



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: PC246

DATE VERIFIED: November 26, 2012

QUALITY ASSURANCE TECHNICIAN: Leah Hardenbergh



LOCATION: WILLIAMSBURG, VIRGINIA



Stormwater Division

MEMORANDUM

Date: March 28, 2012
To: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services
From: Leah Hardenbergh
PO: 110426
Re: Files Approved for Scanning

General File ID or BMP ID: PC246
PIN: 3822400012
Owner Name (if known): NEW TOWN COMMERCIAL ASSOCIATION
Legal Property Description: P-A BLK-10 NEW TOWN
Site Address: 4319 NEW TOWN AVENUE

(For internal use only):

Box # 2

Agreements (in file as of scan date): Y **Book or Doc #:** 060004140/060029766

Contents for Stormwater Management Facilities As-built Files

Each file is to contain:

- ~~1.~~ As-built plan
- ~~2.~~ Completed construction certification
- ~~3.~~ Construction Plan
- ~~4.~~ Design Calculations
- ~~5.~~ Watershed Map *at end of calc*
- ~~6.~~ Maintenance Agreement
7. Correspondence with owners
- ~~8.~~ Inspection Records
9. Enforcement Actions

 **COPY**

COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS

INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 22nd day of November, 20 06,
between New Town Associates, LLC, and
all successors in interest, ("COVENANTOR(S),") owner(s) of the following property:

Parcel Identification Number: (38-2) (24-0-0012)

Legal Description: Block 10 Parcel A

Project or Subdivision Name: New Town - Section 4 - Block 10

Document No. 060004140

OR Deed Book _____, Page No. _____

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

Instrument # 060029766

Recorded on Dec. 11, 2006

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.

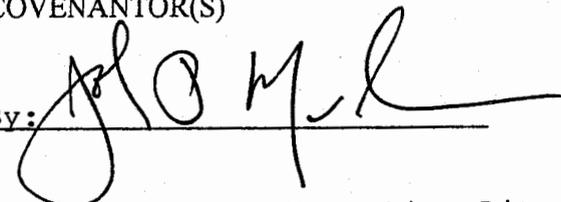
7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the SYSTEM. The COVENANTOR(S)' shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

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.

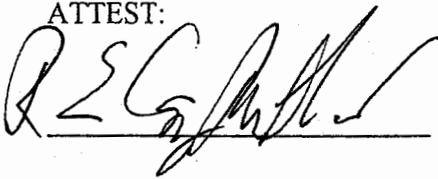
IN WITNESS WHEREOF, the COVENANTOR(S) have executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)

By: 

Print Name/Title John P McCann, Executive Director

ATTEST:



COVENANTOR(S)

Print Name/Title _____

ATTEST:

COMMONWEALTH OF VIRGINIA

CITY/COUNTY OF James City

I hereby certify that on this 22ND day of November, 20 06, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared John P McCann and did acknowledge the foregoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 22ND day of NOVEMBER, 20 06.

Jessica Curzman Knighten
Notary Public

My Commission expires: 08-31-08

Approved as to form:

Joseph C. Long
Asst. County Attorney

This Declaration of Covenants prepared by:

John P. McCann
(Print Name)

Executive Director
(Title)

4801 Courthouse Street
(Address)

Williamsburg, VA 23188
(City) (State) (Zip)

757-565-6200
(Phone Number)

drainage1.pre



**James City County Environmental Division
Stormwater Management/BMP Record Drawing &
Construction Certification Review
Tracking Form**

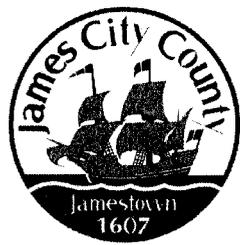
Project Name: Newtown Block 10
County Plan No.: SP-124-05 & SP-77-05
Stormwater Management Facility: Dry Swale
BMP Phase #: I II III
 Information Package Received. Date/By: 6/30/09
 Completeness Check:
 Record Drawing Date/By: 3/4/09
 Construction Certification Date/By: 6/12/09
 RD/CC Standard Forms (Required for all BMPs after Feb 1st 2001 Only)
 Insp/Maint Agreement # / Date:
 BMP Maintenance Plan Location: SP124-05 - Sheet 10
 Other:
 Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review
 Yes No Location: Sheet 10 SP12405
 Assign County BMP ID Code #: Code: PC246
 Preliminary Input/Log into Division's "As-Built Tracking Log"
 Add Location to GIS Map. Obtain basic site information (GPIN, Owner, Address, etc.)
 Preliminary Log into Access Database (BMP ID #, Plan No., GPIN, Project Name, etc.)
 Active Project File Review (correspondence, H&H, design computations, etc.).
 Initial As-Built File setup (File label, folder, copy plan/details/design information, etc.).
 Inspector Check of RD/CC (forward to Inspector using transmittal for cursory review).
 Pre-Inspection Drawing Review of Approved Plan (Quick look prior to Field Inspection).
 Final Inspection (FI) Performed Date: 7/16/09 - Minor repairs - reinspect 8/2/09
 Record Drawing (RD) Review Date: 7/16/09
 Construction Certification (CC) Review Date: 7/16/09
 Actions:
 No comments. (Minor issues - called)
 Comments. Letter Forwarded. Date: _____
 Record Drawing (RD)
 Construction Certification (CC)
 Construction-Related (CR)
 Site Issues (SI)
 Other : _____
 Second Submission: _____
 Reinspection (if necessary): _____
 Acceptable for SWM Purposes (RD/CC/CR/Other). Ok to proceed with bond release.
 Complete "Surety Request Form".
 Check/Clean active file of any remaining material and finish "As-Built" file.
 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 save into County BMP Inventory.
 Request mylar/reproducible from As-Built plan preparer.
 Complete "As-built Tracking Log".
 Last check of BMP Access Database (County BMP Inventory).
 Add BMP to JCC Hydrology & Hydraulic database (optional).
 Add BMP to Municipal BMP list (if a County-owned facility)
 Add BMP to PRIDE BMP ratings database.

Final Sign-Off

Inspector: Amyl Paul
Chief Engineer: _____

Date: 3/17/10
Date: _____

*** See separate checklist, if needed.



James City County, Virginia
Environmental Division

**Stormwater Management / BMP Facilities
Record Drawing and Construction Certification Forms**

(Note: In accordance with the requirements of the Chesapeake Bay Preservation Ordinance, Chapter 23, Section 23-10(4), BMP's shall be designed and constructed in accordance with the manual entitled James City County Guidelines for Design and Construction of Stormwater Management BMP's. Erosion and sediment control policy and approved plans generally require that at the completion of the project and prior to release of surety, an "as-built" plan prepared by a registered Professional Engineer or Certified Land Surveyor must be provided for the drainage system for the project, including any Best Management Practice (BMP) facilities. In addition, for BMP facilities involving the construction of an impounding structure or dam embankment, certification is required by a Professional Engineer who has inspected the structure during its construction. Currently there are over 20 water quality type BMP's accepted by the County.)

Section 1 – Site Information:

Project Name: New Town - Block 10 - Dry Swale
Structure/BMP Name: Block 10 Dry Swale
Project Location: New Town Section 2&4, Block 10
BMP Location: Adjacent to Foundation Square Building in Parking Lot
County Plan No.: SP - 0124 - 2005

Project Type: Residential Business Tax Map/Parcel No.: 3822400012
 Commercial Office BMP ID Code (if known): _____
 Institutional Industrial Zoning District: MU
 Public Roadway Land Use: Parking Lot
 Other Mixed Use Site Area (sf or acres): 2.64 acres

Brief Description of Stormwater Management/BMP Facility: Dry Swale (E-2)

Nearest Visible Landmark to SWM/BMP Facility: Foundation Square Building and Ironbound Gym Building

Nearest Vertical Ground Control (if known):
 JCC Geodetic Ground Control USGS Temporary Arbitrary Other
Station Number or Name: 325
Datum or Reference Elevation: NGVD29 Elevation 110.67
Control Description: Benchmark Station #325
Control Location from Subject Facility: _____

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: September 2005
Facility Monitored by County Representative during Construction: Yes No Unknown
Name of Site Work Contractor Who Constructed Facility: Henderson, Inc.
Name of Professional Firm Who Routinely Monitored Construction: AES Consulting Engineers
Date of Completion for SWM/BMP Facility: 2008/2009
Date of Record Drawing/Construction Certification Submittal: June 2009

(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: New Town Associates, LLC
Mailing Address: 4801 Courthouse Street, Suite 128
Williamsburg, VA 23188
Business Phone: (757) 565-6200 Fax: _____
Contact Person: _____ Title: _____

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 Suite 1
Williamsburg, Virginia 23188
Business Phone: 757-253-0040
Fax: 757-220-8994
Responsible Plan Preparer: Robert E. Cosby, III, P.E.
Title: Project Manager
Plan Name: New Town Section 2&4 Block 10
Firm's Project No. 6632-E-24-1
Plan Date: June 20, 2005, last revised November 9, 2005
Sheet No.'s Applicable to SWM/BMP Facility: 5 / 10 / _____ / _____ / _____

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

Name: Henderson, Inc.
Mailing Address: 5806 Mooretown Road
Williamsburg, Virginia 23187
Business Phone: 757-565-1090
Fax: 757-564-9120
Contact Person: Peter Henderson
Site Foreman/Supervisor: _____
Specialty Subcontractors & Purpose (for BMP Construction Only):

Section 4 – Professional Certifications:

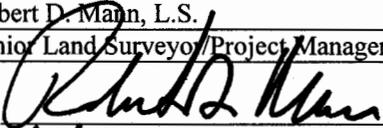
Certifying Professionals: *(Note: A Registered Professional Engineer of Certified Land Surveyor is responsible for preparation of a Record Drawing, sometimes referred to as an As-Built plan, for the drainage system for the project including any Stormwater Management/BMP Facilities. A Registered Professional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

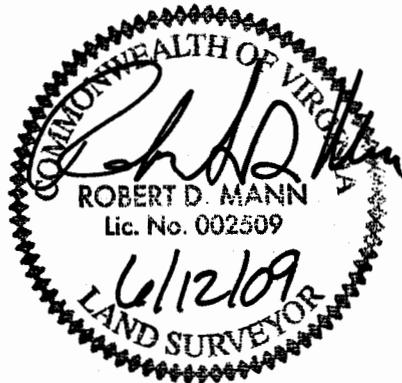
Record Drawing Certification

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

Name: Robert D. Mann, L.S.
Title: Senior Land Surveyor/Project Manager

Signature: 
Date: 6/12/09

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.



(Seal)

Virginia Registered Professional Engineer
Or Certified Land Surveyor

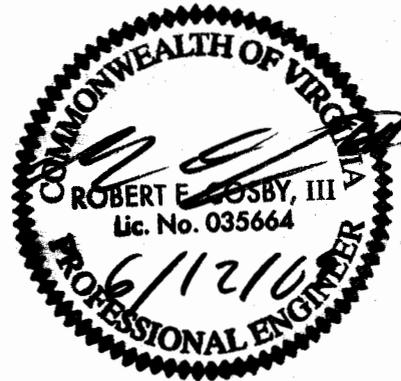
Construction Certification

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

Name: Robert E. Cosby, III, P.E.
Title: Project Manager

Signature: 
Date: 6/12/09

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

Section 5 – Record Drawing and Construction Certification Requirements and Instructions:

- ❑ PreConstruction Meeting – Provides an opportunity to review SWM / BMP facility construction, maintenance and operation plans and address any questions regarding construction and/or monitoring of the structure. The design engineer, certifying professionals (if different), Owner/Applicant, Contractor and County representative(s) are encouraged to attend the preconstruction meeting. Advanced notice to the Environmental Division is requested. Usually, this requirement can be met simultaneously with Erosion and Sediment Control preconstruction meetings held for the project.
- ❑ A fully completed ***STORMWATER MANAGEMENT / BMP FACILITIES, RECORD DRAWING and CONSTRUCTION CERTIFICATION FORM and RECORD DRAWING CHECKLIST***. All applicable sections shall be completed in their entirety and certification statements signed and sealed by the registered professional responsible for individual record drawing and/or construction certification.
- ❑ The Record Drawing shall be prepared by a Registered Professional Engineer or Certified Land Surveyor for the drainage system of the project including any Best Management Practices.
- ❑ Construction Certification. Construction of Stormwater Management / BMP facilities which contain impoundments, embankments and related engineered appurtenances including subgrade preparation, compacted soils, structural fills, liners, geosynthetics, filters, seepage controls, cutoffs, toe drains, hydraulic flow control structures, etc. shall be visually observed and monitored by a Registered Professional Engineer or his/her authorized representative. The Engineer must certify that the structure, embankment and associated appurtenances were built in accordance with the approved design plan, specifications and stormwater management plan and standard accepted construction practice and shall submit a written certification and/or drawings to the Environmental Division as required. Soil and compaction test reports, concrete test reports, inspection reports, logs and other required construction material or installation documentation may be required by the Environmental Division to substantiate the certification, if specifically requested. The Engineer shall have the authority and responsibility to make minor changes to the approved plan, in coordination with the assigned County inspector, in order to compensate for unsafe or unusual conditions encountered during construction such as those related to bedrock, soils, groundwater, topography, etc. as long as changes do not adversely affect the integrity of the structure(s). Major changes to the approved design plan or structure must be reviewed and approved by the original design professional and the James City County Environmental Division.
- ❑ Record Drawing and Construction Certifications are required within **thirty (30) days** of the completion of Stormwater Management / BMP facility construction. Submittals must be reviewed and accepted by James City County Environmental Division prior to final inspection, acceptance and bond/surety release.

Dual Purpose Facilities – Completion of construction also includes an interim stage for Stormwater Management / BMP facilities which serve dual purpose as temporary sediment basins during construction and as permanent stormwater management / BMP facilities following construction, once development and stabilization are substantially complete. For these dual purpose facilities, construction certification is required once the temporary sediment basin phase of construction is complete. Final record drawing and construction certification of additional permanent components is required once permanent facility construction is complete.

Interim Construction Certification is required for those dual purpose embankment-type facilities that are generally ten (10) feet or greater in dam height (*) and may not be converted, modified or begin function as a permanent SWM / BMP structure for a period generally ranging from six (6) to eighteen (18) months or more from issuance of a Land Disturbance permit for construction.

