

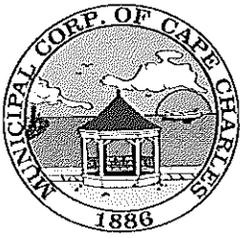
# **Wetlands and Dune Board**

## **Public Hearing Agenda**

**April 22, 2013**

**3:00 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. *Bay Creek South LLC, JPA #13-0416* – Install 600 linear feet of stone riprap situated along the Chesapeake Bay adjacent to Holes 4 and 5 of the Nicklaus course.
    - 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**  
**November 2, 2012**  
**6:00 p.m.**

At 6:05 p.m. in the Town Hall, having established a quorum, Board member Russ Dunton called to order the Wetlands/Coastal Dune Board Public Hearing and Meeting. In attendance were Board members Wayne Creed and Jim Weiner. Chairwoman Ann Hayward Walker and Board member Bruce Lindeman were not in attendance. Also present were Town Planner Tom Bonadeo, Town Clerk Libby Hume, Don MacLennan from Engineering Resources Group, LLC and Eyre Baldwin from South Port Investors. There were also three members of the public in attendance.

**CONSENT AGENDA**

**Motion made by Wayne Creed, seconded by Jim Weiner, to accept the agenda format as presented. The motion was unanimously approved.**

The Board reviewed the minutes from the February 29, 2012 Public Hearing and Meeting.

**Motion made by Jim Weiner, seconded by Wayne Creed to accept the minutes of the February 29, 2012 Public Hearing and Meeting as presented. The motion was unanimously approved.**

**BUSINESS**

**A. *Modification of Permit 08-0104***

Tom Bonadeo stated that the original permit application was approved in 2008 and the purpose of this meeting was to review a modification to the permit due to a change in the location for the wetlands mitigation and a revised plan for the travel lift. Since Wayne Creed was not a member of the Wetlands Board at the time and Russ Dunton was not in attendance at the meeting in 2008, Tom Bonadeo gave a brief overview of the original permit and explained the changes for the modified permit pointing out the affected areas on the map.

Tom Bonadeo went on to explain that the proposed project did not fall within the jurisdiction of the Virginia Marine Resources Commission (VMRC) and the Virginia Institute of Marine Science (VIMS) no longer provided staff reports as a regular process. Tom Bonadeo added that he spoke to a VIMS representative and the initial VIMS report was still valid and the proposed mitigation site was a better location. The application had been reviewed with adjacent property owners and no objections had been received.

Tom Bonadeo introduced Don MacLennan who gave an overview of the proposed modifications and added that more wetlands mitigation would be done than the amount of area being disturbed. The wetlands mitigation site was being changed from Eyre Hall to a location in Cape Charles on land leased by South Port Investors. Mr. MacLennan pointed out the areas on the map and there was some discussion regarding the applicant's plans. The proposed plan was to construct the project in phases. The first phase included a 75-ton

travel lift to be constructed at the east end of the harbor. Future plans would increase this lift to a 100-ton capacity. The floating dock would be installed in the first phase.

Tom Bonadeo stated that the major maintenance would be conducted at the old wastewater plant site and the applicant was working with Planning and Zoning regarding the required conditional use permit applications. The financial impact of the project and the development of new businesses with planned future growth were important to the area. The investment of millions of dollars in this site was crucial to the continued life of the Harbor, Town and lower Northampton County. Future phases would be developed on the south side of the harbor known as parcels 19 and 20.

Tom Bonadeo added that the Corps of Engineers required the project to be bonded and the applicant to provide annual reports to the Corps. The upland mitigation site met the technical requirement for the replacement of wetlands and offered mitigation in the same watershed area and most likely would be approved by the Corps of Engineers. Tom Bonadeo concluded by stating that staff recommended approval of the modified permit with a one-year expiration date per Section 74.37 of the Zoning Ordinance.

Wayne Creed stated that he felt this project would be an improvement to the area. Both Russ Dunton and Jim Weiner expressed their agreement.

Russ Dunton asked the board if there were any other questions or concerns. There were none.

**Motion made by Wayne Creed, seconded by Jim Weiner, to approve the modified permit as presented and per Section 74.37 of the Zoning Ordinance. The motion was unanimously approved.**

**Motion made by Jim Weiner, seconded by Wayne Creed, and unanimously approved to adjourn the Wetlands/Coastal Dune Board Meeting.**

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Board Member Russ Dunton

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Town Clerk

# Wetlands and Dune Board Staff Report

**From:** Tom Bonadeo  
**Date:** April 22, 2013  
**Item:** 3. B. – Bay Creek JPA 13-0416  
**Attachments:** Application, DCR rip rap specifications and photos

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## Background

The Cape Charles Wetlands and Dune Board meets on an as-needed basis to review permit applications. This application has been received to install 600 feet of stone revetment along the Chesapeake Bay, to protect the 5<sup>th</sup> hole of the Nicklaus Golf Course. This area was eroded by Hurricane Sandy. This area is also just to the north of the northern most breakwater of the group installed in 2003.

## Item Specifics

Hurricane Sandy eroded the beach, dune and cart path west of the 5<sup>th</sup> hole of the Nicklaus Golf Course. The photos dated 4/16/2013 show the beach to the north, the 600 feet of eroded bank and the beach/bank tapering off to the south of the site. The applicant proposes to dig down at the toe of the bank deep enough to be below mean low water and to install a stone "bank" composed of Class I stone covered by Class III stone. Please see the attached Table 3.19B from the state manual for stone classification. Class III stone weighs 500 lbs. each. This design is to protect the Nicklaus Golf Course investment.

In approximately 2003 offshore breakwaters were installed to the south to help build and retain beach. These devices are the preferred shore protection. In 2010 the State developed a decision tree to aid in selecting the appropriate treatment for erosion along the Chesapeake Bay. The flow chart is attached for your review.

The ideal situation would be to create more beach to help protect the uplands and provide more habitat for the Tiger Beetle that was known to be in this area prior to the loss of beach during Hurricane Sandy. The economic impact of the potential loss of the golf course is enormous for the area and should be considered in the equation. In addition to these factors, a review of the existing breakwaters will help determine their performance in this area.

**Economic Impact** -The golf course was built at an approximate cost of \$7.5 million in the original investment. We must consider the golf course as a whole and not just Hole 5. This golf course gets approximately 13,800 rounds of play per year and the average spending per round is \$95.70. This results in an economic impact to the area of \$1,320,660 annually. This does not take into consideration the jobs created in the maintenance of the course and other related facilities.

**Review of Alternatives** – An alternative proposal would be to continue with a series of offshore breakwaters. The Decision Tool flow chart guides the user eventually to the box #7 with the question of Fetch? In this case there is more than one correct answer. The fetch for waves coming onto this shore is about 20 miles. There is a very deep portion of the bay just offshore (100'+) and the Cherrystone Channel lies just off the beach at 18' to 20'. With deep water just offshore a revetment is the solution. If the 20 mile fetch is high, then a breakwater with beach nourishment is a solution. The offshore breakwater solution has some history and has not proved to protect an escarpment in the case of a storm surge like Hurricane Sandy. They will help

stabilize beach but require regular nourishment due to the catastrophic loss of sand during a high tide event. The revetment is not the only inappropriate solution for this protection.

**Beach Protection and Nourishment** – This beach has held a population of Tiger Beetles in the past and work on this project should be done from the uplands to lessen the impact to the new beach formed since the Hurricane. The Town of Cape Charles is working with the Army Corps of Engineers to do maintenance dredging of the entrance channel and harbor area. If this spoils material is suitable it should be used as nourishment to enlarge the beach for all the reasons listed above. All agencies will have the opportunity to review this process as permits are acquired for the dredging.

**Design Review** – The proposal is using Class I and Class III stone. There are photos attached dated 4/17/2013 that show the revetment built at Aqua Restaurant. These photos show the damage that was incurred during Hurricane Sandy with only smaller stone. Class III stone weighs 500 pounds each. The design is to withstand the wave action during a high tide event when the waves have a fetch across the Bay and nearby deep water. The construction proposal is to build this from the uplands and then to restore the uplands to preconstruction vegetation.

### **Recommendation**

Review the proposal, Decision Tree Flow Chart, photos and public comment. Staff recommends approval of the permit in light of the above review. The VMRC and other have 10 days for review prior to the issuance of a permit.



# COMMONWEALTH of VIRGINIA

## *Marine Resources Commission*

2600 Washington Avenue

Third Floor

Newport News, Virginia 23607

April 2, 2013

Douglas W. Domenech  
Secretary of Natural Resources

Jack G. Travelstead  
Commissioner

Bay Creek South, LLC  
Attn: Mr. Bobby Jarman  
c/o Mr. Don MacLennan  
Engineering Resources Group, LLC  
5741 Cleveland Street, Suite 120  
Virginia Beach, VA 23462

RE: VMRC #13-0416

Dear Mr. Jarman:

You have inquired regarding a permit to install 600 linear feet of stone riprap situated along the Chesapeake Bay adjacent to Holes 4 and 5 on the Nicklaus course in the Town of Cape Charles.

Based on your application and drawings, we have determined that the proposed project is above mean low water and will not require a permit from the Marine Resources Commission.

For your information, however, you may need authorization from the U. S. Army Corps of Engineers, your local Wetlands Board and/or the Department of Environmental Quality (DEQ) prior to commencing your project.

If I may be of further assistance, please do not hesitate to contact me at (757) 414-0710.

Sincerely,

A handwritten signature in black ink, appearing to read "George H. Badger, III".

