Board of Zoning Appeals

Regular Meeting

Cape Charles Civic Center – 500 Tazewell Avenue

August 9, 2022 10:00 A.M.

1. Call to Order
    a. Roll call and establish a quorum

2. Invocation and Pledge of Allegiance

3. Adoption of Agenda

4. Review and Approval of Minutes
    A. March 8, 2022
    B. July 12, 2022

5. Old Business/Matters Deferred from Previous Meetings: None

6. New Business – Public Hearing
    A. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the majority portion of Tax Map #83A1-3-A and 50% of Tax Map #83A1-3-C totaling approximately .85 acres or 37,037 sq. ft. and further identified on the proposed Site Plan as Lot A located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

    B. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the remaining portion of Tax Map #83A1-3-A not identified in the application above, 50% of Tax Map #83A1-3-C and all of Tax Map #83A1-3-B1 totaling approximately .84 acres or 36,933 sq. ft. and further identified on the proposed Site Plan as Lot B located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

    C. Other Matters

    D. Next Meeting – Tuesday, September 13, 2022 @ 10:00 a.m.

    E. Adjourn

DRAFT
Board of Zoning Appeals
Public Hearing & Meeting
Cape Charles Civic Center
March 8, 2022
10:00 a.m.

At approximately 10:00 a.m. in the Cape Charles Civic Center, Chairman Bill Murphy called to order the Board of Zoning Appeals Public Hearing and Meeting. In attendance were Board members Dolores Blackburn, Jim Holloway, and Laura Weigand. Pete Baumann arrived after roll call. Also, present were, Interim Town Planner/Zoning Administrator Katie Nunez and Planning Technician Tracy Outten. There were two members of the public in attendance.

Bill Murphy introduced and welcomed new board member Laura Weigand.

Bill Murphy led the Board in the recitation of the Pledge of Allegiance.

CONSENT AGENDA
Motion made by Jim Holloway, seconded by Dolores Blackburn, to accept the consent agenda as presented. The motion was approved by unanimous vote.

Bill Murphy asked if there were any changes to the minutes.

Motion made by Dolores Blackburn, seconded by Jim Holloway, to approve the minutes from the December 14, 2021 Board of Zoning Appeals Regular Meeting as written. The motion was approved by unanimous vote.

OLD BUSINESS/MATTERS DEFERRED FROM PREVIOUS MEETINGS
There was no old business to discuss.

NEW BUSINESS - PUBLIC HEARING
A. An application from David M. Gammino of Cape Charles Ventures, LLC, proposed contract purchaser, for a height variance of 8 ft. for the entire roof deck and an additional 10 ft. for the elevator shaft from the Cape Charles Zoning Ordinance Section 6.6 (D) which has a height requirement maximum of 40 ft. at Tax Map #83A3-1-617B, 83A3-1-620B, and 83A3-1-621B at 7 Strawberry Street for an expansion of Hotel Cape Charles with a three-story addition to add a maximum of twelve hotel rooms. Said application is being filed with consent from the property owners, Betis Group, Inc.

i. Zoning Administrator Report
Katie Nunez informed the board that Mr. Gammino, the applicant, had withdrawn the application.

OTHER BUSINESS
There was no other business to discuss.

Hearing no objections, Chairman Bill Murphy adjourned the Board of Zoning Appeals Public Hearing and Meeting at 10:10 a.m. The motion was approved by unanimous vote.

_____
Chairman Bill Murphy

_____
Planning Technician

DRAFT

DRAFT
Board of Zoning Appeals
Public Hearing & Meeting
Cape Charles Civic Center
July 12, 2022
10:00 a.m.

At approximately 10:00 a.m. in the Cape Charles Civic Center, Chairman Bill Murphy called to order the Board of Zoning Appeals Public Hearing and Meeting. In attendance were Board members Pete Baumann, Dolores Blackburn, Jim Holloway, and Laura Weigand. Also, present were, Interim Town Planner/Zoning Administrator Katie Nunez and Planning Technician Tracy Outten. The owner/applicant participated via telephone. There was one member of the public in attendance.

Bill Murphy led the Board in the recitation of the Pledge of Allegiance.

CONSENT AGENDA

Motion made by Jim Holloway, seconded by Pete Baumann, to accept the consent agenda as presented. The motion was approved by unanimous vote.

OLD BUSINESS/MATTERS DEFERRED FROM PREVIOUS MEETINGS

There was no old business to discuss.

NEW BUSINESS - PUBLIC HEARING

A. *An application from Spencer & Lauren Custis at Lot 100 Washington Avenue (Tax Map #83A1-1-100) in the Residential-1 Zoning District for a variance from Cape Charles Zoning Ordinance Section 3.2 (B) to allow an accessory structure (existing shed) to remain on premise without a principal use of a main dwelling unit.*
Bill Murphy read the public notice and asked the applicant if there was any additional information.

Lauren Custis, owner, thought the application covered the reasoning for needing the variance and was obliged to answer any questions.

Discussion and questions were as follows: (i) Bill Murphy asked if a principal structure had to be on a property in order for the Town to assign an address. Katie Nunez answered yes, that was the reason the applicants were not in compliance with the Cape Charles Zoning Ordinance (CCZO). Bill Murphy then wanted to know if the variance was granted, could an address be assigned, no. (ii) Bill Murphy asked the applicant how long the shed had been on the lot. Lauren Custis answered about one year. (iii) Bill Murphy confirmed that all setback requirements were met. Katie Nunez reiterated that (iv) Some discussion ensued on the alley located behind this property and a property located a few yards down that was owned by the applicants. Lauren Custis said the accessory structure could not be placed behind the principal structure that it was being used for because it would not fit due to the setbacks from the alley. Katie Nunez suggested the applicant apply for a variance from those setbacks. (v) Pete Baumann thought the application was insufficient when arguing the criteria, the board was supposed to meet when granting a variance and did not see a reason for any consideration of hardships. (vi) Katie Nunez explained that Spencer Custis, the applicant, was contacted and informed that the accessory structure was in violation of the zoning ordinance. The planning and zoning office has been busy with the commission and various boards that sending out violation notices was put on the do it later list. Then, Mr. Custis applied for an electrical permit through the Building Department, and he was contacted by Katie Nunez and reminded that an accessory structure could not be on a lot without a main dwelling unit and gave him some options. The office decided to hold off on issuing the violation letter of action until the decision for the variance was made as this was the route the applicant decided to take. (vii) Jim Holloway asked if any plans been received for a principal structure, no. (viii) Lauren Custis saw some other sheds located on lots without a main house in the picture that was provided in the staff

report. She continued by saying that this should be allowed since not everyone can access a shed on their neighboring lot and that they cannot build within the next year that was unreasonable. Lastly, they did not mean to do anything wrong. (ix) Laura Weigand said that some of the lots that had only sheds left standing did once have houses that may have fallen down. She asked if they were grandfathered in. Katie Nunez could not answer that without doing further research. and (x) Bill Murphy said though they felt for the applicants this board was tightly governed by the Code of Virginia and the Cape Charles Zoning Ordinance, and this variance application did not meet the requirements of the criteria for a hardship and the definition of an accessory building was clear in the ordinance. Laura Weigand added that if more definitive plans were on the table, she would be more inclined to make an exception. Pete Baumann said the criteria was not meant no argument was given in the application and the issues were not relevant.

Motion made by Laura Weigand, seconded by Dolores Blackburn, to deny the Variance Application from Spencer Custis at Lot 100 on Washington Avenue (Tax Map #83A1-1-100) for a use variance to allow an accessory structure without a principal structure (or single-family dwelling) pursuant to Cape Charles Zoning Ordinance Section 3.2 (B) as an accessory structure is defined in Section 2.9 of the Cape Charles Zoning Ordinance as written with a condition that a thirty-day stay be granted before any enforcement of action for removal began to give the applicant time to make arrangements for the accessory structure to be moved to 204 Washington Avenue (Tax Map #83A1-1-108). The motion was approved by unanimous vote.

OTHER BUSINESS
There was no other business to discuss.

NEXT MEETING
Tuesday, August 9, 2022 at 10:00 a.m. – Bill Murphy informed the board he would be out of town.

Motion made by Jim Holloway, seconded by Laura Weigand, to adjourn the Board of Zoning Appeals Public Hearing and Meeting at 10:50 a.m. The motion was approved by unanimous vote.

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Chairman Bill Murphy

_____
Planning Technician

DRAFT

TOWN OF CAPE CHARLES
Notice of Public Hearing – Variance Request

The Cape Charles Board of Zoning Appeals will hold a public hearing on Tuesday, August 9, 2022 at 10:00 am in the Cape Charles Civic Center, 500 Tazewell Avenue, to receive public comment on the following:

A. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the majority portion of Tax Map #83A1-3-A and 50% of Tax Map #83A1-3-C totaling approximately .85 acres or 37,037 sq. ft. and further identified on the proposed Site Plan as Lot A located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

B. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the remaining portion of Tax Map #83A1-3-A not identified in the application above, 50% of Tax Map #83A1-3-C and all of Tax Map #83A1-3-B1 totaling approximately .84 acres or 36,933 sq. ft. and further identified on the proposed Site Plan as Lot B located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

The applications are available for public review on our website at www.capecharles.org. Please contact Town Planner/Zoning Administrator Katie Nunez at 1-757-331-2036, or by email at planner@capecharles.org, if you have any questions or require additional information. Anyone interested in attending and needing special assistance contact the Town at least 48 hours before the hearing.

AD PLACED: Eastern Shore Post – Tuesday, July 19, 2022
AD TO RUN: Friday, July 22, 2022 and July 29, 2022

BOARD OF ZONING APPEALS
STAFF REPORT

Meeting Date: August 9, 2022
Item #: 6A & 6B – Public Hearing
Prepared by: Katie H. Nunez, Planning/Zoning Administrator

APPLICANT: Dave & Pam Hainsworth
PROPERTY OWNER: Cape Charles Beach, LLC
SITE ADDRESS: Corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay

TAX MAP: 83A1-3-A, 83A1-3-C & 83A1-3-B1
LOT SIZE: 1.6 acres

TYPE OF APPLICATION: CBPA Exception
SPECIFIC REQUEST: To encroach into the Resource Protection Area of the Chesapeake Bay Preservation Act (CBPA) Overlay District to build 2 residences on a reconfiguration of the three lots into 2 lots
ZONING: Section 7.7 (A3) & 7.5
CURRENT ZONING: Residential-1 & CBPA Overlay

DATE RECEIVED: June 29, 2022
DATE DEEMED COMPLETE: July 5, 2022
LEGAL DEADLINE (90 Days from Complete Application – Directory, not Mandatory): October 3, 2022

LEGAL ADS for the 2 PROPOSED LOTS

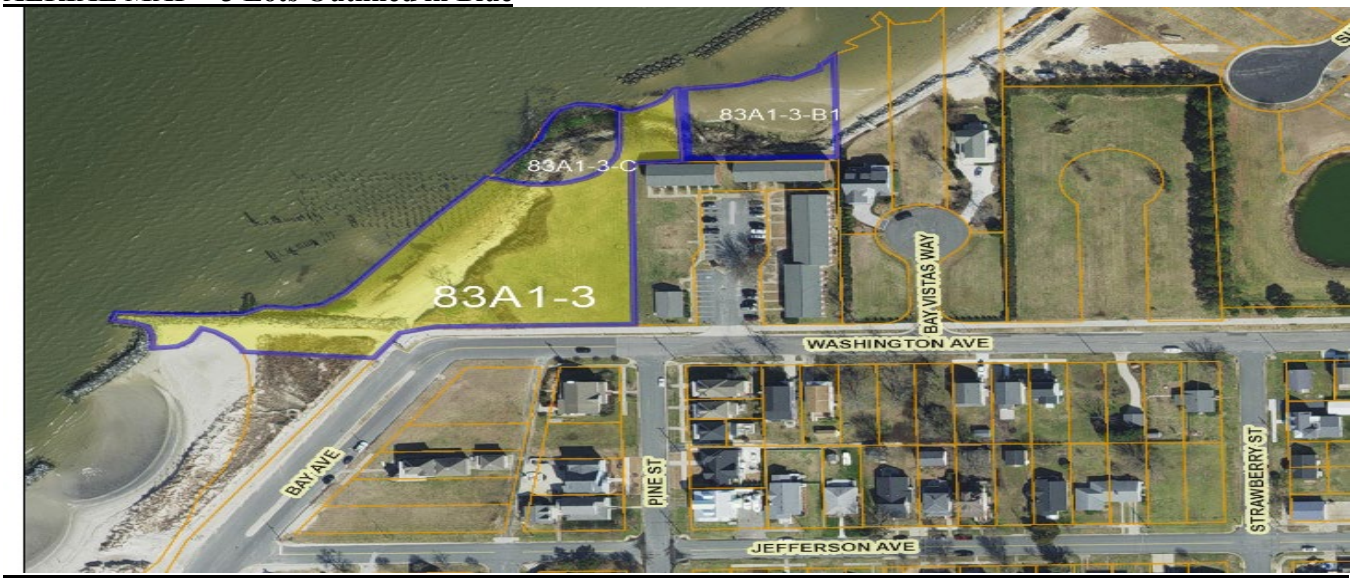
A. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the majority portion of Tax Map #83A1-3-A and 50% of Tax Map #83A1-3-C totaling approximately .85 acres or 37,037 sq. ft. and further identified on the proposed Site Plan as Lot A located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

B. An application from Dave & Pam Hainsworth for the property at the corner of Bay Avenue and Washington Avenue adjacent to the Chesapeake Bay and further described as the remaining portion of Tax Map #83A1-3-A not identified in the application above, 50% of Tax Map #83A1-3-C and all of Tax Map #83A1-3-B1 totaling approximately .84 acres or 36,933 sq. ft. and further identified on the proposed Site Plan as Lot B located in the Residential-1 (R-1) Zoning District and in the Chesapeake Bay Preservation Act (CBPA) Overlay Zoning District; said application is seeking an exception to the CBPA of the Cape Charles Zoning Ordinance (CCZO) Section 7.7 (A3) to allow for a residential dwelling unit pursuant to CCZO Section 7.5 which provides by-right single family dwelling in the R-1 Zoning District.

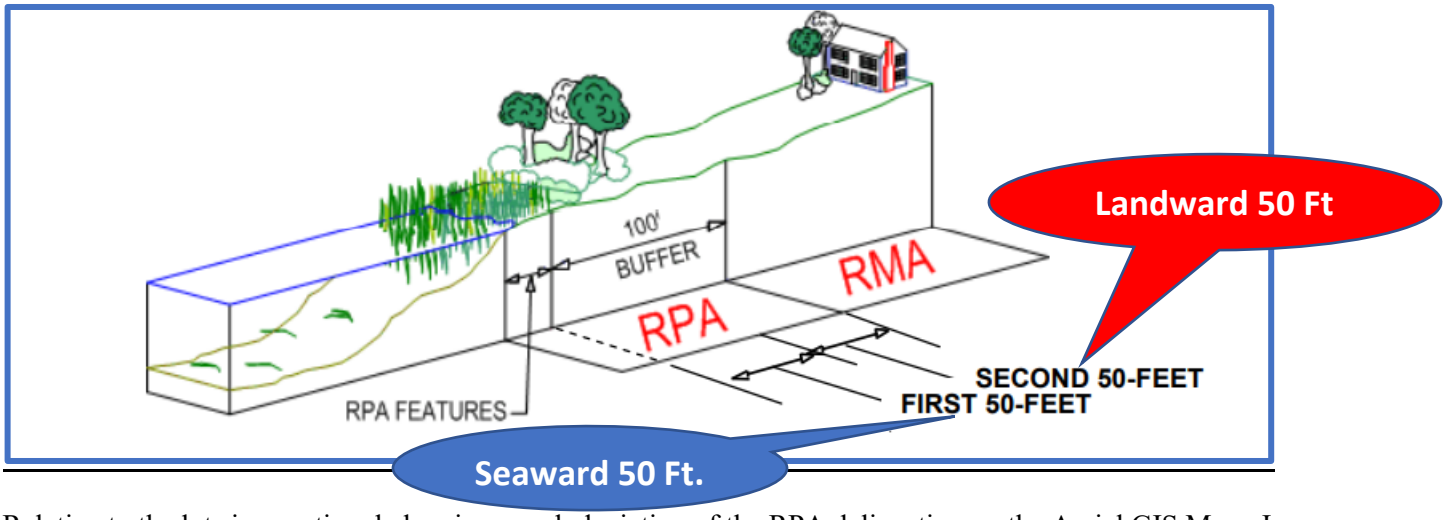
NARRATIVE OF PROPOSAL
Staff has been in discussion with the applicants, Dave & Pam Hainsworth, since February 2022 regarding their interest in purchasing the 3 lots located at the corner of Bay Avenue and Washington Avenue and further identified as Tax Map # 83A1-3-A, 83A1-3-C & 83A1-3-B1. The lots are currently owned by the Cape Charles Beach, LLC as represented by Robert E. Schlegel who has provided an owner affidavit to allow the prospective purchasers of Dave & Pam Hainsworth to file this application regarding this property. The three lots are zoned

Residential-1 and are also located in the Overlay Zoning District of the Chesapeake Bay Preservation Act (CBPA). The lots are substantially located in the Resource Protection Area of the CBPA and can not be considered for development without petitioning the Town for an exception (similar to a variance under state law) from the CBPA.

AERIAL MAP – 3 Lots Outlined in Blue



One of the key components of the Chesapeake Bay Preservation Act is the requirement for a 100-foot vegetated buffer measured from the edge of the water, wetlands or stream. This buffer is known as the RPA (Resource Protection Area). Within the RPA, the 100 ft. buffer is further delineated as the Seaward 50 ft. or first 50 ft. located closest to the water source and the Landward 50 ft or the second 50 ft. closest to the structure. Through an Exception process, there can be some development in the Landward 50 ft of the RPA but never in the Seaward 50 Ft of the RPA. There is also a requirement for a Resource Management Area (RMA). Below is a visual depiction of these two buffer areas.



Relative to the lots in question, below is a rough depiction of the RPA delineation on the Aerial GIS Map. I am providing you this so that you can see its placement based upon the current lots. I would refer the Board to the Application Attachment (Attachments 1 & 2) which shows the proposed re-configuration of the three lots into

two lots (Lots A and B) and the information regarding the RPA is more specifically shown on Sheet No. 1 for Lot A as well as for Lot B.

Resource Protection Area (RPA: from the mean high-water mark to the Yellow Line – 1st 50 feet or Seaward 50 ft. and from the Yellow Line to Red Line – 2nd 50 ft or Landward 50 ft.)

BACKGROUND OF THE CHESAPEAKE BAY ACT

It is essential to understand the history and requirements of the Chesapeake Bay Preservation Act relative to Cape Charles and land use development requirements of the State. The purpose of the Act is to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters and implementing the Act, which provides for the definition and protection of certain lands called Chesapeake Bay Preservation Areas, which if improperly used or developed may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries.

The Code of Virginia requires each locality to adopt an ordinance regarding Subdivisions and the Town adopted said ordinance on January 11, 1977. However, the Code does not require each locality to adopt a Zoning Ordinance - it is a permissible legislative act and if the locality chooses to have a Zoning Ordinance, then the Code of Virginia dictates the requirements and composition elements of a zoning ordinance. The Town did not consider a zoning ordinance until after the state adopted the Chesapeake Bay Preservation Act (CBPA) in 1989 thru Code of Virginia Section 10.1-2100 thru 10.1-2115. As part of that law, each locality that was within the watershed of the CBPA was given a certain amount of time to adopt, in phases, elements of compliance to the CBPA including a CBPA Overlay District and Map, with very specific ordinance requirements in the creation of said map relating to the Resource Protection Areas (RPAs), Resource Management Areas (RMAs) and Intensely Developed Areas (IDAs) of the CBPA.

On September 11, 1990, the Town of Cape Charles adopted the first component required– an overlay district w/map (Attachment 5) and zoning ordinance component describing the CBPA. The Town also adopted an Erosion and Sediment Control (E&S) Ordinance on June 11, 1991 and finally a full zoning ordinance on July 14, 1992. The Town in the early 1990's annexed land from the County that triggered the development and adoption of the Planned Unit Development (PUD) ordinance, more formally known as the Accawmacke Plantation Planned Unit Development Ordinance, on February 9, 1993.

The creation of the PUD was occurring simultaneously while the Town was adopting the CBPA (Article VII of the Town Zoning Ordinance), E&S, and the Town Zoning Ordinance and the PUD initially did not incorporate and/or comply with the state requirements of the CBPA and the associated components of the Town Zoning Ordinance to implement the CBPA. So, during the rest of the 1990's through the early 2000's, the Town and the Bay Creek Development actively worked with the State through its regulatory oversight agency for the CBPA, the Chesapeake Board of Local Assistance Department (CBLAD), and made required changes to the Town's Comprehensive Plan as well as receiving the first of several recognitions of the Town's progress in complying with the CBPA requirements on February 26, 1999 (Attached 6)

BACKGROUND OF THE LOTS

According to the applicant's narrative (Attachments 1 & 2), these lots were previously utilized as part of the ferry system that serviced the lower end of the Eastern Shore. The Schlegel Family sold the property in 1931 and eventually reacquired the lots and utilized the property as a commercial harbor. In the late 1970's, a portion of the land was sold for the construction of the Seabreeze Apartments which were constructed in 1983. This information supports the classification of these lots as legal, non-conforming lots of record that were approved by the Town and recorded before October 1, 1989. The second component of this consideration is found in the Site Plans that delineate the RPA which shows that there is not sufficient land outside the RPA on which to construct a principal dwelling.

I can only presume when the Town finally adopted a Zoning Ordinance and with that, a Zoning Map, that the Town classified most of the Historic District, including Washington Avenue and most of Bay Avenue as Residential-1. Therefore, while these lots had historically been used commercially, these lots were designated as Residential-1 by the Town at that time, in keeping with the surrounding lots. With the zoning district designation of R-1, it does indicate that these lots are entitled to the by-right uses outlined in the R-1 zoning district as well as conforming with any other overlay district requirements that apply.

DETAILS OF THE APPLICATION

I have required the applicants to submit a revised site plan showing how the lots would be reconfigured to meet the requirements of the Zoning Ordinance, specifically showing how access to each lot would be achieved from a town road. They are seeking a reconfiguration of the 3 lots into 2 lots and seeking to place a residence on each lot with frontage on Washington Avenue. In addition, I have required them to prepare a Water Quality Impact Assessment (WQIA) (Attachment 3) in compliance with CCZO Section 7.11 for the proposed two lots, showing the proposed development, stormwater, erosion and sediment control, planting plan and any other proposed shoreline mitigation and/or development efforts and they have also submitted a conceptual drawing of the proposal to assist in our review of the application (Attachment 4 and also shown below).

As additional points of clarification, if the application(s) are approved by the BZA, each lot is still compelled to complete a full Plan of Development pursuant to CCZO Section 7.12 with the Planning & Zoning Department which includes a full zoning review for compliance with all components of the Zoning Ordinance as well as an application to the Historic District Review Board since these lots also are in the Historic District Overlay. Some of those zoning ordinance component stipulate that each lot would be required to connect to the Town's Water and Sewer Systems, any electric service to the lots would need to be placed underground, lot coverage allowances and all setback requirements for all structures. In addition, the applicant has indicated that they would like a dock for the property which would require a separate Joint application to the Virginia Marine Resource Commission (VMRC) which will trigger a review and possible approval required from the Town's Wetlands Board, the Army Corps of Engineers and Virginia Department of Environmental Quality as well as the VMRC.

On Lot A, they are proposing a building footprint of 3,600 square feet with the house being 2-story which would make total square footage of 7,200; a 454.40 square foot covered patio; and a 1,200 square foot attached garage (2-story) and a detached accessory structure (shed) on a 37,037 square foot lot. A portion of the house and small portion of the attached garage would sit outside of the Resource Protection Area (RPA) with the bulk of the structures located within the RPA. This information is fully detailed with amount of land disturbance in the WQIA Report Sheet No. 2 for Lot A.

On Lot B, they are proposing a building footprint of 1,168 square feet with the house being 2-story which would make total square footage of 2,396; and a 120 square foot permeable paver patio on a 36,933 square foot lot. This lot would be sharing through easement a private driveway that provides the legally sized frontage onto Washington Avenue with Lot A. All of this proposed development resides in the RPA. This information is fully detailed with amount of land disturbance in the WQIA Report Sheet No. 2 for Lot B.

For each lot, they have also included a proposed buffer restoration (shows on Sheet No. 3 for each respective lot in the WQIA Report). Said plan is proposing a slight increase of proposed trees/vegetation above the required minimum.

ORDINANCE REQUIREMENTS OF THE CHESAPEAKE BAY PRESERVATION ACT OVERLAY DISTRICT

Section 7.10 Performance Standards

A. Purpose and Intent. The performance standards establish the means to minimize erosion and sedimentation potential, reduce land application of nutrients and toxins, and maximize rainwater infiltration. Natural ground cover, especially woody vegetation, is most effective in holding soil in place and preventing site erosion. Indigenous vegetation, within its adaptability to local conditions without the use of harmful fertilizers or pesticides, filters stormwater runoff. Minimizing impervious cover enhances rainwater infiltration and effectively reduces stormwater runoff potential. The purpose and intent of these requirements are also to implement the following objectives: prevent a net increase in nonpoint source pollution from new development; achieve a 10 percent reduction in nonpoint source pollution from redevelopment; and achieve a 40 percent reduction in nonpoint source pollution from agricultural uses.

B. General Performance Standards for Development and Redevelopment

1. Land disturbance shall be limited to the area necessary to provide for the proposed use or development. a. Ingress and egress during construction shall be limited to one access point unless otherwise approved by the Zoning Administrator.

2. Indigenous vegetation shall be preserved to the maximum extent practicable consistent with the use or development proposed and in accordance with the Virginia Erosion and Sediment Control Handbook.

a. Site clearing for construction activities shall be allowed as approved by the Zoning Administrator through the plan of development review process.

b. Prior to clearing or grading, suitable protective barriers, such as safety fencing, shall be erected five feet outside of the drip line of any tree or stand of trees to be preserved. These protective barriers shall remain so erected throughout all phases of construction. The storage of equipment, materials, debris, or fill shall not be allowed within the area protected by the barrier.

3. Land development shall minimize impervious cover to promote infiltration of storm water into the ground consistent with the proposed use or development.

a. Grid and modular pavements may be used for any required parking area, alley, or other low traffic driveway unless otherwise approved by the Zoning Administrator.

4. Notwithstanding any other provision of this Article or exceptions or exemptions thereto, any land-disturbing activity exceeding 2,500 square feet, including construction of all single-family houses, shall comply with the requirements of Cape Charles' Erosion and Sediment Control Ordinance.

5. All development and redevelopment exceeding 2,500 square feet of land disturbance shall be subject to a plan of development process including the approval of a site plan in accordance with the provisions of the Site Plan Ordinance.

6. All on-site sewage disposal systems not requiring a VPDES permit shall be pumped out at least once every five years in accordance with the provisions of the State Health Code.

7. A reserve sewage disposal site with a capacity at least equal to that of the primary sewage disposal site shall be provided in accordance with the State Health Code. This requirement shall not apply to any lot or parcel recorded prior to October 1, 1989, if such lot or parcel is not sufficient in capacity to accommodate a reserve sewage disposal site as determined by the local health department. Building or construction of any impervious surface shall be prohibited on the area of all sewage disposal sites or on an on-site sewage treatment system which operates under a permit issued by the State Water Control Board until the structure is served by public sewer.

8. For any development or redevelopment, stormwater runoff shall be controlled by the use of best management practices that achieve the following:

a. For development, the post-development nonpoint source pollution runoff load shall not exceed the pre-development load based on the calculated average land cover condition of the Town of Cape Charles.

b. For sites within IDAs or other isolated redevelopment sites, the non-point source pollution load shall be reduced by at least 10 percent. The Zoning Administrator may waive or modify this requirement for redevelopment sites that originally incorporated best management practices for storm water runoff quality control provided the following provisions are satisfied: i. In no case may the post-development non-point source pollution runoff load exceed the pre-development load. ii. Runoff pollution loads must have been calculated and the BMPs selected for the expressed purpose of controlling non-point source pollution. iii. If best management practices are structural, evidence shall be provided that the facilities are currently in good working order and performing at the design levels of service. The Zoning Administrator may require a review of both the original structural design and maintenance plans to verify this provision. A new maintenance agreement may be required to ensure compliance with this Article.

c. For redevelopment, both the pre- and the post-development loadings shall be calculated by the same procedures. However, where the design data is available, the original post-development non-point source pollution loadings can be substituted for the existing development loadings.

9. Prior to initiating grading or other on-site activities on any portion of a lot or parcel, all wetlands permits required by federal, state, and local laws and regulations shall be obtained and evidence of such submitted to the Zoning Administrator in accordance with Section 7.12 of this Article.

10. Land upon which agricultural activities are being conducted shall have a soil and water quality conservation assessment. Such assessments shall evaluate the effectiveness of existing practices pertaining to soil erosion and sediment control, nutrient management and management of pesticides, and where necessary, results in a plan that outlines additional practices needed to ensure that water quality protection is accomplished consistent with the Article.

C. Buffer Area Requirements

To minimize the adverse effects of human activities on the other components of Resource Protection Areas, state waters, and aquatic life, a 100-foot buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained if present and established where it does not exist.

C. (2). When the application of the buffer areas would result in the loss of a buildable area on a lot or parcel recorded prior to October 1, 1989, the Zoning Administrator may allow encroachments into the buffer area in accordance with Section 7.12, Plan of Development Process, and the following criteria:

a. Encroachments into the buffer areas shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities;

b. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot or parcel; and

c. The encroachment may not extend into the seaward 50 feet of the buffer area.

Section 7.15 Exceptions

A. A request for an exception to the requirements of Sections 7.7 and 7.10.C of this Overlay District shall be made in writing to the Board of Zoning Appeals. It shall identify the impacts of the proposed exception on water quality and on lands within the RPA through the performance of a water quality impact assessment which complies with the provisions of Section 7.11.

ORDINANCE COMPONENTS OF THE RESIDENTIAL-1 ZONING DISTRICT

3.2 (F) Area Regulations

1. The minimum lot size shall be 5,600 square feet. Dwelling units existing on lots at the time of adoption of this ordinance which are generally on lots 40 feet by 140 feet are considered to be conforming lots. However, new construction taking place within this district shall meet all standards and requirements of this district.

2. The minimum dwelling unit size shall be 960 square feet and the maximum dwelling unit size shall be 4,500 square feet on any lot or contiguous assemblage of lots under common ownership. Specific dwelling unit square footage relative to the square footage of any lot or contiguous assemblage of lots under common ownership shall be:

a. Lots or contiguous assemblage of lots under common ownership up to 5,600 square feet dwelling units shall be a minimum of 960 and a maximum of 2,400 square feet.

b. Lots or contiguous assemblage of lots under common ownership of 5,601 to 8,400 square feet dwelling units shall be a minimum of 960 and a maximum of 3,000 square feet.

c. Lots or contiguous assemblage of lots under common ownership above 8,400 square feet dwelling units shall be a minimum of 960 and a maximum of 4,500 square feet.

REMINDER OF APPLICATION INFO	
Lot A	Lot B
Lot Size: 37,037 sq. ft	Lot Size: 36,933 sq. ft
House Size: 3,600 sq. ft	House Size: 1,168 sq. ft

ORDINANCE REQUIREMENTS TO BE CONSIDERED WHEN EVALUATING AN EXCEPTION APPLICATION UNDER THE CHESAPEAKE BAY ACT OVERLAY ORDINANCE:

The Board of Zoning Appeals shall review the request for an exception and the water quality impact assessment and may grant the exception with such conditions and safeguards as deemed necessary to further the purpose and intent of this Article if the Board of Zoning Appeals finds:

1. Granting the exception will not confer upon the applicant any special privileges that are denied by this Article to other property owners in the Overlay District;

2. The exception request is not based upon conditions or circumstances that are self-created or self-imposed, nor does the request arise from conditions or circumstances either permitted or non-conforming that are related to adjacent parcels;

3. The exception request is the minimum necessary to afford relief;

4. The exception request will be consistent with the purpose and intent of the Overlay District and not injurious to the neighborhood or otherwise detrimental to the public welfare, and is not of substantial detriment to water quality; and

5. Reasonable and appropriate conditions are imposed which will prevent the exception request from causing a degradation of water quality.

DISCUSSION POINTS:

1. Does the Board feel that allowing the exceptions for each Lot as requested is reasonable?
2. Are there sufficient buffer plantings to mitigate the impact into the buffer for the proposed redevelopment of each lot?
3. Is the size proposed for each residential dwelling for each lot the minimum necessary? Are the additional structures proposed for each lot necessary?
4. Are there other mitigation efforts that can be included in the development of this property to increase the impact of runoff reduction impact to the land and into the Bay?

BZA REVIEW:

Some items that the BZA may wish to consider in its review in addition to the Ordinance Requirements Section on Page 8 of this Staff Report:

1. *Is the application complete and does it contain sufficient information and detail for the BZA to make a defendable ruling?*
2. *Is on its face, is the proposal, a sound and well thought out one that has taken into account potential downsides as well as upsides?*
3. *Are there compelling reasons to approve or deny the request, beyond the fact that no one has spoken in opposition to it or that some are opposed to it?*

STAFF RECOMMENDATION:

Staff is prepared to review the applications in full against the Ordinance Requirements to be Considered When Evaluating an Application for an Exception to the CBPA with the Board, following the Public Hearing for each application.

Staff is not supportive of the Application for Lot B and primarily supportive of the Application for Lot A with some caveats/condition, as follows:

1. Without any photographic evidence as to how any structures or activities were handled on these 3 lots, I can only presume that all three lots were collectively utilized by the Schlegel family in the pursuit of the commercial harbor/dock/ferry service but the interior lot lines were never vacated and the lots were not combined and treated as a singular parcel/lot from a legal documentation perspective but were actually done so from a practical, operational perspective. When the Town adopted its zoning ordinance, there is a unique allowance in Article III – Zoning District Regulations in the Residential-1 Zoning District that allows for the contiguous assemblage of lots under common ownership to cumulatively count in the required square footage of a lot which then in turn supports the size of residential development across these contiguous, common ownership lots without requiring a vacation of lot lines between said lots. This section of the zoning ordinance seems to specifically address and memorialize the very conditions of these three lots.
2. Only one of the lots (Tax Map# 83A1-3-A) as it is currently configured complies with the Zoning Ordinance, specifically with the required access from the lot to a public road. The other two lots are landlocked and have no ability to access them from a public road unless you traverse across Tax Map #83A1-3-A which implies that these three lots should be considered from a singular use of development. The road frontage is a required development standard for any lot and is not unique or solely applicable to the Overlay District.
3. Since the lots are heavily impacted by the Resource Protection Area, I believe that consideration of one residence should be considered and allowable across the 3 lots both in placement and size to the minimum amount necessary to comply with the by-right use allowed in the General Zoning District of Residential-1 and to comply with the requirements of the CBPA Overlay District relative to Exceptions for Development in the RPA as well as to Development of a Nonconforming Lot or Record in existence prior to October 1, 1989. Additionally, the application does demonstrate that a

single-family house development is able to be located only in the landward 50 ft of the RPA on the lot which would comply with the CBPA.

4. As currently presented, Lot A's proposed square footage does not support the requested house square footage proposed to comply with the development standards of the R-1 Zoning District which has a maximum house size of 2,400 square feet if the lot size is up to 5,600 square feet The lot square footage would need to be 8,400 or greater in order to allow a house greater than 3,000 square feet but not to exceed 4,500 square feet. There is the ability to re-examine the site plan utilizing all three lots that could address this issue and allow a lot of the required size to support an application for the house size currently proposed.
5. The additional elements of living space and/or accessory space seem to contradict the philosophy of the Exceptions Evaluation Criteria, specifically the minimum necessary to provide the relief for the use sought. Including a covered porch, a **2-story** garage and detached accessory structure (shed) are not essential to the provisions of a principal dwelling or house.
6. The buffer plantings do meet the required minimum with a slight increase over that requirement and acknowledgement of the type of acceptable plantings allowed (as evidenced by the WQIA Report Exhibits). However, I believe that an increase in the plantings should be considered to help increase the stabilization of these lots from coastal erosion and to improve the treatment of water runoff from any structures on these lots. Of course, the particular identification of the species of trees/shrubs/grasses will need to be agreed upon by the property owner and the Town Zoning Administrator as part of any approved site plan as part of a Plan of Development.

PROPOSED MOTION FOR CONSIDERATION:

Staff will assist in the development of any motion by the Board of Zoning Appeals following the public hearing and extensive discussion and consideration of the public hearing comments, the application, and the staff report.

Please be aware that your vote could be an affirmative as presented, affirmative with conditions, negative, or tabled to a date certain to allow for additional consideration or discussion with the applicant to potential amend elements of the application as a result of the public hearing process and Board deliberation.

Attachments:

Attachment 1 –Lot A: Application with Narrative Letter and Preliminary Site Plan Exhibits – 4 Sheets
Attachment 2 –Lot B: Application with Narrative Letter and Preliminary Site Plan Exhibits – 4 Sheets
Attachment 3 – Full Water Quality Impact Assessment (WQIA) Report dated July 5, 2022
Attachment 4 – 2D Rendering Washington and Bay Avenues
Attachment 5 – Chesapeake Bay Preservation Act Overlay Map
Attachment 6 – Cape Charles Resolution for 1999-04-12
Attachment 7 – Cape Charles Zoning Ordinance Article VII – Chesapeake Bay Preservation Act Overlay

REFERENCE MATERIALS:

Exhibit A – VA DCR RPA Permitted Development Activities Guidance Sheet
Exhibit B – VA DCR Exceptions Guidance Sheet
Exhibit C – VA DCR Nonconforming Structures and uses Guidance Sheet
Exhibit D – VA DCR RPA Buffer Area Encroachments Guidance Sheet

VARIANCE APPLICATION

Town of Cape Charles
2 Plum Street
Cape Charles, VA 23310
757-331-2036 Fax: 757-331-4820
planner@capecharles.org

PERMIT CHECKLIST - all documents can be emailed to the above email

- [x] Completed application
- [x] Letter of intent clearly explaining project
- [x] Existing site plan or survey
- [x] Proposed site plan or survey (if applicable)
- [x] Photos/elevations of existing structure
- [ ] Photos/elevations of proposed project
- [x] Payment of fees (single-family detached $450, all others $750, each additional variance request on same application $50)

PROJECT INFORMATION

Name of Project: Hainsworth - Old Ferry Dock Lot A

Property Address: Old Ferry Dock - Washington Avenue

Brief Description of Project: Residential - single family

Zoning District: HD Current Use: Residential Proposed Use: Residential

OWNER INFORMATION

Name and Company: Cape Charles Beach, LLC

Mailing Address: 841 W. 45th Street Norfolk, VA 23508

Phone Number: 757-287-3667 Email: Reszproperties@gmail.com

APPLICANT INFORMATION

☐ check here if applicant is owner

Name: Dave & Pam Hainsworth

Mailing Address: 10605 Oliver Street Fairfax, VA 22030

Phone Number: 703-407-0265 Email: dave@hainsworthcpa.com

****

CERTIFICATION OF APPLICANT

I hereby certify that I have the authority to make the foregoing application, that the information given is true and correct, and that the construction or improvements will conform to the regulations in the Virginia Statewide Building Code, all pertinent Town Ordinances, including fire, sewer and water ordinances, and private building restrictions, if any, which may be imposed on the property by deed. Furthermore, I certify that the changes to the improvement before or during construction will be provided to the Zoning Administrator and Building Official before such changes are constructed.