Interim or final record drawing and construction certifications are not required for temporary sediment basins which are designed and constructed in accordance with current minimum standards and specifications for temporary sediment basins per the Virginia Erosion and Sediment Control Handbook (VESCH); have a temporary service life of less than eighteen (18) months; and will be removed completely once associated disturbed areas are stabilized, unless a distinct hazard to the public's health, safety and welfare is determined by the Environmental Division due to the size or presence of the structure or due to evidence of improper construction.

(*Note: Dam Height as referenced above is generally defined as the vertical distance from the natural bed of the stream or waterway at the downstream toe of the embankment to the top of the embankment structure in accordance with 4VAC50-20-30, Virginia Impoundment Structure Regulations and the Virginia Dam Safety Program.)

- Record Drawings shall provide, at a minimum, all information as shown within these requirements and the attached **RECORD DRAWING CHECKLIST** specific to the type of SWM/BMP facility being constructed. Other additional record data may be formally requested by the James City County Environmental Division. *(Note: Refer to the current edition of the James City County Guidelines for Design and Construction of Stormwater Management BMP's manual for a complete list of acceptable BMP's. Currently there are over 20 acceptable water quality type BMP's accepted by the County.)*
- Record Drawings shall consist of blue/black line prints and a reproducible (mylar, sepia, diazo, etc.) set of the approved stormwater management plan including applicable plan views, profiles, sections, details, maintenance plans, etc. as related to the subject SWM / BMP facility. The set shall indicate "**RECORD DRAWING**" in large text in the lower right hand corner of each sheet with record elevations, dimensions and data drawn in a clearly annotated format and/or boxed beside design values. Approved design plan values, dimensions and data shall not be removed or erased. Drawing sheet revision blocks shall be modified as required to indicate record drawing status. Elevations to the nearest 0.1' are sufficiently accurate except where higher accuracy is needed to show positive drainage. Certification statements as shown in Section 4 of the Record Drawing and Construction Certification Form, *or similar forms thereof*, and professional signatures and seals, with dates matching that of the record drawing status in the revision or title block, are also required on all associated record drawing plans, prints or reproducible.
- Submission Requirements. Initial and subsequent submissions for review shall consist of a minimum of one (1) blue/black line set for record drawings and one copy of the construction certification documents with appropriate transmittal. Under certain circumstances, it is understood that the record drawing and construction certification submissions may be performed by different professional firms. Therefore, record drawing submission may be in advance of construction certification or vice versa. Upon approval and prior to release of bond/surety, final submission shall include one (1) reproducible set of the record drawings, one (1) blue/black line set of the record drawings and one (1) copy of the construction certification. Also for current and/or future incorporation into the County BMP database and GIS system, it is requested that the record drawings also be submitted to the Environmental Division on a diskette or CD-ROM in an acceptable electronic file format such as *.dxf, *.dwg, etc. or in a standard scanned and readable format. The electronic file requirement can be discussed and coordinated with Environmental Division staff at the time of final submission.

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.
- 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.
 - N/A 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.
 - XX 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.
- 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.
- XX 15. Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
- N/A 16. Outfall protection dimension, type and depth of rock and if underlain filter fabric is present.
- 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.
- N/A 20. BMP vicinity properly cleaned of stockpiles and construction debris.
- N/A 21. No visual signs of erosion or channel degradation immediately downstream of facility.
- XX 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)

III. Group A – Wet Ponds (Includes A-1 Small Wet Ponds; A-2 Wet Ponds; A-3 Wet Ext Det Ponds.)

- A1. All requirements of Section II, Minimum Standards, apply to Group A facilities.
- A2. Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- A3. Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.
- A4. Access for maintenance and equipment is provided to the forebay(s). Access corridors are at least 12 ft. wide, have a maximum slope of 15 percent and are adequately stabilized to withstand heavy equipment or vehicle use.
- A5. Adequate fixed vertical sediment depth markers installed in the forebay(s) for future sediment monitoring purposes.
- A6. Pond liner (if required) provided. Either clay liners, polyliners, bentonite liners or use of chemical soil additives based on requirements of the approved plan.
- A7. Minimum 6 percent slope safety bench extending a minimum of 15 feet outward from normal pool edge and/or an aquatic bench extending a minimum of 10 feet inward from the normal shoreline with a maximum depth of 12 inches below the normal pool elevation, if applicable, per the approved design plans. (Note: Safety benches may be waived if pond side slopes are no steeper than 4H:1V).
- A8. No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.
- A9. Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.
- A10. Low flow orifice has a non-clogging mechanism.
- A11. A pond drain pipe with valve was provided.
- A12. Pond side slopes are not steeper than 3H:1V, unless approved plan allowed for steeper slope.
- A13. End walls above barrels (outlet pipe) greater than 48 inch in diameter are fenced to prevent a fall hazard.

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

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

IV. Group B – Wetlands: *(Includes B-1 Shallow Marsh; B-2 Ext Det Shallow Wetlands; B-3 Pond Wetland System and B-4 Pocket Wetland).*

- B1. Same requirements as Group A Wet Ponds.
- B2. Minimum 2:1 length to width flow path provided across the facility.
- B3. Micropool provided at or around outlet from BMP (generally 3 to 6 ft. deep).
- B4. Wetland type landscaping provided in accordance with approved plan. Includes correct pondscaping zones, plant species, planting arrangements, wetland beds, etc. Wetland plants include 5 to 7 emergent wetland species. Individual plants at 18 inches on center in clumps.
- B5. Adequate wetland buffer provided (Typically 25 ft. outward from maximum design water surface elevation and 15 ft. setback to structures).
- B6. No more than one-half (1/2) of the wetland surface area is planted.
- B7. Topsoil or wetland mulch provided to support vigorous growth of wetland plants.
- B8. Planting zones staked or flagged in field and locations subsequently established by appropriate field surveying methods for record drawing presentation.

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

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

- V. **Group C – Infiltration Practices** (Includes C-1 Infiltration Trench; C-2 Infiltration Trench; C-3 Infiltration Basin; and C-4 Infiltration Basin)
- _____ C1. All requirements of Section II, Minimum Standards, apply to Group C facilities as applicable.
- _____ C2. Facility is not located on fill slopes or on natural ground in excess of six (6) percent.
- _____ C3. Pretreatment devices provided prior to entry into the infiltration facility. Acceptable pretreatment devices include sediment forebays, sediment basins, sediment traps, sump pits or inlets, grass channels, plunge pools or other acceptable measures.
- _____ C4. Three (3) or more of the following pretreatment devices provided to protect long term integrity of structure: grass channel; grass filter strip; bottom sand layer; upper filter fabric layer; use of washed bank run gravel aggregate.
- _____ C5. Sides of infiltration practice lined with filter fabric.
- _____ C6. 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.
- _____ C7. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- _____ C8. Minimum one hundred (100) foot separation horizontally from any known water supply well and minimum one hundred (100) foot separation upslope from any building.
- _____ C9. Minimum twenty-five (25) foot separation down gradient from any structure.
- _____ C10. Stormwater outfalls provided for overflow associated with larger design storms.
- _____ C11. No visual signs of erosion or channel degradation immediately downstream of facility.
- _____ C12. Facility does not currently cause any apparent surface or subsurface water problems to downgrade properties.
- _____ C13. Observation well provided.
- _____ C14. Adequate, direct access provided to the facility for future maintenance, operation and inspection.

**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)*

- D1. All requirements of Section II, Minimum Standards, apply to Group D facilities.
- D2. Sediment pretreatment devices provided.
- 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.
- 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.
- 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.
- D6. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed.
- D7. Filtering system is off-line from storm drainage conveyance system.
- D8. Overflow outlet has adequate erosion protection.
- D9. Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
- D10. Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
- 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.
- D12. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- D13. No visual signs of erosion or channel degradation immediately downstream of facility.
- 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)

- VII. Group E – Open Channel Systems** *(Includes E-1 Wet Swales (Check Dams); E-2 Dry Swales; and E-3 Biofilters)*
- XX E1. All requirements of Section II, Minimum Standards, apply to Group E facilities as applicable.
 - XX E2. Open channel system has constructed longitudinal slope of less than four (4) percent.
 - XX E3. No visual signs of erosion in the open channel system's soil and/or vegetative cover.
 - XX E4. Open channel side slopes are no steeper than 2H:1V at any location. Preferred channel sideslope is 3H:1V or flatter.
 - XX E5. No visual signs of ponding are present at any location in the open channel system, except at rock check dam locations for E-1 systems (Wet Swales).
 - XX E6. For E-2 BMPs (Dry Swales), an underdrain system was provided.
 - XX E7. Treated timber or rock check dams provided as pretreatment devices for the open channel system.
 - XX E8. Gravel diaphragm provided in areas where lateral sheet flow from impervious surfaces are directly connected to the open channel system.
 - XX E9. Grass cover/stabilization in the open channel system appears adaptable to the specific soils and hydroic conditions for the site and along the channel system.
 - XX E10. Open channel system areas with grass covers higher than four (4) to six (6) inches were properly mowed.
 - XX E11. 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 E12. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.
 - N/A E13. For E-3 BMPs (Biofilters), the bottom width is six (6) feet maximum at any location.
 - N/A E14. For E-3 BMPs (Biofilters), sideslopes are 3H:1V maximum at any location.
 - N/A E15. For E-3 BMPs (Biofilters), the constructed channel slope is less than or equal to three (3) percent at any location.
 - N/A E16. For E-3 BMPs (Biofilters), the constructed grass channel is approximately equivalent to the constructed roadway length.

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

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

VIII. Group F – Extended Dry Detention (Includes F-1 Timber Walls; and F-2 Dry Extended Detention with Forebay)

- F1. All requirements of Section II, Minimum Standards, apply to Group F facilities.
- F2. Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.
- F3. Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)
- F4. Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.
- F5. A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging
- F6. Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- F7. Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.
- F8. Low flow orifice, if used, has a minimum diameter of three (3) inches or two (2) inches if internal orifice control was utilized and a small, cage type external trash rack.
- F9. Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.
- F10. Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.
- F11. Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.
- F12. Stilling basin or standard outlet protection provided at principal spillway outlet.
- F13. Adequate, direct access provided to the facility. Access corridor to facility is at least ten (10) feet wide, slope is less than twenty (20) percent and appropriate stabilization provided for equipment and vehicle use. Access extends to forebay, standpipe and timber wall, as applicable.
- F14. No visual signs of undercutting of timber walls or clogging of the low orifice were present.
- F15. No visual signs of erosion or channel degradation immediately downstream of facility.
- F16. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.

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

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

IX. Group G – Open Spaces *(Includes All Open Space Types G-1; G-2; and G-3)*

- G1. All requirements of Section II, Minimum Standards, apply to Group G facilities as applicable.
- G2. Constructed impervious areas appear to conform with locations indicated on the approved plan and appear less than sixty (60) percent impervious in accordance with the requirements of the James City County Chesapeake Bay Preservation Ordinance.
- G3. Dedicated open space areas are in undisturbed common areas, conservation easements or are protected by other enforceable instruments that ensures perpetual protection.
- G4. Provisions included to clearly specify how the natural vegetated areas utilized as dedicated open space will be managed and field identified (marked).
- G5. Adequate protection measures were implemented during construction to protect the defined dedicated open space areas.
- G6. Dedicated open space areas were not disturbed during construction (ie. cleared, grubbed or graded).

**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.

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

XIII. References *(The James City County Record Drawing and Construction Certification Forms and Checklists for Stormwater Management / BMP facilities were developed using the following sources and references.)*

- Baltimore County, Maryland Soil Conservation District, As-Built Stormwater Management Pond Checklist.
- James City County, Virginia, Guidelines for Design and Construction of Stormwater Management BMP's (October 1999.)
- James City County, Virginia, Stormwater Detention/Retention Basin Design Checklist and Erosion and Sediment Control and Stormwater Management Design Plan Checklists.
- James City County Stormwater Policy Framework, Final Report of the James City County BMP Policy Project, October 1998, The Center for Watershed Protection.
- Prince Georges County, Maryland, As-Built Requirements Retention or Detention Pond/Basin.
- Prince William County, Virginia, Stormwater Management Fact Sheet.
- Stafford County, Virginia As-Built Plan Checklist.
- Stormwater Management Design Manual, NRCS Maryland Code No. 378, Pond Standards and Specifications.
- USEPA/Watershed Management Institute, Stormwater Management Inspection Forms.
- Virginia Impounding Structure Regulations (Dam Safety), Department of Conservation & Recreation, 1997.
- Virginia Erosion and Sediment Control Handbook, Third Edition 1992, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.
- Virginia Stormwater Management Handbook, 1999 edition, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.

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.

Robert D. Mann

ROBERT D. MANN, L.S.

