



Stormwater Division

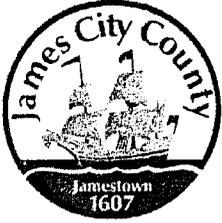
MEMORANDUM

DATE: July 23, 2014
TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services
FROM: Jacob Smith, Stormwater Intern
PO: 110426
RE: Files Approved for Scanning

NAME PDF/SCANNED FILE:		MARYWOOD BMP 3	
BMP ID OR GEN FILE NUMBER:	MC064	OWNER NAME:	CENTEX HOMES
PIN:	CONTRADICTORY	SITE ADDRESS:	MARYWOOD DRIVE
		LEGAL DESCRIPTION:	CA P-4 MARYWOOD SUBDIVISION

MAINTENANCE AGREEMENT IN FILE:	YES	BOOK/PAGE OR DOCUMENT NO.:	010006790	OTHER DESCRIPTION:	N/A
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BOX NO.:	1	COMMENTS:	DECLARATION INSPECTION MAINTENANCE
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**James City County Environmental Division
Stormwater Management/BMP Record Drawing &
Construction Certification Review
Tracking Form**

Project Name: MARYWOOD
 County Plan No.: S-91-04
 Stormwater Management Facility: BMP- Wet Pond
 BMP Phase #: I II III
 Information Package Received. Date/By: _____
 Completeness Check:
 Record Drawing Date/By: 9/24/12 Marc BENNETT
 Construction Certification Date/By: 9/24/12 DAVID GOLDINER
 RD/CC Standard Forms (Required for all BMPs after Feb 1st 2001 Only)
 Insp/Maint Agreement # / Date: 000027625 003.2007
 BMP Maintenance Plan Location: Sheet 30
 Other: _____
 Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review
 Yes No Location: Sheet 33, Item 20
 Assign County BMP ID Code #: Code: MC-063
 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: 11/20/12
 Record Drawing (RD) Review Date: 11/15/12
 Construction Certification (CC) Review Date: 11/15/12
 Actions:
 No comments.
 Comments. Letter Forwarded. Date: 2/19/2013
 Record Drawing (RD)
 Construction Certification (CC)
 Construction-Related (CR)
 Site Issues (SI)
 Other : _____
 Second Submission: _____
 Reinspection (if necessary): _____
 Acceptable for SWM Purposes (RD/CC/CR/Other). Ok to proceed with bond release.
 Complete "Surety Request Form".
 Check/Clean active file of any remaining material and finish "As-Built" file.
 Add to County BMP Inventory/Inspection schedule (Phase I, II or III).
 Copy Final Inspection Report into County BMP Inspection Program file.
 Obtain Digital Photographs of BMP and save into County BMP Inventory.
 Request mylar/reproducible from As-Built plan preparer.
 Complete "As-built Tracking Log".
 Last check of BMP Access Database (County BMP Inventory).
 Add BMP to JCC Hydrology & Hydraulic database (optional).
 Add BMP to Municipal BMP list (if a County-owned facility)
 Add BMP to PRIDE BMP ratings database.

Final Sign-Off

Inspector: [Signature] Date: 3/24/14
 Chief Engineer: _____ Date: _____

*** See separate checklist, if needed.



TRANSMITTAL SHEET
ENGINEERING & RESOURCE PROTECTION → STORMWATER

Project: Marywood

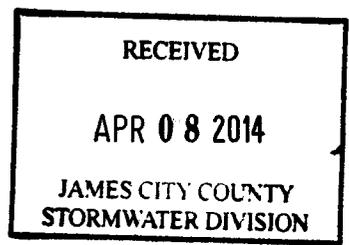
County Plan No. **SP-091-04**

Assigned BMP No.: **MC-064, MC-065, MC-063**

BMP Type: **Wet Pond**

Information Enclosed:

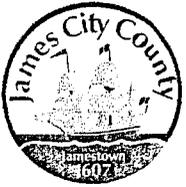
- Record Drawings (Asbuilts)
- Construction Certification
- Computations
- Other:



Note: Name: Gregory B. Johnson

Date: March 24, 2014

Signature:  _____



**James City County Engineering and Resource
Protection Division
Stormwater Management/BMP Record Drawing and
Construction Certification Review Tracking Form**

Project Name: Marywood
 County Plan No. (List any amendments): S-91-04
 Stormwater Management Facility Type: BMP - Wet Pond
 BMP Phase #: I II III

- Information Package Submittal Date: 10/17/12
- Completeness Check:
 - Record Drawing Date/By: 9/24/12 Marc Bennett
 - Construction Certification Date/By: 9/24/12 David Goldwies
 - RD/CC Standard Forms (Ensure that all forms for the BMP type are included)
 - Insp/Maint Agreement # / Date: 070027625 Oct 3, 2007
 - BMP Maintenance Plan Location: Sheet 20
 - Special Considerations:

Standard E&SC Notes on Approved Plan Requiring RD/CC or County comment in plan review
 Location (sheet #): Item 20, sheet 33

County BMP ID Code #: MC-064

- Log into Division's "As-Built Tracking Log"
- Obtain basic site information (GPIN, Owner, Address, etc.)
- Log into Access Database (BMP ID #, Plan No., GPIN, Project Name, etc.)
- Copy from Active Project File (correspondence, H&H, design computations, etc.)
- Create As-Built File using Project File information (File label, folder, copy plan/details/design information, etc.)
- Inspector Review of RD/CC (consult with Chief Engineer prior to completion of comments).
- Record Drawing Review against Approved Plan prior to Field Inspection.
- Final Site Inspection (FI) Performed Date: 12/10/12
- Record Drawing (RD) Review Date: 12/10/12
- Construction Certification (CC) Review Date: 12/10/12

- Actions:
 - No comments.
 - Comments. Letter Forwarded. Date: 2/14/13
 - Record Drawing (RD)
 - Construction Certification (CC)
 - Construction-Related (CR)
 - Site Issues (SI)
 - Other :

- Resubmittal (# and date):
- Re-inspection (if necessary):
- Drainage System Information Acceptable (RD/CC/System Info). Ok for bond release.
- Complete "Surety Request Form".
- Final Inspection of active file copying any relevant information to "As-Built" file.
- On County BMP Inventory (Phase I, II or III).
- Copy Final Inspection Report into County BMP Inspection Program file.
- Provide Digital Photographs of BMP and save into County BMP Inventory.
- Request mylar/reproducible from As-Built plan preparer.
- Complete "As-built Tracking Log".
- Last check of BMP Access Database (County BMP Inventory).
- Add BMP to JCC Hydrology & Hydraulic database (optional).
- Add BMP to Municipal BMP list (if a County-owned facility)
- Add BMP to PRIDE BMP ratings database.

Final Sign-Off

Inspector: [Signature] Date: 5/24/13

Chief Engineer: _____ Date: _____

*** See separate checklist, if needed.

COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS
INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 20 day of September, 2007, between Context Homes, and all successors in interest, ("COVENANTOR(S)"), owner(s) of the following property:

Parcel Identification Number: (47-2) (1-47)
Legal Description: see Attached Exhibit A
Project or Subdivision Name: Marlwood
Document No. _____
OR Deed Book 020006790, Page No. _____,
and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

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

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, monitoring, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

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

operation or use of the SYSTEM.

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

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

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

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

COVENANTOR(S)

[Handwritten Signature]

Signature

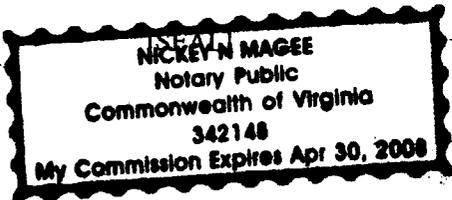
R James Birkholz D.P. Center Homes LLC
Print Name and Title

ACKNOWLEDGMENT

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF Suffolk, to wit:

I hereby certify that on this 21st day of September, 2007, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared R James Birkholz and did acknowledge the foregoing instrument to be his/her Agent.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 21st day of September, 2007



[Handwritten Signature]
Notary Public

Notary Registration Number: 342148

My Commission expires April 30, 2008

COVENANTOR(S)

Signature

Print Name and Title

ACKNOWLEDGMENT

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to wit:

I hereby certify that on this ____ day of _____, 20____, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared _____ and did acknowledge the foregoing instrument to be his/her Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 20____.

[SEAL]

Notary Public

Notary Registration Number: _____

My Commission expires: _____

Approved as to form:

Adam Linsman
County Attorney

This Declaration of Covenants prepared by:

Name: [Signature]

Print Name: Joseph Roque

Title: Carrex Homes Land Development Project Manager

Address: 7025 Harbour View Blvd Suite 115
Suffolk, VA 23435

Phone Number: 757-342-6227

(drainage1.pre)

Marywood

Exhibit A

PARCEL PROPERTY DESCRIPTION:

PARCEL CONTAINING 115.275 ACRE± STANDING IN THE NAME OF ROBERT E. YANCEY AND HIRKO K. YANCEY JAMES CITY COUNTY TAX ASSESSORS PARCEL (47-2)(1-47)

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A IRON PIPE FOUND (P.O.B. SEE SHEET 2 OF 5) ON THE EASTERN RIGHT-OF-WAY LINE OF JOHN TYLER MEMORIAL HIGHWAY; THENCE ALONG THE EASTERN RIGHT-OF-WAY OF JOHN TYLER MEMORIAL HIGHWAY N30°21'08"E 91.25; THENCE S52°21'21"E 227.02' TO A BENT PIPE FOUND; THENCE N18°52'04"E, A DISTANCE 99.84' TO A IRON PIPE FOUND; THENCE N31°59'06"E 194.67' TO A BENT IRON PIPE FOUND; THENCE N27°42'45"E 203.04' TO A IRON ROD FOUND; THENCE N21°00'45"E 209.62' TO A IRON PIPE FOUND; THENCE S47°36'57"E 163.69' TO A IRON PIPE FOUND; THENCE S47°43'24"E 158.54' TO AN IRON PIPE FOUND; THENCE S47°40'33"E 144.02' TO AN IRON PIPE FOUND; THENCE S47°43'37"E 192.99 TO A IRON PIN FOUND; THENCE S47°48'53"E 204.10' TO A IRON ROD FOUND; THENCE S47°40'31"E 703.31' TO A IRON ROD FOUND, SAID ROD BEING IN THE CENTERLINE OF A STREAM, THE STREAM BEING THE PROPERTY LINE; THENCE ALONG CENTERLINE OF STREAM THE FOLLOWING BEARINGS AND DISTANCES: S39°01'26"W 95.05', S62°32'57"W 85.10', N85°25'36"W 43.04', S56°21'38"W 34.89', S73°17'39"W 128.22', N48°34'23"W 43.99', S87°09'19"W 29.68', N49°09'56"W 44.78', S55°32'08"W 38.80', S77°03'23"W 63.17', S49°24'10"W 24.75', S06°12'58"W, 13.13', S30°33'38"W 12.90', S50°35'25"W 48.08', N88°00'19"W 21.94', N36°18'37"W 32.33', S78°12'06"W 64.55' TO A POINT; SAID POINT BEING ON THE NORTHERN RIGHT-OF-WAY LINE OF OXFORD ROAD; THENCE CONTINUING ALONG NORTHERN RIGHT-OF-WAY LINE OF OXFORD ROAD N48°15'52"W 31.05' TO A POINT; THENCE S41°14'08"W 60.00' TO A POINT AT THE SOUTHWEST CORNER OF OXFORD ROAD; THENCE LEAVING OXFORD ROAD N48°15'52"W 21.14' TO A IRON ROD FOUND; THENCE S49°41'43"W 119.98' TO A IRON ROD FOUND; THENCE S54°24'03"W 4.37' TO A IRON PIPE FOUND; THENCE S58°12'15"W 220.44' TO A IRON ROD FOUND; THENCE S04°45'50"W 204.63' TO A POINT; THENCE S17°47'24"E 146.85' TO A POINT; THENCE S25°09'40"E 78.12' TO A POINT; THENCE S08°11'56"E 109.25' TO A IRON ROD FOUND; THENCE S01°50'37"E OF 82.90' TO A IRON ROD FOUND; THENCE S26°13'12"W 81.87' TO A IRON PIPE FOUND; THENCE S45°09'31"W 154.87' TO A IRON PIPE FOUND; THENCE S08°46'34"W 107.38' TO A POINT; THENCE S48°28'13"W 135.32 TO A POINT; THENCE S44°55'22"E 145.00' TO A POINT ON THE WESTERN RIGHT-OF-WAY LINE OF BRADDOCK ROAD; THENCE ALONG A CURVE TO THE LEFT HAVING A LENGTH OF 50.82' AND A RADIUS OF 330.66' TO A POINT ON THE SOUTHWEST CORNER OF BRADDOCK ROAD; THENCE S53°44'12"E 50.00' TO A IRON PIPE FOUND AT THE SOUTHEAST CORNER OF BRADDOCK ROAD; THENCE S53°44'12"E

