



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.

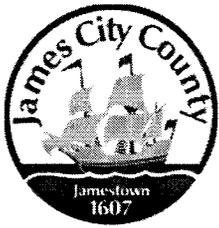
BMP NUMBER: YC028

DATE VERIFIED: January 11, 2013

QUALITY ASSURANCE TECHNICIAN: Leah Hardenbergh

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA



Stormwater Division

MEMORANDUM

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

General File ID or BMP ID: YC028

PIN: 2320900001C

Subdivision, Tract, Business or Owner

Name (if known):

Colonial Heritage

Property Description:

Common Open Space #2 Phase 1 Section 2

Site Address:

(For internal use only)

Box 24

Drawer: 9

Agreements: (in file as of scan date)

Y

Book or Doc#:

030010553

Page:

030000331

Comments

COUNTY OF JAMES CITY, VIRGINIA

COPY

DECLARATION OF COVENANTS

INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 2ND day of APRIL, 2003,
between COLONIAL HERITAGE LLC,
and all successors in interest, ("COVENANTOR(S),") owner(s) of the following property: COLONIAL HERITAGE,
project name, COLONIAL HERITAGE PHASE I SECTION 2,
Document No. , Deed Book , Page No. ; Instrument No.
030000331, 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, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.
5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

Instrument # 030010553 Page 1

Revised 01/02

Recorded on April 8, 2003

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)



Print Name/Title

Michael Dillard VILL PRESIDENT

ATTEST:



COVENANTOR(S)

Print Name/Title

ATTEST:

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF JAMES CITY

I hereby certify that on this 2 day of April, 2003, before the subscribed, a Notary Public of the State of Virginia, and for the City/County of James City, aforesaid personally appeared Michael Dillard and did acknowledge the foregoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 2 day of April, 2003.

Dorothy J. Margold
Notary Public

My Commission expires: June 30, 2007

Approved as to form:

Les P. Rogers
County Attorney

This Declaration of Covenants prepared by:

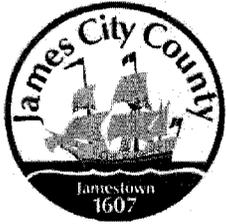
BRIAN J. RETTMAN
(Print Name)

CONSTRUCTION MANAGER
(Title)

6895 RICHMOND RD.
(Address)

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

drainage.pre



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

Project Name: COLONIAL HERITAGE P1 S2
County Plan No.: S-13-02 / SP-88-02
Stormwater Management Facility: DRY DETENTION TYPE E-2
BMP Phase #: I II III
 Information Package Received. Date/By: 5/21/04 / SJT
 Completeness Check:
 Record Drawing Date/By: 6/26/02
 Construction Certification Date/By: 2/17/04
 RD/CC Standard Forms (Required for all BMPs after Feb 1st 2001 Only)
 Insp/Maint Agreement # / Date: 030010553 / 4/2/2003
 BMP Maintenance Plan Location: AS-BUILT DRAWINGS
 Other: _____
 Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review
 Yes No Location: REVIEW COMMENTS
 Assign County BMP ID Code #: Code: YC-028
 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: 1/30/03
 Record Drawing (RD) Review Date: 03/SJT
 Construction Certification (CC) Review Date: 2/17/04
 Actions:
 No comments.
 Comments. Letter Forwarded. Date: _____
 Record Drawing (RD)
 Construction Certification (CC)
 Construction-Related (CR)
 Site Issues (SI)
 Other: POND OK AS-IS ; VERY GOOD CONDITION
 Second Submission: _____
 Reinspection (if necessary): N/A
 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) N/A
 Add BMP to PRIDE BMP ratings database.

Final Sign-Off

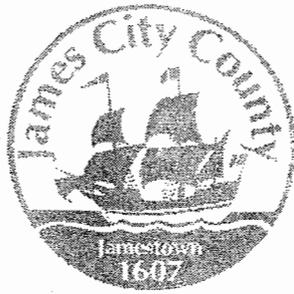
Inspector: _____

Date: _____

Chief Engineer: _____

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: Colonial Heritage, Phase I, Section 2
Structure/BMP Name: BMP 2.1
Project Location: Route 60 - James City County
BMP Location: BMP 2.1
County Plan No.: _____

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

Brief Description of Stormwater Management/BMP Facility:
Temporary Sediment Basin Certification.

Nearest Visible Landmark to SWM/BMP Facility: _____

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

Section 4 - Professional Certifications:

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

Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

Record Drawing Certification

Firm Name: _____
Mailing Address: _____
Business Phone: _____
Fax: _____
Name: _____
Title: _____
Signature: _____
Date: _____

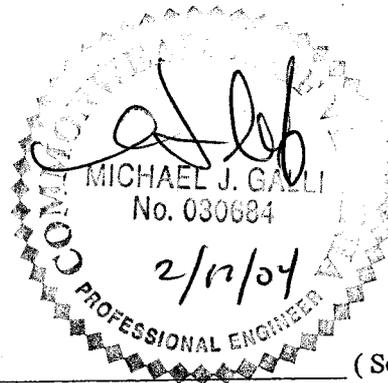
I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the Stormwater Management / BMP facility. The facility appears to conform with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically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

Construction Certification

Firm Name: ECS, Ltd.
Mailing Address: 108 Ingram Rd., Suite 1
Williamsburg, VA 23188
Business Phone: (757) 229-6677
Fax: (757) 229-9978
Name: Michael J. Galli, P.E.
Title: Principal Engineer
Signature: Michael J. Galli
Date: 2/17/04

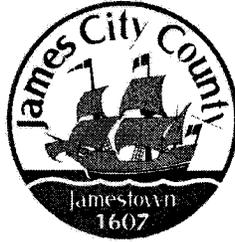
I hereby certify to the best of my knowledge and belief that this Stormwater Management/BMP facility was monitored and constructed in accordance with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

*Temporary Sediment Basin Certification,
for BMP 2.1



(Seal)
Virginia Registered Professional Engineer
or Certified Land Surveyor

(Seal)
Virginia Registered
Professional Engineer



**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: Colonial Heritage Phase 1 - Section 2
 Structure/BMP Name: JCC# YC-028 (WEG SWMP #10 - AES BMP# 2.1)
 Project Location: Colonial Heritage
 BMP Location: Section 2
 County Plan No.: S-63-02 - SP-88-02

Project Type: Residential Business Tax Map/Parcel No.: (24-3)(1-32)
 Commercial Office BMP ID Code (if known): JCC# YC-028
 Institutional Industrial Zoning District: Stonehouse District
 Public Roadway Land Use: Mixed Use (MU with proffers)
 Other _____ Site Area (sf or acres): 33.32 Acres

Brief Description of Stormwater Management/BMP Facility: James City County Extended Dry Detention Type F-2

Nearest Visible Landmark to SWM/BMP Facility: Williamsburg Dodge 7277 Richmond Road / Williamsburg Pottery Factory P. O. Box 123 Lightfoot, Va 23090

Nearest Vertical Ground Control (if known):
 JCC Geodetic Ground Control USGS Temporary Arbitrary Other
 Station Number or Name: _____
 Datum or Reference Elevation: _____
 Control Description: _____
 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: _____
Facility Monitored by County Representative during Construction: Yes No Unknown
Name of Site Work Contractor Who Constructed Facility: Jack L. Massie Contractors
Name of Professional Firm Who Routinely Monitored Construction: ECS, Ltd.
Date of Completion for SWM/BMP Facility: 1/14/04
Date of Record Drawing/Construction Certification Submittal: 1/28/04

(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: U.S. Homes Corp.
Mailing Address: 6895 Richmond Road
Williamsburg, Virginia 23188
Business Phone: 757-258-2705 Fax: 757-258-0516
Contact Person: Mr. Don Fink 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: 5284 Olde Towne Road
Suite 1
Business Phone: 757-253-0040
Fax: 757-253-8994
Responsible Plan Preparer: Richard D. Smith
Title: Project Engineer
Plan Name: Colonial Heritage Phase 1- Section 2
Firm's Project No. 8881-08
Plan Date: 6/26/02
Sheet No.'s Applicable to SWM/BMP Facility: 24 / 25 / _____ / _____ / _____

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

Name: Jack L. Massie Contractors
Mailing Address: 3900 Cokes Lane
Williamsburg, VA 23188-7010
Business Phone: (757) 566-8643
Fax: (757) 566-8566
Contact Person: Mr. Steve Massie
Site Foreman/Supervisor: Mr. Scott Massie
Specialty Subcontractors & Purpose (for BMP Construction Only):

Section 4 – Professional Certifications:

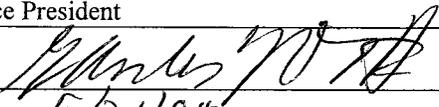
Certifying Professionals: *(Note: A Registered Professional Engineer or Certified Land Surveyor is responsible for preparation of a Record Drawing, sometimes referred to as an As-Built plan, for the drainage system for the project including any Stormwater Management/BMP Facilities. A Registered Professional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

Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

Record Drawing Certification

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

Name: George Archer Marston, III, P.E.
Title: Vice President

Signature: 
Date: 5/21/04

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

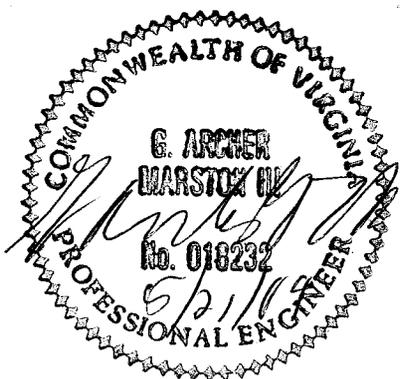
Construction Certification

Firm Name: _____
Mailing Address: _____
Business Phone: _____
Fax: _____

Name: _____
Title: _____

Signature: _____
Date: _____

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



(Seal)

Virginia Registered Professional Engineer
Or Certified Land Surveyor

(Seal)

Virginia Registered
Professional Engineer

Section 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 reproducibles.
- 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.
- XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.
- XX 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.
- XX 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.
- XX 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.
- XX 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.
- Inc 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.**
- Inc 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.
- XX 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.
- XX 20. BMP vicinity properly cleaned of stockpiles and construction debris.
- XX 21. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A 22. Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

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

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

- N/A A1. All requirements of Section II, Minimum Standards, apply to Group A facilities.
- N/A A2. Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- N/A A3. Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.
- N/A 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.
- N/A A5. Adequate fixed vertical sediment depth markers installed in the forebay(s) for future sediment monitoring purposes.
- N/A 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.
- N/A 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).
- N/A A8. No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.
- N/A A9. Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.
- N/A A10. Low flow orifice has a non-clogging mechanism.
- N/A A11. A pond drain pipe with valve was provided.
- N/A A12. Pond side slopes are not steeper than 3H:1V, unless approved plan allowed for steeper slope.
- N/A 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).*
- N/A B1. Same requirements as Group A Wet Ponds.
- N/A B2. Minimum 2:1 length to width flow path provided across the facility.
- N/A B3. Micropool provided at or around outlet from BMP (generally 3 to 6 ft. deep).
- N/A 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.
- N/A B5. Adequate wetland buffer provided (Typically 25 ft. outward from maximum design water surface elevation and 15 ft. setback to structures).
- N/A B6. No more than one-half (½) of the wetland surface area is planted.
- N/A B7. Topsoil or wetland mulch provided to support vigorous growth of wetland plants.
- N/A 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)
- N/A C1. All requirements of Section II, Minimum Standards, apply to Group C facilities as applicable.
- N/A C2. Facility is not located on fill slopes or on natural ground in excess of six (6) percent.
- N/A 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.
- N/A 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.
- N/A C5. Sides of infiltration practice lined with filter fabric.
- N/A 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.
- N/A C7. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- N/A 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.
- N/A C9. Minimum twenty-five (25) foot separation down gradient from any structure.
- N/A C10. Stormwater outfalls provided for overflow associated with larger design storms.
- N/A C11. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A C12. Facility does not currently cause any apparent surface or subsurface water problems to downgrade properties.
- N/A C13. Observation well provided.
- N/A 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)*
- N/A D1. All requirements of Section II, Minimum Standards, apply to Group D facilities.
- N/A D2. Sediment pretreatment devices provided.
- N/A 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.
- N/A 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.
- N/A 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.
- N/A D6. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed.
- N/A D7. Filtering system is off-line from storm drainage conveyance system.
- N/A D8. Overflow outlet has adequate erosion protection.
- N/A D9. Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
- N/A D10. Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
- N/A 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.
- N/A D12. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- N/A D13. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A 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)*
- N/A E1. All requirements of Section II, Minimum Standards, apply to Group E facilities as applicable.
- N/A E2. Open channel system has constructed longitudinal slope of less than four (4) percent.
- N/A E3. No visual signs of erosion in the open channel system's soil and/or vegetative cover.
- N/A E4. Open channel side slopes are no steeper than 2H:1V at any location. Preferred channel sideslope is 3H:1V or flatter.
- N/A 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).
- N/A E6. For E-2 BMPs (Dry Swales), an underdrain system was provided.
- N/A E7. Treated timber or rock check dams provided as pretreatment devices for the open channel system.
- N/A E8. Gravel diaphragm provided in areas where lateral sheet flow from impervious surgages are directly connected to the open channel system.
- N/A E9. Grass cover/stabilization in the open channel system appears adaptable to the specific soils and hydric conditions for the site and along the channel system.
- N/A E10. Open channel system areas with grass covers higher than four (4) to six (6) inches were properly mowed.
- N/A 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.
- N/A 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)*
- XX F1. All requirements of Section II, Minimum Standards, apply to Group F facilities.
- XX F2. Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.
- N/A F3. Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)
- N/A F4. Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.
- XX F5. A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging
- XX F6. Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- N/A F7. Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.
- XX 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.
- N/A F9. Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.
- N/A F10. Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.
- XX F11. Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.
- XX F12. Stilling basin or standard outlet protection provided at principal spillway outlet.
- XX 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.
- N/A F14. No visual signs of undercutting of timber walls or clogging of the low orifice were present.
- XX F15. No visual signs of erosion or channel degradation immediately downstream of facility.
- XX 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)

- XX G1. All requirements of Section II, Minimum Standards, apply to Group G facilities as applicable.
- XX 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.
- XX G3. Dedicated open space areas are in undisturbed common areas, conservation easements or are protected by other enforceable instruments that ensures perpetual protection.
- XX G4. Provisions included to clearly specify how the natural vegetated areas utilized as dedicated open space will be managed and field identified (marked).
- XX G5. Adequate protection measures were implemented during construction to protect the defined dedicated open space areas.
- XX 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.)

- N/A SD1. All requirements of Section II, Minimum Standards, apply to Storm Drainage Systems.
- N/A SD2. Horizontal location of all pipe and structures relative to the SWM/BMP facility.
- N/A SD3. Type, top elevation and invert elevation of all access type structures (inlets, manholes, etc.).
- N/A SD4. Material type, size or diameter, class, invert elevations, lengths and slopes for all pipe segments.
- N/A 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.)*

- N/A O1. All requirements of Section II, Minimum Standards, apply to this section.
- N/A 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.

Colonial Heritage
Phase 1, Section 2

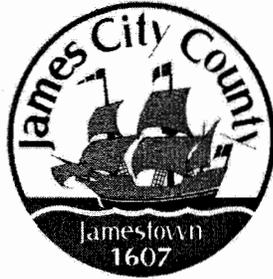


Colonial Heritage

VERITAS SUPREMA SEQUITUR

BMP / Sediment Basin 2.1
Pond Redesign / Sediment Basin
As-Built Report
James City County Environmental

SWMP #10
YC028
SEC 2
2.1
SP-88-02



**James City County, Virginia
Environmental Division**

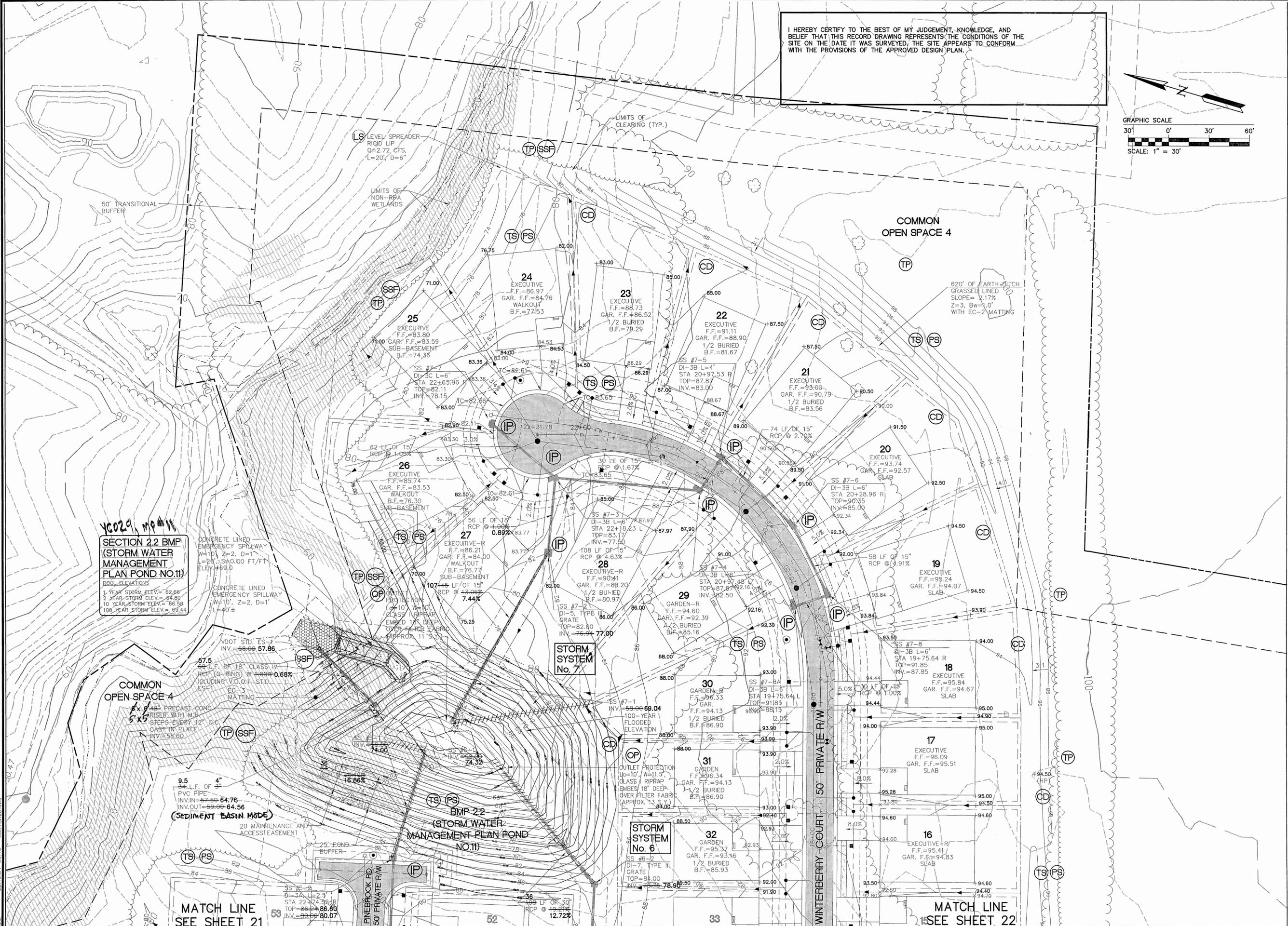
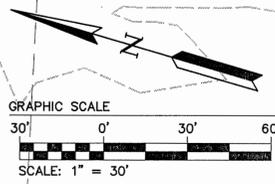
**Stormwater Management / BMP Facilities
Record Drawing and Construction Certification**

Standard Forms & Instructions

<u>Contents</u>		Page
Record Drawing and Construction Certification Forms		
	Section 1 – Site Information	1
	Section 2 – Construction Information	2
	Section 3 – Owner / Designer / Contractor Information	2
	Section 4 – Professional Certifications	3
	Section 5 – Certification Requirements and Instructions	4
Record Drawing Checklist		
I.	Methods and Presentation (Required for All Facilities)	6
II.	Minimum Standards (Required for All Facilities)	6
III.	Group A – Wet Ponds	8
IV.	Group B – Wetlands	9
V.	Group C – Infiltration Practices	10
VI.	Group D – Filtering Systems	11
VII.	Group E – Open Channel Systems	12
VIII.	Group F – Extended Dry Detention	13
IX.	Group G – Open Spaces	14
X.	Storm Drainage Systems (Associated with BMP's Only)	15
XII.	Other Systems	15
XIII.	References	16

*Issue Date
February 1, 2001*

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.



