CERTIFICATE OF AUTHENTICITY

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

BMP NUMBER: **YC007**

DATE VERIFIED: **February 6, 2013**

QUALITY ASSURANCE TECHNICIAN: **Leah Hardenbergh**

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA

Stormwater Division

MEMORANDUM

DATE: March 13, 2010

TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services

FROM: Jo Anna Ripley, Stormwater

PO: 270712

RE: Files Approved for Scanning

General File ID or BMP ID: YC007

PIN: 1240100051

Subdivision, Tract, Business or Owner Name (if known): Williamsburg James City County Schools

Property Description: Toano Middle School

Site Address: 7817 Richmond Road

(For internal use only) **Box** 23 **Drawer:** 9

Agreements: (in file as of scan date) Y **Book or Doc#:** 508 **Page:** 460-461

Comments

PLEASE DELIVER
TO
SCOTT THOMAS
JCC ENVIRO

THANKS
BRUCE

3183

DECLARATION OF COVENANTS

BOOK 508 PAGE 460

INSPECTION/MAINTENANCE OF RUNOFF CONTROL FACILITY

THIS DECLARATION, made this 19th day of March, 1991, between Williamsburg-James City County Schools, and all successors in interest, hereinafter referred to as the "COVENANTOR(S)," owner(s) of the following property: Retention Basin - Toano Area Middle School

Tax Parcel (12-4)(1-51), 7817 Richmond Road, at intersection of Richmond Road and Chickahominy Road,

and James City County, Virginia, hereinafter referred to as the "COUNTY."

WITNESSETH:

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

1. The COVENANTOR(S) shall provide maintenance for the runoff control facility, hereinafter referred to as the "FACILITY," located on and serving the above-described property to ensure that the FACILITY is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations.

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

3. The COVENANTOR(S) shall provide and maintain perpetual access from public rights-of-way to the FACILITY 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 FACILITY for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the FACILITY.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the FACILITY 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 owners of property served by the FACILITY 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 FACILITY.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the FACILITY. 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 FACILITY.

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 this 21st day of March, 1991.

COVENANTOR(S)

Sondra Walker

Member, School Board

ATTEST:

_____

COVENANTOR(S)

Elwood Lewis

Assistant Superintendent of School

ATTEST:

_____

STATE OF VIRGINIA
COUNTY OF James City

I hereby certify that on this 21st day of March 1991, before the subscribed, a Notary Public of the State of Virginia, and for the County of James City, aforesaid, personally appeared Sondra Walker and Elwood Lewis and did acknowledge the aforegoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 21st day of March, 1991.

Josephine P. Gardner

Notary Public

My Commission expires: Sept 11, 1992

Approved as to form:

Leo P. Rogers

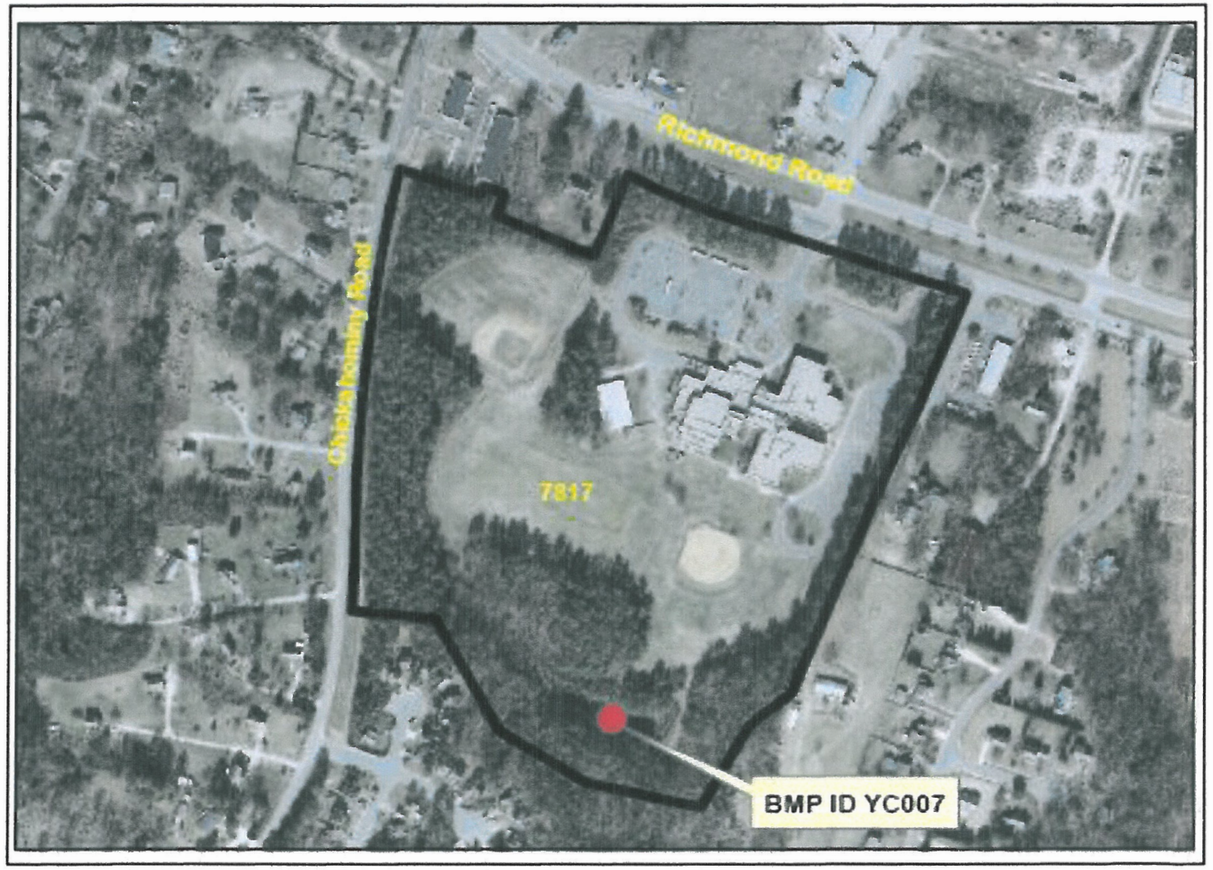
0261U

Rev. 8-89

VIRGINIA: City of Williamsburg and County of James City, to Wit
In the Clerk's office of the Circuit Court of the City of Williamsburg and County of James City the 2 day of April, 1991. This Covenants was presented with certificate annexed and admitted to record at 3:44 o'clock
Teste: Helene S. Ward, Clerk
by _____ D.C.

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 004

Toano Middle School BMP Repairs & Retrofit
7817 Richmond Road
James City County, Virginia



Project Narrative:

This project involves the replacement of failed Stormwater Management Pond Riser structure located within a Stormwater Management Facility at the Toano Middle School, James City County, VA. This project also requires the removal of existing trees from the dam embankment and from the adjacent construction area, and the excavation of earth and sediment from within the facility.

The excavation of earth and sediment is required to replace the failed pond riser as well as to restore the storage capacity of the facility. Following excavation the excavated material shall be used to create an earthen berm slightly upslope of the facility.

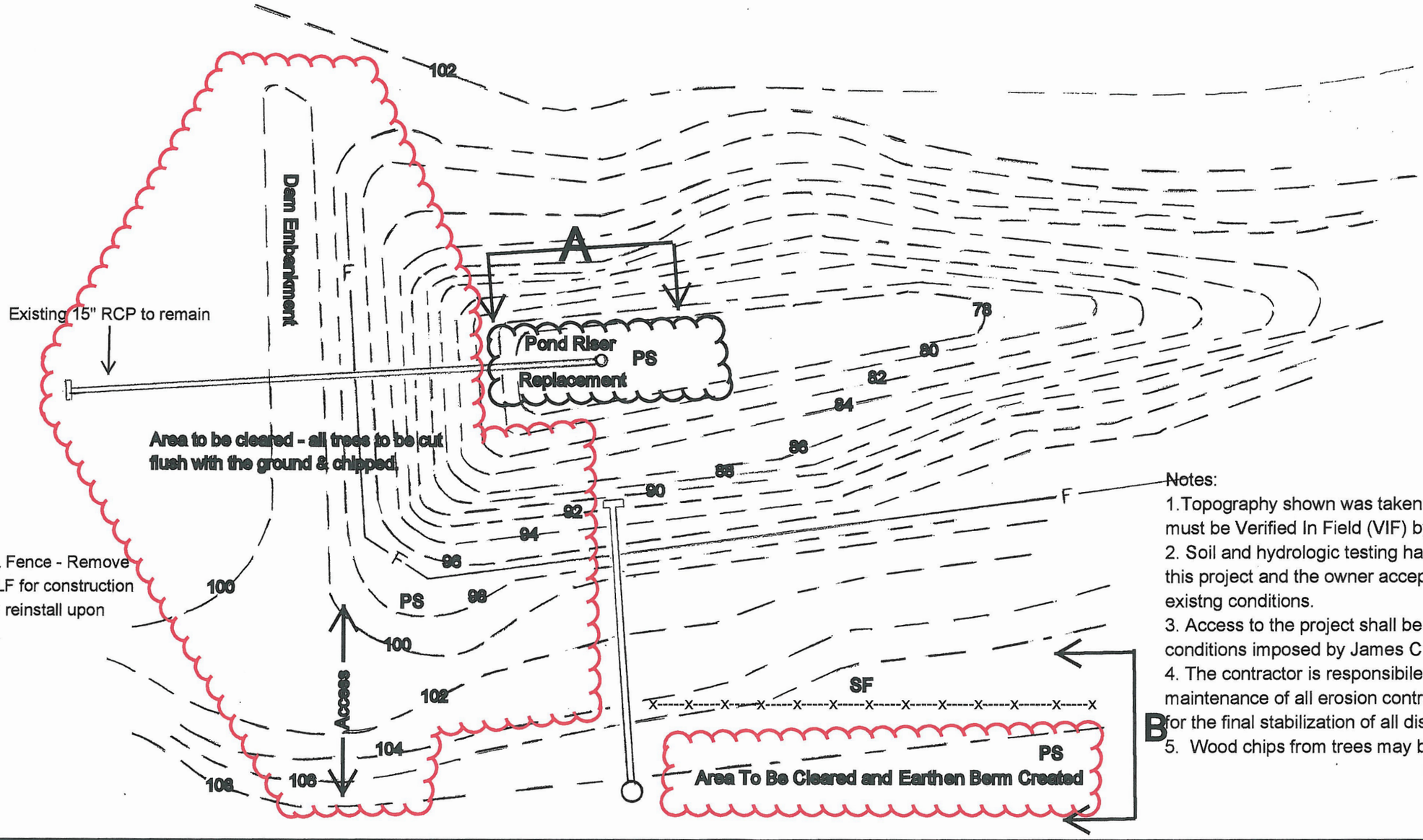
The owners have not preformed any hydrologic or geologic studies for work proposed within this plan; therefore the owners do not accept responsibility for any soil conditions which may be encountered.

Plan Sheet Index:

Title	Sheet
Cover Sheet & Project Narrative	1
Plan View	2
Riser Details, Excavation & Profile A	3
Profile B, Trash Rack & General Notes	4

Toano Middle School BMP Repairs & Retrofit
Owner: James City County Schools

Date: September 30, 2010
Revised : October 11, 2010
Drawn By: PTM
Plan Sheet : 1 0f 4



Notes:

1. Topography shown was taken from existing datum and must be Verified In Field (VIF) by the contractor.
2. Soil and hydrologic testing has not been conducted for this project and the owner accepts no responsibility for existng conditions.
3. Access to the project shall be subject to specific conditions imposed by James City County Schools.
4. The contractor is responsibile for the installation and maintenance of all erosion control measures required and for the final stabilization of all disturbed areas.
5. Wood chips from trees may be utilized onsite.

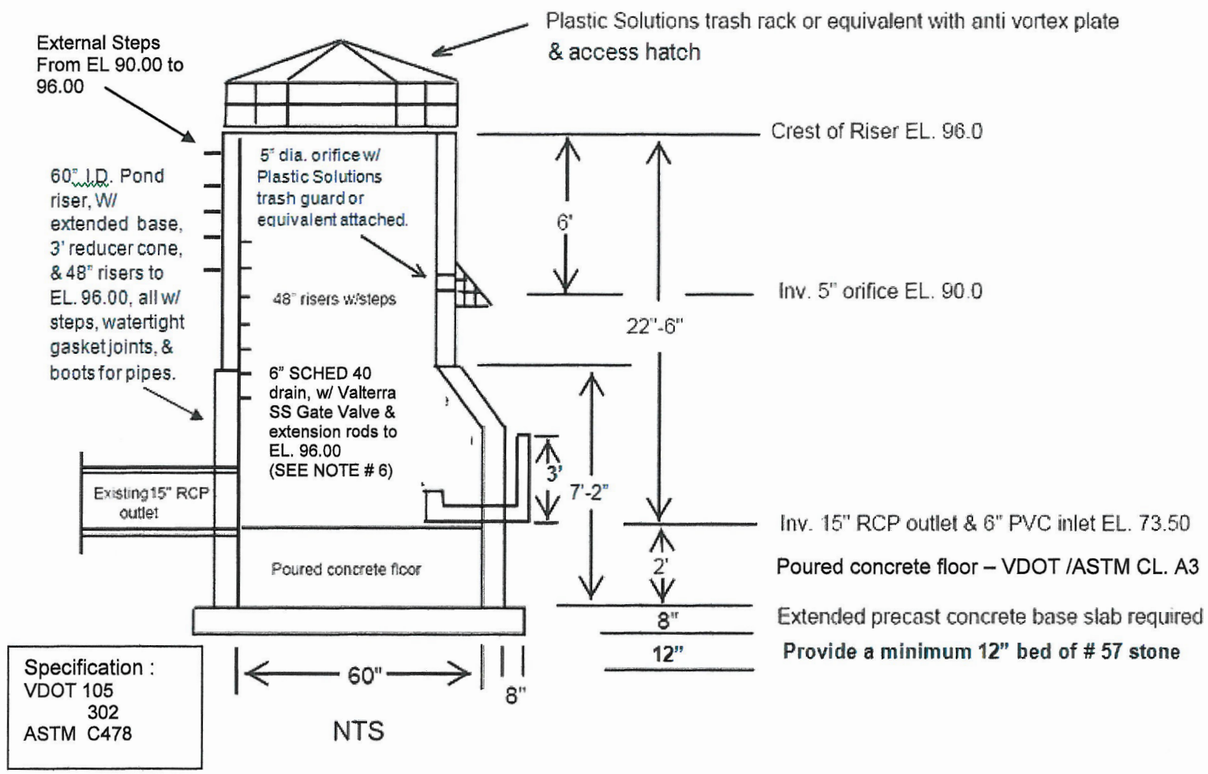
Scale: 1"= 30'

Toano Middle School BMP Repair & Retrofit
Owner: James City County Schools

Plan View of BMP Repairs & Retrofit

Date: September 30, 2010
Drawn By: PTM
Plan Sheet: 2 of 4

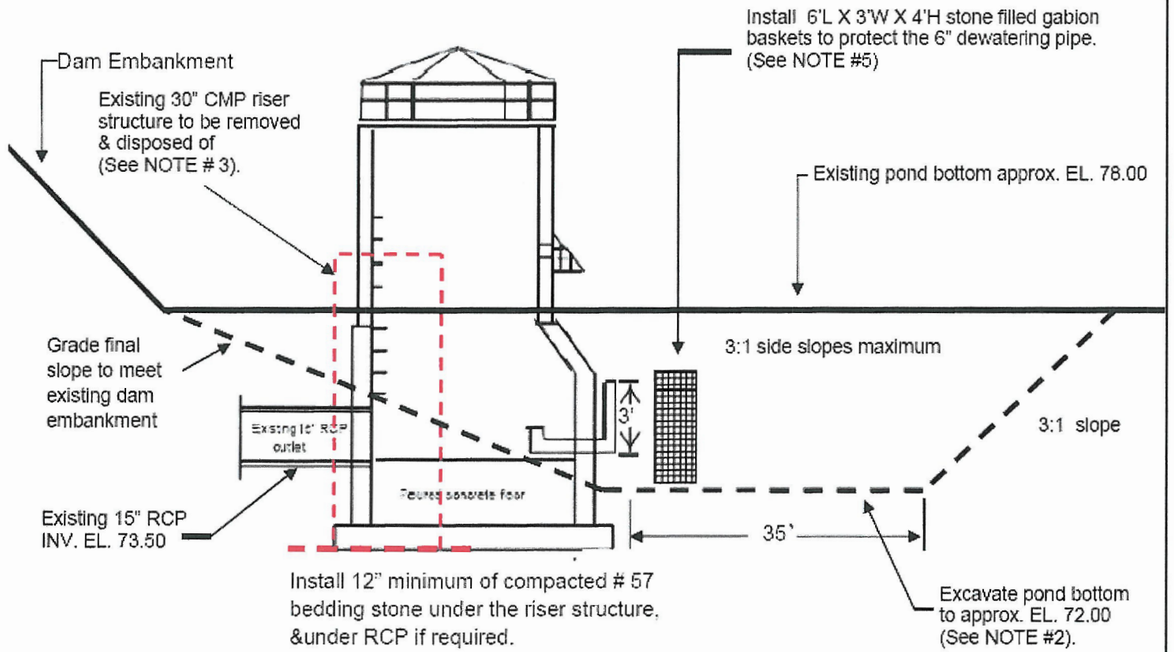
Modified Precast Stormwater Management Pond Riser Structure



Specification :
VDOT 105
302
ASTM C478

NTS

Profile Section: A - Pond Riser Installation & Excavation Detail



Drawing NTS

Notes:

1. Excavate and create a dewatering pit within the proposed pond bottom area shown. Excavate the pit to approx. EL. 70.00, and dewater the pond prior to and during construction, all discharged water must be filtered prior to release downstream.

2. Following dewatering, excavate the pond bottom to approx. El. 72.00, bottom floor dimensions approx. 35'L X 12'W . Dredged material shall be relocated upslope, shaped into an earthen berm and stabilized with a grass cover as shown on plans.

3. Existing 30" CMP pond riser and base to be excavated, separated from the existing 15" RCP barrel, removed and disposed of offsite at an approved facility along with the broken CMP riser, trash rack, fallen trees, trash, & debris within the pond.

4. New 60" ID extended base precast pond riser, w/ 3' reducer cone, 48" risers, & Plastic Solutions trash rack, to be installed on a 12" bed of compacted # 57 stone. Connect the existing 15" RCP barrel to the riser using a Kor-N-Seal or equivalent rubber boot system with the pipe bedded in # 57 stone (if required). A water tight pipe joint between RCP pipes is required and a watertight seal at all joints in the pond riser & installed pipes.

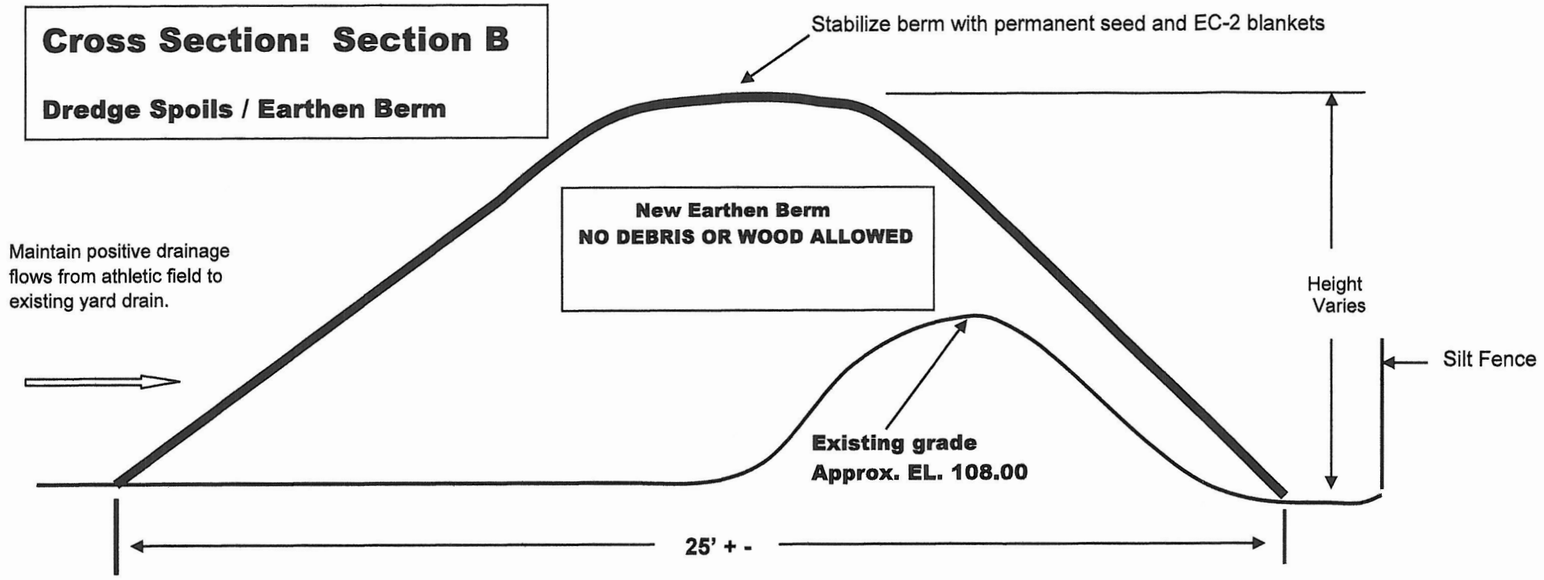
5. Install modular gabion baskets filled with 4"-8" stone to create a "U" shaped structure with each side 6'L x 3'W x 4'H. The gabions shall be positioned so as to protect the dewatering structure from sediment. The modular units shall meet ASTM A974-97 and shall be PVC coated; each unit shall be installed on a 4' W x 6'L x 8" deep bed of compacted # 57 stone.

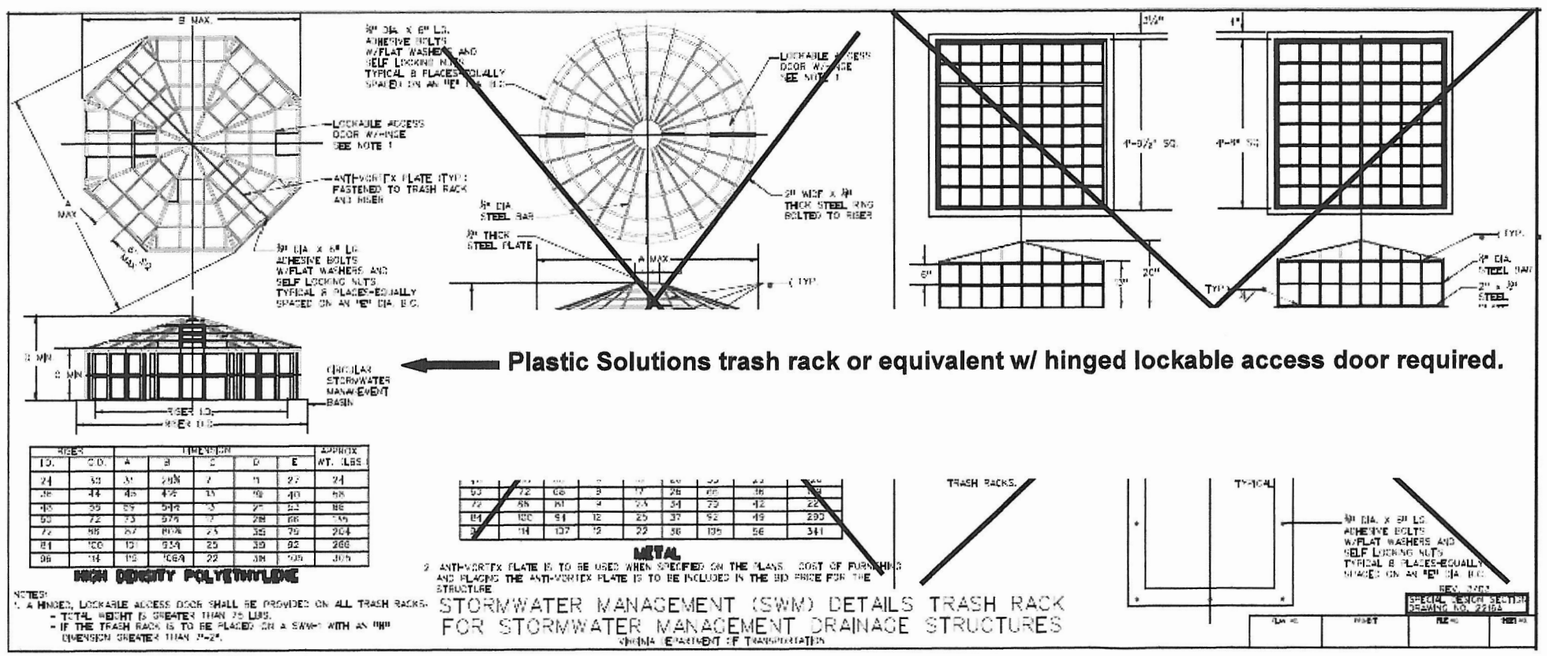
6. Install 6' Schedule 40 PVC drain pipe ,using a Kor-N-Seal or equivalent rubber boot system, with a Valterra SS Gate Valve or equivalent, & extension rods mounted to interior pond riser wall for operation from EL. 96.00. Exterior 3' X 6" Schedule 40 drain to be perforated with 4 rows of 5/8" holes, 3" OC, and a solid cap. All Schedule 40 PVC pipe and fittings to meet ASTM D 1784 & D2665.

Toano Middle School BMP Repairs & Retrofit **Owner: James City County Schools**	**Modified Precast Stormwater Pond Riser Details**	**Date: September 30, 2010** **Revised: October 11, 2010** **Drawn By: PTM** **Plan Sheet : 3 of 4**

Cross Section: Section B

Dredge Spoils / Earthen Berm





Plastic Solutions trash rack or equivalent w/ hinged lockable access door required.

General Notes:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A VSMP PERMIT FOR THIS PROJECT.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES AS PER THE VIRGINIA ERSOION AND SEDIMENT CONTROL HANDBOOK & THE JCC STANDARD E&S NOTES. THE CONTRACTOR SHALL SERVE AS THE RLD FOR THIS PROJECT.
3. THE CONTRACTOR SHALL BE RESPOSIBLE FOR CONTACTING MISS UTILITY AT 1-800-552-7001 TO VERIFY IN FIELD THE EXISTENCE AND LOCATIONS OF ANY UTILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
4. THE CONTRACTOR SHALL ATTEMPT TO SCHEDULE CONSTRUCTION ACTIVITIES DURING DRY PERIODS OR LOW FLOW TO THE GREATEST EXTENT POSSIBLE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THE EXCAVATION AREA IN A DEWATERED CONDITION UNTIL THE INSTALLATION OF THE NEW POND RISER STRUTURE, PIPES AND GABION BASKETS ARE COMPLETED, INSPECTED AND . APPROVED BY THE COUNTY
6. THE METHOD OF DEWATERING ACTIVITIES SHALL BE APPROVED BY THE COUNTY. DISCHARGE FROM DEWATERING ACTIVITIES MUST BE FILTERED PRIOR TO RELEASE.
7. MATERIALS AND INSTALLATION METHODS OF THE POND RISER STRUCTURE, PIPES, STRUCTURES, AND GABION BASKETS, ETC, SHALL MEET OR EXCEED THE VDOT ROAD AND BRIDGE STANDARDS, HAMPTON ROADS PLANNING DISTRICT COMMISSION AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK SPECIFICATIONS.
8. ALL TREES REMOVED AS PER PLAN SHALL BE PROCESSED THROUGH A WOOD CHIPPER OR MULCHER. THE WOOD CHIPS MAY BE UTILIZED ONSITE FOR STABILIZATION AS DIRECTED BY COUNTY.
9. AN ONSITE PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR(S), OWNERS REPRESENTATIVE(S), AND THE COUNTY PRIOR TO THE COMMENCEMENT OF CLEARING ACTIVITIES.
10. ACCESS TO THE PROJECT SITE MAY BE SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS BASED ON OPPERATIONAL REQUIREMENTS OF THE OWNER. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE GRASS ACCESS ROUTE ACROSS THE ATHLETIC FIELD.
11. ALL OBJECTIONAL AND DELETERIOUS MATERIALS ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A STATE APPROVED FACILITY MEETING THE REQUIREMENTS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

Toano Middle School BMP Repairs & Retrofit
Owner: James City County Schools

Cross Section: B Detail & Trash Rack Detail & Notes

Date: September 30, 2010
Revised: October 11, 2010
Drawn By: PTM
Plan Sheet: 4 of 4

YC007

SP-120-90
WJCC TOANO MIDDLE SCHOOL

W/JCC MIDDLE SCHOOL @ TOANO

BMP Design

1. Predevelopment

drainage area = 18.0

Runoff Curve No (RCN) = 65 (woods, field, B/C soils)

t_c = 20 min.

2. Post development

drainage area = 35.0

RCN = 80

t_c = 20 min.

3. Stage - Elevation Curve

Elev	Volume (ac-ft)
70	0
75	0.13
80	0.48
85	1.21
90	2.26
95	4.01
100	7.46

4. Volume of Storage required for water quality = 2.1 ac-ft

based on 15% of watershed impervious

- choose elev 90.0 for normal pool

W/JCC School Cont.

5. Results of Simulation w/ Hydrologic Model based on SCS methodology & pond design are as follows:

A) Normal pool = 90.0

B) 5" orifice release @ 90.0

C) Top of Riser @ 96.2

D) riser diameter = 30"

E) Barrel " = 15" concrete pipe

or 18" metal pipe

F) Emergency Spillway - 15' wide earth spillway @ elev 98.1

G) Top of dam @ elev 100.3

Storm	Pre Devel Peak Q	Post Devel Peak Q	Pond Release Rate	Elevation	Volume of Storage
2 Year	5.9	38.2	3.5	96.2	2.6 ac ft
10 Year	16.7	70.0	18.8	98.1	3.9 " "
100 Year	35.8	96.9	83.1	99.3	4.7 " "

Carley
FAX NO- SMITHEY Boynton 703-

Middle School

1. $Q_p = CIA = 9.5$ cfs - pre peak

$C = 0.15$ $I = 3.4$ $t_c = 20$ min $A = 18.6$ ac

Pre Volume

$Q_{vp} = 0.9 \times t_c \times Q_p = 0.9 \times .33\text{ hr} \times 9.5 = 2.82$ cfs-hr = ac-in

2. Post Dev Peak + Vol

$C = I(x1) + P(x2)$ $I = \frac{4.85}{35.0} = 14\%$

$= 14(.87) + 86(.15)$

$= 0.25$

$Q = CIA = 0.25 \times 3.4 \times 35.0 = 29.8$ cfs

Post Vol

$Q_v = 0.9 \times t_c \times Q_p = .9 \times .33 \times 29.8 = 8.85$ ac-in

3. From ~~chart~~ Table B.1 in Controlling Urban Runoff

W/I = 14% + Rainfall depth = 1.25" Vol of Extended det = 0.3"

or 0.87 ac ft

$C' = C \times .9 = .25 \times .9 \times 1.5 = .338$ ac-in $\times \frac{35 \text{ ac ft}}{12 \text{ in}} = 0.98$ ac ft

MS.DAT

	Storm	Pre	Post	Release	Elev	Vs
6" orif. PS @ 95.0	2-6	5.9	38.2	4.0	5.2	1.9
8" orif. "	2-6	"	"	4.3	5.0	1.8
6" orif PS @ 95.3	2-6	"	"	3.7	5.2	1.9
6" orif PS @ 95.3	2-24	6.4	29.3	6.2	5.6	2.2
5" orif PS @ 96.0	2-24	"	"	3.6	6.2	2.6
5" orif PS @ 96.2	2-24	"	"	3.4 ✓	6.2 ✓	2.6 ✓
" " " " "	10-24	16.7	55.1	19.0	8.1	3.9
" " " " "	10-24	"	"	18.8 ✓	8.1 ✓	3.9 ✓
" " " "	10-6	17.0	70.0	12.3	7.5	3.5
" " " "	100-24	35.8	96.9	81.5	9.7	5.0
	100-6	34.5	110.3	57.1	9.2	4.7
15' E.S.	100-24	35.8	96.9	83.1	9.3	4.7

5" orifice @ 90.0 > 2.6 ac ft

Top of Riser @ 96.2

E.S. Elev @ 98.1 > 3.9 ac ft + 2.25 = 6.15

- 10' wide E.S. - Top of dam = 100.7
- 15' wide E.S. " " " = 100.3

98
68
30'

DRAINAGE CALCULATIONS

EXIST. DRAINAGE AREAS 1, 2
POST CONSTR DRAINAGE 3, 4
CRITICAL DURATION 5
INFLOW HYDROGRAPH 6
STAGE STORAGE 7
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RAINFALL INTENSITY CHART (VDOT FIG, 1.5.1.7) 16
EMERGENCY OVERFLOW 17
WEIR FORMULA 18

Set Prin. NP @ 90.0 - V_s = 2.25 ac ft

Release Rate - < 4.0 cfs ← 5" orifice — check spreadsheet

$2_{Y}V_s$ = 3.0 ± ac ft

10yr = 4.5-5.0 cfs

EXISTING DRAINAGE - 2 YEAR STORM

AREA A - DOES NOT DRAIN EXTERNALLY

AREA = 7.2 ACRES
SLOPE = 2.5%
L = 380'
C = .35
T = 19 MIN
i = 3.4
$Q_2 = (7.2)(.35)(3.4)$ = 8.57 CFS

AREA B - DOES NOT DRAIN EXTERNALLY

AREA = 1.98 ACRES
SLOPE = 4%
L = 300'
C = .35
T = 17 MIN
i = 3.7
$Q_2 = (1.98)(.35)(3.7)$ = 2.60 CFS

? **AREA C**

AREA = 1.29 ACRES
SLOPE = 2.5%
L = 320'
T = 19 MIN
C = .35
i = 3.5
$Q_2 = (1.29)(.35)(3.5)$ = 1.58 CFS

AREA D - DOES NOT DRAIN EXTERNALLY

AREA = 2.6 ACRES
SLOPE = 1.5%
L = 380
T = 23 MIN
C = .35
i = 3.2
Q = (2.6)(.35)(3.2) = 2.90 CFS

AREA E (BASEBALL

AREA = 2.9 ACRES
SLOPE = 3%
L = 300'
C = .35
T = 16 MIN
i = 3.9
$Q_2 = (2.9)(.35)(3.9)$ = 3.96 CFS

EXISTING DRAINAGE (CONT.) - 2 YEAR STORM

AREA F

AREA = 1.15 ACRES
SLOPE = 3%
L = 300'
C = .35
T_c = 16 MIN
i = 3.2
Q_2 = (1.15)(.35)(3.2) = 1.29 CFS

AREA J

AREA = 5.36 AC
SLOPE = 3%
L = 400'
SLOPE = 3.33%
T = 15 min
C = .35
i = 4.0 in/hr.
Q_2 = (5.36)(4.0)(35) =

22.6 ac. - 4 = 18.6 ac
DA = ~~23.86~~ 22.6 acres

1) T_c = 19 min - Kirpich

2) 2.9'/sec × 1000' + Swale
1.4'/sec × 400' Grass
0.6'/sec × 400 Forest
TOTAL = 21.6 min.

i_2 = 3.38
C = 35% × .35 + 65% × .2 = 0.25
CIA = Q_2
Q_2 = .25 × 3.38 × 22.6 = 19 cfs
↓ × ↓ × 18.6 = 15.7 cfs 7.50 CFS

OFFSITE

AREA = 18.5 ACRES
L = 900' C = .35
200' OVERLAND, 700' CHANNEL
SLOPE = 3%
T = 200' = 13 min.
700' CHANNEL, HEIGHT = 20'
T = 4 MIN TOTAL = 17 MIN
i_2 = 3.8 IN/HR
Q_2 = (18.5)(3.8)(.35) = 24.61 CFS

TOTAL = 53 CFS

POST CONSTRUCTION DRAINAGE - 10 YR. STORM

AREAS DRAINING THRU STORM DRAINAGE SYSTEM (SEE VDOT FORMS LED 229) = 37.03

Post Devel D.A.

AREAS DRAINING TO BASIN BY DITCH: 18.5 + .25 + 1.76 +

AREA G

AREA = .25 ACRES
SLOPE = 2%
L = 100'
C = .4
T_c = 11 MIN
I = 6.0
Q_{10} = (.25)(.4)(6.0) = 0.60

AREA H

AREA = 1.76 ACRES
SLOPE = 1%
L = 300'
C = .4
T_c = 19 MIN
I = 4.6
Q_{10} = (1.76)(.4)(4.6) = 3.24

AREA J = 7.50
OFFSITE = 24.61
TOTAL TO BASIN 72.98 CFS

NEW CONSTR. NOT ROUTED TO BASIN (BASEBALL)

AREA I

AREA = 2.9 ACRES
SLOPE = 2.0%
L = 300'
C = .4
T_c = 17 MIN
I = 4.9
Q_{10} = (2.9)(.4)(4.9) = 5.68

POST CONSTR. DRAINAGE NOT ROUTED TO BASIN = 5.68 CFS

EXIST DRAINAGE OF THIS AREA = 3.96 CFS

ADDITIONAL TO BE RETAINED = 1.72 CFS

POST CONSTR DRAINAGE ROUTED TO BASIN = 72.98 CFS

EXIST DRAINAGE = 53.00

ADDITIONAL TO BE RETAINED = 19.98 CFS
1.72

TOTAL REQUIRED TO BE RETAINED = 21.69 CFS

MAY RELEASE RATE 53 - 1.72 = 51.28 CFS Q_2

Post Development

			C
D.A. -	18.6	(original pre)	.25
	.25	G	.9
	1.76	H	.4
	14.42		$(\frac{1}{3})(.9)+\frac{2}{3}(.4)=.565$
	35.03	ac	0.39

$35 ac \times 67 cy/ac = 63,315 ft^3$ sed storage $\approx$ elev 84

4.85 ac imp.

43% w/s imp - perm pool = 3.02 ac ft

for Q_2 = 15 cfs - need 50,600 ac ft

need to elev ± 93

$R_v = 0.05 + .009(I) = .05 + .009(43) = 0.44$

$V = .45 \times .44 \times 18 = 3.5$ ac ft.

RCN = 65
RCN = 80
t_c = .6
a = 18 ac

sed ≅ 8 cfs

	70	0
	75	.13
	80	.98
	85	1.21
90 - 0	90	2.26
95 - 1.75	95	4.01
100 - 5.20	100	7.46

93 - 3.0 = 0

93 = 0
95 = 1.0
100 = 7.5

CRITICAL DURATION:

t_c = 18 MIN (SEE VDOT LAD 229)

A = 39.26

C =
4 ACRES @ .9
35.26 ACRES @ .4
C = .45

$$Tc = \sqrt{\frac{2CA_a(b - tc/4)}{Q_o}} - b$$

$$Tc = \sqrt{\frac{2(45)(39.26)(126.3)(17.3 - 18/4)}{51.28}} - 17.3$$

Tc = 16.07 SAY 16 MIN.

APPROX. STORAGE REQ'D.: V = 16 x 60 x 72.98 - 16 x 60 x 51.28 = 20832 CF

SAY 21,000 C.F.

MS.DAT → WJCCMS.DAT

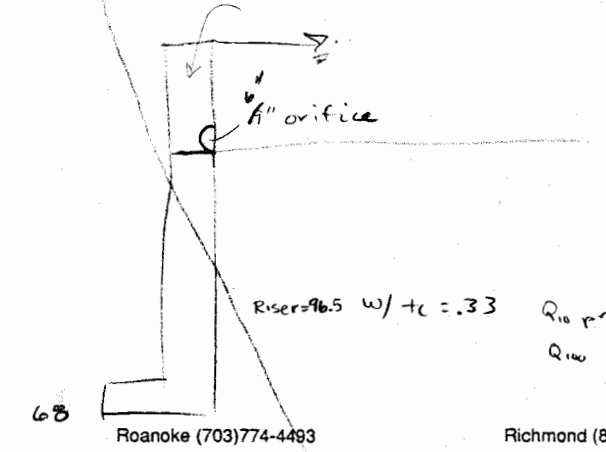
t_c = .6	Q_{2pre} = 4.5	Q_{2post} = ~~15.1~~	rel = 1.5	d = 2'	V = 1 ac-ft.
t_c = .4	Q_{2pre} = 6.1	Q_{2post} = 14.7	rel = 3.2	d = 2'	V = 1.0 ac ft
t_c = .33	Q_{2pre} = 6.4	Q_{2post} = 29.3	rel = 4.0	d = 3.0	V = 2.3
t_c = .33	$Q_{10\,pre}$ = 16.7	$Q_{10\,post}$ = 55.7	rel = 10.6	d = 4.7	V = 4.5 ✓ ← 18" riser @ 4.0
"	"	"	rel = 14.8	d = 4.2'	V = 3.9 ac ft ← 18" barrel @ 3.0
t_c .33	Q_{100} = 35.8	$Q_{100\,post}$ = 96.9	rel = 77.7	d = 5.2'	V = 5.1 ac ft ← 20' e.s.
		"	74.3	d = 5.3	V = 5.3 ← 15' e.s.
			95.5 / 1.3 rel = 66.3	d = 5.5	V = 5.5 ← 10' e.s.

-99.5 Top of dam

97.2 - E.S crest

96 - Top of riser

93 = Normal Pool



E.S = 52 cfs - 15' wide - 1.3'

15" .76 x 17.4 =

18" .77 x 28 = 21.6

Riser=96.5 w/ t_c = .33 $Q_{10\,pre}$ = 16.7 $Q_{10\,post}$ = 55.7 Q_{100} · Q_{OUT} = 14.8 Elev = 4.3 V_s = 4.0

Q_{OUT} = 61.2 Elev 5.7 V_1 = 5.8 ac ft

Roanoke (703)774-4493 Richmond (804)272-1212 Fredericksburg (703)373-0431 High Point, NC (919)884-1225

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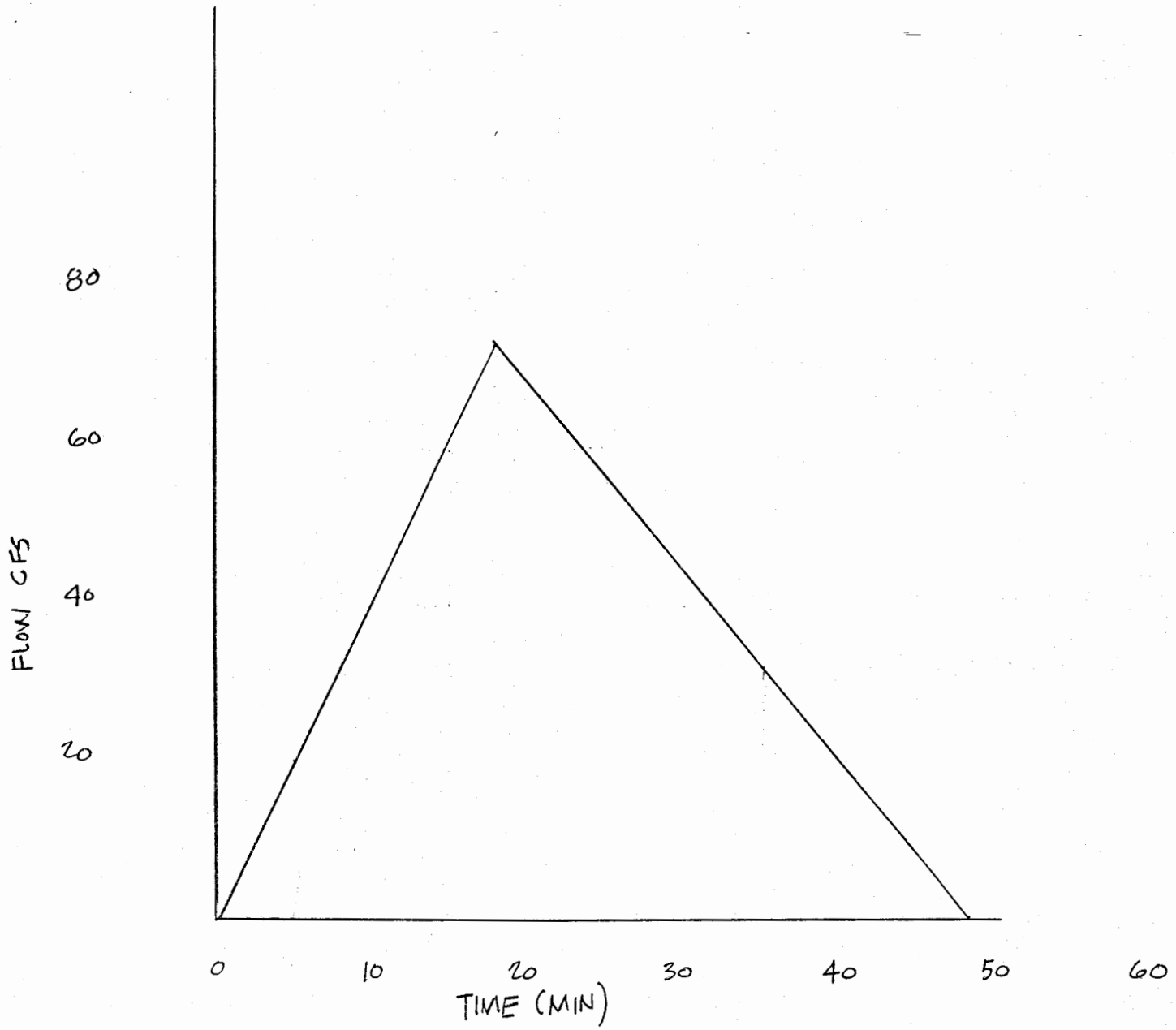
PROJECT WILLIAMSBURG MIDDLE SCHOOL SHEET NO. 5

DATE

COMMISSION NO. 18921100 BY CAT OFFICE



INFLOW HYDROGRAPH

STAGE - STORAGE

ELEVATION	AREA	INCR. VOL	ACC. VOL
69	0	0	0
70	750	375	375
71	1200	975	1350
72	1650	1425	2775
73	2100	1875	4650
74	2550	2325	6975
75	3000	2775	9750
76	3550	3275	13025
77	4100	3825	16850
78	4650	4375	21,225
79	5200	4925	26,150
80	5750	5475	31,625
81	6700	6225	37,850
82	7650	7175	45025
83	8600	8125	53150
84	9550	9075	62,225
85	10,500	10,025	72,250

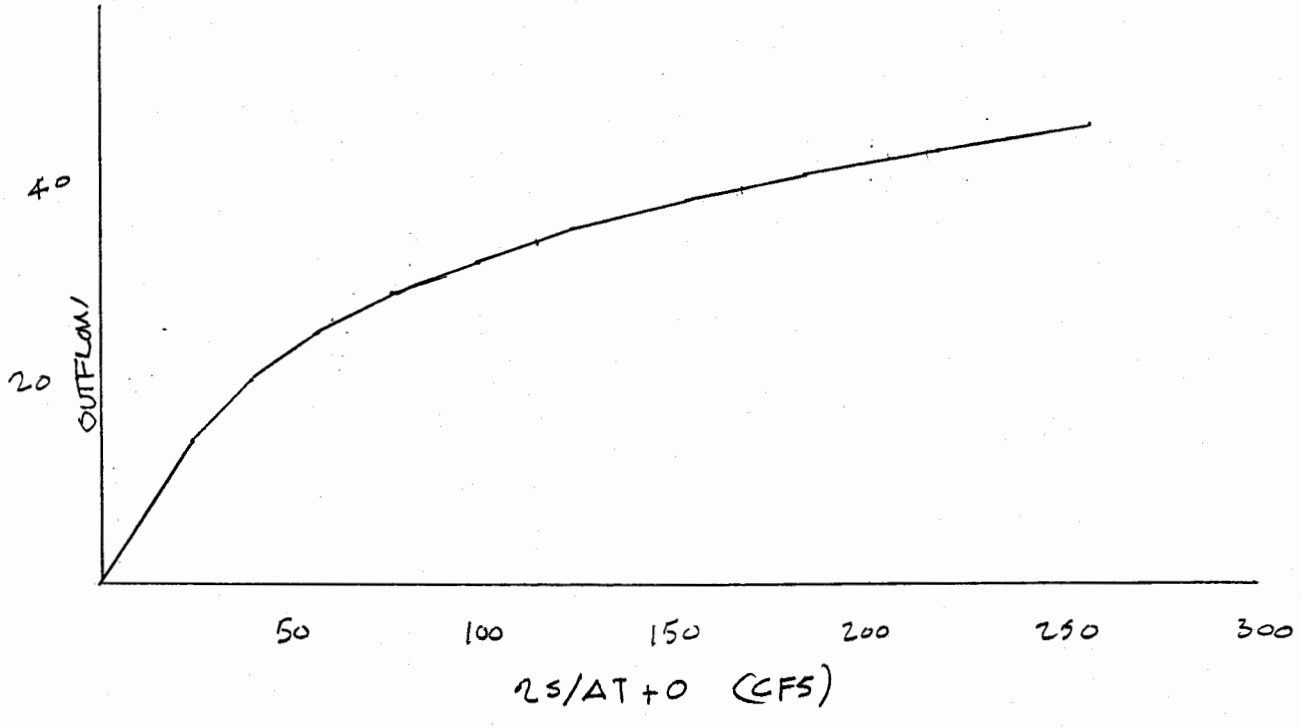
86 - 83,000
87 - 95,000
88 - 108,000
89 - 122,000
90 - 137,000
91 - 153,000
92 - 170,000 (51,000)
93 - 188,000

STAGE DISCHARGE - USE 24"ϕ DISCHARGE, INLET CONTROLLED A= 3.14

$Q = C_d A \sqrt{2gh}$

ELEVATION	HEAD (h)	DISCHARGE
69	0	0
70	0	0
71	1	15.11
72	2	21.38
73	3	26.19
74	4	30.24
75	5	33.81
76	6	37.03
77	7	40.00
78	8	42.76
79	9	45.36
80	10	47.81

ELEVATION	(O) DISCHARGE	(S) STORAGE	ΔT=300 2S/ΔT	2S/ΔT+O
69	0	0	0	0
70	0	0	0	0
71	15.11	1,350	9	24.11
72	21.38	2775	18.5	39.88
73	26.19	4650	31	57.19
74	30.24	6975	46.5	76.74
75	33.81	9750	65	98.81
76	37.03	13,025	86.8	123.86
77	40.00	16,850	112.3	152.33
78	42.76	21,225	141.5	184.26
79	45.36	26,150	174.33	219.69
80	47.81	31,625	210.83	258.64



ROUTING TABLE 10 YEAR

TIME	I_i INFLOW	I_j INFLOW	$\frac{2S}{\Delta T} - O$	$\frac{2S}{\Delta T} + O$	OUTFLOW	
5	20 →	40 →	0	0 ↘		
10	40	61	13	60	23.5	
15	61	64	42	114	36.0	
20	64	56	85	167	41	
25	56	44	117	205	44	
30	44	32	127	217	45	PEAK
35	32	20	115	203	44	
40						
45						
50						

* PEAK AT 45 CFS, ELEV. 79.0

CRITICAL DURATION = 16 MIN, T_c = 18 MIN

∴ NO NEED TO CHECK LONGER STORM!

