



CERTIFICATE OF AUTHENTICITY

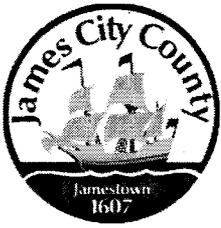
THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMW ATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND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

BMPNUMBER: 99141

DATE VERIFIED: May 12, 2016

QUALITY ASSURANCE TECHNICIAN: Charles E. Lovett II

LOCATION: WILLIAMSBURG, VIRGINIA



Stormwater Division

MEMORANDUM

DATE: March 5, 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: ~~██████████~~ **99141**

PIN: 3840100055

Subdivision, Tract, Business or Owner

Name (if known):

United States Postal Service

Property Description:

Site Address:

(For internal use only)

Box

024

Drawer: 3

Agreements: (in file as of scan date)

N

Book or Doc#:

Page:

Comments

BMP no longer exists; Temporary Large Timber Check Dams were put in place by USPS, but now Langley Federal built on the property and their building is where the structure was once located.

**James City County, Virginia
Environmental Division
Stormwater Management Program**

**Stormwater Management Design Plan
Staff "Quick" Review**

Plan No. SP 63 00 Date/Time: 06/16/00 12:34pm
 Project Name: United States Parcel Service - Monticello Branch
 Rough Location: Monticello Ave Ext., 2000' East Intx. of M.A.E. + V3199
 ADC Map: Sheet 5 Grid: H - 8 First Review
 Flood Map / Zone: 510201- 00 35B Zone: X Review 08/28/00 9:00am
 Description: outside 500-year Floodplain
 Drainage Area: Onsite Only Offsite Only Combination of Both

Drainage Area:
Submitted:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input checked="" type="checkbox"/> Demolition Plan (if applicable) | Sheets: <u>C 2.00</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Site, Geometric or Layout Plan | Sheets: <u>C 3.00</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Grading Plan | Sheets: <u>C 4.00</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Storm Drainage Plan | Sheets: <u>C 4.00</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> E&SC Plan | Sheets: <u>C 5.00 (Phase I & Phase II)</u> |
| <input type="checkbox"/> | <input type="checkbox"/> Environmental Inventory | Sheets: C 6.00 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Note & Detail Sheets | Sheets: <u>C 6.00, C 7.00, C 8.00, C 9.00</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Drainage Map(s) | <u>Report 5/17/00</u> |
| <input type="checkbox"/> | <input type="checkbox"/> Soils Map | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> E&SC and SWM plan checklists. | <u>LANDSCAPE PLAN L1.00 +</u> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> E&SC Design Report (Attachment). | <u>+ DETAILS L2.00</u> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> E&SC and Stormwater Management / Drainage Narrative. | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> Stormwater Management Design Report (Attachment). | <u>Report 5/17/00.</u> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> Geotechnical Report (Attachment). | <u>DATED MARCH 17, 2000 (PSI, INC. 239-05006)</u> |
| <input type="checkbox"/> | <input type="checkbox"/> Waivers, Variances, Exceptions included (Attachments in Writing). | |
| <input type="checkbox"/> | <input type="checkbox"/> VESCH <input type="checkbox"/> CBPO (RPA, Steep Slope) <input type="checkbox"/> Other: | |
| <input type="checkbox"/> | Other (List): <u>ADJ SIMULT. DEV. ON ADVANCED VISION INSTITUTE SITE (AVI SP-41-00)</u> | |

JCC GIS Database: Zoning: M - 1 Tax Parcel ID: Limited Business
 Receiving Water: Powhatan CREEK VIA CHISEL RUN Site Acreage: 33.5 acres / s.f.

Other Known Approvals:
Site Plan Information:

Owner: _____
 Zoning: M - 1 Description: Limited Business Industrial
 Site Area: 4.55 acres / s.f.
 Disturbed Area: 4.32 acres / s.f. (95.0%)
 Disturbance > 5 acres, NPDES Notice of Intent required.
 Impervious Cover: 2.693 (117288) acres / s.f. (59.18%)
 Less than or equal to 60 percent. Meets CBPO requirements.
 More than 60 percent. Does Not Meet CBPO requirements.
 Open / Green Space: 1.857 (80910^{sq}) acres / s.f. (40.82%) }> 100%

Site Development Plan:

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Residential, Lots, etc. | <input type="checkbox"/> Commercial (B / O / R) | <input checked="" type="checkbox"/> Govern./Institutional | <input type="checkbox"/> Industrial |
| <input checked="" type="checkbox"/> Roadways or Entrances | <input checked="" type="checkbox"/> Parking or Loading | <input checked="" type="checkbox"/> Water | <input checked="" type="checkbox"/> Sanitary Sewer |
| <input checked="" type="checkbox"/> Landscaping | <input type="checkbox"/> SWM/BMP facilities | <input checked="" type="checkbox"/> Manmade Drainage | <input type="checkbox"/> Parks, Amenities |
| <input checked="" type="checkbox"/> Pump/Lift Station
<u>(Grinder Pump)</u> | <input type="checkbox"/> Dams (regulated) | <input type="checkbox"/> Other, <u>curb + gutter parking, retaining walls</u> | |



Offices in Virginia Beach, Virginia and Atlanta, Georgia

October 3, 2001

Mr. Scott J. Thomas, P.E.
Civil Engineer
James City County
101 Mounts Bay Road
P.O. Box 8784
Williamsburg, VA 23187-8784



VIA FACSIMILE
(757) 259-4032

Re: Monticello Post Office
Monticello Avenue
Williamsburg, Virginia
TAF Job No. 90672D

Dear Scott:

This letter is to certify that I am a licensed engineer in the State of Virginia. To the best of my knowledge, information, and belief, the structure, embankment and associated appurtenances for the check dams constructed on the north side of Monticello Avenue appear to be in general conformance with the approved construction plans entitled *United States Postal Service, Monticello Branch*. On September 26, 2001, our field personnel inspected the constructed check dams and they appeared to be consistent with the plan documents.

Thank you for your help in this matter. If you have any questions regarding this submittal, please contact our office.

Sincerely,
The TAF Group

Scott W. Smith, PE

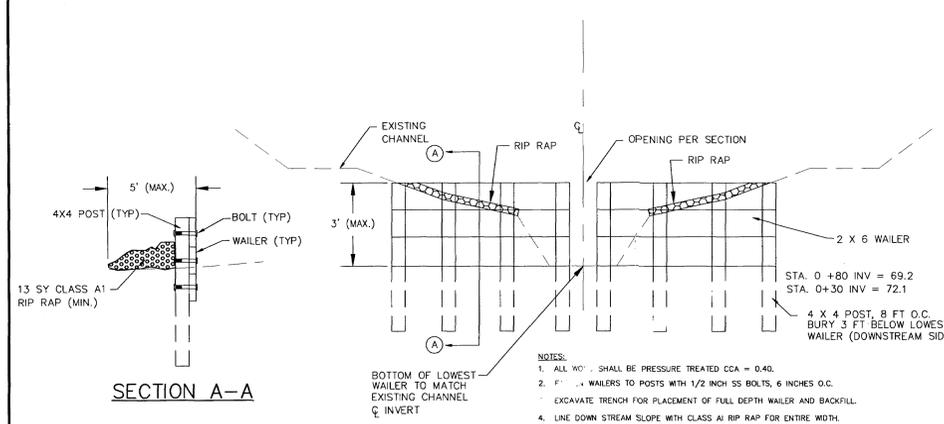
Enclosures

c: Mr. Skip Hughes, Hudgins Contracting Corp.
Mr. Mike Kuebler, Kuebler Builders
John Martino, The TAF Group

X:\WINWORD\990672d_WPO\st100301.doc

100 Landmark Square • Virginia Beach, Virginia 23452 • Phone 757.340.5055 • Fax 757.340.1083 • tafgroup.com

PC 138
SP-63-00

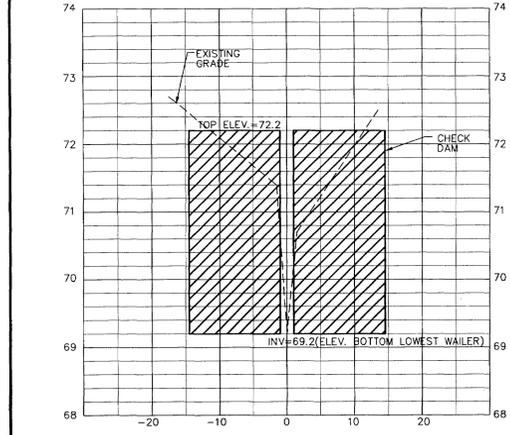


CHECKDAM MAINTENANCE SCHEDULE

- ① OWNER SHALL INSPECT CHECKDAM ON A QUARTERLY BASIS.
- ② REMOVE ANY DEBRIS THAT HAS ACCUMULATED BEHIND CHECKDAM.
- ③ MAKE REPAIR CORRECTIONS TO CHECKDAMS AS REQUIRED.

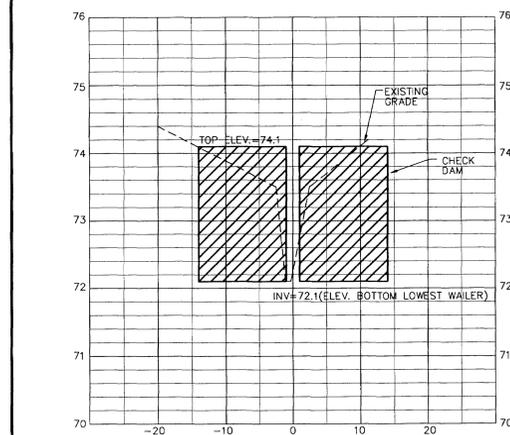
- NOTES:**
1. ALL 4" X 4" SHALL BE PRESSURE TREATED CCA = 0.40.
 2. 2" X 6" WAILERS TO POSTS WITH 1/2 INCH SS BOLTS, 6 INCHES O.C.
 3. EXCAVATE TRENCH FOR PLACEMENT OF FULL DEPTH WAILER AND BACKFILL.
 4. LINE DOWN STREAM SLOPE WITH CLASS A1 RIP RAP FOR ENTIRE WIDTH.
 5. DO NOT PLACE RIP RAP IN MAIN CHANNEL BOTTOM. CONSTRUCTION OF CHECKDAMS SHALL NOT IMPERE FOR MOVEMENTS OR NORMAL FLOW CONDITIONS.
 6. UPON COMPLETION, THE CONSTRUCTION OF CHECK DAMS WILL BE CERTIFIED BY A PROFESSIONAL ENGINEER WHO HAS INSPECTED THE STRUCTURE DURING CONSTRUCTION.
 7. ALL MATERIALS FOR CHECK DAMS SHALL HAND PLACED.

- EROSION CONTROL & SITE ACCESS**
1. LIMIT OF DISTURBANCE IN WETLANDS SHALL BE THE FOOTPRINT OF CHECK DAM.
 2. ACCESS TO CHECK DAMS WILL BE LIMITED TO FOOT TRAFFIC.
 3. CONTRACTOR SHALL CONTROL ALL DENIED AREAS AS SHOWN WITH SALT FENCE & SEEDING AS NECESSARY.
 4. INSTALLATION OF TREE PROTECTION & SILT FENCE AROUND WETLAND AREAS SHALL BE FIRST STEP OF CONSTRUCTION.
 5. WHEN CONSTRUCTION IS COMPLETE REMOVE ALL EAS DEVICES.



- NOTES:**
1. TOP LENGTH OF TOTAL CHECK DAM = 29 FT.
 2. OPENING WIDTH = 2 FT, OPENING HEIGHT = 3 FT.

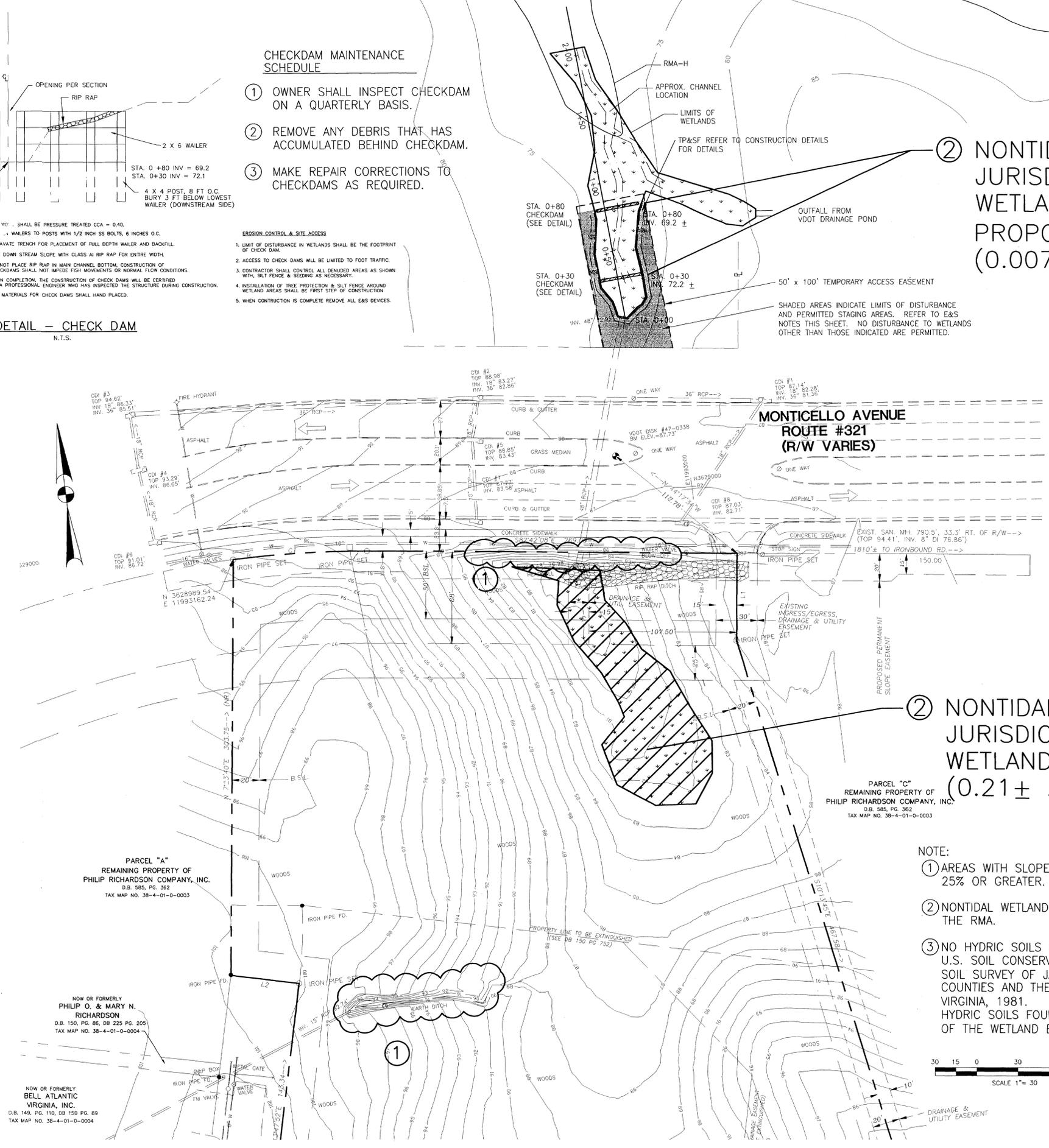
0+80



- NOTES:**
1. TOP LENGTH OF TOTAL CHECK DAM = 28 FT.
 2. OPENING WIDTH = 2 FT, OPENING HEIGHT = 2 FT.