3/4/09

DATE



LEGEND

- BC - BACK OF CURB
- EP - EDGE OF PAVEMENT
- GS - GROUND SHOT
- GEN - GENERATOR
- T - TRANSFORMER

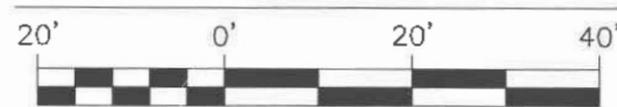
VERTICAL DATUM: NGVD29

MAINTENANCE PROGRAM & SCHEDULE

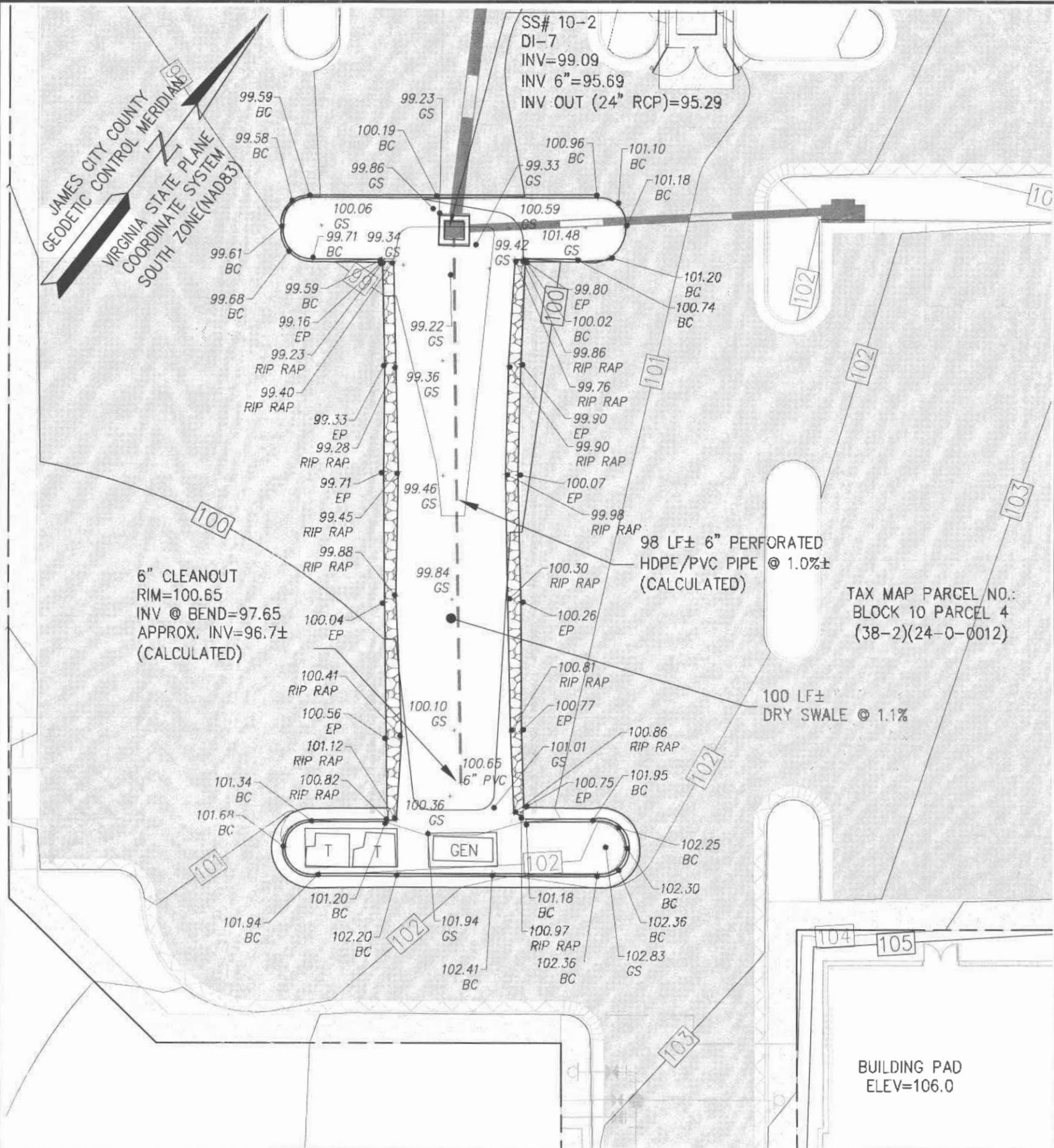
INSPECT AND REPAIR EROSION	MONTHLY
REMULCH ANY VOID AREAS	WHENEVER NEEDED
REMOVE PREVIOUS MULCH AND REAPPLY	EVERY 3 YEARS
REMOVAL AND REPLACEMENT OF ALL DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	WHENEVER NEEDED
CHECK FOR ACCUMULATED SEDIMENTS	MONTHLY
INSPECT AND REMOVE ANY DEBRIS THAT MAY COLLECT AT THE DROP INLET	AFTER MAJOR STORM EVENTS/OR SEMI ANNUALLY
MOW GRASS TO 3"-4" HEIGHT.	REGUARLY

NOTE:
CHANNEL MAY BE MULCHED, STONED OR SEEDED BY OWNER AS DEEEMED APPROPRIATE

GRAPHIC SCALE



SCALE: 1" = 20'



NO.	DATE	REVISION / COMMENT / NOTE

5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23186
(757) 253-0040
Fax (757) 220-8694

CONSULTING ENGINEERS
WILLIAMSBURG • RICHMOND • GLOUCESTER • FREDERICKSBURG

RECORD DRAWING
NEWTOWN SECTION 2 AND 4
BLOCK 10
DRY SWALE (E-2)

Designed REC	Drawn ARD
Scale 1"=20'	Date 6/16/09
Project No. 6632-E-24-1	
Drawing No. 1	

S:\Jobs\6632\124-1-Blk10\dwg\As-Built\6632-e-24-1 Dry Swale As-built.dwg, 6/17/2009 10:15:35 AM, allen.darnell

AES CONSULTING ENGINEERS
Engineering, Surveying, and Planning
 5248 Olde Towne Road, Suite 1
 Williamsburg, VA 23188

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

LETTER OF TRANSMITTAL

ATTN: **Joe Buchite**

CO.: **JCC Enivronmental Div.**

Address: _____

cc: **John McCann, Peter Henderson**

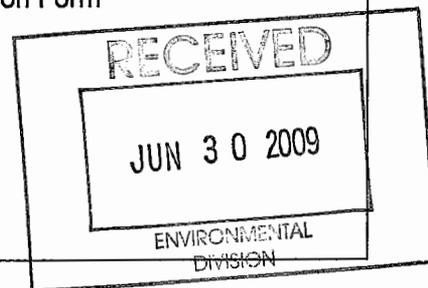
DATE June 30, 2009	JOB NO. 6632-e-24-1
FROM: Bob Cosby	
RE New Town - Block 10 - As-Built	

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	6/12/09	16	Record Drawing Construction Certification Form
1	3/4/09	1	Record Drawing of Dry Swale



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:

Please find attached Record Drawing for the Dry Swale in Block 10 which should satisfy all requirements to release any remaining surety associated with the New Town Block 10 Project.

VIA: Hand Deliver UPS Ground UPS Next Day Air USPS Mail Other:

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

SITE PLAN FOR NEW TOWN - SECTION 4 BLOCK 10 AMENDMENT #1 BERKELEY DISTRICT JAMES CITY COUNTY, VIRGINIA

OWNER/DEVELOPER INFORMATION:

NEW TOWN ASSOCIATES, L.L.C.
4801 COURTHOUSE STREET, SUITE 329
WILLIAMSBURG, VIRGINIA, 23188
TELEPHONE: 757-565-6200
CONTACT: MR. JOHN MCCANN

CERTIFIED RESPONSIBLE LAND DISTURBER:

ROBERT E. COSBY III, P.E.
AES CONSULTING ENGINEERS
5248 OLDE TOWNE ROAD, SUITE 1
WILLIAMSBURG, VIRGINIA, 23188
TELEPHONE: 757-253-0040

* FOR SITE PLAN REVIEW PROCESS ONLY. OWNER OR CONTRACTOR SHALL NAME RESPONSIBLE LAND DISTURBER FOR CONSTRUCTION PROCESS.

SITE DATA:

SITE ADDRESS: 5206 MONTICELLO AVE
TAX MAP PARCEL NO.: PORTIONS OF (38-4)(01-0-0050)
LEGAL DESCRIPTION: PARCEL 2, PORTION OF FORMER (38-4)(01-0-0050) REMAINDER OF (38-4)(01-0-0050) NEW TOWN
PROPERTY REF.: INSTR.#000012573
ZONING: MU WITH PROFFERS
PROJECT AREA: 196,092 S.F.±, 4.50 AC.±
RIGHT OF WAY: 4,385 S.F.±, 0.1 AC.±
IMPERVIOUS AREA: 98,749 S.F.±, 2.27 AC.±
DISTURBED AREA: 196,330 S.F.±, 4.50 AC.± APPROX
FLOOD HAZARD MAP: THIS PROPERTY LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN) PER F.I.R.M. # 510201 0035 B DATED 2/6/91.
PARKING PROVIDED:

TYPE:	PROVIDED	REQUIRED
REGULAR	200*	-
HANDICAP	7	7
TOTAL PARKING SPACES	207	-

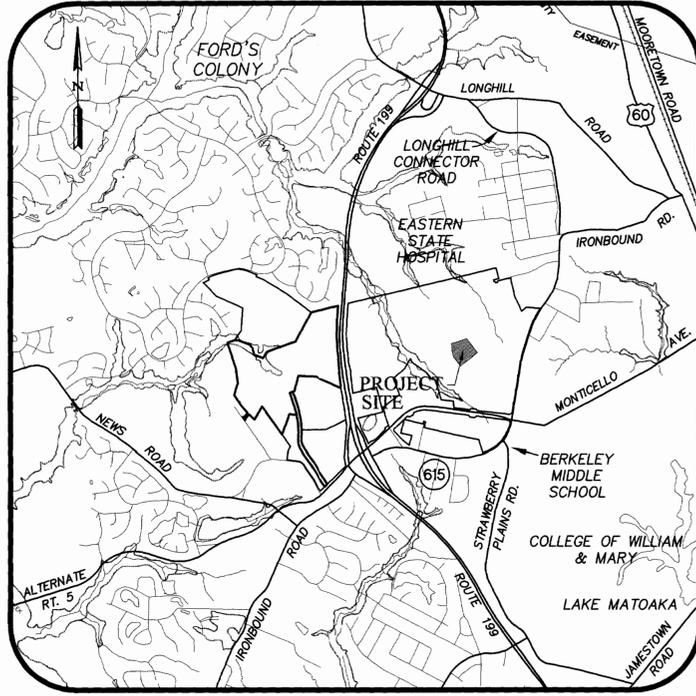
* ALL SPACES ARE FOR FUTURE DEVELOPMENT. (ON-STREET PARKING IS NOT INCLUDED IN THIS NUMBER. SEE ROAD PLANS JCC-SP-053-05)

GENERAL NOTES

- THE SITE IS CURRENTLY ZONED MIXED USE WITH PROFFERS REFERENCING Z-06-03 AND MP-04-03 APPROVED BY THE BOARD OF SUPERVISORS ON OCTOBER 14, 2003.
- ALL UTILITIES SHALL BE PLACED UNDERGROUND.
- CONTACT MISS UTILITY (1-800-552-7001) AT LEAST 48 HOURS IN ADVANCE FOR MARKING OF EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION OR DEMOLITION.
- EXISTING UTILITY LOCATIONS INDICATED ARE APPROXIMATE. FIELD VERIFY PRIOR TO COMMENCING THE WORK.
- A LAND DISTURBING PERMIT AND SILTATION AGREEMENT, WITH SURETY ARE REQUIRED FOR THIS PROJECT.
- VERIFY ALL DIMENSIONS AND NOTIFY JAMES CITY SERVICE AUTHORITY PRIOR TO ANY EXCAVATION OR DEMOLITION WITHIN UTILITY CORRIDORS.
- ANY EXISTING, UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH VIRGINIA NATURAL GAS, DOMINION VIRGINIA POWER, VERIZON TELEPHONE, APPROPRIATE TELEVISION CABLE COMPANY, AND OTHERS THAT MAY BE REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE WORK INDICATED.
- ALL NEW SIGNS SHALL BE IN ACCORDANCE WITH ARTICLE II, DIVISION 3 OF THE JAMES CITY COUNTY ZONING ORDINANCE.
- CONTOUR INTERVAL IS 1 FOOT. EXISTING GRADE IS FROM AERIAL TOPOGRAPHY PROVIDED BY WINGS AERIAL MAPPING INC.
- ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AUTHORITY STANDARDS AND SPECIFICATIONS FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPD REGIONAL STANDARDS, AND THE COMMONWEALTH OF VIRGINIA WATERWORKS AND SEWERAGE REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE JCSA STANDARDS AND REGIONAL STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING THE FULL TIME OF INSTALLING, TESTING, AND CONVEYING THE FACILITIES TO JCSA.
- STORM STRUCTURES, SEWER AND BEDDING SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS. ALL PIPE BEDDING SHALL BE IN ACCORDANCE WITH PB-1 AND MANUFACTURER SPECS. AND GUIDELINES, AND MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III UNLESS OTHERWISE NOTED. STORM SEWER OUTSIDE OF VDOT R.O.W. CAN BE HIGH DENSITY POLYETHYLENE (HDPE).
- THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.
- THIS PROJECT IS LOCATED IN JAMES CITY COUNTY SUB WATERSHED 208 (LOWER CHISEL RUN) AND CATCHMENT 208-103-1 OF THE POMHATAN CREEK WATERSHED.
- JCSA WILL NOT PERFORM ANY TESTING ON THE PROPOSED WATER OR SEWER MAINS UNTIL ALL UTILITIES HAVE BEEN INSTALLED.
- NEW TOWN DRB HAS REVIEWED AND APPROVED THIS SITE PLAN AT THE MEETING OF MAY 19, 2005.

CHANGES TO SITE PLAN DATED NOVEMBER 7, 2005
1. ADDED 2-8"x3" TEE AND 2-3" GV & VB TO WATERLINE "B" (SHEET 4).
2. ADDED 1-8" GV & VB STA 10+49 WATERLINE "A" (SHEET 4).
3. MODIFIED WATERLINE "A" FROM 8" TO 4" STA 10+49 TO END. (SHEET 4 & 6)
4. ELIMINATE WATERLINE "D" AND GATE VALVE STA 10+45 WATERLINE "C" (SHEET 4 & 6)
5. ADJUSTED PARKING LAYOUT AND ADJUSTED GRADING TO BLOCK 10 PARCEL D (SHEET 4 & 5).
6. ADDED SIDEWALKS ADJACENT TO BUILDING PAD PARCELS B, C, AND D (SHEET 4).
7. ADJUSTED GRADING IN PARKING LOT NEAR PARCEL "E" (SHEET 5).
8. ADJUSTED LANDSCAPING BASED ON NEW LAYOUT (SHEET 5).
9. MODIFIED LIGHTING PLAN (SHEET 8).