* NOTE: DETENTION BASIN WILL SERVE AS A TEMPORARY SEDIMENT BASIN ALSO.
TO PROVIDE FOR PROPER SEDIMENT STORAGE OUTFLOW EL. WILL BE 84.
TOP OF DAM EL WILL BE 85

JOB NAME : WILLIAMSBURG MIDDLE SCHOOL
COMM. NO. :
DATE : 9-4-90
BY : CAT

STORM OCCURANCE : 10
INTENSITY CHART : 1.5.1.7

AREA	ACRES	%@.9	%@.4	WEIGHTED 'C'	FLOW DIST. (FT)	SLOPE %	tc (MIN)	i (IN.)	Q (CFS)
I	.46	10	90	.45	180	1%	14	5.2	1.08
II	.61	10	90	.45	160	1%	14	5.2	2.06
III	.37	100	0	.9	80	4%	4	7.2	2.40
IV	.02	100	0	.9	20	2%	2	7.2	.13
V	.29	100	0	.9	200	1%	6	6.9	1.99
VI	.32	100	0	.9	175	1%	6	6.9	1.74
VII	.62	100	0	.9	170	1%	6	6.9	3.85
VIII	.73	100	0	.9	190	4%	3	7.2	4.73
IX	.36	0	100	.4	150	5%	11	6.0	.86
X	.28	100	0	.9	60	1%	4	7.2	1.81
XI	.23	100	0	.9	150	3%	4	7.2	1.49
XII	.59	0	100	.4	200	3%	4	7.2	1.70
XIII	1.83	0	100	.4	350	2%	17	5.0	3.66
XIV	.39 3.35	100	0	.9	60	1%	4	7.2	2.53
XV	2.00	0	100	.4	220	2%	12	5.2	4.16
XVI	1.63	60	40	.70	270	2.0%	9	6.2	7.07
XVII	.07	100	0	.9	100	2.0%	4	7.2	.45
XVIII	.18	0	100	.4	100	2	4	7.2	.52
XIX	.09	100	0	.9	120	2	4	7.2	.58
XV	.36	100	0	.9	80	2	4	7.2	2.59
XXI	2.36	0	100	Ballfield 4	300	2	16	5.0	4.72
XXII	1.4	0	100	.4	300	2	16	5.0	4.72
XXIII	7.8	0	100	.4	300	2	16	5.0	4.72
	16.68								
	-2.36								
	14.22								

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PROJECT: WILLIAMSBURG — COMM. #: 18921100
DESCRIPTION: STORM SEWER DESIGN COMPUTATIONS — DATE: 10-4-90
REV.: ____
SH.#: ___ OF: ____
LAD 229 — CAL.: CAT CKD.: ___

FROM POINT	TO POINT	AREA DRAIN. "A" ACRES	RUN-OFF COEF. C	CA INCREMENT	CA ACCUMULATED	INLET TIME MINUTES	RAIN FALL IN./HR.	RUNOFF Q C.F.S.	INVERT ELEVATIONS UPPER END	INVERT ELEVATIONS LOWER END	LENGTH FT.	SLOPE FT./FT.	DIA. IN.	CAPACITY C.F.S.	VEL. F.P.S.	FLOW TIME SEC.	REMARKS
AREA I & II	DI 110	1.16	.45	.52													
DI 110	DI 109				.52	14	5.1	2.65	101.72	101.29	86	.5%	12	2.6	3.5	25	
AREA III	DI 112	.19	.9	.17													
AREA IV	DI 112	.02	.9	.02													
DI 112	DI 109				.19	4	7.2	1.37	102.00	101.67	165	.2%	12	1.6	2	82	
AREA V	DI 109	.28	.9	.25													
DI 109	DI 108				.96	16	5.0	4.80	101.04	100.87	34	.5%	15	4.8	3.6	9	
AREA VI	DI 108	.32	.9	.29													
DI 108	DI 106				1.25	16	5.0	6.25	100.87	99.99	110	.8%	15	5.8	4.5	24	
AREA VII	DI 106	.62	.9	.56													
AREA VIII	DI 107	.73	.9	.66													
DI 107	DI 106				.66	3	7.2	4.75	102.00	101.02	163	.6%	15	5.0	4.0	41	
DI 106	DI 105A				2.47	16	5.0	12.35	99.49	98.33	193	.6%	21	12.5	5.0	40	
AREA IX	DI 105A	.36	.4	.14													
AREA X	DI 105A	.28	.9	.25													
DI 105 A	DI 105				2.86	17	4.9	14.00	98.33	98.05	35	.8%	21	14.2	6	6	
AREA XI	DI 105	.23	.9	.21													
DI 105	DI 104				3.07	17	4.9	15.04	98.05	97.10	95	1.0%	21	16.0	6.5	15	
AREA XII	DI 104	.59	.4	.24													
DI 104	DI 103				3.31	17	4.9	16.22	96.85	95.74	185	.6%	24	18.0	5.5	33	
AREA XIII	DI 103	1.83	.4	.73													
DI 103	DI 102				4.04	18	4.8	19.39	95.74	94.02	215	.8%	24	20.0	6.5	33	

Smithey & Boynton
Architecture Engineering Planning

PROJECT: W'BURG COMM. #: 18921100
DESCRIPTION: STORM SEWER DATE: 10-4-90
DESIGN COMPUTATIONS REV.:
SH.#: __ OF: __
L4D 229 CAL.: CAT CKD.: __

FROM POINT	TO POINT	AREA DRAIN. "A" ACRES	RUN-OFF COEF. C	CA INCRE-MENT	CA ACCUM-ULATED	INLET TIME MIN-UTES	RAIN FALL IN./HR.	RUNOFF Q C.F.S.	INVERT ELEVATIONS UPPER END	INVERT ELEVATIONS LOWER END	LENGTH FT.	SLOPE FT./FT.	DIA. IN.	CAPA-CITY C.F.S.	VEL. F.P.S.	FLOW TIME SEC.	REMARKS
1/2 AREA XX	DI 102	.18	.9	.16													
AREA XV	DI 102	2.0	.4	.80													
AREA XVI	DI 115	1.70	.7	1.19													
DI 115	DI 113				1.19	9	6.2	7.38	102.00	99.83	145	1.5%	15	8.0	7.0	21	
AREA XVIII	DI 114	.18	.4	.07													
DI 114	DI 113				.07	4	7.2	.5	103.0	102.45	55	1.0%	12	3.6	4.5	12	
1/2 AREA XX	DI 113	.18	.9	.16													
1/2 AREA III	DI 113	.19	.9	.17													
DI 113	DI 102				1.59	9	6.2	9.86	99.58	96.64	245	1.2%	18	11.8	6.5	38	
DI 102	DI 101				6.59	18	4.8	31.68	93.52	91.42	265	.8%	30	37	7.5	35	
AREA XXII	DI 101	1.4	.4	.56													
DI 101	DI 100				7.15	18	4.8	34.32	91.42	90.14	160	.8%	30	37	7.5	35	
AREA XXIII	DI 100	1.8	.4	.72													
DI 100	EW 99				7.87	19	4.7	36.99	90.14	89.50	80	.8%	30	37	7.5	35	

12

(d) Rainfall Intensity

This direct solution methodology requires the expression of rainfall intensity in equation form. The rainfall intensity-duration relationship may be expressed as:

$$I = \frac{a}{b + T} \quad \cdots\cdots\cdots\cdots \text{(VII - 1)}$$

Where I = rainfall intensity, in/hr
a&b = constants, and
T = rainfall duration, minutes.

(e) Rainfall Constants for Selected Sites in Virginia (Table VII-1)

Table VII-1 RAINFALL CONSTANTS FOR VIRGINIA
(Duration 5 min. to 2 hours)

Station	Rainfall Frequency	Constants a	b
Wytheville	2	117.7	19.1
	5	168.6	23.8
	10	197.8	25.2
Lynchburg	2	118.8	17.2
	5	158.9	20.6
	10	189.8	22.6
Richmond	2	130.3	18.5
	5	166.9	20.9
	10	189.2	22.1
Norfolk	2	126.3	17.3
	5	173.8	22.7
	10	201.0	23.9
Cape Henry	2	143.2	21.0
	5	173.8	22.7
	10	203.9	24.8

The above constants are based on linear regression analyses of the frequency intensity-duration curves contained in the VDH&T Drainage Manual. They provide excellent correlations over the range of rainfall durations from 5 minutes to 120 minutes.

ARLINGTON	2	120.5	17.4
	5	163.3	21.4
	10	191.3	22.5

3. CRITICAL STORM DURATION

The above equation expresses volume as a function of time. Equating the first derivative of the expression to zero will provide an estimate of the critical storm duration resulting in the maximum required storage volume. The expression is:

$$T_c = \sqrt{\frac{2CA_a (b - t_c/4)}{q_o}} - b \cdots\cdots (VII-3)$$

Where T_c = critical storm duration in minutes
C = Rational coefficient for developed area
A = drainage area in acres
t_c = Time of Concentration after development in minutes
q_o = allowable peak outflow in cfs
and a&b = rainfall constants from previous tables.

Notes:

Since inflow peak discharge is also a function of storm duration, the equation $Q = \frac{CAa}{b + T}$ was substituted into the original expression before the derivative was taken. If T_c is less than the time of concentration after development, set $T_c = t_c$. Also, C and A for the developed area will generally be represented by the sum of the products of the two variables, based on the planned development.

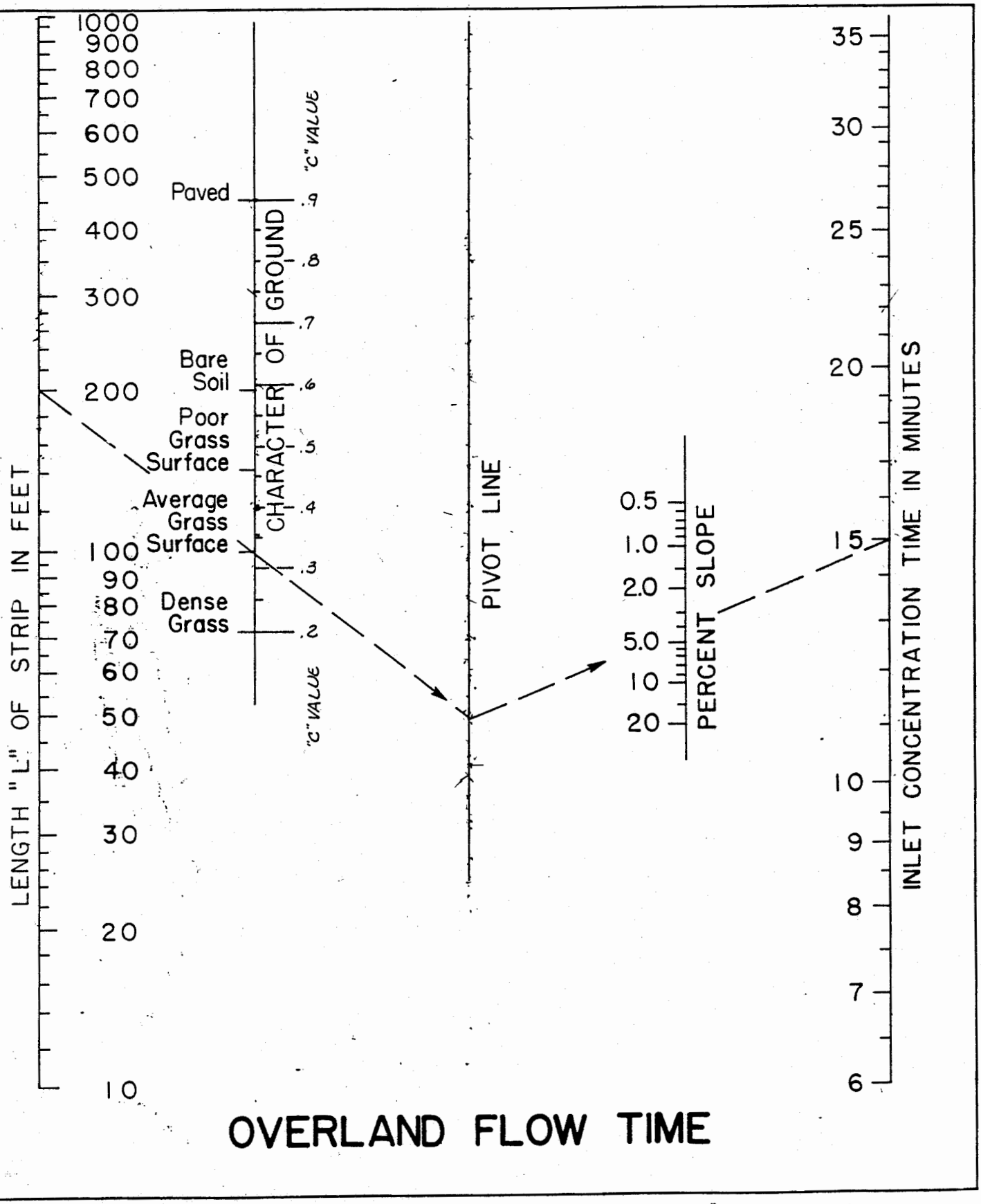
D. DESIGN PROCEDURE

1. OBTAIN RELEVANT DESIGN DATA INCLUDING:

- drainage area
- Time of Concentration (before and after development)
- Rational Equation coefficient (before and after development)
- Rainfall constants (a and b) for the most representative rainfall station, and the frequency of interest.

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 027

FIG. 1.5.1.1



OVERLAND FLOW TIME

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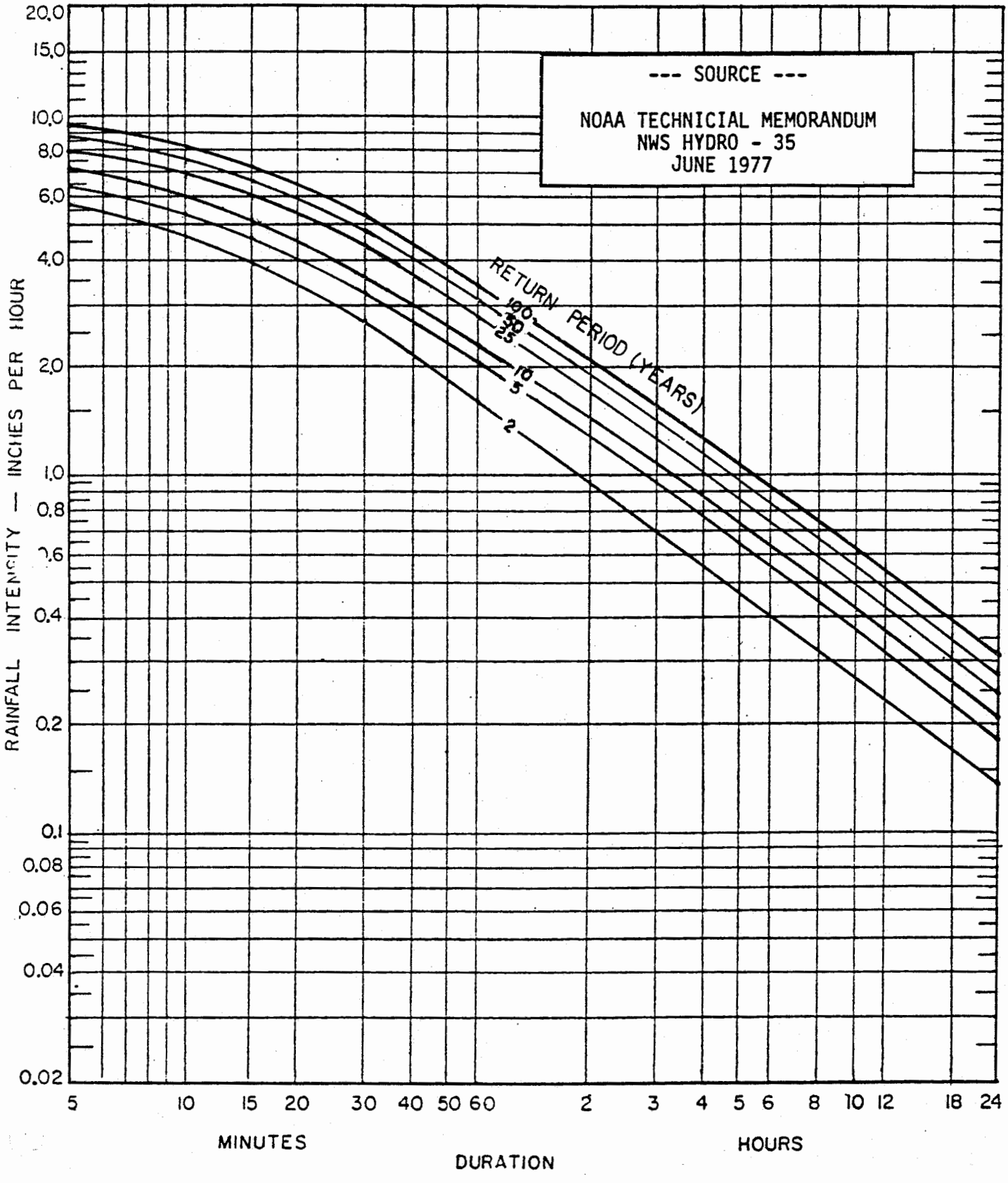
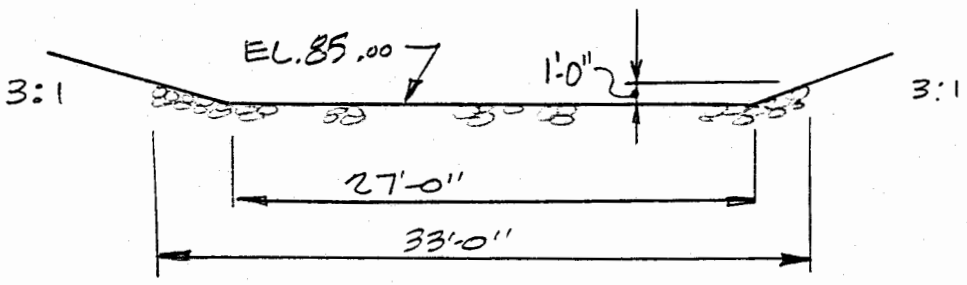
Fig. 1.5.1.7

NORFOLK, VA.



OVERFLOW CHANNEL



WEIR FORMULA : $Q = CLH^{1.5}$

$Q = 72.36$ CFS

$C = 2.68$
$L = 27'$
$H = 1'-0"$

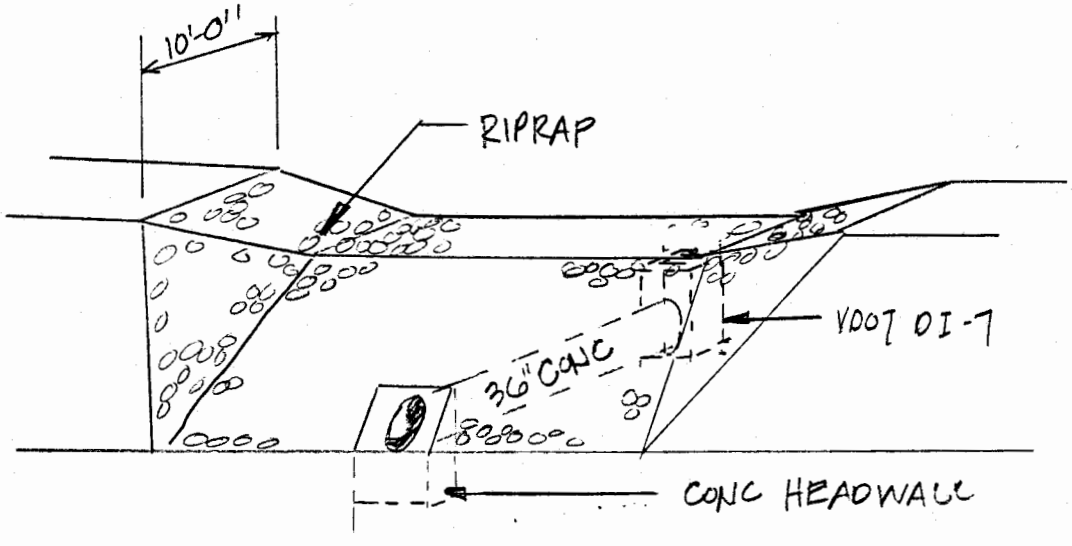


Table 5-3. Values of C in the Formula $Q = CLH^{3/2}$ for Broad-crested Weirs

Measured head in feet, H	Breadth of crest of weir in feet										
	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	10.00	15.00
0.2	2.80	2.75	2.69	2.62	2.54	2.48	2.44	2.38	2.34	2.49	2.68
0.4	2.92	2.80	2.72	2.64	2.61	2.60	2.58	2.54	2.50	2.56	2.70
0.6	3.08	2.89	2.75	2.64	2.61	2.60	2.68	2.69	2.70	2.70	2.70
0.8	3.30	3.04	2.85	2.68	2.60	2.60	2.67	2.68	2.68	2.69	2.64
1.0	3.32	3.14	2.98	2.75	2.66	2.64	2.65	2.67	2.68	2.68	2.63
1.2	3.32	3.20	3.08	2.86	2.70	2.65	2.64	2.67	2.66	2.69	2.64
1.4	3.32	3.26	3.20	2.92	2.77	2.68	2.64	2.65	2.65	2.67	2.64
1.6	3.32	3.29	3.28	3.07	2.89	2.75	2.68	2.66	2.65	2.64	2.63
1.8	3.32	3.32	3.31	3.07	2.88	2.74	2.68	2.66	2.65	2.64	2.63
2.0	3.32	3.31	3.30	3.03	2.85	2.76	2.72	2.68	2.65	2.64	2.63
2.5	3.32	3.32	3.31	3.28	3.07	2.89	2.81	2.72	2.67	2.64	2.63
3.0	3.32	3.32	3.32	3.32	3.20	3.05	2.92	2.73	2.66	2.64	2.63
3.5	3.32	3.32	3.32	3.32	3.32	3.19	2.97	2.76	2.68	2.64	2.63
4.0	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.70	2.64	2.63
4.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.74	2.64	2.63
5.0	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.64	2.63
5.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.64	2.63

Table 5-4. Values of C in the Formula $Q = CLH^{3/2}$ for Models of Broad-crested Weirs with Rounded Upstream Corner

Name of experimenter	Radius of curve in feet	Breadth of weir in feet, B	Height of weir in feet, P	Head in feet, H									
				0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0	4.0	5.0
Bazin	0.33	2.62	2.46	2.93	2.97	2.98	3.01	3.04					
Bazin	0.33	6.56	2.46	2.70	2.82	2.87	2.89	2.92					
U. S. Deep Waterways	0.33	2.62	4.57	....	2.77	2.80	2.83	2.92	3.00	3.08	3.17	3.34	3.50
U. S. Deep Waterways	0.33	6.56	4.56	....	....	2.83	2.83	2.83	2.82	2.82	2.82	2.82	2.81

Table 5-5. Values of C in the Formula $Q = CLH^{3/2}$ for Broad-crested Weirs with Crests Inclined Slightly Downward

(*a*)

Crest	Energy head = H_e								
	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.5
Level	2.78	2.79	2.80	2.81	2.82	2.83	2.85	2.85	2.85
Slope = 0.004	2.95	2.94	2.93	2.92	2.91	2.90	2.88	2.87	2.87
Slope = 0.026	3.07	3.06	3.05	3.04	3.03	3.02	3.00	2.99	

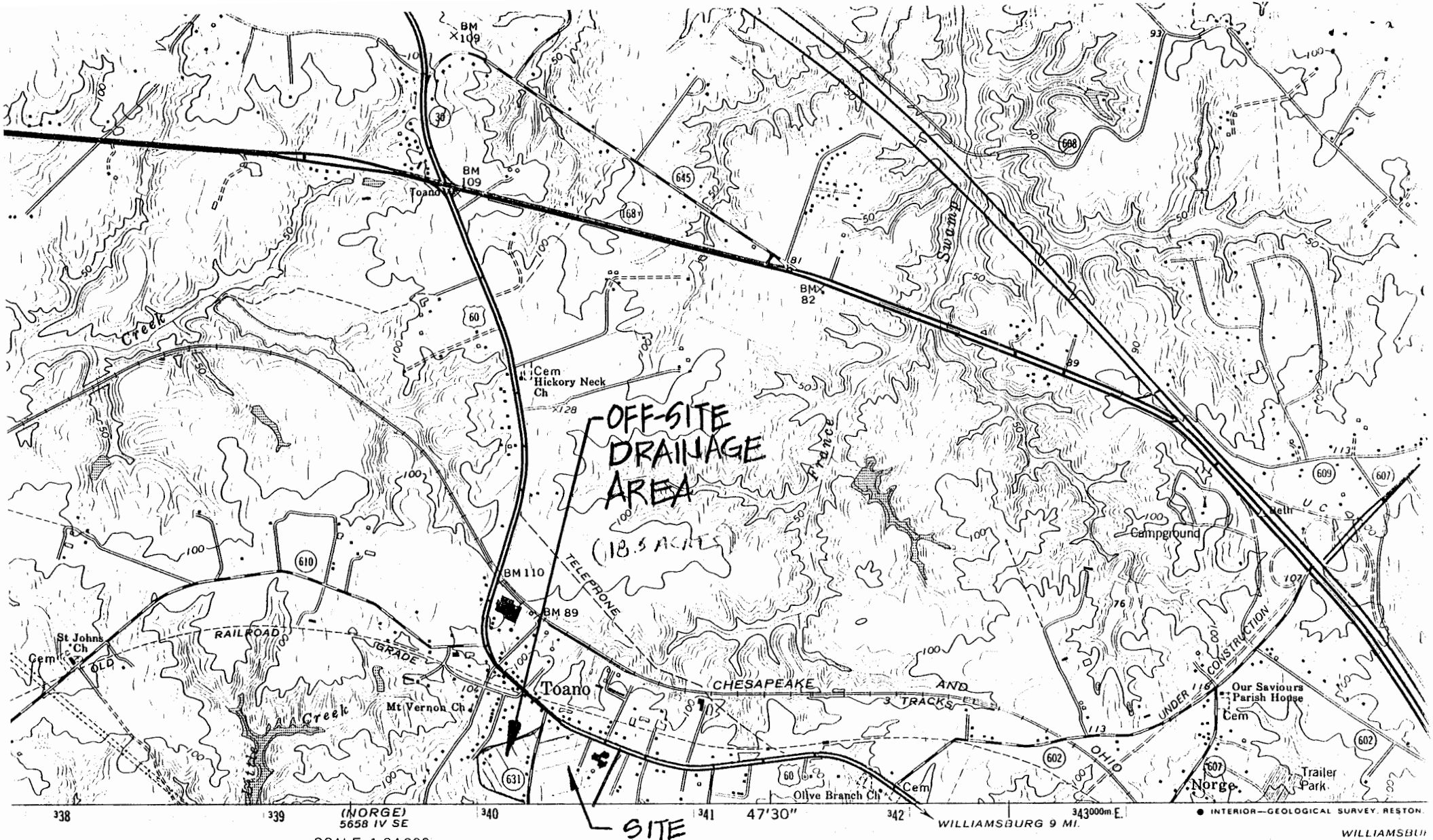
(*b*)

Slope of crest	Length of weir in feet	Head in feet, H						
		0.1	0.2	0.3	0.4	0.5	0.6	0.7
12 to 1	3.0	2.58	2.87	2.57	2.60	2.84	2.81	2.70
18 to 1	3.0	2.91	2.92	2.53	2.60	2.80	2.74	2.62
18 to 1	10.0	2.52	2.68	2.73	2.80	2.90	2.80	2.68

Table 5-6. Values of C in the Formula $Q = CLH^{3/2}$ for Weirs of Triangular Cross Section with Vertical Upstream Face and Sloping Downstream Face

Slope of downstream face	Height of weir in feet, P	Head in feet, H										
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5
Hor. Vert.												
1 to 1	2.46	3.88	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85
2 to 1	2.46	3.48	3.48	3.49	3.49	3.50	3.50	3.50	3.50	3.50	3.51	3.51
2 to 1	1.64	3.56	3.47	3.47	3.51	3.54	3.57	3.58	3.58	3.58	3.59	3.57
3 to 1	1.64	....	2.90	3.11	3.22	3.26	3.33	3.37	3.40	3.40	3.41	3.41
5 to 1	2.46	....	3.08	3.06	3.05	3.05	3.07	3.09	3.12	3.13	3.13	3.13
10 to 1	2.46	....	2.82	2.83	2.84	2.86	2.89	2.90	2.91	2.91	2.92	2.93

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 031



SCALE 1:24000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 2.8 FEET

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(703) 387-1773

VIRGINIA
QUADRANGLE LOCATION

ROAD CLASSIFICATI
Heavy-duty
Medium-duty
U. S. Route
Interstate Ro
Light-du
Unimpr

Revisions shown in purple compiled in cooperation with State of

TOA

N3722.

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS-032

TABLE 3

WORKSHEET FOR BMP POINT SYSTEM

A. STRUCTURAL BMP POINT ALLOCATION

BMP	BMP Points		Fraction of Site Served by BMP		Weighted BMP Points
WET POND	9	x	85%	=	7.7
		x		=	
		x		=	
		x		=	

TOTAL WEIGHTED STRUCTURAL BMP POINTS: _____

B. NATURAL OPEN SPACE CREDIT

Fraction of Site		Natural Open Space Credit (0.1 per 1%)		Points for Natural Open Space
30%	x	.1	=	3.0

C. TOTAL WEIGHTED POINTS

Structural BMP Points		Natural Open Space Points		TOTAL
7.7	+	3.0	=	10.7

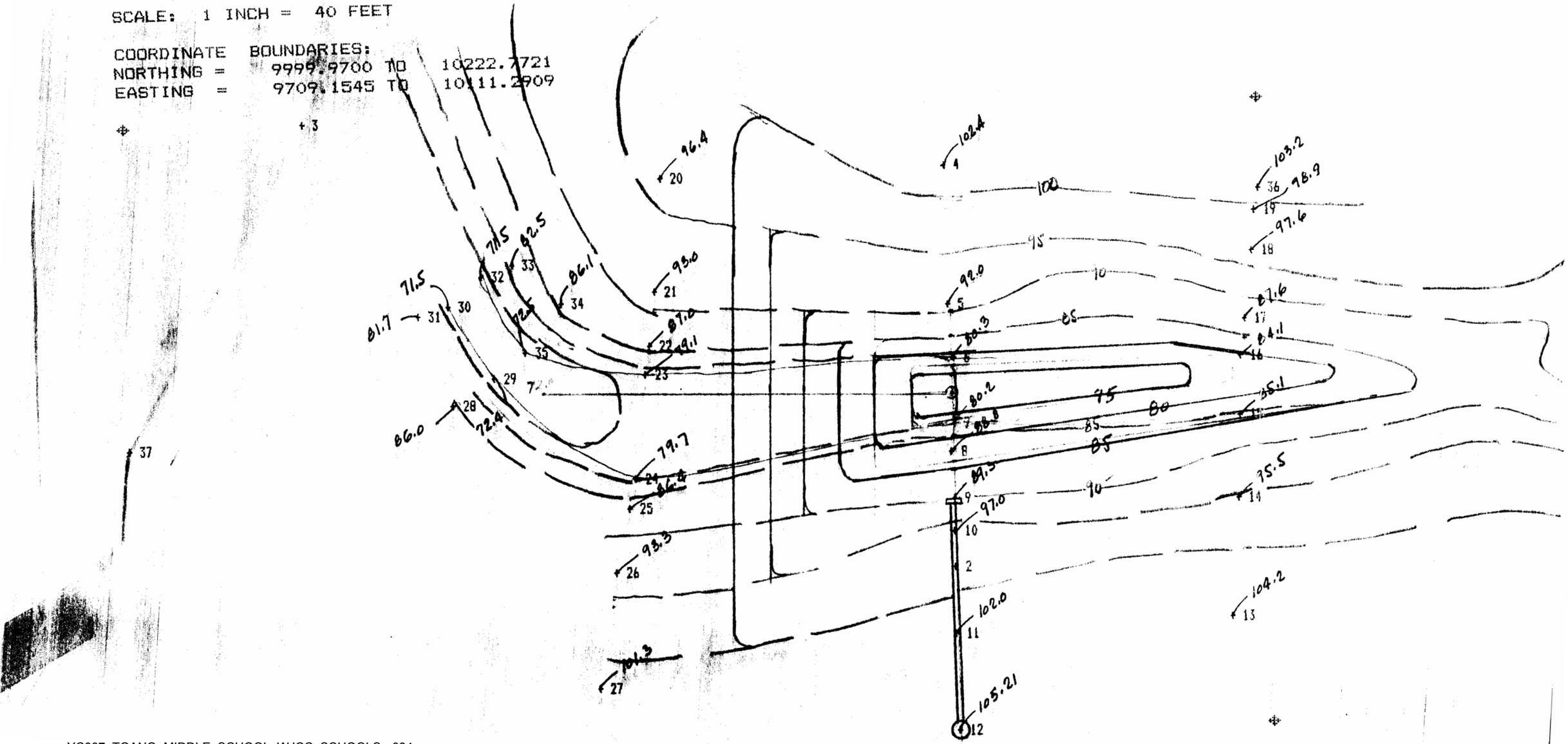
INJECTION / MAINT
508 / 460

DeYoung-Johnson Group
Williamsburg, Va.

JOB NUMBER: 1890590
TOANA SCHOOL SITE TOPO - 5/6/91

SCALE: 1 INCH = 40 FEET

COORDINATE BOUNDARIES:
NORTHING = 9999.9700 TO 10222.7721
EASTING = 9709.1545 TO 10111.2909



TOANO MIDDLE SCHOOL BMP REPAIRS AND RETROFIT

James City County, Virginia

Stormwater Pollution Prevention Plan (SWPPP)

In compliance with:

Stormwater Construction General Permit No. VAR10
Virginia Stormwater Management Program (VSMP)

TOANO MIDDLE SCHOOL BMP REPAIRS AND RETROFIT

James City County, Virginia

Stormwater Pollution Prevention Plan (SWPPP)

In compliance with:

Stormwater Construction General Permit No. VAR10
Virginia Stormwater Management Program (VSMP)

SWPPP Coordinator:

Nathan Skalak
(Signature)

Nathan Skalak
(Print Name)

Site Division Project Manager
(Title)

David A. Nice Builders, Inc.
(Company)

757 - ~~804~~ 566-3032
(Phone number)

Nathan Skalak
(Responsible Land Disturber)

Stormwater Pollution Prevention Plan

for:

TOANO MIDDLE SCHOOL BMP REPAIR AND RETROFIT
James City County
7817 Richmond Road
Toano, Virginia 23168

Operator(s):

David Nice Builders, Inc.
Nathan Skalak
4571 Ware Creek Road
Williamsburg, VA 23188
757-566-3032
757-566-4686 (fax)

SWPPP Contact(s):

David Nice Builders, Inc.
Nathan Skalak
4571 Ware Creek Road
Williamsburg, VA 23188
757-566-4686
nskalak@davidnicebuilders.com

SWPPP Preparation Date:

12 /10 / 2010

Estimated Project Dates:

Project Start Date: 01 /24 /2011
Project Completion Date: 03/18/2011

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SECTION 1: INTRODUCTION

1.1 Plan Purpose

This Stormwater Pollution Prevention Plan (Plan) has been developed as a requirement of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities (Permit), as defined in 4 VAC 50-60-380 and 390 et seq. The purpose of this Plan is to:

1. Identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the construction site, and;

2. To describe and ensure the implementation of practices that will be used to reduce pollutants in stormwater discharges from the construction site and to assure compliance with the conditions of the Permit.

Implementation of the components of this Plan is required as a condition of the Permit (Appendix A). The Department of Conservation and Recreation (DCR) has been granted authority to administer the VSMP program, and is therefore, the regulatory authority overseeing the implementation of this Plan.

1.2 Background – Construction General Permit No. VAR10

This permit has a fixed term of 5 years from the effective date of July 1, 2009, and is required for all projects that will disturb 1 or more acres of total land area. Coverage is also required for projects resulting in land disturbance equal to or greater than 2500 square feet and less than one acre within areas designated as subject to the Chesapeake Bay Preservation Act such as James City County. To obtain a Permit, operators must submit a Registration Statement (Appendix B) prior to commencing construction activities (clearing, grading or other activities that result in soil disturbance). A Registration Statement is considered to be submitted once it is postmarked. Coverage under the Permit becomes effective 15 business days following submittal, unless earlier notification of coverage is made by the DCR.

The Permit authorizes the discharge of stormwater from construction activities until the Permit's expiration date. The Permit also authorized the discharge of stormwater from offsite support activities, provided that certain conditions are met as outlined in the Permit (Part I A.2.). Certain non-stormwater discharges are also authorized by the Permit provided the conditions contained in the Permit (Part I D.2.) are met.

Upon final stabilization of the site, a Notice of Termination (Appendix D) must be submitted to DCR. The Notice of Termination must be submitted within 30 days of site stabilization. Authorization to discharge terminates at midnight on the date that the Notice of Termination is submitted.

SECTION 2: GENERAL PLAN REQUIREMENTS

2.1 Deadlines

The Plan shall be prepared prior to the submittal of the Registration Statement and shall provide for compliance with the terms and schedules of the Permit beginning with the initiation of the construction activities.

2.2 Incorporation of Other Plans

The Plan requirements of the Permit are satisfied by incorporating by reference other plans developed for this construction activity, provided that the other plans meet or exceed the requirements of *Part II.D.* of the Permit. The construction plans develop for this project, Toano Middle School BMP Repairs and Retrofit, have been approved by James City County. The construction plans meet current James City County requirements regarding erosion and sediment control and stormwater management, and also comply with Virginia regulatory requirements as presented in the Virginia Erosion and Sediment Control Handbook, Third Edition. All plans incorporated by reference into the Plan are enforceable under the Permit.

2.3 Plan Administration

The Plan shall be certified in accordance with the Permit. Copies of the Plan shall be kept onsite and be made available to DCR, or other regulatory agencies having authority, upon request. The Plan must also be available to all operators identified as having responsibilities to carry out provisions contained in the Plan. The active, up-to-date SWPPP for each site must be made publicly available upon requires by the public. Access to the SWPPP may be arranged upon request at a time and publicly accessible location convenient to the operator but shall be no more than once per month and shall be during normal business hours. The website address or contact person for access to the SWPPP shall be posted conspicuously near the main entrance of the construction entrance along with the permit coverage letter and registration number for the construction activity.

2.4 Plan Updates

The Plan shall be amended whenever there is a change in design, construction, operation or maintenance of the construction site that has a significant effect on the potential for the discharge of pollutants to surface waters and that has not been addressed in the normal implementation of the Plan. The Plan shall also be updated whenever it is found to be ineffective in meeting the requirements of the Permit. In the event the DCR notifies the permittee that the Plan does not meet one of more of the provisions of the Permit, within a period of 7 days the permittee must make the required changed to the Plan and submit a certification to DCR stating that the required changes have been made.

2.5 Potential Construction Site Stormwater Pollutants

The Plan is focused upon limiting the pollution potential from the following:

1. Sediment – potential sources of sediment to stormwater runoff
   - Clearing and grubbing operations
   - Grading and BMP excavation
   - Vehicle tracking
   - Creation of spoil berm

2. Potential Pollutants and sources other than sediment
   - Combined Staging Area – small fueling activities, minor equipment maintenance, and sanitary facilities
   - Construction Activity – concrete pouring and washout

   For all potential construction site pollutants, see Table 1 below.

Table 1. Potential construction site pollutants

Material/Chemical	Physical Description	Stormwater Pollutants
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates
Asphalt	Black solid	Oil, petroleum distillates
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium
Glue, adhesives	White or yellow liquid	Polymers, epoxies
Paints	Various colored liquid	Metal oxides, stoddard solvent, talc, calcium carbonate, arsenic
Curing compounds	Creamy white liquid	Naphtha
Wood preservatives	Clear amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes

Table 1. (continued)

Material/Chemical	Physical Description	Stormwater Pollutants
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses

SECTION 3: SPECIFIC PLAN REQUIREMENTS

3.1 Site Description

The items required by the Permit regarding the site description (Part II D.1., Appendix A) can be found in the project design plans, Toano Middle School BMP Repairs and Retrofit, which is incorporated by reference into this Plan. A summary of the required elements is provided in Table 2 with a reference to the sheet number in the design plans where the required element can be located:

Table 2. Site Description Elements

Permit Part II D. I...	Required Element	Location
a.	**Description of construction activity:** The goal of this project is to repair and perform maintenance on an existing stormwater management facility (BMP) to restore the treatment function of the BMP for the Toano Middle School. The project will disturb 0.11 acres or 4700 square feet. The project qualifies for Nationwide Permit 43 for maintenance of stormwater facilities (Appendix F)	Site Plan Appendix F
b.	**Description of construction sequence of soil disturbing activities:** The sequence of construction is located on sheet 3 of the project site plan. Unless otherwise indicated, all vegetative and structural erosion and sediment controls shall be constructed and maintained according to the Minimum Standards and specifications of the Virginia Erosion and Sediment Control Handbook, 3rd edition, 1992.	3
c.	**Record of Dates when major grading activities occur:** A record of dates when the project begins and activities occur will be kept in Appendix C, Record of Land Disturbance. The project is a small, contained maintenance activity and does not have major grading associated with it – just an area of excavation in the bottom of the existing BMP and creation of a berm to dispose of excavated material.	Appendix C

Permit Part II D. 1...	Required Element	Location
d.	**Estimates of the total areas expected to be disturbed including offsite borrow and fill areas:** The proposed project will disturb approximately 0.11 acres. There are no offsite borrow or fill areas associated with the project. The limits of clearing and land disturbance are mapped on sheet 2 of the site plan. All land disturbance will be confined to this area.	2
e.	**Description of other potential pollution sources including vehicle fueling, chemical storage areas, sanitary waste facilities, litter, etc.**	Sections 2.5 and Section 3
f.	**Identification of the nearest receiving waters that will receive discharges from disturbed area of the site:** Discharges for this project will be received by the existing stream channel, an unnamed tributary of Yarmouth Creek. The site drains first to Cranston's Mill Pond, then to Yarmouth Creek, the Chickahominy River and finally, the James River. Receiving waters in close proximity to the construction activity are located in Appendix B on the vicinity map.	Appendix B
g.	**The location and description of any discharge associated with industrial activity other than construction at the site:** There are no industrial related discharges proposed for the construction of this project.	
h.	**A legible general location map with sufficient detail to identify the location of the construction activity and surface waters within one mile of the construction activity:** An aerial photograph-GIS based vicinity map has been provided in Appendix B. Surface waters within one mile of the site are unnamed tributaries of Yarmouth Creek. The site is located in subwatershed HUC JL28 of the Lower James River Watershed.	Appendix B
i.	**A legible site map identifying:**	
i(1)	**- Directions of stormwater flows and approximate slopes anticipated after major grading activities:** The BMP is located at the bottom of an existing ravine with steep slopes, generally about 25%. At the edge of the BMP where the excavated soil material is to be placed, the slopes are fairly moderate, 5 to 10%. The slopes will not change after construction and existing drainage patterns will not be disturbed as the project is for BMP maintenance only.	2
i(2)	**- Areas of soil disturbance and areas of the site that will not be disturbed:** The areas of disturbance include the bottom of the BMP and the upslope area to be used as a disposal area for the excavated material. All areas of disturbance are shown within the limits of disturbance shown on sheet 2 of the site plan. No land disturbance shall occur outside these limits unless approved by James City County or shown on an amended erosion control plan.	2
i(3)	**- Locations of major structural and non-structural control measures:** The site plan will utilize silt fence and a construction entrance, if necessary. The location of the silt fence is shown on sheet 2. Seeding shall be in accordance with notes on sheet 4.	2,4
i(4)	**- Locations where stabilization practices are expected to occur:** Permanent stabilization is to be applied to all denuded areas within 7 days after final grade is reached on any portion of the site. Soil stabilization shall also be applied to denuded or disturbed areas not at final grade but which will remain disturbed for longer than 30 days. The site will be seeded in accordance with notes on sheet 4.	4

Permit Part II D. I...	Required Element	Location
i(5)	**- Location of surface waters:** The site is drained by the stream flowing through the BMP. This unnamed tributary of Yarmouth Creek drains to Cranston's Mill Pond. Other receiving waters in close proximity to the site are other unnamed tributaries of Yarmouth Creek shown on the vicinity map in Appendix B.	Appendix B
i(6)	**- Locations where other concentrated stormwater discharges:** This project will not create any new impervious surfaces or additional runoff. The project will restore the function of the BMP to protect downstream waterways from the development of the middle school.	
i(7)	**- Locations of offsite material, borrow or equipment storage areas:** No offsite material borrow or equipment storage areas are proposed for this project.	
i(8)	**- Other potential pollution sources such as vehicle fueling, storage of chemicals, concrete wash-out areas, and sanitary waste facilities including those placed temporarily on the construction site, etc.**	Sections 2.5 and Section 3
i(9)	**- Areas where final stabilization has been accomplished:** Areas where final stabilization has been accomplished shall be recorded in Appendix C, Record of Land Disturbance.	Appendix C

3.2 Controls and Measures

The Permit requires the implementation of various types of controls and measures that are implemented to control pollutants in stormwater discharges from the project site. The Permit specifically requires the implementation of erosion and sediment control practices (both structural and non-structural), stormwater management practices, and other specific controls to reduce pollutants. All erosion and sediment control employed in this project were selected to meet or exceed State and County requirements and are detailed on the referenced site plans.

Several requirements of the Permit relating to control (Part II.D.2, Appendix A) are not included in the referenced site plan. A description of all the required items including erosion and sediment control is presented below along with how they are addressed in this Plan.

1. Erosion and Sediment Control:
   The construction/site plan for this project, Toano Middle School BMP Repairs and Retrofit contains the detailed information regarding the erosion and sediment controls used for this project. This information can be found on sheets 2 and 4.

2. Stormwater Management (BMP):
   The site plan for this project will restore the function of the BMP for the middle school – the project itself does not need a BMP as it is for maintenance of a BMP.

3. Fuels and Oils
    a. Onsite fueling will be conducted in a dedicated location away from access to surface waters. Since the location of the fueling activities may periodically move during this repair project, the site plan does not contain a specific location. A location will be determined in the field and noted in the Site Inspection Log (Appendix D). Containment berms will be located adjacent to the refueling area that will contain any inadvertent spills until they can be cleaned up. Any onsite storage tanks will have a means of secondary containment. In the event of a spill, it will be cleaned up immediately and the material, including any contaminated soil, will be disposed of according to all federal, state, and county regulations.

    b. All vehicles onsite will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.

    c. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

    d. Spill kits will be included with all fueling sources and maintenance activities.

    e. Any asphalt substances used onsite will be applied according the manufacturer's recommendations.

4. Solid Waste
    No solid materials shall be discharged to surface water. Solid materials, including building materials, garbage and debris shall be cleaned up daily and deposited into dumpsters, which will be periodically removed from the site and deposited into a landfill.

5. Fertilizer
    a. Fertilizers will be applied only in the minimum amounts recommended by the manufacturer.

    b. Fertilizers will be worked into the soil to limit exposures to stormwater.

    c. Fertilizers will be stored under cover and partially used bags will be transferred to a sealable bin to avoid spills.

6. Paint and other Chemicals
    a. All paint containers and other chemicals/compounds will be tightly sealed and stored when not required for use. Excess paint or other chemicals will not be discharged to the storm sewers or on the ground but will be properly disposed of according to the manufacturer's instructions.

    b. Chemicals used onsite are to be kept in small quantities and stored in closed containers undercover and kept out of direct contact with stormwater. As with

fuels and oils, any inadvertent spills will be cleaned up immediately and disposed of according to federal, state and county regulations.

7. Concrete
   Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site except in a specially designated concrete disposal area.

8. Sanitary Waste
   Portable lavatories are located onsite and are serviced on a regular basis by a contractor. They will be located in upland areas away from direct contact with surface waters. Any spill occurring during servicing will be cleaned up immediately, including any contaminated soils, and disposed of according to all federal state and county regulations.

9. Grading and Erosion and Sediment Control Activities
   A record of the dates when land disturbing activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be maintained and included in Appendix C of this Plan.

