A and B. Refer to Figure 2a.

STEP 4. Drive the new sheet pile cofferdam cell as shown on the plans. Place and compact suitable clean backfill material behind the new seawall between Points E1-A and E2-B. Excavate the existing material between the new cofferdam cell and the existing bulkhead (shown as Section C, Figure 2a) to approx. EL. -13.0. Dewatering of removed soils may be necessary during excavation. The approved dewatering method is expected to be via a temporary dewatering basin adjacent to the excavated area on Bay Shore Railroad Property. Free water that is pumped from the excavation will pass through a hay bale corral to trap suspended sediment prior to discharge. Temporary outlets will discharge water to the ground or harbor in accordance with applicable regulations. Excavated soil and residuals treatment will be handled on-site in accordance with the site construction activity's soil management plan. Refer to Figure 2a.

STEP 5. Torch cut the existing steel bulkhead Section C (as shown on Figure 2b) at approx. EL. -11.0 between Points A and B. This will leave a double wall in place below EL. -11.0 providing added strength to the new installation. A conduit sleeve (material to be determined during final design) that will encase the submarine cable system within the limits of the new cofferdam and seawall will be installed and then the excavated cofferdam area will be partially backfilled to the bottom of the conduit sleeve to provide support and compacted with clean suitable soils/crushed stone. Refer to Figure 2b.

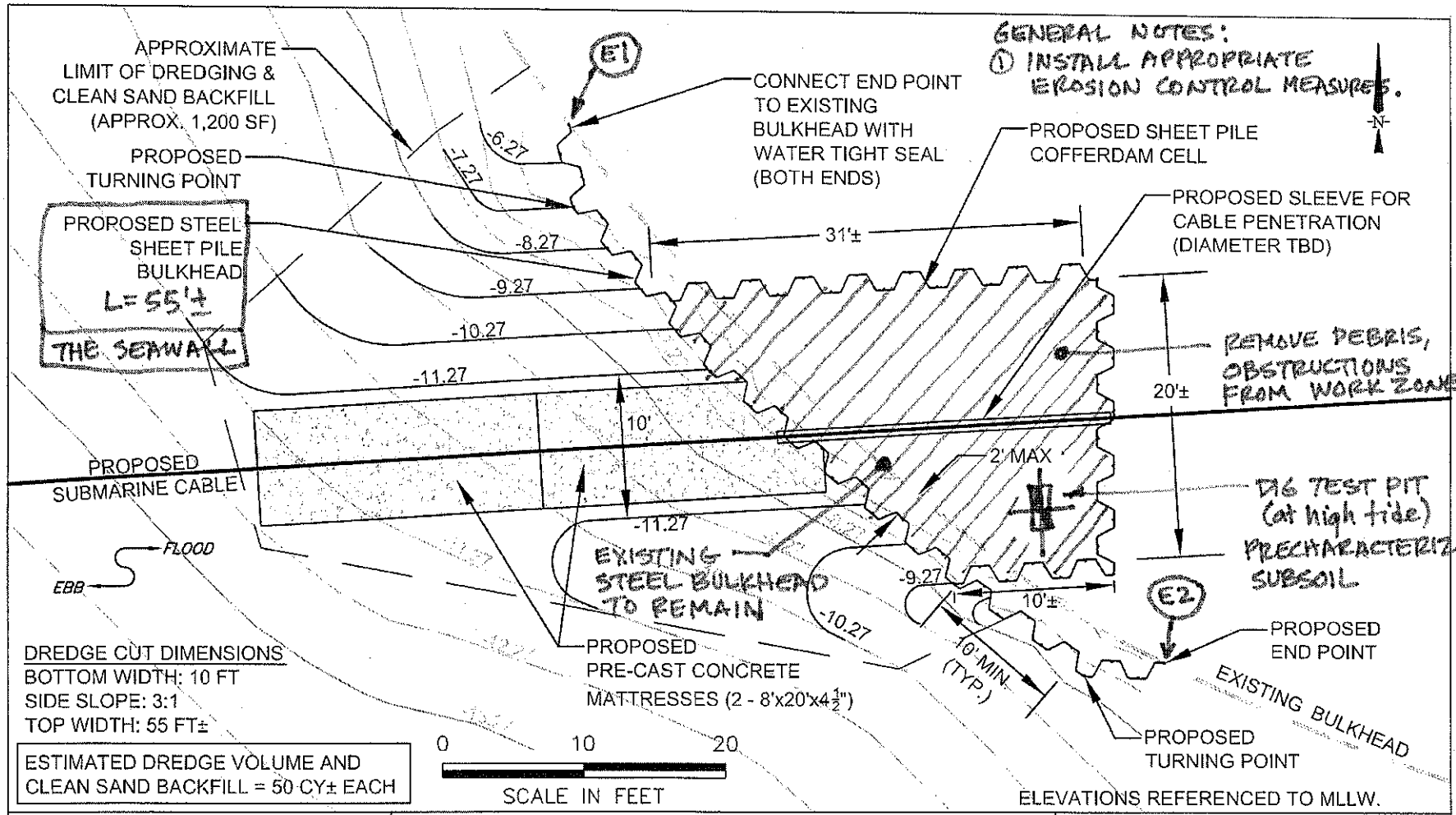
STEP 6. Construction activities move seaward from the shoreline construction. These activities will take place below the Mean Low Water shoreline of Cape Charles Harbor, and hence may not be subject to Wetlands Board jurisdiction, but will be subject to USACE Norfolk District permitting review and approval under the JPA. Subtidal marine sediments will be dredged to EL. -11.27 as shown on Figure 3. Dredging equipment will either operate from the landward side on either side of the open excavation left by the new cofferdam cell or from a barge. Dredged material will also be dewatered in a temporary de-watering basin on the adjacent upland with dewatering run-off from the containment area discharged back into the Harbor.

