MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

November 28, 2022

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Matthew Wells,

Enclosed in this packet are two applications for flood protection and prevention projects that involve implementation of nature-based shoreline solutions. Among the applications are projects which are currently at the construction stage. Construction projects are requesting funds to implement projects which have approved permits or are nearing permit approval prior to construction of a nature-based flood protection solution.

The applications have been modified to include additional information as requested by DCR staff for the Supplemental Round 3 of funding. The primary modifications include addressing adverse impacts to adjacent properties, review of the project by a Certified Floodplain Manager, and additional information for how the project will be maintained over the lifespan of the project, and additional language emphasizing the flood protection benefits of the project.

Below is short summary and map showing the locations of proposed construction projects in the Mobjack Bay watershed:

A. Sarah's Creek Nature-based Flood Protection Construction Project
(CID): 510071 Total Cost (from individual project application): $93,569
This project proposes to construct a nature-based solution on a private property located on Sarah's Creek in Gloucester County. The nature-based solution will involve the installation of 115 linear feet of rock sills and 150 linear feet of living shoreline (i.e., clean sand nourishment and spartina plantings). This project will be a partnership between the MPPDC and one private property owners and is supported by Gloucester County.

B. York River –Nature-based Flood Protection Construction Project
(CID): 510082 Total Cost (from individual project application): $156,264
This project proposes to construct a nature-based solution spanning two private properties located on the York River in King & Queen County. The nature-based solution will involve the installation of 3,552 square feet of Flexamat and 2,851 square feet of marsh grass plantings). This project will be a partnership between the MPPDC and two private property owners and is supported by King & Queen County.

Saluda Professional Center ♦ 125 Bowden Street ♦ PO Box 286 ♦ Saluda, Virginia 23149
(Phone) 804 758-2311 ♦ (Fax) 804 758-3221 ♦ (Email) pdcinfo@mppdc.com
http://www.mppdc.com

The total project costs for projects within the York River watershed are **$249,833** and MPPDC staff are requesting **$112,378** from DCR to support this work.

We consider helping both public and private entities manage flooding a critical and essential function of government.

Thank you for considering the enclosed proposed projects. If you have any questions about the enclosed, please contact me by email at llawrence@mppdc.com or by phone at 804-758-2311.

Sincerely,

Lewis Lawrence
Executive Director

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http://www.mppdc.com

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund
Flood Prevention and Protection Project

PROJECT TITLE: Sarah's Creek Nature-based Flood Protection Construction Project
Name of Local Government: Middle Peninsula Planning District Commission

Category of Grant Being Applied for (check one):

____Capacity Building/Planning X Project _____Study

NFIP/DCR Community Identification Number (CID): Gloucester County (510071)

If a state or federally recognized Indian tribe, Name of tribe: NA

Name of Authorized Official: Lewis Lawrence, Executive Director

Signature of Authorized Official: _____

Mailing Address (1): PO Box 286
Mailing Address (2): 125 Bowden Street
City: Saluda **State:** VA **Zip:** 23149
Telephone Number: (804) 758-2311 Cell Phone Number: (____) _____
Email Address: llawrence@mppdc.com

Contact Person (If different from authorized official): Jackie Rickards
Mailing Address (1): PO Box 286
Mailing Address (2): 125 Bowden Street
City: Saluda **State:** VA **Zip:** 23149
Telephone Number: (804) 758-2311 **Cell Phone Number:** (215) 264-6451
Email Address: jrickards@mppdc.com

Is the proposal in this application intended to benefit a low-income geographic area as defined in the Part 1 Definitions? Yes __X__ No _____

Project Grants (Check All that Apply)

☐ **Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development.**

☑ **Wetland restoration.**

☑ **Floodplain restoration.**

□ **Construction of swales and settling ponds.**

☑**Living shorelines and vegetated buffers.**

□ **Structural floodwalls, levees, berms, flood gates, structural conveyances.**

□ **Storm water system upgrades.**

□ **Medium and large-scale Low Impact Development (LID) in urban areas.**

□ **Permanent conservation of undeveloped lands identified as having flood resilience value by ConserveVirginia Floodplain and Flooding Resilience layer or a similar data driven analytic tool.**

□ **Dam restoration or removal.**

☑ **Stream bank restoration or stabilization.**

□ **Restoration of floodplains to natural and beneficial function.**

□ **Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.**

Location of Project (Include Maps): Gloucester County
NFIP Community Identification Number (CID#) (See appendix F): 510071

Is Project Located in an NFIP Participating Community? ☑ Yes □ No
Is Project Located in a Special Flood Hazard Area? ☑ Yes □ No Flood Zone(s) (If Applicable): AE Zone
Flood Insurance Rate Map Number(s) (If Applicable): 51073C0213E

Total Cost of Project: **$93,569**

Total Amount Requested: **$65,498**

INTRODUCTION –

This project proposes to construct a nature-based solution on a private property located on Sarah's Creek in Gloucester County. The nature-based solution will involve the installation of 115 linear feet of rock sills and 150 linear feet of living shoreline (i.e., clean sand nourishment and spartina plantings).

FEMA, Virginia General Assembly, DCR's Floodplain Management Program, and the Middle Peninsula PDC all recognize that natural hazards pose a serious risk to all levels of government including states, localities, tribes and territories and the citizens which reside and work there. These hazards include flooding, drought, hurricanes, landslides, wildfires and more. Because of climate change, many natural hazards are expected to become more frequent and more severe. Reducing the impacts these hazards have on lives, properties and the economy is a top priority for the Middle Peninsula PDC and the Middle Peninsula Fight the Flood (FTF) program (www.FightTheFloodVA.com). This proposal is a Nature-based solution which utilizes and incorporates sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience. Further, this proposal incorporates natural features and processes in efforts to combat climate change, reduce flood risks, improve water quality, protect coastal property, restore, and protect wetlands, stabilize shorelines, reduce heat, adds recreational space, and more. Nature-based solutions offer significant benefits, monetary and otherwise, often at a lower cost than more traditional infrastructure. These benefits include economic growth, green jobs, increased property values, and improvements to public health, including better disease outcomes and reduced injuries and loss of life (*FEMA Building Community Resilience with Nature Based Solutions,* June 2021).

This project will be a partnership between the MPPDC and one private property owner and is supported by Gloucester County (See the community support letter in **Attachment 1**).

- A link or copy to the approved resilience plan: https://fightthefloodva.com/wp-content/uploads/2021/08/Approved-8_19_DCR-packet_letterandplan.pdf
- Middle Peninsula All Hazards Mitigation Plan (2016): https://www.mppdc.com/articles/reports/AHMP_2016_FEMA_Approved_RED.pdf within the plan please see Section 4 (page 25). This Section includes historical hazard data within the region.
- Here's a link to the Gloucester County Comprehensive Plan: https://www.gloucesterva.info/DocumentCenter/View/5777/2016-Gloucester-County- Comprehensive-Plan

PROJECT LOCATION INFORMATION – This project proposes to install living shorelines on one private property on Sarah's Creek in Gloucester County (**Figure 1 and 2**).

FIGURE 1: COUNTY MAP OF PROJECT LOCATION.

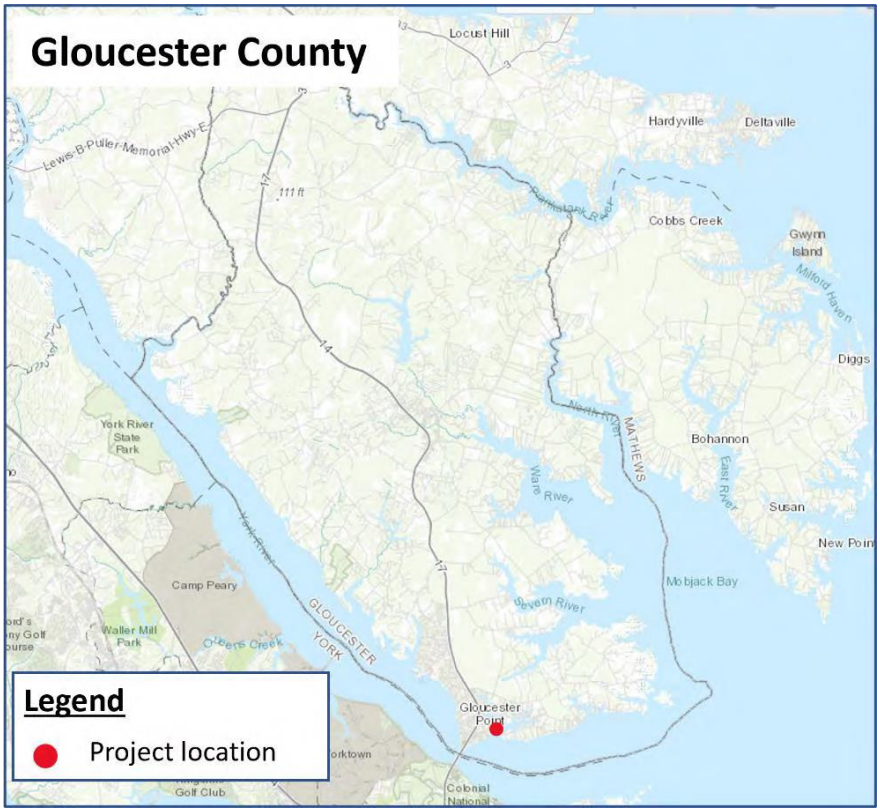
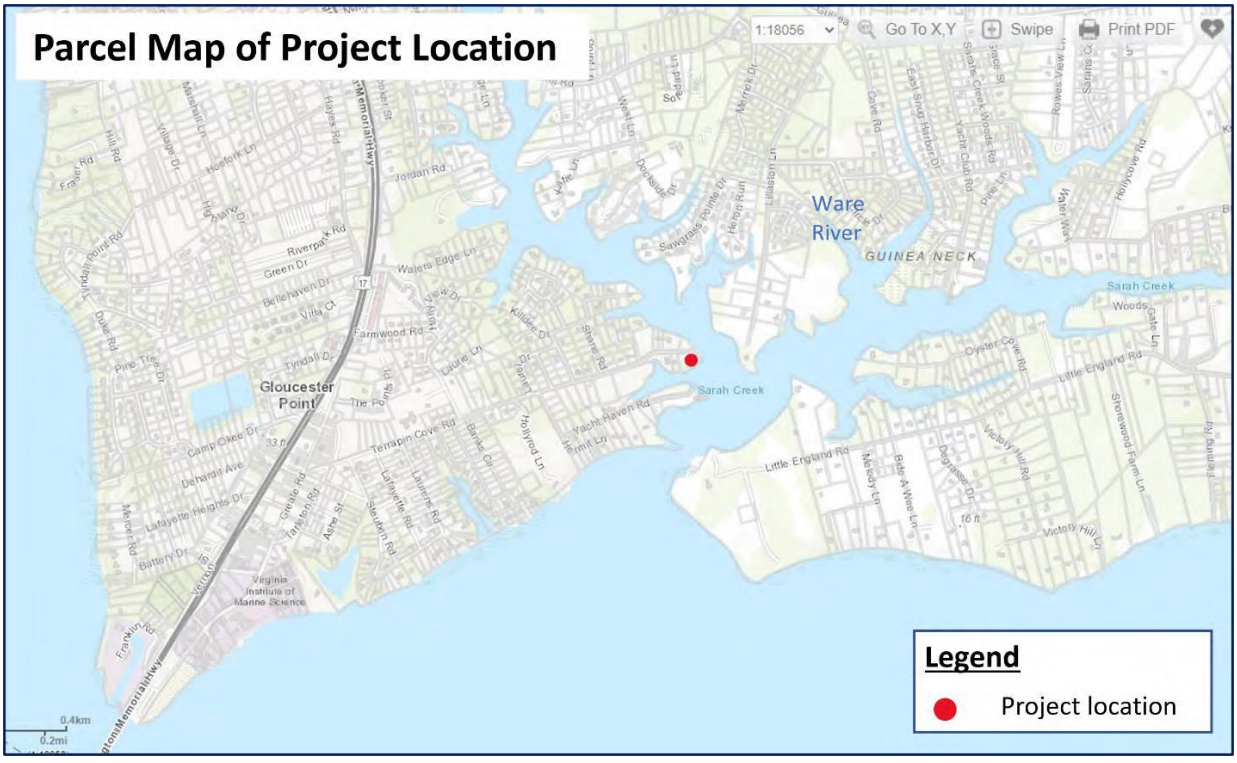


FIGURE 2: PARCEL MAP OF PROJECT LOCATION.



Gloucester County is located at the southern tip of Virginia's Middle Peninsula and is an agriculture, forestry, and water-based economy. The County is comprised of 218 square miles of land 296 miles of shorelines. Based on 2020 Census Data, Gloucester County's population totals 38,711 which makes it the largest Middle Peninsula locality. According to DCR guidelines, a portion of the County is considered a low-income geographic area. In **Figure 3** the green areas qualified as low-income "community" areas meeting the 80% Household limits based on US census household income data or are qualified Opportunity Zones.

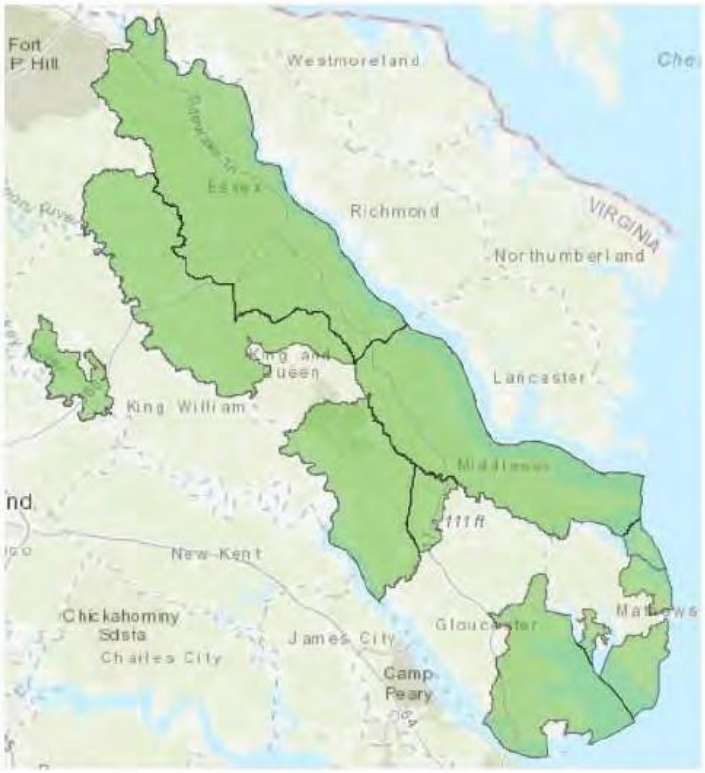
FIGURE 3: MAP OF MIDDLE PENINSULAS LOW INCOME GEOGRAPHIC AREAS QUALIFYING UNDER DCR GUIDELINES.

Each county had its 'Eligible Household income' calculated by multiplying the County's median Household income by .8. This resulted in the following numbers:

	Essex	Middlesex	Mathews	King William	King & Queen	Gloucester
Median household income (in 2019 dollars), 2015-2019	$51,954	$57,438	$64,237	$66,987	$63,982	$70,537
Eligible Household income	$41,563	$45,950	$51,389	$53,590	$51,186	$56,430

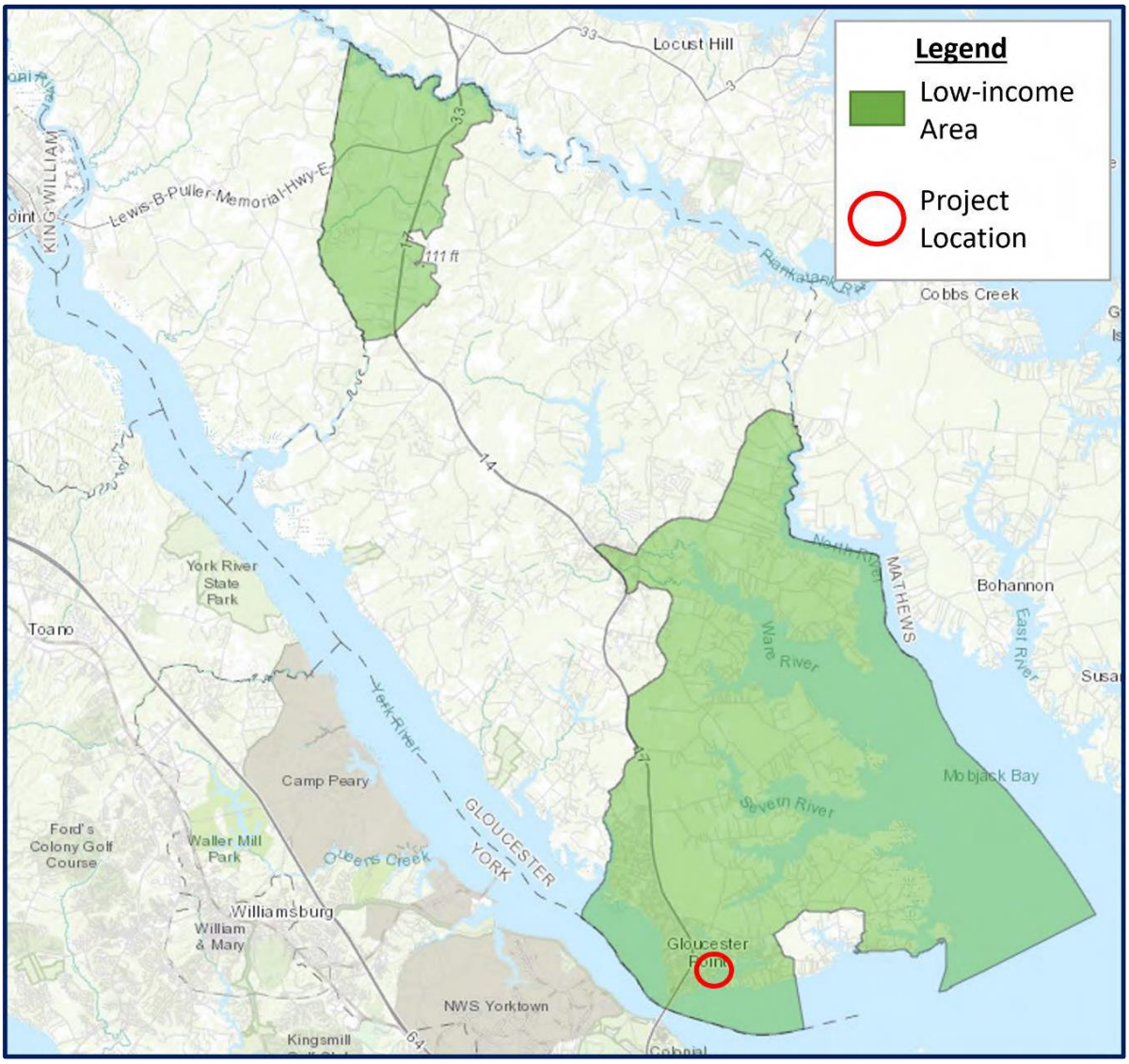
Note: Per 7/15/2021 DCR Webinar, comparing state Household income to locality is permissible to determine if the entire locality is LMI.

The following is an overview of the Regional Eligibility map. Green areas are qualified low-income "community" areas meeting the 80% Household limits based on US census household income data or are qualified Opportunity Zones.



Please see **Figure 4** for a zoomed in map of the project location and the green low-income area overlay. This shows that the project location is within the low-income area.

FIGURE 4: MAP OF THE PROJECT LOCATION WITHIN THE GREEN LOW-INCOME AREA.



According to the VDAPT Virginia's Social Vulnerability Index Score, this project location has a low social vulnerability score (**Figure 5**). MPPDC is perplexed by the designation of the project area being automatically recognized as low income under the Community Flood Preparedness Fund Guidelines as an Opportunity Zone (**Figure 6**), identifying census tracts in the most in need, economically distressed and low-income communities while simultaneously the VA Social Vulnerability score of the exact same area reports a low social vulnerability score of -.03. MPPDC assumes the Opportunity Zone designation trumps the VA Social Vulnerability score in this case.

FIGURE 5: VIRGINIA'S SOCIAL VULNERABILITY INDEX SCORE MAP FOR THE PROJECT LOCATION.

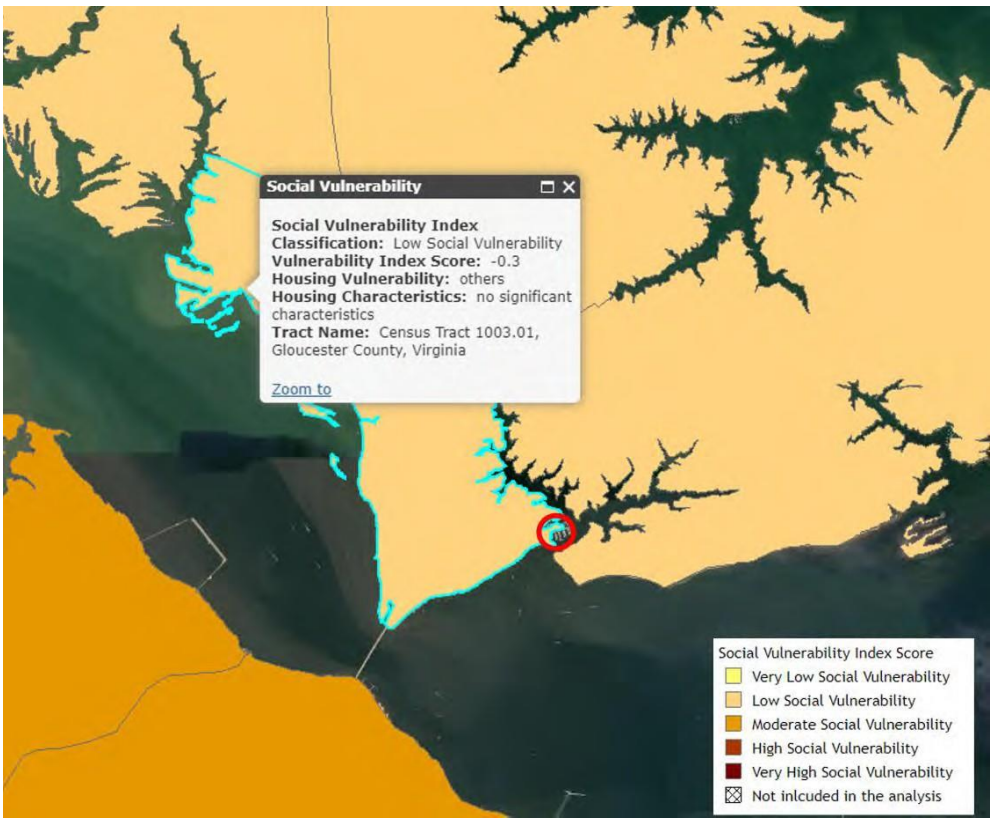
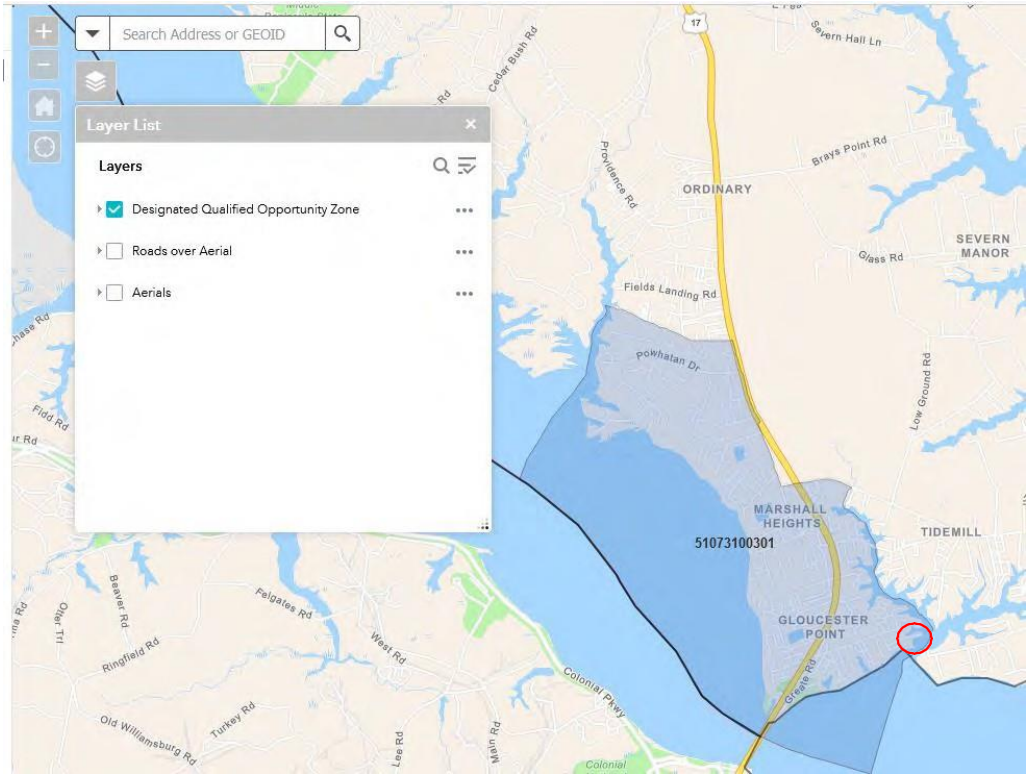
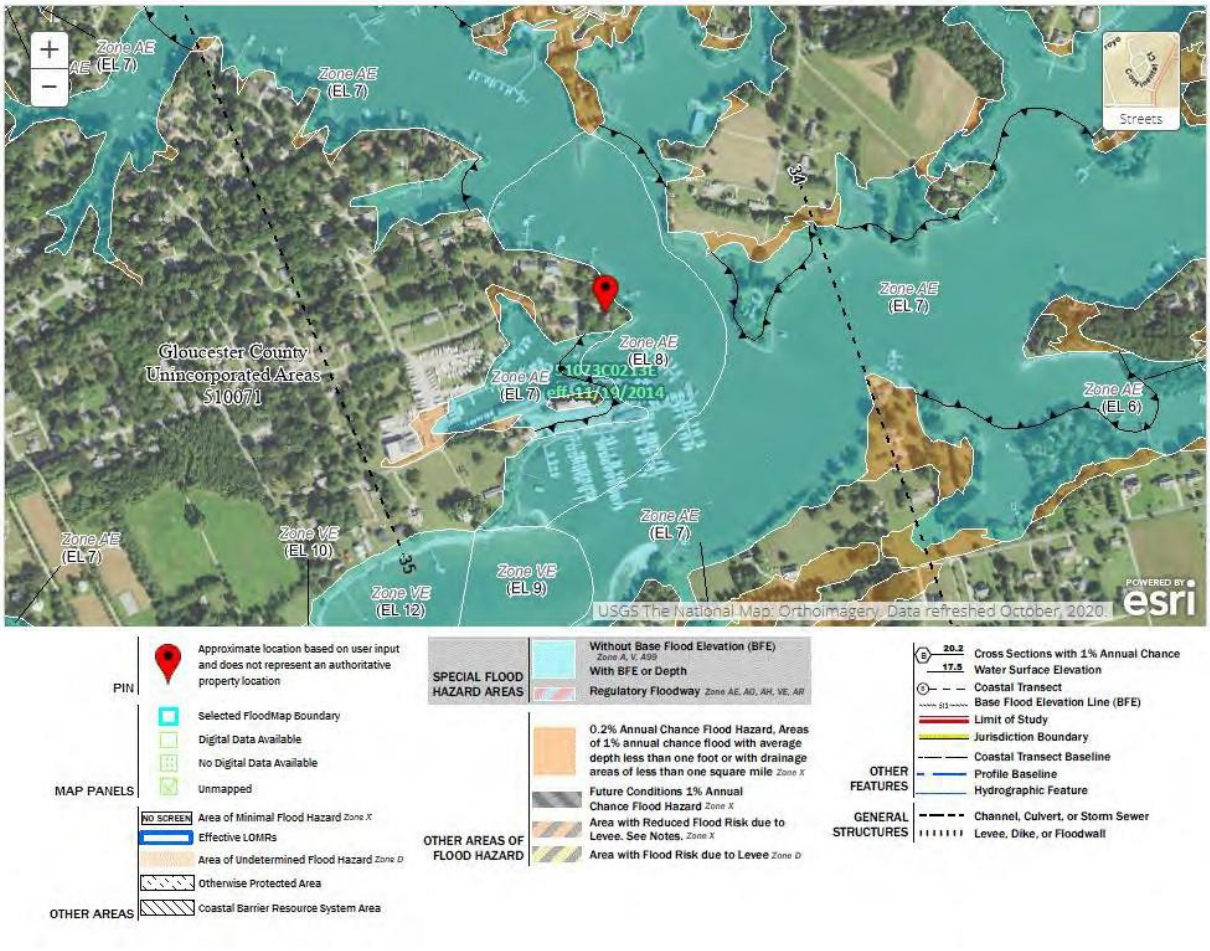


FIGURE 6: FEMA NATION RISK INDEX OF CENSUS TRACK WHERE THE PROJECT LOCATION.



The project is located at 8106 Terrapin Cove Road Gloucester Point, VA 23062 (37.258058, -76.479883). A 115-linear feet sill and 150 linear feet of living shoreline, including sand nourishment and plantings will be constructed. Within the project area there are 2 structures on the property including 1 residential home and 1 detached garage. The structures are not identified as severe repetitive loss structure or repetitive loss structures. This site is located within the AE flood zone (**Figure 7**). Please see **Attachment 2** for the FIRMettes (last mapped 11/19/2014).

FIGURE 7: MAP OF FEMA FLOOD ZONES.

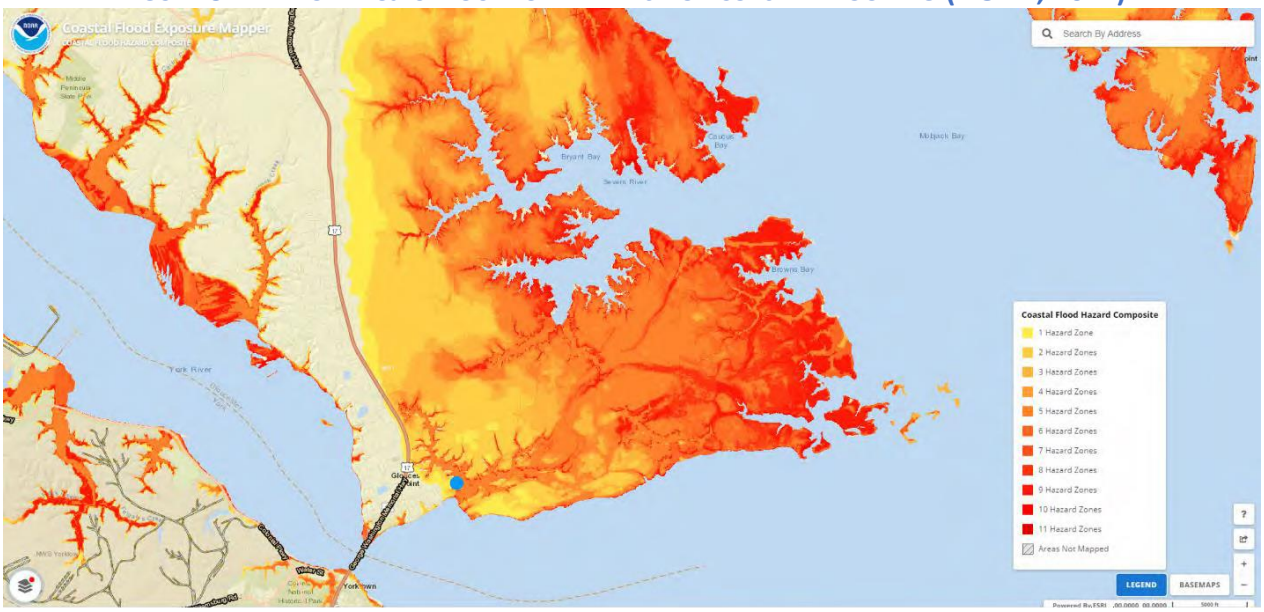


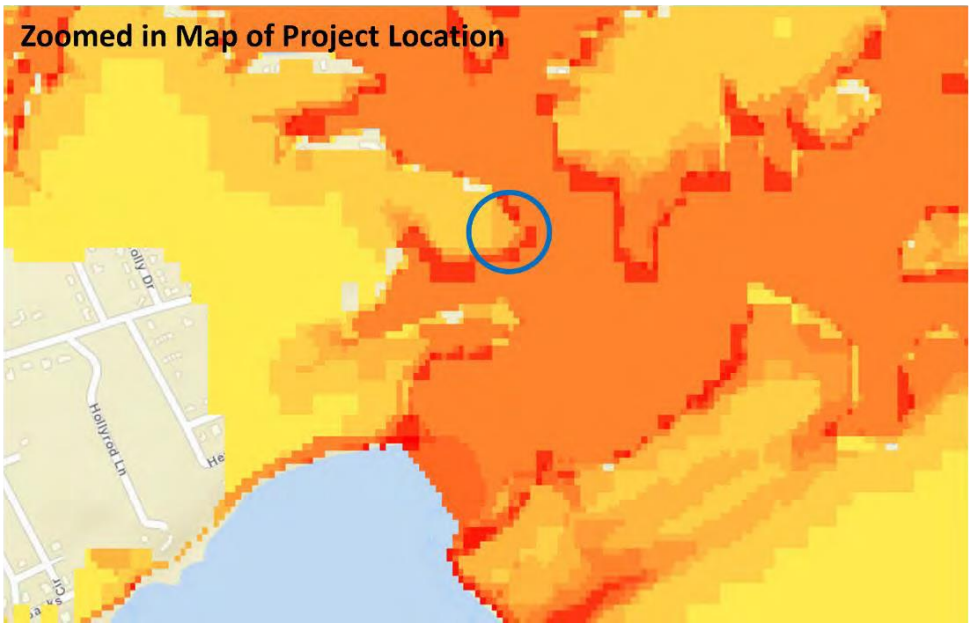
Due to the project site's proximity to the water and relatively low elevation, the site has an extensive history of experiencing flooding events that have resulted in significant impacts to infrastructure and the environment. Based on the historical shoreline data from the Virginia Institute of Marine Science Shoreline Studies Program, **Figure 8** shows the 1937 and the 2017 shorelines. From the figure one can see the change in the shoreline at the project location and the approximate loss of 6,345.5 square feet of shoreline. The project location has and continues to be impacted by tropical, sub-tropical, and nor'easter events. **Attachment 3** lists 87 storm events and provides a map with the project location. Without the flood protection measures proposed, the land, habitat and infrastructure will be compromised, resulting in degradation of the environment and revenue loss to the local tax base.

FIGURE 8: PROJECT LOCATION AND MAP OF THE SHORELINE CHANGE BETWEEN 1937 AND 2017. PLEASE NOTE THAT THE PROJECT AREA PARCEL IS OUTLINED IN WHITE.

Finally, according to NOAA's Coastal Flood Mapper, this project is at the highest risk of coastal flooding (**Figure 9**).

FIGURE 9: MAP OF PROJECT LOCATION AND RISK OF COASTAL FLOODING (NOAA, 2021).





For more information about this project area please see:

- The Middle Peninsula All Hazards Mitigation Plan identifies all hazards that impact the region - https://www.mppdc.com/articles/reports/AHMP_2016_FEMA_Approved_RED.pdf .
- Gloucester County Building and Engineering Department administers the NFIP. Here is the link to the current floodplain ordinance: http://gloucestercounty-va.elaws.us/code/coor_ch8.5

NEED FOR ASSISTANCE –

The Middle Peninsula Planning District Commission (MPPDC) is a political subdivision of the Commonwealth of Virginia formed under VA Code §15.2-4203 to provide solutions to problems of greater than local significance and cost-savings through economies of scale. The MPPDC serves nine localities of the Middle Peninsula including Essex, Gloucester, King & Queen, King William, Mathews, and Middlesex Counties as well as the Towns of Tappahannock, West Point, and Urbanna.

MPPDC is staffed using multiple methods including co-operative procurement, hourly, and burdened staff. MPPDC staff consists of Executive Director, Deputy Director, Chief Financial Officer, Senior Project Planner, clerical support staff; co-operative procured Director of Planning, General Planner, Certified Flood Plain Manager, Transportation Planner, Emergency Planner; Hourly staff for Housing, Community Development Planner and Public relations.

The PDC staffing team assists localities with long-term and/or regional planning efforts. The MPPDC Executive Director, Deputy Director, and Chief Financial Officer have decades of experience in managing and administering project grants at multiple scale from grants in excess of $1,000,000 to very small grants. MPPDC is an entrepreneurial based government agency with an annual operating budget ranging from $750,000 to over $1,000,000. The MPPDC manages annually 25-30 concurrent federal and state grants utilizing industry standard Grants Management Software. Staff utilize GIS and all Microsoft software as well as other software as required by different grants. The MPPDC operates service centers in the topical areas of coastal zone management, emergency planning, housing, transportation planning and transportation demand management, economic development, social assistance, small business development, general planning and technical assistance and other areas as determined by the Commission. MPPDC has over 25 years of experience managing multiple revolving loan programs. In the 25 years that the Executive Director has been employed by the Commission no audit findings have occurred.

The need for assistance is two-fold.

First, as Gloucester County is near the Chesapeake Bay and numerous tidal rivers that create an area of high risk of coastal flooding, sea-level rise, and storm surge. Based on tidal gauge data from VIMS, relative sea- level rise rates ranging from 0.11-0.23 in./yr. (2.9-5.8 mm/yr.; period: 1976-2007; 10 stations) within the Chesapeake Bay region, which are the highest rates reported along the U.S. Atlantic coast (Boon et. al., 2010). In addition to sea-level rise, Gloucester County has a history of being impacted by hurricanes and tropical storms. As storms pass over or near the coast, the atmospheric pressure drops, causing a large volume of sea water to build up, eventually being pushed ashore by the storm's winds causing a storm surge. In Gloucester County, strong East and Northeast winds can push water from the Chesapeake Bay into the mouth of the York and Rappahannock Rivers and Mobjack Bay, flooding much of the county's low-lying areas (Middle Peninsula Planning District Commission, 2005). Additionally, when a storm makes landfall at high tide, the storm surge and the added water from the tidal fluctuation combine to create a "storm tide". In Gloucester County, tidal waters fluctuate twice

daily from 1.2 feet above mean sea level to 1.2 feet below (FEMA 1987, 6). If a severe hurricane were to make landfall during high tide, and additional 1.2 feet of water would be added to the highest storm surge possible, which could create a storm tide of 16.2 feet (Rygel, 2005). Nor'easters, like hurricanes and tropical storms, can dump heavy amounts of rain and produce hurricane-force winds that push large amounts of sea water inland. According to a study conducted by the Center for Coastal Resources Management, a one-and-a-half-foot rise in sea level coupled with a three-foot storm surge, like what would be experienced in a strong tropical storm, would lead to 13% of Gloucester County's land mass being flooded – including 118 miles of roads. Only 3% of the projected flood area is currently developed. A strong indicator that Gloucester County is experiencing the impact of coastal hazards (i.e., flooding, hurricanes, sea-level rise, and storm surge) is the number of repetitive loss and severe repetitive loss claims submitted by residents and businesses to FEMA. As of 2015, the County had 147 repetitive loss properties with claims topping $3.3 Million and 13 severe repetitive loss properties with claims totaling nearly $1.9 Million. The County has implemented several preventative measures, property protection policies, public information activities, and emergency service measures to decrease impacts on communities. Therefore, this project will build on other local efforts move toward becoming a more resilient community.

Second, at this project location, the shoreline is experiencing erosion and undercutting of the bank. This threatens mature oak trees on the shoreline. At the project location the bulkhead is severely damaged and the beach in front of the bulkhead is eroding due to rising sea levels and flooding events. This area was once vegetated with marsh grasses, but with excessive and recurrent flooding the grasses have died. This has reduced habitat for wildlife and has created an unstable shoreline. Additionally, large oak trees sit on top of the bulkhead and in the RPA. They help hold the soil and land in place. Without offering this section of shoreline some protection with the installation of a nature-based shoreline protection solution the trees will most certainly be lost in the very near future. This will ultimately bring water closer to the structures on the property. Please see **Figure 10** for project location photos and **Attachment 4** for more photos.

FIGURE 10: PHOTOS OF THE PROJECT LOCATION.

ALTERNATIVES –
Alternatives are not applicable to this project. A living shoreline is feasible at this location and therefore required per VMRC regulations. This project employs a nature-based solution, and this project cost is not greater than $3 Million.

GOALS AND OBJECTIVES –
This project will install a nature-based solution consisting of 115 linear Feet of rock sills and 150 linear feet of living shoreline (i.e., clean sand nourishment and spartina plantings). This project will reduce erosion and stabilize the shoreline. The installation of a nature-based solution will also help to protect the large oak trees that hold the soil and bank in place. The nature-based solution will be installed as designed and permitted through the JPA process. Please see the permit package for each site within the project area in **Attachment 5**.

The goals and objectives of this project are as follows -

Goal 1: Improve coastal resiliency within the community and the Commonwealth.

- Objective A: Prevent loss of life and reduce property damage by mitigating for recurrent, repetitive, and future flooding within the project area using a nature-based approach.
- Objective B: Stabilize the shoreline to ensure that the County's tax base does not erode.

Goal 2: Improve water quality

- Objective A: Construct a living shoreline to capture nitrogen, phosphorus, and sediment.

Goal 3: Transferability to other communities.

- Objective A: Improve the implementation of Fight the Flood projects and project as an example program to be replicated in other communities within the region or the Commonwealth.

The MPPDC anticipates that the living shoreline installed at this project location will:

1. **Stabilize the shoreline and reduce the overall erosion rate at the project location**. According to FEMA and NOAA living shorelines are more resilient again storms than bulkheads. With the installation of sills these structures will run parallel to the existing or vegetative shoreline, reduce wave energy, and prevent erosion. This will protect the land and it will protect, or at least prolong, the life of the oak trees on the property. Additionally, eroding shorelines and sediment from stormwater runoff greatly contribute to the shoaling of navigable waterways. With maritime industries contributing substantially to the local and regional economy, the mitigation of continued sedimentation and shoaling provided by this project will protect and enhance the region's commercial and recreational maritime economies.

   The proposed project was confirmed for the MPPDC by Matthew C. Burnette PG, PH, CFM or Holly White AICP, CFM.

2. **Provide ecosystem services to the community.** Since this project is proposing the installation of living shorelines, this project will have nutrient and sediment reduction benefit to local waters. According to a report titled, Removal Rates of Shoreline Management Project, an expert Panel on Shoreline Management identified the living shorelines has having a nitrogen removal rate 0.01218 pounds per linear foot per year (lb./lf./yr.) and a phosphorus removal rate of 0.00861 lbs./lf./yr. Additionally living shorelines were shown to reduce total suspended sediment by 42 lb./lf./yr. Therefore, with a proposed project of 150 linear feet of living shoreline this has the ability of removing 1.827 pounds of nitrogen per year, 1.2915 pounds of phosphorus per year and 6,300 pounds of sediment per year. Ultimately contributing to the overall water quality of the Chesapeake Bay.

   In addition to water quality improvements, living shorelines offer new habitat for marine wildlife and birds. With the living shorelines reducing wave energy in this area this provides a calmer habitat to breed and nurse juvenile wildlife and fish. Also, the planting will offer more cover and protection from prey.

3. **Prevent loss of property and life.** As the installation of a living shoreline will reduce erosion of the property this will reduce flood risks at the project site. Also, as flooding and erosion threaten the tax base within the locality, this project will help maintain the tax-base at this project location which directly protects the largest employer in Gloucester County, which is local government.

APPROACH, MILESTONES, AND DELIVERABLES –

This project will follow the designs outlined and approved in the Joint Permit Application. Please see **Attachment 5** for the JPA application, Design, and Permit Package. The below table outlines the components of the nature-based solution and what will be installed at the project location, as permitted by Virginia Marine Resource Commission (VMRC).

	Total Project Location
Rock Sills	115 Linear Feet (LF)
Sand Nourishment	250 cubic yards
Spartina Plantings	1,500 square feet

The anticipated timeline for this project could be as quick as 1 year, but no more than two years. The timeline range is due to the potential delays in the construction industry or delays caused by COVID, including supply shortages. Having a two-year timeline will offer potential windows for planting the living shoreline. To explain, the Chesapeake Bay Foundation recommends that perennials and grasses for living shorelines should be planted during peak growing season (in mid-to-late summer) to allow enough time for their root systems to become established before they go dormant in the late Fall. Trees and shrubs should be planted in Spring and Fall when there is adequate rainfall to help them develop strong roots and leafy

growth.

Below is the project timeline and project milestones for this project.

Receive funding notice - January 2023
Coordinate with property owners and the project contractor Shoreline Structures, LLC to review project timeline and project expectations – January 2023
Initiate site preparation at the project location - February 2023 to August 2023
Construction of the living shoreline – September 2023 to December 2023
Project Close out – December 2023

Concerning Adverse Impacts
Additionally, the applicant and the property owner recognize the importance to do no harm to land owned by the Commonwealth nor the adjacent property owners as result of the construction elements of this project. The proposed project will be constructed under the auspices of experienced contractors who understand that adverse impacts must be avoided and considered in the design and implementation of the project. The proposed project will work with the permitting agency, designers, and contractors to ensure that the project is built to and functions at the level of the design specifications to ensure that no adverse impacts will occur.

RELATIONSHIP TO OTHER PROJECTS –
For over 40 years the Middle Peninsula Planning District Commission (MPPDC) and its participating localities have worked diligently on topics associated with the land water interface, including coastal use conflicts and policies, sea level rise, stormwater flooding, roadside ditch flooding, erosion, living shorelines, coastal storm hazards (i.e. hurricanes, tropical storms), riverine and coastal flooding, and coastal resiliency.

The proposed project is a priority project generated from the Middle Peninsula Regional Flood Resilience Plan, which was approved by DCR during August 2021. The Flood Resiliency Plan serves as the MPPDC's guiding document for its flood resiliency programs and is comprised of two primary MPPDC-approved policy documents which form the implementation and foundation of the Middle Peninsula flood protection approach and are indirectly and directly supported by multiple specific regional planning documents, both approved by various required federal, regional, or local partners as required by statute.

Other plans and resources which are integral to the implementation of the Flood Resiliency Plan are:

Long Term Planning

- Middle Peninsula All Hazard Mitigation Plan, FEMA and Middle Peninsula locality approved 2016 (MPPDC Website)
- The overarching project that provides updates every five years of the hazards within the region is the Middle Peninsula All Hazards Mitigation Plan. This

plan identifies the top hazards within the region and provides a HAZUS assessment that analyzes flooding (riverine and coastal), sea-level rise and hurricane storm surge impacts in the region. Additionally, this plan lists strategies and objectives that guide member localities to mitigate for these strategies.

- Middle Peninsula Comprehensive Economic Development Strategy, MPPDC Approved March 2021
- Middle Peninsula VDOT Rural Long Range Transportation Plan - MPPDC Approved ~annually

Short Term Implementation

- Middle Peninsula Planning District Commission Fight the Flood Program Design MPPDC Commission (approved June 2020 Chairman approved 8/6/21 update)
- Middle Peninsula Planning District Commission Living Shoreline Resiliency Incentive Funding Program-Virginia Revolving Loan Fund Program Design and Guidelines (approved 2015)

As the MPPDC has continuously worked on flooding and coastal resiliency topics, **Attachment 6** lists the projects and short description of relevant projects. All of these projects have built upon each other to establish a solid foundation of regional expertise in flooding and coastal resiliency topics. Now, with such a wealth of information, the MPPDC can move beyond research and studies to begin implementing projects on the ground. One effort, in particular, was launched in 2020 was in response to emerging flood challenges. The MPPDC Commission authorized staff to develop the **Middle Peninsula Fight the Flood (FTF) Program.** This program leverages state and federal funding to deliver flood mitigation solutions directly to constituents, for both the built environment and the natural environment with an emphasis on nature-based flood mitigation solutions. The Middle Peninsula **FTF** program helps property owners gain access to programs and services to better manage challenges posed by flood water. Therefore, MPPDC staff have partnered with private property owners that have registered for the FTF program to assist them in finding funding for their shoreline.

Finally, the Flood Resiliency Plan and associated programs strive to carry out the guiding principles and goals set forth in the Virginia Coastal Resilience Master Planning Framework established in 2020. The proposed activities are proposed in accordance with the guiding principles and with the intent that the outcomes will help the Commonwealth meet the goals set forth in the planning framework.

MAINTENANCE PLAN –

It is important to ensure that the public investment of DCR CFPF funding be protected should the project not withstand future conditions. As such, MPPDC staff will work with legal counsel to develop an agreement to be signed by each party which outlines the terms necessary to ensure the public investment is maintained over the duration of the project.

CRITERIA –

Describe how the project meets each of the applicable scoring criteria contained in Appendix B and provide the required documentation where necessary. Documentation can be incorporated into the Scope of Work Narrative or included as attachments to the application. Appendix B must be completed and submitted with the application.

For local governments that are not towns, cities, or counties, the documentation provided for the criteria below should be based on the local government or local governments in which the project is located and/or directly impacts.

1. **Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these or a recognized state or federal Indian tribe?**
   YES.
2. **Does the local government have an approved resilience plan meeting the criteria as established by this grant manual? Has it been attached or a link provided?**
   YES. Here's the link: https://fightthefloodva.com/wp-content/uploads/2021/08/Approved-8_19_DCR-packet_letterandplan.pdf
3. **For local governments that are not towns, cities, or counties, have letters of support been provided from affected local governments?**
   YES. Please see Attachment 1
4. **Has the applicant provided evidence of an ability to provide the required match funds?**
   YES. Please see the match commitment letter in **Attachment 8**
5. **Has the applicant demonstrated to the extent possible, the positive impacts of the project or study on prevention of flooding?**
   YES.

BUDGET NARRATIVE -

Below is the estimated budget for the proposed flood prevention and protection construction project that will result in a nature-based solution located in a low-income geographic area. Therefore, MPPDC staff is requesting 80% funding from DCR and will provide 20% match. Please see match commitment letters from the property owners in **Attachment 11**.

			DCR (80%)	Match from Owner (20%)	Project Total
Project Management Costs					
	Personnel		$ 6,745	$ 1,686	$ 8,431
	Fringe (26.58% on Salaries)		$ 1,793	$ 448	$ 2,241
SubAward/SubContract Agreement					
	[redacted]	*115 LF rock Sill*	$ 29,440	$ 7,360	$ 36,800
	[redacted]	*Sand Nourishment 250 cyds*	$ 15,000	$ 3,750	$ 18,750
	[redacted]	*Filter Fabric*	$ 2,240	$ 560	$ 2,800
	[redacted]	*Marsh Access. Timber Mats*	$ 2,000	$ 500	$ 2,500
	[redacted]	*Spartina Plantings*	$ 2,600	$ 650	$ 3,250
	[redacted]	*Site Access. Tree Removal, Sand Access Road to Water*	$ 2,800	$ 700	$ 3,500
	[redacted]	*Remove Access road and restore yard*	$ 2,240	$ 560	$ 2,800
	[redacted]	*Permits*	$ 600	$ 150	$ 750
Indirect/IDC/Facilities & Administrative Costs (27.31%)			$ 7,794	$ 1,948	$ 9,742
Project totals			$ 73,252	$ 18,312	$ 91,564

MPPDC staff will manage and administer this project. Thus, personnel time is needed to ensure that project deliverables are completed within the project timeline. Along with personnel expenses, MPPDC fringe is needed. This includes health insurance, retirement, group life insurance, workman's comp, and unemployment insurance. MPPDC fringe rate for FY22 is 26.58% and comprised of: Health Insurance – 49.33%, Retirement – 18.35%, Workers Comp – 27.42%, Social Security – 4.46%, Life Insurance – 0.40%, Unemployment – 0.04%. MPPDC also prepares an indirect cost (IDC) plan annually per 2 CFR 200 Appendix VII. Following annual audit, the plan is submitted to NOAA for acceptance. MPPDC's IDC rate has a basis of Modified Total Direct Costs (MTDC), with a planned rate of 27.31%. IDC is only applied to the first $25,000 of each contract. IDC calculated on MTDC (modified total direct cost)- Personnel, supplies, travel, and first $25,000 of each subcontract, etc.; excludes equipment.

Also please note that the cost estimates for the construction of this project were supplied by the contractor, Shoreline Structures, LLC. Please see **Attachment 7**.

In summary:

***Estimated total project cost*:** $91,564
***Amount of funds requested from the Fund (80% project total)*:** $73,252
***Amount of cash funds available (20% project total)*:** $18,312

Finally, please see the authorization to request for funding in **Attachment 9.**

Appendix B: Scoring Criteria for Flood Prevention and Protection Projects

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

Applicant Name:	Middle Peninsula Planning District Commission	
Eligibility Information		
Criterion	**Description**	**Check One**
1. Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these)?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
2. Does the local government have an approved resilience plan and has provided a copy or link to the plan with this application?		
Yes	Eligible for consideration under all categories	X
No	Eligible for consideration for studies, capacity building, and planning only	
3. If the applicant is <u>not a town, city, or county</u>, are letters of support from all affected local governments included in this application?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
4. Has this or any portion of this project been included in any application or program previously funded by the Department?		
Yes	Not eligible for consideration	
No	Eligible for consideration	X
5. Has the applicant provided evidence of an ability to provide the required matching funds?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
N/A	Match not required	

Project Eligible for Consideration	☑ Yes ☐ No
Applicant Name:	Middle Peninsula Planning District Commission

Scoring Information

Criterion	Point Value	Points Awarded
6. Eligible Projects (Select all that apply)		
Projects may have components of both 1.a. and 1.b. below; however, only one category may be chosen. The category chosen must be the primary project in the application.		
1.a. Acquisition of property consistent with an overall comprehensive local or regional plan for purposes of allowing inundation, retreat, or acquisition of structures.	**50**	
☐ Wetland restoration, floodplain restoration ☐ Living shorelines and vegetated buffers. ☐ Permanent conservation of undeveloped lands identified as having flood resilience value by *ConserveVirginia* Floodplain and Flooding Resilience layer or a similar data driven analytic tool ☐ Dam removal ☐ Stream bank restoration or stabilization. ☐ Restoration of floodplains to natural and beneficial function. ☐ Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.	**45**	45
1.b. any other nature-based approach	**40**	40
All hybrid approaches whose end result is a nature-based solution	**35**	
All other projects	**25**	
7. Is the project area socially vulnerable? (Based on ADAPT VA's Social Vulnerability Index Score.)		
Very High Social Vulnerability (More than 1.5)	**15**	
High Social Vulnerability (1.0 to 1.5)	**12**	
Moderate Social Vulnerability (0.0 to 1.0)	**8**	
Low Social Vulnerability (-1.0 to 0.0)	**0**	0
Very Low Social Vulnerability (Less than -1.0)	**0**	
8. Is the proposed project part of an effort to join or remedy the community's probation or suspension from the NFIP?		

Yes	**10**	
No	**0**	0
9. Is the proposed project in a low-income geographic area as defined in this manual?		
Yes	**10**	10
No	**0**	
10. Projects eligible for funding may also reduce nutrient and sediment pollution to local waters and the Chesapeake Bay and assist the Commonwealth in achieving local and/or Chesapeake Bay TMDLs. Does the proposed project include implementation of one or more best management practices with a nitrogen, phosphorus, or sediment reduction efficiency established by the Virginia Department of Environmental Quality or the Chesapeake Bay Program Partnership in support of the Chesapeake Bay TMDL Phase III Watershed Implementation Plan?		
Yes	**5**	5
No	**0**	
11. Does this project provide "community scale" benefits?		
Yes	**20**	20
No	**0**	
Total Points		120

Appendix D: Checklist All Categories

Virginia Department of Conservation and Recreation Community Flood Preparedness Fund Grant Program

Scope of Work Narrative	
Supporting Documentation	**Included**
Detailed map of the project area(s) (Projects/Studies)	☑Yes □ No □ N/A
FIRMette of the project area(s) (Projects/Studies)	☑Yes □ No □ N/A
Historic flood damage data and/or images (Projects/Studies)	☑Yes □ No □ N/A
A link to or a copy of the current floodplain ordinance	☑Yes □ No □ N/A
Non-Fund financed maintenance and management plan for project extending a minimum of 5 years from project close	□ Yes □ No ☑ N/A
A link to or a copy of the current hazard mitigation plan	☑ Yes □ No □ N/A
A link to or a copy of the current comprehensive plan	☑ Yes □ No □ N/A
Social vulnerability index score(s) for the project area from ADAPT VA's Virginia Vulnerability Viewer	☑ Yes □ No □ N/A
If applicant is not a town, city, or county, letters of support from affected communities	☑ Yes □ No □ N/A
Completed Scoring Criteria Sheet in Appendix B, C, or D	☑ Yes □ No □ N/A
Budget Narrative	
Supporting Documentation	**Included**
Authorization to request funding from the Fund from governing body or chief executive of the local government	☑ Yes □ No □ N/A
Signed pledge agreement from each contributing organization	□ Yes □ No □ N/A

Attachment 1: Community Support Letter

Gloucester County
Administrator's Office

Telephone 804-693-4042 *6489 Main Street, Gloucester, Virginia 23061* *Fax 804-693-6004*

July 16, 2021

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, VA 23149

RE: Support Letter for Applications Submitted by the MPPDC to Virginia Community Flood Preparedness Fund

Dear Lewie,

Gloucester County supports all eligible applications requesting funding under the Virginia Department of Conservation and Recreation (DCR) Flood Preparedness Fund. Proposals submitted by the MPPDC on behalf of our constituents are a necessary governmental function and consistent with regional and local resilience planning efforts. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding. The MPPDC Fight the Flood Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Program Design and the MPPDC Fight the Flood Program Design provide the operational and administrative oversite for resiliency planning, coordination and implementation for our constituents suffering from flooding challenges. These programs, especially the MPPDC Fight the Flood program, recognize the need to better secure the tax base of coastal localities and the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types. They also recognize the relationship between at-risk waterfront real estate values and funding of essential governmental services.