Signature of Applicant: Dave Hainsworth Date: 6/28/2022

OWNER PERMISSION AFFIDAVIT

Town of Cape Charles
2 Plum Street
Cape Charles, VA 23310
757-331-2036 Fax: 757-331-4820
planner@capecharles.org

PROPERTY INFORMATION

Subject Property Street Address: Vacant Land/W. Washington Ave
Subject Property Tax ID Number: 83A1-3-A / 83A1-3-B1 / 83A1-3-C

OWNER INFORMATION

Name (Person, Firm, Corporation, or Agency): City Charles Beach LLC, Robt Schlegel, Mgr
Mailing Address: 841 W 45th Street, Norfolk VA 23508
Phone Number: 757-287-3667 Email: RES2Properties@gmail.com

APPLICANT INFORMATION (If applicable)

Name: David N and Pamela J Hainsworth
Mailing Address: 10605 Eaker Street, Fairfax VA 22030
Phone Number: 703-407-0265 Email: Dave@HainsworthCPA.com

I am applying for, or I hereby give authority to the applicant to file an application for:

Zoning Variance Application To BZA For Boundary Line Adjustment & Set Back Relief

Signature of Owner: [signature] Date: 5/16/22

Commonwealth of Virginia
County/City of Norfolk

The foregoing instrument was acknowledged before me this 16th day of May, 2022, by Robert E. Schlegel, Jr. (name of person acknowledged).

Signature of Notarial Officer: [signature]
Notary Registration Number: 7644292
My Commission Expires: 12/31/2024

JOSEPH E. BROWN
NOTARY PUBLIC
REG. #7644292
MY COMMISSION EXPIRES
12/31/2024
COMMONWEALTH OF VIRGINIA

(Seal)

Dave and Pam Hainsworth

10605 Oliver Street

Fairfax VA 22030

June 29, 2022

TO: Board of Zoning Appeals

Pete Baumann

Dolores Blackburn

Laura Weigand

Bill Murphy

Jim Holloway

Town of Cape Charles

Katie Nunez, Zoning Administrator

Dear Board of Zoning appeals and Town of Cape Charles:

We respectfully submit the following request. Pam and I are potential buyers of the Old Ferry Dock property consisting of 3 parcels on Washington Avenue, which are non-conforming lots of record. The Schlegel Family's Cape Charles Beach LLC is the current owner, and we are under contract to purchase their property. The site is known as the

former site of the Yorktown Ferry adjoining the Seabreeze Apartment complex. The property consists of approximately 1.63 acres and has approximately 700 feet of shoreline on the Bay, zoned "R-1" Single Family Residential consisting of three tax parcels. As contract purchasers, we propose to eliminate one of the 3 existing lots, resulting in 2 lots of record which will be more conforming than the 3 lots are now. In the process, we have prepared a detailed engineered plat with site plans which limits future uses of the property to that which is shown.

As such, we are applying for a zoning variance to build within the RPA of these 2 more conforming lots as shown in the attached engineering reports and documents.

What we are proposing is a residential redevelopment of a previously developed property with a history of substantial commercial use. We believe that our proposal for single family residential use is a less intense and more attractive use for the property. We are willing to permanently limit the property to the less intense uses we have proposed.

We have attached a Water Quality Impact Assessment and based on these designs, we believe that we clearly meet the requirements for BZA approval of our request to build withing the RPA. Our intention is to limit the property to the specific uses shown and build accordingly.

BACKGROUND:

The history of the Ferry Dock property dates back to the original Ferry Terminal developer; "The Peninsula Terminal Corporation, Frank Schlegel, President" in the 1920's. In 1931, it was sold to "The Standard Oil Company of New Jersey" and then later reacquired by the Schlegel family, under its "Peninsula Terminal Corporation" who continued to operate the property as a commercial harbor for decades thereafter.

The pilings from the commercial wharf and pier are visible along the beach to this day, in fact the original ferry dock slip still accommodates a good size vessel. In the late 1970's then mayor of Cape Charles, Ed Parry, requested that the owner sell a portion of the property for the construction of Seabreeze Apartments to help the town with housing needs. The owner was reluctant, but eventually agreed. The town had been making use of the property up until that time as a disposal yard for street demolition debris during a previous installation of water and sewer lines. While Most of that material was eventually removed, some of that debris is still visible along the shoreline.

Sometime after the land for the apartments was sold, the property was rezoned from a Commercial district to what is now the R-1 single family residential district. The 26-unit Seabreeze apartments are also zoned single family R-1. The town built the East-West Jetty that protects the town beach inside the boundaries of parcel A (83-A1-03-A) of this 3-parcel property. It continues to be owned by the Schlegel family (since the 1920's) under its Cape Charles Beach LLC entity with Robert Schlegel as the managing principal.

The Schlegel family have owned this property for about 100 years, and they have always maintained an accommodating relationship with the town, allowing the dumping of debris, selling property for public housing, and even allowing the jetty construction on their property to help build and preserve the towns adjoining public beach, which presently appears to be detrimental to the shoreline erosion of the Schlegal's property.

Today, the Schlegel's have an agreement to sell the property to us. We have been homeowners and part time residents of the town since 2005.

It is our desire to clean-up the ferry dock property and redevelop it into two high quality single family detached homes sites. One lot would be our own and be consistent with the current zoning and the character of the adjacent neighborhood. We would immediately start design plans with elevations and discussions to advance the building of a residence. Our goal is for an attractive redevelopment that would complement and enhance the character of this important area adjoining the town's public beach. The other lot would be reserved future use.

Sincerely,
Dave and Pam Hainsworth

Cc: Bill Parr, Broker

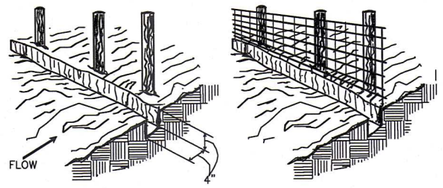
Bobby Schlegel

Enclosures

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

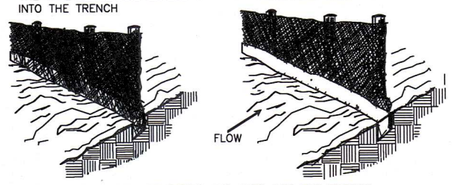
1. SET POSTS AND EXCAVATE A 4"X4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.

2. STAPLE WIRE FENCING TO THE POSTS.

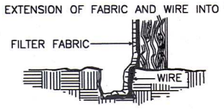


3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH

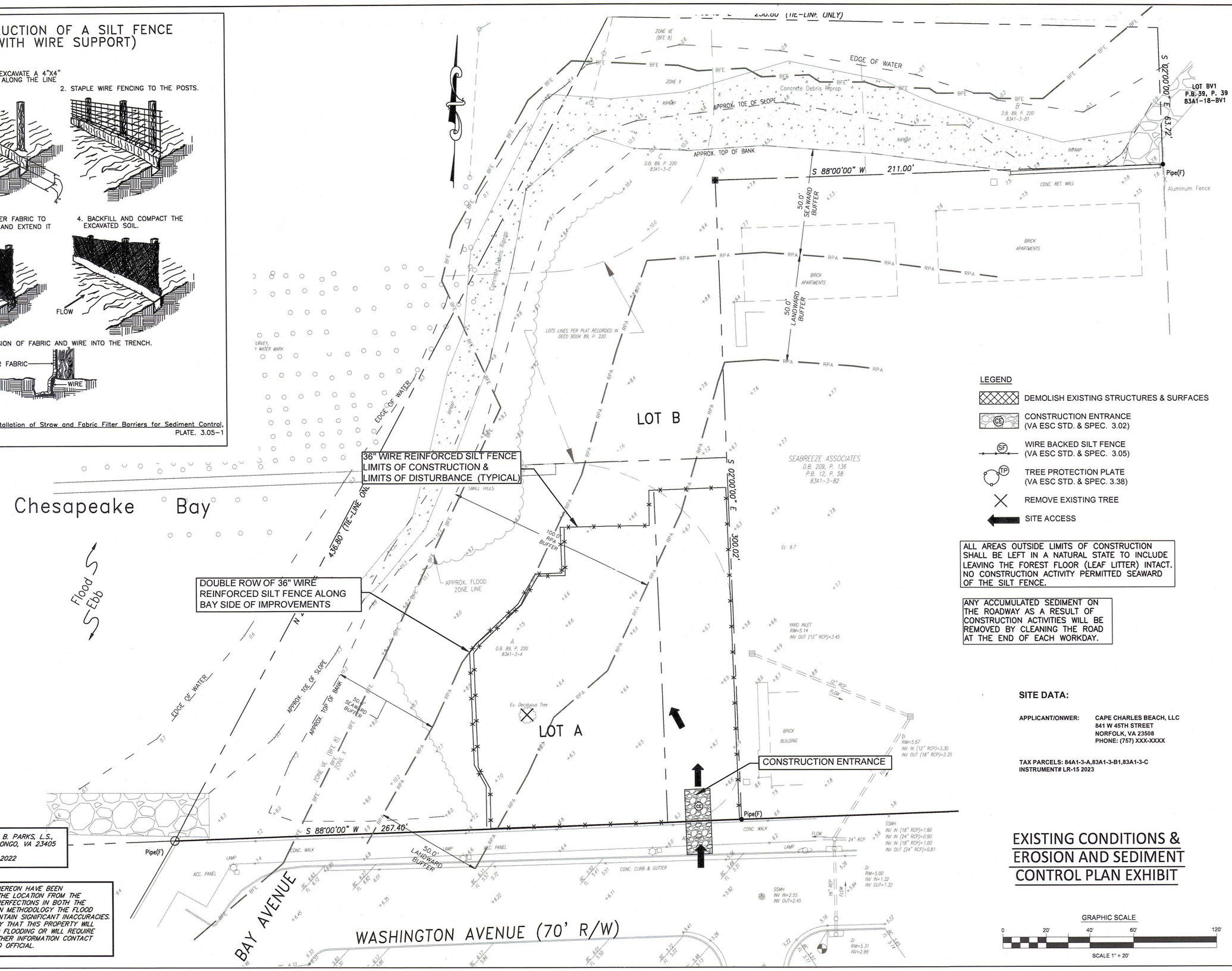
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant PLATE. 3.05–1



LEGEND

- DEMOLISH EXISTING STRUCTURES & SURFACES
- CE — CONSTRUCTION ENTRANCE (VA ESC STD. & SPEC. 3.02)
- SF — WIRE BACKED SILT FENCE (VA ESC STD. & SPEC. 3.05)
- TP — TREE PROTECTION PLATE (VA ESC STD. & SPEC. 3.38)
- REMOVE EXISTING TREE
- SITE ACCESS

ALL AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE LEFT IN A NATURAL STATE TO INCLUDE LEAVING THE FOREST FLOOR (LEAF LITTER) INTACT. NO CONSTRUCTION ACTIVITY PERMITTED SEAWARD OF THE SILT FENCE.

ANY ACCUMULATED SEDIMENT ON THE ROADWAY AS A RESULT OF CONSTRUCTION ACTIVITIES WILL BE REMOVED BY CLEANING THE ROAD AT THE END OF EACH WORKDAY.

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

SITE SURVEY BY: MARSHALL B. PARKS, L.S., 11403 HERON DRIVE, MACHIPONGO, VA 23405 PH. 757-709-4192 DATE OF SURVEY: MAY 26, 2022

FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA-NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

EXISTING CONDITIONS & EROSION AND SEDIMENT CONTROL PLAN EXHIBIT

GRAPHIC SCALE
0 20' 40' 60' 120'
SCALE 1" = 20'

CHESAPEAKE BAY SITE SOLUTIONS
CIVIL ENGINEERING CONSULTING
P.O. BOX 6663
VIRGINIA BEACH, VA. 23456
PH.: 757-575-3715
www.chesapeakebaysitesolutions.com

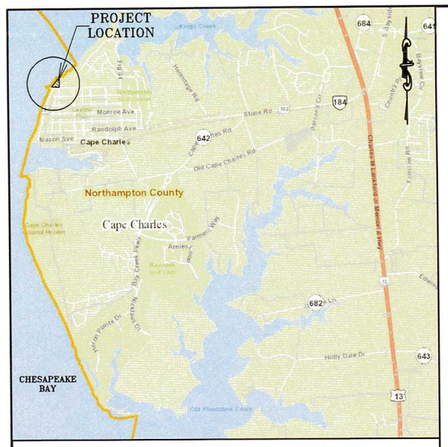
DATE	PLAN REVISION MODIFICATION

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'A' EXISTING CONDITIONS AND EROSION & SEDIMENT CONTROL PLAN EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT A
1 OF 3

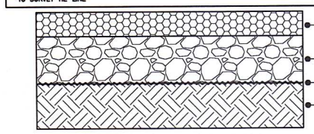


LOCATION MAP NO SCALE

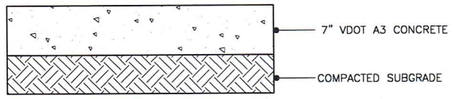
AREA TABLE

PROPOSED PARCEL SIZE*:	37,037 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	30,335 SF	8.2%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	10,699 SF	35.2%
AREA OF SITE IN RPA*:	26,887 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	4,499 SF	16.7%

*TO SURVEY TIE-LINE



PRIVATE DRIVE SECTION
NOT TO SCALE



DRIVEWAY SECTION WITHIN R.O.W.
NOT TO SCALE

SEQUENCE OF CONSTRUCTION:

A. CALL VA811
B. OBTAIN ALL REQUIRED PERMITS.
C. HOLD A PRE-CONSTRUCTION MEETING ON-SITE WITH CIVIL INSPECTOR.
D. INSTALL ALL EROSION CONTROLS AND TREE PROTECTION AS SHOWN ON PLAN.
E. PERFORM DEMOLITION, CONSTRUCT SITE IMPROVEMENTS, ROUGH GRADE SITE
F. FINE GRADE SITE AND STABILIZE SITE WITH ACCEPTABLE LANDSCAPING AND GROUNDCOVER.
G. INSTALL STORMWATER BMP'S.
H. REMOVE ALL TEMPORARY EQUIPMENT, CONSTRUCTION MATERIALS, AND DEBRIS FROM THE SITE.
I. ALL TEMPORARY EROSION CONTROLS SHALL BE REMOVED 30 DAYS AFTER FINAL STABILIZATION OR AS DIRECTED BY THE CIVIL INSPECTOR.

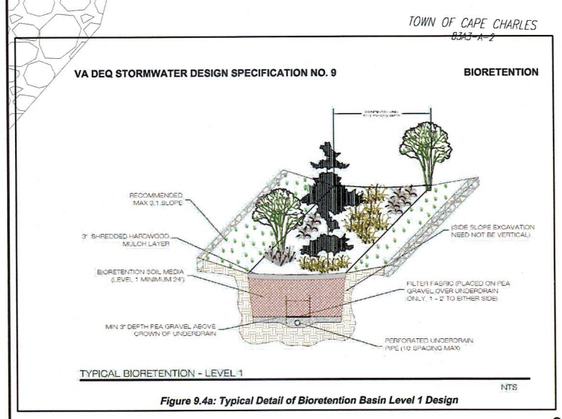
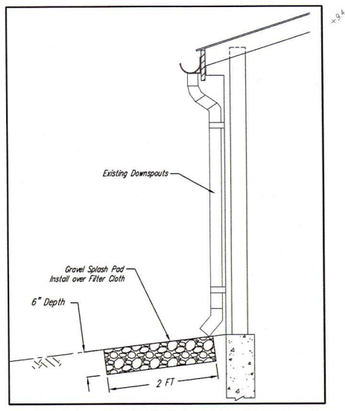


Figure 9.4a: Typical Detail of Bioretention Basin Level 1 Design



GRAVEL DOWNSPOUT SPLASH PAD DETAIL
NOT TO SCALE

Chesapeake Bay

Flood
Ebb

APP. 340 PILINGS OBSERVED DURING SURVEY. MORE PILINGS MAY BE SUBMERGED UNDER LOW WATER MARK

EDGE OF WATER

FUTURE DOCK

4.36.80' (TIE-LINE ONLY)

N 28°14'11" E

PROPOSED 10'x10' SHED

NEW BOUNDARY LINE

AREA OF BRUSH & SMALL TREES

PROP SHED

PROPOSED 1-STORY GARAGE

100.0' RPA BUFFER

APPROX. TOP OF WOOD 30' ALTERNATIVE SETBACK LINE

PROPOSED 2-STY SINGLE FAMILY RESIDENCE

APPROX. TOP OF SLOPE

APPROX. TOP OF BANK

50' SEAWARD BUFFER

ZONE VE (BFE 8) ZONE X

30' BLDG. SETBACK LINE

3 FT WALK

S 88°00'00" W 270.84'

Pipe(F)

STONE JETTY

TOWN OF CAPE CHARLES
83A3-A-2

BAY AVENUE

S 88°00'00" W 211.00'

50.0' SEAWARD BUFFER

LOT B

5' SETBACK

BRICK APARTMENTS

50.0' LANDWARD BUFFER

(M.B. 41, Pg. 484)

LOTS LINES PER PLAT RECORDED IN DEED BOOK 89, P. 220

SEABREEZE ASSOCIATES
D.B. 209, P. 136
P.B. 12, P. 58
83A1-3-B2

S 02°00'00" E 300.00'

PROPOSED PERMEABLE PAVEMENT DRIVEWAYS

PROPOSED 30 FT PRIVATE DRIVE
(PERMEABLE PAVEMENT SYSTEM)

30.0'

PROPOSED 2-STY FRAME GARAGE

40.0'

28.4'

COVERED PATIO

16.0'

60.0'

15.0'

D.B. 89, P. 220
83A1-3-A

PROPOSED 2-STY FRAME FF± 10.0

60.0'

LOT A

PROPOSED PRIVATE DRIVE

170.0'

YARD INLET
RIM=5.14
INV OUT (12" RCP)=3.45

12" RCP FLOW

BRICK BUILDING

DI
RIM=5.67
INV IN (12" RCP
INV OUT (18" R

S 88°00'00" W 267.40'

Pipe(F)

30.0'

5.0'

R20.0' (TYP.)

CONC. WALK

ACC. PANEL

LAMP

CONC. CURB & GUTTER

24" RCP FLOW

SSMH
INV IN (18" RCP)=1.90
INV IN (24" RCP)=0.90
INV IN (16" RCP)=1.00
INV OUT (24" RCP)=0.81

DI
RIM=5.00
INV IN=1.32
INV OUT=1.32

SSMH
INV IN=2.55
INV OUT=2.45

16" RCP FLOW

DI
RIM=5.31
INV=2.99

PROPOSED BIO-RETENTION BEDS (TYPICAL)

VDOT STD. CG-9D ENTRANCE

WASHINGTON AVENUE (70' R/W)

SITE SURVEY BY: MARSHALL B. PARKS, L.S.
11403 HERON DRIVE, MACHIPONGO, VA 23405
PH. 757-709-4192
DATE OF SURVEY: MAY 26, 2022

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841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

PROPOSED SITE CONDITION EXHIBIT

GRAPHIC SCALE
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SCALE 1" = 20'

CHESAPEAKE BAY SITE SOLUTIONS
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DATE	PLAN REVISION MODIFICATION

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'A'
PROPOSED IMPROVEMENTS & IMPERVIOUS CALCULATIONS

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT A
2 OF 3

BUFFER CALCULATIONS

BUFFER RESTORATION REQUIRED 4,499 SF
BUFFER RESTORATION PROVIDED 4,791 SF

4449 SF / 1 BUFFER UNIT (400 SF) = 12 BUFFER UNITS REQUIRED
1 BUFFER UNIT=
ONE (1) - CANOPY TREE
TWO (2) - UNDERSTORY TREES
THREE (3) - SMALL SHRUBS OR WOODY GROUNDCOVER

UNITS x	PLANT/UNIT		NUMBER OF PLANTS REQUIRED
12 UNITS x	1 CANOPY TREE	=	12 CANOPY TREES
	2 UNDERSTORY TREE	=	24 UNDERSTORY TREES
	3 SHRUBS	=	36 SHRUBS

LEGEND

- BUFFER RESTORATION PLANTING BED
- CANOPY TREE (EVERGREEN)
- CANOPY TREE (EVERGREEN)
- CANOPY TREE (DECIDOUS)
- CANOPY TREE (DECIDOUS)
- UNDERSTORY TREE ORNAMENTAL (DECIDOUS)
- UNDERSTORY TREE (DECIDOUS)
- SHRUB
- SHRUB
- RIGHT-OF-WAY TREE (IN ACCORDANCE W/ CAPE CHARLES MASTER TREE PLAN)

CANOPY TREES	
CANOPY TREES REQUIRED	12
CANOPY TREES PROVIDED	13

UNDERSTORY TREES	
UNDERSTORY TREES REQUIRED	24
UNDERSTORY TREES PROVIDED	36

SHRUBS	
SHRUB REQUIRED	36
SHRUBS PROVIDED	53

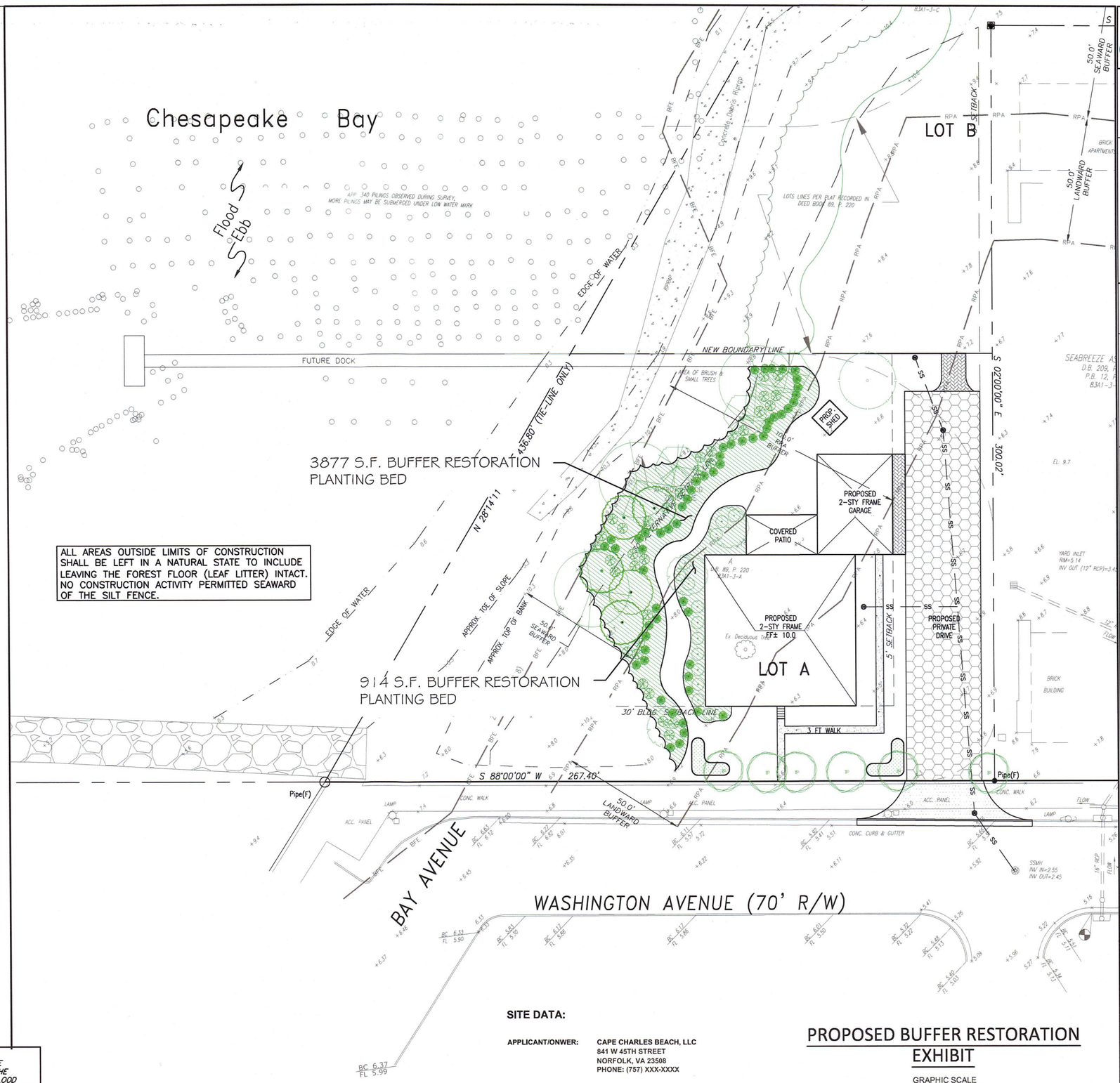
va811.com Dig With CARE

For ALL excavation work ANYWHERE in Virginia!
Call 811 or 1-800-552-7001

SITE SURVEY BY: MARSHALL B. PARKS, L.S.,
11403 HERON DRIVE, MACHIPONGO, VA 23405
PH. 757-709-4192
DATE OF SURVEY: MAY 26, 2022

FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA-NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

(M.B. 41, P. 484)



ALL AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE LEFT IN A NATURAL STATE TO INCLUDE LEAVING THE FOREST FLOOR (LEAF LITTER) INTACT. NO CONSTRUCTION ACTIVITY PERMITTED SEAWARD OF THE SILT FENCE.

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

PROPOSED BUFFER RESTORATION EXHIBIT

GRAPHIC SCALE
0 20' 40' 60' 120'
SCALE 1" = 20'

CHESAPEAKE BAY SITE SOLUTIONS
CIVIL ENGINEERING CONSULTING
P.O. BOX 6663
VIRGINIA BEACH, VA. 23456
PH: 757-575-3715
www.chesapeakebayssitesolutions.com

PLAN REVISION MODIFICATION

DATE

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'A' PROPOSED BUFFER RESTORATION EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT A
3 OF 3

LOCATION MAP NO SCALE

LOT 'B' AREA TABLE		
PROPOSED PARCEL SIZE*:	36,933 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	14,705 SF	39.8%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	2,516 SF	17.1%
AREA OF SITE IN RPA*:	36,632 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	2,493 SF	6.8%

*TO SURVEY TIE-LINE

AREA TABLE		
PROPOSED PARCEL SIZE*:	37,037 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	30,335 SF	8.2%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	10,699 SF	35.2%
AREA OF SITE IN RPA*:	26,887 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	4,499 SF	16.7%

*TO SURVEY TIE-LINE

SITE SURVEY BY: MARSHALL B. PARKS, L.S., 11403 HERON DRIVE, MACHIPONGO, VA 23405 PH. 757-709-4192 DATE OF SURVEY: MAY 26, 2022

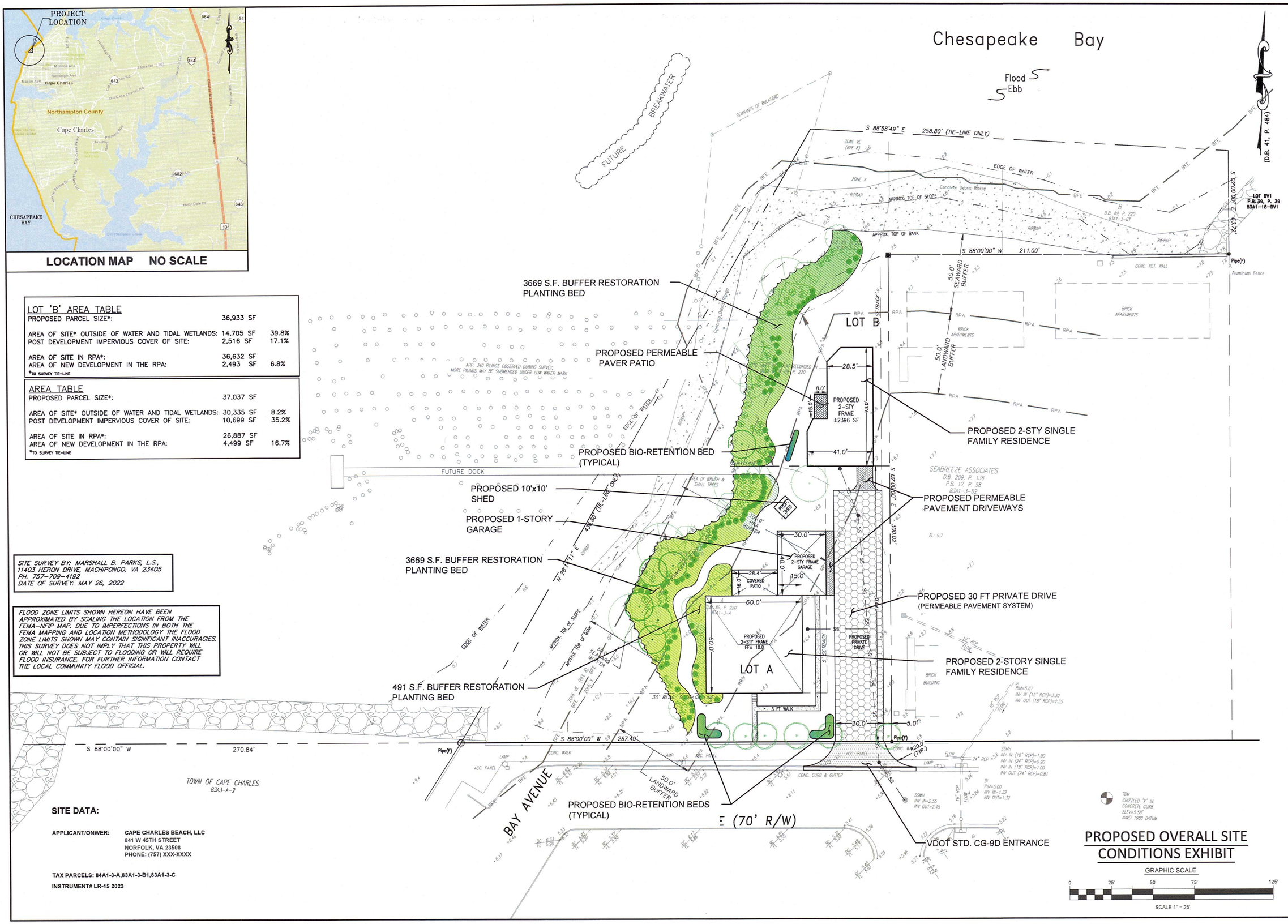
FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA-NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C

INSTRUMENT# LR-15 2023



PROPOSED OVERALL SITE CONDITIONS EXHIBIT

GRAPHIC SCALE

0 25' 50' 75' 125'

SCALE 1" = 25'

CHESAPEAKE BAY SITE SOLUTIONS

CIVIL ENGINEERING CONSULTING
P.O. BOX 6663
VIRGINIA BEACH, VA. 23456
PH: 757-575-3715
www.chesapeakebaysitesolutions.com

PLAN REVISION MODIFICATION	DATE

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

OVERALL SITE LAYOUT EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 84A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
POST
1 OF 1

VARIANCE APPLICATION

Town of Cape Charles
2 Plum Street
Cape Charles, VA 23310
757-331-2036 Fax: 757-331-4820
planner@capecharles.org

PERMIT CHECKLIST - all documents can be emailed to the above email

- [x] Completed application
- [x] Letter of intent clearly explaining project
- [x] Existing site plan or survey
- [x] Proposed site plan or survey (if applicable)
- [x] Photos/elevations of existing structure
- [ ] Photos/elevations of proposed project
- [x] Payment of fees (single-family detached $450, all others $750, each additional variance request on same application $50)

PROJECT INFORMATION

Name of Project: Hainsworth - Old Ferry Dock Lot A

Property Address: Old Ferry Dock - Washington Avenue

Brief Description of Project: Residential - single family

Zoning District: HD Current Use: Residential Proposed Use: Residential

OWNER INFORMATION

Name and Company: Cape Charles Beach, LLC

Mailing Address: 841 W. 45th Street Norfolk, VA 23508

Phone Number: 757-287-3667 Email: Reszproperties@gmail.com

APPLICANT INFORMATION

☐ check here if applicant is owner

Name: Dave & Pam Hainsworth

Mailing Address: 10605 Oliver Street Fairfax, VA 22030

Phone Number: 703-407-0265 Email: dave@hainsworthcpa.com

****

CERTIFICATION OF APPLICANT

I hereby certify that I have the authority to make the foregoing application, that the information given is true and correct, and that the construction or improvements will conform to the regulations in the Virginia Statewide Building Code, all pertinent Town Ordinances, including fire, sewer and water ordinances, and private building restrictions, if any, which may be imposed on the property by deed. Furthermore, I certify that the changes to the improvement before or during construction will be provided to the Zoning Administrator and Building Official before such changes are constructed.

Signature of Applicant: Dave Hainsworth Date: 6/28/2022

OWNER PERMISSION AFFIDAVIT

Town of Cape Charles
2 Plum Street
Cape Charles, VA 23310
757-331-2036 Fax: 757-331-4820
planner@capecharles.org

PROPERTY INFORMATION

Subject Property Street Address: Vacant Land/W. Washington Ave
Subject Property Tax ID Number: 83A1-3-A / 83A1-3-B1 / 83A1-3-C

OWNER INFORMATION

Name (Person, Firm, Corporation, or Agency): City Charles Beach LLC, Robt Schlegel, Mgr
Mailing Address: 841 W 45th Street, Norfolk VA 23508
Phone Number: 757-287-3667 Email: RES2Properties@gmail.com

APPLICANT INFORMATION (If applicable)

Name: David N and Pamela J Hainsworth
Mailing Address: 10605 Eaker Street, Fairfax VA 22030
Phone Number: 703-407-0265 Email: Dave@HainsworthCPA.com

I am applying for, or I hereby give authority to the applicant to file an application for:

Zoning Variance Application To BZA For Boundary Line Adjustment & Set Back Relief

Signature of Owner: [signature] Date: 5/16/22

Commonwealth of Virginia
County/City of Norfolk

The foregoing instrument was acknowledged before me this 16th day of May, 2022, by Robert E. Schlegel, Jr. (name of person acknowledged).

Signature of Notarial Officer: [signature]
Notary Registration Number: 7644292
My Commission Expires: 12/31/2024

JOSEPH E. BROWN
NOTARY PUBLIC
REG. #7644292
MY COMMISSION EXPIRES
12/31/2024
COMMONWEALTH OF VIRGINIA

(Seal)

Dave and Pam Hainsworth

10605 Oliver Street

Fairfax VA 22030

June 29, 2022

TO: Board of Zoning Appeals

Pete Baumann

Dolores Blackburn

Laura Weigand

Bill Murphy

Jim Holloway

Town of Cape Charles

Katie Nunez, Zoning Administrator

Dear Board of Zoning appeals and Town of Cape Charles:

We respectfully submit the following request. Pam and I are potential buyers of the Old Ferry Dock property consisting of 3 parcels on Washington Avenue, which are non-conforming lots of record. The Schlegel Family's Cape Charles Beach LLC is the current owner, and we are under contract to purchase their property. The site is known as the

former site of the Yorktown Ferry adjoining the Seabreeze Apartment complex. The property consists of approximately 1.63 acres and has approximately 700 feet of shoreline on the Bay, zoned "R-1" Single Family Residential consisting of three tax parcels. As contract purchasers, we propose to eliminate one of the 3 existing lots, resulting in 2 lots of record which will be more conforming than the 3 lots are now. In the process, we have prepared a detailed engineered plat with site plans which limits future uses of the property to that which is shown.

As such, we are applying for a zoning variance to build within the RPA of these 2 more conforming lots as shown in the attached engineering reports and documents.

What we are proposing is a residential redevelopment of a previously developed property with a history of substantial commercial use. We believe that our proposal for single family residential use is a less intense and more attractive use for the property. We are willing to permanently limit the property to the less intense uses we have proposed.

We have attached a Water Quality Impact Assessment and based on these designs, we believe that we clearly meet the requirements for BZA approval of our request to build withing the RPA. Our intention is to limit the property to the specific uses shown and build accordingly.

BACKGROUND:

The history of the Ferry Dock property dates back to the original Ferry Terminal developer; "The Peninsula Terminal Corporation, Frank Schlegel, President" in the 1920's. In 1931, it was sold to "The Standard Oil Company of New Jersey" and then later reacquired by the Schlegel family, under its "Peninsula Terminal Corporation" who continued to operate the property as a commercial harbor for decades thereafter.

The pilings from the commercial wharf and pier are visible along the beach to this day, in fact the original ferry dock slip still accommodates a good size vessel. In the late 1970's then mayor of Cape Charles, Ed Parry, requested that the owner sell a portion of the property for the construction of Seabreeze Apartments to help the town with housing needs. The owner was reluctant, but eventually agreed. The town had been making use of the property up until that time as a disposal yard for street demolition debris during a previous installation of water and sewer lines. While Most of that material was eventually removed, some of that debris is still visible along the shoreline.

Sometime after the land for the apartments was sold, the property was rezoned from a Commercial district to what is now the R-1 single family residential district. The 26-unit Seabreeze apartments are also zoned single family R-1. The town built the East-West Jetty that protects the town beach inside the boundaries of parcel A (83-A1-03-A) of this 3-parcel property. It continues to be owned by the Schlegel family (since the 1920's) under its Cape Charles Beach LLC entity with Robert Schlegel as the managing principal.

The Schlegel family have owned this property for about 100 years, and they have always maintained an accommodating relationship with the town, allowing the dumping of debris, selling property for public housing, and even allowing the jetty construction on their property to help build and preserve the towns adjoining public beach, which presently appears to be detrimental to the shoreline erosion of the Schlegal's property.

Today, the Schlegel's have an agreement to sell the property to us. We have been homeowners and part time residents of the town since 2005.

It is our desire to clean-up the ferry dock property and redevelop it into two high quality single family detached homes sites. One lot would be our own and be consistent with the current zoning and the character of the adjacent neighborhood. We would immediately start design plans with elevations and discussions to advance the building of a residence. Our goal is for an attractive redevelopment that would complement and enhance the character of this important area adjoining the town's public beach. The other lot would be reserved future use.