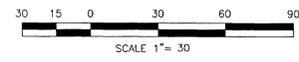
0+30

- SURVEY NOTES**
1. BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY A.D. POTTS & ASSOCIATES, INC.
 2. THE UNDERGROUND UTILITY LINES SHOWN ON THIS DRAWING ARE BASED UPON THE BEST INFORMATION AVAILABLE TO THE SURVEYOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN THE EXACT LOCATION OF THE UTILITY SHOWN AND TO ASCERTAIN THE LOCATION OF OTHER UTILITIES NOT SHOWN HEREON.
 3. WETLAND BOUNDARY FIELD LOCATED BY THE TAF GROUP AND NOT SURVEYED.
 4. CONTOUR DATA ON NORTH SIDE OF MONTICELLO AVE. TAKEN FROM COUNTY TOPOGRAPHICAL MAP.
 5. INVERT DATA FOR CHANNEL ON NORTH SIDE OF MONTICELLO AVE. WAS FIELD LOCATED.



② NONTIDAL JURISDICTIONAL WETLANDS (0.21± AC.)

- NOTE:**
- ① AREAS WITH SLOPES 25% OR GREATER.
 - ② NONTIDAL WETLANDS IN THE RMA.
 - ③ NO HYDRIC SOILS ON SITE AS PER U.S. SOIL CONSERVATION SERVICE SOIL SURVEY OF JAMES CITY AND YORK COUNTIES AND THE CITY OF WILLIAMSBURG VIRGINIA, 1981. HYDRIC SOILS FOUND WITHIN LIMITS OF THE WETLAND BOUNDARY.



**United States Postal Service
Monticello Post Office
Williamsburg, Virginia**

Addendum to Design Calculations and Design Narrative to Support Downstream Check Dam Structures

**November 17, 2000
By: SWS**

At the request of James City County, we provide the following analysis of the stability of the Class A1 riprap downstream of the check dams.

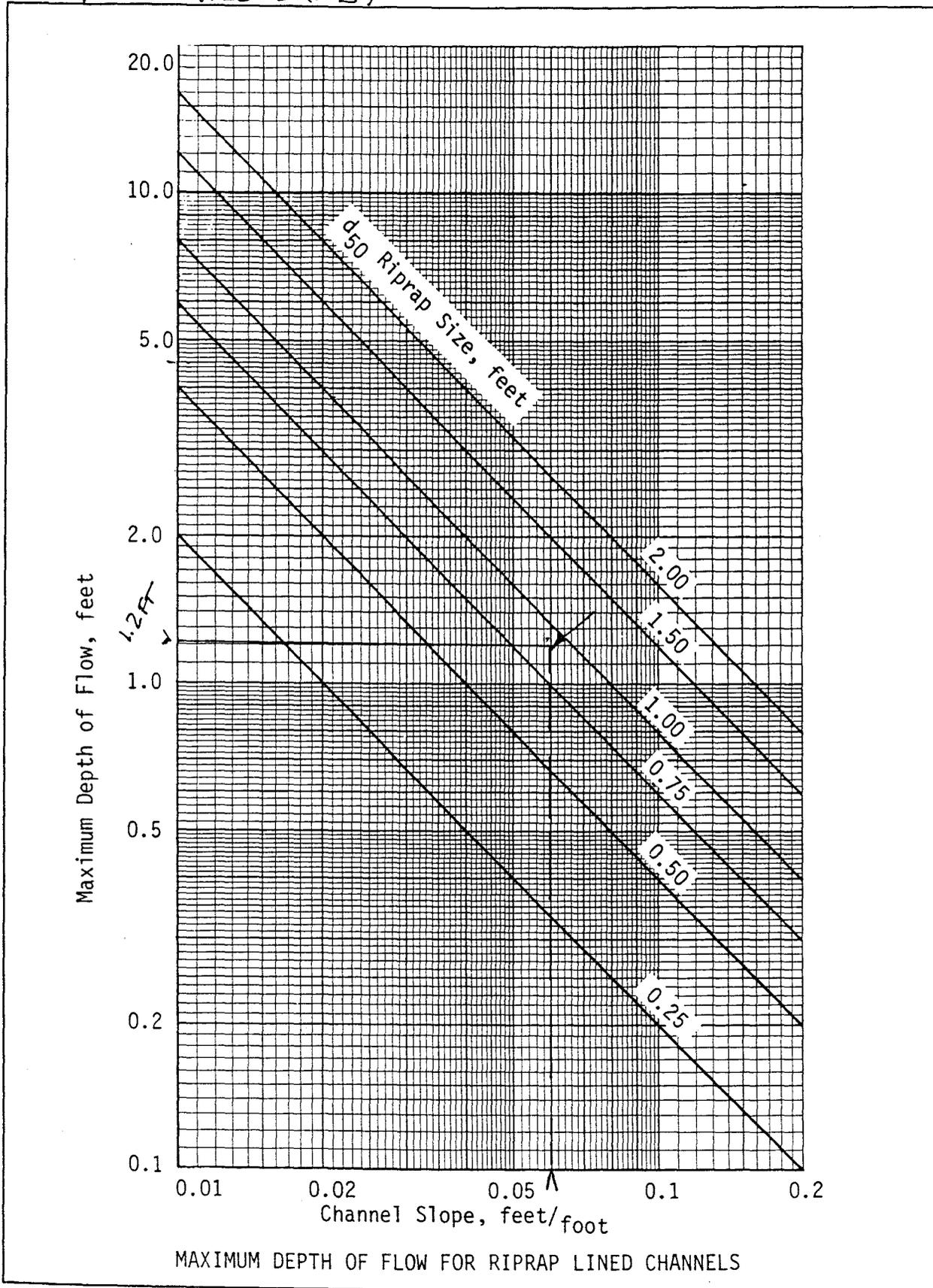
Methodology

Assumptions:

- Riprap located only in over-bank area and not main channel section.
- Primary velocity and shear stress associated with flow through check dams will occur in the main channel and not in over-bank areas.
- Design to 10-Year event.
- $Q_{10} = 50$ CFS (from drainage calculations).
- Maximum Depth of flow in over-bank areas is one foot by inspection of the typical check dam detail.
- Channel Slope is 0.06 ft/ft (from plan ENV 1.00).
- VDOT Class A1 rip rap: $D_{15} = 0.7$ ft, $D_{50} = 0.90$ ft.

Therefore, from VESCH plate 5-31, riprap is ok for given flow conditions up to depth of 1.2 ft (see attached).

(FOR CHECK DAMS)



Source: VDOT Drainage Manual

Plate 3.19-3

ENVIRONMENTAL DIVISION REVIEW COMMENTS
MONTICELLO BRANCH POST OFFICE
PLAN NO. SP - 63 - 00
October 5, 2000

SJT/DEC

The Environmental Division has performed a cursory review of the erosion and sediment control and stormwater drainage plan revisions for onsite and anticipated offsite (check dam) activities associated with the Monticello Branch Post Office site. Although site development is considered under federal project status, the following would be our comments related to erosion and sediment control and stormwater management/drainage, if the plan was under normal County plan review status.

General Comments:

- ✓ 1. Wetlands. Provide evidence that any necessary wetlands permits have been obtained for the 0.21 acres of onsite and 0.007 acre of offsite jurisdictional wetlands impacted for the project. Typically, issuance of a land disturbance permit would not occur until wetland permits required by federal, state and county laws and regulations were obtained and evidence of such submitted to the Environmental Division. Refer to Section 23-9(b)(8) of the Chapter 23 Chesapeake Bay Preservation ordinance.

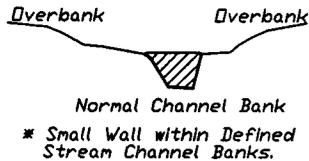
Offsite Activities:

Note: These comments pertain specifically to Plan Sheet ENV1.00, which was a first submission to the County for work associated with the offsite check dams as provided to meet stream channel protection criteria.

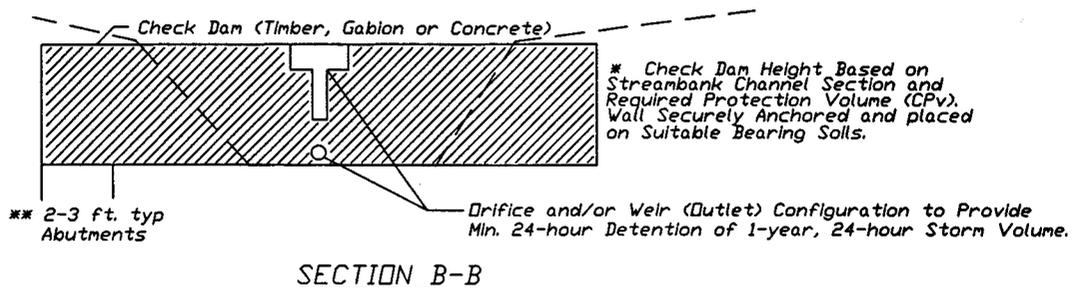
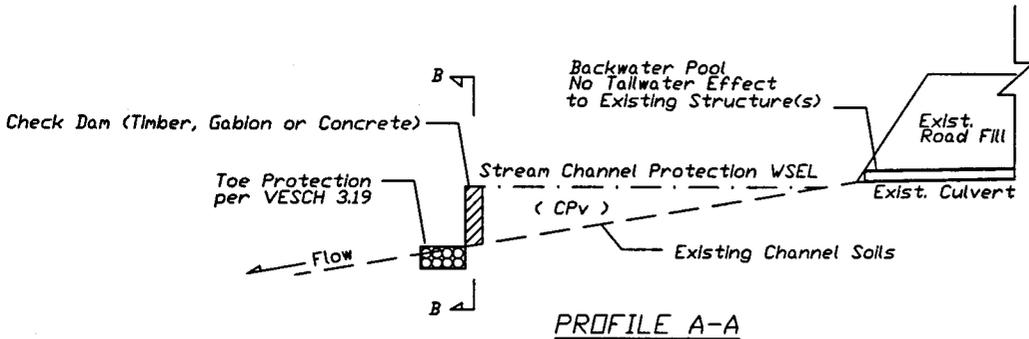
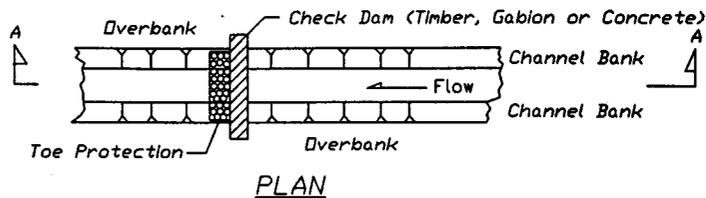
- ✓ 2. E&SC Plan. An erosion and sediment control plan was not presented on Sheet ENV 1.00 for work activities associated with offsite check dams. Show a clear limit of work for these facilities.
- ✓ 3. Access. Indicate if access to the check dam work area is proposed directly off of Monticello Avenue at the 50' x 100' temporary access easement location. Direct access from Monticello Avenue to the temporary easement area at this location may not be feasible due to steep embankment (fill) slopes present.
- ✓ 4. Backwater Pool Impacts. Based on Section 0+30 on Sheet ENV1.00, the proposed top of check dam elevation appears to be at El. 74.1 ±. Larger storm event pooling to this elevation could impact and create an unanticipated tailwater condition at the outlet end of the 48 inch diameter VDOT culvert across Monticello Avenue (invert out 72.95). Provide further information to show a tailwater depth of 1.15 feet will not have an adverse impact on the design and function of this road cross-culvert. (*Note: VDOT review and approval may be necessary due to this situation*).
- ✓ 5. Check Dams. Clearly show the proposed top of check dam elevations on Section 0+30 and 0+80 on Sheet ENV1.00.
- ✓ 6. Check Dams. Indicate a invert elevation match point between the typical check dam detail, Section A-A and Section 0+30 and 0+80 on Sheet ENV1.00. It appears the check dam invert elevations as shown on Section 0+30 and 0+80 would match the lowest 2 x 6 wailer (wale) bottom and not bottom of the 4 x 4 posts.
- ✓ 7. Toe Protection. Provide evidence to support use of Class A1 riprap as toe protection downstream of the timber check dams. If weir flow occurs over the top of the check dams, ensure the riprap will not wash downstream.
- ✓ 8. Maintenance Schedule. Address sediment removal requirements behind the check dams in the maintenance schedule on Sheet ENV1.00. See Minimum Standard & Specification 3.13 of the Virginia Stormwater Management Handbook (Page 3.13-14).

CHECK DAM FOR STREAM CHANNEL PROTECTION

NO SCALE



TYPICAL ARRANGEMENT



SPECIFICATIONS:

1. CHECK DAM - Check dams shall be constructed of non-erosive, durable material such as treated wood, gabions, riprap or concrete and underlain on suitable soils with filter fabric in accordance with Minimum Std & Spec. 3.19 of the VESCH.

WOOD - Pressure Treated 4 x 4 or larger timbers, logs or water-resistant tree species such as cedar, hemlock, swamp oak or locust, securely anchored in place.

GABIONS - Hexagonal twisted (woven) or welded mesh with Epoxy or PVC coating galvanized steel wire. Maximum linear dimension of mesh opening shall not exceed 4.5 inches. Area of mesh opening not to exceed 10 square inches. Rock shall consist of field stone or rough unhewn quarry stone that will not disintegrate with exposure. Gabion baskets or mattresses shall have sufficient size, weight and fasteners for application.

CONCRETE - Reinforced concrete with engineered base. Minimum 8-inch wall width.

2. TOE PROTECTION - Engineered riprap placed over suitable geotextile fabric. Minimum Class I riprap recommended in accordance with Minimum Std. & Spec. 3.19 of the VESCH.

MAINTENANCE:

CHECK DAM maintenance shall be in accordance with the provisions of Minimum Std. & Spec. 3.13 of the Virginia Stormwater Management Handbook, latest edition for grassed swale check dams. Adequate provisions for access and maintenance shall be provided at all times.

OTHER PERMITS:

1. USACOE and Virginia DEQ Wetland Permit may be required due access, structure and backwater pool impacts.
2. Land-Disturbance, Erosion and Sediment Control and Stormwater Management Plan Approval as required.

From: Scott W. Smith [swsmith@tafgroup.com]
Sent: Tuesday, October 31, 2000 3:09 PM
To: scottt@james-city.va.us
Cc: Greg Wilda
Subject: RE: JCC Env Div Comm SP-63-00

Scott,

Sorry for my delayed response but we have been on hold while we awaited final Corps approval for the disturbance. We will forward the permits to your office once they are in place. We will also begin processing the requested changes and forward a revised Environmental Inventory and response letter to you when complete.