The Fight the Flood program and the Living Shoreline program exist to help flood-prone property owners access programs and services to better manage challenges posed by flood water and direct constituents to appropriate mitigation solutions, such as nature-based solutions. When grants and loans are available, we fully support the MPPDC providing such to qualified constituents based on the terms and conditions associated with flood risk necessary to support the public purposes for which the funds, such as the Virginia Community Flood Preparedness Funds, have been allocated.

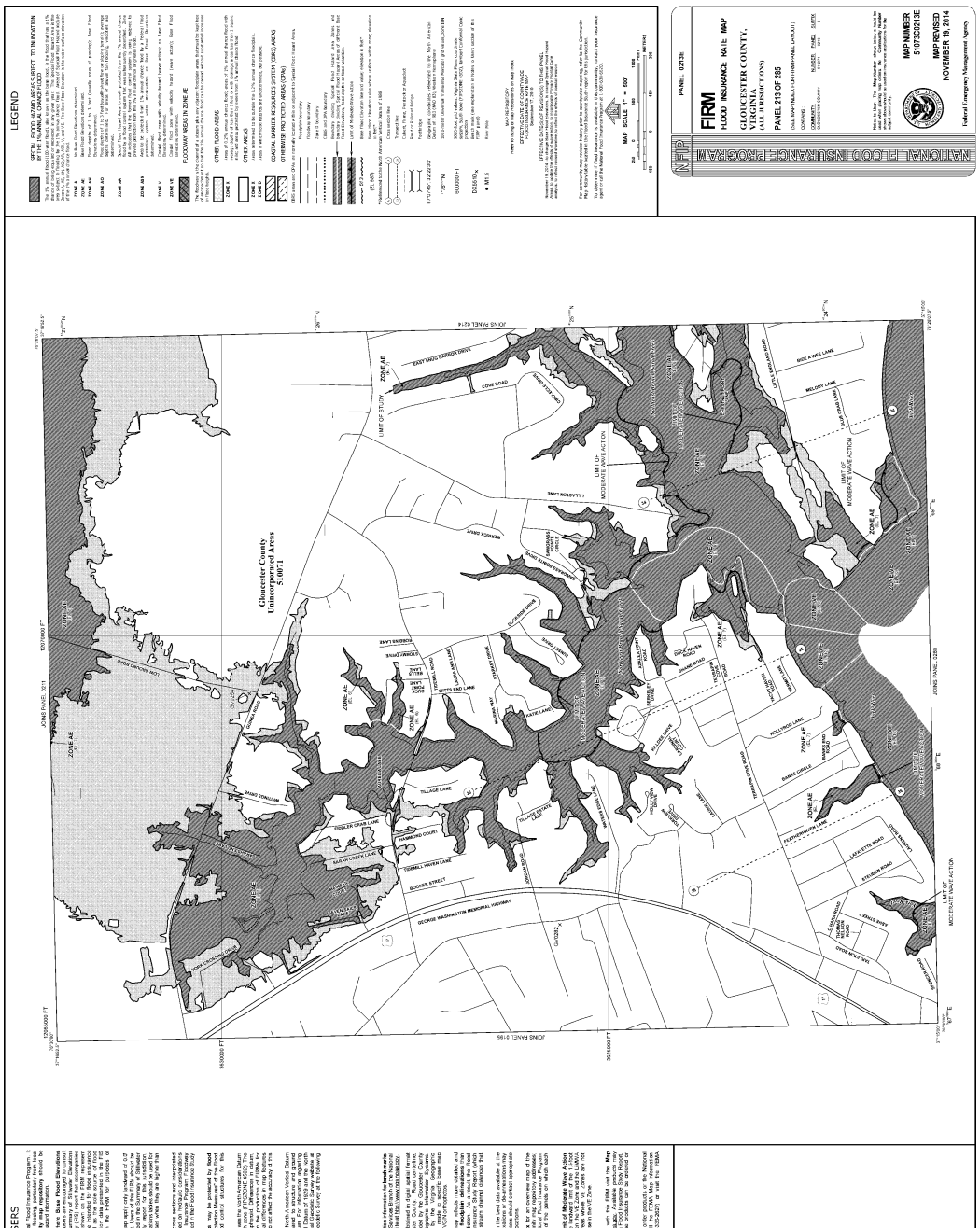
Should you have any questions concerning our support for the work of the MPPDC, I can be reached at 804-693-4042.

Sincerely,

Carol E. Steele
Acting County Administrator

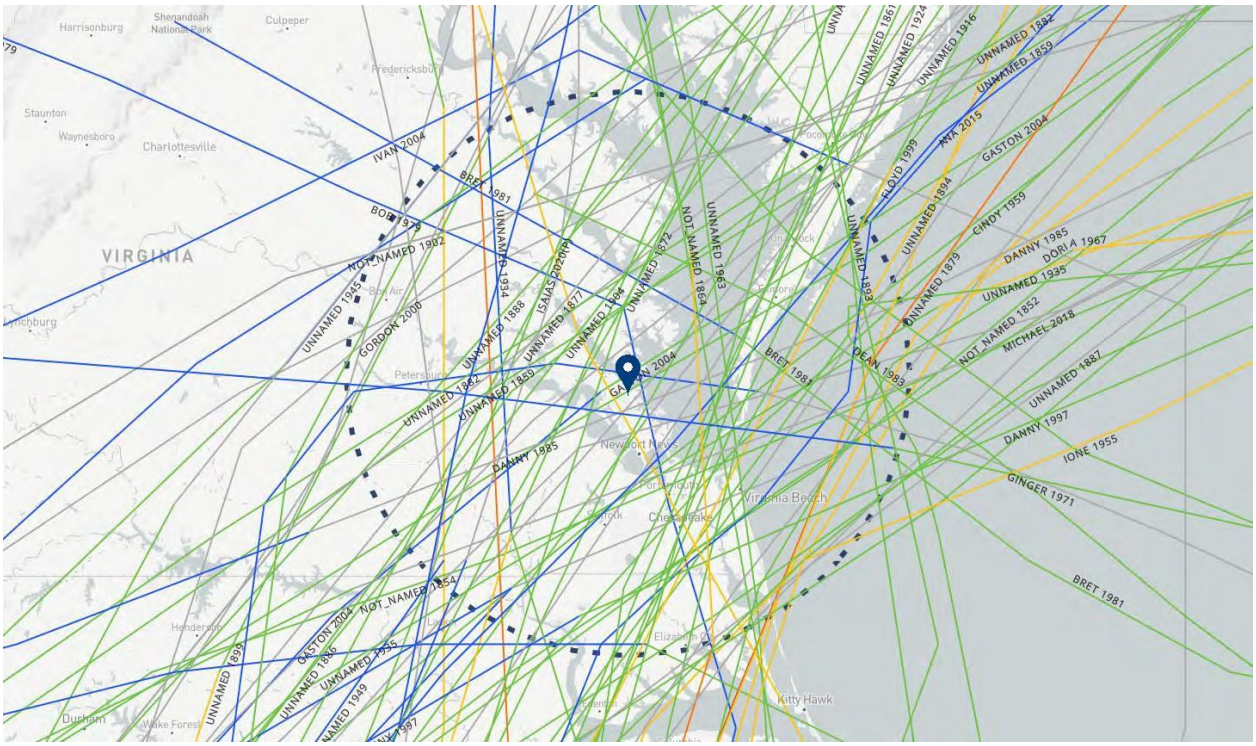
Attachment 2: Project Location FIRMette

(FIRMette #: 51073C0213E)



Attachment 3: List of historic hurricanes impacting the project area.

Hurricane List



Search Filter Criteria

Location: 37.257538, -76.480435

Categories: H5, H4, H3, H2, H1, TS, TD, ET
Months: ALL
Years: ALL
El Niño-Southern Oscillation (ENSO): ALL
Minimum Pressure (mb) below: 1150
Include Unknown Pressure Rating: TRUE
Buffer Distance: 60
Buffer Unit: Nautical Miles

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
ISAIAS 2020(P)	Jul 23, 2020 to Aug 05, 2020	75	987	H1
NESTOR 2019	Oct 17, 2019 to Oct 21, 2019	50	996	TS
MICHAEL 2018	Oct 06, 2018 to Oct 15, 2018	140	919	H5
ANA 2015	May 06, 2015 to May 12,	50	998	TS

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
	2015			
ANDREA 2013	Jun 05, 2013 to Jun 08, 2013	55	992	TS
IRENE 2011	Aug 21, 2011 to Aug 30, 2011	105	942	H3
HANNA 2008	Aug 28, 2008 to Sep 08, 2008	75	977	H1
ERNESTO 2006	Aug 24, 2006 to Sep 04, 2006	65	985	H1
JEANNE 2004	Sep 13, 2004 to Sep 29, 2004	105	950	H3
IVAN 2004	Sep 02, 2004 to Sep 24, 2004	145	910	H5
GASTON 2004	Aug 27, 2004 to Sep 03, 2004	65	985	H1
CHARLEY 2004	Aug 09, 2004 to Aug 15, 2004	130	941	H4
ALLISON 2001	Jun 05, 2001 to Jun 19, 2001	50	1000	TS
HELENE 2000	Sep 15, 2000 to Sep 25, 2000	60	986	TS
GORDON 2000	Sep 14, 2000 to Sep 21, 2000	70	981	H1
FLOYD 1999	Sep 07, 1999 to Sep 19, 1999	135	921	H4
DANNY 1997	Jul 16, 1997 to Jul 27, 1997	70	984	H1
BERTHA 1996	Jul 05, 1996 to Jul 17, 1996	100	960	H3
DANIELLE 1992	Sep 22, 1992 to Sep 26, 1992	55	1001	TS
CHARLEY 1986	Aug 13, 1986 to Aug 30, 1986	70	980	H1
DANNY 1985	Aug 12, 1985 to Aug 20, 1985	80	987	H1

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
DEAN 1983	Sep 26, 1983 to Sep 30, 1983	55	999	TS
BRET 1981	Jun 29, 1981 to Jul 01, 1981	60	996	TS
BOB 1979	Jul 09, 1979 to Jul 16, 1979	65	986	H1
GINGER 1971	Sep 06, 1971 to Oct 05, 1971	95	959	H2
DORIA 1971	Aug 20, 1971 to Aug 29, 1971	55	989	TS
ALMA 1970	May 17, 1970 to May 27, 1970	70	993	H1
CAMILLE 1969	Aug 14, 1969 to Aug 22, 1969	150	900	H5
DORIA 1967	Sep 08, 1967 to Sep 21, 1967	75	973	H1
CLEO 1964	Aug 20, 1964 to Sep 11, 1964	130	938	H4
UNNAMED 1963	Jun 01, 1963 to Jun 04, 1963	50	1000	TS
UNNAMED 1961	Sep 12, 1961 to Sep 15, 1961	55	995	TS
BRENDA 1960	Jul 27, 1960 to Aug 07, 1960	60	976	TS
CINDY 1959	Jul 04, 1959 to Jul 12, 1959	65	995	H1
UNNAMED 1956	Oct 14, 1956 to Oct 19, 1956	55	996	TS
IONE 1955	Sep 10, 1955 to Sep 27, 1955	120	938	H4
CONNIE 1955	Aug 03, 1955 to Aug 15, 1955	120	944	H4
BARBARA 1953	Aug 11, 1953 to Aug 16, 1953	80	973	H1
UNNAMED 1949	Sep 11, 1949 to Sep 14, 1949	45	-1	TS

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
UNNAMED 1945	Sep 12, 1945 to Sep 20, 1945	115	949	H4
UNNAMED 1944	Oct 12, 1944 to Oct 24, 1944	125	937	H4
UNNAMED 1944	Jul 30, 1944 to Aug 04, 1944	70	985	H1
UNNAMED 1943	Sep 28, 1943 to Oct 02, 1943	55	997	TS
UNNAMED 1935	Aug 29, 1935 to Sep 10, 1935	160	892	H5
UNNAMED 1934	Sep 01, 1934 to Sep 04, 1934	45	-1	TS
UNNAMED 1933	Aug 13, 1933 to Aug 28, 1933	120	948	H4
UNNAMED 1929	Sep 19, 1929 to Oct 05, 1929	135	924	H4
UNNAMED 1928	Sep 06, 1928 to Sep 21, 1928	140	929	H5
UNNAMED 1928	Aug 03, 1928 to Aug 13, 1928	90	971	H2
UNNAMED 1924	Sep 27, 1924 to Oct 01, 1924	55	999	TS
UNNAMED 1916	Sep 04, 1916 to Sep 07, 1916	45	-1	TS
UNNAMED 1916	May 13, 1916 to May 18, 1916	40	990	TS
UNNAMED 1907	Jun 24, 1907 to Jun 30, 1907	55	-1	TS
UNNAMED 1904	Sep 08, 1904 to Sep 15, 1904	70	-1	H1
NOT_NAMED 1902	Oct 03, 1902 to Oct 13, 1902	90	970	H2
UNNAMED 1902	Oct 03, 1902 to Oct 13, 1902	90	970	H2
UNNAMED 1902	Jun 12, 1902 to Jun 17,	50	-1	TS

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
	1902			
UNNAMED 1899	Oct 26, 1899 to Nov 04, 1899	95	-1	H2
UNNAMED 1894	Oct 01, 1894 to Oct 12, 1894	105	-1	H3
UNNAMED 1893	Oct 20, 1893 to Oct 23, 1893	50	-1	TS
UNNAMED 1893	Jun 12, 1893 to Jun 20, 1893	65	-1	H1
UNNAMED 1889	Sep 12, 1889 to Sep 26, 1889	95	-1	H2
UNNAMED 1888	Sep 06, 1888 to Sep 13, 1888	50	999	TS
UNNAMED 1887	Oct 09, 1887 to Oct 22, 1887	75	-1	H1
UNNAMED 1886	Jun 27, 1886 to Jul 02, 1886	85	-1	H2
UNNAMED 1886	Jun 17, 1886 to Jun 24, 1886	85	-1	H2
UNNAMED 1882	Sep 21, 1882 to Sep 24, 1882	50	1005	TS
UNNAMED 1882	Sep 02, 1882 to Sep 13, 1882	110	949	H3
UNNAMED 1881	Sep 07, 1881 to Sep 11, 1881	90	975	H2
UNNAMED 1879	Aug 13, 1879 to Aug 20, 1879	100	971	H3
UNNAMED 1878	Oct 18, 1878 to Oct 25, 1878	90	963	H2
UNNAMED 1877	Sep 21, 1877 to Oct 05, 1877	100	-1	H3
UNNAMED 1876	Sep 12, 1876 to Sep 19, 1876	100	980	H3
UNNAMED 1874	Sep 25, 1874 to Oct 01, 1874	80	980	H1

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
UNNAMED 1872	Oct 22, 1872 to Oct 28, 1872	70	-1	H1
NOT_NAMED 1867	Aug 10, 1867 to Aug 18, 1867	45	-1	TS
NOT_NAMED 1864	Jul 23, 1864 to Jul 26, 1864	35	-1	TS
UNNAMED 1863	Sep 16, 1863 to Sep 19, 1863	60	-1	TS
NOT_NAMED 1861	Oct 31, 1861 to Nov 03, 1861	60	992	TS
UNNAMED 1861	Sep 27, 1861 to Sep 28, 1861	70	-1	H1
UNNAMED 1859	Sep 15, 1859 to Sep 18, 1859	70	-1	H1
NOT_NAMED 1858	Aug 11, 1858 to Aug 20, 1858	45	994	TS
UNNAMED 1856	Aug 19, 1856 to Aug 21, 1856	50	-1	TS
NOT_NAMED 1854	Sep 10, 1854 to Sep 14, 1854	65	-1	H1
UNNAMED 1854	Sep 07, 1854 to Sep 12, 1854	110	938	H3
NOT_NAMED 1852	Aug 28, 1852 to Aug 31, 1852	50	-1	TS
UNNAMED 1851	Aug 16, 1851 to Aug 27, 1851	100	-1	H3

CANCEL

Attachment 4: Photos of the shoreline at the project location.

Exposed shore with no vegetation to bear the brunt of the rising seas, boat wakes, and storm surge.

Mature oak trees sit above the deteriorating bulkhead.

Mature trees on the shore.

Attachment 5: Project JPA, Design, and Permit Package

From:	Schaller, Kenna J.
To:	Beth Howell
Subject:	FW: New wetlands jpa
Date:	Wednesday, February 24, 2021 10:39:34 AM
Attachments:	image001.png MX-3570N_20210224_093110.pdf

Beth –
Jeff Watkins sent this to us via email.
Thank you!

Kenna Schaller
Administrative Coordinator
Gloucester County Environmental Programs
6489 Main St., Gloucester, VA 23061
(804)693-1217
DON'T WAIT IN LINE, PAY ONLINE!
https://www.gloucesterva.info/332/Payment-Options

From: Jeffrey G. Watkins <jwatkins49@cox.net>
Sent: Wednesday, February 24, 2021 9:56 AM
To: Owens, Ronald W. <rowens@gloucesterva.info>; Schaller, Kenna J. <kschaller@gloucesterva.info>
Subject: New wetlands jpa

Please shoot me a # so I can get application fee paid.
Jeff

Sent from my iPad

Received by VMRC February 24, 2021 /blh

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.

County or City in which the project is located: Gloucester
Waterway at project site: Sarah Creek

1. Applicant's name* and complete mailing address:

   Mr. [redacted]
   8100 Terrapin Cove Rd.
   Gloucester, VA 23062

   Contact Information:
   Home (____)_____
   Work (____)_____
   Fax (____)_____
   Cell/ Pager (757) 592-3903
   e-mail _____

   State Corporation Commission ID Number (if appicable)_____

2. Property owner(s) name* and complete address, if different from applicant

   Contact Information:
   Home (____)_____
   Work (____)_____
   Fax (____)_____
   Cell/ Pager (____)_____
   e-mail _____

   State Corporation Commission ID Number (if appicable)_____

3. Authorized agent name* and complete mailing address (if applicable):

   Jeff Watkins
   P.O. Box 515
   Gloucester Va 23061

   Contact Information:
   Home (____)_____
   Work (____)_____
   Fax (____)_____
   Cell/ Pager (804) 815-0813
   e-mail Jwatkins49@cox.net

   State Corporation Commission ID Number (if appicable)_____

*** 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.

   Living Shoreline project.
   115 L.F. Rock sills
   250 c.yds beach grade sand as nourishment.
   Spartina plantings where appropriate.

FOR AGENCY USE ONLY	
	Notes:
	JPA # 21-0440

Part 1 - General Information (continued)

5. Have you obtained a contractor for the project? _X_ 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:

Shoreline Structures, LLC
Jeff Watkins
P.O. Box 515
Gloucester, VA 23061

Contact Information:
Home (____)_____
Work (____)_____
Fax (____)_____
Cell / Pager (804) 815-0813
email Jwatkins49@cox.net

State Corporation Commission ID Number (if appicable)_____

*** 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:

Gazette Journal
P.O. Box J
Gloucester, VA 23061

Telephone number
(804) 693-3101

7. Give the following project location information:
Street Address (911 address if available) 8106 Terrapin Cove Rd.
Lot/Block/Parcel# 51-71
Subdivision Lot E Newbill Subdivision
City / County Gloucester Point Zipcode 23062
Latitude and Longitude at Center of Project Site (Decimal Degrees):
If the project is located in a rural area, please provide driving directions.

Rt 17 @ Gloucester Point, Terrapin Cove Rd.
To dead end, 8106 straight ahead.

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)

12. Is this application being submitted for after-the-fact authorization for work which has already begun or been completed? ___Yes _X_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.): $ ~~80,000~~. TBD
Approximate cost of that portion of the project which is below mean low water: $ ~~80,000~~. TBD

14. Completion date of the proposed work: Sumer 2020 -

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).

Left side: David J. Newcomber, 8105, Terrapin Cove road., Gloucester point, va 23062.

Right side: Jon and Rachel Sgroi, 8090 Terrapin Cove Road, Gloucester Point, Va 23062

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, USACE, 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.**

[redacted]

Applicant's Legal Name (printed/typed)

(Use if more than one applicant)

[redacted]

Applicant's Signature

(Use if more than one applicant)

2-23-21

Date

Property Owner's Legal 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) [redacted], hereby certify that I (we) have authorized JEFF WATKINS
(Applicant's legal 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.

(Agent's Signature) (Use if more than one agent)

2-23-21
[redacted]
(Applicant's Signature) (Use if more than one applicant)

2/23/21
(Date)

3. Applicant's having contractors (if applicable)

CONTRACTOR ACKNOWLEDGEMENT

I (we), [redacted], have contracted Shoreline Structures, LLC
(Applicant's legal name(s)) (Contractor's name(s))
to perform the work described in this Joint Permit Application, signed and dated 2-23-21.

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.

Shoreline Structures LLC
Contractor's name or name of firm

POBox 515 Glo. VA 23061
Contractor's or firms address

Contractor's signature and title

Contractor's License Number

[redacted]
Applicant's signature

(use if more than one applicant)

2/23/21
Date

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://ccrm.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)? 115 linear feet. If applicable, what is the volume of the associated backfill? Na cubic yards.

2. What is the maximum encroachment channelward of mean high water? 21 feet.
   channelward of mean low water? 13 feet.
   channelward of the back edge of the dune or beach? Na feet.

3. Please calculate the square footage of encroachment over:
   - Vegetated wetlands 0 square feet
   - Nonvegetated wetlands 1250 square feet
   - Subaqueous bottom 680 square feet
   - Dune and/or beach Na square feet

   B.H. = 400
   sill = 850 → 1250
   sill = 530
   BH = 150 → 680

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**.

   Quarry stone sills
   Coarse, clean beach grade sand as nourishment

6. If using stone, broken concrete, etc., for your structure(s), what is the average weight of the:
   Core (inner layer) material 1-25 pounds per stone Class size surge &A1
   Armor (outer layer) material 50-500 pounds per stone Class size 1 & 2

Part 3 – Appendices (continued)

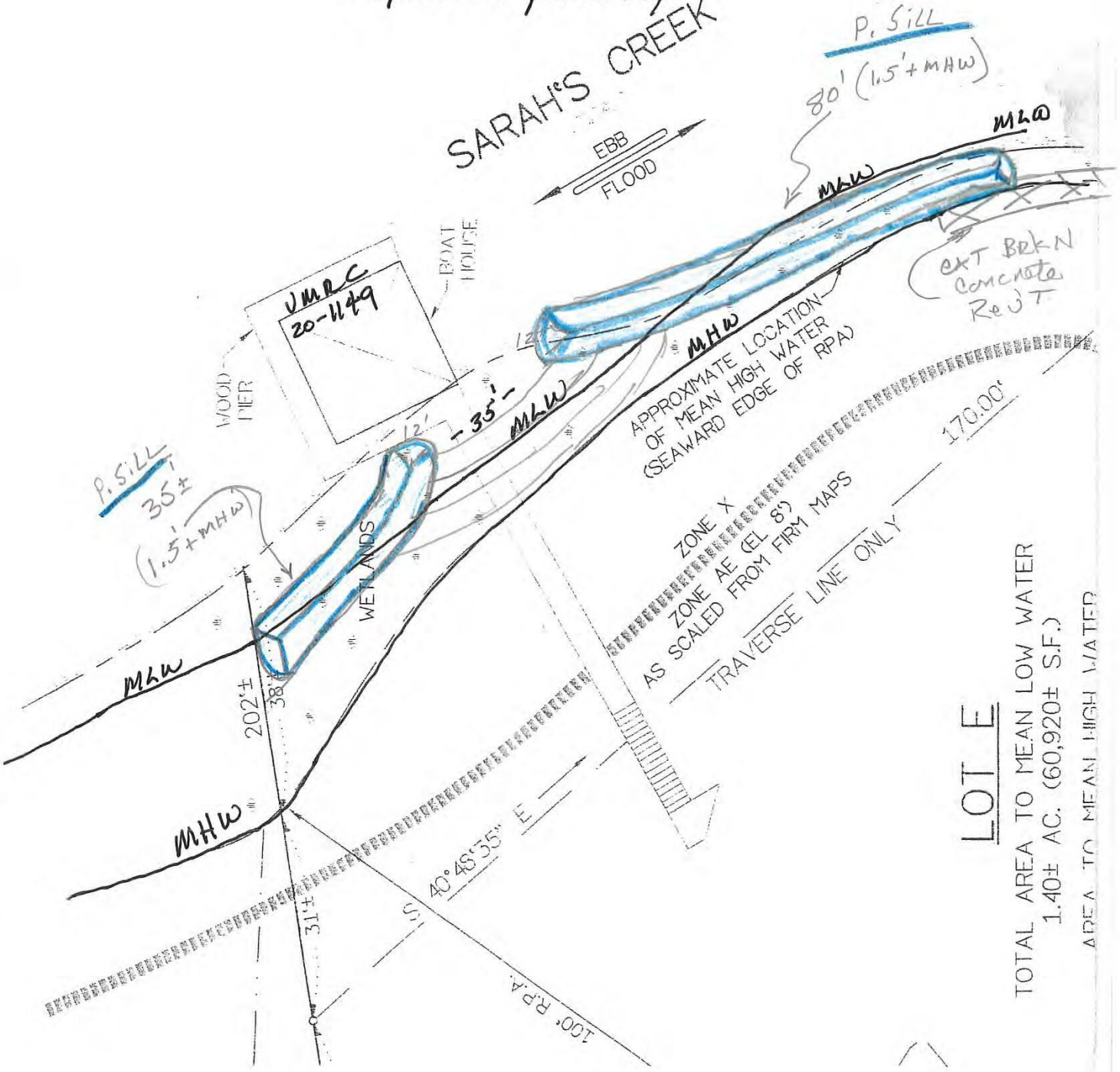
7. For **beach nourishment**, including that associated with breakwaters, groins or other structures, provide the following:

- Volume of material: 75 cubic yards channelward of mean low water; 175 cubic yards landward of mean low water
- Area to be covered: 150 square feet channelward of mean low water; 400 square feet landward of mean low water
- Source of material, composition (e.g. 90% sand, 10% clay): Local pit,
- Method of transportation and placement: Truck, heavy equipment
- Describe any proposed vegetative stabilization measures to be used, including planting schedule, spacing, monitoring, etc.:
  Spartina pattens & alternaflora 18" o.c. Where appropriate

[redacted]

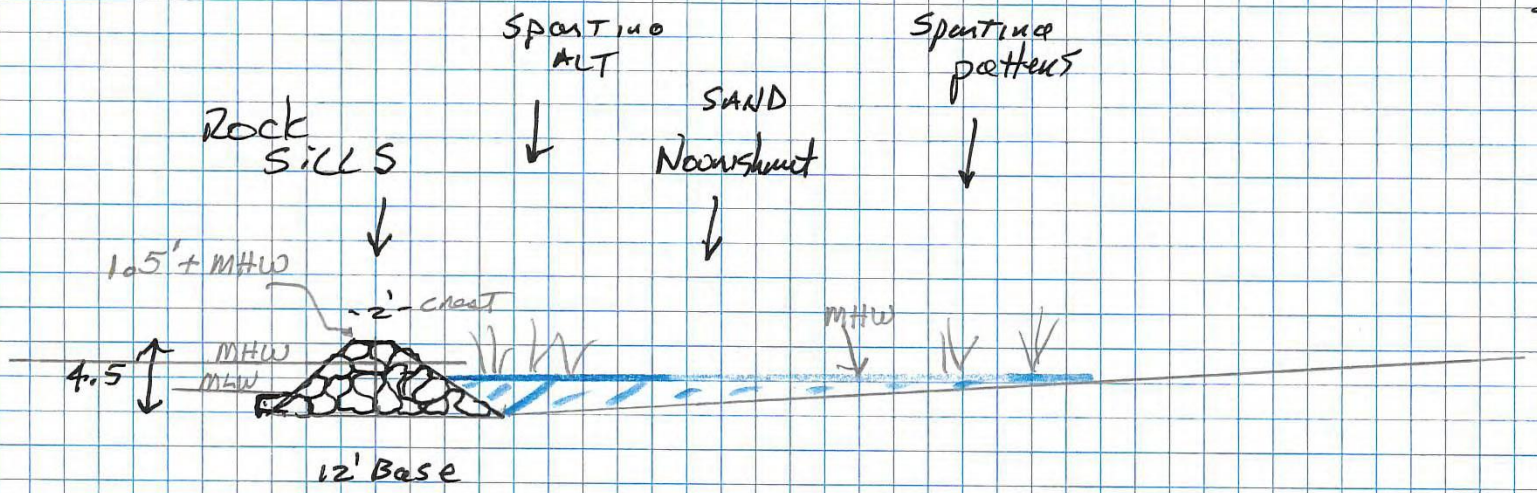
Sarah Creek
Gloucester Co.
Wid. Shoreline
- Rock Sills : 115 L.F.
- Sand Nourishment
- Spartina plantings

Plan View
1"=20'
2-1-21

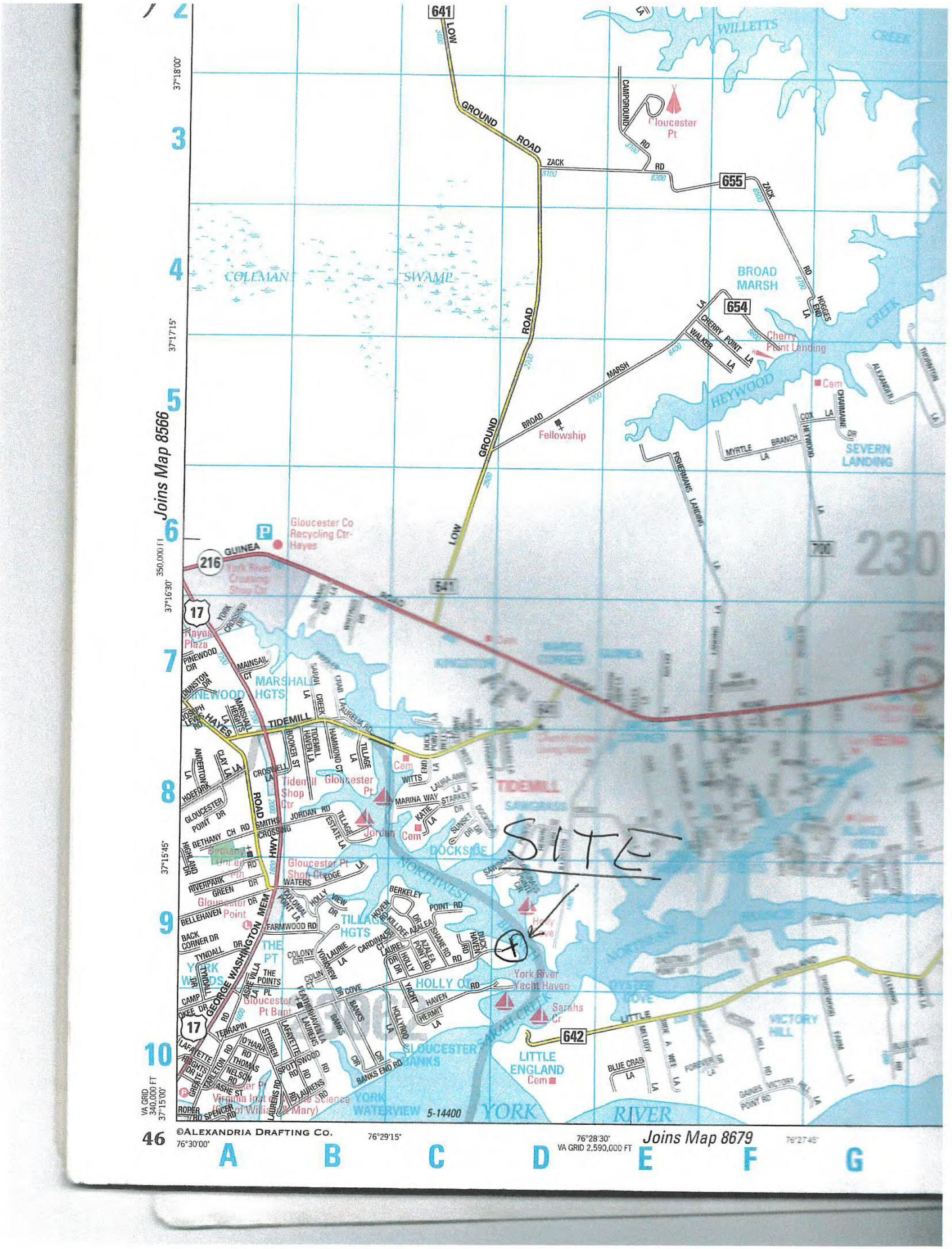


Received by VMRC February 24, 2021 /blh

CROSS SECTION



[redacted]
SARAH Creek
2-1-21
Living Shoreline
Rock Sills,
Sand Nourishment,
Spartina plantings
1" = 10'



Received by VMRC February 24, 2021 /blh

Virginia Marine Resources Commission
Permit Application 20210440
Printed: Friday August 13, 2021 9:39 PM

Applicant: [redacted]
8100 Terrapin Cove Road
Gloucester Point, VA 23062

Application Number:	20210440	**Engineer:**	Mike Johnson
Application Date:	February 24, 2021	**Locality:**	Gloucester
Permit Type:	VMRC Subaqueous	**Waterway:**	Sarah Creek
Permit Status:	Issued	**Expiration Date:**	April 30, 2024
Wetlands Board Action:	Approved as Proposed	**Public Hearing Date:**	April 14, 2021

Project Description: Living Shoreline

Project Dimensions:

Sill: 115 Linear Feet
Living Shoreline: 150 Linear Feet

COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION
PERMIT

The Commonwealth of Virginia, Marine Resources Commission, hereinafter referred to as the Commission, on this 29th day of April 2021 hereby grants unto:

[redacted]

8100 Terrapin Cove Road
Gloucester Point, VA 23062

hereinafter referred to as the Permittee, permission to:

X Encroach in, on, or over State-owned subaqueous bottoms pursuant to Chapter 12, Subtitle III, of Title 28.2 of the Code of Virginia.

___ Use or develop tidal wetlands pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code of Virginia.

Permittee is hereby authorized to install two (2) rock sills, 35 and 80 feet in length, with clean sand fill and plantings along Sarah's Creek at 8106 Terrapin Cove Road in Gloucester County. All activities authorized herein shall be accomplished in conformance with the plans and drawings dated received February 24, 2021, which are attached and made a part of this permit.

This permit is granted subject to the following conditions:

(1) The work authorized by this permit is to be completed by **April 30th, 2024.** The Permittee shall notify the Commission when the project is completed. The completion date may be extended by the Commission in its discretion. Any such application for extension of time shall be in writing prior to the above completion date and shall specify the reason for such extension and the expected date of completion of construction. All other conditions remain in effect until revoked by the Commission or the General Assembly.

(2) This permit grants no authority to the Permittee to encroach upon the property rights, including riparian rights, of others.

(3) The duly authorized agents of the Commission shall have the right to enter upon the premises at reasonable times, for the purpose of inspecting the work being done pursuant to this permit.

(4) The Permittee shall comply with the water quality standards as established by the Department of Environmental Quality, Water Division, and all other applicable laws, ordinances, rules and regulations affecting the conduct of the project. The granting of this permit shall not relieve the Permittee of the responsibility of obtaining any and all other permits or authority for the projects.

(5) This permit shall not be transferred without written consent of the Commissioner.

(6) This permit shall not affect or interfere with the right vouchsafed to the people of Virginia concerning fishing, fowling and the catching of and taking of oysters and other shellfish in and from the bottom of acres and waters not included within the terms of this permit.

(7) The Permittee shall, to the greatest extent practicable, minimize the adverse effects of the project upon adjacent properties and wetlands and upon the natural resources of the Commonwealth.

(8) This permit may be revoked at any time by the Commission upon the failure of the Permittee to comply with any of the terms and conditions hereof or at the will of the General Assembly of Virginia.

(9) There is expressly excluded from the permit any portion of the waters within the boundaries of the Baylor Survey.

(10) This permit is subject to any lease of oyster planting ground in effect on the date of this permit. Nothing in this permit shall be construed as allowing the Permittee to encroach on any lease without the consent of the leaseholder. The Permittee shall be liable for any damages to such lease.

(11) The issuance of this permit does not confer upon the Permittee any interest or title to the beds of the waters.

(12) All structures authorized by this permit, which are not maintained in good repair, shall be completely removed from State-owned bottom within three (3) months after notification by the Commission.

(13) The Permittee agrees to comply with all of the terms and conditions as set forth in this permit and that the project will be accomplished within the boundaries as outlined in the plans attached hereto. Any encroachment beyond the limits of this permit shall constitute a Class 1 misdemeanor.

(14) This permit authorizes no claim to archaeological artifacts that may be encountered during the course of construction. If, however, archaeological remains are encountered, the Permittee agrees to notify the Commission, who will, in turn notify the Department of Historic Resources. The Permittee further agrees to cooperate with agencies of the Commonwealth in the recovery of archaeological remains if deemed necessary.

(15) The Permittee agrees to indemnify and save harmless the Commonwealth of Virginia from any liability arising from the establishment, operation or maintenance of said project.

The following special conditions are imposed on this permit:

(16) The placard accompanying this permit document must be conspicuously displayed at the work site.

(17) Permittee agrees to notify the Commission upon the start of the activities authorized by this permit.

Description of Fees	Amount	Unit of Measure	Rate	Total	Frequency	After-The-Fact
Permit Fee				$300.00	One-Time	
Total Permit Fees				**$300.00**		

This permit consists of 6 Pages

PERMITTEE(S)

[X] BY CHECKING THIS BOX, I certify that I am the Permittee OR the certified agent acting on behalf of all Permittees, that I have read and understood the permit as drafted and accept all of the terms and conditions herein. I agree and understand that checking the box has the same legal authority as a written signature. The provisions of the permit authorization shall be binding on any assignee or successor in interest of the original Permittee(s). In cases where the Permittee is a corporation, agency or political jurisdiction, I certify I have proper authorization to bind the organization to the financial and performance obligations which result from activity authorized by this permit.

PERMITTEE OR CERTIFIED AGENT

[redacted]

Print Your Name Here

DATE TERMS ACCEPTED

April 28, 2021

PERMITEE

[redacted]
8100 Terrapin Cove Road
Gloucester Point, VA 23062

AGENT

Shoreline Structures
Jeff Watkins
Post Office Box 515
Gloucester, Va 23061

COMMISSION

This permit is executed on behalf of the Commonwealth of Virginia, Marine Resources Commission by the undersigned:

Randy Owen
Deputy Chief, Habitat Management Division

DATE SIGNED
29th day of April 2021

Gloucester County
Environmental Programs
6489 Main Street
Telephone 804-693-1217 Gloucester, Virginia 23061 Fax 804-824-2442

April 15, 2021

Mr. [redacted]
c/o Jeff Watkins
Shoreline Structures, LLC
P.O. Box 515
Gloucester, VA 23061

RE: **VMRC #21-0440**

Dear Mr. [redacted]

On April 14, 2021, the Gloucester County Wetlands Board approved your joint permit application as submitted granting authorization to install 115 LF rock sills, 250 cubic yards beach grade sand nourishment and spartina plantings at 8106 Terrapin Cove Road Gloucester, VA 23062.

Your Wetland Permit will be available to your agent/contractor at the Office of Environmental Programs, unless an appeal of the Board's decision or other delaying actions are filed with or by the Virginia Marine Resources Commission within ten (10) days.

If you have any questions concerning this letter you may contact Ron Owens at 804-693-1217 during our regular office hours, Monday – Friday from 8 a.m. to 4:30 p.m.

Respectfully,
Walter Priest
Walter Priest, Chairman
Gloucester Co. Wetlands Board

WP/kjs
cc:

Applicant – 8100 Terrapin Cove Road, Gloucester VA 23062
Army Corp
Virginia Marine Resources Commission
Virginia Institute of Marine Science
File

Received by VMRC April 15, 2021 /blh

COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION
PERMIT

The Commonwealth of Virginia, Marine Resources Commission, hereinafter referred to as the Commission, on this 29th day of April 2021 hereby grants unto:

[redacted]

8100 Terrapin Cove Road
Gloucester Point, VA 23062

hereinafter referred to as the Permittee, permission to:

X Encroach in, on, or over State-owned subaqueous bottoms pursuant to Chapter 12, Subtitle III, of Title 28.2 of the Code of Virginia.

___ Use or develop tidal wetlands pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code of Virginia.

Permittee is hereby authorized to install two (2) rock sills, 35 and 80 feet in length, with clean sand fill and plantings along Sarah's Creek at 8106 Terrapin Cove Road in Gloucester County. All activities authorized herein shall be accomplished in conformance with the plans and drawings dated received February 24, 2021, which are attached and made a part of this permit.

This permit is granted subject to the following conditions:

(1) The work authorized by this permit is to be completed by **April 30th, 2024.** The Permittee shall notify the Commission when the project is completed. The completion date may be extended by the Commission in its discretion. Any such application for extension of time shall be in writing prior to the above completion date and shall specify the reason for such extension and the expected date of completion of construction. All other conditions remain in effect until revoked by the Commission or the General Assembly.

(2) This permit grants no authority to the Permittee to encroach upon the property rights, including riparian rights, of others.

(3) The duly authorized agents of the Commission shall have the right to enter upon the premises at reasonable times, for the purpose of inspecting the work being done pursuant to this permit.

(4) The Permittee shall comply with the water quality standards as established by the Department of Environmental Quality, Water Division, and all other applicable laws, ordinances, rules and regulations affecting the conduct of the project. The granting of this permit shall not relieve the Permittee of the responsibility of obtaining any and all other permits or authority for the projects.

(5) This permit shall not be transferred without written consent of the Commissioner.

(6) This permit shall not affect or interfere with the right vouchsafed to the people of Virginia concerning fishing, fowling and the catching of and taking of oysters and other shellfish in and from the bottom of acres and waters not included within the terms of this permit.

(7) The Permittee shall, to the greatest extent practicable, minimize the adverse effects of the project upon adjacent properties and wetlands and upon the natural resources of the Commonwealth.

(8) This permit may be revoked at any time by the Commission upon the failure of the Permittee to comply with any of the terms and conditions hereof or at the will of the General Assembly of Virginia.

(9) There is expressly excluded from the permit any portion of the waters within the boundaries of the Baylor Survey.

(10) This permit is subject to any lease of oyster planting ground in effect on the date of this permit. Nothing in this permit shall be construed as allowing the Permittee to encroach on any lease without the consent of the leaseholder. The Permittee shall be liable for any damages to such lease.

(11) The issuance of this permit does not confer upon the Permittee any interest or title to the beds of the waters.

(12) All structures authorized by this permit, which are not maintained in good repair, shall be completely removed from State-owned bottom within three (3) months after notification by the Commission.

(13) The Permittee agrees to comply with all of the terms and conditions as set forth in this permit and that the project will be accomplished within the boundaries as outlined in the plans attached hereto. Any encroachment beyond the limits of this permit shall constitute a Class 1 misdemeanor.

(14) This permit authorizes no claim to archaeological artifacts that may be encountered during the course of construction. If, however, archaeological remains are encountered, the Permittee agrees to notify the Commission, who will, in turn notify the Department of Historic Resources. The Permittee further agrees to cooperate with agencies of the Commonwealth in the recovery of archaeological remains if deemed necessary.

(15) The Permittee agrees to indemnify and save harmless the Commonwealth of Virginia from any liability arising from the establishment, operation or maintenance of said project.

VMRC# 2021-0440

The following special conditions are imposed on this permit:

(12) The placard accompanying this permit document must be conspicuously displayed at the work site.

(13) Permittee agrees to notify the Commission upon the start of the activities authorized by this permit.

Description of Fees	Amount	Unit of Measure	Rate	Total	Frequency	After-The-Fact
Permit Fee				$300.00	One-Time	
Total Permit Fees				**$300.00**		

This permit consists of 6 Pages

PERMITTEE(S)

[X] BY CHECKING THIS BOX, I certify that I am the Permittee OR the certified agent acting on behalf of all Permittees, that I have read and understood the permit as drafted and accept all of the terms and conditions herein. I agree and understand that checking the box has the same legal authority as a written signature. The provisions of the permit authorization shall be binding on any assignee or successor in interest of the original Permittee(s). In cases where the Permittee is a corporation, agency or political jurisdiction, I certify I have proper authorization to bind the organization to the financial and performance obligations which result from activity authorized by this permit.

PERMITTEE OR CERTIFIED AGENT

[redacted]

Print Your Name Here

DATE TERMS ACCEPTED

April 28, 2021

PERMITEE

[redacted]
8100 Terrapin Cove Road
Gloucester Point, VA 23062

AGENT
Shoreline Structures
Jeff Watkins
Post Office Box 515
Gloucester, Va 23061

COMMISSION

This permit is executed on behalf of the Commonwealth of Virginia, Marine Resources Commission by the undersigned:

Randy Owen
Deputy Chief, Habitat Management Division

DATE SIGNED
29th day of April 2021

Wetlands Permit

County of Gloucester, Virginia

Please post on site! Notify Gloucester County at 693-1217, 48 hours prior to initiation of permitted land disturbance.

Permit Number: 21020313

Parcel ID: 29202

Owner: [redacted]

Contractor Name: WATKINS, JEFF

Address: 8100 TERRAPIN COVE RD

VRMC#: 21-0440

Water body: SARAH CRK

Specifications: 115 LF ROCK SILLS, 250 C YARDS BEACH GRADE SAND NOURISHMENT, SPARTINA PLANTINGS.

Date Issued: 04/14/2021
Expiration Date: 04/14/2024

for WMP

Gloucester County Wetlands Board Chairman

Date Issued: 04/14/2021

Shoreline Structures, LLC
Jeff Watkins
VA Class A# 2705095843 CBC, RBC
P.O. Box 515
Gloucester, VA 23061
804-815-0813

7-22-21

[redacted]
8106 Terrapin Cove Rd.
Gloucester Point, VA 23062

Cost Estimate:

Living Shore Line project, VMRC: 21-0440

Project Description & Costs:

1.	115L.F. of Rock Sill, 12' base	$ 36,800.
2.	250 c.yds. of sand nourishment.	$ 18,750.
3.	Filter fabric if desired	$ 2,800.
4.	Marsh access, timber mats	$ 2,500.
5.	Spartina plantings: pattens & alternaflora	$ 3,250.
6.	Site access, tree removal, construct sand access road down bank...	$ 3,500.
7.	Remove access road, restore site/yard	$ 2,800.
8.	Permits	$ 750.

Job Total= $ 71,150.

Project material list/quantities

1. (Armor) stone, class 1 & 2 : 225 tons combined.
2. (Core)stone: 80 tons
3. Beach grade sand/nourishment: 250 cubic yards
4. Spartina plants: #1500

These material cost are good for 90 days.
20% deposit to hold spot on our construction calendar.

Jeff Watkins

Gloucester County Wetlands Board
Gloucester County, Virginia
Wetlands Permit

VMRC # 2021-0440

Pursuant to Chapter 13 of Title 28.2, as amended, of the *Code of Virginia* the County of Gloucester, Wetlands Board, hereinafter referred to as the Board, on this 14th day of April, 2021 hereby grants unto [redacted] hereinafter referred to as the permittee(s) permission to: install 115 LF rock sills, 250 cubic yards beach grade sand nourishment and spartina plantings at 8106 Terrapin Cove Road Gloucester, VA 23062.

In conformance with attached drawings dated February 24, 2021.

This permit is granted subject to the following terms and conditions: **approved as submitted.**

The work authorized by this permit shall be completed by **April 14, 2024** after which time this permit shall become null and void.

1. Permittee shall comply with the applicable laws, ordinance rules and regulations affecting the conduct of the project. The granting of this permit shall not relieve the Permittee of the responsibility of obtaining other permits of authority required for the project.
2. Except as specifically authorized herein, the Permittee agrees not to undertake any activity which would impair the natural function of the wetlands; physically alter the contours of the wetlands; or, destroy vegetation growing thereon as listed in the Wetlands Guidelines promulgated by the Virginia Marine Resources Commission. The duly authorized agents of the Wetlands Board and Marine Resources Commission shall have the right to enter upon the premises at reasonable times, for the purpose of inspecting the work being done pursuant to this permit.
3. This permit shall not be transferred without the prior written approval of the Board.
4. The Permittee or Authorized Agent **shall contact the Office of Environmental Programs at 804-693-1217** at least 48 hours prior to the start of the project. Failure to notify will constitute a permit violation and may subject the Permittee to an assessment of civil charges of up to **$10,000**.
5. This permit may be revoked at any time by the Board upon the failure of the Permittee to comply with any of the terms and conditions herein.

Gloucester County Wetlands Board
Gloucester County, Virginia
Wetlands Permit

VMRC #2021-0440

IN, WITNESS WHEREOF, the Gloucester County Wetlands Board has caused these presents to be executed in its behalf by Walter Priest, Chairman of this Board. The Permittee or agent's signature is affixed hereto as evidence of acceptance of the terms and conditions.

Gloucester County Wetlands Board

26th Day of April, 2021 by _____
Walter Priest, Chairman or Ronald Owens, WB Liaison

STATE OF VIRGINIA
GLOUCESTER COUNTY, to wit:

I, Kenna Schaller, Notary Public in and for said state and County of Gloucester, hereby certify that Ronald Owens whose name is signed to the foregoing, has acknowledged before me in my state and County of Gloucester aforesaid.

KENNA JEAN SCHALLER NOTARY PUBLIC REG # 7909113 MY COMMISSION EXPIRES 10/31/2024 COMMONWEALTH OF VIRGINIA

Given under my hand this 26th day of April, 2021

Notary Public _____ REG# 7909113

My Commission expires on 10/31/24

Permittee of Agent

3RD Day of May, 2021 by _____
Permittee or Agent

STATE OF VIRGINIA
GLOUCESTER COUNTY, to wit:

I, Kenna Schaller, Notary Public in and for said state and Gloucester County/City hereby certify that Jeff Watkins Whose name is signed on the foregoing, has acknowledged the same before me in my state and Gloucester County/City aforesaid.