SECTION 22 BMP (STORM WATER MANAGEMENT PLAN POND NO.11)
 POOL ELEVATIONS
 1 YEAR STORM ELEV. = 62.66
 2 YEAR STORM ELEV. = 64.90
 10 YEAR STORM ELEV. = 66.58
 100 YEAR STORM ELEV. = 69.44

COMMON OPEN SPACE 4

(SEDIMENT BASIN MODE)

BMP 22 (STORM WATER MANAGEMENT PLAN POND NO.11)

STORM SYSTEM No. 6

STORM SYSTEM No. 7

MATCH LINE SEE SHEET 22

MATCH LINE SEE SHEET 21

NO.	DATE	REVISION / COMMENT / NOTE
1	5/5/04	RECORD DRAWING
2	11/17/03	REVISED REVERSE CURB AND GUTTER
3	10/31/03	NONE THIS SHEET
4	10/22/03	REVISIONS TO SITE PLAN AMENDMENT
5	8/22/03	SITE PLAN AMENDMENT
6	12/18/02	REVISED PER ICC COMMENTS DATED 2/7/03
7	12/18/02	REVISED PER ICC COMMENTS



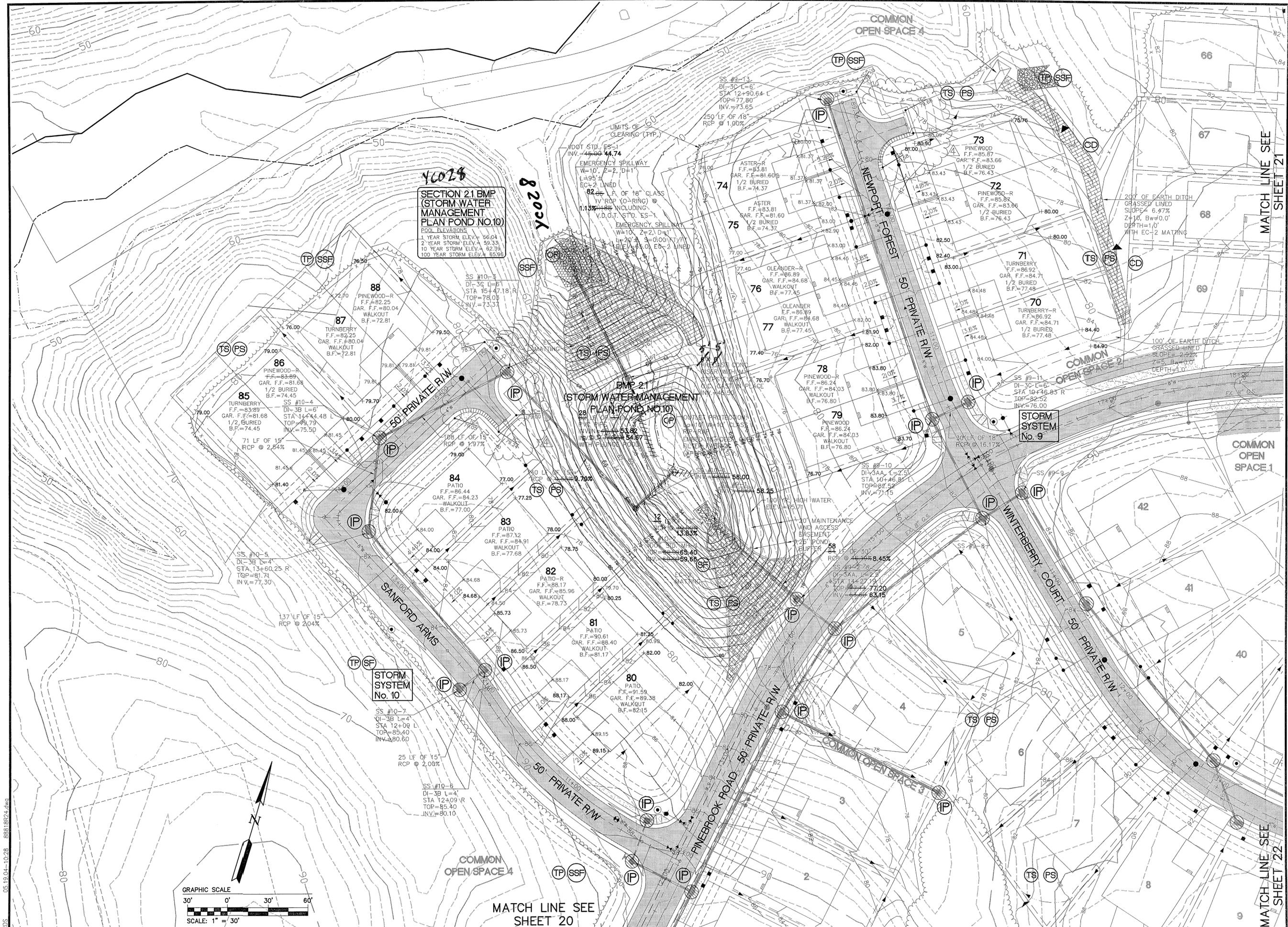
5248 Old Towne Road, Suite 1
 Williamsburg, Virginia 23188
 (757) 253-0040
 Fax (757) 220-8994



CONSULTING ENGINEERS
 JAMES CITY COUNTY, VIRGINIA

Designed	HWP/LLM	Drawn	RMS/ARH
Scale	1" = 30'	Date	6/26/02
Project No.	8881-08	Drawing No.	23

S:\Jobs\8881108-Phase 1 Section 2\dwg\CanAs-Bulldozer\BMP As-Bulldozer\8881108R24.dwg, 05/19/04, 10:47:41 AM, rds

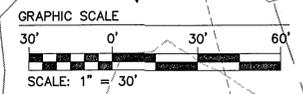


**SECTION 21 BMP
(STORM WATER
MANAGEMENT
PLAN POND NO.10)**
POOL ELEVATIONS
1 YEAR STORM ELEV. = 66.04
2 YEAR STORM ELEV. = 59.33
10 YEAR STORM ELEV. = 62.39
100 YEAR STORM ELEV. = 65.96

**BMP 21
(STORM WATER MANAGEMENT
PLAN POND NO.10)**

**STORM SYSTEM
No. 9**

**STORM SYSTEM
No. 10**



MATCH LINE SEE SHEET 20

MATCH LINE SEE SHEET 22

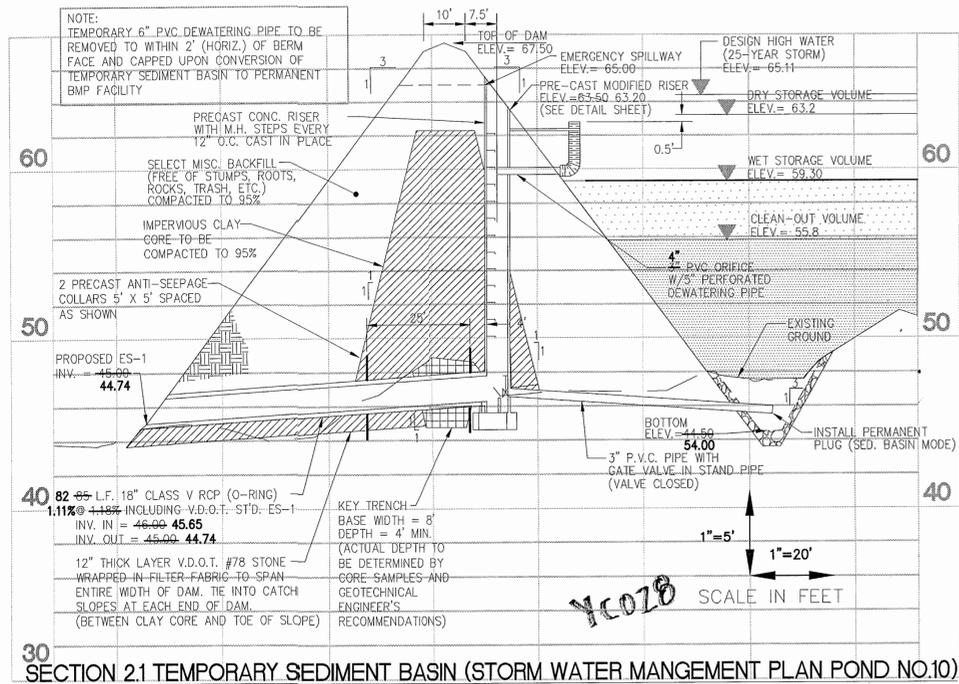
NO.	DATE	REVISION / COMMENT / NOTE	BY
4	5/25/04	RECORD DRAWING	HWP
3	11/11/03	REVISED REVERSE CURBS AND GUTTER	HWP
2	10/21/03	NONE THIS SHEET	HWP
1	10/22/03	REVISIONS TO SITE PLAN AMENDMENT	HWP
		SITE PLAN AMENDMENT	HWP
		REVISED PER JCC COMMENTS DATED 2/07/03	HWP
		REVISED PER JCC COMMENTS	HWP
		2/12/03	HWP
		DATE	
		REVISION / COMMENT / NOTE	



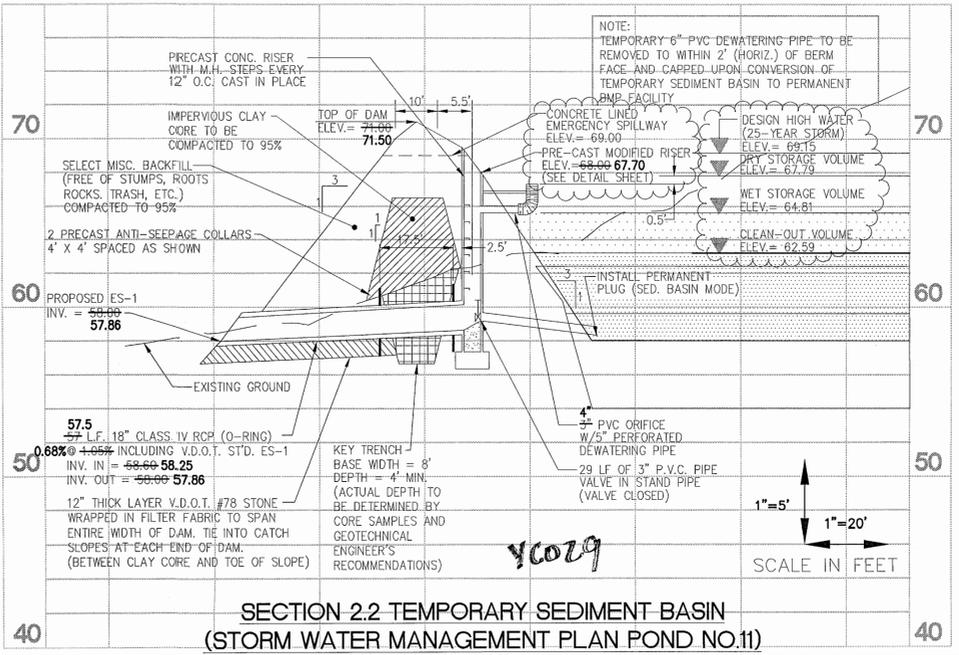
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-8994



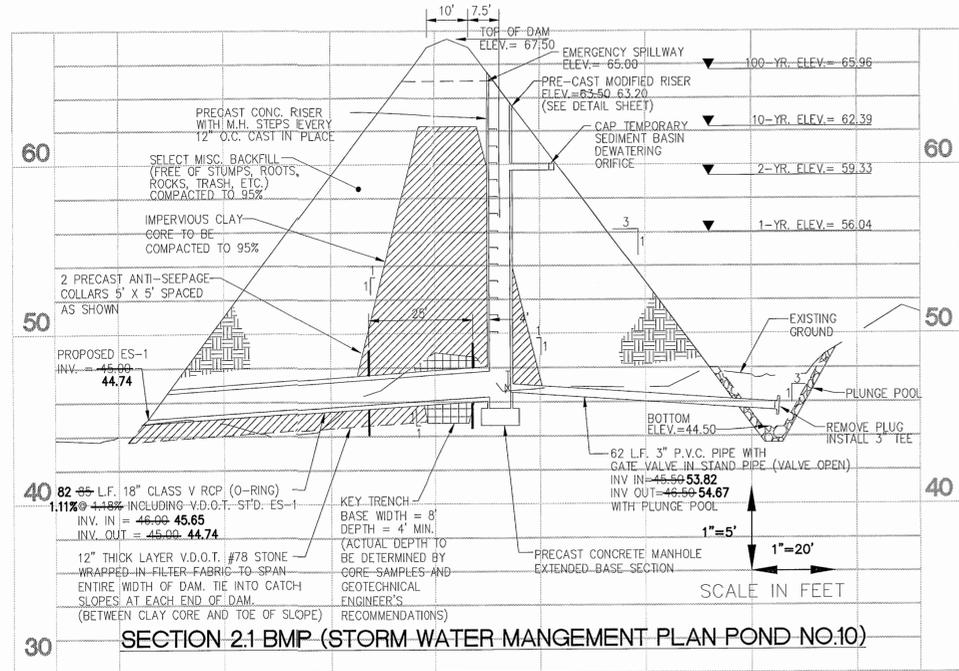
DRAINAGE GRADING AND EROSION- SEDIMENT CONTROL PLAN PHASE I, SECTION 2 COLONIAL HERITAGE OWNER/DEVELOPER: US HOME	
Designed HWP/LLM	Drawn RMS/ARH
Scale 1"=30'	Date 6/26/02
Project No. 8881-08	
Drawing No. 24	



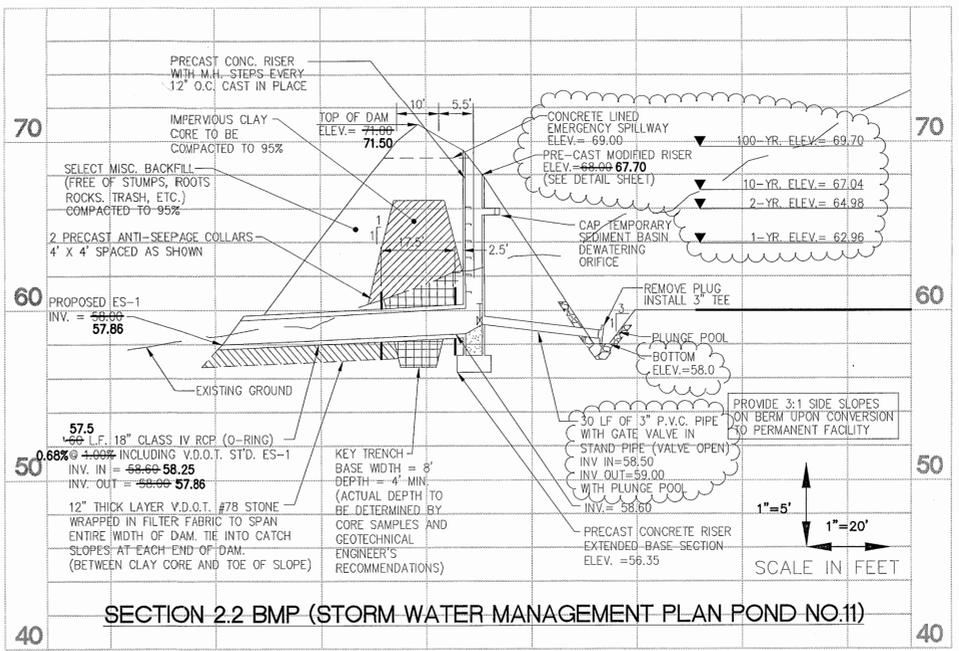
SECTION 2.1 TEMPORARY SEDIMENT BASIN (STORM WATER MANGEMENT PLAN POND NO.10)



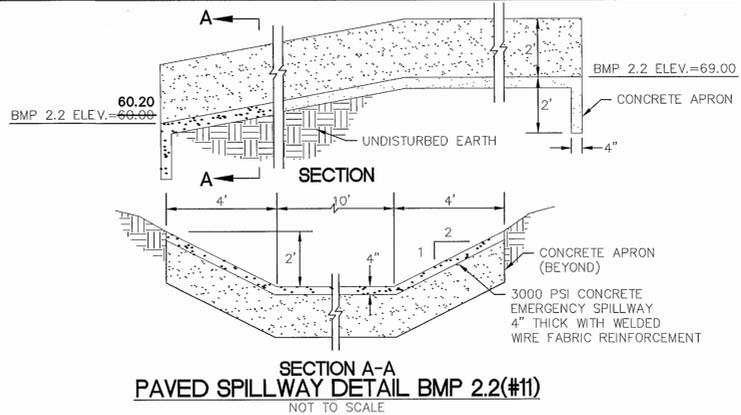
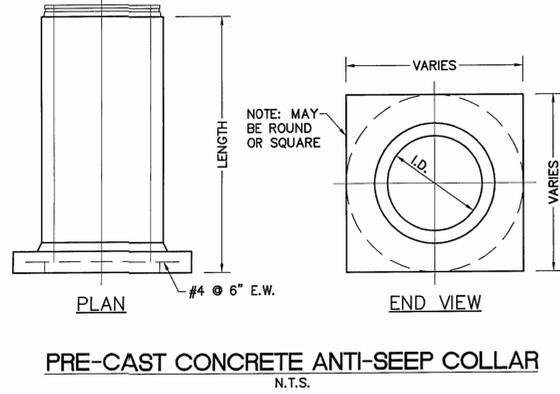
SECTION 2.2 TEMPORARY SEDIMENT BASIN (STORM WATER MANGEMENT PLAN POND NO.11)



SECTION 2.1 BMP (STORM WATER MANGEMENT PLAN POND NO.10)



SECTION 2.2 BMP (STORM WATER MANGEMENT PLAN POND NO.11)



STORMWATER MANAGEMENT / BMP FACILITY MAINTENANCE PLAN

PROPER MAINTENANCE OF THIS FACILITY IS ENCOURAGED TO PREVENT THE INTRODUCTION OF DEBRIS AND SEDIMENT INTO THE FACILITY, SPILLWAYS(S) AND DOWNSTREAM WATERWAYS. FOLLOWING INSTALLATION OF THE FACILITY AND ESTABLISHMENT OF VEGETATION IN DISTURBED AREAS, INSPECTIONS FOR SEDIMENT BUILDUP WILL BE PERFORMED AT LEAST QUARTERLY. IT IS ANTICIPATED THAT NORMAL WEAR AND TEAR OF THESE FACILITIES WILL BE REQUIRED ONCE EVERY 10 YEARS. IF OTHER CONSTRUCTION OR RELATED ACTIVITIES ARE PERFORMED ON UPSTREAM PARCELS, ADEQUATE PROTECTION SHOULD BE PROVIDED AND INSPECTIONS PERFORMED AT LEAST QUARTERLY. OVER THE COURSE OF THESE ACTIVITIES, AS WELL AS INSPECTIONS FOR ACCUMULATED SEDIMENTS AT TWO BMP FACILITY.