Regarding Item No. 8:

Our Corps permit will allow us to impact the wetlands in the area of the footprint of the structure. These are the only areas permitted for disturbance and mitigated for at a ratio of 2:1. Our Corps Wetland permit will not allow us to remove sediment behind the check dams as this would disturb additional wetlands. As a result, we only plan to call for removal of brush and debris from behind the check dam as part of the maintenance for this structure. We trust that this will meet the requirements of James City County.

Thanks,

Scott W. Smith, PE
The TAF Group
(757) 340-5055
swsmith@tafgroup.com

> -----Original Message-----

> From: scottt@james-city.va.us [SMTP:scottt@james-city.va.us]
> Sent: Friday, October 06, 2000 4:41 PM
> To: swsmith@tafgroup.com
> Subject: RE: JCC Env Div Comm SP-63-00

> Scott

> These are my informal responses/clarification based on your email to me today.

> I agree the offsite check dams are low-tech and you do not wish to complicate the design. However, an adequate erosion & sediment control

> plan and maintenance plan are needed for the concept to be a success.

> #2. The work involves disturbance, therefore it requires an E&SC plan.

> Reference to the contractor as being responsible for providing E&SC does

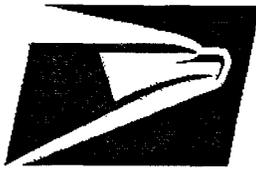
> not

> provide for any type of enforcement. There needs to be a core plan of

> measures to follow. Considering the downstream wetland area is of
> primary
> concern and need protected and the relative simplicity of the work, the
> plan
> could be a narrative, construction sequence or series of notes
> outlining
> proposed control and/or stabilization measures. Also, I am more
> concerned
> with erosion and sediment caused by access due to slopes involved
> rather
> than the CD work area itself. It needs addressed in some fashion.
>
> #3. My concern is that access will not be directly off of Monticello
> at
> the
> easement (perpendicular), but along the toe of road fill to the
> temporary
> easement location. This would possibly involve more clearing,
> disturbance,
> etc. Common sense needs to be applied to where the check dam work
> area
> will
> be accessed from and what E&SC measures may need to be implemented.
>
> #4. Removing the first CD is one option. This is for you to address.
>
> #5. OK.
>
> #6. This is a clarification to eliminate confusion on the plans. Is
> the
> invert elev at bottom of wale or bottom of post.
>
> #7. I feel use of heavier riprap may prevent loss of the riprap
> downstream.
>
> #8. I agree that they are not E&SC devices. However they are
> interim/permanent stormwater management facilities and I disagree that
> sediment evaluation/removal is not a necessary part of the maintenance
> plan.
> The backwater pool has already technically impacted delineated
> wetlands.
> Function of the facility as a stream channel protection control is
> primarily
> based on providing storage volume behind the CD. If that volume is
> not
> there, then the basic function/principle is lost. If not maintained
> in
> some
> fashion and flows consistently tend to flow over the wall more than
> through
> the wall in a throttled fashion, downstream erosion may even be
> accelerated.
> An important aspect of success of these facilities is provisions for
> some
> sort of long-term plan for maintenance, even if it is just observation
> of
> sediment depth at a defined interval (yearly, etc.) and assessment of
> its
> impact on the function of the facility.
>
> Scott
>
> -----Original Message-----
> From: Scott W. Smith [mailto:swsmith@tafgroup.com]
> Sent: Friday, October 06, 2000 9:57 AM
> To: scottt@james-city.va.us
> Cc: Jennifer Beiro-Reveille (E-mail)

> Subject: RE: JCC Env Div Comm SP-63-00
>
>
> Scott,
>
> Thank you for your comments on the off-site check dams. Please
provide
> clarification to the following (numbered items correspond to your
> comments):
>
> 2. We can add a note that the contractor will provide E&S control in
> accordance with VESCH standards and that disturbance will be limited
to
> the
> area of the check dams. Is that acceptable? We do not foresee a
large
> disturbance here. Also, even if we were to propose silt fence or some
> other
> device, I am not sure how much good it would do since the disturbance
is
> so
> insignificant and a large event would wash it away. We would propose
the
> above referenced notes only.
> 3. Access will be from Monticello through the easement. The
contractor
> will have to do a lot of the work by hand to limit disturbance to
wetland
> areas. We will add a note about staying out of the wetland. We want
to
> allow the contractor some flexibility here.
> 4. We propose eliminating the first check dam.
> 5. We will comply.
> 6. We will review.
> 7. We will provide a calculation.
> 8. We advise against the sediment removal. This is not an E&S device
and
> these are wetlands. We wish to minimize impacts here to the natural
> state.
> The stream will again seek its own stabilized flow patterns and this
will
> not be necessary.
>
> Please respond to the above for clarification and we will revise the
> documents as necessary. As a general comment, we feel that this is a
> low-tech device and do not wish to complicate the design too much.
>
> > -----Original Message-----
> > From: scottt@james-city.va.us [SMTP:scottt@james-city.va.us]
> > Sent: Friday, October 06, 2000 9:36 AM
> > To: swsmith@tafgroup.com
> > Cc: schmidle@james-city.va.us; decook@james-city.va.us;
> > jtphorne@james-city.va.us
> > Subject: JCC Env Div Comm SP-63-00
> >
> > Scott W. Smith, PE
> > The TAF Group
> >
> > Attached are advance JCC Environmental Division comments pertaining
to
> the
> > Monticello Branch Post Office (County Plan SP-63-00) along
Monticello
> > Avenue
> > Extended. Please note that comments pertaining to the offsite check
> dams
> > were based on a review of Sheet ENV1.00. This plan was a first

> submittal
> > to
> > our office showing work for these activities.
> >
> > <<SP-063-00.2.wpd>> <<SP-063-00.2.txt>>
> >
> > Please call me at 757-253-6639 or Darryl Cook at 757-253-6673 if you
> have
> > any questions or comments pertaining to the Environmental Division
> > comments.
> >
> > (Note: Comments are provided in both Wordperfect v 9.0 and text
format.
> > Will also followup with a hard copy fax.)
> >
> > Scott J. Thomas
> > James City County, Va.
> > Environmental Division
> >
> > << File: SP-063-00.2.wpd >> << File: SP-063-00.2.txt >>



**UNITED STATES
POSTAL SERVICE**



**United States Postal Service
Monticello Branch
Williamsburg, Virginia**

Design Calculations

**TAF Job No. 980672D
May 17, 2000**



Prepared By:

The TAF Group
100 Landmark Square
Virginia Beach, VA 23452
Phone (757) 3405055
Fax (757) 422-3882

Revised: August 14, 2000

2ND SUBMISSION

Contents

Narrative and Background Data

Storm Water Design

Water Design

Sewer Pump Station Design

Pavement Design

Erosion Control Design and Soils Map

Keystone Wall Design (Not Included)

Appendix A – Geotechnical Report (Not Included)

**NARRATIVE AND
BACKGROUND DATA**

Design Narrative

United States Postal Service
Monticello Station
SWS – 5/17/2000
Revised: 8/14/00

Storm Water Design:

We have provided design calculations for the proposed storm water drainage system for this project. The calculations were performed using a computer-modeling program named "Hydraflow". The calculations include a capacity analysis of the existing, VDOT maintained 48" RCP culvert under Monticello. The existing system was found to have adequate capacity to support the additional runoff due to urbanization on-site. Additionally we have provided hydraulic grade line analysis and inlet capacity analysis.

The storm water system for the site has been designed to incorporate significant off-site flows flowing through the project. We have intercepted these off-site flows and incorporated them into the proposed closed storm system. We have provided storm drainage easements for these storm drainage lines. The storm flows from Bell Atlantic and New Quarter Drive on the southwest side of the site currently drain on-site through an existing 18" RCP. The proposed storm system will intercept this flow and divert it around the Post Office on the west side of the building. Drainage from Cox Cable and Virginia Power also drain through the site. We have intercepted these flows with a rip rap ditch connecting to a drop inlet. This drainage will divert around the proposed Post Office on the east side through a new closed system.

We have included for the purposes of design an additional 5.53 acres entering the system from off-site areas draining through the AVI property (church flow). This acreage has been verified with the design engineers for AVI. Additionally, we have included a flow of 11.71 cfs entering from the property to the west. This value is in excess of the anticipated post-developed runoff for that 2.0 acre parcel and therefore adequate. The 10-year post developed flow from that property can be assumed to be 8.26 cfs (2.0 ac X 0.7 x 5.9 in/hr).

CBPA:

Storm water quality treatment for this site is not required and will be provided by a future regional facility to be constructed by others on the New Town planned development.

Storm Water Management:

Storm water management will be provided either off-site by a timber check dam or on-site by a storm water management facility. The Post Office is currently under negotiation with the adjacent landowner to the north for an easement to construct a timber check dam.

Water Design:

We have provided a sizing of the anticipated water meter for this site using the AWWA Meter Sizing Methodology. Please refer to the included design calculations.

Erosion Control:

Erosion control will be provided on-site by a temporary culvert sediment trap, silt fence, inlet protection, and other erosion control devices. A detailed construction sequence to control erosive areas and bypass off-site areas draining through the site has been provided.

Sewer:

Sewer service for this project will be provided by a package pump station. The pump station will connect to an existing 4-inch, James City Service Authority force main on New Quarter Drive. The pump station will be a two (2) HP, grinder, duplex pump station with adequate capacity to pump against varied head conditions on the 4-inch county force main. In addition to the Post Office, five (5) other users connect to this force main. The TAF Group performed a field study to approximate the peak flows for each of the users along with their pumping rates to determine head conditions. The attached calculations summarize the flow conditions anticipated for this development.

STORM WATER DESIGN

WEIGHTED DRAINAGE COEFFICIENTS
SYSTEM IDENTIFICATION POINTS

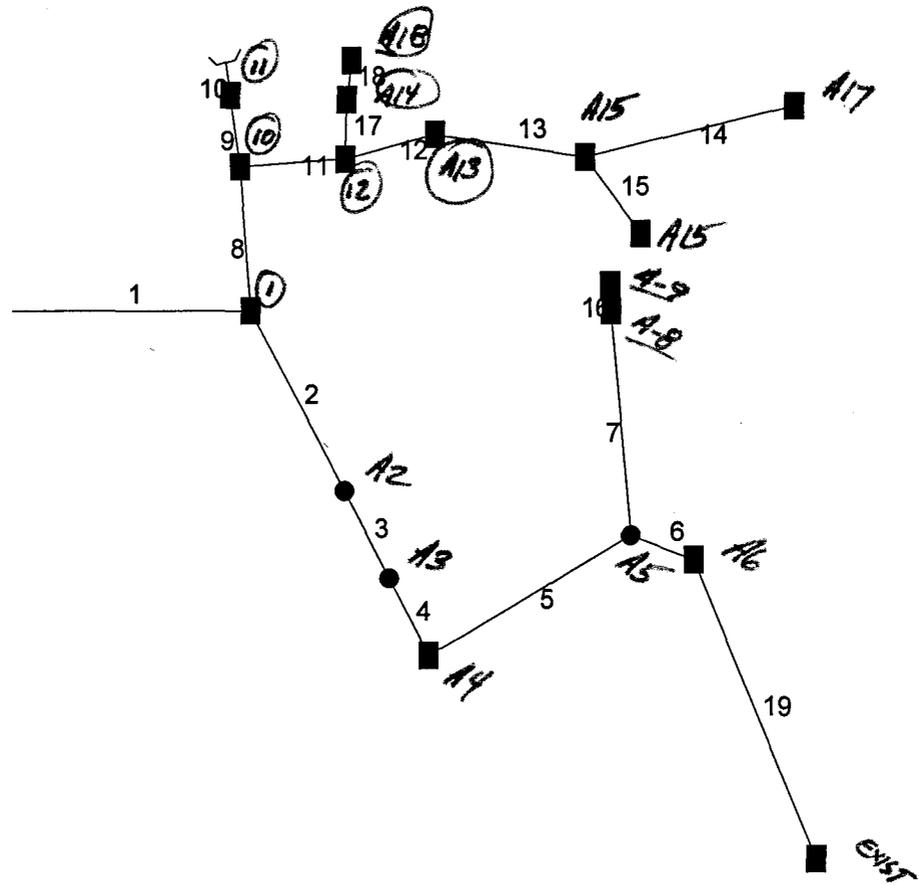
Item	Unit	A1	A3	A4	A6	A7	A8	A9	A10	A11	A12
Pavement	sf	0.0	0.0	4584.0	2076.0	8224.2	19999.0	273.1	4517.5	21710.2	3238.9
Grass	sf	21206.1	0.0	9432.0	7722.6	6495.3	2278.9	0.0	1689.2	39241.2	940.5
Concrete	sf	1780.8	0.0	0.0	615.2	0.0	754.3	1087.3	1882.0	2219.7	836.7
Roof	sf	0.0	30766.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area	acres	0.528	0.706	0.322	0.239	0.338	0.529	0.031	0.186	1.450	0.115
Pavement Coeff.	0.9	0.000	0.000	0.095	0.043	0.170	0.413	0.006	0.093	0.449	0.067
Grass Coeff.	0.2	0.097	0.000	0.043	0.035	0.030	0.010	0.000	0.008	0.180	0.004
Concrete Coeff.	0.9	0.037	0.000	0.000	0.013	0.000	0.016	0.022	0.039	0.046	0.017
Roof Coeff.	0.9	0.000	0.636	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CA		0.134	0.636	0.138	0.091	0.200	0.439	0.028	0.140	0.675	0.089
Average "C"		0.254	0.900	0.429	0.381	0.591	0.831	0.900	0.754	0.465	0.769

Item	Unit	A13	A14	A15	A16	A17	A18	EX-DI
Pavement	sf	2765.1	9202.0	13384.3	20301.9	169593.7	4356.2	82089.4
Grass	sf	275.8	6704.9	6316.7	12713.4	67837.5	26493.9	6314.6
Concrete	sf	251.9	452.5	0.0	1210.8	0.0	273.8	0.0
Roof	sf	0.0	0.0	0.0	0.0	0.0	13486.3	0.0
Area	acres	0.076	0.376	0.452	0.786	5.451	1.024	2.029
Pavement Coeff.	0.9	0.057	0.190	0.277	0.419	3.504	0.090	1.696
Grass Coeff.	0.2	0.001	0.031	0.029	0.058	0.311	0.122	0.029
Concrete Coeff.	0.9	0.005	0.009	0.000	0.025	0.000	0.006	0.000
Roof Coeff.	0.9	0.000	0.000	0.000	0.000	0.000	0.279	0.000
CA		0.064	0.230	0.306	0.503	3.815	0.496	1.725
Average "C"		0.841	0.613	0.676	0.640	0.700	0.484	0.850

Total Area:
(acres) 14.637

conc area = 8256.4
pavement area= 78266
roof area= 30766
green area= 78732
total area= 196020