Marywood

Exhibit A

294.52'; THENCE S35°56'02"W 165.32' TO A IRON PIPE FOUND; THENCE S36°09'37"W 199.61' TO A IRON PIPE FOUND ON THE NORTHERN RIGHT-OF-WAY OF SPRING ROAD; THENCE CONTINUING ALONG THE NORTHERN RIGHT-OF-WAY OF SAID ROAD N53°50'23"W 108.61' TO A POINT AT THE NORTHWEST CORNER OF SPRING ROAD; THENCE S36°09'57"W 50.00' TO A POINT ON THE SOUTHWEST CORNER OF SPRING ROAD; THENCE LEAVING SAID ROAD S37°40'57"W 862.40' TO A IRON PIPE FOUND; THENCE N52°22'47"W 50.03 TO A IRON PIPE FOUND; THENCE S37°37'13"W 50.00' TO A IRON PIPE FOUND; THENCE S52°17'39"E 49.98' TO A IRON PIPE FOUND; THENCE S37°40'57"W 1356.01' TO A IRON ROD FOUND; THENCE S51°13'22"W 160.38' TO A IRON ROD ON THE NORTHWEST CORNER OF RICHNECK ROAD; THENCE S56°36'22"W 184.20' TO A IRON PIPE FOUND ON THE SOUTHWEST CORNER OF RICHNECK ROAD; THENCE S40°40'52"W 299.74' TO A POINT AT THE HIGH WATER LINE OF LAKE POWELL; THENCE ALONG THE HIGH WATER LINE OF LAKE POWELL THE FOLLOWING BEARINGS AND DISTANCES: S73°23'12"W 85.95', N53°39'34"W 105.83', N45°35'28"W 140.60', N27°15'22"W 44.73', N04°48'15"E 108.96', N69°07'33"E 35.38', N22°34'06"W 182.62', N32°32'44"W 145.52', N40°18'07"W 40.18', N06°55'17"E 77.22', N09°42'01"W 126.53' TO A POINT AT THE HIGH-WATER LINE OF LAKE POWEL AND THE CENTERLINE OF A STREAM; PROPERTY LINE IS ALONG THE CENTERLINE OF SAID STREAM; THENCE ALONG THE CENTERLINE OF STREAM THE FOLLOWING BEARINGS AND DISTANCES: N06°44'10"E 57.40', N10°35'40"E 94.89', N27°24'00"E 239.71', N50°27'53"W 126.56', N11°37'56"W 46.90', N13°55'40"E 48.04', N05°01'41"E 37.70', N49°39'26"E 45.62', N72°50'13"E 26.86', N14°32'45"E 128.56', N41°34'29"E 87.60', N01°08'48"W 38.41', N63°05'07"E 53.45', N41°17'30"E 25.05', N84°16'56"E 27.56', S09°04'26"W 32.39', S21°36'41"E 17.57', S87°42'41"E 17.04', N80°56'58"E 23.80', S23°38'48"W 23.78', S64°00'07"E 22.33', N47°18'30"E 40.59', N73°47'38"E 30.25', N58°32'40"E 67.36', N23°25'47"E 94.24', N31°29'54"W 38.84', N44°01'32"E 31.44', S89°17'11"E 88.68', N67°03'37"E 65.18', N52°50'46"E 31.15', N80°05'47"E 52.43', N60°43'53"E 51.91', N42°29'18"E 103.79', N57°00'12"E 115.74', N21°09'30"E 56.51', N51°55'09"W 33.13', N00°24'05"W 56.07', N70°16'34"E 63.66', N01°34'04"W 22.37', N60°07'00"E 33.98', S00°21'23"W 48.81', N83°53'20"E 82.18', TO A IRON PIPE FOUND; THENCE LEAVING SAID STREAM S46°17'12"E 301.33' TO A IRON PIPE FOUND; N43°41'06"E 499.81' TO A IRON PIPE FOUND; THENCE N46°18'54"W 589.09'; THENCE N33°06'22"E 118.45' TO A IRON ROD FOUND; THENCE N61°10'36"W 199.94 TO A IRON PIPE FOUND; THENCE N33°01'14"E 50.12' TO A IRON PIPE FOUND; THENCE S61°12'19"E 199.72' TO A IRON PIPE FOUND; THENCE N33°06'02"E 194.88' TO A IRON PIPE FOUND; THENCE N36°11'07"E 194.24' TO A IRON PIPE FOUND; THENCE N41°41'07"E 384.32' TO A POINT; THENCE N81°58'54"E 284.37' TO A IRON PIPE FOUND; THENCE N65°37'05"E 229.36' TO A IRON PIPE FOUND; THENCE N02°08'39"E 201.29' TO A IRON PIPE FOUND; THENCE N23°22'27"W 108.29' TO A IRON PIPE FOUND; THENCE N29°02'26"W 178.60' TO A IRON PIPE FOUND; THENCE N02°15'37"W 163.23' TO A IRON PIPE FOUND; THENCE N30°28'07"W 447.84' TO A IRON PIPE FOUND;

Marywood

Exhibit A

THENCE N63°56'37"W 123.99' TO A PIPE FOUND, SAID PIPE BEING THE
AFORESAID POINT OF BEGINNING.



Environmental Division

OCT 17 2012

RECEIVED

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: Marywood
Structure/BMP Name: Wet Pond #3 (MC-064)
Project Location: Off Jamestown Road, approximately 2000 feet northwest along Spring Road
BMP Location: West Side of Marywood Drive between Lots 32 and 37
County Plan No.: S - 91 - 04

Project Type: Residential Business Tax Map/Parcel No.: 4722600001C
 Commercial Office BMP ID Code (if known): _____
 Institutional Industrial Zoning District: R-1
 Public Roadway Land Use: Singel Family Residential
 Other Site Area (sf or acres): 115.3 acres

Brief Description of Stormwater Management/BMP Facility: Wet pond with aquatic bench

Nearest Visible Landmark to SWM/BMP Facility: BETWEEN BRADDOCK ROAD AND Marywood Drive @ LOT 36 & 37

Nearest Vertical Ground Control (if known):
 JCC Geodetic Ground Control USGS Temporary Arbitrary Other
Station Number or Name: 319
Datum or Reference Elevation: 103.44
Control Description: James City County Geodetic Station #319
Control Location from Subject Facility: at intersection for John Tyler Highway with Route 199, approximately 5000 feet northeast of bmp

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: 2007
Facility Monitored by County Representative during Construction: Yes No Unknown
Name of Site Work Contractor Who Constructed Facility: George Nice and Sons
Name of Professional Firm Who Routinely Monitored Construction: _____
Date of Completion for SWM/BMP Facility: 02/2010
Date of Record Drawing/Construction Certification Submittal: March 01, 2010

(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: Centex Homes
Mailing Address: 7025 Harbour View Boulevard, Suite 115
Suffolk, Virginia 23235
Business Phone: 757-215-1200 Fax: _____
Contact Person: Kenneth Stubenhofer Title: _____

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

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Business Phone: 757-253-0040
Fax: 757-220-8994
Responsible Plan Preparer: Jason A Grimes, P.E.
Title: Project Manager
Plan Name: Marywood
Firm's Project No. 9272-00
Plan Date: December 22, 2004
Sheet No.'s Applicable to SWM/BMP Facility: 1 / 22 / 30 / _____ / _____

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

Name: George Nice and Sons
Mailing Address: 129 Industrial Park
Toano, Virginia 23168
Business Phone: 757-565-2885
Fax: 757-565-1526
Contact Person: Mike Nice
Site Foreman/Supervisor: Jerry Nice
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, Virginia 23188
Business Phone: 757-253-0040
Fax: 757-220-8994

Name: V. Marc Bennett, P.E.
Title: Senior Project Manager

Signature: 
Date: 09/24/2012

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



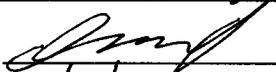
 (Seal)

Virginia Registered Professional Engineer
Or Certified Land Surveyor

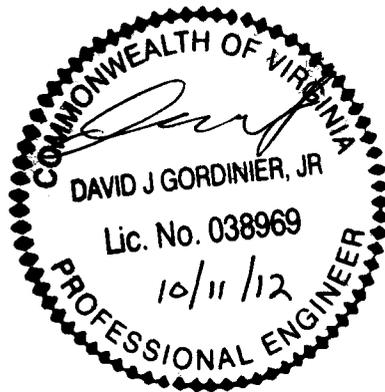
Construction Certification

Firm Name: GGT Solutions Inc.
Mailing Address: 1592 Penniman Rd, STE G
Williamsburg, VA 23106
Business Phone: 757-564-6452
Fax: 757-564-6453

Name: DAVID J. Gordinier, P.E.
Title: Senior Engineer

Signature: 
Date: 10/11/12

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



 (Seal)

Virginia Registered
Professional Engineer

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

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

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

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

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

- XX 1. All requirements of Section I (Methods and Presentation) apply to this section.
- XX 2. Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.
- XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.
- N/A 4. Top widths, berm widths and embankment side slopes.
- XX 5. Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Environmental Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations; and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or freeboard were closely maintained.
- 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.
- N/A 12. Type, location, size and number of anti-seep collars or documentation of other methods utilized for seepage control. **May need to obtain this information during construction.**
- N/A 13. Top of impervious core embankment, core trench limits and elevation of cut-off trench bottom. **May need to obtain this information during construction.**
- XX 14. Elevation of the principal spillway barrel (outlet pipe) inlet and outlet invert.
- XX 15. Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
- 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.
- XX 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.
- XX 22. Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES RECORD DRAWING CHECKLIST

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

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

- XX A1. All requirements of Section II, Minimum Standards, apply to Group A facilities.
- XX A2. Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- XX A3. Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.
- XX 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).
- XX A8. No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.
- XX A9. Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.
- XX A10. Low flow orifice has a non-clogging mechanism.
- XX A11. A pond drain pipe with valve was provided.
- XX 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)