George H. Badger, III  
Environmental Engineer

GHB/lra

HM

cc: Department of Environmental Quality #6  
Cape Charles Wetlands Board  
Applicant

*An Agency of the Natural Resources Secretariat*

[www.mrc.virginia.gov](http://www.mrc.virginia.gov)

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

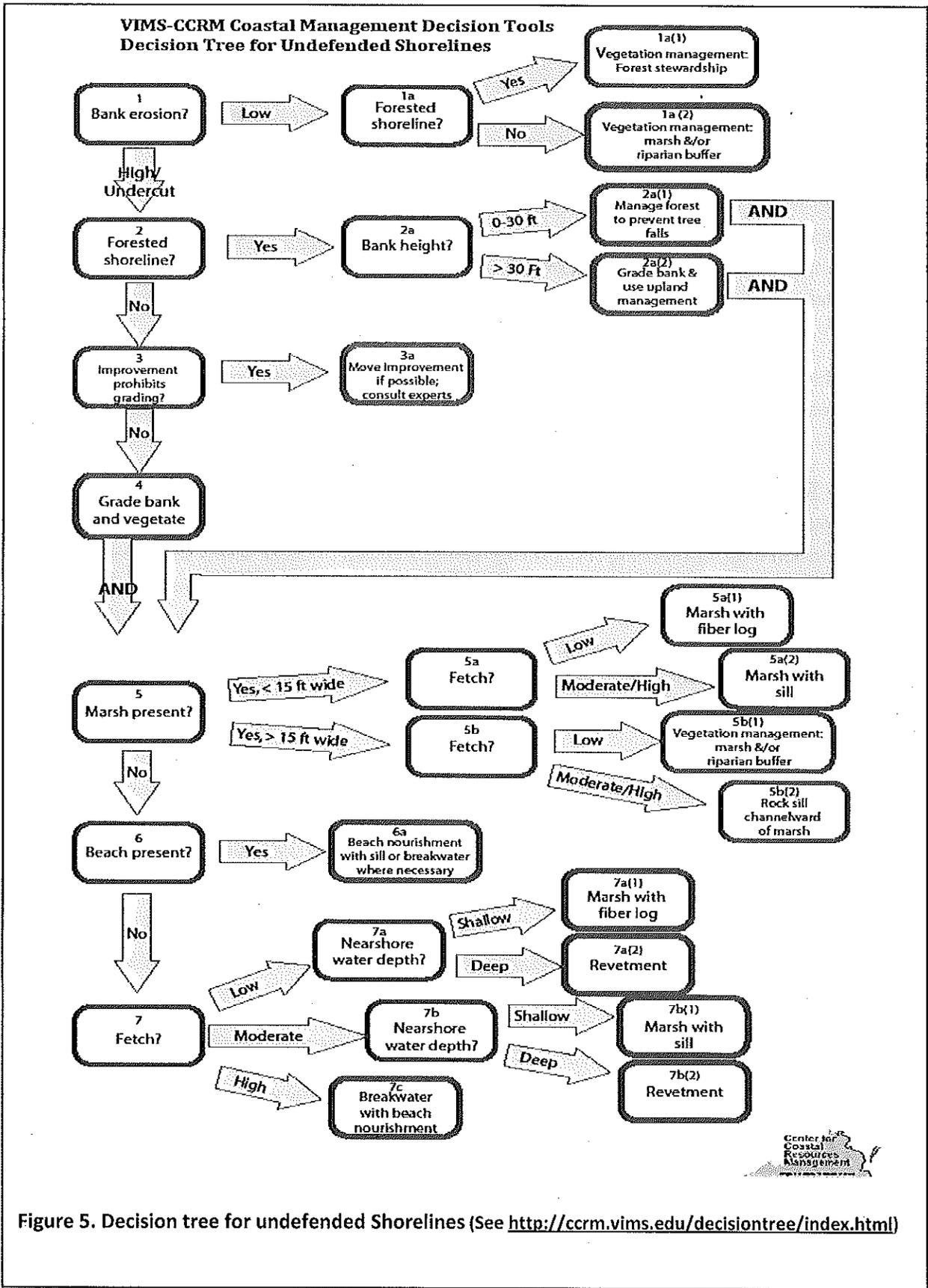


Figure 5. Decision tree for undefended Shorelines (See <http://ccrm.vims.edu/decisiontree/index.html>)

## **Recommendations**

Virginia should develop integrated guidance for management of tidal shoreline systems. The guidance should identify preferred shoreline management approaches for the shoreline types found in Virginia. To the extent possible it should identify and explain the trade-offs in protection of various shoreline system elements associated with each management option. The objective is to provide a sound technical basis for coordination of all the permit decisions required by any shoreline management project. The intent should be for all regulatory authorities with purview over activities along Virginia's tidal shorelines to use the guidance to achieve greater collective efficiency and effectiveness in management of the Commonwealth's resources. Development of the guidance should be a cooperative effort involving the Department of Conservation and Recreation, the Virginia Marine Resources Commission, and the Virginia Institute of Marine Science.

A study to identify and assess any potential regulatory issues associated with development and implementation of integrated guidance for tidal shoreline management should be conducted.

## **Identify Regulatory Innovations to Promote Living Shorelines**

Living shorelines are created or enhanced shorelines that make the best use of nature's ability to abate shoreline erosion while maintaining or improving habitat and water quality. Living shoreline treatments address erosion by providing long-term protection, restoration or enhancement of vegetated shoreline habitats through strategic placement of plants, stone, sand fill and other structural or organic materials (For a in-depth look at living shorelines ecosystem benefits, design/build information, and photographic examples, see the Center for Coastal Resources Management Living Shorelines website at: <http://ccrm.vims.edu/livingshorelines/>).

Application of living shoreline designs has become a widely accepted and preferred strategy for tidal shoreline management. Because they entail a system-level approach, living shoreline treatments reflect the best understanding of how shoreline systems work, and how the benefits they provide can be sustained. For these reasons, promoting the use of living shorelines is seen as desirable by resource managers and scientific advisors across the nation.

In Virginia, each of the regulatory programs managing shore resources tends to seek avoidance of impacts in areas under their jurisdiction. This preference for the status quo can be in conflict with living shoreline designs.

While not all living shoreline designs are identical, creating the necessary conditions can involve:

- grading the riparian area, disrupting or removing the natural vegetation and the associated pollutant removal capacity, and creating a conflict with local Bay Act code requirements; or
- moving design elements channelward to preserve an existing vegetated riparian area, impacting wetlands and creating a conflict with wetlands guidelines; or

**TABLE 3.19-B**  
**GRADED RIPRAP - DESIGN VALUES**

<u>Riprap Class</u>	<u>D<sub>15</sub> Weight (lbs.)</u>	<u>Mean D<sub>15</sub> Spherical Diameter (ft.)</u>	<u>Mean D<sub>50</sub> Spherical Diameter (ft.)</u>
Class AI	25	0.7	0.9
Class I	50	0.8	1.1
Class II	150	1.3	1.6
Class III	500	1.9	2.2
Type I	1,500	2.6	2.8
Type II	6,000	4.0	4.5

Source: VDOT Drainage Manual

The designer, after determining the riprap size that will be stable under the flow conditions, shall consider that size to be a minimum size and then, based on riprap gradations actually available in the area, select the size or sizes that equal or exceed the minimum size. The possibility of damage by children shall be considered in selecting a riprap size, especially if there is nearby water or a gully in which to toss the stones.

#### Thickness

The minimum thickness of the riprap layer shall be 2 times the maximum stone diameter, but not less than 6 inches.

#### Quality of Stone

Stone for riprap shall consist of field stone or rough unhewn quarry stone of approximately rectangular shape. The stone shall be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all respects for the purpose intended. The specific gravity of the individual stones shall be at least 2.5.

Rubble concrete may be used provided it has a density of at least 150 pounds per cubic foot, and otherwise meets the requirement of this standard and specification.

March 21, 2013

**MEMORANDUM**

**TO:** Cape Charles Wetlands Board  
**FROM:** Virginia Marine Resources Commission, Habitat Management  
**SUBJECT:** VMRC #13-0416 Bay Creek South, LLC

The above-referenced application was e-mailed to your office on this date. The Environmental Engineer responsible for your area has not yet seen this application and no determination has been made regarding its completeness. Please advise us of your determination in this matter and when a public hearing is scheduled if, in your judgment, wetlands are involved. You may also want to forward a copy of your response to the U.S. Army Corps of Engineers, Norfolk District, to advise them of your findings concerning this project.

Beth Howell

Division Office Manager

/blh  
Attachment

MARCH 27, 2013  
Date

**MEMORANDUM**

**TO:** Virginia Marine Resources Commission, Habitat Management Division  
**FROM:** Wetlands Board Staff

Review of the above referenced application indicates this project:

Does not involve wetlands. A letter will be forwarded to the applicant advising that no permit will be required from this Board.

Does involve wetlands and a permit will be required. A public hearing has been tentatively scheduled for APRIL 22, 2013 at 3 pm.

Does involve wetlands but a permit will not be required because

Site inspection conducted on \_\_\_\_\_

No site inspection conducted.

Wetlands Board Staff Contact

TOM BONADEO

**Howell, Beth (MRC)**

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**From:** Jason Seas [jseas@ergroup.net]  
**Sent:** Wednesday, March 20, 2013 3:54 PM  
**To:** MRC - jpa Permits  
**Subject:** JPA - Bay Creek Shore Line Revetment  
**Attachments:** 13-0320-BayCreek-JPA.pdf

I am submitting an application package, including drawings, for the proposed construction of a shore line revetment project for the Bay Creek Resort Development located in Cape Charles, Virginia. The shore line of this existing development along the Chesapeake Bay has been damaged and eroded from a series of storms, hurricanes, and nor'easters. The upland area behind the beach has been severely damaged over the past year and is beginning to encroach on the existing golf course. In order to protect the golf course and prevent further upland erosion along the beach the property owner, Bay Creek South, LLC, would like to install a stone revetment along 600' of shoreline as documented in the attached PDF JPA application and drawings.

