



CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMWATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

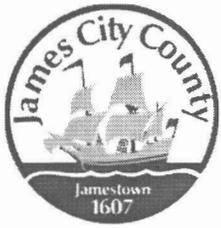
BMP NUMBER: YC022

DATE VERIFIED: January 14, 2013

QUALITY ASSURANCE TECHNICIAN: Leah Hardenbergh



LOCATION: WILLIAMSBURG, VIRGINIA



Stormwater Division

MEMORANDUM

DATE: March 13, 2010
TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services
FROM: Jo Anna Ripley, Stormwater
PO: 270712
RE: Files Approved for Scanning

General File ID or BMP ID: YC022

PIN: 2430100035B

Subdivision, Tract, Business or Owner

Name (if known):

Chesapeake Bank

Property Description:

Bank

Site Address:

6619 Richmond Road

(For internal use only)

Box 24

Drawer: 9

Agreements: (in file as of scan date)

Y

Book or Doc#:

040029616

Page:

040027712

Comments

040029616

COPY

COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS

INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 9th day of November, 2004,
 between Chesapeake Bank, and
 all successors in interest, ("COVENANTOR(S),") owner(s) of the following property:
 Street Address: 6601 Richmond Road, Williamsburg, VA 23188
 Legal Description: Parcel B/ 1.35 acres
 Project Name: SP-074-04 Chesapeake Bank- Lightfoot
 Document No. _____, Deed Book _____, Page No. _____;
 Instrument No. 040027712, and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

We, the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.
2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.
3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.
4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, monitoring, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.
5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the SYSTEM.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the SYSTEM. The COVENANTOR(S)' shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the SYSTEM.

9. This COVENANT shall be recorded in the County Land Records.

IN WITNESS WHEREOF, the COVENANTOR(S) have executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)

Marshall N. Warner

Print Name/Title Marshall N. Warner
Executive Vice President

ATTEST:

COVENANTOR(S)

Print Name/Title _____

ATTEST:

COMMONWEALTH OF VIRGINIA

CITY/COUNTY OF Williamsburg

I hereby certify that on this 9th day of November, 2004, before the subscribed, a Notary Public of the State of Virginia, and for the City/County of James City, aforesaid personally appeared Marshall W. Warner and did acknowledge the foregoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 9th day of November, 2004.

Dorinda Goldman-Winter
Notary Public



My Commission expires: April 5, 2005

Approved as to form:

M. M. H. Jy
County Attorney

This Declaration of Covenants prepared by:

Joseph F. Link
(Print Name)

Proj Mgr
(Title)

538 Oyster Point Rd
(Address)

NEWPORT NEWS Va 23602
(City) (State) (Zip)

757-249-3784
(Phone Number)

VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY
This document was admitted to record on 23 Nov
at 9:32 AM/PM. The taxes imposed by Virginia Code
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

STATE TAX LOCAL TAX ADDITIONAL TAX
\$ _____ \$ _____ \$ _____

TESTE: BETSY B. WOOLRIDGE, CLERK

BY: Betsy B. Woolridge Clerk

drainage1.pre

SP-30-03

James City County, Virginia Environmental Division

Stormwater Management/BMP Record Drawing and Construction Certification Review Tracking Form

County Plan No.: SP-74-04
Project Name: CHESAPEAKE BANK - LIGHTFOOT (NOVANO PROPERTY)
Stormwater Management Facility: BIORETENTION BASIN

- BMP Phase #: I II III
- Information Package Received. Date/By: Aug 08 '05 AES
 - Administrative Check.
 - Record Drawing Date/By: Aug 05 '05 AES
 - Construction Certification Date/By: Aug 05 '05 AES
 - RD/CC Standard Forms (Required for all BMPs after Feb 1st 2001 Only)
 - Insp/Maint Agreement ?? NEED #/Date: 1/m # 040029616
 - BMP Maintenance Plan Location: _____
 - Other: _____

Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review file.
 Yes No Location: _____

Assign County BMP ID Code #: Code: YC022

- Preliminary Input/Log into Division's "As-Built Tracking Log"
- Add Location to GIS Database Map. Obtain site information (GPIN, Owner, Site Area, Address, etc.)
- Preliminary Log into Access BMP Database (BMP ID #, Plan No., GPIN, Project Name, etc.)
- Active Project File Review (correspondence, H&H, etc.)
- Initial As-Built File setup (Label, copy hydraulics, BMP plan and detail information, etc.)
- Inspector Check of RD/CC (forward to inspector using transmittal for cursory review).
- Pre-Inspection Drawing Review - Approved Plan (Quick look prior to Field Inspection).
- Final Inspection (FI) Performed Date: 6/14/07 JEC
- Record Drawing (RD) Review (***) Date: 11/2/05
- Construction Certification (CC) Review Date: 11/2/05

- Actions:
- No comments.
 - Comments. Letter Forwarded. Date: EMAIL 11/02/05
 - Record Drawing (RD)
 - Construction Certification (CC)
 - Construction-Related (CR)
 - Site Issues (SI)
 - Other: 1/m AGREEMENT ✓ RVD

Second Submission: RD 11/21/05

Reinspection (if necessary): 6/14/07

- Acceptable for stormwater management facility purposes (RD/CC/CR/Other). Proceed with bond release.
- Notify Inspector and Inspector Supervisor using "Surety Request Form".
- Check/Clean active file of any remaining material and finish "As-Built" file. 10/06/06
- Add to County BMP Inventory/Inspection schedule (Phase I, II or III).
- Copy Final Inspection Report into County BMP Inspection Program file.
- Obtain Digital Photographs of BMP and log into computer.
- Request mylar/reproducible from As-Built plan preparer.
- Complete "As-built Tracking Log"
- Last check of BMP Access Database.
- Add to JCC Hydrology & Hydraulic database (optional).
- Add to PRIDE BMP ratings database.

Final Sign-Off

Plan Reviewer: _____ Date: _____

*** See separate checklist, if needed.

Section 2 – Stormwater Management / BMP Facility Construction Information:

PreConstruction Meeting Held for Construction of SWM/BMP Facility: Yes No Unknown
Approx. Construction Start Date for SWM/BMP Facility: JANUARY 20, 2005
Facility Monitored by County Representative during Construction: Yes No Unknown
Name of Site Work Contractor Who Constructed Facility: BASIC CONSTRUCTION CO.
Name of Professional Firm Who Routinely Monitored Construction: AES Consulting Engineers
Date of Completion for SWM/BMP Facility: ON OR ABOUT MAY 1, 2005
Date of Record Drawing/Construction Certification Submittal: 08/05/2005

(Note: Record Drawing and Construction Certifications are required within thirty (30) days of the completion of Stormwater Management and/or BMP facility construction. Record Drawings and Construction Certifications must be reviewed and approved by the James City County Environmental Division prior to final inspection, acceptance and bond or surety release.)

Section 3 – Owner / Designer / Contractor Information:

Owner/Developer: *(Note: Site Owner or Applicant responsible for development of the project.)*

Name: CHESAPEAKE BANK
Mailing Address: 1229 LAFAYETTE ST.
WILLIAMSBURG, VA 23185
Business Phone: 757-253-9080 Fax:
Contact Person: MARSHALL N. WARNER Title: VICE-PRES.

Design Professional: *(Note: Professional Engineer or Certified Land Surveyor responsible for the design and preparation of plans and specifications for the Stormwater Management / BMP facility.)*

Firm Name: AES Consulting Engineers
Mailing Address: 5248 OLDE TOWNE ROAD
WILLIAMSBURG, VA 23188
Business Phone: 757-253-0040
Fax: 757-220-8994
Responsible Plan Preparer: A. Wayne Powers
Title: Project Manager
Plan Name: CHESAPEAKE BANK AT LIGHTFOOT
Firm's Project No. 9354-01
Plan Date: 09/02/04
Sheet No.'s Applicable to SWM/BMP Facility: 01 / 03 / 04 / 10 /

BMP Contractor: *(Note: Site Work Contractor directly responsible for construction of the Stormwater Management / BMP facility.)*

Name: BASIC CONSTRUCTION CO.
Mailing Address: 538 Oyster Point Road
Newport News, VA 23602
Business Phone: (757) 249-3789
Fax: Fax: (757) 249-2229
Contact Person: JOE LINK
Site Foreman/Supervisor:
Specialty Subcontractors & Purpose (for BMP Construction Only):

Section 4 – Professional Certifications:

Certifying Professionals: *(Note: A Registered Professional Engineer or Certified Land Surveyor is responsible for preparation of a Record Drawing, sometimes referred to as an As-Built plan, for the drainage system for the project including any Stormwater Management/BMP Facilities. A Registered Professional Engineer is responsible for the inspection, monitoring and certification of Stormwater Management / BMP facilities during its construction.)*

Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

Record Drawing Certification

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Rd. Suite 1
Williamsburg, VA 23188
Business Phone: 757-253-0040
Fax: 757-220-8994

Name: A. Wayne Powers
Title: Project Manager

Signature: *A. Wayne Powers*
Date: 8-5-05

I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the Stormwater Management / BMP facility. The facility appears to conform with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

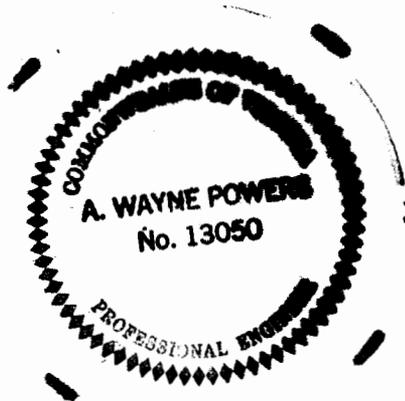
Construction Certification

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Rd. Suite 1
Williamsburg, VA 23188
Business Phone: 757-253-0040
Fax: 757-220-8994

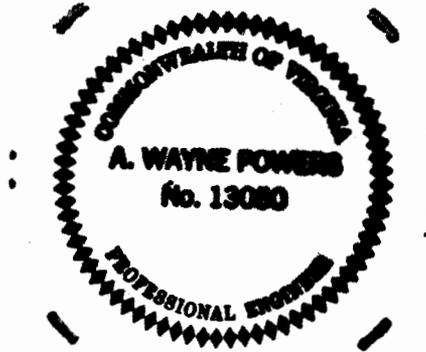
Name: A. Wayne Powers
Title: Project Manager

Signature: *A. Wayne Powers*
Date: 8-5-05

I hereby certify to the best of my knowledge and belief that this Stormwater Management / BMP facility was monitored and constructed in accordance with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.



(Seal)
Virginia Registered Professional Engineer
Or Certified Land Surveyor



(Seal)
Virginia Registered
Professional Engineer

Section 2 – Stormwater Management / BMP Facility Construction Information:

PreConstruction Meeting Held for Construction of SWM/BMP Facility: Yes No Unknown
Approx. Construction Start Date for SWM/BMP Facility: JANUARY 20, 2005
Facility Monitored by County Representative during Construction: Yes No Unknown
Name of Site Work Contractor Who Constructed Facility: BASIC CONSTRUCTION CO.
Name of Professional Firm Who Routinely Monitored Construction: AES Consulting Engineers
Date of Completion for SWM/BMP Facility: ON OR ABOUT MAY 1, 2005
Date of Record Drawing/Construction Certification Submittal: 08/05/2005

(Note: Record Drawing and Construction Certifications are required within thirty (30) days of the completion of Stormwater Management and/or BMP facility construction. Record Drawings and Construction Certifications must be reviewed and approved by the James City County Environmental Division prior to final inspection, acceptance and bond or surety release.)

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Fax: Fax: (757) 249-2229
Contact Person: JOE LINK
Site Foreman/Supervisor: _____
Specialty Subcontractors & Purpose (for BMP Construction Only): _____

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Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

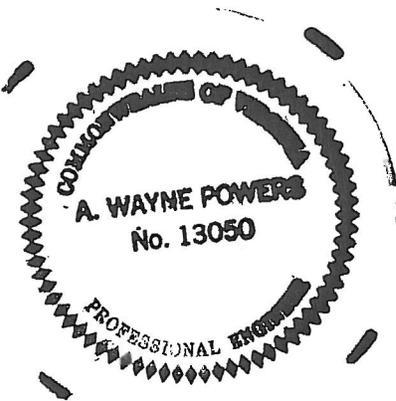
Record Drawing Certification

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Rd. Suite 1
Williamsburg, VA 23188
Business Phone: 757-253-0040
Fax: 757-220-8994

Name: A. Wayne Powers
Title: Project Manager

Signature: *A. Wayne Powers*
Date: 8-5-05

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(Seal)

Virginia Registered Professional Engineer
Or Certified Land Surveyor

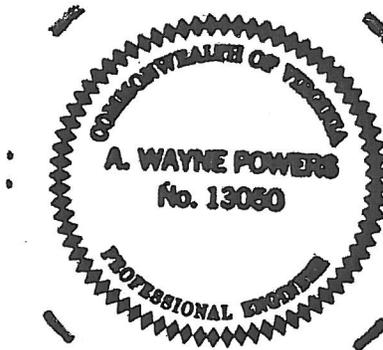
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Fax: 757-220-8994

Name: A. Wayne Powers
Title: Project Manager

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Date: 8-5-05

I hereby certify to the best of my knowledge and belief that this Stormwater Management / BMP facility was monitored and constructed in accordance with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.



(Seal)

Virginia Registered
Professional Engineer

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

I. Methods and Presentation: (Required for all Stormwater Management / BMP facilities.)

- XX 1. All constructed facilities meet approved design plans, unless otherwise shown. Record information or deviations from approved design plan shown in clearly annotated format and/or boxed beside design values.
- XX 2. Elevations to the nearest 0.1' unless higher accuracy is needed to show positive drainage.
- XX 3. All plan sheets labeled with "RECORD DRAWING" in large text in lower right hand corner (Approved County Plan Number and BMP ID Code can be included if known).
- XX 4. All plans sheet revision blocks modified to indicate date and record drawing status.
- XX 5. All plan sheets have certification statements and certifying professional's signature and seal.

Page 5 of 16

II. Minimum Standards: (Required for all Stormwater Management / BMP facilities, as applicable.)

- XX 1. All requirements of Section I (Methods and Presentation) apply to this section.
- XX 2. Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.
- XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.
- N/A 4. Top widths, berm widths and embankment side slopes.
- XX 5. Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Environmental Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations; and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or freeboard were closely maintained.
- N/A 6. Cross-section of the embankment through the principal spillway or outlet barrel. Must extend at least 100 ft. downstream of the pipe outlet or to recorded site property line, whichever is closer. Proper correlation is required between principal spillway (control structure) crest, emergency spillway crest, orifice and weirs and the top of the dam or facility. All elevations and dimensions must reasonably match the design plan or be sequentially relative to each other and the facility must reflect the required design storage volume(s) and/or design depth.
- N/A 7. Profile or elevations along the entire centerline of the emergency spillway. Emergency spillway may be steeper, but no flatter or narrower than design.
- N/A 8. Elevation of the principal spillway crest or outlet crest of the structure.

- XX 9. Primary control structure (riser) diameter or dimensions, height, type of material and base size. Indicate provisions for access that are present such as steps, ladders, etc. **SS#1-4 DI-7**
- XX 10. Dimensions, locations and elevations of outlet orifices, weirs, slots and drains.
- N/A 11. Type and size of anti-vortex and trash rack device. Height, diameter, dimensions, bar spacings (if applicable) and elevations relative to the principal spillway crest. Indicate if lockable hatch is present or not.
- N/A 12. Type, location, size and number of anti-seep collars or documentation of other methods utilized for seepage control. **May need to obtain this information during construction.**
- N/A 13. Top of impervious core embankment, core trench limits and elevation of cut-off trench bottom. **May need to obtain this information during construction.**
- XX 14. Elevation of the principal spillway barrel (outlet pipe) inlet and outlet invert.
- N/A 15. Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
- XX 16. Outfall protection dimension, type and depth of rock and if underlain filter fabric is present. **Stilling Basin is undersized from Plans, but is performing adequately.**
- XX 17. BMP interior and periphery landscaping zones conform with arrangements and requirements of the approved design plan.
- XX 18. Maintenance plan taken from approved design plan transposed onto record drawing set.
- N/A 19. Fencing location and type, if applicable to facility.
- XX 20. BMP vicinity properly cleaned of stockpiles and construction debris.
- XX 21. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A 22. Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

- VI. Group D – Filtering Systems** *Includes D-1 Bioretention Cells; D-2 Surface Sand Filters; D-3 Underground Sand Filters; D-4 Perimeter Sand Filters; D-5 Organic Filters; and D-6 Pocket Sand Filters)*
- XX D1. All requirements of Section II, Minimum Standards, apply to Group D facilities.
- XX D2. Sediment pretreatment devices provided.
- XX D3. For D-1 BMPs (Bioretention Cells), pretreatment consisting of a grass filter strip below level spreader (deflector); a gravel diaphragm; and mulch and planting soil layers were provided.
- XX D4. For D-1 BMPs (Bioretention Cells), plantings consist of native plant species; vegetation provided was based on zones of hydric tolerances; trees and understory of shrubs and herbaceous materials were provided; woody vegetation is absent from inflow locations; and trees are located around facility perimeter.
- XX D5. Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.
- XX D6. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed.
- XX D7. Filtering system is off-line from storm drainage conveyance system. **Outflow from Bio-Cell (via Underdrains & Overflow device) enters storm drain system.**
- XX D8. Overflow outlet has adequate erosion protection.
- XX D9. Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
- XX D10. Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
- XX D11. Minimum fifty (50) foot separation from any slope fifteen (15) percent or greater. Minimum one hundred (100) foot separation horizontally from any known water supply well. Minimum one hundred (100) foot separation upslope and twenty-five (25) foot separation downslope from any building.
- XX D12. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- XX D13. No visual signs of erosion or channel degradation immediately downstream of facility.
- XX D14. Adequate, direct access provided to the pretreatment area and/or filter bed for future maintenance.

**STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST**

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

X. Storm Drainage Systems (Associated with BMP's Only)

(Includes all incidental stormwater drainage conveyance systems associated with SWM/BMP facilities such as onsite or offsite storm drains, open channels, inlets, manholes, junctions, outlet protections, deflectors, etc. These facilities are external to the treatment function of, but are directly associated with drainage to and/or from a constructed SWM/BMP facility. The intent of this portion of the certification is to accurately identify the type and quantity of inflow or outflow points associated with the facility for future reference. The Professional may use his/her own discretion to determine inclusive facilities to meet the intent of this section. As a general rule, storm drainage systems would include incidental facilities to the nearest access structure upslope or downslope from the normal physical limits of the facility or 800 feet of storm drainage conveyance system length, whichever is less.)

- XX SD1. All requirements of Section II, Minimum Standards, apply to Storm Drainage Systems.
- XX SD2. Horizontal location of all pipe and structures relative to the SWM/BMP facility.
- XX SD3. Type, top elevation and invert elevation of all access type structures (inlets, manholes, etc.).
- XX SD4. Material type, size or diameter, class, invert elevations, lengths and slopes for all pipe segments.
- XX SD5. Class, length, width and depth of riprap and outlet protections or dimensions of special energy dissipation structures. **Stilling Basin is smaller than designed, but seems to be performing adequately.**

XII. Other Systems

(Includes any non-typical, specialty, manufactured or innovative stormwater management/BMP practices or systems generally accepted for use as or in conjunction with other acceptable stormwater management / BMP practices. Requires evidence of prior satisfactory industry use and prior Environmental Division approval, waiver or exception.)