AMENDMENT #1
CHANGES TO SITE PLAN DATED SEPTEMBER 27, 2005
1. ADJUSTED WATERLINE "A" BY ADDING 156 LF (SHEET 4).
2. ADJUSTED WATERLINE "B" BY DELETING 240 LF (SHEET 4).
3. ADJUSTED SEWER "C" BY DELETING 23 LF STUB TO NORTH.
4. ADJUSTED WATER "D" BY DELETING 34 LF STUB TO THE NORTH.
5. ADJUSTED THE LOCATION OF THE ENTRANCE TO BLOCK 10 RESIDENTIAL JUST OFF THE DISCOVERY PARK BOULEVARD ENTRANCE (SHEET 4). ADJUSTED SEWER MANHOLE 5-13.
6. ADJUSTED PROFILE ACCORDINGLY TO THE CHANGES LISTED ABOVE (SHEET 6).
7. ADJUSTED GRADING TO MATCH ADJUSTMENT OF ENTRANCE TO BLOCK 10 RESIDENTIAL (SHEET 5).
8. ADJUSTED GRADING AT WEST END OF PARKING LOT ADJACENT TO PARCEL D (SHEET 5).
9. ADJUSTED PARKING LOT LAYOUT, ADDED SIDEWALK, PARKING STALLS, AND ADDED STORM STRUCTURE AND ASSOCIATED PIPE AT NORTHWEST END OF PARKING LOT BETWEEN PARCEL D AND BLOCK 10 RESIDENTIAL ADJACENT TO FOUNDATION STREET (SHEET 4).
10. ADJUSTED GRADING TO MATCH ADJUSTMENTS OF PARKING LOT BETWEEN PARCEL D AND BLOCK 10 RESIDENTIAL ADJACENT TO FOUNDATION STREET (SHEET 5).
11. REMOVED LANDSCAPE ISLAND & DRIVE ISLE AND ADDED THREE (3) PARKING SPACES & SIDEWALK TO PARKING LOT ADJACENT TO BLOCK 10 RESIDENTIAL (SHEET 4).
12. ADJUSTED GRADING TO MATCH ADJUSTMENT OF PARKING LOT ADJACENT TO BLOCK 10 RESIDENTIAL (SHEET 5).
13. ADJUSTED LANDSCAPING TO MATCH ADJUSTMENT OF PARKING LOT ADJACENT TO BLOCK 10 RESIDENTIAL LANDSCAPE PLAN (SHEET 9).



VICINITY MAP
(APPROX. SCALE 1"=2000')

JUNE 20, 2005
JCC-SP-77-05
JCC-SP-124-05 AMENDMENT #1
PROJECT NO.: 6632-E-24
SHEET 1 OF 10



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

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	OVERALL PLAN
3	ENVIRONMENTAL INVENTORY
4	SITE AND UTILITY PLAN
5	GRADING, DRAINAGE, EROSION AND SEDIMENT CONTROL PLAN
6	PROFILES
7	LANDSCAPE PLAN
8	LIGHTING PLAN
9	NOTES AND DETAILS
10	NOTES AND DETAILS

LEGEND

EXISTING		PROPOSED
W	WATER	W
S	GRAVITY SEWER	S
S	GRAVITY SEWER (BY OTHERS)	S
---	STORM SEWER	---
EX. FM	FORCE MAIN	FM
○	MANHOLE	○
---	CURB DROP INLET	---
---	YARD DROP INLET	---
⊕	VALVE	⊕
⊕	FIRE HYDRANT ASSEMBLY	⊕
⊕	BLOW-OFF ASSEMBLY	⊕
---	CLEAN OUT	---
---	WATER METER	---
---	CENTERLINE/BASELINE	---
---	RIGHT OF WAY	---
---	PROPERTY LINE	---
---	DITCH/SWALE	---
---	TREELINE/CLEARING LIMITS	---
80	GROUND ELEVATION	80
	CONTOUR ELEV.	



SP-124-05

COUNTY OF JAMES CITY
FINAL SITE PLAN

APPROVALS	DATE
John Doe	10/3/05



THIS PROJECT SHALL BE CONSTRUCTED CONCURRENTLY WITH PHASE V ROADWAY INFRASTRUCTURE. ALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE V MUST BE INSTALLED AND FUNCTIONING PRIOR TO BEGINNING WORK

VDOT DOES NOT ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE DETENTION BMP OR ITS STRUCTURE AND SHALL BE SAVED HARMLESS FROM ANY DAMAGES.

APPROVAL DATE	No.	DATE	REVISION / COMMENT / NOTE	BY
	4	11/9/05	REVISED PER COUNTY COMMENTS DATED 10/25/05	REC
	3	9/27/05	REVISED PER OWNER	REC
8/17/05	2	8/16/05	REVISED PER JCSA COMMENTS (SHEET 4)	REC
	1	7/29/05	REVISED PER COUNTY COMMENTS	REC

NEW TOWN SECTION 4 BLOCK 10

BERKELEY DISTRICT JAMES CITY COUNTY, VIRGINIA

OWNER/DEVELOPER INFORMATION:

NEW TOWN ASSOCIATES, L.L.C.
4801 COURTHOUSE STREET, SUITE 329
WILLIAMSBURG, VIRGINIA, 23188
TELEPHONE: 757-565-6200
CONTACT: MR. JOHN MCCANN

CERTIFIED RESPONSIBLE LAND DISTURBER:

ROBERT E. COSBY III, P.E.
AES CONSULTING ENGINEERS
5248 OLDE TOWNE ROAD, SUITE 1
WILLIAMSBURG, VIRGINIA, 23188
TELEPHONE: 757-253-0040

* FOR SITE PLAN REVIEW PROCESS ONLY. OWNER OR CONTRACTOR SHALL NAME RESPONSIBLE LAND DISTURBER FOR CONSTRUCTION PROCESS.

SITE DATA:

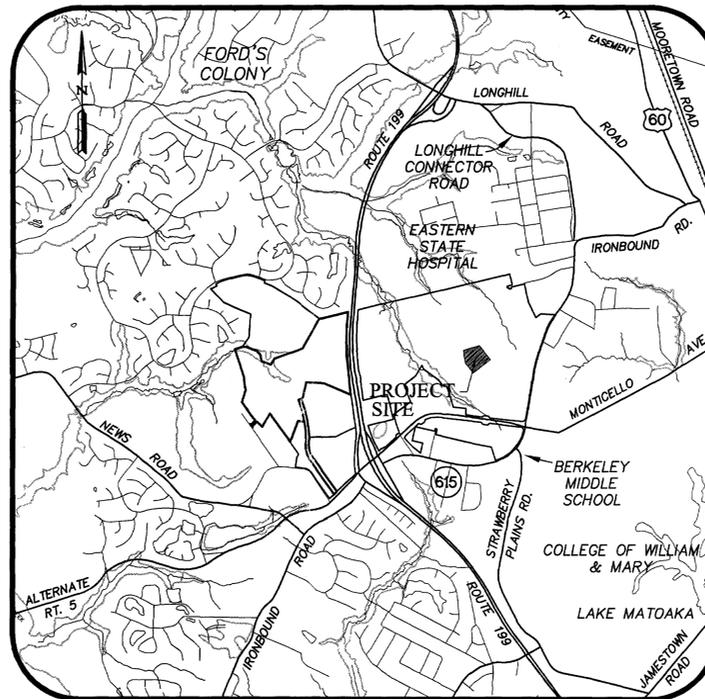
SITE ADDRESS: 5206 MONTICELLO AVE
TAX MAP PARCEL NO.: PORTIONS OF (38-4)(01-0-0050)
LEGAL DESCRIPTION: PARCEL 2, PORTION OF FORMER (38-4)(01-0-0050) REMAINDER OF (38-4)(01-0-0050) NEW TOWN
PROPERTY REF.: INSTR.#000012573
ZONING: MU WITH PROFFERS
PROJECT AREA: 196,092 S.F.±, (4.50) AC.±
RIGHT OF WAY: 4,385 S.F.±, 0.1 AC.±
IMPERVIOUS AREA: 85,596 S.F.±, 1.97 AC.±
DISTURBED AREA: 196,330 S.F.±, (4.50) AC.± APPROX
FLOOD HAZARD MAP: THIS PROPERTY LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAN) PER F.I.R.M. # 510201 0035 B DATED 2/6/91.
PARKING PROVIDED:

TYPE:	PROVIDED	REQUIRED
REGULAR	194*	-
HANDICAP	6	6
TOTAL PARKING SPACES	200	-

* ALL SPACES ARE FOR FUTURE DEVELOPMENT.
(ON-STREET PARKING IS NOT INCLUDED IN THIS NUMBER. SEE ROAD PLANS JCC-SP-053-05)

GENERAL NOTES

- THE SITE IS CURRENTLY ZONED MIXED USE WITH PROFFERS REFERENCING Z-06-03 AND MP-04-03 APPROVED BY THE BOARD OF SUPERVISORS ON OCTOBER 14, 2003.
- ALL UTILITIES SHALL BE PLACED UNDERGROUND.
- CONTACT MISS UTILITY (1-800-552-7001) AT LEAST 48 HOURS IN ADVANCE FOR MARKING OF EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION OR DEMOLITION.
- EXISTING UTILITY LOCATIONS INDICATED ARE APPROXIMATE. FIELD VERIFY PRIOR TO COMMENCING THE WORK.
- A LAND DISTURBING PERMIT AND SILTATION AGREEMENT, WITH SURETY ARE REQUIRED FOR THIS PROJECT.
- VERIFY ALL DIMENSIONS AND NOTIFY JAMES CITY SERVICE AUTHORITY PRIOR TO ANY EXCAVATION OR DEMOLITION WITHIN UTILITY CORRIDORS.
- ANY EXISTING, UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH VIRGINIA NATURAL GAS, DOMINION VIRGINIA POWER, VERIZON TELEPHONE, APPROPRIATE TELEVISION CABLE COMPANY, AND OTHERS THAT MAY BE REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE WORK INDICATED.
- ALL NEW SIGNS SHALL BE IN ACCORDANCE WITH ARTICLE II, DIVISION 3 OF THE JAMES CITY COUNTY ZONING ORDINANCE.
- CONTOUR INTERVAL IS 1 FOOT. EXISTING GRADE IS FROM AERIAL TOPOGRAPHY PROVIDED BY WINGS AERIAL MAPPING INC.
- ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AUTHORITY STANDARDS AND SPECIFICATIONS FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPDC REGIONAL STANDARDS, AND THE COMMONWEALTH OF VIRGINIA WATERWORKS AND SEWERAGE REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE JCSA STANDARDS AND REGIONAL STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING THE FULL TIME OF INSTALLING, TESTING, AND CONVEYING THE FACILITIES TO JCSA.
- STORM STRUCTURES, SEWER AND BEDDING SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS. ALL PIPE BEDDING SHALL BE IN ACCORDANCE WITH PB-1 AND MANUFACTURER SPECS. AND GUIDELINES, AND MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III UNLESS OTHERWISE NOTED. STORM SEWER OUTSIDE OF VDOT R.O.W. CAN BE HIGH DENSITY POLYETHYLENE (HDPE).
- THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.
- THIS PROJECT IS LOCATED IN JAMES CITY COUNTY SUB WATERSHED 208 (LOWER CHISEL RUN) AND CATCHMENT 208-103-1 OF THE POWHATAN CREEK WATERSHED.
- JCSA WILL NOT PERFORM ANY TESTING ON THE PROPOSED WATER OR SEWER MAINS UNTIL ALL UTILITIES HAVE BEEN INSTALLED.
- NEW TOWN DRB HAS REVIEWED AND APPROVED THIS SITE PLAN AT THE MEETING OF MAY 19, 2005.



VICINITY MAP
(APPROX. SCALE 1"=2000')

JUNE 20, 2005
JCC-SP-77-05
PROJECT NO.: 6632-E-24
SHEET 1 OF 10



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

THIS PROJECT SHALL BE CONSTRUCTED CONCURRENTLY WITH PHASE V ROADWAY INFRASTRUCTURE. ALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE V MUST BE INSTALLED AND FUNCTIONING PRIOR TO BEGINNING WORK

VDOT DOES NOT ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE DETENTION BMP OR ITS STRUCTURE AND SHALL BE SAVED HARMLESS FROM ANY DAMAGES.

SP-77-05

COUNTY OF JAMES CITY
FINAL SITE PLAN

APPROVALS	DATE
Fire Dept. <i>6/7/05</i>	<i>6/24/05</i>
Health Dept.	
VDOT <i>Revised</i>	<i>7/1/05</i>
Planning <i>MDA</i>	<i>8/2/05</i>
Environment <i>DEC/05</i>	<i>8/16/05</i>
Zoning <i>MDA</i>	<i>8/16/05</i>
JCSA <i>RAF/05</i>	<i>8/16/05</i>
County Eng. <i>6/8/05</i>	<i>8/16/05</i>
REA	
Other	



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	OVERALL PLAN
3	ENVIRONMENTAL INVENTORY
4	SITE AND UTILITY PLAN
5	GRADING, DRAINAGE, EROSION AND SEDIMENT CONTROL PLAN
6	PROFILES
7	LANDSCAPE PLAN
8	LIGHTING PLAN
9	NOTES AND DETAILS
10	NOTES AND DETAILS

LEGEND

EXISTING		PROPOSED
W	WATER	W
—○—○—	GRAVITY SEWER	—○—○—
—○—○—	GRAVITY SEWER (BY OTHERS)	—○—○—
— — —	STORM SEWER	— — —
—EX. FM—	FORCE MAIN	—FM—
—○—	MANHOLE	—○—
—□—	CURB DROP INLET	—□—
—□—	YARD DROP INLET	—□—
—○—	VALVE	—○—
—○—	FIRE HYDRANT ASSEMBLY	—○—
—○—	BLOW-OFF ASSEMBLY	—○—
—○—	CLEAN OUT	—○—
—○—	WATER METER	—○—
— —	CENTERLINE/BASELINE	— —
— —	RIGHT OF WAY	— —
— —	PROPERTY LINE	— —
—○—	DITCH/SWALE	—○—
—○—	TREELINE/CLEARING LIMITS	—○—
—80—	GROUND ELEVATION	—80—
—80—	CONTOUR ELEV.	—80—

APPROVAL DATE	No.	DATE	REVISION / COMMENT / NOTE	BY
	2	8/16/05	REVISED PER JCSA COMMENTS (SHEET 4)	REC
	1	7/29/05	REVISED PER COUNTY COMMENTS	REC



No.	DATE	REVISION / COMMENT / NOTE	BY
4	11/19/05	REVISED PER COUNTY COMMENTS DATED 10/25/05	REC
3	9/27/05	REVISED PER OWNER	REC
2	8/16/05	REVISED PER JCSA COMMENTS (SHEET 4)	REC
1	7/29/05	REVISED PER COUNTY COMMENTS	REC