If there are any questions with the provided information, please contact me.  
Jason

Jason Seas, PE  
Engineering Resources Group, LLC  
5741 Cleveland Street, Suite 120  
Virginia Beach, VA 23462

P: (757) 961-6215 x224  
F: (757) 961-7244  
[jseas@ergroup.net](mailto:jseas@ergroup.net)



## Part 1 – General Information

**PLEASE PRINT OR TYPE ALL RESPONSES:** If a question does not apply to your project, please print N/A (not applicable) in the block or space provided. If additional space is needed, attach 8-1/2" x 11" sheets of paper.

<b>County or City in which the project is located:</b> <u>Cape Charles, VA, Northampton County</u> <b>Waterway at project site:</b> <u>Chesapeake Bay</u>
--

1. Applicant's name\* and complete mailing address: Contact Information:  
 Bobby Jarman Home ( ) \_\_\_\_\_  
 Bay Creek South, LLC Work ( 757 ) \_\_\_\_\_ 491-1240  
 1100 Eaglewood Drive Fax ( 757 ) \_\_\_\_\_ 491-0456  
 Virginia Beach, VA 23453 Cell/ Pager ( ) \_\_\_\_\_  
e-mail \_\_\_\_\_ bjarman@baymark1.com  
 State Corporation Commission ID Number (if applicable) \_\_\_\_\_

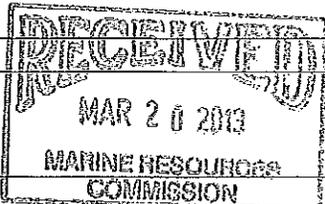
2. Property owner(s) name\* and complete address, Contact Information:  
 if different from applicant Home ( ) \_\_\_\_\_  
Work ( ) \_\_\_\_\_  
Fax ( ) \_\_\_\_\_  
Cell/ Pager ( ) \_\_\_\_\_  
e-mail \_\_\_\_\_  
 State Corporation Commission ID Number (if applicable) \_\_\_\_\_

3. Authorized agent name\* and complete mailing Contact Information:  
 address (if applicable): Home ( ) \_\_\_\_\_  
 Don MacLennan Work ( 757 ) \_\_\_\_\_ 961-6215  
 Engineering Resources Group, LLC Fax ( 757 ) \_\_\_\_\_ 961-7244  
 5741 Cleveland Street, Suite 120 Cell/ Pager ( ) \_\_\_\_\_  
 Virginia Beach, VA 23462 e-mail \_\_\_\_\_ dmaclennan @ ergroup.net  
 State Corporation Commission ID Number (if applicable) \_\_\_\_\_

\* If multiple applicants, property owners, and/or agents, each must be listed and each must sign the applicant signature page. If for a company, use the SCC registered name.

4. Provide a detailed description of the project in the space below. If additional space is needed, provide a separate sheet of paper with the project description. Be sure to include how the construction site will be accessed, especially if clearing and/or grading will be required.

The project is to place stone revetment along 600' of Chesapeake Bay shoreline along Nicklaus Hole 5 of the Bay Creek Resort to reinforce and protect the remaining elevated upland area behind the mean high water line that has been eroding from tidal storm activity.

	<b>FOR AGENCY USE ONLY</b>
	Notes:
	JPA # <u>13-0416</u>

## Part 1 - General Information (continued)

5. Have you obtained a contractor for the project? \_\_\_ Yes\*  No. \*If your answer is "Yes" complete the remainder of this question and submit the Applicant's and Contractor's Acknowledgment Form (enclosed)

Contractor's name\* and complete mailing address:

Contact Information:

Home ( ) \_\_\_\_\_

Work ( ) \_\_\_\_\_

Fax ( ) \_\_\_\_\_

Cell / Pager ( ) \_\_\_\_\_

email \_\_\_\_\_

State Corporation Commission ID Number (if applicable) \_\_\_\_\_

\* If multiple contractors, each must be listed and each must sign the applicant signature page. If for a company, use the SCC registered name.

6. List the name, address and telephone number of the newspaper having general circulation in the area of the project. Failure to complete this question may delay local and State processing.

Name and complete mailing address:

Telephone number

Virginian Pilot  
150 W. Brambleton Avenue  
Norfolk, VA 23510

( 757 ) \_\_\_\_\_ 446-2000

7. Give the following project location information:

Street Address (911 address if available) 1 Clubhouse Way

Lot/Block/Parcel# \_\_\_\_\_

Subdivision Bay Creek Resort, Nicklaus Golf Course, Hole 5

City / County Cape Charles Zipcode 23310

Latitude and Longitude at Center of Project Site (Decimal Degrees): 37D15'17", -76D01'27"

If the project is located in a rural area, please provide driving directions.

**Note:** if the project is in an undeveloped subdivision or property, clearly stake and identify property lines and location of the proposed project. A supplemental map showing how the property is to be subdivided should also be provided.

## Part 1 - General Information (continued)

8. What is the primary and secondary purpose of the project? For example, the primary purpose may be "to protect property from erosion due to boat wakes" and the secondary purpose may be "to provide safer access to a pier."

Primary: To reinforce the existing eroded scarp line, and prevent additional upland erosion that would cause damage to the existing golf course.

9. Proposed use (check one):

Single user (private, non-commercial, residential)  
 Multi-user (community, commercial, industrial, government)

10. Describe the measures that will be taken to avoid and minimize impacts, to the maximum extent practicable, to wetlands, surface waters, submerged lands, and buffer areas associated with any disturbance (clearing, grading, excavating) during and after project construction.

**Please be advised that unavoidable losses of tidal wetlands and/or aquatic resources may require compensatory mitigation.**

Any work to install revetment and protect the shoreline will take place within the RPA buffer of the Chesapeake Bay. Any work on site, and access to the site, from the beach side of the project will only occur above the normal high water line, which will be delineated by construction or sand fencing. At the project site where earth work is to occur, the high water line will be delineate by construction and silt fencing. After work is completed the beach will be returned to the best of the contractor's ability to its pre construction state.

11. Have you previously had a site visit, applied to, or obtained a permit from any agency (Federal, State, or Local) for any portion of the project described in this application or any other project at the site?

Yes\*  No \* If you answered "Yes", provide the following information:

<u>Agency / Representative</u>	<u>Activity</u>	<u>Permit/Project No.</u>	<u>Action** &amp; Date</u>
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(\*\*Issued, Denied, Withdrawn, or Site Visit)

## Part 1 - General Information (continued)

12. Is this application being submitted for after-the-fact authorization for work which has already begun or been completed? \_\_\_ Yes  No. If yes, be sure to clearly depict the portions of the project which are already complete in the project drawings.
13. Approximate cost of the entire project (materials, labor, etc.): \$ 250,000  
Approximate cost of that portion of the project which is below mean low water: \$ 0
14. Completion date of the proposed work: Start within 30 days of JPA approval - In 2013
15. Adjacent Property Owner Information: List the name and complete mailing address, including zip code, of each adjacent property owner to the project. (NOTE: a property owner/applicant cannot be their own adjacent property owner. You must give the next owner down the river, creek, etc).

Tax Parcel 90-A-4C  
Commonwealth of Virginia  
Department of Conservation and Recreation  
203 Governor Street  
Richmond, VA 23219

## Part 2 - Signatures

### 1. Applicants and property owners (if different from applicant).

**NOTE: REQUIRED FOR ALL PROJECTS**

**PRIVACY ACT STATEMENT:** The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972. These laws require that individuals obtain permits that authorize structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters prior to undertaking the activity. Information provided in the Joint Permit Application will be used in the permit review process and is a matter of public record once the application is filed. Disclosure of the requested information is voluntary, but it may not be possible to evaluate the permit application or to issue a permit if the information requested is not provided.

**CERTIFICATION:** I am hereby applying for all permits typically issued by the DEQ, VMRC, U.S. Army Corps of Engineers, and/or Local Wetlands Boards for the activities I have described herein. I agree to allow the duly authorized representatives of any regulatory or advisory agency to enter upon the premises of the project site at reasonable times to inspect and photograph site conditions, both in reviewing a proposal to issue a permit and after permit issuance to determine compliance with the permit.

In addition, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Applicant's Name (printed/typed)

\_\_\_\_\_  
(Use if more than one applicant)

\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
(Use if more than one applicant)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Property Owner's Name (printed/typed)  
(If different from Applicant)

\_\_\_\_\_  
(Use if more than one owner)

\_\_\_\_\_  
Property Owner's Signature

\_\_\_\_\_  
(Use if more than one owner)

\_\_\_\_\_  
Date

## Part 2 – Signatures (continued)

### 2. Applicants having agents (if applicable)

#### CERTIFICATION OF AUTHORIZATION

I (we), Bay Creek South, LLC, hereby certify that I (we) have authorized Engineering Resources Group, LLC  
(Applicant's name(s)) (Agent's name(s))

to act on my behalf and take all actions necessary to the processing, issuance and acceptance of this permit and any and all standard and special conditions attached.

We hereby certify that the information submitted in this application is true and accurate to the best of our knowledge.

D.W. MacLennan  
(Agent's Signature)

\_\_\_\_\_  
(Use if more than one agent)

3/14/2013  
(Date)

Bobby M. James  
(Applicant's Signature)

\_\_\_\_\_  
(Use if more than one applicant)

3-14-13  
(Date)

### 3. Applicant's having contractors (if applicable)

#### CONTRACTOR ACKNOWLEDGEMENT

I (we), \_\_\_\_\_, have contracted \_\_\_\_\_  
(Applicant's Name(s)) (Contractor's Name(s))  
to perform the work described in this Joint Permit Application, signed and dated \_\_\_\_\_.

We will read and abide by all conditions set forth in all Federal, State and Local permits as required for this project. We understand that failure to follow the conditions of the permits may constitute a violation of applicable Federal, state and local statutes and that we will be liable for any civil and/or criminal penalties imposed by these statutes. In addition, we agree to make available a copy of any permit to any regulatory representative visiting the project to ensure permit compliance. If we fail to provide the applicable permit upon request, we understand that the representative will have the option of stopping our operation until it has been determined that we have a properly signed and executed permit and are in full compliance with all terms and conditions.