Hydraflow Plan View



Hydraflow Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (In/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	200.0	0.53	19.49	0.25	0.13	11.28	10.0	35.2	3.4	50.10	203.9	5.76	48	2.02	76.98	72.95	79.07	76.95	86.50	86.50	OUT-A1
2	1	135.0	0.00	3.15	0.00	0.00	2.42	0.0	12.4	5.5	25.12	29.74	5.12	30	0.53	78.19	77.48	80.90	80.39	93.00	86.50	A1-A2
3	2	65.0	0.00	3.15	0.00	0.00	2.42	0.0	12.2	5.6	25.18	29.22	6.69	30	0.51	81.10	80.77	82.89	82.57	93.50	93.00	A2-A3
4	3	57.0	0.32	3.15	0.43	0.14	2.42	10.0	12.1	5.6	13.53	16.68	5.91	24	0.54	84.00	83.69	85.36	85.06	92.72	93.50	A3-A4
5	4	184.0	0.00	2.83	0.00	0.00	2.28	0.0	11.3	5.7	13.02	15.99	4.36	24	0.50	85.02	84.10	86.72	86.18	93.68	92.72	A4-A5
6	5	55.0	0.24	2.27	0.38	0.09	1.82	10.0	10.5	5.8	10.62	16.14	3.63	24	0.51	85.40	85.12	87.07	86.99	99.50	93.68	A5-A6
7	5	137.0	0.53	0.56	0.83	0.44	0.47	10.0	10.3	5.9	2.74	4.62	2.23	15	0.51	85.82	85.12	87.24	86.99	92.70	93.68	A5-A8
8	1	88.0	0.18	15.81	0.75	0.14	8.73	10.0	34.9	3.4	29.87	51.27	4.51	36	0.59	78.00	77.48	80.49	80.39	87.88	86.50	A1-A10
9	8	44.0	1.45	6.98	0.47	0.68	2.89	10.0	34.7	3.4	9.92	15.99	5.35	24	0.50	82.00	81.78	83.13	82.93	88.10	87.88	A10-A11
10	9	20.0	5.53	5.53	0.40	2.21	2.21	34.7	34.7	3.4	7.59	14.44	8.88	15	5.00	85.25	84.25	87.00	84.91	88.25	88.10	STUB-A11
11	8	89.0	0.12	8.65	0.77	0.09	5.70	10.0	11.0	5.8	32.79	49.49	4.89	36	0.55	78.59	78.10	81.15	81.02	91.64	87.88	A10-A12
12	11	77.0	0.08	7.13	0.84	0.07	4.89	10.0	10.8	5.8	28.29	28.81	5.76	30	0.49	79.07	78.69	82.12	81.76	92.88	91.64	A12-A13
13	12	127.0	0.45	7.05	0.68	0.31	4.82	10.0	10.5	5.9	28.20	29.11	5.75	30	0.50	79.94	79.30	83.09	82.48	92.78	92.88	A13-A15
14	13	178.0	5.81	5.81	0.69	4.01	4.01	10.0	10.0	5.9	23.76	29.00	6.57	30	0.50	84.63	83.74	86.34	85.48	89.50	92.78	A15-A17
15	13	66.0	0.79	0.79	0.64	0.51	0.51	10.0	10.0	5.9	3.00	4.57	2.44	15	0.50	80.37	80.04	83.79	83.65	86.50	92.78	A15-A16
16	7	16.0	0.03	0.03	0.90	0.03	0.03	10.0	10.0	5.9	0.16	0.40	0.82	6	0.50	86.00	85.92	87.29	87.28	90.39	92.70	A8-A9
17	11	36.0	0.38	1.40	0.61	0.23	0.72	10.0	10.2	5.9	4.26	7.43	2.41	18	0.50	78.87	78.69	81.82	81.76	90.11	91.64	A12-A14
18	17	24.0	1.02	1.02	0.48	0.49	0.49	10.0	10.0	5.9	2.90	4.75	2.37	15	0.54	79.10	78.97	81.91	81.86	86.50	90.11	A14-A18
19	6	208.0	2.03	2.03	0.85	1.73	1.73	10.0	10.0	5.9	10.23	11.90	7.08	18	1.28	95.93	93.26	97.15	94.34	100.03	99.50	A6-EX.DI

BY
THERS
AVI

• All-A10 Comps 24" / PLAN 10"
 • A17-A15 Comps 0.52% / PLAN 20070
 SUBURBAN AT V OK CORN PIPE

Project File: STM-REV814.stm I-D-F File: Norfolk.IDF Total number of lines: 19 Run Date: 08-14-2000

NOTES: Intensity = 193.66 / (Tc + 23.60) ^ 0.99; Return period = 10 Yrs. ; Initial tailwater elevation = 76.95 (ft) 4' ABOVE 48" CULV. INV. OUT.

Hydraflow Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	Dns line No.
1	OUT-A1	50.10	48 c	200.0	72.95	76.98	2.015	76.95	79.07	1.32	End
2	A1-A2	25.12	30 c	135.0	77.48	78.19	0.526	80.39*	80.90*	0.06	1
3	A2-A3	25.18	30 c	65.0	80.77	81.10	0.508	82.57	82.89	0.10	2
4	A3-A4	13.53	24 c	57.0	83.69	84.00	0.544	85.06	85.36	0.82	3
5	A4-A5	13.02	24 c	184.0	84.10	85.02	0.500	86.18	86.72	0.28	4
6	A5-A6	10.62	24 c	55.0	85.12	85.40	0.509	86.99	87.07	0.25	5
7	A5-A8	2.74	15 c	137.0	85.12	85.82	0.511	86.99*	87.24*	0.04	5
8	A1-A10	29.87	36 c	88.0	77.48	78.00	0.591	80.39	80.49	0.53	1
9	A10-A11	9.92	24 c	44.0	81.78	82.00	0.500	82.93	83.13	0.23	8
10	STUB-A11	7.59	15 c	20.0	84.25	85.25	5.000	84.91*	87.00*	0.59	9
11	A10-A12	32.79	36 c	89.0	78.10	78.59	0.551	81.02	81.15	0.61	8
12	A12-A13	28.29	30 c	77.0	78.69	79.07	0.494	81.76*	82.12*	0.36	11
13	A13-A15	28.20	30 c	127.0	79.30	79.94	0.504	82.48*	83.09*	0.56	12
14	A15-A17	23.76	30 c	178.0	83.74	84.63	0.500	85.48	86.34	0.68	13
15	A15-A16	3.00	15 c	66.0	80.04	80.37	0.500	83.65*	83.79*	0.09	13
16	A8-A9	0.16	6 c	16.0	85.92	86.00	0.500	87.28*	87.29*	0.01	7
17	A12-A14	4.26	18 c	36.0	78.69	78.87	0.500	81.76*	81.82*	0.05	11
18	A14-A18	2.90	15 c	24.0	78.97	79.10	0.542	81.86*	81.91*	0.09	17
19	A6-EX.DI	10.23	18 c	208.0	93.26	95.93	1.284	94.34	97.15	0.69	6

A10-A11 CONSTRAIN 18"
A15-A17 CONSTRAIN 2.00%

Project File: STM-REV814.stm

I-D-F File: Norfolk.IDF

Total No. Lines: 19

Run Date: 08-14-2000

NOTES: c = circular; e = elliptical; b = box; Return period = 10 Yrs.; * Indicates surcharge condition.

Hydraflow Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
1	End	200.0	0.0	Grate	0.00	0.53	0.25	10.0	72.95	2.02	76.98	48	Cir	0.013	1.50	86.50	OUT-A1
2	1	135.0	54.0	MH	0.00	0.00	0.00	0.0	77.48	0.53	78.19	30	Cir	0.013	0.15	93.00	A1-A2
3	2	65.0	0.0	MH	11.71	0.00	0.00	0.0	80.77	0.51	81.10	30	Cir	0.013	0.15	93.50	A2-A3
4	3	57.0	0.0	Curb	0.00	0.32	0.43	10.0	83.69	0.54	84.00	24	Cir	0.013	1.50	92.72	A3-A4
5	4	184.0	-77.0	MH	0.00	0.00	0.00	0.0	84.10	0.50	85.02	24	Cir	0.013	0.85	93.68	A4-A5
6	5	55.0	38.0	Grate	0.00	0.24	0.38	10.0	85.12	0.51	85.40	24	Cir	0.013	1.10	99.50	A5-A6
7	5	137.0	-74.0	Grate	0.00	0.53	0.83	10.0	85.12	0.51	85.82	15	Cir	0.013	0.50	92.70	A5-A8
8	1	88.0	-96.0	Comb	0.00	0.18	0.75	10.0	77.48	0.59	78.00	36	Cir	0.013	1.50	87.88	A1-A10
9	8	44.0	-5.0	Comb	0.00	1.45	0.47	10.0	81.78	0.50	82.00	24	Cir	0.013	0.50	88.10	A10-A11
10	9	20.0	0.0	Hdwl	0.00	5.53	0.40	34.7	84.25	5.00	85.25	15	Cir	0.013	1.00	88.25	STUB-A11
11	8	89.0	93.0	Curb	0.00	0.12	0.77	10.0	78.10	0.55	78.59	36	Cir	0.013	1.50	91.64	A10-A12
12	11	77.0	-8.0	Curb	0.00	0.08	0.84	10.0	78.69	0.49	79.07	30	Cir	0.013	0.70	92.88	A12-A13
13	12	127.0	17.0	Curb	0.00	0.45	0.68	10.0	79.30	0.50	79.94	30	Cir	0.013	1.10	92.78	A13-A15
14	13	178.0	-16.0	Grate	0.00	5.81	0.69	10.0	83.74	0.50	84.63	30	Cir	0.013	1.00	89.50	A15-A17
15	13	66.0	39.0	Grate	0.00	0.79	0.64	10.0	80.04	0.50	80.37	15	Cir	0.013	1.00	86.50	A15-A16
16	7	16.0	4.0	Grate	0.00	0.03	0.90	10.0	85.92	0.50	86.00	6	Cir	0.013	1.00	90.39	A8-A9
17	11	36.0	-85.0	Curb	0.00	0.38	0.61	10.0	78.69	0.50	78.87	18	Cir	0.013	0.50	90.11	A12-A14
18	17	24.0	7.0	Grate	0.00	1.02	0.48	10.0	78.97	0.54	79.10	15	Cir	0.013	1.00	86.50	A14-A18
19	6	208.0	45.0	Grate	0.00	2.03	0.85	10.0	93.26	1.28	95.93	18	Cir	0.013	1.00	100.03	A6-EX.DI

Project File: STM-REV814.stm

I-D-F File: Norfolk.IDF

Total number of lines: 19

Date: 08-14-2000

Hydraflow Hydraulic Grade Line Computations

Line	Size (in)	Q (cfs)	Downstream								Len (ft)	Upstream								Check		JL coeff (K)	Minor loss (ft)
			Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)		Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)		
1	48	50.10	72.95	76.95	4.00	12.56	3.99	0.25	77.20	0.122	200	76.98	79.07	2.09**	6.66	7.53	0.88	79.95	0.417	0.270	N/A	1.50	1.32
2	30	25.12	77.48	80.39	2.50	4.91	5.12	0.41	80.80	0.375	135	78.19	80.90	2.50	4.91	5.12	0.41	81.31	0.375	0.375	0.507	0.15	0.06
3	30	25.18	80.77	82.57	1.80*	3.78	6.66	0.69	83.26	0.502	65.0	81.10	82.89	1.79	3.75	6.71	0.70	83.59	0.510	0.506	0.329	0.15	0.10
4	24	13.53	83.69	85.06	1.37*	2.29	5.90	0.54	85.60	0.541	57.0	84.00	85.36	1.36	2.28	5.93	0.55	85.91	0.547	0.544	0.310	1.50	0.82
5	24	13.02	84.10	86.18	2.00	3.14	4.14	0.27	86.45	0.331	184	85.02	86.72	1.70	2.84	4.58	0.33	87.04	0.313	0.322	0.593	0.85	0.28
6	24	10.62	85.12	86.99	1.87	3.06	3.47	0.19	87.18	0.190	55.0	85.40	87.07	1.67	2.80	3.79	0.22	87.29	0.213	0.202	0.111	1.10	0.25
7	15	2.74	85.12	86.99	1.25	1.23	2.23	0.08	87.07	0.180	137	85.82	87.24	1.25	1.23	2.23	0.08	87.32	0.180	0.180	0.247	0.50	0.04
8	36	29.87	77.48	80.39	2.91	7.01	4.26	0.28	80.68	0.177	88.0	78.00	80.49	2.49	6.26	4.77	0.35	80.84	0.197	0.187	0.164	1.50	0.53
9	24	9.92	81.78	82.93	1.15*	1.88	5.29	0.43	83.37	0.482	44.0	82.00	83.13	1.13	1.83	5.42	0.46	83.59	0.514	0.498	0.219	0.50	0.23
10	15	7.59	84.25	84.91	0.66*	0.66	11.57	2.08	86.99	4.631	20.0	85.25	87.00	1.25	1.23	6.19	0.59	87.59	1.382	3.006	0.601	1.00	0.59
11	36	32.79	78.10	81.02	2.92	7.01	4.68	0.34	81.36	0.213	89.0	78.59	81.15	2.56	6.42	5.11	0.41	81.55	0.226	0.220	0.196	1.50	0.61
12	30	28.29	78.69	81.76	2.50	4.91	5.76	0.52	82.27	0.476	77.0	79.07	82.12	2.50	4.91	5.76	0.52	82.64	0.476	0.476	0.366	0.70	0.36
13	30	28.20	79.30	82.48	2.50	4.91	5.75	0.51	83.00	0.473	127	79.94	83.09	2.50	4.91	5.74	0.51	83.60	0.473	0.473	0.601	1.10	0.56
14	30	23.76	83.74	85.48	1.74*	3.65	6.51	0.66	86.14	0.485	178	84.63	86.34	1.71	3.58	6.64	0.68	87.03	0.508	0.497	0.884	1.00	0.68
15	15	3.00	80.04	83.65	1.25	1.23	2.44	0.09	83.74	0.216	66.0	80.37	83.79	1.25	1.23	2.44	0.09	83.88	0.215	0.215	0.142	1.00	0.09
16	6	0.16	85.92	87.28	0.50	0.20	0.82	0.01	87.29	0.082	16.0	86.00	87.29	0.50	0.20	0.82	0.01	87.30	0.081	0.081	0.013	1.00	0.01
17	18	4.26	78.69	81.76	1.50	1.77	2.41	0.09	81.85	0.164	36.0	78.87	81.82	1.50	1.77	2.41	0.09	81.91	0.164	0.164	0.059	0.50	0.05
18	15	2.90	78.97	81.86	1.25	1.23	2.37	0.09	81.95	0.202	24.0	79.10	81.91	1.25	1.23	2.37	0.09	82.00	0.202	0.202	0.048	1.00	0.09
19	18	10.23	93.26	94.34	1.08*	1.36	7.52	0.88	95.22	1.262	208	95.93	97.15	1.22**	1.54	6.64	0.69	97.84	0.961	1.112	N/A	1.00	0.69

Project File: STM-REV814.stm

I-D-F File: Norfolk.IDF

Total number of lines: 19

Run Date: 08-14-2000

NOTES: Initial tailwater elevation = 76.95 (ft) * Normal depth assumed., ** Critical depth assumed.