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

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

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

XII. Other Systems

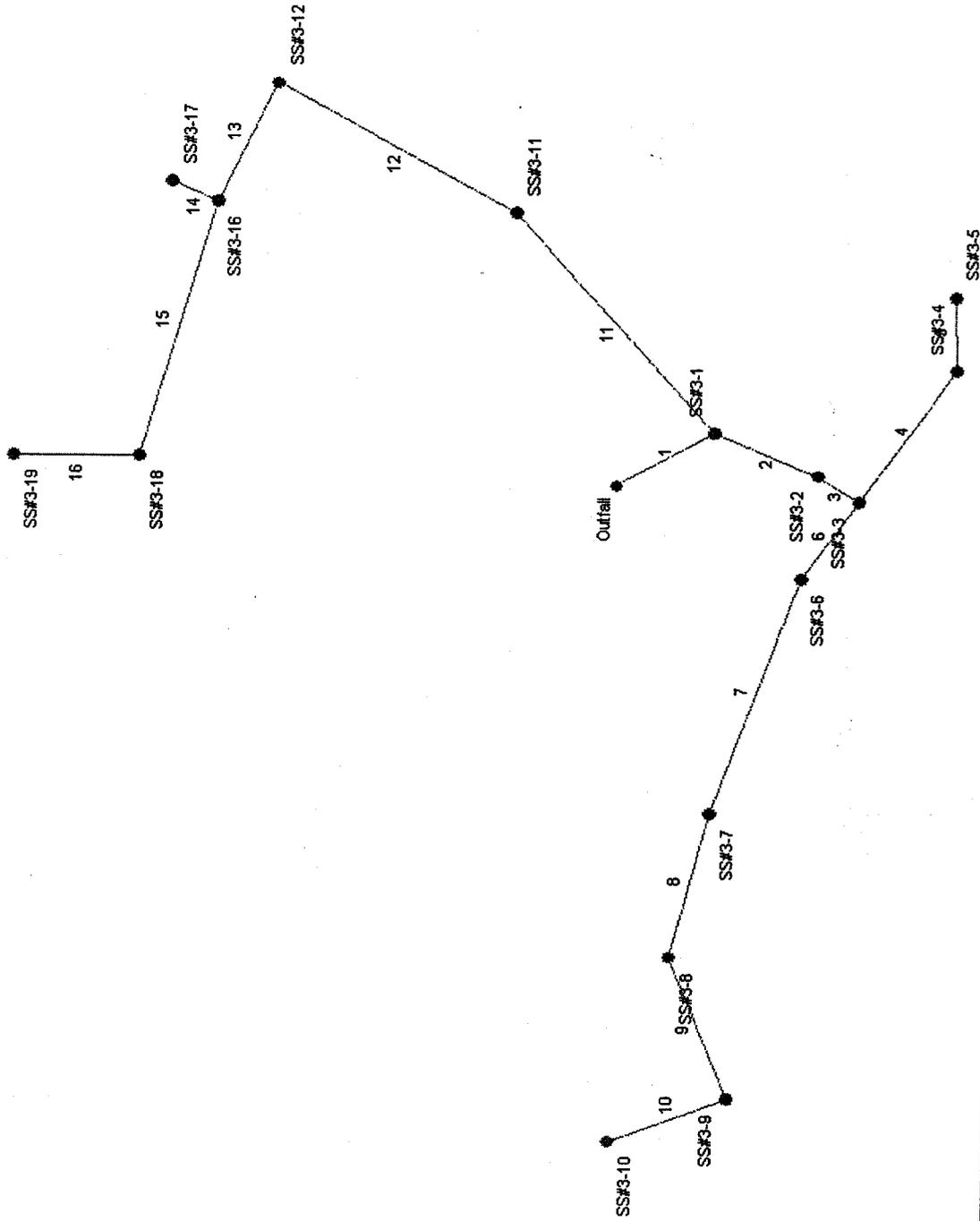
(Includes any non-typical, specialty, manufactured or innovative stormwater management/BMP practices or systems generally accepted for use as or in conjunction with other acceptable stormwater management / BMP practices. Requires evidence of prior satisfactory industry use and prior Environmental Division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

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

Sheet 3 of 4

Hydraflow Plan View

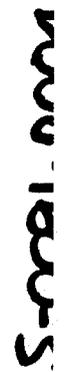
REV. STORM SYSTEM 3



Marywood Storm System 3A

No. Lines: 16

11-28-2007



Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
			Incr	Total		Inlet (min)	Syst (min)	Incr	Total					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)		Up (ft)
1	End	75.0	0.00	5.84	0.00	0.00	2.68	0.0	12.5	5.5	14.79	60.24	4.71	24	7.09	39.32	34.00	46.62	46.30	60.23	60.23	0.00	
2	1	75.0	0.28	4.48	0.70	0.20	1.95	5.0	10.9	5.8	11.27	47.52	3.59	24	4.41	42.63	39.32	46.95	46.77	51.82	60.23	60.23	
3	2	33.0	0.25	4.20	0.47	0.12	1.75	5.0	10.9	5.8	10.16	10.50	5.75	18	1.00	42.96	42.63	47.26	46.95	60.23	60.23	51.82	
4	3	114.0	1.03	2.29	0.35	0.36	0.84	10.0	10.4	5.9	4.95	6.46	5.54	15	1.00	54.08	52.94	54.97	53.76	57.16	60.23	60.23	
5	4	53.0	1.26	1.26	0.38	0.48	0.48	10.0	10.0	6.0	2.86	21.38	3.27	15	10.96	59.89	54.08	60.57	55.32	64.06	60.23	57.16	
6	3	67.0	0.69	1.66	0.38	0.26	0.79	8.0	8.9	6.2	4.91	6.46	4.00	15	1.00	43.63	42.96	47.91	47.53	61.02	60.23	60.23	
7	6	179.0	0.00	0.97	0.00	0.00	0.53	0.0	7.8	6.4	3.40	6.46	2.77	15	1.00	45.42	43.63	48.54	48.04	64.50	61.02	61.02	
8	7	106.0	0.41	0.97	0.44	0.18	0.53	5.0	7.2	6.6	3.48	6.46	2.83	15	1.00	46.48	45.42	48.85	48.54	64.50	61.02	61.02	
9	8	109.0	0.33	0.56	0.51	0.17	0.35	5.0	6.3	6.8	2.37	6.46	1.93	15	1.00	47.57	46.48	49.06	48.91	64.50	61.02	61.02	
10	9	83.0	0.23	0.23	0.79	0.18	0.18	5.0	5.0	7.1	1.29	6.46	1.40	15	1.00	48.40	47.57	49.13	49.10	64.50	61.02	61.02	
11	1	206.0	0.00	1.36	0.00	0.00	0.73	0.0	10.1	6.0	4.36	22.62	1.39	24	1.00	41.38	39.32	47.01	46.94	64.50	61.02	61.02	
12	11	184.0	0.44	1.36	0.42	0.18	0.73	5.0	8.9	6.2	4.53	10.50	2.56	18	1.00	43.22	41.38	47.35	47.01	64.50	61.02	61.02	
13	12	93.0	0.27	0.92	0.42	0.11	0.55	5.0	8.4	6.3	3.45	6.46	2.81	15	1.00	44.15	43.22	47.62	47.35	64.50	61.02	61.02	
14	13	33.0	0.12	0.12	0.80	0.10	0.10	5.0	5.0	7.1	0.68	6.46	3.01	15	1.00	54.45	54.12	54.78	54.40	64.50	61.02	61.02	
15	13	190.0	0.36	0.53	0.55	0.20	0.34	5.0	6.7	6.7	2.25	6.46	1.84	15	1.00	46.05	44.15	47.92	47.69	64.50	61.02	61.02	
16	15	83.0	0.17	0.17	0.82	0.14	0.14	5.0	5.0	7.1	0.99	6.46	0.84	15	1.00	46.88	46.05	47.98	47.96	64.50	61.02	61.02	
Marywood Storm System 3A																							
																Number of lines: 16				Run Date: 11-28-2007			

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



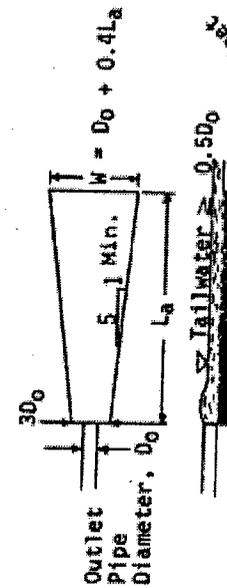
Williamsburg
Gloucester
Richmond

(757) 253-0040
(804) 693-4450
(804) 330-8040

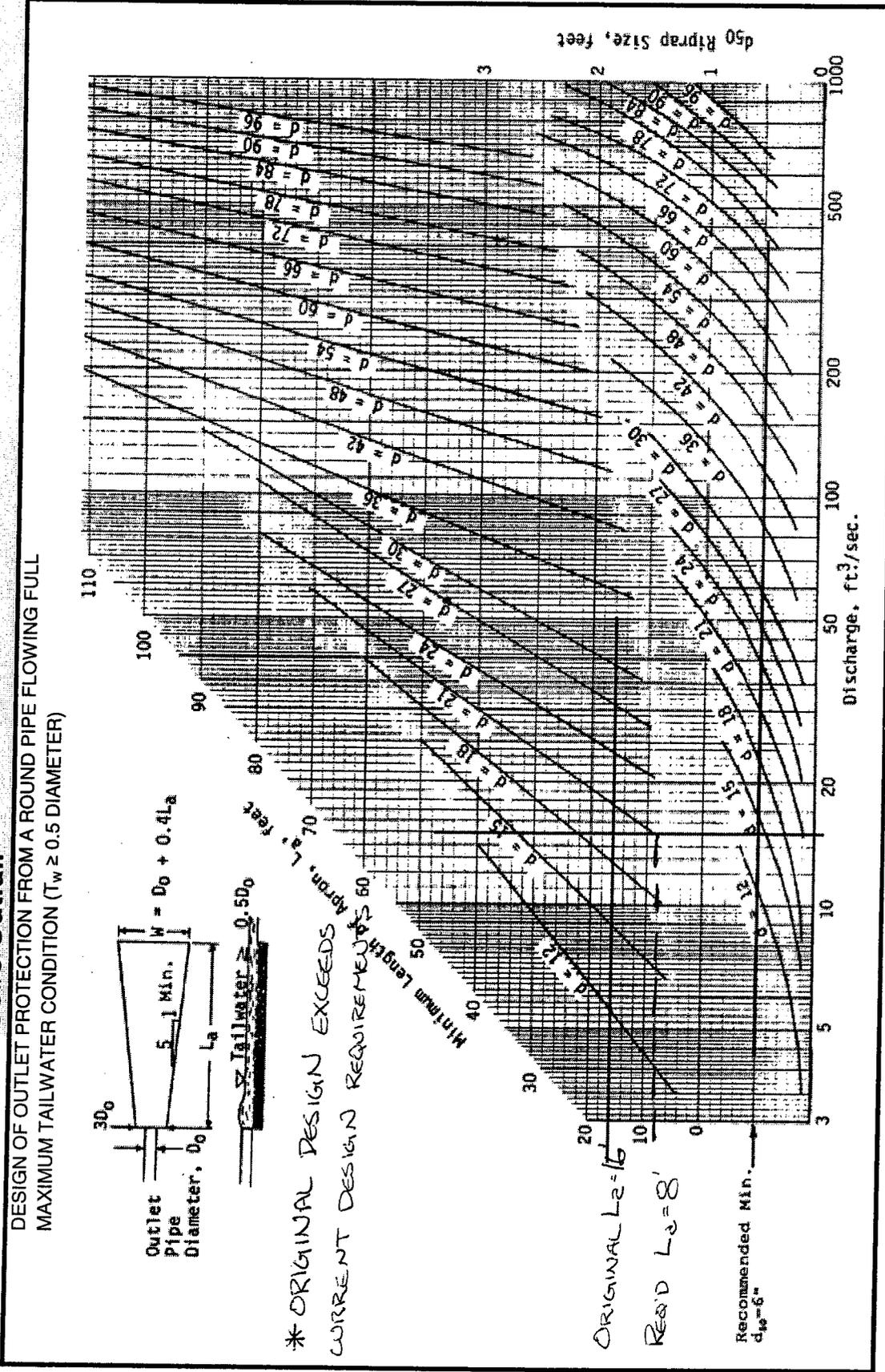
Project: Marywood
Project No.: 9272
Subject: Outlet Protection
Date: November 28, 2007
Calculated By: MJR

Outlet Location: SS#3 Outfall

DESIGN OF OUTLET PROTECTION FROM A ROUND PIPE FLOWING FULL
MAXIMUM TAILWATER CONDITION ($T_w \geq 0.5$ DIAMETER)



* ORIGINAL DESIGN EXCEEDS
CURRENT DESIGN REQUIREMENTS



Source: USDA-SCS

Plate 3.18-4

Q = 14.97 cfs
D₀ = 24 in

3D₀ = 72 in
L_a = 16 ft

W = 13 ft
d₅₀ = 0.5 ft

Depth = >1 ft

Pond Report

REV. BMP #3

Hydraflow Hydrographs by Intelisolve v9.25

Wednesday, Nov 28, 2007

Pond No. 3 - BMP 3

Pond Data

Contours - User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 34.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	34.00	779	0	0
2.00	36.00	1,325	2,104	2,104
4.00	38.00	1,992	3,317	5,421
6.00	40.00	2,778	4,770	10,191
8.00	42.00	10,165	12,943	23,134
10.00	44.00	12,527	22,692	45,826
12.00	46.00	15,114	27,641	73,467
14.00	48.00	17,928	33,042	106,509