3.3 Spills

Oil, chemical or other hazardous substance spills in excess of reportable quantities in accordance with Park I.E or per Permit (Appendix A), will be reported to the DCR in accordance with Part IIIG. of the Permit as soon as the discharge is discovered, but no later than 24 hours. A reportable quantity of oil is defined as a discharge to any surface water that causes a sheen, discoloration or an emulsion. Reports will be made to the following:

Department of Conservation and Recreation Stormwater Permitting
Phone (804) 786-3998
Fax: (804) 786-1978
For reports outside of working hours, leave a message.

Virginia Department of Emergency Management
Emergency Operations Center (EOC)
Phone: (800) 468-8892

Materials and equipment necessary for oil or chemical spill cleanup will be kept onsite. All oil or other chemical spills will be cleaned up immediately upon discovery. Spills large enough to reach the store sewers or stream channels will be reported to the National Response Center at 1-800-424-8802.

3.4 Maintenance

Maintenance of the erosion and sediment controls incorporated into the project must be maintained on a regular basis to assure their continued effectiveness; sediment must be removed from silt fences when the design capacity has been reduced by 50%. This includes repairs to all

erosion and sediment controls as necessary. Those controls found to be ineffective during routine inspections (as described in the following section) shall be repaired before the next anticipated storm event or as soon as practicable. A more detailed description of the maintenance procedures is contained in the construction plans on sheets 2 and 4 and is incorporated into this plan by reference.

3.5 Inspections

Regular inspections of the construction site shall be performed by personnel familiar with all aspects of the Plan and the employed control practices. Inspections shall include the review of all disturbed areas, structural and non-structural control measures, material storage areas, and vehicular access points. Inspection are to be performed (1) at least once every 7 calendar days or (2) at least once every 14 calendar days and within 48 hours following any runoff producing storm event. Areas that already have been stabilized or where runoff is unlikely due to frozen snow covered ground shall be inspected at leas on a monthly basis.

Inspections are intended to identify areas where the pollutant control measures at the site are ineffective and are allowing pollutants to enter surface waters. Receiving waters shall be inspected to ascertain whether control measures are effective in preventing significant impacts. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

If as a result of the inspection, the site conditions or control measures are found to have changed, the Plan shall be updated within a period of 7 calendar days. If control measures need to be modified to assure effectiveness or if additional measures are determined to be necessary, implementation shall be completed prior to the next anticipated storm event or as soon as practicable.

A report summarizing the inspection and the subsequent maintenance activities must be completed and maintained as part of the Plan. The inspection forms are included in Appendix D. Required elements include major observations (including information on control measure performance and incidents of non-compliance), information on the inspection personnel and the amount of rainfall at the construction site during land disturbing activities between SWPPP required inspections. If an inspection does not identify any incidents of non-compliance, then the certification statement contained in the inspection form will apply.

3.6 Non-Stormwater Discharges

With the exception of flows from fire fighting activities, allowable sources of non-stormwater discharges (Part I D.2. of the Permit, Appendix A) must be identified in the Plan. Appropriate measures must be taken to ensure that pollution prevention measures for the non-stormwater component of the discharge are implemented. There are no non-stormwater discharges associated with this project that can be identified at this time.

SWPPP APPENDICES

Appendix A – Stormwater Construction General Permit No. VAR10

Appendix B – Forms: Registration Statement, Fee Form, Site Vicinity Map

Appendix C – Land Disturbing and Stabilization Activities Log

Appendix D – Record of Inspection, Notice of Termination, Transfer Agreement Form, VSMP Construction Permit Inspection Report

Appendix E – Contractor Certification

Appendix F – Wetlands Permit Information

Appendix G – Site Plan

APPENDIX A

Stormwater Construction General Permit No. VAR10

General Permit No.: VAR10

Effective Date: July 1, 2009

Expiration Date: June 30, 2014

GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the Virginia Stormwater Management Act and attendant regulations, operators of construction activities covered by this permit with stormwater discharges are authorized to discharge to state waters, including discharges to a regulated MS4 system, within the boundaries of the Commonwealth of Virginia, except those specifically named in State Water Control Board and Virginia Soil and Water Conservation Board regulations that prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Section I—Discharge Authorization and Special Conditions, Section II—Stormwater Pollution Prevention Plan, and Section III—Conditions Applicable To All VSMP Permits as set forth herein.

SECTION I
DISCHARGE AUTHORIZATION AND SPECIAL CONDITIONS

A. Coverage under this permit.

1. During the period beginning with the date of coverage under this general permit and lasting until the permit's expiration date, the operator is authorized to discharge stormwater from construction activities.

2. This permit may also authorize stormwater discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) located on-site or off-site provided that:

a. The support activity is directly related to the construction site that is required to have VSMP permit coverage for discharges of stormwater associated with construction activity;

b. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and

c. Appropriate control measures are identified in a stormwater pollution prevention plan and implemented to address the discharges from the support activity areas.

3. There shall be no discharge of floating solids or visible foam that contravenes established standards or interferes directly or indirectly with designated uses of surface waters.

B. Limitation on coverage.

1. Post-construction discharges. This permit does not authorize stormwater discharges that originate from the site after construction activities have been completed and the site, including any temporary support activity site, has undergone final stabilization. Post-construction industrial stormwater discharges may need to be covered by a separate VPDES permit.

2. Discharges mixed with nonstormwater. This permit does not authorize discharges that are mixed with sources of nonstormwater, other than those discharges that are identified in Section I D 2 (Exceptions to prohibition of nonstormwater discharges) and are in compliance with Section II D 5 (Nonstormwater discharge management).

3. Discharges covered by another permit. This permit does not authorize stormwater discharges associated with construction activity that have been covered under an individual permit or required to obtain coverage under an alternative general permit.

4. TMDL limitation. Discharges to waters for which a wasteload allocation (WLA) for a pollutant has been established in a "total maximum daily load" (TMDL) approved by the State Water Control Board that would apply to stormwater discharges from a construction activity are not eligible for coverage under this permit unless the stormwater pollution prevention plan (SWPPP) developed by the operator is consistent with the requirements related to TMDLs contained in Section II D 6.

5. Impaired waters limitation. Discharges to waters that have been identified as impaired in the 2008 § 305(b)/303(d) Water Quality Assessment Integrated Report are not eligible for coverage under this permit unless the operator implements strategies and control measures consistent with Sections I H and II D 7.

C. Commingled discharges. Any discharge authorized by a different VSMP or VPDES permit may be commingled with discharges authorized by this permit.

D. Prohibition of nonstormwater discharges.

1. Except as provided in Sections I A 2, I C and I D 2, all discharges covered by this permit shall be composed entirely of stormwater associated with construction activity.

2. The following nonstormwater discharges from active construction sites are authorized by this permit provided the nonstormwater component of the discharge is in compliance with Section II D 5 (Nonstormwater discharges):

a. Discharges from fire fighting activities;

b. Fire hydrant flushings;

c. Waters used to wash vehicles where detergents are not used;

d. Water used to control dust;

e. Potable water sources, including uncontaminated waterline flushings;

f. Routine external building wash down which does not use detergents;

g. Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;

h. Uncontaminated air conditioning or compressor condensate;

i. Uncontaminated ground water or spring water;

j. Foundation or footing drains where flows are not contaminated with process materials such as solvents;

k. Uncontaminated excavation dewatering, and

l. Landscape irrigation.

E. Releases of hazardous substances or oil in excess of reportable quantities. The discharge of hazardous substances or oil in the stormwater discharges from the construction site shall be prevented or minimized in accordance with the stormwater pollution prevention plan for the site. This permit does not relieve the permittee of the reporting requirements of 40 CFR Part 110 (2002), 40 CFR Part 117 (2002) and 40 CFR Part 302 (2002) or § 62.1-44.34:19 of the Code of Virginia.

Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110 (2002), 40 CFR Part 117 (2002), 40 CFR Part 302 (2002), or § 62.1-44.34.19 of the Code of Virginia occurs during a 24-hour period:

1. The operator is required to notify the Department of Environmental Quality and the permit-issuing authority in accordance with the requirements of Section III G as soon as he has knowledge of the discharge;

2. Where a release enters a municipal separate storm sewer system (MS4), the operator shall also notify the operator of the MS4; and

3. The stormwater pollution prevention plan required under Section II D of this permit must be reviewed by the operator to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate within seven calendar days of knowledge of a release.

F. Spills. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

G. Termination of permit coverage. Coverage under this permit may be terminated in accordance with 4VAC50-60-1160.

H. Water quality protection.

1. The operator must select, install, implement and maintain control measures at the construction site that minimize pollutants in the discharge as necessary to ensure that the operator's discharge does not cause or contribute to an excursion above any] applicable water quality standards.

2. If it is determined by the permit-issuing authority in consultation with the State Water Control Board at any time that the operator's stormwater discharges have reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the permit-issuing authority shall require the operator to:

a. Modify control measures in accordance with Section II C to adequately address the identified water quality concerns;

b. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or

c. Cease discharges of pollutants from construction activity and submit an individual permit application according to 4VAC50-60-410 B 3.

All written responses required under this part must include a signed certification consistent with Section III K.

SECTION II
STORMWATER POLLUTION PREVENTION PLAN

A. Stormwater Pollution Prevention Plan Framework.

1. A stormwater pollution prevention plan (SWPPP) shall be developed prior to submission of a registration statement and implemented for the construction activity covered by this permit. SWPPPs shall be prepared in accordance with good engineering practices.

2. The SWPPP shall:

a. Identify potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site;

b. Describe control measures that will be used to minimize pollutants in stormwater discharges from the construction site; and

c. Comply with the terms and conditions of this permit.

3. The SWPPP requirements of this general permit may be fulfilled by incorporating by reference other state or local plans such as (i) an erosion and sediment control (ESC) plan, (ii) an agreement in lieu of a plan as defined in 4VAC50-30-10, (iii) a stormwater management plan, (iv) a spill prevention control and countermeasure (SPCC) plan developed for the site under § 311 of the federal Clean Water Act or (v) best management practices (BMP) programs otherwise required for the facility provided that the incorporated plan meets or exceeds the SWPPP requirements of Section II D. If an erosion and sediment control plan for the land-disturbing activity is being incorporated by reference, the referenced plan must be approved by the locality in which the construction activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulations (4VAC50-30) prior to the commencement of land disturbance.

4. All plans incorporated by reference into the SWPPP become enforceable under this permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP of Section II D, the operator must develop the missing elements and include them in the required SWPPP.

5. Once a definable area has been finally stabilized, the operator may mark this on the SWPPP and no further SWPPP or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in

a complex are done and the area is finally stabilized; one mile of a roadway or pipeline project is done and finally stabilized, etc.).

6. The SWPPP shall identify all properties that are no longer under the control of the operator and the dates on which the operator no longer had control over each property.

7. The operator must implement the SWPPP as written and updated in accordance with Section II C from commencement of construction activity until final stabilization is complete.

B. Signature, SWPPP review and making SWPPPs available.

1. The SWPPP shall be signed in accordance with Section III K.

2. The SWPPP shall be retained, along with a copy of this permit, registration statement, and acknowledgement letter from the permit-issuing authority, at the construction site or other location easily accessible during normal business hours from the date of commencement of construction activity to the date of final stabilization. Operators with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location on-site for the use of all operators and those identified as having responsibilities under the SWPPP whenever they are on the construction site. The SWPPP must be made available, in its entirety, to the department, the permit-issuing authority, and the operator of a municipal separate storm sewer system receiving discharges from the site for review at the time of an on-site inspection. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the SWPPP's location must be posted near the main entrance at the construction site.

3. The operator shall make SWPPPs and all updates available upon request to the department; the permit-issuing authority; EPA; a state or local agency approving erosion and sediment control plans, grading plans, or stormwater management plans; local government officials; or the operator of a municipal separate storm sewer system receiving discharges from the site.

4. A sign or other notice must be posted conspicuously near the main entrance of the construction site. The sign or other notice must contain the following information:

a. A copy of the permit coverage letter than includes the registration number for the construction activity; and

b. The internet address at which a copy of the SWPPP may be found or the location of a hard copy of the SWPPP and name and telephone number of a contact person for scheduling viewing times.

For linear projects, the sign or other notice must be posted at a publicly accessible location near an active part of the construction project (e.g., where a pipeline project crosses a public road).

5. For discharges that commence on or after July 1, 2009 that have not previously held coverage under a VSMP or VPDES permit, the operator shall make the SWPPP available to the public for review. A copy of the SWPPP for each site shall be made available on the internet or in hard copy. The website address or contact person for access to the SWPPP shall be posted on the sign required by

subdivision B 4 of this section. If not provided electronically, access to the SWPPP may be arranged upon request at a time and at a publicly accessible location convenient to the operator or his designee but shall be no less than once per month and shall be during normal business hours. If a reproduced copy of the SWPPP is provided to the requestor, the requestor shall be responsible for the costs of reproduction. Information excluded from disclosure under applicable law shall not be required to be released Information not required to be contained within the SWPPP by this permit is not required to be released.]

C. Maintaining an updated SWPPP.

1. The operator shall amend the SWPPP whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to state waters and that has not been previously addressed in the SWPPP.

2. The SWPPP must be amended if during inspections or investigations by the operator's qualified personnel, or by local, state or federal officials, it is determined that the existing control measures are ineffective in minimizing pollutants in stormwater discharges from the construction site. Revisions to the SWPPP shall include additional or modified control measures designed to correct problems identified. If approval by a plan-approving authority is necessary for the control measure, revisions to the SWPPP shall be completed within seven calendar days of approval. Implementation of these additional or modified control measures must be accomplished as described in Section II D 3 b.

3. Revisions to the SWPPP must be dated and signed in accordance with Section III K 2, but are not required to be certified in accordance with Section III K 4.

4. The SWPPP must clearly identify the contractor(s) or subcontractor(s) that will implement and maintain each measure identified in the SWPPP. The SWPPP shall be revised to identify any new contractor that will implement a measure.

D. Stormwater pollution prevention plan contents. The SWPPP shall include the registration statement, this permit, and the following items:

1. Site and activity description. Each SWPPP shall provide the following information:

a. A narrative description of the nature of the construction activity, including the function of the project (e.g., low density residential, shopping mall, highway, etc.);

b. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation);

c. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated;

d. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas;

e. A description of any other potential pollutant sources, such as vehicle fueling, storage of fertilizers or chemicals, sanitary waste facilities, etc.;

f. Identification of the nearest receiving waters at or near the construction site that will receive discharges from disturbed areas of the project;

g. The location and description of any discharge associated with industrial activity other than construction at the site. This includes stormwater discharges from dedicated asphalt plants and dedicated concrete plants that are covered by this permit;

h. A legible general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) with sufficient detail to identify the location of the construction activity and surface waters within one mile of the construction activity; and

i. A legible site map identifying:

(1) Directions of stormwater flow and approximate slopes anticipated after major grading activities;

(2) Areas of soil disturbance and areas of the site which will not be disturbed;

(3) Locations of major structural and nonstructural control measures identified in the SWPPP, including those that will be permanent after construction activities have been completed;

(4) Locations where stabilization practices are expected to occur;

(5) Locations of surface waters;

(6) Locations where concentrated stormwater discharges;

(7) Locations of off-site material, waste, borrow or equipment storage areas covered by the SWPPP;

(8) Locations of other potential pollutant sources, such as vehicle fueling, storage of chemicals, concrete wash-out areas, sanitary waste facilities, including those temporarily placed on the construction site, etc.; and

(9) Areas where final stabilization has been accomplished.

2. Controls to minimize pollutants. The SWPPP shall include a description of all control measures that will be implemented as part of the construction activity to minimize pollutants in stormwater discharges. For each major activity identified in the project description, the SWPPP shall clearly describe appropriate control measures, the general sequencing during the construction process in which the control measures will be implemented, and which operator is responsible for the control measure's implementation.

a. Erosion and sediment controls.

(1) An erosion and sediment control plan or an agreement in lieu of a plan shall be approved by the appropriate plan-approving authority for the land-disturbing activity in accordance with the Virginia Erosion and Sediment Control Law (§ 10.1-560 et seq.) and regulations (4VAC50-30). Where applicable, a plan shall be developed in accordance with board-approved annual general erosion and sediment control specifications.

(2) All control measures required by the plan shall be designed, installed, and maintained in accordance with good engineering practices and the minimum

standards of the Virginia Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia) and regulations (4VAC50-30).

b. Management practices.

(1) Plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized.

(2) All control measures must be properly selected, installed, and maintained in accordance with good engineering practices and, where applicable, manufacturer specifications. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator must replace or modify the control for site situations as soon as practicable and update the SWPPP in accordance with Section II C.

(3) If sediment escapes the construction site, off-site accumulations of sediment must be removed as soon as practicable to minimize off-site impacts. If approval by a plan-approving authority is necessary, control measures shall be implemented to minimize pollutants in stormwater discharges until such approvals can be obtained.

(4) Construction debris and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source in stormwater discharges.

(5) Litter exposed to stormwater shall be prevented from becoming a pollutant source in stormwater discharges and the construction site shall be policed daily to control litter.

c. Stormwater management.

(1) The operator shall ensure compliance with the requirements of 4VAC50-60-1180 through 4VAC50-60-1190 of the Virginia Stormwater Management Regulations, including but not limited to water quality and quantity requirements. The SWPPP shall include a description of, and all necessary calculations supporting, all post-construction stormwater management measures that will be installed prior to the completion of the construction process to control pollutants in stormwater discharges after construction operations have been completed. Structural measures should be placed on upland soils to the degree possible. Such measures must be designed and installed in accordance with applicable local, state, and federal requirements, and any necessary permits must be obtained.

(2) Control measures contained in Part II of the Virginia Stormwater Management Regulations, 4VAC50-60-1184, or on the Virginia BMP Clearinghouse may be utilized. Innovative or alternate control measures may be allowed by the department provided such measures effectively address water quality and quantity in accordance with the requirements of 4VAC50-60-1180 through 4VAC50-60-1190 and are not restricted by the locality.

(3) Where applicable, the SWPPP shall contain additional information related to participation in a regional stormwater management plan, including:

a. Type of regional facility or facilities to which the site contributes;

b. Geographic location of any regional facility to which the site contributes (county or city and Hydrologic Unit Code);

c. Geographic location of the site (county or city and Hydrologic Unit Code). Latitude and longitude may additionally be included if available; and

d. Number of acres treated by a regional facility.

(4) Where applicable, the SWPPP shall contain additional information related to nutrient offsets to be acquired in accordance with § 10.1-603.8:1 of the Code of Virginia, including:

a. Name of the broker from which offsets will be acquired;

b. Geographic location (county or city and Hydrologic Unit Code) of the broker's offset generating facility;

c. Number of nutrient offsets to be acquired (lbs. per acre per year); and

d. Nutrient reductions to be achieved on site (lbs. per acre per year).

(5) Outflows from a stormwater management facility or stormwater conveyance system shall be discharged to an adequate channel as defined in the Virginia Erosion and Sediment Control Regulations (4VAC50-30). In addition, all control measures shall be employed in a manner that minimizes impacts on the physical, chemical and biological integrity of rivers, streams, and other state waters, is protective of water quality standards, and is consistent with Section II D 6 and D 7 and other applicable provisions of this permit.

d. Other controls.

(1) The SWPPP shall describe measures to prevent the discharge of solid materials, including building materials, garbage, and debris to state waters, except as authorized by a Clean Water Act § 404 permit.

(2) The SWPPP shall describe control measures used to comply with applicable state or local waste disposal, sanitary sewer or septic system regulations.

(3) The SWPPP shall include a description of construction and waste materials expected to be stored on-site with updates as appropriate. The SWPPP shall also include a description of controls including storage practices, to minimize exposure of the materials to stormwater, and for spill prevention and response.

(4) The SWPPP shall include a description of pollutant sources from off-site areas (including stormwater discharges from dedicated asphalt plants and dedicated concrete plants), and a description of control measures that will be implemented at those sites to minimize pollutant discharges.

e. Applicable state or local programs. The control measures implemented at the site shall be consistent with all applicable federal, state, or local requirements for erosion and sediment control and stormwater management. The SWPPP shall be updated as necessary to reflect any revisions to applicable federal, state or local requirements that affect the control measures implemented at the site.

3. Maintenance of controls.

a. All control measures must be properly maintained in effective operating condition in accordance with good engineering practices and, where applicable, manufacturer specifications. If site inspections required by Section II D 4 identify control measures that are not operating effectively, maintenance shall be performed as soon as practicable to maintain the continued effectiveness of stormwater controls.

b. If site inspections required by Section II D 4 identify existing control measures that need to be modified or if additional control measures are necessary for any reason, implementation shall be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, the situation shall be documented in the SWPPP and alternative control measures shall be implemented as soon as practicable.

4. Inspections. The name and phone number of qualified personnel conducting inspections shall be included in the SWPPP.

a. Inspections shall be conducted (i) at least every seven calendar days; or (ii) at least once every 14 calendar days and within 48 hours following any runoff producing storm event. Where areas have been temporarily stabilized or runoff is unlikely due to winter conditions (e.g., the site is covered with snow or ice, or frozen ground exists) such inspections shall be conducted at least once every month.

b. Inspections must include all areas of the site disturbed by construction activity, off-site areas covered by the permit, and areas used for storage of materials that are exposed to precipitation, but does not need to include areas identified pursuant to Section II A 5. Inspectors must look for evidence of, or the potential for, pollutants entering a stormwater conveyance system. Control measures identified in the SWPPP shall be inspected for proper installation, maintenance, and operation. Discharge locations, where accessible, shall be inspected to ascertain whether control measures are effective in minimizing impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

c. Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may limit the access of inspection personnel to the areas described in Section II D 4 b. Inspection of these areas could require that vehicles compromise temporarily or even permanently stabilized areas, cause additional disturbance of soils, and increase the potential for erosion. In these circumstances, controls must be inspected on the same frequencies as other construction projects, but representative inspections may be performed. For representative inspections, personnel must inspect controls along the construction site for 0.25 miles above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described above. The conditions of the controls along each inspected 0.25-mile segment

may be considered as representative of the condition of controls along that reach extending from the end of the 0.25-mile segment to either the end of the next 0.25-mile segment, or to the end of the project, whichever occurs first. Inspection locations must be listed in the report required by Section II D 4 d.

d. A report summarizing the scope of the inspection, names and qualifications of personnel making the inspection, the dates of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with Section II D 4 d of the permit shall be made and retained as part of the SWPPP in accordance with Section III B of this permit. Major observations should include:

(1) The location(s) of discharges of sediment or other pollutants from the site;

(2) Location(s) of control measures that need to be maintained;

(3) Location(s) of control measures that failed to operate as designed or proved inadequate for a particular location;

(4) Location(s) where additional control measures are needed that did not exist at the time of inspection;

(5) Corrective action required including any changes to the SWPPP that are necessary and implementation dates;

(6) An estimate of the amount of rainfall at the construction site (in inches) from the runoff producing storm event requiring the inspection, or if inspecting on a seven-day schedule, the amount of rainfall (in inches) since the previous inspection; and

(7) Weather information and a description of any discharges occurring at the time of inspection.

A record of each inspection and of any actions taken in accordance with Section II must be retained by the operator as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with Section III K of this permit.

5. Nonstormwater discharge management. The SWPPP shall identify all allowable sources of nonstormwater discharges listed in Section I D 2 of this permit that are combined with stormwater discharges from the construction activity at the site, except for flows from fire fighting activities. The SWPPP shall identify and require the implementation of appropriate control measures for the nonstormwater components of the discharge.

6. Total maximum daily loads. A total maximum daily load (TMDL) approved by the State Water Control Board may include a wasteload allocation to the regulated construction activity that identifies the pollutant for which stormwater control measures are necessary for the surface waters to meet water quality standards. The pollutant identified in a wasteload allocation as of the effective date of this permit must be specified in the SWPPP. The SWPPP shall include strategies and control measures to ensure consistency with the assumptions and requirements of

the TMDL WLA that apply to the operator's discharge. In a situation where a TMDL has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified in the TMDL, the operator shall consult with the state or federal TMDL authority to confirm that meeting permit requirements will be consistent with the approved TMDL. If the TMDL specifically precludes such discharges, the operator is not eligible for coverage under the general permit.

7. Impaired waters. In accordance with Section I H, control measures shall be protective of water quality standards for impaired waters identified as having impairments for pollutants that may be discharged from the construction activity in the 2008 § 305(b)/303(d) Water Quality Assessment Integrated Report .

SECTION III
CONDITIONS APPLICABLE TO ALL VSMP PERMITS

NOTE: Discharge monitoring is not required for this permit. If the operator chooses to monitor stormwater discharges or control measures, the operator must comply with the requirements of subsections A, B, and C, as appropriate.

A. Monitoring.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitoring activity.

2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 (2001) or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The operator shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.

B. Records.

1. Monitoring records and reports shall include:

a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) and time(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

2. The operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the registration statement for this permit, for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding

the regulated activity or regarding control standards applicable to the operator, or as requested by the board.

C. Reporting monitoring results.

1. The operator shall update the SWPPP to include the results of the monitoring as may be performed in accordance with this permit, unless another reporting schedule is specified elsewhere in this permit.

2. Monitoring results shall be reported on a discharge monitoring report (DMR); on forms provided, approved or specified by the department; or in any format provided that the date, location, parameter, method, and result of the monitoring activity are included.

3. If the operator monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under 40 CFR Part 136 (2001) or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to provide information. The operator shall furnish, within a reasonable time, any information which the board, department, or other permit-issuing authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The board, department, or other permit-issuing authority may require the operator to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the CWA and the Virginia Stormwater Management Act. The operator shall also furnish to the board, department, or other permit-issuing authority, upon request, copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized stormwater discharges. Pursuant to § 10.1-603.2:2 A of the Code of Virginia, except in compliance with a permit issued by the permit-issuing authority, it shall be unlawful to cause a stormwater discharge from a construction activity.

G. Reports of unauthorized discharges. Any operator who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110 (2002), 40 CFR Part 117 (2002), or 40 CFR Part 302 (2002) that occurs during a 24-hour period into or upon state waters or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters, shall notify the Department of Environmental Quality of the discharge immediately upon discovery of the discharge, but in no case later than within 24 hours after said discovery. A written report of the unauthorized discharge shall

be submitted to the department, the Department of Environmental Quality, and the permit-issuing authority within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;

2. The cause of the discharge;

3. The date on which the discharge occurred;

4. The length of time that the discharge continued;

5. The volume of the discharge;

6. If the discharge is continuing, how long it is expected to continue;

7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the department, the Department of Environmental Quality, and the permit-issuing authority under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a "bypass" or "upset", as defined herein, should occur from a facility and the discharge enters or could be expected to enter state waters, the operator shall promptly notify, in no case later than within 24 hours, the department, the Department of Environmental Quality, and the permit-issuing authority by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The operator shall reduce the report to writing and shall submit it to the department, the Department of Environmental Quality, and the permit-issuing authority within five days of discovery of the discharge in accordance with Section III I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;

2. Breakdown of processing or accessory equipment;

3. Failure or taking out of service of some or all of the facilities; and

4. Flooding or other acts of nature.

I. Reports of noncompliance. The operator shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report to the department, the Department of Environmental Quality, and the permit-issuing authority shall be provided within 24 hours from the time the operator becomes aware of the circumstances. The following shall be included as information that shall be reported within 24 hours under this subdivision:

a. Any unanticipated bypass; and

b. Any upset that causes a discharge to state waters.

2. A written report shall be submitted within five days and shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and

c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The permit-issuing authority may waive the written report on a case-by-case basis for reports of noncompliance under Section III I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The operator shall report all instances of noncompliance not reported under Section III I 1 or 2 in writing as part of the SWPPP. The reports shall contain the information listed in Section III I 2.

NOTE: The reports required in Section III G, H and I shall be made to the department's Stormwater Program Section of the Division of Soil and Water Conservation, appropriate Department of Environmental Quality's Regional Office Pollution Response Program, and the permit-issuing authority. Reports may be made by telephone or by fax. For reports outside normal working hours, leaving a recorded message shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Management maintains a 24-hour telephone service at 1-800-468-8892.

4. Where the operator becomes aware of a failure to submit any relevant facts, or submittal of incorrect information in any report, including a registration statement, to the department or the permit-issuing authority, the operator shall promptly submit such facts or correct information.

J. Notice of planned changes.

1. The operator shall give notice to the permit-issuing authority as soon as possible of any planned physical alterations or additions to the permitted facility or activity. Notice is required only when:

a. The operator plans an alteration or addition to any building, structure, facility, or installation that may meet one of the criteria for determining whether a facility is a new source in 4VAC50-60-420;

b. The operator plans an alteration or addition that would significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this permit; or

2. The operator shall give advance notice to the permit-issuing authority of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making

functions for the corporation; or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this part, a principal executive officer of a public agency includes: (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, including SWPPPs, and other information requested by the board, the department, or the permit-issuing authority shall be signed by a person described in Section III K 1 or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Section III K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the operator. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

c. The signed and dated written authorization is included in the SWPPP. A copy must be provided to the permit-issuing authority, if requested.

3. Changes to authorization. If an authorization under Section III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the construction activity, a new authorization satisfying the requirements of Section III K 2 shall be submitted to the permit-issuing authority prior to or together with any reports or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Section III K 1 or 2 shall make the following certification:

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system

designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to comply. The operator shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Virginia Stormwater Management Act and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the Virginia Stormwater Management Act but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The operator shall comply with effluent standards or prohibitions established under § 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the operator wishes to continue an activity regulated by this permit after the expiration date of this permit, the operator shall submit a new registration statement at least 90 days before the expiration date of the existing permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing permit.

N. Effect of a permit. This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by § 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Section III U) and "upset" (Section III V), nothing in this permit shall be construed to relieve the operator from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties to which the operator is or may be subject under §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law or § 311 of the Clean Water Act.

Q. Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the operator to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and

process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by the operator only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters and in compliance with all applicable state and federal laws and regulations.

S. Duty to mitigate. The operator shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass.

1. "Bypass", as defined in 4VAC50-60-10, means the intentional diversion of waste streams from any portion of a treatment facility. The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of Section III U 2 and 3 herein.

2. Notice.

a. Anticipated bypass. If the operator knows in advance of the need for a bypass, the operator shall submit prior notice to the department, if possible at least 10 days before the date of the bypass.

b. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Section III I herein.

3. Prohibition of bypass.

a. Except as provided in Section III U 1, bypass is prohibited, and the permit-issuing authority may take enforcement action against an operator for bypass unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The operator submitted notices as required under Section III U 2.

b. The permit-issuing authority may approve an anticipated bypass, after considering its adverse effects, if the permit-issuing authority determines that it will meet the three conditions listed in Section III U 3 a.

V. Upset.

1. An upset, as defined in 4VAC50-60-10, means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the operator. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of Section III V 2 herein are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

3. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

4. An operator who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

a. An upset occurred and that the operator can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The operator submitted notice of the upset as required in Section III I herein; and

d. The operator complied with any remedial measures required under Section III S herein.

5. In any enforcement proceeding, the operator seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The operator shall allow the department as the board's designee, the permit-issuing authority, EPA, or an authorized representative of either entity (including an authorized contractor), upon presentation of credentials and other documents as may be required by law to:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of ensuring permit compliance or as otherwise authorized by the Clean Water Act or the Virginia Stormwater Management Act, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit actions. Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits.

1. Permits are not transferable to any person except after notice to the permit-issuing authority. Except as provided in Section III Y 2, a permit may be transferred by the operator to a new operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new operator and incorporate such other requirements as may be necessary under the Virginia Stormwater Management Act and the Clean Water Act.

2. As an alternative to transfers under Section III Y 1, this permit may be automatically transferred to a new operator if:

a. The current operator notifies the permit-issuing authority at least 30 days in advance of the proposed transfer of the title to the facility or property;

b. The notice includes a written agreement between the existing and new operators containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The permit-issuing authority does not notify the existing operator and the proposed new operator of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Section III Y 2 b.

3. For ongoing construction activity involving a change of operator, the new operator shall accept and maintain the existing SWPPP, or prepare and implement a new SWPPP prior to taking over operations at the site.

Z. Severability. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

4VAC50-60-1180. Applicability.

Operators receiving coverage under this general permit shall remain subject to the water quality and quantity criteria set forth in 4VAC50-60-1182 through 4VAC50-60-1190, which specify technical criteria for every land-disturbing activity regulated by this general permit.

4VAC50-60-1182. General.

A. Determination of flooding and channel erosion impacts to receiving streams due to land-disturbing activities shall be measured at each point of discharge from the land disturbance and such determination shall include any runoff from the balance of the watershed that also contributes to that point of discharge.

B. The specified design storms shall be defined as either a 24-hour storm using the rainfall distribution recommended by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) when using NRCS methods or as the storm of critical duration that produces the greatest required storage volume at the site when using a design method such as the Modified Rational Method.

C. For purposes of computing runoff, all pervious lands in the site shall be assumed prior to development to be in good condition (if the lands are pastures, lawns, or parks), with good cover (if the lands are woods), or with conservation treatment (if the lands are cultivated); regardless of conditions existing at the time of computation.

D. Construction of stormwater management facilities or modifications to channels shall comply with all applicable laws and regulations. Evidence of approval of all necessary permits shall be presented.

E. Impounding structures that are not covered by the Impounding Structure Regulations (4VAC50-20) shall be engineered for structural integrity during the 100-year storm event.

F. Predevelopment and postdevelopment runoff rates shall be verified by calculations that are consistent with good engineering practices.

G. Outflows from a stormwater management facility or stormwater conveyance system, shall be discharged to an adequate channel.

H. Proposed residential, commercial, or industrial subdivisions shall apply these stormwater management criteria to the land disturbance as a whole. Individual lots in new subdivisions shall not be considered separate land-disturbing activities, but rather the entire subdivision shall be considered a single land development project. Hydrologic parameters shall reflect the ultimate land disturbance and shall be used in all engineering calculations.

I. All stormwater management facilities shall have an inspection and maintenance plan that identifies the owner and the responsible party for carrying out the inspection and maintenance plan.

J. Construction of stormwater management impoundment structures within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain shall be avoided to the extent possible. When this is unavoidable, all stormwater management facility construction shall be in compliance with all applicable regulations under the National Flood Insurance Program, 44 CFR Part 59.

K. Natural channel characteristics shall be preserved to the maximum extent practicable.

L. Land-disturbing activities shall comply with the Virginia Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia) and attendant regulations.

M. Flood control and stormwater management facilities that drain or treat water from multiple development projects or from a significant portion of a watershed may be allowed in Resource Protection Areas defined in the Chesapeake Bay Preservation Act, provided that (i) the local government has conclusively established that the location of the facility within the Resource Protection Area is the optimum location; (ii) the size of the facility is the minimum necessary to provide necessary flood control, stormwater treatment, or both; and (iii) the facility must be consistent with a stormwater management program that has been approved by the board, the Chesapeake Bay Local Assistance Board, or the Board of Conservation and Recreation.

4VAC50-60-1184. Water quality.

A. Compliance with the water quality criteria may be achieved by applying the performance-based criteria or the technology-based criteria to either the site or a planning area.

B. Performance-based criteria. For land-disturbing activities, the calculated postdevelopment nonpoint source pollutant runoff load shall be compared to the calculated predevelopment load based upon the average land cover condition or the existing site condition. A BMP shall be located, designed, and maintained to achieve the target pollutant removal efficiencies specified in Table 1 of this section to effectively reduce the pollutant load to the required level based upon the following four applicable land development situations for which the performance criteria apply:

1. Situation 1 consists of land-disturbing activities where the existing percent impervious cover is less than or equal to the average land cover condition and the proposed improvements will create a total percent impervious cover that is less than the average land cover condition.

Requirement: No reduction in the after disturbance pollutant discharge is required.

2. Situation 2 consists of land-disturbing activities where the existing percent impervious cover is less than or equal to the average land cover condition and the proposed improvements will create a total percent impervious cover that is greater than the average land cover condition.

Requirement: The pollutant discharge after disturbance shall not exceed the existing pollutant discharge based on the average land cover condition.

3. Situation 3 consists of land-disturbing activities where the existing percent impervious cover is greater than the average land cover condition.

Requirement: The pollutant discharge after disturbance shall not exceed (i) the pollutant discharge based on existing conditions less 10% or (ii) the pollutant discharge based on the average land cover condition, whichever is greater.

4. Situation 4 consists of land-disturbing activities where the existing percent impervious cover is served by an existing stormwater management BMP that addresses water quality.

Requirement: The pollutant discharge after disturbance shall not exceed the existing pollutant discharge based on the existing percent impervious cover while

served by the existing BMP. The existing BMP shall be shown to have been designed and constructed in accordance with proper design standards and specifications, and to be in proper functioning condition.

C. Technology-based criteria. For land-disturbing activities, the postdeveloped stormwater runoff from the impervious cover shall be treated by an appropriate BMP as required by the postdeveloped condition percent impervious cover as specified in Table 1 of this section. The selected BMP shall be located, designed, and maintained to perform at the target pollutant removal efficiency specified in Table 1. Design standards and specifications for the BMPs in Table 1 that meet the required target pollutant removal efficiency will be available at the department.

Table 1*

Water Quality BMP*	Target Phosphorus Removal Efficiency	Percent Impervious Cover
Vegetated filter strip	10%	16-21%
Grassed Swale	15%	
Constructed wetlands	20%	22-37%
Extended detention (2 x WQ Vol)	35%	
Retention basin I (3 x WQ Vol)	40%	
Bioretention basin	50%	38-66%
Bioretention filter	50%	
Extended detention-enhanced	50%	
Retention basin II (4 x WQ Vol)	50%	
Infiltration (1 x WQ Vol)	50%	
Sand filter	65%	67-100%
Infiltration (2 x WQ Vol)	65%	
Retention basin III (4 x WQ Vol with aquatic bench)	65%	

*Innovative or alternate BMPs not included in this table may be allowed at the discretion of the local program administrator or the department. Innovative or alternate BMPs not included in this table that target appropriate nonpoint source pollution other than phosphorous may be allowed at the discretion of the local program administrator or the department.

4VAC50-60-1186. Stream channel erosion.

A. Properties and receiving waterways downstream of any land-disturbing activity shall be protected from erosion and damage due to changes in runoff rate of flow and hydrologic characteristics, including but not limited to, changes in volume, velocity, frequency, duration, and peak flow rate of stormwater runoff in accordance with the minimum design standards set out in this section.

B. The permit-issuing authority shall require compliance with subdivision 19 of 4VAC50-30-40 of the Erosion and Sediment Control Regulations, promulgated pursuant to Article 4 (§ 10.1-560 et seq.) of Chapter 5 of Title 10.1 of the Code of Virginia.

C. The permit-issuing authority may determine that some watersheds or receiving stream systems require enhanced criteria in order to address the increased frequency of bankfull flow conditions (top of bank) brought on by land-disturbing activities. Therefore, in lieu of the reduction of the two-year post-developed peak rate of runoff as required in subsection B of this section, the land development project being considered shall provide 24-hour extended detention of the runoff generated by the one-year, 24-hour duration storm.

D. In addition to subsections B and C of this section, permit-issuing authorities, by local ordinance may, or the board by state regulation may, adopt more stringent channel analysis criteria or design standards to ensure that the natural level of channel erosion, to the maximum extent practicable, will not increase due to the land-disturbing activities. These criteria may include, but are not limited to, the following:

1. Criteria and procedures for channel analysis and classification.
2. Procedures for channel data collection.
3. Criteria and procedures for the determination of the magnitude and frequency of natural sediment transport loads.
4. Criteria for the selection of proposed natural or manmade channel linings.

4VAC50-60-1188. Flooding.

A. Downstream properties and waterways shall be protected from damages from localized flooding due to changes in runoff rate of flow and hydrologic characteristics, including but not limited to, changes in volume, velocity, frequency, duration, and peak flow rate of stormwater runoff in accordance with the minimum design standards set out in this section.

B. The 10-year postdeveloped peak rate of runoff from the development site shall not exceed the 10-year predeveloped peak rate of runoff.

C. In lieu of subsection B of this section, localities may, by ordinance, adopt alternate design criteria based upon geographic, land use, topographic, geologic factors or other downstream conveyance factors as appropriate.

D. Linear development projects shall not be required to control post-developed stormwater runoff for flooding, except in accordance with a watershed or regional stormwater management plan.

4VAC50-60-1190. Regional (watershed-wide) stormwater management plans.

This section enables localities to develop regional stormwater management plans. State agencies intending to develop large tracts of land such as campuses or prison compounds are encouraged to develop regional plans where practical.

The objective of a regional stormwater management plan is to address the stormwater management concerns in a given watershed with greater economy and efficiency by installing regional stormwater management facilities versus individual, site-specific facilities. The result will be fewer stormwater management facilities to design, build and maintain in the affected watershed. It is also anticipated that regional stormwater management facilities will not only help mitigate the impacts of new development, but may also provide for the remediation of erosion, flooding or water quality problems caused by existing development within the given watershed.

If developed, a regional plan shall, at a minimum, address the following:

1. The specific stormwater management issues within the targeted watersheds.

2. The technical criteria in 4VAC50-60-1180 through 4VAC50-60-1188 as needed based on subdivision 1 of this section.

3. The implications of any local comprehensive plans, zoning requirements, local ordinances pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act, and other planning documents.

4. Opportunities for financing a watershed plan through cost sharing with neighboring agencies or localities, implementation of regional stormwater utility fees, etc.

5. Maintenance of the selected stormwater management facilities.

6. Future expansion of the selected stormwater management facilities in the event that development exceeds the anticipated level.

APPENDIX B

Forms:

Registration Statement

Fee Form

Vicinity Maps

VSMP General Permit Registration Statement – Construction Activity Discharges Checklist

Operator Name:
Project Name:

The following should be included with your **Registration Statement** and should be mailed to:

Department of Conservation & Recreation
Attention: Stormwater Permitting
203 Governor Street, Suite 206
Richmond, VA 23219

	YES	NO
Has the completed original registration application been enclosed?		
Has the application been signed in ink by a person authorized by the operator?		
If applicable, has a list of Off-Site Activities been attached?		
If applicable, has a copy of the check & application fee form been attached?		
If applicable, has a list of impaired waters being discharged to by the construction site been attached?		

A Stormwater Pollution Prevention Plan (SWPPP) must be prepared in accordinance with the requirements of the VSMP Construction General Permit prior to submitting the Registration Statement

****DO NOT enclose your fee payment with the registration statement application****

If your permit requires a fee, the following should be included with your **fee payment** and mailed to:

Department of Conservation & Recreation
Division of Finance, Accounts Payable
Attention: Stormwater Permits
203 Governor Street, Fouth Floor
Richmond, Virginia 23219

	YES	NO
Has an application fee form been completed?		
Has a check or money order been cut for the proper amount?		
Has the check or money order been made payable to "**Treasurer of Virginia**"?		

****DO NOT enclose your registration statement with your payment****

Please make a copy of all documents for your records. This checklist does not need to be submitted with your Registration Statement packet. This document is for your information and assistance only.

Upon receipt of a completed application for registration and payment, DCR will mail a notice of coverage to the Operator listed on the registration statement. Failure to submit all required information will result in the failure of the project to be properly registered and could result in enforcement action.

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

DEPARTMENT OF CONSERVATION AND RECREATION PERMIT FEE FORM

Instructions:
Applicants for an individual Virginia Stormwater Management Program (VSMP) Permit are required to pay permit application fees. Fees are also required for registration coverage under General Permits. Fees must be paid when applications for permit issuance or modification are submitted. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received.

The permit fee schedule is included with this form. Fees for permit issuance, reissuance, modification and maintenance are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Conservation and Recreation
Division of Finance, Accounts Payable
203 Governor Street, 4th Floor
Richmond, Virginia 23219

A copy of the form and a copy of your check or money order should accompany the permit registration statement (application). You should retain a copy for your records. Please direct any questions regarding this form or fee payment to SWMESquestions@dcr.virginia.gov.

Construction Activity Operator:

Name:_____ FIN: _____

Mailing Address:_____

City:_____ State:_____ Zip:_____ Phone:_____

Daytime Phone Number: (_____) _____ - _____

Name and Location of Construction Activity:

Name:_____

Town, City, or County:_____

Type of VSMP Permit (from Fee Schedule):

_____ MS4 Individual Permit _____ MS4 General Permit

_____ Construction Individual Permit _____ Construction General Permit

Type of Action: _____ New Issuance _____ Reissuance

_____ Modification _____ Maintenance

Amount of Fee Submitted (from Fee Schedule): _____

Existing Permit Number (if applicable): _____

FOR DCR USE ONLY
Date: _____ DC #: _____

(DCR 199-145) (10/09)

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

Virginia Stormwater Management Program (VSMP) Permit Fee Schedule

A. VSMP Individual Permits. Applications for issuance of new individual VSMP permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. [NOTE: Individual VSMP permittees pay an Annual Permit Maintenance Fee instead of a reapplication fee. The permittee is billed separately by DCR for the Annual Permit Maintenance Fee.]

TYPE OF VSMP PERMIT	ISSUANCE	MODIFICATION
Municipal Stormwater / MS4 Individual (Large and Medium)	$16,000	$5,000
Municipal Stormwater / MS4 Individual (Small)	$8,000	$2,500
Construction Stormwater Individual	$15,000	$0

B. Registration Statements for VSMP MS4 General Permit Coverage. The fee for filing a permit application (registration statement) for coverage under a VSMP MS4 stormwater general permit issued by the permit issuing authority is as follows:

TYPE OF VSMP PERMIT	ISSUANCE
Municipal Stormwater / MS4 General Permit (Small)	$4,000

C. Registration Statements for VSMP Construction General Permit Coverage. The fee for filing a permit application (registration statement) for coverage under a VSMP Construction stormwater general permit issued by the permit issuing authority is as follows:

TYPE OF VSMP PERMIT	ISSUANCE
Construction General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development or sale equal to or greater than five acres)	$500
Construction General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development or sale equal to or greater than one acre and less than five acres)	$300
Construction General / Stormwater Management – Small Construction Activity/Land Clearing (Sites within designated areas of Chesapeake Bay Act localities with land disturbance acreage equal to or greater than 2,500 square feet and less than one acre)	$200

D. Permit Maintenance Fees. The annual permit maintenance fees apply to each VSMP permit identified below, including expired permits that have been administratively continued.

TYPE OF PERMIT	MAINTENANCE
VSMP Municipal Stormwater / MS4 Individual (Large and Medium)	$8,800
VSMP Municipal Stormwater / MS4 Individual (Small)	$6,000
VSMP Municipal Stormwater / MS4 General Permit (Small)	$3,000
VSMP General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres)	$0
VSMP General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development equal to or greater than 1 acre and less than 5 Acres)	$0
Construction General / Stormwater Management – Small Construction Activity/Land Clearing (Sites within designated areas of Chesapeake Bay Act localities with land disturbance acreage equal to or greater than 2,500 square feet and less than one acre)	$0

(DCR 199-145) (10/09)

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

VSMP General Permit for Stormwater Discharges from Construction Activities (VAR10)

Registration Statement

(Please Type or Print All Information)

1. **Construction Activity Operator** *(The permit will be issued to this operator, and the Certification in Item #13 must be signed by the appropriate person associated with this operator [see the instructions])*

   Name:_____

   Mailing Address:_____

   City:_____ State:_____ Zip:_____ Phone:_____

2. **(Must be included for renewals of coverage only) Existing Permit Coverage #:**_____

3. **Location of Construction Activity**

   Name:_____

   Address:_____

   Town, City, County:_____ State:_____ Zip:_____

   DMS to the nearest 15 seconds : Latitude _____ Longitude _____

   Location of all Offsite Support Activities to be Covered Under the Permit

   Name:_____

   Address:_____

   Town, City, or County:_____ State:_____ Zip:_____

   If street address unavailable: Latitude _____ Longitude _____

4. **Status of Activity:** Federal ❑ State ❑ Public ❑ Private ❑ (Check one only)

5. **The Nature of the Construction Activity** (e.g., commercial, industrial, residential, agricultural, oil and gas, etc.)**:**

   _____

6. **Name of the Receiving Water(s):** _____

   Hydrologic Unit Code (HUC): _____

   (Receiving waters identified as impaired on the 2008 305(b)/303(d) Water Quality Assessment Integrated Report or for which a TMDL WLA has been established for stormwater discharges from a construction site shall be noted in an attached list.)

7. **If the discharge is through a Municipal Separate Storm Sewer System (MS4), the name of the municipal operator of the storm sewer:**_____

8. **Estimated Project Start Date (mm/dd/yyyy):** _____ **Estimated Project Completion Date (mm/dd/yyyy):** _____

9. **Total Land Area of Development** (to the nearest one-tenth acre)**:** _____

   Estimated Area to be Disturbed (to the nearest one-tenth acre)**:** _____

10. **Is the area to be disturbed by the construction activity part of a larger common plan of development or sale?** Yes❑ No❑

11. **Are nutrient offsets intended to be acquired for this activity?** Yes❑ No❑ Under consideration❑

12. **A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VSMP Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement. By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.**

13. **Certification:** "I certify under penalty of law that I have read and understand this Registration Statement and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

    Print Name: _____ Title: _____

    Signature:_____ Date:_____

(Please sign in INK. The person signing this form must be associated with the operator identified in Item #1 above.)

Mail to: Department of Conservation and Recreation, Stormwater Permitting, 203 Governor Street, Suite 206 Richmond, VA 23219

DCR

INSTRUCTIONS for FORM DCR 199-146

VPDES General Permit Registration Statement - Construction Activity Stormwater Discharges

General
A Registration Statement must be submitted to the Department of Conservation and Recreation to register for coverage under the General VSMP Permit for Stormwater Discharges from Construction Activities.

Section 1 Construction Activity Operator Information
"Operator" means the owner or operator of any facility or activity subject to the VSMP permit regulation. In the context of stormwater associated with a large or small construction activity, operator means any person associated with a construction project that meets either of the following two criteria: (i) the person has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications or (ii) the person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions (i.e., they are authorized to direct workers at a site to carry out activities required by the stormwater pollution prevention plan or comply with other permit conditions).