Given under my hand this 3RD day of May, 2021

KENNA JEAN SCHALLER NOTARY PUBLIC REG # 7909113 MY COMMISSION EXPIRES 10/31/2024 COMMONWEALTH OF VIRGINIA

Notary Public _____

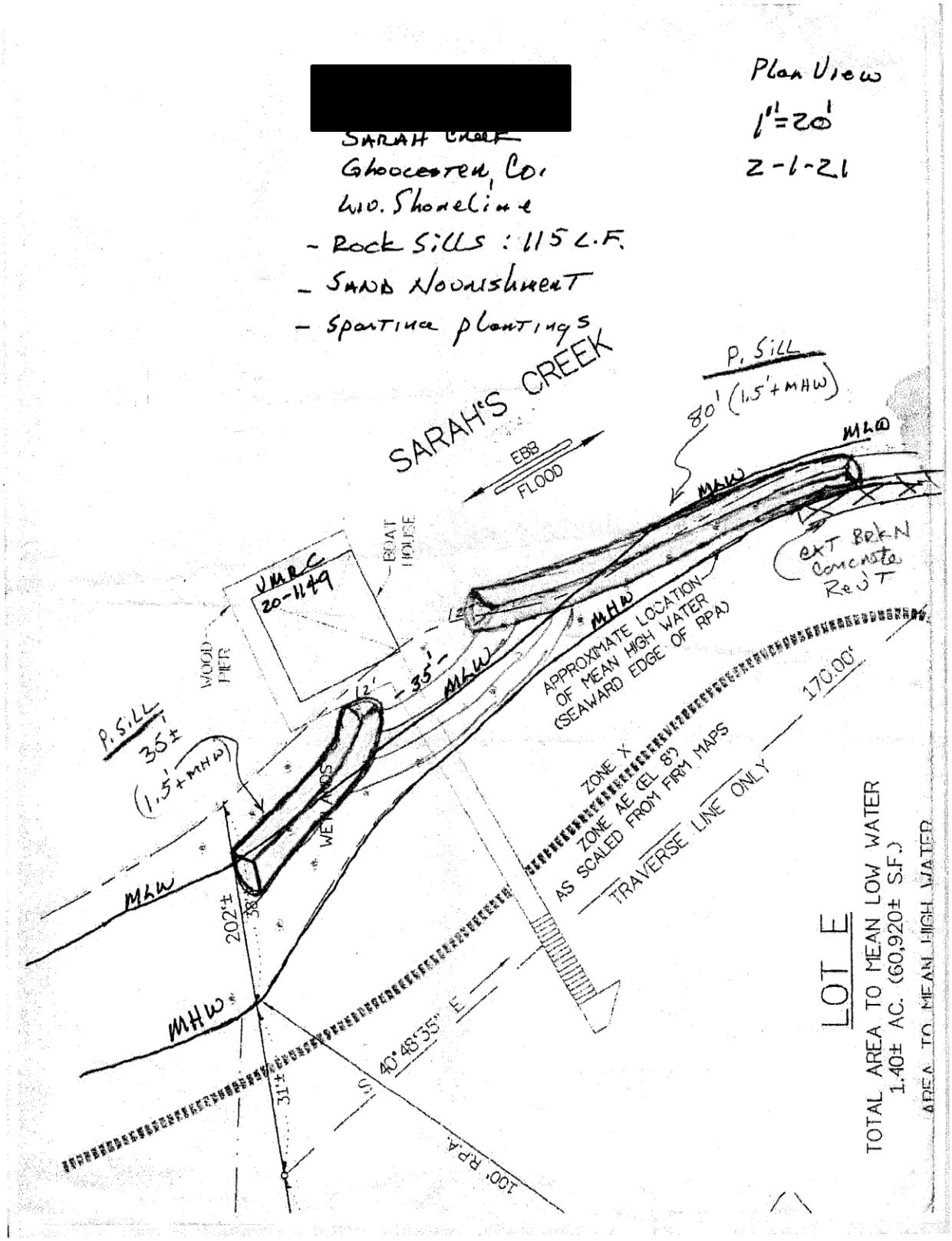
REG# 7909113

My Commission expires on 10/31/2024

[redacted]

Plan View
1"=20'
2-1-21

SARAH CREEK
Gloucester Co.
Lin. Shoreline
- Rock Sills : 115 L.F.
- Sand Nourishment
- Spartina plantings



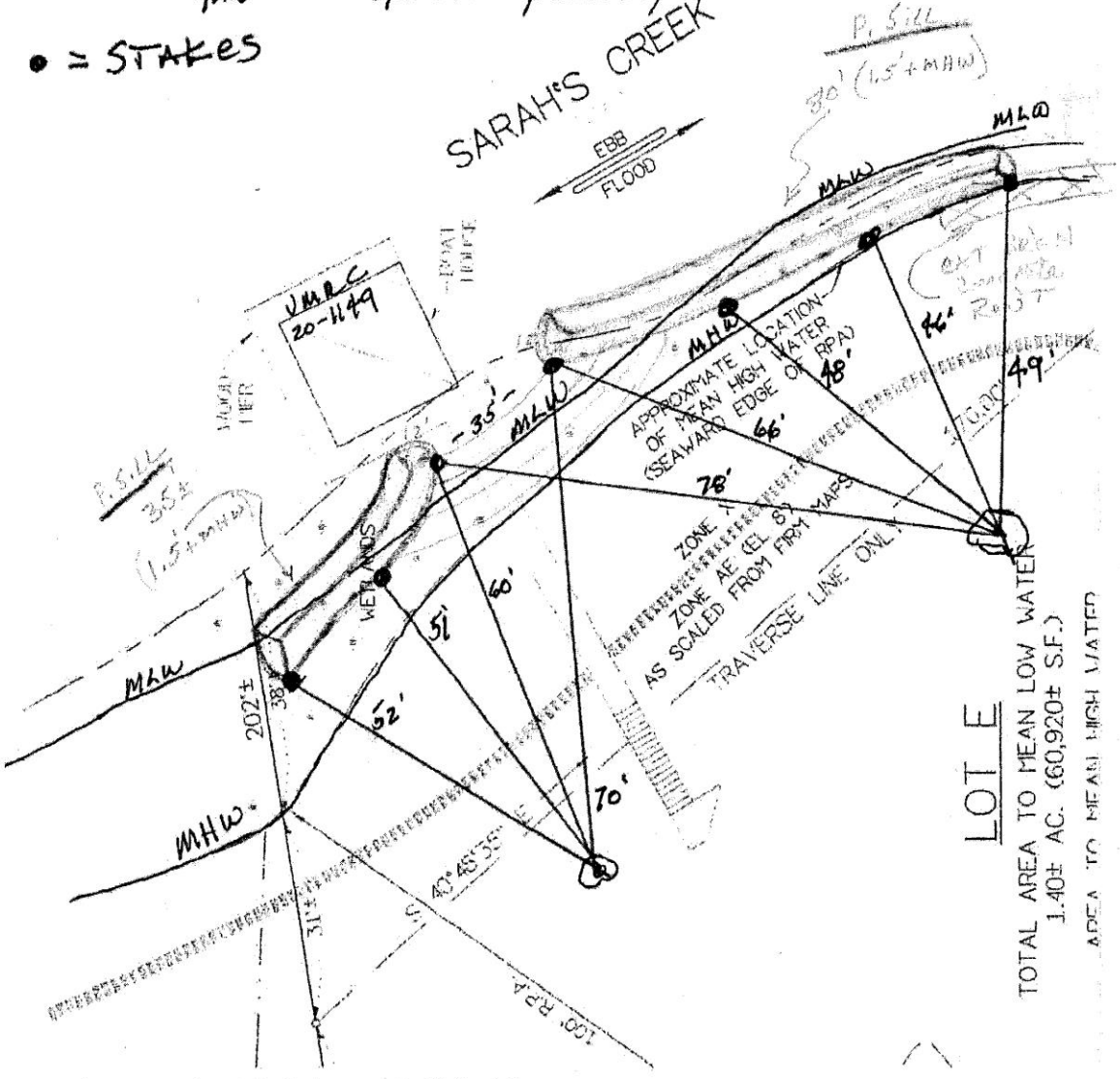
[redacted]

Sarah Creek
Gloucester Co.
Wid. Shoreline
- Rock Sills : 115 L.F.
- Sand Nourishment
- Spartina plantings

Plan View
1"=20'
2-1-21

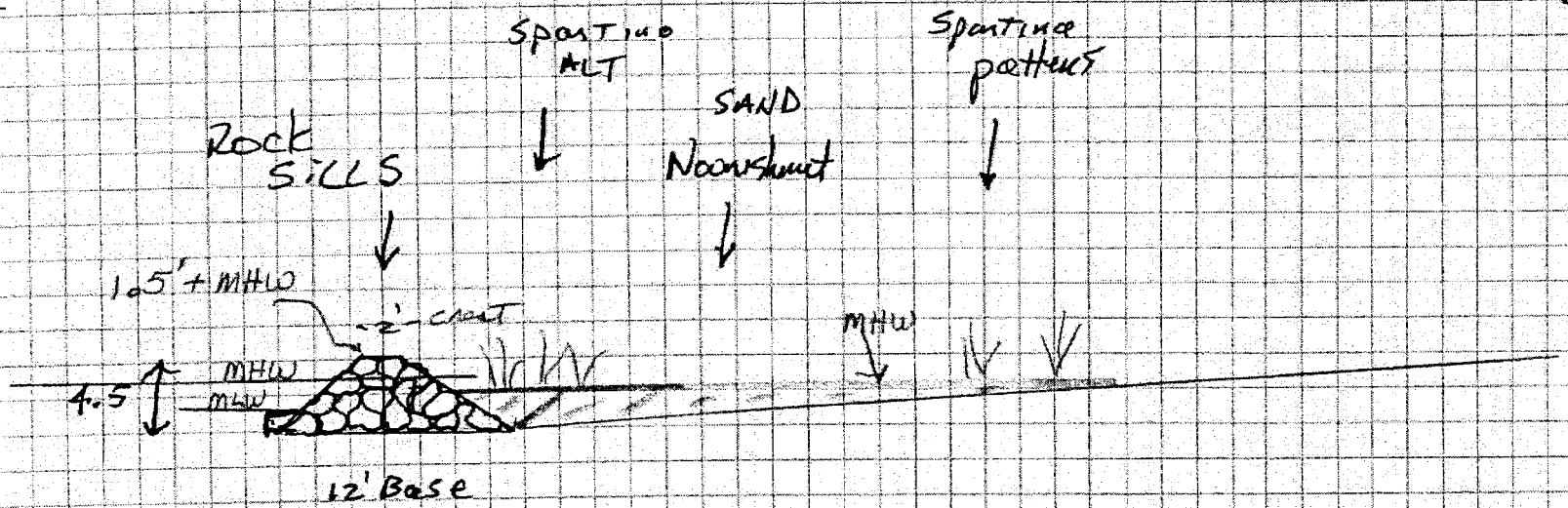
Rec'd 4-1-21
MHW

● = STAKES



Received by VMRC February 24, 2021 /blh

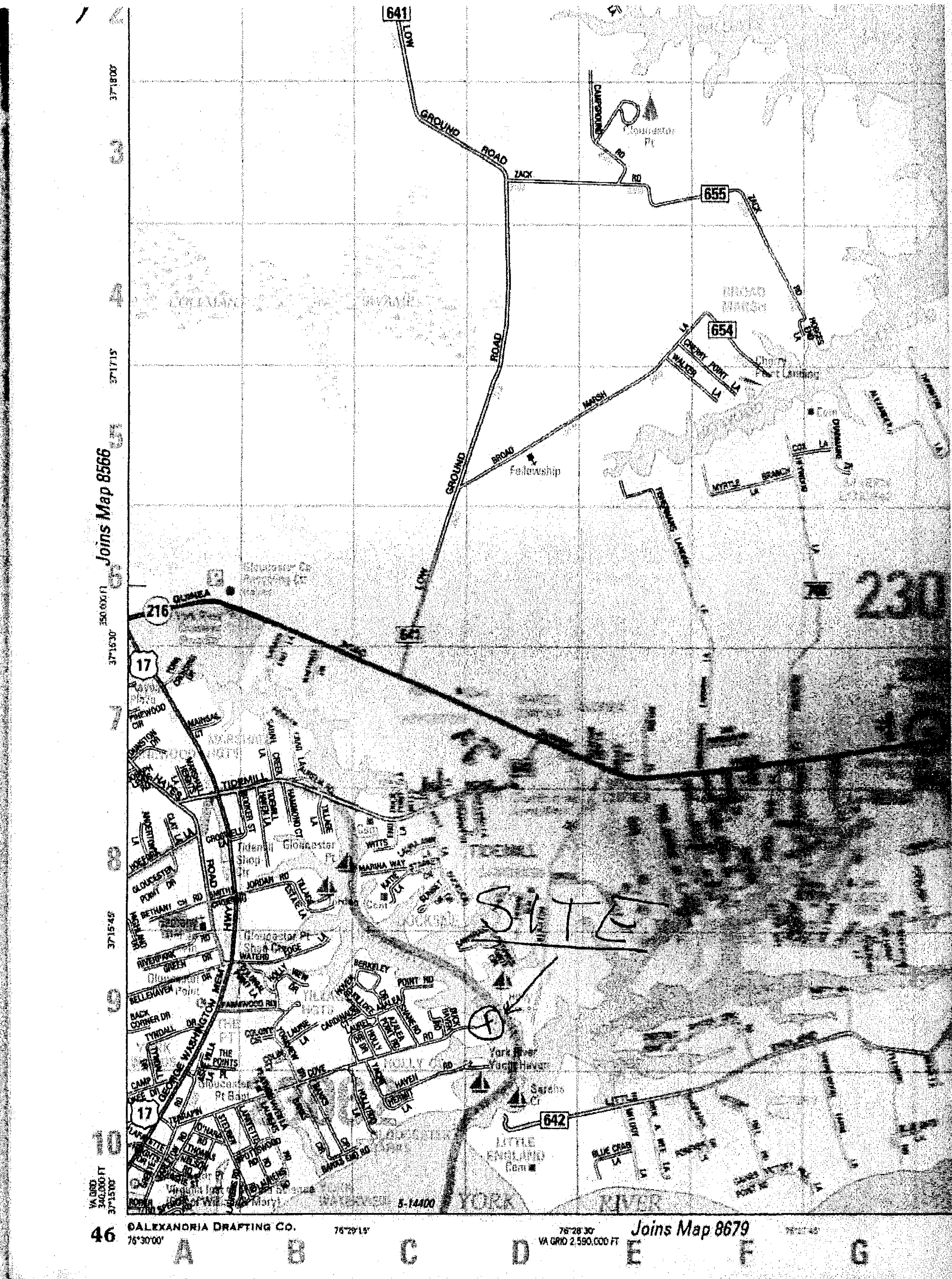
CROSS SECTION



[redacted]
SARAH Creek
2-1-21
Living Shoreline

Rock SILLS
Sand Nourishments
Spartina plantings

1" = 10'



641
LOW GROUND ROAD
ZACK RD
655
Gloucester Pt
BROAD MARSH
654
CHERRY POINT LA
WALKER LA
BROAD MARSH
Fellowship
Joins Map 8566
Gloucester Co Recycling Ctr
216
17
230
TIDEMILL
Tidemill Shop Ctr
Gloucester Pt
JORDAN RD
Gloucester Pt Shop Ctr
GEORGE WASHINGTON MEM HWY
BERKELEY
POINT RD
HOLLY
York River Yacht Haven
Sarah's Cr
642
LITTLE ENGLAND
BLUE CRAB LA
YORK
RIVER
SITE
46
©ALEXANDRIA DRAFTING CO.
76°30'00"
Joins Map 8679
A
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Attachment 6: Flood Prevention Project and its Relevance to Other Projects

MPPDC staff have worked throughout the years to understand the policy, research and impacts of flooding (ie. stormwater, coastal, riverine, sea level rise) and coastal resiliency to the region. Below is a list of projects that have built upon each other over the year that have contributed to our understanding.

Climate Change & Sea Level Rise (2009 to 2012)
The MPPDC was funded for a 3 Phase project through the Virginia Coastal Zone Management Program to assess the impacts of climate and sea level rise throughout the region. With over 1,000 miles of linear shoreline, the Middle Peninsula has a substantial amount of coast under direct threat of accelerated climate change and more specifically sea-level. In Phase 1, MPPDC staff assessed the potential anthropogenic and ecological impacts of climate change. Phase 2 focused on the facilitating presentations and develop educational materials about sea level rise and climate change for the public and local elected officials. Finally Phase 3 focused on developing adaptation public policies in response to the assessments.
Phase 1: Middle Peninsula Climate Change Adaptation: Facilitation of Presentations and Discussions of Climate Change Issues with Local Elected Officials and the General Public
Phase 2: Climate Change III: Initiating Adaptation Public Policy Development
Phase 3: Phase 3 Climate Change: Initiating Adaptation Public Policy Development

Emergency Management - Hazard Mitigation Planning (2009 to Present): Since 2009, the Middle Peninsula Planning District Commission has assisted regional localities in meeting the federal mandate to have an adopted local hazard plan. *The Regional All Hazards Mitigation Plan addresses the natural hazards prone to the region, including hurricanes, winter storms, tornadoes, coastal flooding, coastal/shoreline erosion, sea level rise, winter storms, wildfire, riverine flooding, wind, dam failures, drought, lightning, and earthquakes. This plan also consists of a Hazus assessment of hurricane wind, sea level rise* (ie. Mean High Higher Water and the NOAA 2060 intermediate-high scenario), *and flooding (coastal and riverine flooding) that estimates losses from each hazard.* The Middle Peninsula All-Hazard Mitigation Plan Update 2021 is currently being updated. The 2021 All Hazards Mitigation Plan builds off and updates previous mitigation plans.

Land and Water Quality Protection (2014): In light of changing Federal and State regulations associated with Bay clean up-nutrient loading, nutrient goals, clean water, OSDS management, storm water management, TMDLs, etc, staff from the Middle Peninsula Planning District Commission (MPPDC) will develop a rural pilot project which aims to identify pressing coastal issue(s) of local concern related to Bay clean up and new federal and state legislation which ultimately will necessitate local action and local policy development. Staff has identified many cumulative and secondary impacts that have not been researched or discussed within a local public policy venue. Year 1-3 will include the identification of key concerns related to coastal

land use management/water quality and Onsite Sewage Disposal System (OSDS) and community system deployment. Staff will focus on solution based approaches, such as the establishment of a regional sanitary sewer district to manage the temporal deployment of nutrient replacement technology for installed OSDS systems, assessment of land use classifications and taxation implications associated with new state regulations which make all coastal lands developable regardless of environmental conditions; use of aquaculture and other innovative approaches such as nutrient loading offset strategies and economic development drivers.

Department of Conservation and Recreation Stormwater Management (2014)
The Virginia General Assembly created a statewide, comprehensive stormwater management program related to construction and post-construction activities (HB1065 - Stormwater Integration). The Virginia Department of Conservation and Recreation requires stormwater management for projects with land disturbances of one acre or more. This new state mandate requires all Virginia communities to adopt and implement stormwater management programs by July 1, 2014, in conjunction with existing erosion and sediment control programs. Additionally, the communities within the MPPDC are required to address stormwater quality as stipulated by the Chesapeake Bay TMDL Phase II Watershed Implementation Plan and the Virginia Stormwater Regulations. The MPPDC Stormwater Program helped localities develop tools specific to the region necessary to respond to the state mandate requirement for the development of successful stormwater programs.

Stormwater Management-Phase II (2014): MPPDC staff and Draper Aden Associates worked with localities (i.e. Middlesex, King William, and Mathews Counties and the Town of West Point) interested in participating in a Regional Stormwater Management Program. While each locality sought different services from the regional program, this project coordinated efforts, developed regional policies and procedures, and the proper tools to implement a regional VSMP.

Mathews County Rural Ditch Enhancement Study (2015): In contract with Draper Aden Associates, a comprehensive engineering study was developed to provide recommendations and conceptual opinions of probable costs to improve the conveyance of stormwater and water quality through the ditches in Mathews County.

Drainage and Roadside Ditching Authority (2015): This report explored the enabling mechanism in which a Regional Drainage and Roadside Ditching Authority could be developed. An Authority would be responsible for prioritizing ditch improvement needs, partnering with Virginia Department of Transportation (VDOT) to leverage available funding, and ultimately working toward improving the functionality of the region's stormwater conveyance system.

Living Shoreline Incentive Program (2016 to present)
In 2011 Virginia legislation was passed designating living shorelines as the preferred alternative for stabilizing Virginia tidal floodplain shorelines. The Virginia Marine Resources Commission, in

cooperation with the Virginia Department of Conservation and Recreation and with technical assistance from the Virginia Institute of Marine Science (VIMS), established and implemented a general permit regulation that authorizes and encourages the use of living shorelines however, no financial incentives were put in place to encourage consumers to choose living shorelines over traditional hardening projects in the Commonwealth. To fill this, need the MPPDC developed the MPPDC Living Shoreline Incentives Program to offer loans and/or grants to private property owners interested in installing living shorelines to stabilize their shoreline. Currently, loans are available to assist homeowners to install living shorelines on suitable properties. Loans up to $10,000 can be financed for up to 5 years (60 months). Loans over $10,000 can be financed for up to 10 years (120 months). Interest is at the published Wall Street Journal Prime rate on the date of loan closing - currently at 5.25% (11/29/18). Minimum loan amount is $1,000. Maximum determined by income and ability to repay the loan. Finally, there are currently no grants available in this program. Since 2016 under the MPPDC Living Shoreline Revolving Loan program, 8 living shorelines have been financed and built to date encumbering ~$500,000 in VRA loan funding and ~$400,000 in NFWF grant funding. Living Shoreline construction cost to date range per job $14,000- $180,000. MPPDC oversees all aspects (planning, financing, constriction, and loan servicing) of these projects from cradle to grave.

Mathews County Ditch Project - VCPC White Papers (2017): This report investigated the challenges presented by the current issues surrounding the drainage ditch network of Mathews County. The study summarized research conducted in the field; examined the law and problems surrounding the drainage ditches; and proposed some next steps and possible solutions.

Mathews County Ditch Mapping and Database Final Report (2017): This project investigated roadside ditch issues in Mathews County through mapping and research of property deeds to document ownership of ditches and outfalls. This aided in understanding the needed maintenance of failing ditches and the design of a framework for a database to house information on failing ditches to assist in the prioritization of maintenance needs.

Virginia Stormwater Nuisance Law Guidance (2018): This report was developed by the Virginia Coastal Policy Center to understand the ability of a downstream recipient of stormwater flooding to bring a claim under Virginia law against an upstream party, particularly a nuisance claim. The report summarizes how Virginia courts determine stormwater flooding liability between two private parties.

Oyster Bag Sill Construction and Monitoring at Two Sites in Chesapeake Bay (2018): VIMS Shoreline Studies Program worked with the PAA to (1) install oyster bag sills as shore protection at two PAA sites with the goal of determining effective construction techniques and placement guidelines for Chesapeake Bay shorelines and (2) assess the effectiveness for shore protection with oyster bags on private property through time.

Fight the Flood Program (2020): The Fight the Flood was launched in 2020 to connect property owners to contractors who can help them protect their property from rising flood waters. FTF

also offers a variety of financial tools to fund these projects including but limited to the Septic Repair revolving loan program, Living Shoreline incentives revolving loan fund program, and plant insurance for living shorelines.

Attachment 7: Project cost estimates

Shoreline Structures, LLC
Jeff Watkins
VA Class A # 2705095843 CBC, RBC
P.O. Box 515
Gloucester, VA 23061
804-815-0813

7-22-21

[redacted]
8106 Terrapin Cove Rd.
Gloucester Point, VA 23062

Cost Estimate:

Living Shore Line project, VMRC: 21-0440

Project Description & Costs:

1. 115L.F. of Rock Sill, 12' base.....$ 36,800.
2. 250 c.yds. of sand nourishment.....$ 18,750.
3. Filter fabric if desired.....$ 2,800.
4. Marsh access, timber mats.....$ 2,500.
5. Spartina plantings: pattens & alternaflora.....$ 3,250.
6. Site access, tree removal, construct sand access road down bank...$ 3,500.
7. Remove access road, restore site/yard.....$ 2,800.
8. Permits.....$ 750.

Job Total = $ 71,150.

Project material list/quantities

1. (Armor) stone, class 1 & 2 : 225 tons combined.
2. (Core)stone: 80 tons
3. Beach grade sand/nourishment: 250 cubic yards
4. Spartina plants: #1500

These material cost are good for 90 days.
20% deposit to hold spot on our construction calendar.

Jeff Watkins

Attachment 8: Match Commitment Letters

8/16/21

[Date]

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Clyde Cristman,

Thank you for considering the application to the Virginia Community Flood Preparedness Fund, involving necessary flood mitigation activities on my property at [property address]. I am committed to provide the matching funds necessary in cash or Middle Peninsula Planning District Commission (MPPDC) revolving loan funds for this project and understand that the final amount of matching funds required will be subject to the contract amount awarded by VDCR.

Please reach out to the MPPDC, who is submitting this proposal on my behalf, at 804-758-2311 should you have any questions and they will be able to contact me to coordinate a response. I can be reached by phone at [phone #] or by email at [email address].

Sincerely,
[Signature]
[Printed Name]

[redacted]

Attachment 9: Authorization to request for funding

MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

8/30/21

To: DCR Staff

From: Lewie Lawrence, MPPDC Executive Director

Reff: Authorization to request for funding:

Matching funds for all construction and design projects provided under Round 1 of the Virginia Community Flood Preparedness Fund are provided by the property owner for which the project is proposed. The match commitment letter acknowledges that the owner of the project (land owner) understands that a match commitment is required and will be provided should the project be funded.

The required elements are found within the submitted application proposal packet. A notation of where each required item is noted in "parentheses"

- The name, address, and telephone number of the contributor (application packet and match commitment letter).
- The name of the applicant organization (application cover sheet)
- The title of the project for which the cash contribution is made (application cover sheet)
- The source of funding for the cash contribution (match commitment letter).
- The dollar amount of the cash contribution (application budget)
- A statement that the contributor will pay the cash contribution during the agreement period (match commitment letter).

Saluda Professional Center • 125 Bowden Street • PO Box 286 • Saluda, Virginia 23149
(Phone) 804 758-2311 • (Fax) 804 758-3221 • (Email) pdcinfo@mppdc.com
http://www.mppdc.com

MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

October 22, 2021

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Clyde Cristman,

We are pleased to respond to DCR's October 20, 2021 request to amend Round 1 application based on the two concerns noted in the letter from Darryl Glover, Deputy Director. Our response follows for the **Shoreline Construction project on Sarah's Creek**. As we have offered multiple times, if DCR would provide guidance as to what you desire for applications related to issue areas, we will gladly incorporate into future proposals. We consider helping both public and private entities manage flooding a critical and essential function of government.

Issue #1

DCR questions how properties valued with a stated range can be qualified as low income.

Response: As previously provided by MPPDC legal counsel to DCR, ***"The statute and guidance are clear that the criteria deals with areas, not people. To ignore its plain language or utilize unreliable measures such as property value for grants would be arbitrary and certainly inconsistent with the law.***

Nevertheless, the applicant has voluntarily elected to be reclassified as residing in a non-low-income area designation even though they reside in a low-income area. As such, the applicant has voluntarily elected to change the budget request from 80% to 70% in grant funding, which means the applicant will need to cover 10% more of the project costs than what was originally budgeted for. The applicant has authorized this modification which is included in this letter as well as a new proposed project budget.

Issue #2

DCR questions how the submitted project relates to priority being given to community scale activities; benefit to the greater community; and adverse impact to other neighboring properties.

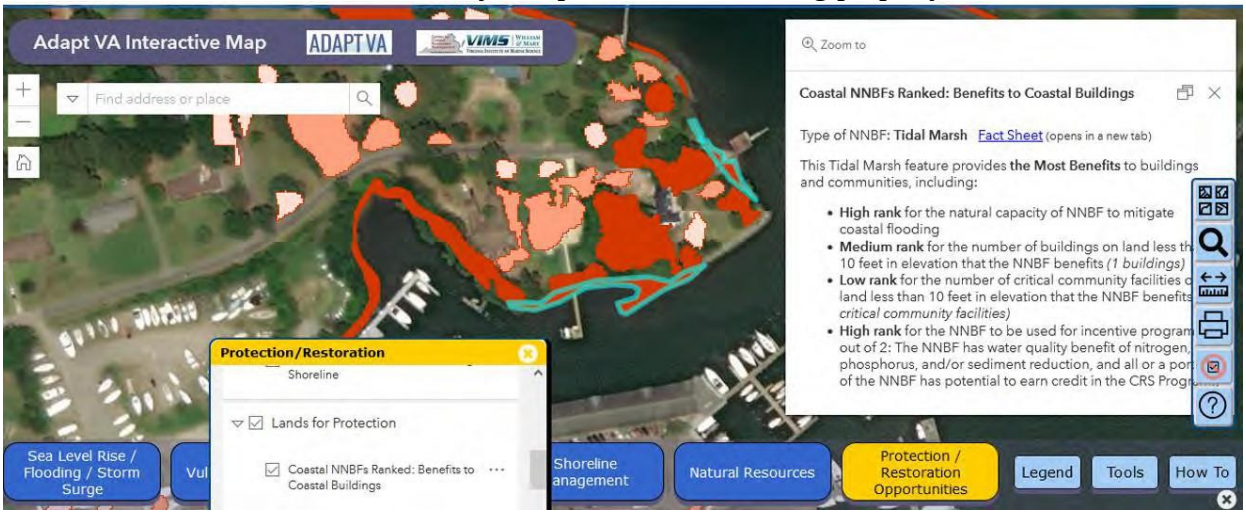
Saluda Professional Center • 125 Bowden Street • PO Box 286 • Saluda, Virginia 23149

(Phone) 804 758-2311 • (Fax) 804 758-3221 • (Email) pdcinfo@mppdc.com
http://www.mppdc.com

Response: The state may have some basis to give preference to projects larger in scale than those affecting one parcel or property owner. Va. Code § 10.1-603.25(E) states, "Priority shall be given to projects that implement community-scale hazard mitigation activities that use nature-based solutions to reduce flood risk. However, this would not provide a basis for *rejecting* applications for one parcel or property owner as projects of all sizes are expressly to be considered. The issue is how the guidance defines "Community Scale project" which means a project that provides demonstrable flood reduction benefits at the US census block level or greater. A census block is the smallest US Census geography, but in rural application in many instances represents an extremely large area covering in excesses of 3,000 acres and almost 5 square miles, while an urban block may be as small as 2 acres or .003 of one acre in size. If the basis for approving rural projects is based singularly on proving "demonstrable flood reduction" benefit, rural areas will never compete.

MPPDC believes that proposing nature-based flood mitigation projects at the parcel scale and where possible, partnering with neighbors can accomplish more in terms of linear shoreline protected than urban areas which have smaller sized parcels. Therefore, consistent with the General Assembly directive to VMRC that every VMRC permitted living shoreline project is the preferred solution, we believe submissions of each nature-based project is essentially a nature- based "brick in the wall" and over time the cumulative impact of this approach will be realized. The alternative is hardening of the shoreline, which is counter to the desires of the General Assembly.

Additionally, Adapt VA contains a data layer illustrating areas of less than 10 feet in elevation that show locations in the Middle Peninsula that offer benefits of NNBF to coastal buildings, habitat, and community protection. All Round 1 applications from the Middle Peninsula have multiple community protection benefits which include combinations of mitigating coastal flooding, protecting buildings/community facilities and CRS credit. The owner mentions the following as well. The property is adjacent to the last navigational aid on this branch of the creek -Green Day mark "11". This location is a choke point for the remainder of the creek . Continued erosion of the shoreline from flooding ,sea level rise and storms will impact the navigability of this creek . The channel is on the project side of the creek . The channel will continue to silt in . This has some major impact to the remaining property owners on the creek



Concerning adverse impacts. MPPDC recognizes that VMRC is the permit issuing authority for all shoreline projects and by statute the local wetlands board and VMRC Commission must utilize the best available science when evaluating each project including how the project impacts up stream and down steam impacts. This might include modifying any aspect of a Flood Fund design to ensure that impacts are mitigated. With that said, MPPDC proposes that prior to requesting final reimbursement from DCR for any design proposal funded under the Flood Fund, MPPDC staff will send the proposed design to the Shoreline Erosion Advisory Service (SEAS) for review. This will require DCR SEAS staff to work directly with the private project designer to address impacts that DCR staff has concerns with to ensure that impacts stemming from any design permitted by VMRC are lessened to a degree that is satisfactory by DCR.

Applicant Voluntarily Selection:

From: [redacted]
Sent: Thursday, October 21, 2021 1:50 PM
To: Dawn Mantell
Cc: Lewis Lawrence; jwatkins49@cox.net
Subject: RE: Flood Fund Round 1 Application - Status Update

Please proceed with option #1-I understand how this affects me financially and am voluntary requesting to be deemed non low income area

Amended Budget Request

DCR Funding:	$ 65,498
Owner:	$ 28,071
Total	$ 93,569

								Budget (Cat. D)
Personnel Salaries/Wages		**DCR**	**Match %**		**Annual Salary**		**DCR**	**Owner**	**Total**
Staff		9.62%	2.35%		$70,000		$6,044	$2,590	$8,634
Personnel		*Lewie's Cheat Sheet*			**DCR**	**Owner**	$6,044	$2,590	$8,634
			Total		*70%*	*30%*			
Fringe, 26.21% salaries;			**$72,650**		50,855.00	21,795.00	$1,584	$679	$2,263
		15%	10,897.50		7,628.25	3,269.25			
Total Personnel			**83,547.50**		**58,483.25**	**25,064.25**	$7,628	$3,269	$10,897
SubAward/SubContract Agreements							**70%**	**30%**	
Shoreline Structures	*115 LF rock Sill*					$36,800	$25,760	$11,040	$36,800
Shoreline Structures	*Sand Nourishment 250 cyds*					$18,750	$13,125	$5,625	$18,750
Shoreline Structures	*Filter Fabric*					$2,800	$1,960	$840	$2,800
Shoreline Structures	*Marsh Access. Timber Mats*					$2,500	$1,750	$750	$2,500
Shoreline Structures	*Spartina Plantings*					$3,250	$2,275	$975	$3,250
Shoreline Structures	*Site Access. Tree Removal, Sand Access Road to Water*					$3,500	$2,450	$1,050	$3,500
Shoreline Structures	*Remove Access road and restore yard*					$2,800	$1,960	$840	$2,800
Shoreline Structures	*Permits and procurement*					$2,250	$1,575	$675	$2,250
						$72,650			
SUBTOTAL: Direct Costs							$58,483	$25,064	$83,547
Indirect/IDC/Facilities & Administrative Costs					**27.92%**	$10,022	$7,015	$3,007	$10,022
Total							**$65,498**	**$28,071**	**$93,569**
Other Match:									
Source of Match							$0	$0	$0
GRAND TOTAL							**$65,498**	**$28,071**	**$93,569**

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund
Flood Prevention and Protection Project

PROJECT TITLE: York River Nature-based Flood Protection Construction Project

Name of Local Government: Middle Peninsula Planning District Commission

Category of Grant Being Applied for (check one):

____Capacity Building/Planning X Project _____Study

NFIP/DCR Community Identification Number (CID): King & Queen County (510082)

If a state or federally recognized Indian tribe, Name of tribe: NA

Name of Authorized Official: Lewis Lawrence, Executive Director

Signature of Authorized Official: _____

Mailing Address (1): PO Box 286
Mailing Address (2): 125 Bowden Street
City: Saluda **State:** VA **Zip:** 23149
Telephone Number: (804) 758-2311 Cell Phone Number: (____) _____
Email Address: llawrence@mppdc.com

Contact Person (If different from authorized official): Jackie Rickards
Mailing Address (1): PO Box 286
Mailing Address (2): 125 Bowden Street
City: Saluda **State:** VA **Zip:** 23149
Telephone Number: (804) 758-2311 **Cell Phone Number:** (215) 264-6451
Email Address: jrickards@mppdc.com

Is the proposal in this application intended to benefit a low-income geographic area as defined in the Part 1 Definitions? Yes X No _____

Project Grants (Check All that Apply)

☐ **Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development.**

☑ **Wetland restoration.**

☑**Floodplain restoration.**

□ **Construction of swales and settling ponds.**

☑**Living shorelines and vegetated buffers.**

□ **Structural floodwalls, levees, berms, flood gates, structural conveyances.**

□ **Storm water system upgrades.**

□ **Medium and large-scale Low Impact Development (LID) in urban areas.**

□ **Permanent conservation of undeveloped lands identified as having flood resilience value by ConserveVirginia Floodplain and Flooding Resilience layer or a similar data driven analytic tool.**

□ **Dam restoration or removal.**

☑ **Stream bank restoration or stabilization.**

□ **Restoration of floodplains to natural and beneficial function.**

□ **Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.**

Location of Project (Include Maps): King & Queen County
NFIP Community Identification Number (CID#) (See appendix F): 510082

Is Project Located in an NFIP Participating Community? ☑ Yes □ No
Is Project Located in a Special Flood Hazard Area? ☑ Yes □ No Flood Zone(s) (If Applicable): VE Zone
Flood Insurance Rate Map Number(s) (If Applicable): 51097C0326C

Total Cost of Project: **$156,264**

Total Amount Requested: **$109,384**

INTRODUCTION –

This project proposes to construct a nature-based solution spanning two private properties located on the York River in King & Queen County. The nature-based solution will involve the installation of 3,552 square feet of Flexamat[1] and 2,851 square feet of marsh grass plantings).

FEMA, Virginia General Assembly, DCR's Floodplain Management Program, and the Middle Peninsula PDC all recognize that natural hazards pose a serious risk to all levels of government including states, localities, tribes and territories and the citizens which reside and work there. These hazards include flooding, drought, hurricanes, landslides, wildfires and more. Because of climate change, many natural hazards are expected to become more frequent and more severe. Reducing the impacts these hazards have on lives, properties and the economy is a top priority for the Middle Peninsula PDC and the Middle Peninsula Fight the Flood (FTF) program (www.FightTheFloodVA.com). This proposal is a Nature-based solution which utilizes and incorporates sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience. Further, this proposal incorporates natural features and processes in efforts to combat climate change, reduce flood risks, improve water quality, protect coastal property, restore, and protect wetlands, stabilize shorelines, reduce heat, adds recreational space, and more. Nature-based solutions offer significant benefits, monetary and otherwise, often at a lower cost than more traditional infrastructure. These benefits include economic growth, green jobs, increased property values, and improvements to public health, including better disease outcomes and reduced injuries and loss of life (*FEMA Building Community Resilience with Nature Based Solutions,* June 2021).

This project will be a partnership between the MPPDC and two private property owners and is supported by King & Queen County (See the community support letter in **Attachment 1**).

- A link or copy to the approved resilience plan: https://fightthefloodva.com/wp-content/uploads/2021/08/Approved-8_19_DCR-packet_letterandplan.pdf
- Middle Peninsula All Hazards Mitigation Plan (2016): https://www.mppdc.com/articles/reports/AHMP_2016_FEMA_Approved_RED.pdf within the plan please see Section 4 (page 25). This Section includes historical hazard data within the region.
- Here's a link to the King & Queen County Comprehensive Plan: http://kingandqueenco.net/html/Govt/bzondocs/Full%20KQ%20Comp%20Plan%202030%20Adopted%2003.11.2019.pdf

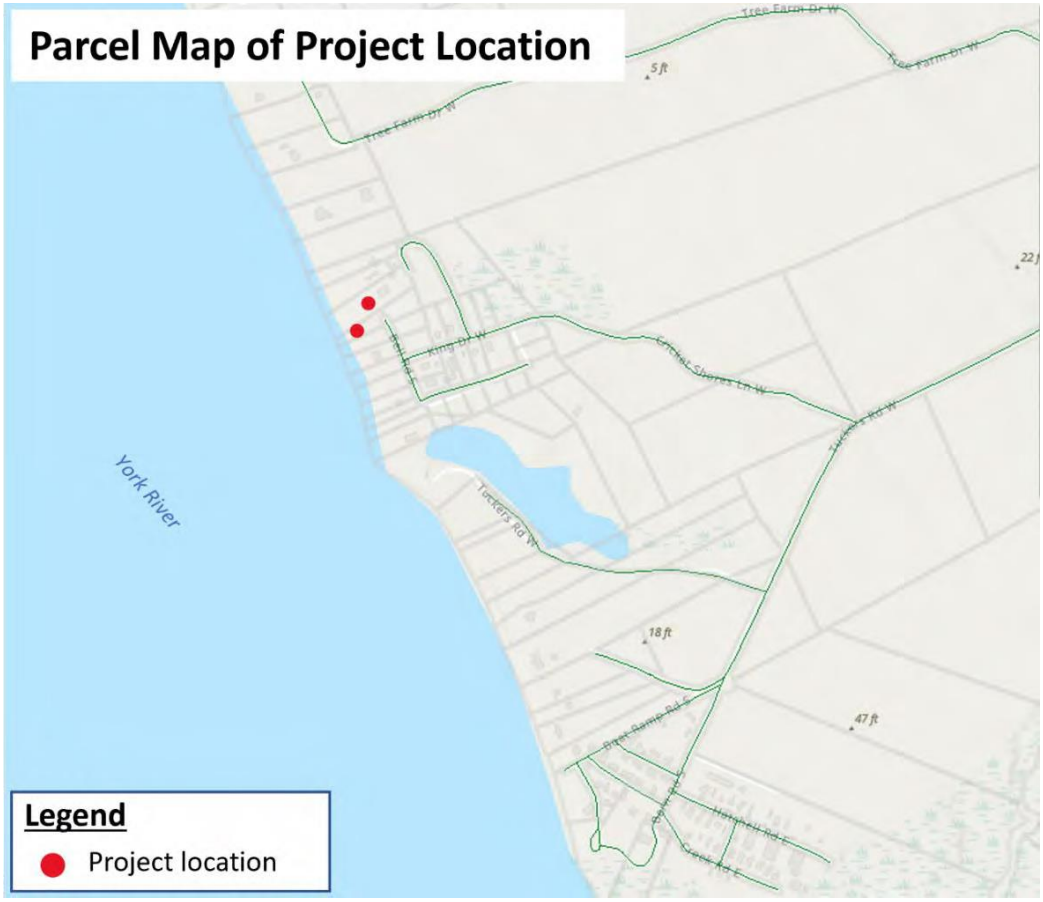
[1] *Flexamat® is tied concrete block mats designed to control erosion as well as provide stable driving/walking surfaces. Flexamat meets the state definition (28.2-104.1) of a Living Shoreline (as required by SB776 passed in 2020) as "a shoreline management practice that provides erosion control and water quality benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials." Flexamat enhances "coastal resilience and attenuation of wave energy and storm surge." For more information about the project please visit - https://www.flexamat.com/*

PROJECT LOCATION INFORMATION –

This project proposes to install a nature-based solution spanning two private properties on the York River in King & Queen County (**Figure 1 and 2**).

FIGURE 1: COUNTY MAP OF PROJECT LOCATION.

FIGURE 2: PARCEL MAP OF PROJECT LOCATION.



King & Queen County is part of the Middle Peninsula of Virginia's Coastal Plain and bounded on the southwest by the York and Mattaponi Rivers which separate King and Queen from King William and New Kent Counties. The County comprises 318.1 square miles of land area and 8.9 square miles of water area. Based on 2020 Census Data, King & Queen County's population totals 6,608 which makes it the least populous Middle Peninsula locality. According to DCR guidelines, a portion of the County is considered a low-income geographic area. In **Figure 3** the green areas qualified as low-income "community" areas meeting the 80% Household limits based on US census household income data or are qualified Opportunity Zones.

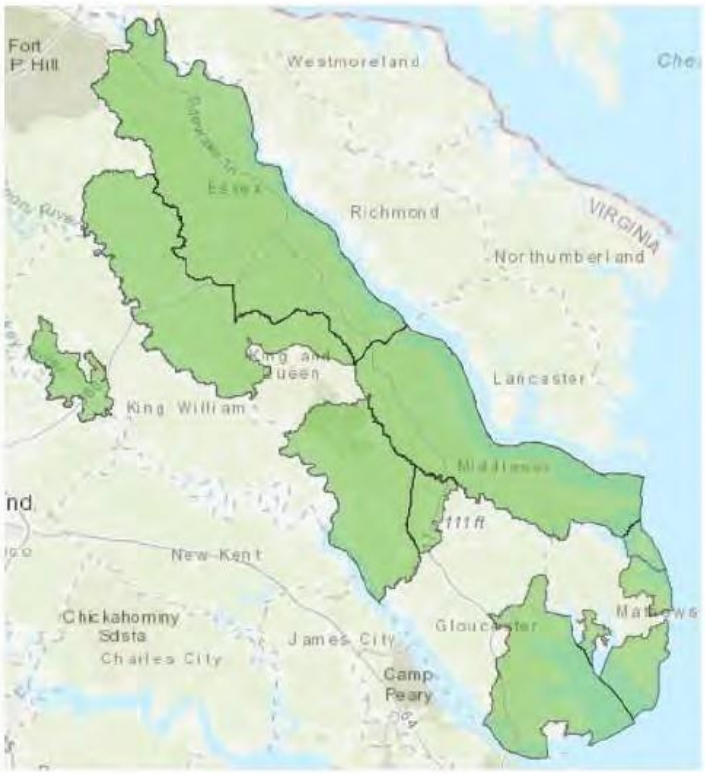
FIGURE 3: MAP OF MIDDLE PENINSULAS LOW INCOME GEOGRAPHIC AREAS QUALIFYING UNDER DCR GUIDELINES.

Each county had its 'Eligible Household income' calculated by multiplying the County's median Household income by .8. This resulted in the following numbers:

	Essex	Middlesex	Mathews	King William	King & Queen	Gloucester
Median household income (in 2019 dollars), 2015-2019	$51,954	$57,438	$64,237	$66,987	$63,982	$70,537
Eligible Household income	$41,563	$45,950	$51,389	$53,590	$51,186	$56,430

Note: Per 7/15/2021 DCR Webinar, comparing state Household income to locality is permissible to determine if the entire locality is LMI.

The following is an overview of the Regional Eligibility map. Green areas are qualified low-income "community" areas meeting the 80% Household limits based on US census household income data or are qualified Opportunity Zones.

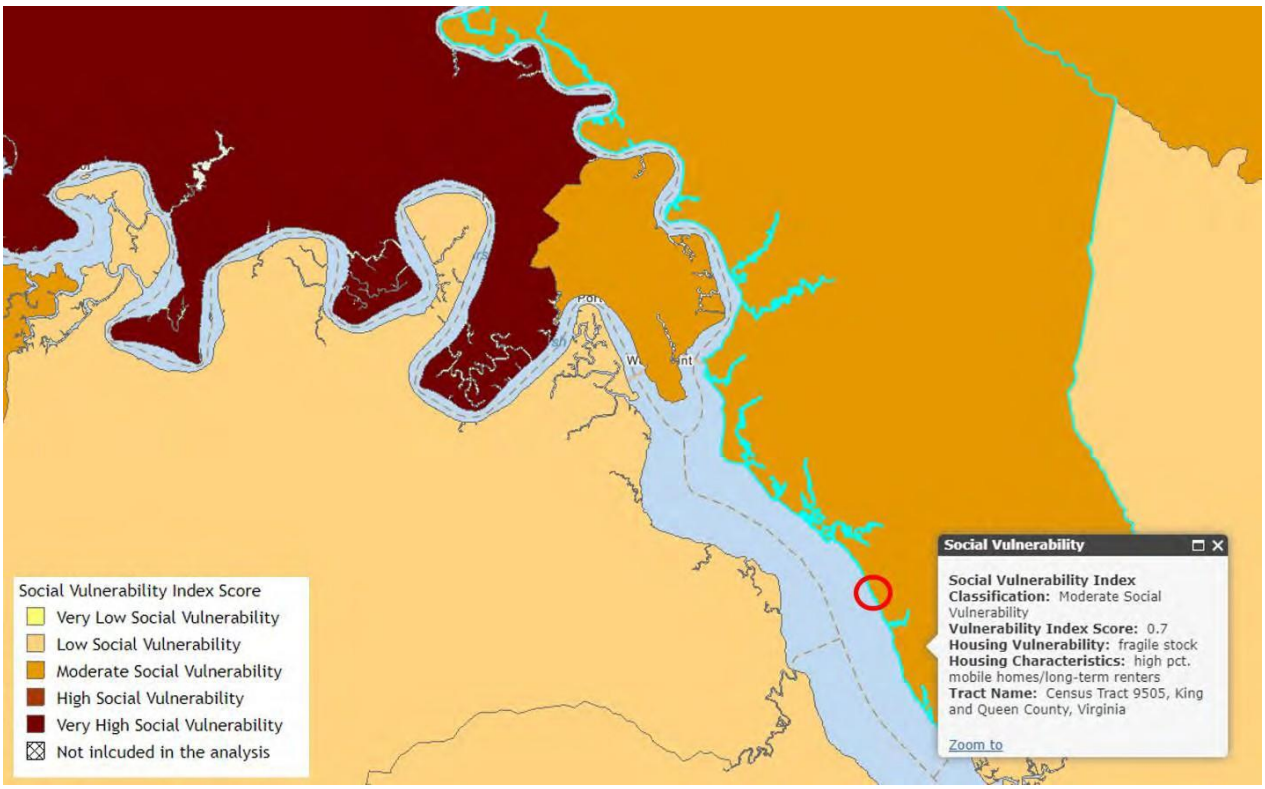


Please see **Figure 4** for a zoomed in map of the project location and the green low-income area overlay. This shows that the project location is within the low-income area.

FIGURE 4: MAP OF THE PROJECT LOCATION WITHIN THE GREEN LOW-INCOME AREA.

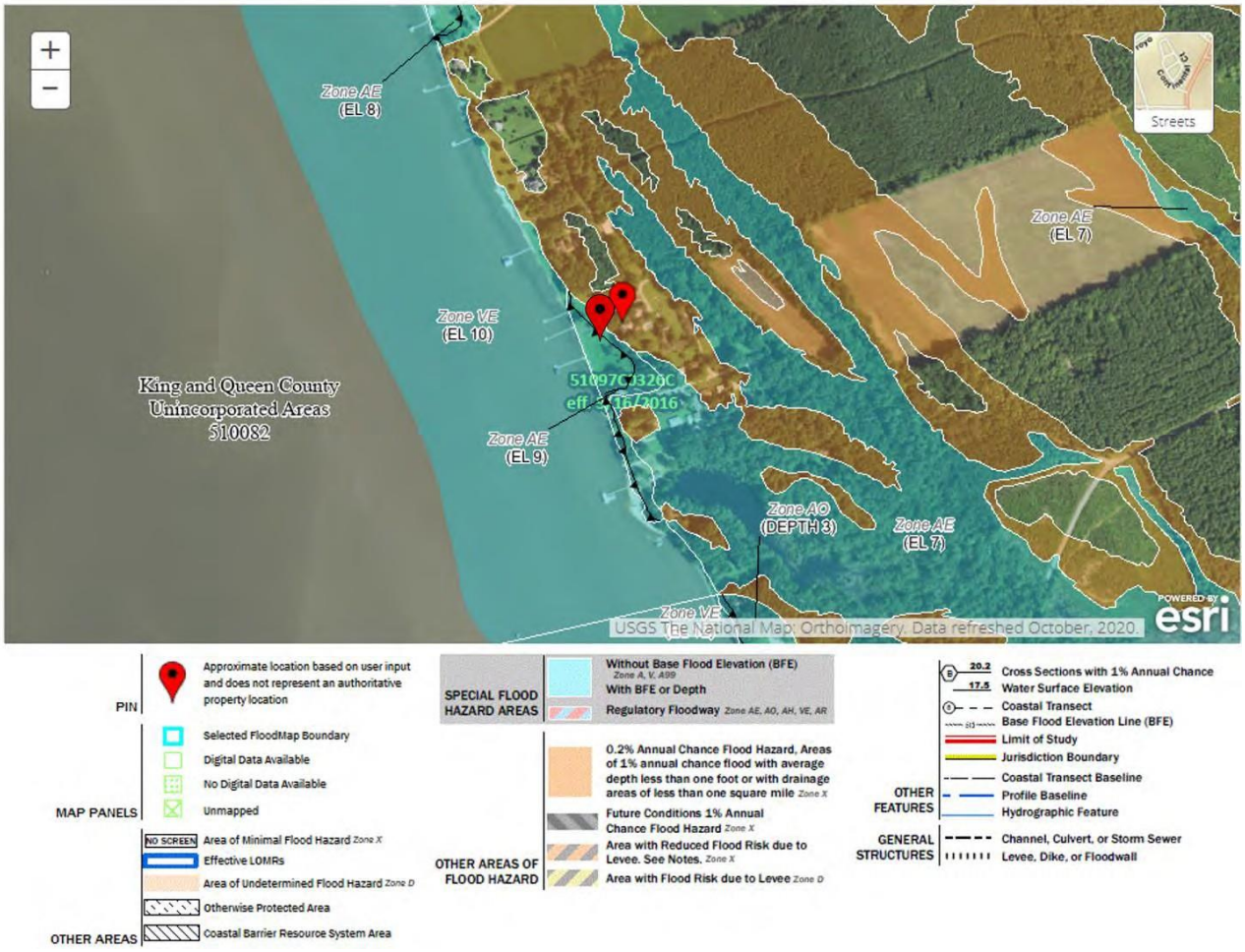
According to the VDAPT Virginia's Social Vulnerability Index Score, this project location has a moderate social vulnerability score (**Figure 5**).

FIGURE 5: VIRGINIA'S SOCIAL VULNERABILITY INDEX SCORE MAP FOR THE PROJECT LOCATION.



The project will be located at 242 Old Farm Drive Shackleford, VA 23156 (37.479281, -76.732522) and on an adjacent land that is southeast of 242 Old Farm Drive (37.479031, -76.732418). The nature-based solution will involve the installation of 3,552 square feet of Flexamat and 2,851 square feet of marsh grass plantings. Please note that there are no structures on the adjacent piece of land; however, at the 242 Farm Drive location there is one residential structure and one detached garage. The structures are not severe repetitive loss structure or repetitive loss structures. This project location is located within the VE flood zone (**Figure 6**). Please see **Attachment 2** for the FIRMettes (last mapped 05/16/2016).

FIGURE 6: MAP OF FEMA FLOOD ZONES.

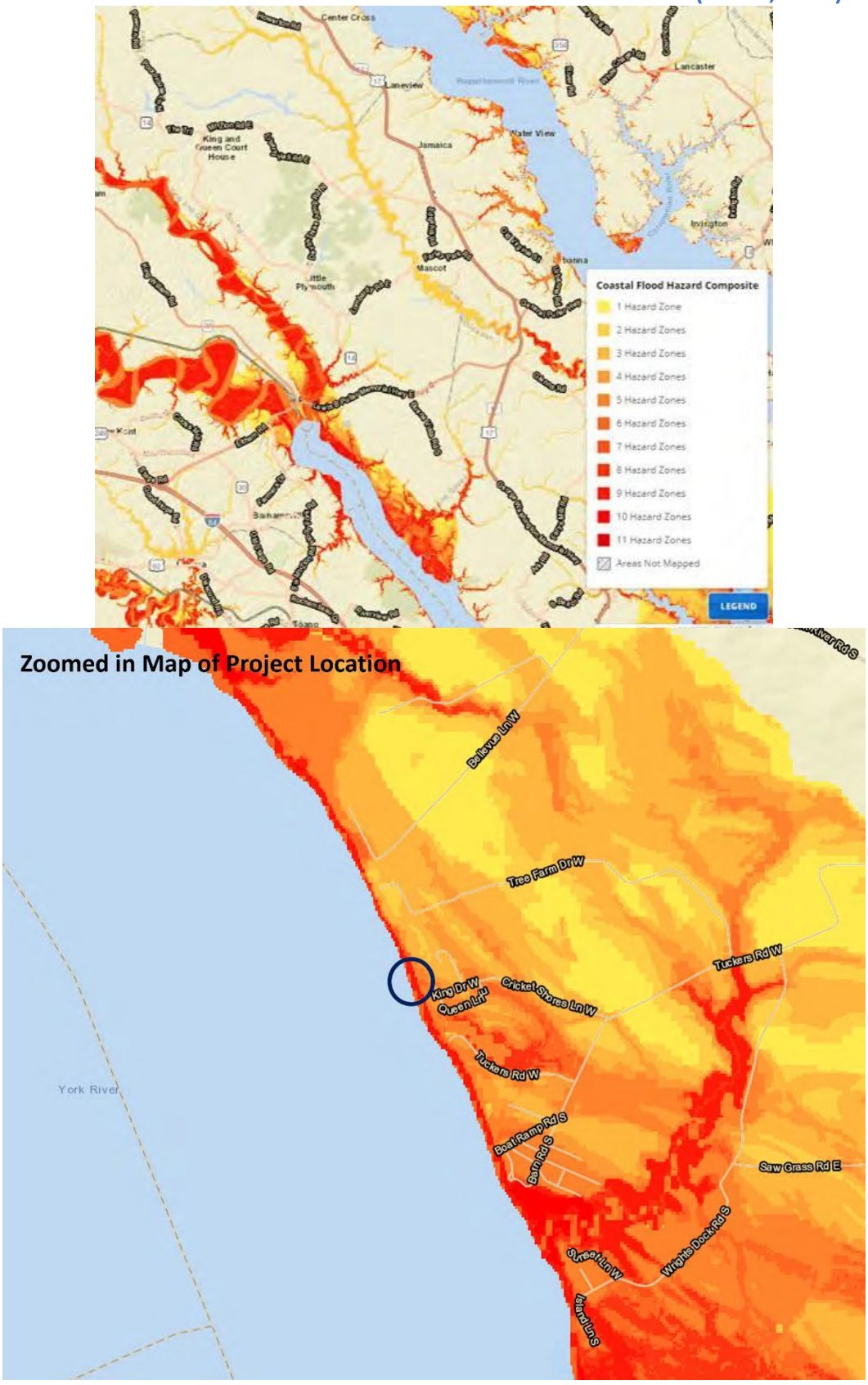


Due to the project site's proximity to the water and relatively low elevation, the site has an extensive history of experiencing flooding events that have resulted in significant impacts to infrastructure and the environment. Based on the historical shoreline data from the Virginia Institute of Marine Science Shoreline Studies Program, **Figure 7** shows the 1937 and the 2017 shorelines. From the figure one can see the change in the shoreline at the project location and the approximate loss of 6,345.5 square feet of shoreline. The project location has and continues to be impacted by tropical, sub-tropical, and nor'easter events. **Attachment 3** lists 75 storm events and provides a map with the project location. Without the flood protection measures proposed, the land, habitat and infrastructure will be compromised, resulting in degradation of the environment and revenue loss to the local tax base.

FIGURE 7: PROJECT LOCATION AND MAP OF THE SHORELINE CHANGE BETWEEN 1937 AND 2017. PLEASE NOTE THAT THE PROJECT AREA PARCEL IS OUTLINED IN WHITE.

Finally, according to NOAA's Coastal Flood Mapper, this project is at the highest risk of coastal flooding (**Figure 8**).

FIGURE 8: MAP OF PROJECT LOCATION AND RISK OF COASTAL FLOODING (NOAA, 2021).



For more information about this project area please see:

- The Middle Peninsula All Hazards Mitigation Plan identifies all hazards that impact the region - https://www.mppdc.com/articles/reports/AHMP_2016_FEMA_Approved_RED.pdf .
- King & Queen County Building and Zoning Department administers the NFIP. Here is the link to the current floodplain ordinance: http://kingandqueencounty.elaws.us/code/coor_ptii_ch3_art10

NEED FOR ASSISTANCE –

The Middle Peninsula Planning District Commission (MPPDC) is a political subdivision of the Commonwealth of Virginia formed under VA Code §15.2-4203 to provide solutions to problems of greater than local significance and cost-savings through economies of scale. The MPPDC serves nine localities of the Middle Peninsula including Essex, Gloucester, King & Queen, King William, Mathews, and Middlesex Counties as well as the Towns of Tappahannock, West Point, and Urbanna.

MPPDC is staffed using multiple methods including co-operative procurement, hourly, and burdened staff. MPPDC staff consists of Executive Director, Deputy Director, Chief Financial Officer, Senior Project Planner, clerical support staff; co-operative procured Director of Planning, General Planner, Certified Flood Plain Manager, Transportation Planner, Emergency Planner; Hourly staff for Housing, Community Development Planner and Public relations.

The PDC staffing team assists localities with long-term and/or regional planning efforts. The MPPDC Executive Director, Deputy Director, and Chief Financial Officer have decades of experience in managing and administering project grants at multiple scale from grants in excess of $1,000,000 to very small grants. MPPDC is an entrepreneurial based government agency with an annual operating budget ranging from $750,000 to over $1,000,000. The MPPDC manages annually 25-30 concurrent federal and state grants utilizing industry standard Grants Management Software. Staff utilize GIS and all Microsoft software as well as other software as required by different grants. The MPPDC operates service centers in the topical areas of coastal zone management, emergency planning, housing, transportation planning and transportation demand management, economic development, social assistance, small business development, general planning and technical assistance and other areas as determined by the Commission. MPPDC has over 25 years of experience managing multiple revolving loan programs. In the 25 years that the Executive Director has been employed by the Commission no audit findings have occurred.

The need for assistance is two-fold.

First, as King & Queen County boarders the Mattaponi River and the York River, the County is influenced by the water and is at high risk of coastal flooding, sea-level rise, and storm surge. Sea levels in King and Queen have risen over 1 foot since 1950, leading to more frequent and

severe coastal flooding, agricultural losses, and property damage. Sea levels are projected to rise between 2-6 feet by 2070, submerging private property and reshaping King and Queen's coastline. Based on tidal gauge data from VIMS, relative sea- level rise rates ranging from 0.11-0.23 in./yr. (2.9-5.8 mm/yr.; period: 1976-2007; 10 stations) within the Chesapeake Bay region, which are the highest rates reported along the U.S. Atlantic coast (Boon et. al., 2010). Also, high tide flooding (also known as sunny day flooding) will become more frequent, putting low-lying homes and infrastructure at risk. Rising sea levels will amplify the impacts of storm surge, allowing waves and severe flooding to reach further inland, damaging homes and property. The County has implemented several preventative measures, property protection policies, public information activities, and emergency service measures to decrease impacts on communities. Therefore, this project is intended to build upon ongoing local and regional efforts to enhance community resiliency.

Second, at this project location, the bulkhead is damaged and underperforming which has exposed the shoreline to extensive winds and wind energy coming off the York River. The increasing shoreline erosion in threatening the residential structures, pier, and land at the project location. The residential structure, Property #1, at 242 Old Farm Dr has a history dating back to 1790. The house sits approximately 200 feet from the York River and one of the two septic drain fields is located between the water and the house. Therefore, if no protection is offered to this shoreline, then there are greater chances of the drain field becoming inundated and causing local water quality impairment. Finally, the adjacent land to 242 Old Farm Dr. (Property #2) currently has no structures on the land; however, protection of this shoreline provides a more effective and comprehensive approach to both properties considering the shorelines are hydrodynamically connected. Please see **Figure 9** for project location photos and **Attachment 4** for more photos.

FIGURE 9: PHOTOS OF THE PROJECT LOCATION.

ALTERNATIVES –
Alternatives are not applicable to this project. A living shoreline is feasible at this location and therefore required per VMRC regulations. This project employs a nature-based solution, and this project cost is not greater than $3 Million.

GOALS AND OBJECTIVES –
This project proposes to remove the failing bulkhead which has hardened the shoreline for years and will be replaced with a nature-based solution. The nature-based solution is based on the DCR Flood Preparedness Fund definition: "*Nature-based solution" means an approach that reduces the impacts of flood and storm events through the use of environmental processes and natural systems. A nature-based solution may provide additional benefits beyond flood control, including recreational opportunities and improved water quality. This includes a project that reduces these impacts by protecting, restoring, or emulating natural features.* Project site requires the use of Flexamat®, a solution comprised of sand, gravel, or crushed stone meeting ASTM C150 and ASTM C33 standards to form 6.5" x 6.5" x 2.25" blocks with 1.5" spacing between the blocks allowing riparian vegetation to thrive and restoring natural features on site while simultaneously stabilizing the shoreline against flooding and erosion all while maintaining the natural environment and improving water quality. Federal agencies, including FEMA and the USACE, have incorporated Flexamat into multiple scale flood management projects. Flexamat prevents erosion protection in areas exposed to high flow and waves energy. Each block is tapered, beveled, and interlocked and includes connections that prevent lateral displacement of the blocks ensuring protection against erosion, storm surge, and wave attenuation. Flexamat as a product is less invasive when compared to the use of granite, which is not native to the coastal zone. The Flexamat company website and technical reports for shoreline erosion mitigation use allows the riparian vegetation to thrive and become one with the shoreline mitigation practice. Additional study of Flexamat shows that vegetated soil side slopes would improve water quality by offering phytoremediation including the reduction of thermal impact consistent with the DCR required definition for water quality improvement for nature-based solution. Flexamat offer additional co-benefits as recognized by the DCR definition such as using the shoreline as an entry point for recreational opportunity for uses such as canoes or kayaks and enhancing wildlife safely along the shoreline. Flexamat has high performance capabilities of 30 ft./sec. and 24 pounds per square foot. Flexamat has better performance than compared to 24" rock rip rap (all product information, description, benefits, specifications are sourced to the Flexamat website: https://www.flexamat.com/).