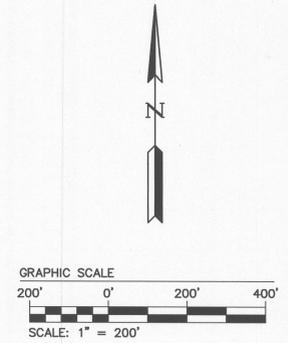
5248 Olde Towne Road, Suite 1
 Williamsburg, Virginia 23188
 (757) 253-0040
 Fax (757) 220-8994



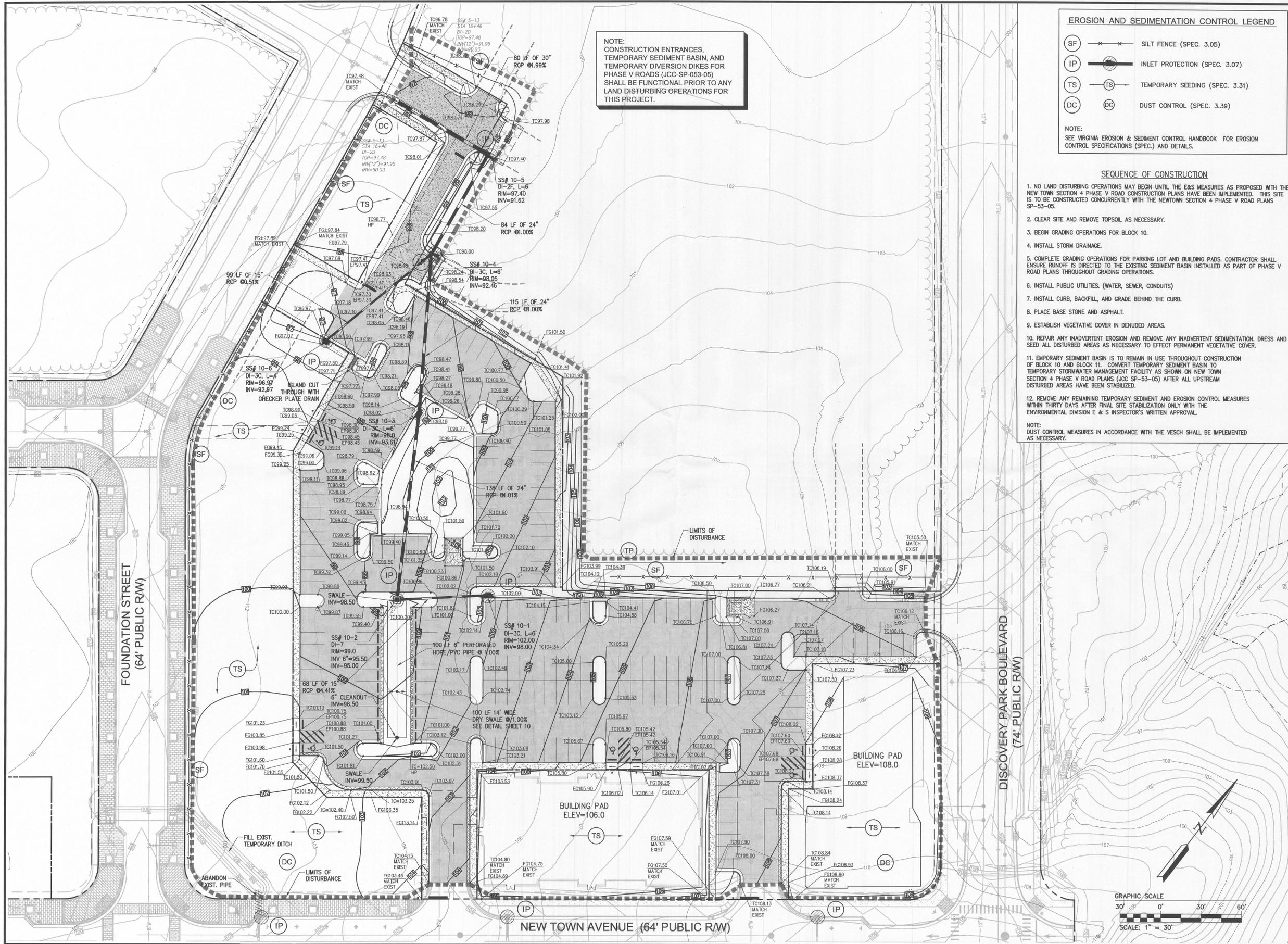
OVERALL PLAN
NEW TOWN
 SECTION 4
 BLOCK 10

BERKELEY DISTRICT JAMES CITY COUNTY VIRGINIA

Designed REC/VAB	Drawn SDC
Scale 1"=200'	Date 6/20/05
Project No. 6632-E-24	
Drawing No. 2	



S:\sub\6632E24-1-Bk1\0\wg\Car6632E24\cd5grading.dwg, 1/19/2006 2:40:21 PM, sdc



NOTE:
CONSTRUCTION ENTRANCES,
TEMPORARY SEDIMENT BASIN, AND
TEMPORARY DIVERSION DIKES FOR
PHASE V ROADS (JCC-SP-053-05)
SHALL BE FUNCTIONAL PRIOR TO ANY
LAND DISTURBING OPERATIONS FOR
THIS PROJECT.

EROSION AND SEDIMENTATION CONTROL LEGEND

- (SF) — X — SILT FENCE (SPEC. 3.05)
- (IP) — [Symbol] — INLET PROTECTION (SPEC. 3.07)
- (TS) — [Symbol] — TEMPORARY SEEDING (SPEC. 3.31)
- (DC) — [Symbol] — DUST CONTROL (SPEC. 3.39)

NOTE:
SEE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK FOR EROSION CONTROL SPECIFICATIONS (SPEC.) AND DETAILS.

- SEQUENCE OF CONSTRUCTION**
1. NO LAND DISTURBING OPERATIONS MAY BEGIN UNTIL THE E&S MEASURES AS PROPOSED WITH THE NEW TOWN SECTION 4 PHASE V ROAD CONSTRUCTION PLANS HAVE BEEN IMPLEMENTED. THIS SITE IS TO BE CONSTRUCTED CONCURRENTLY WITH THE NEWTOWN SECTION 4 PHASE V ROAD PLANS SP-53-05.
 2. CLEAR SITE AND REMOVE TOPSOIL AS NECESSARY.
 3. BEGIN GRADING OPERATIONS FOR BLOCK 10.
 4. INSTALL STORM DRAINAGE.
 5. COMPLETE GRADING OPERATIONS FOR PARKING LOT AND BUILDING PADS. CONTRACTOR SHALL ENSURE RUNOFF IS DIRECTED TO THE EXISTING SEDIMENT BASIN INSTALLED AS PART OF PHASE V ROAD PLANS THROUGHOUT GRADING OPERATIONS.
 6. INSTALL PUBLIC UTILITIES. (WATER, SEWER, CONDUITS)
 7. INSTALL CURB, BACKFILL, AND GRADE BEHIND THE CURB.
 8. PLACE BASE STONE AND ASPHALT.
 9. ESTABLISH VEGETATIVE COVER IN DENUDED AREAS.
 10. REPAIR ANY INADVERTENT EROSION AND REMOVE ANY INADVERTENT SEDIMENTATION. DRESS AND SEED ALL DISTURBED AREAS AS NECESSARY TO EFFECT PERMANENT VEGETATIVE COVER.
 11. EMPORARY SEDIMENT BASIN IS TO REMAIN IN USE THROUGHOUT CONSTRUCTION OF BLOCK 10 AND BLOCK 11. CONVERT TEMPORARY SEDIMENT BASIN TO TEMPORARY STORMWATER MANAGEMENT FACILITY AS SHOWN ON NEW TOWN SECTION 4 PHASE V ROAD PLANS (JCC SP-53-05) AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN STABILIZED.
 12. REMOVE ANY REMAINING TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION ONLY WITH THE ENVIRONMENTAL DIVISION E & S INSPECTOR'S WRITTEN APPROVAL.
- NOTE:
DUST CONTROL MEASURES IN ACCORDANCE WITH THE VESCH SHALL BE IMPLEMENTED AS NECESSARY.

NO.	DATE	REVISION / COMMENT / NOTE	BY
4	11/9/05	REVISED PER COUNTY COMMENTS DATED 10/25/05	REC
3	9/27/05	REVISED PER OWNER	REC
2	8/16/05	REVISED PER JCSA COMMENTS (SHEET 4)	REC
1	7/29/05	REVISED PER COUNTY COMMENTS	REC



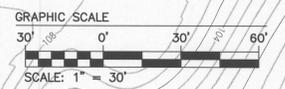
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-8994



GRADING, DRAINAGE, EROSION & SEDIMENT CONTROL PLAN
NEW TOWN SECTION 4
BLOCK 10

BERKELEY DISTRICT JAMES CITY COUNTY VIRGINIA

Designed	REC/VAB	Drawn	SDC
Scale	1" = 30'	Date	6/20/05
Project No.	6632-E-24		
Drawing No.	5		



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, NUTSEDGE, 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).

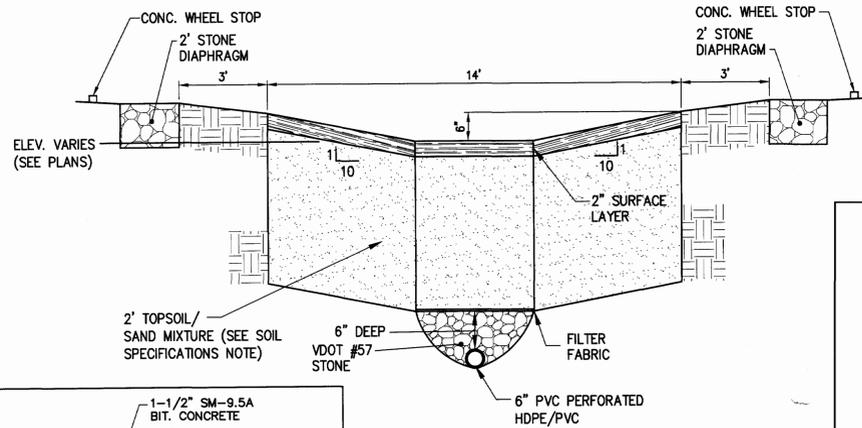
A SURFACE LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE SURFACE LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCT, PEA GRAVEL, OR RIVER STONE, OR TOPSOIL AS SPECIFIED ABOVE AND PERMANENT SEEDING.

MAINTENANCE PROGRAM & SCHEDULE

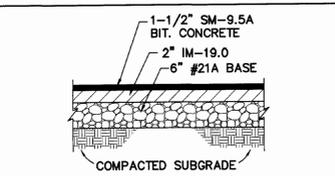
INSPECT AND REPAIR EROSION	MONTHLY
REMUDE ANY VOID AREAS	WHENEVER NEEDED
REMOVE PREVIOUS MULCH AND REAPPLY	EVERY 3 YEARS
REMOVAL AND REPLACEMENT OF ALL DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	WHENEVER NEEDED
CHECK FOR ACCUMULATED SEDIMENTS	MONTHLY
INSPECT AND REMOVE ANY DEBRIS THAT MAY COLLECT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

NOTES

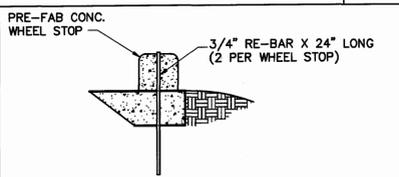
- WATER PLANT MATERIAL EACH DAY FOR FOURTEEN CONSECUTIVE DAYS AFTER CONSTRUCTION.
- CONTRACTOR SHALL REFER TO COUNTY BMP MANUAL (GROUP D, PGS. 48-50) AND MINIMUM STANDARDS 3.11 AND 3.13 OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK FOR METHODS/MATERIAL ASSOCIATED WITH CONSTRUCTION OF THE BIORETENTION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



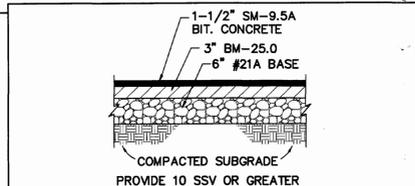
DRY SWALE
N.T.S.



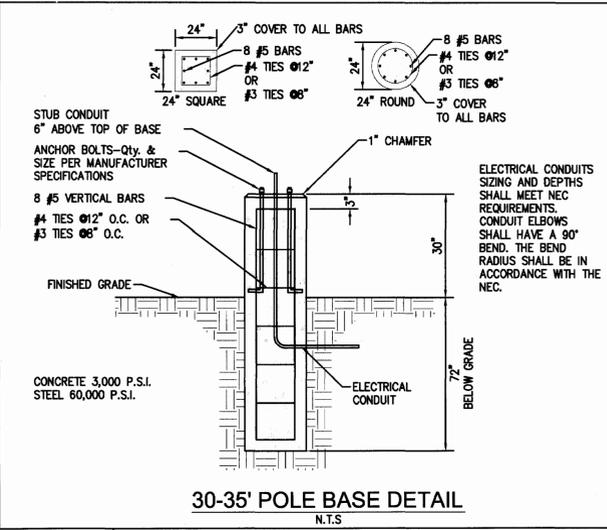
TYPICAL PAVEMENT SECTION
N.T.S.



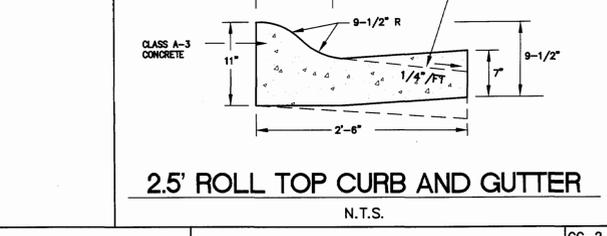
CONC. WHEEL STOP DETAIL
N.T.S.



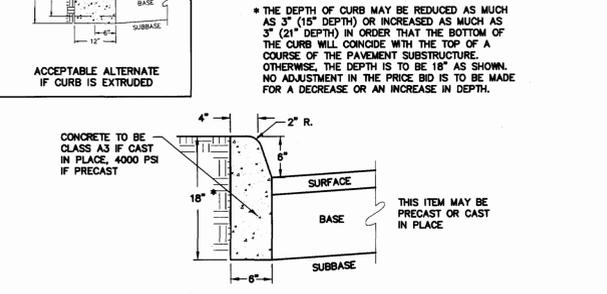
HEAVY DUTY PAVEMENT SECTION
N.T.S.