The entities who are considered operators will commonly consist of the owner or developer of a project (the party with control of project specifications) and the general contractor (the party with day to day operational control of the activities at the project site which are necessary to ensure compliance with the permit). Contractors and subcontractors who are under the general supervision of the general contractor are not considered operators and would not need to submit a registration statement. Give the legal name of the operator, do not use a colloquial name. Enter the complete address and phone number of the operator. **The permit will be issued to this operator.**

Section 2 Existing Permit Coverage Number

For reapplications only, indicate the existing permit coverage number for the project. This section does not need to be completed for initial applications for coverage for new projects.

Section 3 Location of Construction Activity Information
Enter the activity's official name and complete street address, including town, city or county, state and ZIP code.

If the site lacks a street address, enter the town, city or county and the latitude and longitude in degrees, minutes, seconds (DMS) to the nearest 15 seconds of the approximate center of the site (example 37° 30' 15" N 77° 20' 15" W).

Location of Offsite Support Activities
This permit also authorize stormwater discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) located on-site or off-site provided that: (a) The support activity is directly related to the construction site that is required to have VSMP permit coverage for discharges of stormwater associated with construction activity; (b) The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and (c) Appropriate control measures are identified in a stormwater pollution prevention plan and implemented to address the discharges from the support activity areas.

Provide the information required for each off-site support activity seeking coverage. If an off-site support activity is going to be covered by this permit the total land area of the off-site support activity and area to be disturbed by the off-site support activity need to be included in the Estimated Area to be Disturbed (Section 8).

Section 4 Status of Activity
Indicate the appropriate status (Federal, State, Public, or Private) of the activity.

Section 5 Nature of the Construction Project
Indicate the nature of the construction project (commercial, residential, agricultural, oil and gas, etc). This list is not all inclusive.

Section 6 Name of Receiving Water(s)
Enter the name of the receiving water(s) for all stormwater discharge(s), including any stormwater discharges from off-site support activities to be covered under the permit. Receiving waters identified as impaired on the 2008305(b)/303(d) Water Quality Assessment Integrated Report or for which a Total Maximum Daily Load (TMDL) Waste Load Allocation (WLA) has been established for stormwater discharges from a construction site shall be noted.

Hydrologic Unit Code (HUC) is a watershed unit established in the most recent version of Virginia's 6th order national watershed boundary dataset.

Section 7 Name of MS4 Operator
If the stormwater is discharged through a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4. The name of the MS4 operator is usually the Town, City, County, Institute or Federal facility where the construction activity is located.

Section 8 Estimated Project Start Date
Enter the date (Month/Day/Year) the projected is expected to start.

Estimated Project Completion Date
Enter the date (Month/Day/Year) the project is expected to be complete.

Section 9 Total Land Area of the Development
Enter the total area (to the nearest one tenth acre) of the development (meaning the total acreage of the larger common plan of development or sale). Include the total acreage of any offsite support activities to be covered under the permit.

Estimated Area to be Disturbed
Enter an estimate of the total number of acres (to the nearest one tenth acre) to be disturbed. Include in the Estimated Area to be Disturbed the area of disturbance that will occur at off-site support activities to be covered under the permit.

Section 10 Larger Common Plan of Development or Sale
Indicate if the area to be disturbed by the construction activity is part of a larger common plan of development or sale. Larger common plan of development or sale defines a contiguous are where separate and distinct construction may be taking place at different times on different schedules. Plan is broadly defined as any announcement or documentation, including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, etc., or physical demarcation such as boundary signs, lot stake, and surveyor markings indicating that construction activities may occur.

Section 11 Nutrient Offsets

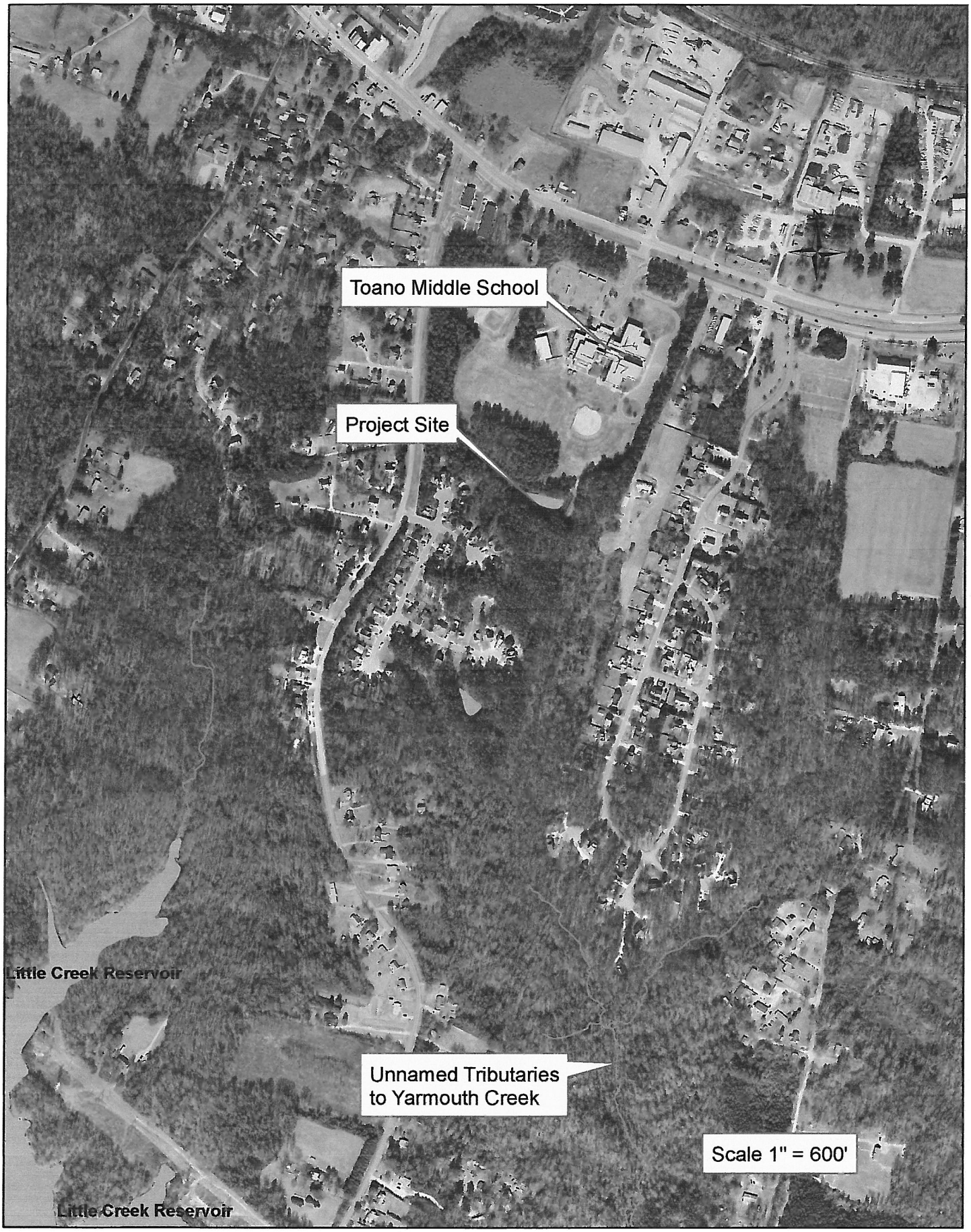
Indicate if nutrient offsets are intended to be acquired in accordance with §10.1-603.8:1 of the Code of Virginia. If the acquisition of offsets is being considered but is not certain, select "under consideration."

Section 12 A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VSMP Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement. By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.

Section 13 Certification
The operator identified in Section 1 of this Registration Statement is responsible for certifying and submitting this Registration Statement. Please sign the form in INK. State statutes provide for severe penalties for submitting false information. State regulations require this Registration Statement to be signed as follows:

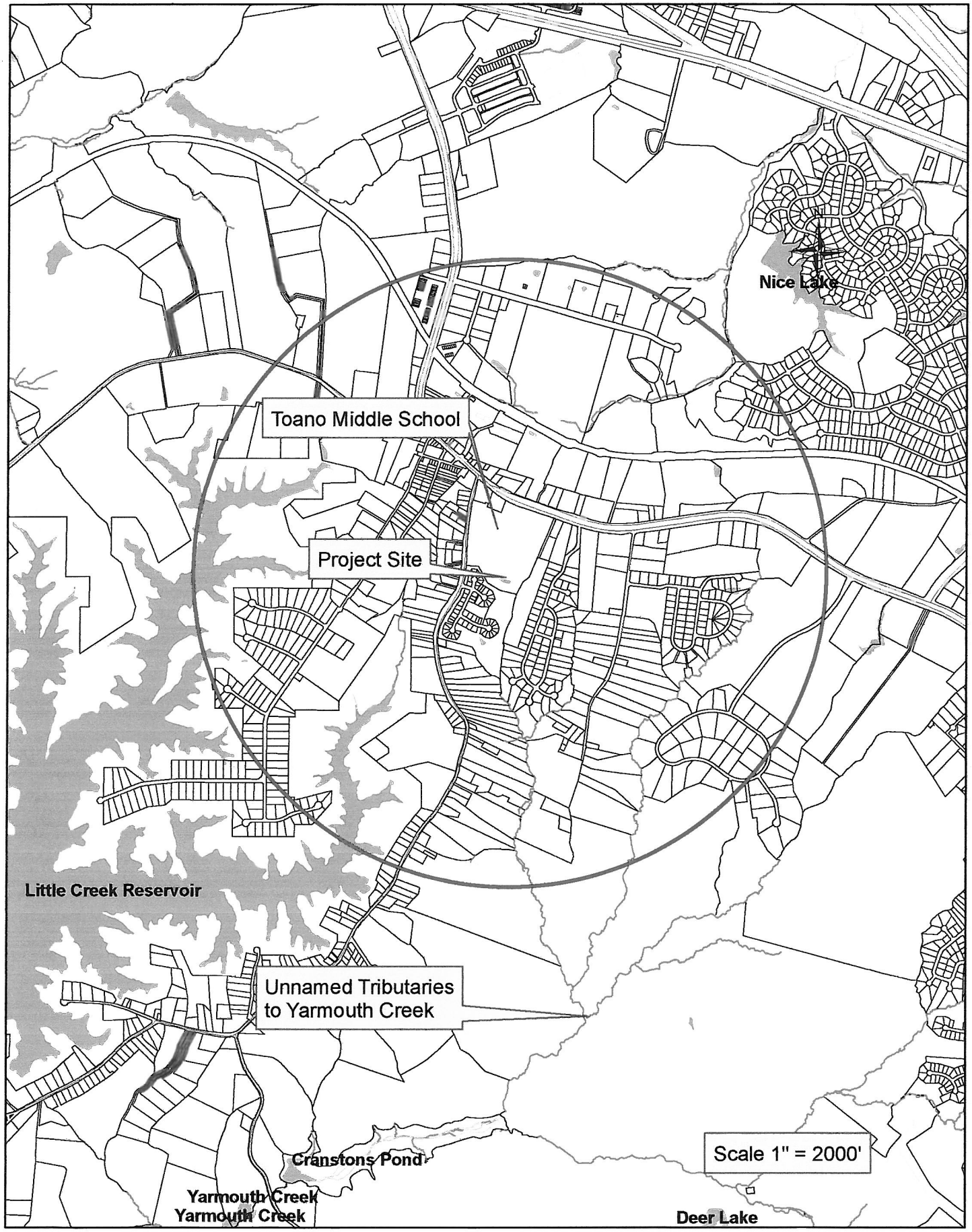
For a corporation: by a responsible corporate officer. For the purpose of this part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this part, a principal executive officer of a public agency includes: (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

The Department of Conservation and Recreation reserves the right to request additional information not directly addressed by the Registration Statement if, in its discretion, a facility or operation poses a potential impact on water quality.



TOANO MIDDLE SCHOOL MIDDLE SCHOOL BMP REPAIR AND RETROFIT

Vicinity Map showing surface waters



TOANO MIDDLE SCHOOL MIDDLE SCHOOL BMP REPAIR AND RETROFIT

Vicinity Map showing surface waters

APPENDIX C

Land Disturbing and Stabilization Activities Log

Land Disturbing and Stabilization Activities Log

Project Name:
SWPPP Contact:

Date Land Disturbing Activity Initiated	Description of Land Disturbing Activity	Date Land Disturbing Ceased (State if Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location
2/	Excavation of BMP basin and construction of spoil berm	2/16/11	2/16/11	Mulch and EC-2 matting

APPENDIX D

Record of Site Inspections

Notice of Termination

Transfer Agreement Form

VSMP Construction Permit Inspection Report

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

_____

(Signature of Permittee or Designee)

EROSION AND SEIDMENTATION CONTROL FACILITIES INSPECTED: (At least once [twice, if on 303(d) listed stream for construction related parameters*] per 14 calendar days Or within 48 hours of a runoff producing rainfall event)

Facility Identification	Date of Inspection	Operating Properly (Y/N)	Describe corrective actions taken (may need to attach additional information)

OBSERVATION OF RUNOFF AT STORMWATER DISCHARGE OUTFALLS: (At least once [twice, if on 303(d) listed stream for construction related parameters*] per 14 calendar days Or within 48 hours of a runoff producing rainfall event)

Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list & describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of the disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy.
Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids.
Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.
Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

VSMP General Permit Notice of Termination - Construction Activity Stormwater Discharges (VAR10)

(Please Type or Print All Information)

1. **Construction Activity Operator:**

   Name:_____

   Mailing Address:_____

   City:_____ State:_____ Zip:_____ Phone:_____

2. **Name and Location of Construction Activity** (As listed on registration statement)**:**

   Name:_____

   Address: _____

   City, Town or County:_____ State:_____ Zip:_____

   If street address unavailable: Latitude _____ Longitude _____

3. **VSMP Stormwater General Permit Number:** _____

4. **The Reason for Terminating Coverage Under the General Permit** (The construction activity operator may only submit a Notice of Termination after one or more of the conditions below have been met)**:**
   - ❑ **Necessary post-construction control measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved on all portions of the site for which the operator is responsible;**
   - ❑ **Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;**
   - ❑ **Coverage under an alternative VPDES or VSMP permit has been obtained; or**
   - ❑ **For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.**

The Notice of Termination must be submitted within 30 days of one of the above conditions being met. Authorization to discharge terminates at midnight on the date that the Notice of Termination is submitted.

5. **Permanent Control measures Installed:** Attach a list of permanent control measures (both structural and non-structural) that will be installed at the construction site. For each BMP, include the following information: (a) Type of control measure installed and the date that it became functional as a permanent control measure; (b) Geographic location (county or city and Hydrologic Unit Code) (latitude and longitude may additionally be included if available); (c) Waterbody the control measures discharge into; and, (d) Number of acres that will be treated (to the nearest one-tenth of an acre). If no permanent control measures were installed please check this box ❑
6. **Participation in a Regional Stormwater Management Plan:** Where applicable, attach the following information related to participation in a regional stormwater management plan: (a) type of regional facility or facilities to which the site contributes; (b) geographic location of any regional facility to which the site contributes (county or city and Hydrologic Unit Code); (c) geographic location of the site (county or city and Hydrologic Unit Code) (latitude and longitude may additionally be included if available); and (d) number of acres treated by a regional facility.
7. **Nutrient Offsets:** Where applicable, attach the following information related to nutrient offsets that were acquired in accordance with §10.1-603.8:1 of the Code of Virginia: (a) name of the broker from which offsets were acquired; (b) geographic location (county or city and Hydrologic Unit Code) of the broker's offset generating facility; (c) number of nutrient offsets acquired (lbs. per acre per year); and (d) nutrient reductions achieved on site (lbs. per acre per year).
8. **Certification:**

   "I certify under penalty of law that I have read and understand this notice of termination and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

   Print Name: _____ Title: _____

   Signature:_____ Date:_____

(Please sign in INK. The person signing this form must be authorized to sign on behalf the operator identified in Item #1 above.)

Mail to: Department of Conservation and Recreation
Stormwater Permitting
203 Governor Street, Suite 206
Richmond, VA 23219

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

INSTRUCTIONS for FORM DCR 199-147

VSMP General Permit Notice of Termination - Construction Activity Stormwater Discharges

General

A VSMP General Permit Notice of Termination must be submitted when an operator no longer wishes to be covered under the VSMP General Permit for Stormwater Discharges from Construction Activities.

Mail to: Department of Conservation and Recreation
Stormwater Permitting
203 Governor Street, Suite 206
Richmond, VA 23219

Section 1 Activity Operator Information

Give the legal name of the person, firm, public organization, or any other entity that was issued the general permit for the site described in this Notice of Termination. Do not use a colloquial name. Enter the complete address and phone number of the operator.

Section 2 Activity Location Information

Enter the activity's official name and complete street address, including city, state and ZIP code. If the activity or site lacks a street address, indicate the latitude and longitude to the nearest 15 seconds of the approximate center of the site.

Section 3 Permit Information

Enter the existing VSMP Stormwater General Permit number assigned to the activity or site identified in Section 1 that the operator wishes to be terminated.

Section 4 Reason for Termination

Check the appropriate statement indicating the reason for submitting this Notice of Termination. The Notice of Termination may only be submitted after one or more of the following conditions have been met:

1. Necessary post-construction control measures included in the SWPPP for the site are in place and functioning and final stabilization has been achieved on all portions of the site for which the operator is responsible;
2. Another operator has assumed control over all areas of the site that have not been finally stabilized;
3. Coverage under an alternative VPDES or VSMP permit has been obtained; or
4. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

The Notice of Termination must be submitted within 30 days of one of the above conditions being met. Authorization to discharge terminates at midnight on the date that the Notice of Termination is submitted.

Section 5 Permanent Control Measures Installed

Attach a list of the permanent control measures (both structural and non-structural) that will be installed at the construction site. For each control measure, include the following information:

(a) Type of control measure installed
(b) Geographic location (county or city and Hydrologic Unit Code)
(c) Waterbody the control measure discharge into
(d) Number of acres that will be treated (to the nearest one-tenth of an acre)

Check the box if no permanent control measures were installed.

Section 6 Participation in a Regional Stormwater Management Plan

Where applicable, attach the following information related to participation in a regional stormwater management plan: (a) type of regional facility or facilities to which the site contributes; (b) geographic location of any regional facility to which the site contributes (county or city and Hydrologic Unit Code); (c) geographic location of the site (county or city and Hydrologic Unit Code) (latitude and longitude may additionally be included if available); and (d) number of acres treated by a regional facility.

Section 7 Nutrient Offsets

Where applicable, attach the following information related to nutrient offsets that were acquired in accordance with §10.1-603.8:1 of the Code of Virginia: (a) name of the broker from which offsets were acquired; (b) geographic location (county or city and Hydrologic Unit Code) of the broker's offset generating facility; (c) number of nutrient offsets acquired (lbs. per acre per year); and (d) nutrient reductions achieved on site (lbs. per acre per year).

Section 8 Certification

State statutes provide for severe penalties for submitting false information on this Notice of Termination.

State regulations require this Notice of Termination to be signed as follows:

For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

The Department of Conservation and Recreation reserves the right to request additional information not directly addressed by the registration statement if, in its discretion, a facility or operation poses a potential impact on water quality.

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

VSMP General Permit for Discharge of Stormwater from Construction Activities (VAR10)
Transfer Agreement

Instructions:
The general permit for discharge of stormwater construction activities may be automatically transferred to a new operator if the current operator notifies the permit-issuing authority at least 30 days in advance of the proposed transfer of the title to the facility or property, the notice includes a written agreement between the existing and new operator containing a specific date for transfer of permit responsibility, coverage, and liability between them.

The original copy of this agreement is mailed to:

Virginia Department of Conservation & Recreation
Stormwater Permitting
203 Governor Street, Suite 206
Richmond, VA 23219

VSMP Permit Number: _____

Construction Activity Name: _____

Date of VSMP Permit Transfer: _____

CURRENT OPERATOR (The permit was issued to this operator)**:**

Construction Activity Operator: _____

Address: _____

City: _____ State: _____ Zip: _____

Daytime Phone Number: (_____) _____ - _____

"I hereby agree to the transfer of the above referenced VSMP Permit."

Print Name: _____ Title: _____

Signed: _____ Date: _____

NEW OPERATOR (The permit will be transferred to this operator)**:**

Construction Activity Operator: _____

Address: _____

City: _____ State: _____ Zip: _____

Daytime Phone Number: (_____) _____ - _____

"I hereby agree to the transfer of the above referenced VSMP General Permit, and agree to accept all permit responsibility, coverage, and liability of the permit."

Print Name: _____ Title: _____

Signed: _____ Date: _____

(Please sign in **INK** and submit original to DCR at the above referenced address and retain copies for your files.)

(DCR 199-191) (09/08)

DCR/Watershed Office:

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

VSMP CONSTRUCTION PERMIT INSPECTION REPORT Attachment 2B

Project Name: _____ Permit Number: _____

Project Address: _____ County/City: _____

Project Operator: _____ Operator Telephone: _____

Operator Address: _____ County/City: _____ ZIP: _____

Inspector Name: _____ Inspection Date: _____ Time: _____

Legal Status (Check one only)

Federal ☐ *State* ☐ *Public* ☐ *Private* ☐

Nature of Project (Check all that apply)

Commercial ☐ *Industrial* ☐ *Residential* ☐ *Road* ☐ *Utility* ☐ *Agriculture* ☐ *Other:* _____

General Stormwater Pollution Prevention Plan Information

	Yes	No
Copy of permit		
Copy of permit coverage letter		
Approved ESC plan or agreement in lieu of a plan		

	Yes	No
SWPPP prepared and available on site		
SWPPP signed/certified by operator		
Approved stormwater management plan (if applicable)		

Specific SWPPP Information

(If information is not applicable indicate so in comments/notes)

	SWPPP CONTENT	Yes	No	*Comments/Notes*
§ II D.1.a	*Description & function of project*			
§ II D.1.b	*Sequence & timing of land-disturbance activities*			
§ II D.1.c	*Estimate of total land-disturbance area including off-site areas*			
§ II D.1.d	*Description of potential pollution sources (fuel, chemical storage, sanitary waste, etc.)*			
§ II D.1.e	*Identification of nearest receiving waters*			
§ II D.1.f	*Location & description of industrial activity discharges covered by this permit (dedicated asphalt & concrete plants)*			
§ II D.1.g	*Site map indicating:*			
	1. Direction of final storm flows & slopes			
	2. Areas of disturbed & undisturbed sites			
	3. Location of controls			
	4. Location of stabilization practices			
	5. Surface body water including wetlands			
	6. Location of stormwater discharges			
	7. Location of off-site areas			
	8. Location of potential pollution sources			
	9. Areas of final stabilization			

POLLUTANT REDUCTION CONTROLS		Yes	No	Comments/Notes
§ II D.2.	*Description of pollution controls to be implemented & operator responsible for implementation of the control measures*			
§ II	*For ESC plans incorporated by reference: plan is approved by the locality or by appropriate plan-approving authority*			
EROSION AND SEDIMENT CONTROLS		**Yes**	**No**	*Comments/Notes*
§ II D.2.a. (1)	*Stabilization practices*			
	(a) Dates of major grading activities			
	Dates when grading temporarily or permanently cease			
	Dates when stabilization measures are initiated			
	(b) Stabilization measures initiated within 7 days after construction has temporarily or permanently ceased {except as provided in §II D.2.a (1) (c), (d), & (e)}			
§ II D.2.a. (2)	*Structural practices*			
	(a) Sediment basin for disturbed areas of 3 acres or greater or equivalent control measures provided until final stabilization			
	(b) Where basins are not attainable, smaller sediment traps or at a minimum silt fence, vegetative buffer strips or equivalent sediment controls are installed for all down and side slope boundaries as appropriate			
	(c) Sediment traps are used for areas < 3 acres or at a minimum silt fence, vegetative buffer strips or equivalent sediment controls are required for all down and side slope boundaries as appropriate			
§ II D.2.b.	*Management practices*			
	(1) Control measures properly selected, installed and maintained			
	(2) Off-site sediment accumulation removed to minimize off-site impacts			
	(3) Litter, construction debris, and chemicals prevented from becoming a pollutant source			
§ II D.2.c.	*Stormwater management*			
	(1) Calculations supporting all post-construction stormwater management measures to be installed and measures designed and installed in accordance with applicable local and state requirements			

	(2) Technical explanation for practices selected to control pollutants and flows that exceed predevelopment levels			
	(3) Outflows from stormwater facility or conveyance system discharge to an adequate channel (no significant changes in the hydrologic regime of receiving water)			
§ II D.2.d.	*Other controls*			
	(1) Measures to prevent discharge of solid materials to surface waters			
	(2) Construction entrance (MS-17)			
	(3) Compliance with state or local waste disposal, sanitary sewer or septic system regulations			
	(4) Description of construction and waste materials, updates, controls to reduce storage, and storage practices			
	(5) Description of pollutant sources from areas other than construction (dedicated asphalt or concrete plants) and control measures to be used at those sites			
§ II D.2.e.	*SWPPP consistent with applicable requirements for ESC & SW management*			
	MAINTENANCE OF CONTROLS	***Yes***	***No***	*Comments/Notes*
§ II D.3.a	*Description and schedule of procedures to maintain all controls in effective operational condition*			
§ II D.4.b.	*Existing BMPs modified or additional BMPs installed prior to next storm event. (If impractical to implement prior to storm event, documented in SWPPP)*			

	INSPECTIONS	***Yes***	***No***	*Comments/Notes*
§ II D.4.	*Conducted by "Qualified Personnel"*			
§ II D.4.a.	*Once every 14 days and within 48 hours after any runoff producing storm event*			
§ II D.4.b.	*Inspection of discharge locations to ascertain whether ESC measures are effective in preventing significant impact to receiving waters*			
§ II D.4.c.	*Linear projects inspected 0.25 miles above and below each access point*			
§ II D.4.d.	*Based on results of inspections, the site, activity description, and pollution prevention measures are modified as appropriate within 7 calendar days following the inspection*			

§ II D.4.e	*Report summarizing scope of inspection*			
	1. Locations of pollutant discharges			
	2. Locations of BMPs needing maintenance			
	3. Locations of inadequate or failed BMPs			
	4. Locations where BMPs are needed			
	5. Corrective action required			

NONSTORMWATER DISCHARGE MANAGEMENT		***Yes***	***No***	*Comments/Notes*
§ II D.5	*SWPPP identifies all allowable discharges*			
	a. Fire fighting controls			
	b. Fire hydrant flushing			
	c. Vehicle washing (no detergent)			
	d. Water used for dust control			
	e. Potable water source			
	f. Water for hydrostatic testing of pipelines			
	g. Building washing (no detergent)			
	h. Pavement washwaters (no hazardous materials or detergent used on pavement)			
	i. Air conditioner or compressor condensation is uncontaminated			
	j. Uncontaminated ground water or springs			
	k. Foundation or footing drains			
	l. Uncontaminated excavation dewatering			
	m. Landscape irrigation			

DCR/Watershed Office:

Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

STORMWATER PROGRAMS SITE INSPECTION REPORT

Project Name: _____ Permit Number: _____

Project Address: _____ County/City: _____

Inspector Name: _____ Inspection Date: _____ Time: _____

STAGE OF CONSTRUCTION

Pre-Construction Conference ☐ *Building Construction* ☐ *Construction of SWM Facilities* ☐
Clearing & Grubbing ☐ *Finish Grading* ☐ *Maintenance of SWM Facilities* ☐
Rough Grading ☐ *Final Stabilization* ☐ *Other*_____ ☐

Item#	*State Regulation*[1]			*Description and Location of condition observed*[2]*, Recommended Corrective Actions, and Other Comments/Notes*
		Initial	*Repeat*	

(1) Refers to applicable regulation found in the most recent publication of the *Virginia Erosion and Sediment Control Regulations* (4VAC50-30) or the *Virginia Stormwater Management Program Permit Regulations* (4VAC50-60).

(2) Note whether or not off-site damage resulting from the condition observed was evident during the inspection.

RECOMMEDED CORRECTIVE ACTION DEADLINE DATE: _____ **Re-inspection Date:** _____

The recommended corrective action deadline date applies to all conditions noted on this report unless otherwise noted. If listed condition(s) currently constitute non-compliance and/or corrective actions are not completed by the deadline, a **NOTICE OF CORRECTIVE ACTION** and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: _____ _____
Signature Date

Acknowledgement of on-site receipt: _____ _____ _____
Print Name Signature Date

APPENDIX E

Contractor Certification

December 10, 2010

Contractor Certification

CONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a contractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the project site.

Each contractor and subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I understand the terms and conditions of this Virginia Stormwater Management Program (VSMP) general permit that authorizes the stormwater discharges from the construction activity identified as part of this certification and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

APPENDIX F

Wetlands Permit Information

Nationwide Permit (43) Stormwater Management Facilities
(3/19/2007)

Discharges of dredged or fill material into non-tidal waters of the United States for the construction and maintenance of stormwater management facilities, including the excavation of stormwater ponds/facilities, detention basins, and retention basins; the installation and maintenance of water control structures, outfall structures and emergency spillways; and the maintenance dredging of existing stormwater management ponds/facilities and detention and retention basins.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States, including the loss of no more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds this 300 linear foot limit is waived in writing by the district engineer. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. This NWP does not authorize discharges of dredged or fill material for the construction of new stormwater management facilities in perennial streams.

Notification: For the construction of new stormwater management facilities, or the expansion of existing stormwater management facilities, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 27.) Maintenance activities do not require pre-construction notification if they are limited to restoring the original design capacities of the stormwater management facility. (Section 404)

REGIONAL CONDITIONS:

1. **Waters with federally listed endangered or threatened species, waters federally designated as Critical Habitat, and one mile upstream (including tributaries) of any such waters, notification is required for work in the areas listed below for NWP 43.**

   The Counties of Lee, Russell, Scott, Tazewell, Wise, and Washington in Southwestern Virginia within the following specific waters and reaches:
   1) **Powell River - from the Tennessee-Virginia state line upstream to the Route 58 bridge in Big Stone Gap and one mile upstream of the mouth of any tributary adjacent to this portion of the River.**
   2) **Clinch River - from the Tennessee-Virginia state line upstream to Route 632 at Pisgah in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the River, the Little River to its confluence with Maiden Spring Creek, and one mile upstream of the mouth of any tributary adjacent to this portion of Little River.**
   3) **North Fork Holston River - from the Tennessee-Virginia state line upstream to the Smyth County/Bland County line and one mile upstream of any tributary adjacent to this portion of the River.**
   4) **Copper Creek - from its junction with the Clinch River upstream to the Route 58 bridge at Dickensonville in Russell County and one mile upstream of any tributary adjacent to this portion of the Creek.**
   5) **Indian Creek - from its junction with the Clinch River upstream to the fourth Norfolk and Western Railroad bridge at Van Dyke in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the Creek.**
   6) **Middle Fork Holston River - from the Tennessee-Virginia state line to its junction with Walker Creek in Smyth County near Marion, Virginia.**
   7) **South Fork Holston River - from its junction with Middle Fork Holston River upstream to its junction with Beech Creek in Washington County.**

This NWP requires notification to work in Lee, Russell, Scott, Smyth, Tazewell, Washington or Wise Counties. For any work in Lee, Russell, Scott, or Wise Counties, please submit the notification to the Norfolk District Corps of Engineers, Clinch Valley Field Office, PO Box 338, Abingdon, Virginia 24212. For any work in Smyth, Tazewell, or Washington Counties please submit the notification to the Norfolk District Corps of Engineers, Virginia Highlands Field Office, PO Box 1295, Abingdon, Virginia 24212-1295. Written verification from these offices would be required prior to performing the proposed work. It is recommended that the prospective permittees first contact the field offices by telephone at (276) 623-5259 (Clinch Valley) or (276) 676-4807 (Virginia Highlands) to determine if the notification procedures would apply. The notification must be in writing and include the following information (the Joint Permit Application may also be used - be sure to mark it with the letters PCN at the top of the first page):

- **Name, address, and telephone number of the prospective permittee.**
- **Location of the proposed project.**
- **Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross section).**
- **Brief description of the proposed project and the project purpose.**
- **Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.**

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project may proceed under the nationwide permit or whether an individual permit is required. If, after reviewing the notification, the District Engineer determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, then he will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide the permittee with instructions on how to seek authorization under an individual permit.

Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

2. **Designated Trout Waters: Notification is already required for all activities under NWP 43; however, additional coordination may be required for work in the areas listed below.**

This condition applies to activities occurring in two categories of waters; Class V (Put and Take Trout Waters) and Class VI (Natural Trout Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680 21-00), dated January 1, 1991, or the most recently updated publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via http://vafwis.org/wis/asp/default.asp.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

1) Potomac-Shenandoah
2) James
3) Roanoke
4) New
5) Tennessee and Big Sandy
6) Rappahannock

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe.

Any discharge of dredged and/or fill material authorized by the nationwide permits listed above, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. We recommend that prospective permittees first contact the appropriate field office by telephone to determine if the notification procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- **Name, address, and telephone number of the prospective permittee.**
- **Location of the proposed project.**
- **Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross section).**
- **Brief description of the proposed project and the project purpose.**
- **Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.**

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can proceed under the NWP or whether an individual permit is required. If, after reviewing the notification, the District Engineer determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide with instructions on how to seek authorization under an individual permit. If the permittee is not notified otherwise within the 45-day period the permittee may begin the activity.

3. **Conditions Pertaining to Countersinking of Pipes and Culverts in Nontidal Waters: This condition applies to NWP 43.**

NOTE: THE COUNTERSINKING REQUIREMENT DOES NOT APPLY IN TIDAL WATERS.

a. Following consultation with the Virginia Department of Game and Inland Fisheries (DGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below.

b. All pipes: All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.

c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).

d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).

e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water *with the countersinking and invert restrictions taken into account.*

f. Pipes on bedrock: Different procedures will be followed for pipes or culverts to be placed on bedrock, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:

i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing

the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.

ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that the bedrock prevents countersinking, they should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then they must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition #27 of the Nationwide Permits. In addition to the information required by General Condition #27, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact their regional fishery biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5% the permittee install larger pipe than required for passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, they must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition #27 of the Nationwide Permits. In addition to the information required by General Condition #27, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact their regional fishery biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.

h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.

i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (f) and/or (g) above.

GENERAL CONDITIONS:

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation.
(a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.
15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
17. Endangered Species.
(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.
(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.
(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.
(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.
18. Historic Properties.
(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must

state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following

statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

(1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.
(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.
If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

D. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

Section 401 Water Quality Certification (4/20/07):

The State Water Control Board has provided conditional §401 Water Quality Certification for the following Nationwide Permits, as meeting the requirements of the Virginia Water Protection Permit Regulation, which serves as the Commonwealth's §401 Water Quality Certification provided that any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:5.E and as detailed below:

NWP 43: Stormwater Management Facilities, provided that the facility is not associated with a water withdrawal.

The Commonwealth requests that all pre-construction notifications for any activities that fall into the excepted category be forwarded to the Department of Environmental Quality in order to accomplish their goal of individual review of certain activities.

Coastal Zone Management Consistency Determination (5/7/07):

The Commonwealth of Virginia's Department of Environmental Quality (DEQ) has determined that the 2007 Nationwide Permits are consistent with the Virginia Coastal Resources Management Program, provided that the Corps and NWP holders comply with all applicable requirements and with the recommendations found in their letter of May 7, 2007. The applicable requirements include, but are not limited to, the following:

- The Section 401 (Clean Water Act) certification provided by DEQ's Division of Water Quality, Office of Wetlands and Water Protection on behalf of the State Water Control Board on April 20, 2007. (Excludes NWPs 16 and 17)
- The permitting requirements for encroachments on subaqueous lands and tidal wetlands administered by the Marine Resources Commission pursuant to *Virginia Code* sections 28.2-1200 et seq. and 28.2-1300 et seq.
- The land use and development performance criteria in the Chesapeake Bay Designation and Management Regulations (9 VAC 10-20-110 through 150) administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance pursuant to the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.2-2100 et seq.).

APPENDIX G

Chesapeake Bay Preservation Ordinance Exception

Development Management
101-A Mounts Bay Road
P.O. Box 8784
Williamsburg, VA 23187-8784
P: 757-253-6671
F: 757-253-6822
devman@james-city.va.us

jccEgov.com

Code Compliance
757-253-6620
codecomp@james-city.va.us

Environmental Division
757-253-6670
environ@james-city.va.us

Planning and Zoning
757-253-6685
planning@james-city.va.us

October 22, 2010

Mr. Darryl E. Cook
County Engineer
General Services Department
5320 Palmer Lane, Suite 2A
Williamsburg, VA 23188

RECEIVED ON
OCT '10
Stormwater Division

RE: JCC Stormwater – Toano MS BMP Repair & Retrofit (YC007)
Resource Protection Area Development - Administrative Exception
CBE-11-051; D-001-10

Dear Darryl:

Pursuant to your water quality impact assessment dated October 22, 2010, an exception is requested to the County's Chesapeake Bay Preservation Ordinance to allow for encroachment into the Resource Protection Area (RPA) for routine maintenance and repair activities associated with an existing BMP at Toano Middle School. The project affects approximately 2,000 square feet of the landward RPA associated with an existing stormwater management facility. The existing BMP is a wet pond facility identified with County BMP ID Code Number YC 007 which was approved under County Plan No. SP-120-90.

Based on our review of the plan and WQIA, this exception is **approved.**

RPA did not exist at the location of the BMP embankment at the time of submission, review, approval and construction of the BMP. However, RPA is now present at the BMP location due to Chesapeake Bay Ordinance amendments effective January 1, 2004. Due to perennial stream features, the RPA is located at and below the base of the fill embankment.

RPA impacts for clearing trees from the dam embankment as proposed will be within the engineered fill section, not a natural buffer. Other repair/maintenance work as planned appears to be outside the limits of the RPA buffer. Obligated maintenance activities associated with the existing wet pond - specifically the removal of trees from the existing earthen embankment - are grandfathered by approval of County Plan No. SP-120-90 as long as routine maintenance does not involve any new improvements or modifications.

Approval of the waiver is conditioned on the implementation of approved plan D-001-10.

The exception request will become null and void if construction of the improvements have not commenced within 12 months of the date of this letter. Please contact us at 253-6670 if there are any questions.

Sincerely,

Scott J. Thomas, P.E.
Environmental Director

Michael D. Woolson
Senior Watershed Planner

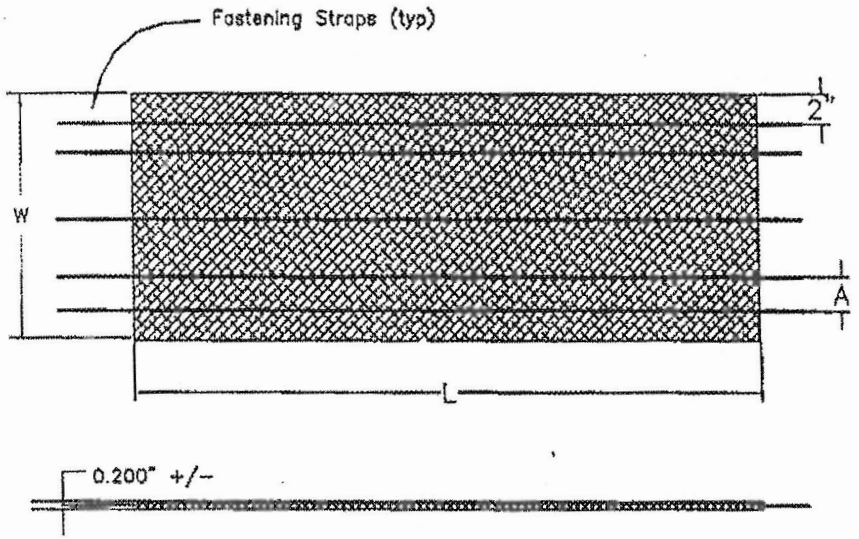
YC009
Chickahominy Rd
CBE-11-051; D-01-10
JCC Storwmater - Toano MS BMP Repair
GPIN 1240100051
YC007
Ridgedale Ave
Woodridge Ct
Tuttington Rd

APPENDIX H

Site Plan

12"–24" DOUBLE WIDE FIELD COUPLER

PART #	PIPE SIZE	L	W	A
1267RCD	12 in (300 mm)	50.00 in (1270 mm)	28.00 in (711 mm)	2.00 in (51 mm)
1567RCD	15 in (375 mm)	62.00 in (1575 mm)	31.00 in (787 mm)	2.60 in (66 mm)
1867RCD	18 in (450 mm)	73.00 in (1854 mm)	34.00 in (864 mm)	2.70 in (69 mm)
2467RCD	24 in (600 mm)	94.00 in (2388 mm)	32.00 in (813 mm)	3.20 in (81 mm)



NOTE: ALL DIMENSIONS ARE NOMINAL

ADS
ADVANCED DRAINAGE SYSTEMS, INC.

DRAWN BY		APPROVED BY		DRAWING #
JDP	07.25.02	AWM	10.06.02	6065

REVISIONS	
BY	DATE

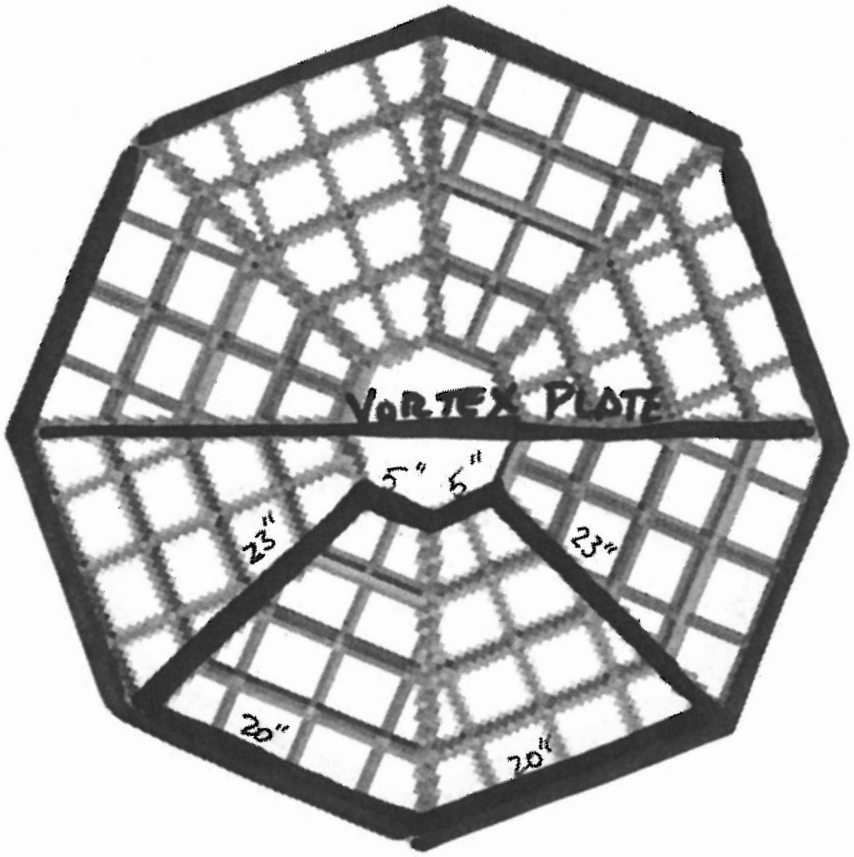
Proposed Modifications to the Toano Middle School SWMF – YC-007

In 2011 the Toano Middle School SWMF was repaired and ungraded under contract # 11-4276. These repairs included dredging sediment, installing a new concrete principal spillway, removal of trees from the embankment, and the installation of rip rap in the emergency spillway. During the dredging operations the contractor encountered several significant springs (water seeps) within the facility.

At the conclusion of construction the facility was allowed to begin to fill with water, but unfortunately the facility has not been able to maintain its designed normal pool elevation of 90.00 ft above MSL. We attribute this problem to the water seeps that were uncovered during the dredging operations. It should be noted that the absence of a normal pool at elevation 90.00 does not adversely affect the intended design function of the facility.

Even though the function is ok, there still exists a need to modify the inlet system that conveys stormwater flows into the facility. The stormwater inlet pipe currently discharges the flows into the facility at approximately the designed normal pool elevation of 90.00. Unfortunately the facility presently maintains a normal pool elevation of 84.00 MSL, which is 6 ft lower than the inlet pipe. This difference in elevations can result in significant slope erosion within the facility.

Therefore we are recommending that modifications to the inlet system be undertaken to resolve this problem.

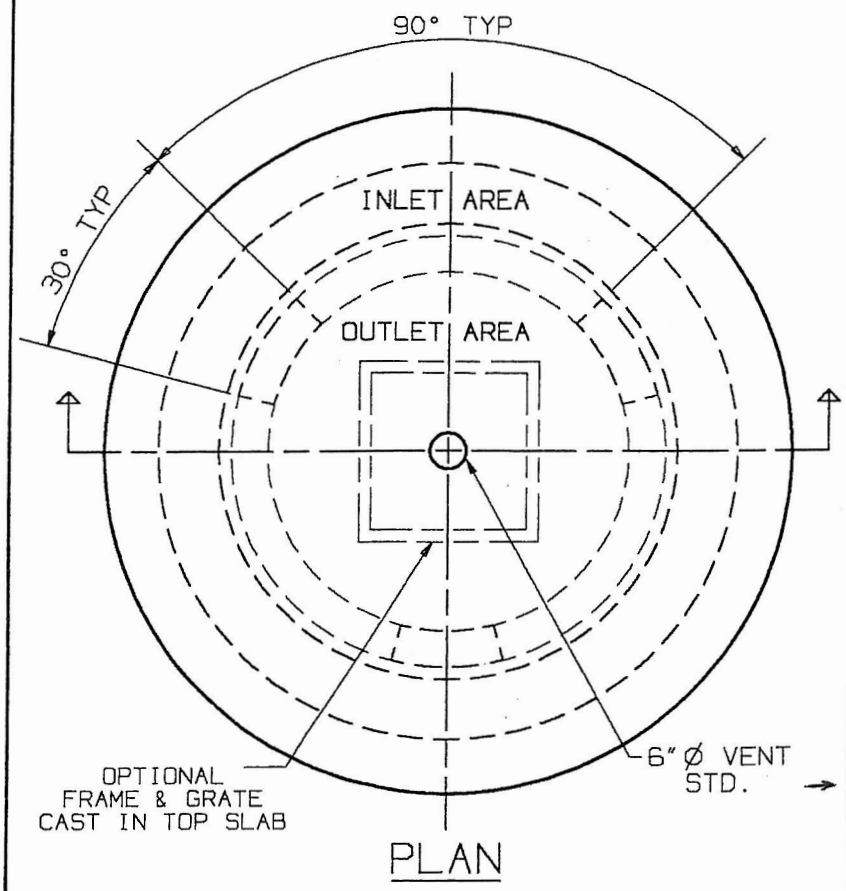

VORTEX PLATE
5"
5"
23"
23"
20"
20"

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 112

CINTER CONST

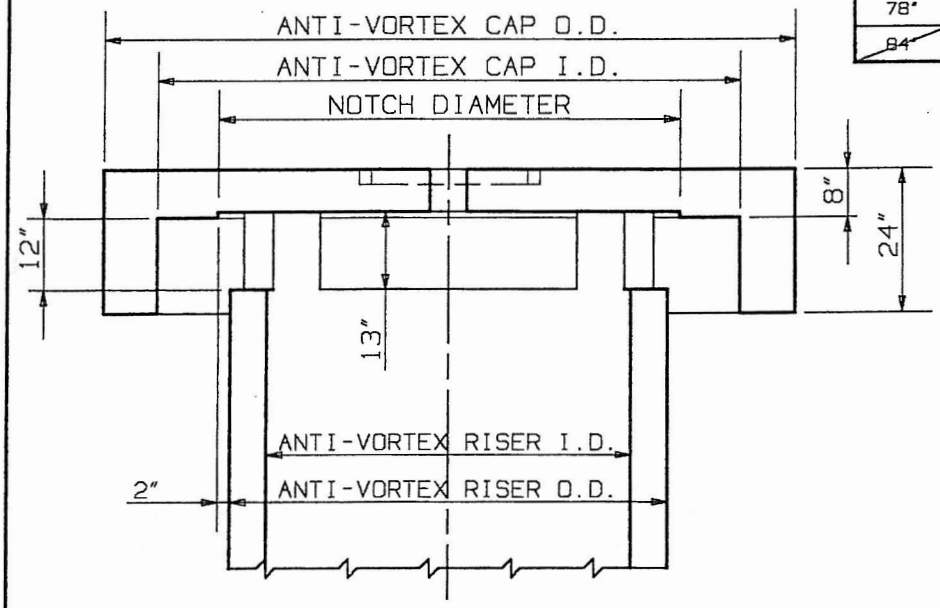
NOTE: H416 #

1. ANTI-VORTEX DEVICE (CAP AND RISER) MANUFACTURED IN ACCORDANCE WITH ASTM C478.
2. DIMENSIONS SUBJECT TO PERMISSIBLE VARIATIONS OF ASTM C478.
3. INLET AREA (AREA BETWEEN DEVICE I.D. AND RISER O.D.) IS GREATER THAN OUTLET AREA (AREA OF RISER I.D.)
4. SLAB REINFORCEMENT TO BE ASTM A615 #4 BARS @ 8" E.W. CIRCUMFERENTIAL REINFORCEMENT TO BE Asc = 1 @ 0.150 2x6 W2.5 x w2.5 WWF MINIMUM. MATERIAL PROPERTIES: fy = 60 ksi, fc = 4 ksi. CONCRETE COVER OVER REINFORCEMENT (CCOR) = 1", UNLESS NOTED
5. DI-1 FRAME & GRATE IS AVAILABLE FOR 48" I.D. RISERS AND LARGER.