This project will reduce erosion and stabilize the shoreline. The nature-based solution will be installed as designed and permitted through the JPA process. Please see the permit package for each site within the project area in **Attachment 5**.

The goals and objectives of this project are as follows -

Goal 1: Improve coastal resiliency within the community and the Commonwealth.

- Objective A: Prevent loss of life and reduce property damage by mitigating for recurrent, repetitive, and future flooding within the project area using a nature-based approach.

- Objective B: Stabilize the shoreline to ensure that the County's tax base does not erode.

Goal 2: Improve water quality
- Objective A: Construct a living shoreline to capture nitrogen, phosphorus, and sediment.

Goal 3: Transferability to other communities.
- Objective A: Improve the implementation of Fight the Flood projects and project as an example program to be replicated in other communities within the region or the Commonwealth.

The MPPDC anticipates that the living shoreline installed at this project location will:

1. **Stabilize the shoreline and reduce the overall erosion rate at the project location**. According to FEMA and NOAA living shorelines are more resilient again storms than bulkheads. With the installation of sills these structures will run parallel to the existing or vegetative shoreline, reduce wave energy, and prevent erosion. This will protect the land and it will protect, or at least prolong, the life of the oak trees on the property. Additionally, eroding shorelines and sediment from stormwater runoff greatly contribute to the shoaling of navigable waterways. With maritime industries contributing substantially to the local and regional economy, the mitigation of continued sedimentation and shoaling provided by this project will protect and enhance the region's commercial and recreational maritime economies.

   The proposed project was confirmed for the MPPDC by Matthew C. Burnette PG, PH, CFM or Holly White AICP, CFM.

2. **Provide ecosystem services to the community.** Since this project is proposing the installation of living shorelines, this project will have nutrient and sediment reduction benefit to local waters. According to a report titled, Removal Rates of Shoreline Management Project, an expert Panel on Shoreline Management identified the living shorelines has having a nitrogen removal rate 0.01218 pounds per linear foot per year (lb./lf./yr.) and a phosphorus removal rate of 0.00861 lbs./lf./yr. Additionally living shorelines were shown to reduce total suspended sediment by 42 lb./lf./yr. Therefore, with a proposed project of 147 linear feet of living shoreline this has the ability of removing 1.79046 pounds of nitrogen per year, 1.26567 pounds of phosphorus per year and 6,174 pounds of sediment per year. Ultimately contributing to the overall water quality of the Chesapeake Bay.

   In addition to water quality improvements, living shorelines offer new habitat for marine wildlife and birds. With the living shorelines reducing wave energy in this area this provides a calmer, lower energy habitat to breed and nurse juvenile wildlife and fish. Also, the planting will offer more cover and protection from prey.

3. **Prevent loss of property and life.** As the installation of a living shoreline will reduce erosion of the property this will reduce flood risks at the project site. Also, as flooding and erosion threaten the tax base within the locality, this project will help maintain the tax base at this project location which directly protects the largest employer in King &

Queen County, which is local government.

APPROACH, MILESTONES, AND DELIVERABLES –
This project has submitted all information needed to complete the Joint Permit Application (JPA) process and is currently waiting permit approval. This project will follow the designs outlined with the JPA. Please see **Attachment 5** for the JPA application and Design. The below table outlines the components of the nature-based solution and what will be installed at the project location, as proposed in the JPA:

	Property #1	**Property #2**	**Total Project Location**
Flexamat	2,352 square feet	1,200 square feet	3,552 square feet
Marsh Grass Planting	1,888 square feet	963 square feet	2851 square feet

The anticipated timeline for this project could be as quick as 1 year, but no more than two years. The timeline range is due to the potential delays in the construction industry or delays caused by COVID, including supply shortages. Having a two-year timeline will offer potential windows for planting the living shoreline. To explain, the Chesapeake Bay Foundation recommends that perennials and grasses for living shorelines should be planted during peak growing season (in mid-to-late summer) to allow enough time for their root systems to become established before they go dormant in the late Fall. Trees and shrubs should be planted in Spring and Fall when there is adequate rainfall to help them develop strong roots and leafy growth.

Below is the project timeline and project milestones for this project.

Receive funding notice - January 2023
Coordinate with property owners and the project contractor Energy Reef to review project timeline and project expectations – January 2023
Initiate site preparation at the project location - February 2023 to August 2023
Construction of the living shoreline – September 2023 to December 2023
Project Close out – December 2023

Concerning Adverse Impacts
Additionally, the applicant and the property owner recognize the importance to do no harm to land owned by the Commonwealth nor the adjacent property owners as result of the construction elements of this project. The proposed project will be constructed under the auspices of experienced contractors who understand that adverse impacts must be avoided and considered in the design and implementation of the project. The proposed project will work with the permitting agency, designers, and contractors to ensure that the project is built to and functions at the level of the design specifications to ensure that no adverse impacts will occur.

RELATIONSHIP TO OTHER PROJECTS –
For over 40 years the Middle Peninsula Planning District Commission (MPPDC) and its participating localities have worked diligently on topics associated with the land water

interface, including coastal use conflicts and policies, sea level rise, stormwater flooding, roadside ditch flooding, erosion, living shorelines, coastal storm hazards (i.e. hurricanes, tropical storms), riverine and coastal flooding, and coastal resiliency.

The proposed project is a priority project generated from the Middle Peninsula Regional Flood Resilience Plan, which was approved by DCR during August 2021. The Flood Resiliency Plan serves as the MPPDC's guiding document for its flood resiliency programs and is comprised of two primary MPPDC-approved policy documents which form the implementation and foundation of the Middle Peninsula flood protection approach and are indirectly and directlysupported by multiple specific regional planning documents, both approved by various required federal, regional, or local partners as required by statute.

Other plans and resources which are integral to the implementation of the Flood Resiliency Plan are:

Long Term Planning

- Middle Peninsula All Hazard Mitigation Plan, FEMA and Middle Peninsula locality approved 2016 (MPPDC Website)
- The overarching project that provides updates every five years of the hazards within the region is the Middle Peninsula All Hazards Mitigation Plan. This plan identifies the top hazards within the region and provides a HAZUS assessment that analyzes flooding (riverine and coastal), sea-level rise and hurricane storm surge impacts in the region. Additionally, this plan lists strategies and objectives that guide member localities to mitigate for these strategies.
- Middle Peninsula Comprehensive Economic Development Strategy, MPPDC Approved March 2021
- Middle Peninsula VDOT Rural Long Range Transportation Plan - MPPDC Approved ~annually

Short Term Implementation

- Middle Peninsula Planning District Commission Fight the Flood Program Design MPPDC Commission (approved June 2020 Chairman approved 8/6/21 update)
- Middle Peninsula Planning District Commission Living Shoreline Resiliency Incentive Funding Program-Virginia Revolving Loan Fund Program Design and Guidelines (approved 2015)

As the MPPDC has continuously worked on flooding and coastal resiliency topics, **Attachment 6** lists the projects and short description of relevant projects. All of these projects have built upon each other to establish a solid foundation of regional expertise in flooding and coastal resiliency topics. Now, with such a wealth of information, the MPPDC can move beyond research and studies to begin implementing projects on the ground. One effort, in particular, was launched in 2020 was in response to emerging flood challenges. The MPPDC Commission authorized staff to develop the **Middle Peninsula Fight the Flood (FTF) Program.** This program leverages state

and federal funding to deliver flood mitigation solutions directly to constituents, for both the built environment and the natural environment with an emphasis on nature-based flood mitigation solutions. The Middle Peninsula **FTF** program helps property owners gain access to programs and services to better manage challenges posed by flood water. Therefore, MPPDC staff have partnered with private property owners that have registered for the FTF program to assist them in finding funding for their shoreline.

Finally, the Flood Resiliency Plan and associated programs strive to carry out the guiding principles and goals set forth in the Virginia Coastal Resilience Master Planning Framework established in 2020. The proposed activities are proposed in accordance with the guiding principles and with the intent that the outcomes will help the Commonwealth meet the goals set forth in the planning framework.

MAINTENANCE PLAN –
It is important to ensure that the public investment of DCR CFPF funding be protected should the project not withstand future conditions. As such, MPPDC staff will work with legal counsel to develop an agreement to be signed by each party which outlines the terms necessary to ensure the public investment is maintained over the duration of the project.

CRITERIA –
Describe how the project meets each of the applicable scoring criteria contained in Appendix B and provide the required documentation where necessary. Documentation can be incorporated into the Scope of Work Narrative or included as attachments to the application. Appendix B must be completed and submitted with the application.

For local governments that are not towns, cities, or counties, the documentation provided for the criteria below should be based on the local government or local governments in which the project is located and/or directly impacts.

1. **Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these or a recognized state or federal Indian tribe?**
   YES.

2. **Does the local government have an approved resilience plan meeting the criteria as established by this grant manual? Has it been attached or a link provided?**
   YES. Here's the link: https://fightthefloodva.com/wp-content/uploads/2021/08/Approved-8_19_DCR-packet_letterandplan.pdf

3. **For local governments that are not towns, cities, or counties, have letters of support been provided from affected local governments?**
   YES. Please see **Attachment 1**

4. **Has the applicant provided evidence of an ability to provide the required match funds?**
   YES. Please see the match commitment letter in **Attachment 9.**

5. **Has the applicant demonstrated to the extent possible, the positive impacts of the project or study on prevention of flooding?**
   YES.

BUDGET NARRATIVE –

Below is the estimated budget for the proposed flood prevention and protection construction project that will result in a nature-based solution located in a low-income geographic area. Therefore, MPPDC staff is requesting 80% funding from DCR and will provide 20% match. Please see match commitment letters from the property owners in **Attachment 9**.

				DCR (80%)	Match from Owner (20%)	Project Total
Project Management Costs						
	Personnel			$ 11,732	$ 2,933	$ 14,665
	Fringe (26.58% on Salaries)			$ 3,118	$ 780	$ 3,898
SubAward/SubContract Agreement						
	[redacted]	Demolition	Bulkhead removal/haul away	$4,078	$ 1,019	$ 5,097
	[redacted]	Site Prep	Equipment Rental & Labor	$10,143	$ 2,536	$ 12,679
	[redacted]	Shoreline Install	Flexamat, Plants, Sand, Returns, Rock & Labor	$46,923	$ 11,731	$ 58,654
	[redacted]	Post Job Yard	Grading, Seeding, & Plantings	$3,282	$ 820	$ 4,102
	[redacted]	Demolition	Bulkhead removal/haul away	$2,092	$ 523	$ 2,615
	[redacted]	Site Prep	Equipment Rental & Labor	$5,067	$ 1,267	$ 6,334
	[redacted]	Shoreline Install	Flexamat,Plants,Sand,Retu	$25,727	$ 6,432	$ 32,159
	[redacted]	Post Job Yard	Grading, Seeding, Plantings	$1,688	$ 422	$ 2,110
Indirect/IDC/Facilities & Administrative Costs (27.31%)				$ 9,518	$ 2,379	$ 11,897
Project totals				$ 123,368	$ 30,842	$ 154,210

MPPDC staff will manage and administer this project. Thus, personnel time is needed to ensure that project deliverables are completed within the project timeline. Along with personnel expenses, MPPDC fringe is needed. This includes health insurance, retirement, group life insurance, workman's comp, and unemployment insurance. MPPDC fringe rate for FY22 is 26.58% and comprised of: Health Insurance – 49.33%, Retirement – 18.35%, Workers Comp – 27.42%, Social Security – 4.46%, Life Insurance – 0.40%, Unemployment – 0.04%. MPPDC also prepares an indirect cost (IDC) plan annually per 2 CFR 200 Appendix VII. Following annual audit, the plan is submitted to NOAA for acceptance. MPPDC's IDC rate has a basis of Modified Total Direct Costs (MTDC), with a planned rate of 27.31%. IDC is only applied to the first $25,000 of each contract. IDC calculated on MTDC (modified total direct cost)- Personnel,

supplies, travel, and first $25,000 of each subcontract, etc.; excludes equipment.

Also please note that the cost estimates for the construction of this project were supplied by the contractor, Ready Reef. Please see **Attachment 8**.

In summary:

***Estimated total project cost*:**	$154,210
***Amount of funds requested from the Fund (80% project total)*:**	$123,368
***Amount of cash funds available (20% project total)*:**	$30,842

Finally, please see the authorization to request for funding in **Attachment 10.**

Appendix B: Scoring Criteria for Flood Prevention and Protection Projects

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

Applicant Name:	Middle Peninsula Planning District Commission	
Eligibility Information		
Criterion	**Description**	**Check One**
1. Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these)?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
2. Does the local government have an approved resilience plan and has provided a copy or link to the plan with this application?		
Yes	Eligible for consideration under all categories	X
No	Eligible for consideration for studies, capacity building, and planning only	
3. If the applicant is <u>not a town, city, or county</u>, are letters of support from all affected local governments included in this application?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
4. Has this or any portion of this project been included in any application or program previously funded by the Department?		
Yes	Not eligible for consideration	
No	Eligible for consideration	X
5. Has the applicant provided evidence of an ability to provide the required matching funds?		
Yes	Eligible for consideration	X
No	Not eligible for consideration	
N/A	Match not required	

Project Eligible for Consideration	☑ Yes ☐ No
Applicant Name:	Middle Peninsula Planning District Commission

Scoring Information

Criterion	Point Value	Points Awarded
6. Eligible Projects (Select all that apply)		
Projects may have components of both 1.a. and 1.b. below; however, only one category may be chosen. The category chosen must be the primary project in the application.		
1.a. Acquisition of property consistent with an overall comprehensive local or regional plan for purposes of allowing inundation, retreat, or acquisition of structures.	**50**	
☐ Wetland restoration, floodplain restoration ☐ Living shorelines and vegetated buffers. ☐ Permanent conservation of undeveloped lands identified as having flood resilience value by *ConserveVirginia* Floodplain and Flooding Resilience layer or a similar data driven analytic tool ☐ Dam removal ☐ Stream bank restoration or stabilization. ☐ Restoration of floodplains to natural and beneficial function. ☐ Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.	**45**	45
1.b. any other nature-based approach	**40**	40
All hybrid approaches whose end result is a nature-based solution	**35**	
All other projects	**25**	
7. Is the project area socially vulnerable? (Based on ADAPT VA's Social Vulnerability Index Score.)		
Very High Social Vulnerability (More than 1.5)	**15**	
High Social Vulnerability (1.0 to 1.5)	**12**	
Moderate Social Vulnerability (0.0 to 1.0)	**8**	8
Low Social Vulnerability (-1.0 to 0.0)	**0**	
Very Low Social Vulnerability (Less than -1.0)	**0**	
8. Is the proposed project part of an effort to join or remedy the community's probation or suspension from the NFIP?		

Yes	**10**	
No	**0**	0
9. Is the proposed project in a low-income geographic area as defined in this manual?		
Yes	**10**	10
No	**0**	
10. Projects eligible for funding may also reduce nutrient and sediment pollution to local waters and theChesapeake Bay and assist the Commonwealth in achieving local and/or Chesapeake Bay TMDLs. Does the proposed project include implementation of one or more best management practices witha nitrogen, phosphorus, or sediment reduction efficiency established by the Virginia Department of Environmental Quality or the Chesapeake Bay Program Partnership in support of the Chesapeake Bay TMDL Phase III Watershed Implementation Plan?		
Yes	**5**	5
No	**0**	
11. Does this project provide "community scale" benefits?		
Yes	**20**	20
No	**0**	
Total Points		128

Appendix D: Checklist All Categories

Virginia Department of Conservation and Recreation

Community Flood Preparedness Fund Grant Program

Scope of Work Narrative	
Supporting Documentation	**Included**
Detailed map of the project area(s) (Projects/Studies)	☑Yes □ No □ N/A
FIRMette of the project area(s) (Projects/Studies)	☑Yes □ No □ N/A
Historic flood damage data and/or images (Projects/Studies)	☑Yes □ No □ N/A
A link to or a copy of the current floodplain ordinance	☑Yes □ No □ N/A
Non-Fund financed maintenance and management plan for project extending a minimum of 5 years from project close	□ Yes □ No ☑ N/A
A link to or a copy of the current hazard mitigation plan	☑ Yes □ No □ N/A
A link to or a copy of the current comprehensive plan	☑ Yes □ No □ N/A
Social vulnerability index score(s) for the project area from ADAPT VA's Virginia Vulnerability Viewer	☑ Yes □ No □ N/A
If applicant is not a town, city, or county, letters of support from affected communities	☑ Yes □ No □ N/A
Completed Scoring Criteria Sheet in Appendix B, C, or D	☑ Yes □ No □ N/A
Budget Narrative	
Supporting Documentation	**Included**
Authorization to request funding from the Fund from governing body or chief executive of the local government	☑ Yes □ No □ N/A
Signed pledge agreement from each contributing organization	☑ Yes □ No □ N/A

Attachment 1: Community Support Letter

King and Queen County
Founded 1691 in Virginia

Office of the County Administrator
P.O. Box 177 • King and Queen Courthouse, Virginia 23085
Phone: (804) 785-5975 • (804) 769-5000
Fax: (804) 785-5999 • (804) 769-5070

8-5-21

Dear Lewie,

King and Queen County supports all eligible applications requesting funding under the DCR Flood Preparedness Fund. Proposals submitted by MPPDC on behalf of our constituents is a necessary governmental function and consistent with regional and local resilience planning efforts. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine or inland flooding. The MPPDC Fight the Flood Program serves as the regions flood resiliency coordination program. The MPPDC Living Shoreline Program Design and the MPPDC Fight the Flood Program Design provide the operational and administrative oversite for resiliency planning, coordination and implementation for our constituents suffering from flooding challenges. These programs, especially MPPDC Fight the Flood (FTF) program recognizes the need to better secure the tax base of coastal localities and the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

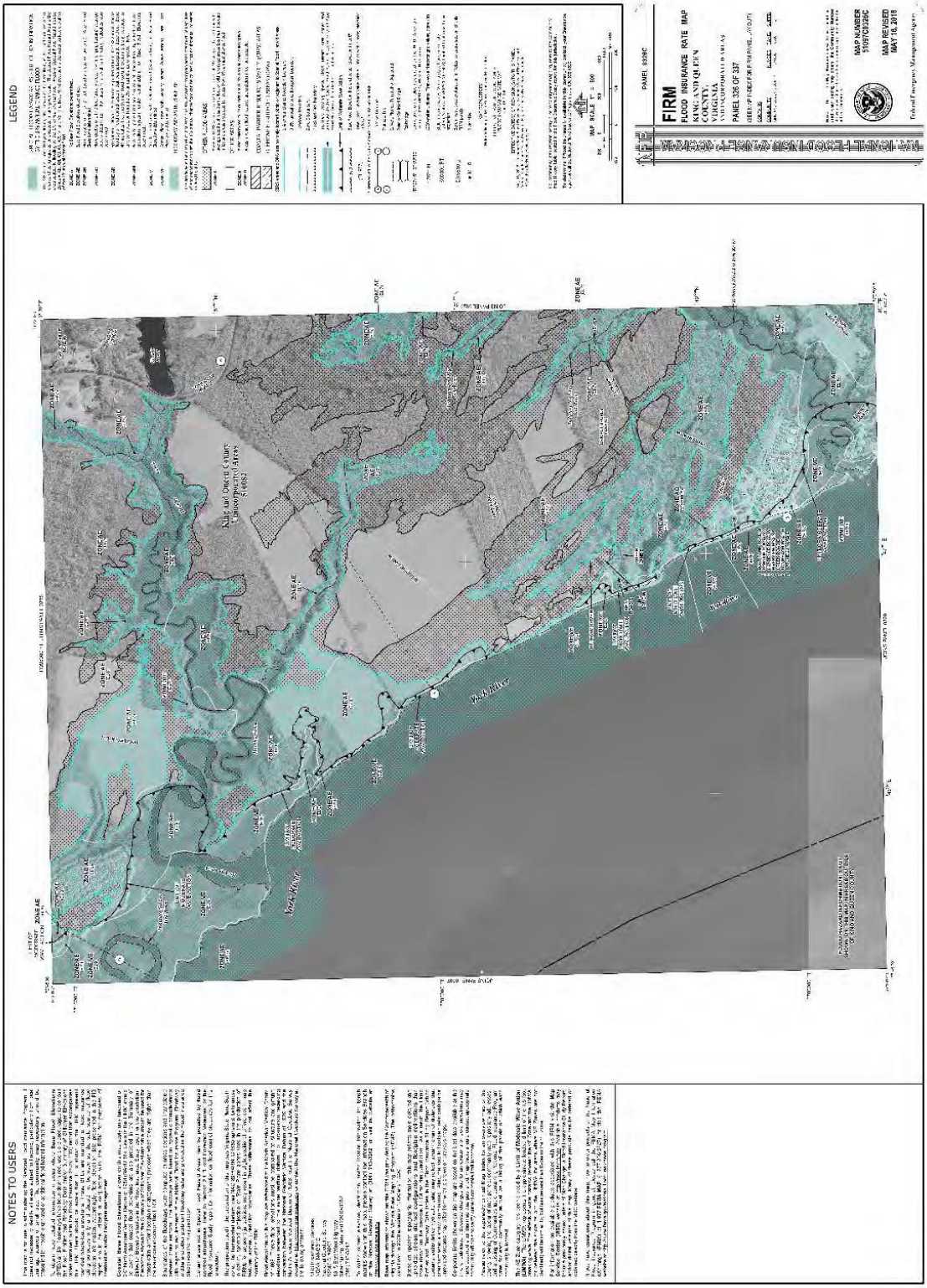
The Fight the Flood program and the Living Shoreline program exists to help flood-prone property owners access programs and services to better manage challenges posed by flood water and directs constituents to appropriate mitigation solutions, such as nature based solutions. When grants and loans are available, we fully support the MPPDC to provide such to qualified constituent's based on the terms and conditions associated with flood risk necessary to support the public purpose(s) for which the funds, such as the Virginia Community Flood Preparedness Funds have been allocated.

Regards,

Thomas J. Swartzwelder
County Administrator

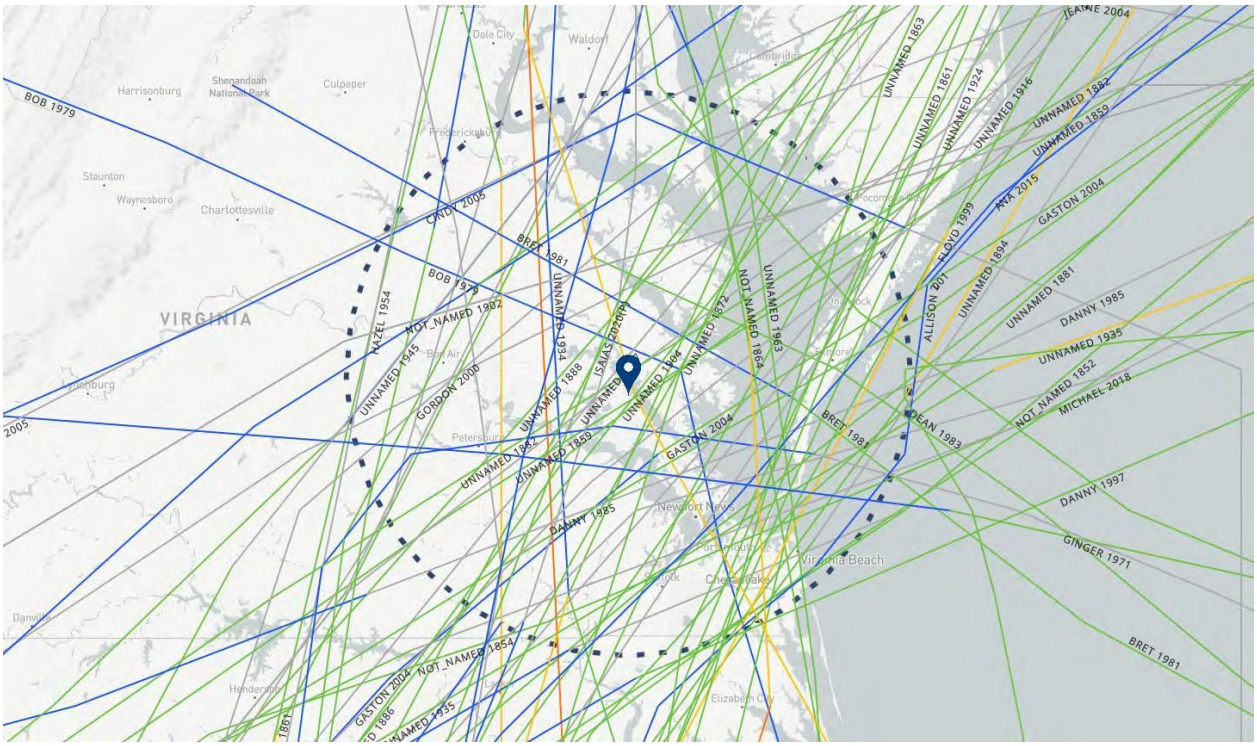
Attachment 2: Project Location FIRMette

(FIRMette #: **51097C0326C**)



Attachment 3: List of historic hurricanes impacting the project area.

Hurricane List



Search Filter Criteria

Location: 37.479284, -76.732522

Categories: H5, H4, H3, H2, H1, TS, TD, ET
Months: ALL
Years: ALL
El Niño-Southern Oscillation (ENSO): ALL
Minimum Pressure (mb) below: 1150
Include Unknown Pressure Rating: TRUE
Buffer Distance: 60
Buffer Unit: Nautical Miles

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
ISAIAS 2020(P)	Jul 23, 2020 to Aug 05, 2020	75	987	H1
NESTOR 2019	Oct 17, 2019 to Oct 21, 2019	50	996	TS
MICHAEL 2018	Oct 06, 2018 to Oct 15, 2018	140	919	H5

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
ANA 2015	May 06, 2015 to May 12, 2015	50	998	TS
ANDREA 2013	Jun 05, 2013 to Jun 08, 2013	55	992	TS
HANNA 2008	Aug 28, 2008 to Sep 08, 2008	75	977	H1
ERNESTO 2006	Aug 24, 2006 to Sep 04, 2006	65	985	H1
CINDY 2005	Jul 03, 2005 to Jul 11, 2005	65	991	H1
JEANNE 2004	Sep 13, 2004 to Sep 29, 2004	105	950	H3
IVAN 2004	Sep 02, 2004 to Sep 24, 2004	145	910	H5
GASTON 2004	Aug 27, 2004 to Sep 03, 2004	65	985	H1
CHARLEY 2004	Aug 09, 2004 to Aug 15, 2004	130	941	H4
ALLISON 2001	Jun 05, 2001 to Jun 19, 2001	50	1000	TS
GORDON 2000	Sep 14, 2000 to Sep 21, 2000	70	981	H1
FLOYD 1999	Sep 07, 1999 to Sep 19, 1999	135	921	H4
DANNY 1997	Jul 16, 1997 to Jul 27, 1997	70	984	H1
BERTHA 1996	Jul 05, 1996 to Jul 17, 1996	100	960	H3
DANNY 1985	Aug 12, 1985 to Aug 20, 1985	80	987	H1
DEAN 1983	Sep 26, 1983 to Sep 30, 1983	55	999	TS
BRET 1981	Jun 29, 1981 to Jul 01, 1981	60	996	TS
BOB 1979	Jul 09, 1979 to Jul 16, 1979	65	986	H1
GINGER 1971	Sep 06, 1971 to Oct 05, 1971	95	959	H2
DORIA 1971	Aug 20, 1971 to Aug 29, 1971	55	989	TS
ALMA 1970	May 17, 1970 to May 27, 1970	70	993	H1
CAMILLE 1969	Aug 14, 1969 to Aug 22, 1969	150	900	H5

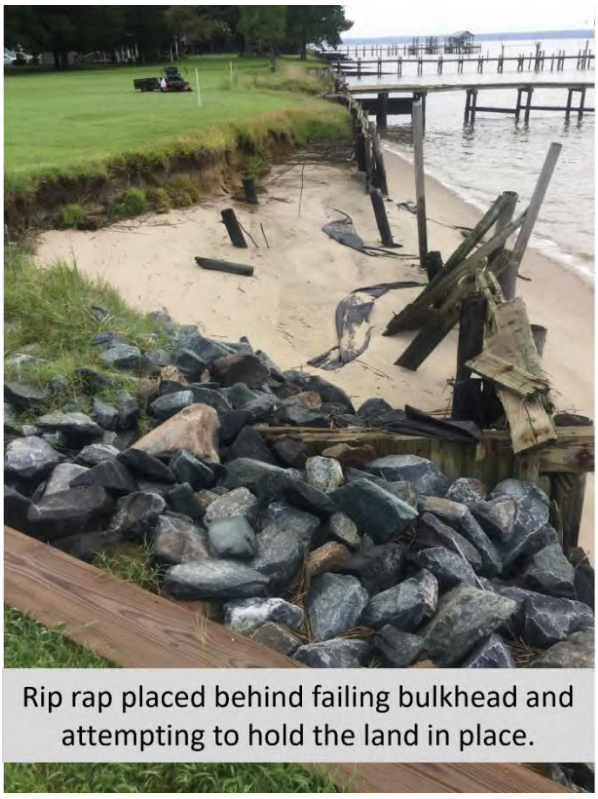
STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
UNNAMED 1963	Jun 01, 1963 to Jun 04, 1963	50	1000	TS
UNNAMED 1961	Sep 12, 1961 to Sep 15, 1961	55	995	TS
BRENDA 1960	Jul 27, 1960 to Aug 07, 1960	60	976	TS
CINDY 1959	Jul 04, 1959 to Jul 12, 1959	65	995	H1
CONNIE 1955	Aug 03, 1955 to Aug 15, 1955	120	944	H4
HAZEL 1954	Oct 05, 1954 to Oct 18, 1954	115	938	H4
UNNAMED 1949	Sep 11, 1949 to Sep 14, 1949	45	-1	TS
UNNAMED 1945	Sep 12, 1945 to Sep 20, 1945	115	949	H4
UNNAMED 1944	Oct 12, 1944 to Oct 24, 1944	125	937	H4
UNNAMED 1944	Jul 30, 1944 to Aug 04, 1944	70	985	H1
UNNAMED 1943	Sep 28, 1943 to Oct 02, 1943	55	997	TS
UNNAMED 1935	Aug 29, 1935 to Sep 10, 1935	160	892	H5
UNNAMED 1934	Sep 01, 1934 to Sep 04, 1934	45	-1	TS
UNNAMED 1933	Aug 13, 1933 to Aug 28, 1933	120	948	H4
UNNAMED 1929	Sep 19, 1929 to Oct 05, 1929	135	924	H4
UNNAMED 1928	Sep 06, 1928 to Sep 21, 1928	140	929	H5
UNNAMED 1928	Aug 03, 1928 to Aug 13, 1928	90	971	H2
UNNAMED 1924	Sep 27, 1924 to Oct 01, 1924	55	999	TS
UNNAMED 1916	May 13, 1916 to May 18, 1916	40	990	TS
UNNAMED 1904	Sep 08, 1904 to Sep 15, 1904	70	-1	H1
NOT_NAMED 1902	Oct 03, 1902 to Oct 13, 1902	90	970	H2
UNNAMED 1902	Oct 03, 1902 to Oct 13, 1902	90	970	H2

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
UNNAMED 1902	Jun 12, 1902 to Jun 17, 1902	50	-1	TS
UNNAMED 1899	Oct 26, 1899 to Nov 04, 1899	95	-1	H2
UNNAMED 1894	Oct 01, 1894 to Oct 12, 1894	105	-1	H3
UNNAMED 1889	Sep 12, 1889 to Sep 26, 1889	95	-1	H2
UNNAMED 1888	Sep 06, 1888 to Sep 13, 1888	50	999	TS
UNNAMED 1886	Jun 27, 1886 to Jul 02, 1886	85	-1	H2
UNNAMED 1886	Jun 17, 1886 to Jun 24, 1886	85	-1	H2
UNNAMED 1883	Sep 04, 1883 to Sep 13, 1883	110	-1	H3
UNNAMED 1882	Sep 21, 1882 to Sep 24, 1882	50	1005	TS
UNNAMED 1882	Sep 02, 1882 to Sep 13, 1882	110	949	H3
UNNAMED 1881	Sep 07, 1881 to Sep 11, 1881	90	975	H2
UNNAMED 1878	Oct 18, 1878 to Oct 25, 1878	90	963	H2
UNNAMED 1877	Sep 21, 1877 to Oct 05, 1877	100	-1	H3
UNNAMED 1876	Sep 12, 1876 to Sep 19, 1876	100	980	H3
UNNAMED 1874	Sep 25, 1874 to Oct 01, 1874	80	980	H1
UNNAMED 1872	Oct 22, 1872 to Oct 28, 1872	70	-1	H1
NOT_NAMED 1867	Aug 10, 1867 to Aug 18, 1867	45	-1	TS
NOT_NAMED 1864	Jul 23, 1864 to Jul 26, 1864	35	-1	TS
UNNAMED 1863	Sep 16, 1863 to Sep 19, 1863	60	-1	TS
NOT_NAMED 1861	Oct 31, 1861 to Nov 03, 1861	60	992	TS
UNNAMED 1861	Sep 27, 1861 to Sep 28, 1861	70	-1	H1
NOT_NAMED 1861	Sep 22, 1861 to Sep 29, 1861	70	989	H1

STORM NAME	DATE RANGE	MAX WIND SPEED	MIN PRESSURE	MAX CATEGORY
UNNAMED 1859	Sep 15, 1859 to Sep 18, 1859	70	-1	H1
NOT_NAMED 1858	Aug 11, 1858 to Aug 20, 1858	45	994	TS
UNNAMED 1856	Aug 19, 1856 to Aug 21, 1856	50	-1	TS
NOT_NAMED 1854	Sep 10, 1854 to Sep 14, 1854	65	-1	H1
UNNAMED 1854	Sep 07, 1854 to Sep 12, 1854	110	938	H3
NOT_NAMED 1852	Aug 28, 1852 to Aug 31, 1852	50	-1	TS

Attachment 4: Photos of the shoreline at project location.

As the bulkhead failed the shoreline eroded the land away from the pier causing it to collapse.



Rip rap placed behind failing bulkhead and attempting to hold the land in place.

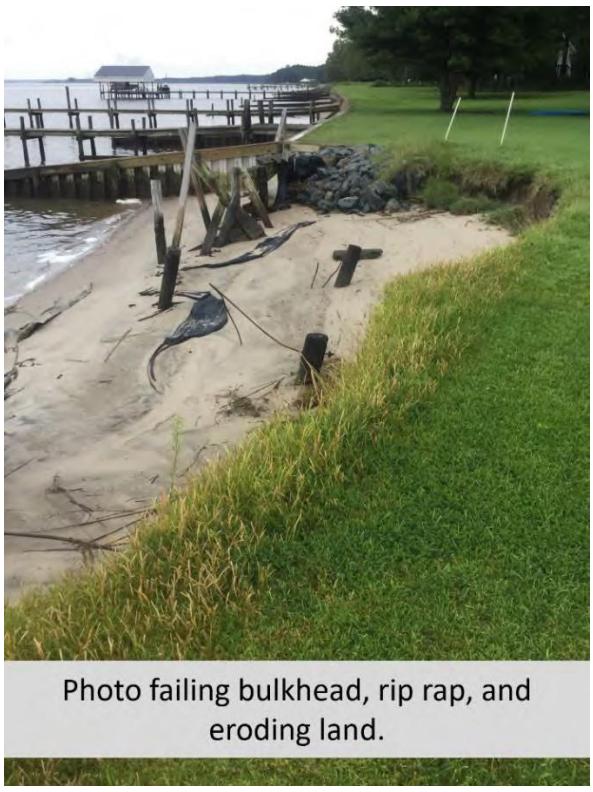


Photo failing bulkhead, rip rap, and eroding land.

Attachment 5: Property #1 JPA and Design (242 Old Farm Dr.)

From: Chris Davis
To: Joshua Rellick; jpa.permits@mrc.virginia.gov; Birge, Tiffany
Cc: [redacted]
Subject: [redacted] Revised JPA 21-0819
Date: Sunday, August 1, 2021 4:40:32 PM
Attachments: [redacted]

Permit attached

Regulatory Agency Contact Information

Virginia Marine Resources Commission (VMRC)
Habitat Management Division
380 Fenwick Road, Building 96
Fort Monroe, VA 23651
Phone: (757) 247-2200, Fax: (757) 247-8062
Website: http://www.mrc.virginia.gov/hmac/hmoverview.shtm

United States Army Corps of Engineers (USACE)
Norfolk District
803 Front Street, ATTN: CENAO-WR-R
Norfolk, Virginia 23510-1011
Phone: (757) 201-7652, Fax: (757) 201-7678
Website: http://www.nao.usace.army.mil/Missions/Regulatory.aspx

Virginia Department of Environmental Quality (DEQ)
Virginia Water Protection Permit Program
Post Office Box 1105
Richmond, Virginia 23218
Phone: (804) 698-4000
Website: http://www.deq.virginia.gov/

LOCAL WETLANDS BOARD (LWB) CONTACT INFORMATION:
Links to LWB information on the Web can be found at http://ccrm.vims.edu/permits_web/guidance/local_wetlands_boards.html
In addition, the phone numbers listed below can be used to contact the LWB. Please be advised that these phone numbers are subject to change at any time.

Accomack County (757) 787-5721, Cape Charles (757) 331-3259, Charles City County (804) 829-9296, Chesapeake (757) 382-6248, Colonial Heights (804) 520-9275, Essex County (804) 443-4951, Fairfax County (703) 324-1364, Fredericksburg (540) 372-1179, Gloucester County (804) 693-2744, Hampton (757) 727-6140, Hopewell (804) 541-2267, Isle of Wight County (757) 365-6211, James City County (757) 253-6673, King and Queen County (804) 769-4978, King George County (540) 775-7111, King William County (804) 769-4927, Lancaster County (804) 462-5220, Mathews County (804) 725-5025, Middlesex County (804) 758-0500, New Kent County (804) 966-9690, Newport News (757) 247-8437, Norfolk (757) 664-4368, Northampton County (757) 678-0442, Northumberland County (804) 580-8910, Poquoson (757) 868-3040, Portsmouth (757) 393-8836, Prince William County (703) 792-6984, Richmond County (804) 333-3415, Stafford County (540) 658-8668, Suffolk (757) 923-3650, Virginia Beach (757) 427-8246, Westmoreland County (804) 493-0120, West Point (804) 843-3330, Williamsburg (757) 220-6130, York County (757) 890-3538

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Tidewater Joint Permit Application (JPA)
For Projects Involving Tidal Waters, Tidal Wetlands and/or Dunes and Beaches in Virginia

This application may be used for most commercial and noncommercial projects involving **tidal waters, tidal wetlands and/or dunes and beaches in Virginia** which require review and/or authorization by Local Wetlands Boards (LWB), the Virginia Marine Resources Commission (VMRC), the Department of Environmental Quality (DEQ), and/or the U. S. Army Corps of Engineers (USACE). This application can be used for:

- **Access-related activities**, including piers, boathouses, boat ramps (without associated dredging or excavation*), moorings, marinas.
- **Shoreline stabilization projects** including living shorelines, riprap revetments, marsh toe stabilization, bulkheads, breakwaters, beach nourishment, groins, and jetties. It is the policy of the Commonwealth that living shorelines are the preferred alternative for stabilizing tidal shorelines (Va. Code § 28.2-104.1).
- **Crossings** over or under tidal waters and wetlands including bridges and utility lines (water, sewer, electric).
- **Aquaculture structures**, including cages and floats except "oyster gardening"**

***Note:** for all dredging, excavation, or surface water withdrawal projects you **MUST** use the Standard JPA form; for noncommercial, riparian shellfish aquaculture projects (i.e., "oyster gardening") you must use the abbreviated JPA found at https://mrc.virginia.gov/forms/2019/VGP3_Aquaculture_form_2019.pdf or call VMRC for a form.

The DEQ and the USACE use this form to determine whether projects qualify for certain General, Regional, and/or Nationwide permits. If your project does not qualify for these permits and you need a DEQ Virginia Water Protection permit or an individual USACE permit, you must submit the Standard Joint Permit application form. You can find this application at http://www.nao.usace.army.mil/Missions/Regulatory/JPA.aspx. Please note that some health departments and local agencies, such as local building officials and erosion and sediment control authorities, do not use the Joint Permit Application process or forms and may have different informational requirements. The applicant is responsible for contacting these agencies for information regarding those permitting requirements.

HOW TO APPLY

Submit one (1) completed copy of the Tidewater JPA to VMRC:

1. If by mail or courier, use the VMRC address provided on page 1.
2. If by electronic mail, address the package to: **JPA.permits@mrc.virginia.gov.** The application must be provided in the .pdf format and should not exceed 10 MB. If larger than 10 MB you may provide a file transfer protocol (ftp) site for download purposes.

The Tidewater JPA should include the following:

1. **Part 1** – General Information
2. **Part 2** – Signatures
3. **Part 3 -** Appendices (A, B, C, and/or D as applicable to your project)
4. **Part 4** – Project Drawings.
   The drawings shall include the following for **ALL** projects:
   - Vicinity Map (USGS topographic map, road map or similar showing project location)
   - Plan View Drawing (overhead, to scale or with dimensions clearly marked)
   - Section View Drawing (side-view, to scale or with dimensions clearly marked)

Sample drawings are included at the end of Part 4 of this application to show examples of the information needed to consider your application complete and allow for the timely processing.

When completing this form, use the legal name of the applicant, agent, and/or property owner. For DEQ application purposes, *legal name* means the full legal name of an individual, business, or other organization. For an individual, the legal name is the first name, middle initial, last name, and suffix. For an entity authorized to do business in Virginia, the legal name is the exact name set forth in the entity's articles of incorporation, organization or trust, or formation agreement, as applicable. Also provide the name registered with the State Corporation Commission, if required to register. DEQ issues a permit or grants coverage to the so-named individual or business, who becomes the 'permittee'. Correspondence from some agencies, including permits, authorizations, and/or coverage, may be provided via electronic mail. If the applicant and/or agent wishes to receive their permit via electronic mail, please remember to include an e-mail address at the requested place in the application.

In order for projects requiring LWB authorization to be considered complete (Virginia Code § 28.2-1302); "The permit application shall include the following: the name and address of the applicant; a detailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances of facilities, including those on the adjacent uplands; a description of the type of equipment to be used and the means of access to the activity site; the names and addresses of record of adjacent land and known claimants of water rights in or adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; and secondary purpose of the proposed project; a complete description of measures to be taken during and after alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require."

You may include signed Adjacent Property Owner (APO) Acknowledgement Forms found at the end of this Short Form. You must provide these addresses in Part 1 whether or not you use the APO forms. VMRC will request comments from APOs for projects that require permits for encroachment over state-owned submerged lands. VMRC or your local wetlands board must notify all APO's of public hearings required for all proposals involving tidal wetlands and dunes/beaches that are not authorized by statute. This information will not be used by DEQ to meet the requirements of notifying riparian land owners.

Regional Permit 17 (RP-17), authorizes the installation and/or construction of open-pile piers, mooring structures/devices, fender piles, covered boathouses/boatslips, boatlifts, osprey pilings/platforms, accessory pier structures, and certain devices associated with shellfish gardening, for private use, subject to strict compliance with all conditions and limitations further set out in the RP-17 enclosure located at http://www.nao.usace.army.mil/Missions/Regulatory/RBregional/. In addition to the information required in this JPA, prospective permittees seeking authorization under RP-17 must complete and submit the 'Regional Permit 17 Checklist' with their JPA. A copy of the 'Regional Permit 17 Checklist' is found on pages 13 and 14 of this application package. If the prospective permittee answers "yes" (or "N/A", where applicable) to all of the questions on the 'Regional Permit 17 Checklist', the permittee is in compliance with RP-17 and will not receive any other written authorization from the Corps but may not proceed with construction until they have obtained all necessary state and local permits. ***Note: If the prospective permittee answers "no" to any of the questions on the 'Regional Permit 17 Checklist' then their proposed structure(s) does not meet the terms and conditions of RP-17 and written authorization from the Corps is required before commencement of any work.***

Note: Land disturbance (grading, filling, etc.) or removal of vegetation associated with projects located in Chesapeake Bay Preservation Areas will require approval from local governments. Certain localities utilize this application during their Bay Act review. Part 5 of this application is included to provide assistance for the applicant to comply with Bay Act /or Erosion and Sediment Control requirements concurrent with this application.

WHAT HAPPENS NEXT

Upon receipt of an application, VMRC will assign a permit application number to the JPA and will then distribute a copy of the application and any original plan copies submitted to the other regulatory agencies that are involved in the JPA process. All agencies will conduct separate but concurrent reviews of your project. Please be aware that each agency must issue a separate permit (or a notification that no permit is required). Note that in some cases, DEQ may be taking an action on behalf of the USACE, such as when the State Program General Permit (SPGP) applies. Make sure that you have received all necessary authorizations, or documentation that no permit is required, from each agency prior to beginning the proposed work.

During the JPA review process, site inspections may be necessary to evaluate a proposed project. Failure to allow an authorized representative of a regulatory agency to enter the property, or to take photographs of conditions at the project site, may result in either the withdrawal or denial of your permit application.

For certain federal and state permit applications, a public notice is published in a newspaper having circulation in the project area, is mailed to adjacent and/or riparian property owners, and/or is posted on the agency's web page. The public may comment on the project during a designated comment period, if applicable, which varies depending upon the type of permit being applied for and the issuing agency. In certain circumstances, the project may be heard by a governing board, such as a Local Wetlands Board, the State Water Control Board, or VMRC in cases where a locality does not have a wetlands board and with certain subaqueous cases. You may be responsible for bearing the costs for advertisement of public notices.

Public hearings that are held by VMRC occur at their regularly scheduled monthly commission meetings under the following situations: Protested applications for VMRC permits which cannot be resolved; projects costing over $500,000 involving encroachment over state-owned subaqueous land; and all projects affecting tidal wetlands and dunes/beaches in localities without a LWB. All interested parties will be officially notified regarding the date and time of the hearing and Commission meeting procedures. The Commission will usually make a decision on the project at the meeting unless a decision for continuance is made. If a proposed project is approved, a permit or similar agency correspondence is sent to the applicant. In some cases, notarized signatures, as well as processing fees and royalties, are required before the permit is validated. If the project is denied, the applicant will be notified in writing.

PERMIT APPLICATION OR OTHER FEES

Do not send any fees with the JPA. VMRC is not responsible for accounting for fees required by other agencies. Please consult agency websites or contact agencies directly for current fee information and submittal instructions.

- USACE: Permit application fees are required for USACE Individual (Standard) permits. A USACE project manager will contact you regarding the proper fee and submittal requirements.

- DEQ: Permit application fees required for Virginia Water Protection permits – while detailed in 9VAC25-20 – are conveyed to the applicant by the applicable DEQ office (http://www.deq.virginia.gov/Locations.aspx). Complete the Permit Application Fee Form and submit it per the instructions to the address listed on the form. Instructions for submitting any other fees will be provided to the applicant by DEQ staff.
- VMRC: An application fee of $300 may be required for projects impacting tidal wetlands, beaches and/or dunes when VMRC acts as the LWB. VMRC will notify the applicant in writing if the fee is required. Permit fees involving subaqueous lands are $25.00 for projects costing $10,000 or less and $100 for projects costing more than $10,000. Royalties may also be required for some projects. The proper permit fee and any required royalty is paid at the time of permit issuance by VMRC. VMRC staff will send the permittee a letter notifying him/her of the proper permit fees and submittal requirements.
- LWB: Permit fees vary by locality. Contact the LWB for your project area or their website for fee information and submittal requirements. Contact information for LWBs may be found at http://ccrm.vims.edu/permits_web/guidance/local_wetlands_boards.html.

FOR AGENCY USE ONLY	
	Notes:
	JPA # 21-0819

APPLICANTS
Part 1 – General Information

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

Check all that apply		
Pre-Construction Notification (PCN) ☐ NWP # _____ (*For Nationwide Permits ONLY - No DEQ-VWP permit writer will be assigned*)	Regional Permit 17 (RP-17) ☐	

County or City in which the project is located: King and Queen

Waterway at project site: York River

PREVIOUS ACTIONS RELATED TO THE PROPOSED WORK (Include all federal, state, and local pre application coordination, site visits, previous permits, or applications whether issued, withdrawn, or denied)

Historical information for past permit submittals can be found online with VMRC - https://webapps.mrc.virginia.gov/public/habitat/ - or VIMS - http://ccrm.vims.edu/perms/newpermits.html

Agency	Action / Activity	Permit/Project number, including any non-reporting Nationwide permits previously used (e.g., NWP 13)	Date of Action	If denied, give reason for denial
	NA			

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 1 - General Information (continued)

1. Applicant's legal name* and complete mailing address: Contact Information:

[redacted], 242 Old Farm Drive,
Shacklefords, VA 23156 (Lot# 12A)

Home (804) 785-2047
Work (804) 370-4024
Fax ( )
Cell ( )
e-mail

State Corporation Commission Name and ID Number (if applicable) _____

2. Property owner(s) legal name* and complete address, if different from applicant: Contact Information:

Home ( )
Work ( )
Fax ( )
Cell ( )
e-mail

State Corporation Commission Name and ID Number (if applicable) _____

3. Authorized agent name* and complete mailing address (if applicable): Contact Information:

Chris Davis (ReadyReef Inc.)
504 Smoketree Court
North Chesterfield, VA 23236

Home ( )
Work ( )
Fax ( )
Cell (804) 338-3103
e-mail chris.readyreef@gmail.com

State Corporation Commission Name and ID Number (if applicable) _____

*** If multiple applicants, property owners, and/or agents, each must be listed and each must sign the applicant signature page.**

4. Provide a detailed description of the project in the space below, including the type of project, its dimensions, materials, and method of construction. Be sure to include how the construction site will be accessed and whether tree clearing and/or grading will be required, including the total acreage. If the project requires pilings, please be sure to include the total number, type (e.g. wood, steel, etc), diameter, and method of installation (e.g. hammer, vibratory, jetted, etc). If additional space is needed, provide a separate sheet of paper with the project description.

The project is to install a Living Shoreline using Flexamat installed behind a decaying bulkhead on the York River to protect the eroding bank. Mat sections totaling 16' wide x 147' (2352 ft²) will be laid on a 3:1 slope and planted with marsh grasses. Flexamat meets the state definition (28.2-104.1) of a Living Shoreline (as required by SB776 passed in 2020) as "a shoreline management practice that provides erosion control and water quality benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials." Flexamat enhances "coastal resilience and attenuation of wave energy and storm surge."
The Flexamat will be installed from the adjacent yard. Grading the slope will be followed with some sand overlay to create a solid, smooth foundation. No tree clearing is required. The mat under-layment will include biodegradable soft wood shavings to prevent soil under-scouring.
The mat will be anchored mechanically and with marsh grass plants growing through it over time. The remnants of the existing bulkhead will be cut down and/or removed after the mat is installed.
The mat ends at neighboring bulkhead returns will be overlain with filter cloth and riprap to prevent scouring from wave action against the bulkhead sections.
There will be a gain of 1888 ft² of Spartina marsh grasses.
The existing dock will be extended 16' back over the graded area to intersect with the yard.
Equipment to be used: skid steer, Excavator, dump truck, flatbed truck and trailer, sand compactor, earth anchors driven with hammer drill powered by gas generator.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 1 - General Information (continued)

5. Have you obtained a contractor for the project? X 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:

ReadyReef Inc
504 Smoketree Court
North Chesterfield, VA 23236

Contact Information:
Home (_)_____
Work (_)_____
Fax (_)_____
Cell (804) 338-3103
email chris.readyreef@gmail.com

State Corporation Commission Name and ID Number (if applicable) _____

*** If multiple contractors, each must be listed and each must sign the applicant signature page.**

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:
Tidewater Review
www.tidewaterreview.com

Telephone number
(757) 446-2291

7. Give the following project location information:
Street Address (911 address if available) 242 Old Farm Drive
Lot/Block/Parcel# 23 131L 396A12A ([redacted])
Subdivision _____
City / County Shacklefords ZIP Code 23156
Latitude and Longitude at Center Point of Project Site (Decimal Degrees):
37.479281 / -76.732522 (Example: 36.41600/-76.30733)

If the project is located in a rural area, please provide driving directions giving distances from the best and nearest visible landmarks or major intersections. *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.*

From Rt. 17 going north from Gloucester Courthouse, turn left at Adner onto Rt 14 West (Buena Vista Rd). At Plainview, turn left onto Rt. 605 (Plain View Lane).
Shortly after, Rt. 605 takes a sharp right and continues.
Turn left onto Rt 666 (Tuckers Road) before Gressitt.
Turn right onto Cricket Shores Lane.
Near York River, it will end, then turn right onto Bells RD. Road ends at House #242 dead ahead.

8. What are the *primary and secondary purposes of and the need for* 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."

The primary purpose is to prevent erosion at the shoreline where an old bulkhead is failing.
The secondary purpose is to install a SB 776 compliant solution to meet the environmental goals of the Chesapeake Bay WIP.

Part 1 - General Information (continued)

9. Proposed use (check one):
   X Single user (private, non-commercial, residential)
   ___ Multi-user (community, commercial, industrial, government)

10. Describe alternatives considered and 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.*

    Bulkhead replacement and riprap revetment were eliminated as being non-compliant with the State's new Living Shoreline law (SB 776). Installing Flexamat will allow for marsh grass planting in its grid, and for a migratory path upwards in elevation should Relative Sea Level Rise continue as forecasted. No impacts to Wetlands, SAVs or buffer areas. Marsh grasses will be installed where none exist now.

11. Is this application being submitted for after-the-fact authorization for work which has already begun or been completed? ___Yes X No. If yes, be sure to clearly depict the portions of the project which are already complete in the project drawings.

12. Approximate cost of the entire project (materials, labor, etc.): $ $35,000
    Approximate cost of that portion of the project that is channelward of mean low water:
    $ 0

13. Completion date of the proposed work: July 31 - 2022

14. Adjacent Property Owner Information: List the name and complete **mailing address**, including zip code, of each adjacent property owner to the project. (NOTE: If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.) Failure to provide this information may result in a delay in the processing of your application by VMRC.

    [redacted], PO Box 154, Urbanna, VA

    John Gove
    330 Cypress Ave
    West Point, VA\23181

    Hartwell and Christian Cook
    207 Trout Dr.
    Middleton, RI
    02842

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

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 programs 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 on 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.

[redacted]
Applicant's Name (printed/typed)

(Use if more than one applicant)

✓ [redacted]
Applicant's Signature

(Use if more than one applicant)

04.02.21
Date

[redacted]
Property Owner's Name (printed/typed)
(If different from Applicant)

(Use if more than one owner)

✓ [redacted]
Property Owner's Signature

(Use if more than one owner)

04.02.21
Date

REVISED March 2014

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 2 – Signatures (continued)

2. Applicants having agents (if applicable)

CERTIFICATION OF AUTHORIZATION

I (we) [redacted], hereby certify that I (we) have authorized Chris Davis of ReadyReef Inc
(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

Chris Davis
(Agent's Signature) (Use if more than one agent)

4/2/21
(Date)

✓ [redacted]
(Applicant's Signature) (Use if more than one applicant)

04.02.21
(Date)

3. Applicant's having contractors (if applicable)

CONTRACTOR ACKNOWLEDGEMENT

I (we), [redacted], have contracted ReadyReef Inc
(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.

Chris Davis
Contractor's name or name of firm

504 Smokehse Ct
North Chesterfield, VA
23236
Contractor's or firms address

READYREEF INC.
Chris Davis President
Contractor's signature and title

Contractor's License Number

✓ [redacted]
Applicant's signature (use if more than one applicant)

04.02.21
Date

REVISED March 2014

Part 2 – Signatures (continued)

ADJACENT PROPERTY OWNER'S ACKNOWLEDGEMENT FORM

I (we), _____, own land next to (across the water
(Print adjacent/nearby property owner's name)

from/on the same cove as) the land of_____.
(Print applicant's name(s))

I have reviewed the applicant's project drawings dated _____
(Date)

to be submitted for all necessary federal, state and local permits.

I HAVE NO COMMENT_____ ABOUT THE PROJECT.

I DO NOT OBJECT _____ TO THE PROJECT.

I OBJECT _____ TO THE PROJECT.

The applicant has agreed to contact me for additional comments if the proposal changes prior to construction of the project.

(Before signing this form, be sure you have checked the appropriate option above).

_____
Adjacent/nearby property owner's signature(s)

_____
Date

Note: If you object to the proposal, the reason(s) you oppose the project must be submitted in writing to VMRC. An objection will not necessarily result in denial of the project; however, valid complaints will be given full consideration during the permit review process.