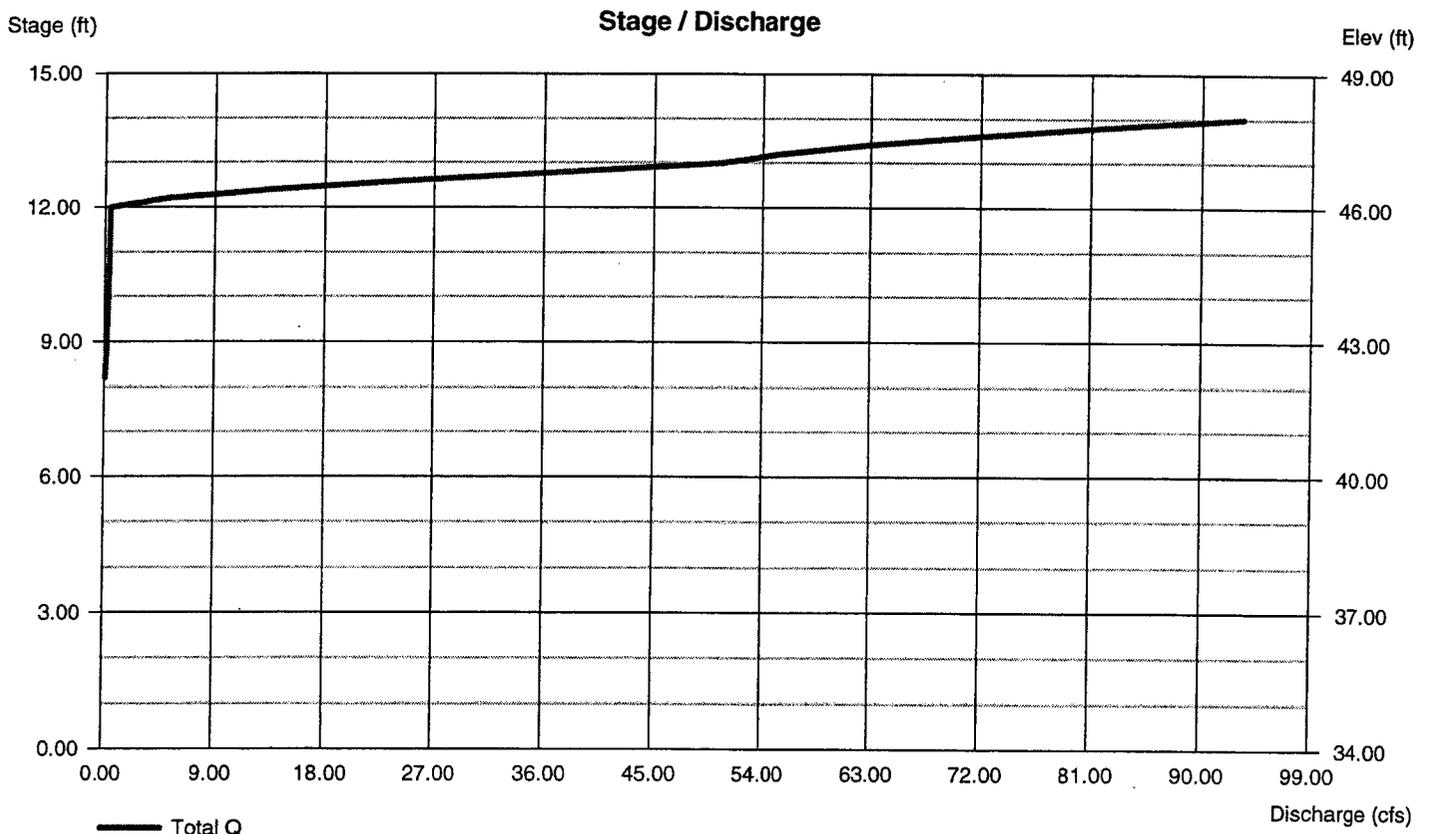
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	3.00	0.00	0.00
Span (in)	= 24.00	3.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 34.00	42.00	0.00	0.00
Length (ft)	= 58.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.000	n/a
Orifice 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)	= 15.70	15.00	0.00	0.00
Crest El. (ft)	= 46.00	47.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	0.00	0.00
Weir Type	= Riser	Broad	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



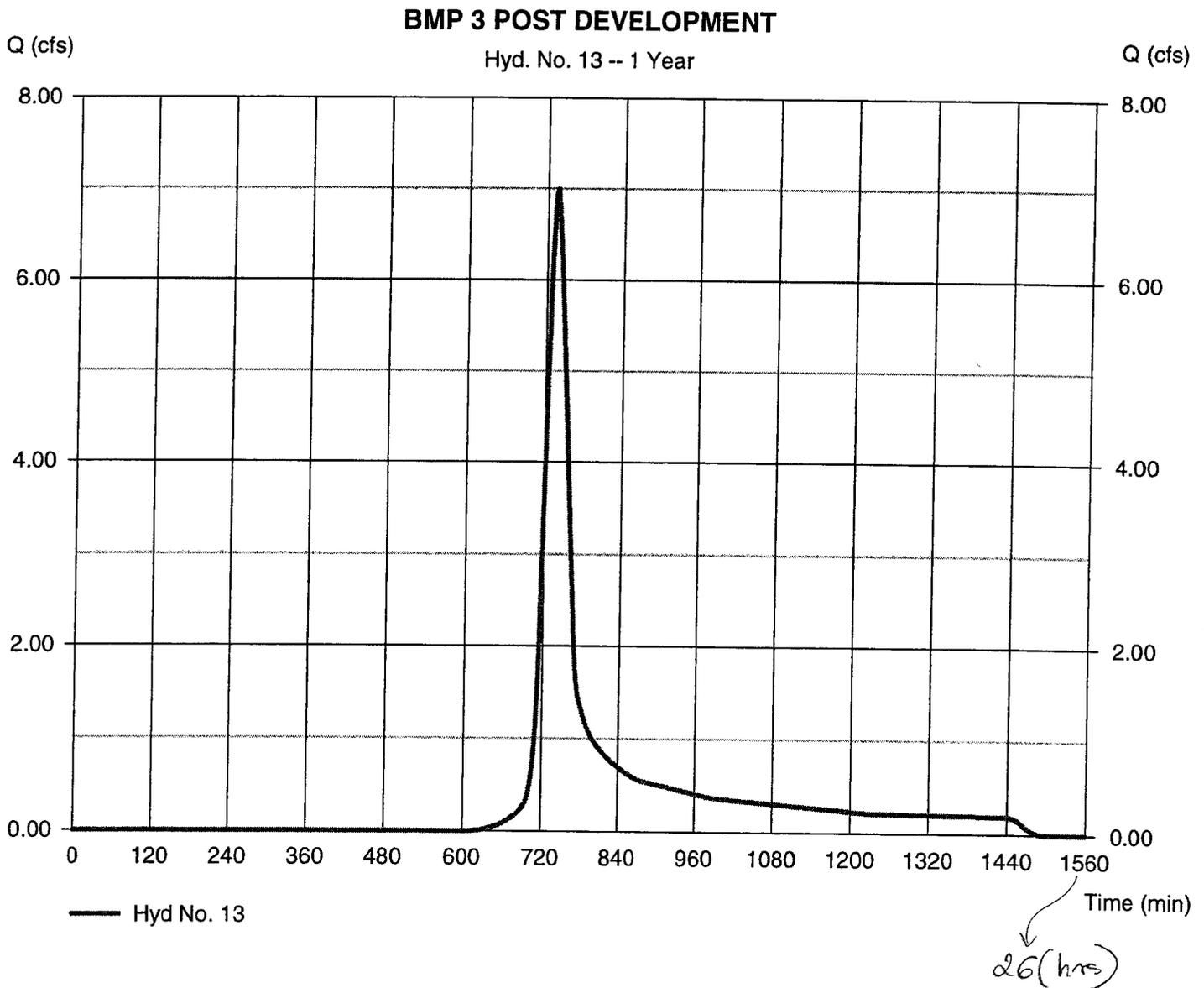
Hydrograph Report

Hyd. No. 13

BMP 3 POST DEVELOPMENT

Hydrograph type = SCS Runoff
Storm frequency = 1 yrs
Time interval = 2 min
Drainage area = 8.290 ac
Basin Slope = 0.0 %
Tc method = USER
Total precip. = 2.80 in
Storm duration = 24 hrs

Peak discharge = 7.000 cfs
Time to peak = 736 min
Hyd. volume = 32,788 cuft
Curve number = 80
Hydraulic length = 0 ft
Time of conc. (Tc) = 34.00 min
Distribution = Type II
Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

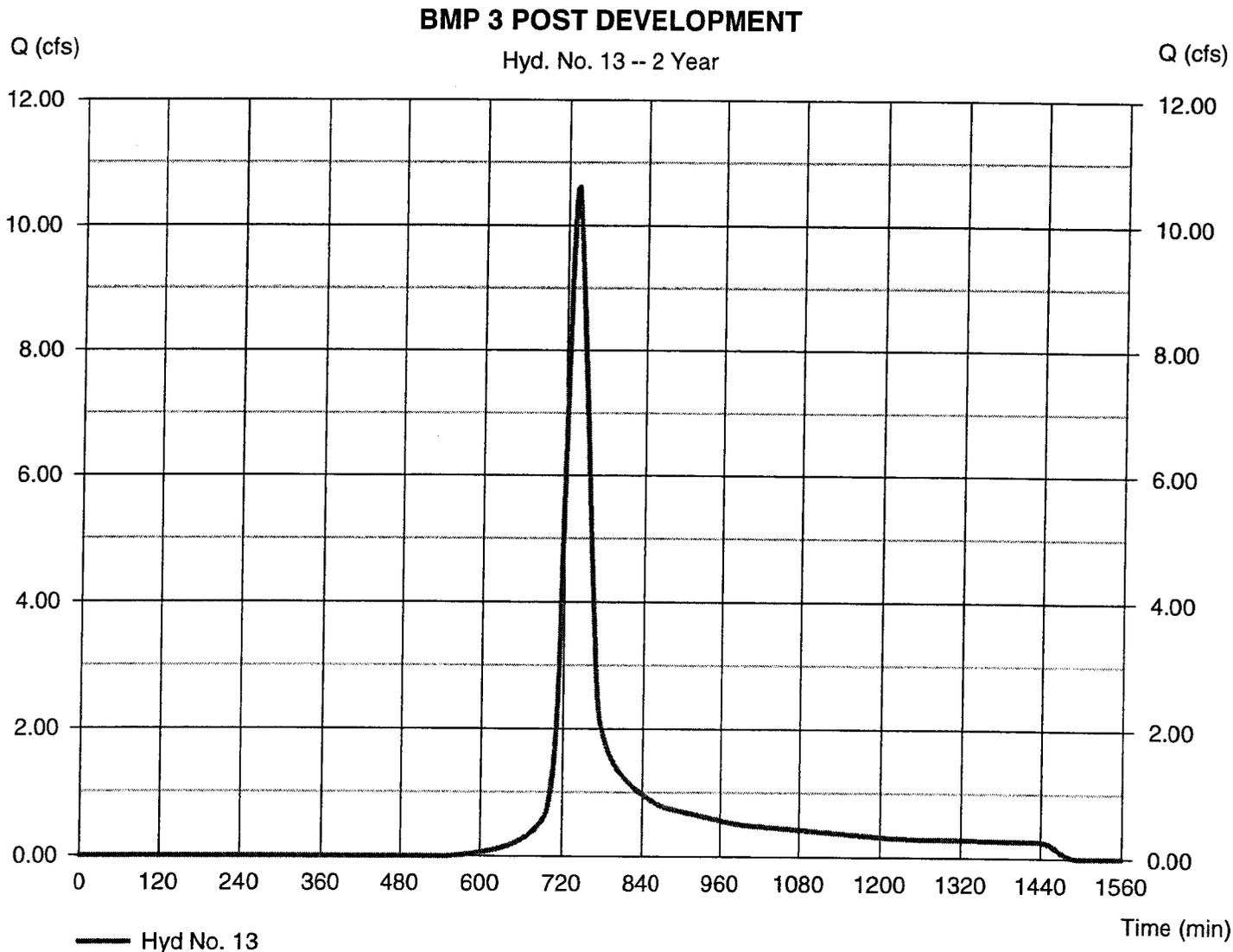
Wednesday, Nov 28, 2007

Hyd. No. 13

BMP 3 POST DEVELOPMENT

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 2 min
 Drainage area = 8.290 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.50 in
 Storm duration = 24 hrs

Peak discharge = 10.61 cfs
 Time to peak = 736 min
 Hyd. volume = 48,683 cuft
 Curve number = 80
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 34.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