STEP 7. Dewater the open cofferdam cell if necessary. Continue installing the new cable sleeve through the cofferdam by filling and compacting the backfill from the bottom up. Complete backfilling and compacting the cofferdam cell to the proposed finished grade. Stabilize the surface soils of the cofferdam cell area and all other areas disturbed by construction activities with loam and grass seed in accordance with the plans. Refer to Figure 3.

STEP 8. Install the proposed submarine cable from the seaward side of the new seawall section and pull the cable bundle through the new bulkhead section and cable sleeve as per the approved plans. The cable will then be pulled directly to the underground Transition Vault where it will be secured and spliced together with the Project's upland cable system. Once the cable is secured in the upland Transition Vault, the submarine cable system will then be installed in the seabed from Cape Charles Harbor to the offshore WTG. After the cable installation is complete, the precast concrete cable protection mattresses will be

installed on the seabed surface at the landfall to provide protection for the cable near the bulkhead. Refer to Figure 3.

If you have any questions about the general construction sequence presented in this memo, please contact me at 781-419-7750 or by email at pwhitney@essgroup.com.



Purpose: Installation and operation of a prototype offshore wind turbine including foundation system and submarine electric export cable.

JOINT PERMIT APPLICATION
LANDFALL TRANSITION - PLAN VIEW
SCALE: 1"=10'