\_\_\_\_\_  
Contractor's name or name of firm

\_\_\_\_\_  
Contractor's or firms address

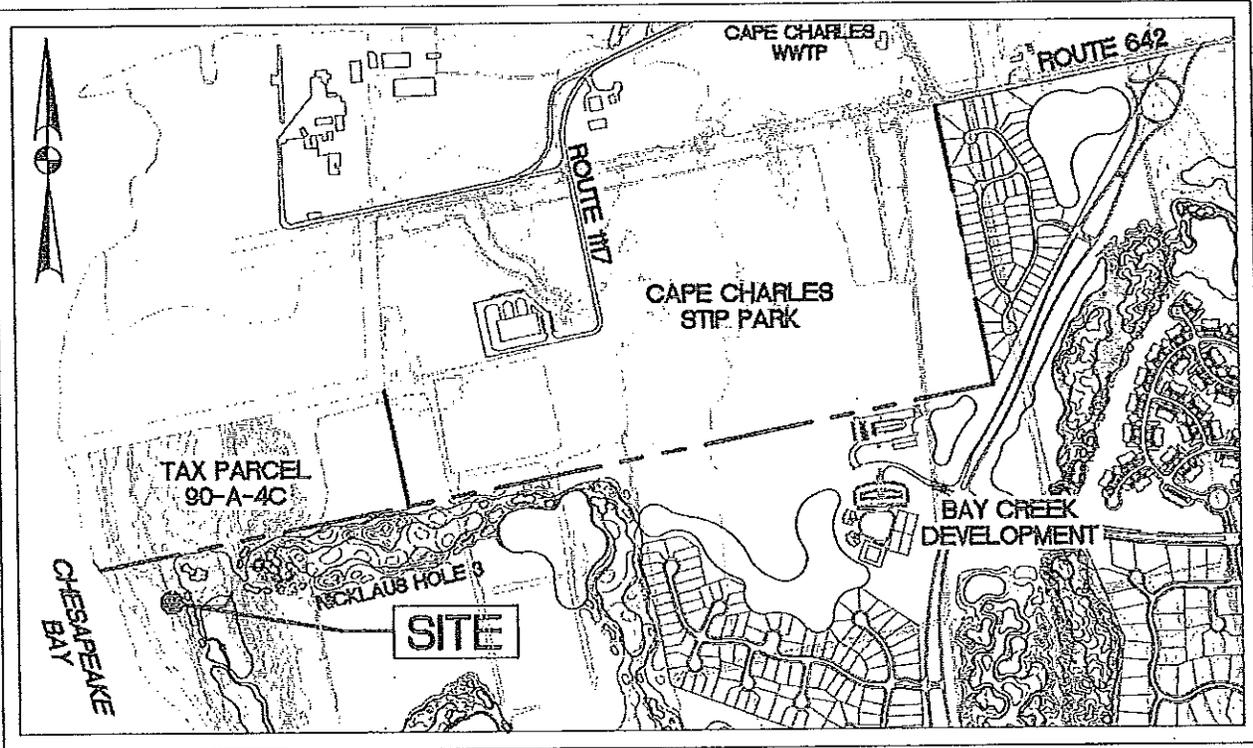
\_\_\_\_\_  
Contractor's signature and title

\_\_\_\_\_  
Contractor's License Number

\_\_\_\_\_  
Applicant's signature

\_\_\_\_\_  
(use if more than one applicant)

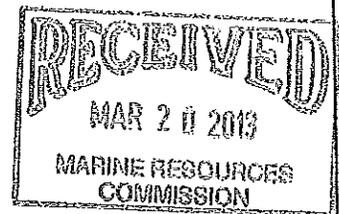
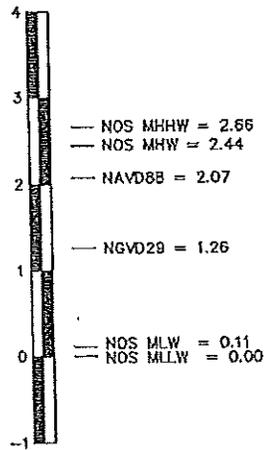
\_\_\_\_\_  
Date



VICINITY MAP

SCALE: 1"=1,000'

ADJACENT PROPERTY OWNERS:  
 TAX PARCEL 90-A-4C  
 COMMONWEALTH OF VIRGINIA  
 DEPARTMENT OF CONSERVATION AND  
 RECREATION  
 203 GOVERNOR STREET  
 RICHMOND, VA 23219



DATUM DIAGRAM (0.5"=1')

ELEVATIONS ARE IN FEET REFERRED TO NOS MEAN LOWEST LOW WATER  
 TIDAL DATUMS BASED ON 1960-1978 NATIONAL TIDAL DATUM EPOCH  
 REFERENCE NOS TIDAL STATION 8532366



Engineering Resources Group, LLC  
 5741 Cleveland Street, Suite 120  
 Virginia Beach, VA 23462  
 P: (757) 631-1111 F: (757) 631-1244  
 ERG PROJECT NO -

PERMIT APPLICATION

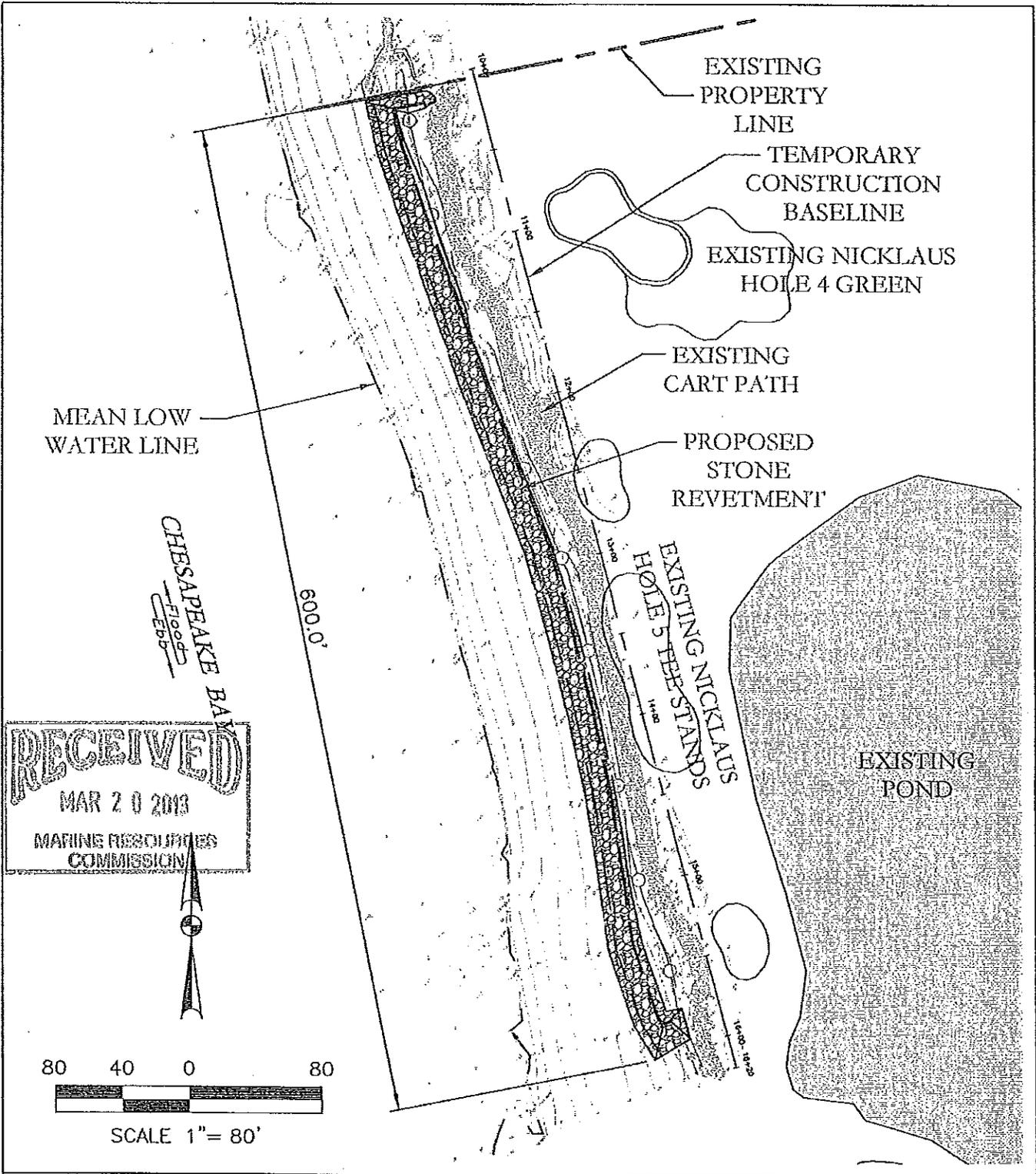
VICINITY MAP

SHEET 1 OF 10

PROJECT: BAY CREEK SHORELINE REVETMENT  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