- _____ O1. All requirements of Section II, Minimum Standards, apply to this section.
- _____ O2. Certification criteria to be determined on a case-by-case basis by the Environmental Division specific to the proposed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

I. Methods and Presentation: (Required for all Stormwater Management / BMP facilities.)

- XX 1. All constructed facilities meet approved design plans, unless otherwise shown. Record information or deviations from approved design plan shown in clearly annotated format and/or boxed beside design values.
- XX 2. Elevations to the nearest 0.1' unless higher accuracy is needed to show positive drainage.
- XX 3. All plan sheets labeled with "RECORD DRAWING" in large text in lower right hand corner (Approved County Plan Number and BMP ID Code can be included if known).
- XX 4. All plans sheet revision blocks modified to indicate date and record drawing status.
- XX 5. All plan sheets have certification statements and certifying professional's signature and seal.

Page 5 of 16

II. Minimum Standards: (Required for all Stormwater Management / BMP facilities, as applicable.)

- XX 1. All requirements of Section I (Methods and Presentation) apply to this section.
- XX 2. Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.
- XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.
- N/A 4. Top widths, berm widths and embankment side slopes.
- XX 5. Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Environmental Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations; and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or freeboard were closely maintained.
- N/A 6. Cross-section of the embankment through the principal spillway or outlet barrel. Must extend at least 100 ft. downstream of the pipe outlet or to recorded site property line, whichever is closer. Proper correlation is required between principal spillway (control structure) crest, emergency spillway crest, orifice and weirs and the top of the dam or facility. All elevations and dimensions must reasonably match the design plan or be sequentially relative to each other and the facility must reflect the required design storage volume(s) and/or design depth.
- N/A 7. Profile or elevations along the entire centerline of the emergency spillway. Emergency spillway may be steeper, but no flatter or narrower than design.
- N/A 8. Elevation of the principal spillway crest or outlet crest of the structure.

- XX 9. Primary control structure (riser) diameter or dimensions, height, type of material and base size. Indicate provisions for access that are present such as steps, ladders, etc. **SS#1-4 DI-7**
- XX 10. Dimensions, locations and elevations of outlet orifices, weirs, slots and drains.
- N/A 11. Type and size of anti-vortex and trash rack device. Height, diameter, dimensions, bar spacings (if applicable) and elevations relative to the principal spillway crest. Indicate if lockable hatch is present or not.
- N/A 12. Type, location, size and number of anti-seep collars or documentation of other methods utilized for seepage control. **May need to obtain this information during construction.**
- N/A 13. Top of impervious core embankment, core trench limits and elevation of cut-off trench bottom. **May need to obtain this information during construction.**
- XX 14. Elevation of the principal spillway barrel (outlet pipe) inlet and outlet invert.
- N/A 15. Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
- XX 16. Outfall protection dimension, type and depth of rock and if underlain filter fabric is present. **Stilling Basin is undersized from Plans, but is performing adequately.**
- XX 17. BMP interior and periphery landscaping zones conform with arrangements and requirements of the approved design plan.
- XX 18. Maintenance plan taken from approved design plan transposed onto record drawing set.
- N/A 19. Fencing location and type, if applicable to facility.
- XX 20. BMP vicinity properly cleaned of stockpiles and construction debris.
- XX 21. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A 22. Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

- VI. Group D – Filtering Systems** *Includes D-1 Bioretention Cells; D-2 Surface Sand Filters; D-3 Underground Sand Filters; D-4 Perimeter Sand Filters; D-5 Organic Filters; and D-6 Pocket Sand Filters)*
- XX D1. All requirements of Section II, Minimum Standards, apply to Group D facilities.
- XX D2. Sediment pretreatment devices provided.
- XX D3. For D-1 BMPs (Bioretention Cells), pretreatment consisting of a grass filter strip below level spreader (deflector); a gravel diaphragm; and mulch and planting soil layers were provided.
- XX D4. For D-1 BMPs (Bioretention Cells), plantings consist of native plant species; vegetation provided was based on zones of hydric tolerances; trees and understory of shrubs and herbaceous materials were provided; woody vegetation is absent from inflow locations; and trees are located around facility perimeter.
- XX D5. Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.
- XX D6. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed.
- XX D7. Filtering system is off-line from storm drainage conveyance system. **Outflow from Bio-Cell (via Underdrains & Overflow device) enters storm drain system.**
- XX D8. Overflow outlet has adequate erosion protection.
- XX D9. Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
- XX D10. Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
- XX D11. Minimum fifty (50) foot separation from any slope fifteen (15) percent or greater. Minimum one hundred (100) foot separation horizontally from any known water supply well. Minimum one hundred (100) foot separation upslope and twenty-five (25) foot separation downslope from any building.
- XX D12. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- XX D13. No visual signs of erosion or channel degradation immediately downstream of facility.
- XX D14. Adequate, direct access provided to the pretreatment area and/or filter bed for future maintenance.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

X. Storm Drainage Systems (Associated with BMP's Only)

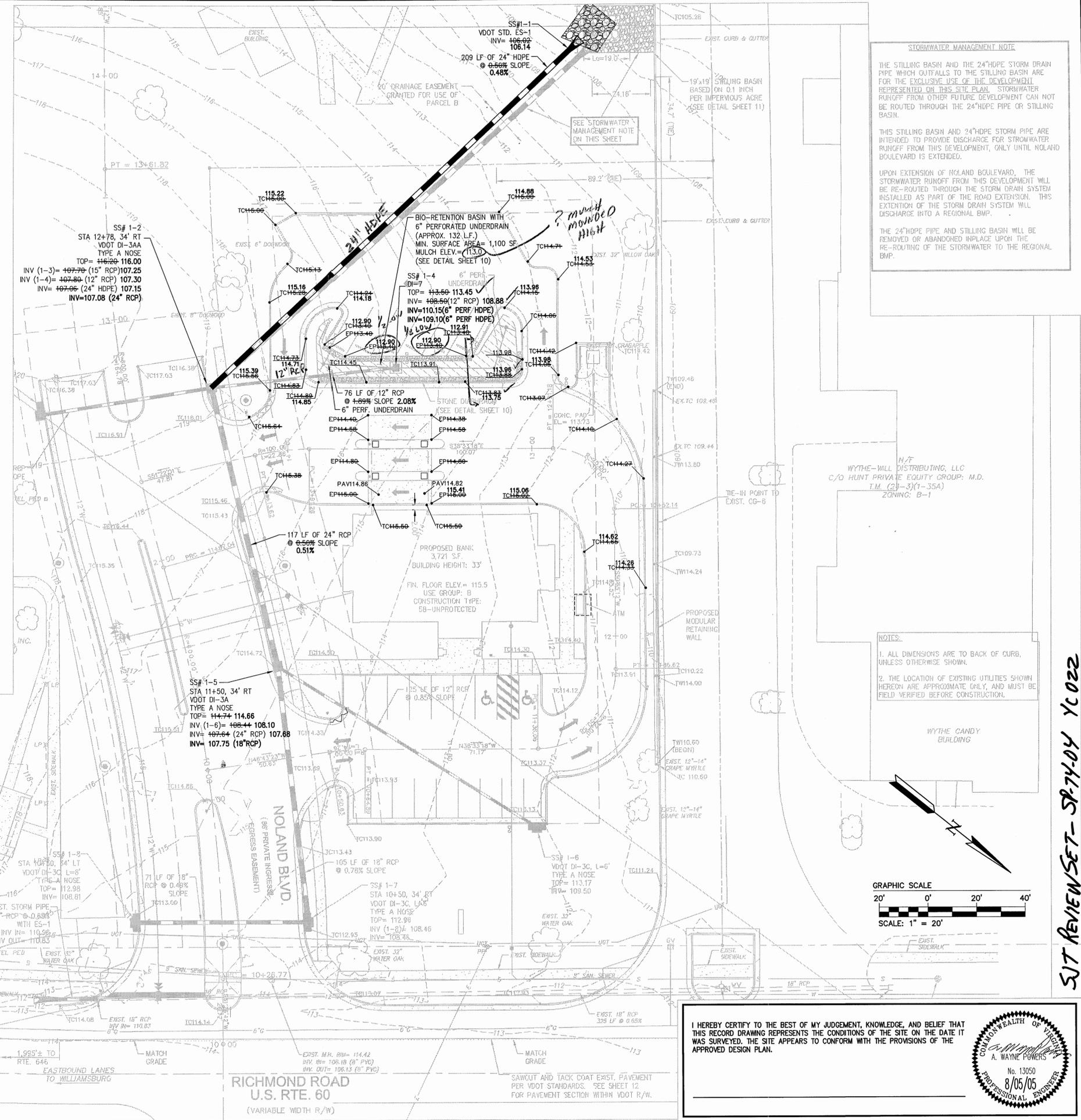
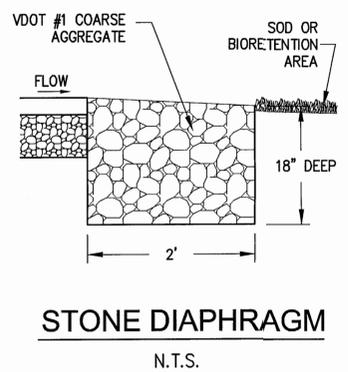
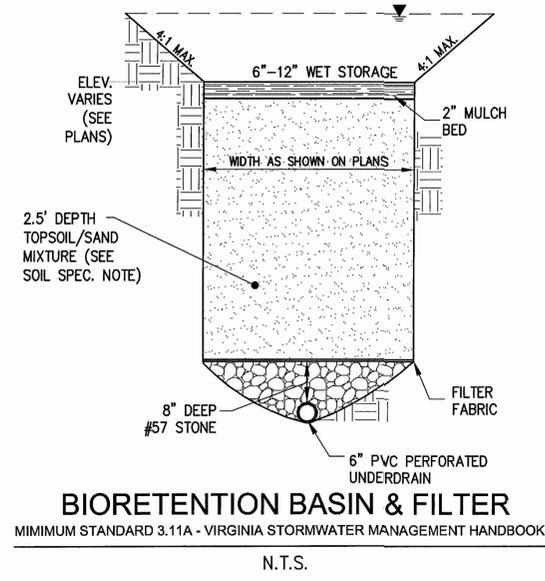
(Includes all incidental stormwater drainage conveyance systems associated with SWM/BMP facilities such as onsite or offsite storm drains, open channels, inlets, manholes, junctions, outlet protections, deflectors, etc. These facilities are external to the treatment function of, but are directly associated with drainage to and/or from a constructed SWM/BMP facility. The intent of this portion of the certification is to accurately identify the type and quantity of inflow or outflow points associated with the facility for future reference. The Professional may use his/her own discretion to determine inclusive facilities to meet the intent of this section. As a general rule, storm drainage systems would include incidental facilities to the nearest access structure upslope or downslope from the normal physical limits of the facility or 800 feet of storm drainage conveyance system length, whichever is less.)

- XX SD1. All requirements of Section II, Minimum Standards, apply to Storm Drainage Systems.
- XX SD2. Horizontal location of all pipe and structures relative to the SWM/BMP facility.
- XX SD3. Type, top elevation and invert elevation of all access type structures (inlets, manholes, etc.).
- XX SD4. Material type, size or diameter, class, invert elevations, lengths and slopes for all pipe segments.
- XX SD5. Class, length, width and depth of riprap and outlet protections or dimensions of special energy dissipation structures. **Stilling Basin is smaller than designed, but seems to be performing adequately.**

XII. Other Systems

(Includes any non-typical, specialty, manufactured or innovative stormwater management/BMP practices or systems generally accepted for use as or in conjunction with other acceptable stormwater management / BMP practices. Requires evidence of prior satisfactory industry use and prior Environmental Division approval, waiver or exception.)

- _____ O1. All requirements of Section II, Minimum Standards, apply to this section.
- _____ O2. Certification criteria to be determined on a case-by-case basis by the Environmental Division specific to the proposed SWM/BMP facility.



STORMWATER MANAGEMENT NOTE

THE STILLING BASIN AND THE 24" HDPE STORM DRAIN PIPE WHICH OUTFALLS TO THE STILLING BASIN ARE FOR THE EXCLUSIVE USE OF THE DEVELOPMENT REPRESENTED ON THIS SITE PLAN. STORMWATER RUNOFF FROM OTHER FUTURE DEVELOPMENT CAN NOT BE ROUTED THROUGH THE 24" HDPE PIPE OR STILLING BASIN.

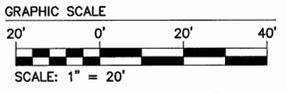
THIS STILLING BASIN AND 24" HDPE STORM PIPE ARE INTENDED TO PROVIDE DISCHARGE FOR STORMWATER RUNOFF FROM THIS DEVELOPMENT, ONLY UNTIL NOLAND BOULEVARD IS EXTENDED.

UPON EXTENSION OF NOLAND BOULEVARD, THE STORMWATER RUNOFF FROM THIS DEVELOPMENT WILL BE RE-ROUTED THROUGH THE STORM DRAIN SYSTEM INSTALLED AS PART OF THE ROAD EXTENSION. THIS EXTENSION OF THE STORM DRAIN SYSTEM WILL DISCHARGE INTO A REGIONAL BMP.

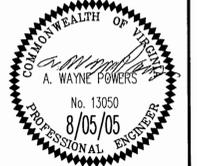
THE 24" HDPE PIPE AND STILLING BASIN WILL BE REMOVED OR ABANDONED IN PLACE UPON THE RE-ROUTING OF THE STORMWATER TO THE REGIONAL BMP.

NOTES:

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2. THE LOCATION OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY, AND MUST BE FIELD VERIFIED BEFORE CONSTRUCTION.



I HEREBY CERTIFY TO THE BEST OF MY JUDGEMENT, KNOWLEDGE, AND BELIEF THAT THIS RECORD DRAWING REPRESENTS THE CONDITIONS OF THE SITE ON THE DATE IT WAS SURVEYED. THE SITE APPEARS TO CONFORM WITH THE PROVISIONS OF THE APPROVED DESIGN PLAN.



NO.	DATE	REVISION / COMMENT / NOTE
1.	9/02/04	REV. PER A.C.C. COMMENTS OF 7/19/04
2.	12/16/04	SEE SHEETS 3 & 4 - 4" AMEND. 2' OFFSET AT DRIVE-TRAILERS
3.	1/25/05	FIELD CHANGE - BOULEVARD LIGHTING (NO CHANGE THIS SHEET)
4.	4/74/05	EX. TREE REPLACED WITH NEW TREES (NO CHANGE THIS SHEET)
5.	8/05/05	RECORD DRAWING FOR BMP-BIO-RETENTION CELL



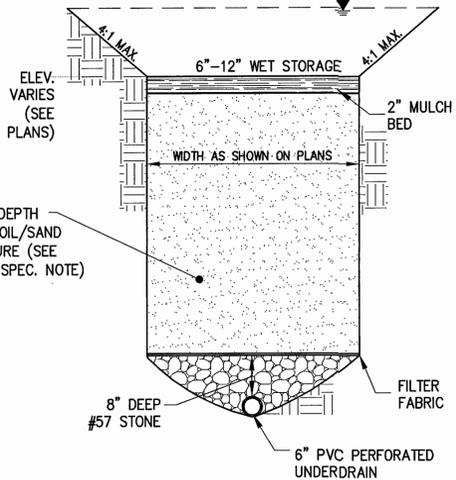
5248 Old Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-8994



GRADING, DRAINAGE, AND FINAL
EROSION & SEDIMENT CONTROL PLAN
CHESAPEAKE BANK
AT LIGHTFOOT

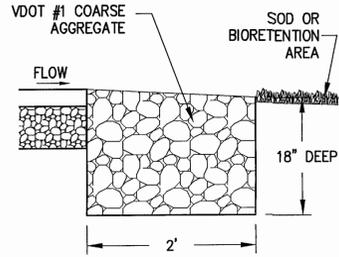
Designed AES	Drawn AES
Scale 1" = 20'	Date 6/07/04
Project No. 9354-01	
Drawing No. 4	

SJT REVIEW SET - SP-74-04 YC022



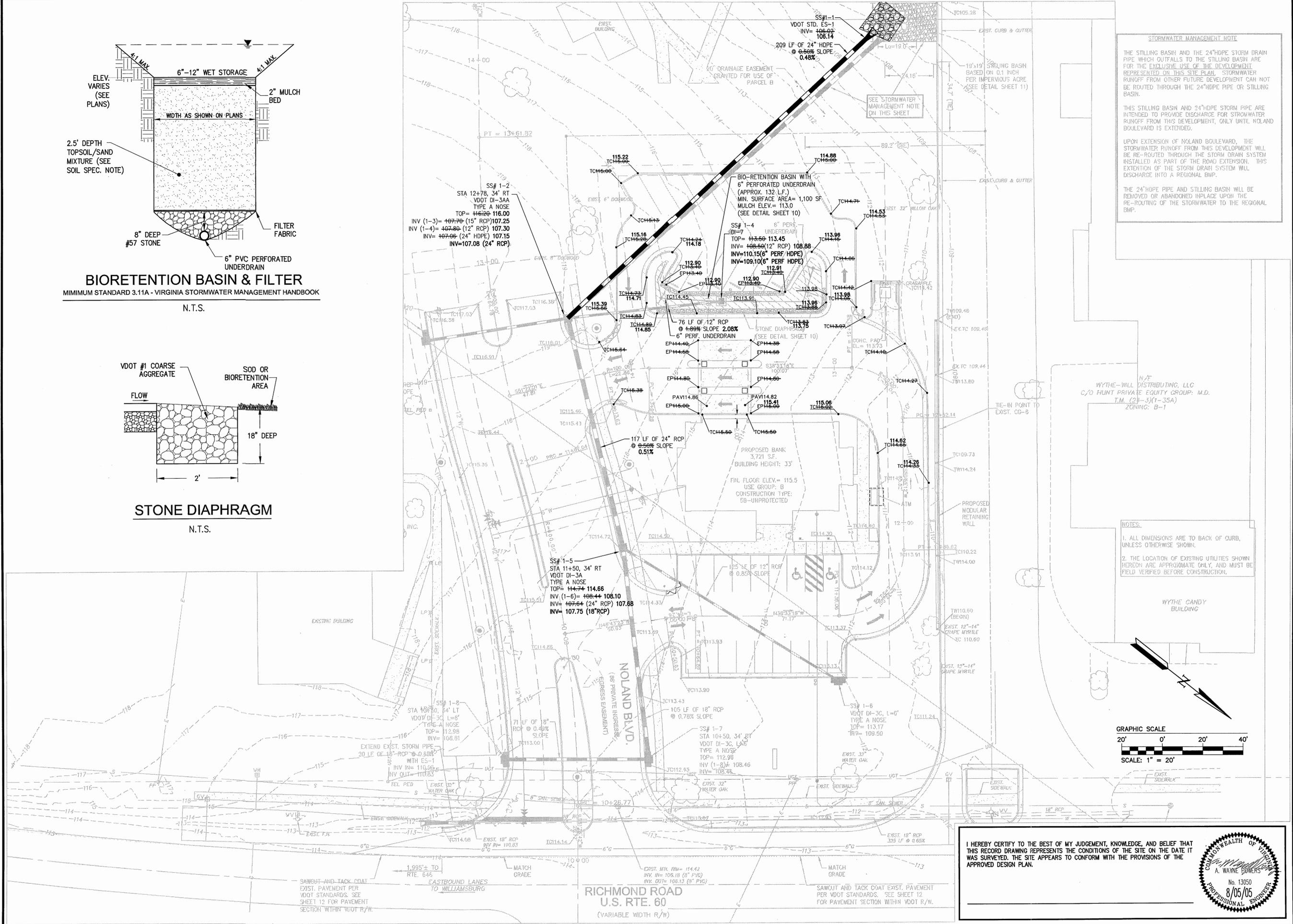
BIORETENTION BASIN & FILTER
MINIMUM STANDARD 3.11A - VIRGINIA STORMWATER MANAGEMENT HANDBOOK

N.T.S.



STONE DIAPHRAGM

N.T.S.