PLAN

RISER I.D.	RISER O.D.	ANTI-VORTEX CAP I.D.	ANTI-VORTEX CAP O.D.	NOTCH DIAMETER	APPROX. CAP WEIGHT
~~24"~~	30"	48"	58"	34"	~~1.49 T~~
27"	33½"	60"	70" OR 72"	37½"	2.28 T
30"	37"	60"	70" OR 72"	41"	2.26 T
36"	44"	60"	70" OR 72"	48"	2.22 T
~~42"~~	51"	72"	86"	55"	~~3.16 T~~
48"	58"	84"	100"	62"	4.27 T
~~54"~~	66½"	84"	100"	70½"	~~4.20 T~~
60"	72"	96"	114"	76"	5.48 T
66"	80½"	96"	114"	84½"	5.39 T
72"	86"	108"	128"	90"	6.83 T
78"	94½"	126"	147"	98½"	8.97 T
84"	100"	126"	147"	104"	8.90 T



SECTION

NOTE:
48" STAN PIPE FOR
72" A.V.D. H416

Technical Manual
page 14.1

PRECAST ANTI-VORTEX DEVICE (CAP AND RISER)

ORIGINAL DATE	02-01-95	RCH
LAST REVISION		
SCALE	3/8 = 1'-0"	
TOPIC - PROJECT # - DRAWING #		
ST-0847-63		

GIFFORD-HILL CONCRETE PRODUCTS
2900 Terminal Ave. ☐ Richmond, Virginia 23234 ☐ 804-233-5471

_____ CONTR _____

STRUCTURE NO. _____

O-RING _____
T&G _____

FRAME & COVER: MH-1_____
OTHER____

ADJ. RING: 4"_____
6"_____

CONE: 2-8____
1-4____

____ x24 F/T: SPECIAL____
STD____

OR

RISERS: 1-0____ 2-8____
1-4____ 3-0____
2-0____ 4-0____
OTHER_____

* DENOTES SPECIAL RISER

SAFETY SLAB ____

REDUCING F/T:____X____

RISERS: 1-0____ 2-8____
1-4____ 3-0____
2-0____ 4-0____
OTHER_____

* DENOTES SPECIAL RISER

DOGHOUSE:

BASE/ EXT BASE/ NO BASE

____"I.D. X ____'_____"

TOP EL_____'

INV. EL_____'

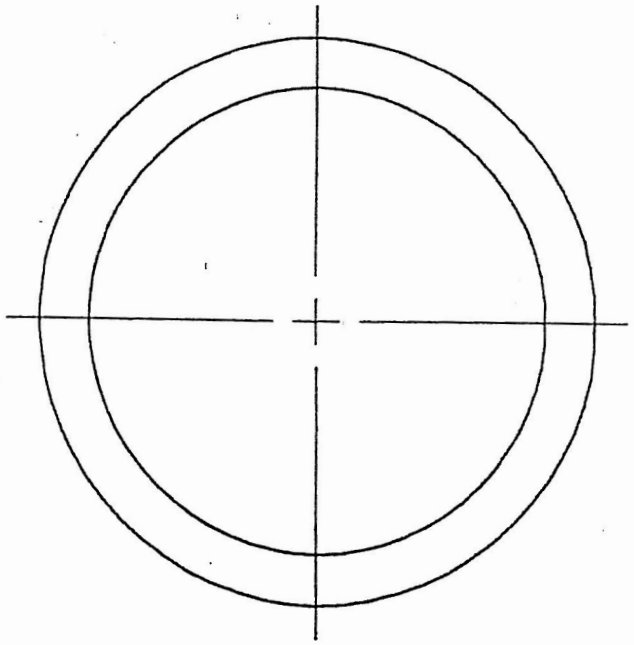
H = _____

SCHEMATIC ASSEMBLY DRAWING
COMPONENTS IN ALPHABETICAL ORDER
FROM BOTTOM TO TOP

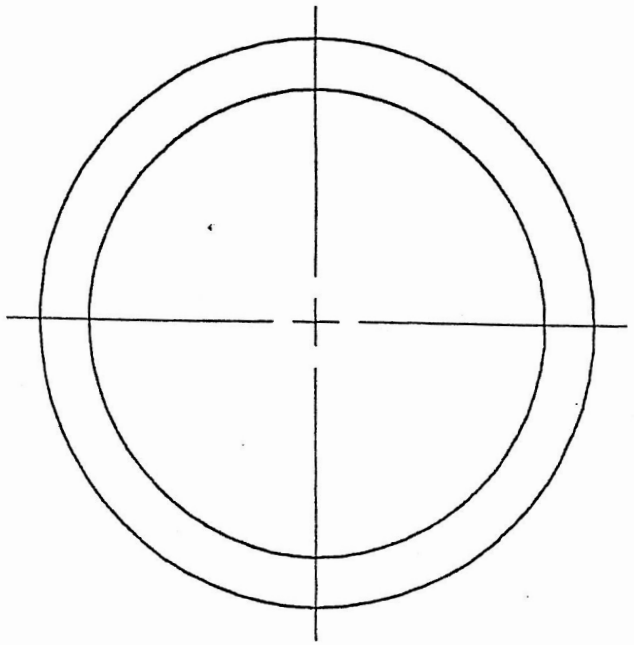
STEPS: _____ 1ST DOWN_____
_____" ON CENTER

SUMP = _____'

COATING: 300M____. SS BLACK____. SIKA____. OTHER_____



_____" I.D. X ____'-_____" DH/DH EXT/DHNB



_____" X _____ FLATTOP/ RISER

Buoyancy Calculations for BMP Riser

Toano Middle School - *48" Riser with 1'-8" Concrete Fill and Plastic Anti-Vortex Device - 5 foot base*

1. Buoyant (uplift) Force

Riser Outside dia (in)	58.00
Riser Height (ft)	24.50
Riser Volume (cuft)	449.52
Uplift Force (lb)	28,050.08
Factor of Safety	1.25
Total Uplift Force (lb)	35,062.60

2. Resisting (downward) Force

a) Riser

Riser Outside dia (in)	58	18.35
Riser Inside dia (in)	48	12.57
Riser Height (ft)	24.5	
Riser Wall Volume (cuft)	141.64	
Riser Unit Weight (lb/cuft)	150	
Total Riser Weight (lb)	21,246.66	

b) Riser Floor Fill

Riser Inside dia (in)	60
Depth of Fill	1.67
Riser Volume (cuft)	32.79
Fill Unit Weight	150
Weight of Fill	4,918.56

c) Riser Base

Base Outside dia (in)	88
Base Thickness (in)	8
Base Volume (cuft)	28.16
Base Unit Weight (lb/cuft)	150
Weight of Base	4,223.70

d) Weight of Soil on Extended Base

Base Outside dia (in)	88	42.24	Area of Base	42.24
Base Extension Width (in)	8	28.27	Total Downward Force	35,515.46
Area of Exposed Base (ft^2)	13.96		Loading	840.8619
Soil Unit Weight	120			
Height of Fill	3			
Weight of Fill	5,026.55			

f) Anti-Vortex Device (lb)	100	8540
e) Total Resisting Force (lb)	35,515.46	

3. Resultant Force = Uplift force - Resisting force

Uplift Force	- Resisting Force	
35,062.60	35,515.46	452.86

Buoyancy Calculations for BMP Riser

Toano Middle School - *48" Riser with 2' Concrete Fill and Plastic Anti-Vortex Device - 5 foot base*

1. Buoyant (uplift) Force

Riser Outside dia (in)	58.00
Riser Height (ft)	24.50
Riser Volume (cuft)	449.52
Uplift Force (lb)	28,050.08
Factor of Safety	1.25
Total Uplift Force (lb)	35,062.60

2. Resisting (downward) Force

a) Riser

Riser Outside dia (in)	58	18.35	
Riser Inside dia (in)	48	12.57	
Riser Height (ft)	24.5		
Riser Wall Volume (cuft)	141.64		
Riser Unit Weight (lb/cuft)	150		
Total Riser Weight (lb)	21,246.66		

b) Riser Floor Fill

Riser Inside dia (in)	60
Depth of Fill	2
Riser Volume (cuft)	39.27
Fill Unit Weight	150
Weight of Fill	5,890.49

c) Riser Base

Base Outside dia (in)	88
Base Thickness (in)	8
Base Volume (cuft)	28.16
Base Unit Weight (lb/cuft)	150
Weight of Base	4,223.70

d) Weight of Soil on Extended Base

Base Outside dia (in)	88	42.24	Area of Base	42.24
Base Extension Width (in)	8	28.27	Total Downward Force	36,487.39
Area of Exposed Base (ft^2)	13.96		Loading	863.8733
Soil Unit Weight	120			
Height of Fill	3			
Weight of Fill	5,026.55			

f) Anti-Vortex Device (lb)	100	8540
e) Total Resisting Force (lb)	36,487.39	

3. Resultant Force = Uplift force - Resisting force

Uplift Force	- Resisting Force	
35,062.60	36,487.39	1,424.79

A. Stone under riser

$44'' \rightarrow 48'' \times 2 = 8'$

$A = \pi r^2 = \pi(4)^2 = 50.26\ ft^2 \times 1' = 50.26\ ft^3$

B. Stone under gabions

$(3) \times 6' \times 3' \times \frac{8''}{12'} = 36\ ft^3$

C. Total = $50.26 + 36 = 86\ ft^3 = 3.1\ cy \times \frac{1.5\ T}{1\ cy} = 4.75$-

Contract V900499, Addendum No. 1, Geotechnical Engineering Study, Wet Detention Pond, Williamsburg Middle School, Route 60 and Route 631, Toano, Virginia

SCHNABEL
ENGINEERING
ASSOCIATES

SCHNABEL
ENGINEERING
ASSOCIATES

ONE WEST CARY STREET • RICHMOND, VIRGINIA 23220-5609
PHONE 804-649-7035 • FAX 804-783-8023

JAMES J. SCHNABEL, P.E.
RAY E. MARTIN, Ph.D., P.E.

RAYMOND A. DeSTEPHEN, P.E.
EDWARD G. DRAHOS, P.E.
JAMES J. SELI, P.E.
GILBERT T. SEESE, P.E.
BRIAN MILNER, P.G.

February 25, 1991

Williamsburg/James City County Schools
305 First Street
Williamsburg, Virginia 23185

Attn: Paul Ogg
Director of Operations

Subject: Contract V900499, Addendum No. 1, Geotechnical Engineering Study, Wet Detention Pond, Williamsburg Middle School, Route 60 and Route 631, Toano, Virginia

Gentlemen:

Submitted herewith are two copies of our report for the above referenced project. These services were provided in accordance with our proposal addendum dated January 29, 1991.

Soil samples that we obtained during our subsurface exploration will be retained until March 25, 1991 and then disposed of unless further disposition is requested.

We appreciate the opportunity to be of service for this project. Please do not hesitate to contact either of the undersigned if clarification is needed on any aspect of this report.

Very truly yours,

SCHNABEL ENGINEERING ASSOCIATES, INC.

Gilbert T. Seese, P.E.
Associate

Edward G. Drahos

Edward G. Drahos, P.E.
Principal

GTS:EGD:krm

COMMONWEALTH OF VIRGINIA
EDWARD G. DRAHOS
No. 015605
PROFESSIONAL ENGINEER

c: Smithey & Boynton (2)
Attn: Richard Hellegas, AIA

James City County (6)
Attn: Waylan Bass

GEOTECHNICAL ENGINEERING STUDY
WET DETENTION POND
WILLIAMSBURG MIDDLE SCHOOL
TOANO, VIRGINIA

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1.	Executive Summary	1
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Appendix B: Soil Laboratory Test Data

1. EXECUTIVE SUMMARY

The natural soils encountered in the test borings and hand augers are generally considered suitable for support of the embankment. These soils generally consist of Pleistocene Age firm density sand and stiff consistency clay soils at the abutments overlying the Yorktown Formation at the base of the ravine. The Yorktown Formation is overlain by a thin layer of loose or soft Recent to Pleistocene Age alluvium. These soils will require removal to depths of about 2 to 4 ft prior to embankment construction. Dewatering will be a necessary part of this excavation and for other aspects of the dam construction.

The dam may be constructed as homogeneous earth fill embankment. On-site soils appear suitable for use as compacted embankment fill. A cut-off trench keyed into the Yorktown Formation is recommended to control seepage beneath the dam. Internal seepage controls along the downstream toe and along the principal spillway pipe are also recommended.

2. INTRODUCTION

2.1 Site Description and Proposed Construction

The site is located in the southeast corner of the proposed Williamsburg Middle School site south of Richmond Road (U.S.Route 60) and east of Chickahominy Road (Route 631) in James City County, Virginia. Existing grades in the proposed pond area vary from about El 70 in the floor of the ravine to about El 105 to El 110 at the left and right abutments, respectively. Slopes from the abutments to the floor of the ravine vary from about 5H:1V down to about El 85 near the top of the ravine, to as steep as 1H:1V from about El 85 to the floor of the ravine. The site is moderately to heavily wooded. A small stream with a water depth of about 2 inches flows along the floor of the ravine.

2.2 Proposed Construction

Proposed for construction is an earth embankment for a wet detention pond to collect site runoff during and after construction. The proposed embankment is to have a crest length of about 245 ft at El 100.3 with a crest width of 10 ft. Upstream and downstream slope grades are planned for 3H:1V. The principal spillway is to consist of a 30 inch diameter metal riser with a drop intake at El 96.2, a 5 inch opening at El 90 and an invert at about El 73. The permanent pool is to be maintained at El 90. The conduit through the dam from the riser intake to the outlet structure at the downstream toe is proposed to be 15 inch diameter Class V concrete pipe laid at a 1.0% grade. The outlet structure at the downstream toe is to have an invert grade of about El 72.5. Three "anti-seep" collars are also proposed for construction along the spillway pipe. The emergency spillway is to be a riprap lined

overflow channel at El 98.1. Project information was obtained from the Details Sheet C4-2 dated January 9, 1991 provided by Smithey & Boynton.

2.3 Objective and Scope

The objective of our geotechnical engineering study was to evaluate the subsurface conditions at the project site and to provide recommendations regarding the design of the spillway structure and embankment for this project. The recommendations developed by our scope of services were based on the information revealed by our exploration. We have made an attempt to provide for normal contingencies. However, the possibility remains that unexpected conditions may be encountered during construction. Should such an event occur, we should be notified to determine whether modifications to our recommendations are necessary.

Our scope of services included providing: (A) Subsurface Exploration, (B) Field Engineering: Boring Stakeout, Logging of the Subsurface Exploration and Hand Auger Probes, (C) Soil Laboratory Testing, and (D) an Addendum to our Geotechnical Engineering Study. The Addendum includes the evaluation of test boring, hand auger probe, geological, soil test and related structural data to develop the following:

- Estimated subsurface conditions and groundwater levels within the area explored.
- Comments on the proposed embankment configuration.
- Recommended earthwork requirements for construction of embankment fill including an evaluation of the use of on-site soils for embankment and core construction.

- Comments on foundation and slope stability based on soil type.

- Bedding and internal drainage requirements for design of the proposed spillway pipe.

- Evaluation of the requirements for a seepage cutoff.

- Discussion of important construction considerations including subgrade preparation, need for temporary dewatering, and scope of geotechnical observation and testing services necessary during construction.

The following services were not provided in this study: surveying for line and grade, cost or quantity estimates, and detailed plans and specifications. These services are not typically provided by our firm.

The following services are also not included in our scope of services but can be provided upon request: a foundation and slope stability analysis, review of geotechnical aspects of the project plans and specifications, attendance at client review meetings and progress meetings, geotechnical and materials observation and testing during construction, environmental site assessments and wetlands studies.

This report is based on information available to us on the proposed structure at the time this report was prepared. However, we would appreciate an opportunity to review the plans and specifications as they pertain to the foundation design and earthwork and submit our comments to you based on this review.

3. SUBSURFACE EXPLORATION AND DATA ANALYSES

3.1 Exploration Techniques

Two test borings were drilled by Ayers and Ayers, Inc., Powhatan, Virginia and were logged by our personnel on January 11, 1991. In addition, three hand augers were performed by our personnel on January 22, 1991. The test boring and hand auger logs are included in Appendix A. The test boring locations are shown on Figure A1.

The test borings were drilled at the left abutment of the proposed embankment using an ATV-mounted hollow stem auger drill rig. Access to the right abutment and the floor of the ravine was not possible due to the steep grades across the ravine. Therefore, three hand augers were performed in the ravine floor and at the right abutment.

3.2 Generalized Subsurface Strata

The following generalized soils strata were observed in the borings and hand augers. Our specific observations at each boring and hand auger location are shown on the logs included in Appendix A. We have characterized the following subsurface soil strata based on the boring and hand auger data.

Stratum A: Topsoil and forest litter were encountered to depths of 0.2 to 0.3 ft. This material was encountered in both borings and in Hand Auger HA-101.

Stratum B: Stratum B consisted of POORLY GRADED SAND, SILTY SAND and CLAYEY SAND with varying amounts of clay and silt (SP, SM, and SC). This material was generally loose to compact density with Standard Penetration Test (N) values between 3 and 24 and Geostick Penetrometer measurements between 1-1/4 and 14.5 inches.

Stratum B soils were encountered in both test borings and the hand augers.

Stratum C: Stratum C soils were generally LEAN CLAYS (CL) with varying amounts of sand. Lenses of organic material were encountered in both borings at about El 69. These soils generally exhibited medium consistency with N values from 6 to 14. Stratum C soils were not encountered in the hand augers.

Stratum D: This stratum consisted of SILTY SAND (SM) and CLAYEY SAND (SC) and was encountered below Strata B and C at depths of about 21.5 to 34 ft in the left abutment, and 2 to 2.5 ft in the floor of the ravine. N values varied from 7 to 19.

The group symbols indicated in this generalized subsurface stratification and on the test boring logs represent the Unified Classification Symbols per ASTM D-2487 based on limited laboratory testing and visual observation of the samples recovered. Criteria for visual identification of the soil samples are given in Appendix A of this report. Some variation may be expected between samples visually classified and samples where laboratory testing has been performed to assist in soil classification.

The above N values indicate the low and high Standard Penetration Test resistances encountered in a particular layer as determined from the number of blows required to drive a 2 inch O.D., 1-3.8 inch I.D. sampling spoon 12 inches using a 140 pound hammer falling 30 inches. This test is conducted after seating the sampler 6 inches in the bottom of the hole according to ASTM D-1586.

Geostick penetrometer (GP on the hand auger logs) refer to penetration by a 1¾ inch diameter conical - typed steel rod pushed manually into the ground. Geostick penetrometer readings give a general indication of the stiffness or density of soils.

The symbol "PP" on the boring logs indicates pocket penetrometer readings performed on jar samples at the elevation indicated on the logs. Pocket penetrometer readings give a general indication of the unconfined compressive strength of the fine grained soils.

3.2 Local Geology

The sands of Stratum B and the clays of Stratum C in the abutment areas represent Pleistocene age alluvial soils. These interbedded deposits may be associated with either the Windsor or Bacon's Castle Formations. In the ravine floor, these materials are likely to be of Recent to Pleistocene Age.

The sands of Stratum D are Miocene age Yorktown Formation soils. These soils were deposited in a shallow marine environment and generally consist of sand, clay and silt soils that contain shell fragments and cemented shell layers. This formation is generally moderately preconsolidated and exhibits high shear strength, relatively low compressibility and relatively low permeability. The Yorktown Formation is sensitive to disturbance, therefore Standard Penetration test N values in these soils are typically not representative of the soil properties.

3.4 Ground Water

Ground water was encountered in both of the borings at depths between 21.5 and 26.5 ft. Upon completion, ground water levels were measured at about El 60.7 and El 66.7. A water observation

well was installed in Boring B-102. A long term reading in this well indicated a ground water level at about El 80.2. Water was at the ground surface at hand auger locations HA-102 and 102A, about El 70 to 71, and was not encountered in HA-101 which was terminated at about El 90. The ground water levels are expected to fluctuate with variations in precipitation, surface runoff, infiltration, evaporation and similar factors which can occur throughout the year.

3.5 Laboratory Testing

Laboratory testing was performed on five jar samples. The laboratory tests performed included grain size analysis, natural moisture content, and Atterberg Limits. The results of the tests are in Appendix B. We have also reviewed soil laboratory testing performed for our original Geotechnical Engineering Study for the new Middle School. These tests included natural moisture content, Atterberg Limits, grain size analysis, Standard Proctor moisture-density (ASTM D-698) relations and California Bearing Ratio (CBR).

The tests results were evaluated for suitability of on-site soils for embankment and core construction. Based on the soil laboratory test results from this study and our previous study on this site, we have considered permeabilities of the on-site soils to be between 10^{-3} and 10^{-5} cm/sec.

4. GEOTECHNICAL ENGINEERING ANALYSIS

4.1 Discussion

We understand that the borrow soils for the construction of the earth fill embankment are to be obtained from on-site. Based on our previous report for the Middle School project and the laboratory test data from this study, the on-site soils are generally silty and clayey sands and lean clays with about 16 to 81 percent material finer by weight than the No. 200 sieve. Due to the anticipated material types present within these potential borrow areas, a homogeneous earth dam was evaluated and is recommended for the earth embankment.

The upstream and downstream slopes for the proposed embankment are planned to be constructed with grades of 3H:1V for ease of maintenance. These slopes may be increased to 2.5H:1V based on the soil types anticipated for construction. The longitudinal axis of the dam should be perpendicular to the abutments or arched slightly upstream. Arching an embankment in the downstream direction increases the possibility of development of tension cracks through the embankment. A seepage cut-off trench keyed into the Yorktown Formation is recommended beneath the proposed embankment. Although the soils of the Yorktown Formation are granular, we believe that the natural permeability of these soils will be about 10^{-4} cm/sec or less based upon the preconsolidated nature of the formation and our previous experience.

We recommend that a drainage blanket be constructed along the downstream toe of the embankment to control internal seepage and reduce porewater pressures at the toe which may lead to instability of the embankment. The horizontal drainage blanket described

in Section 4.6 is recommended due to the ease of construction as compared to other drain types. In addition, the drainage filter described in Section 4.8 should be installed around the downstream portion of the principal spillway pipe to reduce the possibility of piping and leakage along this structure.

The seepage collars indicated on the project plans are not recommended for the structure. Although properly installed seepage collars can extend the length of seepage paths through the embankment, seepage collars are difficult to install and to backfill. A poorly constructed seepage collar may be worse than none at all. For this reason, the Soil Conservation Service recommends controlling seepage by methods discussed in this report rather than using seepage collars.

4.2 Embankment Foundations

The proposed embankments may be supported on suitable natural soils of Strata B, C and D described herein. All topsoil and any soft or loose, Recent alluvium should be removed prior to placement of embankment fill. Dewatering will be required for excavation along the ravine bottom and for the cut-off trench and spillway pipe installation as discussed in Section 5.2. Along the abutments, suitable soils are generally expected to be encountered at nominal stripping depths. Within the ravine bottom, suitable foundation soils are expected to be encountered at depths of about 2 to 4 ft below the existing ground surface grades. Suitable soils are expected to be encountered at the following elevations at the hand auger and test boring locations:

Boring/Hand Auger No.	Estimated Elevation of Suitable Embankment Foundation Material
B-101	100
B-102	92
HA-101	97
HA-102	68
HA-102A	68

All embankment foundations should be observed by the Geotechnical Engineer.

4.3 Cut-off Trench

The compacted soil cut-off trench should be aligned along the longitudinal axis of the embankment. The cut-off trench should be a minimum of 24 ft wide and should be constructed of compacted embankment fill as described in Section 4.5. The cut-off trench should extend a minimum of 3 ft into the Yorktown Formation, Stratum D, along the ravine bottom. The estimated subgrade elevation of the cut-off trench along the ravine bottom is about El 65.

The cut-off trench extending up the dam abutments will not need to extend into the Yorktown Formation, but it should be excavated a minimum of 3 ft deep. All cut-off trench subgrades should be observed in the field by the Geotechnical Engineer. The required depth of the cut-off trench in the abutment slopes may be extended in the field based on recommendations by the Geotechnical Engineer if highly permeable soil strata are encountered.

4.4 Recommended Embankment Configuration

We recommend that the proposed embankments be constructed as a homogeneous dam with upstream and downstream slopes of 3H:1V. These slopes are considered stable for homogeneous earth fill dams

on stable foundation based on U.S. Bureau of Reclamation criteria as given in the Design of Small Dams. A minimum crest width of at least 10 ft should be maintained for the dam. This crest width is less than that suggested by the Bureau of Reclamation, but is considered adequate because the freebound at normal pool is 10 ft. Recommended embankment details are shown on Figure 1.

Detailed settlement analyses have not been performed for the dam. However, we anticipate a maximum settlement of 3 to 5 inches will occur at full embankment height. Settlements are expected to decline linearly from maximum at the full embankment height to 1 to 2 inches at the abutments. Similar distribution of settlements will occur from the crest to the toe of the embankment. The majority of the embankment settlement should occur during construction.

4.5 Embankment Fill

Embankment fill subgrades should be stripped of all topsoil, organic matter, and soft and loose alluvial deposits of Stratum A or B prior to placement of fill materials. Subgrades should be proofrolled with a loaded tandem dump truck or pan under the observation of the Geotechnical Engineer. Proofrolling may be waived by the Geotechnical Engineer depending on subgrade conditions. Areas which exhibit excessive pumping or weaving in the opinion of the Geotechnical Engineer should be excavated and replaced with compacted fill.

Compacted embankment fill, spillway backfill, and cut-off trench fill should be free of organic matter and classify SM, SC, ML, or CL in accordance with the Unified Soil Classification, ASTM

D-2487. The soils should contain at least 20 percent material finer by weight of the No. 200 sieve. The on-site soils of Strata B and C are generally expected to meet this criterion. We recommend that during placement, the finer grained soils be placed along the cut-off trench and center portion of the dam embankment.

Compacted fill should be placed in loose lifts not exceeding 8 inches in thickness and should be compacted to at least 95 percent of maximum dry density according to ASTM D-698, Standard Proctor. Fill should be compacted at moisture contents within 3 percent above and 1 percent below the optimum moisture content for the material used. The surface of each completed lift of compacted embankment fill should be scarified to a depth of 2 inches prior to placing additional fill to limit the development of horizontal seepage planes within the embankment. Compacted embankment fill should be placed in horizontal lifts. Surfaces steeper than 4H:1V should be benched to receive fill. Bench heights should not exceed 4 ft. Backfill along the principal spillway conduit should be placed equally on both sides of the pipe during filling.

4.6 Drainage Blanket

A horizontal drainage blanket consisting of coarse graded aggregate surrounded by a fine graded aggregate filter should be installed at the downstream toe of the proposed embankment. The drainage blanket should be placed on the embankment subgrades. At the abutments, the blanket should extend up the abutment slopes to about El 85. The drainage blanket should extend into the embankment a distance equal to about 20 percent of the embankment width at the blanket grade as shown on Figure 2. Drainage blanket flows should be collected in a toe drain running parallel to the down-

stream toe and discharged into the principal spillway stilling basin.

The coarse graded aggregate should consist of a 12 inch thick layer of VDOT No. 78 stone. The fine aggregate filter surrounding the coarse aggregate should consist of a 12 inch thick layer of VDOT Grade A Fine Aggregate. The toe drain pipe should consist of 6 six inch slotted polyethylene tubing meeting the requirements of ASTM F-405.

4.7 Slope Protection

Slope protection is recommended on the upstream slope of the embankment. Slope protection may consist of spiked timbers waffle concrete, or stone riprap. The extent of the slope protection above and below the normal pool elevation should be evaluated by analysis of wave action and is beyond the scope of this study. As the minimum, we recommend the slope protection extend just above the 100 year storm level. The downstream slope and the portion of the upstream slope above the normal pool level should be seeded, but no trees should be planted on the slopes.

4.8 Principal Spillway

4.8.1 Riser Foundation

The principal spillway riser for the embankment may be supported on a mat founded on suitable natural soils of Stratum D. The tower mat may be designed for its distributed contact pressure provided this pressure does not exceed an allowable soil bearing pressure of 3000 psf. This allowable soil bearing pressure provides a factor of safety of at least three against general shear failure.

Riser structure subgrades should be observed by the Geotechnical Engineer. Any unsuitable soft or loose soils should be excavated from the foundation subgrades as recommended by the Geotechnical Engineer. A working platform consisting of 3 to 4 inches of concrete may be recommended by the Geotechnical Engineer for placement on foundation subgrades in the Stratum D soils to reduce the disturbance to these sensitive soils prior to placement of foundation concrete.

The total settlement of the proposed tower is expected to be less than about 1 inch with differential settlements less than about half this value when the tower is founded as recommended above. We expect that the majority settlement to occur during the construction of the tower and placement of the embankment fill.

4.8.2 Principal Spillway Pipe, Pipe Filter and Headwall

The principal spillway pipe should be supported on a concrete cradle founded on suitable natural soils or compacted embankment fill as shown on Figure 3. The cradle should extend to the springline of the pipe conduit. The sides of the cradle should not be vertical but be sloped at about 1H:10V to facilitate adequate compaction against the structure. The cradle should be articulated with a convex camber of about 2 inches at the maximum embankment section to allow for settlement during embankment construction. Cradle joints should be provided to match pipe joints.

The conduit should be precast concrete pressure pipe designed to be watertight under the maximum internal hydraulic pressure and the maximum external embankment load of about 2 tsf. Joints should be designed to allow for rotation and extension due to

settlement of the dam foundation and should incorporate watertight gaskets. The length of the joint must allow for the estimated extension due to the these movements plus a factor of safety of at least 0.5 inch in joint length.

A graded drainage filter should be installed around the principal spillway pipe from the downstream toe into the embankment, a distance of at least 30 percent of the total spillway pipe length as shown on Figure 3. The filter should consist of a 12 inch thick layer of coarse filter material meeting the requirements of VDOT Size No. 78 aggregate extending around the pipe but not underneath the cradle. A fine filter consisting of a 12 inch thick VDOT Grade A Fine Aggregate should surround the coarse filter and the pipe including beneath the cradle. Recommended principal spillway pipe filter details are also shown on Figure 3.

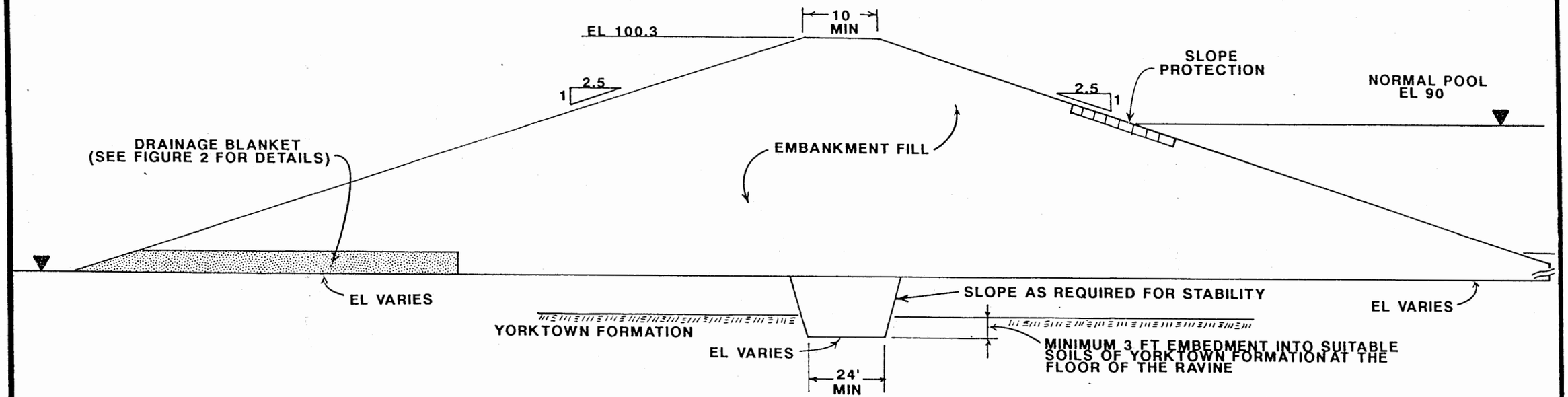
Sufficient clearance should be provided for standard compaction equipment access during backfilling along the principal spillway conduit. The backfill should be ramped up against the conduit on a maximum slope of 1H:6V to improve the compactive effort. Where access is limited, thinner lift thicknesses, hand compaction and tight control on material quality will be necessary. Where trench excavation for the installation of the principal spillway conduit is necessary, slopes should be no steeper than 2H:1V.

Headwall structures may be supported on shallow spread footings founded on compacted embankment fill or suitable natural

soils. Minimum footing dimensions of 16 inches should be maintained for continuous footings.

4.8 Emergency Spillway

It is our understanding that the emergency spillway is to consist of a riprap lined channel over the crest of the embankment. We recommended that a minimum 6 inch thick layer of VDOT Size No. 57 stone wrapped in a geotextile fabric similar to Mirafi 140N be placed beneath the riprap channel.



PROPOSED WET DETENTION POND

SCHNABEL ENGINEERING ASSOCIATES

[redacted]

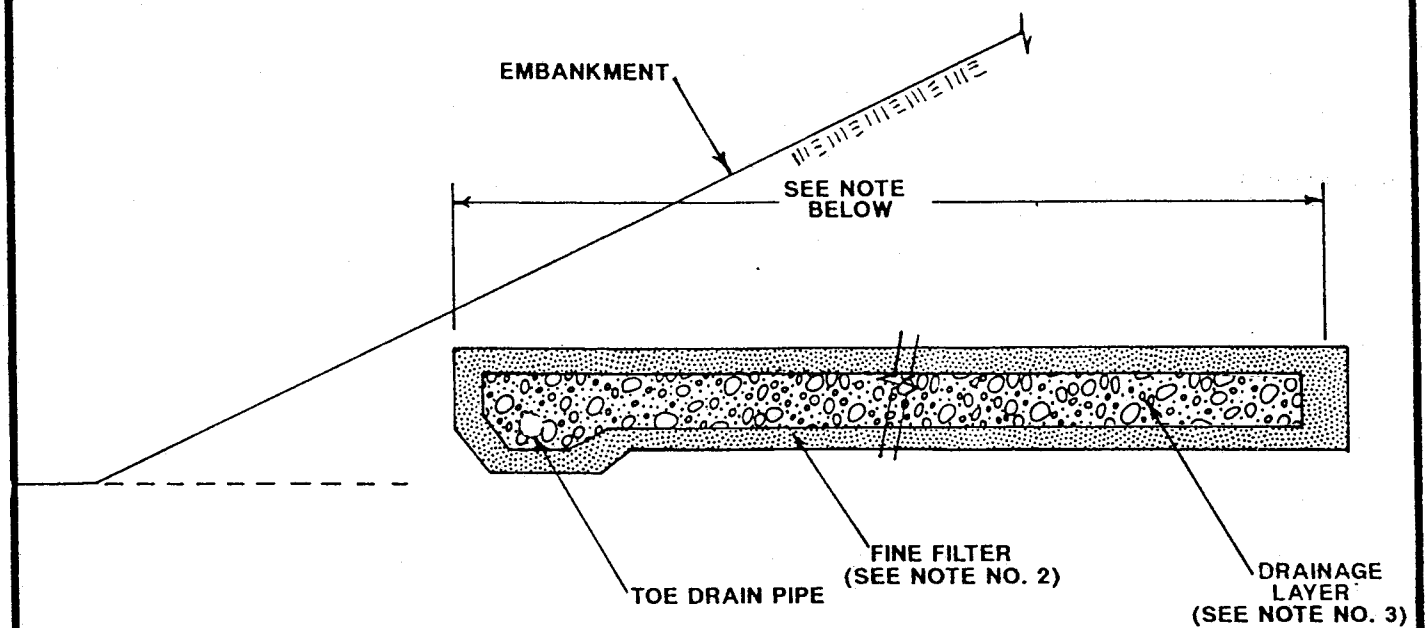
PROPOSED WET DETENTION POND, WILLIAMSBURG MIDDLE SCHOOL, TOANO, VIRGINIA			
RECOMMENDED	SCALE: NO SCALE	DATE: 2-25-91	REVISED DATE
EMBANKMENT	DRAWN BY: KJ	CHECKED BY: GS	REVISED DATE
DETAILS	CONTRACT NO.: V900499	FIGURE: FIGURE 1	REVISED DATE

FIGURE 2

PROPOSED WET DETENTION POND
WILLIAMSBURG MIDDLE SCHOOL
TOANO, VIRGINIA

RECOMMENDED DRAINAGE BLANKET DETAILS

NO SCALE

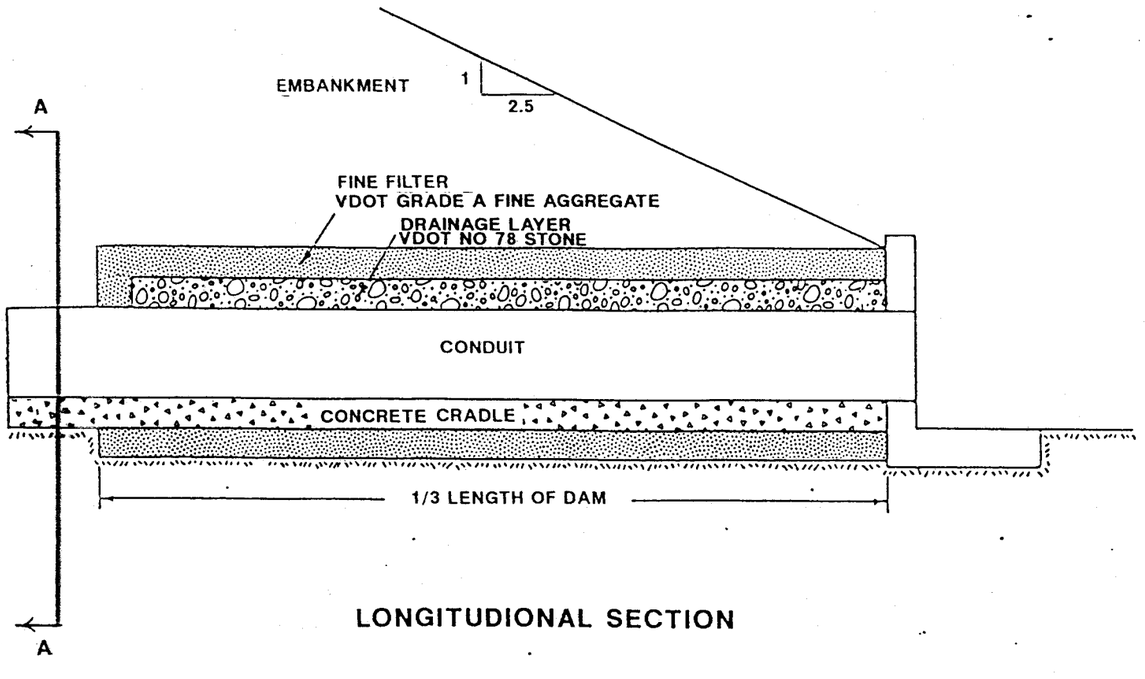


NOTES:

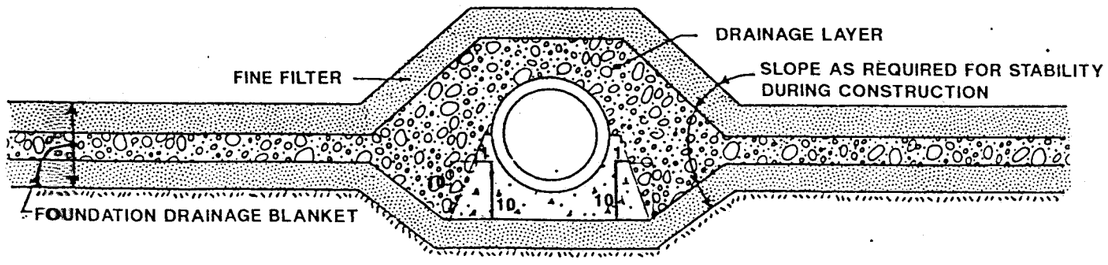
1. THE DRAINAGE BLANKET SHOULD EXTEND INTO THE EMBANKMENT A DISTANCE EQUAL TO ABOUT 20 PERCENT OF THE FULL DAM WIDTH AT BLANKET GRADE
2. THE FINE FILTER SHOULD CONSIST OF VDOT GRADE A FINE AGGREGATE AND HAVE A MINIMUM THICKNESS OF 12 INCHES
3. THE DRAINAGE LAYER SHOULD CONSIST OF VDOT NO. 78 STONE AND HAVE A MINIMUM THICKNESS OF 12 INCHES

V900499

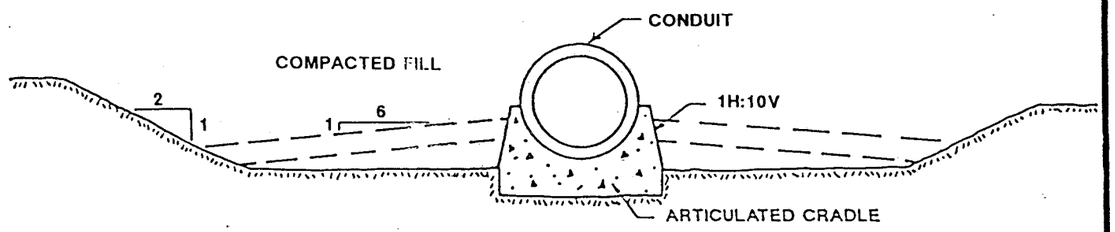
SCHNABEL ENGINEERING



LONGITUDIONAL SECTION



TRANSVERSE SECTION



BACKFILL DETAIL
CRADLE ON SOIL FOUNDATION
SECTION A-A

SCHNABEL ENGINEERING ASSOCIATES

[redacted]

PROPOSED WET DETENTION POND, WILLIAMSBURG MIDDLE SCHOOL, TOANO, VIRGINIA			
SPILLWAY	SCALE NO SCALE	DATE 2-25-91	REVISED DATE
FILTER	DRAWN BY KJ	CHECKED BY GS	REVISED DATE
DETAILS	CONTRACT NO. V900499	FIGURE FIGURE 3	REVISED DATE

5. CONSTRUCTION CONSIDERATION

5.1 General Construction

Material used as compacted fill to construct embankments should meet the quality requirements previously indicated herein. The majority of the non-organic on-site soils within the proposed borrow areas meet the above criteria. Scarifying, drying and recompacting on-site soils are expected. Since the soils are susceptible to moisture changes, we recommend that the earthwork portions of this project be completed during drier weather periods.

Site drainage should be provided to maintain subgrades free of water and to avoid saturation and disturbance of the subgrade soils prior to constructing foundations and placing fill. This will be critical during all phase of the construction work. Any soils which have been weakened due to saturation and disturbance should be removed as recommended by the Geotechnical Engineer.

5.2 Dewatering

Dewatering of the dam foundation areas and the diversion of surface water away from the work area will be necessary to allow proper execution of the construction work. The contractor should furnish to the engineer, in writing, his plans for dewatering prior to earthwork construction for the proposed structure. The existing stream should be temporarily diverted so that the principal spillway riser and conduit can be installed and the stream can then be diverted through the principal spillway to allow completion of the remainder of the embankment construction. Dewatering of the foundation and cut-off trench for dams will likely be required. It may be possible to control surface and groundwater

during construction by use of diversion berms and ditches and pumping from sump pits due to the shallow depths of excavation below the groundwater table expected.

5.3 Embankment Foundation and Cut-off Trench

The soils of the Yorktown Formation, Stratum D, are sensitive and easily disturbed by construction traffic. We recommend final excavation at the subgrade level be performed with backhoe or dragline equipment to minimize disturbance of foundation materials. The excavation should be performed such that the cut formed by the teeth of the backhoe or dragline bucket parallel the axis of the dams. An initial lift of fill should be placed on subgrades immediately after observation and approval.

5.4 Dam Embankment

During placement and compaction of fill to construct the proposed dam, the moisture content of the materials being placed and compacted should be maintained within the limits prescribed in Section 4.5. Water should be applied by sprinkling as necessary to attain the specified moisture content for compaction. Uniform moisture distribution should be obtained by disking, blading, or other approved methods prior to compaction of the layers. Material that is too wet when placed on the fill should either be removed or be aerated to the specified moisture content prior to compaction. Compaction of backfill around the spillway structure is critical with regard to seepage. During construction of the horizontal drainage blanket and drainage filter around the principal spillway conduit, care should be exercised with respect to installation of the fine and coarse materials so as to prevent

contamination by foreign matter. Vehicles should not be permitted to cross over the drainage blanket until a soil cover layer is placed.

5.5 Principal Spillway Foundations

The foundation subgrades should be excavated so that as little disturbance as possible occurs at the foundation level. All loose or soft soils should be carefully cleaned from the bottom of the excavation with a minimum of traffic. Actual foundation grades should be observed by the Geotechnical Engineer during construction so that subgrades meet the requirements as recommended herein. The treatment of subgrades that require undercut will be dependent upon the location of the spillway foundation within the embankment and should be evaluated by the Geotechnical Engineer. Foundations should be concreted the same day as they are excavated to prevent drying or saturation of subgrade soils. Any subgrade soils which become dried or saturated should be removed prior to placement of concrete.

5.6 Observation and Testing

Regardless of the thoroughness of a geotechnical engineering exploration, there is always a possibility that conditions between borings and hand auger probes will be different from those at the boring and hand auger locations, that conditions are not as anticipated by the designers, or that the construction process has altered the soil conditions. Accordingly, it is very important that the designers remain involved with the project during construction. Geotechnical engineering construction observation and testing should be performed by Schnabel Engineering Associates to evaluate whether conditions anticipated in design actually exist

or the recommendations presented herein can be modified where necessary.

All compacted fill subgrades, including the embankment foundation and cutoff trench, should be observed and compacted fill tested by the Geotechnical Engineer. Also, observation of footing, cradle and mat subgrades and installation of the drainage blanket and pipe filter should be provided by the Geotechnical Engineer.

6. MAINTENANCE AND INSPECTION

The following routine maintenance and inspection program is recommended for the dam. After completion of the dam, such a program should be initiated and documented for future reference. Guidelines for establishing this type of program include but are not limited to:

Routine maintenance of embankment slopes and crests:

. Grass and weeds should be cut at least once a year and preferably twice a year. Maintenance is recommended in early summer and fall.

. Trees should be prevented from growing on the dam embankment.

The embankment and abutments should be inspected at regular intervals for evidence of development of unfavorable conditions such as:

. Seepage or an increase of seepage

. Embankment sloughing

. Horizontal or vertical cracks in the embankment

. Surface erosion

. Animal burrows

The toe drain outlets should be inspected for:

. Erosion or loss of riprap around pool area

. Increased flow or movement of fines through the drains

All accessible portions of the principal spillway should be routinely inspected. The riser structure and exposed portions of principal spillway should be inspected for cracks, tilting, and deterioration.

A formal emergency procedure should be prepared and furnished to all operating personnel. It should include:

. How to operate the dam during an emergency

. Who to notify including public officials in case evacuation from the downstream area is necessary

Any remedial measure or repairs required based on the findings of the inspection should be made immediately after the inspection and documented.

Initially, we recommend that inspections be made quarterly and following large storm events. After several seasons of operation, with no abnormal conditions being disclosed, the frequency of inspections may be decreased.

7. GENERAL AND LIMITATIONS

The analyses and recommendations submitted in this report are based on the information revealed by this exploration as described herein. An attempt has been made to provide for normal contingencies, but the possibility remains that unexpected conditions may be encountered during construction. This report does not reflect any variations which may occur between the borings and hand auger probes. The nature and extent of variations between the borings and hand auger probes may not become evident until during the course of construction.

An allowance should be established to account for possible additional costs that may be required to construct the dam foundation and earthwork as recommended herein. Additional costs may be incurred for various reasons including variation of soil between borings and hand auger probes, greater than anticipated depths of unsuitable soils, dewatering, etc.

This report is based on information on the proposed dam structure made available to us at the time of this report. We would appreciate an opportunity to review the plans and specifications as they pertain to the recommendations contained in this report and to submit our comments to you based on this review. Should locations, grades and other details relating to the proposed dam vary from those provided for this analysis, we should be notified so that we may revise our recommendations accordingly.

This study has been prepared to assist your office in the design and preparation of plans and specifications for this project. It may be made available to prospective bidders for

informational purposes. We would recommend that the project specifications contain the following statement:

> "A geotechnical engineering report has been prepared for this project by Schnabel Engineering Associates. This report is for informational purposes only and should not be considered part of the contract documents. The opinions expressed in this report are those of the Geotechnical Engineer and represent his interpretation of the subsurface conditions, tests, and the results of analyses which he has conducted. Should the data contained in this report not be adequate for the Contractor's purposes, the Contractor may make, prior to bidding, his own exploration, tests and analyses. This report may be examined by bidders at the office of the Owner or copies may be procured from the Owner at nominal charge."

Test boring and hand auger data included in Appendix A should be included in the contract documents.

We have prepared this report in accordance with generally accepted geotechnical engineering practices. No other warranty, either expressed or implied, is made as to the professional advice included in this report.

Appendix A
Contract V900499
Addendum No. 1

SUBSURFACE EXPLORATION DATA

General Notes for Test Boring Logs

Identification of Soil

Test Boring Logs, B-101 and B-102

Hand Auger Logs, HA-101, HA-102 and HA-102A

Boring Location Plan, Figure A1

Test Borings

All borings were drilled using hollow stem auger equipment. The Standard Penetration Test (SPT) was performed at the depths indicated on the Test Boring Logs. The augers were advanced to the desired depth with plug inserted. The SPT was performed following removal of the plug.

The hand auger probes were drilled using a 3 inch diameter bucket auger. Geostick Penetration (GP) readings were recorded at the depths indicted on the hand auger logs. These readings give a relative indication as to the density or stiffness of the soil in situ.

Water level data are indicated on the test boring and hand auger logs.