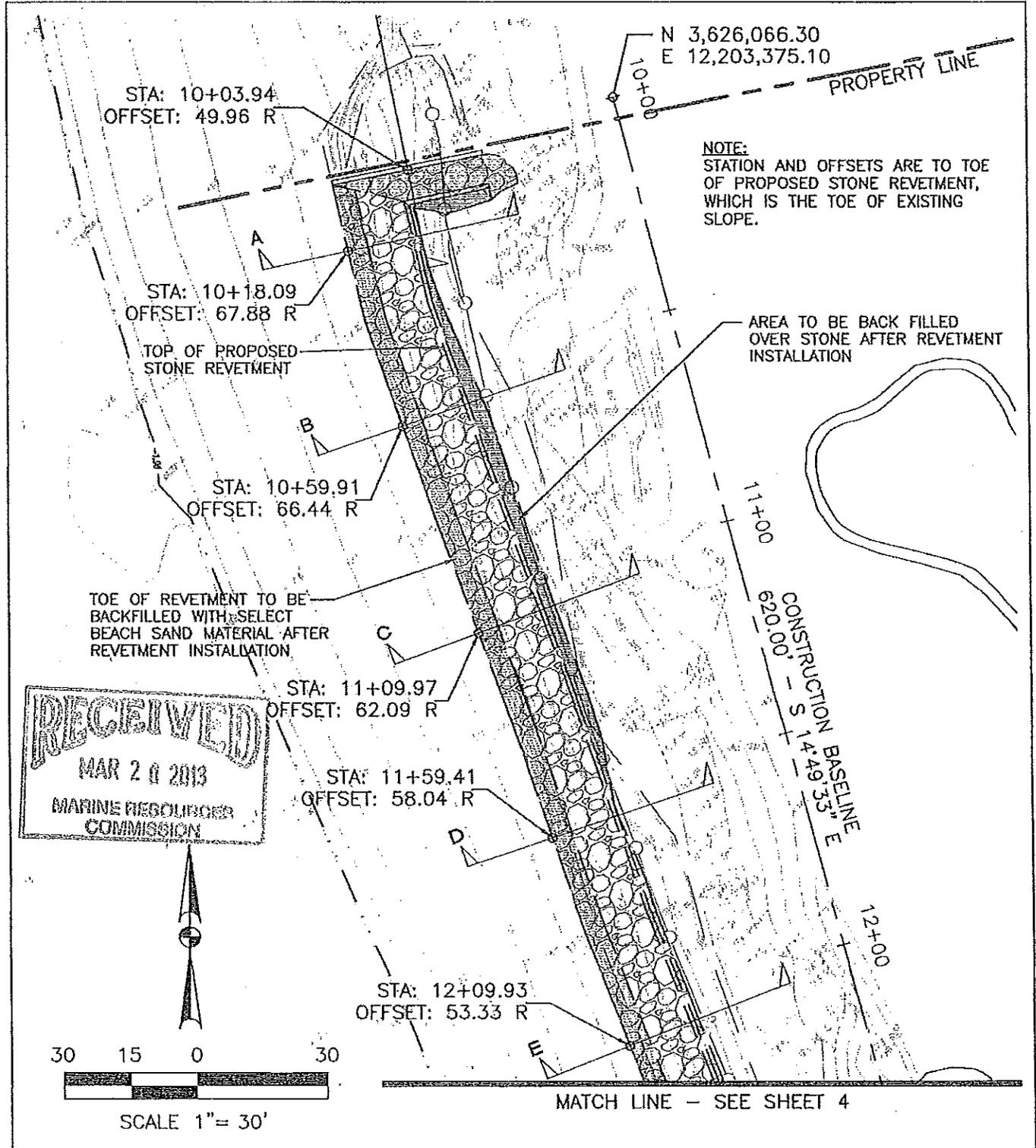
DATE: MARCH 20, 2013



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80 40 0 80  
 SCALE 1" = 80'

 <p>Engineering Resources Group, LLC        5745 Cleveland Street, Suite 120        Virginia Beach, VA 23462        TEL: 757-642-1111 FAX: 757-642-1114        ERG PROJECT NO. -</p>	<p>PERMIT APPLICATION</p>	<p>PROJECT: BAY CREEK SHORELINE REVETMENT        WATERWAY: CHESAPEAKE BAY        TOWNSHIP: CAPE CHARLES        COUNTY: NORTHAMPTON</p>
	<p>OVERALL PLAN</p>	<p>APPLICATION BY:        BAY CREEK SOUTH, LLC</p>
	<p>SHEET 2 OF 10</p>	<p>DATE: MARCH 20, 2013</p>



**NOTE:**  
STATION AND OFFSETS ARE TO TOE OF PROPOSED STONE REVETMENT, WHICH IS THE TOE OF EXISTING SLOPE.

AREA TO BE BACK FILLED OVER STONE AFTER REVETMENT INSTALLATION

TOP OF PROPOSED STONE REVETMENT

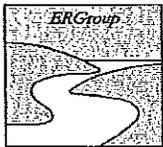
TOE OF REVETMENT TO BE BACKFILLED WITH SELECT BEACH SAND MATERIAL AFTER REVETMENT INSTALLATION

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SCALE 1" = 30'

MATCH LINE - SEE SHEET 4

 <b>Engineering Resources Group, LLC</b> 5741 Cleveland Street, Suite 120 Virginia Beach, VA 23462 Tel: 757/384-4241 Fax: 757/381-7244 ERG PROJECT NO. -	<b>PERMIT APPLICATION</b>	PROJECT: BAY CREEK SHORELINE REVETMENT WATERWAY: CHESAPEAKE BAY TOWNSHIP: CAPE CHARLES COUNTY: NORTHAMPTON
	<b>LAYOUT PLAN</b>	APPLICATION BY: BAY CREEK SOUTH, LLC
	SHEET 3 OF 10	DATE: MARCH 20, 2013

MATCH LINE - SEE SHEET 3

NOTE:  
STATION AND OFFSETS ARE TO TOE  
OF PROPOSED STONE REVETMENT,  
WHICH IS THE TOE OF EXISTING  
SLORE.

STA: 12+59.50  
OFFSET: 47.78 R

STA: 13+18.05  
OFFSET: 44.19 R

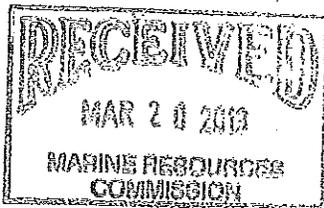
TOE OF REVETMENT TO BE  
BACKFILLED WITH SELECT  
BEACH SAND MATERIAL AFTER  
REVETMENT INSTALLATION

STA: 13+67.62  
OFFSET: 44.21 R

STA: 14+17.14  
OFFSET: 45.62 R

CONSTRUCTION BASELINE  
S 14°49'33" E  
620.00'

N 3,625,679.62  
E 12,203,477.45



SCALE 1" = 30'

MATCH LINE - SEE SHEET 5



Engineering Resources Group, LLC  
5741 Cleveland Street, Suite 120  
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PERMIT APPLICATION

LAYOUT PLAN

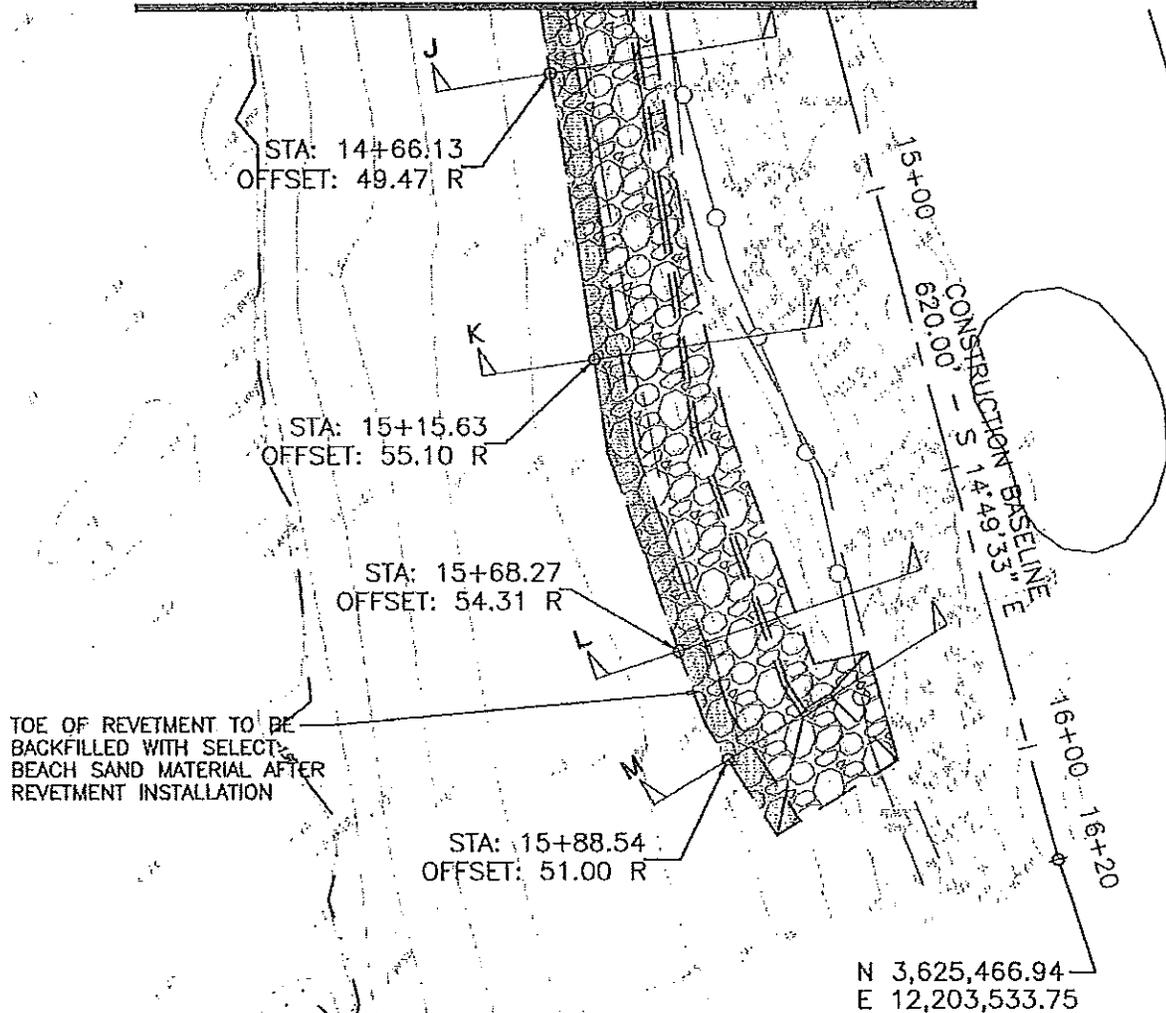
SHEET 4 OF 10

PROJECT: BAY CREEK  
SHORELINE REVETMENT  
WATERWAY: CHESAPEAKE BAY  
TOWNSHIP: CAPE CHARLES  
COUNTY: NORTHAMPTON

APPLICATION BY:  
BAY CREEK SOUTH, LLC

DATE: MARCH 20, 2013

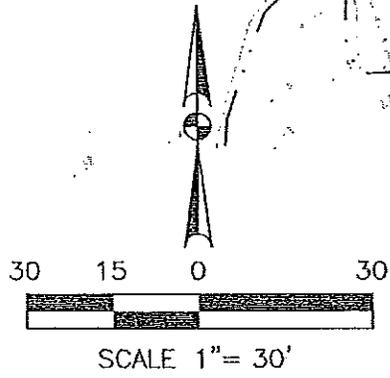
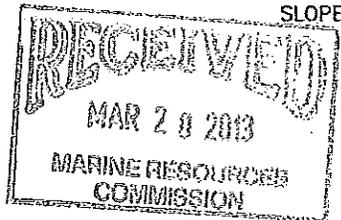
MATCH LINE - SEE SHEET 4