STORMWATER MANAGEMENT NOTE

THE STILLING BASIN AND THE 24\"/>

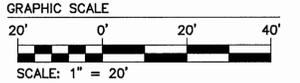
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THE 24\"/>

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COMMONWEALTH OF VIRGINIA
A. WAYNE BOWERS
No. 13050
8/05/05
PROFESSIONAL ENGINEER

19/05/05	RECORD DRAWING FOR BMP-BIO-RETENTION CELL	AWB
4/4/05	EX. TREE REPLACED WITH NEW TREES (NO CHANGE THIS SHEET)	AWB
1/29/05	FIELD CHANGE - BOULEVARD LIGHTING (NO CHANGE THIS SHEET)	AWB
12/16/04	SEE SHEETS 3 & 4 - 9\"/>	AWB
1/19/04	REVISION / COMMENT / NOTE	AWB

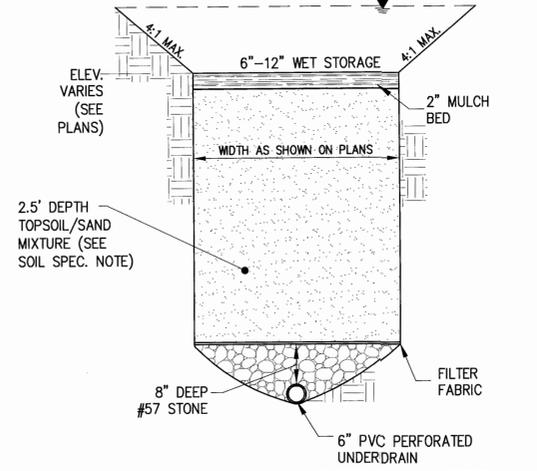


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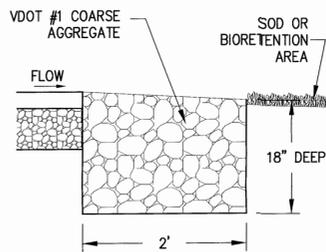
GRADING, DRAINAGE, AND FINAL EROSION & SEDIMENT CONTROL PLAN
CHESAPEAKE BANK
AT LIGHTFOOT

Designed AES	Drawn AES
Scale 1"=20'	Date 6/07/04
Project No. 9354-01	
Drawing No. 4	



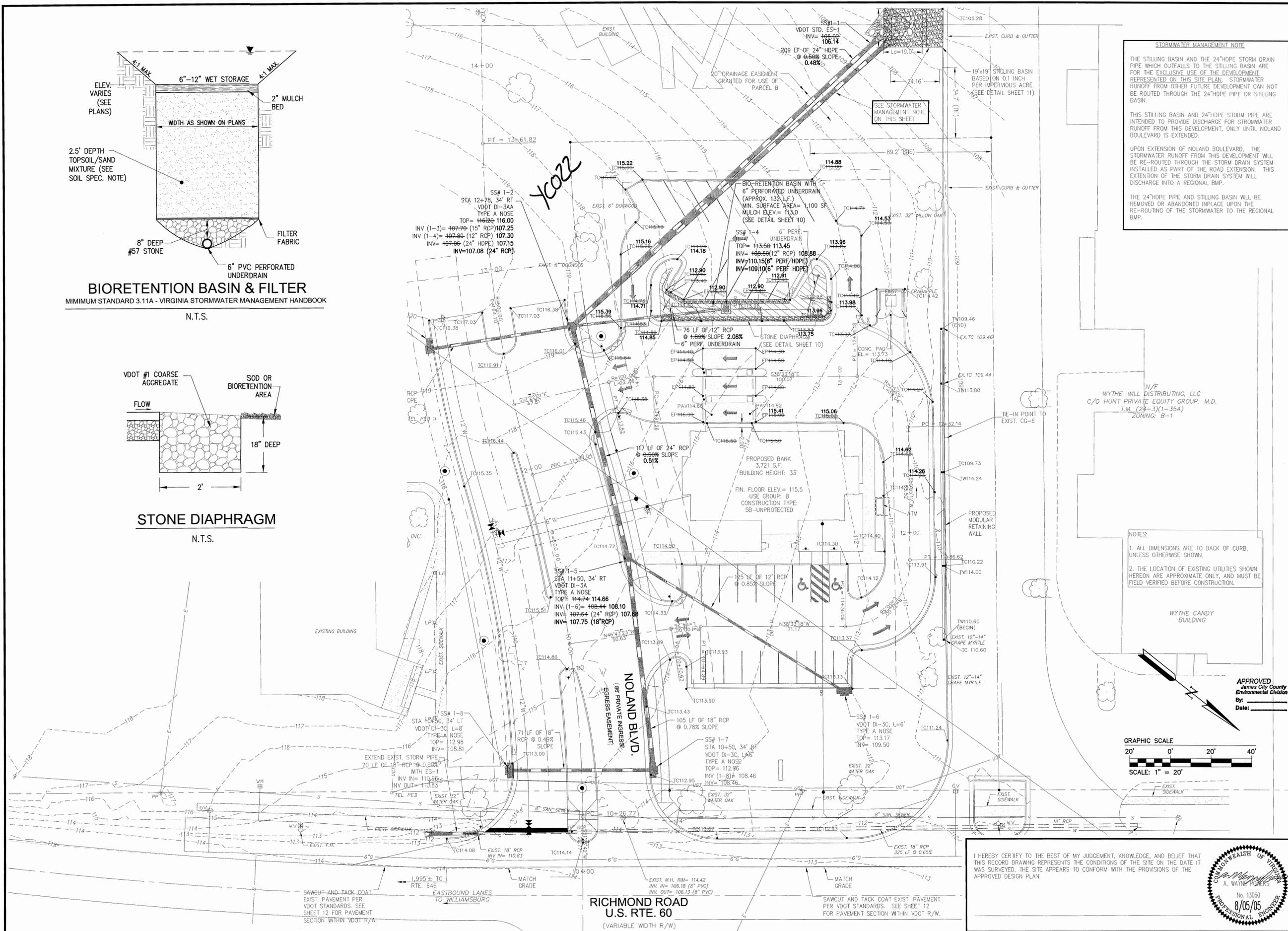
BIORETENTION BASIN & FILTER
MINIMUM STANDARD 3.11A - VIRGINIA STORMWATER MANAGEMENT HANDBOOK

N.T.S.



STONE DIAPHRAGM

N.T.S.



STORMWATER MANAGEMENT NOTE

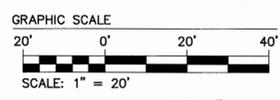
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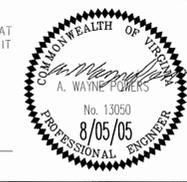
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APPROVED
James City County
Environmental Division
By: _____
Date: _____



**RICHMOND ROAD
U.S. RTE. 60**
(VARIABLE WIDTH R/W)

NO.	DATE	REVISION / COMMENT / NOTE
1	19/02/04	REV. PER J.C.C. COMMENTS OF 7/19/04
2	12/16/04	SEE SHEETS 3 & 4 - 9' AMEND 2' OFFSET FROM TRAILERS
3	1/25/05	FIELD CHANGE - BOULEVARD LIGHTING (NO CHANGE THIS SHEET)
4	4/7/05	EX. TREE REPLACED WITH NEW TREES (NO CHANGE THIS SHEET)
5	8/05/05	RECORD DRAWING FOR BMP, BIURETENTION CELL



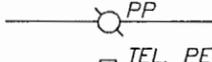
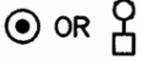
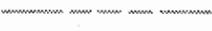
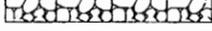
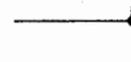
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Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-8994



RECEIVED
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ENVIRONMENTAL
DIVISION
JAMES CITY COUNTY
VIRGINIA

GRADING, DRAINAGE, AND FINAL
EROSION & SEDIMENT CONTROL PLAN
CHESAPEAKE BANK
AT LIGHTFOOT

Designed AES	Drawn AES
Scale 1"=20'	Date 6/07/04
Project No. 9354-01	
Drawing No. 4	

	POWER POLE	
	TELEPHONE PEDESTAL	
	STREETLIGHT	⊙ OR 
	CENTERLINE/BASELINE	— — — — —
	RIGHT OF WAY	— — — — —
	PROPERTY LINE	— — — — —
	☉ DITCH/SWALE	— — — — —
	CONCRETE LINED DITCH	
	EC-3 LINED DITCH	
	EXISTING TREELINE	
	LIMITS OF CLEARING	
	SILT FENCE	
	INLET PROTECTION	
	CHECK DAM	
	RIP RAP	
	REVERSE CG-6R GUTTER	
	GROUND ELEVATION	
	PROPOSED TOP OF CURB ELEV.	
	GRADING LINE TIE-IN	
	CONTOUR ELEVATION	

LAND USE SUMMARY TABLE

PRE-DEVELOPMENT			
ITEM	S.F.	AC.	%
BUILDINGS, WALKS, PAVEMENT	40,989	0.11	70
OPEN SPACE	17,856	0.67	30
TOTAL SITE	58,845	1.35	100
POST-DEVELOPMENT			
ITEM	S.F.	AC.	%
BUILDING & VESTIBULES	4,629	0.11	8
PARKING & ROADS	29,093	0.67	49
SIDEWALKS	1,071	0.02	2
TOTAL IMPERVIOUS AREA	34,793	0.80	59
TOTAL OPEN SPACE	24,052	0.55	41
TOTAL SITE	58,845	1.35	100
TOTAL AREA DISTURBED	96,624	2.22	
GROUND FLOOR:	3,721 S.F.	/ LOT (58,845 S.F.) = .06	
UPPER: STORAGE/MECHANICAL:	968 S.F.	/ LOT (58,845 S.F.) = .02	
FLOOR AREA RATIO:	4,689 S.F.	/ LOT (58,845 S.F.) = .08	

PARKING CALCULATIONS

PROPOSED USE: BANK WITH ATM AND DRIVE THRU

TYPE:	TOTAL SPACES REQUIRED	TOTAL SPACES PROVIDED
REGULAR (1/250 S.F. @ 3,721 S.F.)	15	32
HANDICAP SPACES	1	2

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	ENVIRONMENTAL INVENTORY AND DEMOLITION PLAN
3	SITE AND UTILITY LAYOUT
4	GRADING, DRAINAGE, AND FINAL EROSION & SEDIMENT CONTROL PLAN
5	DRAINAGE PLAN
6	GRADING AND UTILITY PROFILE
7	INITIAL EROSION AND SEDIMENT CONTROL PLAN
8	LANDSCAPE AND LIGHTING PLAN
9	LANDSCAPE, LIGHTING NOTES & DETAILS
10	NOTES & DETAILS
11	NOTES & DETAILS
12	NOTES & DETAILS

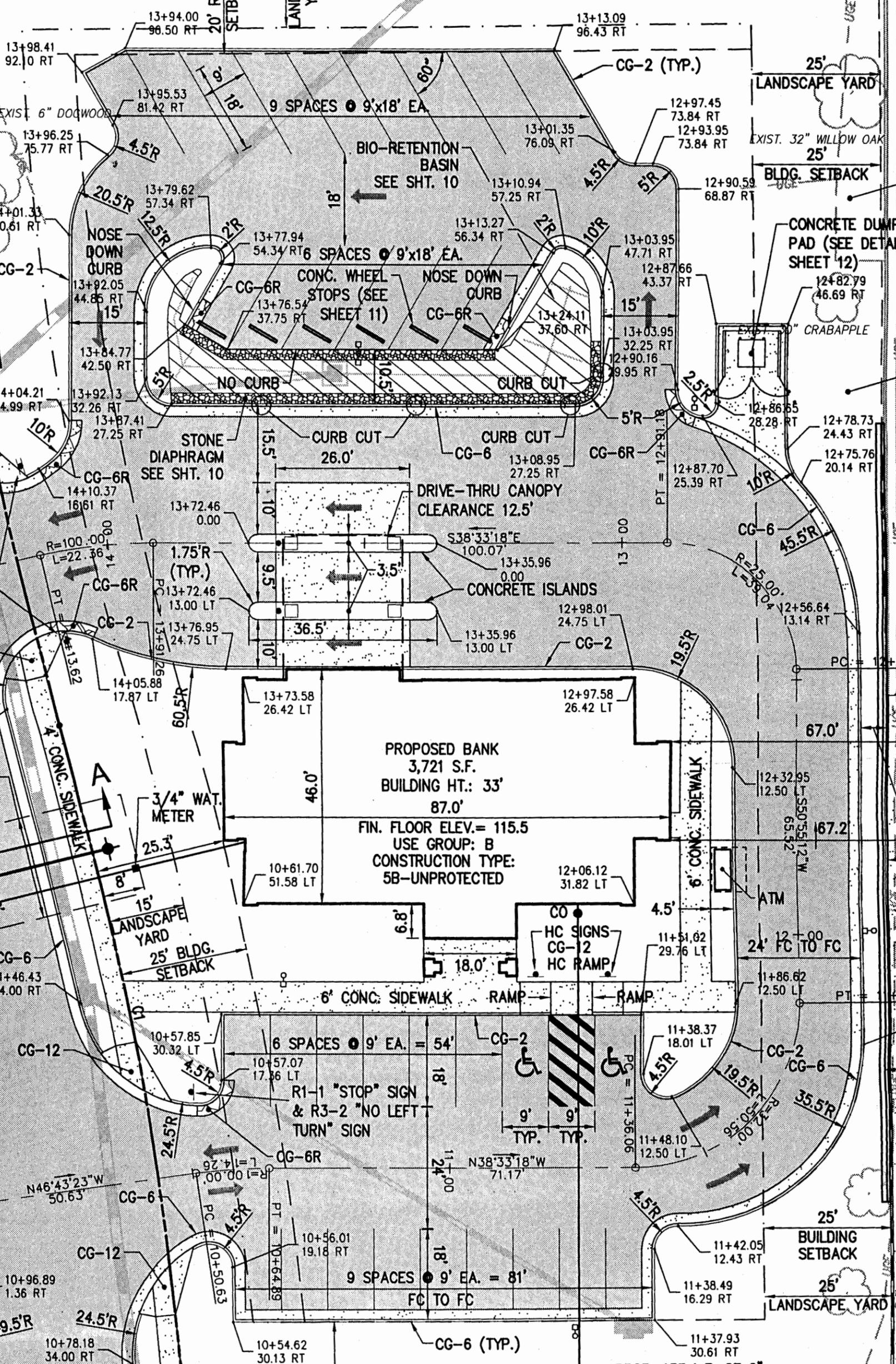
LIMITS OF CONSTRUCTION

20' DRAINAGE EASEMENT GRANTED FOR USE OF PARCEL B

N39°04'48"W 207.00'

89.2' (TIE)

34.7' (TIE)



MUTCD R1-1
TOP SIGN &
MUTCD R5-1
NOT ENTER SIGN

20' JCSA
UTILITY ESMT.

CG-6
CG-12

CG-12

CG-6

CG-12

CG-6

CG-12

CG-2

PROPOSED 4' CONC. SIDEWALK

PROP. 133 L.F. OF 6" CONC. SIDEWALK

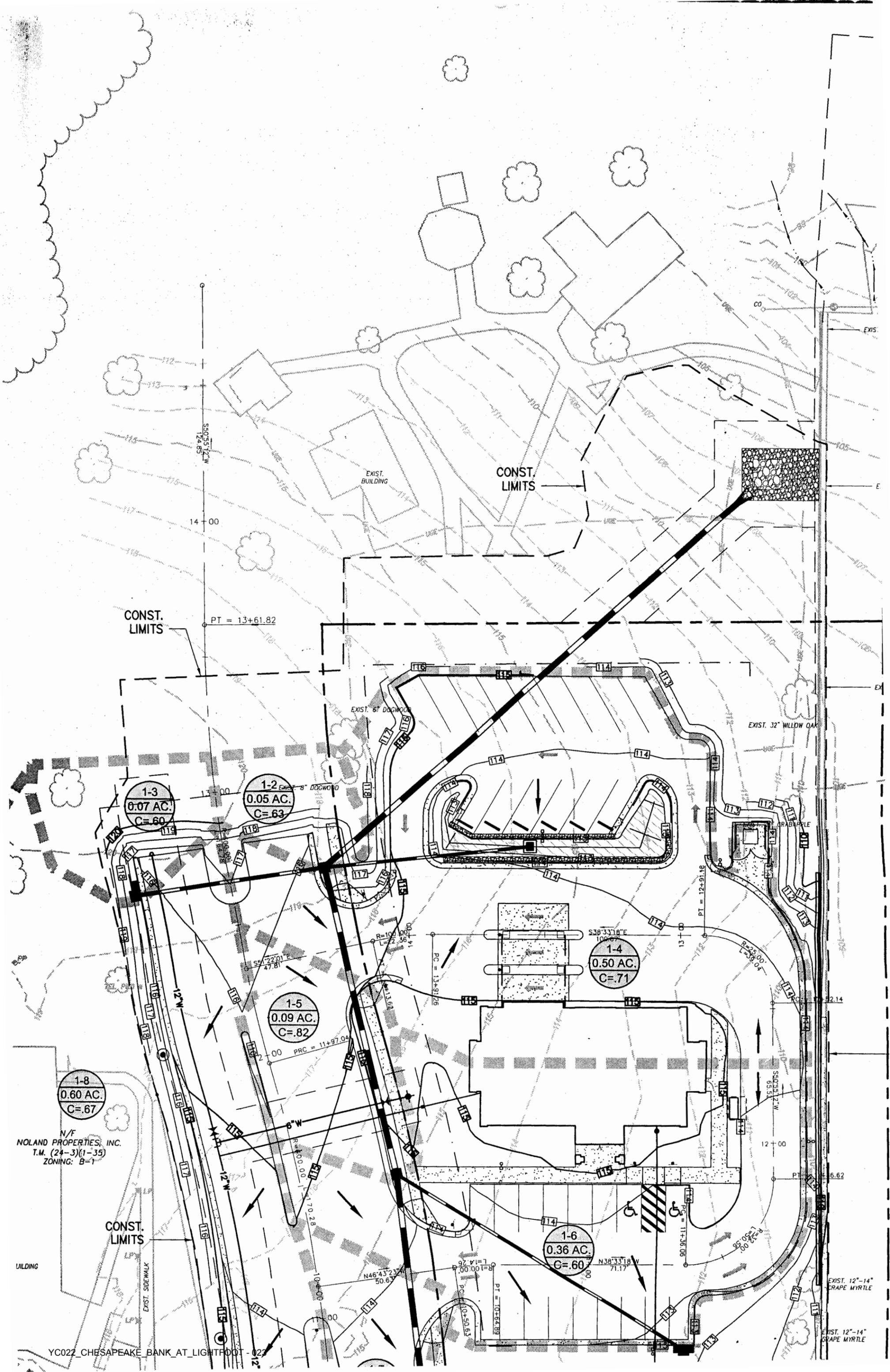
5' LANDSCAPE YARD SETBACK

NEW CG-6

PROPOSED MODULAR RETAINING WALL

EXIST. 12"-14" GRAPE MYRTLE

EXIST. 12"-14" GRAPE MYRTLE



N/F
 NOLAND PROPERTIES, INC.
 T.M. (24-3)(1-35)
 ZONING: B-1

EXIST. BUILDING

SS#1-1
VDOT STD. ES-1
INV= 106.02

209 LF OF 24" HDPE
● 0.50% SLOPE

20' DRAINAGE EASEMENT
GRANTED FOR USE OF
PARCEL B

SEE STORMWATER
MANAGEMENT NOTE
ON THIS SHEET

19'x19" STILLING BA
BASED ON 0.1 INCH
PER IMPERVIOUS A
(SEE DETAIL SHEET

34.7' (TIE)

89.2' (TIE)

BIO-RETENTION BASIN WITH
6" PERFORATED UNDERDRAIN
(APPROX. 132 LF.)
MIN. SURFACE AREA= 1,100 SF
MULCH ELEV.= 113.0
(SEE DETAIL SHEET 10)

SS# 1-4 6" PERF.
DI-7 UNDERDRAIN
TOP= 113.50
INV= 108.50

STONE DIAPHRAGM
(SEE DETAIL SHEET 10)

76 LF OF 12" RCP
● 1.89% SLOPE
6" PERF. UNDERDRAIN

117 LF OF 24" RCP
● 0.50% SLOPE

PROPOSED BANK
3,721 S.F.
BUILDING HEIGHT: 33'
FIN. FLOOR ELEV.= 115.5
USE GROUP: B
CONSTRUCTION TYPE:
5B-UNPROTECTED

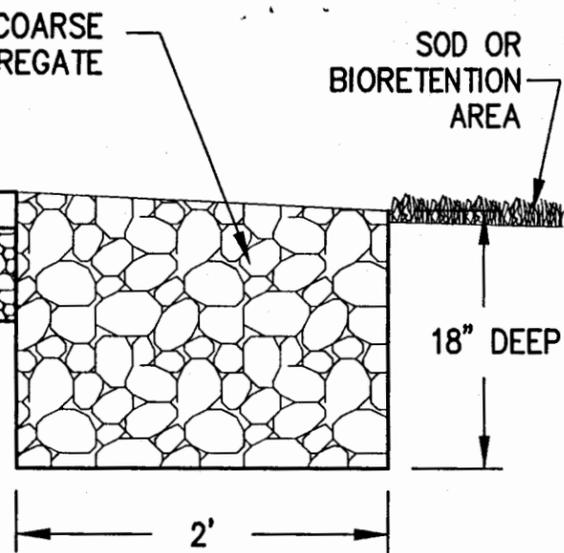
125 LF OF 12" RCP
● 0.85% SLOPE

PROPOSED
MODULAR
RETAINING
WALL

TW110.60
(BEGIN)

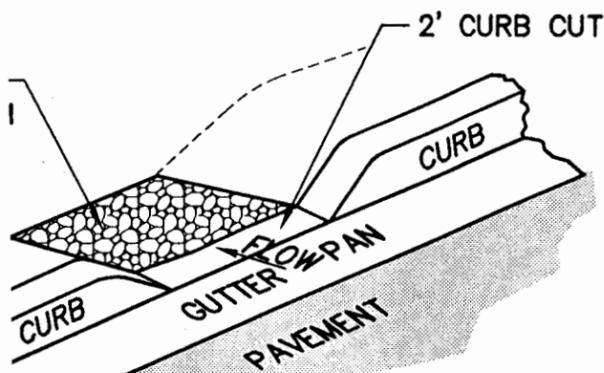
EXIST. 12"-14"
GRAPE MYRTLE

EXIST. 12"-14"
GRAPE MYRTLE



ONE DIAPHRAGM

N.T.S.