Sincerely,
Dave and Pam Hainsworth

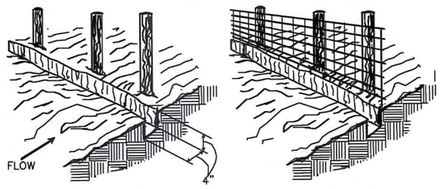
Cc: Bill Parr, Broker

Bobby Schlegel

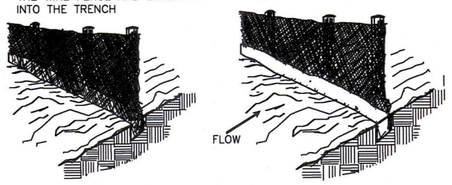
Enclosures

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

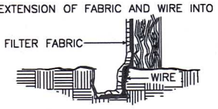
1. SET POSTS AND EXCAVATE A 4"X4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant
PLATE. 3.05–1

DOUBLE ROW OF 36" WIRE REINFORCED SILT FENCE ALONG BAY SIDE OF IMPROVEMENTS

36" WIRE REINFORCED SILT FENCE LIMITS OF CONSTRUCTION & LIMITS OF DISTURBANCE (TYPICAL)

CONSTRUCTION ENTRANCE

PROPOSED PRIVATE DRIVE (UNDER SEPARATE APPLICATION)

VDOT STD. CG-9D ENTRANCE (UNDER SEPARATE APPLICATION)

LOT A

LOT B

LOT BV1 P.B. 39, P. 39 83A1-18-BV1

Chesapeake Bay

Flood
Ebb

EDGE OF WATER

APPROX. TOE OF SLOPE

APPROX. TOP OF BANK

APPROX. FLOOD ZONE LINE

Concrete Debris Riprap

RIPRAP

BRICK APARTMENTS

CONC. RET. WALL

Aluminum Fence

Pipe(F)

SEABREEZE ASSOCIATES
D.B. 209, P. 136
P.B. 12, P. 58
83A1-3-B2

D.B. 89, P. 220
83A1-3-A

D.B. 89, P. 220
83A1-3-B1

D.B. 89, P. 220
83A1-3-C

LOTS LINES PER PLAT RECORDED IN DEED BOOK 89, P. 220

50.0' SEAWARD BUFFER

50.0' LANDWARD BUFFER

50.0' RPA BUFFER

S 88°00'00" W 211.00'

S 02°00'00" E 63.72'

S 02°00'00" E 300.02'

N 28°14'11" E 436.80' (TIE-LINE ONLY)

S 88°00'00" W 267.46'

AREA OF BRUSH & SMALL TREES

Ex. Deciduous Tree

YARD INLET
RIM=5.14
INV OUT (12" RCP)=3.45

DI
RIM=5.67
INV IN (12" RCP)=3.30
INV OUT (18" RCP)=2.35

SSMH
INV IN (18" RCP)=1.90
INV IN (24" RCP)=0.90
INV IN (18" RCP)=1.00
INV OUT (24" RCP)=0.81

SSMH
INV IN=2.5
INV OUT=2

BUILDING

CONC. WALK

ACC. PANEL

CONC. CURB & GUTTER

LAMP

12" RCP FLOW

18" RCP FLOW

24" RCP

BAY AVENUE

WASHINGTON AVENUE (70' R/W)

ZONE VE (BFE 8)

ZONE X

ZONE AE (BFE 8)

ZONE X

RPA

BFE

LEGEND

- DEMOLISH EXISTING STRUCTURES & SURFACES
- CE — CONSTRUCTION ENTRANCE (VA ESC STD. & SPEC. 3.02)
- SF — WIRE BACKED SILT FENCE (VA ESC STD. & SPEC. 3.05)
- TP — TREE PROTECTION PLATE (VA ESC STD. & SPEC. 3.38)
- REMOVE EXISTING TREE
- SITE ACCESS

ALL AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE LEFT IN A NATURAL STATE TO INCLUDE LEAVING THE FOREST FLOOR (LEAF LITTER) INTACT. NO CONSTRUCTION ACTIVITY PERMITTED SEAWARD OF THE SILT FENCE.

ANY ACCUMULATED SEDIMENT ON THE ROADWAY AS A RESULT OF CONSTRUCTION ACTIVITIES WILL BE REMOVED BY CLEANING THE ROAD AT THE END OF EACH WORKDAY.

SITE SURVEY BY: MARSHALL B. PARKS, L.S.,
11403 HERON DRIVE, MACHIPONGO, VA 23405
PH. 757-709-4192
DATE OF SURVEY: MAY 26, 2022

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NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

GRAPHIC SCALE
0 20' 40' 60' 120'
SCALE 1" = 20'

EXISTING CONDITIONS & EROSION AND SEDIMENT CONTROL PLAN EXHIBIT

CHESAPEAKE BAY SITE SOLUTIONS
CIVIL ENGINEERING CONSULTING
P.O. BOX 6663
VIRGINIA BEACH, VA. 23456
PH.: 757-575-3715
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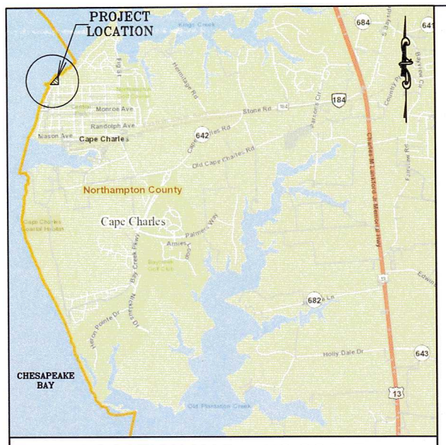
DATE	PLAN REVISION MODIFICATION

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'B'
EXISTING CONDITIONS AND EROSION & SEDIMENT CONTROL PLAN EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT B
1 OF 3



LOCATION MAP NO SCALE

ALL AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE LEFT IN A NATURAL STATE TO INCLUDE LEAVING THE FOREST FLOOR (LEAF LITTER) INTACT. NO CONSTRUCTION ACTIVITY PERMITTED SEAWARD OF THE SILT FENCE.

AREA TABLE

PROPOSED PARCEL SIZE*:	36,933 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	14,705 SF	39.8%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	2,516 SF	17.1%
AREA OF SITE IN RPA*:	36,632 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	2,493 SF	6.8%

*TO SURVEY TIE-LINE

SEQUENCE OF CONSTRUCTION:
A. CALL VA811
B. OBTAIN ALL REQUIRED PERMITS.
C. HOLD A PRE-CONSTRUCTION MEETING ON-SITE WITH CIVIL INSPECTOR.
D. INSTALL ALL EROSION CONTROLS AND TREE PROTECTION AS SHOWN ON PLAN.
E. PERFORM DEMOLITION, CONSTRUCT SITE IMPROVEMENTS, ROUGH GRADE SITE
F. FINE GRADE SITE AND STABILIZE SITE WITH ACCEPTABLE LANDSCAPING AND GROUNDCOVER.
G. INSTALL STORMWATER BMP'S.
H. REMOVE ALL TEMPORARY EQUIPMENT, CONSTRUCTION MATERIALS, AND DEBRIS FROM THE SITE.
I. ALL TEMPORARY EROSION CONTROLS SHALL BE REMOVED 30 DAYS AFTER FINAL STABILIZATION OR AS DIRECTED BY THE CIVIL INSPECTOR.

SITE SURVEY BY: MARSHALL B. PARKS, L.S., 11403 HERON DRIVE, MACHIPONGO, VA 23405 PH. 757-709-4192
DATE OF SURVEY: MAY 26, 2022

FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA-NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

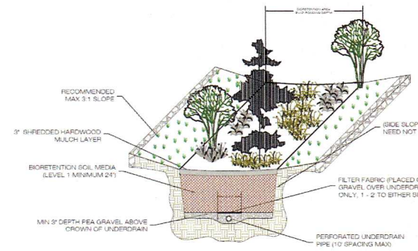
S 88°58'49" E 258.80' (TIE-LINE ONLY)
S 02°00'00" E 63.72'
LOT BV1 P.B. 39, P. 39 83A1-18-BV1
S 88°00'00" W 211.00'
Pipe(F)
Aluminum Fence
EDGE OF WATER
APPROX. TOE OF SLOPE
APPROX. TOP OF BANK
Concrete Debris Riprap
CONC. RET. WALL
BRICK APARTMENTS
50.0' SEAWARD BUFFER
50.0' LANDWARD BUFFER
LOT B
PROPOSED 2-STY SINGLE FAMILY RESIDENCE
PROPOSED PERMEABLE PAVER PATIO
PROPOSED 2-STY FRAME ±2396 SF
28.5'
8.0'
15.0'
73.0'
41.0'
PROPOSED BIO-RETENTION BED (TYPICAL)
LOTS LINES PER PLAT RECORDED IN DEED BOOK 89, P. 220
APP. 340 PILINGS OBSERVED DURING SURVEY. MORE PILINGS MAY BE SUBMERGED UNDER LOW WATER MARK
SEABREEZE ASSOCIATES D.B. 209, P. 136 P.B. 12, P. 58 83A1-3-B2
S 02°00'00" E 300.20'
100.0' RPA BUFFER
N 28°14'11" E 436.80' (TIE-LINE ONLY)
APPROX. FLOOD ZONE LINE
Ex. Deciduous Tree
LOT A
PROPOSED PRIVATE DRIVE (UNDER SEPARATE APPLICATION)
VDOT STD. CG-9D ENTRANCE (UNDER SEPARATE APPLICATION)
S 88°00'00" W 267.40'
Pipe(F)
BAY AVENUE
WASHINGTON AVENUE (70' R/W)
Chesapeake Bay
Flood
Ebb
YARD INLET RIM=5.14
DI RIM=5.67 INV IN (12" RCP)=3.30 INV OUT (18" RCP)=2.35
SSMH INV IN (18" RCP)=1.90 INV IN (24" RCP)=0.90 INV IN (18" RCP)=1.00 INV OUT (24" RCP)=0.81
BRICK BUILDING
CONC. WALK
CONC. CURB & GUTTER
ACC. PANEL
LAMP
24" RCP
12" RCP
18" RCP
FLOW

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

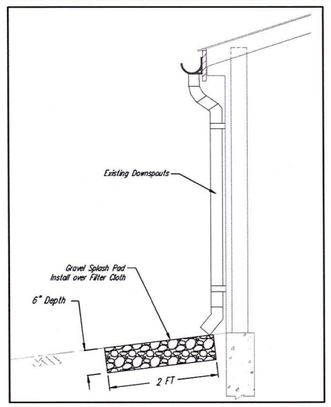
TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

VA DEQ STORMWATER DESIGN SPECIFICATION NO. 9 BIORETENTION



TYPICAL BIORETENTION - LEVEL 1 NTS

Figure 9.4a: Typical Detail of Bioretention Basin Level 1 Design



GRAVEL DOWNSPOUT SPLASH PAD DETAIL
NOT TO SCALE

PROPOSED SITE CONDITIONS

GRAPHIC SCALE
0 20' 40' 60' 120'
SCALE 1" = 20'

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PLAN REVISION MODIFICATION | DATE

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'B'
PROPOSED IMPROVEMENTS & IMPERVIOUS CALCULATIONS

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT B
2 OF 3

BUFFER CALCULATIONS

BUFFER RESTORATION REQUIRED 2,493 SF
BUFFER RESTORATION PROVIDED 3,647 SF

2493 SF / 1 BUFFER UNIT (400 SF) = 7 BUFFER UNITS REQUIRED
1 BUFFER UNIT=
ONE (1) - CANOPY TREE
TWO (2) - UNDERSTORY TREES
THREE (3) - SMALL SHRUBS OR WOODY GROUNDCOVER

UNITS x	PLANT/UNIT		NUMBER OF PLANTS REQUIRED
7 UNITS x	1 CANOPY TREE	=	7 CANOPY TREES
	2 UNDERSTORY TREE	=	14 UNDERSTORY TREES
	3 SHRUBS	=	21 SHRUBS

LEGEND

- BUFFER RESTORATION PLANTING BED
- CANOPY TREE (EVERGREEN)
- CANOPY TREE (DECIDOUS)
- CANOPY TREE (DECIDOUS)
- UNDERSTORY TREE ORNAMENTAL (DECIDOUS)
- UNDERSTORY TREE (DECIDOUS)
- SHRUB
- SHRUB
- RIGHT-OF-WAY TREE (IN ACCORDANCE W/ CAPE CHARLES MASTER TREE PLAN)

CANOPY TREES	
CANOPY TREES REQUIRED	7
CANOPY TREES PROVIDED	8

UNDERSTORY TREES	
UNDERSTORY TREES REQUIRED	14
UNDERSTORY TREES PROVIDED	18

SHRUBS	
SHRUB REQUIRED	21
SHRUBS PROVIDED	34

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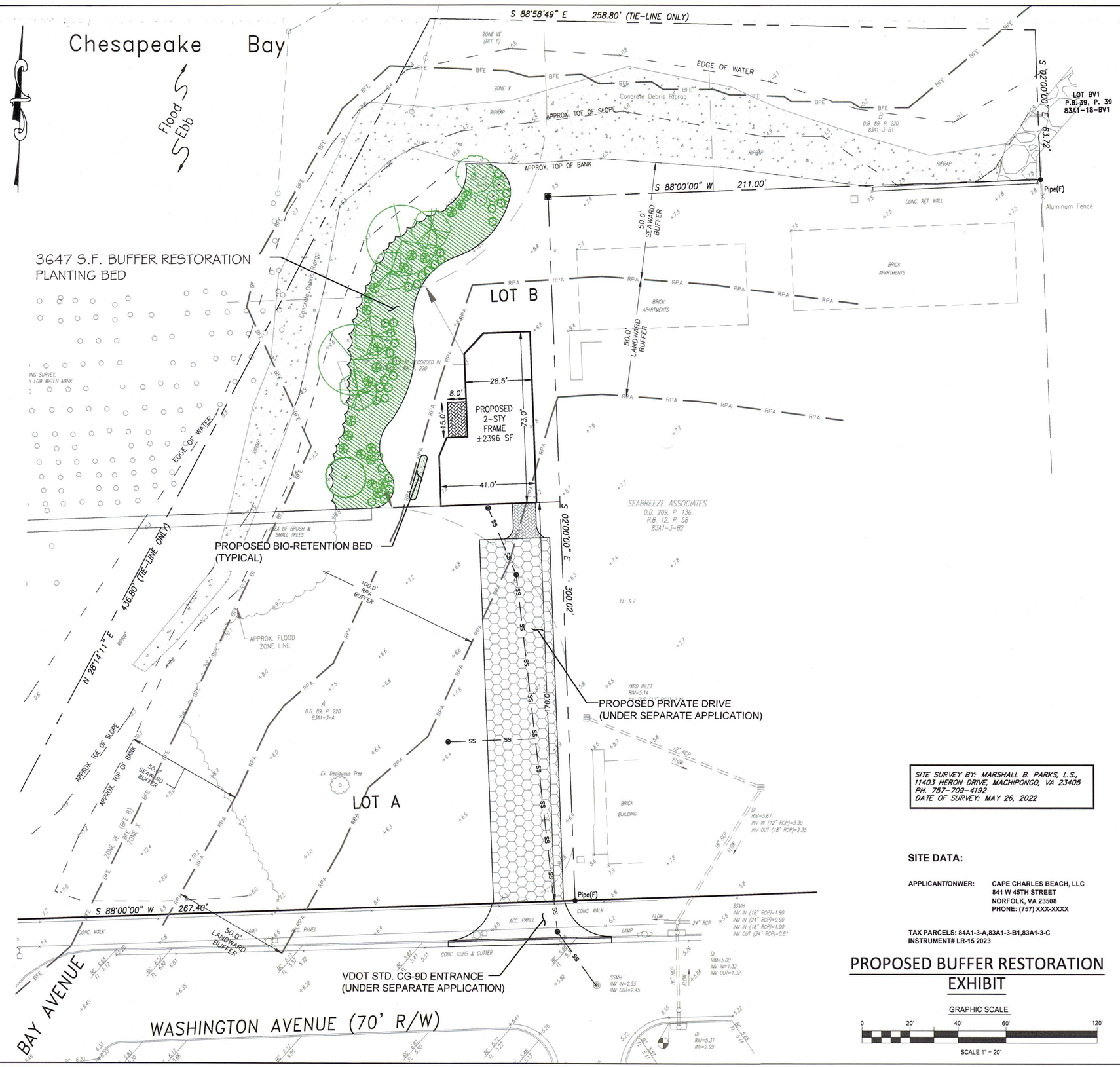
FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA–NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.



SITE SURVEY BY: MARSHALL B. PARKS, L.S., 11403 HERON DRIVE, MACHIPONGO, VA 23405 PH. 757-709-4192 DATE OF SURVEY: MAY 26, 2022

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C
INSTRUMENT# LR-15 2023

PROPOSED BUFFER RESTORATION EXHIBIT

GRAPHIC SCALE
0 20' 40' 60' 120'
SCALE 1" = 20'

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PLAN REVISION MODIFICATION | DATE

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

LOT 'B' PROPOSED BUFFER RESTORATION EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 83A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
LOT B
3 OF 3

LOCATION MAP NO SCALE

LOT 'B' AREA TABLE		
PROPOSED PARCEL SIZE*:	36,933 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	14,705 SF	39.8%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	2,516 SF	17.1%
AREA OF SITE IN RPA*:	36,632 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	2,493 SF	6.8%

*TO SURVEY TIE-LINE

AREA TABLE		
PROPOSED PARCEL SIZE*:	37,037 SF	
AREA OF SITE* OUTSIDE OF WATER AND TIDAL WETLANDS:	30,335 SF	8.2%
POST DEVELOPMENT IMPERVIOUS COVER OF SITE:	10,699 SF	35.2%
AREA OF SITE IN RPA*:	26,887 SF	
AREA OF NEW DEVELOPMENT IN THE RPA:	4,499 SF	16.7%

*TO SURVEY TIE-LINE

SITE SURVEY BY: MARSHALL B. PARKS, L.S., 11403 HERON DRIVE, MACHIPONGO, VA 23405 PH. 757-709-4192 DATE OF SURVEY: MAY 26, 2022

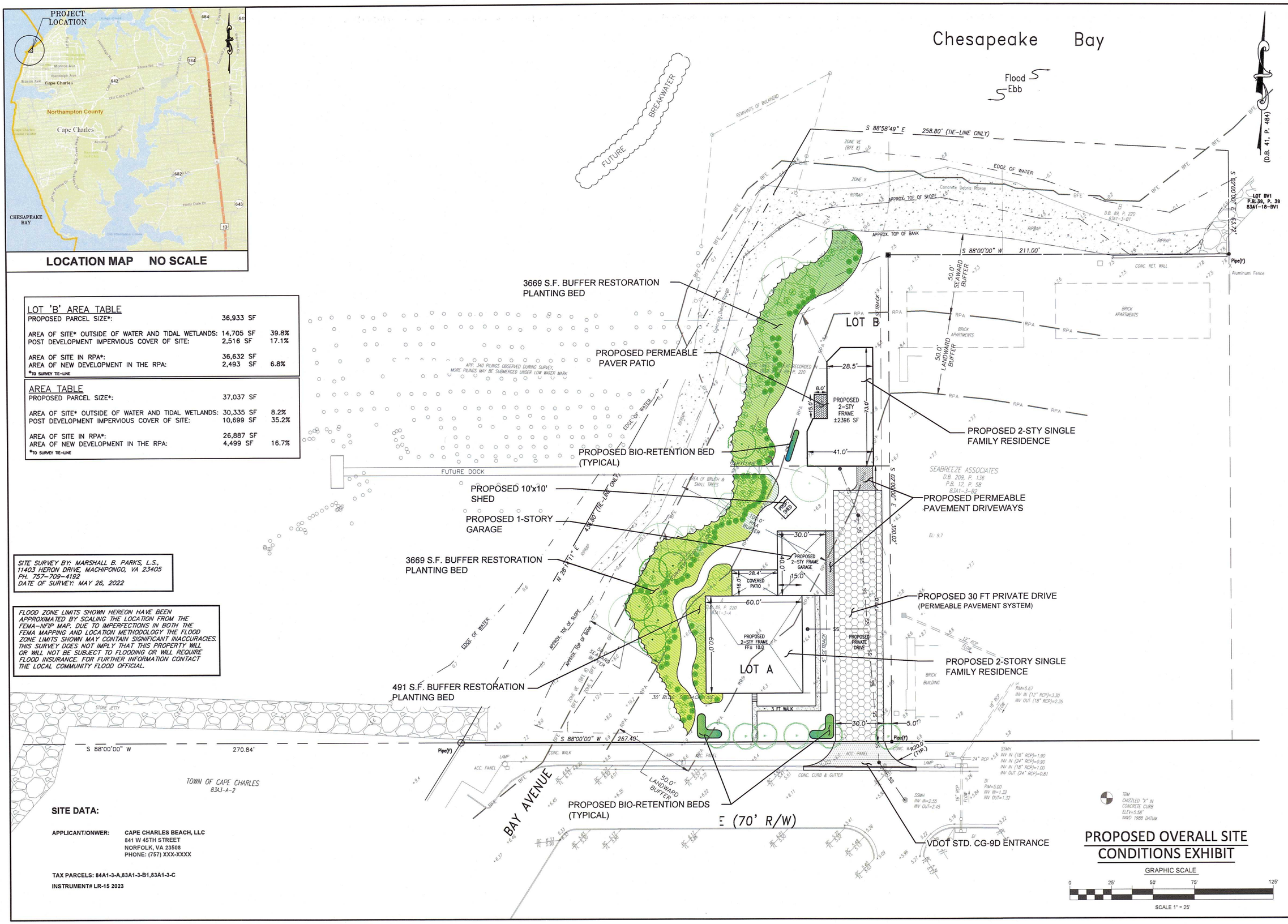
FLOOD ZONE LIMITS SHOWN HEREON HAVE BEEN APPROXIMATED BY SCALING THE LOCATION FROM THE FEMA-NFIP MAP. DUE TO IMPERFECTIONS IN BOTH THE FEMA MAPPING AND LOCATION METHODOLOGY THE FLOOD ZONE LIMITS SHOWN MAY CONTAIN SIGNIFICANT INACCURACIES. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING OR WILL REQUIRE FLOOD INSURANCE. FOR FURTHER INFORMATION CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

SITE DATA:

APPLICANT/ONWER: CAPE CHARLES BEACH, LLC
841 W 45TH STREET
NORFOLK, VA 23508
PHONE: (757) XXX-XXXX

TAX PARCELS: 84A1-3-A,83A1-3-B1,83A1-3-C

INSTRUMENT# LR-15 2023



PROPOSED OVERALL SITE CONDITIONS EXHIBIT

GRAPHIC SCALE

0 25' 50' 75' 125'

SCALE 1" = 25'

CHESAPEAKE BAY SITE SOLUTIONS

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PLAN REVISION MODIFICATION	DATE

COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/01/2022
PROFESSIONAL ENGINEER

OVERALL SITE LAYOUT EXHIBIT

CAPE CHARLES BEACH, LLC
PARCELS A,B1 & C
TAX PARCELS 84A1-3-A,83A1-3-B1, & 83A1-3-C
TOWN OF CAPE CHARLES, VA 23310

SHEET NO.
POST
1 OF 1

Water Quality Impact Assessment

for

Tax Parcels:

Parcel # 83a1-3-A

Parcel # 83a1-3-B1

Parcel # 83a1-3-C

Cape Charles, Va 23310

Prepared for:

David and Pam Hainsworth
10605 Oliver Street
Fairfax, VA 22030

CHESAPEAKE BAY
SITE SOLUTIONS

Prepared By:
Gregory O. Milstead, P.E.
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COMMONWEALTH OF VIRGINIA
GREGORY O. MILSTEAD
Lic. No. 047323
7/5/2022
PROFESSIONAL ENGINEER

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INTRODUCTION

The purpose of this Water Quality Assessment is to provide an assessment of the potential water quality impacts associated with the proposed construction of two (2) single-family residences on Tax Parcels 83A1-3-A, 83A1-3-B1, & 83A1-3-C in Cape Charles, Virginia. Recommendations for mitigation measures are proposed with the site layout to minimize the water quality impacts to an acceptable level.

PROPERTY LOCATION

The project site is located at the intersection of Bay Avenue and Washington Avenue in Cape Charles, VA, 23310. The project site is located on tax parcels:

PARCEL # 83A1-3-A
PARCEL # 83A1-3-B1
PARCEL # 83A1-3-C

EXISTING CONDITIONS

SITE DESCRIPTION

The proposed parcel currently sits vacant. A desktop analysis of historical aerial photographs indicates that the site has been previously developed as seen in the aerial image below.

Figure 1 – Historical Aerial of Site (USGS 1952-11-13 - 1952-11-24)

The project site is bound by the Chesapeake Bay to the north and west, a multi-family development (Sea Breeze Apartments) to the east and Washington Avenue right-of-way to the south. Current site

condition consists of buffer vegetation and managed turf. A 2021 Aerial image of the project site is shown below showing current site conditions. Existing water and sewer utilities are available to serve the site and are located in Washington Avenue right-of-way.

Figure 2 - 2021 Aerial

ZONING

A review of the Town of Cape Charles Official Zoning Map (Revised June 2, 2008) indicates the parcels zoning designation as R-1, Single Family Residential District.

SOIL TYPES

Based on review of available USDA Soil Survey data, there is one predominant soil type, "Bojac fine sandy loam" found within the project area based on available USDA Soil Survey data. Bojac fine sandy loam soil is classified as well draining soil with a very low runoff class, no frequency of flooding or ponding and falls within a Hydrologic Soil Group classification 'A' (HSG A).

The USDA soil map and soil data for the project location are provided in Appendix B.

WATERSHED / H.U.C. (Hydrologic Unit Code)

The project is located in the Chesapeake Bay Watershed, designated Hydrologic Unit Code 020801110902 (HUC 12).

EXISTING TOPOGRAPHY / DRAINAGE

The existing topography of the site is elevated along the west and north portions and generally graded such that majority of site runoff sheet flows away from the water and towards the Washington Street right-of way. The west and north portions of the site are at the highest elevations in the range of 10' and 9' above sea level and remainder of the site elevations are 7' and 6' above sea level with the lowest elevations of 5' located in the Washington Avenue right-of-way. Existing slopes on site range between 0.5% and 1.0% with steeper bank slopes adjacent to the Chesapeake Bay.

Existing site topography is shown on the site plan exhibits provided in Appendix A.

ENVIRONMENTAL

A review of U.S. Fish and Wildlife Service's National Wetlands Inventory for surface waters and wetlands was conducted as part of this Water Quality Impact Assessment. Estuarine and Marine Wetlands are found on site contiguous to MLW on the side of the property adjacent to the Chesapeake Bay.

A National Wetlands Inventory Map for the project site is provided in Appendix C.

PROPOSED IMPROVEMENTS

PROJECT DESCRIPTION

The purpose of this project is to construct two (2) new single-family residences on tax parcels 83A1-3-A, 83A1-3-B1, & 83A1-3-C in Cape Charles, Virginia. The proposed Lot A residence will consist of a single family residence with covered patio, a private drive, garage, and small shed. The proposed Lot B residence will consist of a single-family residence with patio. A shared private drive is proposed for the properties. The proposed site improvement exhibits showing the proposed improvements for both Lot A and Lot B are provided in Appendix A. Due to current site conditions the project will have limited demolition and clearing activities. The project will result in approximately 0.48 acres (20,932 SF) of total land disturbance.

Impervious Area Totals		
Total Area of Site*	73,970 SF	
Area of Site Outside of Water and Tidal Wetlands*	45,040 SF	60.8%
Total Post-developed Impervious	13,215 SF	29.3%
Pre-developed	0 SF	
***To survey tie line**		

Table 1- Impervious Area Calculations

REQUIRED PERMITS

A list of applicable permits to develop the parcel is provided below. This list should not be considered exhaustive as there may be additional permits not identified on the list.

- Town of Cape Charles Residential Building Permit (to include plumbing, mechanical & electrical)
- Town of Cape Charles Site plan approval and land disturbing permit for single family residence.
- VDOT right of way permit for construction of driveway entrance and utility installation.
- Tidewater Joint Permit Application (for proposed pier & breakwater)

MITIGATION MEASURES

EROSION AND SEDIMENT CONTROL MEASURES

All vegetative and structural erosion and sediment control measures will be constructed, inspected, and maintained according to Minimum Standards and Specifications of the latest edition of the Virginia Erosion and Sediment Control handbook. Erosion and Control measures will include a combination of silt fence, construction entrance, dust control, tree protection and vegetative stabilization (permanent and temporary seeding). A site-specific Stormwater pollution prevention plan (SWPPP) will be developed and implemented in accordance with Virginia Erosion and Sediment Control Law.

A row of double wired back silt fence is proposed on the Bay side of the lot limiting land disturbance to within 15 feet of proposed improvements and limiting perimeter fill to the minimum necessary to facilitate positive drainage away from proposed structures are additional erosion and control mitigation measures proposed with this project.

Preliminary demolition and erosion and sediment control exhibits showing the proposed limits of disturbance is provided in Appendix A.

PROPOSED DRAINAGE AND STORMWATER TREATMENT

A preliminary stormwater engineering analysis was conducted for the site to review and determine the water quantity and water quality impacts of the project. The proposed improvements will result in an increase in impervious area of approximately 13,215 square feet from the pre-developed condition. Due to the high permeability of the existing soils localized flooding is not anticipated. The proposed project will not alter existing drainage patterns and will remain the same as currently existing.

WATER QUALITY COMPLIANCE – Bio-retention planting beds, permeable pavement systems, gravel downspouts (disconnected rooftops), sheet flowing runoff to conservation area and buffer restoration are all proposed best management practices (BMP) for the site. The Virginia Runoff Reduction Methodology (VRMM) was applied and the VRRM compliance spreadsheet were utilized to ensure the sites meet pollutant removal requirements. The VRRM compliance spreadsheets for the project sites along with proposed BMP information can be found in Appendix D of this report.

WATER QUANTITY CONTROL (CHANNEL PROTECTION & FLOOD PROTECTION) - will be achieved by utilizing the proposed infiltrating BMPs in combination the natural permeability of the existing soils to infiltrate runoff back into the ground and recharge the water table. BMP design will include overflow controls to attenuate and safely convey larger storm events at non-erosive velocities.

BUFFER RESTORATION PLAN

In accordance with Town of Cape Charles Chesapeake Bay Area Overlay District Ordinance and the Virginia Chesapeake Bay Act no encroachment into the Seaward Buffer and establishment of new Buffer restoration planting beds equal to the proposed impervious area encroachment into the Resource

Protection Area are proposed as part of this project. Buffer restoration will include full complement of vegetation consisting of canopy trees, understory trees, shrubs and groundcovers consistent with the Riparian Buffer and Mitigation Guidance Manual and the 2006 Cape Charles Master Tree Plan.

The proposed buffer restoration will be located in the Resource Protection Area in areas currently devoted to turf. The restoration will begin in the seaward portion of the buffer and progress landward and shall have a mulch layer of organic material 4-inches to 6-inches thick in depth. Proposed buffer restoration areas will be maintained and not allowed to revert to turf in the future.

BUFFER CALCULATIONS

Lot A

1 Buffer Unit = 400 SF

- 1 Canopy Tree
- 2 Understory Trees & 3 Shrubs

  or
- 1 Canopy Tree, 1 Understory Trees, 2 large shrubs and three (3) small shrubs

Square Feet of Buffer Restoration / 400 = Number of Units To Be Installed
New Impervious Area in Buffer = 4499 SF
(In accordance with Town of Cape Charles Zoning Ordinance Section 7.10 C.2. b)
4499 SF / 400 SF = 12 UNITS

BUFFER UNITS REQUIRED x	PLANT UNIT QTY.	PLANT TYPE	NUMBER OF PLANTS REQUIRED	NUMBER OF PLANTS PROVIDED
12 x	1	Canopy Tree	12	13
	2	Understory Tree	24	36
	3	Shrubs	36	53

Table 2 – Buffer Unit Calculations

Lot B

New Impervious Area in Buffer = 2493 SF

2493 SF / 400 SF = 7 UNITS

BUFFER UNITS REQUIRED x	PLANT UNIT QTY.	PLANT TYPE	NUMBER OF PLANTS REQUIRED	NUMBER OF PLANTS PROVIDED
7 x	1	Canopy Tree	7	8
	2	Understory Tree	14	18
	3	Shrubs	21	34

Table 3 – Buffer Unit Calculations

A separate preliminary buffer restoration plan for Lots A & B are provided in Appendix A. Overall site plan showing limits of buffer restoration is also provided in Appendix A. A list of possible buffer planting trees and shrubs is provided in Appendix E.

CONCLUSIONS

With appropriate mitigation measures and precautions in place during construction such as double row wire backed silt fence on the seaward side of proposed improvements and limiting disturbance to within 15 feet of proposed improvements there should be relatively minor impacts associated with the development of this project during or following construction. Proposed permanent mitigation measures such as proposed buffer restoration and the use and regular maintenance of proposed water quality BMPs will further reduce impacts to negligible levels.

WQIA CHECKLIST

Town of Cape Charles, Article VII, Chesapeake Bay Preservation Overlay District Section 7.11 D - Major Water Quality Assessment			
	WQIA COMPONENT PER SECTION 7.11D	**PROVIDED YES / NO/ NA**	**COMMENT**
1.	All of the information required in a minor water quality impact assessment as specified in Section 7.11C. SECTION 7.11C 1 – Location of the components of the RPA, including the 100-foot buffer area;	YES	RPA Buffer Areas are shown on Site plan exhibits provided in Appendix A
	SECTION 7.11C 2- Location and nature of the proposed encroachment into the buffer area if needed including: type of paving material; areas of clearing or grading; location of any structures, drives, or other impervious cover	YES	Location and nature of proposed improvements are shown on site plan exhibits provided in Appendix A.
	SECTION 7.11C 3- Type and location of proposed best management practices to mitigate the proposed encroachment	YES	Type and location of BMPs are shown on site plan exhibits provided in Appendix A and additional information provided in Appendix D.
	SECTION 7.11C 4- Location of existing vegetation onsite, including the number and type of trees and other vegetation to be removed in the buffer to accommodate the encroachment or modification;	YES	Location of existing vegetation are shown on Site plan exhibits provided in Appendix A
	SECTION 7.11C 5- Revegetation plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion and runoff control.	YES	Proposed buffer restoration plan provided in Appendix A.
2a.	A hydro-ecological element that: a. describes the existing topography, soils, hydrology, and geology of the site and adjacent lands	YES	Description of soils, topography, and hydrological and geological elements of the site.
2b.	indicates the following: **i.** disturbance or destruction of wetlands and justification for such action	N/A	National wetlands inventory mapping provided. Disturbance of wetlands is not proposed with this project
	ii, disruptions or reductions in the supply of water to wetlands, streams, or other water bodies	N/A	No disruptions or reductions in the supply of water to wetlands, streams, or water bodies is proposed with this project.

	iii, disruptions to existing hydrology including wetlands and stream circulation patterns;	YES	Discussion of existing hydrology is provided in the body of the report. The proposed project does not alter existing drainage patterns and nor disrupt wetlands or stream circulation patterns.
	iv, source location and description of proposed fill material	N/A	Site will be single family home on crawlspace. Only fill required to promote positive drainage away from structures will be allowed as a mitigation measure. Source of fill material will be determined at a later date. All fill material will be clean, and free of debris and toxins.
	v. location of dredge material and location of dumping area for such material	N/A	No dredging activities are proposed with this project.
	vi, location of and impacts on shellfish beds or submerged aquatic vegetation	N/A	No impacts to shellfish beds or submerged aquatic vegetation is proposed as part of this project.
	vii, estimation of pre- and post-development pollutant loads in runoff	YES	Virginia Runoff Reduction Method Spreadsheets are provided in Appendix D.
	viii, estimation of percent increase in impervious surface on site and type(s) of surfacing materials used	YES	Proposed impervious area increases and materials are shown on the site plan exhibit and a table has been provided in the body of this report as well.
	xi, percent of site to be cleared for project	YES	Due to the existing condition of the site, limited clearing will be required. Total proposed land disturbance is provided in the report and VRRM spreadsheets.
	x., anticipated duration and phasing schedule of construction project	YES	Anticipated schedule is provided on site plan exhibits in Appendix A.
	xi.listing of all requisite permits from all applicable agencies necessary to develop project	YES	A list of anticipated permits required for this project is provided in the body of this report.
2d.	describes the proposed mitigation measures for the potential hydroecological impacts. Potential mitigation measures include: **i.** proposed erosion and sediment control concepts; concepts should include minimizing the extent of the cleared area, perimeter controls, reduction of runoff velocities, measures to stabilize disturbed areas, schedule and personnel for site inspection	YES	An erosion and sediment control plan exhibit is provided in Appendix A showing the limits of disturbance. Mitigation measures are discussed in the body of the report.
	ii,proposed water quality and quantity stormwater management system	YES	Proposed water quality and quantity management systems are shown on the exhibit site plans and discussed in the body of the report.
	iii., creation of wetlands to replace those lost	N/A	No impacts to wetlands are proposed with this project.
	iv. minimizing cut and fill	YES	Minimizing fill material to only what is required to promote positive drainage away from the structure is proposed as a mitigation measure.
3a.	A landscape element that: a. identifies and delineates the location of plant material on site, including all trees two inches or greater diameter at breast height. Where there are groups of trees, stands may be outlined.	YES	A conceptual buffer restoration plan is provided in Appendix A.

3b.	describes the impacts the development or use will have on the existing vegetation. Information should include: **i.** limits of clearing based on all anticipated improvements including buildings, drives, and utilities	YES	Discussion of proposed development is provided in the body of the report and limits of land disturbance is shown on the proposed site plan exhibits in Appendix A.
	ii. clear delineation of all trees and other woody vegetation proposed to be removed	YES	Limits of land disturbance are shown on the site plan exhibits in Appendix A. One (1) decaying tree in the center of the lot is shown for removal. Additional trees are proposed with the buffer restoration plan to mitigate the removal.
	iii. description of plant species to be disturbed or removed	YES	Tree is labeled as deciduous.
3c.	describes the potential measures for mitigation. Possible mitigation measures should include: i. replanting schedule for trees and other significant vegetation removed for construction including a list of possible plants and trees to be used	YES	Potential mitigation measures are discussed in the body of the report and proposed buffer restoration plan is provided in Appendix A and tree planting lists are provided in Appendix E.
	ii. demonstration that the design of the plan will preserve to the greatest extent possible any significant trees and vegetation on the site and will provide maximum erosion control and overland flow benefits from such vegetation	YES	Site plan exhibits are provided in Appendix A. All existing vegetation is proposed to remain and be enhanced with the exception of the decaying tree in conflict.
	iii. demonstration that native plants are to be used to the greatest extent possible	YES	All plant material will be native species and selected in accordance with Cape Charles Tree Conservation Ordinance, Cape Charles Tree Master Plan, and latest version of VA DCR's Riparian Buffers Modification & Mitigation Guidance Manual

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The information contained in this report has been obtained from publicly available data sources and other secondary sources of information produced by entities other than Chesapeake Bay Site Solutions, Inc. Although great care has been taken by Chesapeake Bay Site Solutions, Inc. in compiling and checking the information contained in this report to ensure that it is current and accurate, and/or Chesapeake Bay Site Solutions, Inc. disclaims any and all liability for any errors, omissions or inaccuracies in such information and data, whether attributable to inadvertence or otherwise, and for any consequence arising therefrom. The data provided hereunder neither purports to be, nor constitutes legal or medical advice. It is further understood that Chesapeake Bay Site Solutions, Inc. makes no representations or warranties of any kind, including, but not limited to, the warranties of fitness for a particular purpose of merchantability, nor are such representations or warranties to be implied with respect to the data furnished, and Chesapeake Bay Site Solutions, Inc. assumes no responsibility with respect to its employees, clients, or customers use thereof. Chesapeake Bay Site Solutions, Inc. shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from customer's use of the data. Liability on the part of Chesapeake Bay Site Solutions, Inc. is limited to the monetary value paid for this report. The report is valid only for the geographic parameters specified on the cover page of this report, and any alterations or deviation from this description will require a new report. This report does not constitute a legal opinion.