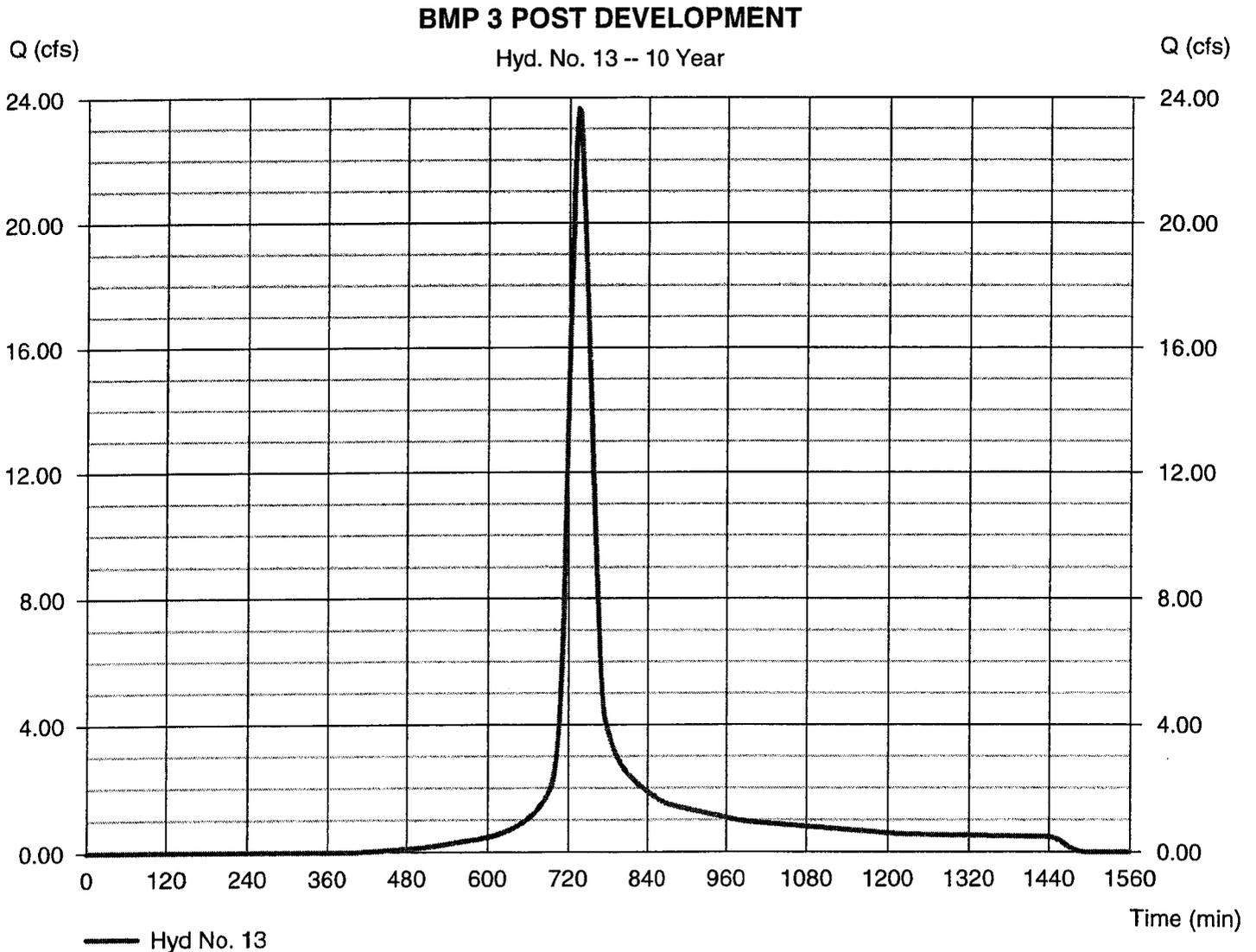
Wednesday, Nov 28, 2007

Hyd. No. 13

BMP 3 POST DEVELOPMENT

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 2 min
 Drainage area = 8.290 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.80 in
 Storm duration = 24 hrs

Peak discharge = 23.65 cfs
 Time to peak = 734 min
 Hyd. volume = 107,141 cuft
 Curve number = 80
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 34.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

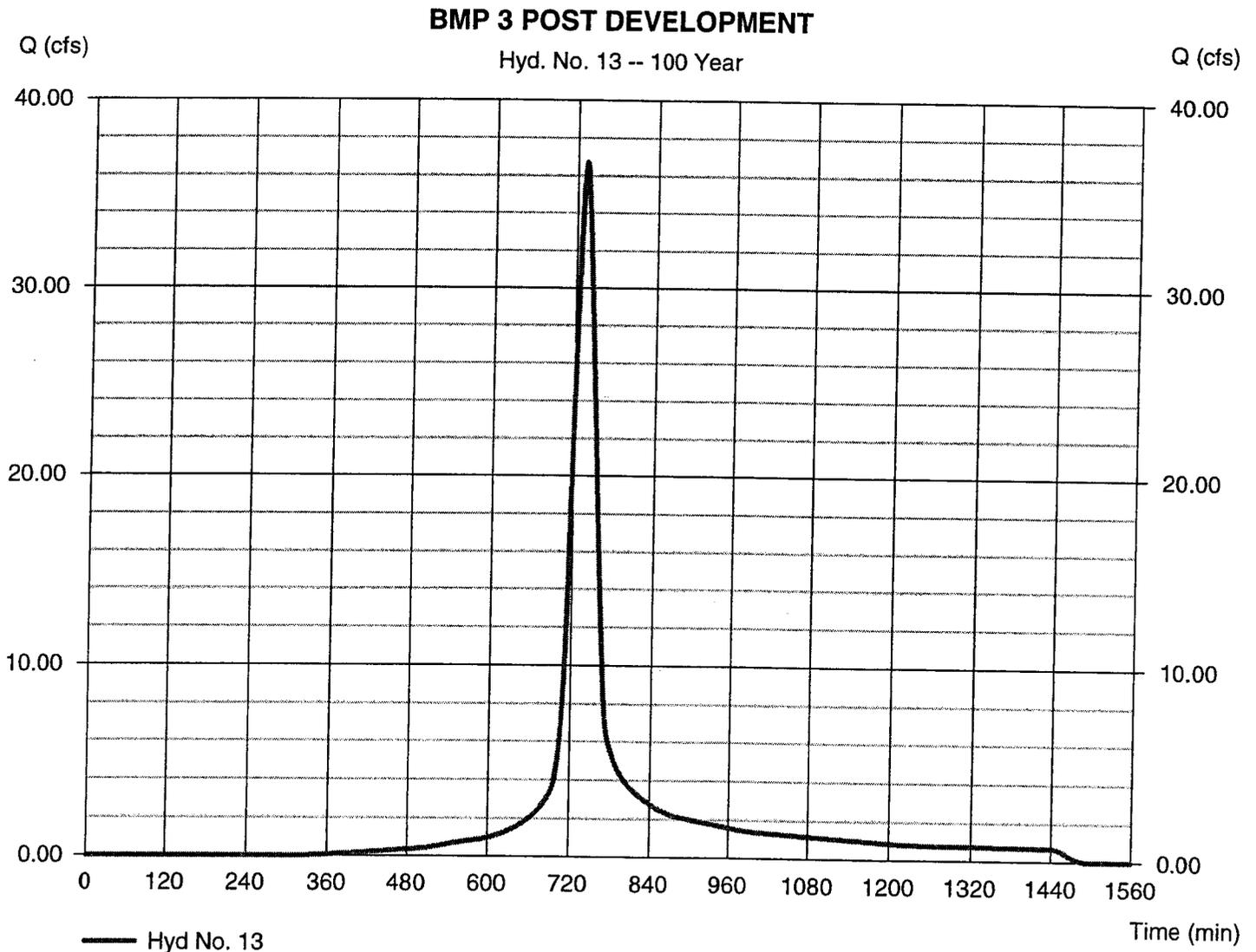
Wednesday, Nov 28, 2007

Hyd. No. 13

BMP 3 POST DEVELOPMENT

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Time interval = 2 min
Drainage area = 8.290 ac
Basin Slope = 0.0 %
Tc method = USER
Total precip. = 8.00 in
Storm duration = 24 hrs

Peak discharge = 36.69 cfs
Time to peak = 734 min
Hyd. volume = 167,348 cuft
Curve number = 80
Hydraulic length = 0 ft
Time of conc. (Tc) = 34.00 min
Distribution = Type II
Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

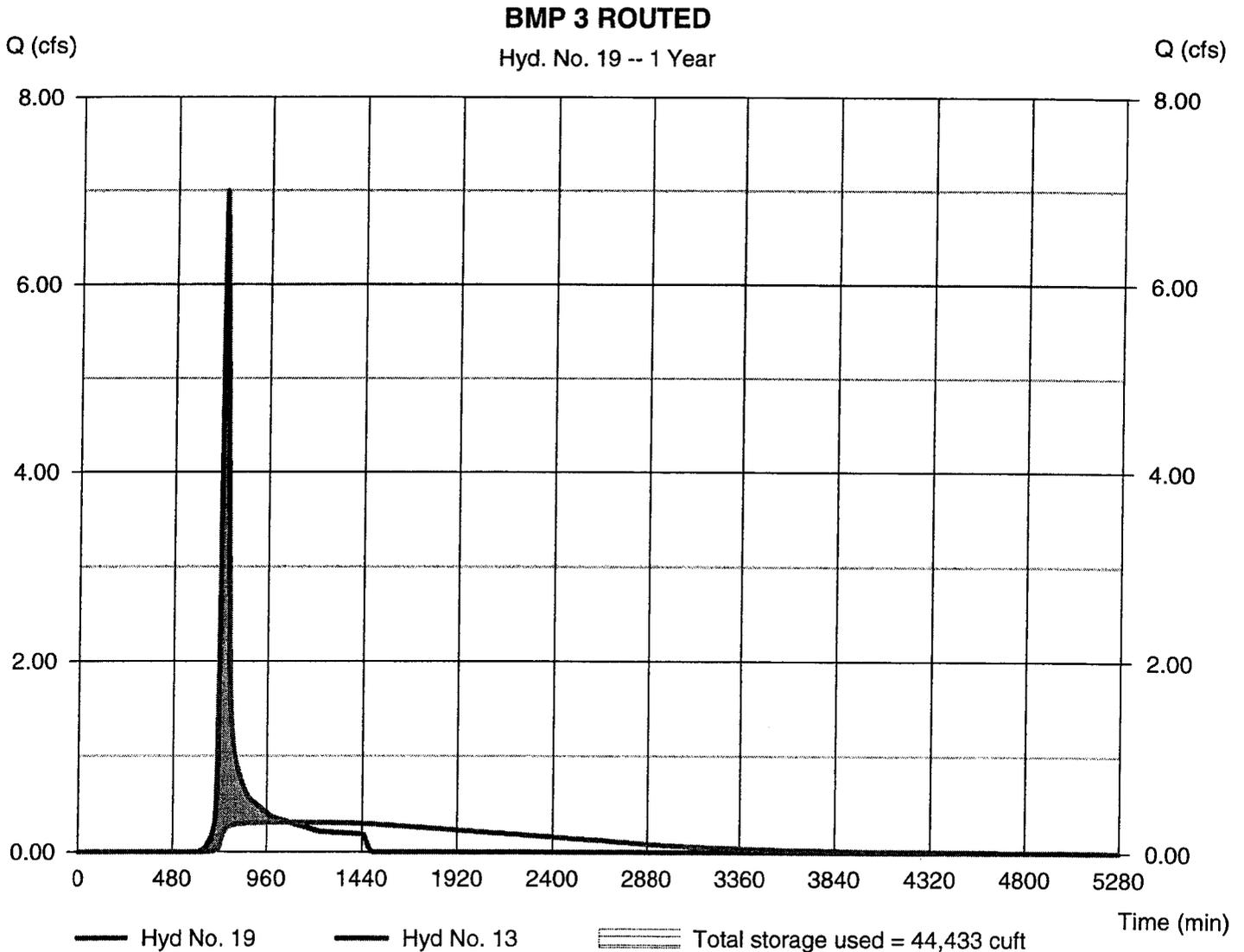
Wednesday, Nov 28, 2007

Hyd. No. 19

BMP 3 ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.313 cfs
Storm frequency	= 1 yrs	Time to peak	= 1074 min
Time interval	= 2 min	Hyd. volume	= 32,752 cuft
Inflow hyd. No.	= 13 - BMP 3 POST DEVELOPMENT	Max. Elevation	= 43.88 ft
Reservoir name	= BMP 3	Max. Storage	= 44,433 cuft

Storage Indication method used. Wet pond routing start elevation = 42.00 ft.