TRANSITION TO STONE DIAPHRAGM

N.T.S.

PLANTING REQUIREMENTS

MIXTURE OF GROUND COVERS, SHRUBS, AND TREES SHALL BE PLANTED IN BIO RETENTION AREAS. LANDSCAPE PLANS SHALL BE INCLUDED IN PARK/OPEN SPACE PLANS BY DEVELOPER.

SOIL SPECIFICATIONS

THE BIORETENTION AREAS SHALL CONTAIN A PLANTING SOIL MIXTURE OF 50% SAND, 30% LEAF COMPOST (FULLY COMPOSTED, NOT PARTIALLY ROTTED LEAVES), AND 20% TOPSOIL. TOPSOIL SHALL BE SANDY LOAM OR LOAMY SAND OF UNIFORM COMPOSITION, CONTAINING NO MORE THAN 5% CLAY, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS GREATER THAN ONE INCH, BRUSH, OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH, OR A HINDRANCE TO PLANT GROWTH OR MAINTENANCE. THE TOPSOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEGE, POISON IVY, CANADIAN THISTLE, CATTAIL, OR OTHERS AS SPECIFIED. IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.

THE TOP SOIL SHALL BE TESTED AND MEET THE MINIMUM CRITERIA SET FORTH IN SECTION 3.11-28 OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (LATEST EDITION).

A MULCH LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCT.

MAINTENANCE PROGRAM & SCHEDULE

INSPECT AND REPAIR EROSION	MONTHLY
REMULCH ANY VOID AREAS	WHENEVER NEEDED
REMOVE PREVIOUS MULCH AND REAPPLY	EVERY 3 YEARS
REMOVAL AND REPLACEMENT OF ALL DISEASED VEGETATION	WHENEVER NEEDED
CONSIDERED BEYOND TREATMENT	
CHECK FOR ACCUMULATED SEDIMENTS	MONTHLY
INSPECT AND REMOVE ANY DEBRIS THAT MAY COLLECT AT THE DROP INLET	AFTER MAJOR STORM EVENTS/OR SEMI ANNUALLY

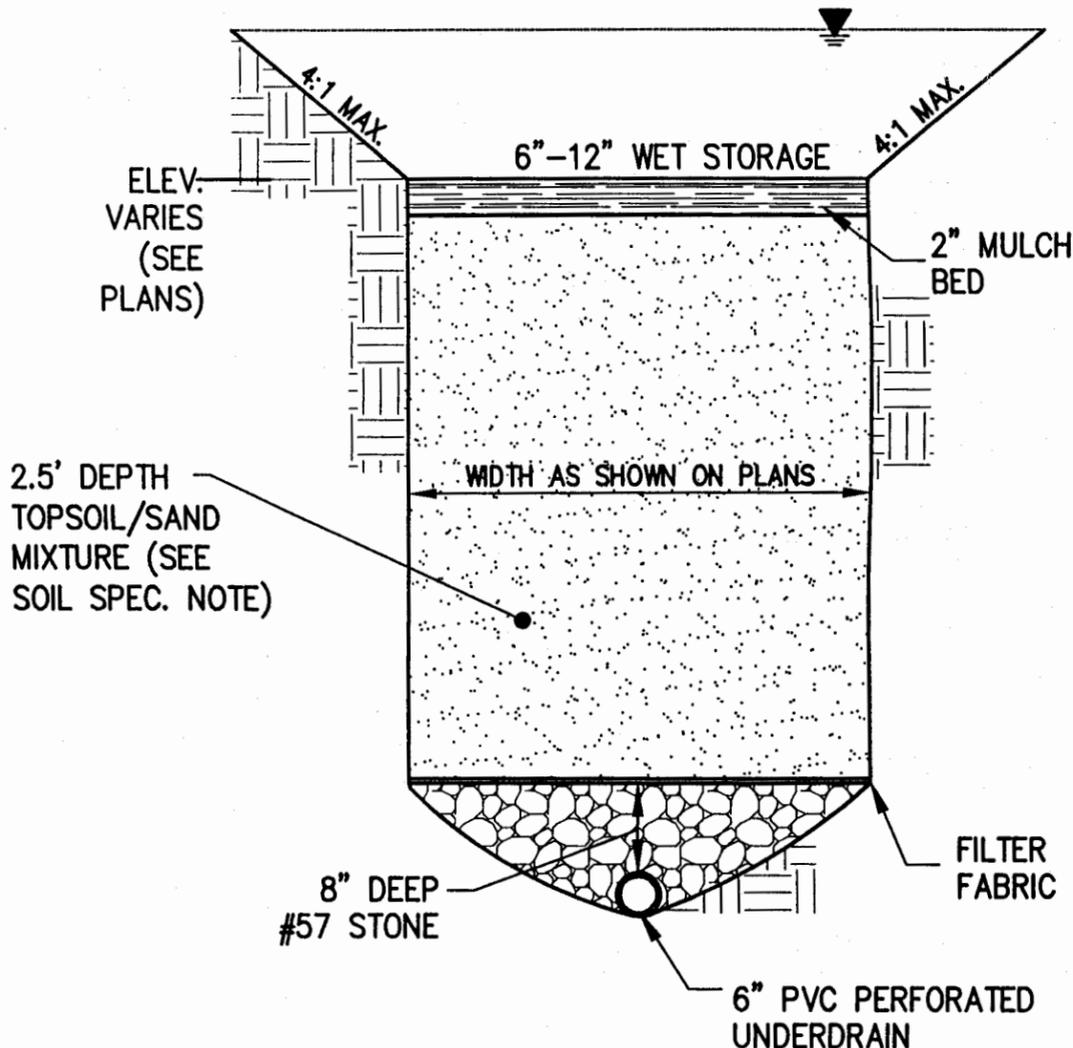
NOTES

WATER PLANT MATERIAL EACH DAY FOR FOURTEEN CONSECUTIVE DAYS AFTER CONSTRUCTION.

CONTRACTOR SHALL REFER TO COUNTY BMP MANUAL (GROUP D, PGS. 48-50) AND MINIMUM STANDARDS 3.11 AND 3.13 OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK FOR METHODS/MATERIAL ASSOCIATED WITH CONSTRUCTION OF THE BIORETENTION CELLS.

VDOT SHALL BE SAVED HARMLESS FROM THE MAINTENANCE RESPONSIBILITY OR LIABILITY ASSOCIATED WITH ANY FAILURE OF THE STORM WATER MANAGEMENT FACILITY AND ITS STRUCTURES.

A PROFESSIONAL ENGINEER WHO HAS INSPECTED THE BASIN DURING CONSTRUCTION SHALL CERTIFY THE CONSTRUCTION OF THE BIORETENTION BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE BIORETENTION BASIN CONSTRUCTION SCHEDULE WITH THE ENGINEER TO ENSURE ON SITE MONITORING.



BIORETENTION BASIN & FILTER

MINIMUM STANDARD 3.11A - VIRGINIA STORMWATER MANAGEMENT HANDBOOK

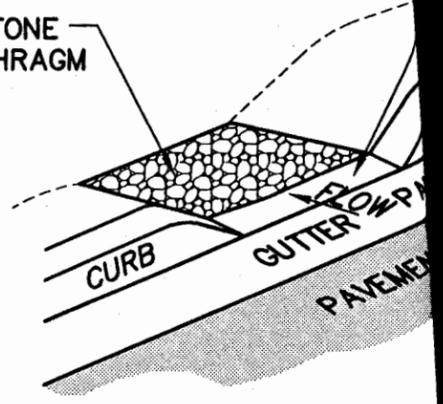
N.T.S.

A

GRASS COVERED BANKMENT TO TYPE OF LEVEL

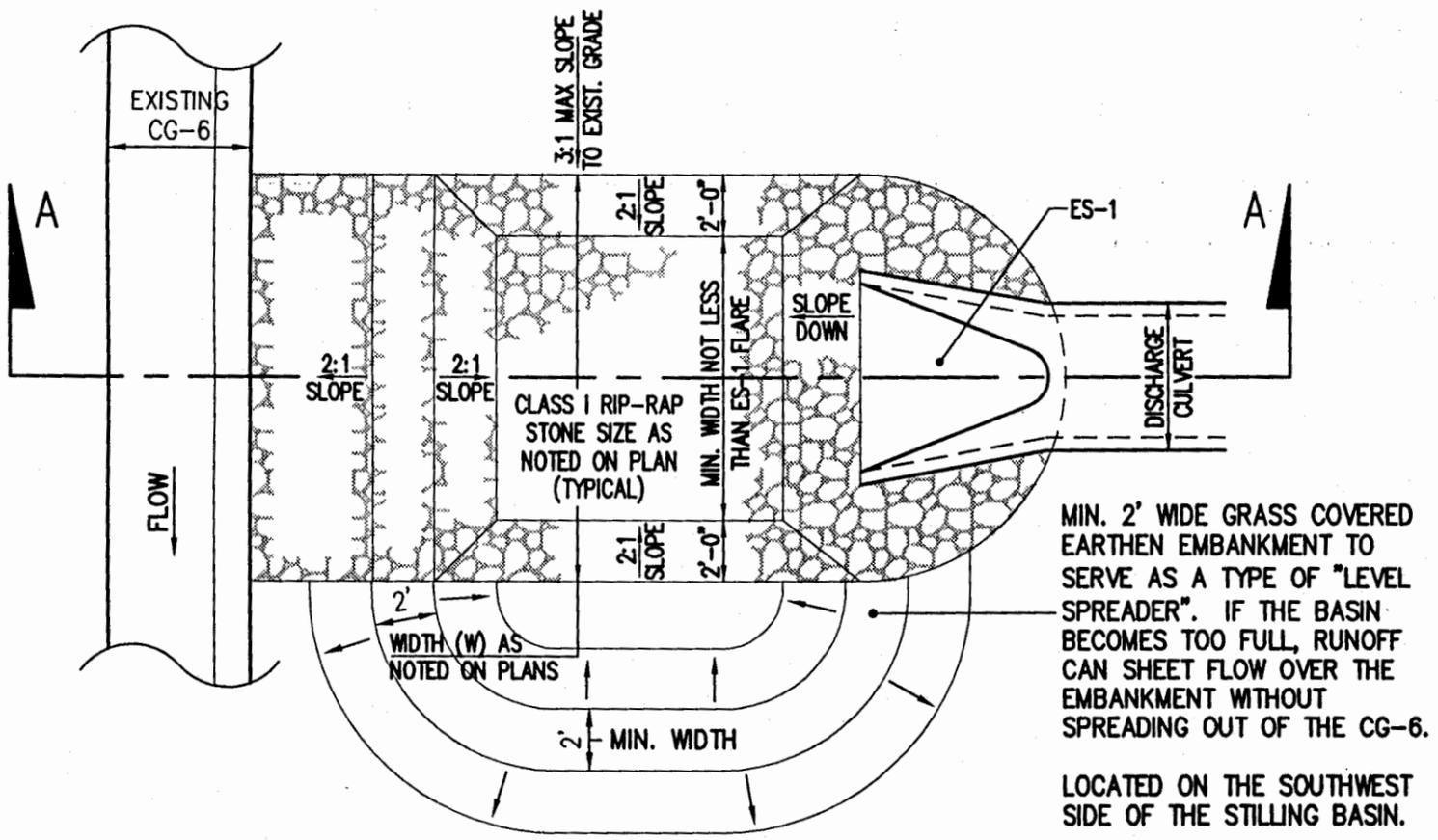
022, CHESAPEAKE_BANK_AT_LIGHTFOOT - 027

2' STONE
DIAPHRAGM



CURB CUT TO STONE D

N.T.S.

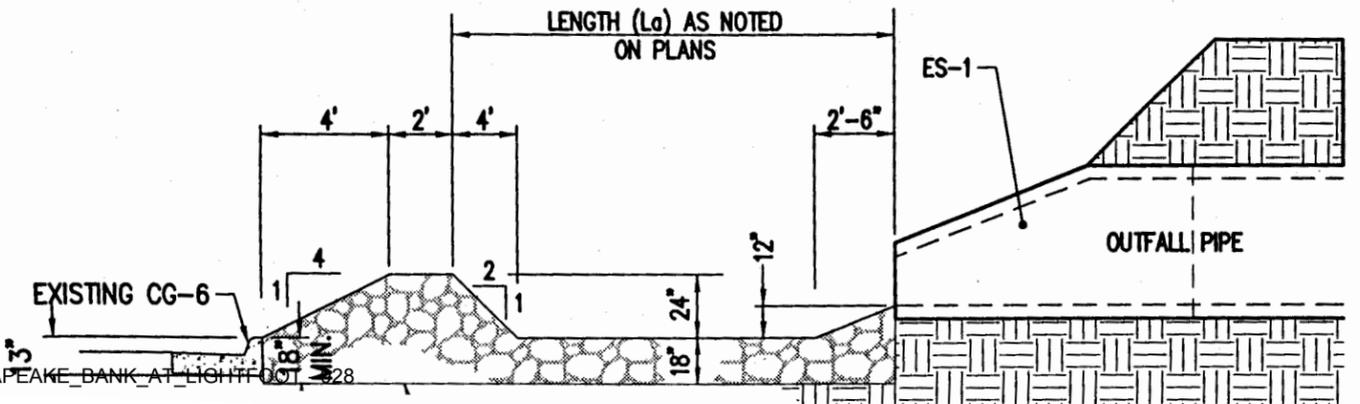


MIN. 2' WIDE GRASS COVERED EARTHEN EMBANKMENT TO SERVE AS A TYPE OF "LEVEL SPREADER". IF THE BASIN BECOMES TOO FULL, RUNOFF CAN SHEET FLOW OVER THE EMBANKMENT WITHOUT SPREADING OUT OF THE CG-6.

LOCATED ON THE SOUTHWEST SIDE OF THE STILLING BASIN.

GRADE THE TOP OF THE EMBANKMENT LEVEL WITH THE TOP OF THE CG-6 CURBING.