Boring Location and Elevations

Test borings and test pits were located by taping from the south and east property lines prior to performing the test borings and hand augers. Actual locations and grades were surveyed by DJG Engineers, Williamsburg, Virginia after the subsurface exploration was completed.

GENERAL NOTES FOR TEST BORING LOGS

1. NUMBERS IN SAMPLE DATA COLUMN NEXT TO STANDARD PENETRATION TEST SYMBOLS INDICATE BLOWS REQUIRED TO DRIVE A TWO INCH O.D., 1-3/8 INCH I.D. SAMPLING SPOON SIX INCHES USING A 140 POUND HAMMER FALLING 30 INCHES.

2. VISUAL CLASSIFICATION OF SOIL IS IN ACCORDANCE WITH TERMINOLOGY SET FORTH IN "IDENTIFICATION OF SOIL." THE ASTM D-2487-83 SYMBOLS SHOWN IN THE CLASSIFICATION COLUMN ARE BASED ON VISUAL OBSERVATIONS.

3. ESTIMATED GROUNDWATER LEVELS INDICATED BY ▼; THESE LEVELS ARE ONLY ESTIMATES FROM AVAILABLE DATA AND MAY VARY WITH PRECIPITATION, POROSITY OF THE SOIL, SITE TOPOGRAPHY, ETC.

4. REFUSAL AT THE SURFACE OF ROCK, BOULDER, OR OBSTRUCTION IS DEFINED AS A PENETRATION RESISTANCE OF 100 BLOWS FOR TWO INCHES OR LESS OF PENETRATION.

5. THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND AT THE PARTICULAR TIME WHEN DRILLED. SOIL CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE SUBSURFACE SOIL AND GROUNDWATER CONDITIONS AT THE BORING LOCATIONS.

6. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL AND ROCK TYPES AS DETERMINED FROM THE DRILLING AND SAMPLING OPERATION. SOME VARIATION MAY ALSO BE EXPECTED VERTICALLY BETWEEN SAMPLES TAKEN. THE SOIL PROFILE, WATER LEVEL OBSERVATIONS AND PENETRATION RESISTANCES PRESENTED ON THESE BORING LOGS HAVE BEEN MADE WITH REASONABLE CARE AND ACCURACY AND MUST BE CONSIDERED ONLY AN APPROXIMATE REPRESENTATION OF SUBSURFACE CONDITIONS TO BE ENCOUNTERED AT THE PARTICULAR LOCATION.

7. BORING LOG VERTICAL SCALE: 1/8 INCH = 1 FT.

8. TEST BORINGS DRILLED BY AYERS AND AYERS, INC., POWHATAN, VIRGINIA UNDER THE INSPECTION OF SCHNABEL ENGINEERING ASSOCIATES, INC.

9. KEY TO SYMBOLS AND ABBREVIATIONS:

5+10+15	STANDARD PENETRATION TEST
3T	2" OR 3" UNDISTURBED TUBE SAMPLE
24/18	LENGTH PUSHED/RECOVERY IN INCHES
PM	PRESSUREMETER TEST (IN REMARKS COLUMN)
do	DITTO

SCHNABEL ENGINEERING ASSOCIATES

Consulting Geotechnical Engineers

IDENTIFICATION OF SOIL

I. DEFINITION OF SOIL GROUP NAMES ASTM D-2487-83

			Symbol	Group Name
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels — More than 50% of coarse fraction retained on No. 4 sieve Coarse, 3/4" to 3" Fine, No. 4 to 3/4"	Clean Gravels Less than 5% fines	GW	Well graded gravel
			GP	Poorly graded gravel
		Gravels with Fines More than 12% fines	GM	Silty gravel
			GC	Clayey gravel
	Sands — 50% or more of coarse fraction passes No. 4 sieve Coarse, No. 10 to No. 4 Medium, No. 40 to No 10 Fine, No. 200 to No. 40	Clean Sands Less than 5% fines	SW	Well-graded sand
			SP	Poorly graded sand
		Sands with Fines More than 12% fines	SM	Silty sand
			SC	Clayey sand
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays — Liquid Limit less than 50 Low to medium plasticity	Inorganic	CL	Lean clay
			ML	Silt
		Organic	OL	Organic clay / Organic silt
	Silts and Clays — Liquid Limit 50 or more Medium to high plasticity	Inorganic	CH	Fat clay
			MH	Elastic silt
		Organic	OH	Organic clay / Organic silt
Highly Organic Soils	Primarily organic matter, dark in color, and organic odor		PT	Peat

II. DEFINITION OF MINOR COMPONENT PROPORTIONS

Minor Component	Approximate Percentage of Fraction by Weight
Adjective Form	
Gravelly, Sandy	30% or more coarse grained
With	
Sand, Gravel	15% or more coarse grained
Silt, Clay	5% to 12% fine grained
Trace	
Sand, Gravel	Less than 15% coarse grained
Silt, Clay	Less than 5% fine grained

III. GLOSSARY OF MISCELLANEOUS TERMS

SYMBOLS — Unified Soil Classification Symbols are shown above as group symbols. Use A Line Chart for laboratory identification. Dual symbols are used for borderline classifications.

BOULDERS & COBBLES — Boulders are considered rounded pieces of rock larger than 12 inches, while cobbles range from 3 to 12 inch size.

DISINTEGRATED ROCK — Residual rock material with a standard penetration resistance (SPT) of more than 60 blows per foot, and less than refusal. Refusal is defined as a SPT of 100 blows for 2" or less penetration.

ROCK FRAGMENTS — Angular pieces of rock, distinguished from transported gravel, which have separated from original vein or strata and are present in a soil matrix.

QUARTZ — A hard silica mineral often found in residual soils

IRONITE — Iron oxide deposited within a soil layer forming cemented deposits

CEMENTED SAND — Usually localized rock-like deposits within a soil stratum composed of sand grains cemented by calcium carbonate or other materials.

MICA — A soft plate of silica mineral found in many rocks, and in residual or transported soil derived therefrom.

ORGANIC MATERIALS (Excluding Peat):
Topsoil - Surface soils that support plant life and which contain considerable amounts of organic matter:
Organic Matter - Soil containing organic colloids throughout its structure;
Lignite - Hard, brittle decomposed organic matter with low fixed carbon content (a low grade of coal).

FILL — Man made deposit containing soil, rock and often foreign matter.

PROBABLE FILL — Soils which contain no visually detected foreign matter but which are suspect with regard to origin

LENSES — 0 to 1/2 inch seam of minor soil component.

LAYERS — 1/2 to 12 inch seam of minor soil component.

POCKET — Discontinuous body of minor soil component

COLOR SHADES — Light to dark to indicate substantial difference in color.

MOISTURE CONDITIONS — Wet, moist, or dry to indicate visual appearance of specimen.

SCHNABEL ENGINEERING ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS
TEST BORING LOG

Project: WET DETENTION POND
WILLIAMSBURG MIDDLE SCHOOL
TOANO, VIRGINIA

Contract Number: V900499
Boring Number: B-101
Sheet: 1 Of 1

Boring Contractor: AYERS AND AYERS, INC.
POWHATAN, VIRGINIA
Boring Foreman: JACK AYERS, JR.
Drilling Method: 2¼" HOLLOW STEM AUGER
Drilling Equipment: CME - 45

SEA Representative: J. KOSTENBAUDER

Dates Started: 01/11/91 Completed: 01/11/91

Location: SEE TEST BORING LOCATION PLAN

Ground Surface Elevation: 100.7 ±

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	1-11	11:00	26.5	-	-
Completion	1-11	11:10	34.0	-	-
Casing Pulled	1-11	11:20	DRY	-	4.0
				-	-

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	W (%)	REMARKS
0.3	FOREST LITTER		100.4	A		1+5+4		
	FINE TO MEDIUM POORLY GRADED SAND WITH CLAY, CONTAINS ROOT FRAGMENTS, MOIST - BROWN	SP-SC				2+3+2		
4.0			96.7		-5-	2+2+2	11.8	
6.0	FINE TO MEDIUM SILTY SAND, TRACE GRAVEL, CONTAINS ROOT FRAGMENTS, MOIST - BROWN	SM	94.7			4+5+6		PLEISTOCENE
9.0			91.7		-10-	6+6+5		
	FINE TO MEDIUM POORLY GRADED SAND WITH CLAY, CONTAINS LENSE OF CEMENTED SAND, MOIST - BROWN	SP-SC						
12.0			88.7	B				
	FINE TO MEDIUM CLAYEY SAND, CONTAINS LENSES AND POCKETS OF CLAY, MOIST - BROWN	SC			-15-	7+14+10	16.4	
	FINE TO COARSE SILTY SAND WITH GRAVEL, CONTAINS LAYERS OF SANDY FAT CLAY AND LENSES OF CEMENTED SAND, MOIST - BROWN	SM			-20-	6+6+5		
21.5			79.2					
	FINE TO MEDIUM SANDY LEAN CLAY, CONTAINS ROOT FRAGMENTS, MOIST - BROWN AND GRAY	CL		C	-25-	2+3+4		PP = 1.0 TSF
26.5			74.2	B				
	FINE TO COARSE CLAYEY SAND, TRACE GRAVEL, WET - BROWN	SC			-30-	7+7+5		
				C				
33.0			67.7					
34.0	LEAN CLAY WITH SAND, MOIST - BROWN	CL	66.7			4+8+11		PP = 0.5 TSF
35.0			65.7	D	-35-			MIOCENE
	FINE SILTY SAND CONTAINS SHELL FRAGMENTS, WET - BROWN	SM						
	BOTTOM OF BORING @ 35.0 FT.							

Comments:
1) BACKFILLED UPON COMPLETION

SCHNABEL ENGINEERING ASSOCIATES CONSULTING GEOTECHNICAL ENGINEERS TEST BORING LOG	Project: WET DETENTION POND WILLIAMSBURG MIDDLE SCHOOL TOANO, VIRGINIA	Contract Number: V900499 Boring Number: B-102 Sheet: 1 Of 1

Boring Contractor: AYERS AND AYERS, INC.
POWHATAN, VIRGINIA
Boring Foreman: JACK AYERS, JR.
Drilling Method: 2¼" HOLLOW STEM AUGER
Drilling Equipment: CME - 45

SEA Representative: J. KOSTENBAUDER

Dates Started: 01/11/91 Completed: 01/11/91

Location: SEE TEST BORING LOCATION PLAN

Ground Surface Elevation: 93.7 ±

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	1-11	11:50	21.5	-	-
Completion	1-11	12:00	33.0	-	-
Casing Pulled	1-11	2:10	-	-	-
W.O.W.	2-1	9:45	20.5	-	-

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	W (%)	REMARKS
0.3	FOREST LITTER		93.4	A		2+2+1		
2.0	FINE TO MEDIUM CLAYEY SAND, MOIST - DARK BROWN	SC	91.7	B		3+2+4		PLEISTOCENE
					-5	3+4+6		
	LEAN CLAY WITH SAND, CONTAINS ROOT FRAGMENTS, MOIST - BROWN	CL		C		3+5+9	25.2	
9.0			84.7					
	FINE TO MEDIUM CLAYEY SAND, CONTAINS ROOT FRAGMENTS, MOIST - BROWN do, CONTAINS POCKETS OF FAT CLAY BELOW 7 FT do, CONTAINS LAYERS OF CLAYEY SAND BELOW 9 FT do, GRAY BELOW 14 FT do,CONTAINS LAYER OF GRAY SAND WITH ORGANIC MATTER - BROWN BELOW 9 FT	SC		B	-10	6+7+9		
					-15	4+5+4	19.6	
					-20	1+1+2	52.5	
21.5			72.2					
	FINE TO COARSE SILTY SAND WITH CLAY CONTAINS SHELL FRAGMENTS, WET - BROWN	SM-SC			-25	1+4+3		
26.5			67.2					
	FINE TO COARSE CLAYEY SAND WITH SHELL FRAGMENTS, WET - TAN	SC		D	-30	3+4+5		MIOCENE
						5+6+7		
35.0			58.7		-35			
	BOTTOM OF BORING @ 35.0 FT.							

Comments:
1) WOW INSTALLED TO 35

HAND AUGER LOG

SCHNABEL ENGINEERING ASSOCIATES

CONSULTING GEOTECHNICAL ENGINEERS

Project: WET DETENTION POND Contract No. V900499

Client: JAMES CITY COUNTY PUBLIC SCHOOLS Hand Auger No. HA-101

Start Date: 1-22-91 Time: 10:40 A.M.

Finish Date: 1-22-91 Time: 12:08 P.M.

Surface Elevation: 98.1 Excavator: J. HOLLOWELL

Observed Ground-water Elevation: NOT ENCOUNTERED Equipment: HAND AUGER

Inspector: J. HOLLOWELL

DEPTH	STRATUM	DESCRIPTION OF SOIL	REMARKS
0.2	A	FOREST LITTER AND TOPSOIL	GP = 12"
		FINE TO MEDIUM SILTY SAND (SM), MOIST - DARK BROWN	
		do, BROWN	GP = 2"
	B		GP = 7" PLEISTOCENE
			GP = 1½"
		do, RED	
3.2		FINE TO MEDIUM CLAYEY SAND (SC), MOIST - RED BROWN	GP = 1¼"
		do, CONTAINS ORGANIC MATTER	GP = 2"
4.7		FINE TO MEDIUM SILTY SAND (SM), MOIST - BROWN	GP = 3¼"
			GP = 1¼"
			GP = 1¼"
		do, CONTAINS CLAYEY SAND LAYER	
8.3		do, FINE SILTY SAND	
		HAND AUGER TERMINATED AT 8.3 FT GP = GEOSTICK PENETRATION	

HAND AUGER LOG

SCHNABEL ENGINEERING ASSOCIATES

CONSULTING GEOTECHNICAL ENGINEERS

Project: WET DETENTION POND Contract No. V900499

Client: JAMES CITY COUNTY PUBLIC SCHOOLS Hand Auger No. HA-102

Start Date: 1-22-91 Time: 12:28 P.M.

Finish Date: 1-22-91 Time: 1:12 P.M.

Surface Elevation: 70.6 Excavator: J. HOLLOWELL

Observed Ground-water Elevation: SURFACE Equipment: HAND AUGER

Inspector: J. HOLLOWELL

DEPTH	STRATUM	DESCRIPTION OF SOIL	REMARKS
	B	FINE TO MEDIUM SILTY SAND (SM), CONTAINS ORGANIC MATTER, WET - DARK BROWN	GP = 4¼"
1.5			GP = 14½"
		FINE TO MEDIUM CLAYEY SAND (SC), CONTAINS ORGANIC MATTER, WET - DARK GREEN GRAY	RECENT TO PLEISTOCENE
2.5			GP = ½"
	D	FINE TO MEDIUM CLAYEY SAND (SC), CONTAINS CEMENTED SHELL FRAGMENTS, WET - BROWN	MIOCENE
3.5			GP = 0"
		HAND AUGER TERMINATED AT 3.5 FT GP = GEOSTICK PENETRATION	HAND AUGER REFUSAL

HAND AUGER LOG

SCHNABEL ENGINEERING ASSOCIATES

CONSULTING GEOTECHNICAL ENGINEERS

Project: WET DETENTION POND Contract No. V900499

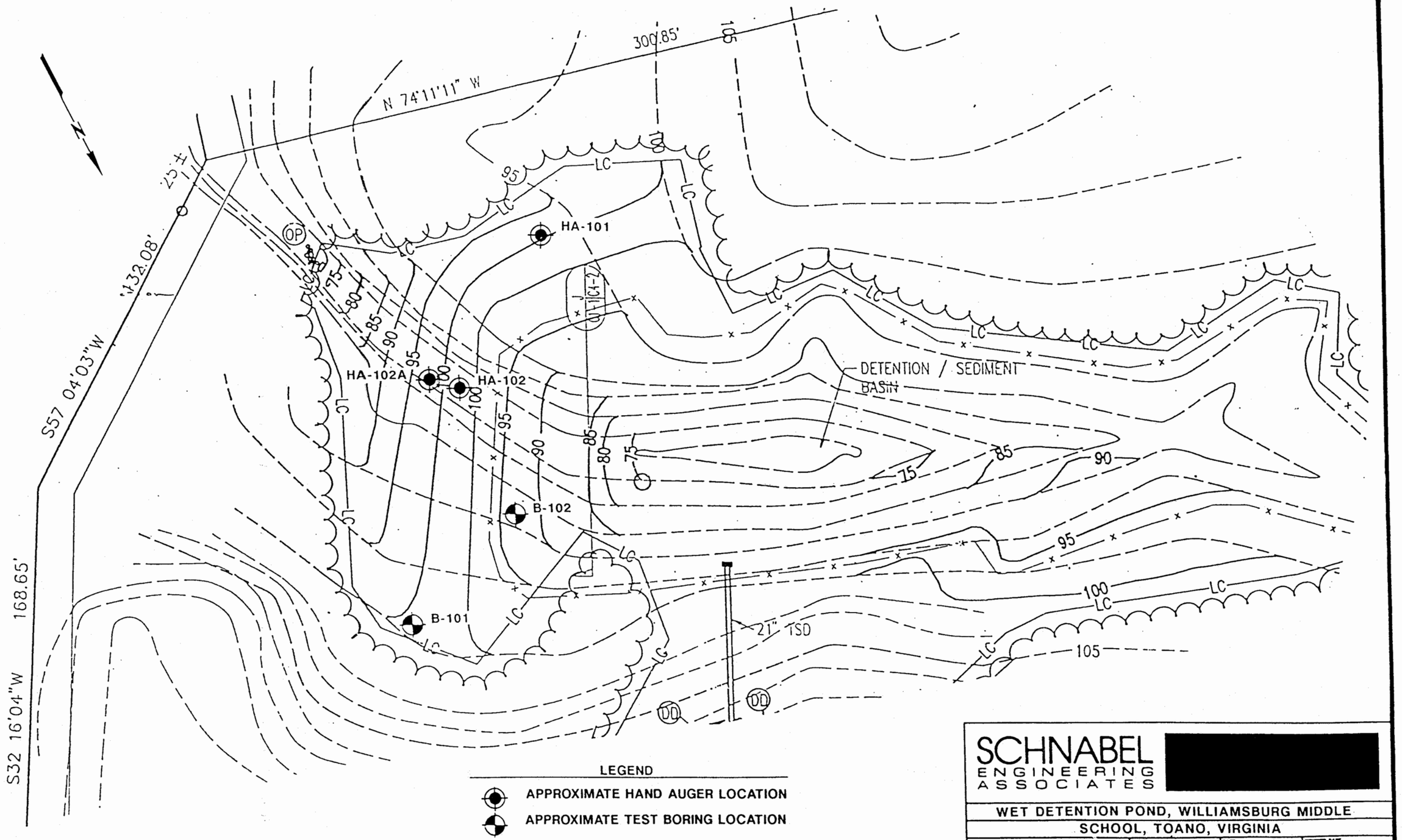
Client: JAMES CITY COUNTY PUBLIC SCHOOLS Hand Auger No. HA-102A

Start Date: 1-22-91 Time: 1:12 P.M.

Finish Date: 1-22-91 Time: 1:26 P.M.

Surface Elevation: 70.2 Excavator: J. HOLLOWELL
Observed Ground-water Elevation: SURFACE Equipment: HAND AUGER
Inspector: J. HOLLOWELL

DEPTH	STRATUM	DESCRIPTION OF SOIL	REMARKS
0	B	FINE TO MEDIUM SILTY SAND (SM), CONTAINS ORGANIC MATTER, WET - DARK GRAY	RECENT TO PLEISTOCENE
1.0		FINE TO MEDIUM CLAYEY SAND (SC), WET - BROWN	
2.0	D	FINE TO MEDIUM CLAYEY SAND (SC), CONTAINS CEMENTED SHELL FRAGMENTS AND CEMENTED SAND, WET-BROWN	MIOCENE GP = 0"
2.5		HAND AUGER TERMINATED AT 2.5 FT GP = GEOSTICK PENETRATION	HAND AUGER REFUSAL



SCHNABEL ENGINEERING ASSOCIATES

[redacted]

WET DETENTION POND, WILLIAMSBURG MIDDLE SCHOOL, TOANO, VIRGINIA

TEST BORING AND HAND AUGER LOCATION PLAN	SCALE 1"=40'	DATE 2-25-91	REVISED DATE
	DRAWN BY KJ	CHECKED BY GS	REVISED DATE
	CONTRACT NO. V900499	FIGURE A1	REVISED DATE

Appendix B
Contract V900499
Addendum No. 1

SOIL LABORATORY TEST DATA

Summary of Soil Laboratory Tests (1)

Gradation Curves (2)

Appendix B
Contract V900499

SUMMARY OF SOIL LABORATORY TESTS

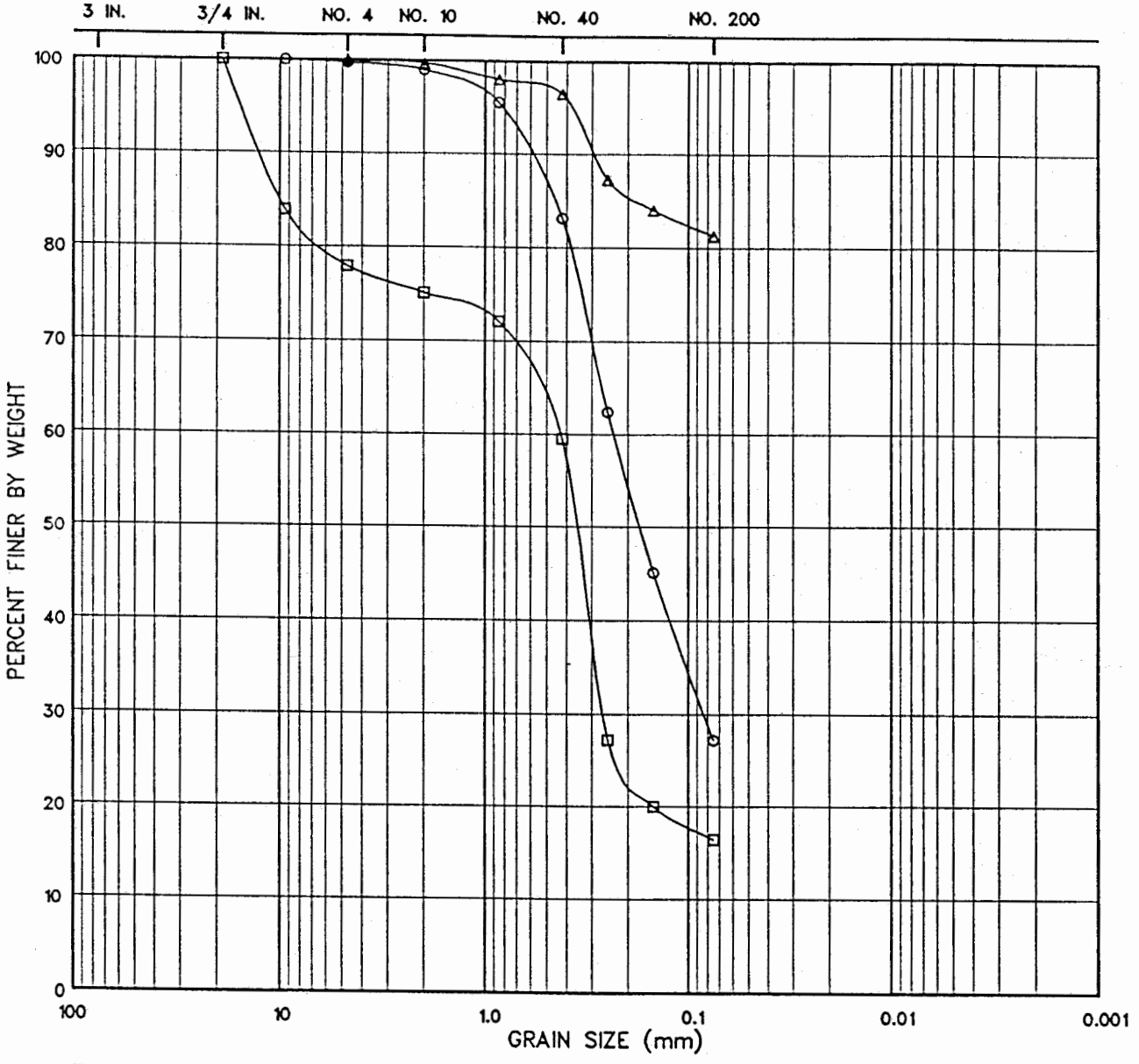
Boring No.	Sample Depth	Sample Type	Description of Soil Specimen	Stratum	Natural Moisture (%)	Atterberg Limits LL	PL	PI	% Passing No. 200 Sieve		Remarks
B-101	4-5.5'	JAR	FINE TO MEDIUM SILTY SAND (SM), TAN AND BROWN	B	11.8	NP	NP	NP	27.2		SEE GRADATION TEST CURVE
B-101	14-15.5'	JAR	FINE TO COARSE SILTY SAND WITH GRAVEL (SM), CONTAINS CEMENTED SAND, TAN AND BROWN	B	10.2	NP	NP	NP	16.4		SEE GRADATION TEST CURVE
B-102	7-8.5'	JAR	LEAN CLAY WITH SAND (CL), BROWN	C	25.2	42	22	20	81.3		SEE GRADATION TEST CURVE
B-102	14-15.5'	JAR	FINE TO MEDIUM CLAYEY SAND (SC), BROWN AND TAN	B	19.6	39	19	20	38.4		SEE GRADATION TEST CURVE
B-102	19-20.5'	JAR	FINE TO MEDIUM CLAYEY SAND (SC), BROWN	B	52.5	48	19	29	43.3		SEE GRADATION TEST CURVE

Notes: 1. Soil tests in accordance with applicable ASTM Standards

2. Soil classifications in accordance with ASTM D-2487

3. Key to abbreviations: LL=Liquid Limit; PL=Plastic Limit; PI=Plasticity Index

4. Soil Tests were conducted by: MN & GB



GRAVEL	SAND			SILT OR CLAY
	coarse	medium	fine	

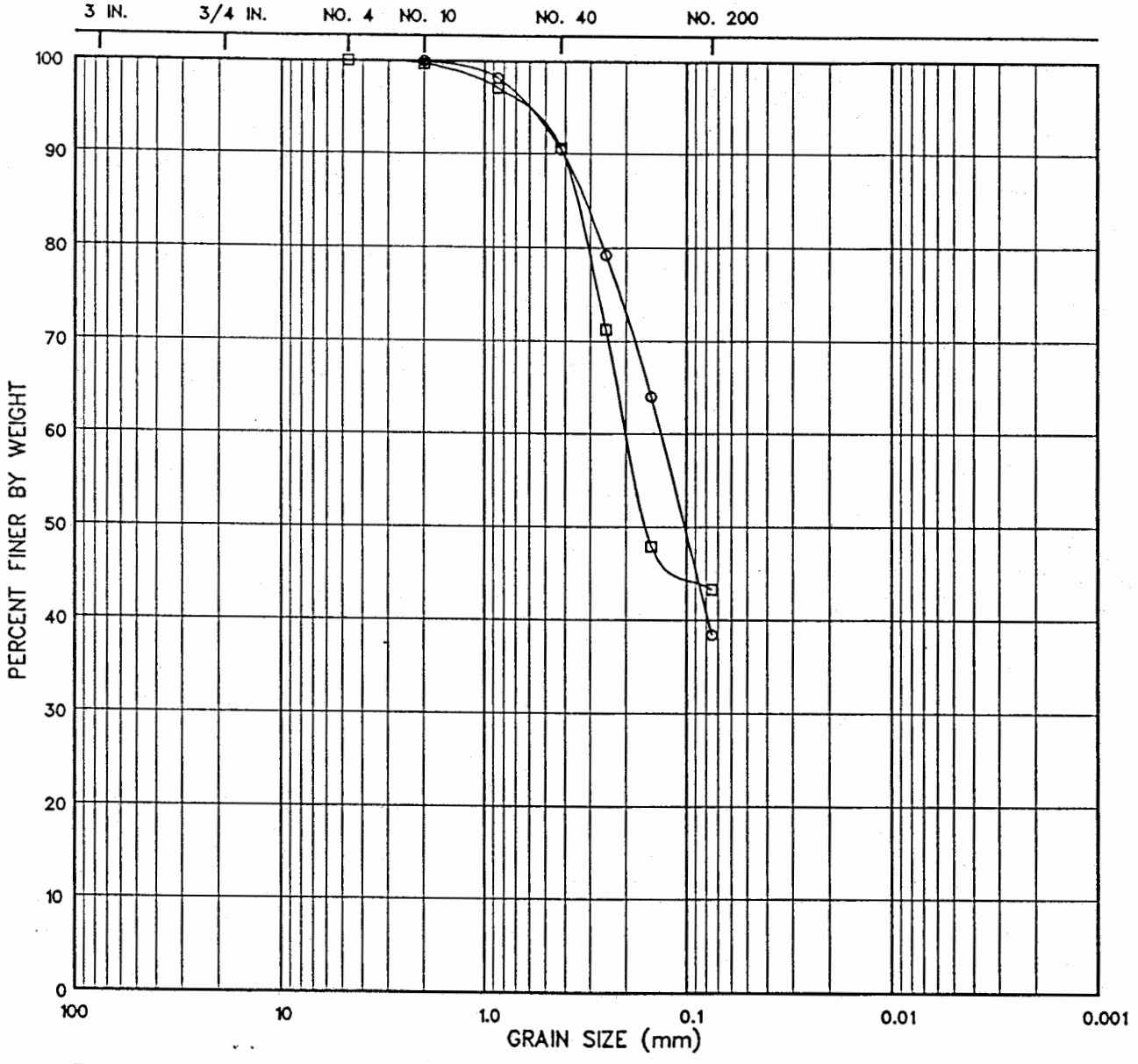
	SAMPLE ID AND SAMPLE DESCRIPTION:
○	SAMPLE ID: B-101 / 4'-5.5' FINE TO MEDIUM SILTY SAND (SM), TAN AND BROWN LIQUID LIMIT: NP PLASTICITY INDEX: NP
□	SAMPLE ID: B-101 / 14'-15.5' FINE TO COARSE SILTY SAND WITH GRAVEL (SM), CONTAINS CEMENTED SAND, TAN AND BROWN LIQUID LIMIT: NP PLASTICITY INDEX: NP
△	SAMPLE ID: B-102 / 7'-8.5' LEAN CLAY WITH SAND (CL), BROWN LIQUID LIMIT: 42 PLASTICITY INDEX: 20

SCHNABEL ENGINEERING ASSOCIATES, INC.
RICHMOND, VIRGINIA

GRADATION CURVES

PROJECT:
WET DETENTION POND
WILLIAMSBURG MIDDLE
SCHOOL, TOANO, VIRGINIA

CONTRACT NO: V900499



GRAVEL	SAND			SILT OR CLAY
	coarse	medium	fine	

	SAMPLE ID AND SAMPLE DESCRIPTION:
○	SAMPLE ID: B-102 / 14'-15.5' FINE TO MEDIUM CLAYEY SAND (SC), BROWN AND TAN LIQUID LIMIT: 39 PLASTICITY INDEX: 20
□	SAMPLE ID: B-102 / 19'-20.5' FINE TO MEDIUM CLAYEY SAND (SC), BROWN LIQUID LIMIT: 48 PLASTICITY INDEX: 29

SCHNABEL ENGINEERING ASSOCIATES, INC.
RICHMOND, VIRGINIA

GRADATION CURVES

PROJECT:
WET DETENTION POND
WILLIAMSBURG MIDDLE
SCHOOL, TOANO, VIRGINIA

CONTRACT NO: V900499

Pat Menichino

From: Nathan Skalak [NSkalak@davidnicebuilders.com]
Sent: Wednesday, April 13, 2011 1:10 PM
To: Pat Menichino; Darryl Cook
Subject: Toano BMP
Attachments: Double Wide Field Coupler.pdf

Pat and Darryl,

I opened the gate valve on the structure this morning to commence draining. We are still planning to get out there tomorrow. Please see the attached detail for the repair band. Sorry, this is the only information I was able to attain.

Nathan A. Skalak

Site Division Project Manager
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188
Office: (757) 566-3032
Fax: (757) 566-4686
Mobile: (757) 903-6968

Darryl Cook

To: Nathan Skalak
Cc: Pat Menichino
Subject: Toano MS BMP Repairs

Contacts: Nathan Skalak

Just one final item on this project – as you obtained the VSMP Construction General Permit, you will need to terminate the permit with the state or else they will be wanting an additional fee from you come February. The Notice of Termination form is in Appendix D of the Stormwater Pollution Plan that I gave you (the notebook) at the start of the project. That should pretty much wrap up this project for you.

Darryl E. Cook
County Engineer

General Services Department
5320 Palmer Lane, Suite 2A
Williamsburg, VA 23188
P: 757-259-1442
F: 757-259-5833
jccEgov.com

Pat Menichino

From: Stacy Arnold [SArnold@davidnicebuilders.com]
Sent: Wednesday, March 02, 2011 1:55 PM
To: Pat Menichino
Cc: Stephanie Luton; Nathan Skalak
Subject: Toano BMP AIA#1
Attachments: Inv# 7403 - AIA#1 - 02-28-2011.pdf

<<Inv# 7403 - AIA#1 - 02-28-2011.pdf>> Pat,

Attached you will find the first draw invoice for this project. The original is being sent to Stephanie's attention.

Sincerely,
Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218
Fax: (757) 566-4686
www.davidnicebuilders.com

COUNTY ADMINISTRATION

101-C MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6728

FAX: (757) 253-6833

September 30, 2010

Mr. Doug Fritz, MS4 Program Manager
Department of Conservation and Recreation
Division of Soil and Water Conservation
MS4 Stormwater Permitting
203 Governor Street, Suite 206
Richmond, Virginia 23219

RE: VSMP General Permit for Small MS4s, VAR040037, James City County

Dear Mr. Fritz:

In accordance with 4 VAC §50-60-1240 Section II(E)(3) and its VSMP small MS4 permit, VAR040037, enclosed is one copy of James City County's Year Two Annual Report. This report summarizes the County's activities taken toward meeting its measurable goals during the period of July 1, 2009 through June 30, 2010.

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

If you have any questions or need additional information, please do not hesitate to contact Mr. Darryl E. Cook of the Stormwater Division at (757) 259-1442.

Sincerely,

Robert C. Middaugh
County Administrator

cc: Darryl E. Cook, County Engineer

FILE - MIDDLE SCHOOL

SMITHEY & BOYNTON
Architecture/Engineering/Planning
4818 Starkey Road, S.W. (24014)
P.O. Box 20969
Roanoke, Virginia 24018
Telephone Number (703) 774-4493
Fax Number (703) 772-9470

DATE: 3-29-91

TIME: 2:45

NUMBER OF PAGES (including cover sheet): 3

TO: JAMES CITY COUNTY - DARREL COOK

(FAX NUMBER) 1-804-253-6663

FROM: CONLEY TAYLOR

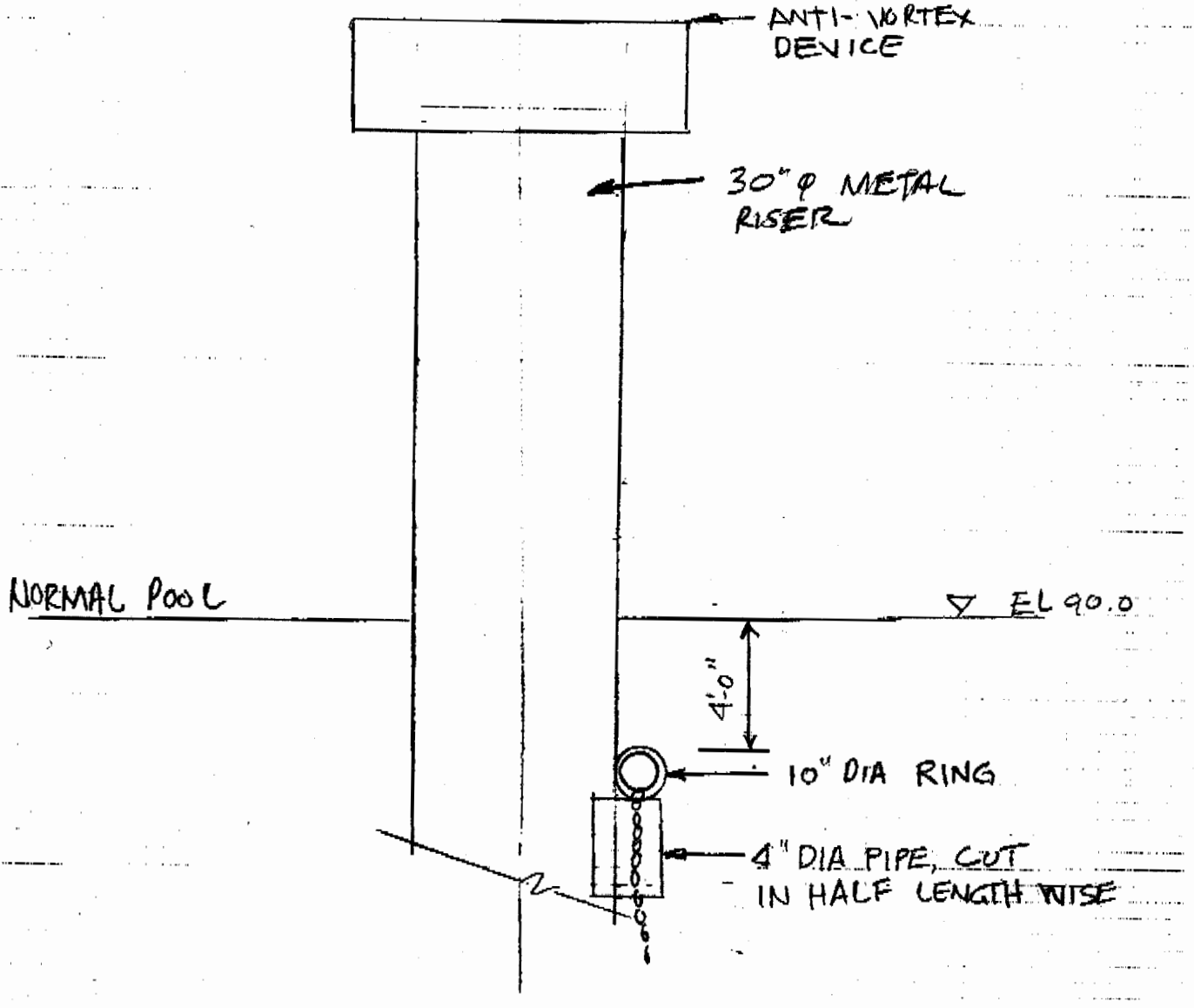
RE: WILLIAMSBURG MIDDLE SCHOOL
DET. BASIN DRAIN
Comm. No. 1852.100

REMARKS:

PLEASE REVIEW THESE ROUGH SKETCHS OF OUR PROPOSED DRAIN FOR THE DET. POND. WE WOULD LIKE TO US A FLAP VALVE, OPENED BY A CHAIN WHICH IS ATTACHED TO THE RISER. PLEASE CALL ME AS SOON AS POSSIBLE WITH YOUR COMMENTS.

THANKS

Conley



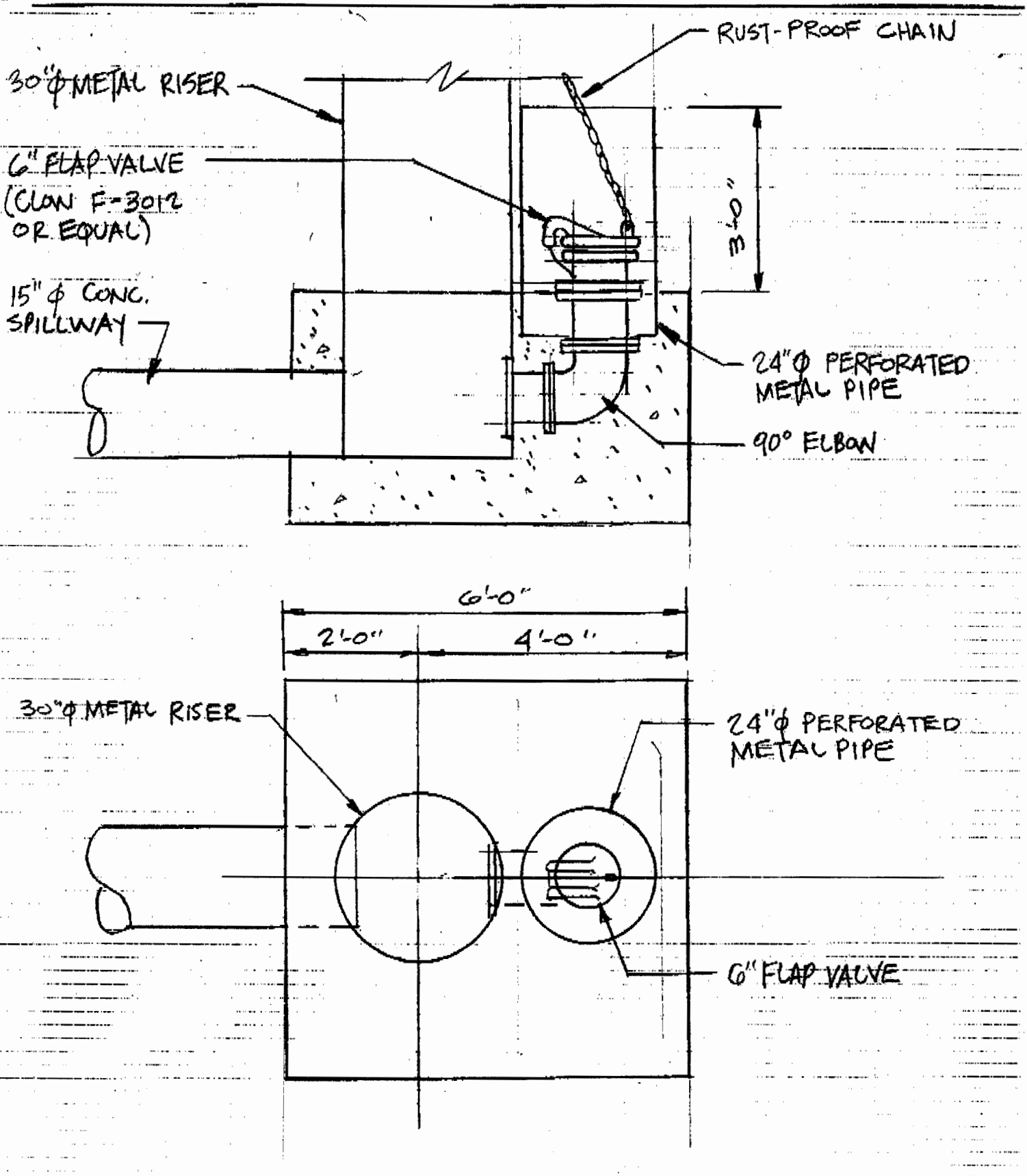
Roanoke (703)774-4493 Richmond (804)379-8112 Fredericksburg (703)373-0431 High Point, NC (919)884-1225

Smithey & Boynton
Architecture Engineering Planning

PROJECT WILLIAMSBURG MIDDLE SCHOOL SHEET NO.

DRAIN FOR DET. POND DATE 3-29-91

COMMISSION NO. 8921100 BY CAT OFFICE



Roanoke (703)774-4493 Richmond (804)379-8112 Fredericksburg (703)373-0431 High Point, NC (919)884-1225

Smithey & Boynton
Architecture Engineering Planning

PROJECT WILLIAMSBURG MIDDLE SCHOOL
DRAIN FOR DET. POND
COMMISSION NO. 1892100 BY CAT

SHEET NO.
DATE 3-29-91
OFFICE

SMITHEY & BOYNTON
Architecture/Engineering/Planning
4818 Starkey Road, S.W. (24014)
P.O. Box 20969
Roanoke, Virginia 24018
Telephone Number (703) 774-4493
Fax Number (703) 772-9470

DATE: 5-7-91

TIME: 10:40

NUMBER OF PAGES (including cover sheet): 5

TO: DARRYL COOK

(FAX NUMBER) 1-804-253-6663

FROM: CONLEY TAYLOR

RE: WMBURG. MIDDLE SCHOOL

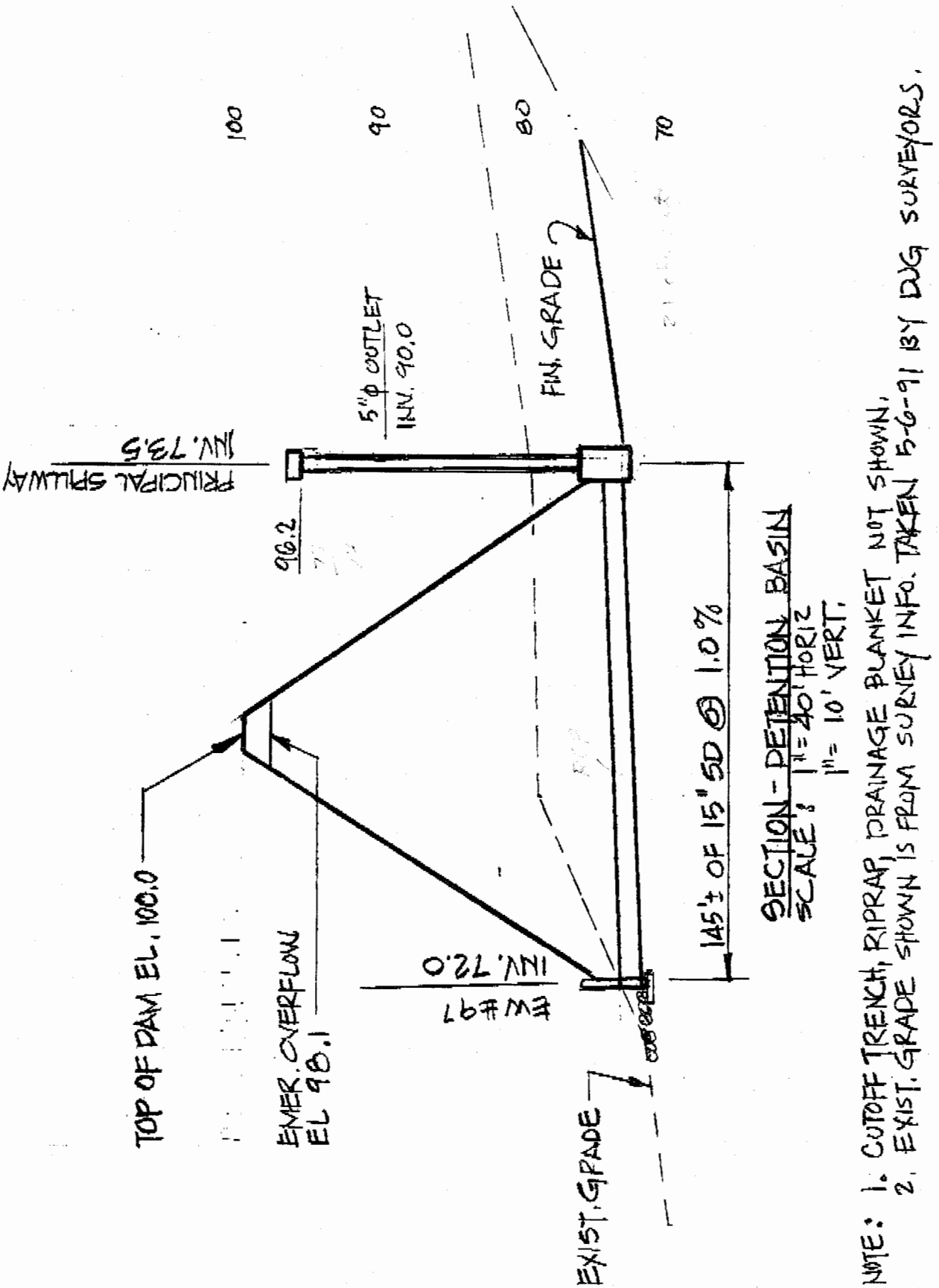
Comm. No. 1892100

REMARKS:

PLEASE CALL WHEN THIS INFORMATION IS RECEIVED SO WE CAN DISCUSS IT.

THANKS

Conley



SECTION - DETENTION BASIN
SCALE: 1"=40' HORIZ
1"= 10' VERT.

NOTE: 1. CUTOFF TRENCH, RIPRAP, DRAINAGE BLANKET NOT SHOWN,
2. EXIST. GRADE SHOWN IS FROM SURVEY INFO. TAKEN 5-6-91 BY DJG SURVEYORS.

Smithey & Boynton
Architecture Engineering Planning

PROJECT WILLIAMSBURG MIDDLE SCHOOL
SECTION DET. BASIN (REVISED)
COMMISSION NO. 1892100 BY CAT

SHEET NO. 1
DATE 5-7-91
OFFICE

Y:\007_TDANE_MIDDLE_SCHOOL_WJCC_SCHOOLS - 171

STAGE- ELEVATION CURVE

ELEV.	PREVIOUS STORAGE (C.F)		NEW STORAGE (C.F)*	
70	0		0	
75	5,663		2,900	
80	20,909		15,100	
85	52,707		43,983	
90	98,445		102,818	
95	174,676	@98	227,770	@98
100	324,957	> 265,144	476,030	376,726

*FROM SURVEY INFO. TAKEN 5-6-91 BY DJG SURVEYORS.

INVESTIGATE EFFECT OF CHANGE OF INVT. EL. ON DISCHARGE:

PREVIOUS INV. OF SPILLWAY = 69.0
OVERFLOW = 96
27'

$Q = C_d A \sqrt{2gh}$; 15" OUTLET
$h = 27'$, $Q =$ 30.7 CFS

NEW INV OF SPILLWAY = 73.5
OVERFLOW = 96
22.5

$h = 22.5'$, $Q =$ 28 CFS

30" DIA RISER = 4.91 S.F.