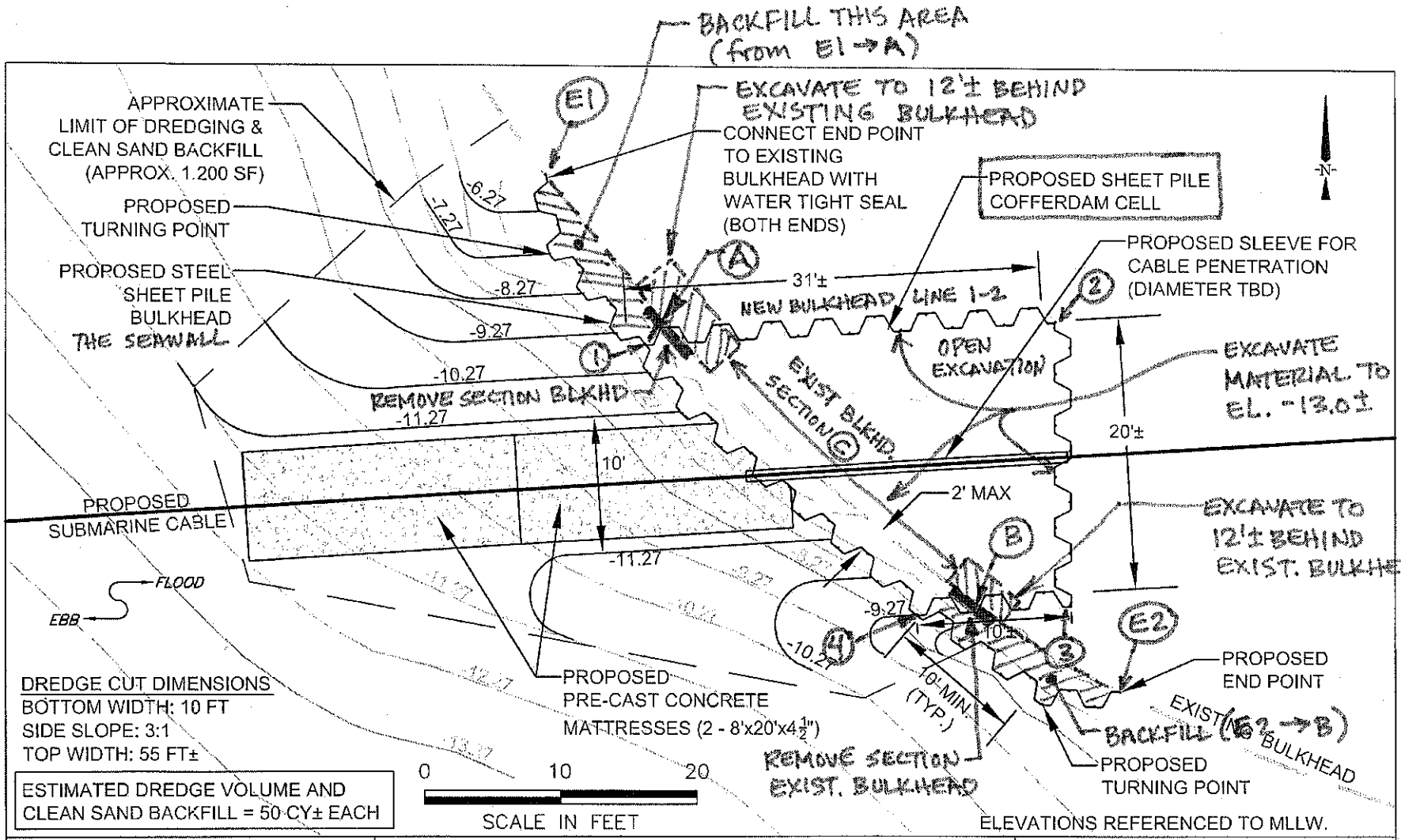
G11X OFFSHORE WIND TURBINE PROJECT

ESS group
4410 East Claiborne Square, Suite 334
Hampton, VA 23666
p 757.251.3790

APPLICANT: Gamesa Energy USA, LLC
WATERWAY: Cape Charles Harbor
IN: Chesapeake Bay
TOWN: Cape Charles
COUNTY: Northampton
NUMBER OF SHEETS: ~~18~~ 1 of 4
DATE: JANUARY 26, 2012

LANDFALL CONSTRUCTION SEQUENCE

FIGURE 1:
STEPS 1 AND 2



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LANDFALL TRANSITION - PLAN VIEW
SCALE: 1"=10'