A DESIGNATED REPRESENTATIVE OF THE OWNER WILL INSPECT THE BMP STRUCTURE AFTER EACH SIGNIFICANT RAINFALL EVENT OR THE FOLLOWING WORKING DAY IF A WEEKEND OR HOLIDAY OCCURS. A SIGNIFICANT RAINFALL FOR THIS STRUCTURE IS DEFINED AS ONE (1) INCH OR MORE OF GAUGED RAINFALL WITHIN A 24 HOUR PERIOD. OVER THE COURSE OF THESE ACTIVITIES, THE COUNTY MAY JOINTLY INSPECT THE STRUCTURE. APPROPRIATE ACTION, PERFORMED AT THE COST OF THE OWNER, WILL BE TAKEN TO ENSURE APPROPRIATE MAINTENANCE. KEYS TO LOCKED ACCESS POINTS SHALL BE MADE AVAILABLE TO COUNTY INSPECTION PERSONNEL UPON REQUEST.

INSPECTION AND MAINTENANCE OF THE FACILITY WILL CONSIST OF THE FOLLOWING ADDITIONAL MEASURES:

1. THE INSPECTION FOR SEDIMENT BUILDUP WILL BE PERFORMED BY VISUAL INSPECTION AND A PHYSICAL DETERMINATION OF SEDIMENT DEPTH WITHIN THE STORAGE AREA. SEDIMENT REMOVAL IS REQUIRED USING A RUBBER-WHEELED BACKHOE AT THE SAME TIME, OR AT LEAST ONCE PER YEAR, THE RISER BOTTOM AND OUTLET PIPE SHALL BE CLEANED OF ACCUMULATED SEDIMENTS. DISPOSE OF SEDIMENTS REMOVED FROM THE FACILITY AT AN ACCEPTABLE DISPOSAL AREA. SEDIMENT SHALL NOT BE ALLOWED TO ACCUMULATE TO DEPTHS GREATER THAN 1'-0" FEET. NO SEDIMENT SHALL BE ALLOWED TO ACCUMULATE TO PREVENT THE PROPER FUNCTION OF ANY PIPE OR CULVERT.
2. PERFORM MAINTENANCE MOWING OF GRASSED AREAS AT LEAST TWICE EACH YEAR. GRASSES SUCH AS TALL FESCUE SHOULD BE MOWED IN EARLY SUMMER AFTER EMERGENCE OF THE HEADS ON COOL SEASON GRASSES AND IN LATE FALL TO PREVENT SEEDS OF ANNUAL WEEDS FROM MATURING. MOWING OF LEGUMES CAN BE LESS FREQUENT TREES AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ON ANY PART OF THE GRADED EMBANKMENT.
3. PERFORM SOIL SAMPLING ON STABILIZED BMP SOIL AREAS ONCE EVERY FOUR (4) YEARS. SOIL SAMPLING AND TESTING SHOULD BE PERFORMED BY A QUALIFIED INDEPENDENT TESTING LABORATORY. APPLY ADDITIONAL LIME AND FERTILIZER IN ACCORDANCE WITH TEST RECOMMENDATIONS.
4. IN STABILIZED BMP AREAS, IF VEGETATION COVERS LESS THAN 40% OF SOIL SURFACES, LIME, FERTILIZER AND SEEDING SHOULD BE PROVIDED WITH RECOMMENDATIONS FOR NEW SEEDINGS, AS LISTED IN DAM CONSTRUCTION NOTES. IF VEGETATION COVERS MORE THAN 40% BUT LESS THAN 70% OF SOIL SURFACES, LIME FERTILIZER AND OVERSEED IN ACCORDANCE WITH CURRENT SEEDLING RECOMMENDATIONS.
5. PERFORM QUARTERLY INSPECTIONS OF THE RELEASE STRUCTURES, RISER SECTION AND CREST OF SPILLWAY FOR THE OBSERVANCE OF COLLECTED DEBRIS. IMMEDIATELY REMOVE ANY DEBRIS TO MAINTAIN THE INTEGRITY OF THE STRUCTURE AND PROVIDE AN ATTRACTIVE APPEARANCE. DURING QUARTERLY INSPECTIONS, THE POND DRAIN VALVE, USUALLY LEFT IN THE VALVE "CLOSED" POSITION, SHALL BE INSPECTED AND OPERATED THROUGH TWO COMPLETE FULL-OPEN TO FULL-CLOSE TO FULL-OPEN CYCLES.
6. PERFORM YEARLY STRUCTURAL INSPECTIONS OF THE FACILITY FOR DAMAGE. STRUCTURAL INSPECTION SHALL BE PERFORMED ON THE CONCRETE RISER, ANTI-VORTEX DEVICE, TRASH RACK, CRIBBLE / BERR(S), OUTLET BARREL AND POND EMBANKMENT. IF DAMAGE IS EVIDENT, FURTHER INVESTIGATION BY A PROFESSIONAL ENGINEER MAY BE REQUIRED TO ASSESS THE CONTINUED INTEGRITY OF THE STRUCTURE.
7. PERFORM QUARTERLY INSPECTIONS OF THE GRADED SIDE SLOPES OF THE FACILITY FOR SIGNS OF ANNUAL / ROOTING BORROWS OR SLOPE EROSION. IMMEDIATELY PERFORM NECESSARY REPAIRS, REPAIRING RECORDS AS APPROPRIATE.
8. RECORD KEEPING. THE LANDOWNER OR DESIGNATED REPRESENTATIVE SHALL KEEP REASONABLE, ACCURATE WRITTEN RECORDS OF INSPECTIONS PERFORMED ON THE STRUCTURE. RECORDS SHALL DOCUMENT ROUTINE MAINTENANCE AND / OR REPAIRS PERFORMED. COPIES SHALL BE PROVIDED TO THE COUNTY UPON REQUEST.
9. THE FACILITY SHALL NOT BE MODIFIED IN ANY WAY WITHOUT PRIOR CONSENT / APPROVAL OF THE COUNTY.

GENERAL NOTES FOR CONSTRUCTION OF STORMWATER BASINS

1. THE CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS NEEDED TO CONSTRUCT THE STORMWATER BASIN, STORMWATER MANAGEMENT FACILITY, BEST MANAGEMENT PRACTICES, SEDIMENT BASINS AND SEDIMENT TRAPS. THE WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND MATERIALS NEEDED FOR THE COMPLETION OF GRADING AND EARTHWORK ASSOCIATED WITH THE CONSTRUCTION.
2. THE CONTRACTOR SHALL CONSULT AND PROVIDE FOR THE SERVICES OF A GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE TEST RESULTS ON PLACED DAM MATERIALS, IDENTIFYING SOIL CLASSIFICATION, PERMEABILITY, PLASTICITY INDEX, AND COMPACTION. ALL TESTS SHALL BE IN CONFORMANCE WITH ASTM STANDARDS. THE COST OF THE SERVICES OF THE GEOTECHNICAL ENGINEER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SATISFACTORY GEOTECHNICAL RESULTS ARE NEEDED PRIOR TO FINAL APPROVAL.
3. ALL INSPECTIONS REQUIRED FOR THE WORK SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER AT THE EXPENSE OF THE GENERAL CONTRACTOR.
4. ON-SITE EXCAVATED MATERIAL, IF DETERMINED SUITABLE FOR USE IN DAM CONSTRUCTION BY A GEOTECHNICAL ENGINEER, MAY BE USED FOR DAM CONSTRUCTION. SHOULD ADDITIONAL MATERIAL BE REQUIRED, THE CONTRACTOR SHALL IDENTIFY THE NEED FOR MATERIAL TO THE OWNER, AS ADDITIONAL BORROW MATERIAL MAY BE AVAILABLE ON THE PROPERTY. ALL EXCAVATED MATERIAL DETERMINED BY THE GEOTECHNICAL ENGINEER TO BE UNSUITABLE SHALL BE DISPOSED OF PROPERLY AT THE CONTRACTOR'S EXPENSE. ALL EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING SHALL EITHER BE DEPOSITED ON SITE AND SPREAD BY THE CONTRACTOR, OR SHALL BE DEPOSITED IN AN AREA ON THE PROPERTY AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROVIDE PROPER STABILIZATION, AND EROSION AND SEDIMENT CONTROL MEASURES NEEDED TO CONTROL AS PER THE VESCH THIRD EDITION.
5. UNDERCUT FOR THE FOUNDATION OF THE DAM EMBANKMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATION. THE FOUNDATION SHALL BE BACKFILLED WITH SOILS CLASSIFIED AS SM, SC, OR CL UNDER THE UNIFIED SOIL CLASSIFICATION SYSTEM. SOILS SHALL HAVE A MINIMUM OF 15% BY WEIGHT FINES, HAVING A PLASTICITY INDEX OF 30% AND A PERMEABILITY OF 0.0004 IN./SEC. OR LESS. FILL SHALL BE COMPACTED IN 12-INCH LIFTS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER, TO A DRY DENSITY OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). EXCAVATION FOR THE DAM KEY SHALL BE IN ACCORDANCE TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION. HEIGHT, DEPTH, AND WIDTH OF THE KEY SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. TO COVER THE DAM CORE, A SILTY FINE SAND OR CLAYEY SOIL (SM, SC, OR CL) SHALL BE PLACED. A VEGETATIVE COVER USING VDOT EC-2 EROSION CONTROL BLANKETS SHALL BE PLACED ON DAM SLOPES AND CREST TO PREVENT EROSION.
6. THE DAM CORE SHALL BE AS CONSTRUCTED WITH NON-EXPANSIVE SC OR CL CLAYEY MATERIAL WITH PERMEABILITY OF 0.0004 IN./SEC. OR LESS. THE FILL OF THE CORE SHALL BE MADE IN 12-INCH LIFTS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER, TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). SIZE, SHAPE, WIDTH, DEPTH, AND HEIGHT OF THE DAM CORE SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. TO COVER THE DAM CORE, A SILTY FINE SAND OR CLAYEY SOIL (SM, SC, OR CL) SHALL BE PLACED. A VEGETATIVE COVER USING VDOT EC-2 EROSION CONTROL BLANKETS SHALL BE PLACED ON DAM SLOPES AND CREST TO PREVENT EROSION.
7. THE STORMWATER MANAGEMENT / BMP FACILITIES SHOWN ON THESE PLANS REQUIRE THE SUBMISSION, REVIEW AND APPROVAL OF RECORD DRAWING(S) AND CONSTRUCTION CERTIFICATION PRIOR TO RELEASE OF THE POSTED BOND / SURETY. THE GEOTECHNICAL ENGINEER IS TO ENSURE THAT HIS / HER INSPECTION OF THE SWM / BMP CONSTRUCTION ACTIVITY IS PERFORMED DURING AND FOLLOWING CONSTRUCTION OF THE SWM / BMP IN ACCORDANCE WITH THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION STORMWATER MANAGEMENT / BMP FACILITIES DESIGN GUIDELINES HANDBOOK, DATED AUGUST 30, 2000.
8. THE CONTRACTOR SHALL PROVIDE INTERIM CERTIFICATION OF TEMPORARY SEDIMENT BASIN IN ACCORDANCE WITH SECTION 5 OF THE JAMES CITY COUNTY BMP, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT DESIGN GUIDES.

HWP	REVISIONS	DATE	BY
1	ISSUED FOR CONSTRUCTION	05/07/04	ARH
2	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
3	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
4	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
5	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
6	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
7	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
8	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
9	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH
10	REVISIONS TO SITE PLAN AMENDMENT	06/26/02	ARH



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



STORMWATER MANAGEMENT SECTIONS AND NOTES PHASE I, SECTION 2 COLONIAL HERITAGE OWNER/DEVELOPER: US HOME

Designed	JAG	Drawn	ARH
Scale	NONE	Date	6/26/02
Project No.	8881-08		
Drawing No.	25		

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SCS Runoff	-----	0.35	1.54	-----	-----	3.86	10.84	-----	24.01	Pre
2	SCS Runoff	-----	8.89	17.27	-----	-----	27.53	51.10	-----	89.03	Post
3	Reservoir	2	0.50	0.62	-----	-----	0.79	12.15	-----	58.80	BMP 2.1 Routing
5	Reservoir	2	0.33	1.38	-----	-----	6.77	31.54	-----	72.19	Sed Basin 2.1 Routed
10	Reservoir	2	0.42	0.57	-----	-----	0.75	13.04	-----	36.44	BMP 2.1 Routing
12	Reservoir	2	0.54	1.95	-----	-----	9.82	25.00	-----	61.94	Sed Basin 2.1 Routed

Proj. file: Pond 2-1 -Redesign As-built.gpw

Run date: 02-16-2004

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	0.35	2	760	6,063	---	----	----	Pre
2	SCS Runoff	8.89	2	726	34,964	---	----	----	Post
3	Reservoir	0.50	2	992	34,959	2	58.54	17,571	BMP 2.1 Routing
5	Reservoir	0.33	2	1190	31,991	2	62.82	53,804	Sed Basin 2.1 Routed
10	Reservoir	0.42	2	1090	30,752	2	57.96	19,478	BMP 2.1 Routing
12	Reservoir	0.54	2	960	34,086	2	62.50	54,717	Sed Basin 2.1 Routed

Proj. file: Pond 2-1 -Redesign As-built Report
 Run Period: 1 yr

Run date: 02-16-2004

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	1.54	2	742	14,468	---	---	---	Pre
2	SCS Runoff	17.27	2	726	59,872	---	---	---	Post
3	Reservoir	0.62	2	1104	59,519	2	61.03	36,004	BMP 2.1 Routing
5	Reservoir	1.38	2	834	54,576	2	63.66	63,381	Sed Basin 2.1 Routed
10	Reservoir	0.57	2	1142	54,681	2	60.61	37,643	BMP 2.1 Routing
12	Reservoir	1.95	2	790	58,834	2	63.40	64,381	Sed Basin 2.1 Routed

Proj. file: Pond 2-1 -Redesign As-built Report Period: 2 yr

Run date: 02-16-2004

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description	
1	SCS Runoff	3.86	2	738	26,478	---	----	----	Pre	
2	SCS Runoff	27.53	2	726	90,744	---	----	----	Post	
3	Reservoir	0.79	2	1144	81,567	2	63.43	60,771	BMP 2.1 Routing	
5	Reservoir	6.77	2	746	85,214	2	64.09	68,569	Sed Basin 2.1 Routed	
10	Reservoir	0.75	2	1160	75,954	2	63.22	62,254	BMP 2.1 Routing	
12	Reservoir	9.82	2	742	89,638	2	63.96	70,628	Sed Basin 2.1 Routed	
Proj. file: Pond 2-1 -Redesign As-built							Return Period: 10 yr		Run date: 02-16-2004	

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	10.84	2	736	58,057	---	----	----	Pre
2	SCS Runoff	51.10	2	724	162,455	---	----	----	Post
3	Reservoir	12.15	2	746	151,891	2	64.38	72,683	BMP 2.1 Routing
5	Reservoir	31.54	2	736	156,657	2	65.15	83,709	Sed Basin 2.1 Routed
10	Reservoir	13.04	2	744	146,832	2	64.13	72,963	BMP 2.1 Routing
12	Reservoir	25.00	2	738	161,319	2	65.16	88,854	Sed Basin 2.1 Routed

Proj. file: Pond 2-1 -Redesign As-built Return Period: 25 yr

Run date: 02-16-2004

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description	
1	SCS Runoff	24.01	2	736	115,072	---	----	----	Pre	
2	SCS Runoff	89.03	2	724	278,559	---	----	----	Post	
3	Reservoir	58.80	2	734	267,441	2	65.93	94,827	BMP 2.1 Routing	
5	Reservoir	72.19	2	730	272,675	2	66.25	100,164	Sed Basin 2.1 Routed	
10	Reservoir	36.44	2	740	262,620	2	66.01	106,088	BMP 2.1 Routing	
12	Reservoir	61.94	2	732	277,408	2	66.29	112,806	Sed Basin 2.1 Routed	
Proj. file: Pond 2-1 -Redesign As-built Report							Return Period: 100 yr		Run date: 02-16-2004	

Reservoir Report

Reservoir No. 10 - Dry Pond 2.1

Hydraflow Hydrographs by Intelisolve

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	53.00	286	0	0
1.00	54.00	3,204	1,745	1,745
2.00	55.00	3,825	3,515	5,260
3.00	56.00	4,471	4,148	9,408
4.00	57.00	5,130	4,801	14,208
5.00	58.00	5,811	5,471	19,679
6.00	59.00	6,528	6,170	25,848
7.00	60.00	7,418	6,973	32,821
8.00	61.00	8,429	7,924	40,745
9.00	62.00	9,516	8,973	49,717
10.00	63.00	10,681	10,099	59,816
11.00	64.00	11,911	11,296	71,112
12.00	65.00	16,897	14,404	85,516
13.00	66.00	23,584	20,241	105,756
14.00	67.00	25,824	24,704	130,460
15.00	68.00	28,578	27,201	157,661

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 18.0	3.0	0.0	0.0
Span in	= 18.0	3.0	0.0	0.0
No. Barrels	= 1	1	0	0
Invert El. ft	= 45.65	54.67	0.00	0.00
Length ft	= 82.0	28.0	0.0	0.0
Slope %	= 1.13	1.00	0.00	0.00
N-Value	= .013	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len ft	= 4.13	10.00	0.00	0.00
Crest El. ft	= 63.20	65.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	0.00
Weir Type	= Rect	Ciplti	---	---
Multi-Stage	= Yes	Yes	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	53.00	0.00	0.00	---	---	0.00	0.00	---	---	---	0.00
1.00	1,745	54.00	21.38	0.00	---	---	0.00	0.00	---	---	---	0.00
2.00	5,260	55.00	21.38	0.11	---	---	0.00	0.00	---	---	---	0.11
3.00	9,408	56.00	21.38	0.26	---	---	0.00	0.00	---	---	---	0.26
4.00	14,208	57.00	21.38	0.35	---	---	0.00	0.00	---	---	---	0.35
5.00	19,679	58.00	21.38	0.42	---	---	0.00	0.00	---	---	---	0.42
6.00	25,848	59.00	21.38	0.48	---	---	0.00	0.00	---	---	---	0.48
7.00	32,821	60.00	21.38	0.54	---	---	0.00	0.00	---	---	---	0.54
8.00	40,745	61.00	21.38	0.59	---	---	0.00	0.00	---	---	---	0.59
9.00	49,717	62.00	21.38	0.63	---	---	0.00	0.00	---	---	---	0.63
10.00	59,816	63.00	21.38	0.68	---	---	0.00	0.00	---	---	---	0.68
11.00	71,112	64.00	21.38	0.72	---	---	9.84	0.00	---	---	---	10.56
12.00	85,516	65.00	33.55	0.34	---	---	33.21	0.00	---	---	---	33.55
13.00	105,756	66.00	36.43	0.07	---	---	20.62	15.74	---	---	---	36.43
14.00	130,460	67.00	37.41	0.04	---	---	17.09	20.22	---	---	---	37.35
15.00	157,661	68.00	38.31	0.02	---	---	15.68	22.48	---	---	---	38.18

Note: All outflows have been analyzed under inlet and outlet control.