$Q = C_d A \sqrt{2gh}$

$h = 2'$

$Q = 53$ CFS.

376,726 C.F.
- 265,144 C.F.
111,582 more STORAGE!!

FLOW CONTROLED BY HEAD ON SPILLWAY PIPE

CONCLUSION: THE DIFF. IN DISCHARGE WILL BE 2.7 CFS. HOWEVER, AN ADDITIONAL 111,582 C.F. WILL BE PROVIDED TO COMPENSATE FOR THE DIFFERENCE.

$\frac{111,582 \text{ CF}}{2.7 \text{ CFS}}$ = 11.48 HOURS OF FLOW TO FILL ADDITIONAL STORAGE.

THE DeYOUNG-JOHNSON GROUP, INC.
P.O. Box 3505
WILLIAMSBURG, VIRGINIA 23187
(804) 253-0673

JOB 1890590
SHEET NO. ____ OF ____
CALCULATED BY Penci DATE 5-6-91
CHECKED BY ____ DATE ____
SCALE ____

ELEV.	AREA (SF.)	$\Sigma(A_1+A_2)\div 2$	VOLUME (CF)	Σ VOL (CF.)
70	0	—	—	—
75	1160	580	2900	2900
80	3720	2440	12,200	15,100
85	7833	5776.5	28,882.5	43,982.5
90	15,701	11,767	58,835	102,817.5
95	34,252	24,976.5	124,882.5	227,770
100	65,052	49,652	248,260	476,030

W/JCC Middle School @ Toano

BMP Design

1. Predevelopment

drainage area = 18.0

Runoff Curve No (RCN) = 65 (woods, field, B/C soils)

t_c = 20 min.

2. Post development

drainage area = 35.0

RCN = 80

t_c = 20 min.

3. Stage - Elevation Curve

Elev	Volume (ac-ft)
70	0
75	0.13
80	0.48
85	1.21
90	2.26
95	4.01
100	7.46

4. Volume of storage required for water quality = 2.1 ac-ft

based on 15% of watershed impervious

- choose elev 90.0 for normal pool

Scott Thomas

From: Scott Thomas
Sent: Friday, February 02, 2007 11:25 AM
To: 'Alan T. Robertson (RobertsonA@wjcc.k12.va.us)'
Subject: Toano MS BMP (YC007)

By now you probably received a copy of a letter from AES dated January 24, 2007 related to the BMP at the Toano Middle School site. An inspection and statement from the engineer was required to indicate that the BMP is in good working order and functioning at the design level of service. As you can see in the letter there are some inherent deficiencies associated with the BMP. Technically, we could hold approval of the Cafeteria Expansion, Bus Loop and new entrance plans at Toano as the BMP has deficiencies. For this specific review case, I made a decision not to do that as the new projects are a very small percentage of the overall service area to the BMP and the pond can function properly, but it has some issues.

These issues will need to be addressed in some manner however. We will probably need to have a follow-up discussion on this matter as it is a school BMP and the school is responsible for maintenance. I would be happy to know a plan is in effect to make necessary repairs in some reasonable time frame.

I did work with General Services about a year or two ago to address routine maintenance issues at the BMP. We did notice the outfall pipe problem but that was beyond their scope and purpose to repair.

Scott J. Thomas, P.E.
Chief Engineer - Stormwater
James City County
Environmental Division

Visit:
http://www.james-city.va.us/resources/devmgmt/div_devmgmt_environ.html
and
www.protectedwithpride.org

SP-136-06
TOANO MS
CAFETERIA
EXPANSION

AES CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1, Williamsburg, VA 23188
614 Moorefield Park Drive, Richmond, VA 23236
6632 Main Street, Gloucester, VA 23061
(757) 253-0040
(804) 330-8040
(804) 693-4450
www.aesva.com

January 24, 2007

YC 007

Mr. Scott Thomas, P.E.
James City County Environmental Division
101-A Mounts Bay Road
Williamsburg, VA 23185

RE: Toano Middle School Cafeteria Expansion
JCC SP-136-06
AES Project No. 9763

Dear Mr. Thomas:

Our office has made a visual inspection of the existing storm sewer system, pond and outfall (YC 007) for the above mentioned project. The following is a summary of our observations:

1. Structure #105A as referenced to on original plan needs additional compacted fill to the west side of box.
2. Structure #110 has a slight area around box needing some compacted fill.
3. The head wall at the end of the storm sewer system, located in the BMP, needs repair. However, it does not appear that it has a significant affect on the function of the system. We recommend the School system budget repairs of headwall in their next CIP request.
4. At structure #113, there is a piece of 2" x 6" board down in the throat of the structure that needs to be removed.
5. The existing BMP appears to be functioning as designed. There were no visible signs of deterioration or erosion of the embankment, outfall structure, or the area immediately downstream of the outfall. The embankment and spillway appear to have had trees removed recently.

Calculations have been performed on the existing 12" pipe adjacent to the project (from structure #116 to structure #105A). We find that the pipe has the capacity to handle the proposed improvements. In addition, we have added a Stormwater Narrative on Sheet 3 of the plans.

If you have any questions, please feel free to call or email our office for additional information.

Sincerely,

Mark A. Richardson, P.E.
Senior Project Manager
mrichardson@aesva.com

cc: Alan Robertson, WJCC Schools

S:\Jobs\9763\00-ToanoCafeteriaExpansion\Admin\Correspondence\Letters\9763 Storm Sys to Scott Thomas.doc

Wendy Wiggs

From: Joanna Ripley
Sent: Friday, April 01, 2011 2:03 PM
To: Wendy Wiggs
Subject: FW: Toano BMP - 2nd Draw Billing
Attachments: Scanned Signatures of CO#2R and CO#3R.pdf; Toano Middle School CO#1.pdf

Jo Anna Ripley
Stormwater

General Services
5320 Palmer Lane Suite 2A
Williamsburg, VA 23188
P: 757-259-1447
F: 757-259-5833
jccEgov.com

From: Stacy Arnold [mailto:SArnold@davidnicebuilders.com]
Sent: Friday, April 01, 2011 1:59 PM
To: Joanna Ripley
Cc: Nathan Skalak
Subject: RE: Toano BMP - 2nd Draw Billing

Joanna,
Attached you will find our copies of CO#1-3. Hopefully this will help to have the math make sense. If you still would like to meet and/or adjust the billing (i.e., CO#2R to reflect 414-2) please let me know.

Sincerely,

Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218
Fax: (757) 566-4686
www.davidnicebuilders.com

From: Stacy Arnold
Sent: Thursday, March 31, 2011 4:40 PM
To: 'joannad@james-city.va.us'
Cc: Nathan Skalak
Subject: Toano BMP - 2nd Draw Billing

Joanna,

Please see attached. Let me know if you have any questions, or need any additional information.

Sincerely,

Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218
Fax: (757) 566-4686
www.davidnicebuilders.com

Wendy Wiggs

From: Nathan Skalak [NSkalak@davidnicebuilders.com]
Sent: Monday, April 11, 2011 2:36 PM
To: Stacy Arnold; Joanna Ripley
Cc: Wendy Wiggs; Pat Menichino
Subject: RE: Toano BMP - 2nd Draw Billing
Attachments: CO#2 REVISED.pdf

Jo Anna,

This is in regards to the cost breakdown for CO #2 Revised. Originally, they were setup as two separate Change Orders, #2 and #4, but since they were similar in the type of work Pat Menichino asked that we combine the two and apply them to the unit cost portion of the contract. Thus we applied them to the line item number 414-2 at his request to become apart of the category that the additional work most closely related to. Since there was no clear method of stating this information on the Change Order Form, Pat asked us to state it in the "Reason for Change Order" section on the form. Basically, we took the two change orders, #'s 2 and 4, combined them, and then divided them by the unit cost in line item number 414-2 from the contract, to find the amount at which we would be billing for. The amount produced was 8.42719209 square yards which was rounded to the nearest hundredth place, 8.43 square yards, creating the discrepancy in math that you have encountered.

If this is still a concern, we can revise the CO #2 Revised again to state the exact amount of square yards to omit this $1.11 discrepancy.

Nathan A. Skalak

Site Division Project Manager
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188
Office: (757) 566-3032
Fax: (757) 566-4686
Mobile: (757) 903-6968

Bid unit price
#414-2 Erosion Control Rip Rap
394.60 SY (unit price)

From: Stacy Arnold
Sent: Monday, April 11, 2011 1:37 PM
To: Joanna Ripley
Cc: Nathan Skalak; Wendy Wiggs; Pat Menichino
Subject: RE: Toano BMP - 2nd Draw Billing

0 *
394 • 60 x
8 • 43 =
3,326 • 48 *

Joanna,

Sorry for the delay on this. Attached you will find breakdown(s) for the 2 smaller COs. something re: the larger one shortly.

Sincerely,

Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218
Fax: (757) 566-4686
www.davidnicebuilders.com

C/O request is for 3,325.37

OK ✓

From: Joanna Ripley [mailto:JOANNAD@james-city.va.us]
Sent: Friday, April 01, 2011 2:25 PM
To: Stacy Arnold
Cc: Nathan Skalak; Wendy Wiggs; Pat Menichino
Subject: RE: Toano BMP - 2nd Draw Billing

Good afternoon Stacy,

Thank you for the change order documentation. In addition to the change order documents, I will need an itemized list for change order amounts $137.71 and $306.46. Are these amounts an hourly rate for labor? Please give me a breakdown.

On the change order for $3,325.37, does this amount consist of 8.43 SY at the 394.60 SY material costs? Because 8.43 x 394.60=$3326.48.

Once you supply me with the breakdown for the $137.71 and $306.46 and verify the details regarding the $3,325.37, I can then submit everything to our Purchasing office for review and approval.

If you have any questions, please feel free to call me or I am available to meet with you anytime next week.

Thanks, Jo Anna

Jo Anna Ripley
Stormwater

General Services
5320 Palmer Lane Suite 2A
Williamsburg, VA 23188
P: 757-259-1447
F: 757-259-5833
jccEgov.com

From: Stacy Arnold [mailto:SArnold@davidnicebuilders.com]
Sent: Friday, April 01, 2011 1:59 PM
To: Joanna Ripley
Cc: Nathan Skalak
Subject: RE: Toano BMP - 2nd Draw Billing

Joanna,
Attached you will find our copies of CO#1-3. Hopefully this will help to have the math make sense. If you still would like to meet and/or adjust the billing (i.e., CO#2R to reflect 414-2) please let me know.

Sincerely,

Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218

Fax: (757) 566-4686
www.davidnicebuilders.com

From: Stacy Arnold
Sent: Thursday, March 31, 2011 4:40 PM
To: 'joannad@james-city.va.us'
Cc: Nathan Skalak
Subject: Toano BMP - 2nd Draw Billing

Joanna,

Please see attached. Let me know if you have any questions, or need any additional information.

Sincerely,

Stacy Arnold
David A. Nice Builders, Inc.
Contract Administrator/ARM
4571 Ware Creek Road
Williamsburg, VA 23188
Phone: (757) 566-3032 ext. 218
Fax: (757) 566-4686
www.davidnicebuilders.com

Wendy Wiggs

From: Heather McClure
Sent: Friday, April 15, 2011 3:58 PM
To: Wendy Wiggs
Subject: RE: RUSH - Please check funds. Thanks

Okay to process. Available funds are $1,383,584.18.

Heather McClure
Senior Budget Analyst

Financial Management Services
101 F Mounts Bay Road
Williamsburg, VA 23185
P: 757-253-6729
F: 757-253-6619
jccEgov.com

From: Wendy Wiggs
Sent: Friday, April 15, 2011 3:46 PM
To: Heather McClure
Subject: RUSH - Please check funds. Thanks
Importance: High

013-020-0300 $3,769.54 Additional work added to contract for Toano BMP Repairs – not included in bid

Wendy E. Wiggs
Buyer II

Purchasing
101-F Mounts Bay Road
Suite 300
Williamsburg, VA 23185
P: 757-253-6646
F: 757-253-6753
jccEgov.com

Purchasing

101 F Mounts Bay Rd, Suite 300, Williamsburg, Virginia 23185
(757) 253-6646 Fax Number: (757) 253-6753

April 19, 2011

Mr. Nathan Skalak
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188

Reference: Contract Number # 11-4276-Toano Middle School BMP Repairs

Dear Mr. Skalak:

Please find enclosed your copy of the above referenced Change Order for additional costs for various items itemized in change order documents, and submitted for approval for the Toano Middle School BMP repairs project. Change Order #1 *increased* the contract amount by $ 3,769.54, adjusting the total Contract amount to $43,292.83.

Please continue to provide updated and current Certificate of Insurance information for the life of this contract, per limits outlined in the contract documents. Please forward all invoices to the attention of Accounts Payable Department, PO Box 8784, Williamsburg, VA 23187, and reference the contract number, #11-4276 on all correspondence.

Please contact me at (757) 253-6644 if you have any questions regarding this letter. Thank you for your cooperation and continued interest in serving the citizens of James City County.

Sincerely,

Kitty Hall, VCO
Senior Buyer

Encl.:

Cc: F. Geissler; P. Menichino; J. Ripley; S. Luton; A. Robertson; A/P; FILE

Pat Menichino

From: Nathan Skalak [NSkalak@davidnicebuilders.com]
Sent: Wednesday, March 23, 2011 5:50 PM
To: Pat Menichino
Cc: Darryl Cook
Subject: RE: Toano MS BMP Project

Pat,

Sorry for not responding earlier today. I have been communicating back and forth with 'Concrete Jack' for a possible solution to fix the pipe. Unfortunately, it does not look like the original idea of injecting a part polyurethane solution around the pipe is going to be a possible fix. With that said, our solution will be most likely be one of the several we have discussed previously. We would like to have this issue cleared up as soon as possible, but I do not have a date for you at this time. I personally would like to try to have this issue resolved by next week so give me a couple of days and I will get back to you with date confirming when we will be on site. Of course, before we attempt anything I will inform you, unfortunately this week is just out of the question right now because we are tied up with other jobs.

Thank you and sorry for the delay,

Nathan A. Skalak

Site Division Project Manager
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188
Office: (757) 566-3032
Fax: (757) 566-4686
Mobile: (757) 903-6968

From: Pat Menichino [mailto:pmenichi@james-city.va.us]
Sent: Wednesday, March 23, 2011 8:50 AM
To: Nathan Skalak
Cc: Darryl Cook
Subject: Toano MS BMP Project

Nathan,

The original contract completion date is approaching for the Toano Middle School BMP project. Could you please provide us with a update on the leak repair and on the timeframe (completion date) for the entire project.

Thanks,

Pat

Patrick T. Menichino
Project Manager
Stormwater Specialist

General Services Department
5320 Palmer Lane, Suite 2A

Pat Menichino

From: Kelly Hayes [khayes@americastusa.com]
Sent: Wednesday, July 21, 2010 4:22 PM
To: Pat Menichino
Subject: RE: JAMES CITY COUNTY--PIPE- BUDGET NUMBERS.xls

IT INCLUDES GASKETS AT THE JOINTS

BOOTS WOULD BE $70.00 FOR 8" DIP AND $217.00 FOR 15" RCP

IF YOU COULD USE 30" SQUARE OPENING , THAT WOULD BE A STANDARD DI-1 . ALSO---DO YOU NEED A SAFETY SLAB SINCE IT IS OVER 12'?

IF SO ADD $250.00

From: Pat Menichino [mailto:pmenichi@james-city.va.us]
Sent: Wednesday, July 21, 2010 4:09 PM
To: Kelly Hayes
Subject: RE: JAMES CITY COUNTY--PIPE- BUDGET NUMBERS.xls

Kelly,

Thanks for the price list on RCP.

I just want to make sure on that the 48" storm manhole price is correct. I am looking at a 48" manhole maybe 16'-18' w/steps, with a 15" RCP opening in the base at say at 9:00 and a 8" DIP opening at 3:00. This structure will be used within a BMP wet pond as a riser to upgrade the present system. So my understanding is that the MH will cost approximately $100.00 per VF and add approx. $320.00 for the 68" base. We probably will spec out a top slab with a 36" square opening for a grate.

Does this MH price include water tight boots for the pipes and gasket joints for the MH sections?

Thanks again for your quick response.

Best Regards,

Pat

Patrick T. Menichino
Stormwater Specialist
James City County Stormwater Division
757-259-1443
pmenichi@james-city.va.us

From: Kelly Hayes [mailto:khayes@americastusa.com]
Sent: Wednesday, July 21, 2010 3:38 PM
To: Pat Menichino
Cc: Ron Brown
Subject: JAMES CITY COUNTY--PIPE- BUDGET NUMBERS.xls

PAT,

HOPE THIS HELPS.

MY NUMBER IS 869-2546 AND I AM IN YORK COUNTY IF YOU NEED ANYTHING ELSE.

THANKS

KELLY

Pat Menichino

From: Dennis Lunder [dennis@valterra.com]
Sent: Thursday, October 21, 2010 12:22 PM
To: Pat Menichino
Cc: belinda@valterra.com
Subject: FW: Web Site Inquiry - pmenichi

Pat:

Thanks for your inquiry. See answers below.

Also, we offer custom length extension kits, so any length can be ordered.

Best regards,

Dennis Lunder
Valterra Products, Inc.
15230 S. F. Mission Blvd, Suite 107
Mission Hills, CA 91345
818-898-1671 ext 16
818-475-1408 efax
310-918-9435 mobile
www.valterra.com
dennis@valterra.com
C-TPAT Certified

From: Pat Menichino [mailto:pmenichi@james-city.va.us]
Sent: Thursday, October 21, 2010 7:06 AM
To: 'valterra@valterra.com'
Subject: Web Site Inquiry

Gentlemen:

We are considering installing your 6" Valterra Gate Valve part # 6601to use as a dewatering valve for a pond. We would also use your rod extensions to operate the valve from above. The valve would be located within a 4' diameter pond riser structure (manhole) at an elevation that was 18' below the surface water elevation.

I would appreciate a answer to the following questions:

What is the maximum lowest operating temperature of this valve? Minimum operating temperature is -10 degrees F. If the valve is installed below the freeze line, it will function fine.

Has this valve been installed for use in similar situations, and have you received any negative feedback? While most of our valves are sold through distributors, I am aware of a few instances of installations similar to what you describe with no negative feedback.

Thanks,

Pat

Patrick T. Menichino
Stormwater Specialist

General Services Department
5320 Palmer Lane, Suite 2A
Williamsburg, VA 23188
P: 757-259-1443
F: 757-259-5833
jccEgov.com

Pat Menichino

From: siteworxplus@verizon.net
Sent: Tuesday, October 26, 2010 2:36 PM
To: Pat Menichino
Subject: Re: BMP Repair at Toano Middle School
Attachments: BUDGET-BMP REPAIR.pdf

Pat

Please find attached budget spreadsheet for demo and repair of the BMP Pond per or conversation.

I think this should be the high end unless something gets added.

No bonds included in this.

Call if you need anything else.

Thanks

Tony Gregory
Site-Worx Plus, LLC
757-532-5655 cell

On Oct 20, 2010, **Pat Menichino** <pmenichi@james-city.va.us> wrote:

> Tony,
>
> Attached are the plans for the Toano Middle School repair. The cost of the Valterra Valve and extension rods is approx.$550.00.
>
> We just need a ballpark estimate. Let me know if you need more info.
>
> Thanks,
>
> Pat

Pat Menichino

To: Stephanie Luton
Subject: RE: TOANO MIDDLE SCHOOL - IFB 11-4276

From: Stephanie Luton
Sent: Monday, November 01, 2010 4:44 PM
To: Pat Menichino
Subject: RE: TOANO MIDDLE SCHOOL - IFB 11-4276

I will need to see electronic versions of all sections of the bid documents at your earliest convenience. The majority of my input will be in Sections 101 through 109. I will input things like the bid #, the pre-bid conference info and the due date. I will also need to see a draft set of the drawings. These can be provided electronically if they are in pdf form. We are actually using a bid document printing service vendor that provides all copies of the bid documents to interested bidders so we don't have to fool around with copies of bid docs and big rolls of plans. So the sooner you can get me the electronic bid docs and plans, the sooner I can figure out how many pages we will have in the final bid package. I need the page counts for the printing vendor.

From: Pat Menichino
Sent: Monday, November 01, 2010 3:28 PM
To: Stephanie Luton
Subject: TOANO MIDDLE SCHOOL - IFB 11-4276

Stephanie,

Attached are the bid items for "Toano Middle School BMP Repairs and Retrofit"

When do you want the projects plans and how many sets?

Pat

Patrick T. Menichino
Stormwater Specialist

General Services Department
5320 Palmer Lane, Suite 2A
Williamsburg, VA 23188
P: 757-259-1443
F: 757-259-5833
jccEgov.com

Pat Menichino

From: Stephanie Luton
Sent: Friday, December 17, 2010 1:30 PM
To: 'Mike Suerdieck'; 'Stacy Arnold'
Cc: Pat Menichino; Wendy Wiggs
Subject: Draft Contract Bid 11-4276 Toano MS BMP Repairs
Attachments: DRAFT AGREEMENT.pdf

Hi Stacy and Mike,

Attached please find the draft contract for this project. If it is satisfactory, please print out and execute 2 copies and return them to me at the address below along with your Performance Bond, Payment Bond and Certificate of Insurance naming James City County as Additional Insured under General Liability coverage.

Pat Menichino from JCC Stormwater (phone 757-259-1443) is the Project Manager and will issue the Notice to Proceed.

Please let me know if you have any questions.

Thanks,
Stephanie Luton
JCC Purchasing
101-F Mounts Bay Rd, Suite 300
Williamsburg, VA 23185

Pat Menichino

From: Nathan Skalak [NSkalak@davidnicebuilders.com]
Sent: Tuesday, February 15, 2011 8:53 AM
To: Pat Menichino
Cc: Darryl Cook; David Greshamer; Spotswood Johnson
Subject: RE: Toano Middle School

Pat,

I am aware that several vehicles did drive outside of the safety fence at the project. Unfortunately I was not present at the time of these incidents leaving it hard for us to stop the traffic. We apologize for this and will see to it that no other traffic drives outside of the designated construction entrance.

Nathan A. Skalak

Site Division Project Manager
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188
Office: (757) 566-3032
Fax: (757) 566-4686
Mobile: (757) 903-6968

From: Pat Menichino [mailto:pmenichi@james-city.va.us]
Sent: Tuesday, February 15, 2011 8:31 AM
To: Nathan Skalak
Cc: Darryl Cook; David Greshamer; Spotswood Johnson
Subject: Toano Middle School

Nathan,

As you are aware the County installed safety fence to delineate the traffic access route to the project site. Yesterday I observed tire tracks outside of the delineated traffic area. After seeing the tracks I spoke with Chris and he assured me that it would not happen again. Unfortunately I understand that it happened again later yesterday afternoon, when a wood chipper was being delivered to the project site.

Please undertake measures to prevent this from happening again. The County will not accept responsibility for damage to the ball field outside of the delineated construction access route which is approximately 25' wide.

Thanks,

Pat

Patrick T. Menichino
Project Manager
Stormwater Specialist

General Services Department

Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

January 28, 2011

RECEIVED
FEB - 8 201
David A. Nice Builders, Inc.

David A. Nice Builders Inc
4571 Ware Creek Rd
Williamsburg, VA 23188

RE: VSMP Construction Stormwater General Permit No. VAR10-11-101009, Toano Middle School BMP Repairs and Retrofit - BMP Repair - 7817 Richmond Rd - Toano

Dear Nathan Skalak:

The staff has received your registration statement for the proposed land-disturbing project under the VSMP General Permit for Discharges of Stormwater from Construction Activities (VAR10) on 1/24/2011. The project's date of coverage is either the date in which you receive this letter or fifteen business days after the postmark date of the project's complete registration packet submittal to DCR.

By submission of the registration statement, you acknowledge that the proposed project is eligible for coverage under the General Permit and you have agreed to the conditions in the General Permit including any applicable conditions regarding Total Maximum Daily Loads and impaired waters. A copy of the General Permit is available on the DCR web page at **http://www.dcr.virginia.gov/soil_and_water/documents/vsmpgenpermvar10.pdf**. Print the VAR10 permit and read it carefully as you are responsible for meeting all the permit conditions. The General Permit will expire on June 30, 2014.

Your project specific permit registration number is **VAR10-11-101009.** A copy of this permit coverage letter, registration statement, copy of the VAR10 permit, and the project's stormwater pollution prevention plan (SWPPP) must be at the construction site from the date of commencement of the construction activity to final stabilization. In addition, DCR staff conducts periodic site inspections for compliance with the permit.

Additional information on the permit and DCR staff contact information are available at **http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml** on the DCR web page.

Sincerely,

J. Douglas Fritz
Acting VSMP Construction Permitting Manager

COUNTY ADMINISTRATION

101-C MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6728

FAX: (757) 253-6833

September 30, 2010

Mr. Doug Fritz, MS4 Program Manager
Department of Conservation and Recreation
Division of Soil and Water Conservation
MS4 Stormwater Permitting
203 Governor Street, Suite 206
Richmond, Virginia 23219

RE: VSMP General Permit for Small MS4s, VAR040037, James City County

Dear Mr. Fritz:

In accordance with 4 VAC §50-60-1240 Section II(E)(3) and its VSMP small MS4 permit, VAR040037, enclosed is one copy of James City County's Year Two Annual Report. This report summarizes the County's activities taken toward meeting its measurable goals during the period of July 1, 2009 through June 30, 2010.

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

If you have any questions or need additional information, please do not hesitate to contact Mr. Darryl E. Cook of the Stormwater Division at (757) 259-1442.

Sincerely,

Robert C. Middaugh
County Administrator

cc: Darryl E. Cook, County Engineer

These are acceptable
DEC 1/13/11

Williamsburg Branch 558
224 Industrial Blvd.
Toano, VA 23168
Ph: (757) 566-2631 Fax: (757) 566-2636

December 28, 2010

Contractor: David Nice Builders

Job Name: Toano BMP
James City County, VA

To Whom It May Concern:

Attached and listed below are ___ ( ) copies of certifications, data sheets and/or drawings for use as submittal data for the above referenced job. Please have one (1) copy of each marked "APPROVED" and returned to us as soon as possible. Thank you.

Storm:

1. Charlotte Foundry Schedule 40 Bell End PVC Pipe
2. Multi-Fittings SCH40 DWV Fittings
3. Valterra 6601 6" Stainless Steel Gate Valve with Extension Rods –
4. KOR-N-SEAL Manhole Boot
5. Midwest Construction Products 6Lx3Wx4D PVC Gabion Baskets
6. Western Excelsior Corporation SR-1 Single Net Straw Blanket
7. Propex Geotex 401 4oz. Non-Woven Fabric

If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Greg Abel
Account Manager

Suggested Specification

System: **PVC Schedule 40 Pressure Pipe and Fitting System**

Scope: This specification covers PVC Schedule 40 pipe and fittings for pressure applications. This system is intended for pressure applications where the operating temperature will not exceed 140°F.

Specification: Pipe and fittings shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a Cell Class of 12454 as identified in ASTM D 1784.

PVC Schedule 40 pipe shall be Iron Pipe Size (IPS) conforming to ASTM D 1785. PVC Schedule 40 fittings shall conform to ASTM D 2466. Pipe and fittings shall be manufactured as a system and be the product of one manufacturer. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to National Sanitation Foundation (NSF) Standard 61 or the health effects portion of NSF Standard 14.

Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all local plumbing, building, and fire code requirements. Solvent cement joints shall be made in a two step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM D 2564. The system shall be protected from chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents not compatible with PVC compounds. Systems shall be hydrostatically tested after installation. Testing with compressed air or gas is not recommended.

Referenced Standards:

ASTM D 1784	Rigid Vinyl Compounds
ASTM D 1785	PVC Plastic Pipe, Schedule 40
ASTM D 2466	PVC Plastic Fittings, Schedule 40
ASTM D 2564	Solvent Cements for PVC Pipe and Fittings
NSF Standard 14	Plastic Piping Components and Related Materials
NSF Standard 61	Drinking Water System Components - Health Effects

Note: Latest revision of all standards apply.

You can't beat the system.®

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 196

P.O. Box 3300, Term."A"
London, Ont. Canada
N6A 4K3
(519) 681-2140
1-800-265-1815
Fax (519) 681-2156

4507 LeSaint Court
Fairfield, Ohio USA
45014
(513) 942-9910
1-800-523-3539
Fax (513) 942-9914

MULTI FITTINGS
Engineered Tough

PVC-DWV
DRAIN, WASTE & VENT FITTINGS

LETTER OF COMPLIANCE

Scope:
This letter of compliance covers Multi Fittings requirements for 4" (100 mm) **PVC Drain, Waste & Vent** Solvent Weld Fittings. These products meet or exceed performance standards set by the American National Standards Institute (ANSI), the American Society of Testing and Materials (ASTM), and NSF International.
PVC Drain, Waste & Vent Solvent Weld Fittings are suitable for the drainage and venting of sewage and certain other liquids.

Material:
Rigid PVC Poly(Vinyl Chloride) used in the manufacturing of Multi Fittings **PVC Drain, Waste & Vent** Solvent Weld Fittings complies with ASTM D 1784, *Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds, having a* cell classification 12454.

Molded Fittings:
Molded **PVC Drain, Waste & Vent** Solvent Weld Fittings conform to the following standards:
ANSI/NSF 14 *"Plastic Piping System Components and Related Materials"*
ASTM D 2665 *"Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings"*
ASTM D 3311 *"Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns"*
IAPMO *"Uniform Plumbing Code"*

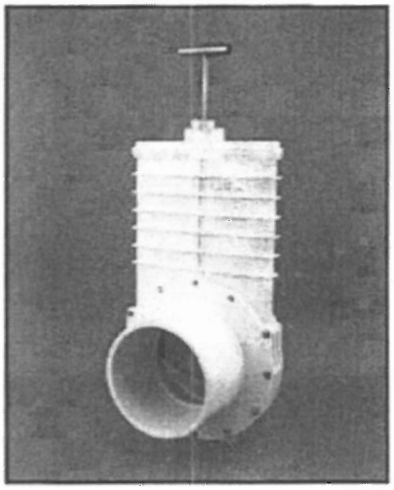
Color Coding: **PVC Drain, Waste & Vent** Solvent Weld Fittings are color-coded white.

Yours truly,

Frank Yorio
Senior Vice President, Operations

Issue Date: 2010-12-28

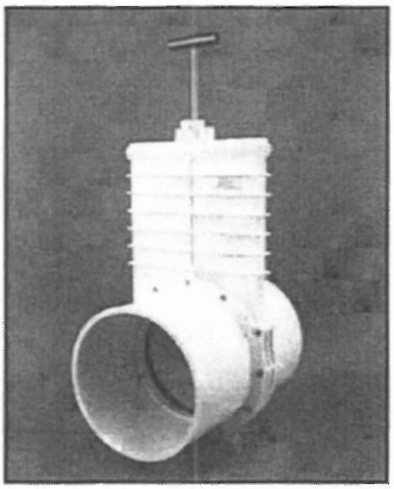
6" GATE VALVE ASSEMBLIES with Stainless Steel Handle



Part No. PVC/WHT	Size	Description	Ctn. Qty.	Wt. (lbs.)	Price Each
6601	6" Slip x Slip		1	16	

Back to Top

8" GATE VALVE ASSEMBLIES with Stainless Steel Handle



Part No. PVC/WHT	Size	Description	Ctn. Qty.	Wt. (lbs.)	Price Each
6801	8" Slip x Slip		1	18	

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 198

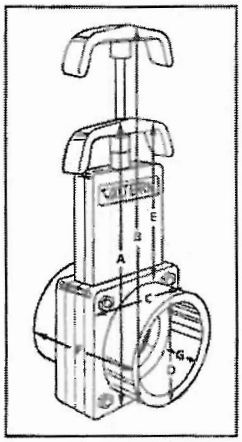
GATE VALVE TECHNICAL DATA

MATERIAL & SPECIFICATIONS

	1½"	2"	3"	4"	6"/8"	10"/12"
Color	White/Black	White/Black	White/Black	White	White	White
Hubs	PVC/ABS	PVC/ABS	PVC/ABS	PVC	PVC	PVC
Body	PVC/ABS	PVC/ABS	PVC/ABS	PVC	ABS	ABS
Shaft	304SS	304SS	304SS	304SS	304SS	304SS
Paddle	Polypro	Polypro	Polypro	304SS	304SS	304SS
Handle	Plastic	Plastic	Plastic	Die Cast Aluminum	304SS	304SS
Seals	Sarlink	Sarlink	Sarlink	Sarlink	Sarlink	Sarlink
PSI	45	40	30	20	10	10

DIMENSIONS

SIZE (in.)	A	B	C	D	E	F	G
1.5 ABS	6.5	8.625	2.875	2.375	3.9375	2.875	0.7
1.5 PVC	6.5	8.625	2.875	2.375	3.9375	3.375	1.25
2 ABS	7.5	10.25	3.25	2.6875	4.5	3.125	0.75
2 PVC	7.5	10.25	3.25	2.75	4.5	3.5	1.6
3 ABS	9.25	13	4.375	3.9375	5.1875	4.5	1.6
3 PVC	9.25	13	4.375	3.9375	5.1875	4.5	1.8
4 PVC	13.25	18	6.625	5	7.4375	5.1875	1.7
6 PVC	22.375	31.125	11	7.25	13.25	11.125	4.375
8 PVC	22.375	31.125	11	9.3125	12.1875	13.75	5.67
10 PVC	35	48.5	18	10.78	16.99	13.75	5
12 PVC	35	48.5	18	12.78	18	15.375	6



"B" Dimension is height of valve in fully open position.

CEMENT

FITTING	PIPE	CEMENT
ABS	PVC	Use IPS #793 or equivalent
ABS	ABS	Use IPS #771 or equivalent
PVC	ABS	Use IPS #793 or equivalent
PVC	PVC	Use IPS #705 or equivalent

STATIC HEAD PRESSURE

Feet Head	PSI
1	0.43
3	1.03
6	2.6
9	3.9
12	5.2
15	6.51
20	8.66
30	12.99
40	17.32
50	21.65

- Feet Head to PSI, multiply by 0.434
- PSI to Feet Head, multiply by 2.3

WORKING TEMPERATURE

Material	Suggested Maximum Working Temperature
ABS	205° F
PVC	167° F
PC	280 ° F

Phone: 800-806-6159 Fax: 818-361-5389 email: valterra@valterra.com Web: www.valterra.com

TRELLEBORG
ENGINEERED SYSTEMS

Kor-N-Seal® Product Line

Technical Specifications

PERFORMANCE
Performed on all standard sizes of Kor-N-Seal Connectors.

Test	ASTM Method	Test Requirements	Kor-N-Seal Products
Head Pressure	C923 - 7.1	0° - 13 psi (30 ft) for 10 min.	+13 psi for 10 min.
		7° - 10 psi (23 ft) for 10 min.	+10 psi for 10 min.
Deflection Test	C923 - 7.2.2	7° in any direction	Over 7° in any direction
Load Test	C923 - 7.2.3	150 lbs/in. pipe dia.	Over 150 lbs/in. pipe dia.

RESILIENT RUBBER MATERIAL
Conforms to ASTM C923

Test	ASTM Method	Test Requirements	Kor-N-Seal Products
Chemical Resistance	D543, at 22°C for 48 h		
1 N Sulfuric Acid		No weight loss	No weight loss
1 N Hydrochloric Acid		No weight loss	No weight loss
Tensile Strength	D412	1200 psi	1580 psi
Elongation at Break		350% min.	500%
Hardness	D2240 (shore A durometer)	± 5 from the manufacturer's specified hardness	48 ± 5
Accelerated Oven-Aging	D573 70 ± 1°C for 7 days	Decrease of 15%, max. of original tensile strength, decrease of 20% max. of elongation	10.1% tensile decrease 14% elongation decrease
Compression Set	D395, method B, at 70°C for 22h	Decrease of 25%, max. of original deflection	13% decrease
Water Absorption	D471, immerse 0.75 by 2-in. specimen in distilled water at 70°C for 48 h	Increase of 10%, max. of original by weight	.8% increase
Ozone Resistance	D1171	Rating 0	Rating 0
Low-temperature Brittle Point	D746	No fracture at -40°C	No fracture at -40°C
Tear Resistance	D624, method B	200 lbf/in.	No tear at 210 lbf/in.

300 SERIES STAINLESS STEEL
Conforms to ASTM C923, ASTM A666, and A240

Test	Kor-N-Seal Products
Tensile Strength	75,000 psi
Yield Strength (min.)	30,000 psi
Elongation in 2" (min. %)	40%
Hardness Rockwell "B"	95

Trelleborg Pipe Seals Milford, Inc.
250 Elm Street, P.O. Box 301, Milford, New Hampshire 03055 U.S.A.
Tel: 800-626-2180 603-673-8680 Fax: 603-673-7271 www.trelleborg.com/npc

Midwest Construction Products

www.midwestconstruct.com -- www.ipafes.com -- www.gabionbaskets.net

We certify that the Gabion Baskets are manufactured to the highest standards and meet or exceed all specifications Midwest Construction Products, Corp. requires.

Listed below are values obtained through the testing of wire used to manufacture the component panels of each gabion basket.

6L x 3W x 4D

Characteristic	Units	Customer Specifications		Actual Values		
		Min	Max	Min{in bold}	Max{underline}	Avg
Diameter	Inches	0.106	.146	**0.113**	0.138	0.125
PVC Coating Thickness	Inches	.015	.136	**.017**	.0221	.0195
Mandrel Bend	Pass	Pass	Pass	Pass	Pass	Pass
PVC Adhesion	Pass	Pass	Pass	Pass	Pass	Pass
Width	Pass	Pass	Pass	Pass	Pass	Pass

ASTM A974-97

James Wilson

Production/Quality Control Manager

Chad Lipscomb, PE, CPESC
Director, Technical Services
Western Excelsior Corporation
PO Box 270308
Fort Collins, CO 80527-0308
970-631-8366 office
chad@westernexcelsior.com

"Blanketing Nature With Nature"

Effective: 2/10/10

RE: Certificate of Conformance: *Excel SR-1*™

To Whom it May Concern:

This letter is to certify that Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as EXCEL SR-1. Each blanket is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE_EXCEL_SR1_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for Excel SR-1. Document number WE_EXCEL_SR1_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE_EXCEL_SR1_SII and WE_EXCEL_SR1_CII for hill slope and channel installations, respectively. A copy of document number WE_EXCEL_SR1_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-800-967-4009, at www.westernexcelsior.com or by email at wexcotech@westernexcelsior.com.

Regards,

Chad M. Lipscomb, PE, CPESC
Director, Technical Services
Western Excelsior Corporation

Material Properties and Dimensions

Description

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). Excel SR-1 temporary Erosion Control Blanket is composed of a 100% certified weed free agricultural straw matrix mechanically (stitch) bonded on two inch centers to a single synthetic, photodegradable net. The net is secured to the top of the RECP to restrain the straw matrix once installed. Excel SR-1 blanket is intended for use in channels or on slopes requiring erosion protection for a period up to twelve months. Actual field longevity is dependent on soil and climatic conditions.

Specifications

Each roll of EXCEL SR-1 is manufactured under Western Excelsior's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness. Verified values are provided in Table 1 and product characteristics are provided in Tables 2 and 3. Values provided in Tables 1, 2 and 3 represent expected values at the time of manufacture. Installation instructions and performance data are available from Western Excelsior's Technical Support Division.

Table 1 - Verified Values			
Tested Property	Test Method	Value	Units
Tensile Strength	ASTM D6818	4.8 (MD), 4.8 (TD)	lb/in
Elongation	ASTM D6818	15 (MD), 20 (TD)	%
Mass per Unit Area	ASTM D6475	8.0	oz/yd²
Thickness	ASTM D6525	7.0	mm
Light Penetration	ASTM D6567	22	% open
Water Absorption	ASTM D1117	450	%

Table 2 - Netting	
Top Net	Synthetic Photo-degradable
Bottom Net	N/A
Top Net Opening	0.50" x 0.54" (Nominal)
Bottom Net Opening	N/A

Table 3 - Roll Dimensions		
Style	Narrow	Wide
Roll Width	7.5 ft	15.0 ft
Roll Length	120 ft	120 ft
Coverage	100 yd²	200 yd²
Roll Weight	55 lbs	110 lbs

Document # WE_EXCEL_SR1_SPEC. This document has been developed to provide the characteristic properties of the product described. For questions, to request performance data or installation recommendations, contact Western Excelsior at 800-967-4009 or wexcotech@westernexcelsior.com. Updated 02/10.

PRODUCT DATA SHEET

GEOTEX® 401

GEOTEX 401 is a polypropylene, staple fiber, needlepunched nonwoven geotextile produced by Propex, and will meet the following Minimum Average Roll Values (MARV) when tested in accordance with the methods listed below. The fibers are needled to form a stable network that retains dimensional stability relative to each other. The geotextile is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

GEOTEX 401 conforms to the property values listed below.[1] Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

PROPERTY	TEST METHOD	ENGLISH	METRIC
Mechanical			
Tensile Strength (Grab)	ASTM D-4632	115 lbs	512 N
Elongation	ASTM D-4632	50%	50%
Puncture	ASTM D-4833	65 lbs	289 N
CBR Puncture	ASTM D-6241	310 lbs	1379 N
Mullen Burst	ASTM D-3786	210 psi	1448 kPa
Trapezoidal Tear	ASTM D-4533	50 lbs	222 N
Endurance			
UV Resistance % Retained at 500 hrs	ASTM D-4355	70%	70%
Hydraulic			
Apparent Opening Size (AOS)[3]	ASTM D-4751	70 US Std. Sieve	0.212 mm
Permittivity	ASTM D-4491	2.0 sec^{-1}	2.0 sec^{-1}
Water Flow Rate	ASTM D-4491	140 gpm/ft^2	5704 $l/min/m^2$
Roll Sizes		12.5 ft x 360 ft 15 ft x 360 ft	3.81 m x 109.8 m 4.57 m x 109.8 m

NOTES:

1. The property values listed above are effective 06/2009 and are subject to change without notice.
2. Values shown are in weaker principal direction. Minimum average roll values (MARV) are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any samples taken from quality assurance testing will exceed the value reported.
3. Maximum average roll value.

PROPEX® | THE ADVANTAGE CREATORS.™

GEOSYNTHETICS

Propex Operating Company, LLC
6025 Lee Highway, Suite 425
PO Box 22788
Chattanooga, TN 37422

PH: 423 899 0444
PH: 800 621 1273
FAX: 423 899 7619
www.geotextile.com

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Development Management
101-A Mounts Bay Road
P.O. Box 8784
Williamsburg, VA 23187-8784
P: 757-253-6671
F: 757-253-6822
devman@james-city.va.us

jccEgov.com

Code Compliance
757-253-6620
codecomp@james-city.va.us

Environmental Division
757-253-6670
environ@james-city.va.us

Planning and Zoning
757-253-6685
planning@james-city.va.us

October 22, 2010

Mr. Darryl E. Cook
County Engineer
General Services Department
5320 Palmer Lane, Suite 2A
Williamsburg, VA 23188

RECEIVED ON
NOV 1 '10
Stormwater Division

RE: JCC Stormwater – Toano MS BMP Repair & Retrofit (YC007)
Resource Protection Area Development - Administrative Exception
CBE-11-051; D-001-10

Dear Darryl:

Pursuant to your water quality impact assessment dated October 22, 2010, an exception is requested to the County's Chesapeake Bay Preservation Ordinance to allow for encroachment into the Resource Protection Area (RPA) for routine maintenance and repair activities associated with an existing BMP at Toano Middle School. The project affects approximately 2,000 square feet of the landward RPA associated with an existing stormwater management facility. The existing BMP is a wet pond facility identified with County BMP ID Code Number YC 007 which was approved under County Plan No. SP-120-90.

Based on our review of the plan and WQIA, this exception is **approved**.

RPA did not exist at the location of the BMP embankment at the time of submission, review, approval and construction of the BMP. However, RPA is now present at the BMP location due to Chesapeake Bay Ordinance amendments effective January 1, 2004. Due to perennial stream features, the RPA is located at and below the base of the fill embankment.

RPA impacts for clearing trees from the dam embankment as proposed will be within the engineered fill section, not a natural buffer. Other repair/maintenance work as planned appears to be outside the limits of the RPA buffer. Obligated maintenance activities associated with the existing wet pond - specifically the removal of trees from the existing earthen embankment - are grandfathered by approval of County Plan No. SP-120-90 as long as routine maintenance does not involve any new improvements or modifications.

Approval of the waiver is conditioned on the implementation of approved plan D-001-10.

The exception request will become null and void if construction of the improvements have not commenced within 12 months of the date of this letter. Please contact us at 253-6670 if there are any questions.

Sincerely,

Scott J. Thomas, P.E.
Environmental Director

Michael D. Woolson
Senior Watershed Planner

Scott Thomas

From: Scott Thomas
Sent: Friday, February 02, 2007 11:25 AM
To: 'Alan T. Robertson (RobertsonA@wjcc.k12.va.us)'
Subject: Toano MS BMP (YC007)

By now you probably received a copy of a letter from AES dated January 24, 2007 related to the BMP at the Toano Middle School site. An inspection and statement from the engineer was required to indicate that the BMP is in good working order and functioning at the design level of service. As you can see in the letter there are some inherent deficiencies associated with the BMP. Technically, we could hold approval of the Cafeteria Expansion, Bus Loop and new entrance plans at Toano as the BMP has deficiencies. For this specific review case, I made a decision not to do that as the new projects are a very small percentage of the overall service area to the BMP and the pond can function properly, but it has some issues.

These issues will need to be addressed in some manner however. We will probably need to have a follow-up discussion on this matter as it is a school BMP and the school is responsible for maintenance. I would be happy to know a plan is in effect to make necessary repairs in some reasonable time frame.

I did work with General Services about a year or two ago to address routine maintenance issues at the BMP. We did notice the outfall pipe problem but that was beyond their scope and purpose to repair.

Scott J. Thomas, P.E.
Chief Engineer - Stormwater
James City County
Environmental Division

Visit:
http://www.james-city.va.us/resources/devmgmt/div_devmgmt_environ.html
and
www.protectedwithpride.org

SP-136-06
TOANO MS
CAFETERIA
EXPANSION

KELLY HAYES

AMERICAST
not just concrete, concrete solutions.

January 13, 2011

Attn: Nathan Skalak, David A. Nice Builders *e-mail: nskalak@davidnicebuilders.com*
RE: Toano Middle School BMP Repairs & Retrofit *14 pages (including this cover)*

Dear Mr. Skalak:

Attached please find shop drawings related to the storm water management structure quoted for the above-referenced project. We are expecting approval of these catalog drawings prior to scheduling production and delivery; please advise if this stance should change.

Summary Drawing:

- #1 Americast Summary Drawing (Note piecing, stacking order, and elevations.)

Structure Components (for use where indicated and/or as needed):

- 60GENMH 60"Ø Storm or Sanitary Manhole Components
- 48GENMH 48"Ø Storm or Sanitary Manhole Components
- Type 4G Gaskets Manufacturer's Information, Press-Seal Gasket Corporation (3 pages)
- PSX:Direct Drive Manufacturer's Information, Press-Seal Gasket Corporation (4 pages)
- ML-10 Steps Manufacturer's Information, American Step Company
- RS-48 Trash Rack Manufacturer's Information, Plastic Solutions, Inc.
- Debris Cage Manufacturer's Information, Plastic Solutions, Inc.

Action Requested:

1. Please review and forward these documents with as you see fit.
2. According to our salesman's comments received on the contract cover, **receipt of APPROVED DRAWINGS** prior to structure fabrication **IS REQUIRED** for items in this package.
3. Should you become aware of any changes which might impact this project or the associated precast structures (design, production, or shipping), please contact us immediately. Please do not hesitate to contact us at (804)798-6068 with questions or additional information:

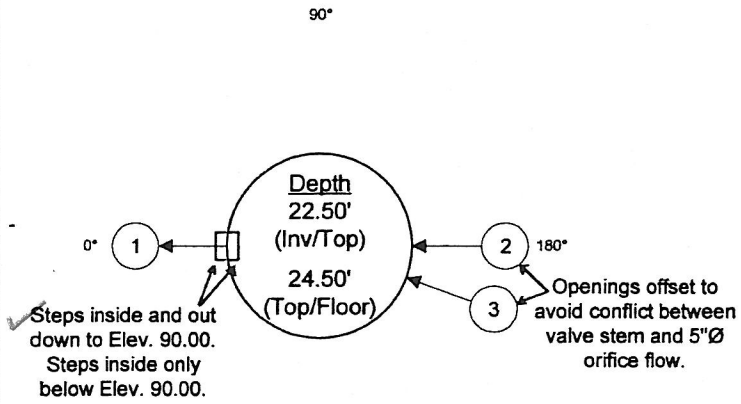
Johanna Townsend	(jtownsend@americastusa.com)	Structure Design/Plan-related Issues
Stan Nabors	(snabors@americastusa.com)	Production-related Issues
Katie Maurer	(kmaurer@americastusa.com)	Shipping/Dispatch-related Issues

Sincerely,

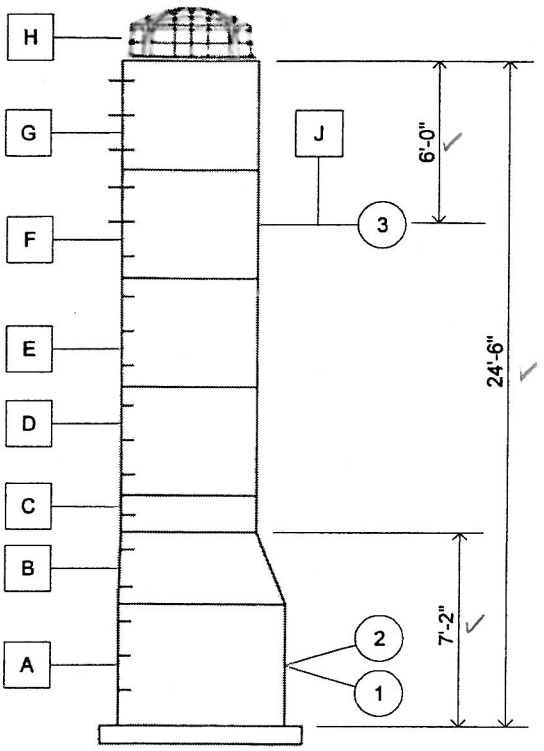
Johanna Townsend

Johanna S. Townsend, Senior Project Manager
AMERICAST – Ashland Plant
11352 Virginia Precast Road
Ashland, VA 23005
800-999-2278 / 804-798-6068 / 804-752-6838 (fax)

Encl.