G11X OFFSHORE WIND TURBINE PROJECT

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4410 East Claiborne Square, Suite 334
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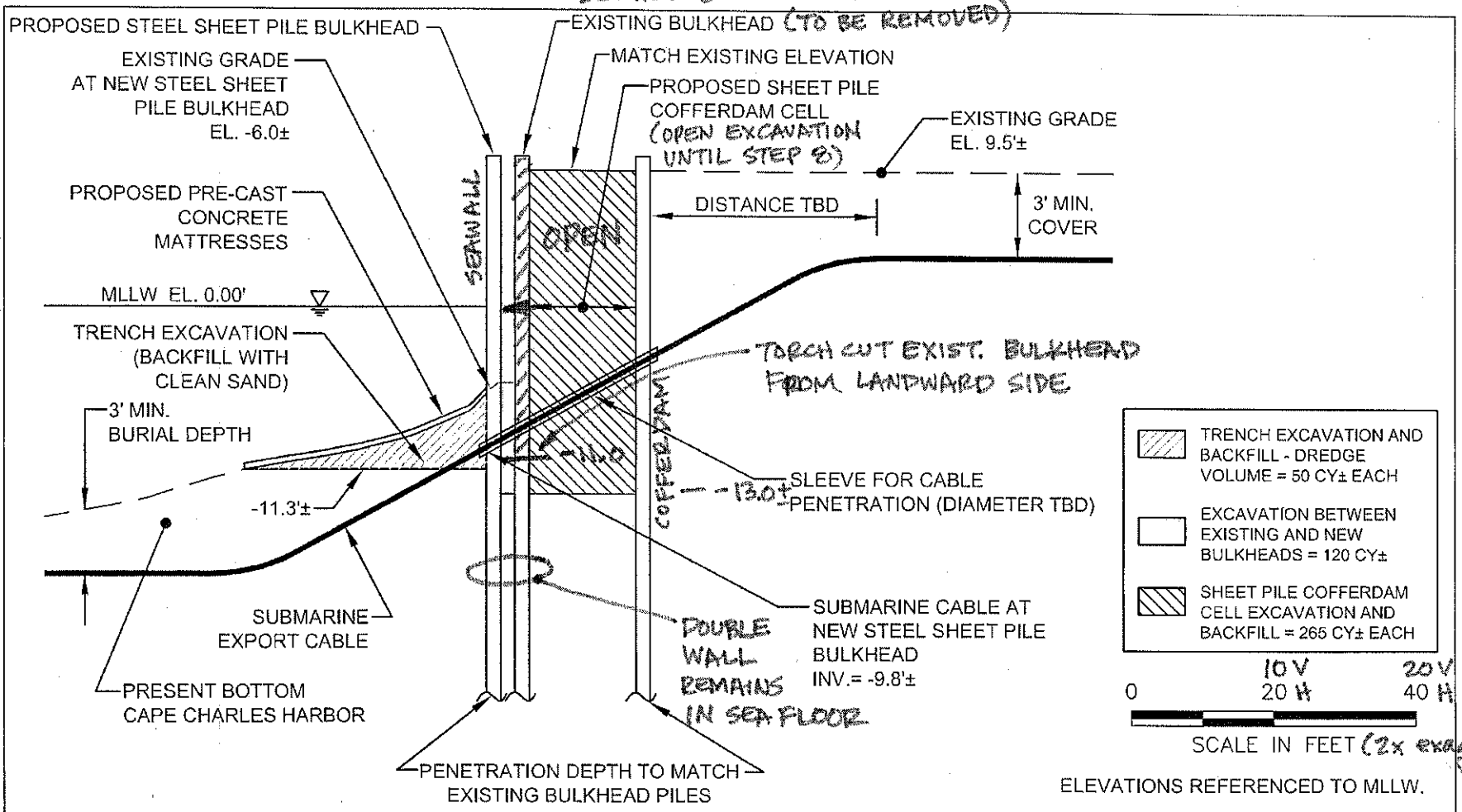
p 757.251.3790

APPLICANT: Gamesa Energy USA, LLC
WATERWAY: Cape Charles Harbor
IN: Chesapeake Bay
TOWN: Cape Charles
COUNTY: Northampton
2 of 4
NUMBER OF SHEETS: ~~13 of 18~~
DATE: JANUARY 26, 2012