Reservoir Report

Reservoir No. 12 - Sediment Basin 2.1

Hydraflow Hydrographs by Intelisolve

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	53.00	286	0	0
1.00	54.00	3,204	1,745	1,745
2.00	55.00	3,825	3,515	5,260
3.00	56.00	4,471	4,148	9,408
4.00	57.00	5,130	4,801	14,208
5.00	58.00	5,811	5,471	19,679
6.00	59.00	6,528	6,170	25,848
7.00	60.00	7,418	6,973	32,821
8.00	61.00	8,429	7,924	40,745
9.00	62.00	9,516	8,973	49,717
10.00	63.00	10,681	10,099	59,816
11.00	64.00	11,911	11,296	71,112
12.00	65.00	16,897	14,404	85,516
13.00	66.00	23,584	20,241	105,756
14.00	67.00	25,824	24,704	130,460
15.00	68.00	28,578	27,201	157,661

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 15.0	4.0	0.0	0.0
Span in	= 15.0	4.0	0.0	0.0
No. Barrels	= 1	1	0	0
Invert El. ft	= 45.65	60.67	0.00	0.00
Length ft	= 82.0	13.0	0.0	0.0
Slope %	= 1.13	2.31	0.00	0.00
N-Value	= .013	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len ft	= 10.00	4.13	0.00	0.00
Crest El. ft	= 65.00	63.20	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	0.00
Weir Type	= Broad	Rect	---	---
Multi-Stage	= No	Yes	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	Civ D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	53.00	0.00	0.00	---	---	0.00	0.00	---	---	---	0.00
1.00	1,745	54.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
2.00	5,260	55.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
3.00	9,408	56.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
4.00	14,208	57.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
5.00	19,679	58.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
6.00	25,848	59.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
7.00	32,821	60.00	14.18	0.00	---	---	0.00	0.00	---	---	---	0.00
8.00	40,745	61.00	14.18	0.17	---	---	0.00	0.00	---	---	---	0.17
9.00	49,717	62.00	14.18	0.45	---	---	0.00	0.00	---	---	---	0.45
10.00	59,816	63.00	14.18	0.62	---	---	0.00	0.00	---	---	---	0.62
11.00	71,112	64.00	14.18	0.75	---	---	0.00	9.84	---	---	---	10.59
12.00	85,516	65.00	23.04	0.29	---	---	0.00	22.74	---	---	---	23.04
13.00	105,756	66.00	23.86	0.16	---	---	26.00	23.69	---	---	---	49.85
14.00	130,460	67.00	24.49	0.10	---	---	73.54	24.38	---	---	---	98.03
15.00	157,661	68.00	25.09	0.08	---	---	135.10	24.99	---	---	---	160.16

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

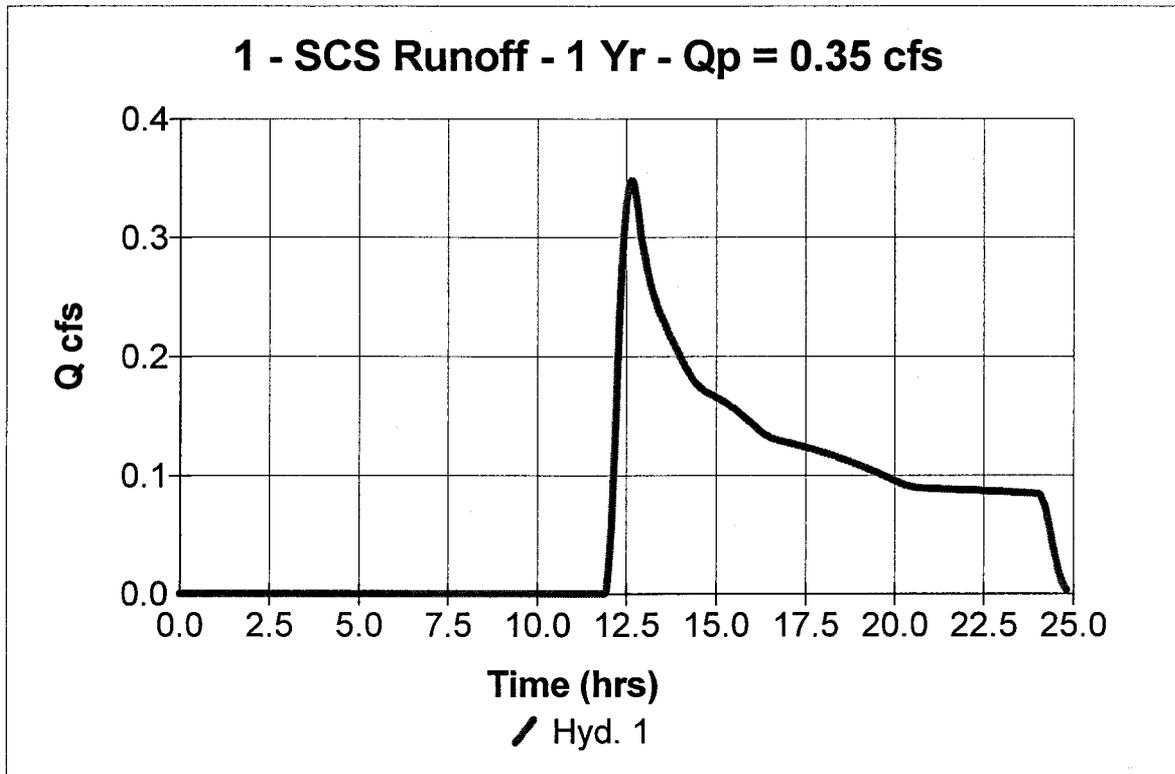
Hyd. No. 1

Pre

Hydrograph type = SCS Runoff
Storm frequency = 1 yrs
Drainage area = 11.66 ac
Basin Slope = 4.0 %
Tc method = USER
Total precip. = 2.80 in
Storm duration = 24 hrs

Peak discharge = 0.35 cfs
Time interval = 2 min
Curve number = 55
Hydraulic length = 2000 ft
Time of conc. (Tc) = 36 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 6,063 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

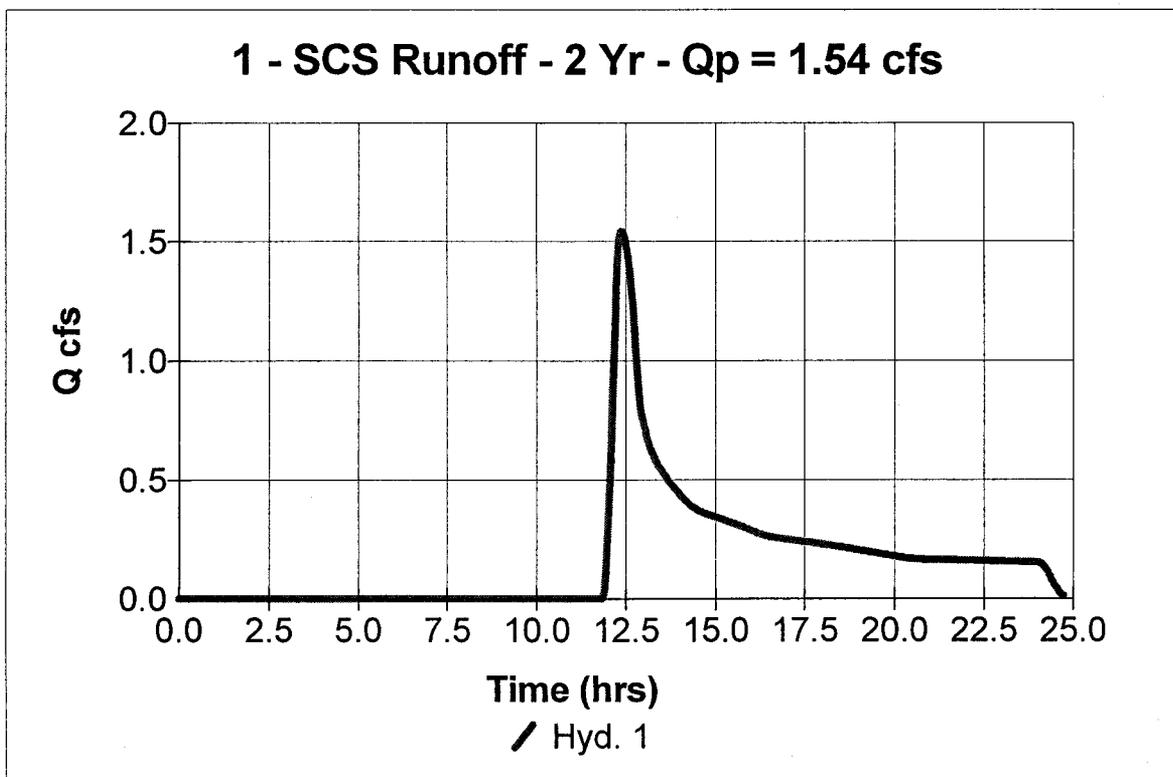
Hyd. No. 1

Pre

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 11.66 ac
Basin Slope = 4.0 %
Tc method = USER
Total precip. = 3.50 in
Storm duration = 24 hrs

Peak discharge = 1.54 cfs
Time interval = 2 min
Curve number = 55
Hydraulic length = 2000 ft
Time of conc. (Tc) = 36 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 14,468 cuft



Hydrograph Plot

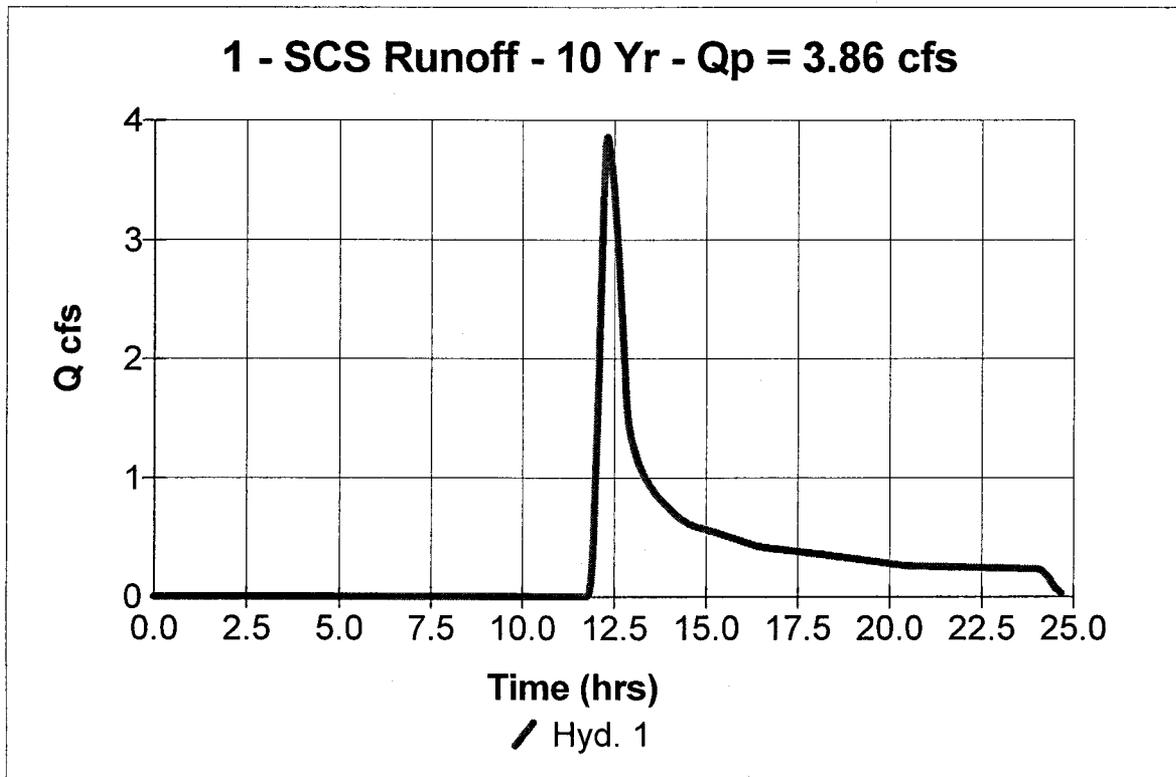
Hydraflow Hydrographs by Intelisolve

Hyd. No. 1

Pre

Hydrograph type	= SCS Runoff	Peak discharge	= 3.86 cfs
Storm frequency	= 10 yrs	Time interval	= 2 min
Drainage area	= 11.66 ac	Curve number	= 55
Basin Slope	= 4.0 %	Hydraulic length	= 2000 ft
Tc method	= USER	Time of conc. (Tc)	= 36 min
Total precip.	= 4.25 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 26,478 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

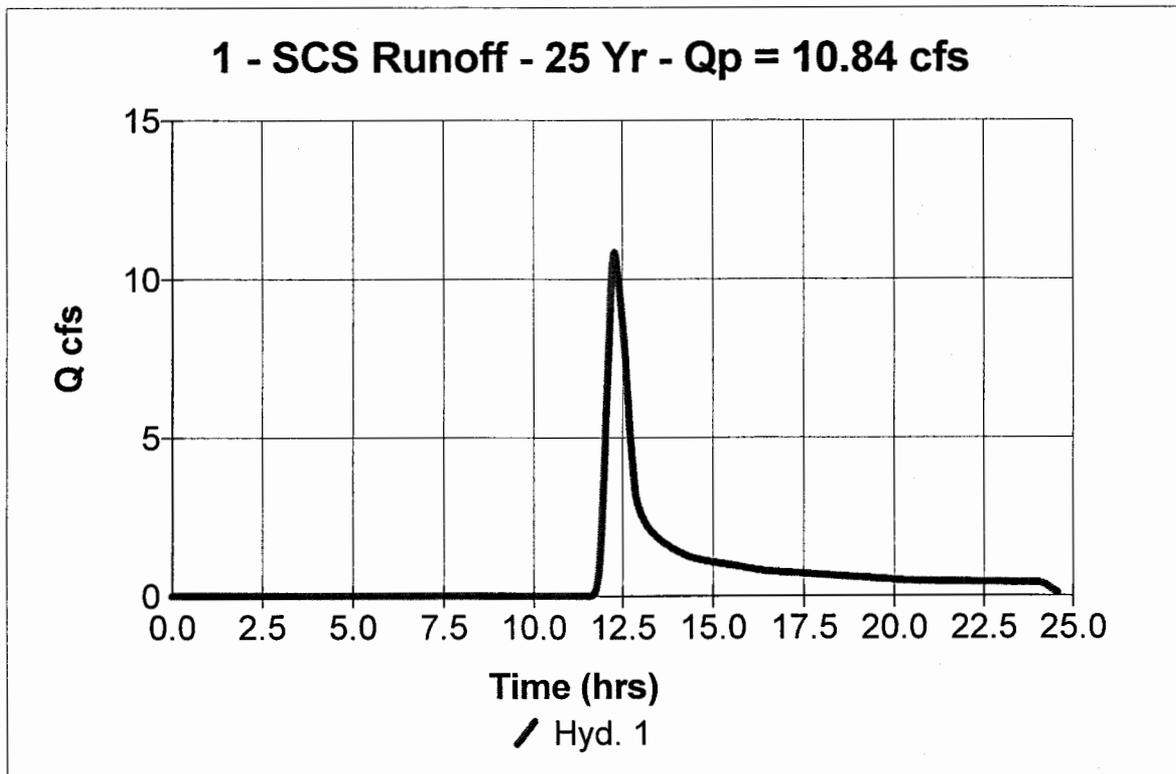
Hyd. No. 1

Pre

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 11.66 ac
Basin Slope = 4.0 %
Tc method = USER
Total precip. = 5.77 in
Storm duration = 24 hrs

Peak discharge = 10.84 cfs
Time interval = 2 min
Curve number = 55
Hydraulic length = 2000 ft
Time of conc. (Tc) = 36 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 58,057 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