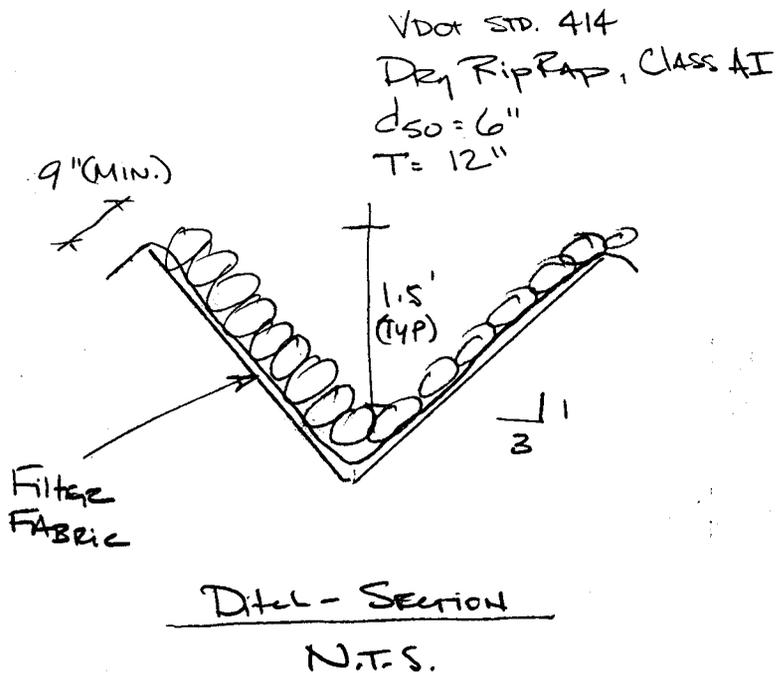
4' DEPTH @ INV. OUT.

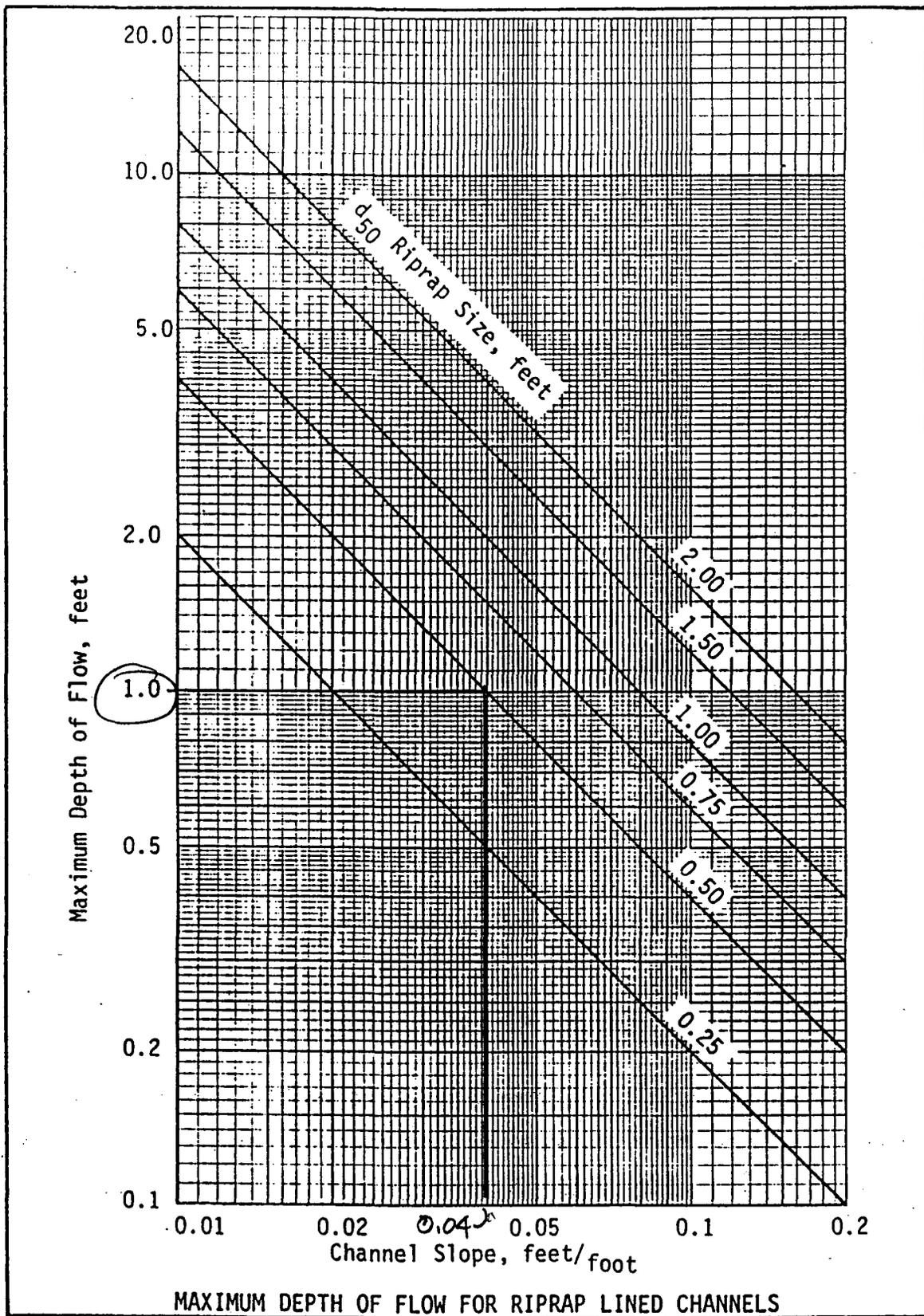
Worksheet Worksheet for Triangular Channel

Project Description	
Worksheet	Triangular Channel - 1
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.035
Slope	0.044000 ft/ft
Left Side Slope	3.00 H : V
Right Side Slope	3.00 H : V
Discharge	6.00 cfs

Results	
Depth	0.69 ft
Flow Area	1.4 ft ²
Wetted Perimete	4.35 ft
Top Width	4.13 ft
Critical Depth	0.76 ft
Critical Slope	0.026472 ft/ft
Velocity	4.22 ft/s
Velocity Head	0.28 ft
Specific Energy	0.97 ft
Froude Number	1.27
Flow Type	Supercritical





$d_{50} = 0.5 \text{ FT}$

Source: VDOT Drainage Manual

Plate 5-31

EROSION CONTROL DESIGN



Taken from the Soil Survey of James City and York Counties and the City of Williamsburg Virginia

Symbol	Name	Hydrologic Soil Group
11C	Craven	C
15E	Emporia	C
19B	Kempsville	B
25B	Norfolk	B
37	Urban Land	--



Williamsburg Post Office

Culvert Sediment Trap

Project #: 990672D
Designed By: SWS
Checked:
Date: 08/14/00

Contributing Area (ac.) =
Volume Req'd (cf) = 7127.46 (Based on 134 cy/ac.)

Area Approximation:

Volume (cf) = 3563.73
Depth, D (ft) = (4' maximum)
Pipe Invert =
Bottom Elev = 74.98

Wet Storage Dimensions:

Min. Top Radius = (Below Stone)
Min. Bottom Radius = 19.50
Assume Max. Bottom R =
Calc. Outside Top R = 32.00

Wet Storage Volume: (67 cy/ac required)

Bottom Area = 634.21 (cf)
Top Area = 1231.11 (cf)
Volume = 69.09 (cy) OK

Dry Storage Dimensions: (67 cy/ac required)

Height, ft =
Height, Ho (ft) =
Bottom Inside Radius = 15.50
Top Inside Radius = 11.50
Bottom Outside Radius = 32.00
Top Outside Radius = 35.00

Dry Storage Volume: (67 cy/ac required)

Bottom Area = 1231.11 (cf)
Top Area = 1716.49 (cf)
Volume = 81.88 (cy) OK

Req'd Stub Pipe?

$$Q = C_i A$$
$$= (2.0)(0.9)(5.5) = 9.9$$

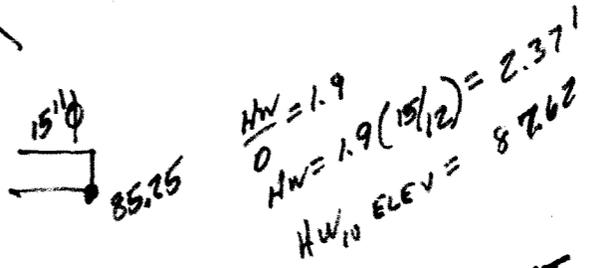
Check 18" temporary stub with orifice eqn.

$$Q = CA(2gh)^{0.5}$$
$$= (0.6)(1.77)(64.4*2)^{0.5} = 12.05 > 9.9 \text{ OK}$$

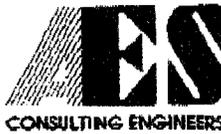
LOCATION				AREA-ACRES		RUN-OFF			TIME OF FLOW (MIN.)			PIPE-CHANNEL DESIGN							HYDRAULIC GRADE LINE									
LINE	RUN	FROM	TO	INCREMENTAL	TOTAL	RUN-OFF COEFF.	INCREMENTAL CA	ACCUMULATED CA	TO INLET/UPPER RCH.	WITHIN REACH CONVEYANCE	TIME OF CONCENTRATION	INTENSITY	DISCHARGE/CFS	PIPE SIZE	CHANNEL SECTION	SLOPE FT/FT	CAPACITY FULL/C.F.S.	VELOCITY FULL/C.F.S.	DESIGN VELOCITY/F.P.S.	CONVEYANCE LENGTH/FT.	INVERT OUT - UPSTREAM	INVERT IN - DOWNSTREAM	FRICTION SLOPE/FT.	VELOCITY FACTOR	V2/2G/FT.	H.G.L. ELEV. UPSTREAM	H.G.L. DOWNSTREAM	COVER ELEV
1	1	DI #1	DI #2	0.94	0.94	0.65	0.61	0.61	20	10.20	30.20	3.6	2.2	15		0.0150	11.4	9.31	6.98	168	85.62	83.10	0.000557	0.75	0.757	82.04	81.57	91.58
		DI #2	DI #3	0.37	1.31	0.78	0.29	0.90	5	7.00	12.00	5.7	5.1	15		0.0250	14.8	12.02	10.58	36	83.00	82.10	0.00303	0.88	1.738	81.57	80.88	89.82
		* STUB PIPE	DI #3	5.53	5.53	0.40	2.21	2.21	31.75	3.00	34.75	3.3	7.3	15		0.0500	20.9	17.00	15.30	20	85.25	84.25	0.00613	0.90	3.636	80.88	80.00	87.00
		DI #3	OUTFALL	0.10	6.94	0.85	0.09	3.20	5	0.00	5.00	7	22.4	18		0.0250	24.0	13.58	12.22	80	82.00	80.00	0.02175	0.90	2.318	83.67	81.00	88.10

7.59 USFS
7.3 AVI

* REVISED "STUB PIPE" DRAINAGE AREA & RUN-OFF COEFFICIENT CONSIDERING POTENTIAL UPSLOPE DEVELOPMENT (CHURCH SITE). ENTIRE CHURCH SITE CONSIDERED IN THIS CALCULATION, ALTHOUGH THIS PIPE WILL NOT RECEIVE FLOW FROM THE ENTIRE CHURCH PROPERTY (∴ CONSERVATIVE CALCULATION FOR UPSLOPE DEVELOPMENT).



AVI Comps.



AES Consulting Engineers Fax Memorandum

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

441-7584

To: Scott Smith	Org./Firm: TAF
Fax Number: 1-757-422-3882	Date: Aug 8 2000
From: Rich Costello	Pages Including Cover Page: 3
cc: Dawn Lemon	cc Fax Number: 253-2319
Subject: Noncello Post Office - Drainage	

Urgent
 For Review
 Please Comment
 Please Reply

Comments:

In reviewing your memo of 7/13/00 (received 8/7/00)
3 areas need to be corrected

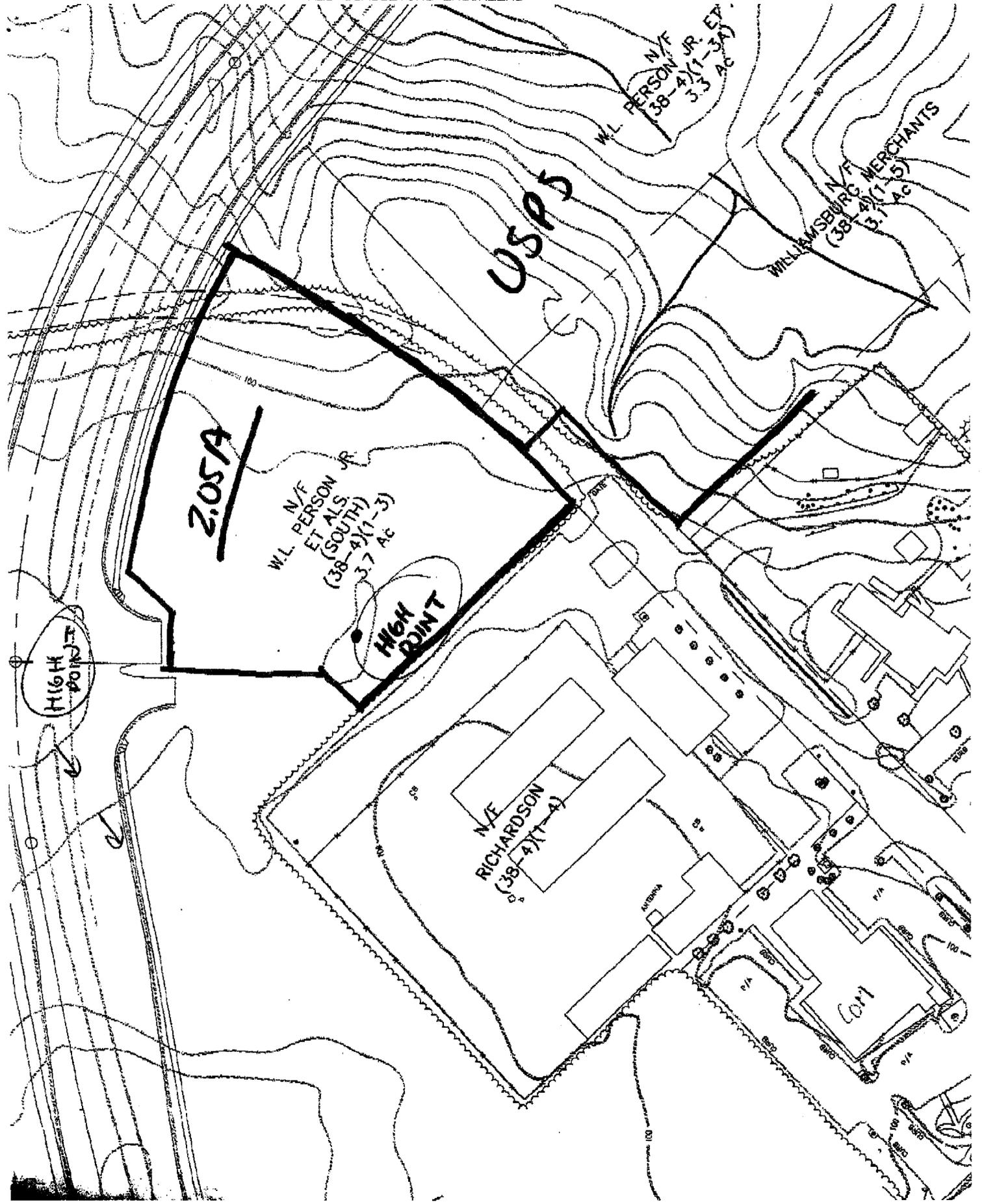
1. Church drainage - Confusion on pipes caused me to give you incorrect info. 1.7 Acres @ 0.7 coeff. drains to the Courthouse and crosses the road in a 30" pipe. The remainder goes to the 48" pipe per your drawing. (Internal confusion of the Pipe)