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

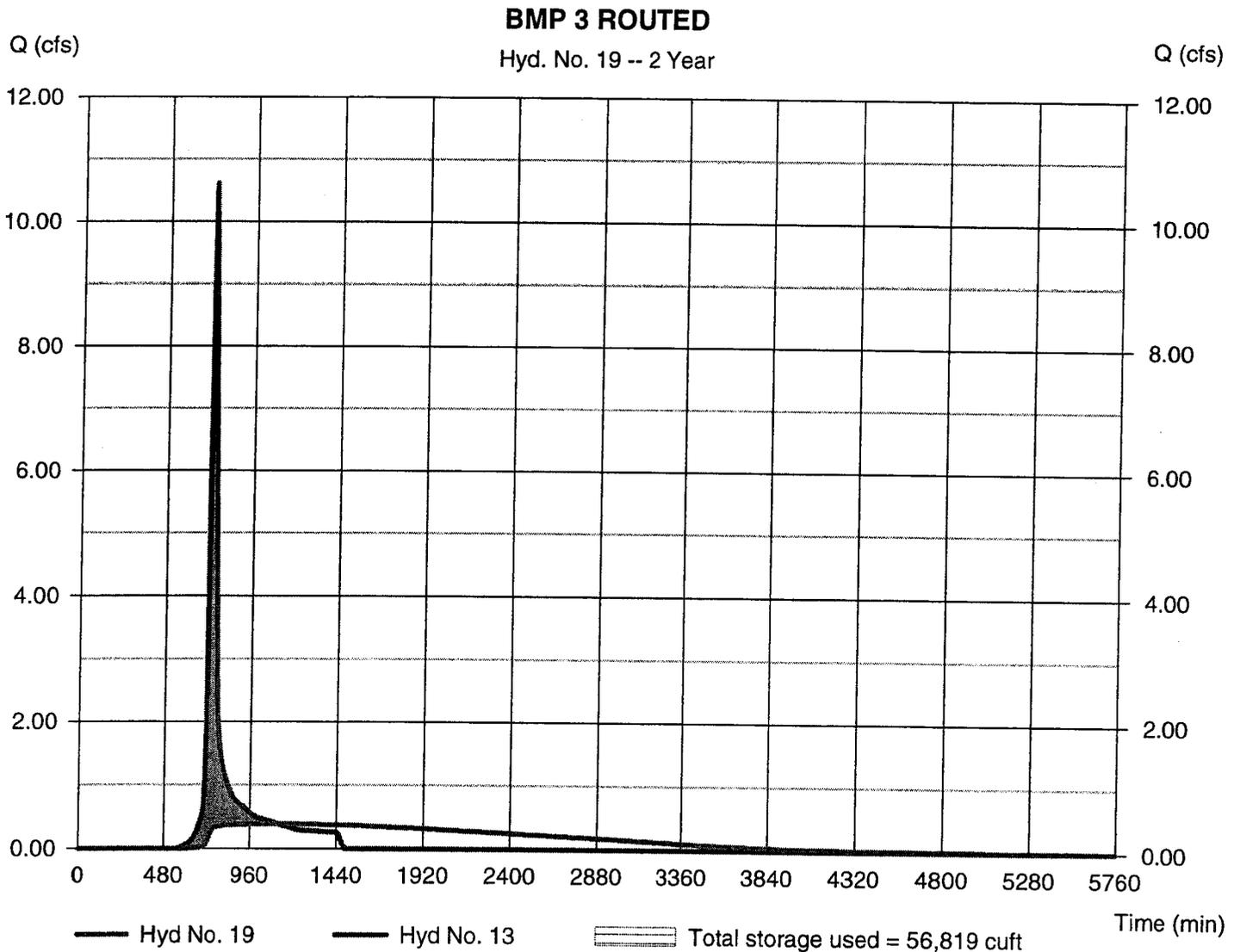
Wednesday, Nov 28, 2007

Hyd. No. 19

BMP 3 ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 0.386 cfs
Storm frequency	= 2 yrs	Time to peak	= 1122 min
Time interval	= 2 min	Hyd. volume	= 48,617 cuft
Inflow hyd. No.	= 13 - BMP 3 POST DEVELOPMENT	Max. Elevation	= 44.80 ft
Reservoir name	= BMP 3	Max. Storage	= 56,819 cuft

Storage Indication method used. Wet pond routing start elevation = 42.00 ft.



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

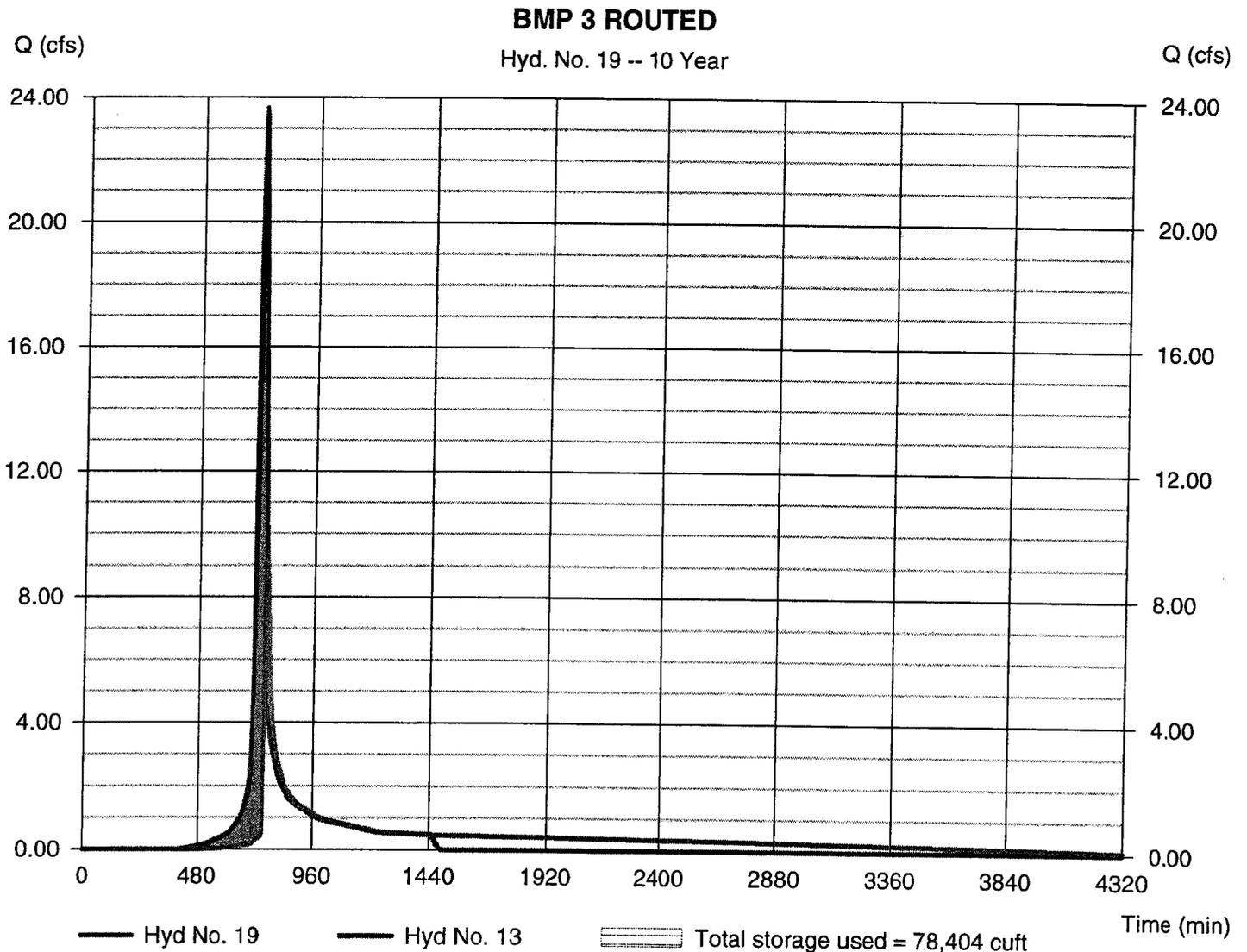
Wednesday, Nov 28, 2007

Hyd. No. 19

BMP 3 ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 9.383 cfs
Storm frequency	= 10 yrs	Time to peak	= 762 min
Time interval	= 2 min	Hyd. volume	= 106,913 cuft
Inflow hyd. No.	= 13 - BMP 3 POST DEVELOPMENT	Max. Elevation	= 46.30 ft
Reservoir name	= BMP 3	Max. Storage	= 78,404 cuft

Storage Indication method used. Wet pond routing start elevation = 42.00 ft.



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.25

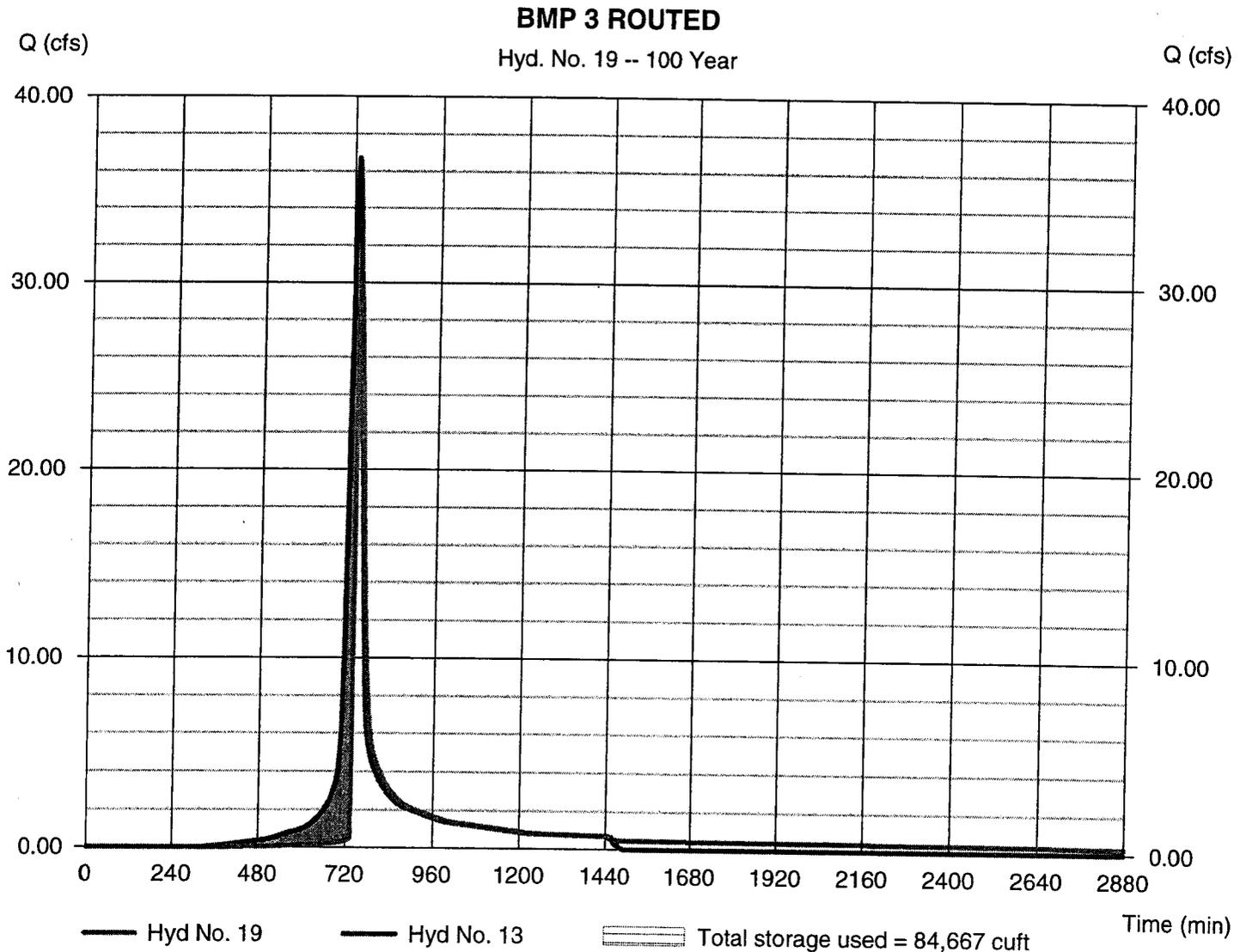
Wednesday, Nov 28, 2007

Hyd. No. 19

BMP 3 ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 29.91 cfs
Storm frequency	= 100 yrs	Time to peak	= 744 min
Time interval	= 2 min	Hyd. volume	= 167,117 cuft
Inflow hyd. No.	= 13 - BMP 3 POST DEVELOPMENT	Max. Elevation	= 46.68 ft
Reservoir name	= BMP 3	Max. Storage	= 84,667 cuft

Storage Indication method used. Wet pond routing start elevation = 42.00 ft.