PLAN



OUTFALL PIPE

EL.=107

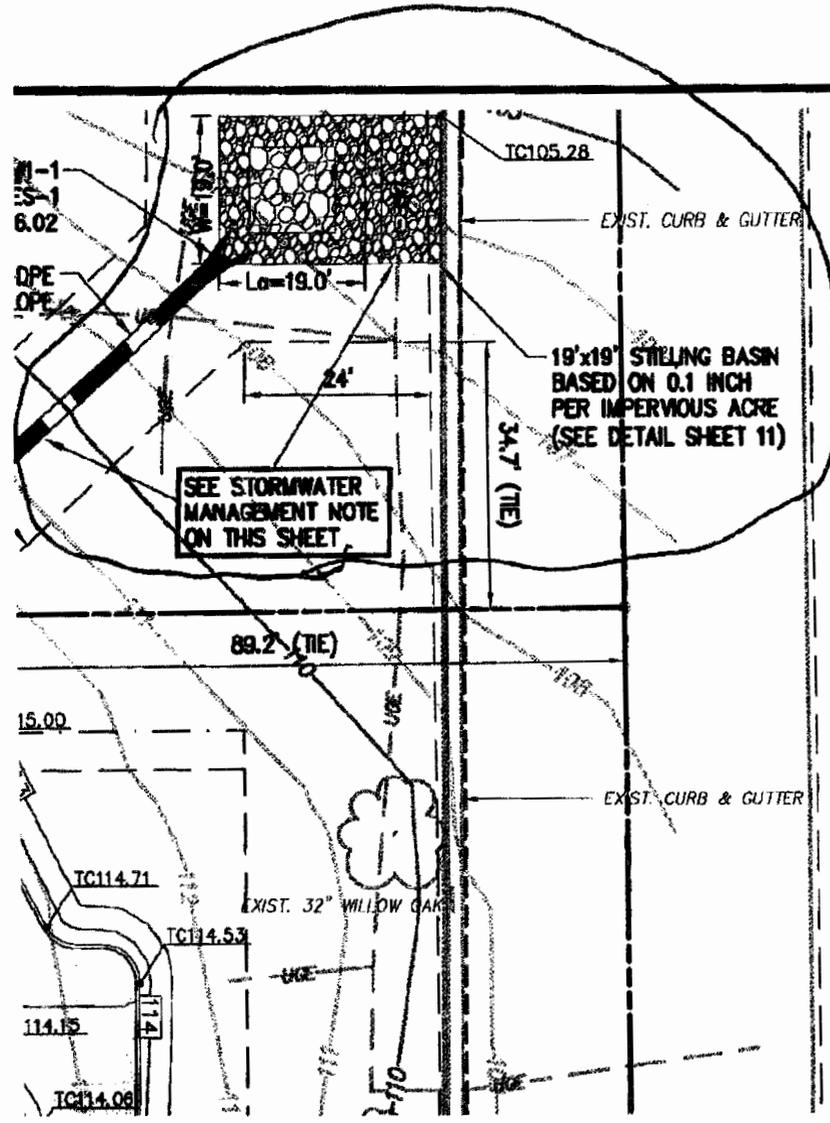
CTED TO 95% OF
UM MOISTURE

S II OR CLASS III
LIFTS,
MAX. DENSITY IN
FACTURERS
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DE

SHEET 4



STORMWATER MANAGEMENT NOTE

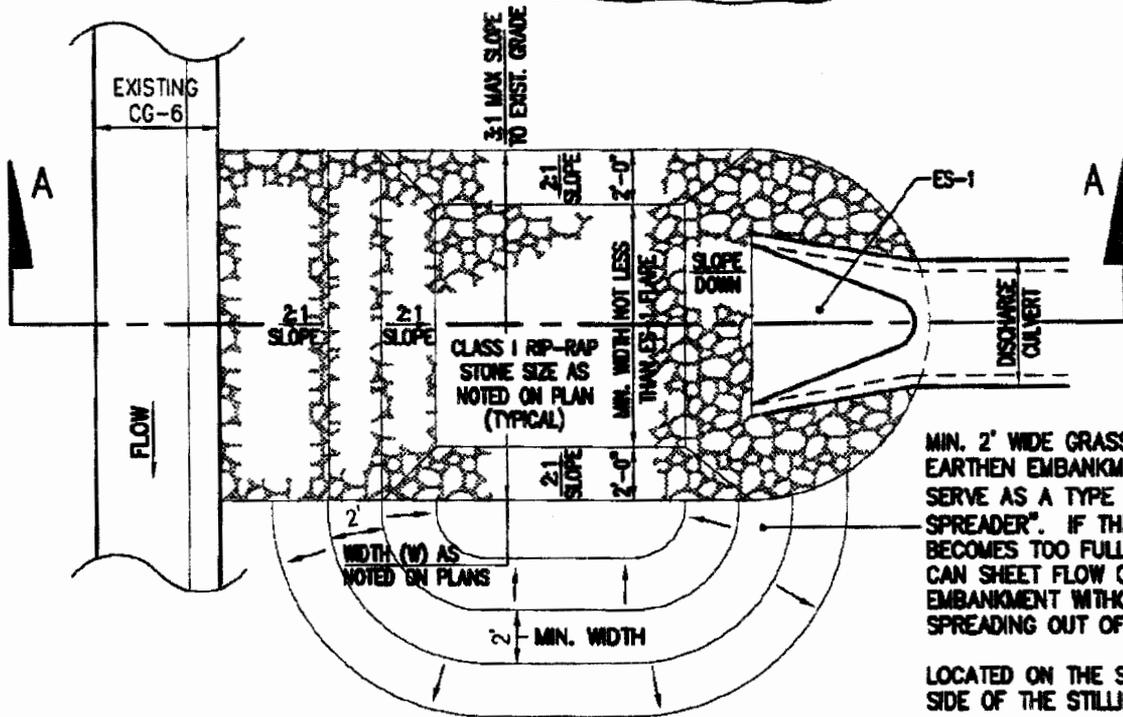
THE STILLING BASIN AND THE 24"HDPE STORM DRAIN PIPE WHICH OUTFALLS TO THE STILLING BASIN ARE FOR THE EXCLUSIVE USE OF THE DEVELOPMENT REPRESENTED ON THIS SITE PLAN. STORMWATER RUNOFF FROM OTHER FUTURE DEVELOPMENT CAN NOT BE ROUTED THROUGH THE 24"HDPE PIPE OR STILLING BASIN.

THIS STILLING BASIN AND 24"HDPE STORM PIPE ARE INTENDED TO PROVIDE DISCHARGE FOR STORMWATER RUNOFF FROM THIS DEVELOPMENT, ONLY UNTIL NOLAND BOULEVARD IS EXTENDED.

UPON EXTENSION OF NOLAND BOULEVARD, THE STORMWATER RUNOFF FROM THIS DEVELOPMENT WILL BE RE-ROUTED THROUGH THE STORM DRAIN SYSTEM INSTALLED AS PART OF THE ROAD EXTENSION. THIS EXTENSION OF THE STORM DRAIN SYSTEM WILL DISCHARGE INTO A REGIONAL BMP.

THE 24"HDPE PIPE AND STILLING BASIN WILL BE REMOVED OR ABANDONED INPLACE UPON THE RE-ROUTING OF THE STORMWATER TO THE REGIONAL BMP.

SHEET-10

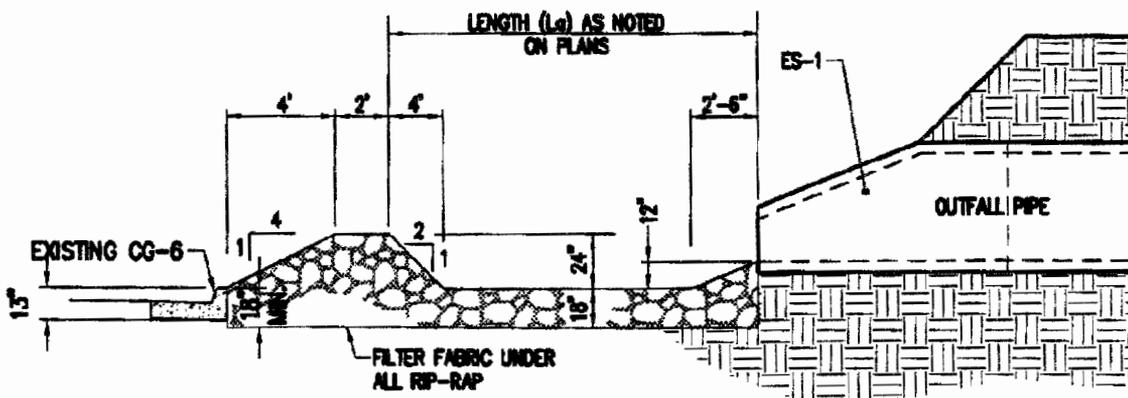


PLAN

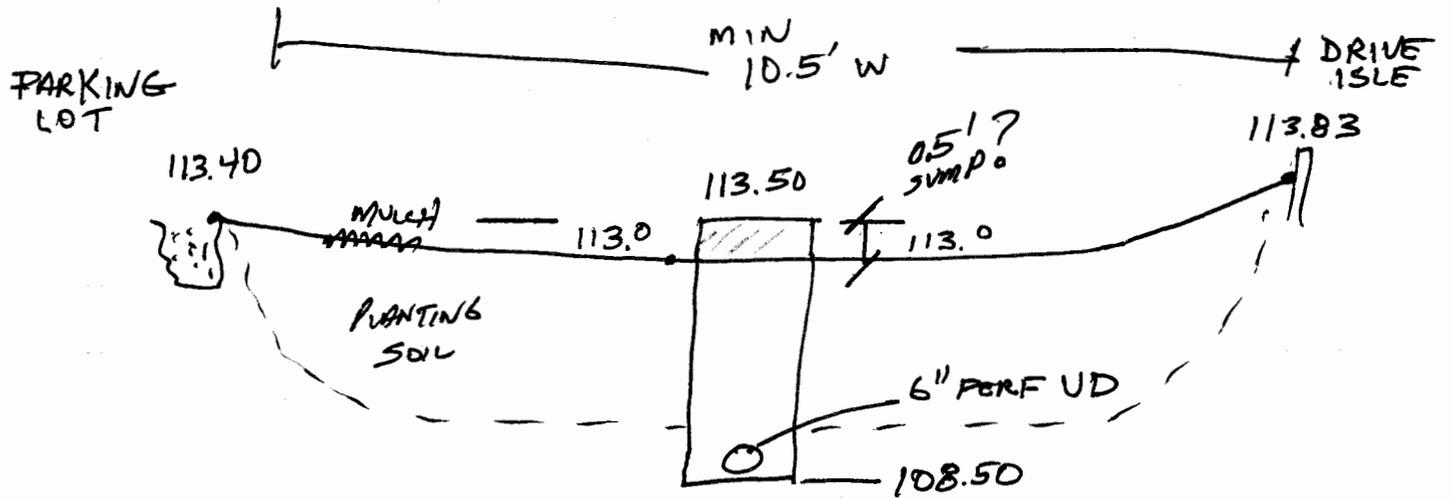
MIN. 2' WIDE GRASS COVERED EARTHEN EMBANKMENT TO SERVE AS A TYPE OF "LEVEL SPREADER". IF THE BASIN BECOMES TOO FULL, RUNOFF CAN SHEET FLOW OVER THE EMBANKMENT WITHOUT SPREADING OUT OF THE CG-6.

LOCATED ON THE SOUTHWEST SIDE OF THE STILLING BASIN.

GRADE THE TOP OF THE EMBANKMENT LEVEL WITH THE TOP OF THE CG-6 CURBING.

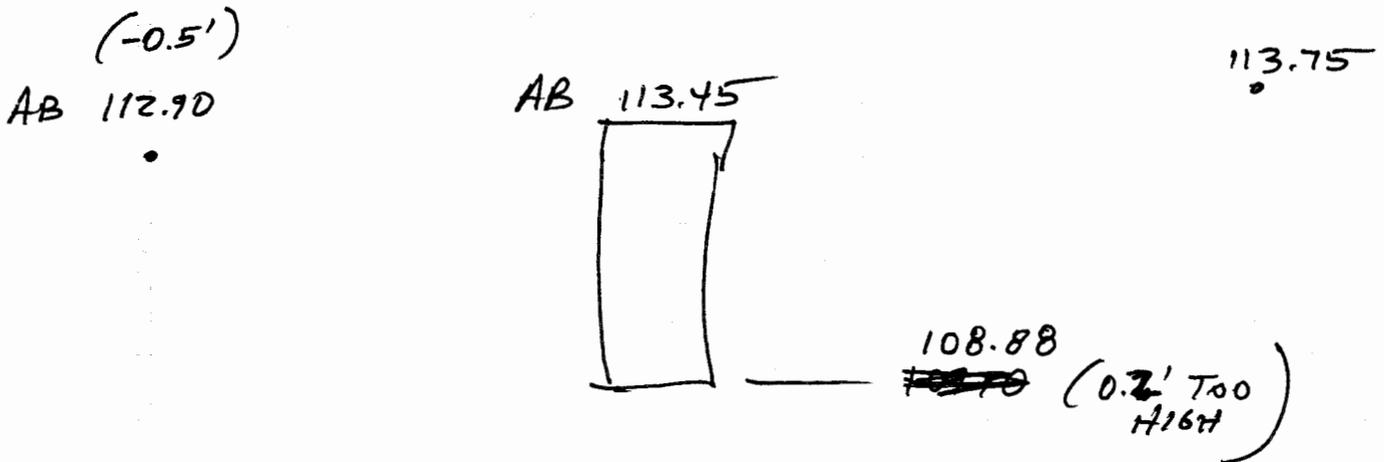


SECTION A-A STILLING BASIN DETAIL N.T.S.



INLET 5' DEEP
 PLANT SOIL 2.5' DEEP

Approved Plan Typical Section



REFERENCES:
P.B. 41, PG. 74
P.B. 61, PG. 79-80

CURVE TABLE						
CURVE	DELTA	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	15°06'20"	643.00	169.52	85.26	169.03	S42°44'16"W
C2	15°44'06"	557.00	152.97	76.97	152.49	S43°03'09"W
C3	14°55'38"	557.00	145.12	72.97	144.71	S42°38'55"W
C4	9°43'19"	643.00	109.10	54.68	108.97	S40°02'45"W

PARCEL A
REMAINING PROPERTY OF
NOLAND PROPERTIES, INC.
T.M. (24-3)(1-35)
DOC. #040003857
ZONED B1

20' DRAINAGE EASEMENT GRANTED
FOR USE OF PARCEL B

N/F NOLAND PROPERTIES, INC.
T.M. (24-3)(1-35)
DOC. #040003857
ZONED B1

APPROXIMATE
LOCATION VIRGINIA
POWER EASEMENT
D.B. 131, PG. 347
VEPCO PLAT BOOK 3,
PAGE 318

PARCEL B
58,845 S.F.
1.35 AC.
ZONED B1

JCC GEODETIC CONTROL
N 3,653,796.7907
E 11,989,019.9285

C&P TELEPHONE EASEMENT
D.B. 126, PG. 174
(ACTUAL LOCATION HAS
NOT BEEN DETERMINED)

JCC GEODETIC CONTROL
N 3,654,047.6847
E 11,989,033.8240

TO WILLIAMSBURG 0.42± MILES
TO RT. 646 LIGHTFOOT ROAD

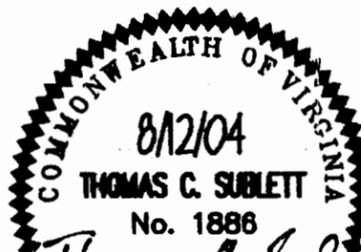
RICHMOND ROAD (U.S. ROUTE 60)
(VARIABLE WIDTH R/W)

STA
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REC
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TES

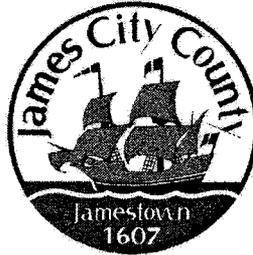
PLAT OF SUBDIVISION

NOLAND PROPERTIES, INC.

CONTAINING 53.44 ACRES



4151 171819202122
YQ022_CRESAPEAKE_BANK_A
1004



James City County, Virginia
Environmental Division

**Erosion and Sediment Control and
Stormwater Management Design Plan Checklists**

Table of Contents

<u>Contents</u>	<u>Page</u>
Erosion and Sediment Control Plan	
I. General	1
II. Site Plan	1
III. Narrative	3
IV. Calculations	4
Stormwater Management Design Plan	
I. General	5
II. Stormwater Conveyance Systems	7
III. Stormwater Management / BMP Facilities	8
IV. Outlet Protections	14
V. Additional Comments and Information	14

GENERAL INFORMATION

Project Name: Chesapeake Bank, Lightfoot
Owner / Applicant: AES Consulting Engineers
Plan Preparer: V. Marc Bennett Email: mbennett@aesva.com
Project Location: Chesapeake Bank, Lightfoot
Tax Map / Parcel: 24301000035
County Plan No. (if known): 50-71-01
County BMP Type: Existing (n/a-)

Other information submitted in addition to this checklist (Check all that apply):

- Design or Construction Drawings (Plans, Profiles, Details, etc.).
- Erosion & Sediment Control Plan (Plan, Details, etc.).
- Erosion & Sediment Control Plan Design Report.
- Stormwater Management Design Plan (Plans, Profiles, Details, etc.).
- Stormwater Management Design Report.
- Other, List: _____

Issue Date
March 1, 2001

**JAMES CITY COUNTY, VIRGINIA
ENVIRONMENTAL DIVISION**

EROSION AND SEDIMENT CONTROL PLAN CHECKLIST

I. GENERAL:

Yes No N/A

- FAMILIARITY* with current versions of Chapter 8, Erosion and Sedimentation Control and Chapter 23, Chesapeake Bay Preservation ordinances of the Code of James City County, Virginia and the Virginia Erosion and Sediment Control Handbook (VESCH).
- LAND DISTURBING PERMIT AND SILTATION AGREEMENT* with surety are required for the project.
- VARIANCE* if necessary, requested in writing, for the plan approving authority to waive or modify any of the minimum standards and specifications of the VESCH deemed inappropriate based on site conditions specific to this review case only. Variances which are approved shall be properly documented in the plan and become part of the approved erosion and sediment control plan for the site.

II. SITE PLAN:

Yes No N/A

- VICINITY MAP* locating the site in relation to the surrounding area. Include any major landmarks which might assist in physically locating the site.
- INDICATE NORTH* direction in relation to the site.
- LIMITS OF CLEARING AND GRADING* for the site including that required for implementation of erosion and sediment controls, stockpile areas and utilities.
- DISTURBED AREA ESTIMATES* in acres or square feet for the project.
- EXISTING TOPOGRAPHY* or contours for the site at no more than 5 foot contour interval.
- FINAL TOPOGRAPHY*, contours or proposed site grading in accordance with the design plan which indicates changes to existing topography and drainage patterns at no more than 2 foot contour interval (or 1 foot contours where required).
- EXISTING AND PROPOSED SPOT ELEVATIONS* to supplement existing and proposed contours, topography or site grading information. Spot elevations may replace final contours in some instances, especially if terrain is in a low lying area or relatively flat.
- EXISTING VEGETATION* including existing tree lines, grassed or unique vegetation areas.

Yes No N/A

EXISTING SITE FEATURES including roads, buildings, homes, utilities, streams, fences, structures and other important surface features of the site.

SOILS MAP with soil symbols, boundaries and legend in accordance with the current Soil Survey of James City and York Counties and the City of Williamsburg, Virginia.

ENVIRONMENTAL INVENTORY in accordance with Section 23-10(2) of the Chesapeake Bay Preservation Ordinance of James City County. Inventory generally includes: tidal shores and wetlands, non-tidal wetlands, resource protection area, hydric soils and slopes steeper than 25 percent. For wetlands, provide a copy of issued permits or satisfactory evidence that appropriate permits are being pursued for the entire project.

100-YEAR FLOODPLAIN LIMITS or any special flood hazard areas or flood zones based on appropriate Federal Management Agency Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps (FHBMs) of James City County, Virginia.

DRAINAGE AREAS for offsite and onsite areas, existing or proposed as applicable. Include drainage divides and directional labels for all subareas at points of interest and size (in acres), weighted runoff coefficient or curve number and times of concentration for each subarea.

CRITICAL EROSION AREAS which require special consideration or unique erosion and sediment control measures. Refer to the VESCH, Chapter 6 for criteria.

DEVELOPMENT PLAN for the site showing all improvements such as buildings, structures, parking areas, access roadways, above and below ground utilities, stormwater management and drainage facilities, trails or sidewalks, proposed vegetation and landscaping, amenities, etc.

LOCATION OF PRACTICES proposed for erosion and sediment control, tree protection and temporary stormwater management due to land disturbance activities at the site. Use standard abbreviations, labels and symbols consistent for plan views based on minimum standards and specifications in Chapter 3 of the VESCH.

TEMPORARY STOCKPILE AREAS or staging and equipment storage areas as required for onsite or offsite construction activities or indicate that none are anticipated for this project.

OFFSITE LAND DISTURBING AREAS including borrow sites, waste areas, utility extensions, etc. and required erosion and sediment controls. If none are anticipated for the project, then indicate on the plans by general or erosion and sediment control notes.

DETAILS or alternately, appropriate reference to current minimum standards and specifications of the VESCH for each measure proposed for the project. Non-modified, standard duplicated details (silt fence, diversion dikes, etc.) may be referenced to the current version of the VESCH. Specific dimensional or modified standards (basins, traps, outlet protections, check dams, etc.) require presentation on detail sheets. Schedules or tables may be used for multiple site measures such as sediment traps, basins, channels, slope drains, etc. Any modification to standard details should be clearly defined, explained and illustrated.

Yes No N/A

MAINTENANCE PLAN or alternately, appropriate reference to current minimum standards and specifications of the VESCH, outlining the inspection frequency and maintenance requirements for all erosion and sediment control measures proposed for the project.

TRENCH DEWATERING methods and erosion and sediment controls, if anticipated for the project.

CONSTRUCTION SEQUENCE outlining the anticipated sequence for installation of erosion and sediment controls and site, grading and utility work to be performed for the project by the site contractor.

PHASING PLAN if required for larger project sites that are to be developed in stages or phases.

STANDARD COUNTY NOTES are required to be placed on the erosion and sediment control plan. Refer to the standard James City County Erosion and Sediment Control Notes dated May 5, 1999.

PROFESSIONAL SEAL AND SIGNATURE required on final and complete approved plans, drawings, technical reports and specifications.

III. NARRATIVE:

Yes No N/A

PROJECT DESCRIPTION briefly describing the nature and purpose of the land disturbing activity and the acreage to be disturbed.

EXISTING SITE CONDITIONS description of existing topography, land use, cover and drainage patterns at the site.

ADJACENT AREA descriptions of neighboring onsite or offsite areas such as streams, lakes, property, roads, etc. and potential impacts due to concentrated flow or runoff from the land disturbing activity.