APPENDIX A- (PRELIMINARY SITE PLAN EXHIBITS)

LOT A & B EXISTING CONDITIONS & EROSION & SEDIMENT CONTROL EXHIBITS
LOT A & B PROPOSED LAYOUT EXHIBITS
LOT A & B PROPOSED BUFFER RESTORATION EXHIBITS
OVERALL PROPOSED SITE CONDITIONS EXHIBIT

These exhibits are included w/ the Exception/Variance Application Attachments for both Lots A & B and were not reproduced w/ this attachment.

- Katie Nunez
8/2/2022

APPENDIX B-(USDA SOIL SURVEY DATA)

Soil Map—Northampton County, Virginia
(Cape Charles, LLC)

Map Scale: 1:979 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Northampton County, Virginia
Survey Area Data: Version 15, Sep 14, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 18, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BoA	Bojac fine sandy loam, 0 to 2 percent slopes	1.6	100.0%
Totals for Area of Interest		**1.6**	**100.0%**

Northampton County, Virginia

BoA—Bojac fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 40kq
Elevation: 0 to 80 feet
Mean annual precipitation: 25 to 60 inches
Mean annual air temperature: 55 to 64 degrees F
Frost-free period: 200 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bojac and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bojac

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Marine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 32 inches: fine sandy loam
H3 - 32 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Polawana

Percent of map unit: 6 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: Yes

Nimmo

Percent of map unit: 2 percent
Landform: Carolina bays
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Northampton County, Virginia
Survey Area Data: Version 15, Sep 14, 2021

APPENDIX C-(NATIONAL WETLANDS INVENTORY MAP)

U.S. Fish and Wildlife Service

National Wetlands Inventory

CAPE CHARLES

June 29, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

APPENDIX D-(VRRM SPREADSHEETS & WATER QUALITY BMPs)

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: **2013 Draft Stds & Specs**

Site Summary

Project Title: CAPE CHARLES LLC, LOT A
Date: 44736

Total Rainfall (in):	43
Total Disturbed Acreage:	0.37

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.37	0.00	0.00	0.00	0.37	100
Impervious Cover (acres)	0.00	0.00	0.00	0.00	0.00	0
					0.37	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.12	0.00	0.00	0.00	0.12	32
Impervious Cover (acres)	0.25	0.00	0.00	0.00	0.25	68
					0.37	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.69	0.15	0.95	0.15
Treatment Volume (ft^3)	927	65	862	65
TP Load (lb/yr)	0.58	0.04	0.54	0.04
	Baseline TP Load (lb/yr):	0.0492*	*Reduction below new development load limitation not required*	

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
0.34	1.57	0.34

Total TP Load Reduction Required (lb/yr)	0.43	-0.01	0.44

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	4.17	0.91

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	10%

** Note: % Reduction will reduce post-development TP load to less than or equal to baseline load of 0.05 lb/yr (0.41 lb/ac/yr)*
[Required reduction for Post-ReDev. = Post-ReDev TP load - baseline load of 0.0492 lb/yr], baseline load = site area x 0.41 lb/ac/yr

Total Runoff Volume Reduction (ft^3)	685
Total TP Load Reduction Achieved (lb/yr)	0.46
Total TN Load Reduction Achieved (lb/yr)	3.31
Remaining Post Development TP Load (lb/yr)	0.12
Remaining TP Load Reduction (lb/yr) Required	0.00

** TARGET TP REDUCTION EXCEEDED BY 0.03 LB/YEAR **

**Reduction below new development load limitation not required*

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.03	0.02	0.02	0.04	0.00	0.11
Impervious Cover (acres)	0.02	0.03	0.07	0.13	0.00	0.25
Total Area (acres)	0.05	0.05	0.09	0.17	0.00	0.36

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.05	0.06	0.12	0.23	0.00	0.46
TN Load Reduced (lb/yr)	0.35	0.47	0.85	1.64	0.00	3.31

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

○ 2011 BMP Standards and Specifications ◎ 2013 Draft BMP Standards and Specifications

Project Name:	CAPE CHARLES LLC, LOT A
Date:	6/24/2022
Linear Development Project?	No

CLEAR ALL

data input cells
constant values
calculation cells
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.37

Maximum reduction required:	10%
The site's net increase in impervious cover (acres) is:	0.25
Post-Development TP Load Reduction for Site (lb/yr):	0.43

Check:

BMP Design Specifications List:	2013 Draft Stds & Specs
Linear project?	No
Land cover areas entered correctly?	✓
Total disturbed area entered?	✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed forest/open space					0.00
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.37				0.37
Impervious Cover (acres)					0.00
					0.37

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested land					0.00
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.12				0.12
Impervious Cover (acres)	0.25				0.25
Area Check	OK.	OK.	OK.	OK.	0.37

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.37	0.12
Weighted Rv(turf)	0.15	0.15
% Managed Turf	100%	100%
Impervious Cover (acres)	0.00	0.00
Rv(impervious)	0.95	0.95
% Impervious	0%	0%
Total Site Area (acres)	0.37	0.12
Site Rv	0.15	0.15

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0046	0.0015	
Pre-ReDevelopment Treatment Volume (cubic feet)	201	65	
Pre-ReDevelopment TP Load (lb/yr)	0.13	0.04	*
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.34	0.34	*
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.05	

[1] Adjusted Land Cover Summary
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.12
Weighted Rv (turf)	0.15
% Managed Turf	32%
Impervious Cover (acres)	0.25
Rv(impervious)	0.95
% Impervious	68%
Final Site Area (acres)	0.37
Final Post Dev Site Rv	0.69

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.12
Weighted Rv (turf)	0.15
% Managed Turf	100%
ReDev. Impervious Cover (acres)	0.00
Rv(impervious)	0.95
% Impervious	0%
Total ReDev. Site Area (acres)	0.12
ReDev Site Rv	0.15

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.25
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0213	Post-ReDevelopment Treatment Volume (acre-ft)	0.0015	Post-Development Treatment Volume (acre-ft)	0.0198
Final Post-Development Treatment Volume (cubic feet)	927	Post-ReDevelopment Treatment Volume (cubic feet)	65	Post-Development Treatment Volume (cubic feet)	862
Final Post-Development TP Load (lb/yr)	0.58 *	Post-ReDevelopment Load (TP) (lb/yr)*	0.04	Post-Development TP Load (lb/yr)	0.54
Final Post-Development TP Load per acre (lb/acre/yr)	1.57	Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.34		
		Max. Reduction Required (Below Pre-ReDevelopment Load)	10%		
		TP Load Reduction Required for Redeveloped Area (lb/yr)	-0.01 *	TP Load Reduction Required for New Impervious Area (lb/yr)	0.44

* Reduction below new development load limitation not required

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.43

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	0.91	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	4.17

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

○ 2011 BMP Standards and Specifications ⊙ 2013 Draft BMP Standards and Specifications

Project Name:	CAPE CHARLES LLC, LOT B	CLEAR ALL	data input cells
Date:	6/24/2022		constant values
	Linear Development Project? No		calculation cells
			final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 0.11

Maximum reduction required:	10%	Check:	
The site's net increase in impervious cover (acres) is:	0.06	BMP Design Specifications List:	2013 Draft Stds & Specs
Post-Development TP Load Reduction for Site (lb/yr):	0.10	Linear project?	No
		Land cover areas entered correctly?	✓
		Total disturbed area entered?	✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed forest/open space					0.00
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.11				0.11
Impervious Cover (acres)					0.00
					0.11

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed	0.05				0.05
Impervious Cover (acres)	0.06				0.06
Area Check	OK	OK	OK	OK	0.11

Constants	
Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Rv (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY – PRE-REDEVELOPMENT

Land Cover Summary Pre		
Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv (forest)	0.03	0.03
% Forest	0%	0%
Managed Turf Cover (acres)	0.11	0.05
Weighted Rv (turf)	0.15	0.15
% Managed Turf	100%	100%
Impervious Cover (acres)	0.00	0.00
Rv (impervious)	0.95	0.95
% Impervious	0%	0%
Total Site Area (acres)	0.11	0.05
Site Rv	0.15	0.15

LAND COVER SUMMARY – POST DEVELOPMENT

Land Cover Summary Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv (forest)	0.03
% Forest	0%
Managed Turf Cover (acres)	0.05
Weighted Rv (turf)	0.15
% Managed Turf	45%
Impervious Cover (acres)	0.06
Rv (impervious)	0.95
% Impervious	55%
Final Site Area (acres)	0.11
Final Post Dev Site Rv	0.59

Land Cover Summary Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv (forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.05
Weighted Rv (turf)	0.15
% Managed Turf	100%
ReDev. Impervious Cover (acres)	0.00
Rv (impervious)	0.95
% Impervious	0%
Total ReDev. Site Area (acres)	0.05
ReDev Site Rv	0.15

Land Cover Summary Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.06
Rv (impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0014	0.0006
Pre-ReDevelopment Treatment Volume (cubic feet)	60	27
Pre-ReDevelopment TP Load (lb/yr)	0.04	0.02
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.34	0.34
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.02

Adjusted Land Cover Summary:
Pre-ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proportional to new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage minus acreage of new impervious cover.

Column 1 shows baseline pre-treatment for new impervious cover based on pre-redevelopment load limit (0.41 lbs/acre/year).

Final Post-Development Treatment Volume (acre-ft)	0.0054	
Final Post-Development Treatment Volume (cubic feet)	234	
Final Post-Development TP Load (lb/yr)	0.15	*
Final Post-Development TP Load per acre (lb/acre/yr)	1.34	

Treatment Volume and Nutrient Load

Post-ReDevelopment Treatment Volume (acre-ft)	0.0006	
Post-ReDevelopment Treatment Volume (cubic feet)	27	
Post-ReDevelopment Load (TP) (lb/yr)*	0.02	*
Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.34	
Max. Reduction Required (Below Pre-ReDevelopment Load)	10%	
TP Load Reduction Required for Redeveloped Area (lb/yr)	0.00	*

* Reduction below new development load limitation not required

Post-Development Treatment Volume (acre-ft)	0.0048	
Post-Development Treatment Volume (cubic feet)	207	
Post-Development TP Load (lb/yr)	0.13	
TP Load Reduction Required for New Impervious Area (lb/yr)	0.11	

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.10

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	0.27	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	1.05

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: **2013 Draft Stds & Specs**

Site Summary

Project Title: CAPE CHARLES LLC, LOT B
Date: 44736

Total Rainfall (in):	**43**
Total Disturbed Acreage:	**0.11**

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.11	0.00	0.00	0.00	0.11	100
Impervious Cover (acres)	0.00	0.00	0.00	0.00	0.00	0
					0.11	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.05	0.00	0.00	0.00	0.05	45
Impervious Cover (acres)	0.06	0.00	0.00	0.00	0.06	55
					0.11	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.59	0.15	0.95	0.15
Treatment Volume (ft^3)	234	27	207	27
TP Load (lb/yr)	0.15	0.02	0.13	0.02
	Baseline TP Load (lb/yr):	0.0205*	**Reduction below new development load limitation not required*	

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
0.34	1.34	0.34

Total TP Load Reduction Required (lb/yr)	0.10	0.00	0.11

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	1.05	0.27

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	10%

** Note: % Reduction will reduce post-development TP load to less than or equal to baseline load of 0.02 lb/yr (0.41 lb/ac/yr)*
[Required reduction for Post-ReDev. = Post-ReDev TP load - baseline load of 0.0205 lb/yr], baseline load = site area x 0.41 lb/ac/yr

Total Runoff Volume Reduction (ft^3)	156
Total TP Load Reduction Achieved (lb/yr)	0.10
Total TN Load Reduction Achieved (lb/yr)	0.74
Remaining Post Development TP Load (lb/yr)	0.05
Remaining TP Load Reduction (lb/yr) Required	0.00

**No further TP load reduction required (Required - Achieved < 0.005 lb/yr)

**Reduction below new development load limitation not required*

(Remaining TP load reduction <0.005)

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.04	0.00	0.00	0.00	0.00	0.04
Impervious Cover (acres)	0.03	0.03	0.00	0.00	0.00	0.06
Total Area (acres)	0.07	0.03	0.00	0.00	0.00	0.10

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.06	0.04	0.00	0.00	0.00	0.10
TN Load Reduced (lb/yr)	0.42	0.32	0.00	0.00	0.00	0.74

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm
Target Rainfall Event (in)	0.00	0.00	0.00

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		64	98	0	0	0
RR (ft^3)		94	62	0	0	0
1-year return period	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN adjusted	100	100	0	0	0
2-year return period	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN adjusted	100	100	0	0	0
10-year return period	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN adjusted	100	100	0	0	0

Larger scale (e.g., commercial) applications that utilize disconnection and/or sheetflow for runoff reduction credit should consult Stormwater Design Specification 2: Filter Strips.

Figure 1.1 portrays various rooftop disconnection and alternative runoff reduction options.

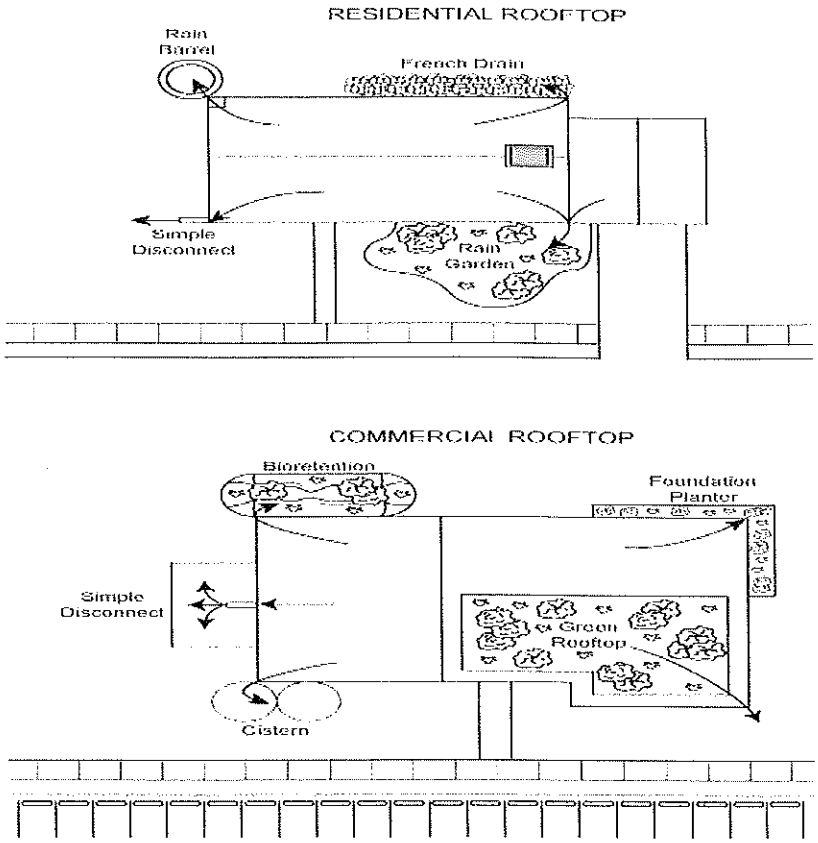


Figure 1.1 Roof Disconnection with Alternative Runoff Reduction Practices

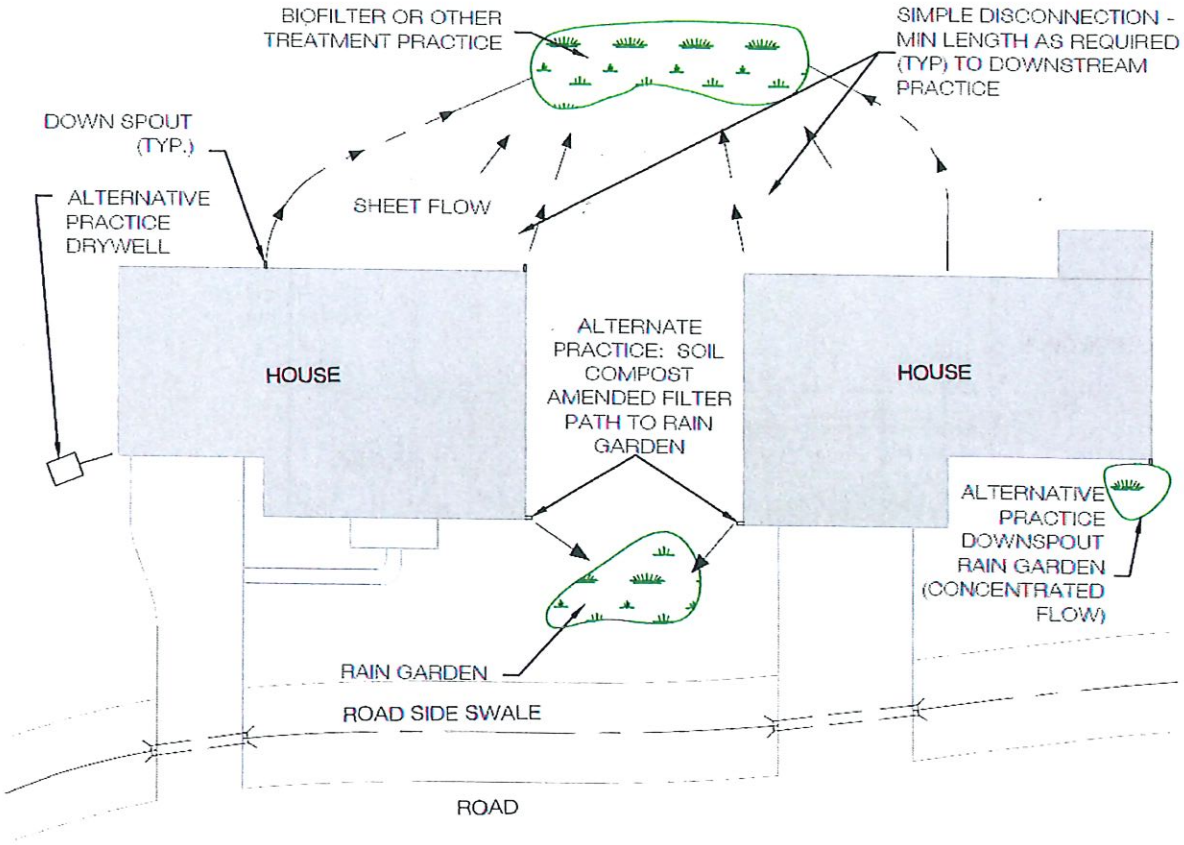


Figure 1.2. Residential Rooftop Treatment – Plan View:
a) Simple Disconnection;
b) Simple Disconnection to downstream Raingarden;
c) Disconnection – Alternative Practice: Raingarden;
d) Disconnection – Alternative Practice: Compost Amended Flow Path to downstream Raingarden;
e) Disconnection – Alternative Practice: Dry Well (micro-infiltration);

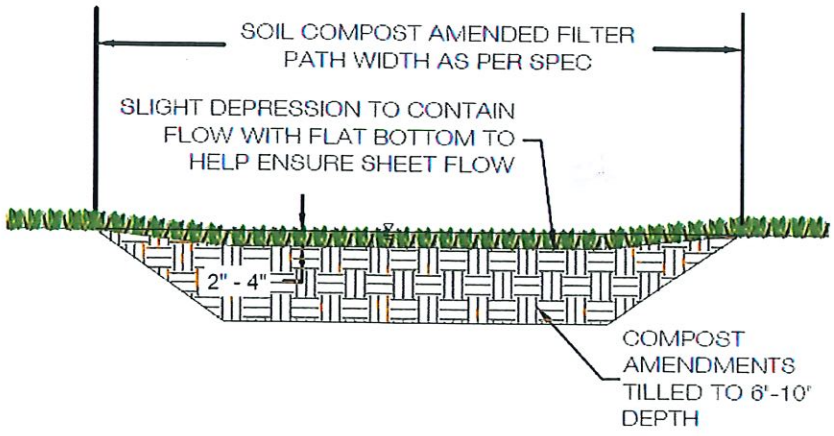


Figure 1.3. Disconnection: Soil Compost Amended Filter Path

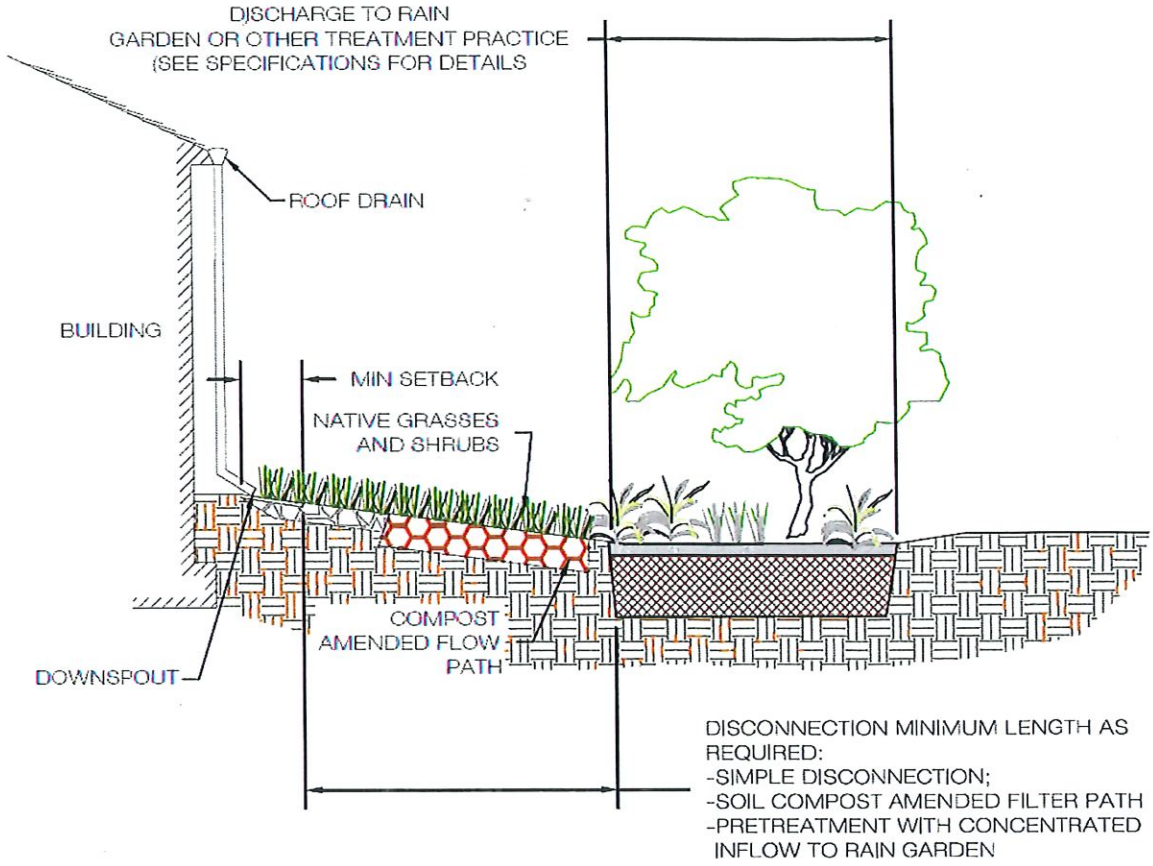


Figure 9.3A. Residential Rooftop Disconnection – Section View: (a) Simple Disconnection to downstream Raingarden; (b) Disconnection – Alternative Practice: Compost Amended Flow Path to downstream Raingarden

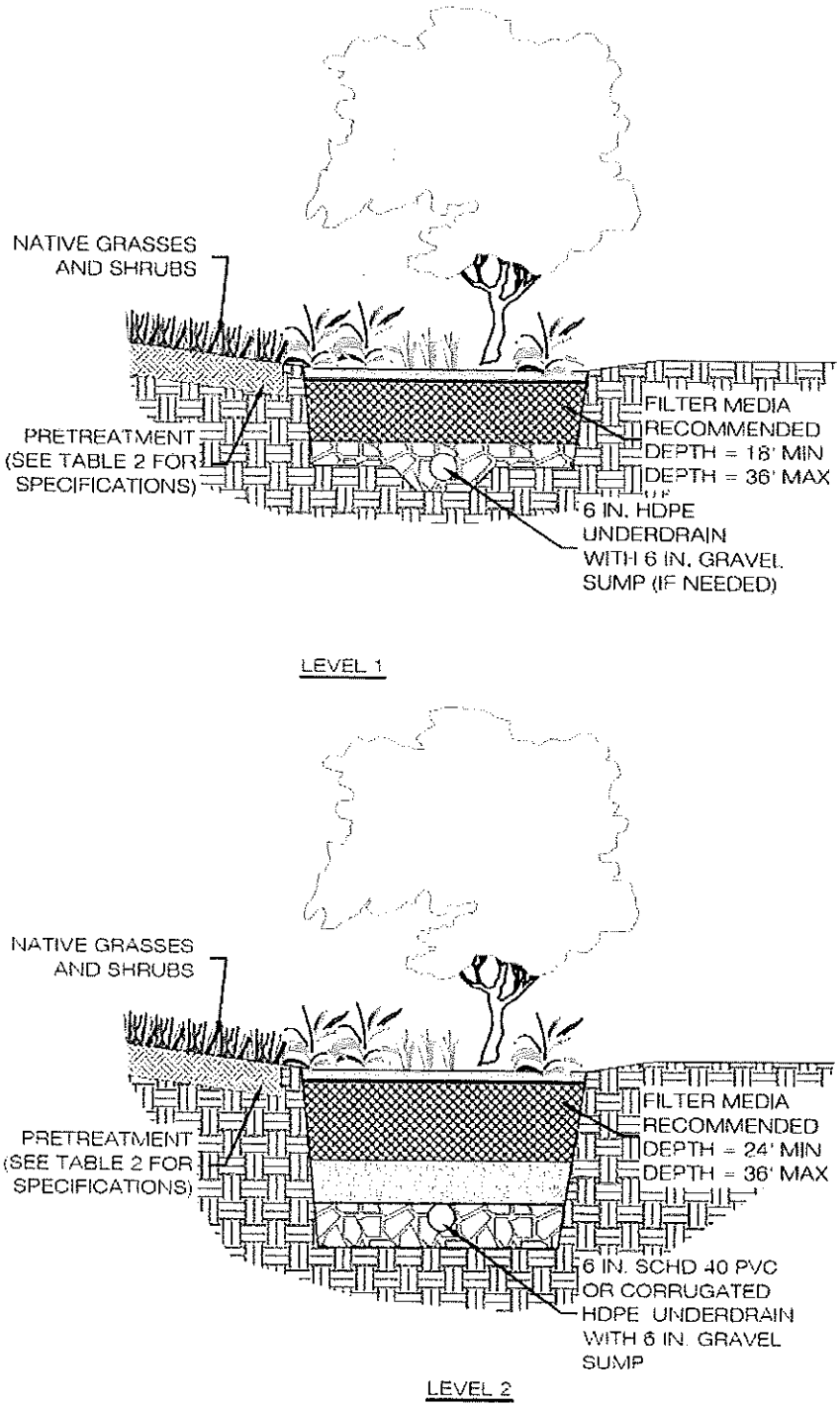


Figure 9.3B. Typical Micro-Bioretention Basin (Rain Garden) Level I and Level II – Section View:

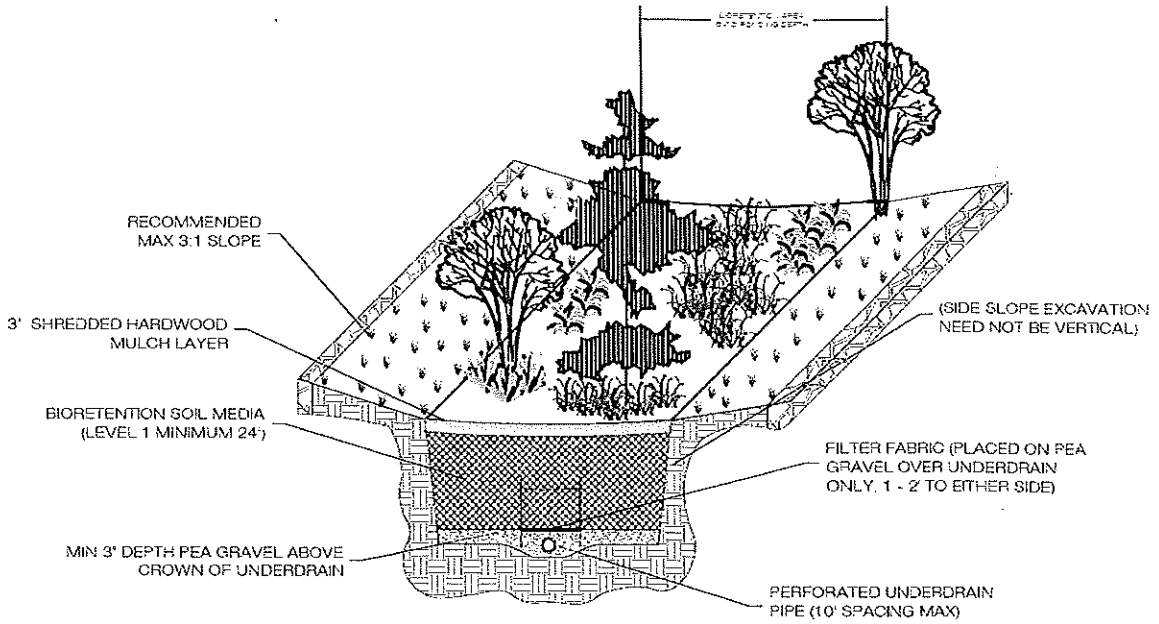


Figure 9.4a: Typical Detail of Bioretention Basin Level 1 Design

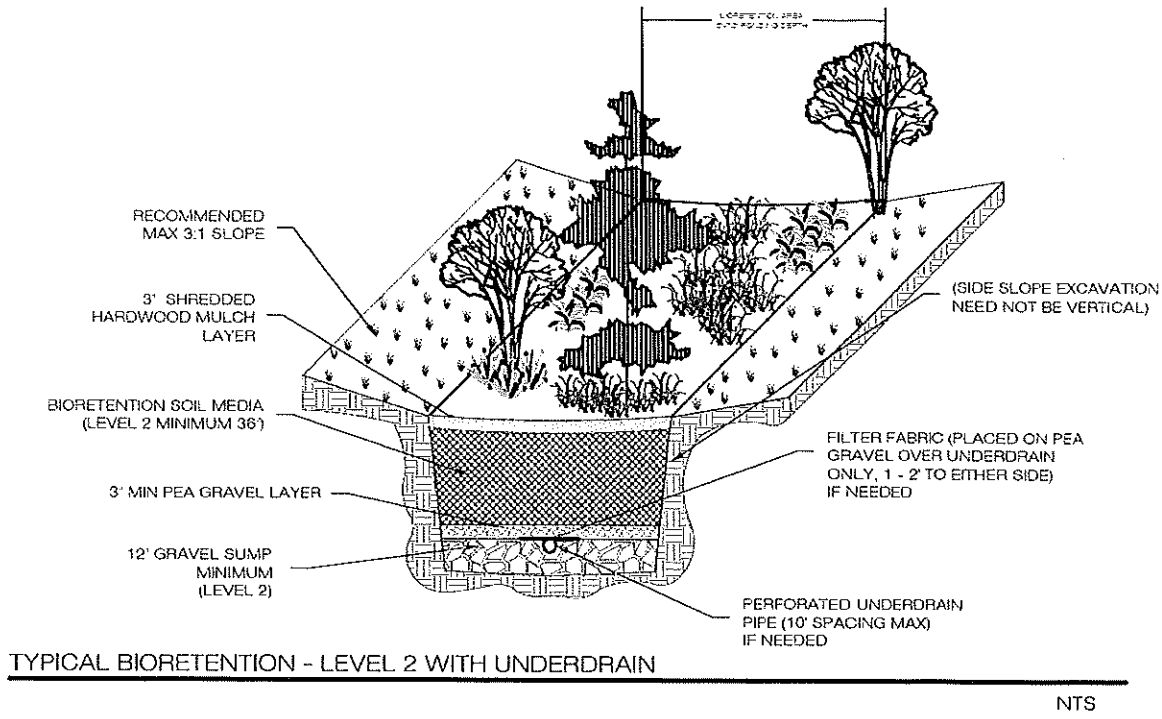


Figure 9.4b: Typical Detail of Bioretention Basin Level 2 Design

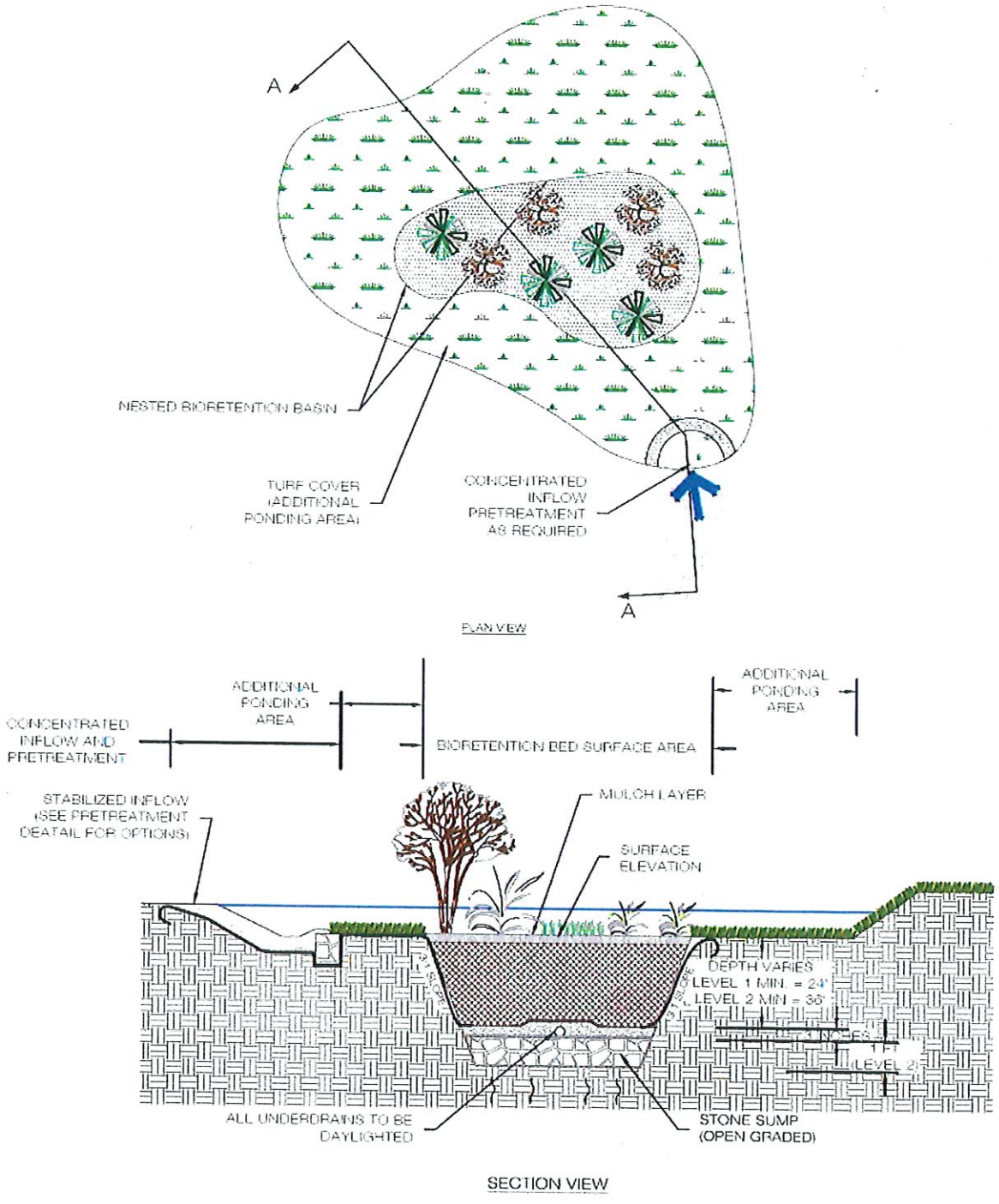
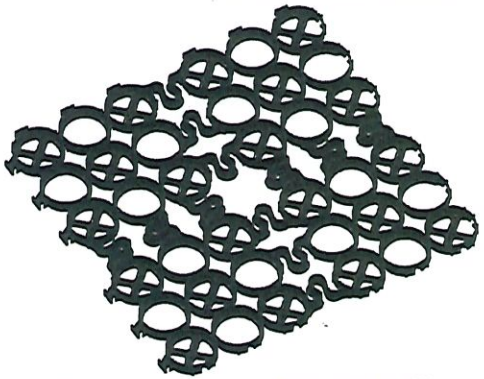


Figure 9.5. Typical Detail of Bioretention with Additional Surface Ponding

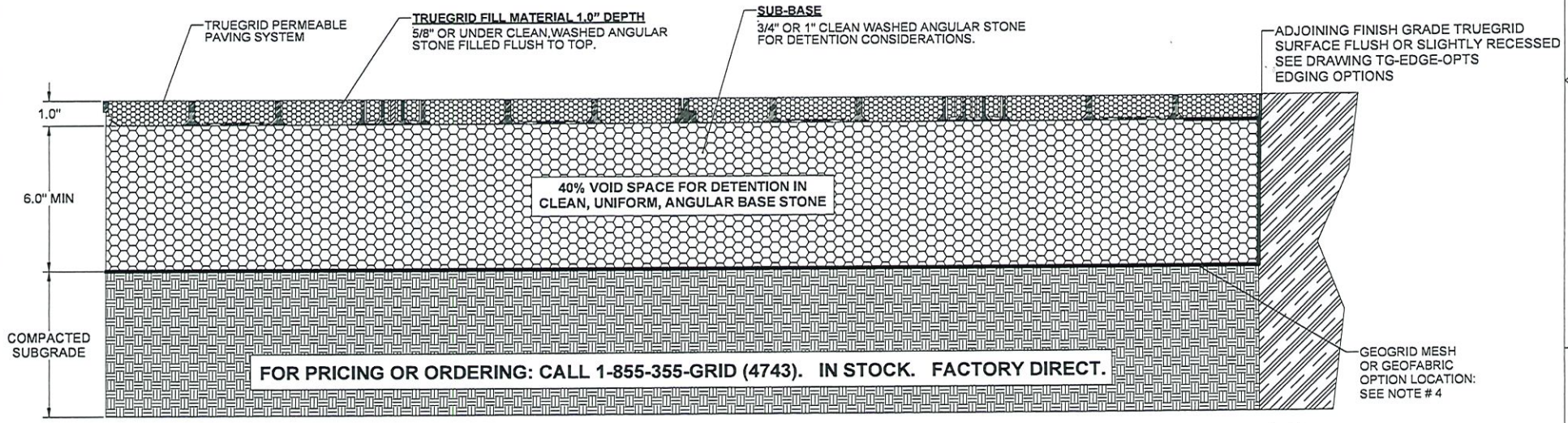
NOTES:

1. SUB-BASE DEPTH AND PREPARATION IS DEPENDENT ON SITE CONDITIONS PLUS LOADING REQUIREMENTS.
2. TRUEGRID PRO LITE PRODUCTS ARE SUFFICIENTLY RATED FOR LOW TRAFFIC H-20/HS-20 LOADING.
3. GEOGRID MESH OR GEOFABRIC MAY BE REQUIRED BETWEEN SUB-GRADE & SUB-BASE FOR CERTAIN SOILS AND SITE SPECIFIC REQUIREMENTS.
4. INCREASE SUB-BASE DEPTH FOR INCREASED STORM WATER DETENTION.
5. NO STAKING NECESSARY WITH TRUEGRID PRO LITE WHEN SLOPE IS BELOW 20 DEGREE, ASSESS PROJECT AS NEEDED.
6. TRUEGRID PRO LITE IS ADA COMPLIANT WITH PROPER FILL MATERIAL.
7. FINAL ENGINEERED CROSS SECTION AGGREGATES AND DEPTH SHOULD ALLOW FOR EXPECTED INFILTRATION RATES, STORAGE CAPACITIES, OUTLET FLOW RATES, AND OTHER SITE SPECIFIC CONDITIONS AND LOAD REQUIREMENTS.
8. THIS CROSS SECTION IS FOR INFORMATION ONLY.