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

County BMP ID Code (if known): MC-0604

Name of Facility: Marywood BMP No.: 3 of 4 Date: 12/10/12

Location: West Side of Marywood Drive between lots 32 and 37

Name of Owner: CENTEX / PULTEC Group

Name of Inspector: Gregory B. Johnson

Type of Facility: RETENTION Pond

Weather Conditions: Cloudy 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		✓		Some trees need to be pruned dead branches removed
Tree Growth			✓	Trees need to be staked and stabilize around perimeter of fence (outside)
Erosion			✓	Several places on slopes around BMP need to be stabilized
Trash & Debris		✓		Remove trash and debris from around BMP
Seepage	✓			
Fencing or Benches	✓			
Interior Landscaping/Planted Areas: <input type="checkbox"/> None <input type="checkbox"/> Constructed Wetland/Shallow Marsh <input type="checkbox"/> Naturally Established Vegetation				
Vegetated Conditions		✓		Several areas inside need to be stabilized
Trash & Debris		✓		Remove trash and debris from inside to BMP and the inside perimeter of pond
Floating Material		✓		
Erosion		✓		See vegetated conditions
Sediment	✓			
Dead Plant		✓		Some Verify all plants are secure and go
Aesthetics	✓			
Other				
Notes:				

Facility Item	O.K.	Routine	Urgent	Comments
Water Pools: <input checked="" type="checkbox"/> Permanent Pool (Retention Basin) <input type="checkbox"/> Shallow Marsh (Detention Basin) <input type="checkbox"/> None, Dry (Detention Basin)				
Shoreline Erosion				
Algae	✓			
Trash & Debris		✓		Clean trash and building material from pool
Sediment	✓			
Aesthetics	✓			
Other	✓			
Inflows (Describe Types/Locations):				
Condition of Structure	✓			
Erosion				
Trash and Debris	✓			
Sediment				Remove SF and ensure there is positive flow. Also fill voids with more stone
Outlet Protection				↓
Other				
Principal Flow Control Structure - Riser, Intake, etc. (Describe Type): Mag DC-1				
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	✓			Verify pipe placement
Emergency Spillway (Overflow):				
Vegetation		✓		Get vegetation in channel
Lining		✓		Something other than wood chips needs to be in place for lining of channel
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		✓		Slopes need stabilized
Trash & Debris	✓			
Aesthetics	✓			
Access /Maintenance Roads or Paths	✓			
Other				
Remarks: Inlet pipe appears at one time to be buried in sediment. Confirm length and placement of pipe.				
Overall Environmental Division Internal Rating: _____				
Signature: 		Date: 12/8/12		
Title: Inspector				

BMP 3 RECORD DRAWING

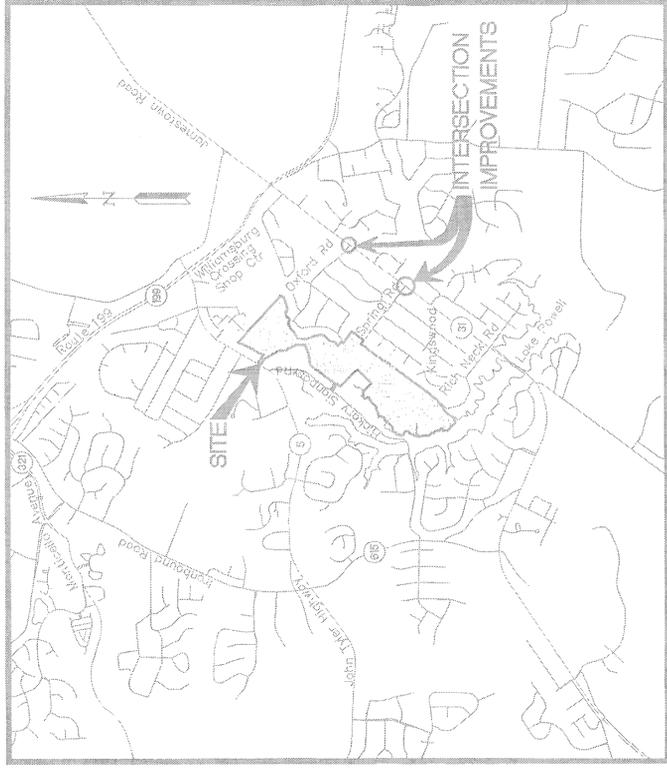
FOR

MARYWOOD SUBDIVISION

JAMES CITY COUNTY, VIRGINIA

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	OVERALL SUBDIVISION LAYOUT & STREET RIGHTS
3	ENVIRONMENTAL INVESTIGATION PLAN
4	ENVIRONMENTAL IMPACT STATEMENT
5	PRELIMINARY PLAN
6	PRELIMINARY PLAN
7	PRELIMINARY PLAN
8	PRELIMINARY PLAN
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21	PRELIMINARY PLAN
22	GRADING AND DRAINAGE PLAN
23	GRADING AND DRAINAGE PLAN
24	GRADING AND DRAINAGE PLAN
25	GRADING AND DRAINAGE PLAN
26	GRADING AND DRAINAGE PLAN
27	GRADING AND DRAINAGE PLAN
28	GRADING AND DRAINAGE PLAN
29	GRADING AND DRAINAGE PLAN
30	STORMWATER MANAGEMENT
31	STORMWATER MANAGEMENT
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99	STORMWATER MANAGEMENT
100	STORMWATER MANAGEMENT



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

PROJECT NO.: 9272-0
JCC CASE: S-91-04



THOMAS C. SUBLETT
DATE

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



LEGEND

EXISTING	PROPOSED
EX. W	WATER
EX. S	SANITARY SEWER
EX. FM	FORCE MAIN
EX. M	MANHOLE
EX. DI	CURB DROP INLET
EX. FS	FLARED END SECTION
EX. V	VALVE
EX. BV	FIRE HYDRANT ASSEMBLY
EX. BO	BLOW-OFF VALVE
EX. AC	AIR RELEASE ASSEMBLY
EX. GP	GRINDER PUMP CONNECTION
EX. CO	CLEAN OUT
EX. WM	WATER METER
EX. SL	STREETLIGHT
EX. CL	CENTERLINE/BASELINE
EX. RW	RIGHT OF WAY
EX. PS	PROPERTY LINE
EX. DS	DITCH/SWALE
EX. CLD	CONCRETE LINED DITCH
EX. E	EXISTING TREE LINE
EX. L	LIMITS OF CLEARING
EX. R	REVERSE ROLL TOP GUTTER
EX. G	GROUND ELEVATION
EX. C	PROPOSED TOP OF CURB ELEV.
EX. S	STRAW BALE BARRIER
EX. R	RIP RAP
EX. G	GRADING LINE TIE-IN
EX. C	EXISTING CONTOUR ELEV.
EX. P	PROPOSED CONTOUR ELEV.
EX. S	SIGN
EX. C	CUT/FILL

EROSION AND SEDIMENTATION CONTROL LEGEND

SF	SILT FENCE (SPEC. 3.06)
SF2	SUPER SILT FENCE (SPEC. 3.06)
P	INLET PROTECTION (SPEC. 3.07)
CE	CONSTRUCTION ENTRANCE (SPEC. 3.02)
CD	CHECK DAM (SPEC. 3.20)
FR	RIP RAP (SPEC. 3.19)
OP	OUTLET PROTECTION (SPEC. 3.18)
CP	CULVERT INLET PROTECTION (SPEC. 3.06-1 WITH STONE COMBIN. INSTEAD OF SILT FENCE)
ST	TEMPORARY SEDIMENT TRAP (SPEC. 3.13)
PS	PERMANENT SEEDING (SPEC. 3.32)
TP	TREE PROTECTION (SPEC. 3.38)
SC	STORMWATER CONVEYANCE CHANNEL (SPEC. 3.17)
SB	SEDIMENT BASIN (SPEC. 3.14)
CS	CONSTRUCTION ROAD STABILIZATION (SPEC. 3.03)
DD	DIVERSION DIKE (SPEC. 3.12)
BB	BRUSH BARRIER (SPEC. 3.06)

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

NOTE: PRIOR TO CONSTRUCTION A SEPARATE PLAN TO LOCATE THE PASSIVE RECREATION TRAILS MUST BE SUBMITTED AND APPROVED BY JAMES CITY COUNTY ENVIRONMENTAL DIVISION. THE LOCATION OF PASSIVE RECREATION TRAILS ARE TO BE FIELD VERIFIED BY COUNTY ENVIRONMENTAL STAFF TO ENSURE TRAILS ARE PROPERLY LOCATED OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.



County of James City
Subdivision Construction Plan
DATE OF APPROVAL: 11/1/2007
Does not constitute final plat approval

SITE DATA:
TAX MAP PARCEL NO. 42-2(1-47)
ZONING: R-1
PROJECT AREA: 115.28 ACRES / 5,021,410 SF
DISTURBED AREA: 22.72 ACRES / 989,567 SF
WETLAND DISTURBED AREA: 0.40 ACRES / 17,500 SF
WATERSHED: MILL CREEK (LAKE POWELL) WATERSHED
NUMBER OF LOTS: 90
FEMA PANEL NUMBER: 510201 0045 B
ZONE X: AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN

OWNER INFORMATION:
CENTEX HOMES
ATTENTION: DAVID MURRAY
TELEPHONE: (757) 215-1260
FAX: (757) 215-1261

NOTES:
1. SETBACKS: FRONT = 35', SIDE = 15', REAR = 35'.
IF LOT IS LESS THAN 1 ACRE, MINIMUM WIDTH AT SETBACK LINE IS 100 FT.
IF LOT IS MORE THAN 1 ACRE, MINIMUM WIDTH AT SETBACK LINE IS 150 FT.
SPECIAL PROVISIONS FOR CORNER LOTS:
A) ON THE 2 SIDES OF A CORNER LOT, THE FRONT OF THE LOT SHALL BE DEEMED TO BE THE SHORTER OF THE 2 SIDES.
B) EACH CORNER LOT SHALL HAVE A MINIMUM WIDTH AT THE SETBACK LINE OF 125 FT.

"RESPONSIBLE LAND DISTURBER":
"THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE SIGNER ON DEVELOPER SHALL PROVIDE WRITTEN NOTICE TO THE SIGNER ON THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.