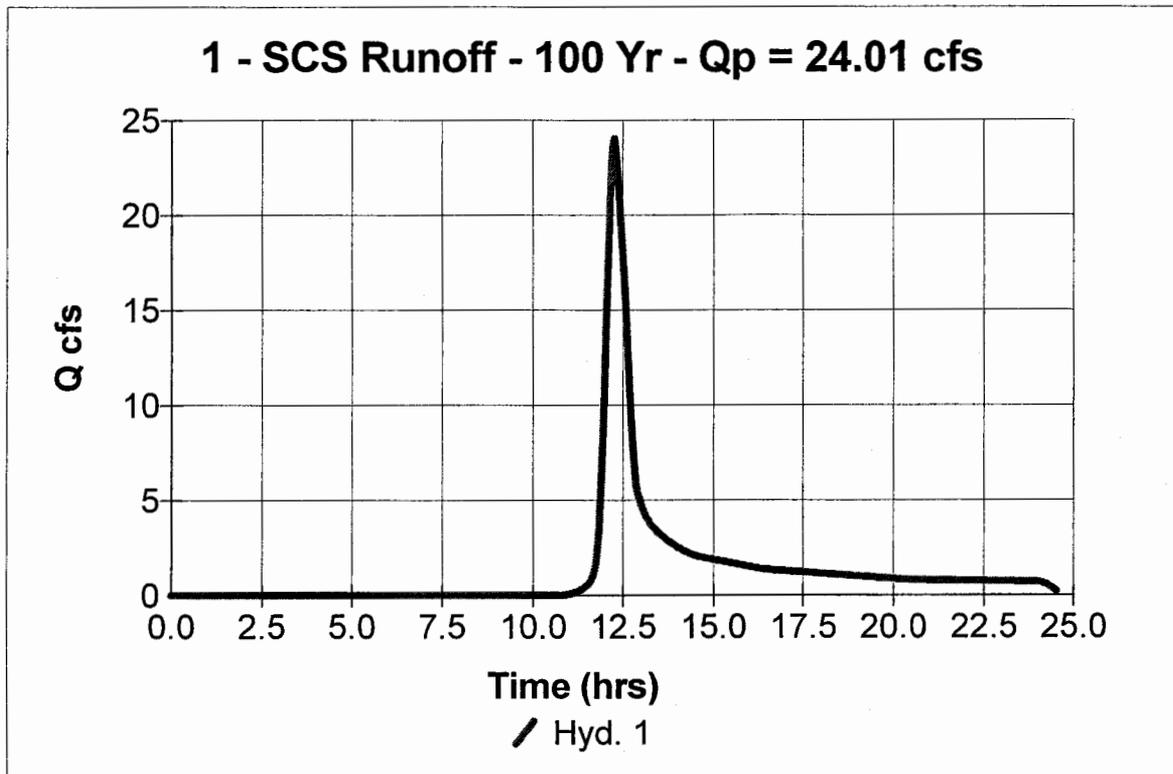
Hyd. No. 1

Pre

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 11.66 ac
Basin Slope = 4.0 %
Tc method = USER
Total precip. = 7.95 in
Storm duration = 24 hrs

Peak discharge = 24.01 cfs
Time interval = 2 min
Curve number = 55
Hydraulic length = 2000 ft
Time of conc. (Tc) = 36 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 115,072 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

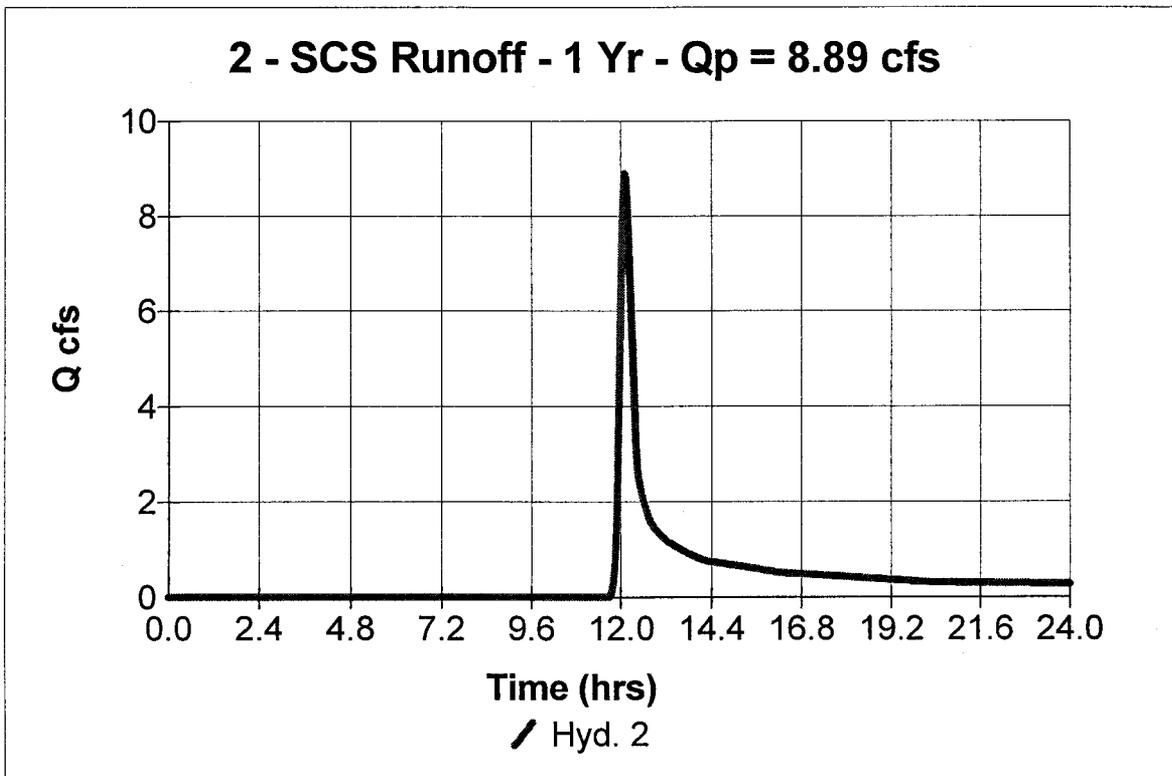
Hyd. No. 2

Post

Hydrograph type = SCS Runoff
Storm frequency = 1 yrs
Drainage area = 18.30 ac
Basin Slope = 2.0 %
Tc method = USER
Total precip. = 2.80 in
Storm duration = 24 hrs

Peak discharge = 8.89 cfs
Time interval = 2 min
Curve number = 68
Hydraulic length = 3600 ft
Time of conc. (Tc) = 19 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 34,964 cuft



Hydrograph Plot

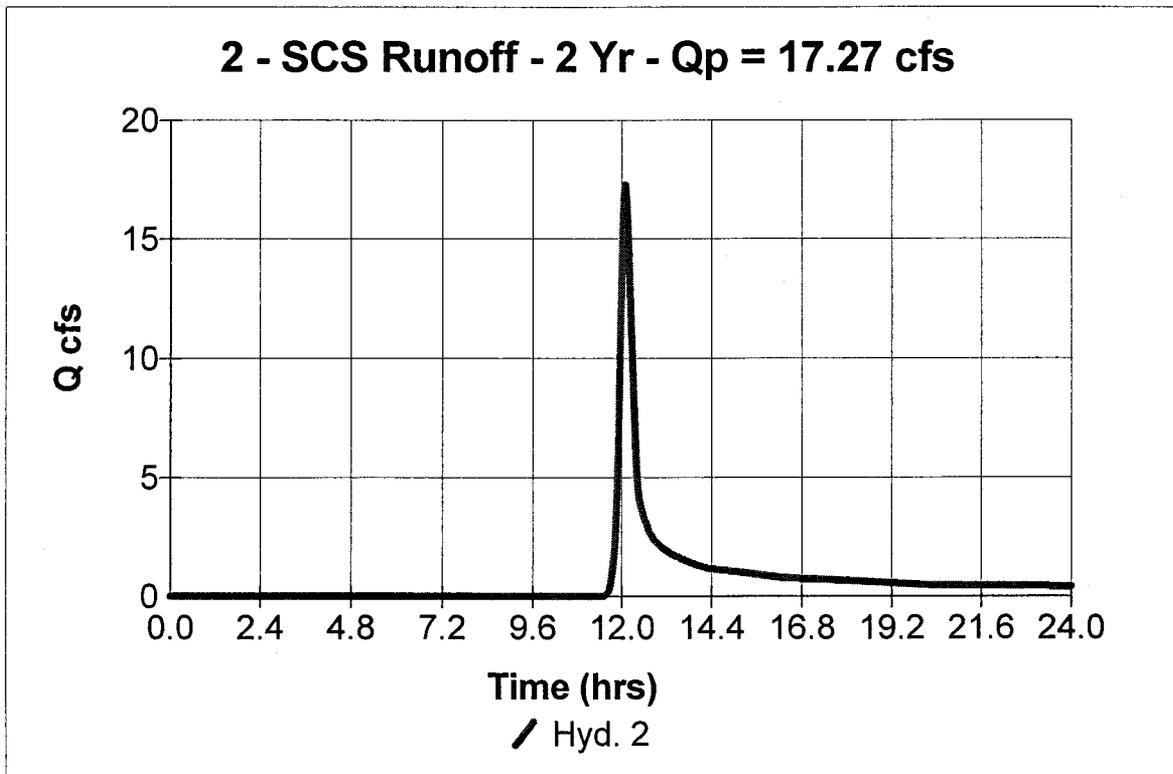
Hydraflow Hydrographs by Intelisolve

Hyd. No. 2

Post

Hydrograph type	= SCS Runoff	Peak discharge	= 17.27 cfs
Storm frequency	= 2 yrs	Time interval	= 2 min
Drainage area	= 18.30 ac	Curve number	= 68
Basin Slope	= 2.0 %	Hydraulic length	= 3600 ft
Tc method	= USER	Time of conc. (Tc)	= 19 min
Total precip.	= 3.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 59,872 cuft



Hydrograph Plot

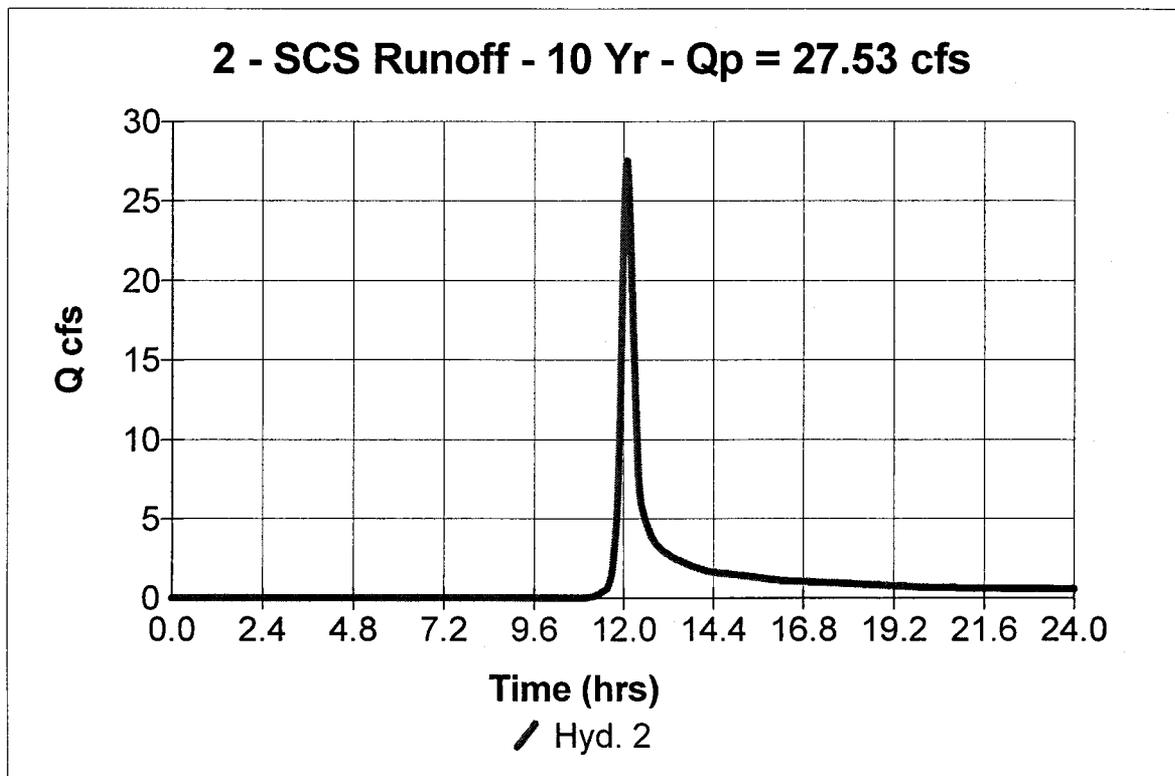
Hydraflow Hydrographs by Intelisolve

Hyd. No. 2

Post

Hydrograph type	= SCS Runoff	Peak discharge	= 27.53 cfs
Storm frequency	= 10 yrs	Time interval	= 2 min
Drainage area	= 18.30 ac	Curve number	= 68
Basin Slope	= 2.0 %	Hydraulic length	= 3600 ft
Tc method	= USER	Time of conc. (Tc)	= 19 min
Total precip.	= 4.25 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 90,744 cuft



Hydrograph Plot

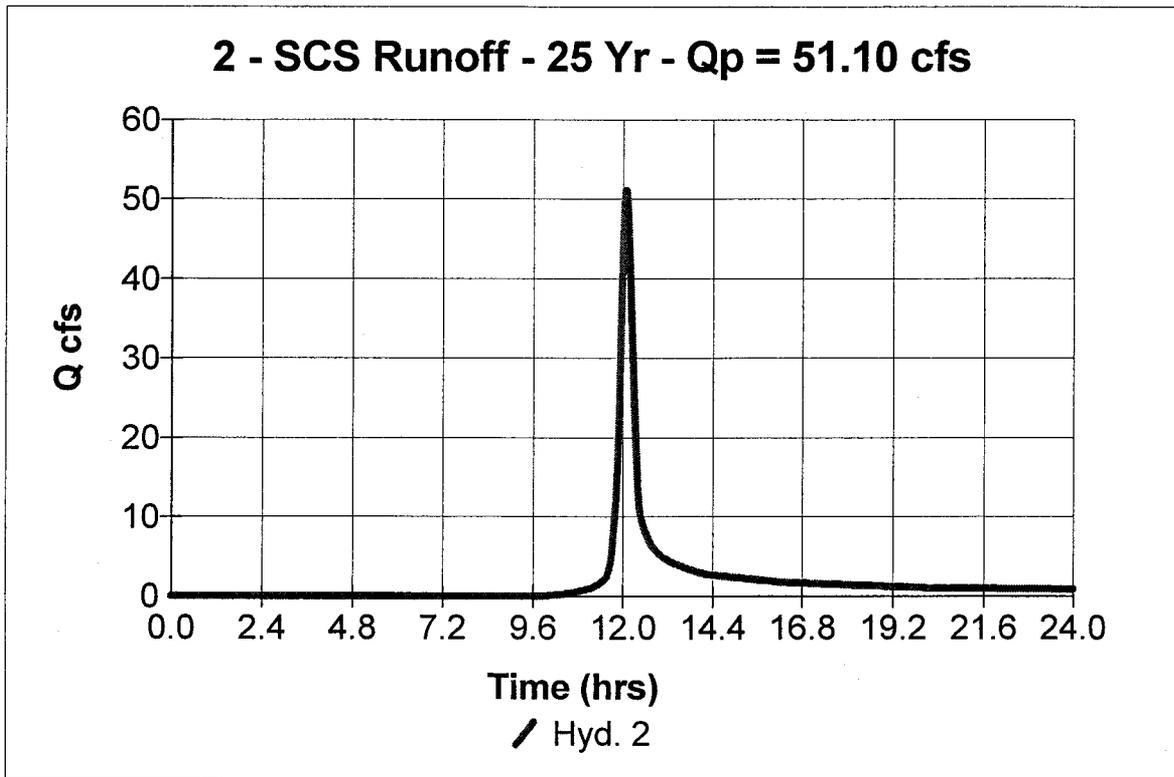
Hydraflow Hydrographs by Intelisolve

Hyd. No. 2

Post

Hydrograph type	= SCS Runoff	Peak discharge	= 51.10 cfs
Storm frequency	= 25 yrs	Time interval	= 2 min
Drainage area	= 18.30 ac	Curve number	= 68
Basin Slope	= 2.0 %	Hydraulic length	= 3600 ft
Tc method	= USER	Time of conc. (Tc)	= 19 min
Total precip.	= 5.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph Volume = 162,455 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

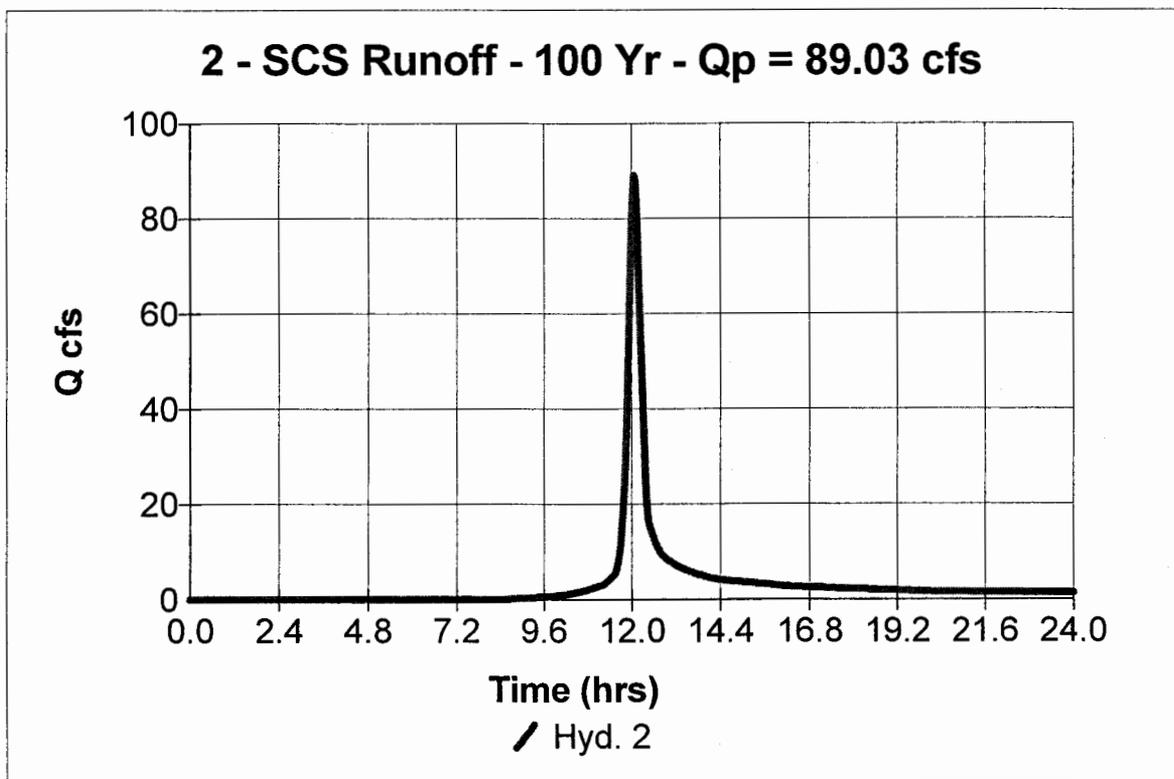
Hyd. No. 2

Post

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 18.30 ac
Basin Slope = 2.0 %
Tc method = USER
Total precip. = 7.95 in
Storm duration = 24 hrs

Peak discharge = 89.03 cfs
Time interval = 2 min
Curve number = 68
Hydraulic length = 3600 ft
Time of conc. (Tc) = 19 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 278,558 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 3

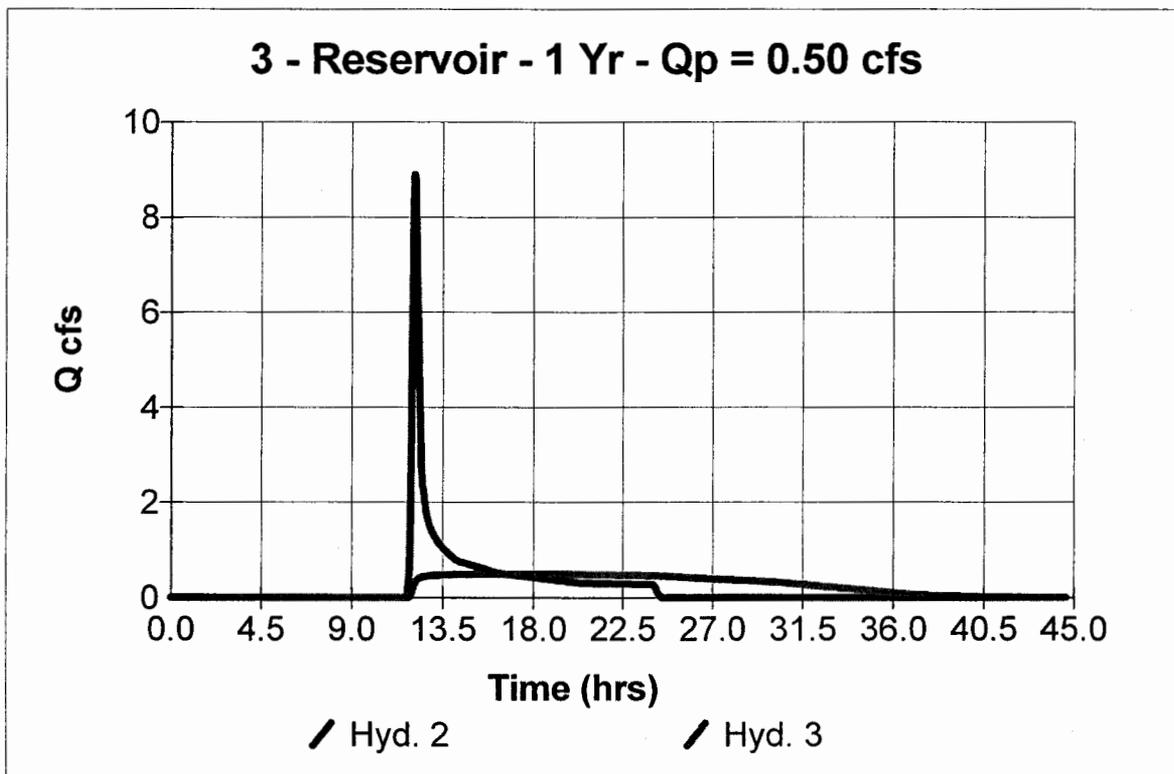
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 1 yrs
Inflow hyd. No. = 2
Max. Elevation = 58.54 ft

Peak discharge = 0.50 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 17,571 cuft

Storage Indication method used.