OFFSITE DISTURBED AREA descriptions of proposed borrow sites, water or surplus areas, utility extensions and erosion and sediment controls to be implemented.

SOILS DESCRIPTION briefly summarizing site, disturbed area and drainage basin soils including name, unit, hydrologic soil group (HSG) classification, surface runoff potential, erodibility, permeability, depth, texture, structure, erosion hazards, shrink-swell potential, limitations for use and anticipated depths to bedrock and the seasonal water table, as applicable.

CRITICAL AREAS on the site which may have potentially serious erosion and sediment control problems and special considerations required (i.e. steep slopes, hydric soils, channels, springs, sinkholes, water supply reservoirs, groundwater recharge areas, etc.)

Yes No N/A

PROPOSED EROSION & SEDIMENT CONTROL MEASURES inclusive to the specific erosion and sediment control plan as proposed for the land disturbing activity. Measures should be consistent with those proposed on the site drawings. Address general use, installation, limitations, sequencing and maintenance requirements for each control measure.

STABILIZATION MEASURES required for the site, either temporary or permanent, and during and following construction including temporary and permanent seeding and mulching, paving, stone, soil stabilization blankets and matting, sodding, landscaping or special stabilization techniques to be utilized at the site.

STORMWATER MANAGEMENT CONSIDERATIONS for the site, either of temporary or permanent nature, and strategies, sequences and measures required for control. May reference the stormwater management plan for the site, if prepared, for permanent stormwater management facilities and control of drainage once the site is stabilized.

IV. CALCULATIONS:

Yes No N/A

CALCULATIONS AND COMPUTATIONS associated with hydrology, hydraulics and design of proposed temporary and permanent erosion and sediment control measures including: sediment traps and basins, diversions, stormwater conveyance channels, culverts, slope drains, outlet protections, etc. Computations are not required on the construction plan and may be attached in a supplemental erosion and sediment control plan design report, if presented in a clear and organized format.

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET submitted for each basin along with schematic or sketch cross-section showing applicable design and construction data, storage volumes (wet-dry), dimensions and elevations. Peak design runoff to be based on the 2- or 25-year design storm event based on maximum disturbed site conditions (existing, interim or proposed conditions) in accordance with Minimum Standard 3.14 of the VESCH.

**JAMES CITY COUNTY, VIRGINIA
ENVIRONMENTAL DIVISION**

STORMWATER MANAGEMENT DESIGN PLAN CHECKLIST

I. GENERAL:

Yes No N/A

FAMILIARITY with current versions of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual; Chapter 8, Erosion and Sediment Control and Chapter 23, Chesapeake Bay Preservation ordinances of the Code of James City County, Virginia; the Virginia Erosion and Sediment Control Handbook (VESCH); and the Virginia Stormwater Management Handbook (VSMH).

WAIVER OR EXCEPTION if necessary, requested in writing, for the plan approving authority to waive or except the requirements of Chapter 23, Chesapeake Bay Preservation ordinance in accordance with procedure established in Sections 23-14 through 23-17 of the ordinance. Applies to the review case only.

VARIANCE REQUEST if necessary, requested in writing for the plan approving authority to waive or modify any of the minimum standards and specifications of the VESCH deemed inappropriate based on site conditions specific to this review case only. Variances which are approved shall be properly documented in the plan and become part of the approved erosion and sediment control plan for the site.

PROFESSIONAL SEAL AND SIGNATURE required on final and complete approved stormwater management plans, drawings, technical reports and specifications.

WORKSHEET FOR BMP POINT SYSTEM to ensure the stormwater management plan for the project attains at least 10 BMP points (New Development) or traditional pollutant load reduction computations per the Chesapeake Bay Local Assistance Manual (Redevelopment Only)

PROPOSED CONSERVATION EASEMENT AREAS for any natural open space points claimed in the BMP worksheet.

INSPECTION/MAINTENANCE AGREEMENT is required to be prepared and executed with the County for the project.

FEMA FIRM PANEL reference with designated special flood hazard areas or zone designations associated with the site, as applicable.

DRAINAGE AREA MAP at a maximum scale of 1"=200' scale showing drainage area boundaries for pre- and postdevelopment conditions and associated time of concentration flow paths. Labels to include drainage area size, runoff coefficient or curve number and time of concentration for each subarea shown on the map.

Yes No N/A

SOILS MAP with soil symbols, boundaries and legend in accordance with the current Soil Survey of James City and York Counties and the City of Williamsburg, Virginia with approximate locations of the project site, BMPs and applicable drainage basins.

STORMWATER MANAGEMENT NARRATIVE in a brief and simple format which describes the project; location; site and drainage basin soil characteristics; receiving water or drainage facility; existing site and drainage basin conditions (topography, land use, cover, slopes, etc.); proposed site development; proposed stormwater management and drainage plan including County BMP type selected; summary of hydrology and hydraulics; maintenance program; and any special assumptions utilized for development of the stormwater management and drainage design plan or computations.

TEMPORARY STORMWATER MANAGEMENT (if applicable) for control of stormwater runoff encountered during construction activities in addition to measures provided in the erosion and sediment control plan or stormwater management/drainage plan for the site. Adequate protection measures or sequencing provided.

MODIFICATION PLAN clearly defined for temporary sediment control structures which will be converted to permanent SWM/BMP structures. Includes appropriate hydrologic and hydraulic computations, conversions, sequencing and cleanout information or details. Normally related to primary control structures associated with dry detention or wet retention ponds. Normally not permitted for Group C or D categories such as bioretention, infiltration and filtering system facilities.

STORMWATER MANAGEMENT and DRAINAGE DESIGN REPORT in a bound 8-1/2 x 11 inch size format. Report shall generally include a title sheet, date, project identification, owner and preparer information, table of contents, narrative, summaries and computations as required. Computations may include: backwater, closed conduit, headwater, hydraulic, hydraulic grade line, hydrology, inlet, open channel, storm sewer, water quality, extended detention or stream channel protection and multi-stage storm routing calculations, as applicable, for the project. Computation data may include hand or computer generated computations, maps or schematics. All information should be presented in a clear, easy to follow format and should closely match construction plan information.

PLAN VIEW at 1 inch = 50 ft. scale or less (1" = 40', 1" = 30', etc.)

North arrow and plan legend.

Property lines.

Adjacent property information.

Existing site features and existing impervious cover areas.

Impervious cover tabulations.

Existing drainage facilities (natural or manmade)

Existing environmentally sensitive areas (RPA, wetlands, floodplain, steep slopes, critical soils, buffers, etc.)

Existing and proposed contours (1' or 2' contour interval) and spot elevations as necessary to define high and low topography.

Existing and proposed easement locations.

Yes	No	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed site improvements and proposed impervious cover areas.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed stormwater conveyance, drainage and management facilities with appropriate labeled construction data and information.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed landscaping and seeding plans (disturbed areas, pond interior, etc.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed slope stabilization areas (riprap, blankets, mattings, walls, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delineation of permanent pools and the 1-, 2-, 10- and 100-year Design Water Surface Elevations.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delineation of ponding, headwater, surcharge or backwater areas which may affect adjacent existing or proposed buildings, structures or upstream adjacent properties.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test boring locations with reference surface elevations (if known).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Risers, barrels, underdrains, overflows and outlet protections.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Emergency spillway level section and outlet channel.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Existing and proposed site utilities and protection measures.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Erosion and sediment control measures (for site or BMP).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Maintenance or access corridors to permanent stormwater management, BMP or drainage facilities.

II. STORMWATER CONVEYANCE SYSTEMS:

Yes No N/A

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PLAN VIEWS	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Storm drain lengths, sizes, types, classes and slopes for all segments. Label directly on plan or use structure/pipe schedule.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Access structure (inlets, manholes, junctions, etc.) rim elevations, inverts, type and required grate or top unit and lengths labeled.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		All structure numbers labeled.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Adequate horizontal clearance from other site utilities or structures.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PROFILES	generally are not required but are encouraged to expedite review. If not provided, ensure all pipe segments have adequate minimum cover, do not exceed maximum depths of cover for the type/class of pipe specified and do not conflict with other site utilities or excavation areas.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETAILS	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Typical storm drain bedding details or reference note.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Standard details or reference note for all proposed access structure types (inlets, manholes, junctions, etc.).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Inlet shaping detail or applicable reference note.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Step detail or applicable reference note (if depth 4 ft. or more).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Typical open channel details with designation, location, shape, type, bottom width, top width, lining, slope, length, side slope, and installation depth required for construction. Channel design data as necessary may also be included.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Outlet protections at all pipe outfalls.

Yes No N/A

STORMWATER CONVEYANCE SYSTEM COMPUTATIONS

- Storm Sewer Design computations based on 10-year design event.
- Hydraulic Grade Line computations based on 10-year design event.
- Inlet computations based on current VDOT procedure for spread, ponding depth and grate size required.
- Culvert Headwater computations. Design based on 10-year design storm event and check only for 100-year storm event.
- Open Channel computations based on 2-year design event for velocity and 10-year design event for capacity.
- Standard outlet protection or special energy dissipators.
- Pipe thickness design computations, as required, for selected pipe type (live load, minimum cover, maximum height of cover, etc.).
- Adequate channel computations for receiving channels (based on field measured channel section data).

III. STORMWATER MANAGEMENT/BMP FACILITIES:

Yes No N/A

HYDROLOGY – An SCS based methodology is required for the design of stormwater management/BMP facilities with watersheds exceeding 20 acres. Under 20 acres, other generally accepted methodologies such as the modified rational, critical storm are allowable. Refer to Chapter 5 of the VESCH or Chapter 5 of the VSMH.

- Runoff Curve Number or Coefficient determinations: predeveloped and ultimate development land use scenarios.
- Time of concentration: predeveloped and ultimate development indicating overland, shallow concentrated, and channel flow components (200 ft. maximum length for overland flow).
- Hydrograph generation (tabular or graphical): pre- and postdevelopment conditions for the 1-, 2-, 10- and 100-year design storm events.

FACILITY CONFIGURATION and MINIMUM SEPARATIONS

- Screening and layout consistent with Section 24-98(d) of the Chapter 24 Zoning ordinance (landscaping, screening, visibility, etc.).
- Basic considerations for safety and unauthorized entry.
- Proper length to width ratio (Typically 2H:1V).
- Facilities with deep pools (4 feet or more in depth) provided with two benches. Fifteen (15) ft. safety bench outward from normal pool at maximum 6 percent slope and aquatic bench inward from normal shoreline below normal pool. Narrower widths may be considered on a case-by-case basis.
- Pond buffer minimum 25 feet outward from maximum design WSEL. Additional setbacks may be required to permanent structures.
- No trees, shrubs or woody plants within 15 feet of embankment toe or 25 feet from principal spillway structure.
- Infiltration and filtering system facilities generally located at least 100 feet horizontally from any water supply well; 100 feet from any downslope building; and 25 feet from any upslope buildings, unless site specific investigation allows for reduced separation.

Yes No N/A

HYDRAULIC COMPUTATIONS

- Elevation- or Stage-Storage curve and/or tabular data.
- Weir / Orifice Control – Extended Detention.
- Weir / Orifice Control – riser 1-year control for channel protection.
- Weir / Orifice Control – riser 2-year control for quantity (if required).
- Weir / Orifice Control – riser 10-year control for quantity (if required).
- Inlet / Outlet (barrel) control – (All Storms).
- Check for barrel control prior to riser orifice flow to prevent slug flow-water hammer conditions.
- Emergency spillway capacity and depth of flow.
- Elevation – Discharge (Outlet Rating) curve and/or table. Provide all supporting calculations and/or design assumptions.
- Adequate channel computations for receiving channel. May be waived if facility is designed based on current Stream Channel Protection criteria.

POND or RESERVOIR ROUTING

- Storage-Indication Routing of postdeveloped inflow hydrographs for the 1-, 2-, 10-, and 100-year design storms. Preference is for structure to discharge up to the 10-year storm through the principal spillway and pass the 100-year storm with a minimum 1 foot of freeboard through a combination principal and emergency spillways. If no emergency spillway is provided, riser must be large enough to pass the design high water flow and trash without overtopping the facility, have 3 square feet or more of cross-sectional area, contain a hood type inlet and have a minimum freeboard of 2 feet. Token spillways with minimum 8 ft. width are also recommended at or above the design 100-year storm elevation.
- Downstream hydrographs at established study points, if conditions warrant (i.e. facility discharge combined with uncontrolled bypass).

MISCELLANEOUS COMPUTATIONS

- Water quality volume for permanent pool based on selected BMP treatment volume (WQv).
- Water quality volume for extended detention base on selected BMP treatment volume (WQv) with drawdown computations.
- Drawdown computations for the 1-year, 24 hour detention for stream channel protection criteria.
- Pond drain computations (within 24 hours).
- Anti-seep collar design (concrete preferred) or match material type.
- Filter diaphragm design (or alternative method of controlling seepage).
- Riser / base structure flotation analyses. FS = 1.25 minimum.
- Downstream danger reach study and/or emergency action plan (if conditions warrant).
- Upstream backwater analyses onto offsite adjacent property (if conditions warrant).
- 100 year floodplain impacts (if conditions warrant).

Yes No N/A

GEOTECHNICAL REQUIREMENTS

- Geotechnical Report with recommendations specific to BMP facility type selected. Report prepared by a registered professional engineer. Requires submission, review and approval prior to issuance of Land Disturbance Permit.
- Initial Feasibility Testing requirements satisfied as per Appendix E of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual. (Infiltration, Bioretention and Filtering System BMP types only).
- Concept Design Testing requirements satisfied as per Appendix E of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual. (Infiltration, Bioretention and Filtering System BMP types only).
- Minimum Boring locations: borrow area, pool area, principal control structure, top of facility near one abutment and emergency spillway if provided.
- Boring logs with Unified Soil Classification (ASTM D2487), soils descriptions and depths to bedrock and the seasonal water table indicated.
- Standard County Record Drawing/Construction Certification note provided on plan. *Note: It is understood that preparation of record drawings and construction certifications as required for project facilities may not necessarily be performed by the plan preparer. These components may be performed by others.*

PRINCIPAL SPILLWAY PROFILE AND ASSOCIATED DETAILS

- EXISTING GROUND AND PROPOSED GRADE**
 - Embankment or excavation side slopes labeled (3H:1V maximum).
 - Minimum top width labeled (per VESCH or VSMH requirements).
 - Removal of unsuitable material under proposed facility (per Geotechnical Report requirements).

Yes No N/A

CORE TRENCH

- Material (per plan or Geotechnical Report).
 Bottom width (4' minimum or greater as dictated by Geotechnical Report recommendations).
 Side slopes (1:1 maximum steepness)
 Depth (4' minimum or greater as dictated by Geotechnical Report).

PRINCIPAL CONTROL STRUCTURE. RISER OR SIMILAR STRUCTURE (DETAILS REQUIRED FOR ALL ITEMS)

- Durable, watertight, resistant material (concrete preferred).
 Riser diameter is at least 1.25 times larger than barrel diameter.
 All pertinent dimensions and elevations shown.
 Control orifice or weir dimensions and elevations shown.
 Trash rack – removable – for each release.
 Anti-vortex device, baffle or plate.
 Riser base structure with dimensions and embedment specifications (concrete preferred).
 Interior access (steps, ladders, etc.) for maintenance for structures over 4 feet in height. Excessively high risers may need some form of exterior access on top portion.
 Low flow orifice with trash rack device.

PRINCIPAL CONTROL STRUCTURE OUTLET BARREL

- Material (ASTM C-361 reinforced concrete pipe) with watertight joints. Prior approval required for all other pipe material (other RCP types, CMP, CPP, PVC, etc.).
 Support and bedding requirements for barrel – concrete cradles, etc. or as recommended by the Geotechnical Report.
 Pipe inverts, length, size, class and slope shown.
 Flared end section or endwall provided on barrel outlet.

SEEPAGE CONTROL

- Phreatic line shown (4:1 slope measured from the intersection of the embankment and the principal spillway design high water).

ANTI-SEEP COLLARS

- Anti-seep collar, concrete preferred.
 Size – 15 percent increase in length of saturation using outside pipe diameter.
 Spacing and location on barrel (located at least 2 feet from a pipe joint).

FILTER DIAPHRAGMS

- Design based on latest NRCS design methods and certified by a professional engineer.

Chesapeake Bank - Lightfoot

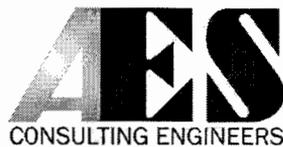
Documents and Design Calculations
for
James City County Environmental

AES Project No. 9354-01
James City County Case No. SP-74-04

September 2, 2004

SP-74-04

Prepared by:



AES Consulting Engineers

5248 Olde Towne Road, Suite 1
Williamsburg, VA 23188
(757) 253-0040 Fax: (757) 220-8994
<http://www.aesva.com>

Bioretention Cell Sizing

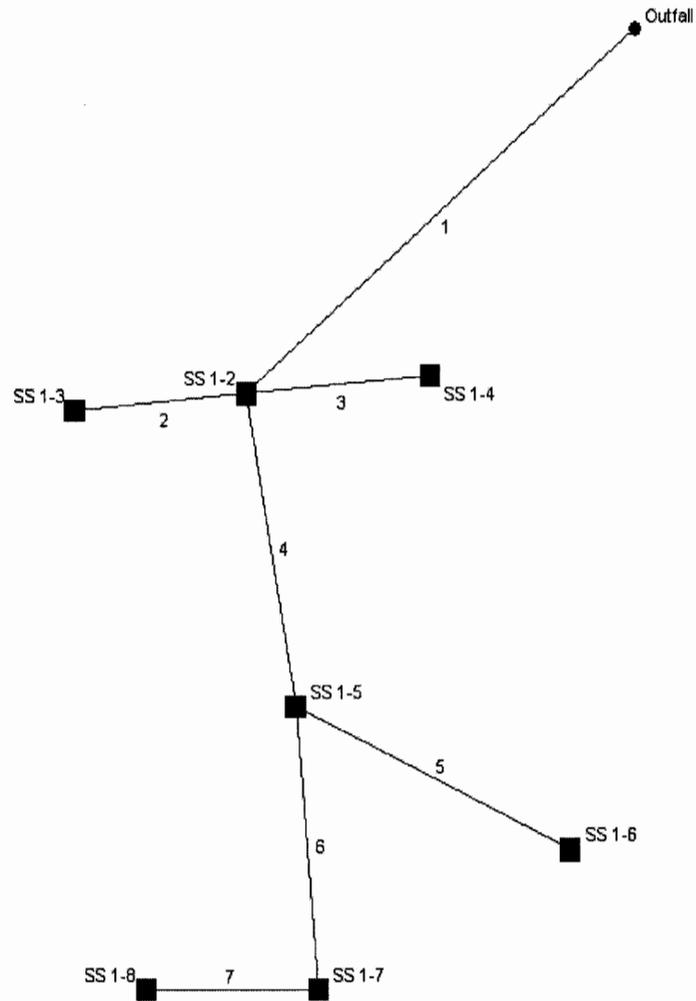
Size based on 1" per Impervious Area => 5% of Impervious Area

Total Drainage Area to Structure SS 1-4	0.50 Acre
Impervious Cover in Drainage Area	0.45 Acre
Surface Area Required	980.1 Sq Ft
Surface Area Provided	1100 Sq Ft

VA = 0.50 AC
IMPERV = 0.45 AC

1" + 0.45 AC + $\frac{1A}{12''}$

Hydraflow Plan View



Project file: 9354-01Storm System 1.stm

No. Lines: 7

08-10-2004

Hydraflow Storm Sewers 2003

Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	209.0	0.05	1.80	0.63	0.03	1.23	5.0	13.3	5.3	6.46	15.95	2.24	24	0.50	107.06	106.02	108.64	108.49	116.20	106.69	SS 1-1 TO 1-2
2	1	71.0	0.07	0.07	0.60	0.04	0.04	5.0	5.0	7.0	0.29	6.46	0.61	15	1.00	108.41	107.70	108.79	108.78	116.22	116.20	SS 1-2 TO 1-3
3	1	76.0	0.50	0.50	0.71	0.36	0.36	5.0	5.0	7.0	2.48	4.90	3.81	12	1.89	108.50	107.06	109.17	108.78	113.50	116.20	SS 1-2 TO 1-4
4	1	117.0	0.09	1.18	0.82	0.07	0.80	5.0	11.9	5.5	4.37	15.92	1.91	24	0.50	107.64	107.06	108.81	108.78	114.74	116.20	SS 1-2 TO 1-5
5	4	125.0	0.36	0.36	0.60	0.22	0.22	5.0	5.0	7.0	1.51	3.28	3.87	12	0.85	109.50	108.44	110.02	108.92	113.17	114.74	SS 1-5 TO 1-6
6	4	105.0	0.13	0.73	0.82	0.11	0.51	5.0	10.9	5.7	2.88	9.28	2.87	18	0.78	108.46	107.64	109.11	108.91	112.96	114.74	SS 1-5 TO 1-7
7	6	71.0	0.60	0.60	0.67	0.40	0.40	10.0	10.0	5.8	2.34	7.37	2.38	18	0.49	108.81	108.46	109.51	109.47	112.98	112.96	SS 1-7 TO 18

Project File: 9354-01Storm System 1.stm Number of lines: 7 Run Date: 08-10-2004

NOTES: Intensity = 80.56 / (Inlet time + 14.90) ^ 0.82; Return period = 10 Yrs.