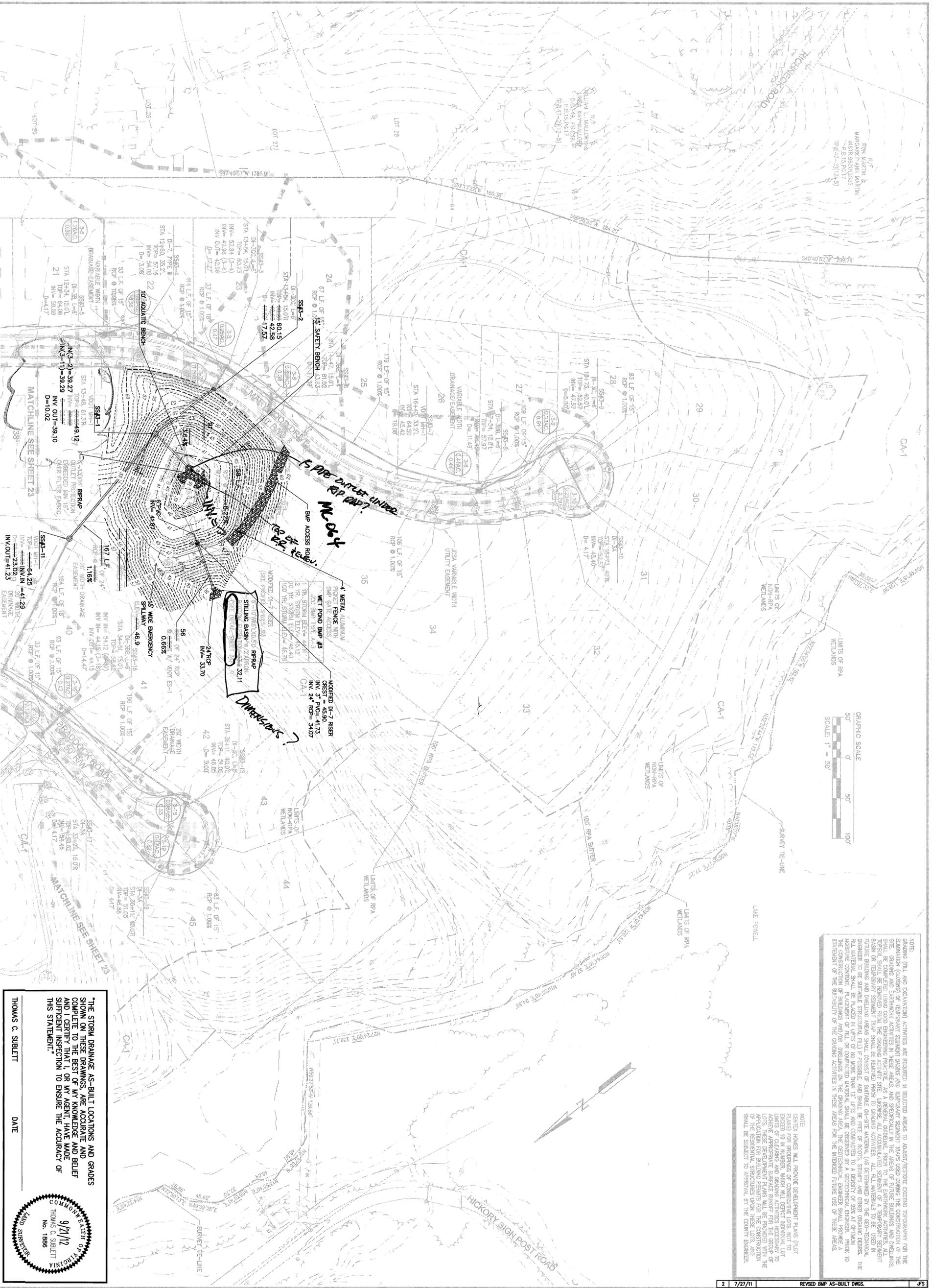
2. ALL PROPOSED UTILITIES SHOWN ARE TO BE PLACED UNDERGROUND AS PER THE CURRENT JAMES CITY COUNTY SUBDIVISION ORDINANCE SECTION 19-33.
3. THE CONTRACTOR SHALL CONTACT "MIS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON THE SITE. CALL 1-800-562-7081.
4. ALL EXISTING UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH THE STATE PRIVATE WELL REGULATIONS AND THE JAMES CITY COUNTY CODE.
5. ALL DRAINAGE ELEMENTS AND STORM WATER ATTENUATION BASINS ARE TO BE DEDICATED TO THE HOMEOWNERS ASSOCIATION. VDOT DOES NOT ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE BMPs OR THEIR STRUCTURES AND SHALL BE SAVED HARMLESS FROM ANY DAMAGES.
6. ALL RESIDENTIAL SUBDIVISION SIGNS SHALL BE IN ACCORDANCE WITH ARTICLE II, DIVISION 3 OF THE JAMES CITY COUNTY ZONING ORDINANCE.
7. NEW PROPERTY MONUMENTS WILL BE INSTALLED PER SECTIONS 19-34 THROUGH 19-36 OF THE JAMES CITY COUNTY SUBDIVISION ORDINANCE.
8. ALL NEW STREET SIGNS SHALL BE INSTALLED PER SECTION 19-45 OF THE JAMES CITY COUNTY SUBDIVISION ORDINANCE.
9. THE CONTRACTOR SHALL AT ALL TIMES POSSESS AND MAINTAIN A CURRENT COPY OF THE HRRPC REGIONAL STANDARDS AND SPECIFICATIONS AT THE SITE AND READILY AVAILABLE FOR IMMEDIATE REFERENCE.

10. WETLANDS AND LAND WITHIN RESOURCE PROTECTION AREAS SHALL REMAIN IN A NATURAL UNDISTURBED STATE EXCEPT FOR THOSE ACTIVITIES PERMITTED BY SECTION 25-7(G) OF THE JAMES CITY COUNTY CODE.
11. DISTURBANCE TO TOPOGRAPHY WITH SLOPES EQUAL TO OR GREATER THAN 25% IS PROHIBITED UNLESS A WAIVER HAS BEEN OBTAINED FROM JAMES CITY COUNTY TOPOGRAPHY. HOWEVER THIS TOPOGRAPHY MAY NOT ACCURATELY LOCATE OR SHOW STEEPLY SLOPED GROUND PLANES. PRIOR TO ANY LOT DISTURBANCE, THE HOMEOWNER SHALL IDENTIFY AREAS OF 25% OR GREATER SLOPES AND SHALL SECURE ALL NECESSARY APPROVALS THROUGH THE ENVIRONMENTAL DIVISION TO DISTURB STEEP SLOPES.
12. SECURITY LIGHTS, WHERE NOTED, REFER TO STREET LIGHTS INSTALLED FOR SECURITY AND NIGHT TIME ILLUMINATION OF THE ADJACENT STREET. THESE LIGHTS, POLES AND LUMINAIRES WILL NOT BE MAINTAINED OR REPLACED BY 1001.
13. A LAND DISTURBING PERMIT, SILTATION AGREEMENT WITH SURETY, AND A PRE-CONSTRUCTION CONFERENCE IS REQUIRED FOR THIS PROJECT.

14. ONLY JCSA PERSONNEL ARE AUTHORIZED TO OPERATE VALVES ON THE EXISTING WATER MAINS AND SANITARY FORCE MAINS.
15. THE CONTRACTOR IS TO PLACE AN RPA BUFFER SIGN AT THE INTERSECTION OF EACH LOT LINE WITH AN RPA BUFFER. THE STANDARD JAMES CITY COUNTY RPA BUFFER SIGN IS TO BE LOCATED AT THE LIMIT OF THE BUFFER. SIGNS ARE AVAILABLE FROM MR. WAYLAND BASS, THE JAMES CITY COUNTY ENGINEER, AT A FEE OF \$30 / SIGN. TELEPHONE: 757-253-6671 FOR FURTHER INFORMATION.
16. ALL STORM PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) SMOOTH WALL UNLESS OTHERWISE NOTED.
17. STORM STRUCTURES SHALL CONFORM TO VDOT ROAD & BRIDGE STANDARDS AND SPECIFICATIONS. ALL MANHOLES SHALL INCLUDE INLET SHAPING (IS-1) AND MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). PIPE BEDDING SHALL BE IN ACCORDANCE WITH VDOT PB-1 AND MANUFACTURERS SPECIFICATIONS.

18. NATURAL OPEN SPACE AREAS SHALL REMAIN IN AN UNDISTURBED STATE EXCEPT FOR THOSE ACTIVITIES REFERENCED ON THE DEED OF EASEMENT.
19. CENTEX HOMES WILL PROVIDE DEVELOPMENT PLANS (PLOT PLANS) FOR GROUPINGS OF CONSECUTIVE LOTS, NOT TO EXCEED 10 IN NUMBER, WHICH WILL DEPICT INDIVIDUAL LOT LIMITS OF CLEARING AND GRADING ACTIVITIES NECESSARY TO ACHIEVE APPROPRIATE SURFACE RUNOFF FOR THE GROUP OF LOTS. THESE DEVELOPMENT PLANS ARE TO BE SUBMITTED TO THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION FOR REVIEW AND APPROVAL BEFORE APPLICABLE, INDIVIDUAL, SINGLE-FAMILY BUILDING PERMIT APPLICATIONS ARE SUBMITTED FOR REVIEW.
20. SURVEY DATA PROVIDED BASED UPON JAMES CITY COUNTY GEODETIC CONTROL NAD-83 ESTABLISHED FROM MONUMENT 318.
21. CONTROL NAD-83 ESTABLISHED FROM MONUMENT 318.

THIS PROJECT DOES NOT RELY ON EXISTING MANAGEMENT CRITERIA.
THIS PLAN WAS GRANTED PRELIMINARY APPROVAL BY THE JAMES CITY COUNTY PLANNING COMMISSION ON DECEMBER 5, 2005.



NOTE:
 GRADING (FILL AND EXCAVATION) ACTIVITIES ARE REQUIRED TO ADJUST/RESTORE EXISTING TOPOGRAPHY FOR THE SUBDIVISION. CONSTRUCTION OF TEMPORARY SEDIMENT BASINS AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF CONSTRUCTION. AS A GENERAL ENGINEERING PRACTICE, ALL TOPSOIL SHALL BE REMOVED FROM THE GRADING ACTIVITY SITE. LICENSED AND ACCREDITED PERSONNEL SHALL BE RESPONSIBLE FOR THE REMOVAL AND STORAGE OF TOPSOIL. ALL FILL MATERIALS TO BE USED IN GRADING AND TEMPORARY SEDIMENT BASINS SHALL BE REMOVED PRIOR TO GRADING ACTIVITIES. ALL FILL MATERIALS TO BE USED IN GRADING AND TEMPORARY SEDIMENT BASINS SHALL BE REMOVED PRIOR TO GRADING ACTIVITIES. (AS DETERMINED BY THE GEO-TECHNICAL ENGINEER) THE FILL MATERIAL SHALL BE PLACED IN LIFTS OF NO MORE THAN 12" LIFTS AND COMPACTED TO A DENSITY OF 98% AT OPTIMAL MOISTURE CONTENT. FILLING OF FILL OR COMPACTED MATERIAL SHALL BE OBSERVED BY A GEOLOGICAL ENGINEER PRIOR TO THE CONSTRUCTION OF BUILDINGS AND/OR DRIVEWAYS ON THE GRADING AREA. THE GEOLOGICAL ENGINEER SHALL PROVIDE A STATEMENT OF THE SUITABILITY OF THE GRADING ACTIVITIES IN THESE AREAS FOR THE INTENDED FUTURE USE OF THESE AREAS.

NOTE:
 CENTER HOMES WILL REMOVE DEVELOPMENT PLANS (PLOT PLANS) TO IN COMPLIANCE WITH THE DEVELOPMENT PLANS. LIMITS OF CLEARING AND GRADING ACTIVITIES NECESSARY TO ACHIEVE APPROPRIATE SURFACE RUNOFF FOR THE GROUP OF LOTS. THESE DEVELOPMENT PLANS WILL BE PROVIDED WITH THE SUBMITTAL. THE DEVELOPMENT PLANS SHALL BE OBSERVED BY THE RESIDENTIAL STRUCTURES UPON THESE LOTS AND SHALL BE SUBJECT TO APPROVAL BY THE COUNTY ENGINEER.

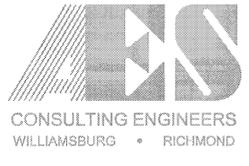
No.	DATE	REVISION / COMMENT / NOTE	BY
2	7/27/11	REVISED BMP AS-BUILT DWGS.	JFS
1	2/09/09	BMP AS-BUILT DWGS.	MC
8	08/07	REVISED PER JCC ENVIRONMENTAL COMMENTS 8/13/07	JAG
7	06/07	REVISED PER JCC COMMENTS 3/07 THROUGH 5/07	JAG
6	02/07	REVISED PER JCC COMMENTS 11/06 THROUGH 1/07	JAG
5	10/06	REVISED PER JCC COMMENTS 8/06 THROUGH 10/06	JAG
4	2/06	REVISED PER JCC COMMENTS 11/05 THROUGH 1/06	VMB
3	10/05	REVISED PER JCC COMMENTS 8/06	VMB
2	4/05	REVISED PER JCC COMMENTS 2/17/05	VMB

THE STORM DRAINAGE AS-BUILT LOCATIONS AND GRADES SHOWN ON THESE DRAWINGS, ARE ACCURATE AND BELIEF AND I CERTIFY THAT I, OR MY AGENT, HAVE MADE SUFFICIENT INSPECTION TO ENSURE THE ACCURACY OF THIS STATEMENT.

THOMAS C. SUBLETT
 DATE



GRADING AND DRAINAGE PLAN
MARYWOOD SUBDIVISION
 JAMES TOWN DISTRICT JAMES CITY COUNTY VIRGINIA



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



Designed	JAG/ALR
Checked	JAG/ALR
Scale	1" = 50'
Project No.	9222
Drawing No.	22