APPENDIX B

U.S. Army Corps Of Engineers
Norfolk District

REGIONAL PERMIT 17 CHECKLIST

Expires: September 5, 2023

Please review the 18-RP-17 enclosure before completing this form and note 18-RP-17 can only be used for proposed PRIVATE USE structure(s) that comply with the terms and conditions of 18-RP-17. Copies can be obtained online at http://www.nao.usace.army.mil/Missions/Regulatory/RBregional/.

YES ☐ NO ☐ **(1)** Has the permittee reviewed the 18-RP-17 enclosure and verified that the proposed structure(s) is in compliance with all the terms, conditions, and limitations of 18-RP-17?

YES ☐ NO ☐ **(2)** Does the proposed structure(s) extend no more than one-fourth of the distance across the waterway measured from either mean high water (MHW) to MHW (including all channelward wetlands) or ordinary high water (OHW) to OHW (including all channelward wetlands)?

YES ☐ NO ☐ **(3)** Does the proposed structure(s) extend no more than 300 feet from MHW or OHW (including all channelward wetlands)?

YES ☐ NO ☐ N/A ☐ **(4)** Does the proposed structure(s) attach to the upland at a point landward of MHW or OHW (including all channelward wetlands)?

YES ☐ NO ☐ N/A ☐ **(5)** If the proposed structure(s) crosses wetland vegetation, is it an open-pile design that has a maximum width of five (5) feet and a minimum height of four (4) feet between the decking and the wetland substrate?

YES ☐ NO ☐ N/A ☐ **(6)** Does the proposed structure(s) include no more than two (2) boatlifts and no more than two (2) boat slips?

YES ☐ NO ☐ N/A ☐ **(7)** Is the open-sided roof structure designed to shelter a boat ≤ 700 square feet and/or is the open sided roof structure or gazebo structure designed to shelter a pier ≤ 400 square feet?

YES ☐ NO ☐ N/A ☐ **(8)** Are all piles associated with the proposed structure(s) non-steel, less than or equal to 12" in diameter, and will less than or equal to 25 piles be installed channelward of MHW?

YES ☐ NO ☐ N/A ☐ **(9)** Is all work occurring behind cofferdams, turbidity curtains, or other methods to control turbidity being utilized when operationally feasible and federally listed threatened or endangered species may be present?

YES ☐ NO ☐ N/A ☐ **(10)** If the proposed structure(s) is to be located within an anadromous fish use area, the prospective permittee will adhere to the anadromous fish use area time of year restriction (TOYR) prohibiting in-water work from occurring between February 15 through June 30 of any given year if (1) piles are to be installed with a cushioned impact hammer and there is less than 492 feet between the most channelward pile and mean low water (MLW) on the opposite shoreline or (2) piles are to be installed with a vibratory hammer and there is less than 384 feet between the most channelward pile and MLW on the opposite shoreline.

YES ☐ NO ☐ **(11)** Is all work occurring outside of submerged aquatic vegetation (SAV) mapped by the Virginia Institute of Marine Sciences' (VIMS) most recent survey year and 5 year composite?

YES ☐ NO ☐ **(12)** Has the permittee ensured the construction and/or installation of the proposed structure(s) will not affect federally listed threatened or endangered species or designated critical habitat?

YES ☐ NO ☐ **(13)** Will the proposed structure be located outside of Broad Creek in Middlesex County, Fisherman's Cove in Norfolk, or the Salt Ponds in Hampton?

YES ☐ NO ☐ **(14)** Will the proposed structure(s) be located outside of the waterways containing a Federal Navigation Project listed in Permit Specific Condition 12 of 18-RP-17 and/or will all portions of the proposed structure(s) be located more than 85 feet from the Federal Navigation Project?

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

YES☐ NO☐ **(15)** Will the proposed structure(s) be located outside a USACE Navigation and Flood Risk Management project area?

YES☐ NO☐ **(16)** Will the proposed structure(s) be located outside of any Designated Trout Waters?

YES☐ NO☐ N/A☐ **(17)** If the proposed structure(s) includes flotation units, will the units be made of materials that will not become waterlogged or sink if punctured?

YES☐ NO☐ N/A☐ **(18)** If the proposed structure(s) includes flotation units, will the floating sections be braced so they will not rest on the bottom during periods of low water?

YES☐ NO☐ **(19)** Is the proposed structure(s) made of suitable materials and practical design so as to reasonably ensure a safe and sound structure?

YES☐ NO☐ **(20)** Will the proposed structure(s) be located on the property in accordance with the local zoning requirements?

YES☐ NO☐ N/A☐ **(21)** If the proposed structure(s) includes a device used for shellfish gardening, will the device be attached directly to a pier and limited to a total of 160 square feet?

YES☐ NO☐ N/A☐ **(22)** If the proposed structure(s) includes a device used for shellfish gardening, does the permittee recognize this RP does not negate their responsibility to obtain an oyster gardening permit (General Permit #3) from Virginia Marina Resources Commission's Habitat Management Division?

YES☐ NO☐ **(23)** Does the permittee recognize this RP does not authorize any dredging or filling of waters of the United States (including wetlands) and does not imply that future dredging proposals will be approved by the Corps?

YES☐ NO☐ **(24)** Does the permittee understand that by accepting 18-RP-17, the permittee accepts all of the terms and conditions of the permit, including the limits of Federal liability contained in the 18-RP-17 enclosure? Does the permittee acknowledge that the structures permitted under 18-RP-17 may be exposed to waves caused by passing vessels and that the permittee is solely responsible for the integrity of the structures permitted under 18-RP-17 and the exposure of such structures and vessels moored to such structures to damage from waves? Does the permittee accept that the United States is not liable in any way for such damage and that it shall not seek to involve the United States in any actions or claims regarding such damage?

IF YOU HAVE ANSWERED "NO" TO ANY OF THE QUESTIONS ABOVE, REGIONAL PERMIT 17 (18-RP-17) DOES NOT APPLY AND YOU ARE REQUIRED TO OBTAIN WRITTEN AUTHORIZATION FROM THE CORPS PRIOR TO PERFORMING THE WORK.

IF YOU HAVE ANSWERED "YES" (OR "N/A", WHERE APPLICABLE) TO ALL OF THE QUESTIONS ABOVE, YOU ARE IN COMPLIANCE WITH REGIONAL PERMIT 17 (18-RP-17). PLEASE SIGN BELOW, ATTACH, AND SUBMIT THIS CHECKLIST WITH YOUR COMPLETED JOINT PERMIT APPLICATION (JPA). THIS SIGNED CERTIFICATE SERVES AS YOUR LETTER OF AUTHORIZATION FROM THE CORPS. YOU WILL NOT RECEIVE ANY OTHER WRITTEN AUTHORIZATION FROM THE CORPS; HOWEVER, YOU MAY NOT PROCEED WITH CONSTRUCTION UNTIL YOU HAVE OBTAINED ALL OTHER NECESSARY STATE AND LOCAL PERMITS.

I CERTIFY THAT I HAVE READ AND UNDERSTAND ALL CONDITIONS OF THE REGIONAL PERMIT 17 (18-RP-17), DATED SEPTEMBER 2018, ISSUED BY THE US ARMY CORPS OF ENGINEERS, NORFOLK DISTRICT REGULATORY BRANCH (CENAO-WRR), NORFOLK, VIRGINIA.

Proposed work to be located at:

_____ _____

Signature of Property Owner(s) or Agent

_____

Date_____ **VMRC Number:** _____

Part 3 – Appendices

Please complete and submit the appendix questions applicable to your project, and attach the required vicinity map(s) and drawings to your application. If an item does not apply to your project, please write "N/A" in the space provided.

Appendix A: (TWO PAGES) Projects for Access to the water such as private and community piers, boathouses, marinas, moorings, and boat ramps. Answer all questions that apply.

1. **Briefly describe your proposed project**.

2. **For private, noncommercial piers:**
   Do you have an existing pier on your property? ____Yes____ No
   If yes, will it be removed? ____Yes ____No
   Is your lot platted to the mean low water shoreline? ____Yes ____No
   What is the overall length of the proposed structure? _____feet.
   Channelward of Mean High Water? _____feet.
   Channelward of Mean Low Water? _____feet.
   What is the area of the piers and platforms that will be constructed over
   Tidal non-vegetated wetlands _____ square feet.
   Tidal vegetated wetlands _____ square feet.
   Submerged lands _____square feet.
   What is the total size of any and all L- or T-head platforms?_____sq. ft.
   For boathouses, what is the overall size of the roof structure? _____sq. ft.
   Will your boathouse have sides?_____Yes____ No.

   NOTE: All proposals for piers, boathouses and shelter roofs must be reviewed by the Virginia Marine Resources Commission (Commission or VMRC), however, pursuant to § 28.2-1203 A 5 of the Code of Virginia a VMRC permit may not be required for such structures (except as required by subsection D of § 28.2-1205 for piers greater than 100 feet in length involving commercially productive leased oyster or clam grounds), provided that (i) the piers do not extend beyond the navigation line or private pier lines established by the Commission or the United States Army Corps of Engineers (USACE), (ii) the piers do not exceed six feet in width and finger piers do not exceed five feet in width, (iii) any L or T head platforms and appurtenant floating docking platforms do not exceed, in the aggregate, 400 square feet, (iv) if prohibited by local ordinance open-sided shelter roofs or gazebo-type structures shall not be placed on platforms as described in clause (iii), but may be placed on such platforms if not prohibited by local ordinance, and (v) the piers are determined not to be a navigational hazard by the Commission. Subject to any applicable local ordinances, such piers may include an attached boat lift and an open-sided roof designed to shelter a single boat slip or boat lift. In cases in which open-sided roofs designed to shelter a single boat, boat slip or boat lift will exceed 700 square feet in coverage or the open-sided shelter roofs or gazebo structures exceed 400 square feet, and in cases in which an adjoining property owner objects to a proposed roof structure, permits shall be required as provided in § 28.2-1204.

Part 3 – Appendices (continued)

3. **For USACE permits**, in cases where the proposed pier will encroach beyond one fourth the waterway width (as determined by measuring mean high water to mean high water or ordinary high water mark to ordinary high water mark), the following information must be included before the application will be considered complete. For an application to be considered complete:

   a. The USACE MAY require depth soundings across the waterway at increments designated by the USACE project manager. Typically 10-foot increments for waterways less than 200 feet wide and 20-foot increments for waterways greater than 200 feet wide with the date and time the measurements were taken and how they were taken (e.g., tape, range finder, etc.).
   b. The applicant MUST provide a justification as to purpose if the proposed work would extend a pier greater than one-fourth of the distance across the open water measured from mean high water or the channelward edge of the wetlands.
   c. The applicant MUST provide justification if the proposed work would involve the construction of a pier greater than five feet wide or less than four feet above any wetland substrate.

4. Provide the type, size, and registration number of the vessel(s) to be moored at the pier or mooring buoy.

   Type Length Width Draft Registration #

   _____

   _____

   _____

5. For **Marinas, Commercial Piers, Governmental Piers, Community Piers and other non-private piers**, provide the following information:
   A) Have you obtained approval for sanitary facilities from the Virginia Department of Health?_____ (required pursuant to Section 28.2-1205 C of the Code of Virginia).
   B) Will petroleum products or other hazardous materials be stored or handled at your facility?_____.
   C) Will the facility be equipped to off-load sewage from boats?_____.
   D) How many wet slips are proposed?_____. How many are existing?_____.
   E) What is the area of the piers and platforms that will be constructed over
      Tidal non-vegetated wetlands _____ square feet
      Tidal vegetated wetlands _____ square feet
      Submerged lands _____square feet

6. For **boat ramps**, what is the overall length of the structure?_____feet.
   From Mean High Water?_____feet.
   From Mean Low Water?_____feet.

   Note: drawings must include the construction materials, method of installation, and all dimensions. If tending piers are proposed, complete the pier portion.
   Note: If dredging or excavation is required, you must complete the Standard Joint Point Permit application.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

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, and living shoreline projects. Answer all questions that apply. Please provide any reports provided from the Shoreline Erosion Advisory Service or VIMS**.**

NOTE: It is the policy of the Commonwealth that living shorelines are the preferred alternative for stabilizing tidal shorelines (Va. Code § 28.2-104.1). **Information on non-structural, vegetative alternatives (i.e., Living Shoreline) for shoreline stabilization is available at http://ccrm.vims.edu/coastal_zone/living_shorelines/index.html.**

1. Describe each **revetment, bulkhead, marsh toe, breakwater, groin, jetty, other structure, or living shoreline project** separately in the space below. Include the overall length in linear feet, the amount of impacts in acres, and volume of associated backfill below mean high water and/or ordinary high water in cubic yards, as applicable:

   2352 ft² of Flexamat (147' x 16') will be installed in a cut and fill grading behind the decaying bulkhead. An additional 9 cuyds of clean sand will be overlain and compacted prior to mat installation in the space behind MLW and up to 1.5X the tide range, approximately 14' behind the remnants of the existing bulkhead.

2. What is the maximum encroachment channelward of mean high water? 14' feet.
   Channelward of mean low water? 0 feet.
   Channelward of the back edge of the dune or beach? 16' feet.

3. Please calculate the square footage of encroachment over:
   - Vegetated wetlands 0 square feet
   - Non-vegetated wetlands 865 square feet
   - Subaqueous bottom 0 square feet
   - Dune and/or beach 0 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.

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Part 3 – Appendices (continued)

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**.

   See attachments for Flexamat Specs and Materials
   Clean sand source: upland pit in Middlesex County

6. If using stone, broken concrete, etc. for your structure(s), what is the average weight of the:
   Core (inner layer) material _____ pounds per stone Class size _____
   Armor (outer layer) material 75 pounds per stone Class size 1

7. For **beach nourishment**, including that associated with breakwaters, groins or other structures, provide the following:

   - Volume of material
     0 cubic yards channelward of mean low water
     9 cubic yards landward of mean low water
     9 cubic yards channelward of mean high water
     0 cubic yards landward of mean high water
   - Area to be covered
     0 square feet channelward of mean low water
     2352 square feet landward of mean low water
     9 cubic yards channelward of mean high water
     0 cubic yards landward of mean high water
   - Source of material, composition (e.g. 90% sand, 10% clay): 93% sand, 7% clay
   - Method of transportation and placement:
     Truck from pit to yard dump. Tracked Skid steer from dump to shoreline.
   - Describe any proposed vegetative stabilization measures to be used, including planting schedule, spacing, monitoring, etc. Additional guidance is available at http://www.vims.edu/about/search/index.php?q=planting+guidelines:

     Flexamat will be planted 1' on center in the grid between revetment blocks.
     It will take up to 2 years to achieve saturation as the marsh grass sends out rhizomes in its second year after planting.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 3 – Appendices (continued)

Appendix C: Crossings in, on, over, or under, waters, submerged lands, tidal wetlands and/or dunes and beaches, including but not limited to, bridges, walkways, pipelines and utility lines.

1. What is the purpose and method of installation of the crossing?

2. What is the width of the waterway and/or wetlands to be crossed
   from mean high water to mean high water (tidal waters)? _____ feet.
   from mean low water to mean low water (tidal waters)? _____ feet.
   from ordinary high water to ordinary high water (non-tidal waters)? _____ feet.

3. For bridges (footbridges, golf cart bridges, roadway bridges, etc.), what is the width of the structure over the tidal wetlands, dunes/beaches and/or submerged lands? _____square feet.

4. For overhead crossings:
   a. What will be the height above mean high water? _____feet.
   b. If there are other overhead crossings in the area, what is the minimum height? _____feet.
   c. If the proposed crossing is an electrical line, please confirm the total number of electrical circuits: _____

5. For buried crossings, what will be the depth below the substrate? _____feet. Will the proposed utility provide empty conduits for any additional utilities that may propose to co-locate at a later date? ____Yes _____No.

6. Will there be any excavation or fill required for placement of abutments, piers, towers, or other permanent structures on State-owned submerged lands, tidal wetlands, and dunes/beaches? ___Yes ____ No.

   If yes, please provide the following:

   a. Amount of excavation in wetlands _____ cubic yards
      _____ square feet

   b. Amount of excavation in submerged land _____ cubic yards
      _____ square feet

   c. Amount of excavation in dune/beach _____ cubic yards
      _____ square feet

   d. Amount of fill in wetlands _____ cubic yards
      _____ square feet

   e. Amount of fill in submerged lands _____ cubic yards
      _____ square feet

   f. Amount of fill in dune/beach _____ cubic yards
      _____ square feet

Part 3 – Appendices (continued)

Appendix D: Aquaculture Related Structures such as cages and floats. Before completing this appendix, please review the aquaculture requirements summary at: http://mrc.virginia.gov/Shellfish_Aquaculture.shtm.

1. Will the activity be for commercial purposes? _____Yes _____ No.

   If Yes and structures will be placed upon an oyster ground lease, you may qualify for the VMRC General Permit #4 for Temporary Protective Enclosures for Shellfish. For more info see: http://www.mrc.virginia.gov/regulations/MRC_Scanned_Regs/Shellfish_Mix/fr1130_12-0107.pdf. If you qualify for the General Permit #4, or if such structures are proposed that are not on an oyster planting ground lease, or for floating structures of any kind, complete this Joint Permit Application and include the necessary information requested below in question 2 through 11.

   If No, you may qualify for the VMRC General Permit #3, for Noncommercial Riparian Shellfish Growing (i.e. "Gardening") For more information see: http://www.mrc.virginia.gov/forms/VGP3_Aquaculture.doc.pdf. If you qualify for this general permit use the Abbreviated Joint Permit Application For Noncommercial Riparian Shellfish Aquaculture Structures available at https://mrc.virginia.gov/forms/2019/VGP3_Aquaculture_form_2019.pdf ***do not use this Joint Permit Application***.

2. Will aquaculture structures be attached to an existing pier or other structure? ____ Yes ____ No.

3. The plat file # if proposed upon oyster planting ground lease(s)._____

4. The maximum area where enclosures are proposed. _____ square feet

5. The maximum number of enclosures being proposed to be deployed. _____

6. The species of shellfish to be cultured. _____

7. A detailed description of the enclosures to include width, length and height.

8. In addition to the requirements itemized in Part 4 Project Drawings, the following additional information must be included on your project drawings: A general description of the area within 500 feet of deployment area. Provide a drawing that depicts existing marine resources such as SAV, shellfish beds, fixed fishing devices, public grounds, piers, water depths at mean low water, tide range, and the minimum clearance at mean low tide over the enclosures.

9. Provide the date enclosures are proposed to be deployed _____. How will the structures be secured? _____.

Part 3 – Appendices (continued)

10. List of all riparian land owners within 500 feet of the area where enclosures are proposed along with a map (tax map or other suitable map) depicting the locations of such parcels or riparian property owner acknowledgement forms signed by the riparian land owner with any comments concerning the enclosures deployment request.

11. Proof that the applicant holds a current oyster or clam aquaculture product owners permit, and verification that the applicant is in compliance with Mandatory Harvest Reporting requirements, and verification that the current years oyster ground rent is paid, if structures are proposed on an oyster ground lease.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 4 - Project Drawings

Plan view and cross-sectional view drawings are required for all projects. Application drawings do not need to be prepared by a professional draftsman, but they must be clear, accurate, and should be to an appropriate scale. If a scale is not used, all dimensions must be clearly depicted in the drawings. If available, a plat of the property should be included, with the existing and proposed structures clearly indicated. Distances from the proposed structure(s) to fixed points of reference (benchmarks) and to the adjacent property lines must be shown. A vicinity map (County road map, USGS Topographic map, etc.) must also be provided to show the location of the property. **NOTE:** The sample drawings have been included at the end of this section to provide guidance on the information required for different types of projects. Clear and accurate drawings are essential for project review and compliance determination. Incomplete or unclear drawings may cause delays in the processing of your application.

The following items must be included on <u>ALL</u> project drawings: (plan and cross-sectional, as appropriate)

- **name of project**
- **north arrow**
- **scale**
- **waterway name**
- **existing and proposed structures, labeled as such**
- **dimensions of proposed structures**
- **mean high water and mean low water lines**
- **all delineated wetlands and all surface waters on the site, including the Cowardin classification (i.e., emergent, scrub-shrub, or forested) for those surface waters (if applicable)**
- **limits of proposed impacts to surface waters, such as fill areas, riprap scour protection placement, and dredged areas, and the amount of such impacts in square feet and acres**
- **ebb/flood direction**
- **adjacent property lines and owner's name**
- **distances from proposed structures to fixed points of reference (benchmarks) and adjacent property lines**

Part 5 - Chesapeake Bay Preservation Act Information

All proposed development, redevelopment, land disturbance, clearing or grading related to this Tidewater JPA must comply with the Chesapeake Bay Preservation Area Designation and Management Regulations, which are enforced through locally adopted Chesapeake Bay Preservation Area (CBPA) ordinances. Compliance with state and local CBPA requirements mandates the submission of a ***Water Quality Impact Assessment (WQIA)*** for the review and approval of the local government. Contact the appropriate local government office to determine if a WQIA is required for the proposed activity(ies).

Because the 84 local governments within Tidewater Virginia are responsible for enforcing the CBPA Regulations, the completion of the JPA process does not constitute compliance with the Bay Act Regulations nor does it guarantee that the local government will approve encroachments into the RPA that may result from this project. Applicants should contact their local government as early in the design process as possible to ensure that the final design and construction of the proposed project meets all applicable CBPA requirements. Early cooperation with local government staff can help applicants avoid unnecessary and costly delays to construction. Applicants should provide local government staff with information regarding existing vegetation within the Resource Protection Area (RPA) as well as a description and site drawings of any proposed land disturbance, construction, or vegetation clearing. As part of their review and approval processes, local government staff will evaluate the proposed project and determine whether or not approval can be granted. Once the locality has made a decision on the project, they will advise the Local Wetlands Boards and other appropriate parties of applicable CBPA concerns or issues.

Resource Protection Areas (RPAs) are composed of the following features:

1. **Tidal wetlands;**
2. **Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;**
3. **Tidal shores;**
4. **Other lands considered by the local government to meet the provisions of subsection A of 9VAC25-830-80 and to be necessary to protect the quality of state waters; and**
5. **A buffer area not less than 100 feet in width located adjacent to and landward of the components listed in subdivisions 1 through 4 above, and along both sides of any water body with perennial flow.**

Notes for all projects in RPAs

Development, redevelopment, construction, land disturbance, or placement of fill within the RPA features listed above requires the approval of the locality and may require an exception or variance from the local Bay Act ordinance. Please contact the appropriate local government to determine the types of development or land uses that are permitted within RPAs.

Pursuant to 9VAC25-830-110, on-site delineation of the RPA is required for all projects in CBPAs. Because USGS maps are not always indicative of actual "in-field" conditions, they may not be used to determine the site-specific boundaries of the RPA.

Notes for shoreline erosion control projects in RPAs

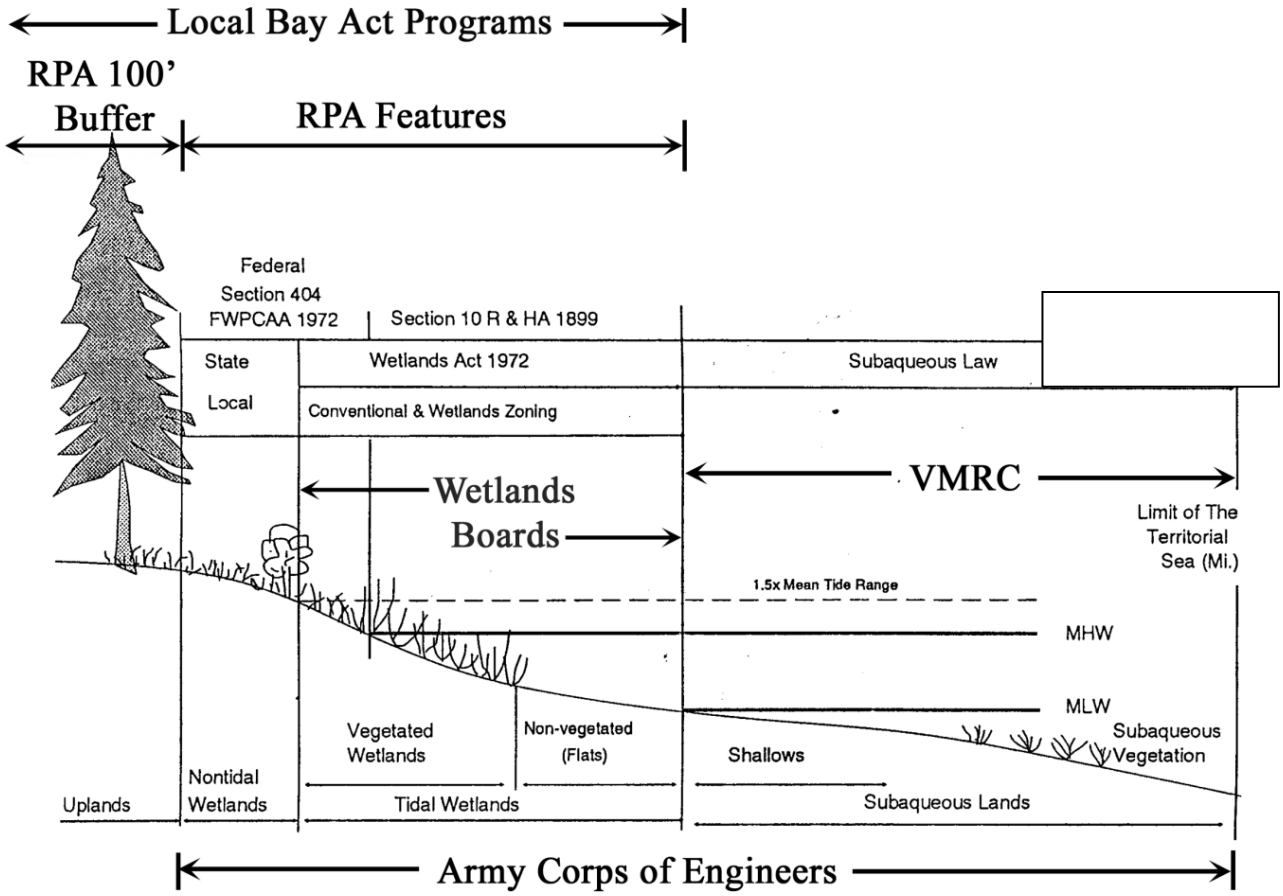
Re-establishment of woody vegetation in the buffer will be required by the locality to mitigate for the removal or disturbance of buffer vegetation associated with your proposed project. Please contact the local government to determine the mitigation requirements for impacts to the 100-foot RPA buffer.

Part 5 - Chesapeake Bay Preservation Act Information (continued)

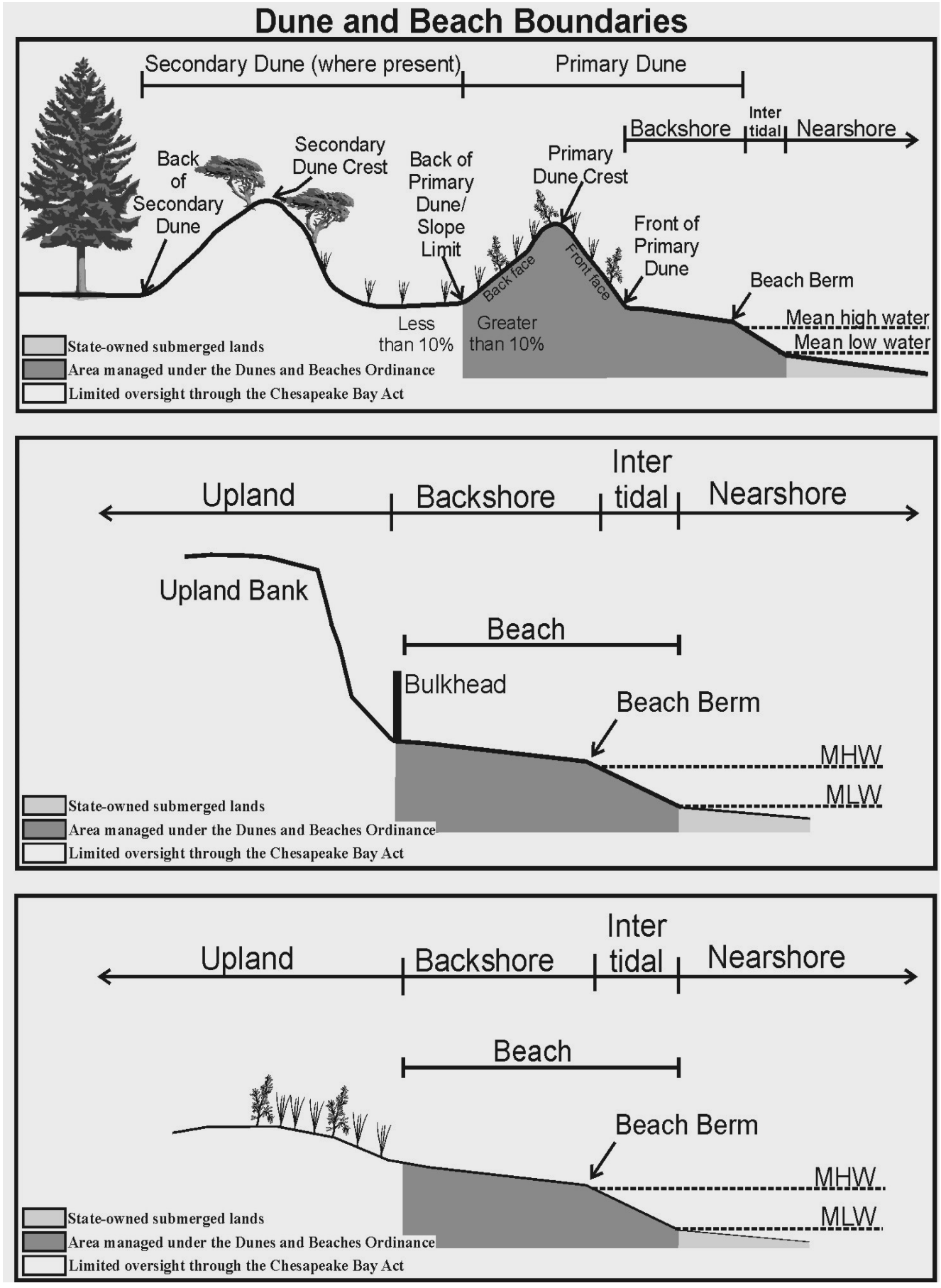
Pursuant to 9VAC25-830-140 5 a (4) of the Virginia Administrative Code, shoreline erosion projects are a permitted modification to RPAs provided that the project is based on the "best technical advice" and complies with applicable permit conditions. In accordance with 9VAC25-830-140 1 of the Virginia Administrative Code, the locality will use the information provided in this Part V, in the project drawings, in this permit application, and as required by the locality, to make a determination that:

1. Any proposed shoreline erosion control measure is necessary and consistent with the nature of the erosion occurring on the site, and the measures have employed the "best available technical advice"
2. Indigenous vegetation will be preserved to the maximum extent practicable
3. Proposed land disturbance has been minimized
4. Appropriate mitigation plantings will provide the required water quality functions of the buffer (9VAC25-830-140 3)
5. The project is consistent with the locality's comprehensive plan
6. Access to the project will be provided with the minimum disturbance necessary.

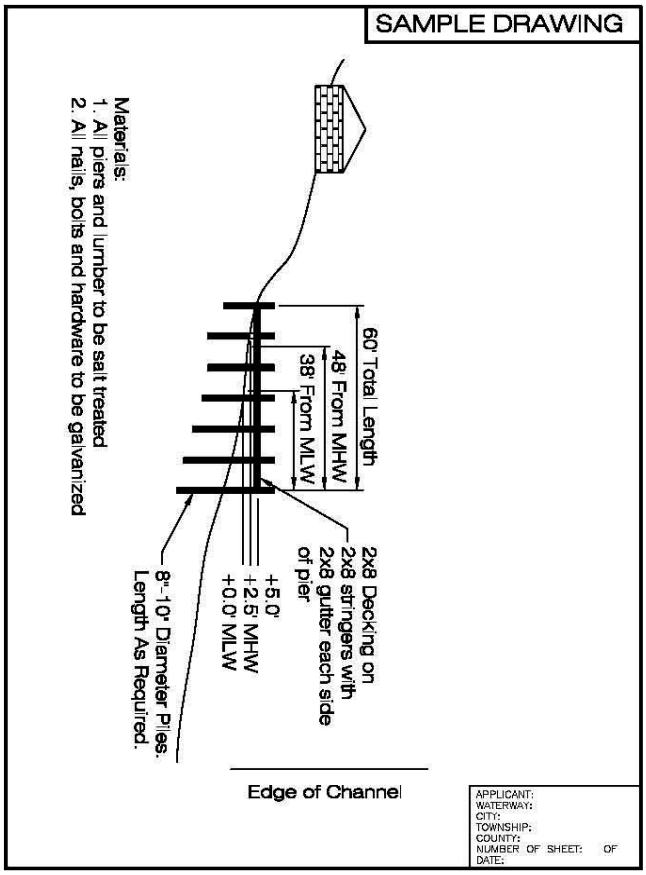
JURISDICTIONAL BOUNDARIES

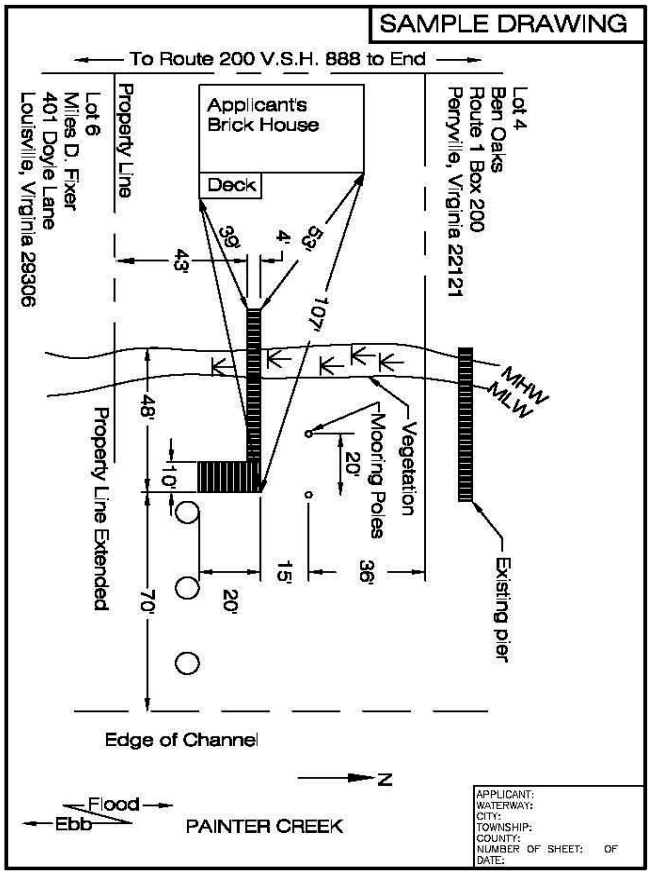


and DEQ (including isolated wetlands)

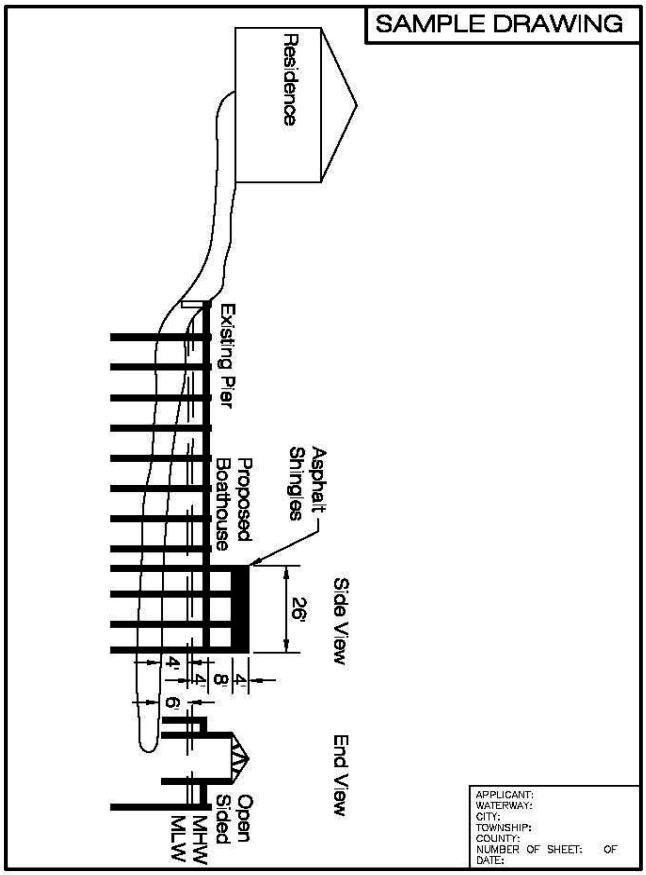


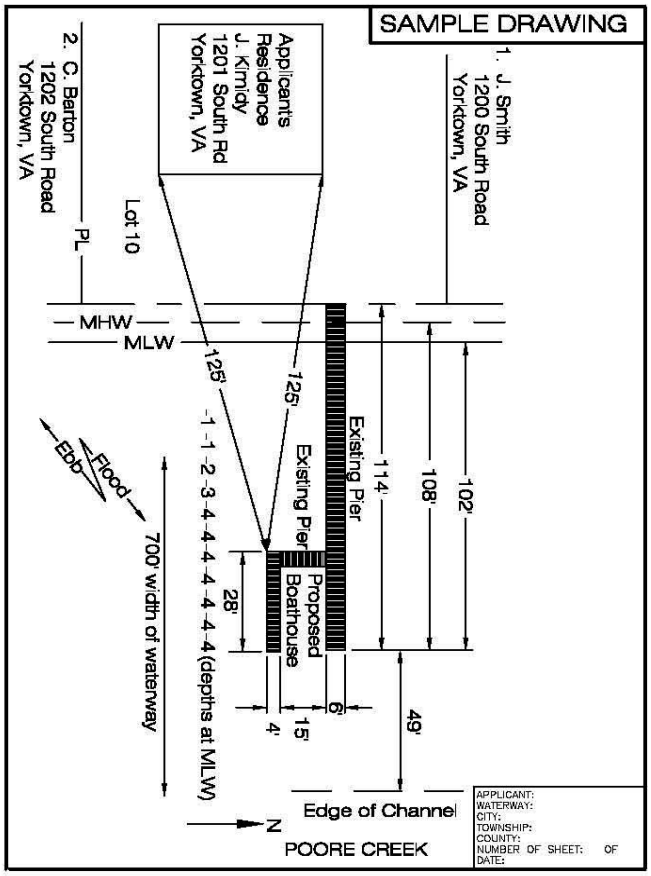
ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh



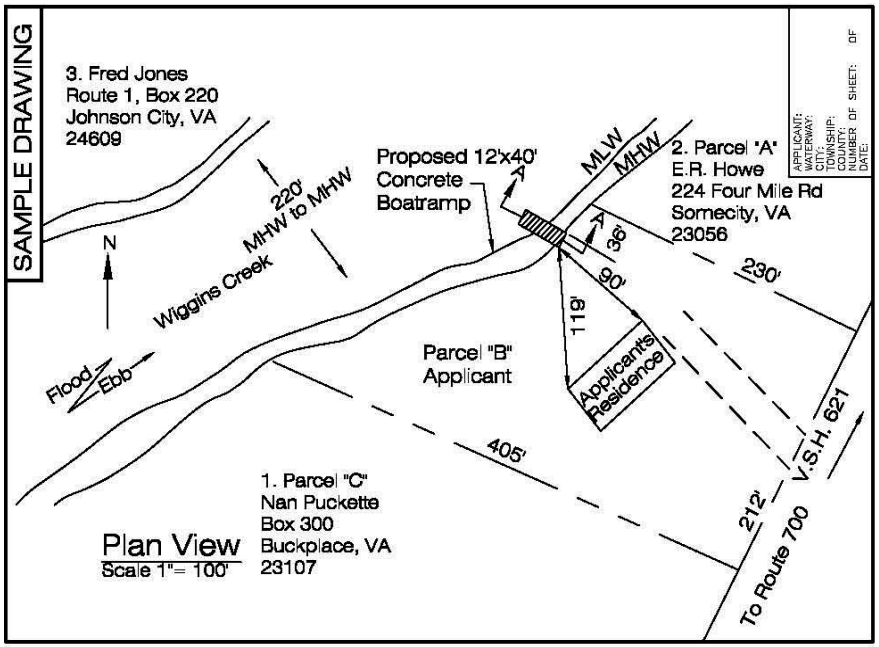


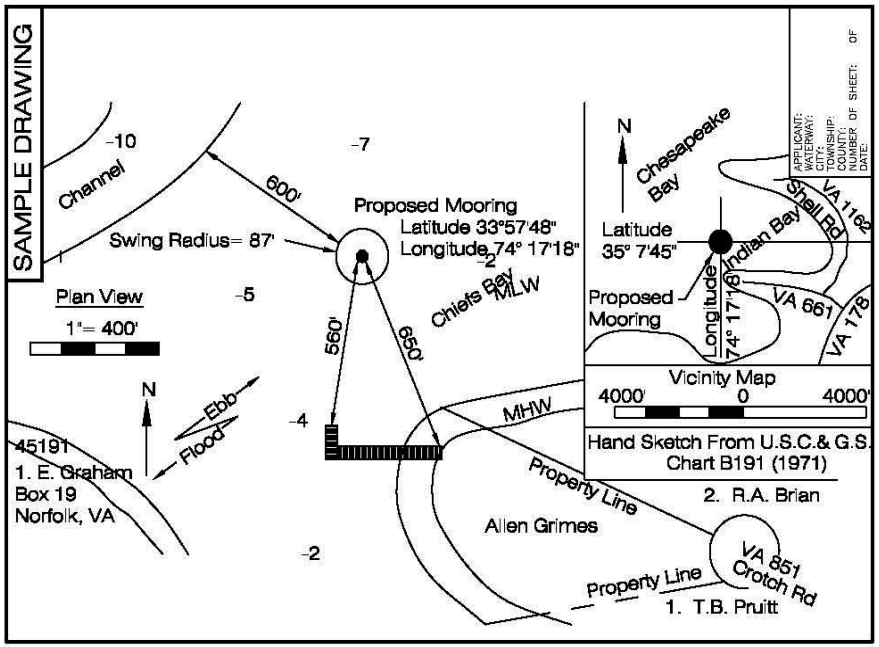
Private Piers & Marginal Wharves



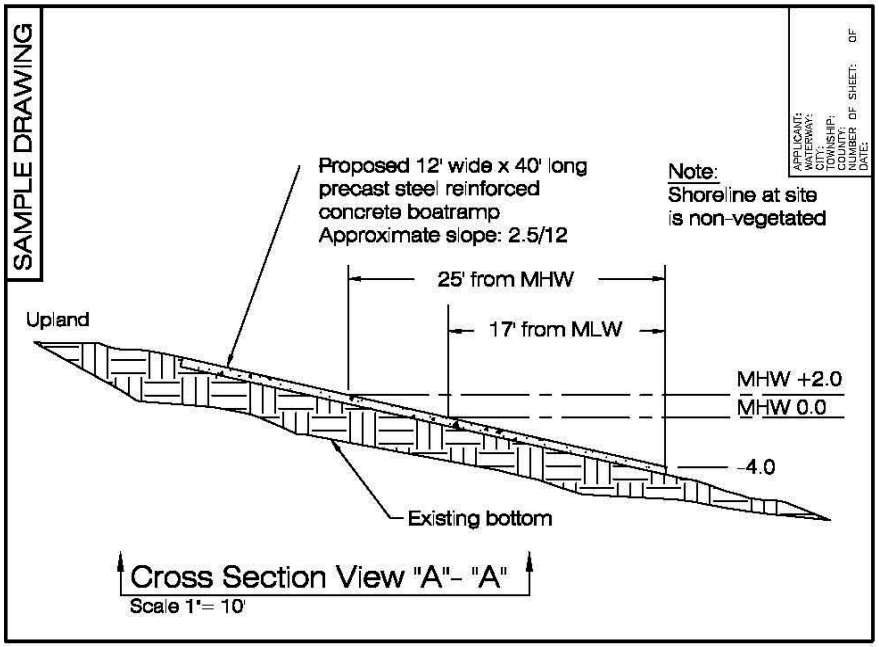


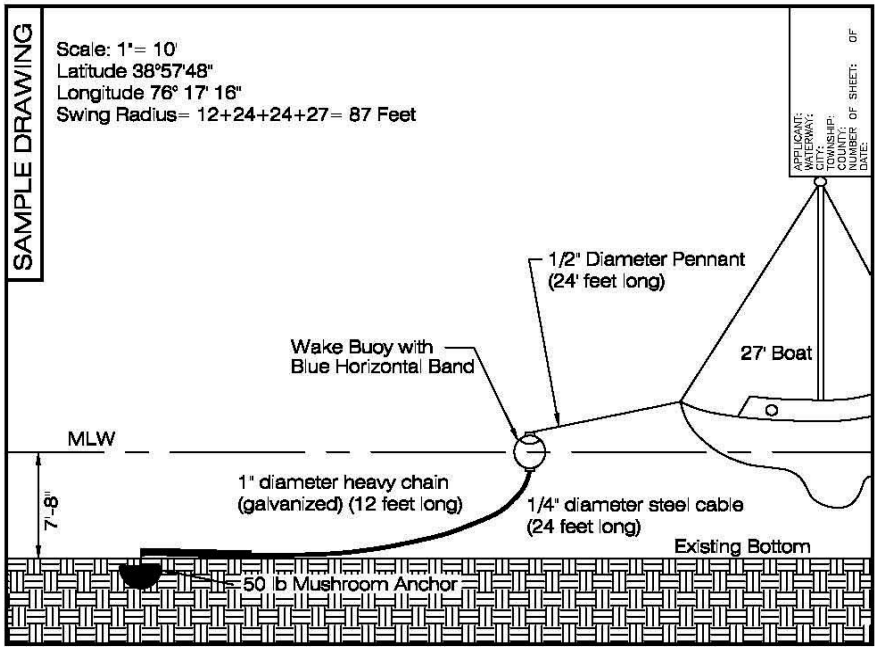
Boathouses





Boat Ramps





Dolphins or Moorings

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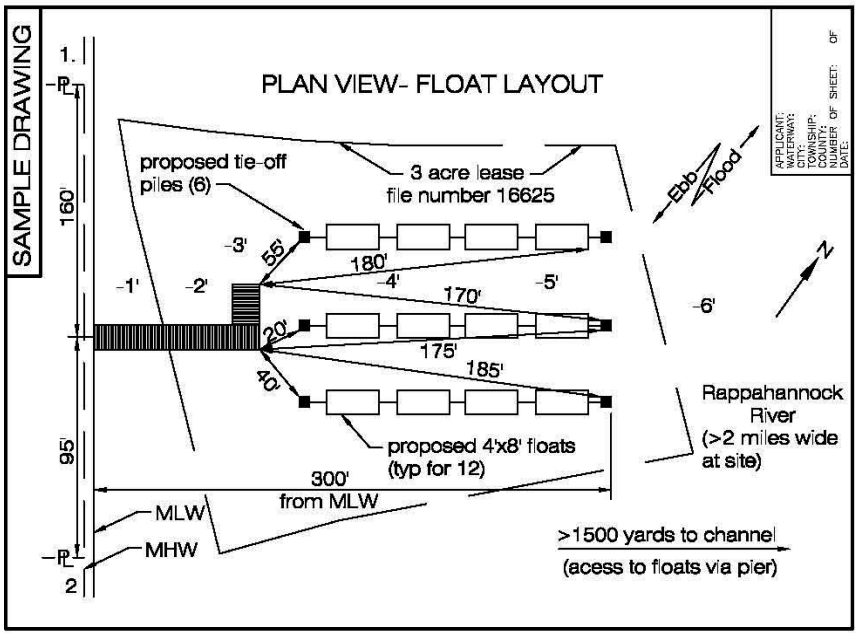

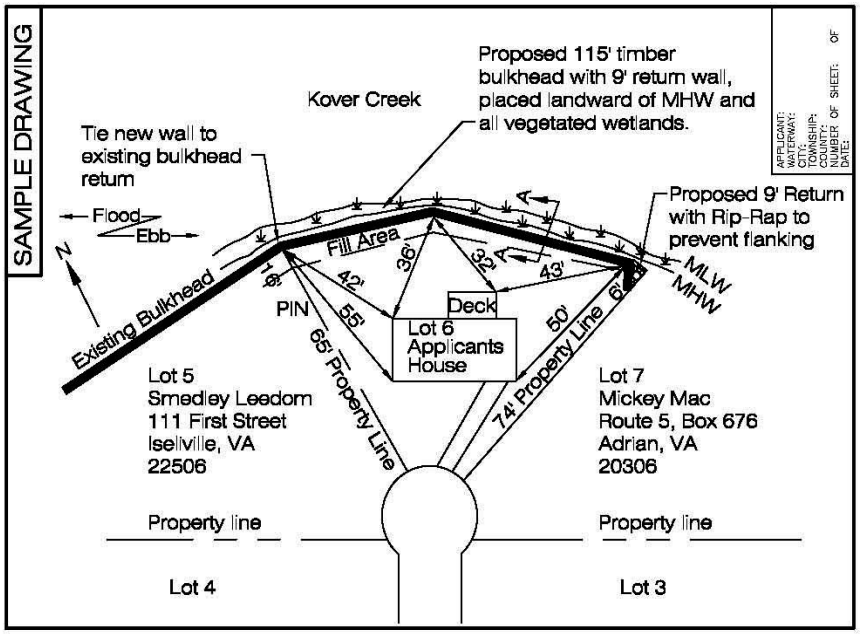

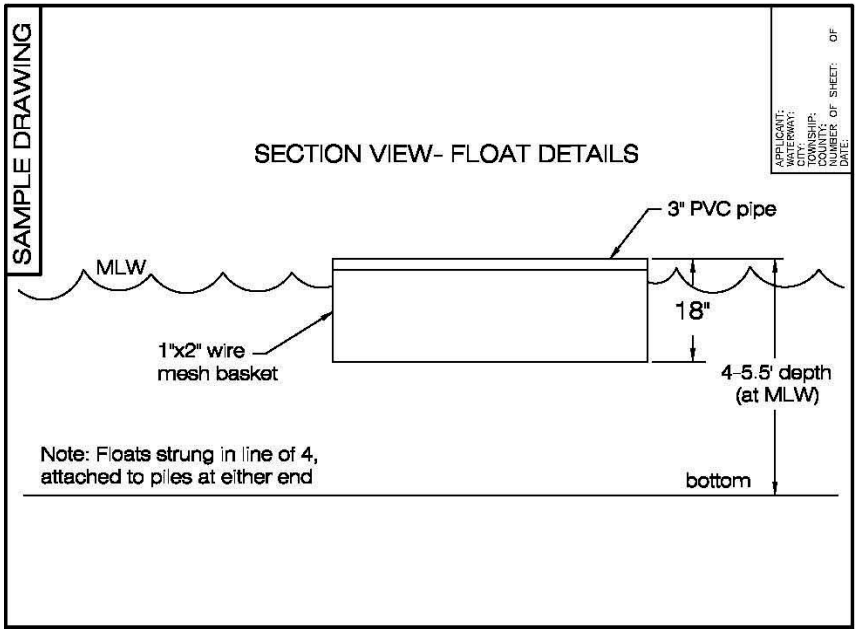

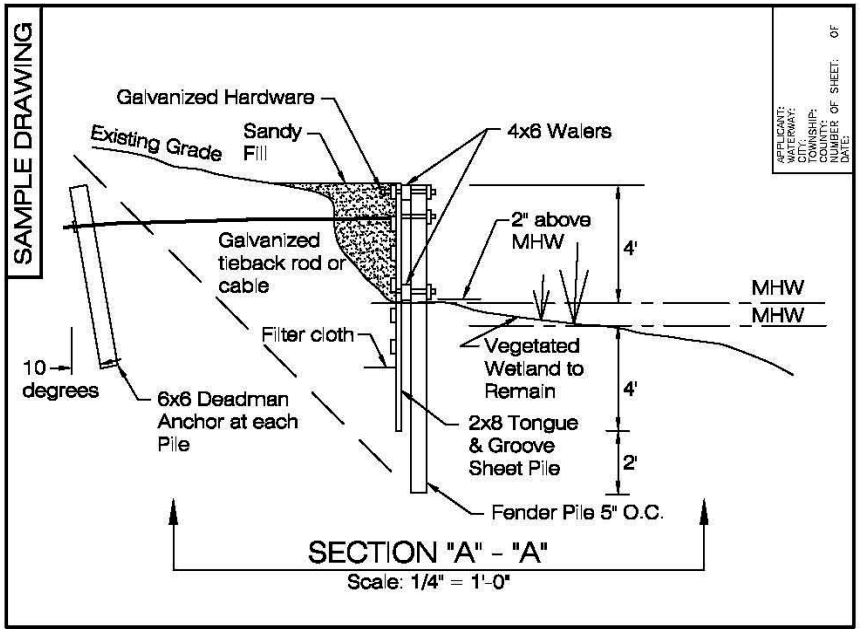

Private & Commercial Aquaculture Activities

Bulkheads and Associated Backfill

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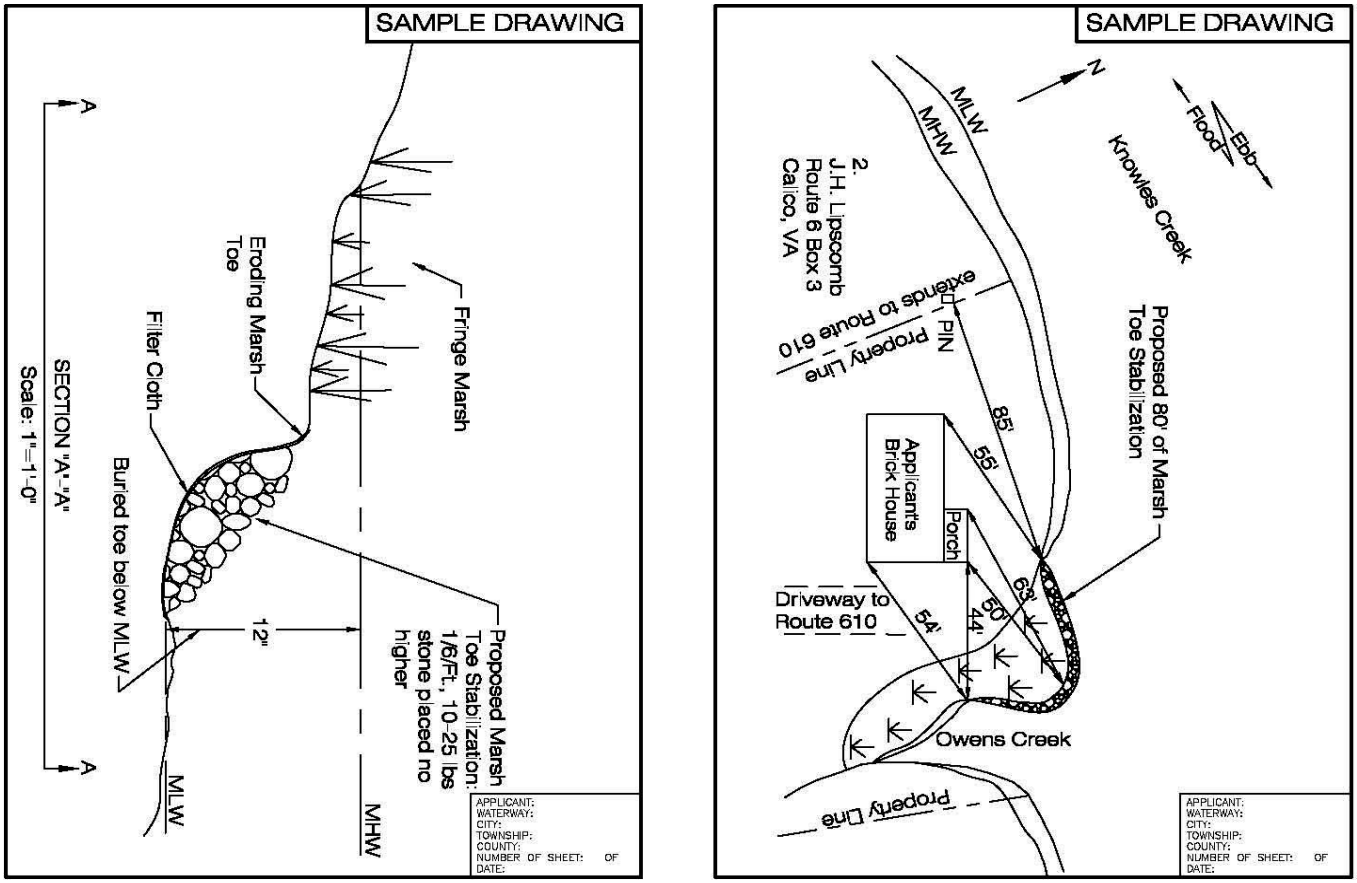
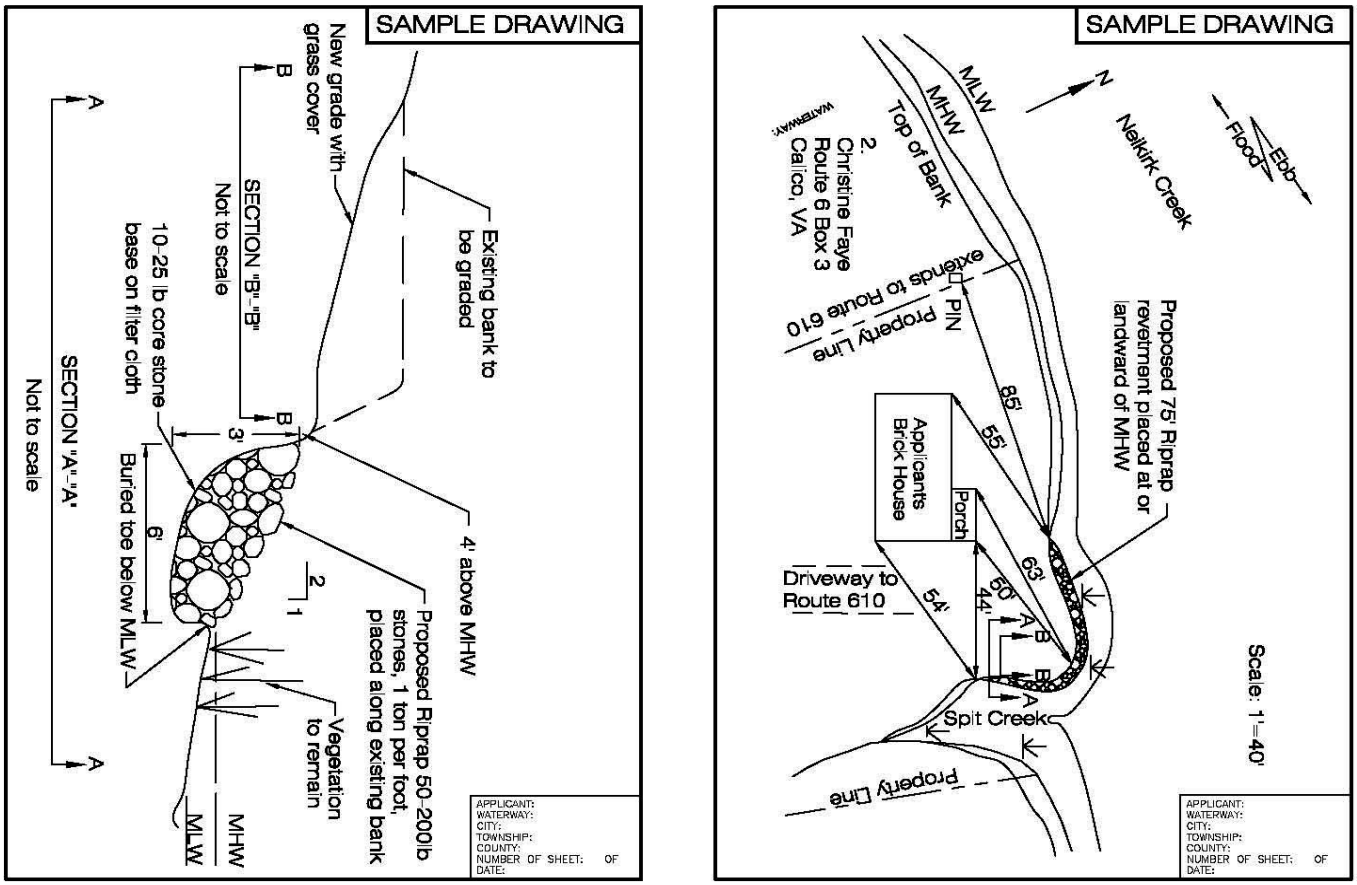