TOE OF REVETMENT TO BE BACKFILLED WITH SELECT BEACH SAND MATERIAL AFTER REVETMENT INSTALLATION

N 3,625,466.94  
E 12,203,533.75

**NOTE:**  
STATION AND OFFSETS ARE TO TOE OF PROPOSED STONE REVETMENT, WHICH IS THE TOE OF EXISTING SLOPE.



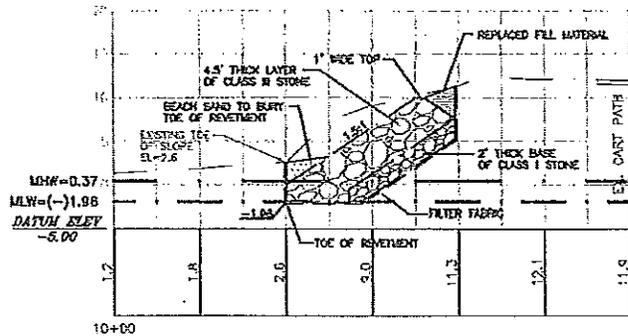
**ER Group**  
Engineering Resources Group, LLC  
5741 Cleveland Street, Suite 120  
Virginia Beach, VA 23462  
Tel: 757-561-0233 Fax: 757-561-1211  
ERG PROJECT NO. -

PERMIT APPLICATION

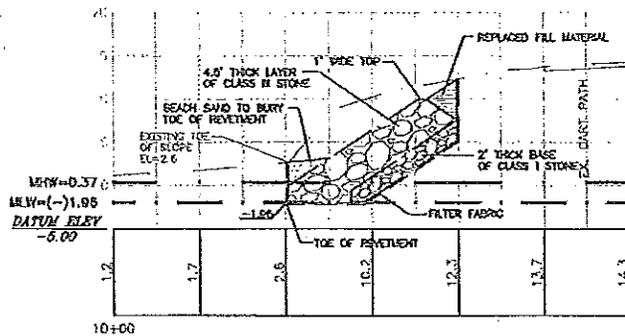
LAYOUT PLAN

SHEET 5 OF 10

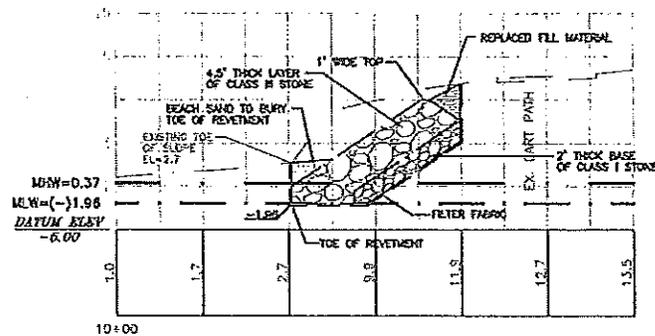
PROJECT: BAY CREEK SHORELINE REVETMENT  
WATERWAY: CHESAPEAKE BAY  
TOWNSHIP: CAPE CHARLES  
COUNTY: NORTHAMPTON  
APPLICATION BY: BAY CREEK SOUTH, LLC  
DATE: MARCH 20, 2013



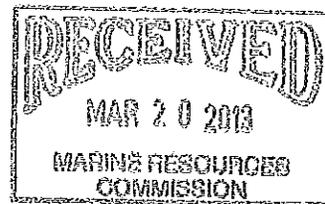
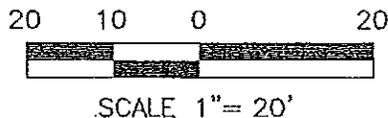
SECTION A



SECTION B



SECTION C



Engineering Resources Group, LLC  
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 Virginia Beach, VA 23462  
 Tel: (757) 941-4211 Fax: (757) 941-7244  
 ERG PROJECT NO. -

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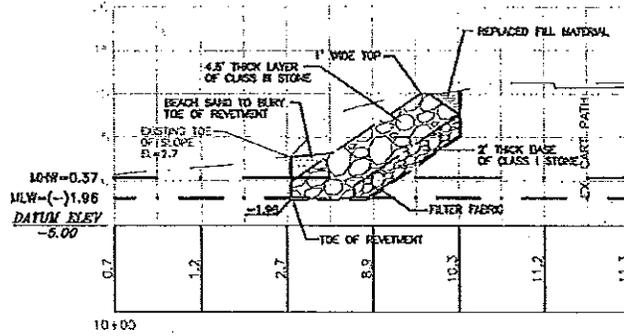
CROSS SECTIONS

SHEET 6 OF 10

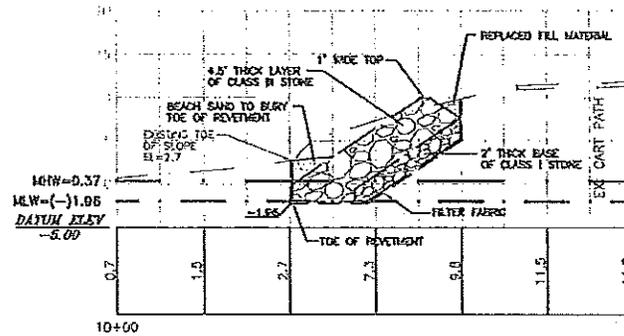
PROJECT: BAY CREEK SHORELINE REVELMENT  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

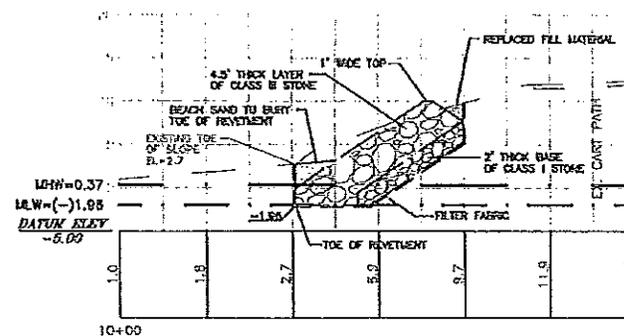
DATE: MARCH 20, 2013



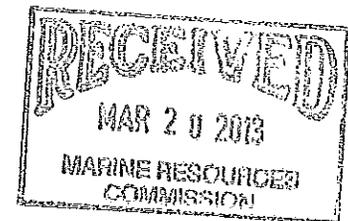
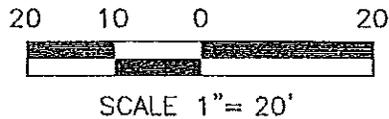
SECTION D



SECTION E



SECTION F



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 5741 Cleveland Street, Suite 120  
 Virginia Beach, VA 23462  
 TEL: (757) 641-4243 FAX: (757) 641-2311  
 ERG PROJECT NO. -

PERMIT APPLICATION

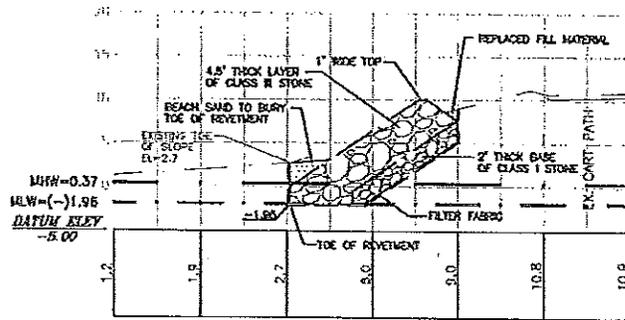
CROSS SECTIONS

SHEET 7 OF 10

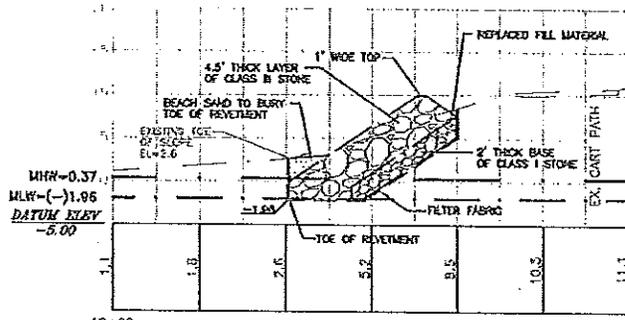
PROJECT: BAY CREEK SHORELINE REVETMENT  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