Hydrograph Volume = 34,959 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 3

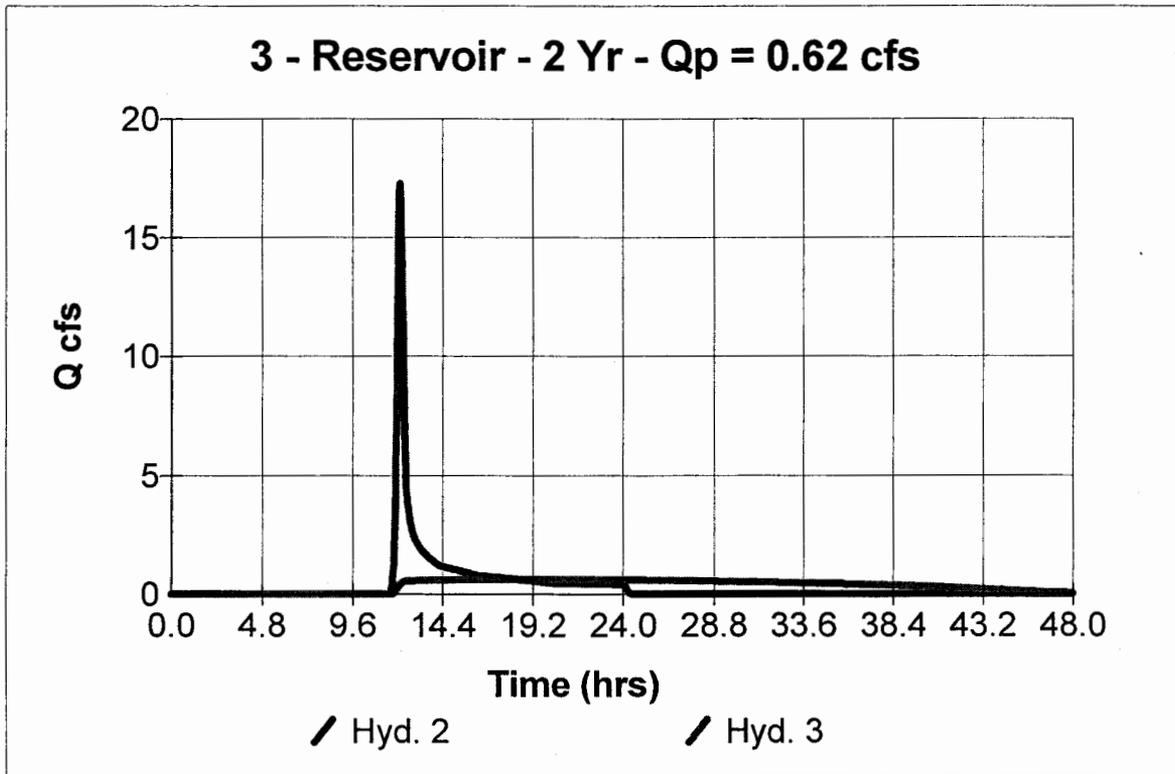
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 2
Max. Elevation = 61.03 ft

Peak discharge = 0.62 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 36,004 cuft

Storage Indication method used.

Hydrograph Volume = 59,519 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 3

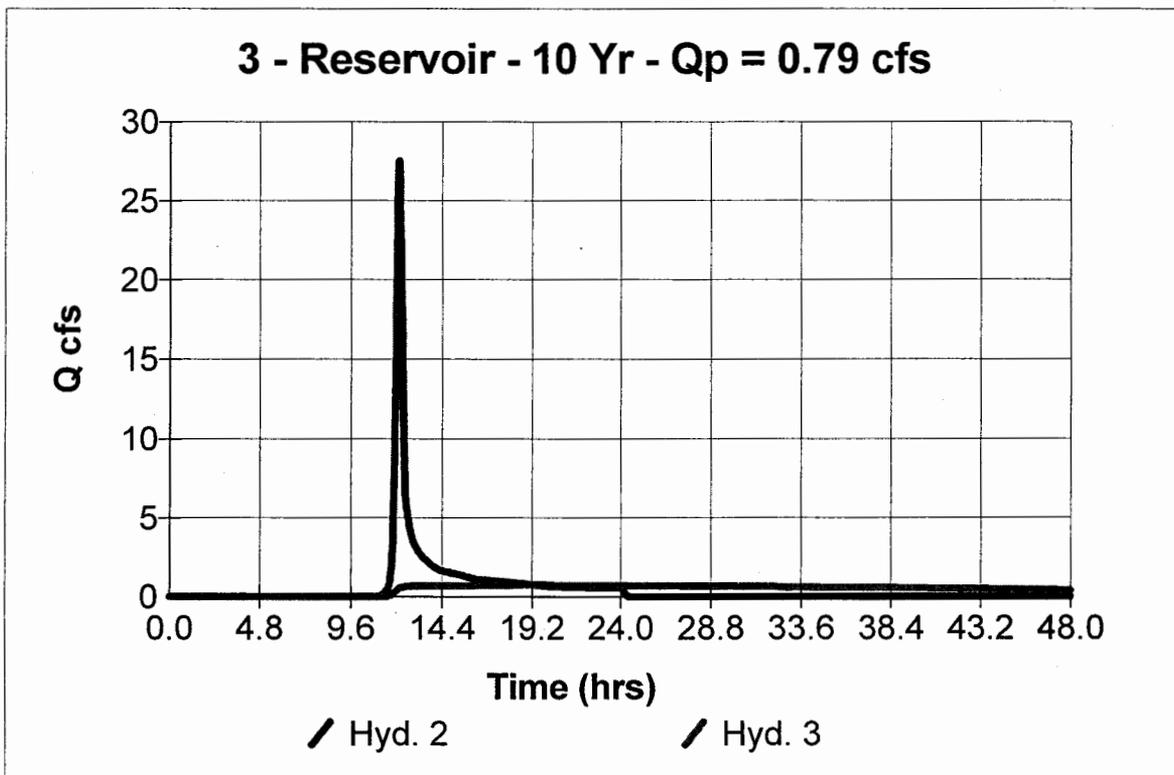
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 10 yrs
Inflow hyd. No. = 2
Max. Elevation = 63.43 ft

Peak discharge = 0.79 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 60,771 cuft

Storage Indication method used.

Hydrograph Volume = 81,567 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 3

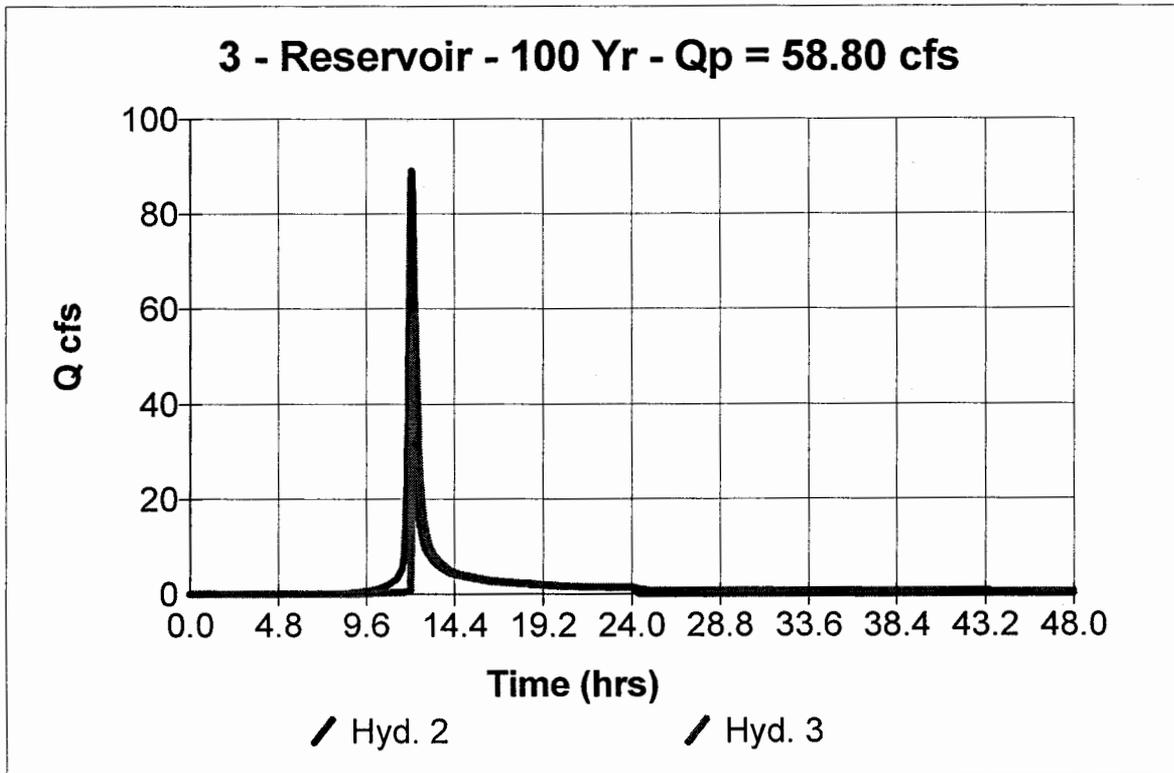
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 100 yrs
Inflow hyd. No. = 2
Max. Elevation = 65.93 ft

Peak discharge = 58.80 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 94,827 cuft

Storage Indication method used.

Hydrograph Volume = 267,441 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 5

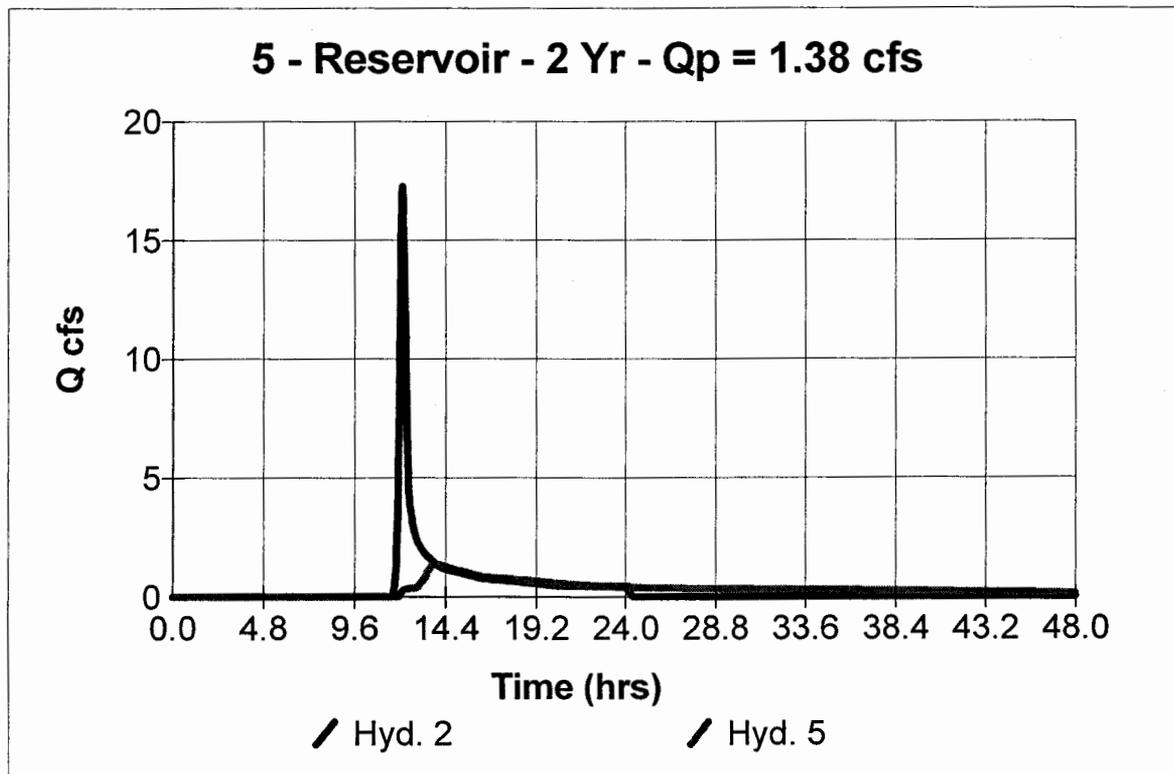
Sed Basin 2.1 Routed

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 2
Max. Elevation = 63.66 ft

Peak discharge = 1.38 cfs
Time interval = 2 min
Reservoir name = Sediment Basin
Max. Storage = 63,381 cuft

Storage Indication method used.

Hydrograph Volume = 54,576 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 5

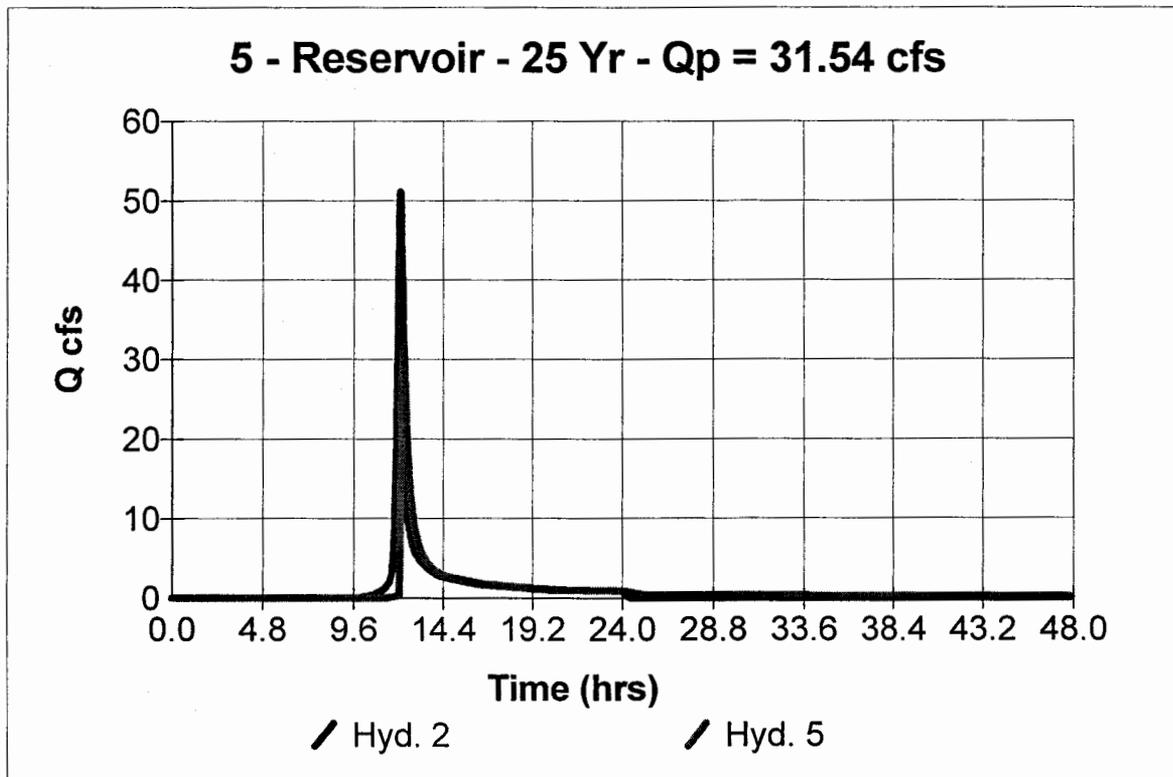
Sed Basin 2.1 Routed

Hydrograph type = Reservoir
Storm frequency = 25 yrs
Inflow hyd. No. = 2
Max. Elevation = 65.15 ft

Peak discharge = 31.54 cfs
Time interval = 2 min
Reservoir name = Sediment Basin
Max. Storage = 83,709 cuft

Storage Indication method used.