TRUEGRID BLOCK REFERENCE VIEW

PREASSEMBLED & DELIVERED IN 4' X 4' SHEET. RECONFIGURED AS NEEDED. NO EXTRA TOOLING OR ACCESSORIES REQUIRED



GRAVEL FILL - HEAVY LOAD

APPLICATION EXAMPLES:
DRIVEWAYS
RV PADS
OVERFLOW PARKING

REV		DRAWN	CHECKED	APPROVED	DATE
00	ORIGINAL ISSUE	JT	JT	CW	9/3/2019

REVISION

1-855-355-GRID (4743)

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CLIENT / PROJECT

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SCALE 1:2 SHEET 1 OF 1

APPENDIX E-(LIST OF POTENTIAL BUFFER PLANTINGS)

Listing of appropriate trees by type and location for Streetscape

Appropriate trees are suggested by Virginia Cooperative Extension of Virginia Tech (www.ext.vt.edu/pubs/trees) and shall be used in accordance with the Town's zoning ordinance.

Canopy Trees and Suggested Plantings for Streetscape

Where Overhead Wires Exist

Amur Maple (Acer ginnala)

Flowering Apricot (Prunus mume)

Flowering Crabapple (Malus spp.)

Fringetree (Chioanthus virginicus)

Goldenraintree (Koelreuteria paniculata)

Japanese Maple (Acer palmatum)

Kousa Dogwood (Cornus kousa)

Little Gem Magnolia (Magnolia grandiflora 'Little Gem')

Okame Cherry (Prunus x 'Okame')

Saucer Magnolia (Magnolia x soulangiana)

Star Magnolia (Magnolia stellata)

White Redbud (Cercis canadensis 'Texas White')

Yoshino Cherry (Prunus x yedoensis)

Large Shrubs That Can be Pruned Into Tree Form

Althea/Rose of Sharon (Hibiscus syriacus)

Chastetree (Vitex agnus-castus)

Crape Myrtle (Lagerstroemia indica)

Where Overhead Wires Do Not Exist

American Elm (Ulmus americana)

American Sycamore (Platanus occidentalis)

Common Hackberry (Celtis occidentalis)

Eastern Cottonwood (Populus deltoides)

Ginkgo (Ginkgo biloba – very slow growing)

Green Ash (Fraxinus pennsylvanica)

Honey Locust (Gleditsia triacanthos)

Linden (Tilia sp.)

Littleleaf Linden (Tilia cordata)

Pecan (Carya illinoensis)

Pin Oak (Quercus palustris)

Red Maple (Acer rubrum)

Red Oak (Quercus rubra)

River Birch (Betula nigra)

Sweetbay Magnolia (Magnolia virginiana)

Sweetgum (Liquidambar styraciflua – the variety 'rotunda loba' produces no gum balls)

Tulip tree (Liriodendron tulipifera)

Water Oak (Quercus nigra)

White Oak (Quercus alba)

Willow Oak (Quercus phellos)

Salt-Tolerant for the Bay/Beachfront Area

Sycamore (Acer)

Hackberry (Celtis laevigata)

Ginkgo (Ginkgo biloba – very slow growing)

Honey locust (Gleditsia triacanthos)

American Holly (Ilex opaca)

Black Walnut (Juglans nigra)

Eastern Red Cedar (Juniperus virginiana)

Sweetgum (Liquidambar styraciflua – the variety 'rotunda loba' produces no gum balls)

Southern Magnolia (Magnolia grandiflora – grass will not grow under it)

Japanese Black Pine (Pinus thunbergiana)

Live Oak (Quercus virginiana)

(White, Pin, Red, and Willow Oak will also tolerate salt spray drift)

Evergreen Trees for Screening

American Holly (Iles opaca – grass will not grow under it)

Arborvitae (Thuja spp. 'Emerald Green)

Dwarf Southern Magnolia ((Magnolia grandiflora 'Little Gem')

Eastern Red Cedar (Juniperus virginiana)

Eastern White Pine (Pinus strobes)

Foster Holly (Ilex x attenuate)

Japanese Cryptomeria (Cryptomeria japonica - grass will not grow under it)

Leyland Cypress (x Cupressocyparis leylandii - large, fast growing, prone to bagworms)

Loblolly Pine (Pinus taeda)

Nellie Stevens Holly (Ilex x 'Nellie R. Stevens')

Sweetbay Magnolia (Magnolia virginiana)

Virginia Pine (Pinus virginiana)

Parking Lots and Paved Areas

Amur Maple (Acer ginnala)

Arborvitae (Thuja occidentalis 'Emerald Green')

Chastetree (Vitex agnus-castus)

Cornelian Cherry (Cornus mas)

Crabapple (Malus baccata)

Eastern Red Cedar (Juniperus virginiana)

Ginkgo (Ginkgo biloba – very slow growing)

Goldenraintree (Koelreuteria paniculata)

Honey locust (Gleditsia triacanthos 'Shademaster')

Japanese Crape Myrtle (Lagerstroemia fauriei)

Lacebark Elm (Ulmus parvifolia)

Littleaf Linden (Tilia cordata)

Scarlet Oak (Quercus coccinea – potentially large)

Southern Magnolia (Magnolia grandiflora - grass will not grow under it)

Sweetbay Magnolia (Magnolia virginiana)

Virginia's Highly Invasive Species (Never Recommended)

Alligator Weed (Alterrnanthera philoxeroides)

Aneilema (Murdannia keisak)

Asiatic sand sedge (Carex kobomugi)

Autumn olive (Elaeagnus umbellata)

Canada thistle (Cirsium arvense)

Chinese lespedeza (Lespedeza cuneata)

Chinese privet (Ligustrum sinense)

Chinese yam (Dioscorea oppositifolia)

Cogon grass (Imperata cylindrica)

Common reed (Phragmites australis)

European water-milfoil (Myriophyllum spicatum)

Garlic Mustard (Alliaria petiolata)

Hydrilla (Hydrilla verticiiata)

Japanese honeysuckle (Lonicera japonica)

Japanese knotweed (Polygonum cuspidatum)

Japanese stilt grass (Microstegium vimineum)

Johnson grass (Sorghum halepense)

Kudzu vine (Pueraria Montana)

Lesser celandine (Ranunculus ficaria)

Mile-a-minute (Polugonum perfoliatum)

Morrow's honeysuckle (Lonicera morowii)

Multiflora rose (Rosa multiflora)

Oriental bittersweet (Celastrus orbiculata)

Parrot feather (Myriophyllum aquaticum)

Porcelain-berry (Ampelopsis brevipedunculata)

Purple loosestrife (Lythrum salicaria)

Short fringed knapweed (Centaurea dubia)

Spotted knapweed (Centaurea biebersteinii)

Standish's honeysuckly (Lonicera standishii)

Tree of Heaven (Ailanthus altissima)

Wineberry (Rubus phoenicolasius)

Winged burning bush (Euonymus alata)

Other - Suggested Shrubs for Private Property (not for Public Right-of-Ways)

Camellia

Fig

Knockout Rose

Nandina

Oleander

Trees for Public Rights of Way and Spaces

Canopy Trees

American Sycamore (Platanus occidentalis)
Littleleaf Linden (Tilia cordata)
Live Oak (Quercus virginiana)
London Plane (Plantanus x acerifolia)
Pin Oak (Quercus palustris)
Red Maple (Acer rubrum)
Sweetgum (Liquidambar styraciflua 'rotunda loba')
Tulip tree - also known as Yellow Poplar (Liriodendron tulipfera)
Willow Oak (Quercus phellos)

Overhead Utility Easements

Low Height Zone - Generally less than 20 feet at maturity

Amur Maple (Acer ginnala)
Flowering Crabapple (Malus tschonoskii))
White Redbud (Cercis Canadensis 'Texas White')
Purple Plum (Prunus avium 'Pissardii')
Crape Myrtle – shrub pruned as a tree

Mid-height Zone – Near but not under utility lines, 20 – 40 feet at maturity

White Redbud (Cercis Canadensis 'Texas White')
Kousa Dogwood (Cornus kousa)
Golden Raintree (Koelreuteria paniculata)
Flowering Apricot (Prunus mume)
Okame Cherry (Prunus x 'Okame")
Yoshino Cherry (Prunus x yedoensis)
Thornless Cockspur Hawthorne (Crataegus crus-galli vqar. Inermis)
Washington Hawthorne (Crataegus phaenopyrum)

Tall Narrow Zone – Near but not under utility lines, 40 – 60 feet at maturity

Red Maple (Acer rubrum "Armstrong', 'Bowhall')
Ginkgo (Ginkgo biloba 'Fairmont', 'Fastigiata')
Sweetbay Magnolia (Magnolia virginiana)
English Oak (Quercus robur 'Fastigiata', 'Skyrocket')

APPENDIX A - PLANT LISTS

These lists are suggestions for recommended plants and are not to be construed as exclusive lists. There are many other suitable plants for riparian buffer planting. These lists are a place to start.

MEDIUM TO LARGE DECIDUOUS CANOPY TREES

Red maple - Acer rubrum
Acer saccharum - Silver maple
Betula lenta - Black birch
River birch - Betula nigra
Shagbark hickory - Carya ovata-
Mockernut hickory - Carya tomentosa
Hackberry - Celtis occidentalis
Washington hawthorn - Craetagus phaenopyrum
Persimmon - Diospyros virginiana
American Beech - Fagus grandifolia
White ash - Fraxinus americana
Green ash - Fraxinus pennsylvanica
Water locust - Gleditsia aquatica-
Black walnut - Juglans nigra
Sweetgum - Liquidamber straciflua
Tulip poplar - Liriodendron tulipifera
Water tupelo - Nyssa aquatica
Black gum - Nyssa sylvatica
Sourwood - Oxydendron arboreum
Sycamore - Platanus occidentalis
Cottonwood poplar - Populus deltoids
Swamp cottonwood - Populus heterophylla
Black cherry - Prunis serotina
Swamp white oak - Quercus bicolor
Shingle oak - Quercus imbricata
Laurel oak - Quercus laurifolia
Overcup oak - Quercus lyrata-
Swamp chestnut oak - Quercus michauxii
Water oak - Quercus nigra
Pin oak - Quercus palustris
Willow oak - Quercus phellos
Shumard oak - Quercus shumardii
Swamp willow, Black willow - Salix nigra
Weeping willow - Salix babylonica
American basswood - Tilia Americana

SMALL CANOPY/UNDERSTORY TREES

Red buckeye - Aesculus pavia
Smooth alder - Alnus serrulata
Serviceberry - Amelanchier canadensis
Devil's walkingstick - Aralia spinosa
Pawpaw - Asimia triloba
American hornbeam- Carpinus caroliniana
Sugar hackberry - Celtis laevigata
Redbud, Judas tree - Cercis canadensis
Fringetree - Chionanthus virginicus
Dogwood - Cornus florida
Cockspur hawthorn - Crataegus crus-galli
Green hawthorn - Crataegus viridis
Parsley hawthorne - Crataegus marshalli
Swamp cyrilla - Cyrilla racemosa
Two-winged Silverbell - Halesia diptera
American holly – Ilex opaca
Possumhaw - Ilex deciduas
Spicebush - Lindera benzoin
Sweetbay Magnolia - Magnolia virginiana
Eastern hophornbeam - Ostrya virginiana
Sourwood - Oxydendron arboreum
Elderberry - Sambucus canadensis
Sassafras - Sassafras albidum
Sparkleberry - Vaccinium arboreum
Nannyberry - Viburnum lentago

EVERGREEN TREES

American holly - Ilex opaca
Eastern red cedar - Juniperus virginiana
Southern magnolia - Magnolia grandiflora
Shortleaf pine - Pinus echinata
Pitch pine - Pinus rigida
Eastern white pine - Pinus strobus
Loblolly pine - Pinus taeda
Virginia pine - Pinus virginiana
Darlington oak - Quercus laurifolia Darlingtonia
Live oak - Quercus virginiana

EVERGREEN SHRUBS

Inkberry holly - Ilex glabra
Common juniper - Juniperus communis
Shore juniper - Juniperus conferta
Southern wax myrtle - Myrica cerifera
Bayberry - Myrica pennsylvanica
Swamp azalea - Rhododendrona viscosum
Farkleberry - Vaccinium arboreum

LARGE SHRUBS

Alder - Alnus serrulata
False indigo - Amorpha fruiticosa
Red chokeberry - Aronia arbutifolia
American beautyberry - Calicarpa americana
Eastern sweetshrub -Calycanthus floridus
Buttonbush - Cephalanthus occidentalis
Silky dogwood - Cornus amonum
Greystem dogwood - Cornus racemosa
Red twig dogwood - Cornus stolonifera
Witch hazel - Hammamelis virginiana
Wild hydrangea - Hydrangea arborescens
Oakleaf hydrangea - Hydrangea quercifolia
Winterberry holly - Ilex verticilata
Yaupon holly - Ilex vomitoria
Virginia sweetspire - Itea virginica
Fetterbush/ Sweetbells - Leucothoe racemosa
Fetterbush - Lyonia lucida
Male-berry - Lyonia ligustrina
Southern wax myrtle - Myrica cerifera
Bayberry - Myrica pennsylvanica
Common ninebark - Physocarpus opulifolius
Choke cherry - Prunus virigniana
Swamp azalea - Rhododendrona viscosum
Smooth sumac - Rhus glabra
Allegheny blackberry - Rubus allegheniensis
Pussy willow - Salix discolor
Silky willow - Salix sericea
Elderberry - Sambucus canadensis
American snowbell - Styrax americanus
Highbush blueberry - Vaccinium corybosum
Arrowwood viburnum - Viburnum dentatum
Swamphaw Viburnum - Viburnum nudum
Blackhaw viburnum - Viburnum prunifolium

SMALL SHRUBS

Obovate serviceberry - Amelanchier obovalis
Black chokecherry - Aronia melanocarpa
Sweet pepperbush - Clethra alnifolia
Sweet fern - Comptonia peregrina
Strawberry bush - Euonymus americanus
Fothergilla - Fothergilla gardenii
Black huckleberry - Gaylussacia baccata
Dangleberry - Gaylussacia frondosa
Wild hydrangea - Hydrangea arborescens
Oakleaf hydrangea - Hydrangea quercifolia
Mountain laurel - Kalmia latifolia
Staggerbush - Lyonia mariana
Shrubby cinquefoil - Potentilla fruticosa
Beach plum - Prunus maritime
Sand blackberry - Rubus cuneifolius
Bankers willow - Salix cottettii
White meadowsweet - Spiraea alba
Meadowsweet - Spiraea latifolia
Steeplebush - Spiraea tomentosa
Common snowberry - Symphoricarpos albus
Coralberry - Symphocarpos orbiculatus
Lowbush blueberry - Vaccinium angustifolium
Maple-leaved viburnum - Vaccinium acerifolium
Adam's needle - Yucca filamentosa

NATIVE GRASSES

Big Bluestem - Andropogon gerardi
Broomsedge - Andropogon virginicus
Indian woodoats - Chasmanthium latifolium
Coastal panic grass - Panicum amarum
Switch grass - Panicum virgatum
Little bluestem - Schizachyrium scoparium
Indian grass - Sorghastrum nutans
Easternn gama grass - Tripsacum dactyloides

HERBACEOUS PLANTS

Black-eyed Susan - Rudbeckia fulgida
Cardinal Flower - Lobelia cardinalis
Coralbells - Heuchera Americana
Creeping Phlox - Phlox stolonifera
Crested Iris - Iris cristata
Foamflower - Tiarella cordifolia
Goldenrod - Solidago Canadensis
Great Blue Lobelia - Lobelia siphilitica
Green and Gold - Crysogonum virginianum
Ironweed - Vernonia noveboracensis
Jack-in-the-Pulpit - Arisaema triphyllum
Joe-Pye Weed - Eupatorium purpureum
Mayapple - Podophyllum peltatum
Mistflower - Eupatorium coelestinum
Mouse-ear Coreopsis - Coreopsis auriculata
New York Aster - Aster novi-belgii
Pink Turtlehead - Chelone lyonii
Purple Coneflower - Echinacea purpurea
Small Solomon's Seal - Polygonatum biflorum
Swamp Milkweed - Asclepias incarnata
Sweet Flag - Acorus americanus
Tall Gayfeather - Liatris scarios
Three-toothed Cinquefoil -Potentilla tridentata
Tickseed - Coreopsis grandiflora
Virginia Bluebells - Metensia virginica
Virginia Blue flag - Iris virginica
Wild Columbine - Aquilegia Canadensis
Woodland Phlox - Phlox divaricata

SHADE TOLERANT PLANTS

Trees

Red maple
Sugar maple
Serviceberry, Shadbush
Pawpaw
Yellow birch
Hornbeam
American beech
White ash
Sweetbay magnolia
Hop hornbeam
American basswood
Canada hemlock

Small Trees & Shrubs

Dogwood
Redbud
Fringetree
Sweet pepperbush
Gray dogwood
American hazelnut
Witchhazel
Inkberry
Mountain laurel
Spicebush
Staghorn sumac
Elderberry
Highbush blueberry
Witherod
Southern arrowwood
Highbush cranberry
Virginia sweetspire

PART SUN (semi-shade intolerant)

Trees

Silver maple
Sweet birch
Bitternut hickory
Shagbark hickory
Hackberry
Tulip poplar
Easter white pine
Sycamore
White oak
Swamp white oak
Chestnut oak
Willow oak
Northern red oak
Slippery elm

Small Trees & Shrubs

Red chokeberry
Black choke berry
Black huckleberry
Winterberry
Swamp azalea
Meadowsweet
Nannyberry
Smooth alder
Pinxterbloom azalea

FULL SUN (shade intolerant)

Trees
Persimmon
Black ash
Red ash
Honey-locust
Kentucky coffee-tree
Black walnut
Sweet gum
Black gum
Eastern cottonwood
Black cherry
Pin oak
Black willow
Sassafras

Small Trees & Shrubs
Groundsel bush
Buttonbush
Silky dogwood
Red-osier dogwood
Bayberry
Wax myrtle
Ninebark
Rosebay rhododendron
Blackhaw viburnum

FLOOD TOLERANT

Trees
Red maple
Shadbush
Yellow birch
Black Ash
Red ash
Sweet gum
Sweetbay magnolia
Eastern cottonwood
Swamp white oak
Willow oak
Black willow
Slippery elm

Small Trees & Shrubs
Smooth alder
Red chokeberry
Black chokeberry
Groundsel bush
Buttonbush
Silky Dogwood
Red-osier dogwood
Inkberry
Winterberry
Bayberry
Ninebark
Rosebay rhododendron
Swamp azalea
Swamp rose
Meadowsweet
Highbush blueberry
Witherod
Southern arrowwood
Northern arrowwood
Highbush cranberry

SEMI-FLOOD TOLERANT
(good for wet sites)

Trees

Atlantic white cedar
Allegheny serviceberry
Bald cypress
Black gum
Bitternut hickory
Eldeberry
Grey birch
Green ash
Hackberry
Persimmon
White ash
Honey-locust
Kentucky coffee-tree
Black walnut
Tulip poplar
Black gum
Sycamore
Northern red oak
River birch

Shrubs

Serviceberry
Fringe tree
American hazelnut
Black huckleberry
Grey dogwood
Spicebush
Witchhazel
Mountain laurel
Staghorn sumac
Nannyberry viburnum
Blackhaw viburnum

SALT TOLERANT SPECIES

Serviceberry, Shadblow
Groundsel tree
Hackberry
American holly
Eastern red cedar
Sweetbay magnolia
Black gum
Pitch pine
Elderberry

Shrubs

Bearberry
Red cokeberry
Black chokeberry
Buttonbush
Sweet pepperbush
Inkberry
Spicebush
Southern wax myrtle
Bayberry
High tide bush
Beach plum
Winged sumac
Smooth sumac
Staghorn sumac
Rugosa rose
Arrowwood viburnum
Blackhaw viburnum
Highbush blueberry

Table 9.4. Popular Native Plant Materials for Bioretention

Perennials/Herbaceous	Shrubs	Trees
Virginia Wild Rye *(Elymus virginicus)*	Common Winterberry *(Ilex verticillatta)*	River Birch *(Betula nigra)*
Redtop Grass *(Agrostis alba)*	Inkberry *(Ilex glabra)*	Red Maple *(Acer rubrum)*
Swamp Milkweed *(Asclepias incarnata)*	Sweet Pepperbush *(Clethra ainifolia)*	Pin Oak *(Quercus palustris)*
Switchgrass *(Panicum virgatum)*	Wax Myrtle *(Myrica cerifera)*	Willow Oak *(Quercus phellos)*
Cardinal Flower *(Lobelia cardinalis)*	Virginia Sweetspire *(Itea virginica)*	Sweetgum *(Liquidambar styraciflua)*
Common Three Square *(Scirpus americanus)*	Swamp Azeala *(Azeala viscosum)*	Black Willow *(Salix nigra)*
Sensitive Fern *(Onoclea sensibilis)*	Button Bush *(Cephalanthus occidentalis)*	Grey Birch *(Betula populifolia)*
Blue Flag *(Iris versicolor)*	Black Haw *(Virburnum prunifolium))*	Black Gum *(Nyassa sylvatica)*
Woolgrass *(Scirpus cyperninus)*	Indigo Bush *(Amorpha fruticosa)*	Sycamore *(Platanus occidentalis)*
Indian Grass *(Sorghastrum nutans)*	Arrowwood *(Virburum dentatum)*	Green Ash *(Fraxinus pennsylvanica*
Marsh Marigold *(Caltha palustris)*		Sweetbay Magnolia* *(Magnolia virginiana)*
Joe Pye Weed *(Eupatorium purpureum)*		Atlantic White Cedar* *(Charnaecyparis thyoides)*
Turk's cap lily (*Lilium superbum*)		Bald Cypress* *(Taxodium distichum)*
Bee Balm *(Mornarda didyma)*		Grey Dogwood *(Cornus racernosa)*
Northern Sea Oats *(Chasmanthium latifolium)*		Smooth Alder *(Alnus serrulata))*
		Serviceberry *(Amelanchier canadensis)*
		Redbud (*Cercis candensis*)
		Box Elder *(Acer negundo)*
		Fringe Tree (*Chionanthus virginicus*)

Note: Prior to selection, please consult bioretention plant lists for more detailed information regarding inundation, drought and salt tolerance for each species.
* most applicable to the coastal plain

ABOUT THE NATIVE PLANTS FOR CONSERVATION, RESTORATION AND LANDSCAPING PROJECT

This project is a collaboration between the Virginia Department of Conservation and Recreation and the Virginia Native Plant Society. VNPS chapters across the state helped to fund the 2011 update to this brochure.

The following partners have provided valuable assistance throughout the life of this project:

The Nature Conservancy – Virginia Chapter • Virginia Tech Department of Horticulture • Virginia Department of Agriculture and Consumer Services • Virginia Department of Environmental Quality, Coastal Zone Management Program • Virginia Department of Forestry • Virginia Department of Game and Inland Fisheries • Virginia Department of Transportation

FOR MORE INFORMATION

Virginia Department of Conservation and Recreation
Natural Heritage Program
804-786-7951
www.dcr.virginia.gov/natural_heritage/nativeplants.shtml

FOR A LIST OF NURSERIES THAT PROPAGATE NATIVE SPECIES, CONTACT:

Virginia Native Plant Society
400 Blandy Farm Lane, Unit 2
Boyce, VA 22620
540-837-1600 | vnpsofc@shentel.net
www.vnps.org

FOR A LIST OF NURSERIES IN A PARTICULAR REGION OF VIRGINIA, CONTACT:

The Virginia Nursery and Landscape Association
383 Coal Hollow Road
Christiansburg, VA 24073
540-382-0943 | vnla@verizon.net
To search for species in VNLA member catalogs, visit:
www.vnla.org/search.asp

ILLUSTRATIONS COURTESY OF THE FLORA OF VIRGINIA PROJECT.

Illustrators: Lara Gastinger, Roy Fuller and Michael Terry. To learn more, visit:
www.floraofvirginia.org

DCR
Virginia Department of Conservation & Recreation

9/2011

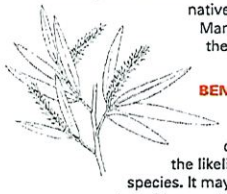
Native Plants

FOR CONSERVATION, RESTORATION & LANDSCAPING

VIRGINIA RIPARIAN BUFFER ZONES

WHAT ARE NATIVES?

Native species evolved within specific regions and dispersed throughout their range without known human involvement. They form the primary component of the living landscape and provide food and shelter for native animal species. Native plants co-evolved with native animals over many thousands to millions of years and have formed complex and interdependent relationships. Our native fauna depend on native flora to provide food and cover. Many animals require specific plants for their survival.



BENEFITS OF NATIVE PLANTS

Using native species in landscaping reduces the expense of maintaining cultivated landscapes and minimizes the likelihood of introducing new invasive species. It may provide a few unexpected benefits as well.

Native plants often require less water, fertilizer and pesticide, thus adding fewer chemicals to the landscape and maintaining water quality in nearby rivers and streams. Fewer inputs mean time and money saved for the gardener.

Native plants increase the presence of desirable wildlife, such as birds and butterflies, and provide sanctuaries for these animals as they journey between summer and winter habitats. The natural habitat you create with native plants can become an outdoor classroom for children, or a place for you to find peace and quiet after a busy day.

Native plants evoke a strong sense of place and regional character. For example, live oak and magnolia trees are strongly associated with the Deep South. Redwood trees characterize the Pacific Northwest. Saguaro cacti call to mind the deserts of the Southwest.

BUYING AND GROWING NATIVE PLANTS

More gardeners today are discovering the benefits of native plants and requesting them at their local garden centers. Because of this increased demand, retailers are offering an ever-widening selection of vigorous, nursery-propagated natives.

Once you've found a good vendor for native plants, the next step is choosing appropriate plants for a project. One of the greatest benefits of designing with native plants is their adaptation to local conditions. However, it is important to select plants with growth requirements that best match conditions in the area to be planted.

If you're planning a project using native plant species, use the list in this brochure to learn which plants grow in your region of Virginia. Next, study the minimum light and moisture requirements for each species, noting that some plants grow well under a variety of conditions. Many of the recommended species are well-suited to more than one of these categories.

For more information, refer to field guides and publications on local natural history for color, shape, height, bloom times and specific wildlife value of the plants that grow in your region. Visit a nearby park, natural area preserve, forest or wildlife management area to learn about common plant associations, spatial groupings and habitat conditions.

For specific recommendations and advice about project design, consult a landscape or garden design specialist with experience in native plants.

WHAT ARE NON-NATIVE PLANTS?

Sometimes referred to as "exotic," "alien," or "non-indigenous," non-native plants are species introduced, intentionally or accidentally, into a new region by humans. Over time, many plants and animals have expanded their ranges slowly and without human assistance. As people began cultivating plants, they brought beneficial and favored species along when they moved into new regions or traded with people in distant lands. Humans thus became a new pathway, enabling many species to move into new locations.

WHAT ARE INVASIVE PLANTS?

Invasive plants are introduced species that cause health, economic or ecological damage in their new range. More than 30,000 species of plants have been introduced to the United States since the time of Columbus. Most were introduced intentionally, and many provide great benefits to society as agricultural crops and landscape ornamentals. Some were introduced accidentally, for example, in ship ballast, in packing material and as seed contaminants. Of these introduced species, fewer than 3,000 have naturalized and become established in the United States outside cultivation. Of the 3,500 plant species in Virginia, more than 800 have been introduced since the founding of Jamestown. The Virginia Department of Conservation and Recreation currently lists more than 100 of these species as invasive.

In the United States, invasive species cause an estimated $120 billion in annual economic losses, including costs to manage their effects. Annual costs and damages arising from invasive plants alone are estimated at $34 billion.

NATIVE PLANTS VS. INVASIVE PLANTS

Invasive plants have competitive advantages that allow them to disrupt native plant communities and the wildlife dependent on them. For example, kudzu (*Pueraria montana*) grows very rapidly and overtops forest canopy, thus shading other plant species from the sunlight necessary for their survival. A tall invasive wetland grass, common reed (*Phragmites australis ssp. australis*), invades and dominates marshes, reducing native plant diversity and sometimes eliminating virtually all other species.

Invasive species can marginalize or even cause the loss of native species. With their natural host plants gone, many insects disappear. And since insects are an essential part of the diet of many birds, the effects on the food web become far reaching. Habitats with a high occurrence of invasive plants become a kind of "green desert." Although green and healthy in appearance, far fewer native species of plants and animals are found in such radically altered places.

Virginia Riparian Buffer Zones

Riparian forest buffers are areas of trees, shrubs and other vegetation found next to stream channels and other waterways. The removal of these buffers has contributed to ecological problems in our waterways and the Chesapeake Bay. Problems include sedimentation, nutrient and toxic chemical pollution, and reduction of fish habitat.

Riparian forest buffers are natural communities such as bottomland hardwood forest, coastal scrub and upland oak-hickory-pine forests. They support a variety of plants and animals, particularly plants that are adapted to periodic flooding or saturated soils. Because of the presence of moving water, more materials are deposited in, and pass through, riparian forests than any other wetland ecosystem.

Riparian forest buffers provide important ecosystem services.

- Vegetation, leaf litter and porous soil slow the flow of water. This helps control the rate and volume of water in streams and rivers, greatly influencing flood levels.
- Leaf litter filters sediment from upland runoff, as well as phosphorus, nitrogen and other nutrients that may be bonded to sediment particles. Leaf litter intercepts and stores these polluting nutrients before they can cloud waterways.
- Leaf litter captures and converts pesticides to nontoxic compounds by various chemical and microbial activities within the forest buffer. This protects fish and amphibians, which are threatened by pesticide pollution.
- Soils store water, and plants in the forest buffer take up that water and release it into the atmosphere.
- The canopy created by riparian forests provides shade and controls water temperature, which is essential for instream organisms and the invertebrate food sources on which they depend. Instream, leaf litter and woody debris create food and habitat vital to the aquatic food web.
- Riparian forests provide food and habitat for a variety of terrestrial wildlife species and serve as safe corridors for movement between habitats. Habitat conversion and fragmentation have reduced wildlife habitat and limited the ability of animals to move between existing habitats.
- Riparian forest buffers offer recreation to fishermen, hunters, birders, hikers, canoeists and picnickers. People enjoy these areas in many different ways because of the diversity of life and scenic beauty they provide.

Drier upland forests adjacent to waterways provide many of the same ecosystem values. These ecological functions combine to make riparian forest buffers critical to ecological and human health. Recognizing this, staff at the Chesapeake Bay Program has set a goal to replant riparian buffers along 70 percent of stream miles in the bay watershed.

RIPARIAN VEGETATION ZONES

Riparian forest buffers consist of four vegetation zones. Zone 1, the emergent vegetation zone, is permanently to semipermanently flooded and often dominated by grasses, sedges, rushes and other herbaceous plants. Zone 2, the riverside thicket, may be seasonally to temporarily flooded and is often characterized by emergent aquatic species, shrubs and a few tree species. Zone 3, the saturated forest, has soils that are saturated to poorly drained. Zone 4, the well-drained forest, is also known as upland forest and has dry soil. Zones 3 and 4 are dominated by trees but also contain shrub and herb layers in the understory.

Recommended Uses
W = Wildlife
H = Horticulture & landscaping
C = Conservation & restoration
D = Domestic livestock forage

Region
M = Mountain
P = Piedmont
C = Coastal Plain

Minimum Light Requirements
S = Shade
P = Partial sun
F = Full sun

Moisture Requirements
L = Low moisture
M = Moderate moisture
H = High moisture

Riparian Buffer Zones
1 = Emergent
2 = Riverside thicket
3 = Saturated forest
4 = Well-drained forest

Some species are marked with the following footnote symbols:

+ May be aggressive in a garden setting
* Due to the rarity and sensitivity of habitat in Virginia, these species are recommended for horticultural use only. Planting these species in natural areas could be detrimental to the survival of native populations.