Marsh Toe Stabilization



Riprap Revetment & Associated Backfill

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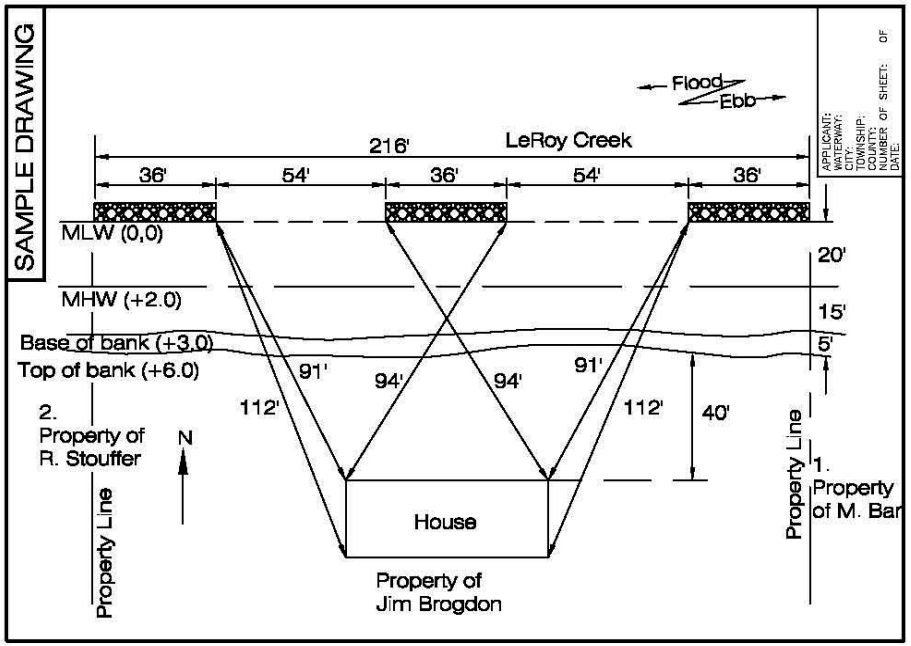

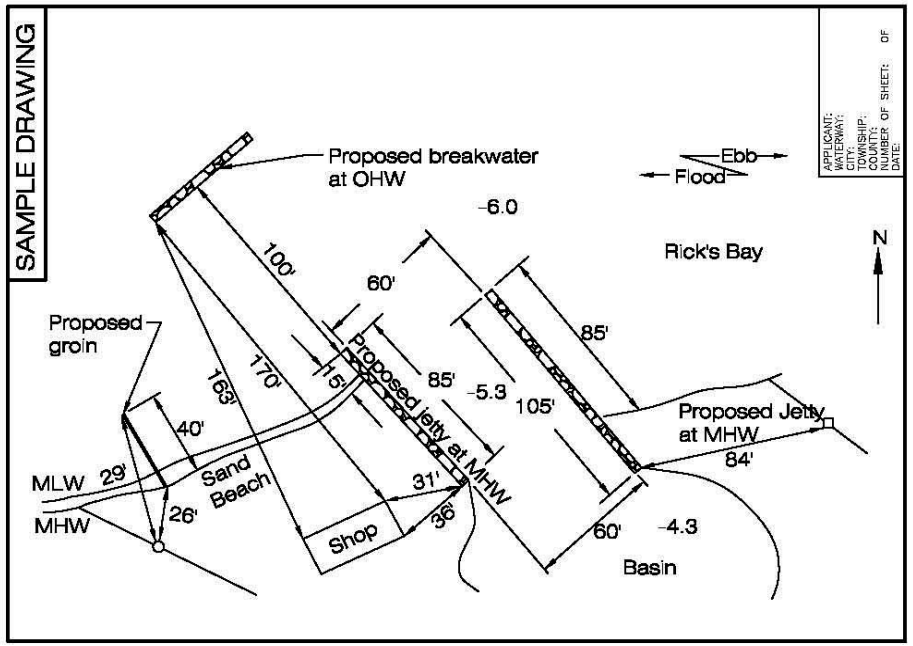

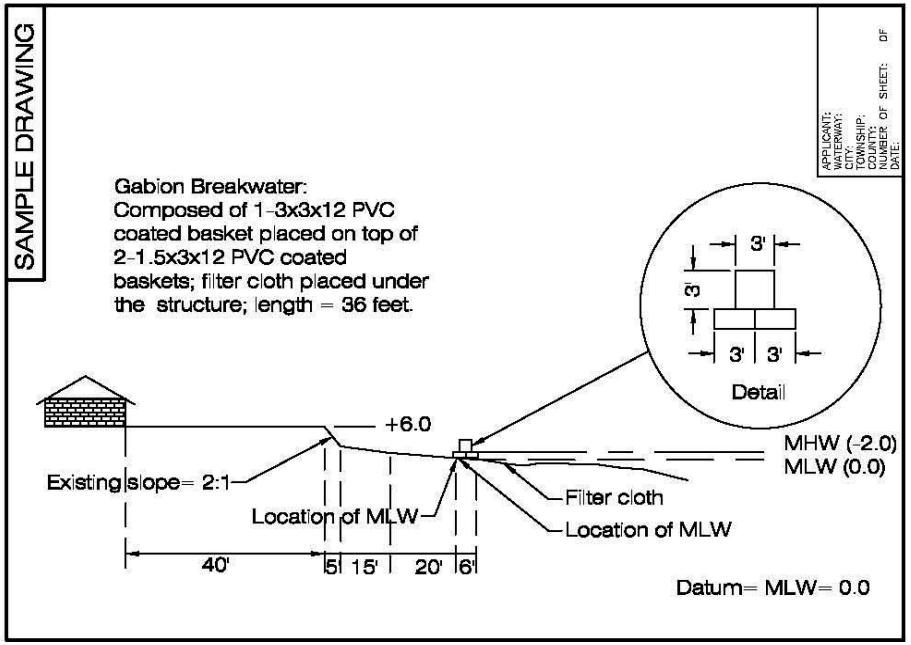

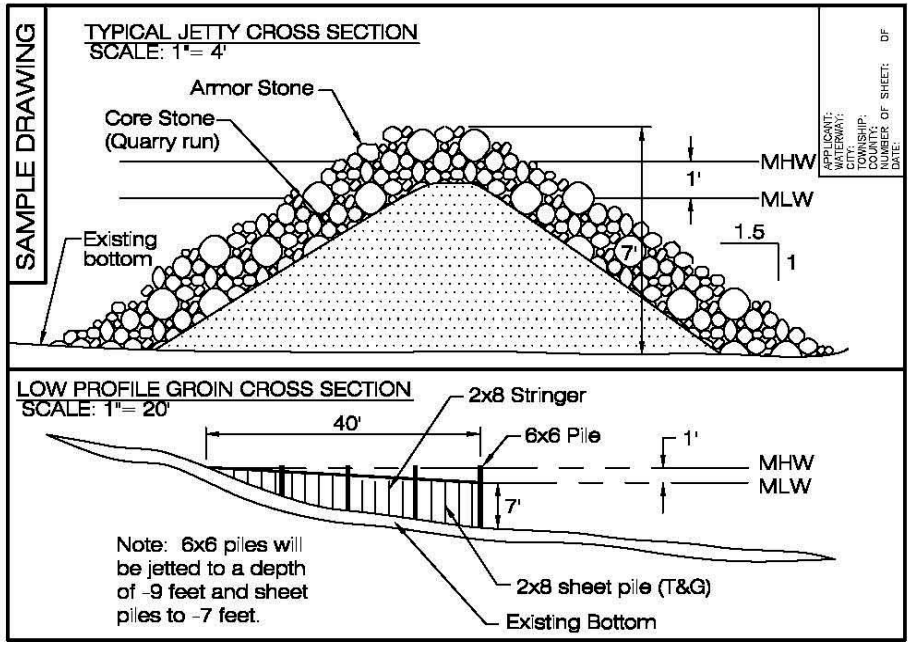

Breakwaters

Groins & Jetties

31

Application Revised: October 2019

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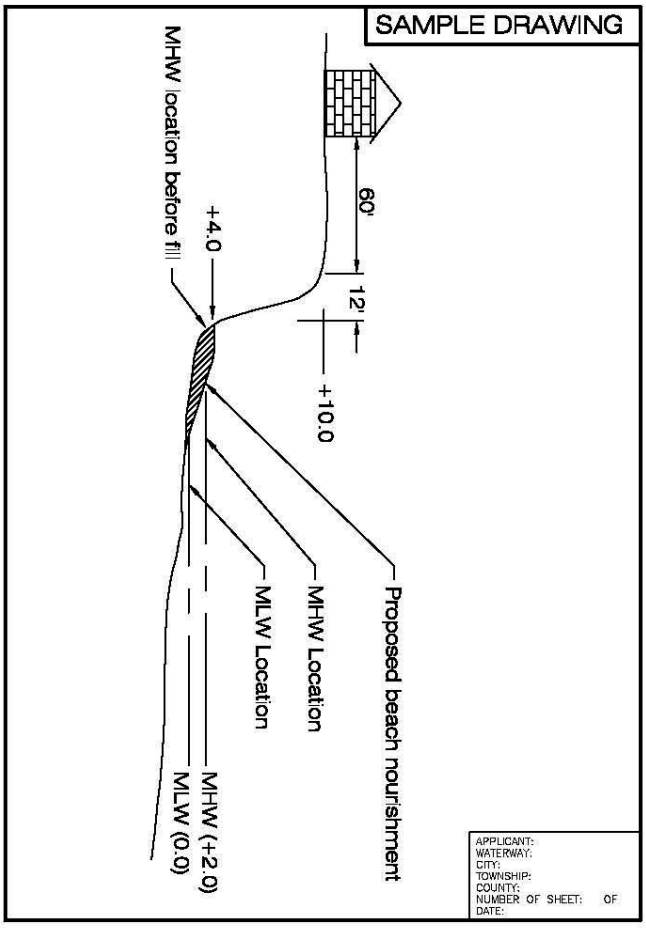

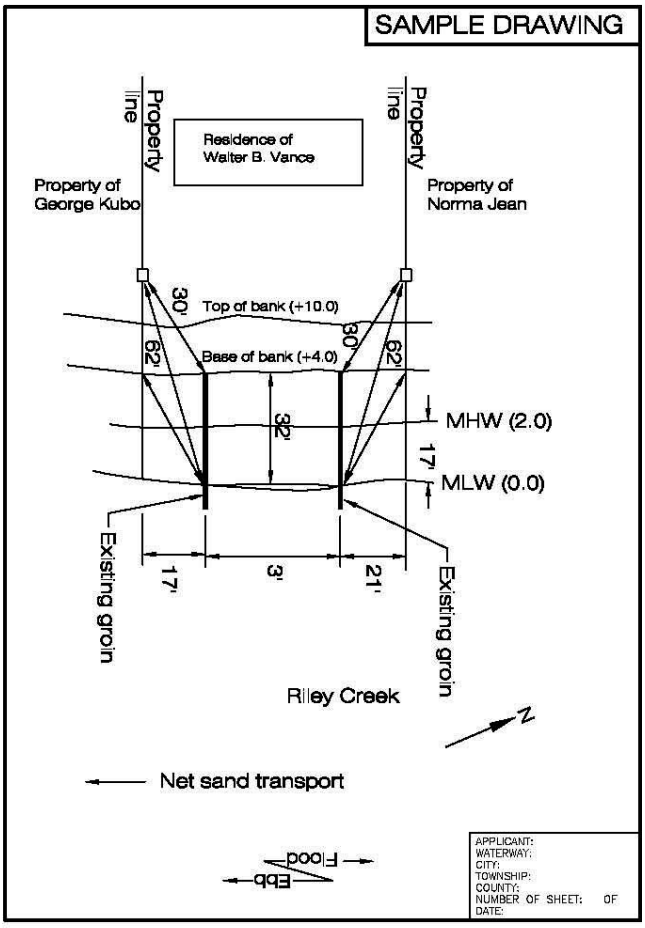

Beach Nourishment

(http://www.kingandqueenco.net/)

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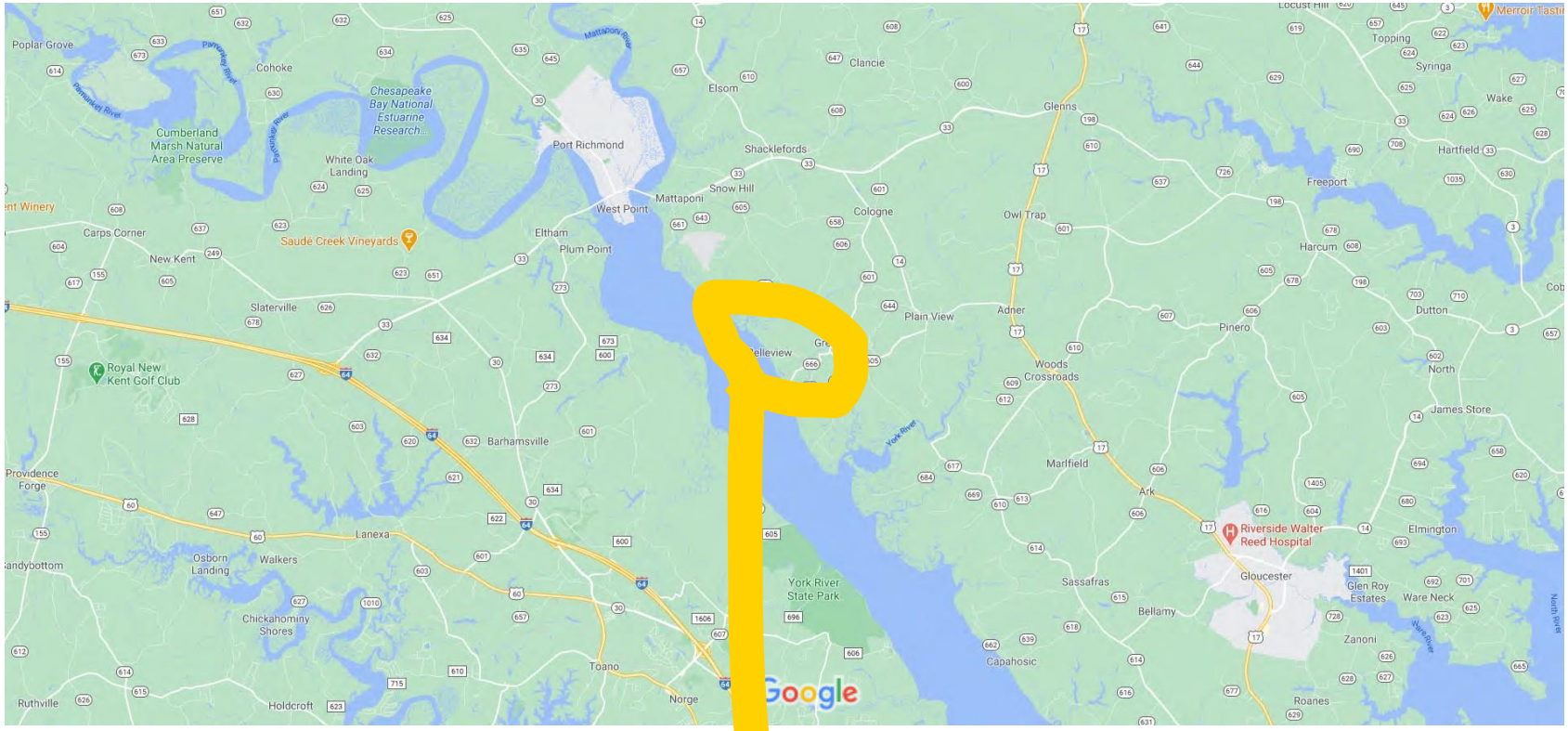
Google Maps



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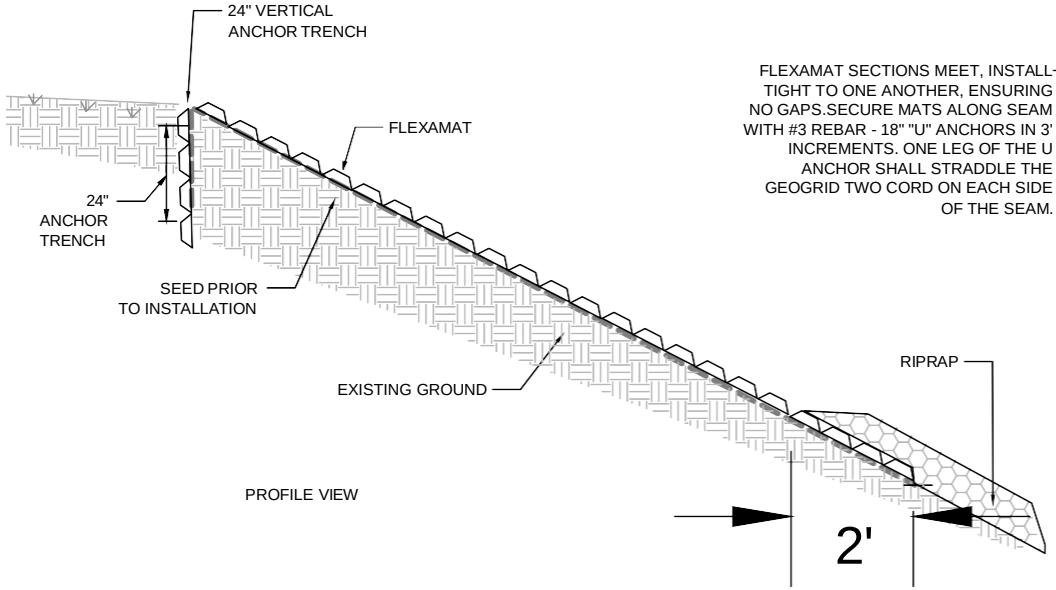
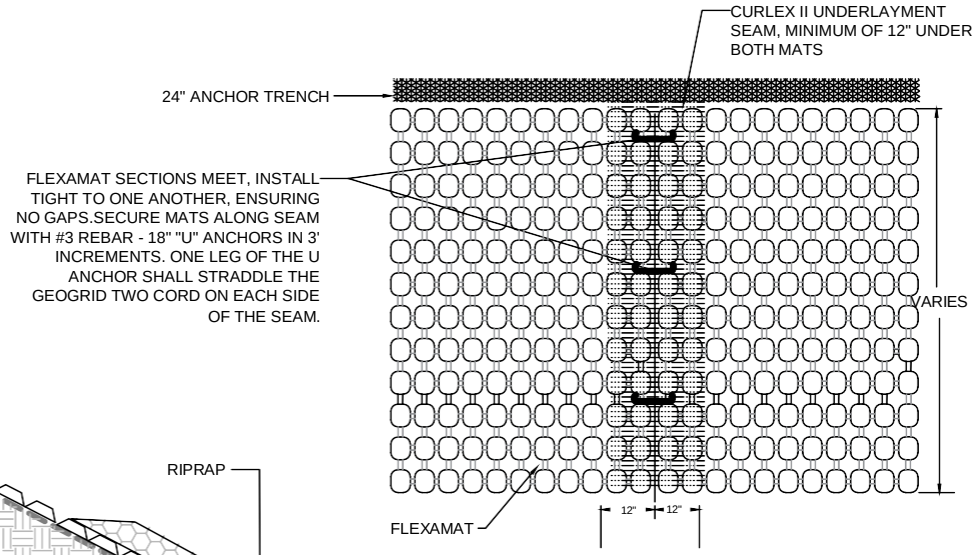


PROFILE VIEW



PROFILE VIEW -

LONGITUDINAL SEAM

FLEXAMAT® INFORMATION

Manufacturer:	Motz Enterprises, Inc.
Product Name:	Flexamat
Address:	3153 Madison Road
	Cincinnati, Ohio 45209
Telephone:	513-772-6689
Email:	Info@Flexamat.com
Website:	www.Flexamat.com

CONSTRUCTION NOTES:

1. GRADE A UNIFORM SUBGRADE. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
2. APPLY SEED DIRECTLY TO THE PREPARED SOIL PRIOR TO INSTALLATION OF MATS. USE SEED AND /OR TOPSOIL PER PROJECT SPECIFICATIONS.
3. FLEXAMAT SHALL EXTEND A MINIMUM OF 2' BEYOND THE RIPRAP ALONG TOE OF MAT.
4. AT ANY SEAMS IN THE MAT, THE FLEXAMAT SHALL BE MANUALLY FLIPPED BACK 3' THE LENGTH OF THE SEAM ON BOTH ADJACENT MATS. RECYCLEX TRM UNDERLAYMENT SHALL BE INSTALLED UNDER THE SEAM, WITH A MINIMUM OF 12" OF THE UNDERLAYMENT UNDER EITHER MAT. MAT SHALL THEN BE MANUALLY FLIPPED BACK INTO PLACE SO THAT THE FLEXAMAT SECTIONS FIT TIGHTLY. A CONCRETE SAW MAY BE NECESSARY TO CUT MAT TO FIT TIGHTLY TO ADJACENT SECTION OF MAT.
5. SECURE SEAMS WITH #3 REBAR - 18" "U' ANCHORS IN 3' INCREMENTS. ONE LEG OF THE "U" ANCHORS SHALL EXTEND OVER GEOGRID CORDS ON EITHER SIDE OF THE SEAM. .
6. SECURE INITIAL LEADING EDGE OF THE TOP OF MAT IN 24" DEEP ANCHOR TRENCH.

FLEXAMAT ®
SHORELINE ARMORING UNDER RIPRAP - WAVE ACTION
INSTALLATION DETAIL

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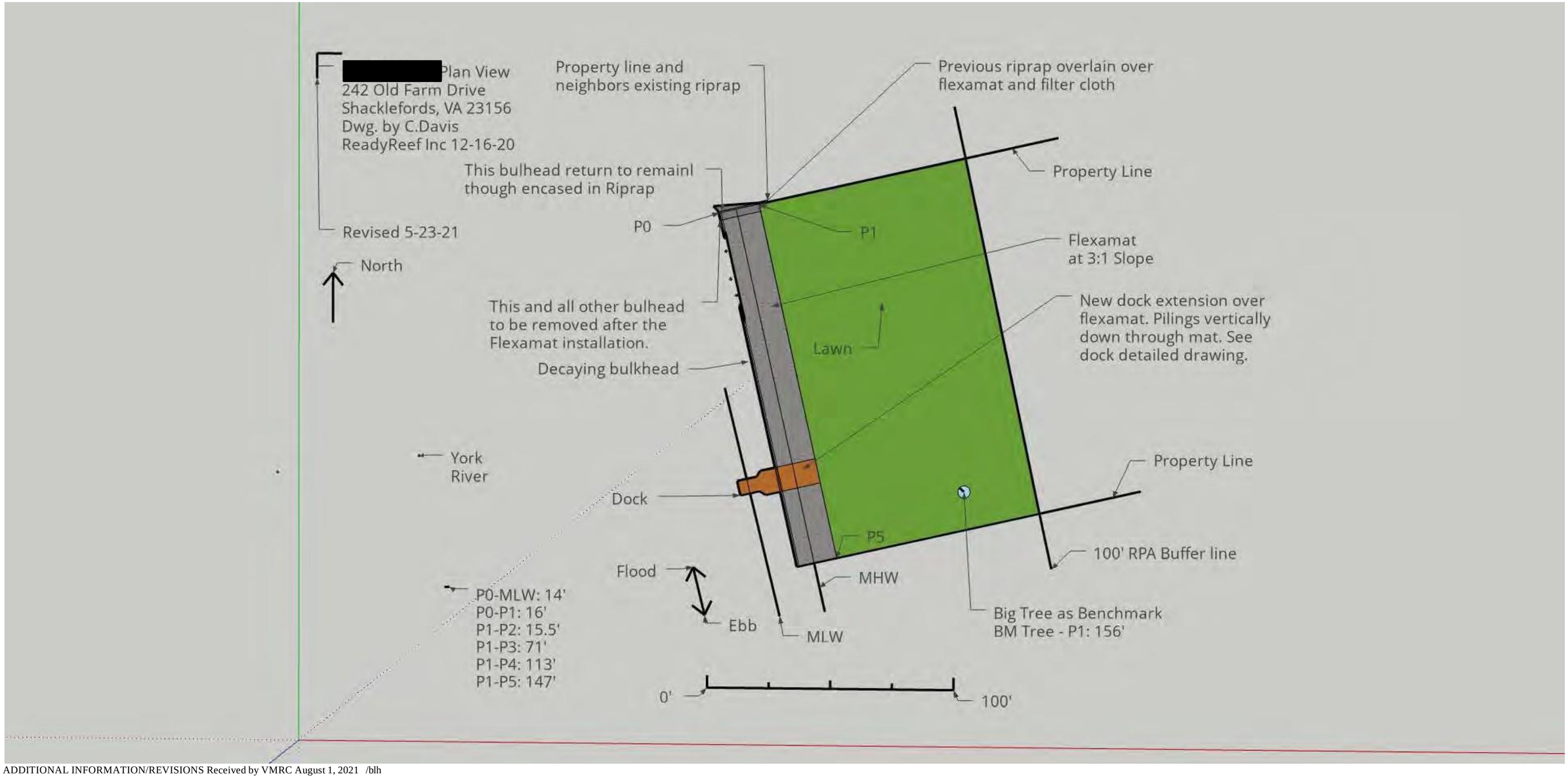

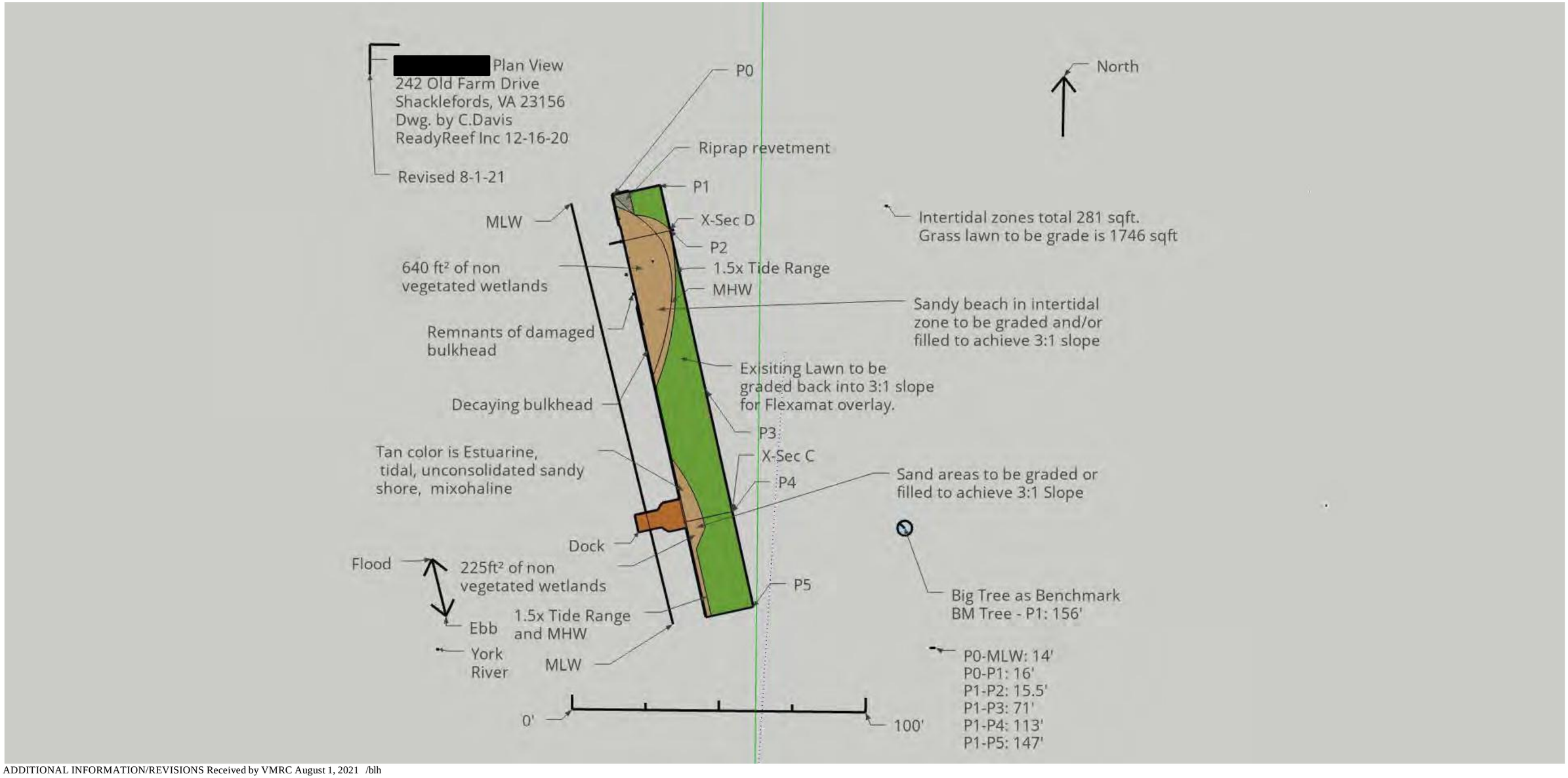

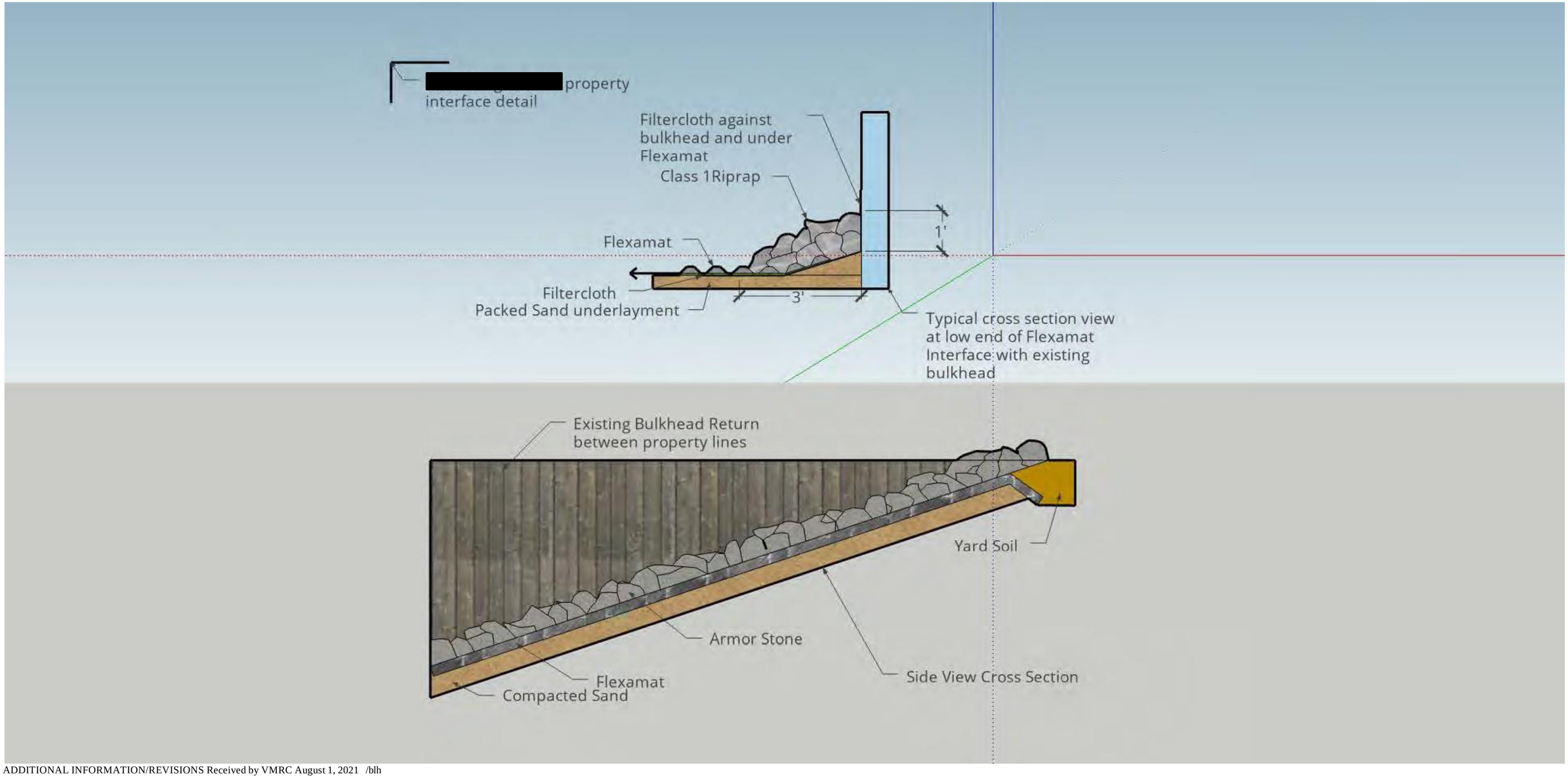

Flexamat – Tied Concrete Block Mats

1. DESCRIPTION

Flexamat – Tied Concrete Block Erosion Control Mats

This work shall consist of furnishing and placing the Flexamat system in accordance with this specification and conforming with the lines, grades, design, and dimensions shown on the plans.

2. MATERIALS

Flexamat is manufactured from individual concrete blocks tied together with high strength polypropylene bi-axial geogrid. Each block is tapered, beveled and interlocked and includes connections that prevent lateral displacement of the blocks within the mats when they are lifted for placement.

Tied Concrete Block Mats shall be Flexamat, manufactured by Motz Enterprises, Inc. or approved equal (See Section 3, Alternative Products).

2.1. **Blocks.** Furnish blocks manufactured with concrete conforming to the cement requirements of ASTM C150 and to the aggregate requirements of ASTM C33. Meet a minimum compressive strength of 5,000 psi at 28 days. Furnish blocks that have a minimum weight of 3 lb. per block. Blocks shall be placed no further than 2 in. apart.

2.2. **Polypropylene Bi-Axial Geogrid.** Provide revetment mat that is constructed of a high tenacity, low elongating, and continuous filament polypropylene fibers that is securely cast into and embedded within the base of the concrete blocks and obtains connection strength greater than that of the geogrid. Ensure the geogrid meets the requirements of Table 1:

Table1
Polypropylene Bi-Axial Geogrid

Description	Requirement
UV Stabilization	2% Carbon Black
Ultimate Tensile Strength	2055 lb./lf

2.3. **Underlayment Materials** – Three backing options:

- Standard Flexamat – Includes Curlex® II backing
- Flexamat Plus – Includes both Curlex® II and Recyclex TRM-V
- Flexamat with Filter Fabric – Includes non-woven filter fabric backing.

The backing material shall be packaged within roll of Flexamat.

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Curlex® II:

Curlex II erosion control blanket (ECB) consists of a specific cut of naturally seed free Great Lakes Aspen curled wood excelsior with 80% six-inch fibers or greater fiber length. It is of consistent thickness with fibers evenly distributed throughout the entire area of the blanket. The top and bottom of each blanket is covered with degradable polypropylene netting.

Index Property	Test Method	Value
Thickness	ASTM D 6525	0.418 in (10.62 mm)
Light Penetration	ASTM D 6567	34.6%
Resiliency	ASTM D 6524	64%
Mass per Unit Area	ASTM D 6475	0.57 lb/yd^2 (309 g/m^2)
MD-Tensile Strength Max.	ASTM D 6818	127.0 lb/ft (1.9 kN/m)
TD-Tensile Strength Max.	ASTM D 6818	50.9 lb/ft (0.7 kN/m)
MD-Elongation	ASTM D 6818	28.64%
TD-Elongation	ASTM D 6818	29.84%
Swell	ECTC Procedure	89%
Water Absorption	ASTM D 1117/ECTC	199%
Bench-Scale Rain Splash	ECTC Method 2	SLR = 6.84 @ 2 in/hr [2,3]
Bench-Scale Rain Splash	ECTC Method 2	SLR = 7.19 @ 4 in/hr [2,3]
Bench-Scale Rain Splash	ECTC Method 2	SLR = 7.56 @ 6 in/hr [2,3]
Bench-Scale Shear	ECTC Method 3	2.6 lb/ft^2 @ 0.5 in soil loss [3]
Germination Improvement	ECTC Method 4	645%

[1] Weight is based on a dry fiber weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen excelsior is 22%.

[2] SLR is the Soil Loss Ratio, as reported by NTPEP/AASHTO. [3] Bench-scale index values should not be used for design purposes.

Recyclex® TRM:

Recyclex TRM – V is a permanent non-degradable Turf Reinforcement Mat (TRM), consists of 100% post-consumer recycled polyester (green or brown bottles) with 80% five-inch fibers or greater fiber length. It is of consistent thickness with fibers evenly distributed throughout the entire area of the TRM. The top and bottom of each TRM is covered with heavy duty polypropylene net. Fibers are tightly crimped and curled to allow fiber interlock, and to retain 95% memory of the original shape after loading by hydraulic events. Fibers have a specific gravity greater than 1.0; therefore, the blanket will not float during hydraulic events. Recyclex TRM – V meets Federal Government Executive Order initiatives for use of products made from, or incorporating, recycled materials. Recyclex TRM – V shall be manufactured in the U.S.A. and the fibers shall be made from 100a% recycled post-consumer goods.

Index Property	Test Method	Value
Thickness	ASTM D 6525	0.294 in (7.47 mm)
Light Penetration	ASTM D 6567	57%
Resiliency	ASTM D 6524	86%
Mass per Unit Area	ASTM D 6566	0.50 lb/yd^2 (271 g/m^2)
MD-Tensile Strength Max.	ASTM D 6818	295.2 lb/ft (4.32 kN/m)
TD-Tensile Strength Max.	ASTM D 6818	194.4 lb/ft (2.85 kN/m)
MD-Elongation	ASTM D 6818	32.2%
TD-Elongation	ASTM D 6818	40.8%
Swell	ECTC Procedure	8%
Water Absorption	ASTM D 1117/ECTC	33.8%
Specific Gravity	ASTM D 792	1.21
UV Stability	ASTM D 4355 (1,000 hr)	80% minimum
Porosity	Calculated	97.5%
Bench-Scale Rain Splash	ECTC Method 2	SLR = 4.13 @ 2 in/hr [1,2]
Bench-Scale Rain Splash	ECTC Method 2	SLR = 4.97 @ 4 in/hr [1,2]
Bench-Scale Rain Splash	ECTC Method 2	SLR = 5.99 @ 6 in/hr [1,2]
Bench-Scale Shear	ECTC Method 3	2.40 lb/ft^2 @ 0.5 in soil loss [2]
Germination Improvement	ECTC Method 4	353%

[1] SLR is the Soil Loss Ratio, as reported by NTPEP/AASHTO. [2] Bench-scale index values should not be used for design purposes

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10oz non-woven filter fabric:

The underlayment material shall be packaged in roll of Flexamat and shall meet the following characteristics:

Property	Test Method	English	Metric
Weight - Typical	ASTM D-5261	10 oz/sy	339 g/sm
Tensile Strength	ASTM D-4632	250 lbs	1,112 N
Elongation @ Break	ASTM D-4632	50%	50%
Mullen Burst*	ASTM D-3786*	500 psi	3,447 kPa
Puncture Strength*	ASTM D-4833*	155 lbs	690 N
CBR Puncture	ASTM D-6241	700 lbs	3,115 N
Trapezoidal Tear	ASTM D-4533	100 lbs	444 N
Apparent Opening Size	ASTM D-4751	100 US Sieve	0.150 mm
Permittivity	ASTM D-4491	1.20 Sec-1	1.20 Sec-1
Water Flow Rate	ASTM D-4491	80 g/min/sf	3,251 l/min/sm
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

2.4. Cover the mat or otherwise protect it during long periods of storage to protect against degradation of the backing material as recommended by the manufacturer.

2.5. Mats will be rolled for shipment and are packaged with handling straps. These handling straps shall only be used for lifting below 2 ft. to place heavy duty lifting straps under rolls. Upon delivery, rolls may be left exposed for up to 30 days. If exposure will exceed 30 days, cover or tarp the rolls to minimize UV exposure.

All mats to be inspected upon delivery. Assure that all units are sound and free of defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction.

Chipping or missing concrete resulting in a weight loss exceeding 15% of the average weight of a concrete unit is grounds for rejection by the engineer. Replace, repair or patch the damaged areas per the manufacturer's recommendations.

3. ALTERNATIVE PRODUCTS

Alternative products may be considered if composition matches the materials detailed in Section 2. Such products must be pre-approved in writing by the Engineer prior to bid date. Alternative product packages must be submitted to the Engineer a minimum of fifteen (15) days prior to bid date. Submittal packages for alternate products must include, as a minimum, the following:

a. Product Properties – Composition of materials, stating product is comprised of the following components:

   i. **Concrete Blocks** - minimum compressive strength of 5,000 psi at 28 days. Furnish blocks that have a minimum weight of 3 lb. per block. Blocks shall be placed no further than 2 in. apart.

   ii. **Polypropylene Bi-Axial Geogrid** – minimum tensile strength of 2055lbs

   iii. **Underlayment** - Minimum of a double-net excelsior (wood fiber) blanket, plus additional turf reinforcement or filter fabric as specified by design engineer. Underlayment must be packaged within the Tied Concrete Block Mat rolls.

b. Full-Scale laboratory testing performed by an independent 3rd party testing facility with associated engineered calculations certifying the hydraulic capacity of the proposed Tied-Concrete Block Erosion Control Mat meets the performance requirements listed in Section 4 of this specification.

c. A list of 15 comparable projects in terms of project size, application and material dimensions in the United States, where the results of the specific alternative material's use can be verified and reviewed for system integrity and sustained after a minimum of 5 years of service life.

4. PERFORMANCE

Full-Scale laboratory testing performed by an independent 3rd party testing facility with associated engineered calculations certifying the hydraulic capacity of the proposed Tied-Concrete Block Erosion Control Mat meets the following requirements:

Test	Tested Value	Bed Slope	Soil Classification	Limiting Value
ASTM 6460	Shear Stress	30%	Sandy Loam (USDA)	24lb./ft^2
ASTM 6460	Velocity	20%	Loam (USDA)	30 ft./sec

5. EQUIPMENT

Provide the proper equipment to place the mat that will not damage the mat material or disturb the top soil subgrade and seed bed.

6. CONSTRUCTION

Prior to installing Flexamat, prepare the subgrade as detailed in the plans. All subgrade surfaces to be smooth and free of all rocks, stones, sticks, roots, and other protrusions or debris of any kind that would result in an individual block being raised more than 3/4 in. above the adjoining blocks. When seeding is shown on the plans, provide subgrade material that can sustain growth.

Ensure the prepared subgrade provides a smooth, firm, and unyielding foundation for the mats. The subgrade shall be graded into a parabolic or trapezoidal shape to concentrate flow to middle of mat or mats.

When vegetation is required, distribute seed on the prepared topsoil subgrade before installation of the concrete mats in accordance with the specifications.

Install mats to the line and grade shown on the plans and per the manufacturer's guidelines. The manufacturer or authorized representative will provide technical assistance during the slope preparation and installation of the concrete block mats as needed.

Provide a minimum 18 in. deep concrete mat embedment toe trench at all edges exposed to concentrated flows. Recess exterior edges subject to sheet flow a minimum of 3 in.

When needed, provide fastening or anchoring as recommended by the manufacturer or engineer for the site conditions.

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For seams parallel to the flow line in ditch or channel applications, center a minimum 3 ft. wide strip of soil retention blanket under the seam. Fasten along the seam at 5 ft. maximum spacing. Parallel seams in the center of the ditch shall be avoided when possible.

Shingle seams perpendicular to the flow line with the downstream mat recessed a minimum of 2 blocks under the upstream mat and fastened together along the seam at 2 ft. maximum spacing if required by manufacturer or engineer.

7. MEASUREMENT

This Item will be measured by the square foot as shown on the plans, complete in place.

8. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Flexamat". This price is full compensation for loading and transporting, placing concrete block mats; excavation and disposal; furnishing topsoil and bedding; and equipment, labor, materials, tools, and incidentals.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Attachment 6: Property #2 JPA and Design (adjacent property)

From: Chris Davis
To: Joshua Rellick; jpa.permits@mrc.virginia.gov; Birge, Tiffany
Cc: [redacted]
Subject: Revised [redacted] JPA #21-0820
Date: Sunday, August 1, 2021 3:37:35 PM
Attachments: [redacted]

Find attached documents with the revisions requested per Joshua Rellick on July 30th

Regulatory Agency Contact Information

Virginia Marine Resources Commission (VMRC)
Habitat Management Division
380 Fenwick Road, Building 96
Fort Monroe, VA 23651
Phone: (757) 247-2200, Fax: (757) 247-8062
Website: http://www.mrc.virginia.gov/hmac/hmoverview.shtm

United States Army Corps of Engineers (USACE)
Norfolk District
803 Front Street, ATTN: CENAO-WR-R
Norfolk, Virginia 23510-1011
Phone: (757) 201-7652, Fax: (757) 201-7678
Website: http://www.nao.usace.army.mil/Missions/Regulatory.aspx

Virginia Department of Environmental Quality (DEQ)
Virginia Water Protection Permit Program
Post Office Box 1105
Richmond, Virginia 23218
Phone: (804) 698-4000
Website: http://www.deq.virginia.gov/

LOCAL WETLANDS BOARD (LWB) CONTACT INFORMATION:
Links to LWB information on the Web can be found at http://ccrm.vims.edu/permits_web/guidance/local_wetlands_boards.html
In addition, the phone numbers listed below can be used to contact the LWB. Please be advised that these phone numbers are subject to change at any time.

Accomack County (757) 787-5721, Cape Charles (757) 331-3259, Charles City County (804) 829-9296, Chesapeake (757) 382-6248, Colonial Heights (804) 520-9275, Essex County (804) 443-4951, Fairfax County (703) 324-1364, Fredericksburg (540) 372-1179, Gloucester County (804) 693-2744, Hampton (757) 727-6140, Hopewell (804) 541-2267, Isle of Wight County (757) 365-6211, James City County (757) 253-6673, King and Queen County (804) 769-4978, King George County (540) 775-7111, King William County (804) 769-4927, Lancaster County (804) 462-5220, Mathews County (804) 725-5025, Middlesex County (804) 758-0500, New Kent County (804) 966-9690, Newport News (757) 247-8437, Norfolk (757) 664-4368, Northampton County (757) 678-0442, Northumberland County (804) 580-8910, Poquoson (757) 868-3040, Portsmouth (757) 393-8836, Prince William County (703) 792-6984, Richmond County (804) 333-3415, Stafford County (540) 658-8668, Suffolk (757) 923-3650, Virginia Beach (757) 427-8246, Westmoreland County (804) 493-0120, West Point (804) 843-3330, Williamsburg (757) 220-6130, York County (757) 890-3538

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Tidewater Joint Permit Application (JPA)
For Projects Involving Tidal Waters, Tidal Wetlands and/or Dunes and Beaches in Virginia

This application may be used for most commercial and noncommercial projects involving **tidal waters, tidal wetlands and/or dunes and beaches in Virginia** which require review and/or authorization by Local Wetlands Boards (LWB), the Virginia Marine Resources Commission (VMRC), the Department of Environmental Quality (DEQ), and/or the U. S. Army Corps of Engineers (USACE). This application can be used for:

- **Access-related activities**, including piers, boathouses, boat ramps (without associated dredging or excavation*), moorings, marinas.
- **Shoreline stabilization projects** including living shorelines, riprap revetments, marsh toe stabilization, bulkheads, breakwaters, beach nourishment, groins, and jetties. It is the policy of the Commonwealth that living shorelines are the preferred alternative for stabilizing tidal shorelines (Va. Code § 28.2-104.1).
- **Crossings** over or under tidal waters and wetlands including bridges and utility lines (water, sewer, electric).
- **Aquaculture structures**, including cages and floats except "oyster gardening"**

***Note:** for all dredging, excavation, or surface water withdrawal projects you **MUST** use the Standard JPA form; for noncommercial, riparian shellfish aquaculture projects (i.e., "oyster gardening") you must use the abbreviated JPA found at https://mrc.virginia.gov/forms/2019/VGP3_Aquaculture_form_2019.pdf or call VMRC for a form.

The DEQ and the USACE use this form to determine whether projects qualify for certain General, Regional, and/or Nationwide permits. If your project does not qualify for these permits and you need a DEQ Virginia Water Protection permit or an individual USACE permit, you must submit the Standard Joint Permit application form. You can find this application at http://www.nao.usace.army.mil/Missions/Regulatory/JPA.aspx. Please note that some health departments and local agencies, such as local building officials and erosion and sediment control authorities, do not use the Joint Permit Application process or forms and may have different informational requirements. The applicant is responsible for contacting these agencies for information regarding those permitting requirements.

HOW TO APPLY

Submit one (1) completed copy of the Tidewater JPA to VMRC:

1. If by mail or courier, use the VMRC address provided on page 1.
2. If by electronic mail, address the package to: **JPA.permits@mrc.virginia.gov.** The application must be provided in the .pdf format and should not exceed 10 MB. If larger than 10 MB you may provide a file transfer protocol (ftp) site for download purposes.

The Tidewater JPA should include the following:

1. **Part 1** – General Information
2. **Part 2** – Signatures
3. **Part 3 -** Appendices (A, B, C, and/or D as applicable to your project)
4. **Part 4** – Project Drawings.
   The drawings shall include the following for **ALL** projects:
   - Vicinity Map (USGS topographic map, road map or similar showing project location)
   - Plan View Drawing (overhead, to scale or with dimensions clearly marked)
   - Section View Drawing (side-view, to scale or with dimensions clearly marked)

Sample drawings are included at the end of Part 4 of this application to show examples of the information needed to consider your application complete and allow for the timely processing.

When completing this form, use the legal name of the applicant, agent, and/or property owner. For DEQ application purposes, *legal name* means the full legal name of an individual, business, or other organization. For an individual, the legal name is the first name, middle initial, last name, and suffix. For an entity authorized to do business in Virginia, the legal name is the exact name set forth in the entity's articles of incorporation, organization or trust, or formation agreement, as applicable. Also provide the name registered with the State Corporation Commission, if required to register. DEQ issues a permit or grants coverage to the so-named individual or business, who becomes the 'permittee'. Correspondence from some agencies, including permits, authorizations, and/or coverage, may be provided via electronic mail. If the applicant and/or agent wishes to receive their permit via electronic mail, please remember to include an e-mail address at the requested place in the application.

In order for projects requiring LWB authorization to be considered complete (Virginia Code § 28.2-1302); "The permit application shall include the following: the name and address of the applicant; a detailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances of facilities, including those on the adjacent uplands; a description of the type of equipment to be used and the means of access to the activity site; the names and addresses of record of adjacent land and known claimants of water rights in or adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; and secondary purpose of the proposed project; a complete description of measures to be taken during and after alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require."

You may include signed Adjacent Property Owner (APO) Acknowledgement Forms found at the end of this Short Form. You must provide these addresses in Part 1 whether or not you use the APO forms. VMRC will request comments from APOs for projects that require permits for encroachment over state-owned submerged lands. VMRC or your local wetlands board must notify all APO's of public hearings required for all proposals involving tidal wetlands and dunes/beaches that are not authorized by statute. This information will not be used by DEQ to meet the requirements of notifying riparian land owners.

Regional Permit 17 (RP-17), authorizes the installation and/or construction of open-pile piers, mooring structures/devices, fender piles, covered boathouses/boatslips, boatlifts, osprey pilings/platforms, accessory pier structures, and certain devices associated with shellfish gardening, for private use, subject to strict compliance with all conditions and limitations further set out in the RP-17 enclosure located at http://www.nao.usace.army.mil/Missions/Regulatory/RBregional/. In addition to the information required in this JPA, prospective permittees seeking authorization under RP-17 must complete and submit the 'Regional Permit 17 Checklist' with their JPA. A copy of the 'Regional Permit 17 Checklist' is found on pages 13 and 14 of this application package. If the prospective permittee answers "yes" (or "N/A", where applicable) to all of the questions on the 'Regional Permit 17 Checklist', the permittee is in compliance with RP-17 and will not receive any other written authorization from the Corps but may not proceed with construction until they have obtained all necessary state and local permits. ***Note: If the prospective permittee answers "no" to any of the questions on the 'Regional Permit 17 Checklist' then their proposed structure(s) does not meet the terms and conditions of RP-17 and written authorization from the Corps is required before commencement of any work.***

Note: Land disturbance (grading, filling, etc.) or removal of vegetation associated with projects located in Chesapeake Bay Preservation Areas will require approval from local governments. Certain localities utilize this application during their Bay Act review. Part 5 of this application is included to provide assistance for the applicant to comply with Bay Act /or Erosion and Sediment Control requirements concurrent with this application.

WHAT HAPPENS NEXT

Upon receipt of an application, VMRC will assign a permit application number to the JPA and will then distribute a copy of the application and any original plan copies submitted to the other regulatory agencies that are involved in the JPA process. All agencies will conduct separate but concurrent reviews of your project. Please be aware that each agency must issue a separate permit (or a notification that no permit is required). Note that in some cases, DEQ may be taking an action on behalf of the USACE, such as when the State Program General Permit (SPGP) applies. Make sure that you have received all necessary authorizations, or documentation that no permit is required, from each agency prior to beginning the proposed work.

During the JPA review process, site inspections may be necessary to evaluate a proposed project. Failure to allow an authorized representative of a regulatory agency to enter the property, or to take photographs of conditions at the project site, may result in either the withdrawal or denial of your permit application.

For certain federal and state permit applications, a public notice is published in a newspaper having circulation in the project area, is mailed to adjacent and/or riparian property owners, and/or is posted on the agency's web page. The public may comment on the project during a designated comment period, if applicable, which varies depending upon the type of permit being applied for and the issuing agency. In certain circumstances, the project may be heard by a governing board, such as a Local Wetlands Board, the State Water Control Board, or VMRC in cases where a locality does not have a wetlands board and with certain subaqueous cases. You may be responsible for bearing the costs for advertisement of public notices.

Public hearings that are held by VMRC occur at their regularly scheduled monthly commission meetings under the following situations: Protested applications for VMRC permits which cannot be resolved; projects costing over $500,000 involving encroachment over state-owned subaqueous land; and all projects affecting tidal wetlands and dunes/beaches in localities without a LWB. All interested parties will be officially notified regarding the date and time of the hearing and Commission meeting procedures. The Commission will usually make a decision on the project at the meeting unless a decision for continuance is made. If a proposed project is approved, a permit or similar agency correspondence is sent to the applicant. In some cases, notarized signatures, as well as processing fees and royalties, are required before the permit is validated. If the project is denied, the applicant will be notified in writing.