Hydrograph Volume = 156,657 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 10

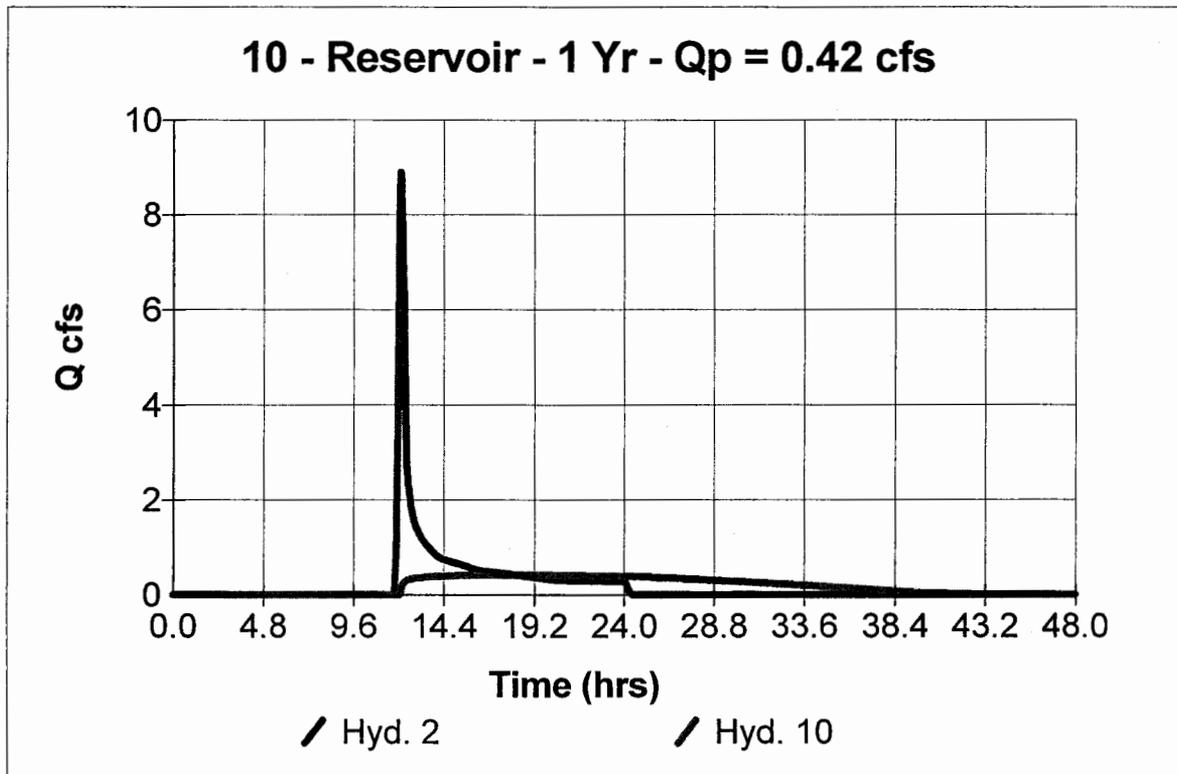
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 1 yrs
Inflow hyd. No. = 2
Max. Elevation = 57.96 ft

Peak discharge = 0.42 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 19,478 cuft

Storage Indication method used.

Hydrograph Volume = 30,752 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 10

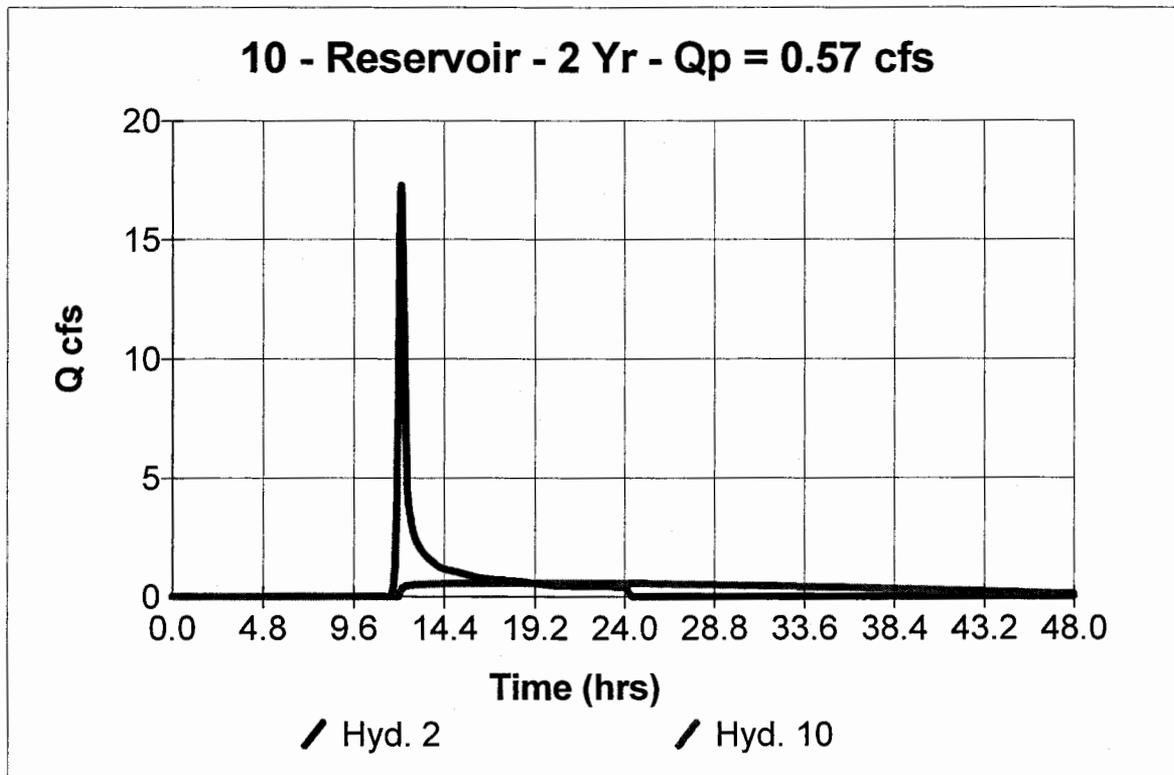
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 2
Max. Elevation = 60.61 ft

Peak discharge = 0.57 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 37,643 cuft

Storage Indication method used.

Hydrograph Volume = 54,681 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 10

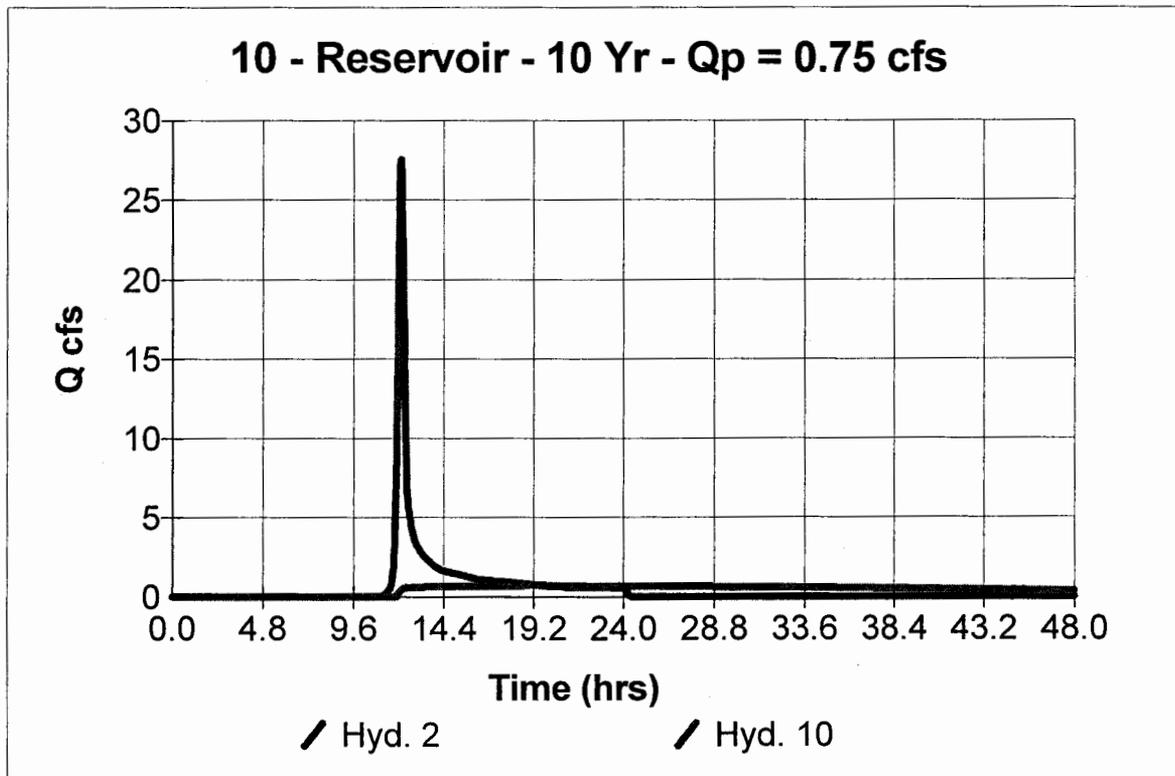
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 10 yrs
Inflow hyd. No. = 2
Max. Elevation = 63.22 ft

Peak discharge = 0.75 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 62,254 cuft

Storage Indication method used.

Hydrograph Volume = 75,954 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 10

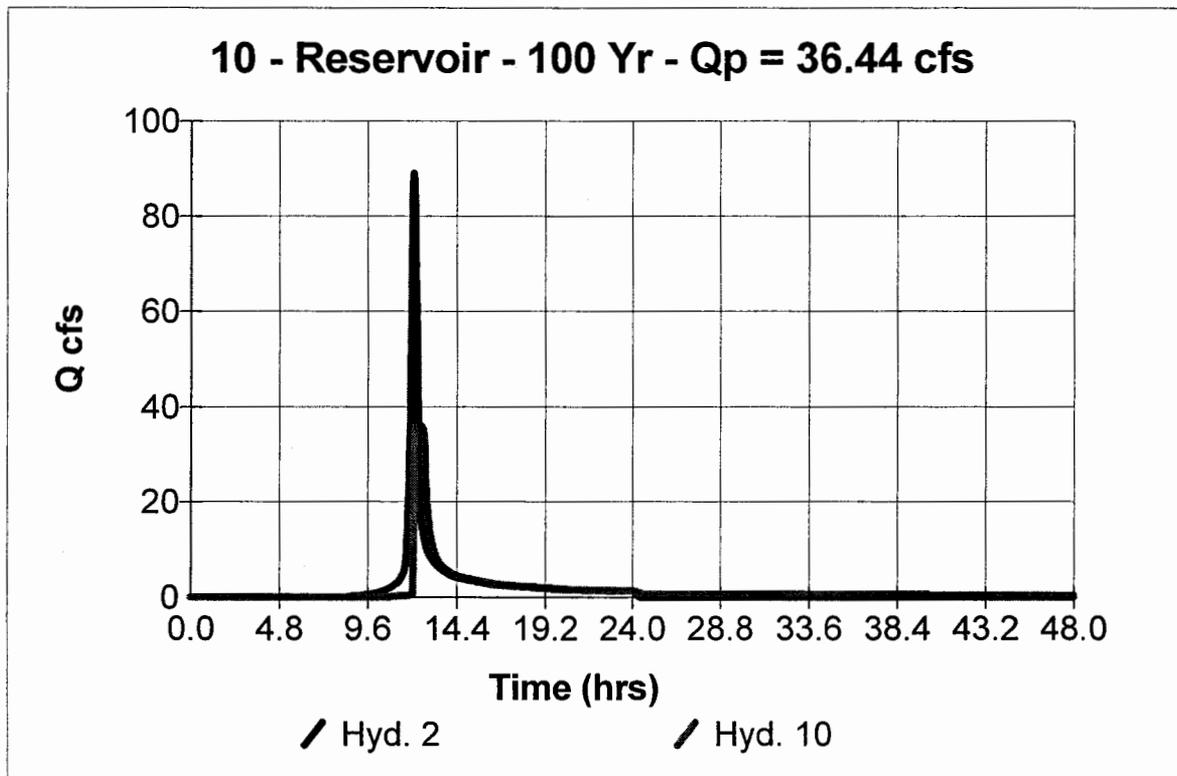
BMP 2.1 Routing

Hydrograph type = Reservoir
Storm frequency = 100 yrs
Inflow hyd. No. = 2
Max. Elevation = 66.01 ft

Peak discharge = 36.44 cfs
Time interval = 2 min
Reservoir name = Dry Pond 2.1
Max. Storage = 106,088 cuft

Storage Indication method used.

Hydrograph Volume = 262,620 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 12

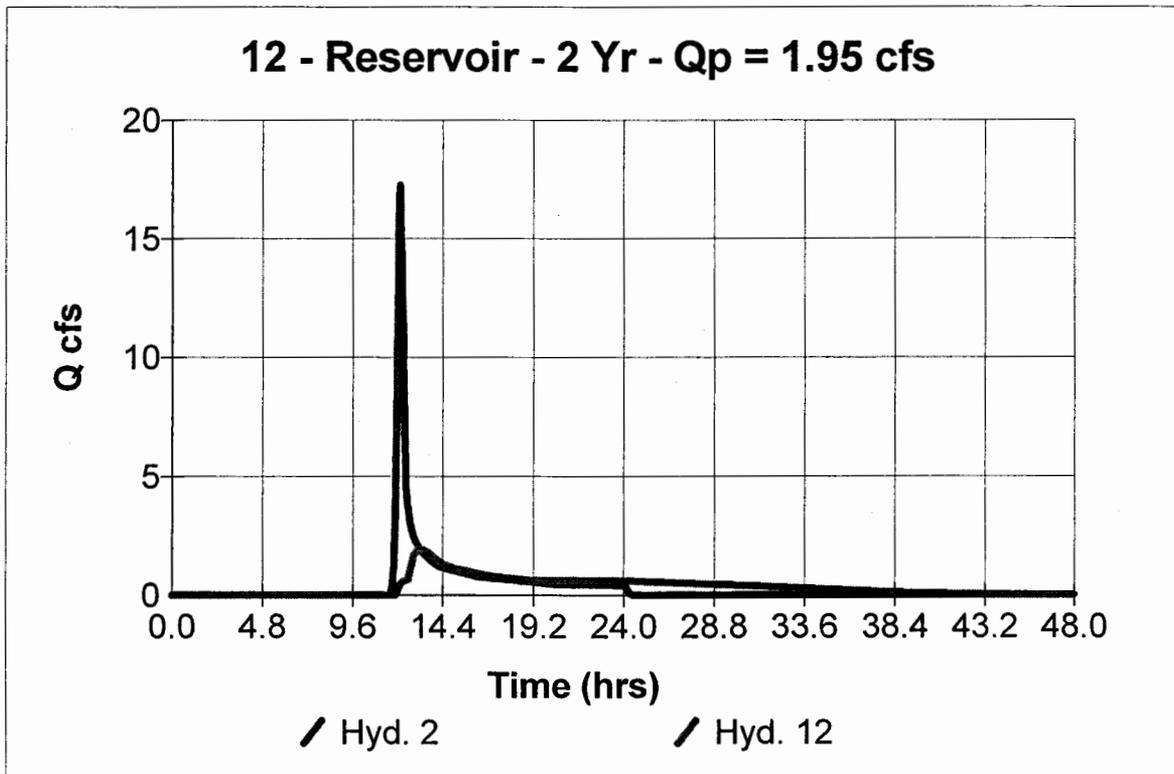
Sed Basin 2.1 Routed

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 2
Max. Elevation = 63.40 ft

Peak discharge = 1.95 cfs
Time interval = 2 min
Reservoir name = Sediment Basin
Max. Storage = 64,381 cuft

Storage Indication method used.

Hydrograph Volume = 58,834 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Hyd. No. 12

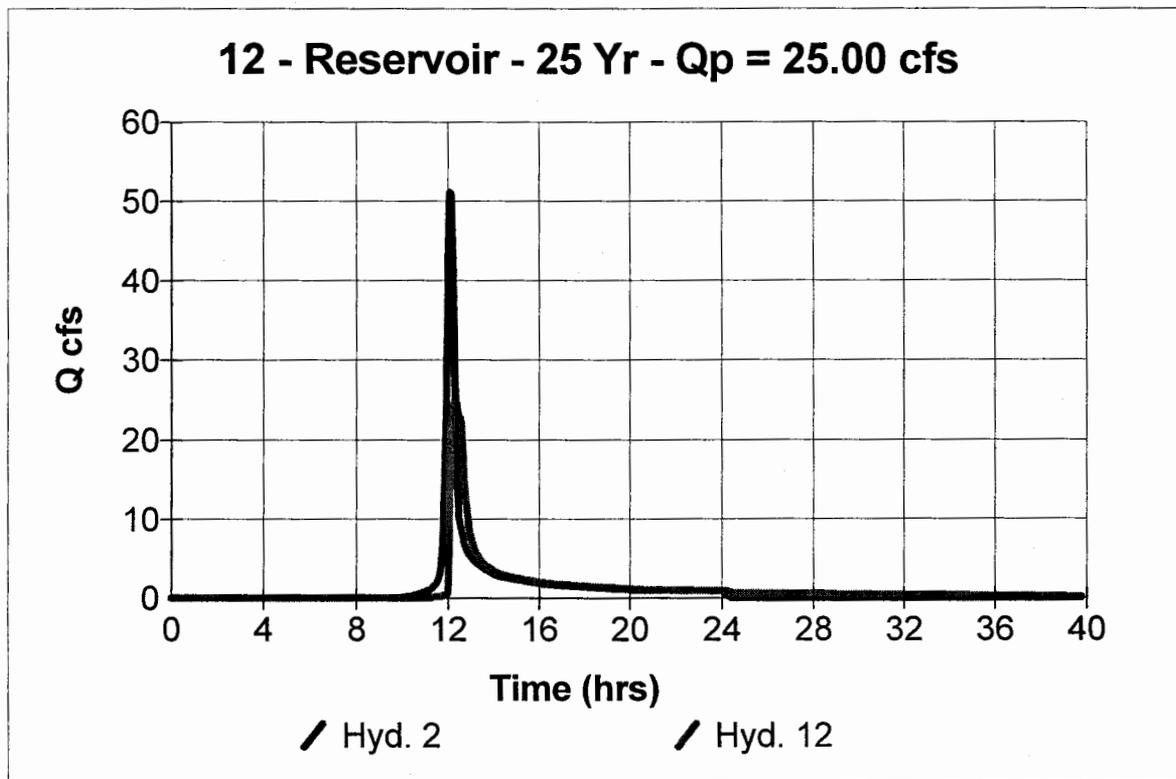
Sed Basin 2.1 Routed

Hydrograph type = Reservoir
Storm frequency = 25 yrs
Inflow hyd. No. = 2
Max. Elevation = 65.16 ft

Peak discharge = 25.00 cfs
Time interval = 2 min
Reservoir name = Sediment Basin
Max. Storage = 88,854 cuft

Storage Indication method used.

Hydrograph Volume = 161,320 cuft



Scott Thomas

From: sherrillsnellgrove@cox.net
Sent: Thursday, July 20, 2006 3:45 PM
To: Scott Thomas

We are requesting a variance to encroach into a pond buffer. The encroachment is approximately five feet in from our rear property line and the impact will be minimal.

Last summer we requested the Environmental Division visit our property in regard to the feasibility of constructing a retaining wall in order to increase our rear yard to a reasonable size. Mr. Earl Croft, Environmental Inspector, indicated that James City County was not responsible for inside our property line. He also said that Lennar had satisfied the environmental concerns from our property line to the BMP.