Scientific Name	*Common Name*	Uses W	H	C	D	Region M	P	C	Light S	P	F	Moisture L	M	H	Riparian Zone 1	2	3	4
Herbs																		
Amsonia tabernaemontana	blue star		•				•	•	•	•			•			•	•	
Arisaema triphyllum	Jack-in-the-pulpit		•			•	•	•	•				•				•	•
Asarum canadense+	wild ginger		•	•		•	•	•	•				•					•
Asclepias incarnata	swamp milkweed	•	•	•		•	•	•		•	•		•	•	•			
Bidens cernua+	nodding beggar-ticks	•	•	•		•	•	•		•	•	•	•	•	•			
Boltonia asteroides*	aster-like boltonia		•				•			•	•		•	•	•	•		
Caltha palustris	marsh marigold		•	•		•	•	•		•	•		•				•	
Chamaecrista fasciculata+	partridge pea		•			•	•	•		•	•	•	•					•
Chelone glabra	white turtlehead		•	•		•	•	•	•	•			•			•	•	
Chrysogonum virginianum	green and gold		•	•		•	•	•	•				•					•
Conoclinium coelestinum	blue mistflower	•	•	•		•	•	•		•	•		•				•	•
Coreopsis tripteris	tall coreopsis		•	•		•	•	•		•	•		•			•	•	•
Delphinium tricorne	dwarf larkspur		•			•	•		•	•			•					•
Dicentra cucullaria	Dutchman's breeches		•			•	•		•				•					•
Doellingeria umbellata	flat-top white aster		•	•		•	•			•	•		•				•	•
Equisetum hyemale	horsetail		•			•	•	•	•	•			•			•	•	•
Eupatoriadelphus fistulosus	Joe-pye weed	•	•	•		•	•	•		•	•		•			•	•	•
Eupatorium perfoliatum	common boneset		•			•	•	•		•			•			•	•	•
Helenium autumnale	sneezeweed		•	•		•	•	•		•	•		•			•	•	•
Helianthus decapetalus	ten-petaled sunflower		•	•		•	•	•		•	•		•				•	•
Helianthus divaricatus	woodland sunflower		•	•		•	•		•	•		•						•
Hibiscus moscheutos	Eastern rosemallow		•	•		•	•	•			•		•	•	•			
Iris virginica	Virginia blue flag		•	•			•	•		•	•		•	•	•			
Kosteletskya virginica	seashore mallow	•	•			•	•	•		•	•		•	•	•			
Lilium superbum	Turk's cap lily		•			•	•	•		•	•		•				•	•
Lobelia cardinalis	cardinal flower		•	•		•	•	•		•	•		•	•	•		•	•
Lobelia siphilitica	great blue lobelia		•	•		•	•	•	•	•			•				•	•
Maianthemum racemosum	false Solomon's seal			•		•	•	•		•	•		•				•	•
Mertensia virginica	Virginia bluebells			•		•	•		•	•			•				•	•
Mimulus ringens	monkeyflower			•		•	•	•		•			•	•	•		•	•
Monarda didyma	bee balm		•	•		•			•	•			•				•	•
Nymphaea odorata	American water lily		•	•		•	•	•		•			•					•
Oenothera fruticosa	sundrops		•	•		•	•	•		•	•		•					•
Packera aurea+	golden ragwort		•	•		•	•	•	•	•			•				•	•
Peltandra virginica	arrow arum		•	•		•	•	•	•	•			•	•	•			
Phlox divaricata	woodland phlox		•	•		•	•	•	•	•		•	•					•
Phlox paniculata	summer phlox		•	•		•	•	•		•	•		•					•
Podophyllum peltatum+	mayapple		•	•		•	•	•		•	•		•					•
Polemonium reptans	Jacob's ladder		•	•		•	•	•	•	•			•					•
Pontederia cordata	pickerel weed		•	•		•	•			•			•	•				
Rhexia virginica	Virginia meadow-beauty		•	•		•	•	•		•	•		•					•
Rudbeckia laciniata	cut-leaved coneflower		•	•		•	•	•		•	•		•					•
Sagittaria latifolia	broadleaf arrowhead		•	•		•	•	•		•	•		•	•	•			
Saururus cernuus	lizard's tail		•	•		•	•	•		•	•		•	•	•			
Solidago rugosa+	rough-stemmed goldenrod	•	•	•		•	•	•		•	•		•				•	•
Symphyotrichum novae-angliae	New England aster		•	•		•				•	•	•	•					•
Symphyotrichum novi-belgii	New York aster	•	•	•			•	•		•	•		•	•	•			
Verbena hastata	blue vervain		•	•		•	•			•	•		•					•
Vernonia noveboracensis	New York ironweed	•	•	•		•	•	•		•	•		•				•	•
Viola cucullata	marsh blue violet		•	•		•	•	•		•	•	•	•					•
Viola pubescens	yellow violet		•	•		•	•	•	•	•			•					•
Zephyranthes atamasco	Atamasco lily		•	•			•	•		•	•		•	•			•	•
Ferns & Fern Allies																		
Athyrium asplenioides	Southern ladyfern		•	•		•	•	•	•	•			•	•				•
Botrychium virginianum	rattlesnake fern		•			•	•	•	•	•		•	•					•
Onoclea sensibilis+	sensitive fern		•	•		•	•	•		•	•		•	•			•	•
Osmunda cinnamomea	cinnamon fern		•	•		•	•	•	•	•			•	•			•	•
Osmunda regalis	royal fern		•	•		•	•	•		•	•		•	•			•	•
Polystichum acrostichoides	Christmas fern		•	•		•	•	•	•	•			•					•
Thelypteris palustris	marsh fern		•			•	•	•	•	•			•	•			•	•
Woodwardia virginica+	Virginia chain fern		•	•			•	•		•	•		•	•			•	•
Grasses, Sedges & Rushes																		
Agrostis perennans	autumn bentgrass			•		•	•	•	•	•	•	•	•				•	•
Andropogon gerardii	big bluestem	•	•	•		•	•		•	•		•	•				•	•
Andropogon glomeratus	bushy bluestem		•	•		•	•	•		•	•		•	•			•	•
Arundinaria gigantea	wild cane	•	•			•			•	•	•		•				•	•
Arundinaria tecta	switch cane	•	•			•	•	•	•	•	•		•				•	•
Carex crinita	long hair sedge	•	•	•		•	•	•		•	•		•	•			•	•
Carex lurida	sallow sedge	•	•	•		•	•	•		•	•		•	•			•	•
Carex stricta	tussock sedge	•	•	•		•	•	•		•	•		•	•			•	•
Chasmanthium latifolium+	river oats, spanglegrass		•	•		•	•	•	•	•			•				•	•
Dichanthelium clandestinum	deer-tongue	•	•	•		•	•	•		•	•	•	•				•	•
Dichanthelium commutatum	variable panicgrass	•	•	•		•	•	•		•	•	•	•					•
Dulichium arundinaceum	dwarf bamboo	•	•	•		•	•	•		•	•		•	•	•		•	•
Elymus hystrix	bottlebrush grass	•	•			•	•	•	•	•		•	•					•
Elymus virginicus	Virginia wild rye	•	•			•	•	•	•	•		•	•				•	•

Scientific Name	*Common Name*	Uses W	H	C	D	Region M	P	C	Light S	P	F	Moisture L	M	H	Riparian Zone 1	2	3	4
Juncus canadensis	Canada rush		•	•			•	•		•	•		•	•		•	•	•
Juncus effusus	soft rush		•	•		•	•	•		•	•		•	•		•	•	•
Leersia oryzoides	rice cutgrass		•	•			•	•		•	•		•	•		•	•	•
Panicum virgatum	switch grass	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•
Saccharum giganteum	giant plumegrass		•	•			•	•		•	•		•	•		•	•	•
Scirpus cyperinus	woolgrass bulrush		•	•		•	•	•		•	•		•	•		•	•	•
Sparganium americanum	American bur-reed		•	•			•	•		•	•		•	•			•	•
Tripsacum dactyloides	gama grass		•	•		•	•	•		•	•		•	•		•	•	•
Typha latifolia	broad-leaved cattail		•	•			•	•		•			•	•		•	•	
Zizania aquatica	wild rice		•	•			•			•			•	•		•	•	
Vines																		
Bignonia capreolata	crossvine	•	•			•	•	•	•	•			•				•	•
Celastrus scandens	climbing bittersweet		•			•	•	•		•	•		•					•
Clematis virginiana	virgin's bower		•				•	•		•	•		•				•	•
Parthenocissus quinquefolia	Virginia creeper	•	•	•		•	•	•		•	•		•				•	•
Shrubs & Small Trees																		
Alnus serrulata	hazel alder	•	•	•		•	•	•			•		•	•		•	•	•
Aronia arbutifolia	red chokeberry		•	•		•	•	•		•	•		•	•			•	•
Aronia melanocarpa	black chokeberry		•	•		•	•	•		•	•	•	•	•			•	•
Baccharis halimifolia	high tide bush		•	•				•			•	•	•	•			•	•
Callicarpa americana	American beautyberry	•	•				•	•		•	•		•					•
Cephalanthus occidentalis	buttonbush		•	•		•	•	•		•	•			•	•	•		
Clethra alnifolia	sweet pepper-bush		•	•			•	•		•	•		•	•			•	•
Cornus amomum	silky dogwood	•	•	•		•	•	•		•	•		•	•			•	•
Eubotrys racemosa	fetterbush		•	•		•	•	•		•			•	•	•			
Hydrangea arborescens	wild hydrangea		•	•		•	•	•		•	•		•					•
Ilex decidua	deciduous holly	•	•	•			•	•		•	•		•				•	•
Ilex verticillata	winterberry	•	•	•		•	•	•		•	•		•	•			•	•
Itea virginica	Virginia willow	•	•	•			•	•		•			•				•	•
Leucothoe axillaris	coastal dog-hobble		•				•			•			•				•	•
Lindera benzoin	spicebush	•	•	•		•	•	•		•			•					•
Myrica cerifera	Southern wax myrtle	•	•	•			•	•		•	•		•	•	•		•	•
Rhododendron viscosum	swamp azalea		•	•		•	•			•	•		•	•				•
Rubus allegheniensis	Alleghany blackberry	•	•	•		•	•	•			•		•				•	•
Salix sericea	silky willow		•	•		•	•			•			•				•	•
Sambucus canadensis	common elderberry	•	•	•		•	•	•		•			•	•			•	•
Spiraea alba	narrow-leaved meadowsweet	•	•			•				•			•				•	•
Spiraea latifolia	broad-leaved meadowsweet	•	•			•				•			•				•	•
Vaccinium corymbosum	highbush blueberry	•	•			•	•	•		•	•		•	•			•	•
Viburnum dentatum	Southern arrow-wood viburnum	•	•			•	•	•		•	•		•	•			•	•
Viburnum prunifolium	black-haw viburnum	•	•			•	•			•			•	•			•	•
Medium Trees																		
Amelanchier arborea	downy serviceberry	•	•	•		•	•	•		•			•					•
Amelanchier canadensis	Canada serviceberry	•	•	•		•	•	•			•		•				•	•
Amelanchier laevis	smooth serviceberry	•	•	•			•	•		•			•					•
Asimina triloba	paw paw	•	•	•			•	•	•	•			•					•
Cornus alternifolia	alternate-leaf dogwood	•	•	•			•	•		•	•		•	•				•
Crataegus viridis	green hawthorn	•	•	•			•	•		•	•		•					•
Morus rubra	red mulberry	•	•	•		•	•	•		•			•					•
Ostrya virginiana	Eastern hop-hornbeam		•				•	•		•	•		•					•
Persea borbonia	redbay		•	•			•	•		•			•					•
Rhus glabra	smooth sumac	•	•	•			•	•			•		•	•				•
Salix nigra	black willow		•	•			•	•		•	•		•	•			•	•
Large Trees																		
Acer rubrum	red maple		•	•			•	•		•			•	•				•
Betula lenta	sweet birch		•	•			•	•		•	•		•					•
Betula nigra	river birch		•	•			•	•		•	•		•	•				•
Diospyros virginiana	persimmon		•	•			•	•		•			•					•
Fraxinus americana	white ash		•	•			•	•		•			•					•
Fraxinus pensylvanica	green ash		•	•			•	•		•			•					•
Juglans nigra	black walnut		•	•			•	•		•			•					•
Liquidambar styraciflua	sweetgum		•	•			•	•		•	•		•					•
Liriodendron tulipifera	tulip poplar	•	•	•			•	•		•			•					•
Nyssa aquatica	water tupelo	•	•	•			•	•		•			•	•				•
Nyssa sylvatica	black gum	•	•	•			•	•		•			•					•
Oxydendrum arboreum	sourwood		•	•			•	•		•			•					•
Pinus taeda	loblolly pine	•	•	•			•	•		•	•		•	•				•
Platanus occidentalis	sycamore		•	•			•	•		•			•					•
Quercus bicolor	swamp white oak	•	•	•			•	•		•	•		•					•
Quercus laurifolia	swamp laurel oak	•	•				•	•		•			•					•
Quercus michauxii	swamp chestnut oak	•	•				•	•		•			•					•
Quercus nigra	water oak	•	•				•	•		•			•					•
Quercus palustris	pin oak	•	•	•			•	•		•			•					•
Quercus phellos	willow oak	•	•	•			•	•		•			•					•
Taxodium distichum	bald cypress	•	•	•			•	•		•			•					•

Chesapeake Bay

FUTURE BREAKWATER

LOT B

PROPOSED
2-STY
FRAME
±2396 SF

PROP SHED

PROPOSED
2-STY FRAME
GARAGE

COVERED
PATIO

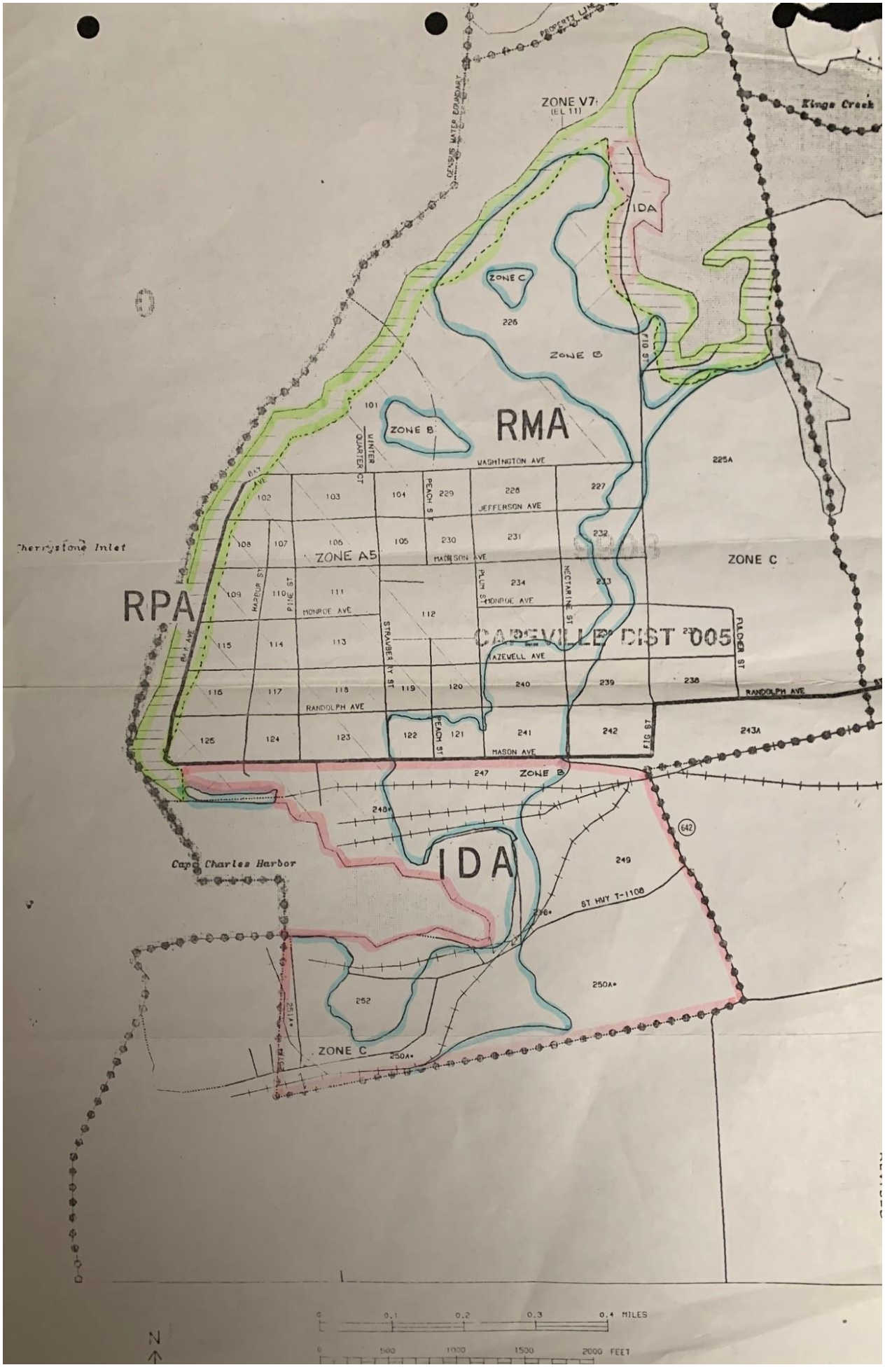
PROPOSED
2-STY FRAME
FF± 10.0

LOT A

PROPOSED
PRIVATE
DRIVE

BAY AVENUE

WASHINGTON AVENUE (70' R/W)


ZONE V7
(EL 11)
Kings Creek
CENSUS WATER BOUNDARY
IDA
ZONE C
226
ZONE B
RMA
ZONE B
101
WINTER QUARTER CT
WASHINGTON AVE
225A
PATTY AVE
102
103
104
PEACH ST
229
228
JEFFERSON AVE
227
Cherrystone Inlet
108
107
106
105
230
231
232
ZONE A5
MADISON AVE
ZONE C
RPA
109
MAZEUR ST
110
PINE ST
111
MONROE AVE
112
PLUM ST
234
MONROE AVE
233
MCKINNEY ST
CAPEVILLE DIST 005
ALLAN AVE
115
114
113
STRAWBERRY ST
119
120
AZEVELL AVE
240
239
238
FULCHER ST
116
117
118
RANDOLPH AVE
RANDOLPH AVE
125
124
123
122
PEACH ST
121
241
242
FIG ST
243A
MASON AVE
247
ZONE B
248*
642
Cape Charles Harbor
IDA
249
ST HWY T-1108
246*
250A*
252
ZONE C
250A*
0
0.1
0.2
0.3
0.4 MILES
0
500
1000
1500
2000 FEET
N

CHESAPEAKE BAY LOCAL ASSISTANCE BOARD
April 12, 1999

RESOLUTION

LOCAL PROGRAM, PHASE I
TOWN OF CAPE CHARLES - #14

Determination of Consistency - Final

WHEREAS § 10.1-2109 of the Chesapeake Bay Preservation Act states that counties, cities, and towns in Tidewater Virginia shall designate Chesapeake Bay Preservation Areas and incorporate protection of the quality of state waters in Chesapeake Bay Preservation Areas into local plans and ordinances; and,

WHEREAS § 9VAC10-20-60 of the *Chesapeake Bay Preservation Area Designation and Management Regulations* states that the elements in subsections A (a map delineating Chesapeake Bay Preservation Areas) and B (performance criteria applying in Chesapeake Bay Preservation Areas) shall be adopted by local governments no later than November 15, 1991; and,

WHEREAS the Town of Cape Charles adopted a local program to comply with § 9VAC10-20-60 A and B on September 11, 1990; and,

WHEREAS the Town of Cape Charles' adopted program was reviewed by the Board on February 5, 1991, and on September 21, 1995 at which time it was found to be consistent with § 10.1-2109 of the Act and §9VAC10-20-60 A and B of the Regulations subject to one condition; and,

WHEREAS the Town Cape Charles' adopted program, as amended, has been reviewed by the Department, which recommended a finding by the Local Program Review Committee for the Southern Area that the Town's Phase I Program should be deemed consistent with § 10.1-2109 of the Act and 9VAC10-20-69 A and B of the Regulations; and,

WHEREAS the Local Program Review Committee for the Southern Area considered and evaluated the information contained in the staff report for its meeting of March 3, 1999, along with testimony by CBLAD staff and the Town, and made its recommendation to the Board; and,

WHEREAS after considering and evaluating the information presented on this date, the Board agrees with the recommendation made by the Local Program Review Committee for the Southern Area; now,

THEREFORE BE IT RESOLVED that the Chesapeake Bay Local Assistance Board finds that the Town of Cape Charles' Phase I Program, as amended on February 26, 1999, is determined to be Consistent with §10.1-2109 of the Act and §9VAC10-20-60 A and B of the Regulations.

Town of Cape Charles

ARTICLE VII

Chesapeake Bay Preservation Area Overlay District

Section 7.1 Title

This ordinance shall be known and referenced as the Chesapeake Bay Preservation Area Overlay District of the Town of Cape Charles.

Section 7.1.1 Findings of Fact

The Chesapeake Bay and its tributaries is one of the most important and productive estuarine systems in the world, providing economic and social benefits to the citizens of Cape Charles and the Commonwealth of Virginia. The health of the Bay is vital to maintaining the Town of Cape Charles' economy and the welfare of its citizens.

The Chesapeake Bay has been degraded significantly by many sources of pollution, including non-point source pollution from land uses and development. Existing high quality waters are worthy of protection from degradation to guard against further pollution. Certain lands that are proximate to shorelines have intrinsic water quality value due to the ecological and biological processes they perform. Other lands have severe development constraints from flooding, erosion, and soil limitations. With proper management, they offer significant ecological benefits by providing water quality maintenance and pollution control, as well as flood and shoreline erosion control. These lands together, designated by the Town Council of Cape Charles as Chesapeake Bay Preservation Areas (hereinafter CBPA), need to be protected from destruction and damage in order to protect the quality of life in Cape Charles and the Commonwealth of Virginia.

Section 7.2 Purpose and Intent

A. This ordinance is enacted to implement the requirements of Section 10.1-2100 et seq. of the Code of Virginia, 1950 as amended, (The Chesapeake Bay Preservation Act) and amends the Zoning Ordinance of Cape Charles. The intent of the Town Council and the purpose of the Overlay District is to: (1) protect existing high quality state waters; (2) restore all other state waters to a condition or quality that will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them; (3) safeguard the clean waters of the Commonwealth from pollution; (4) prevent any increase in pollution; (5) reduce existing pollution; and (6) promote water resource conservation in order to provide for the health, safety, and welfare of the present and future citizens of the Town of Cape Charles.

B. This district shall be in addition to and shall overlay all other zoning districts where they are applied so that any parcel of land lying in the Chesapeake Bay Preservation Area Overlay District shall also lie in one or more of the other zoning districts provided for by the Zoning Ordinance. Unless otherwise stated in the Overlay District, the review and approval procedures provided for in other applicable ordinances shall be followed in reviewing and approving development, redevelopment, and uses governed by this Article.

C. This Article is enacted under the authority of Section 10.1-2100, The Chesapeake Bay Preservation Act, and Section 15.2-2283 of the Code of Virginia. Section 15.2-2283 states that zoning ordinances may "also include reasonable provisions, not inconsistent with applicable state water quality standards, to protect surface water and groundwater as defined in Section 62.1-255."

Section 7.3 Definitions

The following words and terms used in the Chesapeake Bay Overlay District shall have the following meanings unless the context clearly indicates otherwise. Words and terms not defined in this Article but defined in this zoning ordinance shall be given the meanings set forth therein.

AGRICULTURAL LANDS means those lands used for the planting and harvesting of crops or plant growth of any kind in the open; pasture; horticulture; dairying; floriculture; or raising of poultry and/or livestock.

BEST MANAGEMENT PRACTICES or **BMP** means a practice, or a combination of practices, that is determined by a state or designated area-wide planning agency to be the most effective, practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

BUFFER AREA means an area of natural or established vegetation managed to protect other components of a Resource Protection Area and state waters from significant degradation due to land disturbances.

CHESAPEAKE BAY PRESERVATION AREA or **CBPA** means any land designated by the Town Council pursuant to Part III of the Chesapeake Bay Preservation Area Designation and Management Regulations, 9 VAC 10-20 et seq**.,** Section 10.1-2107 of the Code of Virginia. A Chesapeake Bay Preservation Area shall consist of a Resource Protection Area and a Resource Management Area.

CONSTRUCTION FOOTPRINT means the area of all impervious surface including but not limited to buildings, roads and drives, parking areas, and sidewalks and the area necessary for construction of such improvements.

DEVELOPMENT means the construction or substantial alteration of residential, commercial, industrial, institutional, recreation, transportation, or utility facilities or structures.

DIAMETER AT BREAST HEIGHT or **DBH** means the diameter of a tree measured outside the bark at a point 4.5 feet above ground.

DRIPLINE means a vertical projection to the ground surface from the furthest lateral extent of a tree's leaf canopy.

IMPERVIOUS COVER means a surface composed of any material that significantly impedes or prevents natural infiltration or water into the soil. Impervious surfaces include but are not limited to roofs, buildings, streets, parking areas, and any concrete, asphalt, compacted gravel, or shell surface.

INTENSELY DEVELOPED AREA or **IDA** means a portion of Resource Protection Area or a Resource Management Area designated by the Town Council where development is concentrated and little of the natural environment remains.

NONPOINT SOURCE POLLUTION means pollution consisting of constituents such as sediment, nutrients, and organic and toxic substances from diffuse sources, such as runoff from agriculture and urban land development and use.

NONTIDAL WETLANDS means those wetlands other than tidal wetlands that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions such as defined by the U.S. Environmental Protection Agency pursuant to Section 404 of the Federal Clean Water Act in 33 C.F.R. 328.3b~~, dated November 13, 1986~~.

NOXIOUS WEEDS means weeds that are difficult to control effectively, such as Johnson Grass, Kudzu, and multiflora rose.

PLAN OF DEVELOPMENT means the process for site plan or subdivision plat review to ensure compliance with Section 10.1-2109 of the Code of Virginia and this Article prior to any clearing or grading of a site or the issuance of a building permit.

PUBLIC ROAD means a publicly owned road designed and constructed in accordance with water quality protection criteria at least as stringent as requirements applicable to the Virginia Department of Transportation, including regulations promulgated pursuant to (i) the Erosion and Sediment Control Law (§ 10.1-603.1 et seq. of the Code of Virginia). This definition includes those roads where the Virginia Department of Transportation exercises direct supervision over the design or construction activities, or both, and cases where secondary

roads are constructed and maintained, or both, by the Town of Cape Charles in accordance with the standards of the Town of Cape Charles.

REDEVELOPMENT means the process of developing land that is or has been previously developed.

RESOURCE MANAGEMENT AREA or **RMA** means that component of the Chesapeake Bay Preservation Area that is not classified as the Resource Protection Area. RMAs include land types that, if improperly used or developed, have the potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area.

RESOURCE PROTECTION AREA or **RPA** means that component of the Chesapeake Bay Preservation Area comprised of lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation to the quality of state waters.

SILVICULTURAL ACTIVITIES means forest management activities, including but not limited to the harvesting of timber, the construction of roads and trails for forest management purposes, and the preparation of property for reforestation that are conducted in accordance with the silvicultural best management practices developed and enforced by the State Forester pursuant to § 10.1-1105 of the Code or Virginia and are located on property defined as real estate devoted to forest use under § 58.1-3230 of the Code of Virginia.

SUBSTANTIAL ALTERATION means expansion or modification of a building or development that would result in a disturbance of land exceeding an area of 2,500 square feet in the Resource Management Area only.

TIDAL SHORE or **SHORE** means land contiguous to a tidal body of water between the mean low water level and the mean high water level.

TIDAL WETLANDS means the vegetated and non-vegetated wetlands as defined in Section 28.2-1300 of the Code of Virginia.

WATER-DEPENDENT FACILITY means a development of land that cannot exist outside the Resource Protection Area and must be located on the shoreline by reason of the intrinsic nature of its operation. These facilities include but are not limited to: (1) ports; (2) the intake and outfall structures of power plants, water treatment plants, sewage treatment plants, and storm sewers; (3) marinas and other boat docking structures; (4) beaches and other public water-oriented recreation areas; and (5) fisheries or other marine resources facilities.

WETLANDS means tidal and non-tidal wetlands.

Section 7.4 Areas of Applicability

A. The Chesapeake Bay Preservation Act Overlay District shall apply to all lands identified as CBPAs as designated by the Town Council and as shown on the Zoning District Map. Such map, together with all explanatory matter thereon, is hereby adopted by reference and declared to be a part of this Article.

1. The Resource Protection Area includes:
   a. tidal wetlands
   b. non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow
   c. tidal shores
   d. a 100-foot vegetated buffer area located adjacent to and landward of the components listed in subsections a through c above and along both sides of any water body with perennial flow

2. The Resource Management Area is composed of the following land categories: flood plains; highly erodible soils, including steep slopes; highly permeable soils; non-tidal wetlands not included in the RPA; other lands necessary to protect the quality of state waters or a minimum of 100 feet in width landward of the Resource Protection Area , whichever is greatest.

B. The Zoning District Map shows the general location of CBPAs and should be consulted by persons contemplating activities within Cape Charles prior to engaging in a regulated activity.

C. Portions of RPAs and RMAs designated by the Town Council as Intensely Developed Areas shall serve as redevelopment areas. Areas so designated shall comply with all erosion and sediment control requirements and the performance standards for redevelopment in Section 7.10, Performance Standards.

Section 7.5 Use Regulations

Permitted uses, special permit uses, accessory uses, and special requirements shall be as established by the underlying zoning district unless specifically modified by the requirements set forth herein.

Section 7.6 Lot Size

Lot size shall be subject to the requirements of the underlying zoning district(s) provided that any lot shall have sufficient area outside the RPA to accommodate an intended development in accordance with the performance standards in Section 7.10 when such development is not otherwise allowed in the RPA.

Section 7.7 Development Criteria for Resource Protection Areas

A. Development in RPAs may be allowed only if it: (1) is water dependent (2) constitutes redevelopment or development within IDAs, or (3) constitutes redevelopment

1. A new or expanded water dependent facility may be allowed provided that the following criteria are met:
    a. It does not conflict with the comprehensive plan;
    b. It complies with the performance criteria set forth in Section 7.10 of this Article;
    c. Any non water dependent component is located outside of the RPA; and
    d. Access to the water dependent facility will be provided with the minimum disturbance necessary. Where practicable, a single point of access will be provided.
2. Redevelopment on isolated redevelopment sites outside of the designated IDAs shall be permitted only if there is not an increase in the amount of impervious cover and no further encroachment within the RPA and it shall conform to the stormwater management requirements outlined under Section 7.10.B.8 and erosion and sediment control requirements outlined under Section 7.10.B.4 of this Article.

B. A water quality impact assessment shall be required for any proposed land disturbance, development or redevelopment within RPAs and for any development within RMAs when required by the Zoning Administrator because of the unique characteristics of the site or intensity of development in accordance with the provisions of Section 7.11 of this Article.

Section 7.8 Conflict With Other Regulations

In any case where the requirements of this Article conflict with any other provision of the Cape Charles Zoning Ordinance and other regulations or existing state or federal regulations, whichever imposes the more stringent restrictions shall apply.

Section 7.9 Interpretation of Resource Protection Area Boundaries

A. Delineation by the Applicant. The site-specific boundaries of the Resource Protection Area shall be determined by the applicant through the performance of an environmental site assessment, subject to approval by the Zoning Administrator and in accordance with Section 7.12, Plan of Development Process or Section 7.11 Water Quality Impact Assessment, of this Article. The Zoning District Map may be used as a guide to the general location of Resource Protection Areas.

B. Delineation by the Zoning Administrator. The Zoning Administrator, when requested by an applicant wishing to construct a single-family residence, may waive the requirement for an environmental site assessment and perform the delineation. The Zoning Administrator may use hydrology, soils, plant species, and other data and consult other appropriate resources as needed to perform the delineation.

C. Where Conflict Arises Over Delineation. When the applicant provides a site-specific delineation of the RPA, the Zoning Administrator will verify the accuracy of the boundary delineation. In determining the site-specific RPA boundary, the Zoning Administrator may render adjustments to the applicant's boundary delineation in accordance with Section 7.12, Plan of Development Process, of this Article. In the event the adjusted boundary delineation is contested by the applicant, the applicant may seek relief in accordance with the provisions of Section 7.12.H of this ordinance.

1 Section 7.10 Performance Standards

A. Purpose and Intent. The performance standards establish the means to minimize erosion and sedimentation potential, reduce land application of nutrients and toxins, and maximize rainwater infiltration. Natural ground cover, especially woody vegetation, is most effective in holding soil in place and preventing site erosion. Indigenous vegetation, within its adaptability to local conditions without the use of harmful fertilizers or pesticides, filters stormwater runoff. Minimizing impervious cover enhances rainwater infiltration and effectively reduces stormwater runoff potential.

The purpose and intent of these requirements are also to implement the following objectives: prevent a net increase in nonpoint source pollution from new development; achieve a 10 percent reduction in nonpoint source pollution from redevelopment; and achieve a 40 percent reduction in nonpoint source pollution from agricultural uses.

B. General Performance Standards for Development and Redevelopment

1. Land disturbance shall be limited to the area necessary to provide for the proposed use or development.
   a. Ingress and egress during construction shall be limited to one access point unless otherwise approved by the Zoning Administrator.
2. Indigenous vegetation shall be preserved to the maximum extent practicable consistent with the use or development proposed and in accordance with the Virginia Erosion and Sediment Control Handbook.
   a. Site clearing for construction activities shall be allowed as approved by the Zoning Administrator through the plan of development review process.
   b. Prior to clearing or grading, suitable protective barriers, such as safety fencing, shall be erected five feet outside of the drip line of any tree or stand of trees to be preserved. These protective barriers shall remain so erected throughout all phases of construction. The storage of equipment, materials, debris, or fill shall not be allowed within the area protected by the barrier.

3. Land development shall minimize impervious cover to promote infiltration of storm water into the ground consistent with the proposed use or development.
   a. Grid and modular pavements may be used for any required parking area, alley, or other low traffic driveway unless otherwise approved by the Zoning Administrator.
4. Notwithstanding any other provision of this Article or exceptions or exemptions thereto, any land-disturbing activity exceeding 2,500 square feet, including construction of all single-family houses, shall comply with the requirements of Cape Charles' Erosion and Sediment Control Ordinance.
5. All development and redevelopment exceeding 2,500 square feet of land disturbance shall be subject to a plan of development process including the approval of a site plan in accordance with the provisions of the Site Plan Ordinance.
6. All on-site sewage disposal systems not requiring a VPDES permit shall be pumped out at least once every five years in accordance with the provisions of the State Health Code.
7. A reserve sewage disposal site with a capacity at least equal to that of the primary sewage disposal site shall be provided in accordance with the State Health Code. This requirement shall not apply to any lot or parcel recorded prior to October 1, 1989, if such lot or parcel is not sufficient in capacity to accommodate a reserve sewage disposal site as determined by the local health department. Building or construction of any impervious surface shall be prohibited on the area of all sewage disposal sites or on an on-site sewage treatment system which operates under a permit issued by the State Water Control Board until the structure is served by public sewer.
8. For any development or redevelopment, stormwater runoff shall be controlled by the use of best management practices that achieve the following:
   a. For development, the post-development nonpoint source pollution runoff load shall not exceed the pre-development load based on the calculated average land cover condition of the Town of Cape Charles.
   b. For sites within IDAs or other isolated redevelopment sites, the non-point source pollution load shall be reduced by at least 10 percent. The Zoning Administrator may waive or modify this requirement for redevelopment sites that originally incorporated best management practices for storm water runoff quality control provided the following provisions are satisfied:
      i. In no case may the post-development non-point source pollution runoff load exceed the pre-development load.
      ii. Runoff pollution loads must have been calculated and the BMPs selected for the expressed purpose of controlling non-point source pollution.
      iii. If best management practices are structural, evidence shall be provided that the facilities are currently in good working

order and performing at the design levels of service. The Zoning Administrator may require a review of both the original structural design and maintenance plans to verify this provision. A new maintenance agreement may be required to ensure compliance with this Article.

c. For redevelopment, both the pre- and the post-development loadings shall be calculated by the same procedures. However, where the design data is available, the original post-development non-point source pollution loadings can be substituted for the existing development loadings.

9. Prior to initiating grading or other on-site activities on any portion of a lot or parcel, all wetlands permits required by federal, state, and local laws and regulations shall be obtained and evidence of such submitted to the Zoning Administrator in accordance with Section 7.12 of this Article.

10. Land upon which agricultural activities are being conducted shall have a soil and water quality conservation assessment. Such assessments shall evaluate the effectiveness of existing practices pertaining to soil erosion and sediment control, nutrient management and management of pesticides, and where necessary, results in a plan that outlines additional practices needed to ensure that water quality protection is accomplished consistent with the Article.

C. Buffer Area Requirements

To minimize the adverse effects of human activities on the other components of Resource Protection Areas, state waters, and aquatic life, a 100-foot buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained if present and established where it does not exist. The buffer area shall be located adjacent to and landward of other RPA components and along both sides of any water body with perennial flow. The full buffer area shall be designated as the landward component of the RPA in accordance with Section 7.4, Areas of Applicability, and Section 7.12, Plan of Development Process, of this Article.

The 100-foot buffer area shall be deemed to achieve a 75 percent reduction of sediments and a 40 percent reduction of nutrients.

The buffer area shall be maintained to meet the following additional performance standards:

1. In order to maintain the functional value of the buffer area, indigenous vegetation may be removed, subject to approval by the Zoning Administrator, only to provide for reasonable sight lines, access paths, general woodlot management, and best management practices including those that prevent upland erosion and concentrated flows of stormwater, as follows:

a. Trees may be pruned or removed as necessary to provide for sight lines and vistas provided that, where removed, they shall be

replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff.

b. Any path shall be constructed and surfaced so as to effectively control erosion.

c. Dead, diseased, or dying trees or shrubbery and noxious weeds (such as Johnson grass, kudzu and multiflora rose) may be removed and thinning of trees allowed, pursuant to standards adopted by the Town of Cape Charles.

d. For shoreline erosion control projects, trees and woody vegetation may be removed, necessary control techniques employed, and appropriate vegetation established to protect or stabilize the shoreline in accordance with the best of available technical advice and applicable permit conditions or requirements.

2. When the application of the buffer areas would result in the loss of a buildable area on a lot or parcel recorded prior to October 1, 1989, the Zoning Administrator may allow encroachments into the buffer area in accordance with Section 7.12, Plan of Development Process, and the following criteria:

   a. Encroachments into the buffer areas shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities;

   b. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot or parcel; and

   c. The encroachment may not extend into the seaward 50 feet of the buffer area.

3. Redevelopment within IDAs may be exempt from establishing vegetation within the buffer area in accordance with Section 7.12, Plan of Development Process, of this Article.

4. On agricultural lands the agricultural buffer area shall be managed to prevent concentrated flows of surface water from breaching the buffer area and appropriate measures may be taken to prevent noxious weeds from invading the buffer area. Agricultural activities may encroach into the buffer area as follows:

   a. Agricultural activities may encroach into the landward 50 feet of the 100-foot wide buffer area when at least one agricultural best management practice, which, in the opinion of the [local soil and water conservation district board], addresses the more predominant water quality issue on the adjacent land – erosion control or nutrient management – is being implemented on the adjacent land, provided that the combination of the undisturbed buffer area and the best management practice_achieves water quality protection, pollutant removal, and water resource conservation at least the equivalent of the 100-foot wide buffer area. If nutrient management is identified

as the predominant water quality issue, a nutrient management plan, including soil test, must be developed consistent with the "Virginia Nutrient Management Training and Certification Regulations (4 VAC 5-15 et seq.)" administered by the Virginia Department of Conservation and Recreation.

b. Agricultural activities may encroach within the landward 75 feet of the 100-foot wide buffer area when agricultural best management practices which address erosion control, nutrient management, and pest chemical control, are being implemented on the adjacent land. The erosion control practices must prevent erosion from exceeding the soil loss tolerance level, referred to as "T", as defined in the "National Soil Survey Handbook" of November 1996 in the "Field Office Technical Guide" of the U. S. Department of Agriculture Natural Resource Conservation Service. A nutrient management plan, including soil test, must be developed consistent with the "Virginia Nutrient Management Training and Certification Regulations (4 VAC 5-15 et seq. administered by the Virginia Department of Conservation and Recreation. In conjunction with the remaining buffer area, this collection of best management practices shall be presumed to achieve water quality protection at least the equivalent of that provided by the 100-foot wide buffer area**.**

~~c.~~ The buffer area is not required to be designated adjacent to agricultural drainage ditches if the adjacent agricultural land has in place at least one best management practice~~s~~ as considered by the local Soil and Water Conservation District to address the more predominant water quality issue on the adjacent land – either erosion control or nutrient management

4. When agricultural or silvicultural uses within the buffer area cease, and the lands are proposed to be converted to other uses, the full 100-foot wide buffer area shall be reestablished. In reestablishing the buffer, management measures shall be undertaken to provide woody vegetation that assures the buffer functions are maintained or established.

Section 7.11 Water Quality Impact Assessment

A. Purpose and Intent

The purpose of the water quality impact assessment is to: (1) identify the impact of proposed development on water quality and lands within RPAs and other environmentally sensitive lands; (2) ensure that, where development does take place within RPAs and other sensitive lands, it will be located on those portions of a site and in a manner that will be least disruptive to the natural functions of RPAs and other sensitive lands; (3) to protect individuals from investing funds for improvements proposed for location on lands unsuited for such development because of high ground water, erosion, or vulnerability to flood and storm damage; and (4) specify mitigation which will address water quality protection.

B. Water Quality Impact Assessment Required

A water quality impact assessment is required for (1) any proposed land disturbance, redevelopment or development within a RPA, including any buffer area modification or encroachment as provided in Section 7.10 of this Article; (2) any development in a RMA as deemed necessary by the Zoning Administrator due to the unique characteristics of the site or intensity of the proposed development. There shall be two levels of water quality impact assessments--a minor assessment and a major assessment.

C. Minor Water Quality Impact Assessment

A minor water quality impact assessment pertains only to a development within CBPAs which causes no more than 5,000 square feet of land disturbance and requires any modification or encroachment into the landward 50 feet of the 100-foot buffer area. A minor assessment must demonstrate that the undisturbed buffer area, enhanced vegetative plantings, and any required best management practices will result in removal of no less than 75 percent of sediments and 40 percent of nutrients from post-development stormwater runoff and that the remaining buffer area will retard runoff, prevent erosion and filter nonpoint source pollution the equivalent of the full undisturbed 100-foot buffer area. A minor assessment shall include a site drawing to scale which shows the following:

1. Location of the components of the RPA, including the 100-foot buffer area;
2. Location and nature of the proposed encroachment into the buffer area if needed including: type of paving material; areas of clearing or grading; location of any structures, drives, or other impervious cover;
3. Type and location of proposed best management practices to mitigate the proposed encroachment.
4. Location of existing vegetation onsite, including the number and type of trees and other vegetation to be removed in the buffer to accommodate the encroachment or modification;
5. Revegetation plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion and runoff control.

D. Major Water Quality Impact Assessment

A major water quality impact assessment shall be required for any development which (1) exceeds 5,000 square feet of land disturbance within CBPA and requires any modifications or encroachment into the landward 50 feet of the 100-foot buffer area; (2) proposes to disturb any portion of any other component of an RPA or proposes to disturbs any portion of the buffer area within 50 feet of any other component of any RPA; or (3) is located in an RMA and is deemed necessary by the Zoning Administrator. The information required in this section shall be considered a minimum unless the Zoning Administrator determines that

some of the elements are unnecessary due to the scope and nature of the proposed use and development of land.