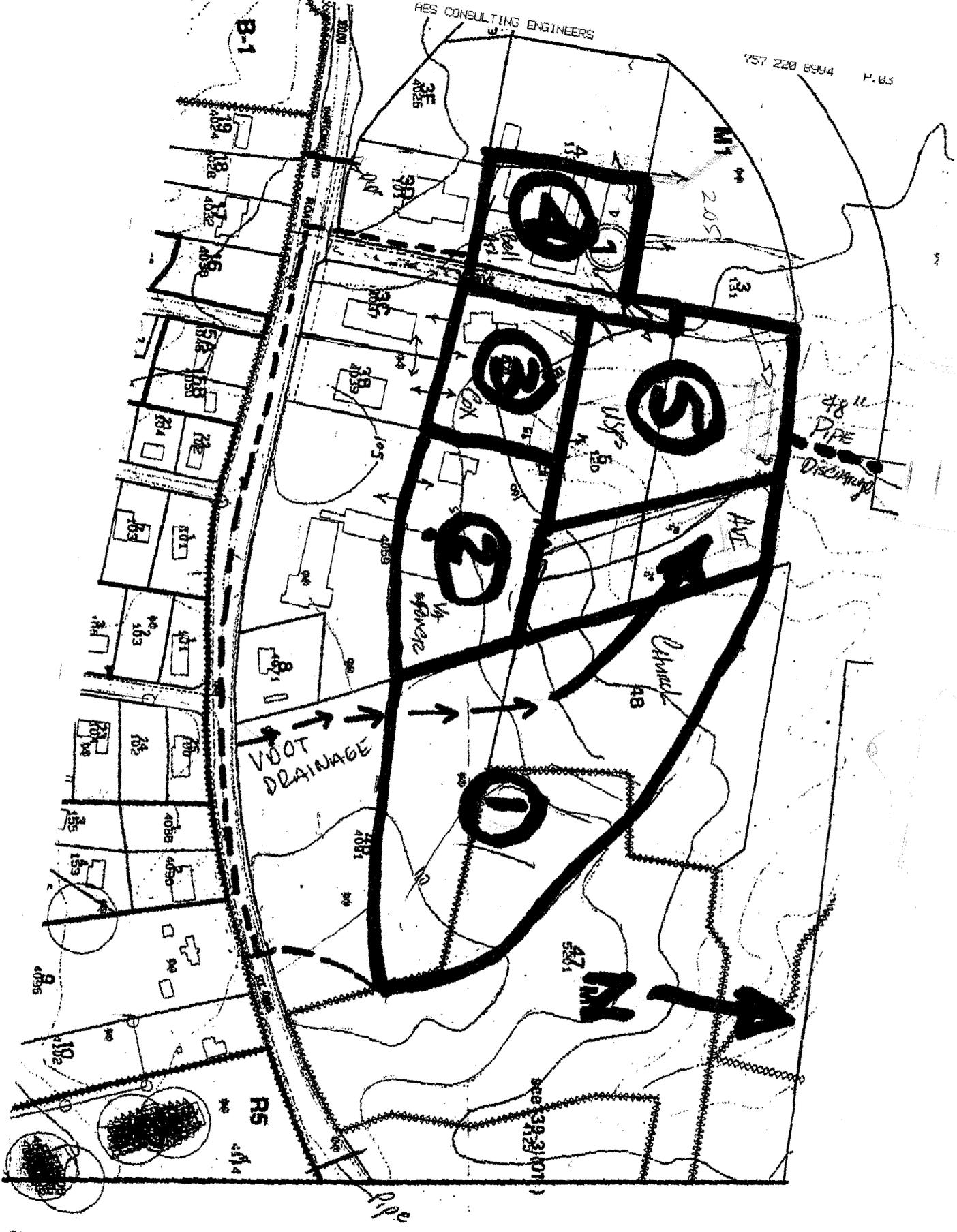
2. I have marked up your drawing based upon our field info and more detailed topo showing the area of UDOT drainage from Ironbound Road. Lot 30 was rerouted across the road years ago otherwise it would also go to the 48"

3 Attached is a detail topo of the Richardson 2 Acres Obviously 90% of the predevelopment goes to the 48" pipe

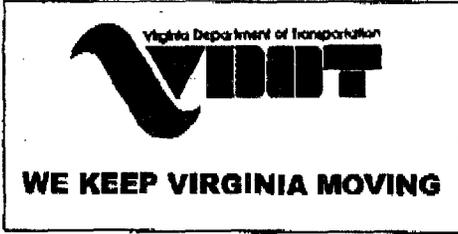
Confidentiality Note: The documents accompanying this fax may contain confidential information. This information is intended only for the use of the individual or entity named on the transmission sheet. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution,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

Option 1 - Neg. w/ Richardson's - w/ timber checks





TALKED TO & RECD
FROM P.K. DAS VDOT
3/22/00



VDOT

(NEW MAILING ADDRESS)

VDOT - WILLIAMSBURG RESIDENCY
4451 IRONBOUND ROAD
WILLIAMSBURG, VA. 23188 - 2621
PHONE NO. (757) 253 - 4832
FAX NO. (757) 253 - 4556 (TRAILER)
FAX NO. (757) 255148 (MAIN OFFICE)

LAND DEVELOPMENT
PERMITS & SUBDIVISIONS

FROM THE DESKS OF

John Mazur - Assistant Resident Engineer
P.K. Dass - Transportation Engineer
Cheryl Chance - Permit & Subdivision Spec. Sr.
Betty Smith - Permit & Subdivision Spec. Sr.
Elaine Wolfe - Office Services Specialist

FAX COVER SHEET

DATE: ___/___/___

TO: Scott Thomas FROM: P.K. DAS

PHONE NO. () _____ PHONE NO. () _____

FAX NO. () _____ FAX NO. () _____

REMARKS: URGENT FOR YOUR REVIEW REPLY ASAP PLEASE COMMENT

COMMENTS / NOTES:

Culvert cables for Rte. 321

NUMBER OF PAGES INCLUDING COVER SHEET : 3

CONFIDENTIALITY NOTICE

15:21 NO.0001.00
 MAY 22 00
 572505148
 WILLIAMSBUK

MMM DESIGN GROUP
 ARCHITECTS - ENGINEERS - PLANNERS
CULVERT ANALYSIS

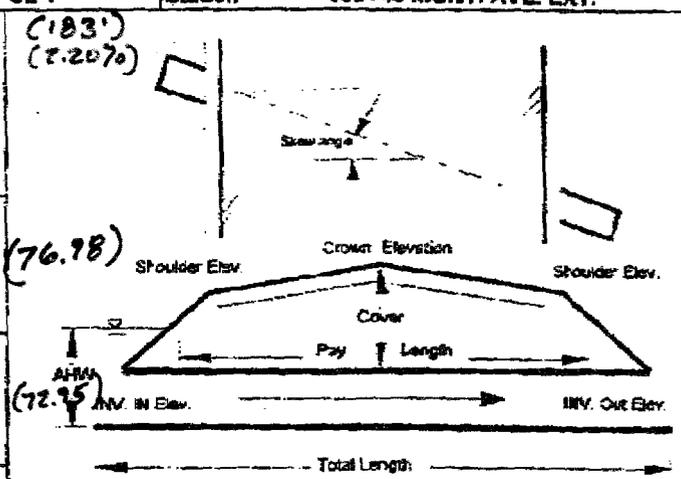
2.20%
 AS-BUILT

8/27/97

Project: MONTICELLO AVE. EXT.
 Job #: 8429.03
 Plan Sheet: 4E

Date: 08/27/97
 Computed by: BRT
 IDF: JAMES CITY

Drainage Surface Area		Area	C * A	Pipe Information		Str.: 8E-1	Station	158+40 MONT. AVE. EXT.
Subarea 1	ZONING U-1	32.15	0.85	27.23	Total Length: L (ft) =	158	(183')	
Subarea 2					Slope S =	0.0190	(2.20%)	
Subarea 3					Crown Elev. =	88.07		
		Total CTA		27.33	AHW ELEV. (ft) =	88.44		
Time of Concentration					Skew =	10 deg		
Overland Flow:	1440 LF @ 2.20 % →	20.2	min		Cover =	7 ft		
Channel Flow:	575 LF @ 1.50 FPS →	6.4	min					
		Total time of concentration:	26.6	min	Inlet Parameter			
Discharge & Tailwater					Shoulder Elevation =	93.34	(76.98)	
YEAR	CF	Tc	I	Q	TW EL.	INV. In Elevation =	79.00	
2	1.00	27	2.83	77.2		Ground Elevation =	79.0	
5	1.00	27	3.46	94.6		Outlet Parameter		
10	1.00	27	3.91	107.0		Shoulder Elevation =	89.38	
25	1.10	27	4.58	137.8		INV. Out Elevation =	76.00	
50	1.20	27	5.09	166.8		Ground Elevation =	76.0	
100	1.25	27	5.60	191.4				



Comments:

Type & size	Design Year	D Inch	n	Q CFS	Headwater Computations								Contr. Elev.	Outlet Velocity FPS	End Treatment		Comments	
					Inlet Control				Outlet Control						ES / EW	ES / EW		
					Shape	HW/D	HW	Ke	dc	ho	H	L * So						HWs
42 Dia. Conc. Pipe	10	42	0.012	107.0	1	2.07		0.5	3.16	3.33	4.40	3.00	4.73	88.23	17.31	EW	EW	Q/QF=0.7 EC REQD
42 Dia. Conc. Pipe	25	42	0.012	137.8	1	2.39		0.5	3.36	3.43	7.30	3.00	7.73	89.48	17.74	EW	EW	Q/QF=0.9 WSE>AHW/EC REQ
42 Dia. C.M. Pipe	10	42	0.024	107.0	4	2.02	7.07	0.5	3.16	3.33	8.95	3.00	9.28	88.28	11.12	EW	EW	Q/QF=1.4 WSE>AHW/EC REQ
42 Dia. C.M. Pipe	25	42	0.024	137.8	4	2.90	13.16	0.5	3.36	3.43	14.85	3.00	15.27	94.27	14.12	EW	EW	Q/QF=1.8 WSE>AHW/EC REQ
48 Dia. Conc. Pipe	10	48	0.012	107.0	1	1.38		0.5	3.16	3.38	2.43	3.00	3.01	84.53	17.13	EW	EW	Q/QF=0.5 EC REQD
48 Dia. Conc. Pipe	25	48	0.012	137.8	1	1.86		0.5	3.51	3.78	4.04	3.00	4.80	86.43	17.06	EW	EW	Q/QF=0.6 EC REQD
48 Dia. C.M. Pipe	10	48	0.024	107.0	4	1.37	5.52	0.5	3.16	3.38	4.66	3.00	5.24	84.47	8.88	EW	EW	Q/QF=1.0 EC REQD
48 Dia. C.M. Pipe	25	48	0.024	137.8	4	1.82	7.28	0.5	3.51	3.76	7.74	3.00	8.50	87.50	10.97	EW	EW	Q/QF=1.3 WSE>AHW/EC REQ

Summary & Recommendations:

Pipe:	158' Pay LF. - 48" PIPE CONC. REQD	INV. In Elevation = 79.00	INV. Out Elevation = 76.00	Design Fld. Exceed. Prob.:	Elevation:
End Treatment:	2 STD. EW-2 END WALLS REQUIRED			Overlap Fld. Exceed. Prob.:	Elevation:
Erosion Control:	TONS STD. EC-1, CLASS I REQD			Base Flood Exceed. Prob.:	Elevation:

107.0 → 53.48
 7.1
 6.95

4' ASSUMED
 ON-SITE STORM
 DESIGN

L:\0428\5\CV\LRW2150\MM\MONTICULLU.WB2

MAY-22-00 MON 10:43 AM
 HMM DESIGN GROUP
 FAX NO. 757-823-5808
 P. 03/03

WILLIAMS BURG

TEL: (757) 255-148

155

E MONTICELLO AVE. EXTENDED

$A = 50^{\circ}54'00''$ AT
 $D = 71,000.00'$
 $T = 389.54'$
 $L = 727.15'$
 $R = 818.51'$
 $P.C. = 143+40.50$
 $P.T. = 156+67.73$
 $LS = 45.0'$
 $E = 0.040$
 $V = 47$ MFT (1000)

P.T. STA. 156+67.73
SURVEY & MONTICELLO AVE. EXT.

*NOTE:
 LEFT BACKSLOPE -
 WENTHISE BACKSLOPE GRADE FROM
 STA 157+00 TO STA 157+40
 STRUCK BY STATIONARY
 STRUCK BY STATIONARY
 FROM STA 157+00 TO STA 157+40
 AND STA 157+73.