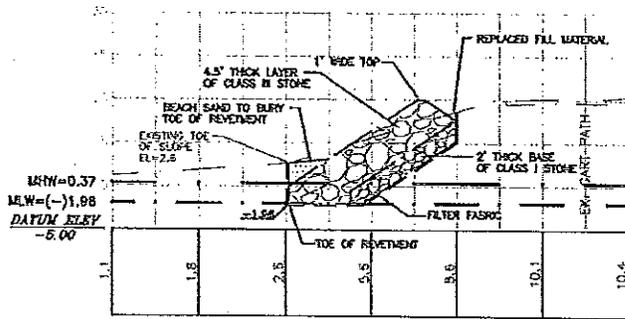
DATE: MARCH, 20 2013



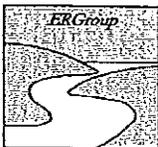
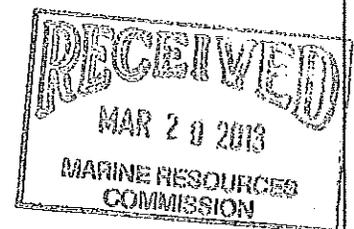
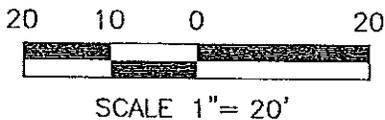
SECTION G



SECTION H



SECTION I



Engineering Resources Group, LLC  
 5741 Cleveland Street, Suite 120  
 Virginia Beach, VA 23462  
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 ERG PROJECT NO. 1

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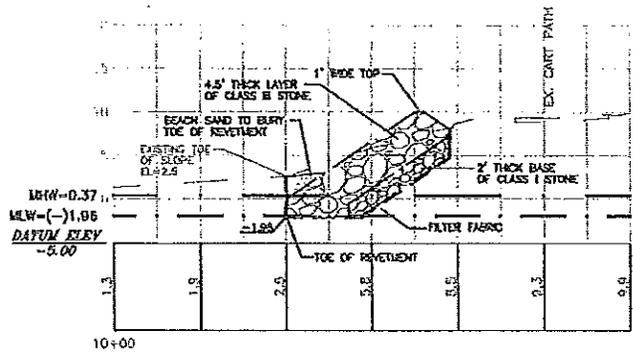
CROSS SECTIONS

SHEET 8 OF 10

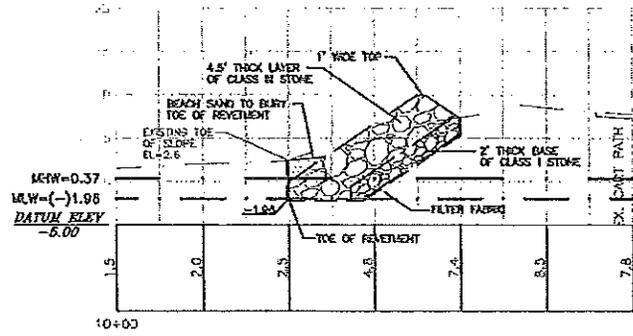
PROJECT: BAY CREEK  
 SHORELINE REVETMENT  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

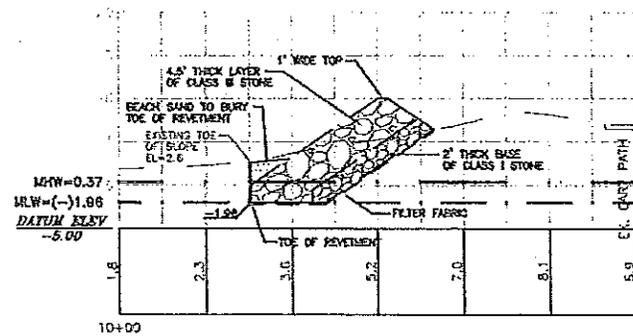
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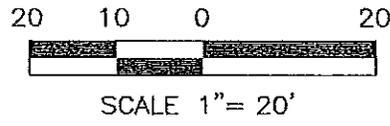
SECTION J



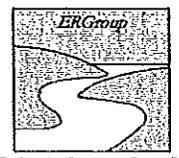
SECTION K



SECTION L



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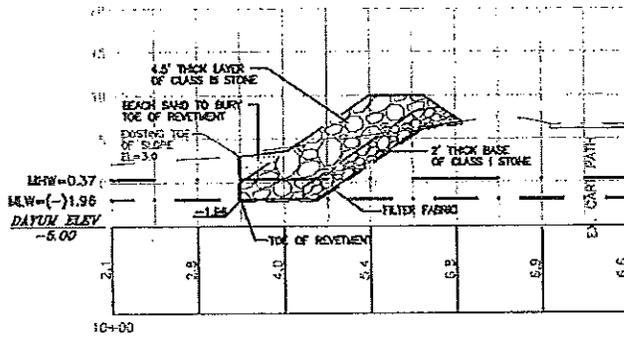
CROSS SECTIONS

SHEET 9 OF 10

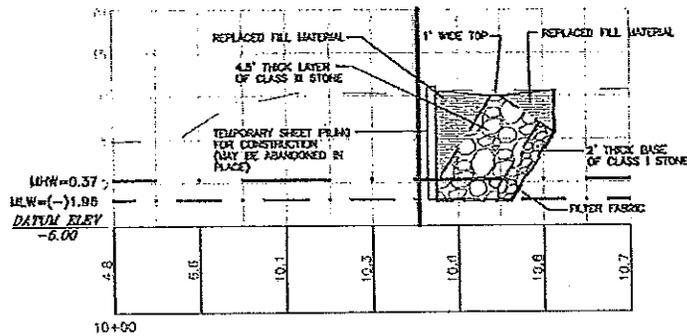
PROJECT: BAY CREEK SHORELINE REVETMENT,  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

DATE: MARCH 20, 2013

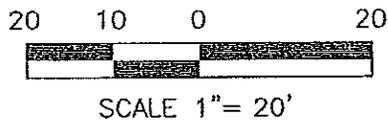


SECTION M



SECTION N

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 Virginia Beach, VA 23462  
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CROSS SECTIONS

SHEET 10 OF 10

PROJECT: BAY CREEK  
 SHORELINE REVETMENT  
 WATERWAY: CHESAPEAKE BAY  
 TOWNSHIP: CAPE CHARLES  
 COUNTY: NORTHAMPTON

APPLICATION BY:  
 BAY CREEK SOUTH, LLC

DATE: MARCH 20, 2013

### Part 3 – Appendices (continued)

**Appendix B: Projects for Shoreline Stabilization** in tidal wetlands, tidal waters and dunes/beaches (including riprap revetments and associated backfill, marsh toe stabilization, bulkheads and associated backfill, breakwaters, beach nourishment, groins, jetties, etc). Answer all questions that apply. Please provide any reports provided from the Shoreline Erosion Advisory Service.

**NOTE:** Information on non-structural, vegetative alternatives (i.e. Living Shoreline) for shoreline stabilization is available at [http://cerm.vims.edu/coastal\\_zone/living\\_shorelines/index.html](http://cerm.vims.edu/coastal_zone/living_shorelines/index.html).

1. For riprap, bulkheads, marsh toe, breakwaters, groins, jetties: What is the overall length of the structure(s)? 600 linear feet. If applicable, what is the volume of the associated backfill? 0 cubic yards.
2. What is the maximum encroachment channelward of mean high water? 0 feet.  
channelward of mean low water? 0 feet.  
channelward of the back edge of the dune or beach? 0 feet.
3. Please calculate the square footage of encroachment over:
  - Vegetated wetlands 0 square feet
  - Nonvegetated wetlands 0 square feet
  - Subaqueous bottom 0 square feet
  - Dune and/or beach 2,857 square feet
4. For bulkheads, is any part of the project maintenance or replacement of a previously authorized, currently serviceable, existing structure?      Yes      No.

If yes, will the construction of the new bulkhead be no further than two (2) feet channelward of the existing bulkhead?      Yes      No.

If no, please provide an explanation for the purpose and need for the additional encroachment.

5. Describe the type of construction and all materials to be used, including source of backfill material, if applicable (e.g. vinyl sheet-pile bulkhead, timber stringers and butt piles, 100% sand backfill from upland source; broken concrete core material with Class II quarry stone armor over filter cloth).

**NOTE:** Drawings must include construction details, including dimensions, design and all materials, including fittings if used.

All work to be done placing stone for the revetment is to occur from the surveyed toe of slope/dune landward. Revetment to be placed will consist of a base layer of Class I stone and an outer layer of Class III stone for armor and protection. Any material required for backfill will be taken from the excavated material. Surplus of material to be removed from site at the completion of construction.