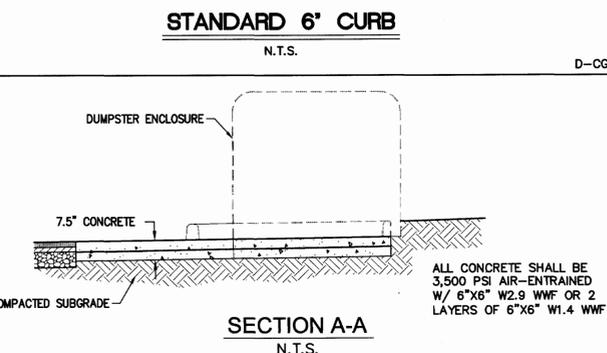
30-35' POLE BASE DETAIL
N.T.S.



2.5' ROLL TOP CURB AND GUTTER
N.T.S.



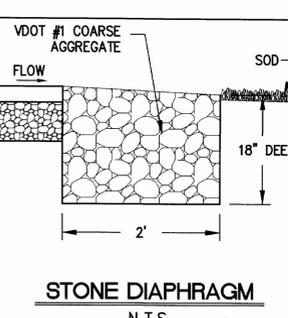
STANDARD 6" CURB
N.T.S.



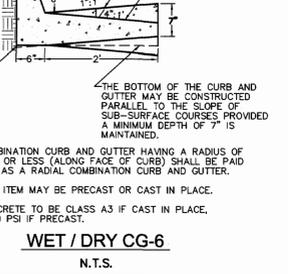
SECTION A-A
N.T.S.

ALL STORM DRAIN INLETS AND PIPES AND UTILITIES CONSTRUCTED WITHIN THE PAVEMENT SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS AND VDOT ROAD AND BRIDGE STANDARDS.

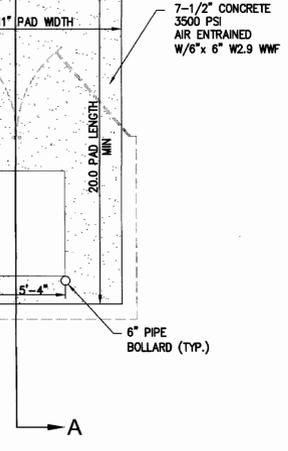
DI-3A-3C.....	104.09-104.10
IS-1.....	106.08
ST-1.....	106.09
PB-1.....	107.01
CG-2.....	201.01
CG-5.....	201.03
DI-2D-2F.....	104.06-104.07
DI-7.....	104.22-104.24



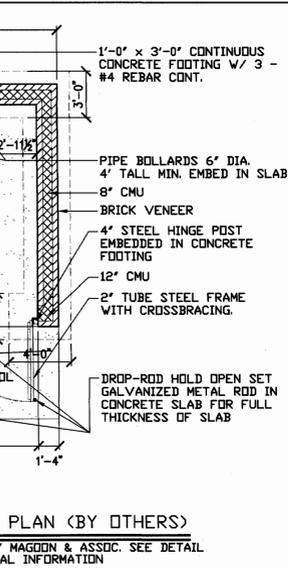
STONE DIAPHRAGM
N.T.S.



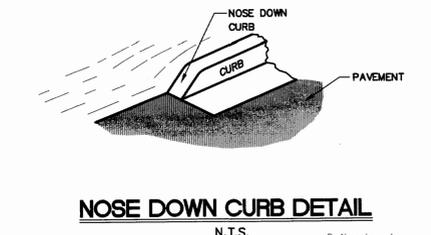
WET / DRY CG-6
N.T.S.



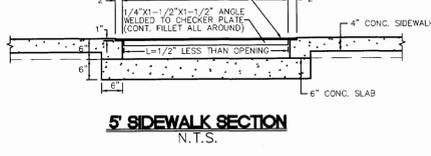
DUMPSTER PAD DETAIL
N.T.S.



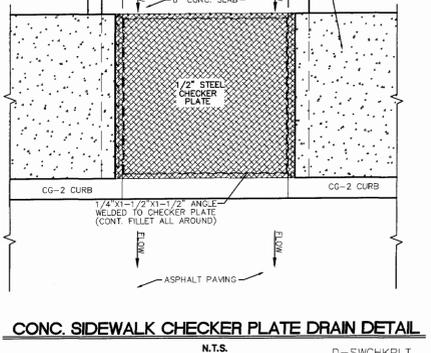
DUMPSTER ENCLOSURE PLAN (BY OTHERS)
N.T.S.



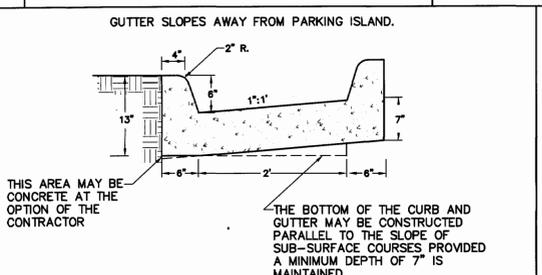
NOSE DOWN CURB DETAIL
N.T.S.



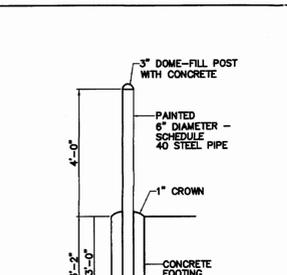
5" SIDEWALK SECTION
N.T.S.



CONC. SIDEWALK CHECKER PLATE DRAIN DETAIL
N.T.S.



ISLAND CUT THROUGH
N.T.S.



BOLLARD DETAIL
N.T.S.

SPECIES	SEEDING RATE	SOUTH (b)			PLANT CHARACTERISTICS
		ACRE	1000 FT SQ.		
OATS (AVENA SATIVA)	3 BU. (UP TO 100 LBS., NOT LESS THAN 50 LBS.)	2 lbs.	X	-	Use spring varieties (e.g., Noble).
RYE (SECALE CEREALE)	2 bu. (up to 110 lbs., not less than 50 lbs.)	2.5 lbs.	X	-	Use for late fall seedings, winter cover. Tolerates cold and low moisture.
GERMAN MILLET (SETARIA ITALICA)	50 lbs.	approx. 1 lb.	-	X	Warm-season annual. Dies at first frost. May be added to summer mixes.
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	60 lbs.	1-1/2 lbs.	X	-	May be added in mixes. Will mow out of most stands.
WEeping LOVEGRASS (ERAGROTTIS CURVULA)	15 lbs.	5-1/2 ozs.	-	X	Warm-season perennial. May bunch. Tolerates hot, dry slopes and acid, infertile soils. May be added to mixes.
KOREAN LESPEDEZA (LESPEDEZA STIPULACEA)	25 lbs.	approx. 1-1/2 lbs.	X	X	Warm-season annual legume. Tolerates acid soils. May be added to mixes.

b: SOUTHERN PIEDMONT AND COASTAL PLAIN.
c: MAY BE USED AS A COVER CROP WITH SPRING SEEDING.
d: MAY BE USED AS A COVER CROP WITH FALL SEEDING.
x: MAY BE PLANTED BETWEEN THESE DATES.
-: MAY NOT BE PLANTED BETWEEN THESE DATES.

TEMPORARY SEEDING
N.T.S.

REVISED PER COUNTY COMMENTS DATED 10/25/05	REC	BY
REVISED PER OWNER	REC	
REVISED PER JSSA COMMENTS (SHEET 4)	REC	
REVISED PER COUNTY COMMENTS	REC	
REVISION / COMMENT / NOTE		
DATE		



5248 Old Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 263-0040
Fax (757) 220-8894



NOTES AND DETAILS
NEW TOWN
SECTION 4
BLOCK 10

DESIGNED: REC/VAB
DRAWN: SDC
SCALE: NTS
DATE: 6/20/05
PROJECT NO.: 6632-E-24
DRAWING NO.: 10

DRAINAGE CALCULATIONS

FOR

**NEW TOWN
SECTION 4
BLOCK 10**

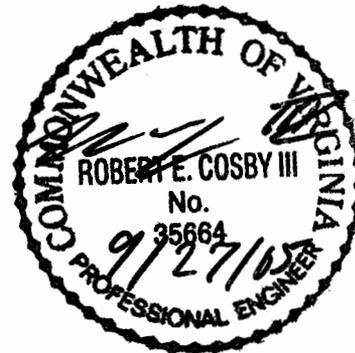


SITE:

James City County

SUBMITTED TO:

Environmental Division
James City County



Prepared By:

AES Consulting Engineers
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188

June 20, 2005
Revised: September 27, 2005

AES Project No. 6632-E-24-1

6632E24.drncalcs.doc

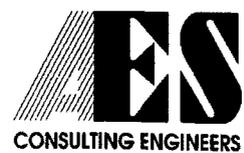


TABLE OF CONTENTS

- I INTRODUCTION
- II EXISTING SITE CONDITIONS
- III PROPOSED STORMDRAIN SYSTEM

APPENDICES

- APPENDIX A STORM SEWER SYSTEM
- APPENDIX B DRAINAGE AREA MAP



I INTRODUCTION

This project, known as Section 4 Block 10 is a continuation of Section 4 Phase V Roadways (JCC SP-53-05). The drainage associated with this project and the roadway will be collected into a storm drainage system draining to a temporary best management practice (BMP) facility. During construction, diversion dikes and diversions will be utilized to collect runoff from the disturbed area into the sediment basin and also to pass upstream drainage areas around the disturbed areas and lessen the potential for erosion.

II EXISTING SITE CONDITIONS

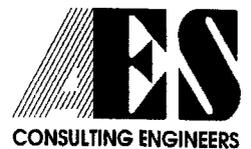
The majority of this site is a wooded area with some open fallow farmland at the southeast of the project. Stormwater is currently conveyed via sheet flow to natural channels downstream.

III PROPOSED STORMDRAIN SYSTEM

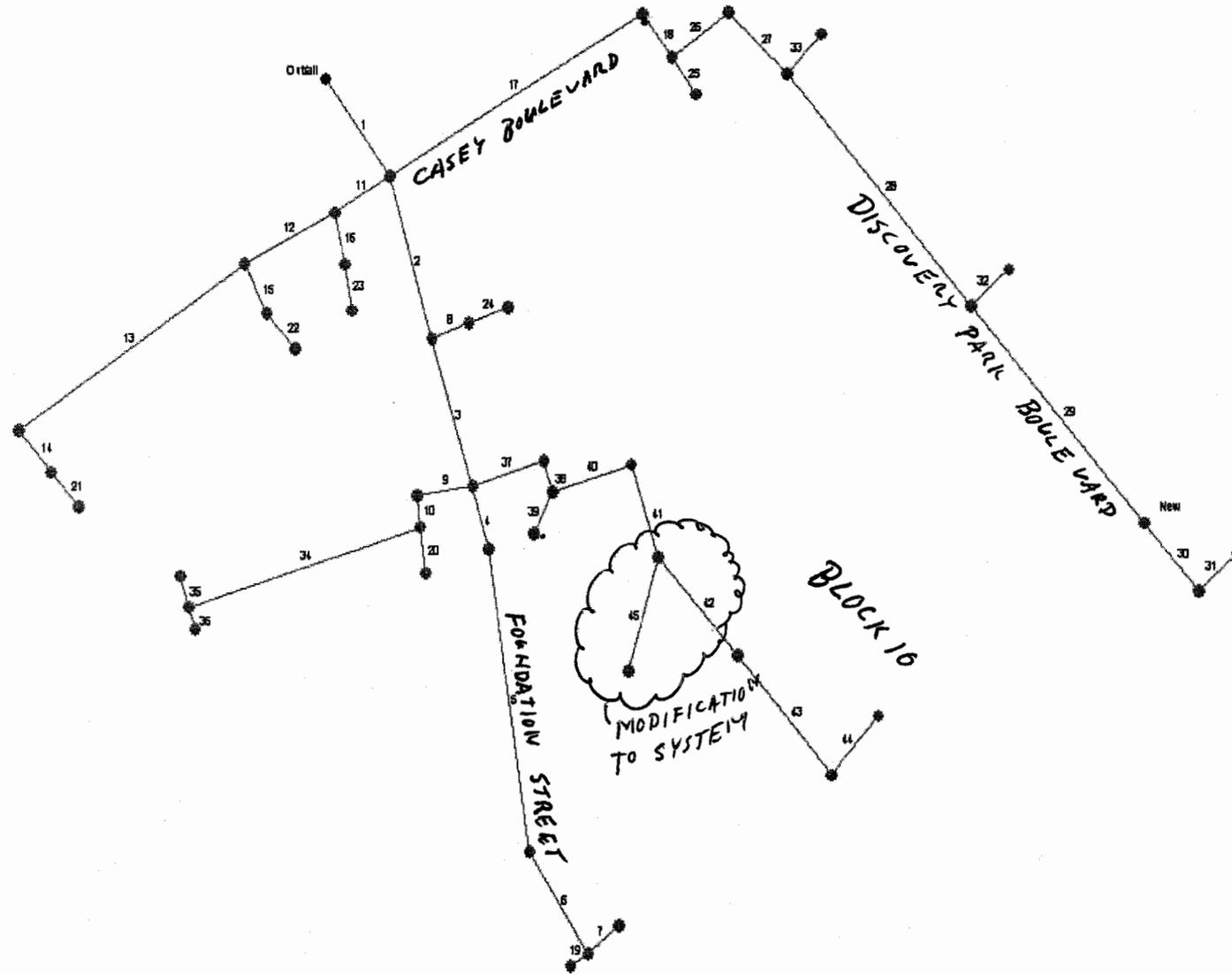
This project will be collected by a single storm drainage system which is designed to collect the runoff from the roadway and commercial blocks upon the completion of all construction. The drainage system is draining to a temporary best management practice (BMP) facility. This facility is designed as a temporary sediment basin, which will be converted to a temporary best management practice (BMP) facility with Section 4 Phase V Roadways (JCC SP-53-05). The sediment basin is designed for the roadways along with the commercial blocks 10 & 11 using the ultimate drainage areas for sizing the basins.