230' L-TEMP SALT
 FENCE RECD. AT
 STA. 157+00 TO
 STA. 158+10

87' L-TEMP SALT
 FENCE RECD. AT
 STA. 158+20

140' L-TEMP SALT
 FENCE RECD. (DB. ROW
 STA. 158+50 TO STA.
 159+00)

159+57 E. MONT. AVE. EXT.
 PROP. STA. PE-1
 (TYPE III), W=24'

STD. CO-R RECD. AT
 STA. 159+15 AND
 STA. 159+40

480' L-TEMP FILTER
 BARRIER RECD. AT
 (DBL. ROW STA. 159+00
 STA. 161+15)

STR. 8E-1

*BACKSLOPE DRAWING -
SEE NOTE BELOW

158+50 MONT. AVE. EXT.
 RECD. AT
 STA. 160+00
 STA. 161+15

160

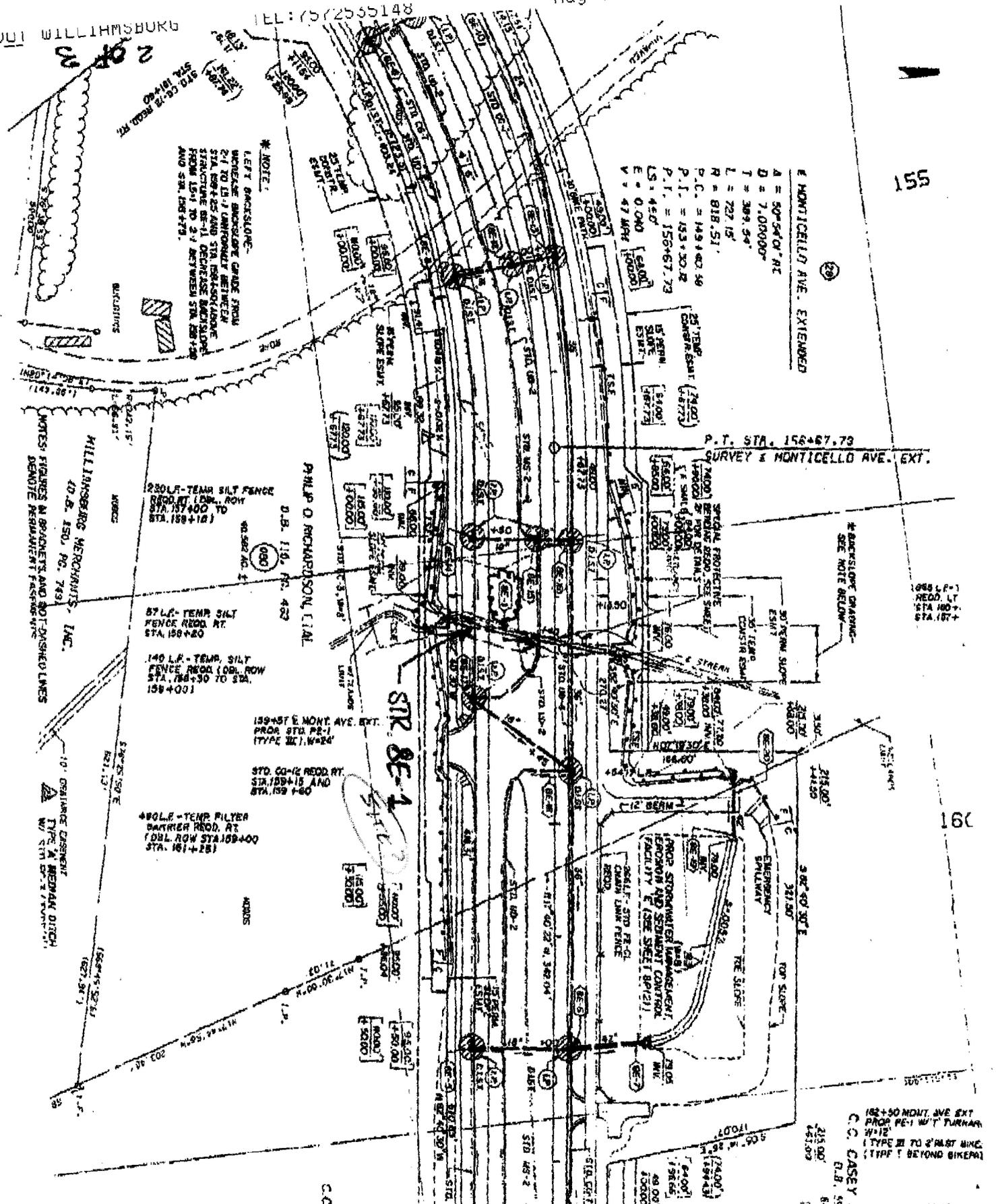
158+50 MONT. AVE. EXT.
 PROP. PE-1 W/T TURNAR.
 W=12'
 (TYPE III TO 2' PART CONC.
 (TYPE I BEYOND BIKEWAY)

C.C. CASEY
 R.B. SR.
 451.00'
 215.00'
 110.00'

MAY-22-00 MON 10:42 AM
 RMM DESIGN GROUP

FAX NO. 7570235809
 C.C. CASEY

P. 02/03



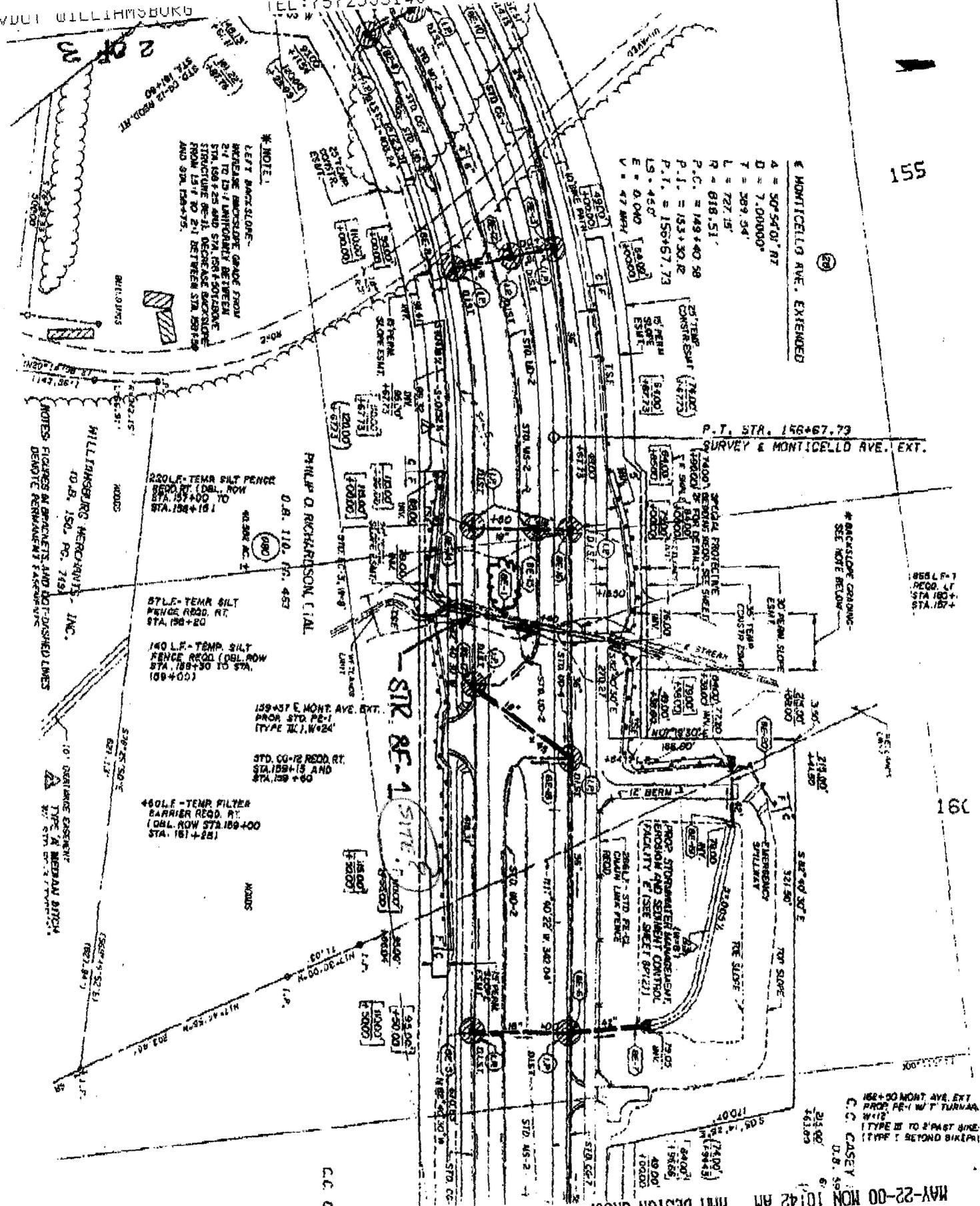
€ MONTICELLO AVE. EXTENDED

$A = 50^{\circ}54'07''$ RT
 $D = 7,000.00'$
 $T = 289.34'$
 $L = 727.15'$
 $R = 618.51'$
 $P.C. = 149+40.58$
 $P.T. = 153+30.12$
 $P.L. = 150+67.73$
 $E = 0.000$
 $V = 47$ MAY 2000

P.T. STA. 156+67.73 SURVEY & MONTICELLO AVE. EXT.

* BACKSLOPE GRADING - SEE NOTE BELOW

855 L.F. 1' REQ. AT STA 186+ STA 187+



* NOTE:
 REMOVE BACKSLOPE GRADING FROM 2'-4" TO 12" UNIFORMITY BETWEEN STA 186+25 AND STA 187+50. EXISTING STRUCTURE OF 12" DEGRADE BACKSLOPE FROM 15' TO 2'-4" BETWEEN STA 187+50 AND STA 188+75.

220 L.F. TEMP. SILT FENCE REQ. RT. (OHL. ROW) STA. 157+00 TO STA. 158+20

57 L.F. TEMP. SILT FENCE REQ. RT. (OHL. ROW) STA. 185+00 TO STA. 185+57

140 L.F. TEMP. SILT FENCE REQ. RT. (OHL. ROW) STA. 185+58 TO STA. 186+98

450 L.F. TEMP. FILTER BARRIER REQ. RT. (OHL. ROW) STA. 189+00 TO STA. 191+50

189+57 E. MONT. AVE. EXT. FROM STD. PE-1 (TYPE III, W=24')

STD. CG-12 REED. RT. STA. 189+13 AND STA. 189+60

SIR. RE-1 SITE 1

PROPOSED STORMWATER MANAGEMENT FACILITY (SEE SHEET SP12)

WILLIAMSBOOK MERCHANTS, INC.
 10 B. 150, PG. 749

* DISTURBED EXISTING TYPE 'A' MEDIAN BIRCH BY STA. 187+27 TO STA. 187+87

189+00 MONT. AVE. EXT. FROM PE-1 W/T TURNAR. W=12' (TYPE III TO 2' PAST AVE. (TYPE I BEYOND BIKELAN)

C.C. CASEY

D.B. 59

6'

215.00'

143.00'

100.00'

50.00'

100.00'

100.00'

100.00'

100.00'

100.00'

100.00'

100.00'

100.00'

100.00'

100.00'

May 22 00 15:17 No.006 P.02
 TEL: 7572565148
 WILLIAMSBURG
 202

MMM DESIGN GROUP
 ARCHITECTS - ENGINEERS - PLANNERS
CULVERT ANALYSIS

Project: MONTICELLO AVE. EXT.
 Job #: 8429.03
 Plan Sheet: 8E

Date: 08/27/97
 Computed by: ERT
 IDF: JAMES CITY

Drainage Surface Area		Area	C	C * A	Pipe Information	Str.: 8E-1	Station	158+40 MONT. AVE. EXT.	
Subarea 1	ZONING M-1	32.15	0.86	27.33	Total Length: L (ft) =	158			
Subarea 2					Slope S =	0.0190			
Subarea 3					Crown Elev. =	88.07			
Total C*A				27.33	AHW ELEV. (R) =	85.44			
Time of Concentration					Skew =	10 deg			
Overland Flow:	1440 LF @	2.20 %	→	20.2 min	Cover =	7 ft			
Channel Flow:	575 LF @	1.50 FPS	→	6.4 min	Inlet Parameter				
Total time of concentration:					26.6 min.	Shoulder Elevation =			88.34
Discharge & Tailwater					INV. In Elevation =	79.00			
YEAR	CF	Tc	I	Q	TWEI	Ground Elevation =			79.0
2	1.00	27	2.83	77.2		Outlet Parameter			
5	1.00	27	3.46	94.6		Shoulder Elevation =	89.38		
10	1.00	27	3.91	107.0		INV. Out Elevation =	76.00		
25	1.10	27	4.58	137.8		Ground Elevation =	76.0		
50	1.20	27	5.09	168.8					
100	1.25	27	5.50	191.4					

Comments:

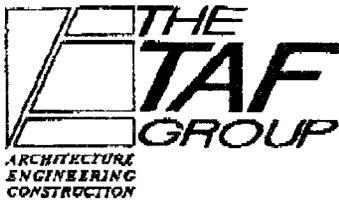
Type & size	Design Year	D Inch	n	Q CFS	Headwater Computations								Contr. HW Elev.	Outlet Velocity FPS	End Treatment		Comments	
					Inlet Control				Outlet Control						Inlet ES / EW	Outlet ES / EW		
					Shape	H/W/D	H/W	H	K _e	d/c	h _o	H						L * S _o
42 Dia. Conc. Pipe	10	42	0.012	107.0	1	2.07		0.5	3.16	3.33	4.40	3.00	4.73	86.23	17.01	EW	EW	Q/Qf=0.7 EC REQD
42 Dia. Conc. Pipe	25	42	0.012	137.8	1	2.59		0.5	3.36	3.43	7.30	3.00	7.73	89.48	17.74	EW	EW	Q/Qf=0.9 WSE>AHW EC REQ
42 Dia. C.M. Pipe	10	42	0.024	107.0	4	2.02	7.07	0.5	3.16	3.33	8.95	3.00	88.28	11.12	EW	EW	Q/Qf=1.4 WSE>AHW EC REQ	
42 Dia. C.M. Pipe	25	42	0.024	137.8	4	2.90	13.16	0.5	3.36	3.43	14.85	3.00	94.27	14.32	EW	EW	Q/Qf=1.8 WSE>AHW EC REQ	
48 Dia. Conc. Pipe	10	48	0.012	107.0	1	1.38		0.5	3.16	3.58	2.43	3.00	84.53	17.13	EW	EW	Q/Qf=0.5 EC REQD	
48 Dia. Conc. Pipe	25	48	0.012	137.8	1	1.86		0.5	3.51	3.76	4.04	3.00	86.43	17.06	EW	EW	Q/Qf=0.6 EC REQD	
48 Dia. C.M. Pipe	10	48	0.024	107.0	4	1.37		0.5	3.16	3.58	4.86	3.00	84.47	8.65	EW	EW	Q/Qf=1.0 EC REQD	
48 Dia. C.M. Pipe	25	48	0.024	137.8	4	1.82	7.28	0.5	3.51	3.76	7.74	3.00	87.50	10.97	EW	EW	Q/Qf=1.3 WSE>AHW EC REQ	

Summary & Recommendations:						Design Fld. Exceed. Prob.:	Elevation:
Pipe:	158' Pay L.F.	48" PIPE CONC. REQ'D	INV. In Elevation = 79.00	INV. Out Elevation = 76.00	Overlap Fld. Exceed. Prob.:	Elevation:	
End Treatment:	2 STD. EW-2 END WALLS REQUIRED				Base Flood Exceed. Prob.:	Elevation:	
Erosion Control:	TONS STD. EC-1, CLASS I REQ'D						

CULVERT V03

L:\06298\01\1\W209\CP\MW\ONT\CULV\M02

MAY-22-00 MON 10:43 AM
 MMM DESIGN GROUP
 FAX NO. 7578235809
 P. 03/03



MEMORANDUM

100 Landmark Square, Virginia Beach, VA 23452 (757) 340-5055 FAX (757) 422-3882
Engineering Department

DATE: July 13, 2000

PROJECT No.: 990672D

TO: Rich Costello, AES (757) 220-8994
Dawn Lemon, DJG (757) 253-2319

PROJECT NAME: Monticello Post Office

FROM: Scott W. Smith, PE

PAGE 1 OF 1 FAX#:

This document was (CHECK AS RE faxed mailed in-house hand delivered

Dawn and Rich,

Please find attached a marked-up copy of the James City County topo for the project area. We are getting conflicting information regarding drainage boundaries contributing to the 48" RCP under Monticello. Based on the County topo we have determined the overall area to be approximately 24.2 acres. The areas of contention are the areas from the church property draining through the AVI property and from the Richardson property west of the Post Office. Based on County topo and our field run topo the Richardson property to the west runs towards Monticello Ave. and not towards the 48" RCP. Also based on the County topo the site area from the east including the church and AVI appears to be 12.2 acres (much larger than information provided by AES and DJG).