LANDFALL CONSTRUCTION SEQUENCE

FIGURE 2a:
STEPS 3 AND 4

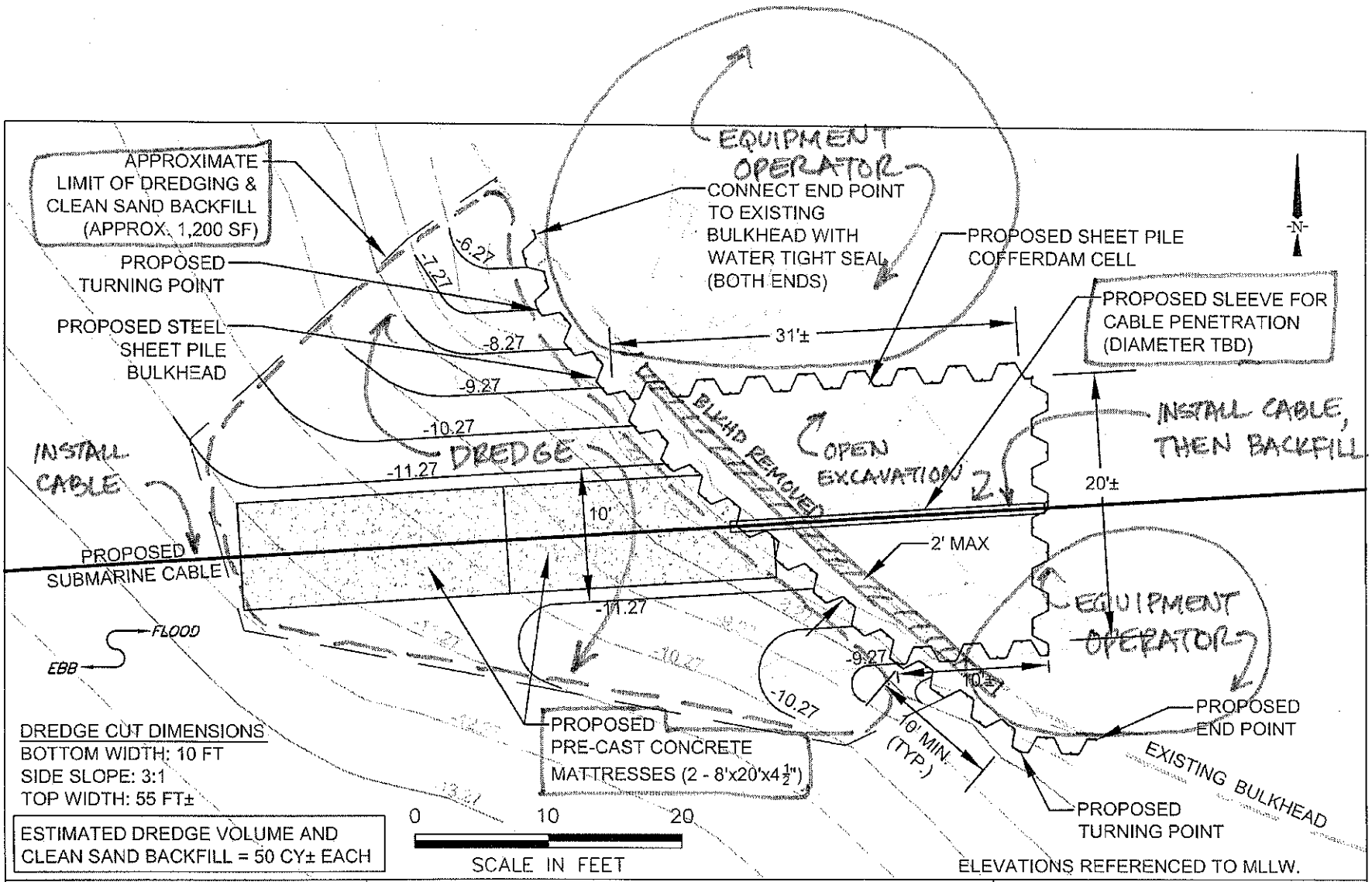
SECTION C (FIG. 2A)



Purpose: Installation and operation of a prototype offshore wind turbine including foundation system and submarine electric export cable.	JOINT PERMIT APPLICATION LANDFALL TRANSITION - SECTION VIEW SCALE: 1"=20' G11X OFFSHORE WIND TURBINE PROJECT ESS group 4410 East Claiborne Square, Suite 334 Hampton, VA 23666 p 757.251.3790	APPLICANT: Gamesa Energy USA, LLC WATERWAY: Cape Charles Harbor IN: Chesapeake Bay TOWN: Cape Charles COUNTY: Northampton 3 of 4 NUMBER OF SHEETS: ~~15 of 18~~ DATE: JANUARY 26, 2012

LANDFALL CONSTRUCTION SEQUENCE

FIGURE 2b: STEP 5



Purpose: Installation and operation of a prototype offshore wind turbine including foundation system and submarine electric export cable.

JOINT PERMIT APPLICATION
LANDFALL TRANSITION - PLAN VIEW
SCALE: 1"=10'

G11X OFFSHORE WIND TURBINE PROJECT

ESS group
4410 East Claiborne Square, Suite 334
Hampton, VA 23666
p 757.251.3790

APPLICANT: Gamesa Energy USA, LLC
WATERWAY: Cape Charles Harbor
IN: Chesapeake Bay
TOWN: Cape Charles
COUNTY: Northampton 4 of 4
NUMBER OF SHEETS: ~~13 of 18~~
DATE: JANUARY 26, 2012

LANDFALL CONSTRUCTION SEQUENCE

FIGURE 3:
STEPS 6, 7, 8