Chesapeake Bank
SEDIMENT TRAP
Aggregate & Rip Rap Type Outlet
8/3/2004
AES Project No.: 9354-01

DRAINAGE AREA TO POINT OF CONCERN

1.8 Acres

STORAGE REQUIRED

- A. Wet Pond Volume = Drainage Area x 67 cy/ac = 121 cu. yd. / 3,256 cu. ft.
- B. Dry Pond Volume = Drainage Area x 67 cy/ac = 121 cu. yd. / 3,256 cu. ft.
6,512 cu.ft. Required

STORAGE PROVIDED

Elevation	Depth	Area (sq. ft.)	Incremental Volume (cu. ft.)	Volume (cu. ft.)	
104.00	0.00	907.0	0	0	Bottom Elev.
105.00	1.00	1,027.0	967	967	
106.00	1.00	1,153.0	1,090	2,057	
107.00	1.00	1,286.0	1,220	3,277	Top Wet Storage (121c.y.)
108.00	1.00	1,569.0	1,428	4,704	
109.00	1.00	1,879.0	1,724	6,428	
109.50	0.50	2,042.0	980	7,408	Top Dry Storage (153c.y.)
109.50	0.00	2,212.0	0	7,408	

SEDIMENT TRAP DATA

Pond Bottom Elevation =	104.00 feet	
Base of Aggregate & Rip Rap Elevation =	107.00 feet	1:1 Slope in Wet Storage Area
Top of Aggregate & Rip Rap Elevation =	109.50 feet	Top Dry Storage
Top of Diversion Dike Elevation = (Dry Elev. + 1.0Ft.)	110.5 feet	2:1 Slope in Dry Storage Area
Length of Aggr. & Rip Rap = 6 x Drain. Area (6' min.) :	10.8 feet	
Height of Aggregate & Rip Rap =	2.5 feet	Depth of Dry Storage
Top Width Aggregate & Rip Rap (Plate 3.13-1) = Orig.Ground Elev. = 107.	3.0 feet	
Diversion Dike Height = Top of D.D. - Base of Aggregate =	3.5 feet	

Stormwater Management for Site Re-development

Project: Chesapeake Bank in Lightfoot, VA
JCC SUP-30-03 Approved March 9, 2004

August 17, 2004

Under the proposed re-development the Percent Impervious Cover within the site drainage area to the point of concern (cg-6 gutter in the southwest portion of the site) will be reduced from 70.1% to 58.3%.

The runoff cfs will be reduced by 6.67%. (see attached Pre/Post Development Runoff sheet).

In addition the problem of unabated stormwater runoff flowing onto the adjacent site will be eliminated.

By reducing the amount of impervious cover and reducing the amount of stormwater runoff, this project meets the Re-Development criteria as outlined in James City Ordinances Sec. 23-7 (a)(2), 23-9(b)(4) & (5), and 23-9((b)(8). A Bio-retention Basin BMP has been added to he plans to enhance the water quality of the storm water runoff from the proposed site.

*REDUCING
DA DOES
NOT MAKE
PROBELTS
FALL
UNDER
REDEV*

Existing Site Conditions:

The existing site is an abandoned retail complex in a state of deterioration. Some off-site drainage from an abandoned restaurant is also directed onto this property. Within the pre-development drainage area for this site approximately 70% of the drainage area is impervious cover; Consisting mainly of paved parking area and the remainder from sidewalks and roof tops of the abandoned restaurant and several deteriorated frame buildings.

There are currently no stormwater management practices or facilities located on this site. Most of the pre-development storm water runoff is directed toward the north and west side of the property to a CG-6 gutter. However, the paved entrances on the north-west side of the property allow for most of the storm water runoff to by-pass the gutter. This runoff flows off the subject property into the paved parking lot of the adjacent property of the Wythe-Will Company.

PRE-DEVEL. SITE DRAINAGE TO CG-6 gutter at southwest end of site
96,247 sq.ft. 2.21 acres

PRE-DEVEL.- IMPERVIOUS COVER WITHIN CONSTRUCTION SITE:

PAVED PARKING& ENTR.:	61,037 sq.ft. 1.40 acres
LESS ISLANDS	<u>-5,439</u>
TOTAL PARKING:	55,598 sq.ft. 1.28ac.
WALKS (REAR) :	+6,042 sq.ft.
BUILDINGS(5):	<u>+5,762 sq.ft.</u>
Total Pre-Devel.-Impervious:	67,402 sq.ft. 1.55 ac.
	within Drainage Area

*1.55 AC IMPERV
IN 2.21 AC
PREDEV*

Pre-Devel – Impervious Cover (within drainage area) 70.1% (1.55/2.21)

Proposed Post Development Conditions:

The re-development of this site with the proposed bank facility will substantially improve the existing stormwater runoff conditions. The percent impervious cover is reduced to 58% as well as the runoff-cfs being reduced by about 7% from the site. (see attached Pre/Post Development Runoff sheet). A Bio-retention Basin BMP has been added to he plans to enhance the water quality of the storm water runoff from the proposed site

The stormwater runoff is controlled via collection in CG-6 guttering around the front and west sides of the property, as well as collected in a storm drain system for discharge at the rear of the property into the pre-existing gutter/runoff system. This eliminates the current condition of runoff flowing onto the adjacent property's parking lot.

Once future development of the Noland Properties to the east and south of the subject property is completed, the entire storm drain system of this property will be re-directed to the BMP facility created for this future development.

POST DEVEL. DRAINAGE AREA TO CG-6 gutter at southwest end of site
: 100,300 sq.ft. 2.30 acres

POST-DEVEL.- IMPERVIOUS COVER
WITHIN CONSTRUCTION SITE:

POST IMPERVIOUS AREA:

PARKING & ENTR RD. : 63,971 sq.ft. 1.47 acre

LESS INTERIOR

OPEN SPACE/ISLANDS -6,137 sq.ft.

TOTAL POST-DEVEL. IMPERVIOUS: 57,834 sq.ft. 1.33 ac.

Less Impervious inside 25'Easement -7,683 sq.ft.

Plus Area around Old Restaurant +5,321 sq.ft.

Plus Area to 1/2 Road Width +2,778 sq.ft.

Total Post Devel.-Impervious : 58,250 sq.ft. 1.34 ac.
within Drainage Area

*1.33 AC. IMPERV.
IN 2.30 AC DA
PREDEV*

*IF MEETS
REDEV MUST
ADDRESS
IMPERV COVER
IN OTHER W.S.*

Post-Devel. – Impervious Cover (within drainage area) 58.3% (1.34/2.30)

**PRE / POST DEVELOPMENT RUNOFF
USING RATIONAL METHOD
CHESAPEAKE BANK SITE AT LIGHTFOOT**

AES Project No.: 9354-1
May 28, 2004

I. PRE-DEVELOPMENT CONDITIONS TO POINT OF CONCERN

- A. Pre-Development Drainage Area to Point of Concern = **2.21 Acres**
 B. Pre-development Land Use, Weighted Average Runoff Coefficient

	<u>Land Use</u>	<u>Area of Land Use (in Acres)</u>	<u>Run Off Coefficient</u>	<u>Adjusted (C)</u>
1)	Impervious (Paved Surfaces)	1.51	0.90	1.36
2)	Grass (Sandy Soil - Slopes Steep)	0.70	0.20	0.14
Totals =		2.21		1.50
Weighted Average Runoff Coefficient				<u>0.68</u>

Rational Method $Q = C * I * A$ $C * A = 1.50$

II. POST-DEVELOPMENT CONDITIONS TO POINT OF CONCERN

- A. Post-Development Drainage Area to Point of Concern = **2.30 Acres**
 B. Post-development Land Use, Weighted Average Runoff Coefficient

	<u>Land Use</u>	<u>Area of Land Use (in Acres)</u>	<u>Run Off Coefficient</u>	<u>Adjusted (C)</u>
1)	Impervious (Paved Surfaces)	1.34	0.90	1.21
2)	Grass (Sandy Soil - Slopes Steep)	0.96	0.20	0.19
Totals =		2.30		1.40
Weighted Average Runoff Coefficient				<u>0.61</u>

Rational Method $Q = C * I * A$ $C * A = 1.40$

III. COMPARISON: POST DEVELOPMENT TO PRE-DEVELOPMENT

For ANY given Rainfall Intensity (Post Runoff CFS is **6.67 % LESS** that Pre-Development Runoff

Stormwater Management for Site Re-development

Project: Chesapeake Bank in Lightfoot, VA
JCC SUP-30-03 Approved March 9, 2004
presented for sup.
NO 7 June 7, 2004

Don't buy this - REDEV? CONFLICTS w/ SUP-30-03 plan which showed a BMP.

Under the proposed re-development the Percent Impervious Cover within the site drainage area to the point of concern (cg-6 gutter in the southwest portion of the site) will be reduced from 70.1% to

58.3% **A670**

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PA PRE 2.21 AC. POST 2.30 AC. PRE 0.108 POST 0.101

Pre-Devel - Impervious Cover (within drainage area) 70.1% (1.55/2.21)

Proposed Post Development Conditions:

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**PRE / POST DEVELOPMENT RUNOFF
USING RATIONAL METHOD
CHESAPEAKE BANK SITE AT LIGHTFOOT**

AES Project No.: 9354-1

May 28, 2004

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Totals =			1.50
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Rational Method $Q = C * I * A$ $C * A = 1.50$

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- A. Post-Development Drainage Area to Point of Concern = **2.30 Acres**
 B. Post-development Land Use, Weighted Average Runoff Coefficient

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1) Impervious (Paved Surfaces)	1.34	0.90	1.21
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Totals =			1.40
Weighted Average Runoff Coefficient			<u>0.61</u>

Rational Method $Q = C * I * A$ $C * A = 1.40$

III. COMPARISON: POST DEVELOPMENT TO PRE-DEVELOPMENT

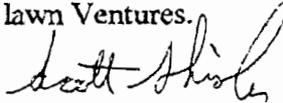
For ANY given Rainfall Intensity (Post Runoff CFS is **6.67** % LESS that Pre-Development Runoff

LAWN VENTURES MATERIAL SUPPLY
4703 GEORGE WASHINGTON MEMORIAL HIGHWAY
GRAFTON, VIRGINIA 23692
757-249-1005

Basic Construction
To Mr. Joe Link

In reference to topsoil blend that was made to spec, for the James City
County job.
This blend consisted of 50% sand, 30% compost and 20% topsoil.
This mix was blended and sifted for use on your job.

Thank you for your business
lawn Ventures.



owner

Scott Shisler

H/O BASIC CONSTRUCTION
NEWPORT NEWS, VA
RECEIVED

JAN 20 2005



Noland Properties, Inc.
 2700 Washington Avenue, Suite 400
 Post Office Box 971
 Newport News, Virginia 23607
 Voice • 757/247-8200 FAX • 757/247-8205

August 26, 2004

Mr. Marshall Warner
 Executive Vice President
 Chesapeake Bank
 P.O. Box 360
 Williamsburg, VA 23187-0360

RE: Chesapeake Bank at Lightfoot

Dear Mr. Warner:

Please allow this letter to serve as authorization from Noland Properties, Inc., to Chesapeake Bank for permission to construct site improvements necessary to support the proposed Chesapeake Bank site in Lightfoot, Virginia. Our authorization is limited to those site improvements designated on plans prepared by AES Consulting Engineers for this site.

If Noland Properties, Inc. can be of any further assistance, please do not hesitate to call.

Sincerely,

Noland Properties, Inc.

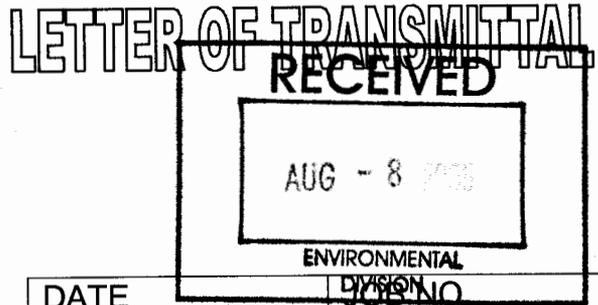
Ben. A. Williams III
 Chairman and CEO

BAW/amp

Post-it® Fax Note	7671	Date	9-1	# of pages	1
To	Marc Bennett	From	Ben Williams		
Co./Dept.	AES	Co.	Noland Prop.		
Phone #		Phone #			
Fax #		Fax #			

AES CONSULTING ENGINEERS
Engineering, Surveying, and Planning
 5248 Olde Towne Road, Suite 1
 WILLIAMSBURG, VIRGINIA 23188

Phone: (757) 253-0040
Fax: (757) 220-8994



ATTN: **Scott Thomas**

CO.:

Address: 101-E Mounts Bay Road
 Williamsburg, VA 23185

cc:

DATE	8/8/05	JOB NO	9354-01
FROM:	Wayne Powers		
RE	SP-74-04 Chesapeake Bank - Lightfoot BMP-BioCell Record Drawing & Certification		

WE ARE SENDING YOU THE FOLLOWING ITEMS:

- Attached
 Under separate cover via

- Original(s) Print(s) Plan(s) Specification(s) Change Order
 Copy of letter(s) Other:

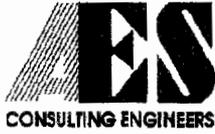
COPIES	DATE	No. of Pages	DESCRIPTION
2	8/5/05		SWM / BMP Certification Forms
2	1/20/05	1	Certification of Topsoil & Sand Mixture used in Bio-Cell
2	8/5/05	1	Record Drawing of BMP-Bio Cell

THESE ARE TRANSMITTED as checked below:

- For your approval For your signature For review and comment
 For your use As you requested As requested by:
 Other:

REMARKS:

If enclosures are not as noted, kindly notify us at once.



AES Consulting Engineers Fax Memorandum

5248 Olde Towne Road, Suite 1 • Williamsburg, Virginia 23188
Telephone: (757) 253-0040 • Facsimile: (757) 220-8994 • Email: aes@aesva.com

To: Scott Thomas	Org./Firm: James City County Enviromental
Fax Number: (757) 259-4032	Date: 10/11/04
From: Wayne Powers (email: wpowers@aesva.com)	Pages, including cover page: 3
cc:	cc Fax Number:
Subject: Chesapeake Bank - Lightfoot : SP-074-04	

Urgent **For Your Information** **For Review** **Please Comment** **Please Reply**

Comments:

As a follow-up to your on-site meeting with Mark Bennett last Thursday 10/07/04, the attached 2 sheets reflect the additions to the site plan discussed with Mark. Sheet 4 contains a note, which specifies that the Stilling Basin and outfall to the stilling basin are for the exclusive use of this site development only, and that the stilling basin and outfall pipe will be abandoned/removed when the road is extended. Sheet 10: The Stilling Basin Detail has been modified to show a small earthen mound on the down slope side of the stilling basin.

If these adjustments to the site plan are what you wanted, per your meeting with Mark, please let me know.

In order to expedite the final approval of this site plan, I would like to slip-sheet these changes into your and other county copies at your earliest convenience this week.

Thank you for your comments and assistance,

S:\Jobs\9354\01-Chesapeake Bank S.P\Wordproc\Document\935401Fax-ScottThomas SlipSheets.doc

Confidentiality Note: The documents accompanying this fax may contain confidential information. This information is intended only for the use of the individual or entity named on the transmission sheet. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on the contents of this faxed information is strictly prohibited, and that the documents should be returned to AES Consulting Engineers. If you have received this fax in error, please notify us by telephone immediately at the number above so that we can arrange for the return of the original document at no cost to you.

Scott Thomas

From: Scott Thomas
Sent: Monday, October 11, 2004 11:43 AM
To: 'Bennett, V. Marc'; 'wpowers@aesva.com'
Cc: Christopher Johnson; Darryl Cook
Subject: Chesapeake Bank SP-74-04

Marc/Wayne

Pursuant to our site meeting held on Thursday October 7th, I wanted to forward this email to provide information on this project. Also I know that Marc is out on vacation this week.

I am forwarding the plan on as approved by our Division. However, I want to give clarification on some issues and would like to see the final plans as submitted back to Planning with two small revisions. The revisions were discussed with Marc in the field last Thursday.

Clarifications:

1. There is no natural defined receiving channel at SS # 1-1 outfall. However, the outfall is of temporary nature and will be removed once the storm piping system along Noland Boulevard is extended and, also, this area will be treated in the future by a regional basin per the master stormwater plan.
2. I still do not totally buy off on the "redevelopment" scenario for stormwater management purposes. Although the stormwater narrative shows 1.55 acres of predevelopment impervious area in the 2.21 acre predevelopment drainage area and then a decrease to 1.33 acres impervious in the 2.30 acre postdevelopment drainage area, on a project-wide basis the cover sheet of the plans shows (for the bank site) 0.11 acres of impervious cover in the predevelopment state and 0.80 acres in the postdevelopment state, resulting in a 0.69 acre increase. However, based on the revised plan a bioretention BMP serving 0.50 acres was now implemented into the site design. The addition of this BMP in combination with the temporary nature of the outfall at SS # 1-1, the intent for a future regional BMP and a general 6.7 percent reduction in predevelopment runoff to the point of concern adequately addresses our previous stormwater management comments *for the bank site only*.

Minor Plan Revisions:

1. Label storm drain outfall SS # 1-1 on Sheet 4 as temporary, to be removed with extension of storm drainage piping along Noland Boulevard.
2. Rearrange the spreader lip portion of the stilling basin so that it is constructed on the north (Wythe-Will) and west side of the basin. Revise plan Sheet 4 and/or the detail on Sheet 10 appropriately. Overflow from the stilling basin should not be able to short-circuit around the west side.

Please ensure the two (2) minor plan revisions are completed on the final site/construction plans as there is no reason to issue another round of comments just for these small items. Let me know if you have any questions on this matter.

Scott J. Thomas, P.E.
James City County
Environmental Division

10/11/2004

YC022_CHESAPEAKE_BANK_AT_LIGHTFOOT - 061

Scott Thomas

From: Scott Thomas
Sent: Monday, October 11, 2004 11:47 AM
To: 'wpowers@aesva.com'
Cc: Christopher Johnson
Subject: FW: Chesapeake Bank SP-74-04

Wayne

I got your email this morning addressing the 2 minor plan revisions. I am ok with the adjustments made to address both issues. Ensure these corrections are on the final plans sent back to Planning.