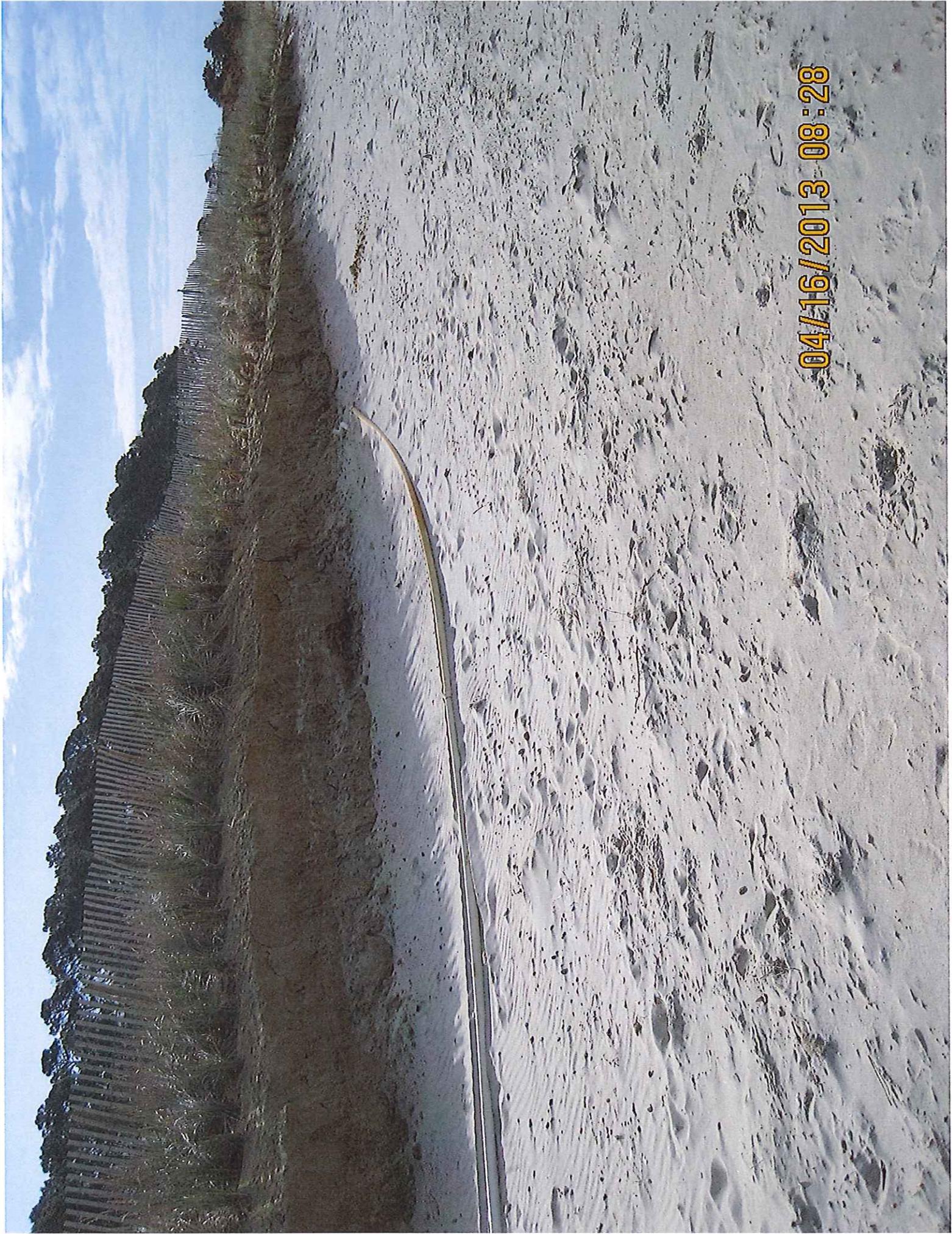
6. If using stone, broken concrete, etc., for your structure(s), what is the average weight of the:  
Core (inner layer) material 50 pounds per stone    Class size I  
Armor (outer layer) material 500 pounds per stone    Class size III



04/16/2013 08:25



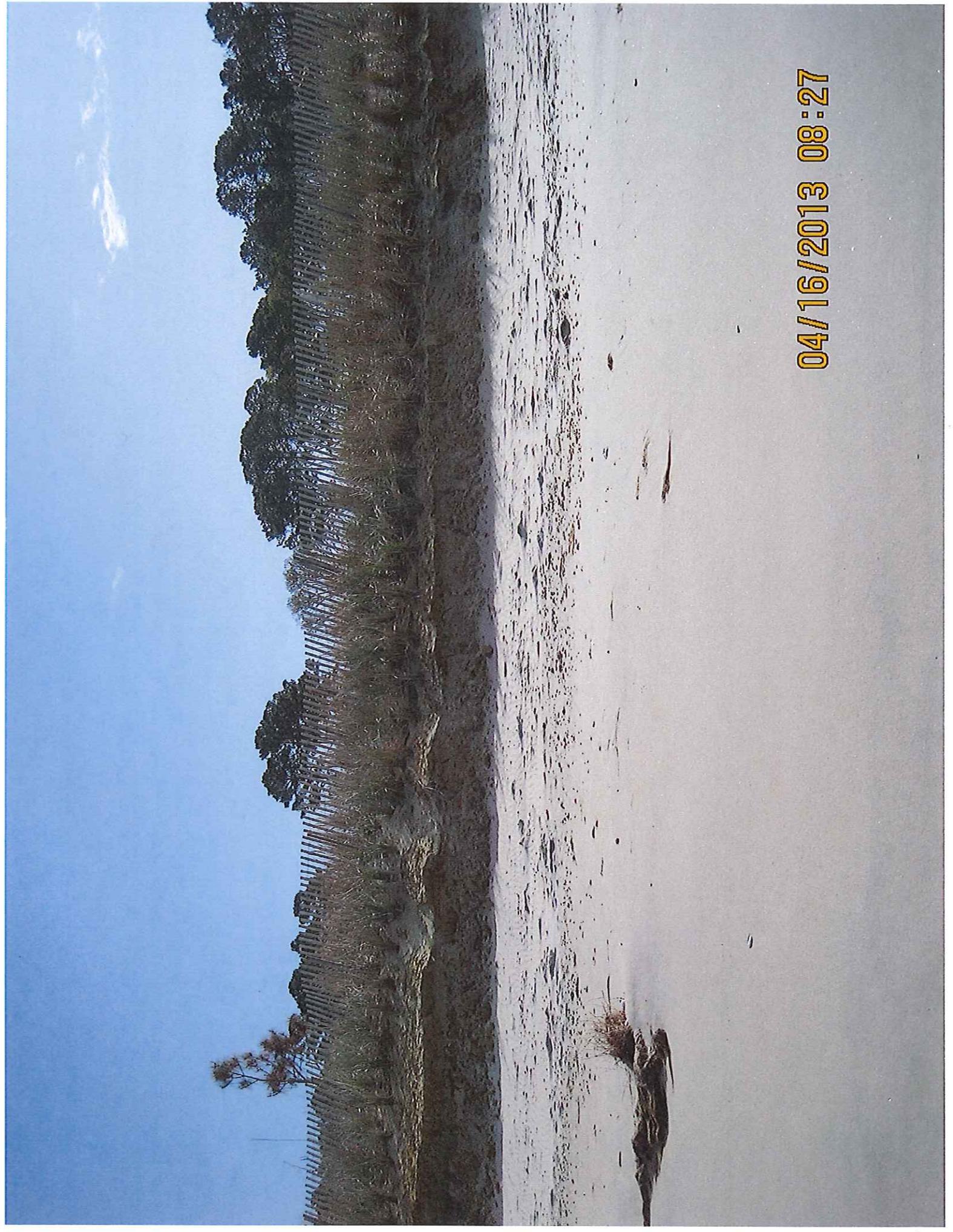
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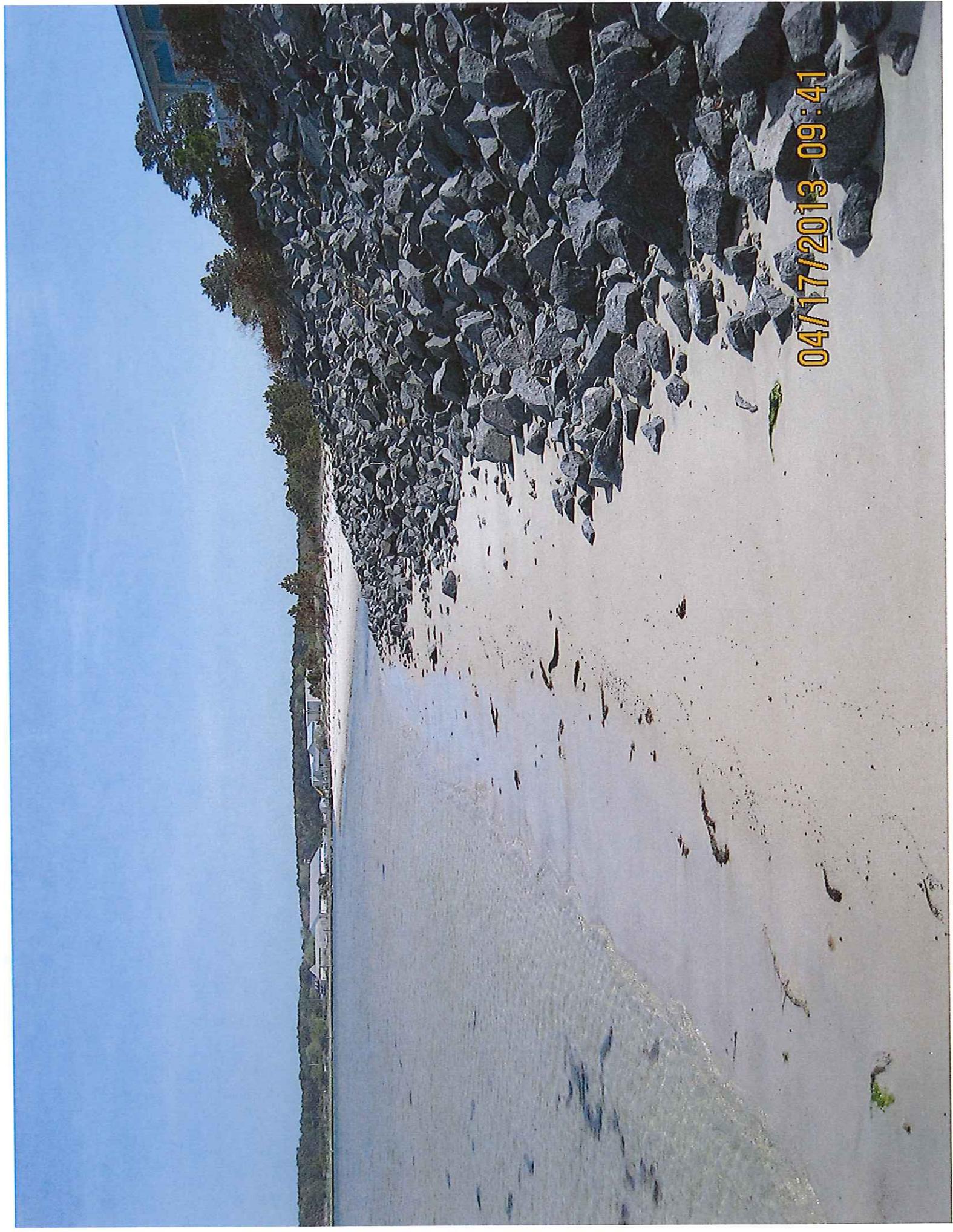


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04/17/2013 09:42