PERMIT APPLICATION OR OTHER FEES

Do not send any fees with the JPA. VMRC is not responsible for accounting for fees required by other agencies. Please consult agency websites or contact agencies directly for current fee information and submittal instructions.

- USACE: Permit application fees are required for USACE Individual (Standard) permits. A USACE project manager will contact you regarding the proper fee and submittal requirements.

- DEQ: Permit application fees required for Virginia Water Protection permits – while detailed in 9VAC25-20 – are conveyed to the applicant by the applicable DEQ office (http://www.deq.virginia.gov/Locations.aspx). Complete the Permit Application Fee Form and submit it per the instructions to the address listed on the form. Instructions for submitting any other fees will be provided to the applicant by DEQ staff.
- VMRC: An application fee of $300 may be required for projects impacting tidal wetlands, beaches and/or dunes when VMRC acts as the LWB. VMRC will notify the applicant in writing if the fee is required. Permit fees involving subaqueous lands are $25.00 for projects costing $10,000 or less and $100 for projects costing more than $10,000. Royalties may also be required for some projects. The proper permit fee and any required royalty is paid at the time of permit issuance by VMRC. VMRC staff will send the permittee a letter notifying him/her of the proper permit fees and submittal requirements.
- LWB: Permit fees vary by locality. Contact the LWB for your project area or their website for fee information and submittal requirements. Contact information for LWBs may be found at http://ccrm.vims.edu/permits_web/guidance/local_wetlands_boards.html.

FOR AGENCY USE ONLY	
	Notes:
	JPA # 21-0820

APPLICANTS
Part 1 – General Information

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

Check all that apply		
Pre-Construction Notification (PCN) ☐ NWP # _____ (*For Nationwide Permits ONLY - No DEQ-VWP permit writer will be assigned*)	Regional Permit 17 (RP-17) ☐	

County or City in which the project is located: King and Queen

Waterway at project site: York River

PREVIOUS ACTIONS RELATED TO THE PROPOSED WORK (Include all federal, state, and local pre application coordination, site visits, previous permits, or applications whether issued, withdrawn, or denied)

Historical information for past permit submittals can be found online with VMRC - https://webapps.mrc.virginia.gov/public/habitat/ - or VIMS - http://ccrm.vims.edu/perms/newpermits.html

Agency	Action / Activity	Permit/Project number, including any non-reporting Nationwide permits previously used (e.g., NWP 13)	Date of Action	If denied, give reason for denial
	NA			

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 1 - General Information (continued)

1. Applicant's legal name* and complete mailing address: Contact Information:

[redacted], PO Box 154, Urbanna, VA 23175 (Lot#A13)

Home (_)_____
Work (_)_____
Fax (_)_____
Cell (804) 824-4023
e-mail khodges@gloucesterpharmacy.com

State Corporation Commission Name and ID Number (if applicable) _____

2. Property owner(s) legal name* and complete address, if different from applicant: Contact Information:

Home (_)_____
Work (_)_____
Fax (_)_____
Cell (_)_____
e-mail _____

State Corporation Commission Name and ID Number (if applicable) _____

3. Authorized agent name* and complete mailing address (if applicable):

Chris Davis (ReadyReef Inc.)
504 Smoketree Court
North Chesterfield, VA 23236

Contact Information:
Home (____)_____
Work (_)_____
Fax (_)_____
Cell (804) 338-3103
e-mail chris.readyreef@gmail.com

State Corporation Commission Name and ID Number (if applicable) _____

*** If multiple applicants, property owners, and/or agents, each must be listed and each must sign the applicant signature page.**

4. Provide a detailed description of the project in the space below, including the type of project, its dimensions, materials, and method of construction. Be sure to include how the construction site will be accessed and whether tree clearing and/or grading will be required, including the total acreage. If the project requires pilings, please be sure to include the total number, type (e.g. wood, steel, etc), diameter, and method of installation (e.g. hammer, vibratory, jetted, etc). If additional space is needed, provide a separate sheet of paper with the project description.

The project is to install a Living Shoreline using Flexamat installed behind a decaying bulkhead on the York River to protect the eroding bank. Mat sections totaling 16' wide x 75' (1200 ft²) will be laid on a 3:1 slope and planted with marsh grasses. Flexamat meets the state definition (28.2-104.1) of a Living Shoreline (as required by SB776 passed in 2020) as "a shoreline management practice that provides erosion control and water quality benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials." Flexamat enhances "coastal resilience and attenuation of wave energy and storm surge."

The Flexamat will be installed from the adjacent yard. Grading the slope will be followed with some sand overlay to create a solid, smooth foundation. No tree clearing is required. The mat is has underlayment to hold the sand on the slope while the concrete serves as revetment.

The mat will be anchored mechanically and with marsh grass plants growing through it over time. The remnants of the existing bulkhead will be cut down and/or removed after the mat is installed.

The mat ends at neighboring bulkhead returns will be overlain with filter cloth and riprap to prevent scouring from wave action against the bulkhead sections.

There will be a gain of 963 ft² of Spartina marsh grasses in the mat and a buffer of Spartina Patens will be established at the top of the Flexamat and lawn interface.

Equipment to be used: skid steer, Excavator, dump truck, flatbed truck and trailer, sand compactor, earth anchors driven by hammer drill run off generator.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 1 - General Information (continued)

5. Have you obtained a contractor for the project? X 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:

ReadyReef Inc
504 Smoketree Court
North Chesterfield, VA 23236

Contact Information:
Home (_)_____
Work (_)_____
Fax (_)_____
Cell (804) 338-3103
email chris.readyreef@gmail.com

State Corporation Commission Name and ID Number (if applicable) _____

*** If multiple contractors, each must be listed and each must sign the applicant signature page.**

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:
Tidewater Review
www.tidewaterreview.com

Telephone number
(757) 446-2291

7. Give the following project location information:

Street Address (911 address if available) just South East of 242 Old Farm Drive
Lot/Block/Parcel# 23 131L 396A13 [redacted])
Subdivision _____
City / County Shacklefords ZIP Code 23156
Latitude and Longitude at Center Point of Project Site (Decimal Degrees):
37.479031 / -76.732418 (Example: 36.41600/-76.30733)

If the project is located in a rural area, please provide driving directions giving distances from the best and nearest visible landmarks or major intersections. *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.*

From Rt. 17 going north from Gloucester Courthouse, turn left at Adner onto Rt 14 West (Buena Vista Rd). At Plainview, turn left onto Rt. 605 (Plain View Lane).
Shortly after, Rt. 605 takes a sharp right and continues.
Turn left onto Rt 666 (Tuckers Road) before Gressitt.
Turn right onto Cricket Shores Lane.
Near York River, turn right onto Bells Rd. Road ends on undeveloped lot.

8. What are the *primary and secondary purposes of and the need for* 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."

The primary purpose is to prevent erosion at the shoreline where an old bulkhead is failing.
The secondary purpose is to install a SB 776 compliant solution to meet the environmental goals of the Chesapeake Bay WIP.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Part 1 - General Information (continued)

9. Proposed use (check one):
   X Single user (private, non-commercial, residential)
   ___ Multi-user (community, commercial, industrial, government)

10. Describe alternatives considered and 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.*

    Bulkhead replacement and riprap revetment were eliminated as being non-compliant with the State's new Living Shoreline law (SB 776). Installing Flexamat will allow for marsh grass planting in its grid, and for a migratory path upwards in elevation should Relative Sea Level Rise continue as forecasted. No impacts to Wetlands, SAVs or buffer areas. Marsh grasses will be installed where none exist now.

11. Is this application being submitted for after-the-fact authorization for work which has already begun or been completed? ___Yes X No. If yes, be sure to clearly depict the portions of the project which are already complete in the project drawings.

12. Approximate cost of the entire project (materials, labor, etc.): $ $25,000
    Approximate cost of that portion of the project that is channelward of mean low water:
    $ 0

13. Completion date of the proposed work: July 31 - 2022

14. Adjacent Property Owner Information: List the name and complete **mailing address**, including zip code, of each adjacent property owner to the project. (NOTE: If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.) Failure to provide this information may result in a delay in the processing of your application by VMRC.

    John Gove
    330 Cypress Ave.
    West Point, VA
    2318

    [redacted]
    242 Old Farm Drive
    Shacklefords, VA
    23156

(Use if more than one applicant)

(Use if more than one applicant)

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

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.

[redacted]
Applicant's Name (printed/typed)

(Use if more than one applicant)

[redacted]
Applicant's Signature

(Use if more than one applicant)

4-1-21
Date

[redacted]
Property Owner's Name (printed/typed)
(If different from Applicant)

(Use if more than one owner)

[redacted]
Property Owner's Signature

(Use if more than one owner)

4-1-21
Date

REVISED March 2014

Part 2 – Signatures (continued)

2. Applicants having agents (if applicable)

CERTIFICATION OF AUTHORIZATION

I (we), [redacted], hereby certify that I (we) have authorized Chris Davis of ReadyReef Inc
(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.

Chris Davis
(Agent's Signature) (Use if more than one agent)

4/2/21
(Date)

[redacted]
(Applicant's Signature) (Use if more than one applicant)

4-2-21
(Date)

3. Applicant's having contractors (if applicable)

CONTRACTOR ACKNOWLEDGEMENT

I (we), [redacted], have contracted ReadyReef Inc
(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.

Chris Davis
Contractor's name or name of firm

584 Smoketree Ct
North Chesterfield VA
23236
Contractor's or firms address

READYREEF INC
Chris Davis President
Contractor's signature and title

Contractor's License Number

[redacted]
Applicant's signature (Use if more than one applicant)

4-2-21
Date

REVISED March 2014

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Part 2 – Signatures (continued)

ADJACENT PROPERTY OWNER'S ACKNOWLEDGEMENT FORM

I (we), _____, own land next to (across the water
(Print adjacent/nearby property owner's name)

from/on the same cove as) the land of_____.
(Print applicant's name(s))

I have reviewed the applicant's project drawings dated _____
(Date)

to be submitted for all necessary federal, state and local permits.

I HAVE NO COMMENT_____ ABOUT THE PROJECT.

I DO NOT OBJECT _____ TO THE PROJECT.

I OBJECT _____ TO THE PROJECT.

The applicant has agreed to contact me for additional comments if the proposal changes prior to construction of the project.

(Before signing this form be sure you have checked the appropriate option above).

_____
Adjacent/nearby property owner's signature(s)

_____
Date

Note: If you object to the proposal, the reason(s) you oppose the project must be submitted in writing to VMRC. An objection will not necessarily result in denial of the project; however, valid complaints will be given full consideration during the permit review process.

Part 2 – Signatures (continued)

ADJACENT PROPERTY OWNER'S ACKNOWLEDGEMENT FORM

I (we), _____, own land next to (across the water
(Print adjacent/nearby property owner's name)

from/on the same cove as) the land of_____.
(Print applicant's name(s))

I have reviewed the applicant's project drawings dated _____
(Date)

to be submitted for all necessary federal, state and local permits.

I HAVE NO COMMENT_____ ABOUT THE PROJECT.

I DO NOT OBJECT _____ TO THE PROJECT.

I OBJECT _____ TO THE PROJECT.

The applicant has agreed to contact me for additional comments if the proposal changes prior to construction of the project.

(Before signing this form, be sure you have checked the appropriate option above).

_____
Adjacent/nearby property owner's signature(s)

_____
Date

Note: If you object to the proposal, the reason(s) you oppose the project must be submitted in writing to VMRC. An objection will not necessarily result in denial of the project; however, valid complaints will be given full consideration during the permit review process.

APPENDIX B

U.S. Army Corps Of Engineers
Norfolk District

REGIONAL PERMIT 17 CHECKLIST

Expires: September 5, 2023

Please review the 18-RP-17 enclosure before completing this form and note 18-RP-17 can only be used for proposed PRIVATE USE structure(s) that comply with the terms and conditions of 18-RP-17. Copies can be obtained online at http://www.nao.usace.army.mil/Missions/Regulatory/RBregional/.

YES ☐ NO ☐ **(1)** Has the permittee reviewed the 18-RP-17 enclosure and verified that the proposed structure(s) is in compliance with all the terms, conditions, and limitations of 18-RP-17?

YES ☐ NO ☐ **(2)** Does the proposed structure(s) extend no more than one-fourth of the distance across the waterway measured from either mean high water (MHW) to MHW (including all channelward wetlands) or ordinary high water (OHW) to OHW (including all channelward wetlands)?

YES ☐ NO ☐ **(3)** Does the proposed structure(s) extend no more than 300 feet from MHW or OHW (including all channelward wetlands)?

YES ☐ NO ☐ N/A ☐ **(4)** Does the proposed structure(s) attach to the upland at a point landward of MHW or OHW (including all channelward wetlands)?

YES ☐ NO ☐ N/A ☐ **(5)** If the proposed structure(s) crosses wetland vegetation, is it an open-pile design that has a maximum width of five (5) feet and a minimum height of four (4) feet between the decking and the wetland substrate?

YES ☐ NO ☐ N/A ☐ **(6)** Does the proposed structure(s) include no more than two (2) boatlifts and no more than two (2) boat slips?

YES ☐ NO ☐ N/A ☐ **(7)** Is the open-sided roof structure designed to shelter a boat ≤ 700 square feet and/or is the open sided roof structure or gazebo structure designed to shelter a pier ≤ 400 square feet?

YES ☐ NO ☐ N/A ☐ **(8)** Are all piles associated with the proposed structure(s) non-steel, less than or equal to 12" in diameter, and will less than or equal to 25 piles be installed channelward of MHW?

YES ☐ NO ☐ N/A ☐ **(9)** Is all work occurring behind cofferdams, turbidity curtains, or other methods to control turbidity being utilized when operationally feasible and federally listed threatened or endangered species may be present?

YES ☐ NO ☐ N/A ☐ **(10)** If the proposed structure(s) is to be located within an anadromous fish use area, the prospective permittee will adhere to the anadromous fish use area time of year restriction (TOYR) prohibiting in-water work from occurring between February 15 through June 30 of any given year if (1) piles are to be installed with a cushioned impact hammer and there is less than 492 feet between the most channelward pile and mean low water (MLW) on the opposite shoreline or (2) piles are to be installed with a vibratory hammer and there is less than 384 feet between the most channelward pile and MLW on the opposite shoreline.

YES ☐ NO ☐ **(11)** Is all work occurring outside of submerged aquatic vegetation (SAV) mapped by the Virginia Institute of Marine Sciences' (VIMS) most recent survey year and 5 year composite?

YES ☐ NO ☐ **(12)** Has the permittee ensured the construction and/or installation of the proposed structure(s) will not affect federally listed threatened or endangered species or designated critical habitat?

YES ☐ NO ☐ **(13)** Will the proposed structure be located outside of Broad Creek in Middlesex County, Fisherman's Cove in Norfolk, or the Salt Ponds in Hampton?

YES ☐ NO ☐ **(14)** Will the proposed structure(s) be located outside of the waterways containing a Federal Navigation Project listed in Permit Specific Condition 12 of 18-RP-17 and/or will all portions of the proposed structure(s) be located more than 85 feet from the Federal Navigation Project?

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YES☐ NO☐ **(15)** Will the proposed structure(s) be located outside a USACE Navigation and Flood Risk Management project area?

YES☐ NO☐ **(16)** Will the proposed structure(s) be located outside of any Designated Trout Waters?

YES☐ NO☐ N/A☐ **(17)** If the proposed structure(s) includes flotation units, will the units be made of materials that will not become waterlogged or sink if punctured?

YES☐ NO☐ N/A☐ **(18)** If the proposed structure(s) includes flotation units, will the floating sections be braced so they will not rest on the bottom during periods of low water?

YES☐ NO☐ **(19)** Is the proposed structure(s) made of suitable materials and practical design so as to reasonably ensure a safe and sound structure?

YES☐ NO☐ **(20)** Will the proposed structure(s) be located on the property in accordance with the local zoning requirements?

YES☐ NO☐ N/A☐ **(21)** If the proposed structure(s) includes a device used for shellfish gardening, will the device be attached directly to a pier and limited to a total of 160 square feet?

YES☐ NO☐ N/A☐ **(22)** If the proposed structure(s) includes a device used for shellfish gardening, does the permittee recognize this RP does not negate their responsibility to obtain an oyster gardening permit (General Permit #3) from Virginia Marina Resources Commission's Habitat Management Division?

YES☐ NO☐ **(23)** Does the permittee recognize this RP does not authorize any dredging or filling of waters of the United States (including wetlands) and does not imply that future dredging proposals will be approved by the Corps?

YES☐ NO☐ **(24)** Does the permittee understand that by accepting 18-RP-17, the permittee accepts all of the terms and conditions of the permit, including the limits of Federal liability contained in the 18-RP-17 enclosure? Does the permittee acknowledge that the structures permitted under 18-RP-17 may be exposed to waves caused by passing vessels and that the permittee is solely responsible for the integrity of the structures permitted under 18-RP-17 and the exposure of such structures and vessels moored to such structures to damage from waves? Does the permittee accept that the United States is not liable in any way for such damage and that it shall not seek to involve the United States in any actions or claims regarding such damage?

IF YOU HAVE ANSWERED "NO" TO ANY OF THE QUESTIONS ABOVE, REGIONAL PERMIT 17 (18-RP-17) DOES NOT APPLY AND YOU ARE REQUIRED TO OBTAIN WRITTEN AUTHORIZATION FROM THE CORPS PRIOR TO PERFORMING THE WORK.

IF YOU HAVE ANSWERED "YES" (OR "N/A", WHERE APPLICABLE) TO ALL OF THE QUESTIONS ABOVE, YOU ARE IN COMPLIANCE WITH REGIONAL PERMIT 17 (18-RP-17). PLEASE SIGN BELOW, ATTACH, AND SUBMIT THIS CHECKLIST WITH YOUR COMPLETED JOINT PERMIT APPLICATION (JPA). THIS SIGNED CERTIFICATE SERVES AS YOUR LETTER OF AUTHORIZATION FROM THE CORPS. YOU WILL NOT RECEIVE ANY OTHER WRITTEN AUTHORIZATION FROM THE CORPS; HOWEVER, YOU MAY NOT PROCEED WITH CONSTRUCTION UNTIL YOU HAVE OBTAINED ALL OTHER NECESSARY STATE AND LOCAL PERMITS.

I CERTIFY THAT I HAVE READ AND UNDERSTAND ALL CONDITIONS OF THE REGIONAL PERMIT 17 (18-RP-17), DATED SEPTEMBER 2018, ISSUED BY THE US ARMY CORPS OF ENGINEERS, NORFOLK DISTRICT REGULATORY BRANCH (CENAO-WRR), NORFOLK, VIRGINIA.

Proposed work to be located at:

_____ _____

Signature of Property Owner(s) or Agent

_____

Date_____ **VMRC Number:** _____

Part 3 – Appendices

Please complete and submit the appendix questions applicable to your project, and attach the required vicinity map(s) and drawings to your application. If an item does not apply to your project, please write "N/A" in the space provided.

Appendix A: (TWO PAGES) Projects for Access to the water such as private and community piers, boathouses, marinas, moorings, and boat ramps. Answer all questions that apply.

1. **Briefly describe your proposed project**.

2. **For private, noncommercial piers:**
   Do you have an existing pier on your property? ____Yes____ No
   If yes, will it be removed? ____Yes ____No
   Is your lot platted to the mean low water shoreline? ____Yes ____No
   What is the overall length of the proposed structure? _____feet.
   Channelward of Mean High Water? _____feet.
   Channelward of Mean Low Water? _____feet.
   What is the area of the piers and platforms that will be constructed over
   Tidal non-vegetated wetlands _____ square feet.
   Tidal vegetated wetlands _____ square feet.
   Submerged lands _____square feet.
   What is the total size of any and all L- or T-head platforms?_____sq. ft.
   For boathouses, what is the overall size of the roof structure? _____sq. ft.
   Will your boathouse have sides?_____Yes____ No.

   NOTE: All proposals for piers, boathouses and shelter roofs must be reviewed by the Virginia Marine Resources Commission (Commission or VMRC), however, pursuant to § 28.2-1203 A 5 of the Code of Virginia a VMRC permit may not be required for such structures (except as required by subsection D of § 28.2-1205 for piers greater than 100 feet in length involving commercially productive leased oyster or clam grounds), provided that (i) the piers do not extend beyond the navigation line or private pier lines established by the Commission or the United States Army Corps of Engineers (USACE), (ii) the piers do not exceed six feet in width and finger piers do not exceed five feet in width, (iii) any L or T head platforms and appurtenant floating docking platforms do not exceed, in the aggregate, 400 square feet, (iv) if prohibited by local ordinance open-sided shelter roofs or gazebo-type structures shall not be placed on platforms as described in clause (iii), but may be placed on such platforms if not prohibited by local ordinance, and (v) the piers are determined not to be a navigational hazard by the Commission. Subject to any applicable local ordinances, such piers may include an attached boat lift and an open-sided roof designed to shelter a single boat slip or boat lift. In cases in which open-sided roofs designed to shelter a single boat, boat slip or boat lift will exceed 700 square feet in coverage or the open-sided shelter roofs or gazebo structures exceed 400 square feet, and in cases in which an adjoining property owner objects to a proposed roof structure, permits shall be required as provided in § 28.2-1204.

Part 3 – Appendices (continued)

3. **For USACE permits**, in cases where the proposed pier will encroach beyond one fourth the waterway width (as determined by measuring mean high water to mean high water or ordinary high water mark to ordinary high water mark), the following information must be included before the application will be considered complete. For an application to be considered complete:

   a. The USACE MAY require depth soundings across the waterway at increments designated by the USACE project manager. Typically 10-foot increments for waterways less than 200 feet wide and 20-foot increments for waterways greater than 200 feet wide with the date and time the measurements were taken and how they were taken (e.g., tape, range finder, etc.).
   b. The applicant MUST provide a justification as to purpose if the proposed work would extend a pier greater than one-fourth of the distance across the open water measured from mean high water or the channelward edge of the wetlands.
   c. The applicant MUST provide justification if the proposed work would involve the construction of a pier greater than five feet wide or less than four feet above any wetland substrate.

4. Provide the type, size, and registration number of the vessel(s) to be moored at the pier or mooring buoy.

   Type Length Width Draft Registration #

   _____

   _____

   _____

5. For **Marinas, Commercial Piers, Governmental Piers, Community Piers and other non-private piers**, provide the following information:
   A) Have you obtained approval for sanitary facilities from the Virginia Department of Health?_____ (required pursuant to Section 28.2-1205 C of the Code of Virginia).
   B) Will petroleum products or other hazardous materials be stored or handled at your facility?_____.
   C) Will the facility be equipped to off-load sewage from boats?_____.
   D) How many wet slips are proposed?_____. How many are existing?_____.
   E) What is the area of the piers and platforms that will be constructed over
      Tidal non-vegetated wetlands _____ square feet
      Tidal vegetated wetlands _____ square feet
      Submerged lands _____square feet

6. For **boat ramps**, what is the overall length of the structure?_____feet.
   From Mean High Water?_____feet.
   From Mean Low Water?_____feet.

   Note: drawings must include the construction materials, method of installation, and all dimensions. If tending piers are proposed, complete the pier portion.
   Note: If dredging or excavation is required, you must complete the Standard Joint Point Permit application.

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

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, and living shoreline projects. Answer all questions that apply. Please provide any reports provided from the Shoreline Erosion Advisory Service or VIMS**.**

NOTE: It is the policy of the Commonwealth that living shorelines are the preferred alternative for stabilizing tidal shorelines (Va. Code § 28.2-104.1). **Information on non-structural, vegetative alternatives (i.e., Living Shoreline) for shoreline stabilization is available at http://ccrm.vims.edu/coastal_zone/living_shorelines/index.html.**

1. Describe each **revetment, bulkhead, marsh toe, breakwater, groin, jetty, other structure, or living shoreline project** separately in the space below. Include the overall length in linear feet, the amount of impacts in acres, and volume of associated backfill below mean high water and/or ordinary high water in cubic yards, as applicable:

   1200 ft² of Flexamat (75' x 16') will be installed in a cut and fill grading behind the decaying bulkhead. An additional 5 cuyds of clean sand will be overlain and compacted prior to mat installation in the space behind MLW and up to 1.5X the tide range, approximately 14' behind the remnants of the existing bulkhead.

2. What is the maximum encroachment channelward of mean high water? 14' feet.
   Channelward of mean low water? 0 feet.
   Channelward of the back edge of the dune or beach? 16' feet.

3. Please calculate the square footage of encroachment over:
   - Vegetated wetlands 0 square feet
   - Non-vegetated wetlands 143 square feet
   - Subaqueous bottom 0 square feet
   - Dune and/or beach 0 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.

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Part 3 – Appendices (continued)

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**.

See attachments for Flexamat Specs and Materials
Clean sand source: upland pit in Middlesex County

6. If using stone, broken concrete, etc. for your structure(s), what is the average weight of the:
Core (inner layer) material _____ pounds per stone Class size _____
Armor (outer layer) material 75 pounds per stone Class size 1

7. For **beach nourishment**, including that associated with breakwaters, groins or other structures, provide the following:

- Volume of material
  - 0 cubic yards channelward of mean low water
  - 5 cubic yards landward of mean low water
  - 5 cubic yards channelward of mean high water
  - 0 cubic yards landward of mean high water
- Area to be covered
  - 0 square feet channelward of mean low water
  - 1200 square feet landward of mean low water
  - 5 cubic yards channelward of mean high water
  - 0 cubic yards landward of mean high water
- Source of material, composition (e.g. 90% sand, 10% clay): 93% Sand, 7% clay
- Method of transportation and placement:
  Truck from pit to yard dump. Tracked Skid steer from dump to shoreline.
- Describe any proposed vegetative stabilization measures to be used, including planting schedule, spacing, monitoring, etc. Additional guidance is available at http://www.vims.edu/about/search/index.php?q=planting+guidelines:

  Flexamat will be planted 1' on center in the grid between revetment blocks.
  It will take up to 2 years to achieve saturation as the marsh grass sends out rhizomes in its second year after planting.

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Part 3 – Appendices (continued)

Appendix C: Crossings in, on, over, or under, waters, submerged lands, tidal wetlands and/or dunes and beaches, including but not limited to, bridges, walkways, pipelines and utility lines.

1. What is the purpose and method of installation of the crossing?

2. What is the width of the waterway and/or wetlands to be crossed
   from mean high water to mean high water (tidal waters)? _____ feet.
   from mean low water to mean low water (tidal waters)? _____ feet.
   from ordinary high water to ordinary high water (non-tidal waters)? _____ feet.

3. For bridges (footbridges, golf cart bridges, roadway bridges, etc.), what is the width of the structure over the tidal wetlands, dunes/beaches and/or submerged lands? _____square feet.

4. For overhead crossings:
   a. What will be the height above mean high water? _____feet.
   b. If there are other overhead crossings in the area, what is the minimum height? _____feet.
   c. If the proposed crossing is an electrical line, please confirm the total number of electrical circuits: _____

5. For buried crossings, what will be the depth below the substrate? _____feet. Will the proposed utility provide empty conduits for any additional utilities that may propose to co-locate at a later date? ____Yes _____No.

6. Will there be any excavation or fill required for placement of abutments, piers, towers, or other permanent structures on State-owned submerged lands, tidal wetlands, and dunes/beaches? ___Yes ____ No.

   If yes, please provide the following:

   a. Amount of excavation in wetlands _____ cubic yards
      _____ square feet

   b. Amount of excavation in submerged land _____ cubic yards
      _____ square feet

   c. Amount of excavation in dune/beach _____ cubic yards
      _____ square feet

   d. Amount of fill in wetlands _____ cubic yards
      _____ square feet

   e. Amount of fill in submerged lands _____ cubic yards
      _____ square feet

   f. Amount of fill in dune/beach _____ cubic yards
      _____ square feet

Part 3 – Appendices (continued)

Appendix D: Aquaculture Related Structures such as cages and floats. Before completing this appendix, please review the aquaculture requirements summary at: http://mrc.virginia.gov/Shellfish_Aquaculture.shtm.

1. Will the activity be for commercial purposes? _____Yes _____ No.

   If Yes and structures will be placed upon an oyster ground lease, you may qualify for the VMRC General Permit #4 for Temporary Protective Enclosures for Shellfish. For more info see: http://www.mrc.virginia.gov/regulations/MRC_Scanned_Regs/Shellfish_Mix/fr1130_12-0107.pdf. If you qualify for the General Permit #4, or if such structures are proposed that are not on an oyster planting ground lease, or for floating structures of any kind, complete this Joint Permit Application and include the necessary information requested below in question 2 through 11.

   If No, you may qualify for the VMRC General Permit #3, for Noncommercial Riparian Shellfish Growing (i.e. "Gardening") For more information see: http://www.mrc.virginia.gov/forms/VGP3_Aquaculture.doc.pdf. If you qualify for this general permit use the Abbreviated Joint Permit Application For Noncommercial Riparian Shellfish Aquaculture Structures available at https://mrc.virginia.gov/forms/2019/VGP3_Aquaculture_form_2019.pdf ***do not use this Joint Permit Application***.

2. Will aquaculture structures be attached to an existing pier or other structure? ____ Yes ____ No.

3. The plat file # if proposed upon oyster planting ground lease(s)._____

4. The maximum area where enclosures are proposed. _____ square feet

5. The maximum number of enclosures being proposed to be deployed. _____

6. The species of shellfish to be cultured. _____

7. A detailed description of the enclosures to include width, length and height.

8. In addition to the requirements itemized in Part 4 Project Drawings, the following additional information must be included on your project drawings: A general description of the area within 500 feet of deployment area. Provide a drawing that depicts existing marine resources such as SAV, shellfish beds, fixed fishing devices, public grounds, piers, water depths at mean low water, tide range, and the minimum clearance at mean low tide over the enclosures.

9. Provide the date enclosures are proposed to be deployed _____. How will the structures be secured? _____.

Part 3 – Appendices (continued)

10. List of all riparian land owners within 500 feet of the area where enclosures are proposed along with a map (tax map or other suitable map) depicting the locations of such parcels or riparian property owner acknowledgement forms signed by the riparian land owner with any comments concerning the enclosures deployment request.

11. Proof that the applicant holds a current oyster or clam aquaculture product owners permit, and verification that the applicant is in compliance with Mandatory Harvest Reporting requirements, and verification that the current years oyster ground rent is paid, if structures are proposed on an oyster ground lease.

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Part 4 - Project Drawings

Plan view and cross-sectional view drawings are required for all projects. Application drawings do not need to be prepared by a professional draftsman, but they must be clear, accurate, and should be to an appropriate scale. If a scale is not used, all dimensions must be clearly depicted in the drawings. If available, a plat of the property should be included, with the existing and proposed structures clearly indicated. Distances from the proposed structure(s) to fixed points of reference (benchmarks) and to the adjacent property lines must be shown. A vicinity map (County road map, USGS Topographic map, etc.) must also be provided to show the location of the property. **NOTE:** The sample drawings have been included at the end of this section to provide guidance on the information required for different types of projects. Clear and accurate drawings are essential for project review and compliance determination. Incomplete or unclear drawings may cause delays in the processing of your application.

The following items must be included on <u>ALL</u> project drawings: (plan and cross-sectional, as appropriate)

- **name of project**
- **north arrow**
- **scale**
- **waterway name**
- **existing and proposed structures, labeled as such**
- **dimensions of proposed structures**
- **mean high water and mean low water lines**
- **all delineated wetlands and all surface waters on the site, including the Cowardin classification (i.e., emergent, scrub-shrub, or forested) for those surface waters (if applicable)**
- **limits of proposed impacts to surface waters, such as fill areas, riprap scour protection placement, and dredged areas, and the amount of such impacts in square feet and acres**
- **ebb/flood direction**
- **adjacent property lines and owner's name**
- **distances from proposed structures to fixed points of reference (benchmarks) and adjacent property lines**

Part 5 - Chesapeake Bay Preservation Act Information

All proposed development, redevelopment, land disturbance, clearing or grading related to this Tidewater JPA must comply with the Chesapeake Bay Preservation Area Designation and Management Regulations, which are enforced through locally adopted Chesapeake Bay Preservation Area (CBPA) ordinances. Compliance with state and local CBPA requirements mandates the submission of a ***Water Quality Impact Assessment (WQIA)*** for the review and approval of the local government. Contact the appropriate local government office to determine if a WQIA is required for the proposed activity(ies).

Because the 84 local governments within Tidewater Virginia are responsible for enforcing the CBPA Regulations, the completion of the JPA process does not constitute compliance with the Bay Act Regulations nor does it guarantee that the local government will approve encroachments into the RPA that may result from this project. Applicants should contact their local government as early in the design process as possible to ensure that the final design and construction of the proposed project meets all applicable CBPA requirements. Early cooperation with local government staff can help applicants avoid unnecessary and costly delays to construction. Applicants should provide local government staff with information regarding existing vegetation within the Resource Protection Area (RPA) as well as a description and site drawings of any proposed land disturbance, construction, or vegetation clearing. As part of their review and approval processes, local government staff will evaluate the proposed project and determine whether or not approval can be granted. Once the locality has made a decision on the project, they will advise the Local Wetlands Boards and other appropriate parties of applicable CBPA concerns or issues.

Resource Protection Areas (RPAs) are composed of the following features:

1. **Tidal wetlands;**
2. **Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;**
3. **Tidal shores;**
4. **Other lands considered by the local government to meet the provisions of subsection A of 9VAC25-830-80 and to be necessary to protect the quality of state waters; and**
5. **A buffer area not less than 100 feet in width located adjacent to and landward of the components listed in subdivisions 1 through 4 above, and along both sides of any water body with perennial flow.**

<u>Notes for all projects in RPAs</u>

Development, redevelopment, construction, land disturbance, or placement of fill within the RPA features listed above requires the approval of the locality and may require an exception or variance from the local Bay Act ordinance. Please contact the appropriate local government to determine the types of development or land uses that are permitted within RPAs.

Pursuant to 9VAC25-830-110, on-site delineation of the RPA is required for all projects in CBPAs. Because USGS maps are not always indicative of actual "in-field" conditions, they may not be used to determine the site-specific boundaries of the RPA.

<u>Notes for shoreline erosion control projects in RPAs</u>

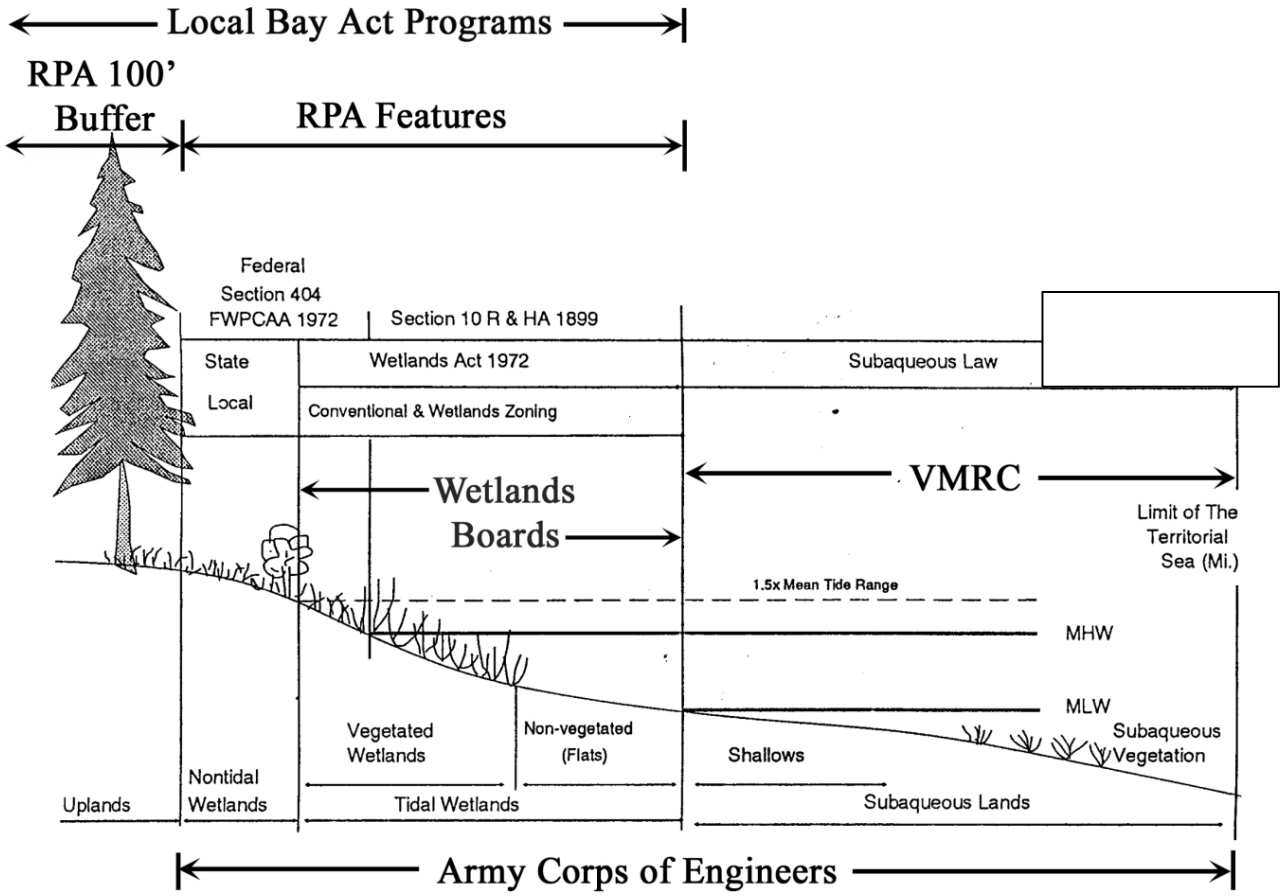
Re-establishment of woody vegetation in the buffer will be required by the locality to mitigate for the removal or disturbance of buffer vegetation associated with your proposed project. Please contact the local government to determine the mitigation requirements for impacts to the 100-foot RPA buffer.

Part 5 - Chesapeake Bay Preservation Act Information (continued)

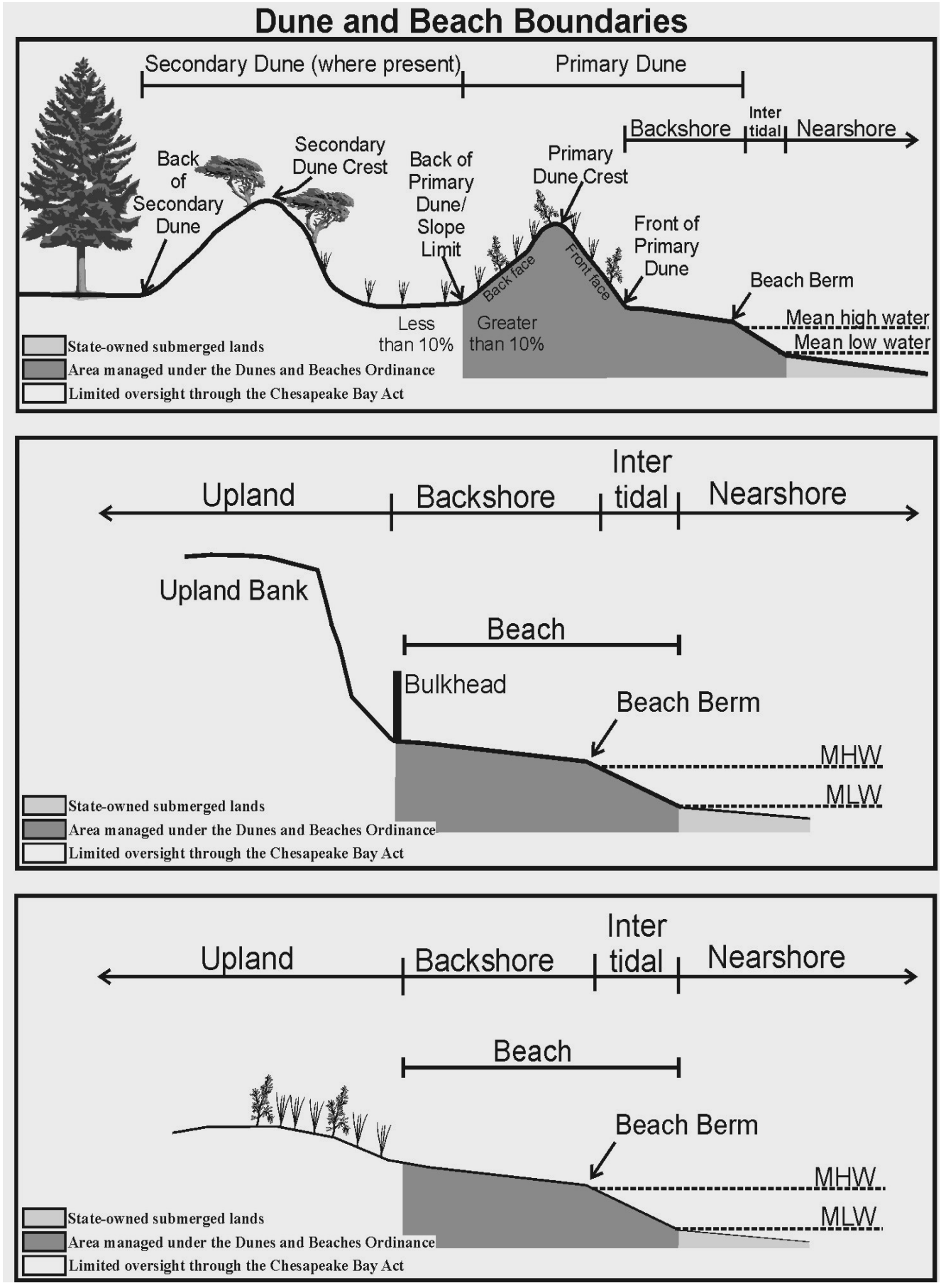
Pursuant to 9VAC25-830-140 5 a (4) of the Virginia Administrative Code, shoreline erosion projects are a permitted modification to RPAs provided that the project is based on the "best technical advice" and complies with applicable permit conditions. In accordance with 9VAC25-830-140 1 of the Virginia Administrative Code, the locality will use the information provided in this Part V, in the project drawings, in this permit application, and as required by the locality, to make a determination that:

1. Any proposed shoreline erosion control measure is necessary and consistent with the nature of the erosion occurring on the site, and the measures have employed the "best available technical advice"
2. Indigenous vegetation will be preserved to the maximum extent practicable
3. Proposed land disturbance has been minimized
4. Appropriate mitigation plantings will provide the required water quality functions of the buffer (9VAC25-830-140 3)
5. The project is consistent with the locality's comprehensive plan
6. Access to the project will be provided with the minimum disturbance necessary.

JURISDICTIONAL BOUNDARIES



and DEQ (including isolated wetlands)



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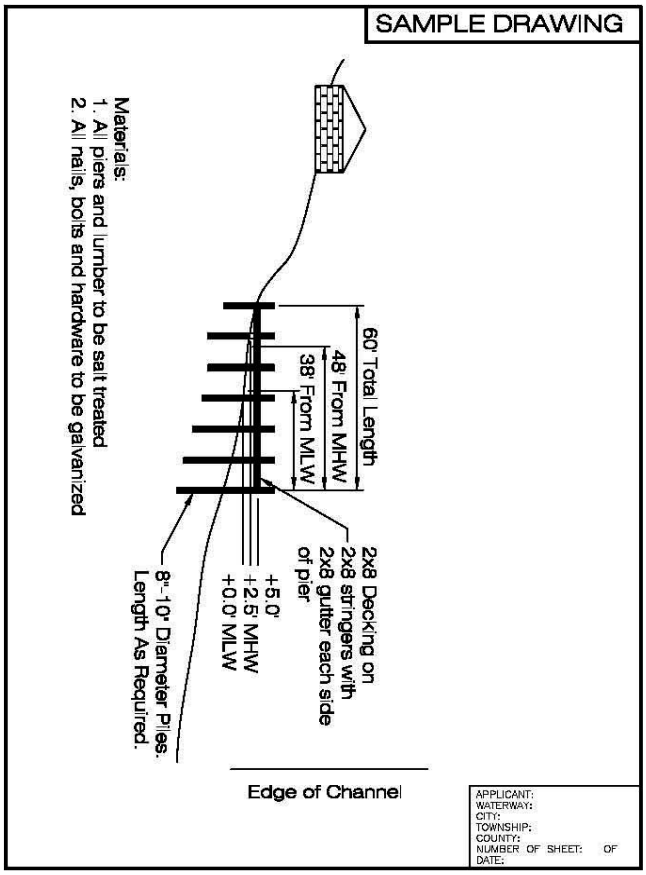
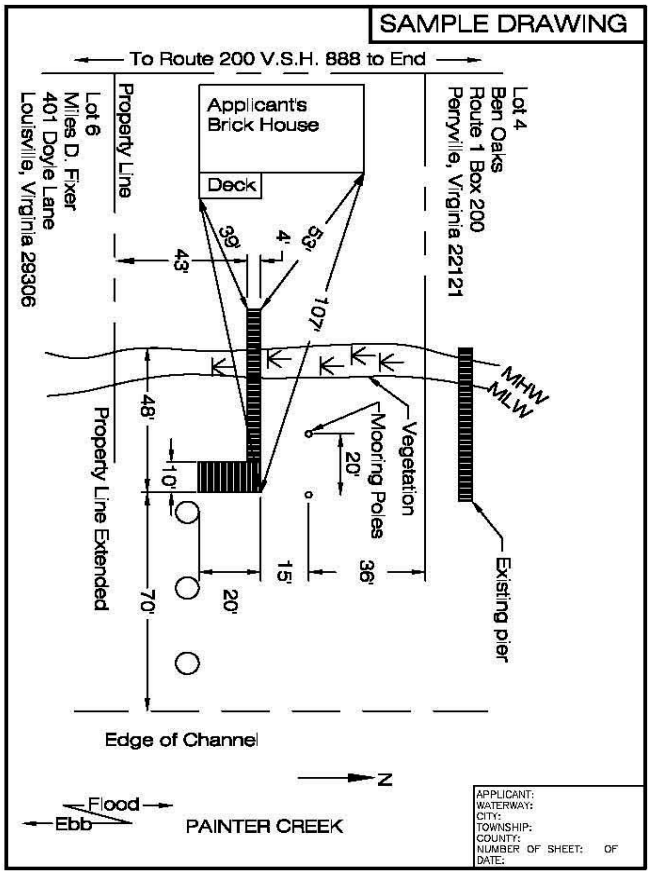
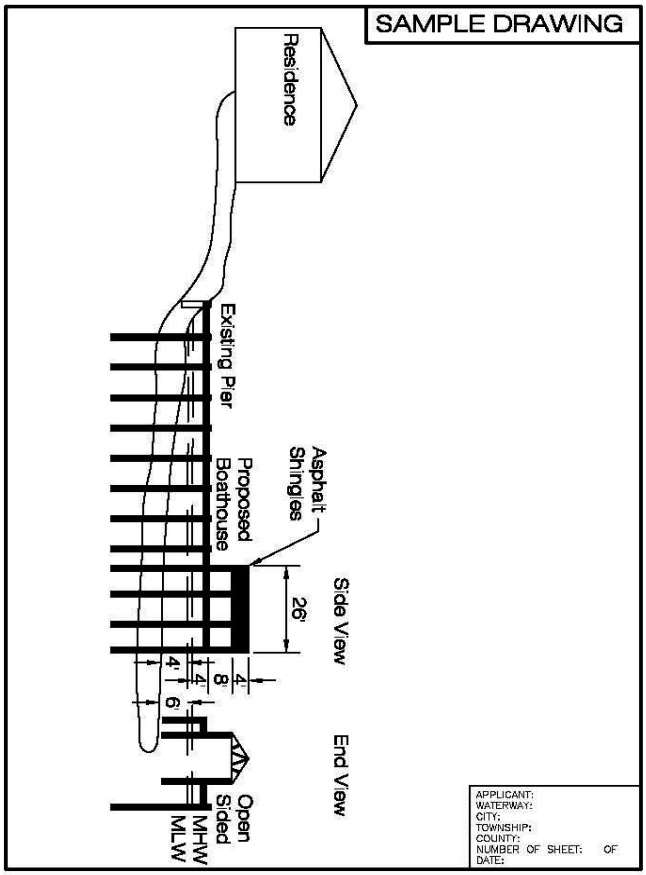
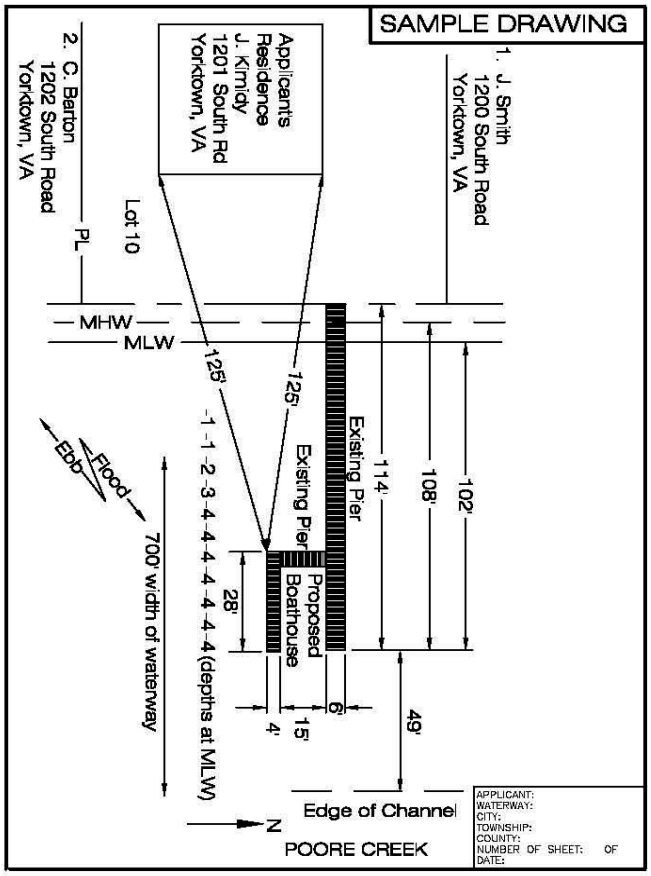