The project was approved by the Covenants Committee of Colonial Heritage at their meeting on April 21, 2006 and confirmed in writing to us in a letter dated May 8, 2006. We contracted with a reputable company on May 30, 2006 and the work commenced on July 17, 2006.

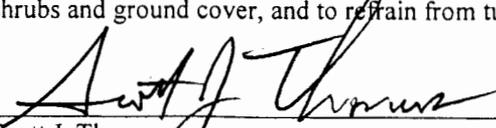
Thank you for your prompt attention to this request.

Dade S. and Donna Snellgrove
4701 Newport Forest
Williamsburg, VA 23188-7255

Telephone: 757-345-6847

LOCATION: Lot 79, Colonial Heritage Phase 1 Section 2, 4701 Newport Forest (County BMP ID Code: YC 028)

Variance request as submitted by Owner dated July 20, 2006 for clearing, grading and installation of a permanent retaining wall structure within the designated pond buffer/setback reviewed and found to be acceptable. Efforts should be made to preserve existing trees and vegetation in the buffer during construction, to landscape or stabilize impacted buffer to resemble meadow or forest area with native trees, shrubs and ground cover, and to refrain from turfing to the water's edge to the greatest extent possible.



Scott J. Thomas
Chief Engineer – Stormwater
Environmental Division

07-24-06
Date

Scott Thomas

From: sherrillsnellgrove@cox.net
Sent: Thursday, July 20, 2006 3:45 PM
To: Scott Thomas

We are requesting a variance to encroach into a pond buffer. The encroachment is approximately five feet in from our rear property line and the impact will be minimal.

Last summer we requested the Environmental Division visit our property in regard to the feasibility of constructing a retaining wall in order to increase our rear yard to a reasonable size. Mr. Earl Croft, Environmental Inspector, indicated that James City County was not responsible for inside our property line. He also said that Lennar had satisfied the environmental concerns from our property line to the BMP.

The project was approved by the Covenants Committee of Colonial Heritage at their meeting on April 21, 2006 and confirmed in writing to us in a letter dated May 8, 2006. We contracted with a reputable company on May 30, 2006 and the work commenced on July 17, 2006.

Thank you for your prompt attention to this request.

Dade S. and Donna Snellgrove
4701 Newport Forest
Williamsburg, VA 23188-7255

Telephone: 757-345-6847

NOTE:
THIS PLAT IS BASED ON A CURRENT SURVEY AND WAS PREPARED WITHOUT BENEFIT OF A CURRENT TITLE REPORT.

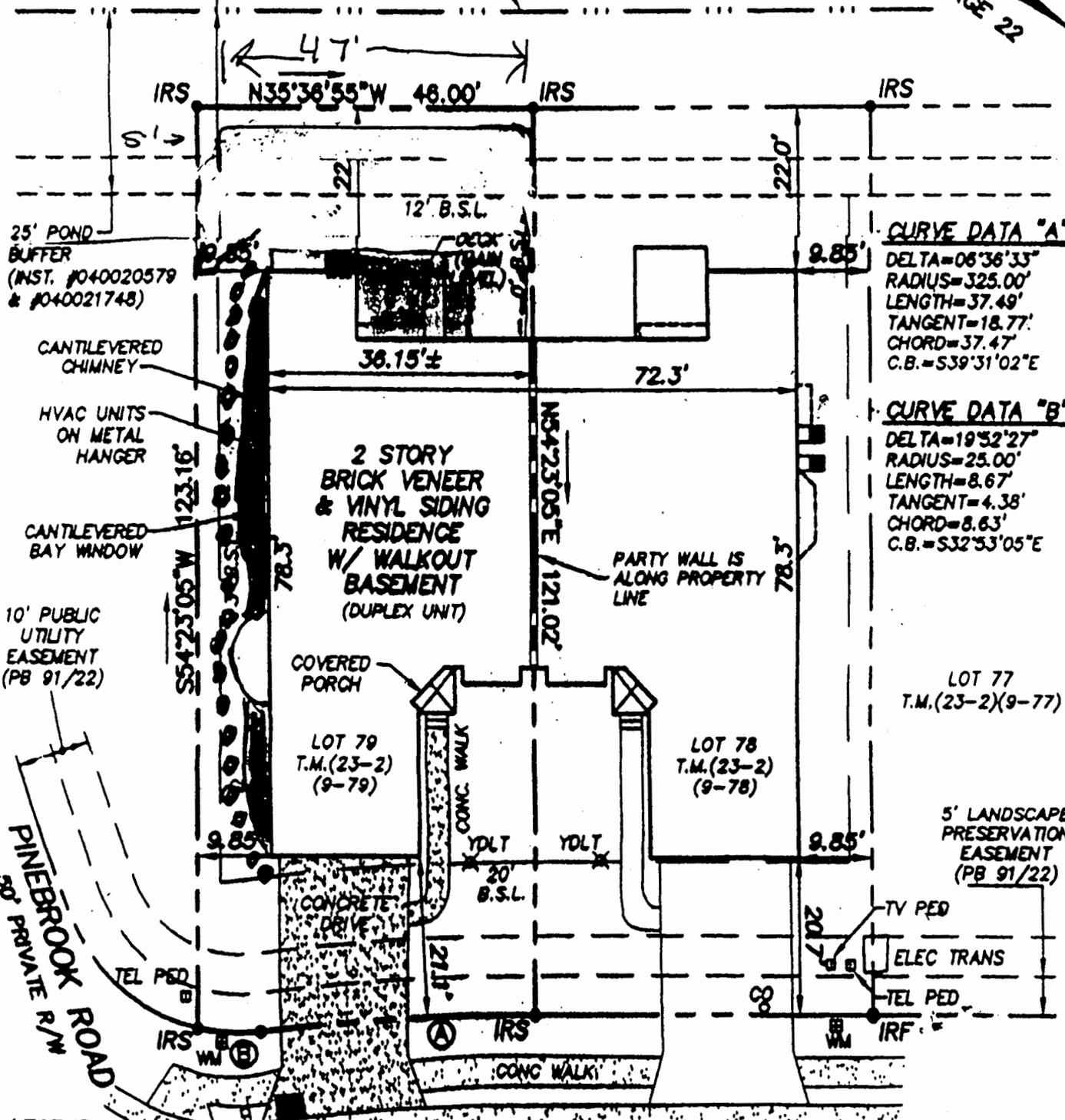
NOTE:
POND BUFFER IS REAR BUILDING SETBACK.

RECORD MERIDIAN
PLAT BOOK 91, PAGE 22

20' MAINTENANCE ACCESS EASEMENT (INST. #040020579 & #040021748)

100 YEAR FLOOD ELEVATION=66.0' (PER AES PLANS)

COMMON OPEN SPACE #2



CURVE DATA "A"
DELTA=08°36'33"
RADIUS=325.00'
LENGTH=37.49'
TANGENT=18.77'
CHORD=37.47'
C.B.=S39°31'02"E

CURVE DATA "B"
DELTA=19°52'27"
RADIUS=25.00'
LENGTH=8.67'
TANGENT=4.38'
CHORD=8.63'
C.B.=S32°53'05"E

LOT 77
T.M.(23-2)(9-77)

LOT 78
T.M.(23-2)
(9-78)

LOT 79
T.M.(23-2)
(9-79)

5' LANDSCAPE PRESERVATION EASEMENT (PB 91/22)

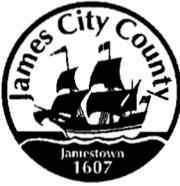
- LEGEND**
- IRF = IRON ROD FOUND
 - IRS = IRON ROD SET
 - B.S.L. = BUILDING SETBACK LINE
 - YDLT = YARD LIGHT
 - WM = WATER METER
 - CO = SEWER CLEAN OUT
 - GM = GAS METER
 - STOP SIGN
 - STORM D.I.
 - CONG. ROLL-TOP CURB & GUTTER

NEWPORT FOREST
50' PRIVATE R/W

COMMONWEALTH OF VIRGINIA
4/19/05
G.T. WILSON, JR.
No. 1183
S.T. Wilson

TAX PARCEL: (23-2)(9-79)
STREET ADDRESS: #4701 NEWPORT FOREST

LOT 70



**James City County Environmental Division
Stormwater Management / BMP Inspection Report
Detention and Retention Pond Facilities**

County BMP ID Code (if known): YC-028

Name of Facility: COLONIAL HERITAGE P1 S2 POND 2.1 BMP No.: 1 of 2 Date: 1/30/2008

Location: COLONIAL HERITAGE ADJACENT TO PINEBROOK RD.

Name of Owner: COLONIAL HERITAGE / LENNAR

Name of Inspector: M. MATTESKI

Type of Facility: EXTENDED DRY DETENTION

Weather Conditions: 49° sunny Type: Final Inspection County BMP Inspection Program Owner 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 to 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
Embankments and Side Slopes:				
Grass Height	✓			
Vegetation Condition	✓			
Tree Growth	✓			
Erosion	✓			
Trash & Debris	✓			
Seepage	✓			
Fencing or Benches				N/A
Interior Landscaping/Planted Areas: <input type="checkbox"/> None <input type="checkbox"/> Constructed Wetland/Shallow Marsh <input checked="" type="checkbox"/> Naturally Established Vegetation				
Vegetated Conditions	✓			
Trash & Debris	✓			
Floating Material	✓			
Erosion	✓			
Sediment	✓			
Dead Plant	✓			
Aesthetics	✓			
Other				
Notes:				

Facility Item	O.K.	Routine	Urgent	Comments
Water Pools: <input type="checkbox"/> Permanent Pool (Retention Basin) <input type="checkbox"/> Shallow Marsh (Detention Basin) <input checked="" type="checkbox"/> None, Dry (Detention Basin)				
Shoreline Erosion	✓			
Algae	✓			
Trash & Debris	✓			
Sediment	✓			
Aesthetics	✓			
Other				
Inflows (Describe Types/Locations):				
Condition of Structure	✓			
Erosion	✓			
Trash and Debris	✓			
Sediment	✓			
Outlet Protection	✓			
Other				
Principal Flow Control Structure - Riser, Intake, etc. (Describe Type):				
Condition of Structure	✓			
Corrosion	✓			
Trash and Debris	✓			
Sediment	✓			
Vegetation	✓			
Other				
Principal Outlet Structure - Barrel, Conduit, etc. :				
Condition of Structure	✓			
Settlement	✓			
Trash & Debris	✓			
Erosion/Sediment	✓			
Outlet Protection	✓			
Other				
Emergency Spillway (Overflow):				
Vegetation	✓			
Lining	✓			
Erosion	✓			
Trash & Debris	✓			
Other				
Notes:				

Facility Item	O.K.	Routine	Urgent	Comments
Nuisance Type Conditions:				
Mosquito Breeding	✓			
Animal Burrows	✓			
Graffiti	✓			
Other				
Surrounding Perimeter Conditions:				
Land Uses	✓			
Vegetation	✓			
Trash & Debris	✓			
Aesthetics	✓			
Access /Maintenance Roads or Paths	✓			
Other				
Remarks:				
<p>Overall Environmental Division Internal Rating: <u>4/5</u></p> <p>Signature: <u>M. P. M. J.</u> Date: <u>1/30/08</u></p> <p>Title: <u>ENVIRONMENTAL INSPECTOR</u></p>				

SWMProg\BMP\CoInspProg\InspForms\DetRet.wpd

Date Record Created:

WS BMPNO:

YC028

Print Form

Created By:

WATERSHED YC

BMP ID NO 028

PLAN NO S-63-02

TAX PARCEL (24-3)(1-32)

PIN NO 2320900034

CONSTRUCTION DATE 1/14/2004

PROJECT NAME Colonial Heritage Ph 1 Sec 2

FACILITY LOCATION Adjacent to Winterberry Court

CITY-STATE Williamsburg, VA

CURRENT OWNER Lennar/US Homes

OWNER ADDRESS 6895 Richmond Rd.

OWNER ADDRESS 2

CITY-STATE-ZIP CODE Williamsburg VA 23188

OWNER PHONE (757) 258-2705

MAINT AGREEMENT Yes

EMERG ACTION PLAN No

**PRINTED ON:
Saturday, March 13, 2010
3:21:33 PM**

MAINTENANCE PLAN

SITE AREA acre

LAND USE

old BMP TYP

JCC BMP CODE

POINT VALUE

SVC DRAIN AREA acres

SERVICE AREA DESCRI

IMPERV AREA acres

RECV STREAM

EXT DET-WQ-CTRL

WTR QUAL VOL acre-ft

CHAN PROT CTRL

CHAN PROT VOL acre-ft

SW/FLOOD CONTROL

GEOTECH REPORT

Yes

33.32

Mixed Use

Dry Pond

F2 Dry ED with forebay

4

18.7

Condos, Single Family Homes, Roadways

0.00

Yarmouth Tributary

No

No

No

No

CTRL STRUC DESC

CTRL STRUC SIZE inches

OTLT BARRL DESC

OTLT BARRL SIZE inch

EMERG SPILLWAY

DESIGN HW ELEV

PERM POOL ELEV

2-YR OUTFLOW cfs

10-YR OUTFLOW cfs

REC DRAWING

CONSTR CERTIF

LAST INSP DATE 1/30/2008

INTERNAL RATING 4/5

MISC/COMMENTS

Master plan pond # 10

18

Yes

65.96

n/a

0.62

0.79

Yes

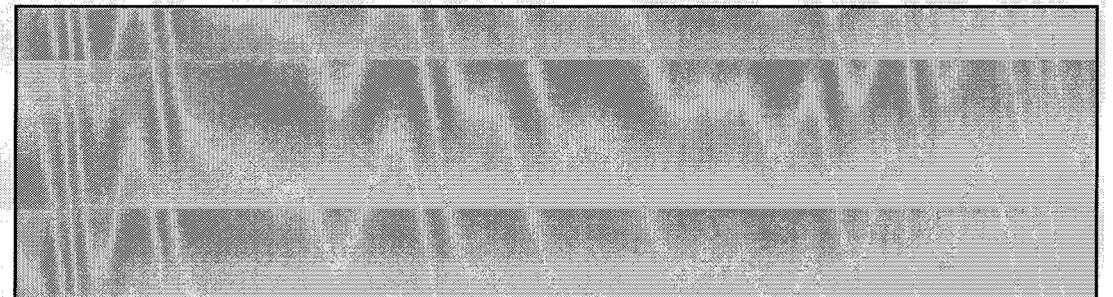
Yes

Inspected by:

Get Last BMP No

Return to Menu

Additional Comments:





APPLICATION FOR BUILDING PERMIT

101-E Mounts Bay Road, P.O. Box 8784, Williamsburg, VA 23187-8784

(757) 253-6626

FAX: (757) 259-4038

Office Hours: Mon-Fri 8:00 a.m. - 5:00 p.m.

CONTRACTOR INFORMATION

License No. 2701 0337411A
 Company Name Gloucester Down Mount
 Street Address 320 Ewall Rd
 City Williamsburg State VA Zip 23185
 Phone No. (757) 565 3648 Fax No. (757) 565 6223
 E-Mail Address _____

Signature: [Signature]
 Print Name: JEFF WENZEL

DESCRIPTION OF WORK

17' x 42' Detaining Wall

SAME AS PLAN NUMBER _____ (Lists Options)

LOCATION OF WORK

Tax Map No. (23-2) (09-0-0079)
 Street Address 4701 NEWPORT FOREST
 City LEWISBURG State VA Zip 23188
 Zone _____ Subdivision Colonial Heritage

BUILDING INFORMATION

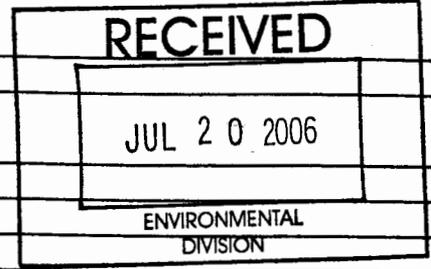
Stories _____ No. Rooms _____ No. Baths _____ No. Bath Fix. _____
 No. Fireplaces _____ Type _____
 Exterior Finish: (Vinyl, Brick, Wood, Other) _____
 Interior Finish: (Gypsum wallboard, Wood, Other) _____
 Flooring: (Carpet, Wood, Vinyl, Other) _____
 Roofing: (Asphalt-Fiberglass, Wood, Other) _____
 Heat Type: (Gas, Heatpump, Electric, Other) _____
 Air Conditioning-Type: (Central, Window, None) _____

Estimated Construction Value 5000.00 (Do not include Lot \$)

OWNER INFORMATION

Name SMALL GROVE
 Address 4701 NEWPORT FOREST
 City LEWISBURG State VA Zip 23188
 Phone No. (757) 315 Fax No. ()
 E-Mail Address 6547

Signature: _____
 Print Name: _____
 Agent: _____
 Print Name: _____



(For Commercial Projects Only)

Site Plan No. _____ Date Approved _____

MECHANICS' LIEN AGENT

Name: _____
 Address: _____
 City _____ State _____ Zip _____
 Phone No. () _____ Fax No. () _____

Floor Area (sq.ft.) _____
 (Do not include Basement, Garage, and Deck/Porch)
 Deck (sq.ft.) _____
 Porch (sq.ft.) _____
 Basement Area (sq.ft.) _____
 Garage Area (sq.ft.) _____
 Total Area (sq.ft.) _____

Septic _____ Public Sewer _____ Grinder Pump _____
 Well _____ Public H₂O _____

OFFICE USE ONLY

Lot Width _____ Improvement Code _____
 Lot Depth _____ Structure Used As _____
 Front Property Line _____ Use Group _____
 Right Property Line _____ Occupancy Load _____
 Left Property Line _____ Type Construction _____
 Rear Property Line _____ Zoning Approved _____
 Zoning Disapproved _____
 PERMIT NO. _____ Plan Approved _____
 Plan Disapproved _____

Notes:
ELS - SHALL RPA 7/11/06 EROFF

LINE NO. 06-1241
 Date/Time In 7/20/06 2:39 PLAN REVIEW FEE _____
 Date Plan Reviewed _____ PERMIT FEE _____

SJT

**James City County
Environmental Division**
Single Family Plan Submittal - Miscellaneous

Lot 79, Colonial Heritage Phase 1 Section 2 (4701 Newport Forest)

Clearing, grading and a permanent retaining wall structure is proposed the pond setback/buffer as required per page 38 of the James City County BMP manual. A pond buffer should be provided that extends 25 feet outward from the maximum water surface elevation of the pond. Based on information as available in our record files, it appears the 100-year design high water surface elevation for the adjacent stormwater management facility (BMP # 2.1, Master Plan Pond # 10, County BMP ID Code: YC028) is at Elevation 65.96.

Reconfigure the plan to conform with current setback/buffer requirements; or alternatively, submit a written request for waiver to the Environmental Division with supporting information as follows: a variance request, in writing, from the owner or tenant, current or future, rather than the builder or contractor.