The following elements shall be included in the preparation and submission of a major water quality assessment:

1. All of the information required in a minor water quality impact assessment as specified in Section 7.11.C;
2. A hydro-ecological element that:
    a. describes the existing topography, soils, hydrology, and geology of the site and adjacent lands
    b. indicates the following:
        i. disturbance or destruction of wetlands and justification for such action
        ii. disruptions or reductions in the supply of water to wetlands, streams, or other water bodies
        iii. disruptions to existing hydrology including wetlands and stream circulation patterns
        iv. source location and description of proposed fill material
        v. location of dredge material and location of dumping area for such material
        vi. location of and impacts on shellfish beds or submerged aquatic vegetation
        vii. estimation of pre- and post-development pollutant loads in runoff
        viii. estimation of percent increase in impervious surface on site and type(s) of surfacing materials used
        ix. percent of site to be cleared for project
        x. anticipated duration and phasing schedule of construction project
        xi. listing of all requisite permits from all applicable agencies necessary to develop project
    d. describes the proposed mitigation measures for the potential hydroecological impacts. Potential mitigation measures include:
        i. proposed erosion and sediment control concepts; concepts should include minimizing the extent of the cleared area, perimeter controls, reduction of runoff velocities, measures to stabilize disturbed areas, schedule and personnel for site inspection
        ii. proposed water quality and quantity stormwater management system
        iii. creation of wetlands to replace those lost
        iv. minimizing cut and fill
3. A landscape element that:
    a. identifies and delineates the location of plant material on site, including all trees two inches or greater diameter at breast height. Where there are groups of trees, stands may be outlined.

b. describes the impacts the development or use will have on the existing vegetation. Information should include:
   i. limits of clearing based on all anticipated improvements including buildings, drives, and utilities
   ii. clear delineation of all trees and other woody vegetation proposed to be removed
   iii. description of plant species to be disturbed or removed
c. describes the potential measures for mitigation. Possible mitigation measures should include:
   i. replanting schedule for trees and other significant vegetation removed for construction including a list of possible plants and trees to be used
   ii. demonstration that the design of the plan will preserve to the greatest extent possible any significant trees and vegetation on the site and will provide maximum erosion control and overland flow benefits from such vegetation
   iii. demonstration that native plants are to be used to the greatest extent possible

E. Submission and Review Requirements

1. Eight copies of all site drawings and other applicable information as required by Subsections C and D above shall be submitted to the Zoning Administrator for review.
2. All information required in this section shall be certified as complete and accurate by a professional engineer or certified land surveyor.
3. A minor water quality impact assessment shall be prepared and submitted to and reviewed by the Zoning Administrator in conjunction with Section 7.12, Plan of Development Process, of this Article.
4. A major water quality impact assessment shall be prepared and submitted to and reviewed by the Zoning Administrator in conjunction with a request for rezoning, special use permit, or in conjunction with Section 7.12 of this Article as deemed necessary by the Zoning Administrator.
5. As part of any major quality impact assessment submittal, the Zoning Administrator may require review by the Chesapeake Bay Local Assistance Department (CBLAD). Upon receipt of a major water quality impact assessment, the Zoning Administrator will determine if such review is warranted and may request CBLAD to review the assessment and respond with written comments. Any comments by such CBLAD will be incorporated into the final review by the Zoning Administrator provided that such comments are provided by CBLAD within 90 days of the request.

F. Evaluation Procedure

1. Upon the completed review of a minor water quality impact assessment, the Zoning Administrator will determine if any proposed encroachment

into the buffer area is consistent with the provisions of this Article and make a finding based upon the following criteria:

a. the necessity of the proposed encroachment and the ability to place improvements elsewhere on the site to avoid disturbance of the buffer area;
b. impervious surface is minimized;
c. proposed best management practices, where required, achieve the requisite reductions in pollutant loadings;
d. the development, as proposed, meets the purpose and intent of this Article;
e. the cumulative impact of the proposed development, when considered in relation to other development in the vicinity both existing and proposed, will not result in a significant degradation of water quality.

2. Upon the completed review of a major water quality impact assessment, the Zoning Administrator will determine if the proposed development is consistent with the purpose and intent of this Article and make a finding based upon the following criteria in conjunction with Section 7.12.
   a. Within an RPA, the proposed development is water dependent.
   b. The disturbance of any wetlands will be minimized.
   c. The development will not result in significant disruption of the hydrology of the site.
   d. The development will not result in significant degradation to aquatic vegetation or life.
   e. The development will not result in unnecessary destruction of plant materials on site.
   f. Proposed erosion and sediment control concepts are adequate to achieve the reductions in runoff and prevent off-site sedimentations.
   g. Proposed storm water management concepts are adequate to control the storm water runoff to achieve the required performance standard for pollutant control.
   h. Proposed re-vegetation of disturbed areas will provide optimum erosion and sediment control benefits.
   i. The development as proposed is consistent with the purpose and intent of the Overlay District.
3. The Zoning Administrator shall require additional mitigation where potential impacts have not been adequately addressed. Evaluation of mitigation measures will be made by the Zoning Administrator based on the criteria listed above in Subsections 1 and 2.
4. The Zoning Administrator shall find the proposal to be inconsistent with the purpose and intent of this Article when the impacts created by the proposal cannot be mitigated. Evaluation of the impacts will be made by the Zoning Administrator based on the criteria listed in Subsections 1 and 2.

Section 7.12 Plan of Development Process

Any development or redevelopment exceeding 2,500 square feet of land disturbance shall be accomplished through a plan of development process prior to any clearing or grading of the site or the issuance of any building permit to assure compliance with all applicable requirements of this Article.

A. Required Information

In addition to the requirements of this Ordinance or the requirements of the Cape Charles Subdivision Ordinance, the plan of development process shall consist of the plans and studies identified below. These required plans and studies may be coordinated or combined as deemed appropriate by the Zoning Administrator. The Zoning Administrator may determine that some of the following information is unnecessary due to the scope and nature of the proposed development.

The following plans or studies shall be submitted unless otherwise provided for:

1. A site plan in accordance with the provisions of this ordinance; or a subdivision plat in accordance with the provisions of the Subdivision Ordinance of Cape Charles;
2. An environmental site assessment;
3. A landscaping plan;
4. A storm water management plan;
5. An erosion and sediment control plan in accordance with the provisions of the Cape Charles Erosion and Sediment Control Ordinance.

B. Environmental Site Assessment

An environmental site assessment shall be submitted in conjunction with preliminary site plan or preliminary subdivision plan approval.

1. The environmental site assessment shall be drawn to scale and clearly delineate the following environmental features:
   a. tidal wetlands
   b. tidal shores
   c. non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow
   d. a 100-foot buffer area located adjacent to and landward of the components listed in Subsections a through c above, and along both sides of any water body with perennial flow
   e. other sensitive environmental features as determined by the Zoning Administrator
2. Wetlands delineations shall be performed consistent with the methods and procedures used and accepted from time to time by the U.S. Army Corps of Engineers.
3. The environmental site assessment shall delineate the site-specific geographic extent of the RPA.

4. The environmental site assessment shall be drawn at the same scale as the preliminary site plan or subdivision plat and shall be certified as complete and accurate by a professional engineer or a certified land surveyor. This requirement may be waived by the Zoning Administrator when the proposed use or development would result in less than 5,000 square feet of disturbed area.

C. Landscaping Plan

A landscape plan shall be submitted in conjunction with site plan approval or as part of subdivision plat approval. No clearing or grading of any lot or parcel shall be permitted without an approved landscaping plan.

Landscaping plans when required shall be prepared and/or certified by design professionals practicing within their areas of competence as prescribed by the Code of Virginia

1. Contents of the plan
    a. The landscaping plan shall be drawn to scale and clearly delineate the location, size, and description of existing and proposed plant material. All existing trees on the site two inches or greater DBH shall be shown on the landscaping plan. Where there are groups of trees, stands may be outlined instead. The specific number of trees two inches or greater DBH to be preserved outside of this construction footprint shall be indicated on the plan. Trees to be removed to create a desired construction footprint shall be clearly delineated on the landscaping plan.
    b. Any required buffer area shall be clearly delineated and any plant material to be added to establish or supplement the buffer area, as required by this Article, shall be shown on the landscaping plan.
    c. Within the buffer area, trees to be removed for sight lines, vistas, access paths, and best management practices, as provided for in this Article, shall be shown on the plan. Vegetation required by this Article to replace any existing trees within the buffer area shall also be shown on the landscaping plan.
    d. Trees to be removed for shoreline stabilization projects and any replacement vegetation required by this Article shall be shown on the landscaping plan.
    e. The plan shall depict grade changes or other work adjacent to trees which would affect them adversely. Specifications shall be provided as to how grade, drainage, and aeration would be maintained around trees to be preserved.
    f. The landscaping plan will include specifications for the protection of existing trees during clearing, grading, and all phases of construction.
2. Plant specifications

a. All plant materials necessary to supplement the buffer area or vegetated areas outside the construction footprint shall be installed according to standard planting practices and procedures.
b. All supplementary or replacement plant materials shall be living and in a healthy condition. Plant materials shall conform to the standards of the most recent edition of the American Standard for Nursery Stock, published by the American Association of Nurserymen.

3. Maintenance
   a. The applicant shall be responsible for the maintenance and replacement of all vegetation as may be required by the provision of the Article.
   b. In buffer areas and areas outside the construction footprint, plant material shall be tended and maintained in a healthy growing condition and free from refuse and debris. Unhealthy, dying, or dead plant materials shall be replaced during the next planting season as required by the provisions of this Article.

D. Storm water Management Plan

A stormwater management plan shall be submitted as part of the plan of development process required by this Article and in conjunction with site plan or subdivision plan approval.

1. Contents of the plan. The storm water management plan shall contain maps, charts, graphs, tables, photographs, narrative descriptions, explanations, and citations to supporting references as appropriate to communicate the information required by this Article. At a minimum, the storm water management plan must contain the following:
   a. location and design of all planned storm water control devices;
   b. procedures for implementing non-structural storm water control practices and techniques;
   c. pre- and post-development non-point source pollutant loadings with supporting documentation of all utilized coefficients and calculations;
   d. for facilities, verification of structural soundness, including a professional engineer or Class IIIB surveyor certification.
2. Site specific facilities shall be designed for the ultimate development of the contributing watershed based on zoning, comprehensive plans, local public facility master plans, or other similar planning documents.
3. All engineering calculations must be performed in accordance with procedures outlined in the current edition of the Virginia Storm water Management Handbook.
4. The plan shall establish a long-term schedule for inspection and maintenance of storm water management facilities that includes all maintenance requirements and persons responsible for performing maintenance. If the designated maintenance responsibility is with a party other that the Town of Cape Charles, then a maintenance agreement

shall be executed between the responsible party and the Town of Cape Charles.

E. Erosion and Sediment Control Plan

An erosion and sediment control plan shall be submitted that satisfies the requirements of this Article and in accordance with the Cape Charles Erosion and Sediment Control Ordinance in conjunction with site plan or subdivision plan approval.

F. Final Plan

Final plan for property within CBPAs shall be final plats for land to be subdivided or site plans for land not to be subdivided as required in the Cape Charles Subdivision Ordinance and this Ordinance.

1. Final plans for all lands within CBPAs shall include the following additional information:
   a. the delineation of the Resource Protection Area boundary
   b. the delineation of required buffer areas
   c. all wetlands permits required by law
   d. a maintenance agreement as deemed necessary and appropriate by the Zoning Administrator to ensure proper maintenance of best management practices in order to continue their functions
2. Installation and bonding requirements
   a. Where buffer areas, landscaping, storm water management facilities, or other specifications of an approved plan are required, no certificate of occupancy shall be issued until the installation of required plant materials or facilities is completed in accordance with the approved site plan.
   b. When the occupancy of a structure is desired prior to the completion of the required landscaping, storm water management facilities, or other specifications of an approved plan, a certificate of occupancy may be issued only if the applicant provides Cape Charles a form of surety satisfactory to the Zoning Administrator in an amount equal to the remaining plant materials, related materials, and installation costs of the required landscaping or facilities and/or maintenance costs for any required storm water management facilities during the construction period.
   c. All required landscaping shall be installed and approved by the first planting season following issuance of a certificate of occupancy or the surety may be forfeited to the Town of Cape Charles.
   d. All required storm water management facilities or other specifications shall be installed and approved within 18 months of project commencement. Should the applicant fail, after proper notice, to initiate, complete, or maintain appropriate actions required by the approved plan, the surety may be forfeited to the

Town of Cape Charles. Cape Charles may collect from the applicant the amount by which the reasonable cost of required actions exceed the amount of the surety held.

e. After all required actions of the approved site plan have been completed, the applicant must submit a written request for a final inspection. If the requirements of the approved plan have been completed to the satisfaction of the Zoning Administrator, such unexpended or un-obligated portion of the surety held shall be refunded to the applicant or terminated within 60 days following the receipt of the applicant's request for final inspection. The Zoning Administrator may require a certificate of substantial completion from a professional engineer or Class IIIB surveyor before making a final inspection.

G. Administrative Responsibility

Administration of the plan of development process shall be in accordance with this ordinance or the Cape Charles Subdivision Ordinance.

H. Denial of Plan, Appeal of Conditions or Modifications

In the event the final plan or any component of the plan of development process is disapproved and recommended conditions or modifications are unacceptable to the applicant, the applicant may appeal such administrative decision to the Planning Commission. In granting an appeal the Planning Commission must find such plan to be in accordance with all applicable ordinances and include necessary elements to mitigate any detrimental impact on water quality and upon adjacent property and the surrounding area or such plan meets the purposes and intent of the performance standards in this Article. If the Planning Commission finds that the applicant's plan does not meet the above-stated criteria, they shall deny approval of the plan. In the event of a denial of appeal to the Planning Commission, the applicant may appeal such decision to the Cape Charles Town Council. Said appeal shall be made within 15 days of the negative decision. Further appeals by the applicant shall be as established by law.

Section 7.13 Non-Conforming Use and Development Waivers

The lawful use of a building or structure which existed on September 11, 1990, or which exists at the time of any amendment to this Article and which is not in conformity with the provisions of the Overly District may be continued in accordance Section 2.5 of this Ordinance.

No change or expansion of use shall be allowed with the exception that:

1. The Zoning Administrator may grant a non-conforming use and development waiver for structures on legal non-conforming lots or parcels to provide for remodeling and alterations to such non-conforming structures provided that:

a. there will be no increase in non-point source pollution load;
b. any development or land disturbance exceeding an area of 2,500 square feet complies with all erosion and sediment control requirements of this Article;
c. the intent of Section 2.5, Non-Conforming Uses, is upheld.

2. An application for a non-conforming use and development waiver shall be made to and upon forms furnished by the Zoning Administrator and shall include, for the purpose of proper enforcement of this Article, the following information:
   a. name and address of applicant and property owner;
   b. legal description of the property and type of proposed use and development;
   c. a sketch of the dimensions of the lot or parcel, location of buildings and proposed additions relative to the lot lines, and boundary of the Resource Protection Area;
   d. location and description of any existing private water supply or sewerage system.
3. A non-conforming use and development waiver shall become null and void twelve months from the date issued if no substantial work has commenced.
4. An application for the expansion of a nonconforming structure may be approved by the Zoning Administrator through an administrative review process provided that the following findings are made:
   a. The request for the waiver is the minimum necessary to afford relief;
   b. Granting the waiver will not confer upon the applicant any specific privileges that are denied by this Article to other property owners in similar situations;
   c. The waiver is in harmony with the purpose and intent of this Article and does not result in water quality degradation;
   d. The waiver is not based on conditions or circumstances that are self-created or self-imposed;
   e. Reasonable and appropriate conditions are imposed, as warranted, that will prevent the waiver from causing a degradation of water quality;
   f. Other findings, as appropriate and required by the Town of Cape Charles are met; and
   g. In no case shall this provision apply to accessory structures.

Section 7.14 Exemptions

A. Exemptions for Utilities, Railroads, and Public Roads

1. Construction, installation, operation, and maintenance of electric, natural gas, fiber-optic, and telephone transmission lines, railroads, and public roads and their appurtenant structures in accordance with (i) regulations promulgated pursuant to the Erosion and Sediment Control Law (§ 10.1-

560 et seq. of the Code of Virginia) and the Stormwater Management Act (§ 10.1-603.1 et seq. of the Code of Virginia), (ii) an erosion and sediment control plan and a stormwater management plan approved by the Virginia Department of Conservation and Recreation, or (iii) local water quality protection criteria at least as stringent as the above state requirements are deemed to comply with this Article. The exemption of public roads is further conditioned on the following:

a. The road alignment and design has been optimized, consistent with all applicable requirements, to prevent or otherwise minimize the encroachment in the Resource Protection Area and to minimize the adverse effects on water quality.

2. Construction, installation, and maintenance of water, sewer, and natural gas and underground telecommunication and cable television lines, owned, permitted or both by the Town of Cape Charles, shall be exempt from the Overlay District provided that:

a. to the degree possible, the location of such utilities and facilities shall be outside RPAs;
b. no more land shall be disturbed than is necessary to provide for the proposed utility installation;
c. all construction, installation, and maintenance of such utilities and facilities shall be in compliance with all applicable state and federal requirements and permits and designed and conducted in a manner that protects water quality; and
d. any land disturbance exceeding an area of 2,500 square feet complies with all Cape Charles erosion and sediment control requirements.

B. Exemptions for Silvicultural Activities

Silvicultural activities are exempt from the requirements of this Article provided that silvicultural operations adhere to water quality protection procedures prescribed by the Virginia Department of Forestry in the 1997 edition of "Best Management Practices Handbook for Forestry Operations [Technical Guide].

C. Exemptions in Resource Protection Areas

The following land disturbances in Resource Protection Areas may be exempted from the Overlay District: (1) water wells; (2) passive recreation facilities such as boardwalks, trails, and pathways; and (3) historic preservation and archaeological activities provided that it is demonstrated to the satisfaction of the Zoning Administrator that:

1. Any required permits, except those to which this exemption specifically applies, shall have been issued;

2. Sufficient and reasonable proof is submitted that the intended use will not deteriorate water quality;
3. The intended use does not conflict with nearby planned or approved uses; and
4. Any land disturbance exceeding an area 2,500 square feet shall comply with all Cape Charles erosion and sediment control requirements.

Section 7.15 Exceptions

A. A request for an exception to the requirements of Sections 7.7 and 7.10.C of this Overlay District shall be made in writing to the Board of Zoning Appeals. It shall identify the impacts of the proposed exception on water quality and on lands within the RPA through the performance of a water quality impact assessment which complies with the provisions of Section 7.11.

B. The Town of Cape Charles shall notify the affected public of any such exception requests and shall consider these requests in a public hearing in accordance with Section 15.2-2204 of the Code of Virginia, except that only one hearing shall be required.

C. The Board of Zoning Appeals shall review the request for an exception and the water quality impact assessment and may grant the exception with such conditions and safeguards as deemed necessary to further the purpose and intent of this Article if the Board of Zoning Appeals finds:

1. Granting the exception will not confer upon the applicant any special privileges that are denied by this Article to other property owners in the Overlay District;
2. The exception request is not based upon conditions or circumstances that are self-created or self-imposed, nor does the request arise from conditions or circumstances either permitted or non-conforming that are related to adjacent parcels;
3. The exception request is the minimum necessary to afford relief;
4. The exception request will be consistent with the purpose and intent of the Overlay District and not injurious to the neighborhood or otherwise detrimental to the public welfare, and is not of substantial detriment to water quality; and
5. Reasonable and appropriate conditions are imposed which will prevent the exception request from causing a degradation of water quality.

D. If the Board of Zoning Appeals cannot make the required findings or refuses to grant the exception, the Board of Zoning Appeals shall return the request for an exception together with the water quality impact assessment and the written findings and rationale for the decision to the applicant.

E. A request for an exception to the requirements of provisions of this Article other than those in Sections 7.7 and 7.10.C shall be made in writing to the Zoning

Administrator. The Zoning Administrator may grant these exceptions provided that:

1. Exceptions to the requirements are minimum necessary to afford relief; and Reasonable and appropriate conditions are placed upon any exception that is granted, as necessary, so that the purpose and intent of this Article is preserved.
   Exceptions to § 7.10.B may be made provided that the findings noted in § 7.15.C are made.

Section 7.16 Enforcement

A. Any person who: (i) violates any provision of this ordinance or (ii) violates or fails, neglects, or refuses to obey any Town of Cape Charles or its official Designee's final notice, order, rule, regulation, or variance or permit condition authorized under this ordinance shall, upon such finding by an appropriate circuit court be assessed a civil penalty not to exceed $5,000 for each day of violation. Such civil penalties may, at the discretion of the court assessing them, be directed to be paid into the treasury of the Town of Cape Charles for the purpose of abating environmental damage to or restoring Chesapeake Bay Preservation Areas therein, in such a manner as the court may direct by order, except that where the violator is the Town of Cape Charles itself or its agent, the court shall direct the penalty to be paid into the state treasury.

B. With the consent of any person who: (i) violates any provision of any Town of Cape Charles ordinance related to the protection of water quality in Chesapeake Bay Preservation Areas or (ii) violates or fails, neglects, or refuses to obey any Town of Cape Charles or its official Designee's order, rule, regulation, or variance or permit condition authorized under such ordinance, the Town of Cape Charles may provide for the issuance of an order against such person for the one-time payment of civil charges for each violation in specific sums, not to exceed $10,000 for each violation. Such civil charges shall be paid into the treasury of the Town of Cape Charles for the purpose of abating environmental damage to or restoring Chesapeake Bay Preservation Areas therein, except that where the violator is the Town of Cape Charles itself or its agent, the civil charges shall be paid into the state treasury. Civil charges shall be in lieu of any appropriate civil penalty that could be imposed under subdivision 1 of this subsection. Civil charges may be in addition to the cost of any restoration required or ordered by the Town of Cape Charles body or official.

Section 7.17 Severability

The provisions of this ordinance shall be deemed to be severable, and if any of the provisions hereof are adjudged to be invalid or unenforceable, the remaining portions of this ordinance shall remain in full force and effect and their validity shall remain unimpaired.

Section 7.18 Effective Date

This ordinance was duly considered following a required public hearing held on November 12, 2003 and was adopted by the Town Council of Cape Charles, Virginia, at its regular meeting held November 12, 2003. (Ord. No. 11122003; 11-12-03)

Resource Protection Areas: Permitted Development Activities

Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations

Revised September 19, 2005, June 15, 2009; June 21, 2010

Purpose:

This document provides guidance on those sections of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations) related to development and redevelopment activities permitted within Resource Protection Areas (RPAs) and those activities that are otherwise exempt from the Regulations.

Regulations:

- Section 9 VAC 10-20-130 sets out the performance criteria for Resource Protection Areas (RPAs), and permits the following uses by right: water dependent uses; redevelopment as defined by the Regulations; development or redevelopment within a designated Intensely Developed Area (IDA); a new use established on a nonconforming lot; a street or driveway crossing approved by the locality pursuant to the Regulations; or a flood control or stormwater management facility serving multiple development projects or a significant portion of a watershed, consistent with certain conditions.

- Section 9 VAC 10-20-130 1 a requires a Water Quality Impact Assessment to be submitted for any land disturbing activity within an RPA, including the buffer component.

- Section 9 VAC 10-20-130 1 b sets out the criteria that must be met for new or expanded water dependent facilities to be allowed in the RPA. These criteria include the following: that it does not conflict with the local comprehensive plan; that it complies with all performance criteria; that any non-water dependent component is located outside of the RPA; and; that access is provided with the minimum disturbance necessary.

- Section 9 VAC 10-20-130 1 c requires stormwater management and erosion and sediment control requirements to be applied for redevelopment activities both within and outside of IDAs, and also contains criteria for no net increase of imperviousness and no further encroachment into the RPA.

- Section 9 VAC 10-20-150 B exempts the construction of public utilities, railroads, public roads and appurtenant facilities from the Regulations, consistent with certain conditions.

Discussion:

<u>Water Dependent Facilities</u>

Certain uses are permitted by-right within the RPA. Water dependent facilities, i.e., facilities that by their very nature require that they be located adjacent to the water, are among these facilities. Some examples of water dependent facilities that are permitted to be located within the RPA include the water dependent portion of marinas, aquacultural facilities that require fresh flows of water, beaches, docks and piers as well as stream and wetland restoration projects that have been permitted by state and federal agencies such as DEQ and USCOE.

Development of these facilities requires that a Water Quality Impact Assessment (WQIA) be submitted for review and approval prior to beginning construction activity and that the conditions in 9 VAC 10-20-130 1 b be satisfied.

Redevelopment Within RPAs That Are Not IDAs

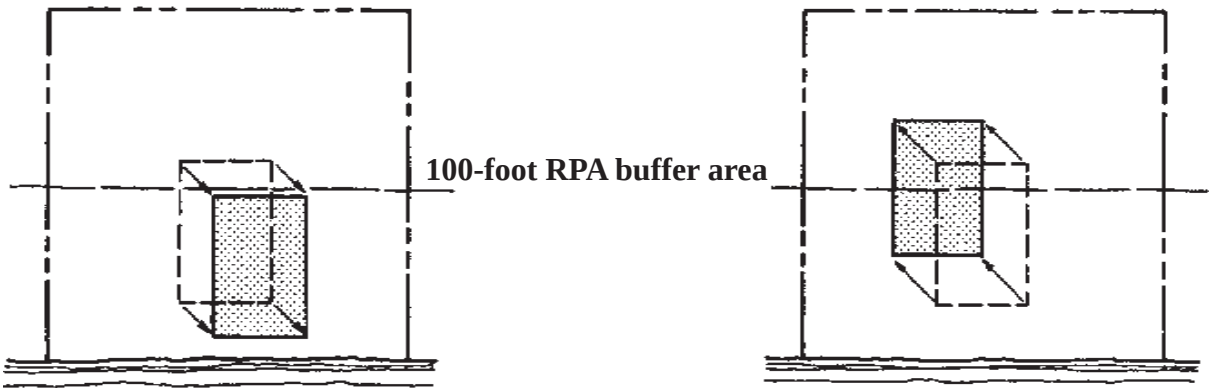
Redevelopment activities are also permitted to occur within the RPA. **A Water Quality Impact Assessment must be reviewed and approved before development activities may begin.** The *Chesapeake Bay Preservation Area Designation and Management Regulations* define **redevelopment** to mean "the process of developing land that has previously been developed." Under the traditional view of redevelopment, old, dilapidated, or outdated structures and impervious areas are demolished or removed and reconstructed.

The intent of the Regulations is to allow redevelopment within RPAs so that areas where existing development is concentrated may be renovated while improving the quality of stormwater runoff. If redevelopment increases the amount of impervious surface in the RPA, or reduces the width of an existing buffer area, water quality degradation may occur. The definition of redevelopment, then, generally dictates that redevelopment occur in approximately the same physical location as the previous development. This is a particularly important point when considering sites where the previous development occurred only on a portion of a site. Placing structures outside of the RPA, even on redevelopment sites, should be encouraged. For the purposes of the Bay Act program, the following conditions must be present in order for a project to be considered "redevelopment:"

- The lot or parcel has been previously developed;
- The new structures and/or impervious areas are approximately in the same physical location as the previously existing structures and/or impervious areas;
- The proposed amount of impervious surface is no greater than the original development;
- RPA features are not further encroached upon.

For the purposes of the Bay Act program, redevelopment is **not:**

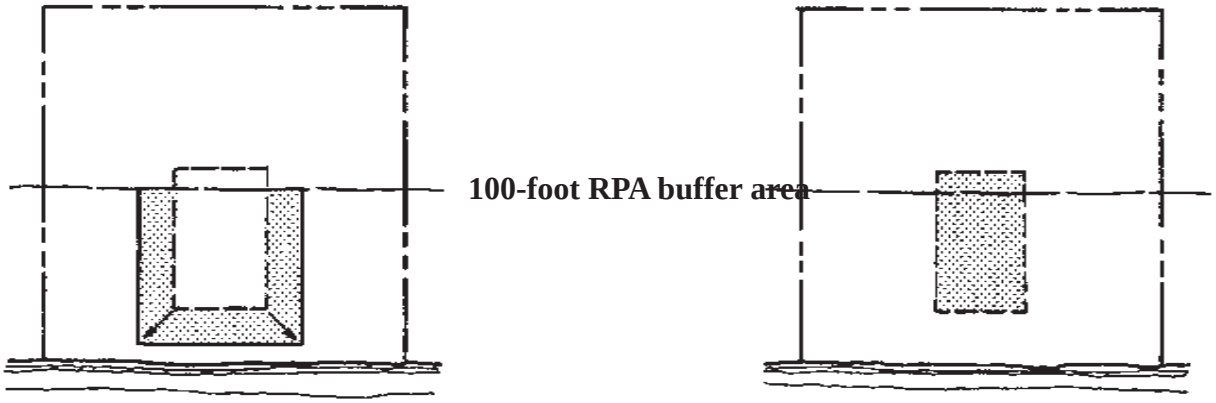
Figure 1 - No Further Expansion into RPA



NOT ACCEPTABLE AS REDEVELOPMENT
The redevelopment encroaches further into the RPA (100-foot buffer component)

ACCEPTABLE AS REDEVELOPMENT
The redevelopment reduces the encroachment into the RPA (100-foot buffer compo-

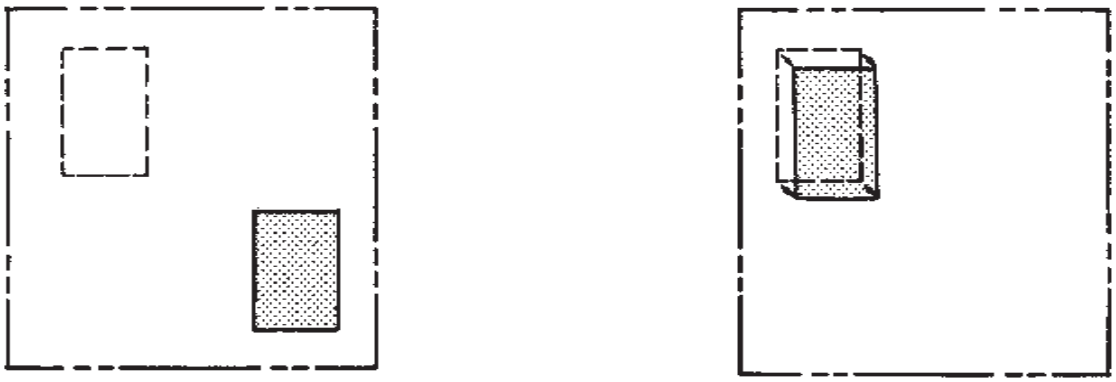
Figure 2 - No Increase of Impervious Surface in RPA



NOT ACCEPTABLE AS REDEVELOPMENT
The redevelopment is increasing the amount of impervious surface in the RPA.

ACCEPTABLE AS REDEVELOPMENT
The redevelopment is not increasing the amount of impervious surface in the RPA.

Figure 3 - Redevelopment in Same General Location



NOT ACCEPTABLE AS REDEVELOPMENT
The redevelopment is not in the same general location as the existing development

ACCEPTABLE AS REDEVELOPMENT
The redevelopment is in the same general location as the existing development

- **New construction** on a previously undeveloped parcel;
- **Additions or expansions** to existing structures
- **Replacement** of a structure lost by casualty. (However, it is possible that other local ordinances may allow the replacement of such structures.)
- **Relocation** of an existing structure to a previously undeveloped portion of a site.

Development or Redevelopment within an Intensely Developed Area

Intensely Developed Areas (IDAs) are redevelopment areas, identified by a local government and approved by the Chesapeake Bay Local Assistance Board, that meet the criteria found in 9 VAC 10-20-100.B. Development or redevelopment within IDAs is permitted provided that it conforms to applicable erosion and sediment control and stormwater management requirements. A WQIA must be submitted for land disturbance within the RPA portion of an IDA overlay.

Development on a Nonconforming Lot of Record

Nonconforming lots [i.e., lots that either (1) were approved by the locality and recorded before October 1, 1989 and that do not have sufficient land outside of the RPA on which to construct a principal dwelling, or (2) lots with insufficient land area outside the full 100 foot RPA that were recorded between October 1, 1989 and March 1, 2002 in those localities that had buffer equivalency language written into their local Chesapeake Bay Preservation Ordinances] may be improved with a principal structure and necessary utilities within the landward 50 feet of the RPA buffer provided that certain requirements are met. For guidance on development on nonconforming lots of record, please refer to the guidance entitled *Nonconforming Structures and Uses* and *Resource Protection Area: Buffer Area Encroachments*, posted on DCBLA's web site.

Stormwater or Flood Control Facilities

Flood control and stormwater management facilities that drain or treat water from multiple development projects may be permitted in the RPA provided that certain criteria are met. Consistent with 9 VAC 10-20-130 1 e (iii) of the Regulations, the local government must first develop a regional stormwater management program that is consistent with the water quality protection provisions of the *Virginia Stormwater Management Regulations* (4 VAC 50-60 *et seq.*) This local program must then be reviewed and approved as a Phase I program modification by the Chesapeake Bay Local Assistance Board. The local government must establish through an analysis of a Water Quality Impact Assessment that the location of the facility within the RPA is the optimum location and that the size of the facility is the minimum necessary to provide flood control, stormwater treatment, or both. All applicable permits for construction in state or federal waters must be obtained from the appropriate state and federal agencies (such as the U.S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission), and continued maintenance of the facility is required to assure that the facility continues to function as designed. For a more detailed discussion of the stormwater management requirements contained within the Chesapeake Bay Designation and Management Regulations, please refer to the *Stormwater Management Requirements* guidance, posted on DCBLA's web site.

Exemptions

Water wells, passive recreation sites (e.g., trails, paths, and other linear, minimally intrusive uses, but not ball fields and similar facilities), and historic or archeological sites are all permitted within the Resource Protection Area provided that the development of such sites is reviewed and approved by the local government, and any land disturbance in excess of 2,500 square feet complies with the erosion and sediment control requirements. Public utilities (including electric lines, natural gas lines, fiber-optic cables, and telephone transmission lines), public roads, railroads, and structures customarily accessory to these uses are permitted within the RPA provided that minimal criteria are met. These exemptions are based on the premise that the agencies responsible for their construction have water quality protection requirements equal in effectiveness to the Chesapeake Bay Preservation Act Regulations. The installation of these facilities must conform to both the Erosion and Sediment Control Law (§10.1-560 *et seq.* of the Code of Virginia) and the Stormwater

Management Act (§10.1-603.1 *et seq.* of the Code of Virginia) and must be constructed according to an erosion and sediment control plan and a stormwater management plan approved by the Department of Conservation and Recreation. The construction of public roads is further conditioned on the minimization of the encroachment into the RPA and a minimization of water quality impacts.

The construction, installation, and maintenance of water, sewer, natural gas, underground telecommunication and cable television lines owned or permitted by a local government or regional service authority is permitted within the RPA provided that the encroachment is the minimum necessary, no more land is disturbed than is necessary to accommodate the installation, all applicable state and federal permits for the installation are obtained, the installation takes place in a manner that protects water quality, and any land disturbance exceeding an area of 2,500 square feet complies with the erosion and sediment control requirements contained in the Regulations.

Conclusions:

- Water dependent facilities are permitted by right within the RPA. They must conform to erosion and sediment control requirements, must(1) be constructed according to an approved Plan of development, (2) be justified through a Water Quality Impact Assessment, and (3) meet other conditions of 9 VAC 10-20-130 1 b.

- Redevelopment activities are permitted within the RPA, provided that a Water Quality Impact Assessment (WQIA) is reviewed and approved, a Plan of Development is followed and the project complies with applicable erosion and sediment control and stormwater management requirements.

- Encroachments into the landward 50 foot portion of the RPA buffer are permitted by-right on lots recorded prior to October 1, 1989 **only when there is not sufficient land area outside the buffer for the principal structure and the required utilities**. A Water Quality Impact Assessment must show that the encroachment is the minimum necessary to afford relief, and, where practicable, a vegetated area equal in size to the encroachment and equal in ability to provide water quality benefits must be established elsewhere on the site.

- Encroachments into the landward 50 foot portion of the RPA buffer are permitted by-right on lots recorded between October 1, 1989 and March 1, 2002 **in those localities whose Chesapeake Bay Preservation Ordinances contained buffer equivalency language**, provided that the lot was legally created, that any conditions or mitigation required by a previous exception are met, and that any previously required Best Management Practices (BMPs) are functioning effectively (and will be reestablished or repaired if required). These criteria are in addition to the two criteria required for pre-1989 lots described above.

- Flood control and stormwater management facilities that drain or treat water from multiple development projects may be permitted in the RPA provided that they are part of a local regional stormwater management program that has been reviewed and approved as a Phase 1 program modification by the Chesapeake Bay Local Assistance Board and is consistent with the water quality protection provisions of the *Virginia Stormwater Management Regulations* (4 VAC 50-60 *et seq.*).

- Public utilities, public roads, railroads, and structures accessory to these uses are permitted within the RPA provided that the installation conforms to both the Erosion and Sediment Control Law (§10.1-560 *et seq.* of the Code of Virginia) and the Stormwater Management Act (§10.1-603.1 *et seq.* of the Code of Virginia) and the facilities are constructed according to an erosion and sediment control plan and a stormwater management plan approved by the Department of Conservation and Recreation. The construction of public roads is further conditioned on the minimization of the encroachment into the RPA and a minimization of water quality impacts.

- Certain public utilities may be located within the RPA provided that specific conditions are met.

- The General Performance Criteria apply to **any** development occurring within a Chesapeake Bay Preservation Area, including exempted activities and uses that are permitted by right. Localities are to insure compliance with the criteria through a review of a Water Quality Impact Assessment, which ~~are~~ is required for **all** development activities (excluding exempted uses) within a RPA.

Exceptions

Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations

September 16, 2002, Revised June 15, 2009

Purpose:

This document provides local planners and officials with guidance when considering exceptions to requirements of the Chesapeake Bay Preservation Area Designation and Management Regulations as implemented at the local level.

The Regulations provide authority for local relief mechanisms in cases where a development proposal cannot meet the regulatory requirements due to a unique set of circumstances and conditions. The Regulations also outline a process by which adjacent property owners and other concerned citizens are to be included in the exception review and decision-making process.

Regulations:

- Section 9 VAC 10-20-130 1 a requires a Water Quality Impact Assessment (WQIA) for any proposed land disturbance in a Resource Protection Area.

- Section 9 VAC 10-20-150 C 1 permits exceptions to the General Performance Criteria (9 VAC 10-20-120) and the Development Criteria for Resource Protection Areas (9 VAC 10-20-130) and sets forth the findings that must be made in granting the exception request.

- Section 9 VAC 10-20-150 C 2 requires that local governments design and implement a process for considering exception requests and sets forth the public notice and public hearing requirements for considering certain exception requests.

- Section 9 VAC 10-20-150 C 3 permits exceptions to the other provisions of the Regulations and sets forth the requirements for granting such exception requests.

- Section 9 VAC 10-20-150 C 4 addresses the alteration or expansion of nonconforming principal structures. Such activity does not require a formal exception; however, it does require that the findings set forth in 9 VAC 10-20-150 C 1 are made through a local administrative review process.

Discussion:

Webster's Ninth New Collegiate Dictionary defines the term "exception" to mean "a case to which a rule does not apply," and it is in this manner that the term is used for purposes of this guidance. An analogous term familiar to many in the planning and land use profession is "variance." The Department recognizes that there are instances where the full measure of the Regulations can not be imposed, and where exceptions to the Regulations could be made.