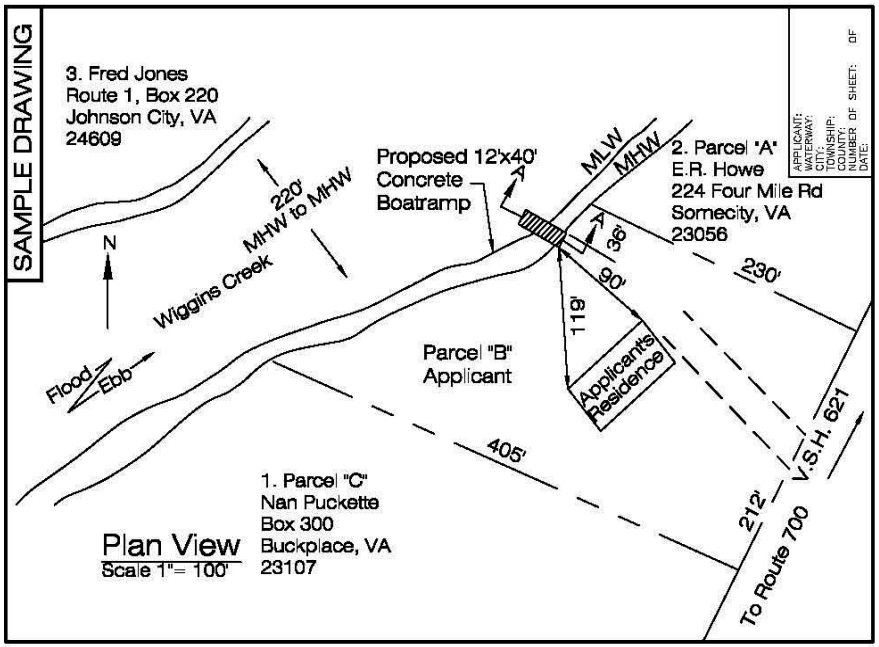


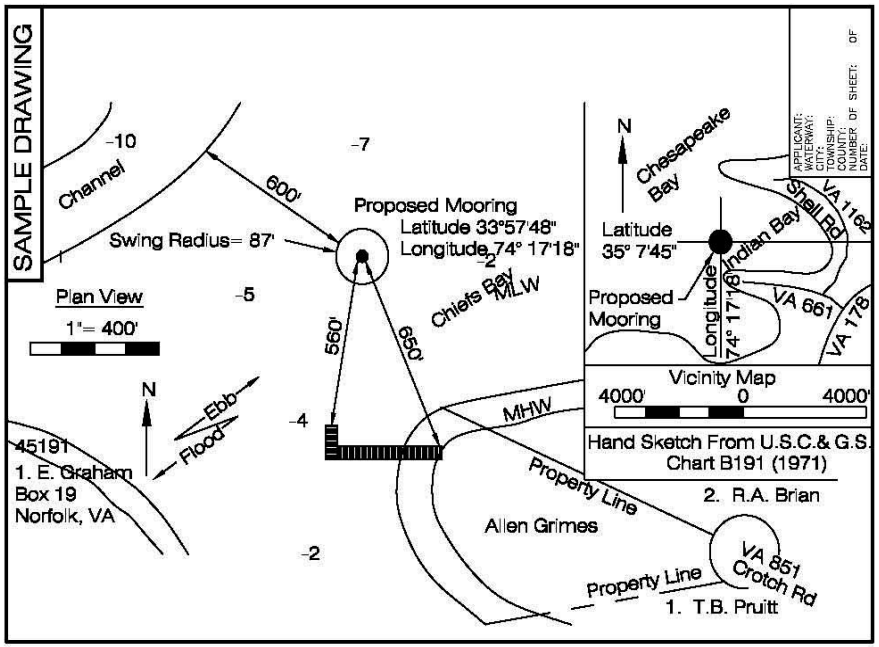
Private Piers & Marginal Wharves



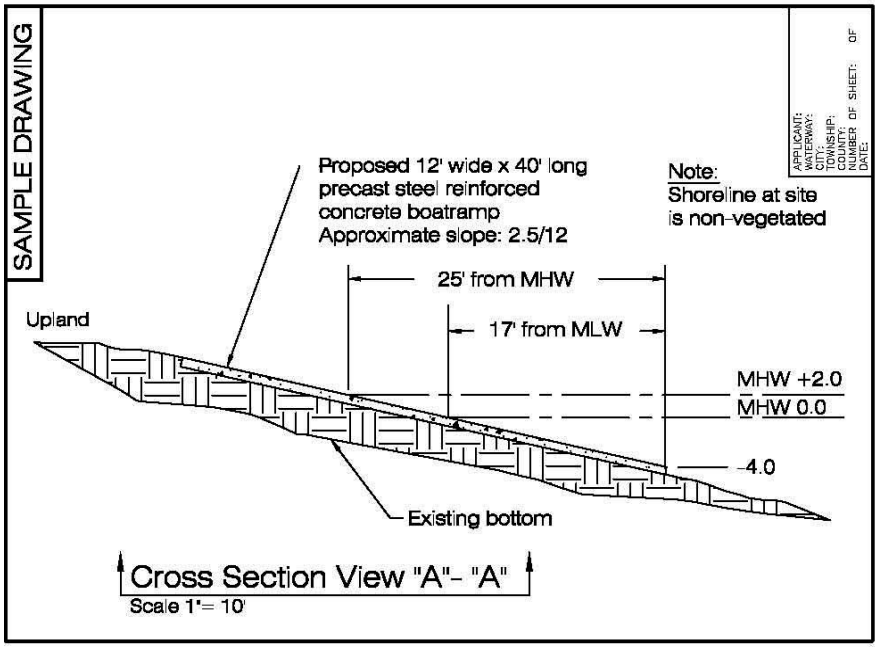


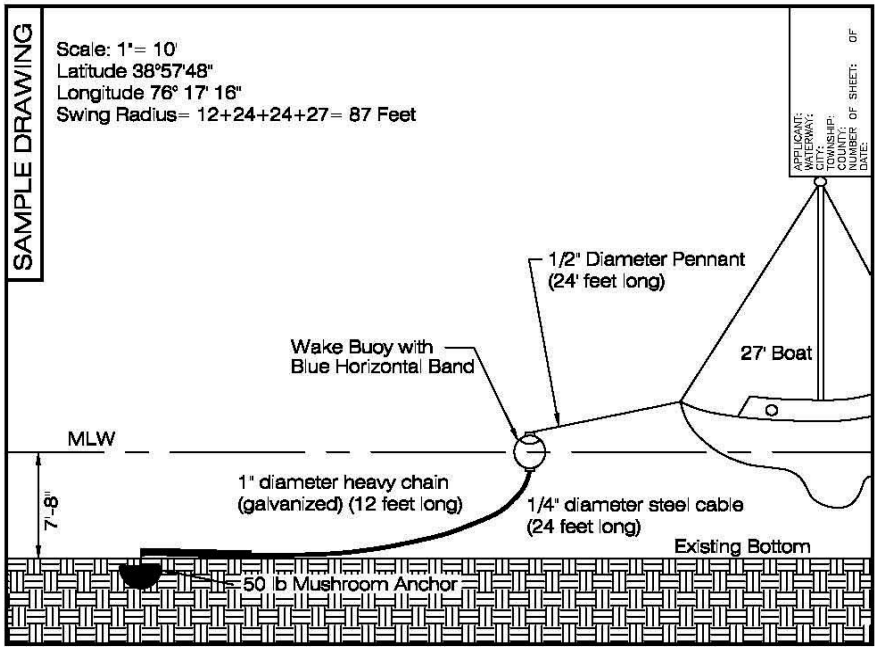
Boathouses





Boat Ramps

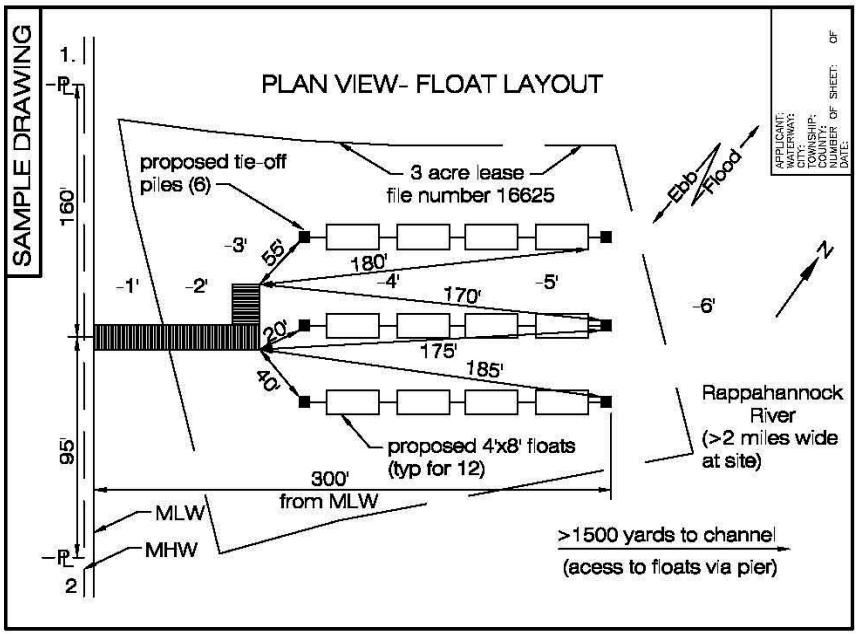


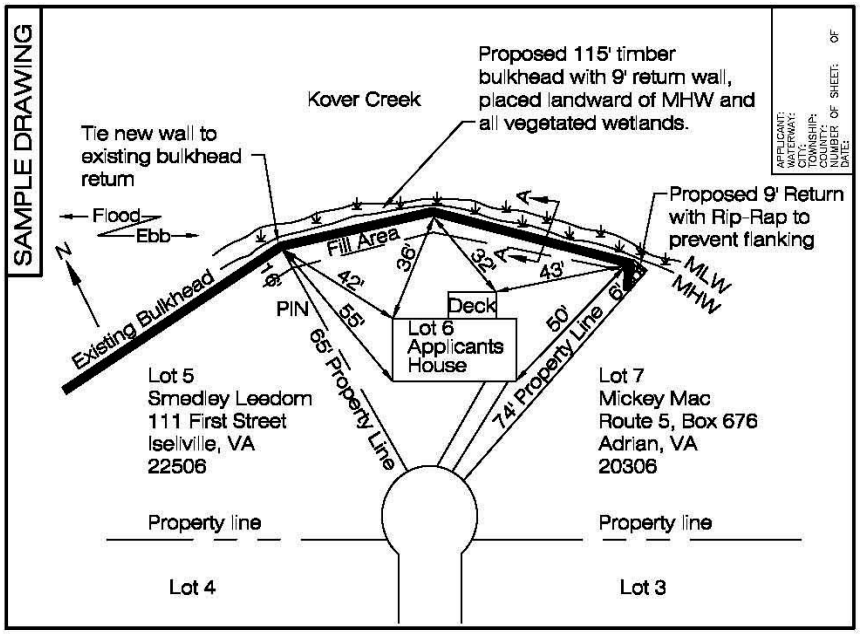


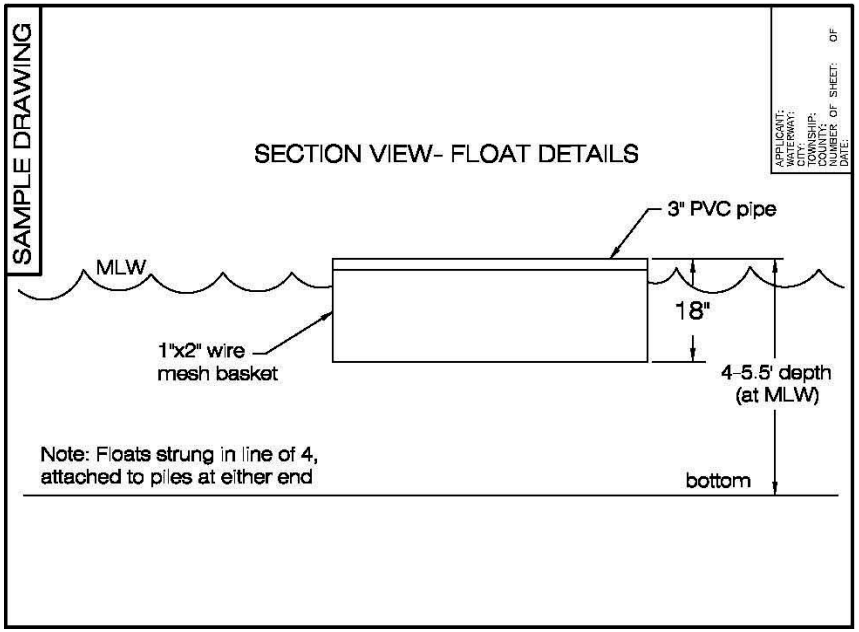
Dolphins or Moorings

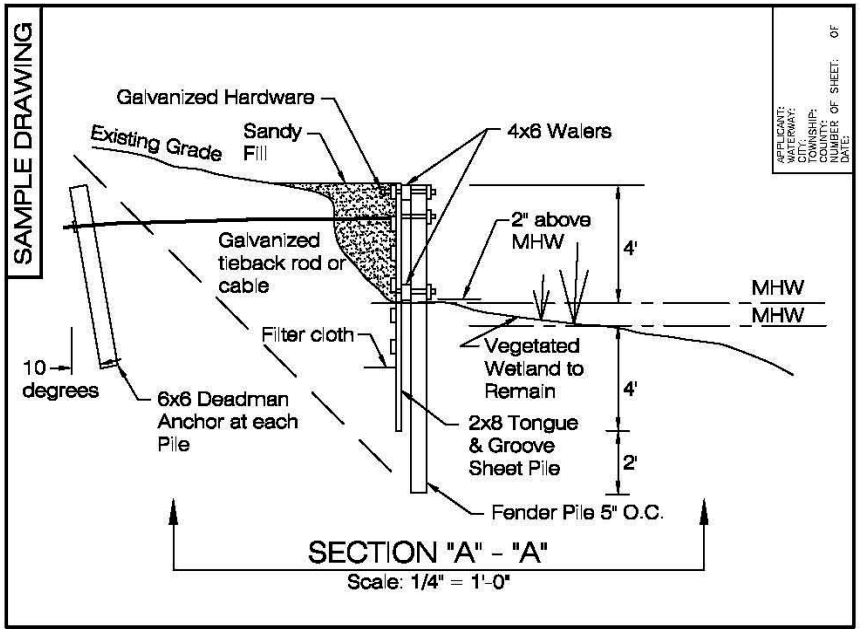
Application Revised: October 2019

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh







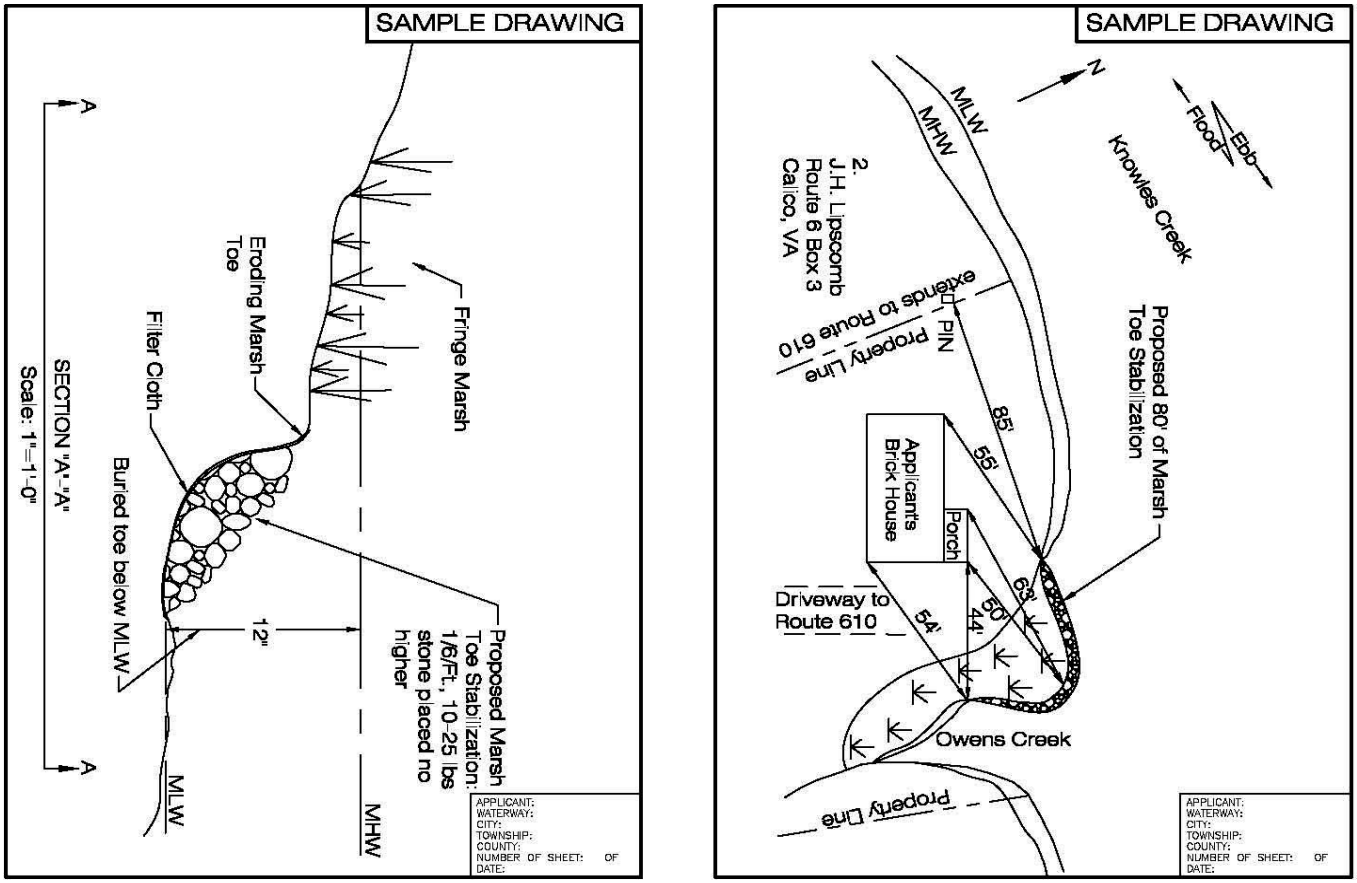


Private & Commercial Aquaculture Activities

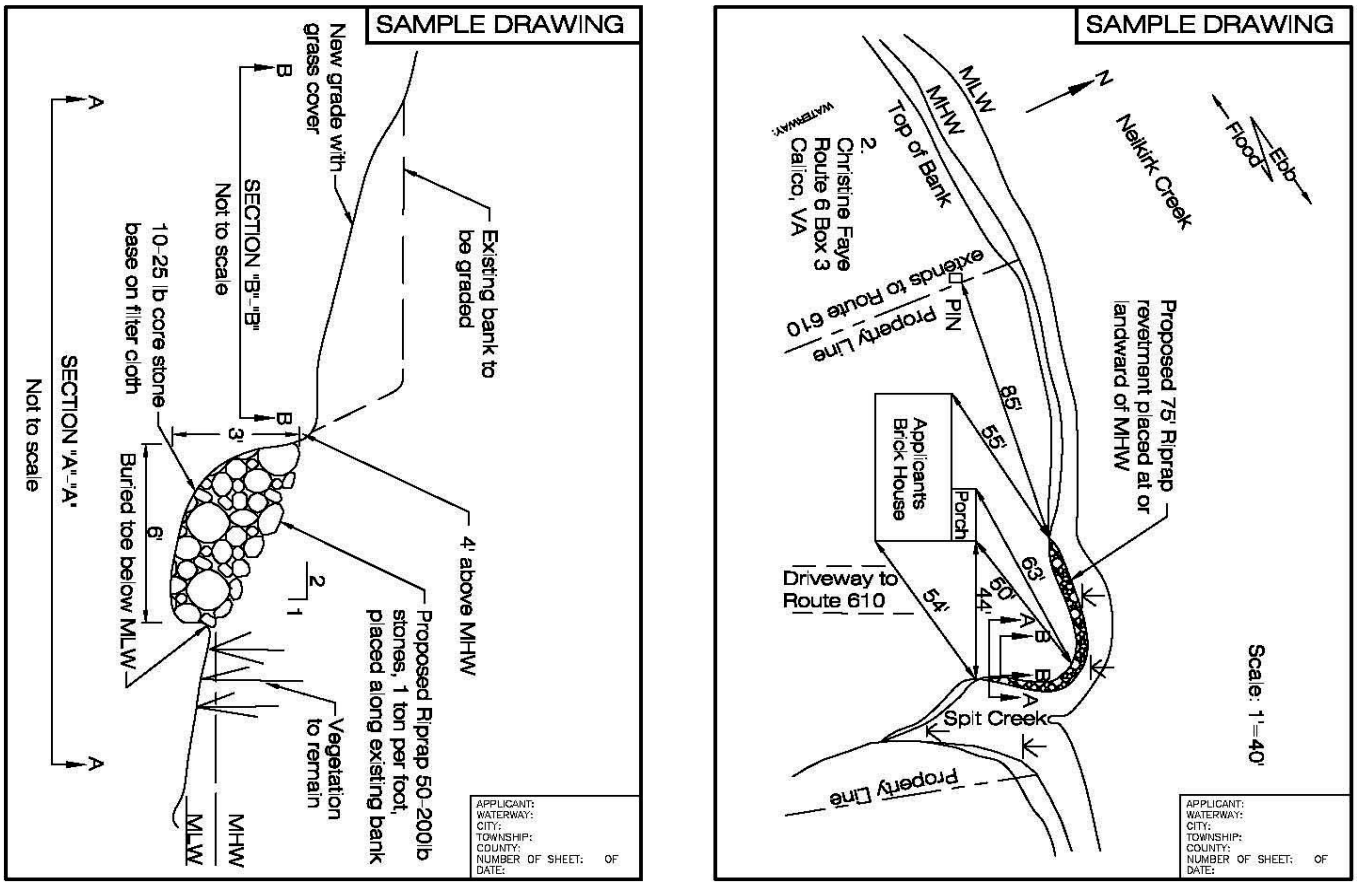
Bulkheads and Associated Backfill

Application Revised: October 2019

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

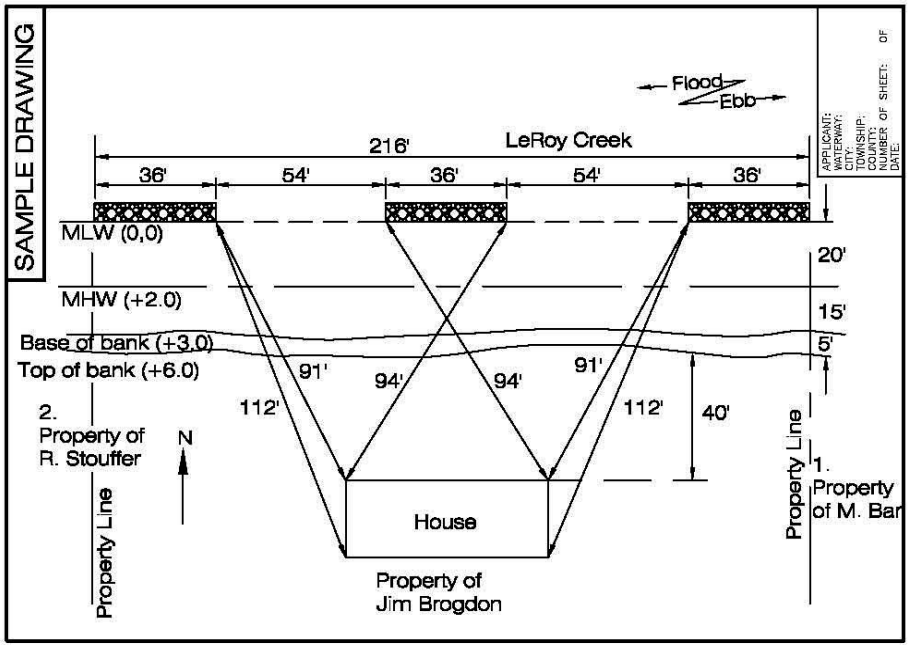


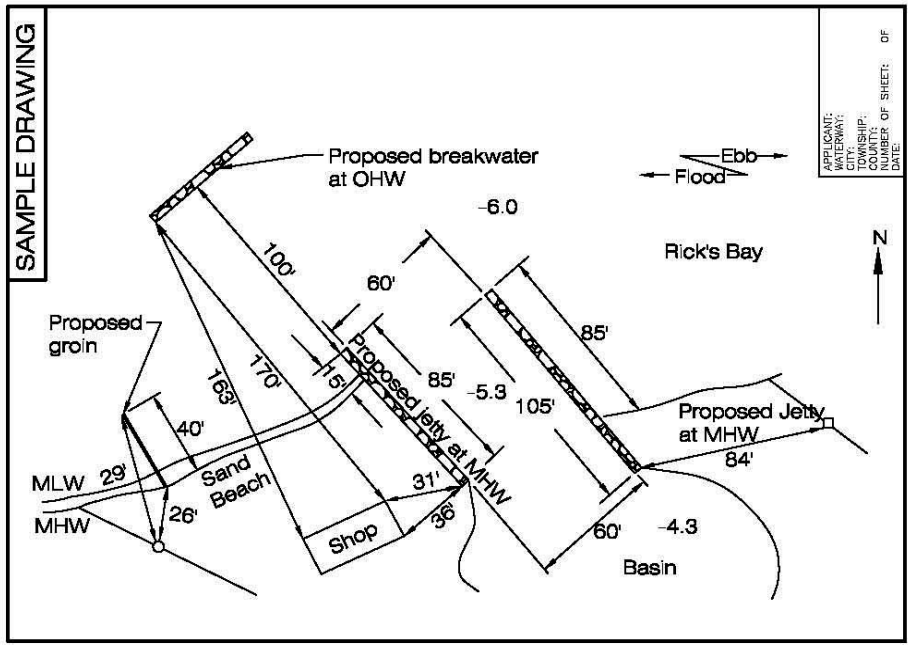
Marsh Toe Stabilization

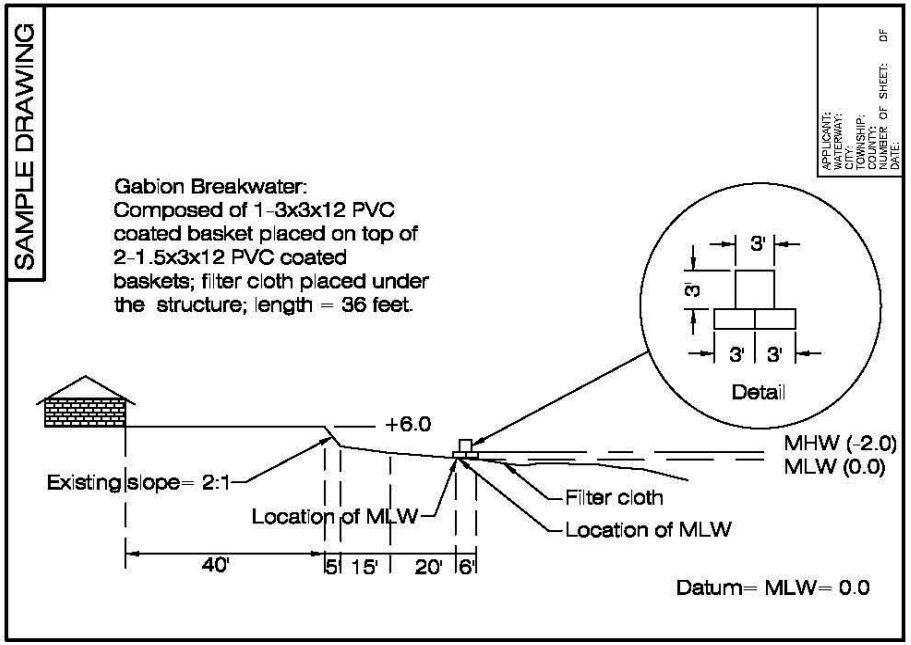


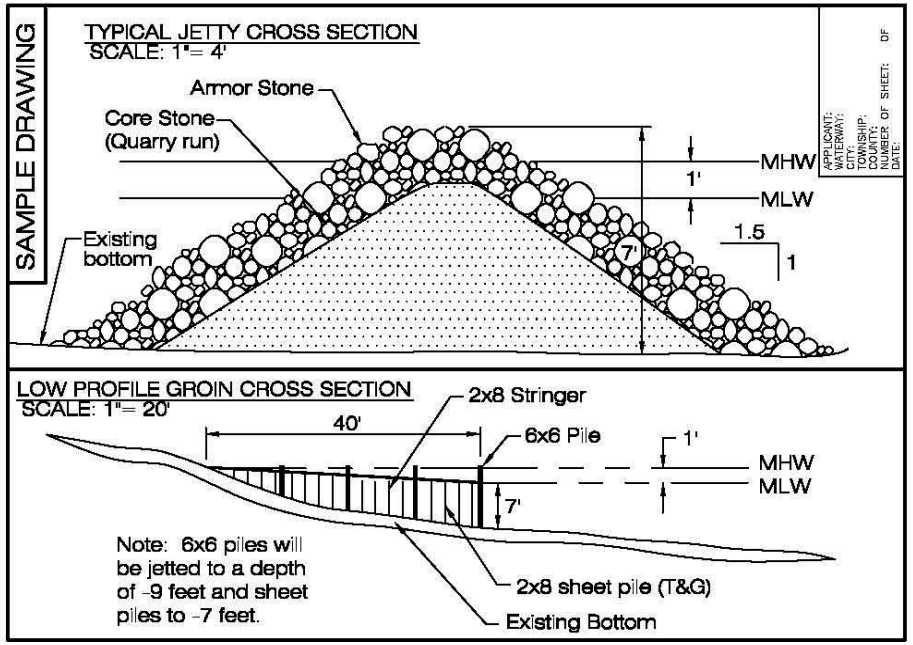
Riprap Revetment & Associated Backfill

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh









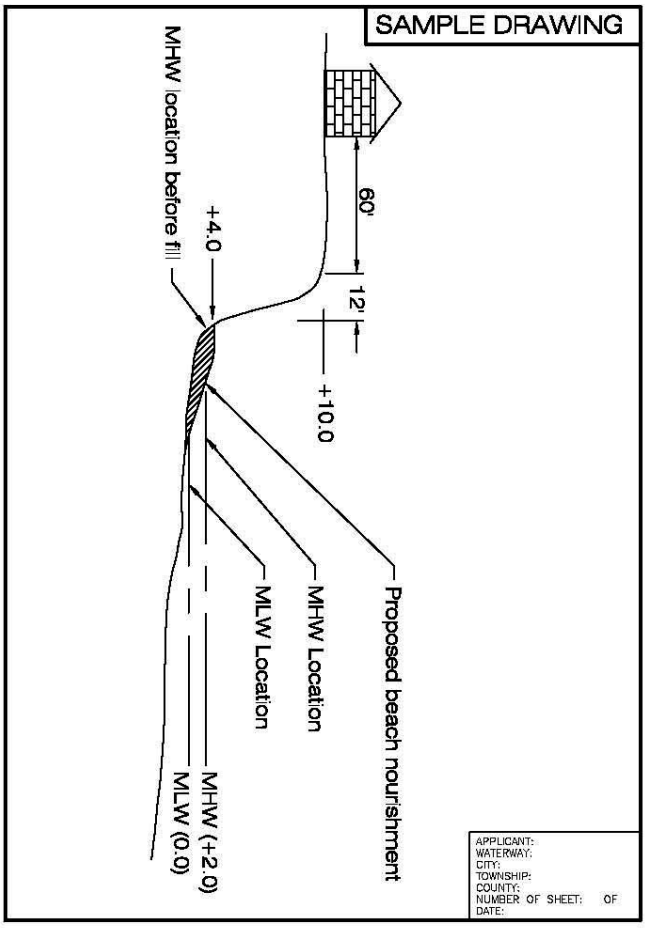
Breakwaters

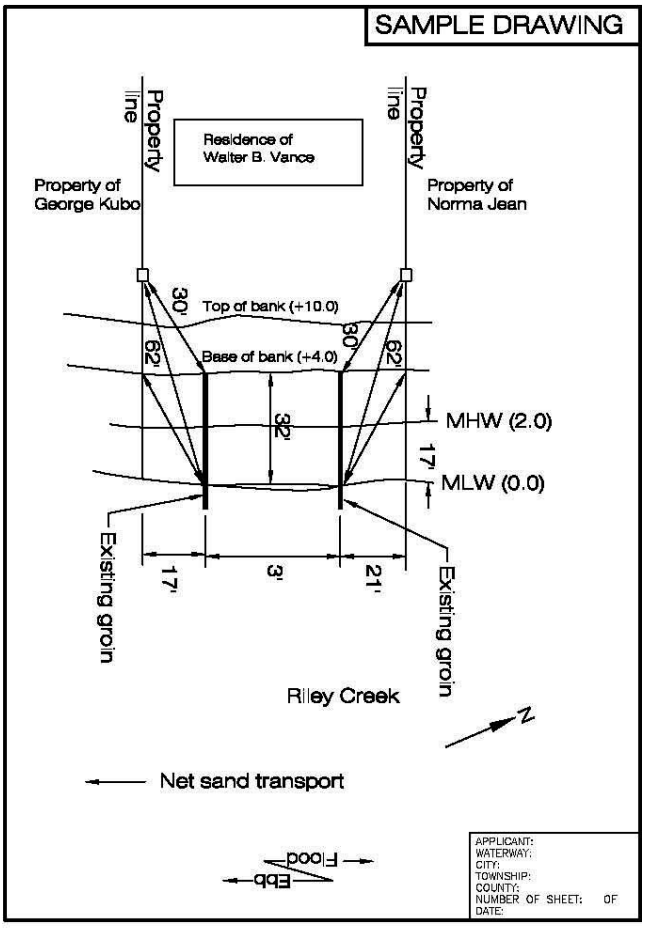
Groins & Jetties

31

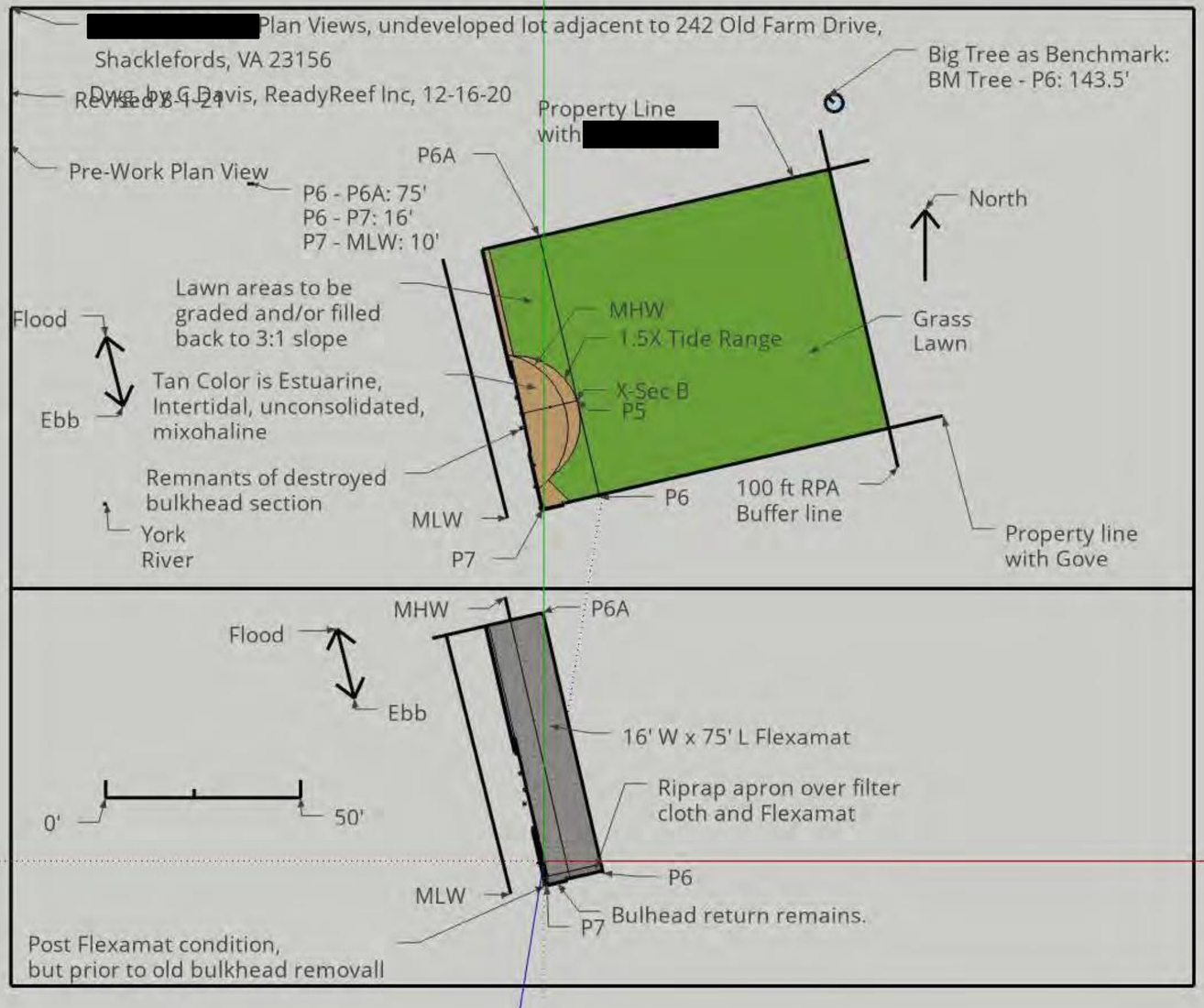
Application Revised: October 2019

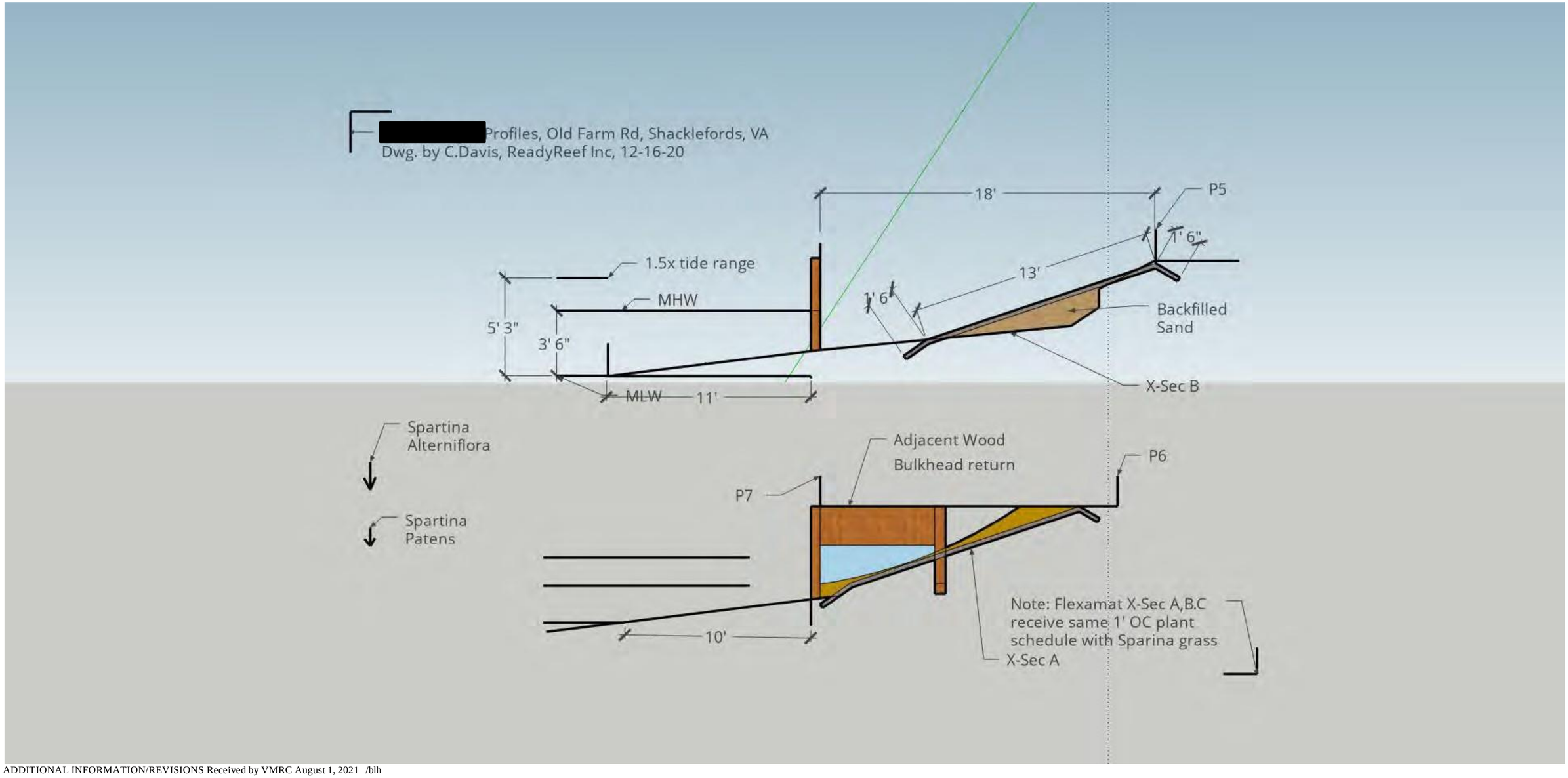
ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh



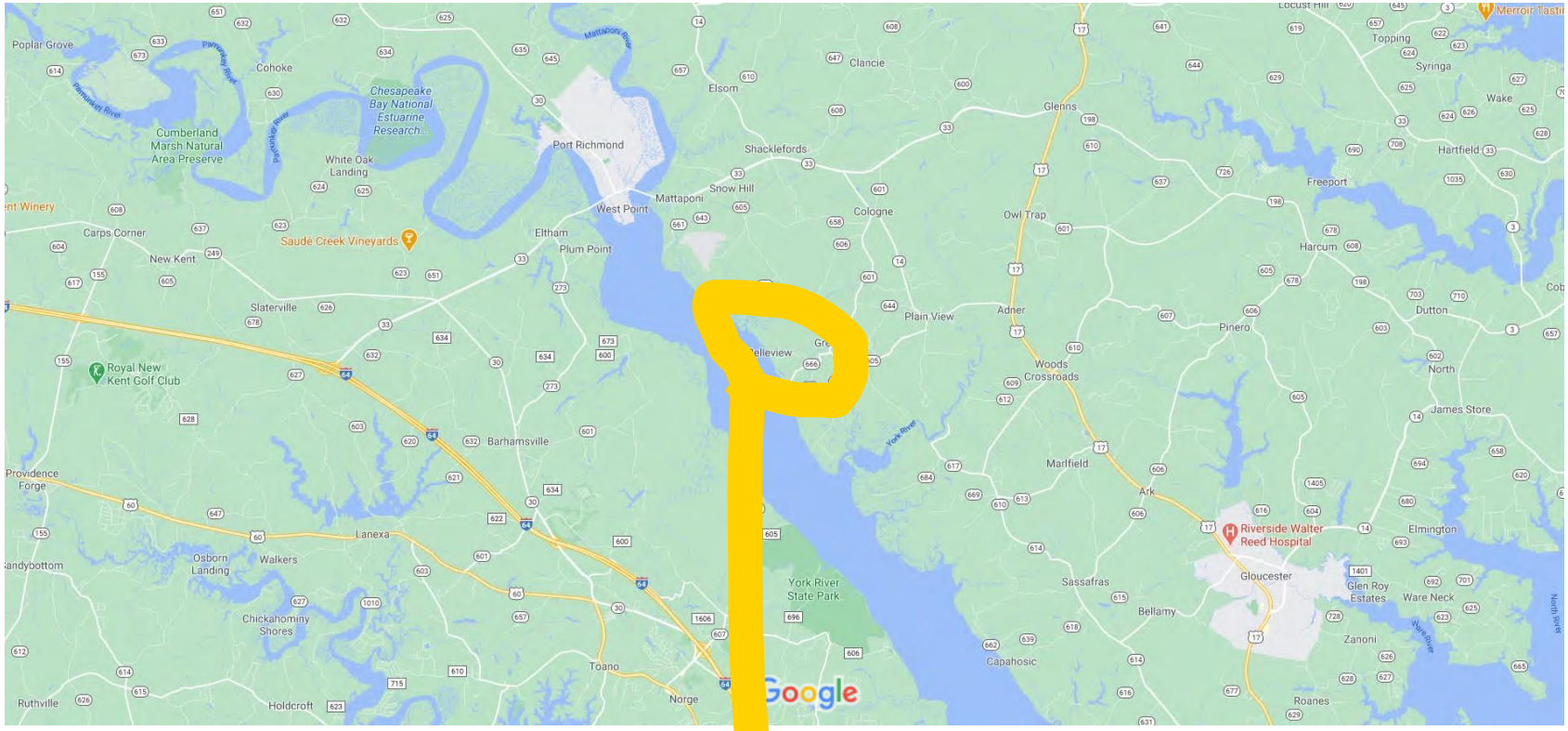


Beach Nourishment





Google Maps



ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

(http://www.kingandqueenco.net/)

ADDITIONAL INFORMATION/REVISIONS Received by VMRC August 1, 2021 /blh

Virginia Marine Resources Commission
Permit Application 20210820
Printed: Friday August 13, 2021 9:42 PM

Applicant: [redacted]
Post Office Box 154
Urbanna, VA 23175

Application Number:	20210820	**Engineer:**	Tiffany Birge
Application Date:	April 12, 2021	**Locality:**	King and Queen
Permit Type:	No VMRC Permit Nec.	**Waterway:**	York River
Permit Status:	No Permit Nec	**Expiration Date:**	
Wetlands Board Action:		**Public Hearing Date:**	

Project Description: Living Shoreline

Project Dimensions:

BeachNourishment: 5 Cubic Yards

Bioengineered Structure: 1200 Linear Feet

Virginia Marine Resources Commission
Photos for Permit Application 20210820
Printed: Friday August 13, 2021 9:42 PM

Date Photo Uploaded: 2021:06:30

Date Photo Uploaded: 2021:06:30

Virginia Marine Resources Commission
Photos for Permit Application 20210820
Printed: Friday August 13, 2021 9:42 PM

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Attachment 7: Flood Prevention Project and its Relevance to Other Projects

MPPDC staff have worked throughout the years to understand the policy, research and impacts of flooding (ie. stormwater, coastal, riverine, sea level rise) and coastal resiliency to the region. Below is a list of projects that have built upon each other over the year that have contributed to our understanding.

Climate Change & Sea Level Rise (2009 to 2012)

The MPPDC was funded for a 3 Phase project through the Virginia Coastal Zone Management Program to assess the impacts of climate and sea level rise throughout the region. With over 1,000 miles of linear shoreline, the Middle Peninsula has a substantial amount of coast under direct threat of accelerated climate change and more specifically sea-level. In Phase 1, MPPDC staff assessed the potential anthropogenic and ecological impacts of climate change. Phase 2 focused on the facilitating presentations and develop educational materials about sea level rise and climate change for the public and local elected officials. Finally Phase 3 focused on developing adaptation public policies in response to the assessments.

Phase 1: Middle Peninsula Climate Change Adaptation: Facilitation of Presentations and Discussions of Climate Change Issues with Local Elected Officials and the General Public
Phase 2: Climate Change III: Initiating Adaptation Public Policy Development
Phase 3: Phase 3 Climate Change: Initiating Adaptation Public Policy Development

Emergency Management - Hazard Mitigation Planning (2009 to Present): Since 2009, the Middle Peninsula Planning District Commission has assisted regional localities in meeting the federal mandate to have an adopted local hazard plan. *The Regional All Hazards Mitigation Plan addresses the natural hazards prone to the region, including hurricanes, winter storms, tornadoes, coastal flooding, coastal/shoreline erosion, sea level rise, winter storms, wildfire, riverine flooding, wind, dam failures, drought, lightning, and earthquakes. This plan also consists of a Hazus assessment of hurricane wind, sea level rise* (ie. Mean High Higher Water and the NOAA 2060 intermediate-high scenario), *and flooding (coastal and riverine flooding) that estimates losses from each hazard.* The Middle Peninsula All-Hazard Mitigation Plan Update 2021 is currently being updated. The 2021 All Hazards Mitigation Plan builds off and updates previous mitigation plans.

Land and Water Quality Protection (2014): In light of changing Federal and State regulations associated with Bay clean up-nutrient loading, nutrient goals, clean water, OSDS management, storm water management, TMDLs, etc, staff from the Middle Peninsula Planning District Commission (MPPDC) will develop a rural pilot project which aims to identify pressing coastal issue(s) of local concern related to Bay clean up and new federal and state legislation which ultimately will necessitate local action and local policy development. Staff has identified many cumulative and secondary impacts that have not been researched or discussed within a local public policy venue. Year 1-3 will include the identification of key concerns related to coastal land use management/water quality and Onsite Sewage Disposal System (OSDS) and

community system deployment. Staff will focus on solution based approaches, such as the establishment of a regional sanitary sewer district to manage the temporal deployment of nutrient replacement technology for installed OSDS systems, assessment of land use classifications and taxation implications associated with new state regulations which make all coastal lands developable regardless of environmental conditions; use of aquaculture and other innovative approaches such as nutrient loading offset strategies and economic development drivers.

Department of Conservation and Recreation Stormwater Management (2014)
The Virginia General Assembly created a statewide, comprehensive stormwater management program related to construction and post-construction activities (HB1065 - Stormwater Integration). The Virginia Department of Conservation and Recreation requires stormwater management for projects with land disturbances of one acre or more. This new state mandate requires all Virginia communities to adopt and implement stormwater management programs by July 1, 2014, in conjunction with existing erosion and sediment control programs. Additionally, the communities within the MPPDC are required to address stormwater quality as stipulated by the Chesapeake Bay TMDL Phase II Watershed Implementation Plan and the Virginia Stormwater Regulations. The MPPDC Stormwater Program helped localities develop tools specific to the region necessary to respond to the state mandate requirement for the development of successful stormwater programs.

Stormwater Management-Phase II (2014): MPPDC staff and Draper Aden Associates worked with localities (i.e. Middlesex, King William, and Mathews Counties and the Town of West Point) interested in participating in a Regional Stormwater Management Program. While each locality sought different services from the regional program, this project coordinated efforts, developed regional policies and procedures, and the proper tools to implement a regional VSMP.

Mathews County Rural Ditch Enhancement Study (2015): In contract with Draper Aden Associates, a comprehensive engineering study was developed to provide recommendations and conceptual opinions of probable costs to improve the conveyance of stormwater and water quality through the ditches in Mathews County.

Drainage and Roadside Ditching Authority (2015): This report explored the enabling mechanism in which a Regional Drainage and Roadside Ditching Authority could be developed. An Authority would be responsible for prioritizing ditch improvement needs, partnering with Virginia Department of Transportation (VDOT) to leverage available funding, and ultimately working toward improving the functionality of the region's stormwater conveyance system.

Living Shoreline Incentive Program (2016 to present)
In 2011 Virginia legislation was passed designating living shorelines as the preferred alternative for stabilizing Virginia tidal floodplain shorelines. The Virginia Marine Resources Commission, in cooperation with the Virginia Department of Conservation and Recreation and with technical assistance from the Virginia Institute of Marine Science (VIMS), established and implemented a general permit regulation that authorizes and encourages the use of living shorelines however,

no financial incentives were put in place to encourage consumers to choose living shorelines over traditional hardening projects in the Commonwealth. To fill this, need the MPPDC developed the MPPDC Living Shoreline Incentives Program to offer loans and/or grants to private property owners interested in installing living shorelines to stabilize their shoreline. Currently, loans are available to assist homeowners to install living shorelines on suitable properties. Loans up to $10,000 can be financed for up to 5 years (60 months). Loans over $10,000 can be financed for up to 10 years (120 months). Interest is at the published Wall Street Journal Prime rate on the date of loan closing - currently at 5.25% (11/29/18). Minimum loan amount is $1,000. Maximum determined by income and ability to repay the loan. Finally, there are currently no grants available in this program. Since 2016 under the MPPDC Living Shoreline Revolving Loan program, 8 living shorelines have been financed and built to date encumbering ~$500,000 in VRA loan funding and ~$400,000 in NFWF grant funding. Living Shoreline construction cost to date range per job $14,000- $180,000. MPPDC oversees all aspects (planning, financing, constriction, and loan servicing) of these projects from cradle to grave.

Mathews County Ditch Project - VCPC White Papers (2017): This report investigated the challenges presented by the current issues surrounding the drainage ditch network of Mathews County. The study summarized research conducted in the field; examined the law and problems surrounding the drainage ditches; and proposed some next steps and possible solutions.

Mathews County Ditch Mapping and Database Final Report (2017): This project investigated roadside ditch issues in Mathews County through mapping and research of property deeds to document ownership of ditches and outfalls. This aided in understanding the needed maintenance of failing ditches and the design of a framework for a database to house information on failing ditches to assist in the prioritization of maintenance needs.

Virginia Stormwater Nuisance Law Guidance (2018): This report was developed by the Virginia Coastal Policy Center to understand the ability of a downstream recipient of stormwater flooding to bring a claim under Virginia law against an upstream party, particularly a nuisance claim. The report summarizes how Virginia courts determine stormwater flooding liability between two private parties.

Oyster Bag Sill Construction and Monitoring at Two Sites in Chesapeake Bay (2018): VIMS Shoreline Studies Program worked with the PAA to (1) install oyster bag sills as shore protection at two PAA sites with the goal of determining effective construction techniques and placement guidelines for Chesapeake Bay shorelines and (2) assess the effectiveness for shore protection with oyster bags on private property through time.

Fight the Flood Program (2020): The Fight the Flood was launched in 2020 to connect property owners to contractors who can help them protect their property from rising flood waters. FTF also offers a variety of financial tools to fund these projects including but limited to the Septic Repair revolving loan program, Living Shoreline incentives revolving loan fund program, and plant insurance for living shorelines.

Attachment 8: Project cost estimates

Item					
Demolition	Property #1			Property #2	
Bulkhead removal/haul away	$ 2,000.00			$ 1,000.00	
Overall labor	$ 3,097.38	$ 5,097.38		$ 1,615.13	$ 2,615.13
Prep Work	$ -			$ -	
Excavator rental for 2 wks	$ 5,025.00			$ 2,475.00	
Contracted Excavator Operator	$ 3,216.00			$ 1,584.00	
Skid Steer Rental for 2 wks	$ 1,340.00			$ 660.00	
Overall labor	$ 3,097.38	$ 12,678.38		$ 1,615.13	$ 6,334.13
Installation Work	$ -			$ -	
Flexamat	$ 32,562.00			$ 16,038.00	
Flexamat Anchors	$ 335.00			$ 165.00	
Plants in Flexamat	$ 8,140.50			$ 4,009.50	
Sand	$ 2,412.00			$ 2,412.00	
Labor Install and pack sand to grade	$ 2,412.00			$ 1,188.00	
Returns to limit erosion with riprap support	$ 3,500.00			$ 3,500.00	
Overall labor	$ 9,292.13	$ 58,653.63		$ 4,846.38	$ 32,158.88
Post Work	$ -			$ -	
Grading lawn, with excavated material, remedial planting,and lawn restoration	$ 1,005.00			$ 495.00	
Overall labor	$ 3,097.38	$ 4,102.38		$ 1,615.13	$ 2,110.13
Total	**$ 80,531.77**			**$ 43,218.27**	
		$ 80,531.77			**$ 43,218.27**
			Grant Total Both Property		
			$ 123,750.04		

Attachment 9: Match Commitment Letters

August 19, 2021

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Clyde Cristman,

Thank you for considering the application to the Virginia Community Flood Preparedness Fund, involving necessary flood mitigation activities on my property at 242 Old Farm Drive, Shacklefords VA, 23156. I am committed to provide the matching funds necessary in cash or Middle Peninsula Planning District Commission (MPPDC) revolving loan funds for this project and understand that the final amount of matching funds required will be subject to the contract amount awarded by VDCR.

Please reach out to the MPPDC, who is submitting this proposal on my behalf, at 804-758-2311 should you have any questions and they will be able to contact me to coordinate a response. I can be reached by phone at 804-241-4107 or by email at saras5gkids@gmail.com.

Sincerely,

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Clyde Cristman,

Thank you for considering the application to the Virginia Community Flood Preparedness Fund, involving necessary flood mitigation activities on my property at [property address]. I am committed to provide the matching funds necessary in cash or Middle Peninsula Planning District Commission (MPPDC) revolving loan funds for this project and understand that the final amount of matching funds required will be subject to the contract amount awarded by VDCR.

Please reach out to the MPPDC, who is submitting this proposal on my behalf, at 804-758-2311 should you have any questions and they will be able to contact me to coordinate a response

Sincerely,

[redacted]

Attachment 10: Authorization to request for funding

MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

8/30/21

To: DCR Staff

From: Lewie Lawrence, MPPDC Executive Director

Reff: Authorization to request for funding:

Matching funds for all construction and design projects provided under Round 1 of the Virginia Community Flood Preparedness Fund are provided by the property owner for which the project is proposed. The match commitment letter acknowledges that the owner of the project (land owner) understands that a match commitment is required and will be provided should the project be funded.

The required elements are found within the submitted application proposal packet. A notation of where each required item is noted in "parentheses"

- The name, address, and telephone number of the contributor (application packet and match commitment letter).
- The name of the applicant organization (application cover sheet)
- The title of the project for which the cash contribution is made (application cover sheet)
- The source of funding for the cash contribution (match commitment letter).
- The dollar amount of the cash contribution (application budget)
- A statement that the contributor will pay the cash contribution during the agreement period (match commitment letter).

Saluda Professional Center • 125 Bowden Street • PO Box 286 • Saluda, Virginia 23149
(Phone) 804 758-2311 • (Fax) 804 758-3221 • (Email) pdcinfo@mppdc.com
http://www.mppdc.com

MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

October 22, 2021

Virginia Department of Conservation and Recreation
Attention: Virginia Community Flood Preparedness Fund
Division of Dam Safety and Floodplain Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Dear Mr. Clyde Cristman,

We are pleased to respond to DCR's October 20, 2021 request to amend Round 1 application based on the two concerns noted in the letter from Darryl Glover, Deputy Director. Our response follows for the **multi-parcel Plains Shoreline Construction** application. As we have offered multiple times, if DCR would provide guidance as to what you desire for applications related to issue areas, we will gladly incorporate into future proposals. We consider helping both public and private entities manage flooding a critical and essential function of government.

Issue #1

DCR questions how properties valued with a stated range can be qualified as low income.

Response: As previously provided by MPPDC legal counsel to DCR, ***"The statute and guidance are clear that the criteria deals with areas, not people. To ignore its plain language or utilize unreliable measures such as property value for grants would be arbitrary and certainly inconsistent with the law.***

Nevertheless, the applicant has voluntarily elected to be reclassified as residing in a non-low-income area designation even though they reside in a low-income area. As such, the applicant has voluntarily elected to change the budget request from 80% to 70% in grant funding, which means the applicant will need to cover 10% more of the project costs than what was originally budgeted for. The applicant has authorized this modification which is included in this letter as well as a new proposed project budget.

Issue #2

DCR questions how the submitted project relates to priority being given to community scale activities; benefit to the greater community; and adverse impact to other neighboring properties.

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http://www.mppdc.com

Response: The state may have some basis to give preference to projects larger in scale than those affecting one parcel or property owner. Va. Code § 10.1-603.25(E) states, "Priority shall be given to projects that implement community-scale hazard mitigation activities that use nature-based solutions to reduce flood risk. However, this would not provide a basis for *rejecting* applications for one parcel or property owner as projects of all sizes are expressly to be considered. The issue is how the guidance defines "Community Scale project" which means a project that provides demonstrable flood reduction benefits at the US census block level or greater. A census block is the smallest US Census geography, but in rural application in many instances represents an extremely large area covering in excesses of 3,000 acres and almost 5 square miles, while an urban block may be as small as 2 acres or .003 of one acre in size. If the basis for approving rural projects is based singularly on proving "demonstrable flood reduction" benefit, rural areas will never compete.

MPPDC believes that proposing nature-based flood mitigation projects at the parcel scale and where possible, partnering with neighbors can accomplish more in terms of linear shoreline protected than urban areas which have smaller sized parcels. Therefore, consistent with the General Assembly directive to VMRC that every VMRC permitted living shoreline project is the preferred solution, we believe submissions of each nature-based project is essentially a nature- based "brick in the wall" and over time the cumulative impact of this approach will be realized. The alternative is hardening of the shoreline, which is counter to the desires of the General Assembly.

Additionally, Adapt VA contains a data layer illustrating areas of less than 10 feet in elevation that show locations in the Middle Peninsula that offer benefits of NNBF to coastal buildings, habitat, and community protection. All Round 1 applications from the Middle Peninsula have multiple community protection benefits which include combinations of mitigating coastal flooding, protecting buildings/community facilities and CRS credit

Concerning adverse impacts. MPPDC recognizes that VMRC is the permit issuing authority for all shoreline projects and by statute the local wetlands board and VMRC Commission must utilize the best available science when evaluating each project including how the project impacts up stream and down steam impacts. This might include modifying any aspect of a Flood Fund design to ensure that impacts are mitigated. With that said, MPPDC proposes that prior to requesting final reimbursement from DCR for any design proposal funded under the Flood Fund, MPPDC staff will send the proposed design to the Shoreline Erosion Advisory Service (SEAS) for review. This will require DCR SEAS staff to work directly with the private project designer to address impacts that DCR staff has concerns with to ensure that impacts stemming from any design permitted by VMRC are lessened to a degree that is satisfactory by DCR.

Applicant Voluntarily Selection:

From: [redacted]
Sent: Monday, October 25, 2021 12:04 PM
To: Lewis Lawrence
Subject: [redacted] grant free classification

Lewie,
Although the properties in the DCR flood mitigation grant applications for the [redacted] are located in a low-income area, we voluntarily elect for the properties to be reclassified as non-low-income. Please know we do not believe this will prohibit receiving the additional 10% funding as you get more clarification and the rules for the program are finalized.
Best,
[redacted]

Amended Budget Request

DCR Funding:	$ 109,384
Owner:	$ 46,880
Total	$ 156,264

								Budget (Cat. D)
Personnel Salaries/Wages			**PDC %**	**Match %**	**Annual Salary**		**DCR**	**Owner**	**Total**
Staff			16.75%	4.19%	$70,000		$10,420	$4,466	$14,886
Personnel			*Lewie's Cheat Sheet*		**DCR**	**Owner**	$10,420	$4,466	$14,886
			Total		*70%*	*30%*			
26.21% salaries;				**125,250**	87,674.76	37,574.90	$2,731	$1,171	$3,902
			15%	18,787.45	13,151.21	5,636.23			
Total Personnel				**144,037.11**	**100,825.98**	**43,211.13**	$13,151	$5,637	$18,788
	SubAward/SubContract Agreements						**70%**	**30%**	
[redacted]	*Demolition*	*Bulkhead removal/haul away*				$5,097	$3,568	$1,529	$5,097
	Site Prep	*Eequipment Rental and Labor*				$12,678	$8,875	$3,804	$12,678
	Shoreline Install	*Flexamat,Plants,Sand,Returns, Rock Labor*				$58,654	$41,058	$17,596	$58,654
	Post Job Yard	*Grading, Seeding, Plantings*				$4,102	$2,872	$1,231	$4,102
						$0	$0	$0	$0
						$0	$0	$0	$0
						$0	$0	$0	$0
						$0	$0	$0	$0
	Demolition	*Bulkhead removal/haul away*				$2,615	$1,831	$785	$2,615
	Site Prep	*Equipment Rental and Labor*				$6,334	$4,434	$1,900	$6,334
	Shoreline Install	*Flexamat,Plants,Sand,Returns, Rock Labor*				$32,159	$22,511	$9,648	$32,159
	Post Job Yard	*Grading, Seeding, Plantings*				$2,110	$1,477	$633	$2,110
	Procurement					$1,500	$1,050	$450	$1,500
						$0	$0	$0	$0
						$0	$0	$0	$0
						$0	$0	$0	$0
									$0
						$125,250			
SUBTOTAL: Direct Costs							$100,826	$43,212	$144,038
Indirect/IDC/Facilities & Administrative Costs					**27.92%**	$12,226	$8,558	$3,668	$12,226
Total							**$109,384**	**$46,880**	**$156,264**
Other Match:									
Source of Match							$0	$0	$0
GRAND TOTAL							**$109,384**	**$46,880**	**$156,264**

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