Please review the attached sketch and contact our office to finalize these drainage areas. Because James City County is inclined not to accept increased flows under Monticello, we will consider all areas in their pre-developed state for design.

We anticipate providing on-site detention for the Post Office as previously discussed.

Thanks,

Scott W. Smith, PE

Copy To: File

EXISTING CONDITIONS

Peak Flows AT PIPE

AREA #	CN	Area (ac)	T _c (min)	1 YR	2 YR	10 YR
1	70	12.2	110			
2	95	3.1	15			
3	84.5	2.0	11			
4	95	2.3	14			
5	70	4.6	101			
				13.1 cfs	16.9 cfs	34.9 cfs

Proposed Conditions

Peak Flows AT PIPE

AREA #	CN	Area (ac)	T _c (min)	1 YR	2 YR	10 YR
1	75.12	12.2	104			
2	95	3.1	9			
3	84.5	2.0	5			
4	95	2.3	8			
5	95	4.6	19			
				17.4 cfs	21.1 cfs	37.6 cfs

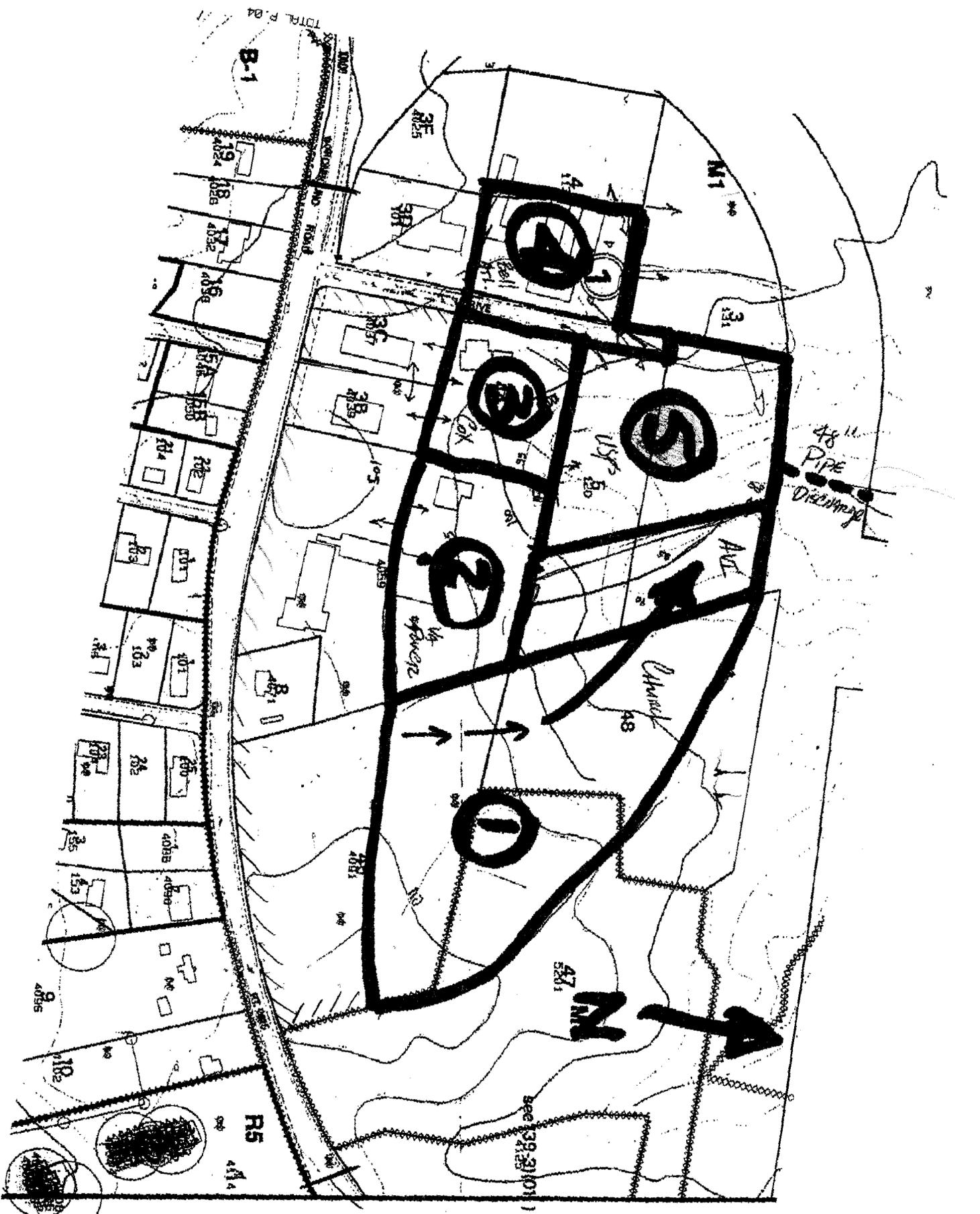
48" PIPE UNDER MONTECALO AVENUE

182' INV LIP 76.99 INV DN 72.95 - 2.2%

CAPACITY: 70 cfs

State Camp 32.15 ac C = .85 T_c = 26.6 min

Q₁₀ = 107 cfs





PC138

USPS
Monticello
Branch

AVI



DEVELOPMENT MANAGEMENT

101-E MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6671 Fax: (757) 253-6850 E-MAIL: devtman@james-city.va.us

CODE COMPLIANCE
(757) 253-6626
codecomp@james-city.va.us

ENVIRONMENTAL DIVISION
(757) 253-6670
environ@james-city.va.us

PLANNING
(757) 253-6685
planning@james-city.va.us

COUNTY ENGINEER
(757) 253-6678
INTEGRATED PEST MANAGEMENT
(757) 253-2620

August 22, 2000

Mr. Scott Smith
The TAF Group
100 Landmark Square
Virginia Beach, VA 23452

RE: Monticello Branch Post Office, SP-63-00

Dear Mr. Smith:

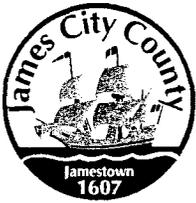
As a followup to the meeting of August 17, 2000, this letter will present the information needed to complete the plans for the above project in regards to stormwater management. On August 17, Scott Thomas of this office gave you a typical detail of the type of check dam to be used to control the stormwater runoff from this site and its two adjacent parcels. To provide even more detailed information, the check dams should be about three feet high and extend in elevation above the overbank areas by approximately one foot. Two check dams should be provided, one each about 50 and 100 feet downstream of the 48" pipe under Monticello Avenue.

The opening in the wall for passage of the stormwater runoff should be sized so that the conveyance properties are the same as for the existing channel at bankfull conditions. In other words, when the water is flowing at the full height of the wall, the flow rate and velocity in the weir opening should be the same as computed for the channel flowing bankfull. The opening should just be a straight vertical opening extending all the way to the channel bottom to allow for fish passage in accordance with the Army Corps of Engineer requirements. Also calculate the amount of temporary storage provided behind the check dams. Finally, provide all details on the plan necessary to construct the check dams.

If you need additional clarification, please contact me or Scott Thomas at 253-6670.

Sincerely,

Darryl E. Cook, P.E.
Environmental Director



DEVELOPMENT MANAGEMENT

101-E MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6671 Fax: (757) 253-6850 E-MAIL: devtman@james-city.va.us

CODE COMPLIANCE
(757) 253-6626

codecomp@james-city.va.us

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(757) 253-6670

environ@james-city.va.us

PLANNING

(757) 253-6685

planning@james-city.va.us

COUNTY ENGINEER

(757) 253-6678

INTEGRATED PEST MANAGEMENT

(757) 253-2620

July 5, 2000

Ms. Jennifer Beiro-Reveille, AIA
Architect-Engineer, Facilities Design and Construction
U.S. Postal Service
4301 Wilson Boulevard, Suite 300
Arlington, VA 22203-1861

Dear Ms. Beiro-Reveille:

I have received a copy of your letter to Tammy Rosario, dated June 28, 2000. I appreciate the response to the design comments from this department and the Design Review Board contained in that letter and we will be reviewing your response. Ms. Rosario or other members of this department will respond to you in the near future.

Prior to that response, however, I wanted to respond to a statement that is made on Page 2 of your letter concerning stormwater management. This is the second time that it has been stated that in a telephone conversation in January 2000, the U.S. Postal Service was somehow exempted from stormwater detention requirements in James City County. As I stated clearly to you and other members of the Postal Service recently, stormwater quality detention is being provided offsite by others to the benefit of the Postal Service. The remaining issue is the ability of the Postal Service to convey its water to a stormwater quality facility in a way that does not degrade the receiving channel and cause significant environmental damage. While it appears that this requirement was misunderstood by representatives of the Postal Service based on their understanding of the previous conversation, this requirement has been clear and consistent. The requirement to protect the receiving channel is a long standing requirement of both State and local Erosion and Sediment laws in Virginia. This specific requirement was discussed and documented in writing to representatives of the property owners in this area, including representatives of Mr. Richardson, and James City County has in no way changed that requirement in any conversations with the Postal Service.

Having said this, representatives of this department, led by Darryl Cook, are attempting to coordinate discussions among the designers of the Post Office facility, AVI facility, representatives of Mr. Richardson (the property owner from which you purchased this property), and other adjoining property owners. Our objective is to agree quickly on measures that can be taken along the receiving channels to prevent significant environmental damage from the Post Office and other facilities. This coordination is an activity not normally undertaken by the County and would, under normal circumstances, be done by the design engineers for such a facility. County staff will, nonetheless, continue to try to coordinate among the various property interests in the area to quickly resolve this matter.

Ms. Jennifer Beiro-Reveille

July 5, 2000

Page 2

If you have any other questions concerning stormwater management, I would be happy to discuss those with you; although, I do believe your designers are in close coordination with Darryl Cook. If you have any questions, please don't hesitate to contact me.

Sincerely,



John T. P. Horne
Development Manager

JTPH/alc
beiro-reveille.ltr

cc: Sanford B. Wanner, County Administrator
Mike Bennett and Scott Smith, TAF Group
Tammy Rosario, Planning Division
Darryl Cook, Environmental Division

WATERSHED PC
BMP ID NO 138
PLAN NO SP-63-00
TAX PARCEL (38-04)(01-3H)
PIN NO 3840100003H
CONSTRUCTION DATE 10/1/2001
PROJECT NAME USPS Monticello Branch
FACILITY LOCATION North of 5219 Monticello Ave.
CITY-STATE Williamsburg, Va. 23188
CURRENT OWNER United States Postal Service
OWNER ADDRESS MidAtlantic FSO
OWNER ADDRESS 2 P.O. Box 27497
CITY-STATE-ZIP CODE Greensboro, NC 27498
OWNER PHONE
MAINT AGREEMENT No
EMERG ACTION PLAN No

MAINTENANCE PLAN Yes
SITE AREA acre 4.55
LAND USE Limited Business
old BMP TYP
JCC BMP CODE F1 Timber Walls
POINT VALUE 4
SVC DRAIN AREA acres 24.2
SERVICE AREA DESCRI USPS, AVI, offsite & VDOT Road
IMPERV AREA acres 0.00
RECV STREAM UT of Powhatan Creek
EXT DET-WQ-CTRL No
WTR QUAL VOL acre-ft 0
CHAN PROT CTRL Yes
CHAN PROT VOL acre-ft
SW/FLOOD CONTROL No
GEOTECH REPORT Yes

CTRL STRUC DESC Timber Wall
CTRL STRUC SIZE inches
OTLT BARRL DESC Timber Wall
OTLT BARRL SIZE inch
EMERG SPILLWAY No
DESIGN HW ELEV 72.2
PERM POOL ELE na
2-YR OUTFLOW cfs 0.00
10-YR OUTFLOW cfs 50.00
REC DRAWING No
CONSTR CERTI Yes
LAST INSP DATE 9/26/2001
INTERNAL RATING 4
MISC/COMMENTS
 Offsite interim SCPv. Dual timber ck
 dams @ 50' sp. Esmt (Richardson).
 AVI site

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WATERSHED	PC	MAINTENANCE PLAN	Yes	CTRL STRUC DESC	Timber Wall
BMP ID NO	138	SITE AREA acre	4.55	CTRL STRUC SIZE inches	
PLAN NO	SP-63-00	LAND USE	Limited Business	OTLT BARRL DESC	Timber Wall
TAX PARCEL	(38-04)(01-3H)	old BMP TYP		OTLT BARRL SIZE inch	
PIN NO	3840100003H	JCC BMP CODE	F1 Timber Walls		
CONSTRUCTION DATE	10/1/2001	POINT VALUE	4	EMERG SPILLWAY	No
PROJECT NAME	USPS Monticello Branch			DESIGN HW ELEV	72.2
FACILITY LOCATION	North of 5219 Monticello Ave.			PERM POOL ELE	na
CITY-STATE	Williamsburg, Va. 23188	SVC DRAIN AREA acres	24.2	2-YR OUTFLOW cfs	0.00
CURRENT OWNER	United States Postal Service			10-YR OUTFLOW cfs	50.00
OWNER ADDRESS	MidAtlantic FSO			REC DRAWING	No
OWNER ADDRESS 2	P.O. Box 27497	SERVICE AREA DESCRI	USPS, AVI, offsite & VDOT Road		
CITY-STATE-ZIP CODE	Greensboro, NC 27498	IMPERV AREA acres	0.00	CONSTR CERTI	Yes
OWNER PHONE		RECV STREAM	UT of Powhatan Creek		
MAINT AGREEMENT	No	EXT DET-WQ-CTRL	No	LAST INSP DATE	9/26/2001
EMERG ACTION PLAN	No	WTR QUAL VOL acre-ft	0	INTERNAL RATING	4
		CHAN PROT CTRL	Yes	MISC/COMMENTS	
		CHAN PROT VOL acre-ft		Offsite interim SCPv. Dual timber ck	
		SW/FLOOD CONTROL	No	dams @ 50' sp. Esmt (Richardson).	
		GEOTECH REPORT	Yes	AVI site	

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