The Regulations distinguish between exceptions for proposed development activities within Resource Protection Areas, those relating to the general performance criteria, and other requests

for exceptions not included in the first two situations. The Regulations differentiated between these types of exception requests in order to ensure that each was reviewed in the most appropriate forum. For instance, the requirement that any exception request relating to RPA issues be considered in a public forum was included because of complaints by citizens that they were afforded no notice or input on such requests. Other exception requests may be considered in a more administrative manner, in part because such requests do not have the same potential impact on adjacent properties.

Exceptions Generally

The exception process is intended to identify the minimum relief necessary to permit the proposed use. To assist in this determination, a Water Quality Impact Assessment (WQIA) is to be used in evaluating the site of the proposed exception, the potential effects of the exception, and for identifying mitigation measures that are appropriate to counteract those effects. The WQIA is to be reviewed **prior** to action on the exception request. Also, all land disturbances or development in the RPA require the preparation and consideration of a WQIA.

The approval of any exception must be based upon the making of certain findings. For exceptions dealing with the General Performance Criteria or for activity in the RPA, findings outlined in Section 9 VAC 10-20-150 C 1 must be addressed. For all other exception requests the findings must determine that it is the minimum necessary to afford relief and that reasonable and appropriate conditions are imposed, as necessary, so that the purpose and intent of the Act are preserved. These requirements are intended to relate not only to the potential water quality impact of the exception request, but are also intended to evaluate the request from an equity perspective and to ensure that exceptions are not arbitrary and capricious, but are decided on the specific facts related to the application. The following is a brief description and discussion of each of the required findings.

The requested exception to the criteria is the minimum necessary to afford relief.

Localities should use the requested exception as a starting point and work with the applicant to refine their proposal to meet the review standards. The terms “minimum necessary to afford relief” is inherently a subjective standard that must be considered on a case-by-case basis, taking into account the specifics of a particular request. When considering the minimum necessary to afford relief, things such as the size of the structure, the types of proposed structures, and the placement of the structures in relation to the size, layout and location of the lot or parcel are important considerations. Some examples of requests that would not be the minimum necessary to afford relief could include an application for an extremely large structure on a given lot or parcel, especially when compared to the size of the structures in the adjacent lots. Another example would be a request for a house that would be located outside of the RPA, but with a large attached deck with a pool that would be located within the RPA. In this instance, the sole reason for the exception request relates, not to a use of the property, but to the extent that the applicant wishes to use the property. In this example, consideration of relocation of the house on the lot or resizing the deck and pool are all potential solutions that may result in the property owner achieving their desired use without the need for an exception. Should alternative location, sizing, or orientation options to avoid the need for an exception be available, and the applicant chooses to continue with the exception request, then the finding of “minimum necessary to afford relief” would not be present.

Granting the exception will not confer upon the applicant any special privileges that are denied by this Part IV to other property owners who are subject to its provisions and who are similarly situated.

This finding is intended to make sure that an exception request would not give the applicant something that has been denied to others in similar situations, and gets to the equity, fairness, and arbitrary and capricious aspects of any exception request and decision. For instance, a property owner requests an exception to build a pool in the RPA and neighbors have applied for and been denied a similar request. In this instance, if the exception is approved, a special privilege has been permitted for one neighbor but not the others.

The exception request is in harmony with the purpose and intent of this Part IV and is not of substantial detriment to water quality.

As the purpose of the Regulations is to protect water quality, this is the finding that should focus on the protection of water quality. The appropriate vehicle for determining whether water quality will be adequately protected should a given request be approved, is the Water Quality Impact Assessment (WQIA).

The exception request is not based upon conditions or circumstances that are self-created or self-imposed.

This finding is somewhat related to the first finding, that the request is the minimum to afford relief, however it is different in that this finding focuses more on the actions of the property owner. For instance, if a lot area is 10,000 square feet, and encumbered by the RPA, then a property owner's desire to place a 7,000 square foot house on the lot would essentially be a self-imposed condition, in that a smaller house would be more suitable for the lot size. In general this finding relates, in most cases, to a property owner's failure to realize that their property is not suited for their intended use. When the circumstance for the request is "self-created", the request should be denied by the local body, board or commission.

Reasonable and appropriate conditions are imposed, as warranted, that will prevent the allowed activity from causing a degradation of water quality.

Conditions should be imposed to ensure, among other things, that water quality is protected, and that the function of the undisturbed RPA remains. Conditions should be based, in part, upon the findings of the WQIA, as well as the specific situation of the lot or parcel on which the exception request was permitted. In addition to possible stormwater management BMP requirements to help compensate for the loss of the pollutant removal aspect of the RPA, a locality should investigate opportunities to require additional vegetative plantings elsewhere on the lot or parcel, to boost the functions of the undisturbed RPA. Also, a locality could require additional vegetation to be installed in the remaining portion of the RPA (including the buffer component).

Process for Reviewing Exceptions

Exceptions to the Regulations, particularly those related to requests for uses and development within RPAs, should be considered in those situations where the property owner can show that the property was acquired in good faith and where, by reasons of the exceptional narrowness, shallowness, size or shape of the property, or where by reasons of exceptional topographic conditions or other extraordinary conditions associated with the owner's property or of immediately adjacent properties, the strict application of the requirements would prohibit or unreasonably restrict the use of the property.

The need for exceptions should be identified as early in the development review process as is possible. This will allow a project to proceed through the review, approval, and construction phases with a minimum of delays, saving both the locality and the applicant time and money. For example, while seeking a building permit to construct a home with a deck that encroaches into the RPA, the applicant states that he intends, in the future, to add a detached garage. Even though the building permit submission only addresses the construction of the primary structure and its deck, the applicant should be encouraged to incorporate the detached garage into the exception request in order to save the time, money, and debate associated with filing a separate exception request when the garage is desired. In this case, the discussion and analysis used in considering the exception for the potential garage may have a direct bearing on the location of the proposed deck, especially if the garage would not be accommodated as an accessory structure, but would be allowed if it were attached to the principal structure.

The exception-granting body is permitted to require reasonable and appropriate conditions in granting the exception request. Examples of reasonable and appropriate conditions that could be considered include re-vegetation to compensate for buffer encroachment or establishment of a buffer where one did not previously exist, requiring the use of porous pavement or other water permeable materials, and requiring the use of level spreaders and dry wells to increase stormwater infiltration. Other measures should also be considered, depending upon the circumstances of each case.

Other forms of regulatory relief should be considered before an exception is pursued. Variances from the side and/or front yard setbacks may be able to accommodate the proposed development and negate the need for the exception. For example, a front yard setback variance may be more appropriate than granting an encroachment into an RPA, depending upon the individual circumstances of the case.

Local Exception Review Body Options

The are several options for fulfilling the requirement of 9 VAC 10-20-150 C 2 a, which states that an exception may be considered and acted upon only by the local legislative body; the local planning commission; or a special committee, board or commission. For those localities that incorporate the Regulations into their local Zoning Ordinances, Chesapeake Bay Preservation Act program exceptions may be considered by the Board of Zoning Appeals in the same manner as a variance request; or, as allowed for under 9 VAC 10-20-150 C 2 b, they may be referred to a special board or commission which has been delegated the authority to act on exceptions. For those localities that enact their local Bay Program provisions through a separate, stand-alone ordinance or through multiple provisions throughout their code, exceptions may be acted upon by the governing body, the planning commission, or a special committee, board, or commission that is given that specific authority. A few localities use a special board. Localities may also use a special board or planning commission to consider the exception request as part of the plan of development review process.

Appeals of decisions related to exceptions granted by the Board of Zoning Appeals should be administered similarly to other appeals related to variance decisions. Where the exception authority is delegated to some other body (i.e., a special Chesapeake Bay Board or the local Planning Commission, for example), the appeal process may involve the local governing body, the Board of Zoning Appeals (if the local Chesapeake Bay Preservation Ordinance is contained within the Zoning Ordinance), or some other body appointed by the Board of Supervisors or Council. The decision as to how to best accommodate the review, action, and appeal of exceptions is truly dependent upon the unique circumstances of each locality, however, a 2008 revision to the Act requires a minimum 30 day period for an appeal when the appeal process is codified in a local ordinance.

Local governments should recognize that the body designated to consider exception requests might need to be trained in the particular requirements of the local Chesapeake Bay preservation ordinance. The DCBLA staff is available to assist in this effort. Additionally, careful consideration should be given to the makeup of any special board or commission created to consider exception requests. A balanced membership could include individuals with land use planning experience, engineers, real estate professionals, attorneys, and related professions along with citizen representation.

Exception Tracking

Localities should design and implement a tracking system for exceptions. The applicant's name, the property address, the tax parcel number, the case number, and a general statement of the type of request should be catalogued so that the locality and the Department can quickly analyze the location of requested encroachments, their disposition, and the types of development activities that are being reviewed. This tracking system can also be used to monitor "serial exceptions." These are properties that have a series of exception requests (i.e., a request for an encroachment for a deck or patio, then a separate request for an accessory building, etc.). The Department discourages "serial exceptions" because the criteria for granting an exception are based on the minimum necessary to provide for use of the property, not convenience or desire for a particular level of development.

Resource Protection Area (RPA) Exception Requests

The requirements for consideration of an exception to the Development Criteria for Resource Protection Areas (9 VAC 10-20-130) require public notice, public hearing by a committee, board, commission or special body, and the review of the request according to very specific criteria resulting in findings.

The public must be notified of the hearing at which the exception will be considered as required by §15.2-2204 of the Code of Virginia, except that only one hearing is required and first-class mail may be used in notifying qualifying adjacent property owners. The exception may only be granted by the local legislative body, the local Planning Commission or such other board or commission established specifically for the purpose of reviewing and approving exceptions to the locally-adopted Chesapeake Bay Preservation Ordinance. For example, an exception application requesting permission to construct a detached garage within the landward 50' of the RPA buffer on a lot recorded after the date of the local program adoption could not be handled administratively, but rather must be heard by the body charged with granting exceptions. The case could only be heard after the required public notice and during the required public hearing.

Granting the exception must be based on the findings outlined in subdivision a-f of 9 VAC 10-20-150 C (these are listed previously). The findings must be made in writing and a record of

the hearing maintained. In deciding the matter, the board must consider a Water Quality Impact Assessment and may impose reasonable conditions upon the applicant. These conditions could include buffer restoration requirements, types of materials that may be used in the construction, maximum size of the structure, and the exact location of the structure. Other conditions may be warranted and will vary from case to case.

Exceptions for General Performance Criteria

Exceptions to the General Performance Criteria (9 VAC 10-20-120) may be granted through an administrative review process provided that the same findings required for use or development exceptions in RPAs are made in writing. As these exception requests are not likely to have the same potential impact on similarly situated or adjacent property owners, the Regulations do not require that such requests be considered through the public notice and special body hearing process as those requests relating to RPA issues. Exception requests from the full application of the general performance criteria can be diverse in nature. For example, the 100% reserve drainfield requirement may be set aside through an administrative exception process provided that the request is related to the unusual size, shape, or topography of the parcel and the locality requires conditions such as monitoring of the primary septic system to ensure function, or for a pressurized septic system to ensure more efficient use of the drainfield.

Other Exceptions

All other exception requests may be processed administratively but still require the minimal findings that it is the minimum necessary to afford relief and that reasonable and appropriate conditions are imposed, as necessary, so that the purpose and intent of the Act is preserved.

Conclusions:

Based on these factors, the Department provides the following guidance:

- The requirements for consideration of an exception to the Development Criteria for Resource Protection Areas (9 VAC 10-20-130) require public notice, public hearing by a committee, board, commission or special body, and the review of the request according to very specific criteria resulting in findings.

- Exceptions to the General Performance Criteria (9 VAC 10-20-120) may be granted through an administrative review process provided that the same findings required for use or development exceptions in the Resource Protection Area are made in writing.

- Exceptions to the Regulations should be granted in those situations only where the property owner can show that the property was acquired in good faith and where, by reasons of the exceptional narrowness, shallowness, size or shape of the property, or where by reasons of exceptional topographic conditions or other extraordinary conditions associated with the owner's property or of immediately adjacent properties, the strict application of the

  requirements would prohibit or unreasonably restrict the use of the property in question.

- The Department recognizes that localities may have incorporated the Regulations into their local Zoning Ordinances. In those instances, Chesapeake Bay preservation provision exceptions may be considered by the Board of Zoning Appeals in the same manner as a variance request or they may be referred to a special board or commission to which the authority to review such requests has been delegated.

- Localities must review a Water Quality Impact Assessment (WQIA) prior to acting on an exception involving modification of or encroachment into an RPA.

- The need for exceptions should be identified as early in the development review process as is possible.

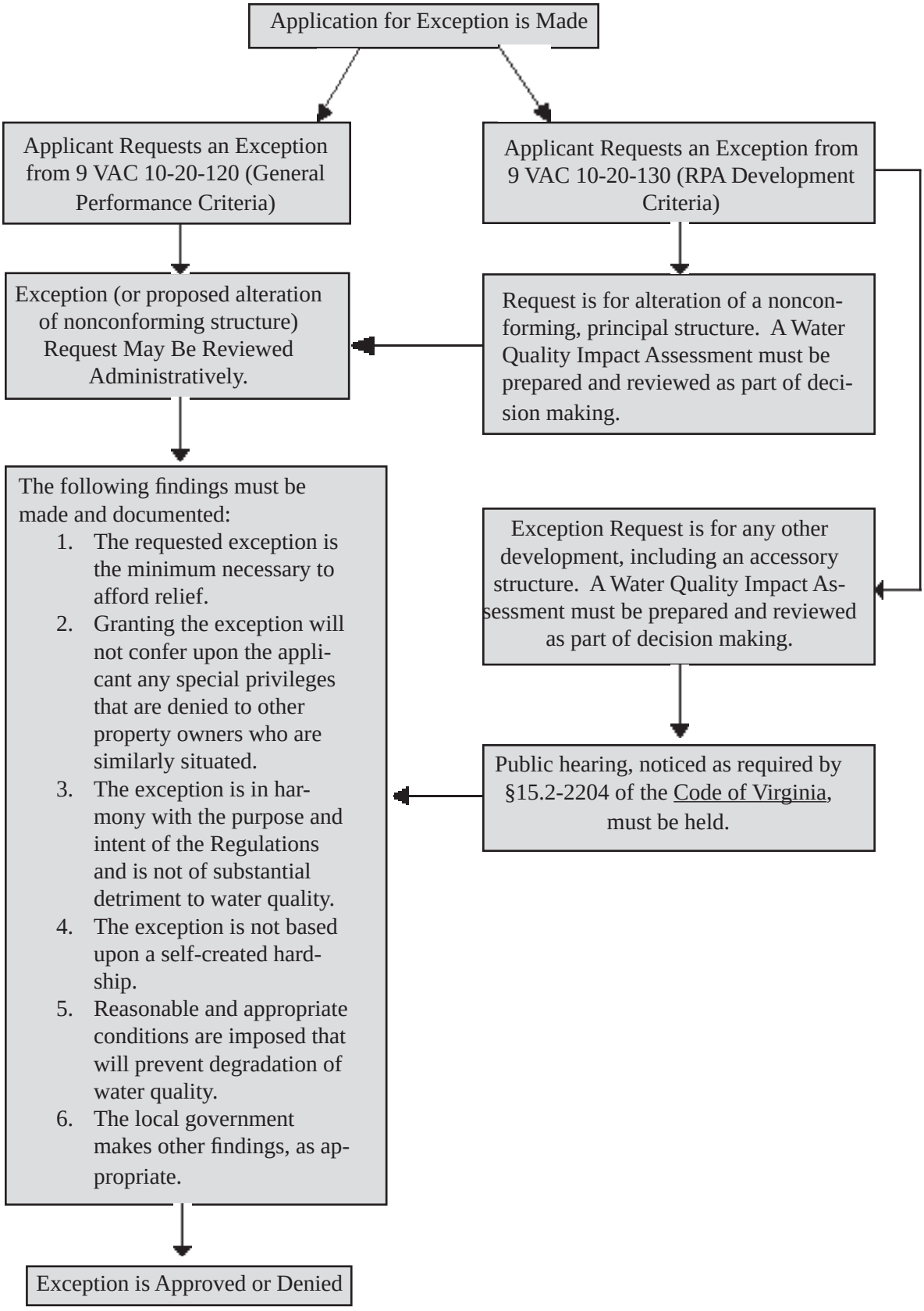
- Exceptions are to be the minimum necessary to afford relief.

- Other forms of regulatory relief should be considered before an exception is pursued.

- The exception-granting body is permitted to require reasonable and appropriate conditions in granting the exception request.

- Localities should design and implement a tracking system for exceptions.

Exception Review Process



Nonconforming Structures and Uses

Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations

September 16, 2002

Purpose:

This document provides local planners and officials with guidance on administering those sections of the Chesapeake Bay Preservation Area Designation and Management Regulations related to nonconforming structures and uses.

Nonconforming structures and uses (i.e., structures and uses that were legally constructed or established but that no longer meet current legal requirements) are protected under the Chesapeake Bay Act and Regulations. These structures and uses may, in some cases, be expanded provided that the local government reviews the requested expansion or alteration through a standardized process and makes certain findings.

Regulations:

- Section 9 VAC 10-20-150 A 1 permits, but does not require, local governments to allow for the continued use of, but not necessarily the expansion of, any structure or use in existence at the time of the local program adoption. This section also allows local governments to administratively review and approve requests to modify structures on nonconforming lots.

- Sections 9 VAC 10-20-150 A 1 a and b outline the criteria that must be considered when approving such expansions, including (1) that there be no net increase in the nonpoint source pollution load, and (2) that any land disturbance exceeding 2,500 square feet in size complies with erosion and sediment control requirements.

- Section 9 VAC 10-20-150 A 2 permits the reconstruction of a nonconforming structure that is lost to casualty, provided the structure complies with all other local requirements.

- Section 9 VAC 10-20-150 C 4 permits local governments to administratively review and approve exception requests to modify nonconforming **principal** structures, provided that the two criteria identified above are met and the findings required by Sections 9 VAC 10-20-150 C 1a-1f are made. This provision does **not** apply to nonconforming **accessory** structures located within the Resource Protection Area, the expansion of which may only be approved through the complete exception process.

Discussion:

Nonconforming structures and uses enjoy certain rights under general land use practices. Generally, nonconforming structures and uses may continue to be used provided they are not expanded in area or intensity. For purposes of this guidance, the Department relies on the definition of “structure” contained in the Virginia Uniform Statewide Building Code (effective date September 15, 2000), which defines “structures” to be “an assembly of materials forming a construction for occupancy or use.”

In the context of the Act and Regulations, nonconforming structures and uses are most directly related to restrictions placed on land use and development in Resource Protection Areas. The Chesapeake Bay Preservation Area Designation and Management Regulations specifically permit the local government to approve the modification or expansion of these structures and uses, provided that the local government makes certain findings regarding the potential effect of the modification or expansion on water quality. A Water Quality Impact Assessment (WQIA), reviewed before final approval for the development is given, must be an integral part of the approval process.

Nonconforming Structures

An example of a nonconforming structure is a small cottage or vacation-home that was constructed within the area now designated as an RPA, but prior to the adoption of the Act and Regulations and that the owner now wants to expand to accommodate year-round occupancy. The use (a single family dwelling) is not a permitted use within the RPA and is considered nonconforming. Under the Regulations, local governments may administratively review a request to modify such a structure, and may grant the request provided that certain findings are made.

These findings are contained in two separate sections of the Regulations: 9 VAC 10-20-150 A and 9 VAC 10-20-150 C. Section 9 VAC 10-20-150 A requires that there be no net increase in the nonpoint source pollutant load and that any land disturbance or development exceeding 2,500 square feet in area must comply with all erosion and sediment control requirements. Additionally, the findings in Sections 9 VAC 10-20-150 C 1 a-f must be made. These findings are the same findings that must be made for the granting of an exception and include (1) The requested modification is the minimum necessary to afford relief from the Regulations; (2) granting the approval will not confer any special privilege upon the applicant, but instead is based upon unique conditions associated with the parcel; (3) the modification is in harmony with the purpose and intent of the Regulations and is not of substantial detriment to water quality; (4) the modification is not required as a result of a self-created or self-imposed hardship; (5) reasonable and appropriate conditions are imposed as warranted; and, (6) the local government has made other findings, as appropriate.

Modifications to nonconforming accessory structures may also be permitted, but these modifications must be reviewed and approved using the process for considering exceptions to the Regulations. For purposes of this guidance, the DCBLA considers decks, garages, and other customary and incidental structures that are attached to the principle structure to be part of the principal structure. As such, the review and approval of these structures may be done administratively. Detached structures, such as detached garages, gazebos, tool sheds, and similar structures are clearly accessory to the principle use, and modifications or expansions of these structures must be reviewed and approved using the formal exception process. Inground pools, patios, terraces, and other impermeable landings are considered accessory uses of land, not structures, and any modification or expansion to such a use must be reviewed and approved using a formal exception process.

In both cases, every effort should be made to site the modification or expansion so that no further encroachment into the RPA occurs. Where possible, existing areas of impervious cover should be used to site modifications or expansions of nonconforming uses, thereby allowing for increased usable area while not increasing impervious area.

Nonconforming Uses

Uses, too, can be nonconforming with respect to the Act and Regulations. A parking lot serving a long-established marina or waterside restaurant is an example of a use that pre-dates the Act and Regulations and which may need to be modified or expanded under the nonconforming use provisions of the local ordinance. Because the modification or expansion of such uses typically results in significant land disturbance, all modifications or expansions to nonconforming uses of land must be reviewed and approved using the formal exception process. Changes in use from one nonconforming use to another nonconforming use may require a formal exception, depending upon whether land disturbing or other development activities will take place.

Conclusions:

- All development activity, including additions to nonconforming structures, within a Resource Protection Area (RPA) must be reviewed and approved by the local government.

- Development activity, not specifically permitted elsewhere in the Regulations, may be permitted within the RPA either through the approval of an administrative waiver or when approved through a formal exception process.

- Local governments may administratively approve the modification or expansion of a noncon forming **principal** structure. The findings outlined in 9 VAC 10-20-150 1 a-f must be made.

- Local governments must use the exception process contained within the local ordinance to approve all other modifications to nonconforming structures and uses.

- The Division of Chesapeake Bay Local Assistance recognizes a difference between nonconforming **uses** and nonconforming **structures**. Nonconforming uses could possibly exist within the Resource Protection Area buffer that do not require any structures (e.g., active recreation fields, boat storage, etc.). Consideration of requests to expand such uses must be through the full exception process – including a public hearing. Such uses will, most likely, require significant land disturbance or buffer destruction and these potential effects warrant a public hearing and public participation in the decision-making process.

- Decks and garages that are attached to the principal structure may be considered a part of the principle structure. Pools, patios, tennis courts and other impermeable surfaces do not permit infiltration to groundwater and are to be considered accessory uses of land. They are not to be considered structures and their expansion may not be processed administratively.

- Expansions to nonconforming **accessory** structures may not be processed through an administrative waiver process and must be reviewed through an exception process involving public notice and a public hearing. Accessory structures include, but are not limited to, detached garages, gazebos, storage buildings, guest houses, and similar forms of development that are customarily incidental and subordinate to the principle structure.

- The Division of Chesapeake Bay Local Assistance recommends that additions to nonconforming structures, either principle or accessory, not be allowed to encroach further into the RPA than does the existing structure and that, to the extent possible, additions should be within an area of existing impervious cover. In keeping with the General Performance

Criteria, any encroachment permitted must be the minimize impervious area, minimize land disturbance, and maintain indigenous vegetation to the extent practicable. Encroachments into the seaward 50' of the RPA buffer are discouraged.

- A Water Quality Impact Assessment (WQIA) must accompany any request to expand a nonconforming structure or use, and the WQIA must be reviewed and approved **prior** to the issuance of any permits for development activity within the RPA. Accessory structures may require only a minor WQIA, and allowances should be made in the local ordinance for such instances.

- Additions to structures that have previously received exceptions are discouraged. All required encroachments should be identified and addressed in one action, if at all possible.

Resource Protection Area: Buffer Area Encroachments

Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations

September 16, 2002, Revised June 15, 2009

Purpose:

This document provides local planners and officials with guidance on requirements of the Chesapeake Bay Preservation Act with regard to the circumstances under which structures such as buildings and other impervious surfaces may be placed in the buffer area. Information of the circumstances for removing vegetation for sight lines, views and vistas, shoreline erosion control projects, woodlot management and pathways will be prepared in the future as part of an ongoing grant project.

The Bay Act Regulations establish the Resource Protection Area (RPA) as the "landward" component of the Chesapeake Bay Preservation Area. RPA's are composed of tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, tidal shores, such other lands considered necessary to protect the quality of state waters and a 100 foot buffer adjacent to and landward of these features. The buffer component is an extremely important part of the RPA, as it filters nonpoint source pollution, controls erosion and retards runoff.

Regulations:

- Section 9 VAC 10-20-80 B 5 requires a buffer area of not less than 100 feet in width as the landward component of Resource Protection Areas (RPAs).

- Section 9 VAC 10-20-130 1 lists the land development activities or uses that are permitted to occur within the Resource Protection Area, including the 100-foot buffer area component. These include: water dependent facilities, redevelopment activities, roads and drives under certain circumstances, and stormwater management and flood control facilities under certain circumstances.

- Section 9 VAC 10-20-1 a requires a Water Quality Impact Assessment to be submitted for any land disturbing activity within an RPA, including the buffer component.

- Section 9 VAC 10-20-130 3 states "[t]he 100-foot wide buffer area shall be the landward component of the Resource Protection Area…" and continues by noting "[n]otwithstanding permitted uses, encroachments, and vegetation clearing as set forth in this section, the 100-foot wide buffer area is not reduced in width. To minimize the adverse effects of human activities on the other components of the Resource Protection Area, state waters, and aquatic life, a 100-foot wide buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained if present and established where it does not exist."

- Sections 9 VAC10-20-130 4 a and b outline the conditions under which encroachments for new structures may be approved under an administrative process by a local government and the conditions that must be met when approving these encroachments.

Discussion:

As the landward component of the RPA, the buffer area is extremely important to the protection of the remaining RPA components and water quality. The functions of the buffer serve to not only protect the tidal shores, tidal wetlands and nontidal wetlands that comprise the remainder of the RPA, it also serves to protect water bodies with perennial flow from additional pollution inputs.

Nonpoint source pollution is a cumulative phenomenon. Nonpoint source pollution is a significant contributor to overall water quality concerns, because the land area draining to the Chesapeake Bay and its tributaries is vast. Nonpoint source pollution is also an incremental phenomenon in that its effects are exacerbated over time and distance. Lands nearest to water resources do not necessarily contribute the most pollution but their proximity makes the impact immediate and these lands represent the last opportunity for pollution control and prevention. Although a vegetated buffer has many additional functions, the buffer area as outlined in the Regulations has three primary functions: retard runoff, prevent erosion and filter pollution,

The buffer area works to retard runoff by slowing down the speed of the overland surface water, which enables the water to filter through the surface of the ground and be taken up the plant roots. This function helps to prevent channels from forming and also enhances the pollutant removal capacity of the buffer area. Retarding runoff is one way that the buffer area assists in the prevention of soil erosion.

The buffer area prevents erosion by trapping and holding surface water that flows across it. The vegetation in the buffer area not only slows down the velocity of the runoff, but enhances the filtering of sediment. The roots of the vegetation actually bind the soil, preventing erosion from occurring in close proximity to the water feature or wetland. A vegetated buffer also helps to prevent erosion because the vegetation helps to protect the ground surface from rain impact. All these functions are enhanced if the buffer is forested.

Research in the decade since the Regulations were first promulgated supports vegetated buffer areas adjacent to wetlands and other water features for water quality protection and improvement purposes. In fact, numerous states have voluntary or mandatory vegetated buffer requirements as part of an overall water quality protection program. Research indicates that vegetated buffer areas adjacent to wetlands or other water features can not only function to remove pollutants from stormwater runoff over land but, when forested, buffer areas can function to remove pollution from groundwater by absorbing it through the tree roots.

The Chesapeake Bay Program recognized the significance of vegetated buffers. In 2002, signatories of the Chesapeake Bay Agreement met the goal of 2010 miles of restored riparian buffers by 2010, set forth in the 1996 Riparian Forested Buffer Initiative, eight years ahead of schedule primarily by partnering with the USDA to implement the Conservation Reserve Enhancement Program (CREP). In 2002 the goal was extended to 10,000 miles of additional buffers by 2010. To achieve the 2007 Chesapeake Bay Program's Forest Land Protection Goal of 695,000 acres by 2020, the Virginia Department of Forestry developed a Forest Conservation Plan identifying strategies that will result

in permanent protection of 135,000 forested acres within Virginia's Bay watershed by 2012 and 315,000 acres by 2020.

In addition to the water quality benefits of buffers, many land use ordinances use buffers to separate incompatible uses and in one sense, the RPA 100-foot buffer serves in this capacity. The ability of the buffer to separate man-made structures and land disturbances from the wetlands and other water bodies is one of the more important functions of the buffer area, and is a significant reason it is the landward component of the RPA.

Given the importance of the buffer area in protecting water quality, the Regulations outline additional criteria that must be adhered to relating to encroachments of structures and buildings in the buffer area, as well as the circumstances for removing vegetation in the buffer area. As the water quality functions of the buffer area are directly related to the presence of filtering vegetation, placement of impervious surfaces that change or inhibit this natural filtering capacity is to be carefully monitored and mitigation to address the loss of function is necessary. Also, the removal of vegetation in the buffer area that provides for the filtering, runoff control and erosion control must also be limited to those types of activities outlined in the Regulations, and mitigation for the removal of vegetation must be required.

Conclusions:

Based on these factors and the Regulations, the Department provides the following guidance regarding buffer modification and encroachments:

Buffer Area reductions **-** The buffer area is never reduced in width. The Regulations make it very clear that the buffer area must, in all cases, be 100 feet in width and that the presence of structures, uses, encroachments or vegetation clearing does not reduce the width of the buffer component. When encroachments are permitted, either (1) as a permitted development or redevelopment activity, or (2) as a new structure on lots recorded prior to October 1, 1989 or between that date and March 1, 2002, the designation of the buffer area as the landward component of the RPA remains

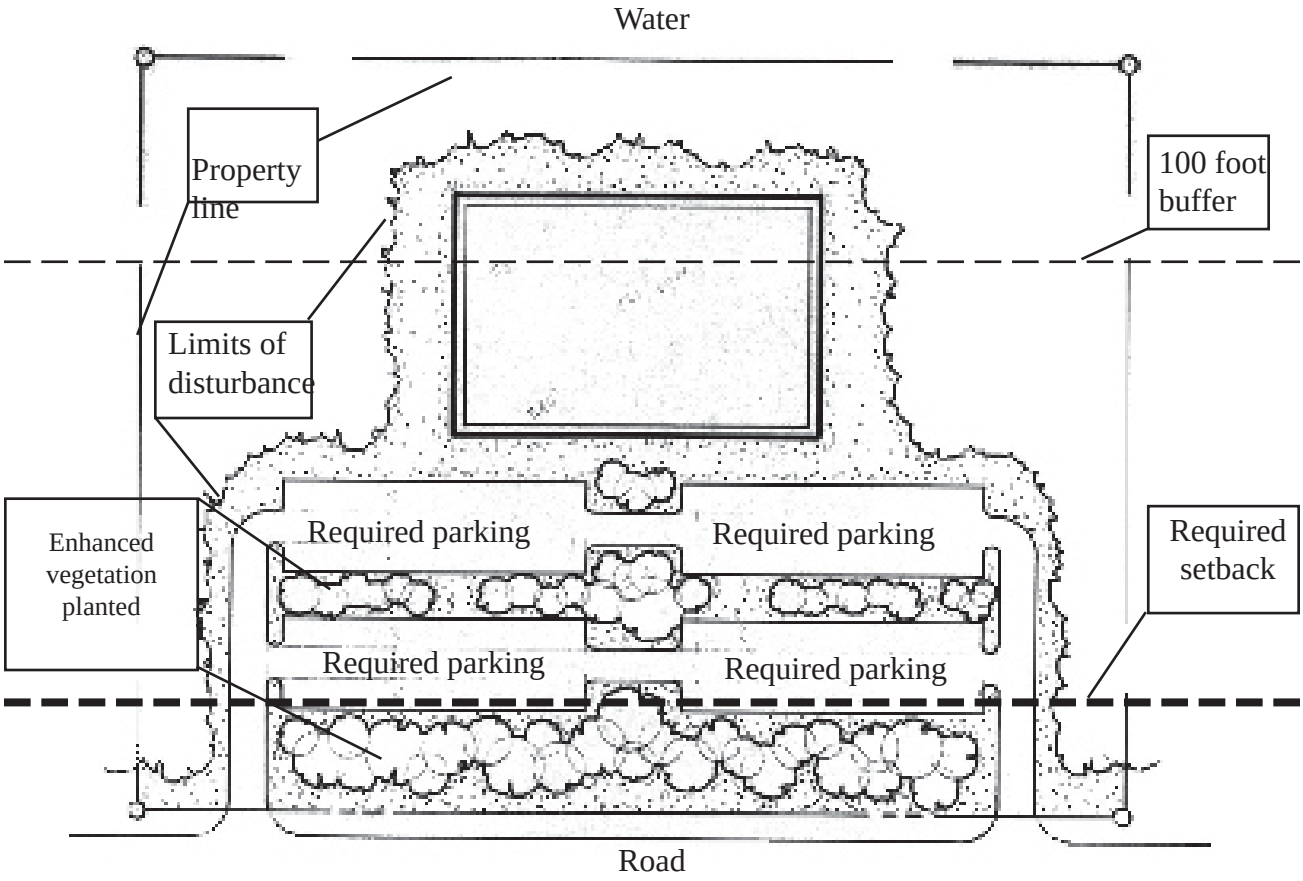
Buffer encroachment for new development **-** Under the circumstances outlined in the Regulations, encroachments may be permitted within the buffer area for the construction of buildings or other structures. The guidance document, *Resource Protection Areas: Permitted Uses and Development* discusses in greater detail the permitted development activities within the Resource Protection Area. For other structures, buildings and other structures may be placed in the buffer on to lots recorded prior to October 1, 1989 and also on certain other lots that may have been recorded between October 1, 1989 and March 1, 2002. **However, this administrative review and approval is permitted only for a principal structure and necessary utilities, and only when the application of the full 100-foot buffer would render the lot unbuildable.** In both cases, the encroachment is to be the minimum necessary to permit the construction of a principal structure and necessary utilities and in no way permits the width to be reduced for the full length of the buffer .

Webster's Dictionary (9th edition) defines "principal" as "…a matter or thing of primary importance." Using this definition, a principal structure would be one primary structure. Furthermore, the principal structure would be one that is necessary to use the land in the manner permitted by the underlying zoning classification. Necessary utilities includes such things as electric and telecommunication lines, water and on-site or public sewage disposal facilities.

While this provision most often relates to residential properties, it is possible for proposed development on a pre-1989 commercial or industrial lot to be considered under this provision. For commercial or industrial development, the principal structure provision would apply to such things as a warehouse (but not the parking area); a convenience store (but not gasoline pumps, etc); or an office building (but not several office buildings). Reviewing and approving administrative waivers for non-residential properties is more dependent on the underlying zoning district requirements in terms of the types of development that are allowed. However, just because a lot or parcel was recorded prior to October 1, 1989 does not mean that the entire landward 50 feet of the buffer area can be developed under this provision. As is discussed below, the relief afforded to any pre-recorded lot or parcel must be the "minimum necessary."

For residential development, the Department considers a principal structure to be a house, which may include a front porch, and stairs etc. necessary for accessing the house, and it may include an

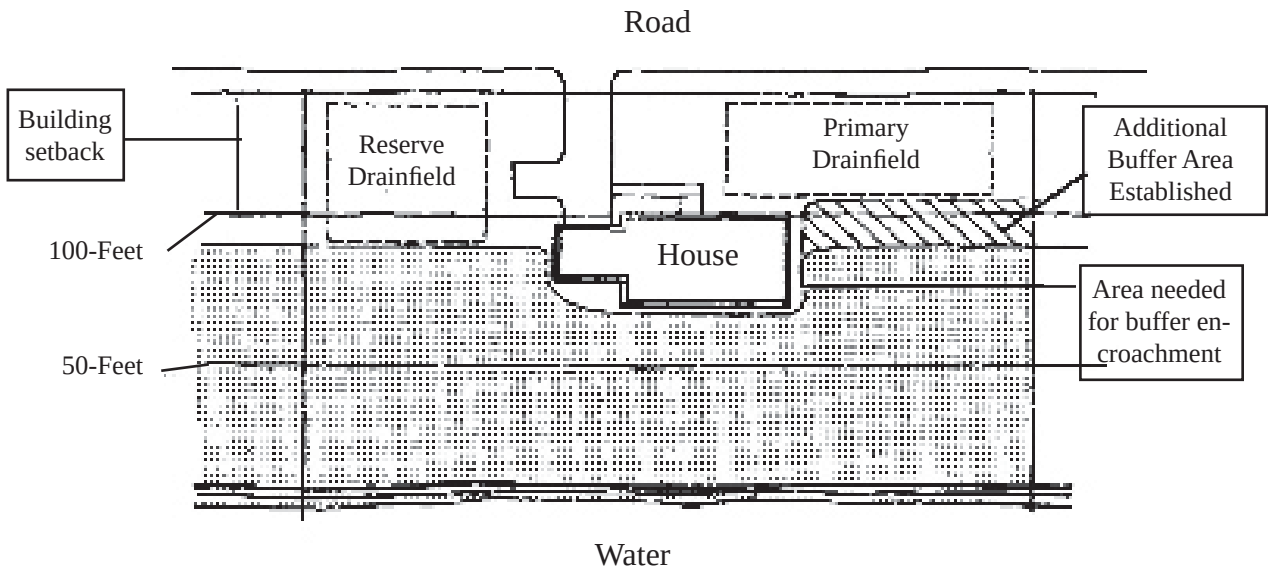
Example 1 - Non-residential development encroachment



attached garage, depending on the situation. While some localities consider an attached deck as part of the principal structure, the Department does not encourage the approval of encroachments into the buffer area under this provision for the purpose of placing an attached deck. Some localities have begun to require building setback lines from the edge of the RPA itself, to ensure adequate area for future additions such as decks and patios, and yard area without encroachments into the RPA. Items

not considered as part of a principal structure include pools, gazebos, patios, free-standing decks or garages, or storage sheds, etc.

In considering and granting these administrative waivers, the Department also notes that the size, location, orientation, etc. of the proposed structure should be reviewed by the locality for consistency with the requirement of "minimum necessary to achieve a buildable area for a principal structure and necessary utilities." In some cases, the sole reason a property owner requests an administrative waiver for a pre-1989 lot is to place a house with a large footprint on a small lot. In other cases, the request is made because the property owner wishes to be closer to the water. The local government should not approve an administrative waiver under either of these circumstances. Such requests should be considered under the formal exception request.

The location of soils suitable for an onsite septic system and drainfield and the encumbrance of the vast majority of a lot or parcel by the RPA, are two of the situations that warrant the approval of an administrative waiver on lots recorded prior to October 1, 1989. The figure below illustrates one situation where such a waiver is warranted.

Example 2 - Residential development encroachment