APPENDIX A
STORM SEWER SYSTEM



Hydraflow Plan View



Project File: 6632-E-23-StormSys.stm

No. Lines: 45

09-26-2005

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)		Inlet/ Rim El (ft)
1	End	105.0	53.8	MH	0.00	0.00	0.00	0.0	84.00	0.61	84.64	48	Cir	0.013	1.00	96.08	SS #2 TO SS#1
2	1	144.6	20.0	MH	0.00	0.33	0.85	5.0	84.64	0.46	85.31	42	Cir	0.013	1.00	94.49	SS#9 TO SS#2
3	2	134.0	-0.8	MH	0.00	0.00	0.00	0.0	85.31	2.77	89.02	36	Cir	0.013	1.00	95.75	SS#11 TO SS#9
4	3	56.3	1.5	MH	0.00	0.28	0.85	5.0	89.02	2.01	90.15	18	Cir	0.013	0.15	96.61	SS#21 TO SS#11
5	4	266.0	7.2	MH	0.00	0.00	0.00	0.0	90.15	0.60	91.75	18	Cir	0.013	0.48	97.65	SS#22 TO SS#21
6	5	104.1	-24.8	MH	0.00	0.29	0.90	5.0	91.75	0.81	92.59	18	Cir	0.013	1.00	97.06	SS#23 TO SS#22
7	6	38.0	-94.5	MH	0.00	0.69	0.90	5.0	92.59	1.24	93.06	15	Cir	0.013	1.00	97.06	SS#24 TO SS#23
8	2	38.0	-93.5	MH	0.00	0.49	0.85	5.0	86.31	4.00	87.83	18	Cir	0.013	0.15	94.49	SS#10 TO SS#9
9	3	54.0	99.0	MH	0.00	0.25	0.85	5.0	89.02	1.00	89.56	24	Cir	0.013	1.00	95.66	SS#15 TO SS#11
10	9	28.0	-88.9	MH	0.00	0.26	0.85	5.0	89.56	1.00	89.84	24	Cir	0.013	0.99	95.66	SS#16 TO SS#15
11	1	61.0	95.8	MH	0.00	0.42	0.85	5.0	84.64	4.08	87.13	24	Cir	0.013	0.95	95.65	SS#3 TO SS#2
12	11	97.0	4.1	MH	0.00	0.11	0.85	5.0	87.13	1.66	88.74	24	Cir	0.013	1.00	96.40	SS#5 TO SS#3
13	12	259.3	-7.0	MH	0.00	0.28	0.85	5.0	88.74	0.50	90.04	18	Cir	0.013	1.00	94.03	SS#7 TO SS#5
14	13	48.0	-97.3	MH	0.00	0.26	0.85	5.0	90.04	0.50	90.28	18	Cir	0.013	0.15	94.03	SS#8 TO SS#7
15	12	48.0	-89.6	MH	0.00	0.11	0.85	5.0	88.74	2.00	89.70	12	Cir	0.013	0.31	96.40	SS#6 TO SS#5
16	11	45.0	-70.0	MH	0.00	0.21	0.85	5.0	87.13	2.00	88.03	12	Cir	0.013	0.15	95.65	SS#4 TO SS#3
17	1	283.0	-83.7	MH	0.00	0.38	0.85	5.0	84.64	0.88	87.12	30	Cir	0.013	1.00	95.17	SS#25 TO SS#2
18	17	48.0	83.8	MH	0.00	0.48	0.85	5.0	87.12	1.42	87.80	24	Cir	0.013	1.00	95.17	SS#26 TO SS#25
19	6	20.0	90.0	MH	0.00	0.60	0.25	10.0	92.59	1.00	92.79	18	Cir	0.013	1.00	97.50	FUTURE
20	10	40.0	0.0	MH	0.00	0.90	0.85	5.0	89.84	1.00	90.24	15	Cir	0.013	1.00	97.50	FUTURE
21	14	40.0	0.0	MH	0.00	0.58	0.85	5.0	90.28	1.00	90.68	18	Cir	0.013	1.00	94.00	FUTURE

Project File: 6632-E-23-StormSys.stm

Number of lines: 45

Date: 09-26-2005

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
22	15	40.0	-15.0	MH	0.00	0.20	0.85	5.0	89.70	1.00	90.10	12	Cir	0.013	1.00	97.00	FUTURE
23	16	40.0	0.0	MH	0.00	0.28	0.85	5.0	87.97	1.00	88.37	12	Cir	0.013	1.00	96.00	FUTURE
24	8	40.0	0.0	MH	0.00	0.94	0.85	5.0	86.83	1.00	87.23	18	Cir	0.013	1.00	95.00	FUTURE
25	18	40.0	0.0	MH	0.00	1.29	0.85	8.0	87.80	4.97	89.79	18	Cir	0.013	1.00	96.00	FUTURE
26	18	68.0	-90.0	MH	0.00	0.00	0.00	0.0	87.80	1.16	88.59	24	Cir	0.013	0.99	95.86	SS#27 TO SS#26
27	26	78.7	79.6	MH	0.00	0.41	0.85	5.0	88.59	1.00	89.38	24	Cir	0.013	1.00	97.49	SS#28 TO SS#27
28	27	269.1	4.9	MH	0.00	0.39	0.85	5.0	89.38	1.00	92.07	18	Cir	0.013	1.00	100.29	SS#30 TO SS#28
29	28	251.0	0.0	MH	0.00	0.28	0.85	5.0	92.07	0.59	93.55	15	Cir	0.013	0.15	104.40	SS#32 TO SS#30
30	29	79.0	0.0	MH	0.00	0.20	0.85	5.0	93.55	0.51	93.95	15	Cir	0.013	1.00	106.21	SS#33 TO SS#32(2)
31	30	48.0	-90.0	MH	0.00	0.38	0.85	5.0	93.95	0.50	94.19	12	Cir	0.013	1.00	106.21	SS#34 TO SS#33
32	28	48.0	-90.0	MH	0.00	0.40	0.85	5.0	92.07	1.00	92.55	12	Cir	0.013	1.00	100.29	SS#31 TO SS#30
33	27	48.0	-90.0	MH	0.00	0.41	0.85	5.0	89.38	1.00	89.86	12	Cir	0.013	1.00	97.49	SS#29 TO SS#28
34	10	233.0	80.0	MH	0.00	0.12	0.85	5.0	89.84	0.50	91.00	18	Cir	0.013	1.00	95.03	SS#17 TO SS#16
35	34	28.0	90.0	MH	0.00	0.12	0.85	5.0	91.00	1.00	91.28	18	Cir	0.013	1.00	95.03	SS#18 TO SS#17
36	34	20.0	-90.0	MH	0.00	0.33	0.85	5.0	91.00	1.00	91.20	18	Cir	0.013	1.00	95.00	FUTURE
37	3	73.0	-90.0	MH	0.00	0.16	0.85	0.0	89.02	1.00	89.75	30	Cir	0.013	1.00	96.78	SS#12 TO SS#11
38	37	28.0	90.0	MH	0.00	0.15	0.85	5.0	89.75	1.00	90.03	30	Cir	0.013	1.00	97.48	SS#13 TO SS#12
39	38	40.0	45.0	MH	0.00	0.26	0.85	5.0	91.95	2.00	92.75	12	Cir	0.013	1.00	96.61	SS#14 TO SS#13
40	38	80.0	-90.0	MH	0.00	1.21	0.85	10.0	90.03	1.99	91.62	30	Cir	0.013	1.00	97.40	SS#10-5 TO SS#5-13
41	40	84.0	89.0	MH	0.00	0.53	0.85	5.0	91.62	1.00	92.46	24	Cir	0.013	0.62	98.05	SS#10-4 TO SS#10-5
42	41	115.0	-24.0	MH	0.00	1.04	0.85	5.0	92.46	1.00	93.61	24	Cir	0.013	0.15	98.00	SS#10-3 TO SS#10-4

Project File: 6632-E-23-StormSys.stm

Number of lines: 45

Date: 09-26-2005

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
43	42	138.0	1.0	MH	0.00	1.34	0.85	10.0	93.61	1.01	95.00	24	Cir	0.013	1.00	99.00	SS#10-2 TO SS#10-3
44	43	68.0	-97.0	MH	0.00	1.09	0.85	5.0	95.00	4.41	98.00	15	Cir	0.013	1.00	102.00	SS#10-1 TO SS#10-2
45	41	102.9	34.3	MH	0.00	0.06	0.90	5.0	92.46	1.31	93.81	15	Cir	0.013	1.00	98.10	SS#10-6 TO SS#10-4

Project File: 6632-E-23-StormSys.stm

Number of lines: 45

Date: 09-26-2005

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	105.0	0.00	18.51	0.00	0.00	15.43	0.0	13.5	5.4	82.66	112.1	6.58	48	0.61	84.64	84.00	89.35	89.00	96.08	0.00	SS #2 TO SS#1
2	1	144.6	0.33	11.44	0.85	0.28	9.42	5.0	13.1	5.4	51.15	68.47	5.32	42	0.46	85.31	84.64	90.63	90.25	94.49	96.08	SS#9 TO SS#2
3	2	134.0	0.00	9.68	0.00	0.00	7.92	0.0	12.7	5.5	43.49	111.0	6.62	36	2.77	89.02	85.31	91.49	91.07	95.75	94.49	SS#11 TO SS#9
4	3	56.3	0.28	1.86	0.85	0.24	1.27	5.0	12.5	5.5	7.02	14.88	3.97	18	2.01	90.15	89.02	92.52	92.27	96.61	95.75	SS#21 TO SS#1
5	4	266.0	0.00	1.58	0.00	0.00	1.03	0.0	11.2	5.8	5.94	8.14	3.36	18	0.60	91.75	90.15	93.48	92.63	97.65	96.61	SS#22 TO SS#2
6	5	104.1	0.29	1.58	0.90	0.26	1.03	5.0	10.7	5.8	6.03	9.43	3.60	18	0.81	92.59	91.75	93.86	93.56	97.06	97.65	SS#23 TO SS#2
7	6	38.0	0.69	0.69	0.90	0.62	0.62	5.0	5.0	7.1	4.42	7.18	3.63	15	1.24	93.06	92.59	94.26	94.10	97.06	97.06	SS#24 TO SS#2
8	2	38.0	0.49	1.43	0.85	0.42	1.22	5.0	5.2	7.1	8.59	21.00	4.86	18	4.00	87.83	86.31	91.39	91.14	94.49	94.49	SS#10 TO SS#9
9	3	54.0	0.25	1.98	0.85	0.21	1.68	5.0	8.3	6.3	10.64	22.62	3.39	24	1.00	89.56	89.02	92.39	92.27	95.66	95.75	SS#15 TO SS#1
10	9	28.0	0.26	1.73	0.85	0.22	1.47	5.0	8.1	6.4	9.34	22.62	2.97	24	1.00	89.84	89.56	92.66	92.61	95.66	95.66	SS#16 TO SS#1
11	1	61.0	0.42	2.45	0.85	0.36	2.08	5.0	7.4	6.5	13.59	45.70	4.33	24	4.08	87.13	84.64	90.62	90.40	95.65	96.08	SS#3 TO SS#2
12	11	97.0	0.11	1.54	0.85	0.09	1.31	5.0	6.8	6.7	8.73	29.15	2.78	24	1.66	88.74	87.13	91.21	91.07	96.40	95.65	SS#5 TO SS#3
13	12	259.3	0.28	1.12	0.85	0.24	0.95	5.0	5.6	7.0	6.62	7.44	3.75	18	0.50	90.04	88.74	92.37	91.33	94.03	96.40	SS#7 TO SS#5
14	13	48.0	0.26	0.84	0.85	0.22	0.71	5.0	5.3	7.0	5.02	7.43	2.84	18	0.50	90.28	90.04	92.79	92.68	94.03	94.03	SS#8 TO SS#7
15	12	48.0	0.11	0.31	0.85	0.09	0.26	5.0	5.4	7.0	1.85	5.04	2.35	12	2.00	89.70	88.74	91.50	91.37	96.40	96.40	SS#6 TO SS#5
16	11	45.0	0.21	0.49	0.85	0.18	0.42	5.0	5.3	7.0	2.93	5.04	3.73	12	2.00	88.03	87.13	91.28	90.97	95.65	95.65	SS#4 TO SS#3
17	1	283.0	0.38	4.62	0.85	0.32	3.93	5.0	8.3	6.3	24.76	38.39	5.05	30	0.88	87.12	84.64	91.33	90.30	95.17	96.08	SS#25 TO SS#2
18	17	48.0	0.48	4.24	0.85	0.41	3.60	5.0	8.2	6.3	22.82	26.92	7.26	24	1.42	87.80	87.12	92.21	91.73	95.17	95.17	SS#26 TO SS#2
19	6	20.0	0.60	0.60	0.25	0.15	0.15	10.0	10.0	6.0	0.90	10.50	0.51	18	1.00	92.79	92.59	94.29	94.29	97.50	97.06	FUTURE
20	10	40.0	0.90	0.90	0.85	0.77	0.77	5.0	5.0	7.1	5.45	6.46	4.44	15	1.00	90.24	89.84	93.08	92.79	97.50	95.66	FUTURE
21	14	40.0	0.58	0.58	0.85	0.49	0.49	5.0	5.0	7.1	3.51	10.50	1.99	18	1.00	90.68	90.28	92.92	92.87	94.00	94.03	FUTURE

DLW

Project File: 6632-E-23-StormSys.stm

Number of lines: 45

Run Date: 09-26-2005

NOTES: Intensity = 143.72 / (Inlet time + 19.20) ^ 0.94; Return period = 10 Yrs.