Scott J. Thomas, P.E.
James City County
Environmental Division
-----Original Message-----

From: Scott Thomas
Sent: Monday, October 11, 2004 11:43 AM
To: 'Bennett, V. Marc'; 'wpowers@aesva.com'
Cc: Christopher Johnson; Darryl Cook
Subject: Chesapeake Bank SP-74-04

Marc/Wayne

Pursuant to our site meeting held on Thursday October 7th, I wanted to forward this email to provide information on this project. Also I know that Marc is out on vacation this week.

I am forwarding the plan on as approved by our Division. However, I want to give clarification on some issues and would like to see the final plans as submitted back to Planning with two small revisions. The revisions were discussed with Marc in the field last Thursday.

Clarifications:

1. There is no natural defined receiving channel at SS # 1-1 outfall. However, the outfall is of temporary nature and will be removed once the storm piping system along Noland Boulevard is extended and, also, this area will be treated in the future by a regional basin per the master stormwater plan.
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1. Label storm drain outfall SS # 1-1 on Sheet 4 as temporary, to be removed with extension of storm drainage piping along Noland Boulevard.

10/11/2004

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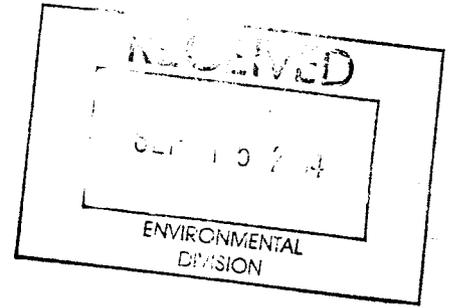
Please ensure the two (2) minor plan revisions are completed on the final site/construction plans as there is no reason to issue another round of comments just for these small items. Let me know if you have any questions on this matter.

Scott J. Thomas, P.E.
James City County
Environmental Division

10/11/2004

YC022_CHEESAPEAKE_BANK_AT_LIGHTFOOT - 063

TRANSMITTAL



DATE: September 15, 2004
TO: Environmental JCSA
FROM: Christopher Johnson, Senior Planner
SUBJECT: S-88-04. Noland Properties, Inc., Parcel B
ITEMS ATTACHED: Plat
INSTRUCTIONS: Please review and comment.
RETURN BY: September 30, 2004
AGENCY COMMENTS:

No comments DEC 10/15/04

RECEIVED SEP 21 2004
- Pre Sept 29 '04

Is this development served by Newport News Waterworks? _____ (JCSA please check if yes)

If checked, planner will fax a copy of preliminary approval letter with Fire Department comments, and the JCSA completed water data sheet to Newport News Waterworks as soon as all three are available.

Scott Thomas

From: Scott Thomas
Sent: Wednesday, November 02, 2005 2:34 PM
To: 'Powers, Wayne'
Cc: Joan Etchberger
Subject: RE: Form to get E&S Bond reduced

Wayne, I was able to look at the asbuilt for the bioretention basin at the Chesapeake Bank (SP-74-04; YC022) and also go back through the file a little in order to try and close-out the project. These are the issues right now:

- 1. Inspection/Maintenance Agreement.** As Noland conveyed the parcel to Chesapeake Bank, an inspection/maintenance agreement will be needed for the project for the BMP and onsite storm drainage piping systems on the bank site. This was never identified in our first review of the project as the redevelopment scheme did not initially have a BMP. We would have requested an I/M agreement if upon first review there was a BMP present. Subsequently it was added to the site and we never requested the I/M agreement. Although this BMP may be locked into the overall bigger master stormwater plan, it will still be a permanent device on the bank site that needs inspected and the County allowed access to inspect. I have alerted Joan Etchberger to attempt to notify the owner on this matter, but any assistance from your end will be appreciated.
- 2. Construction Certification** appears satisfactory.
- 3. Record Drawing/Asbuilt.** Overall the asbuilt looks ok, however, the west side of the parking lot looks about ½ ft. low as compared to proposed edge of pavement, which may be causing a problem with what I have seen in the field (about the constructed section not representing the approved design section). There is supposed to be at least one-half foot of storage (sump) between the west parking lot edge and top of mulch - and the rim of the DI-7 should be just about at the same elevation as the west parking lot edge. This is not the case, but pending no further changes to the BMP (per the comment below), the asbuilt can be considered as approved. Forward me one more blue or black line copy and one reproducible.
- 4. Field-Issue.** I did visit the site during a rain event and did see the 1-inch holes cut. But the problem was it appeared the top of inlet elevation and top of mulch elevation was very much higher than the west edge of parking lot elevation at the gravel diaphragm. I am not certain if this an optical illusion (and the asbuilt is right) or the asbuilt has some incorrect elevations, especially top of inlet rim (El. 113.45). Although there may be some minor discrepancies, I don't have a huge problem with moving forward on release from a field perspective knowing that the overall concept SWM plan for the Noland site will have regional BMPs and this BMP-IMP will be a secondary type measure. It appears to now be free-draining or could be easily modified to be "better-free draining" if it needs to be. But to move forward, I need some kind of comfort level that it does not impact site use at the bank site (ie. parking, drive aisle, etc.)

As such, we will need to discuss item # 4 further, perhaps a visit to the site together, and we will need the inspection/maintenance agreement from the owner before I could sign off and release bond on the BMP. I assume that there are not any site or erosion/stabilization issues that need worked out with our inspection group and I am all that remain for bond release/reduction.

Scott J. Thomas, P.E.
James City County
Environmental Division

-----Original Message-----

From: Powers, Wayne [mailto:wpowers@aesva.com]
Sent: Tuesday, November 01, 2005 2:39 PM
To: Scott Thomas
Subject: RE: Form to get E&S Bond reduced

Scott,

Thanks for the update, No. the last time we spoke was when I called and you were going to a meeting and said that you would try to get to Ches. Bank. after you meeting. I will follow up with Basic, & Henderson.

Wayne

-----Original Message-----

From: Scott Thomas [mailto:SCOTTT@james-city.va.us]
Sent: Tuesday, November 01, 2005 2:34 PM
To: Powers, Wayne
Subject: RE: Form to get E&S Bond reduced

Wayne, I thought that I had told you when we last spoke that I did visit the bio-basin during a rain event, saw the 1-inch holes that were cut, but the big hang-up was that the constructed section from parking lot to curb (drive-up aisle) did not follow the approved typical section and this needed further evaluation. I have spoken to someone from Henderson and Joe Link about this and was going to further look at the asbuilt and make a final decision. There is no bond release form, it is our own internal form that when we get a request we fill it out for the inspection staff to process.

Scott J. Thomas, P.E.
James City County
Environmental Division

Visit:

http://www.james-city.va.us/resources/devmgmt/div_devmgmt_environ.html

and

www.protectedwithpride.org

-----Original Message-----

From: Powers, Wayne [mailto:wpowers@aesva.com]
Sent: Tuesday, November 01, 2005 1:25 PM
To: Scott Thomas
Subject: Form to get E&S Bond reduced

Scott,

In regard to the Chesapeake Bank site, I have been told that there is a form the Owner/Contractor, can fill out and with the signature of the E&S inspector, get a substantial amount of the E&S bond can be released.

I've looked at the county's web site and did not see such form. I'm told it exists, but no one here can remember what it is called.

Could you have someone send me a copy of this form ?

Please let me know something about the As-Built for the Bio-Cell as soon as you get time to work on it.

11/2/2005

YC022_CHESAPEAKE_BANK_AT_LIGHTFOOT - 066

Thanks for your assistance.

Wayne

AES Consulting Engineers

Williamsburg | Richmond | Gloucester

Ph: (757)253-0040 Fax: (757)220-8994

5248 Olde Towne Road, Suite 1

Williamsburg, VA 23188

www.aesva.com

ENGINEERS

To: Joe Link	Org./Firm: Basic Construction Co.
Fax Number: 757-249-2229	Date: 11/08/04
From: Wayne Powers	Pages, including cover page: 3
cc: Joan Etchberger, JCC Environmental Dept.	cc Fax Number: (757) 259-4032
Subject: Deed for Chesapeake Bank on Richmond Road SP-74-04	

Urgent For Your Information For Review Please Comment Please Reply

Comments:

Here is the deed for Chesapeake Bank for Noland Properties. Please note that the Subdivision Plat was recorded separately at Instrument # 040027712 as shown on this document..

I believe this will be all of the information required by JCC Environmental concerning the transfer of the property to Chesapeake Bank.

Please let me know if we can be of further assistance.

Regards,



Document2

Confidentiality Note: The documents accompanying this fax may contain confidential information. This information is intended only for the use of the individual or entity named on the transmission sheet. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on the contents of this faxed information is strictly prohibited, and that the documents should be returned to AES Consulting Engineers. If you have received this fax in error, please notify us by telephone immediately at the number above so that we can arrange for the return of the original document at no cost to you.

040028475

of Tax Map #24-3-1-35

CONSIDERATION: \$500,000.00

THIS DEED, made as of the 2nd day of November, 2004, by and between NOLAND PROPERTIES, INC., a Virginia corporation, GRANTOR; and CHESAPEAKE BANK, a Virginia banking corporation, GRANTEE, whose mailing address is 97 North Main Street, Post Office Box 1419, Kilmarnock, Virginia 22482.

WITNESSETH

THAT FOR and in consideration of the sum of TEN DOLLARS (\$10.00) cash in hand paid, and other good and valuable consideration, the receipt whereof is hereby acknowledged, the Grantor has bargained and sold and by these presents does hereby grant and convey, with **GENERAL WARRANTY** and with **ENGLISH COVENANTS OF TITLE**, unto the said Grantee, its successors and/or assigns, the following described property (the "Property"), to wit:

All that certain lot, piece or parcel of land situate, lying and being in the County of James City, Virginia, designated as Parcel B containing 1.35 acres, as shown on the plat entitled, "PLAT OF SUBDIVISION, NOLAND PROPERTIES, INC., CONTAINING 53.44 ACRES," made by Thomas C. Sublett, Land Surveyor, AES Consulting Engineers, Williamsburg, Virginia, dated August 12, 2004, of the lands of Noland Properties, Inc., situated in Stonehouse District, James City County, Virginia which said plat is duly recorded in the Clerk's Office of the Circuit Court of the County of James City, Virginia, on October 29, 2004 as Instrument Number 040027712.

Together with that certain private ingress and egress easement .86' in width for ingress and egress from Richmond Road (U.S. Route 60) over other lands of the Grantor to be used by the Grantor its successors and/or assigns in common with the Grantee and its successors and/or assigns which easement is more particularly shown on the aforesaid plat and entitled "86' Private Ingress & Egress Esm't".

Prepared by: Patten, Wornom, Hatten & Diamonstein, LC
12350 Jefferson Avenue, Suite 300
Newport News, Virginia 23602

Page 1 of 2

Together with all and singular the buildings and improvements thereon, rights and privileges, tenements, hereditaments, easements and appurtenances unto the said land belonging or in anywise appertaining.

Subject to restrictions, covenants, conditions and easements of record affecting the Property herein conveyed.

AND BEING a portion of the same property conveyed to the Grantor herein by virtue of that certain deed dated February 5, 2004 and recorded in the aforesaid Clerk's Office as Instrument Number 040003857.

Whenever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall include all other genders.

WITNESS the following signature and seal:

NOLAND PROPERTIES, INC.
a Virginia corporation

BY Ben A. Williams III
Ben A. Williams III, Chairman and CEO

COMMONWEALTH OF VIRGINIA

City of Newport News, to wit;

I, Ailene Peters, a Notary Public in and for the city and commonwealth aforesaid, do certify that Ben A. Williams III as Chairman and CEO and on behalf of NOLAND PROPERTIES, INC., a Virginia corporation, whose name is signed to the foregoing Deed dated November 2, 2004, has acknowledged the same before me in my city and commonwealth aforesaid.

Given under my hand this 3rd day of November, 2004.

My commission expires 12-31-05

Ailene Peters
Notary Public



VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY
This document was admitted to record on 5 Nov 04
at 1:15 PM. The taxes imposed by Virginia Code
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

Page

STATE TAX LOCAL TAX ADDITIONAL TAX
\$ 1250.00 \$ 416.67 \$ 500.00

TESTE: BETSY B. WOOLRIDGE, CLERK

BY Betsy B. Woolridge Clerk

RETURN TO:
GEDDY, HARRIS, FRANK & HICKMAN, L.L.P.
POST OFFICE BOX 379
WILLIAMSBURG, VIRGINIA 23187-0379

TOTAL P. 03

AES CONSULTING ENGINEERS
Engineering, Surveying, and Planning
 5248 Olde Towne Road, Suite 1
 WILLIAMSBURG, VIRGINIA 23188

LETTER OF TRANSMITTAL

Phone: (757) 253-0040
Fax: (757) 220-8994

ATTN: **Scott Thomas**

CO.:

Address: 101-E Mounts Bay Road
 Williamsburg, VA 23185

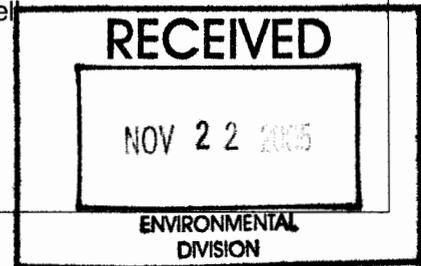
cc:

DATE 11/21/05	JOB NO. 9354-01
FROM: Wayne Powers	
RE SP-74-04 Chesapeake Bank - Lightfoot BMP-BioCell Record Drawing	

WE ARE SENDING YOU THE FOLLOWING ITEMS:

- Attached
 Under separate cover via
 Original(s) Print(s) Plan(s) Specification(s) Change Order
 Copy of letter(s) Other:

COPIES	DATE	No. of Pages	DESCRIPTION
1	8/5/05		Mylar - Record Drawing of BMP-Bio Cell
1	8/5/05	1	Print - Record Drawing of BMP-Bio Cell



THESE ARE TRANSMITTED as checked below:

- For your approval For your signature For review and comment
 For your use As you requested As requested by:
 Other:

REMARKS:

Attached are the As-Built copies you requested in your 11/02/05 email.

Please let me know if you want to visit the site together.

Thank you,

If enclosures are not as noted, kindly notify us at once.

Facility Item	O.K.	Routine	Urgent	Comments
Condition				
Erosion	✓			
Trash and Debris	✓			
Sediment	✓			
Aesthetics	✓			
Other				
Primary Infiltration (Bioretention Cell) Area:				
Specialty Landscaping	✓			
Mulch Layer	✓			
Planting Soil/Sand	✓			
Subgrade Soil	✓			
Aggregate	✓			
Underdrain	✓			
Sediment	✓			
Aesthetics	✓			
Overflow or Bypass Control Structure (Describe Type/Location):				
Condition	✓			
Erosion	✓			
Trash & Debris	✓			
Sediment	✓			
Other				
Outlet Structure (Describe Type/Location): re routed to 12" DI - BMP rather than 24"/stilling basin				
Condition	✓			
Erosion	✓			
Trash & Debris	✓			
Sediment	✓			
Other				
Contributing Drainage Area/Perimeter Conditions:				
Land Use	✓			Bank/Parking Area
Stabilization	✓			
Trash & Debris	✓			
Pollutant Hazard	✓			
Other				

Facility Item	O.K.	Routine	Urgent	Comments
Sketch and/or Remarks:				
<p>Overall Environmental Division Internal Rating: <u>4</u></p> <p>Signature: <u>Vina Cooke</u> Date: <u>6/14/07</u></p> <p>Title: <u>Environmental Inspector</u></p>				

SWMPProg\BMP\CoInspProg\Bioret.wpd

Date Record Created:

WS_BMPNO:

YC022

Print Form

Created By:

WATERSHED YC
BMP ID NO 022
PLAN NO SP-74-04
TAX PARCEL (24-3)(1-35B)
PIN NO 2430100035B
CONSTRUCTION DATE 1/20/2005
PROJECT NAME Chesapeake Bank at Lightfoot
FACILITY LOCATION 6601 Richmond Road
CITY-STATE Williamsburg, Virginia
CURRENT OWNER Chesapeake Bank
OWNER ADDRESS 1229 Lafayette St
OWNER ADDRESS 2
CITY-STATE-ZIP CODE Williamsburg, VA 23185
OWNER PHONE 757-253-9080
MAINT AGREEMENT Yes
EMERG ACTION PLAN No

PRINTED ON:
Saturday, March 13, 2010
3:24:28 PM

MAINTENANCE PLAN

SITE AREA acre
LAND USE
 old BMP TYP
JCC BMP CODE
POINT VALUE

Yes

1.35

Bank

Bioretention

D1 Bioretention

10

SVC DRAIN AREA acres

0.5

SERVICE AREA DESCRI

Parking Area

IMPERV AREA acres

0.45

RECV STREAM

UT of Yarmouth Creek

EXT DET-WQ-CTRL

Yes

WTR QUAL VOL acre-ft

0.038

CHAN PROT CTRL

No

CHAN PROT VOL acre-ft

0

SW/FLOOD CONTROL

Yes

GEOTECH REPORT

No

CTRL STRUC DESC

Conc. DI-7

CTRL STRUC SIZE inches

OTLT BARRL DESC

RCP

OTLT BARRL SIZE inch

12

EMERG SPILLWAY

No

DESIGN HW ELEV

114.4

PERM POOL ELEV

n/a

2-YR OUTFLOW cfs

0.00

10-YR OUTFLOW cfs

2.48

REC DRAWING

Yes

CONSTR CERTIF

Yes

LAST INSP DATE 6/14/2007

Inspected by:

INTERNAL RATING 4

MISC/COMMENTS

1,100 sf bio-basin.

Get Last BMP No

Return to Menu

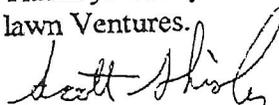
Additional Comments:

LAWN VENTURES MATERIAL SUPPLY
4703 GEORGE WASHINGTON MEMORIAL HIGHWAY
GRAFTON, VIRGINIA 23692
757-249-1005

Basic Construction
To Mr. Joe Link

In reference to topsoil blend that was made to spec, for the James City
County job.
This blend consisted of 50% sand, 30% compost and 20% topsoil.
This mix was blended and sifted for use on your job.

Thank you for your business
lawn Ventures.



owner

Scott Shisler

H/O BASIC CONSTRUCTION
NEWPORT NEWS, VA
RECEIVED

JAN 20 2005

Powers, Wayne

From: Scott Thomas [SCOTTT@james-city.va.us]
Sent: Wednesday, November 02, 2005 2:34 PM
To: Powers, Wayne
Cc: Joan Etchberger
Subject: RE: Form to get E&S Bond reduced

Wayne, I was able to look at the asbuilt for the bioretention basin at the Chesapeake Bank (SP-74-04; YC022) and also go back through the file a little in order to try and close-out the project. These are the issues right now:

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*Scott J. Thomas, P.E.
 James City County
 Environmental Division*

-----Original Message-----

From: Powers, Wayne [mailto:wpowers@aesva.com]
Sent: Tuesday, November 01, 2005 2:39 PM
To: Scott Thomas
Subject: RE: Form to get E&S Bond reduced

Scott,

11/21/2005

Log In -

AND

PROGRESS

EO ✓ RVD
CC ✓ RVD

YCOZZ
SP-74-04

~~Need 1/m
AGREE AS NOLAND
DRAINED LOT TO
CITY'S BANK.~~

~~1ST REVIEW NEVER
HAD BMP SO A
COMMENT WAS NEVER
MADE~~

Need to
try and get
an I/M
agreement

SP-74-04
Chesapeake Bank at
Lightfoot (Noland
Property)

Scott,
For you,
Law