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)	
22	15	40.0	0.20	0.20	0.85	0.17	0.17	5.0	5.0	7.1	1.21	3.56	1.54	12	1.00	90.10	89.70	91.62	91.57	97.00	96.40	FUTURE
23	16	40.0	0.28	0.28	0.85	0.24	0.24	5.0	5.0	7.1	1.70	3.56	2.16	12	1.00	88.37	87.97	91.55	91.46	96.00	95.65	FUTURE
24	8	40.0	0.94	0.94	0.85	0.80	0.80	5.0	5.0	7.1	5.69	10.50	3.22	18	1.00	87.23	86.83	91.77	91.65	95.00	94.49	FUTURE
25	18	40.0	1.29	1.29	0.85	1.10	1.10	8.0	8.0	6.4	7.00	23.42	3.96	18	4.97	89.79	87.80	93.79	93.61	96.00	95.17	FUTURE
26	18	68.0	0.00	2.47	0.00	0.00	2.10	0.0	7.9	6.4	13.42	24.38	4.27	24	1.16	88.59	87.80	93.81	93.57	95.86	95.17	SS#27 TO SS#2
27	26	78.7	0.41	2.47	0.85	0.35	2.10	5.0	7.6	6.5	13.57	22.66	4.32	24	1.00	89.38	88.59	94.38	94.09	97.49	95.86	SS#28 TO SS#2
28	27	269.1	0.39	1.65	0.85	0.33	1.40	5.0	6.8	6.7	9.35	10.50	5.29	18	1.00	92.07	89.38	96.80	94.67	100.29	97.49	SS#30 TO SS#2
29	28	251.0	0.28	0.86	0.85	0.24	0.73	5.0	5.7	6.9	5.06	4.96	4.13	15	0.59	93.55	92.07	98.95	97.41	104.40	100.29	SS#32 TO SS#3
30	29	79.0	0.20	0.58	0.85	0.17	0.49	5.0	5.3	7.1	3.48	4.59	2.83	15	0.51	93.95	93.55	99.36	99.13	106.21	104.40	SS#33 TO SS#3
31	30	48.0	0.38	0.38	0.85	0.32	0.32	5.0	5.0	7.1	2.30	2.52	2.93	12	0.50	94.19	93.95	99.69	99.49	106.21	106.21	SS#34 TO SS#3
32	28	48.0	0.40	0.40	0.85	0.34	0.34	5.0	5.0	7.1	2.42	3.56	3.08	12	1.00	92.55	92.07	97.75	97.52	100.29	100.29	SS#31 TO SS#3
33	27	48.0	0.41	0.41	0.85	0.35	0.35	5.0	5.0	7.1	2.48	3.56	3.16	12	1.00	89.86	89.38	95.03	94.80	97.49	97.49	SS#29 TO SS#2
34	10	233.0	0.12	0.57	0.85	0.10	0.48	5.0	6.1	6.8	3.31	7.41	1.87	18	0.50	91.00	89.84	93.11	92.87	95.03	95.66	SS#17 TO SS#1
35	34	28.0	0.12	0.12	0.85	0.10	0.10	5.0	5.0	7.1	0.73	10.50	0.41	18	1.00	91.28	91.00	93.21	93.21	95.03	95.03	SS#18 TO SS#1
36	34	20.0	0.33	0.33	0.85	0.28	0.28	5.0	5.0	7.1	2.00	10.50	1.13	18	1.00	91.20	91.00	93.20	93.20	95.00	95.03	FUTURE
37	3	73.0	0.16	5.84	0.85	0.14	4.97	0.0	11.5	5.7	28.27	41.01	5.76	30	1.00	89.75	89.02	92.62	92.27	96.78	95.75	SS#12 TO SS#1
38	37	28.0	0.15	5.68	0.85	0.13	4.83	5.0	11.4	5.7	27.57	41.01	5.62	30	1.00	90.03	89.75	93.28	93.16	97.48	96.78	SS#13 TO SS#1
39	38	40.0	0.26	0.26	0.85	0.22	0.22	5.0	5.0	7.1	1.57	5.04	2.01	12	2.00	92.75	91.95	94.28	94.20	96.61	97.48	SS#14 TO SS#1
40	38	80.0	1.21	5.27	0.85	1.03	4.48	10.0	11.2	5.8	25.79	57.82	5.25	30	1.99	91.62	90.03	94.12	93.84	97.40	97.48	SS#10-5 TO SS#
41	40	84.0	0.53	4.06	0.85	0.45	3.45	5.0	10.9	5.8	20.01	22.62	6.37	24	1.00	92.46	91.62	95.21	94.55	98.05	97.40	SS#10-4 TO SS#
42	41	115.0	1.04	3.47	0.85	0.88	2.95	5.0	10.6	5.9	17.28	22.62	5.50	24	1.00	93.61	92.46	96.43	95.76	98.00	98.05	SS#10-3 TO SS#

Project File: 6632-E-23-StormSys.stm

Number of lines: 45

Run Date: 09-26-2005

NOTES: Intensity = 143.72 / (Inlet time + 19.20) ^ 0.94; Return period = 10 Yrs.

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)	
43	42	138.0	1.34	2.43	0.85	1.14	2.07	10.0	10.0	6.0	12.33	22.70	3.92	24	1.01	95.00	93.61	97.14	96.73	99.00	98.00	SS#10-2 TO SS#
44	43	68.0	1.09	1.09	0.85	0.93	0.93	5.0	5.0	7.1	6.60	13.56	5.75	15	4.41	98.00	95.00	99.03	97.38	102.00	99.00	SS#10-1 TO SS#
45	41	102.9	0.06	0.06	0.90	0.05	0.05	5.0	5.0	7.1	0.38	7.40	0.31	15	1.31	93.81	92.46	96.23	96.23	98.10	98.05	SS#10-6 TO SS#

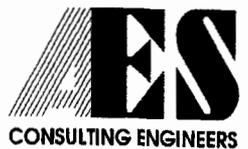
Project File: 6632-E-23-StormSys.stm

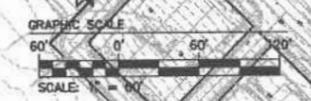
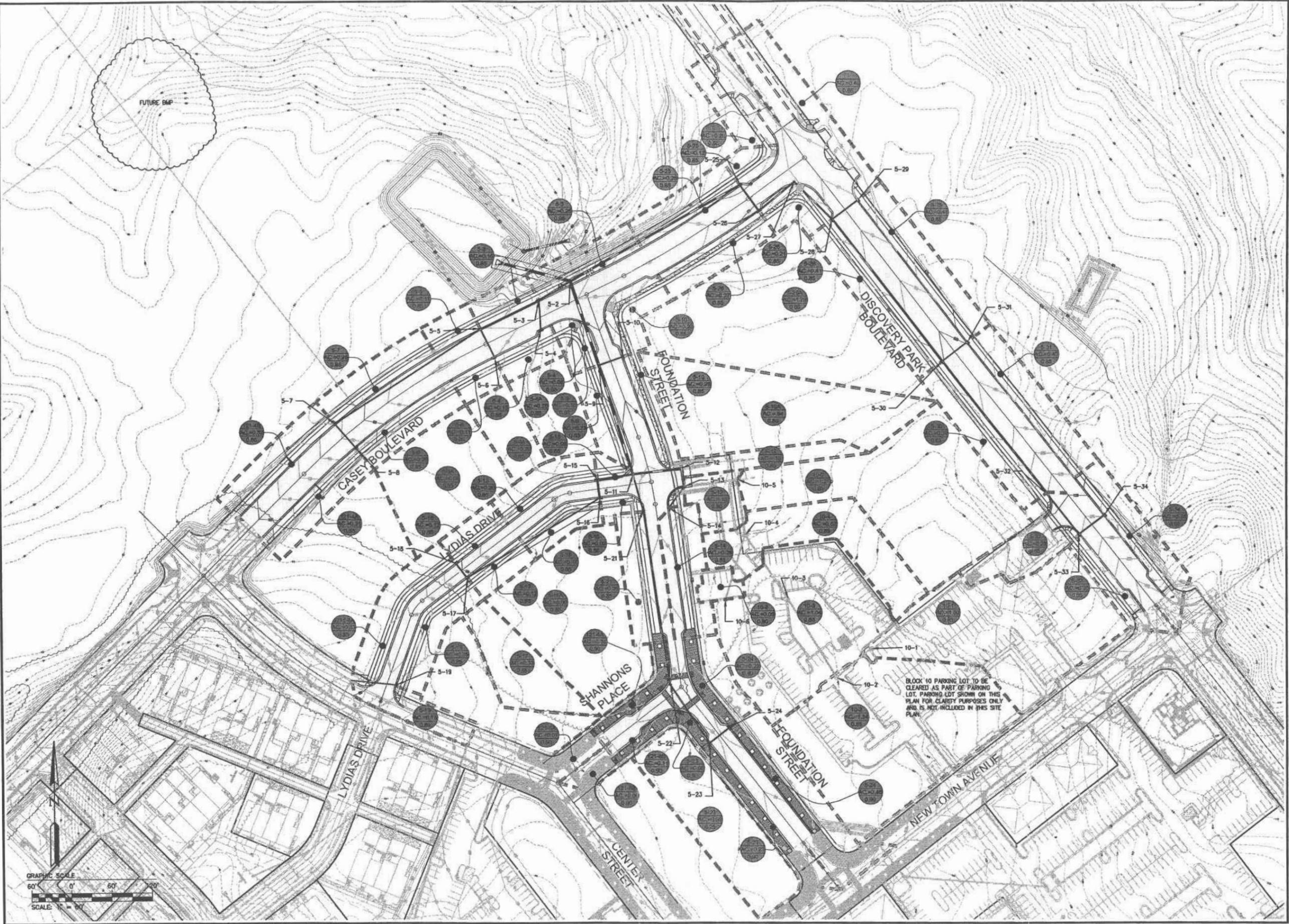
Number of lines: 45

Run Date: 09-26-2005

NOTES: Intensity = 143.72 / (Inlet time + 19.20) ^ 0.94; Return period = 10 Yrs.

APPENDIX B
DRAINAGE AREA MAP





No.	DATE	REVISION / COMMENT / NOTE
2	9/12/05	REVISED PER COUNTY COMMENTS
1	7/29/05	REVISED PER COUNTY COMMENTS AND OWNER



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



OVERALL DRAINAGE PLAN
NEW TOWN
 SECTION 2&4
 ROADWAY INFRASTRUCTURE PLANS
 PHASE V

BERKELEY DISTRICT JAMES CITY COUNTY VIRGINIA

Designed	REC	Drawn	AES
Scale	1"=60'	Date	9/02/05
Project No.	6632-E-23		
Drawing No.	12		

10/7/05

Bill

No comments,

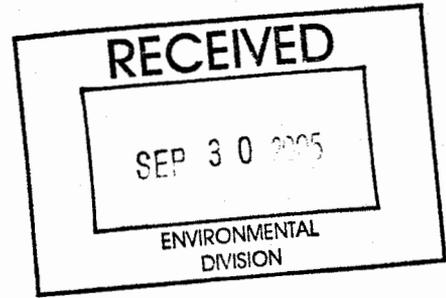
Mike

~~Steve~~ 10/7/05

APPROVE IT.

Bill

TRANSMITTAL



DATE: September 30, 2005

TO: Fire
VDOT
Environmental*
County Engineer
JCSA
Codes Compliance

FROM: Kate Sipes, Planner

SUBJECT: SP-124-05: New Town Section 4 Block 10. Please note this is an amendment to SP-077-05, which was given final approval 8/17/05.

ITEMS

ATTACHED: Site Plan, Drainage Calculations*

ACTION: Please review and return comments by October 14, 2005.

Approved.
[Signature]
10-07-05



**James City County Environmental Division
Stormwater Management / BMP Inspection Report
Infiltration Basin and Trench Facilities**

County BMP ID Code (if known): PC 246
 Name of Facility: Newtown Block 10 - Dry Swale BMP No.: _____ Date: 7/16/09
 Location: Adjacent to Foundation Sq. Bldg. in parking lot
 Name of Owner: Newtown Assoc. LLC
 Name of Inspector: Amy Parker
 Type of Facility: Dry Swale (10" perf. underdrain)
 Weather Conditions: cloudy Type: Final Inspection County BMP Inspection Program Owners Inspection

If an inspection item is not applicable, mark NA, otherwise mark the appropriate column.
 O.K. - The item checked is in adequate condition and the maintenance program is currently satisfactory. No action required.
 Routine - The item checked requires attention, but does not present an immediate threat to the function/integrity of the BMP.
 Urgent - The item checked requires immediate attention to keep the BMP operational and prevent damage to the facility.

Provide an explanation and details in the comment column, if routine or urgent are marked.

Facility Item	O.K.	Routine	Urgent	Comments
Accessibility:				
Roads	✓			
Parking Areas	✓			
Gates	N/A			
Locks	N/A			
Safety Fencing	N/A			
Observation Wells/Areas:				
Trap Doors	N/A			
Manhole Covers		✓		cover doesn't sit in place (observation well pipe too high)
Grates	✓			
Steps	✓			↑ fixed (inspected 8/12/09)
Pretreatment Devices: <input type="checkbox"/> Inlet <input type="checkbox"/> Sump <input type="checkbox"/> Forebay <input type="checkbox"/> Other				
Sediment				
Trash & Debris	✓			
Structure	✓			
Other				

Facility Item	O.K.	Routine	Urgent	Comments
Primary Storage/ Infiltration Area:				
Trash & Debris	✓			
Sediment	✓			
Ponding / Drawdown	✓			ok- last rain 7/13/09
Surface Aggregates	✓			
Aesthetics	✓			
Other				
Inlet Structure # 1 (Describe Location):				
Condition of Structure	✓			
Erosion	✓			
Trash and Debris	✓			
Sediment	✓			
Aesthetics	✓			
Other				
Inlet Structure # 2 (Describe Location):				
Condition of Structure				
Erosion				
Trash and Debris				
Sediment				
Aesthetics				
Other				
Inlet Structure # 3 (Describe Location):				
Condition of Structure				
Erosion				
Trash and Debris				
Sediment				
Aesthetics				
Other				
Outlets - Overflow or Bypass Control Structures (Describe Location):				
Condition of Structure	✓			
Erosion	✓			
Trash and Debris	✓			
Sediment	✓			
Other				
Nuisance Type Conditions:				

Facility Item	O.K.	Routine	Urgent	Comments
Mosquito Breeding	✓			
Animals, Rodents	✓			
Graffiti	✓			
Other				
Perimeter (Contributing Drainage Area) Conditions:				
Stabilization	✓			
Vegetation Condition	✓			
Trash and Debris	✓			
Aesthetics	✓			
Other				
Remarks:				
<p>Overall Environmental Division Internal Rating: <u>4.75</u></p> <p>Signature: <u><i>Amey Parker</i></u> Date: <u>7/16/09</u></p> <p>Title: <u>Inspector</u></p>				

SWMPProg\BMP\CoInspProg\SubDetInfil.wpd