Plan View
(Only basic features are represented for clarity)



Elevation View
(For stacking purposes – orientation of some components may have been adjusted for clarity)

Structure Details
Joint Type: Offset
Joint Sealer: Type 4G
Step Angle: 0° (in & out)
Sump: 2.00'

Elevations
Top: 96.00'
Top of Base Slab: 71.50'
Btm of Base Slab: 70.83'

Opening Details:

Tag	Pipe	Invert Elevation	Opening	Angle	* Vertical Location
1	15" RCP-B	73.50'	DD 24L	0°	19 1/2"
2	6" PVC	73.50'	DD 12-06	180°	21"
3	7"Ø Opg thru Riser Wall	90.00'	7"Ø	200°	221"

* Reference point is top of base slab - distance is to bottom of opening (or center if marked "CTR")

→ increase to 225°

Stacking Details:

Tag	Build Height	Description	Weight (lbs)
A	62"	4-6 Ext Base [60] - 8" slab extension	9600
B	32"	2-8 Cone Reducer [60 x 48]	2900
C	16"	1-4 Riser [48]	1200
D	48"	4-0 Riser [48]	3500
E	48"	4-0 Riser [48]	3500
F	48"	4-0 Riser [48] - Special	3500
G	48"	4-0 Riser [48] – Flat Joint on Top	3500
H	27 3/4"	48" Round Series Trash Rack (RS-48) with Antivortex Plate	-
J	0"	Debris Cage & Orifice Plate (5"Ø opg) - To cover 7"Ø concrete opg	-

needs to have access hatch

Weights are approximate.

Customer:	NICE BUILDERS INC., DAVID A.	Project:	TOANO MIDDLE SCHOOL BMP RISER - STR
SO#:	039189	Eng: JST	James City County - Virginia
AMERICAST		Structure Type:	SWM Pond Riser Structure
		Date: 1/13/2011 10:44:09 AM	Structure: 1

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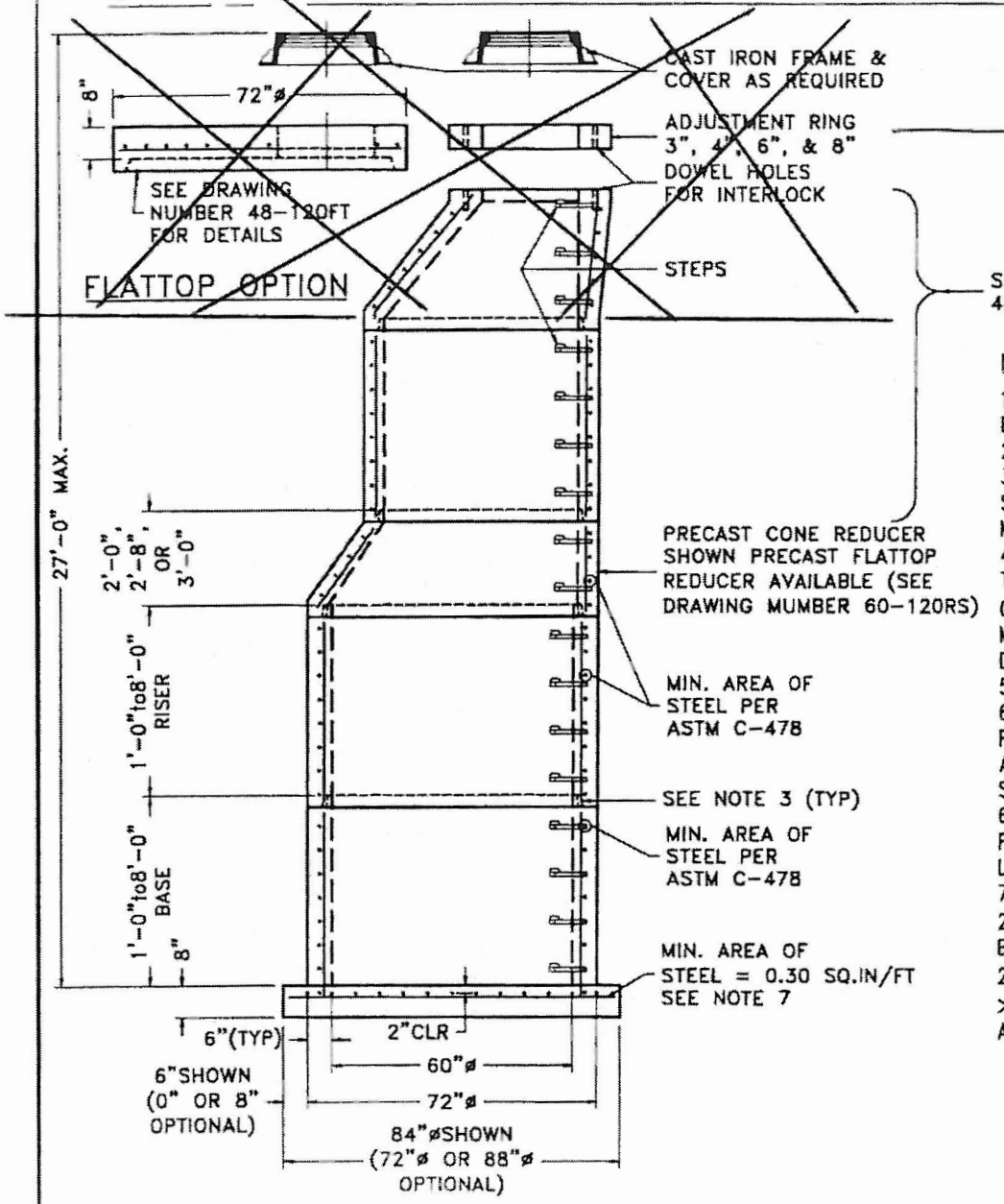
60"ø STORM OR SANITARY MANHOLE



ELEVATION VIEW

NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 4,000 PSI.
2. MANHOLE MEETS ASTM C-478.
3. OFFSET JOINT GASKET FOR SANITARY MEETS ASTM C-443. MORTAR FOR STORM.
4. PIPE OPENINGS OR ENTRY SEALS TO BE LOCATED AS REQUIRED. PIPE OPENING TO BE 4" MIN. TO 8" MAX. LARGER THAN OUTSIDE DIAMETER OF PIPE.
5. ALL REBAR TO BE GRADE 60-ASTM A-615. ALL WELDED WIRE FABRIC TO BE GRADE 65 MIN-ASTM A-185 IN WALLS, A497 IN BASE SLAB.
6. BOTTOM MAY BE POURED IN FIELD BY OTHERS WHEN EXISTING LINES ARE PRESENT.
7. MIN. AREA OF STEEL GOOD TO 23'-0". USE 0.40 SQ.IN/FT IN BASE SLAB FOR DEPTHS FROM 23'-0" TO 27'-0". DEPTHS >27'-0" REQUIRE SPECIAL DESIGN AND CONNECTOR REQUIREMENTS.

* VDOT REVIEW STAMP *

VIRGINIA DEPARTMENT OF TRANSPORTATION
REVIEW OF WORKING DRAWINGS
Working drawings have been reviewed in accordance with Section 105.02 of the Specifications with the following comments:
☒ Review Completed.
☐ Correct and Resubmit.
☐ Rejected See Remarks.
Le D (Division or District)
Reviewed by Dan Wilson Date 6/12/05

REVISION DATE

AMERICAST. A Division of VALLEY BLOCK, Inc.
Harrisonburg Plant 210 Stone Spring Road Harrisonburg, VA 22801 1-800-548-2278
Hallwood Plant P.O.Box 128 Hallwood, VA 23423 1-800-548-4288
Ashland Plant 11352 Virginia Precast Road Ashland, VA 23005 1-804-798-4168

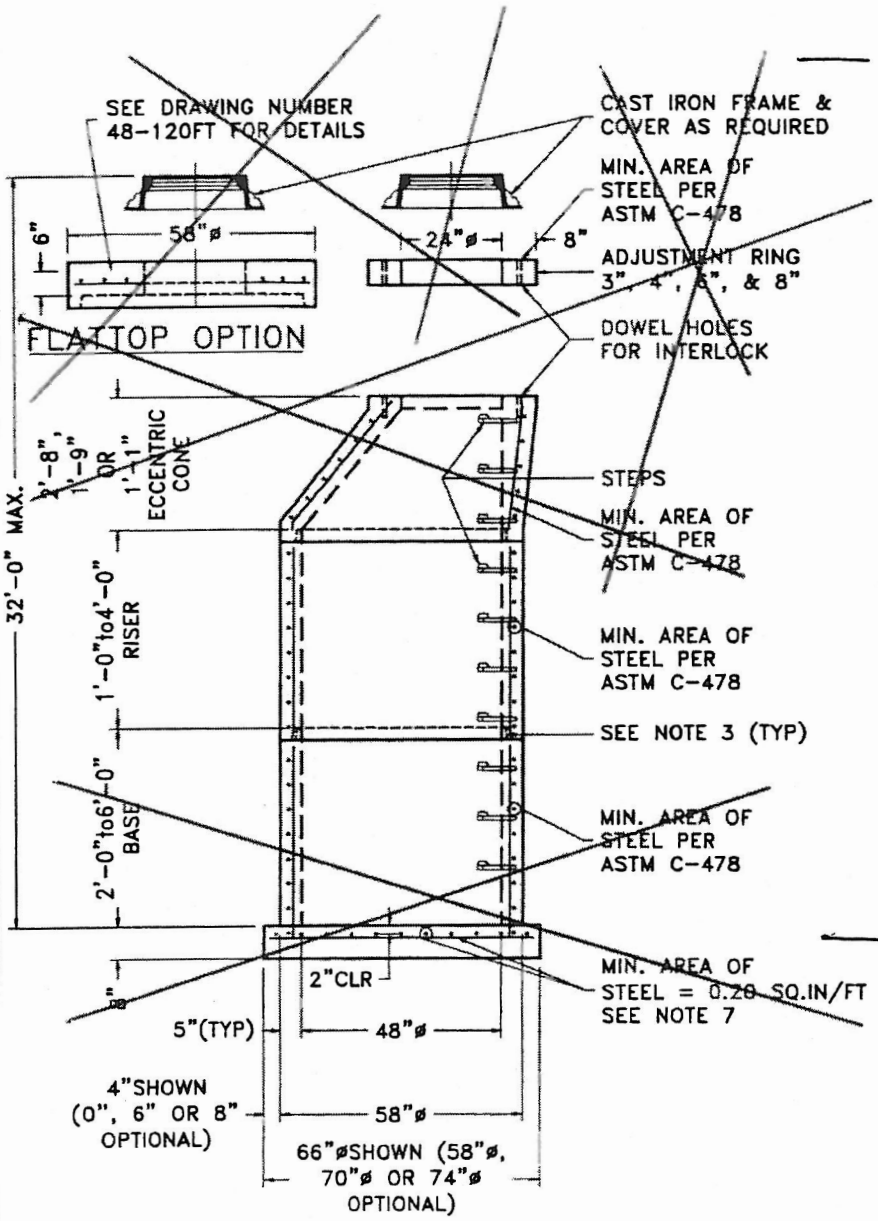
* SEAL *

COMMONWEALTH OF VIRGINIA NO. 021783 PROFESSIONAL ENGINEER
6/13/05

DRAWING NUMBER: **60GENMH**

FILE NAME: 60INDIA-MOD-COMPS-PROPOSED

48"ø STORM OR SANITARY MANHOLE



ELEVATION VIEW

— NOT FOR THIS APPLICATION

NOTES:

1. MINIMUM CONCRETE STRENGTH TO BE 4,000 PSI.
2. MANHOLE MEETS ASTM C-478.
3. OFFSET JOINT GASKET FOR SANITARY MEETS ASTM C-443. MORTAR FOR STORM.
4. PIPE OPENINGS OR ENTRY SEALS TO BE LOCATED AS REQUIRED. PIPE OPENING TO BE 4" MIN. TO 8" MAX. LARGER THAN OUTSIDE DIAMETER OF PIPE.
5. ALL REBAR TO BE GRADE 60-ASTM A-615. ALL WELDED WIRE FABRIC TO BE GRADE 65 MIN-ASTM A-185 IN WALLS, ASTM A-497 IN BASE SLAB. HOOPS TO BE WIRE CONFORMING TO A-82 OR A-496, OR REBAR CONFORMING TO A-615.
6. BOTTOM MAY BE POURED IN FIELD BY OTHERS WHEN EXISTING LINES ARE PRESENT.
7. MIN. AREA OF STEEL GOOD TO 20'-0". USE 0.28 SQ.IN/FT IN BASE SLAB FOR DEPTHS FROM 20'-0" TO 32'-0". DEPTHS >32'-0" REQUIRE SPECIAL DESIGN AND CONNECTOR CONSIDERATIONS.

— NOT FOR THIS APPLICATION (ONLY 48" ø RISERS)

* VDOT REVIEW STAMP *

VIRGINIA DEPARTMENT OF TRANSPORTATION
REVIEW OF WORKING DRAWINGS

Working drawings have been reviewed in accordance with Section 105.02 of the Specifications with the following comments:

☒ Review Completed
☐ Correct and Resubmit.
☐ Rejected See Remarks.

LeD
(District or District)

Reviewed by [signature] Date 8/12/05

REVISION DATE

AMERICAST.
A Division of VALLEY ROCK, Inc.
Harrisonburg Plant: 200 Stone Spring Road, Harrisonburg, VA 22801, 1-800-646-7278
Hillsboro Plant: P.O. Box 100, Hillsboro, WV 24946, 1-800-648-4585
Ashland Plant: 11322 Virginia Precast Road, Ashland, VA 23005, 1-804-798-0958

* SEAL *

COMMONWEALTH OF VIRGINIA
CYNTHIA R. KING
NO. 021722
6/13/05
PROFESSIONAL ENGINEER

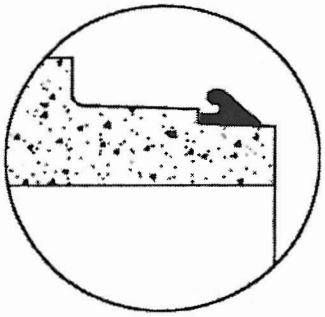
DRAWING NUMBER: 48GENMH

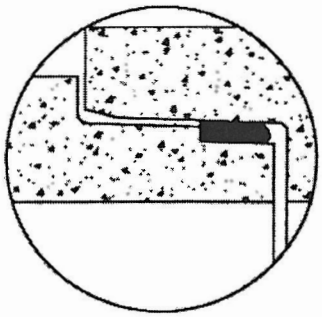
FILE NAME: 48INDIA-MOD-COMPS-PROPOSED

TYPE 4G & 4F PROFILE

FOR SINGLE-STEP PIPE AND MANHOLE JOINTS

TYPE 4G & 4F Profile Gaskets were developed specifically to meet the needs of contemporary concrete pipe joint designs. Their unique design and superior quality provide the perfect match for reliable sealing of underground collection systems.





How They Work

- Wedge design reduces homing force while it concentrates sealing force
- Gasket slope creates an entrance angle that helps center the pipe during installation
- Unique "Swayback" design reduces pushback during pipe installation
- Increased rubber mass provides more gasket contact area between gasket and pipe
- Less likely to roll, pinch, or break bells
- Installation is simple and easy

Applications

- Sanitary Concrete Pipe Joints
- Stormwater Concrete Pipe Joints
- Manhole Joints
- Box Culvert Joints
- Elliptical Concrete Pipe Joints

Why They Are Better

- Rubber compounds were developed specifically for concrete pipe sealing
- Each profile design has been analyzed and optimized for a specific joint configuration
- Extrusion process is laser-controlled for precise, consistent sizing
- Every production run is tested and certified by our in-house Laboratory before being released for production
- Automated processing equipment eliminates variability in sizing
- 100% final inspection guarantees quality of the finished product

How They Perform

TYPE 4G & 4F PROFILES *meet or exceed all requirements of* ***ASTM C 443 and ASTM C 1619***

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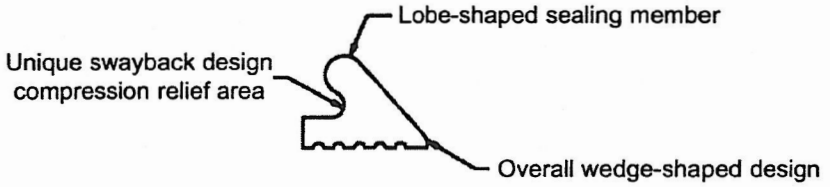
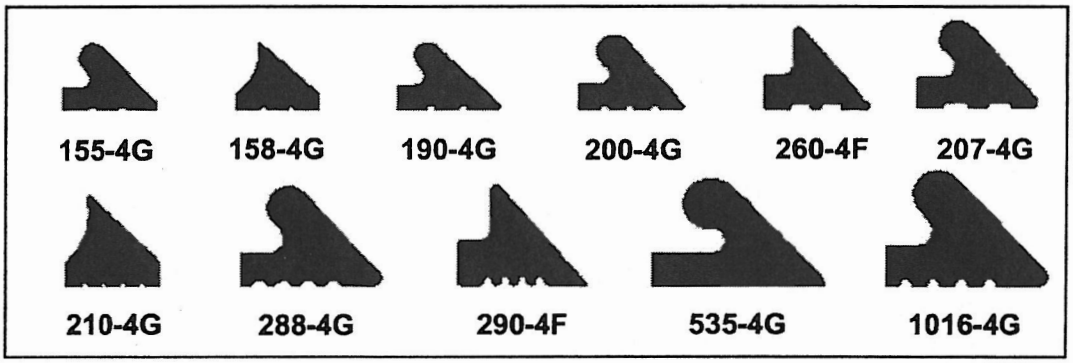
web: www.press-seal.com
Made in USA

TYPE 4G & 4F PROFILE

FOR SINGLE-STEP PIPE AND MANHOLE JOINTS

Type 4G and 4F gaskets solve problems inherent with pre-lubricated gaskets as well as both rolling and confined O-Ring Joint Designs.
Available for Concrete Pipe, Manholes and Box Culverts.





Type 4G & 4F gaskets meet and/or exceed the physical property requirements of
ASTM C 443 - Standard Specification for Joints for Concrete Pipe and Manholes Using Rubber Gaskets
and
ASTM C 1619 - Standard Specification for Elastomeric Seals for Joining Concrete Structures
Type 4G & 4F gaskets are available in regular and oil-resistant compounds. Contact our Customer Service Department for ordering information.

Gasket Type	Gasket Base	Gasket Height	Annular Space
155-4G	.885	.618	.326
158-4G	.749	.622	.326
190-4G	.951	.624	.384
200-4G	.962	.700	.398
260-4G	.950	.775	.422
207-4G	1.125	.818	.450
210-4G	.880	.826	.452
288-4G	1.301	.908	.500
290-4F	1.211	.918	.500
535-4G	1.575	.984	.600
1016-4G	1.500	1.063	.600

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web: www.press-seal.com *an ISO 9001:2000 Registered Company*

TYPE 4G & 4F

INSTALLATION INSTRUCTIONS

Guidelines for Assembling 4G and 4F

Type 4G and 4F gaskets manufactured by Press-Seal Gasket Corporation have proved to be one of the most reliable gasket systems ever developed for concrete pipe. It is easy to ensure the best performance of the 4G and 4F gaskets by following these simple installation steps.

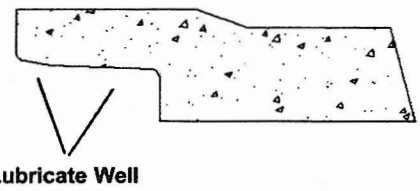
1. The pipe should be handled with extreme caution to avoid chipping of the spigots or bell grooves.

2. Clean spigot-end, including the seat of gasket.

3. Stretch the gasket over the spigot end of the pipe and move it back until it is seated against the step of the spigot. Always place squared area of gasket against pipe and step.

4. Equalize the stretch on the gasket by pulling the sealing lobe away from the spigot at least one inch and then releasing the gasket. Repeat this every three or four inches around the circumference of the pipe. Equalization of stretch makes sure that the gasket has the same stretch cross-section and tension throughout.

5. Remove all dirt and other foreign matter from the inside surface of the bell. Using a Press-Seal lubricant formulated especially for concrete pipe lubricate the entire bell area only of the joint. Be sure to coat the entrance slop of the bell thoroughly with lubricant. Do not place any lubricant on the gasket of the spigot. It is important that the gasket grips the spigot during installation, so that it is not displaced from the step.



6. Carefully align pipe sections and bring home slowly, making sure to seat pipe sections fully.

7. Complete installation by following pipe manufacturer's recommended bedding and backfilling practices.

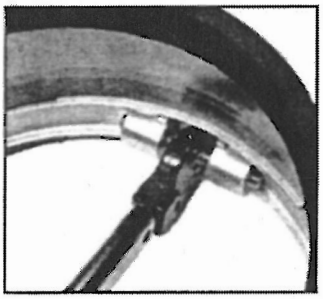
PRESS-SEAL GASKET CORPORATION
P.O. Box 10482, Fort Wayne, Indiana 46852
Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

PSX:DIRECT DRIVE

HIGH-PERFORMANCE PIPE-TO-MANHOLE CONNECTOR

What It Is

PSX: Direct Drive is a high-performance flexible pipe- to-manhole connector that offers easy installation and long-term performance in one convenient product. Whether you core or cast your holes, **PSX:Direct Drive** fits right into your production methods, ready to seal your toughest applications every time.



How It Works

PSX:Direct Drive has superior materials and technology

- Specially developed synthetic rubber is continuously tested and lab-certified
- Power Sleeve made from tempered Series 304 stainless steel
- Installation Mechanism made from Series 300 stainless steel
- Installation Mechanism is infinitely adjustable
- Installation tools are calibrated and certified
- Take-up clamps made from Series 304 stainless steel with quick-adjusting screws

Why It's Better

- Installs quickly and easily from outside the manhole
- Requires no retightening or adjustment
- All stainless-steel components
- No plastic parts to crack or break
- Accurately compensates for hole size variation
- Available for pipes from 1.7"- 44" OD
- Additional torque and multiple adjusters on larger diameters
- Use in manholes, wet wells, pump and lift stations, stormwater structures, on-site treatment structures, grease interceptors, or any application requiring a flexible watertight connector

How It Performs

***PSX:Direct Drive** meets or exceeds all requirements of the following Specifications and/or Test Methods:*

ASTM C 923
ASTM C 1244
ASTM C 1478
ASTM F 2510

Protected by one or more of the following patents: 6805359, 7146689, 7263746

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email: sales @press-seal.com
web: www.press-seal.com

Made in USA

PSX:DIRECT DRIVE

PRODUCT SPECIFICATION

Submittal Specification

A watertight flexible pipe-to-manhole connector shall be employed in the connection of the sanitary sewer and/or stormwater pipe to precast manholes or other structures.

The connector shall be PSX:DIRECT DRIVE as manufactured by Press-Seal Gasket Corporation, Fort Wayne, Indiana, or approved equal.

The connector assembly shall be the sole element relied on to assure a flexible watertight seal of the pipe to the structure. The connector shall consist of a rubber gasket, an internal expansion sleeve, and one or more external compression take-up clamps. Approved materials for the connector shall be natural or synthetic rubber and Series 300 non-magnetic stainless steel. No plastic components shall be permitted.

The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet/exceed the requirements of ASTM C 923, and shall have a minimum tensile strength of 1600 PSI. Minimum thickness of the cross-section shall be 0.275 inches.

The internal expansion sleeve components shall be made of Series 300 non-magnetic stainless steel and shall utilize no welds in their construction.

Installation shall be performed using a calibrated installation tool available from the connector manufacturer. Installation of the sleeve shall require no retightening after the initial installation.

The external compression take-up clamp(s) shall be constructed of Series 300 non-magnetic stainless steel and shall utilize no welds in its constructions. The clamp(s) shall be installed by torquing the adjusting screw using a torque-setting wrench available from the connector manufacturer.

Selection of the proper size connector for the manhole and pipe requirement, and installation thereof, shall be in strict conformance with the recommendations of the connector manufacturer. Any dead end pipe stubs installed in connectors shall be restrained from movement per ASTM C 923.

The finished connection shall provide sealing to 13 psi (minimum), and shall accommodate deflection of pipe to 7 degrees (minimum) without loss of seal.

Vacuum testing shall be conducted in strict conformance with ASTM C 1244 prior to backfill. Other testing shall be conducted in strict conformance with the requirements of the connector manufacturer.

PRODUCT PERFORMANCE

PSX:Direct Drive meets and/or exceeds all requirements of ASTM C 923, including physical properties of materials and performance testing. Performance testing includes:

- 13 psi minimum in straight alignment
- 10 psi at minimum 7°angle
- 10 psi minimum under shear load of 150 lbs/in. pipe diameter

PSX:Direct Drive meets and/or exceeds the following specifications:

- ASTM C 923 *Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals*
- ASTM C 1478 *Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes and Laterals*
- ASTM F 2510 *Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated High Density Polyethylene Drainage Pipes*
- ASTM C 1244 *Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test*

TYPICAL TEST RESULTS for PSX:Direct Drive (as in ASTM C 923 and C 1478)			
Test	ASTM Test Method	Test Requirements	Typical Result
CHEMICAL RESISTANCE; 1N SULFURIC ACID and 1N HYDROCHLORIC ACID	D 534, AT 22°C FOR 48 HRS	NO WEIGHT LOSS NO WEIGHT LOSS	NO WEIGHT LOSS NO WEIGHT LOSS
TENSILE STRENGTH	D 412	1200 PSI, MIN.	2100 PSI
ELONGATION AT BREAK	D 412	350%, MIN.	525%
HARDNESS	D 2240 (SHORE A DUROMETER)	±5 FROM THE MANUFACTURER'S SPECIFIED HARDNESS	<2
ACCELERATED OVEN-AGING	D 573, 70± 1°C FOR 7 DAYS	DECREASE OF 15%, MAX. OF ORIGINAL TENSILE STRENGTH, DECREASE OF 20%, MAX. OF ELONGATION	-13% TENSILE CHANGE, -14% ELONGATION CHANGE
COMPRESSION TEST	D 395, METHOD B, AT 70°C FOR 22 HRS	DECREASE OF 25%, MAX. OF ORIGINAL DEFLECTION	13%
WATER ABSORPTION	D 471 IMMERSE 0.75 BY 2-IN.SPECIMEN IN DISTILLED WATER AT 70°C FOR 48 hrs	INCREASE OF 10%, MAX. OR ORIGINAL BY WEIGHT	3.50%
OZONE RESISTANCE	D 1171	RATING 0	PASS
LOW-TEMP, BRITTLE POINT	D 746	NO FRACTURE AT -40°C	PASS
TEAR RESISTANCE	D 624, METHOD B	200 LBF/IN. (MIN.)	450 LBF/IN.

Protected by one or more of the following patents: 6805359, 7146689, 7263746

Press-Seal believes all information is accurate as of its publication date. Information, specifications, and prices are all subject to change without notice. Press-Seal is not responsible for any inadvertent errors. Copyright 2007

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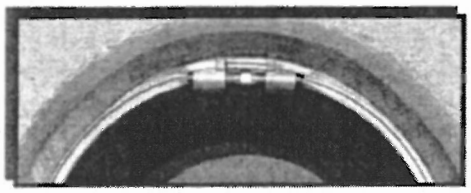
web: www.press-seal.com *an ISO 9001:2000 Registered Company*

PSX:DIRECT DRIVE

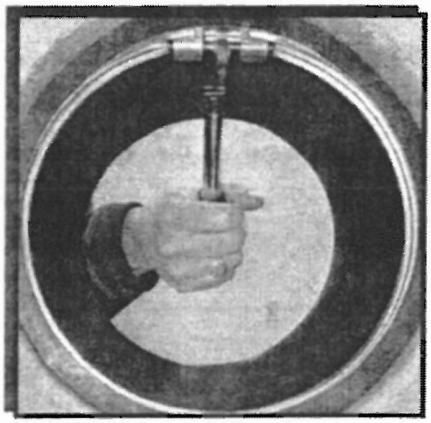
CONNECTOR INSTALLATION INSTRUCTIONS

Providing products and services that protect our planet's clean water supply.

1. As with any boot-type connector, first check hole to make sure that it is free of dirt and debris. Patch any voids with slurry and allow to dry completely before installing PSX: Direct Drive.

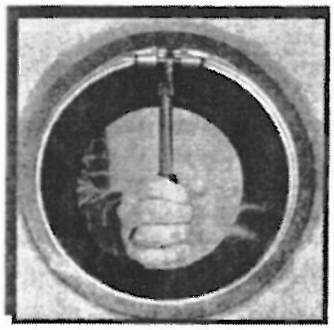


3. Place the PSX: Direct Drive Connector in the hole with the adjuster mechanism in position so that it will be at the top of the hole (9 to 3 o'clock) in the final installed position of the manhole. Align the Connector so that it is square to the hole.

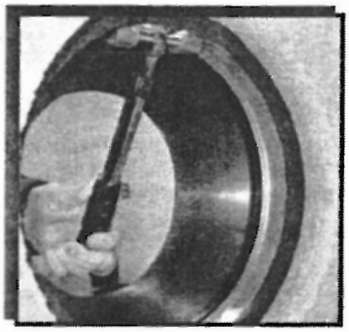


5. Begin to tighten the PSX: Direct Drive Connector by pulling the wrench handle toward the outside of the manhole. The wrench will rachet back easily at the end of the stroke. If the Connector has multiple adjusters (28" and higher), tighten each adjuster five times, alternating them in sequence so that installation pressure is evenly distributed.

2. Select the correct PSX: Direct Drive wrench. The wrenches and the adjusters are sized so that only the correct wrench can be used with each size adjuster, and will provide the correct torque. DO NOT USE ANY OTHER SIZE OR TYPE OF WRENCH TO INSTALL PSX: DIRECT DRIVE.



4. Place the wrench on the adjuster nut so that the arm of the wrench is on the installer's left side. This will ensure that the proper orientation is maintained.



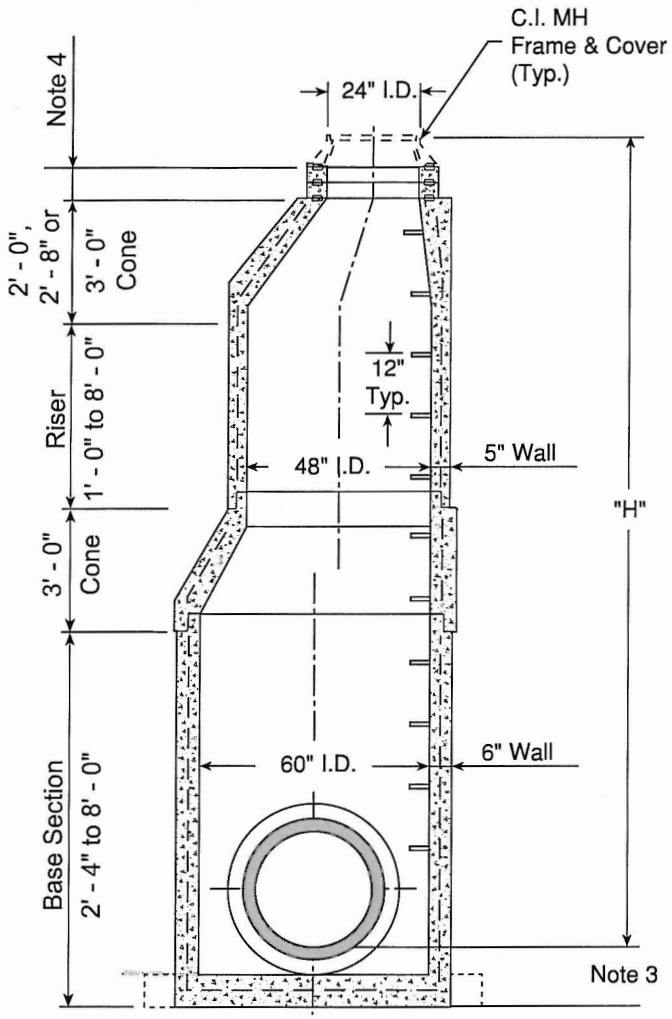
6. Continue tightening until proper torque is reached. The wrench will signal this by "breaking" slightly. If in doubt torque has been reached, tighten again and wrench should "break" quickly and easily. If there are multiple adjusters, make sure that the wrench "breaks" at each one. Installation is now complete.

To remove an installed PSX:Direct Drive Connector, simply reverse wrench position and loosen Connector. Connector may be reused without further adjustment. 8QRS and 9QRS are designed to be installed from the inside of the manhole. If being installed from the outside, the arm of the wrench needs to be on your right hand side.

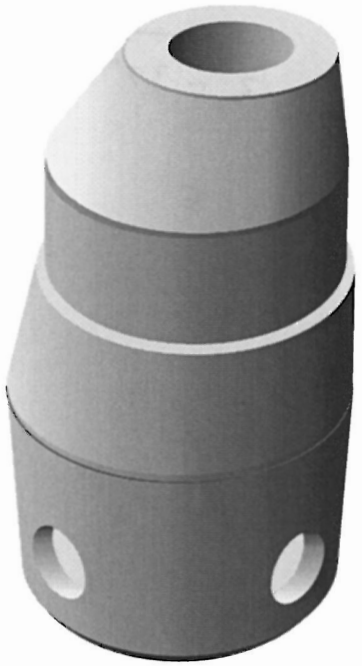
U.S. Patent No. 6805359
Copyright 2003 by Press-Seal Gasket Corporation
EFFECTIVE MAY 2004

PRESS-SEAL GASKET CORPORATION
P.O. Box 10482, Fort Wayne, Indiana 46852
Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

Circular Manholes / Vertical Structures



Section



Isometric View

Note:

(1.) Manhole sections manufactured according to ASTM C478. T&G or rubber gasket joints conforming to ASTM C443. Manhole steps to be polypropylene encapsulated steel. See also precast component detail reference, page 8.25.

(2.) Dimensions subject to permissible variation of ASTM C478.

(3.) Invert to bottom of base = 10" minimum. 6" min. extended base available if required.

(4.) 4" and 6" adjustment rings interlock to cone or flattop by grout filled recesses.

(5.) Riser heights to be multiples of 12".

(6.) Base section heights of 2' - 4", 2' - 10", 3' - 4", 3' - 10", 4' - 4" and 4' - 10". Other heights may be available.

(7.) Material properties: f'_c = 4,000 p.s.i., f_y = 60,000 p.s.i.

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	STATE	SECTION.PAGE	DATE	
Precast 60" Manhole Assembly Detail	VA	8.9	03-15-06	Hanson

These are acceptable
DEC 1/13/11

Williamsburg Branch 558
224 Industrial Blvd.
Toano, VA 23168
Ph: (757) 566-2631 Fax: (757) 566-2636

December 28, 2010

Contractor: David Nice Builders

Job Name: Toano BMP
James City County, VA

To Whom It May Concern:

Attached and listed below are ___ ( ) copies of certifications, data sheets and/or drawings for use as submittal data for the above referenced job. Please have one (1) copy of each marked "APPROVED" and returned to us as soon as possible. Thank you.

Storm:

1. Charlotte Foundry Schedule 40 Bell End PVC Pipe
2. Multi-Fittings SCH40 DWV Fittings
3. Valterra 6601 6" Stainless Steel Gate Valve with Extension Rods –
4. KOR-N-SEAL Manhole Boot
5. Midwest Construction Products 6Lx3Wx4D PVC Gabion Baskets
6. Western Excelsior Corporation SR-1 Single Net Straw Blanket
7. Propex Geotex 401 4oz. Non-Woven Fabric

If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Greg Abel
Account Manager

Suggested Specification

System: **PVC Schedule 40 Pressure Pipe and Fitting System**

Scope: This specification covers PVC Schedule 40 pipe and fittings for pressure applications. This system is intended for pressure applications where the operating temperature will not exceed 140°F.

Specification: Pipe and fittings shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a Cell Class of 12454 as identified in ASTM D 1784.

PVC Schedule 40 pipe shall be Iron Pipe Size (IPS) conforming to ASTM D 1785. PVC Schedule 40 fittings shall conform to ASTM D 2466. Pipe and fittings shall be manufactured as a system and be the product of one manufacturer. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to National Sanitation Foundation (NSF) Standard 61 or the health effects portion of NSF Standard 14.

Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all local plumbing, building, and fire code requirements. Solvent cement joints shall be made in a two step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM D 2564. The system shall be protected from chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents not compatible with PVC compounds. Systems shall be hydrostatically tested after installation. Testing with compressed air or gas is not recommended.

Referenced Standards:

ASTM D 1784	Rigid Vinyl Compounds
ASTM D 1785	PVC Plastic Pipe, Schedule 40
ASTM D 2466	PVC Plastic Fittings, Schedule 40
ASTM D 2564	Solvent Cements for PVC Pipe and Fittings
NSF Standard 14	Plastic Piping Components and Related Materials
NSF Standard 61	Drinking Water System Components - Health Effects

Note: Latest revision of all standards apply.

You can't beat the system.®

Smithey & Boynton
Architecture Engineering Planning

P.O. Box 20969
Roanoke, Virginia 24018
Telephone 703-774-4493
FAX 703-772-9470

FEB 1991
RECEIVED
PLANNING DEPARTMENT

February 20, 1991

Mr. Michael A. Freda, Planner
Williamsburg/James City County
Department of Development Management
P.O. Box JC
Williamsburg, Virginia 23187-3627

Re: Williamsburg/James City County
Middle School at Toano
Case No. SP-120-90
Comm. No. 18921100

Dear Mr. Freda:

The following comments are responses to the conditional comments contained in your letter of January 22, 1991 regarding preliminary site plan approval for the new middle school.

Virginia Department of Transportation
The drawings have been developed for the Richmond Road scenario as outlined in their comments faxed to us on January 29, 1991. We have increased the stacking space and decreased the taper for eastbound left turns into the site.

Division of Code Compliance
1. The required items will be obtained following acceptance of the revised site plan submittal.
2. As-built drawings for the detention basin will be furnished upon completion of construction.
3. A preconstruction conference will be scheduled after acceptance of the revised site plan submittal.
4. Acknowledged.
5. Five revisions have been incorporated on the revised site plan documents and specifications.
6-9. Revisions have been incorporated on the revised drawings.
10. As discussed with JCC Planning, Paul Ogg has indicated a desire to not provide gravel surfaced road for security purposes and has stated that they will provide cleared access for WJCC's School maintenance.
11-13. Revisions have been incorporated on the revised drawings.
14. This item will be addressed by WJCC Schools.

County Engineer

1. Copies of revised Worksheet for BMP Point System are attached. The wet pond has been incorporated into the drawings in accordance with Comment No. 13 JCSA above. Natural open spaces are shown on the drawings.
2. Copies of the Geotechnical Report are attached. Drawings have been revised to comply with the Engineer's recommendations.
3. Guidelines for highly erodible soils are covered in Specification Section 02080, Paragraph 3-01e. Areas at the detention facility will be seeded in accordance with the specifications. Other steep slopes will be left undisturbed.
4. Areas of the site containing slopes of 25 percent or greater are existing ravines located at the southern end of the site. Except as required for construction of the dam for the wet pond, no slopes greater than 25 percent will be disturbed. A copy of the letter requesting exception to disturb slopes greater than 25 percent is under separate cover.

Planning Division

1. Referenced items have been included on the revised drawings.
2. Referenced items have been included on the revised drawings.
3. A reference to location of general notes is included on the cover sheet.
4. Sheet references for drawings not included with the site plan submittal have been deleted from the cover sheet.
5. Details of signs are included on the revised drawings.
6. Site lighting fixtures are shown on all civil plan drawings and required note reference has been added to the general notes.
7. An additional ramp has been shown on the revised drawings.
8. Wooden curbs adjacent to parking areas have been included on the revised drawings.
9. Landscape islands have been included on the revised drawings.
10. Notes have been included on the revised drawings.
11. Notes and drawings revised to include requirements outlined.

12-13. The site development plan and landscape plans have been developed to retain as much of the existing wooded areas as possible. A minimum of 50 feet of undisturbed wooded areas have been retained at adjacent property owner boundaries and ±80 feet along Richmond Road. The break in the tree line at the existing dirt road and new entrance drive were left open to provided visibility for the School from Richmond Road. The Architect/Engineer requests a modification of Section 20-14.c.2.a. of the requirements for planting of shrubs on the perimeter of the site based on the existing wooded conditions.

14. Planting details are included on the drawings.
15. A chain link fence along the east property line has been added to the drawings.

James City Service Authority

1. Following discussions with JCSA and the Regional Health Department, the design was modified as shown on the drawings. Copies of calculations downsizing the station are attached. Copies of drawings and specification have been submitted to the Regional Health Department. A copy of their comments received February 20, 1991 is attached. Response to their comments will require information from the Contractor relative to specific equipment to be supplied. All regulations and requirements will be completed with and will be submitted to the Regional Health Department and JCSA.

2-4. These items have been incorporated on the drawings.

5. A submeter has been incorporated on the revised drawings.

Health Department

1. Copies of drawings and specifications were submitted to and reviewed by the Health Department. Copies of Jacob Seaton's letter of December 7, 1990 are attached.

Fire Department

1-2. The drawings have been revised to include these comments.

Attached to this letter I am sending the following items for your use in completing your review for final site plan approval:

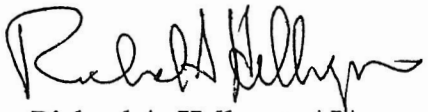
- 10 sets of Site Plan Drawings revised February 25, 1991. Cover Sheet, C1-1, C1-2, C2-1, C2-2, C3-1, C4-1, C4-2, C4-3, C5-1, C5-2, C6-1.
- 6 copies of Division 2 Specifications with Addendum.
- 4 copies of Smithey & Boynton letter request to Mr. Farmer dated February 22, 1991.
- 4 copies of Sewage Pumping Station calculations.
- 4 copies of Worksheet for BMP Point System.
- 4 copies of Department of Public Health comments dated December 17, 1990.
- 6 copies of Geotechnical Report for Detention Basin

Your earliest review is requested in order that we may schedule the preconstruction conference and complete necessary requirements for issuance of the Land Disturbing Permit

If you have any questions on the enclosed material or if you need additional information, please contact me directly.

Very truly yours,

SMITHEY & BOYNTON



Richard A. Hellegas, AIA
Project Manager

drm

Enclosures

cc: Mr. Paul Ogg w/enclosures

Purchasing

101 F Mounts Bay Rd, Suite 300, Williamsburg, Virginia 23185
(757) 253-6646 Fax Number: (757) 253-6753

April 19, 2011

Mr. Nathan Skalak
David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188

Reference: Contract Number # 11-4276-Toano Middle School BMP Repairs

Dear Mr. Skalak:

Please find enclosed your copy of the above referenced Change Order for additional costs for various items itemized in change order documents, and submitted for approval for the Toano Middle School BMP repairs project. Change Order #1 *increased* the contract amount by $ 3,769.54, adjusting the total Contract amount to $43,292.83.

Please continue to provide updated and current Certificate of Insurance information for the life of this contract, per limits outlined in the contract documents. Please forward all invoices to the attention of Accounts Payable Department, PO Box 8784, Williamsburg, VA 23187, and reference the contract number, #11-4276 on all correspondence.

Please contact me at (757) 253-6644 if you have any questions regarding this letter. Thank you for your cooperation and continued interest in serving the citizens of James City County.

Sincerely,

Kitty Hall, VCO
Senior Buyer

Encl.:

Cc: F. Geissler; P. Menichino; J. Ripley; S. Luton; A. Robertson; A/P; FILE

CONTRACT APPROVAL FORM (short form)

Contract #: 11-4276 ☐ Contract ☒ Change Order # 1

Project Name: Toano Middle School BMP

Vendor: David A. Nice Bldrs.

RED FOLDER

Approved by — Date

Approval attached

County / Service Authority Representative

Heyland Tuter 4/19/11

Purchasing Director

Funds Check: Approval attached HM 4.15.11

Budget Code(s) ☐ Annual / Term Contract

013 - 020 - 0300	$	3,769.54
- -	$	
- -	$	

Beg. bal: 39,523.29
+CO#1. 3769.54
43,292.83

COPIES DISTRIBUTED

	Date	By
Buyer Update Database	4/19/11	KW
Vendor Fran Soltra		
JCC/~~ICSA~~ Rep: Pat M.		
Accts Payable		
File		
Encumbered		

CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1, Williamsburg, VA 23188
614 Moorefield Park Drive, Richmond, VA 23236
6632 Main Street, Gloucester, VA 23061
(757) 253-0040
(804) 330-8040
(804) 693-4450
www.aesva.com

January 24, 2007

YC 007

Mr. Scott Thomas, P.E.
James City County Environmental Division
101-A Mounts Bay Road
Williamsburg, VA 23185

RE: Toano Middle School Cafeteria Expansion
JCC SP-136-06
AES Project No. 9763

Dear Mr. Thomas:

Our office has made a visual inspection of the existing storm sewer system, pond and outfall (YC 007) for the above mentioned project. The following is a summary of our observations:

1. Structure #105A as referenced to on original plan needs additional compacted fill to the west side of box.
2. Structure #110 has a slight area around box needing some compacted fill.
3. The head wall at the end of the storm sewer system, located in the BMP, needs repair. However, it does not appear that it has a significant affect on the function of the system. We recommend the School system budget repairs of headwall in their next CIP request.
4. At structure #113, there is a piece of 2" x 6" board down in the throat of the structure that needs to be removed.
5. The existing BMP appears to be functioning as designed. There were no visible signs of deterioration or erosion of the embankment, outfall structure, or the area immediately downstream of the outfall. The embankment and spillway appear to have had trees removed recently.

Calculations have been performed on the existing 12" pipe adjacent to the project (from structure #116 to structure #105A). We find that the pipe has the capacity to handle the proposed improvements. In addition, we have added a Stormwater Narrative on Sheet 3 of the plans.

If you have any questions, please feel free to call or email our office for additional information.

Sincerely,

Mark A. Richardson, P.E.
Senior Project Manager
mrichardson@aesva.com

cc: Alan Robertson, WJCC Schools

S:\Jobs\9763\00-ToanoCafeteriaExpansion\Admin\Correspondence\Letters\9763 Storm Sys to Scott Thomas.doc

Date Record Created:

Created By:

WS_BMPNO: YC007

Print Form

PRINTED ON:
Saturday, March 13, 2010
2:49:46 PM

WATERSHED	YC
BMP ID NO	007
PLAN NO	SP-120-90
TAX PARCEL	(12-4)(1-51)
PIN NO	12401000051
CONSTRUCTION DATE	9/18/1992
PROJECT NAME	Toano Middle School
FACILITY LOCATION	7817 Richmond Road
CITY-STATE	Toano, VA
CURRENT OWNER	WJCC Schools
OWNER ADDRESS	
OWNER ADDRESS 2	
CITY-STATE-ZIP CODE	Williamsburg, VA 23185
OWNER PHONE	
MAINT AGREEMENT	Yes
EMERG ACTION PLAN	No

Get Last BMP No

Return to Menu

MAINTENANCE PLAN	No
SITE AREA acre	28.3
LAND USE	Middle School
old BMP TYP	Wet Pond
JCC BMP CODE	A2 Wet Pond
POINT VALUE	9
SVC DRAIN AREA acres	35
SERVICE AREA DESCRI	School & Offsite Area
IMPERV AREA acres	5.25
RECV STREAM	UT of Yarmouth Creek
EXT DET-WQ-CTRL	Yes
WTR QUAL VOL acre-ft	2.1
CHAN PROT CTRL	No
CHAN PROT VOL acre-ft	0
SW/FLOOD CONTROL	Yes
GEOTECH REPORT	Yes

CTRL STRUC DESC	Riser
CTRL STRUC SIZE inches	30
OTLT BARRL DESC	RCP
OTLT BARRL SIZE inch	15
EMERG SPILLWAY	Yes
DESIGN HW ELEV	99.3
PERM POOL ELEV	90
2-YR OUTFLOW cfs	3.50
10-YR OUTFLOW cfs	18.80
REC DRAWING	No
CONSTR CERTIF	No

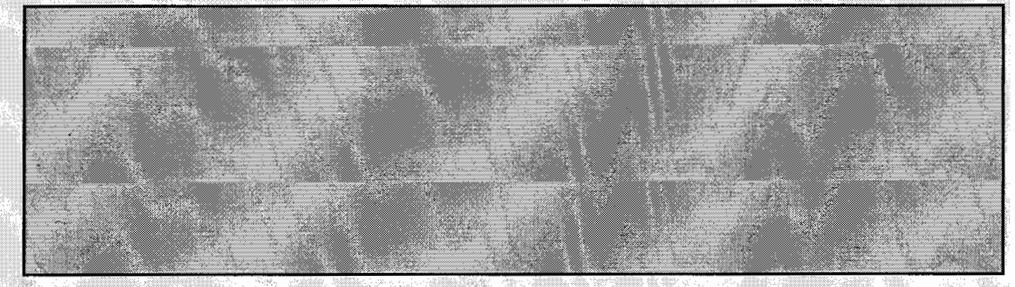
LAST INSP DATE 11/20/2000 Inspected by:

INTERNAL RATING 2

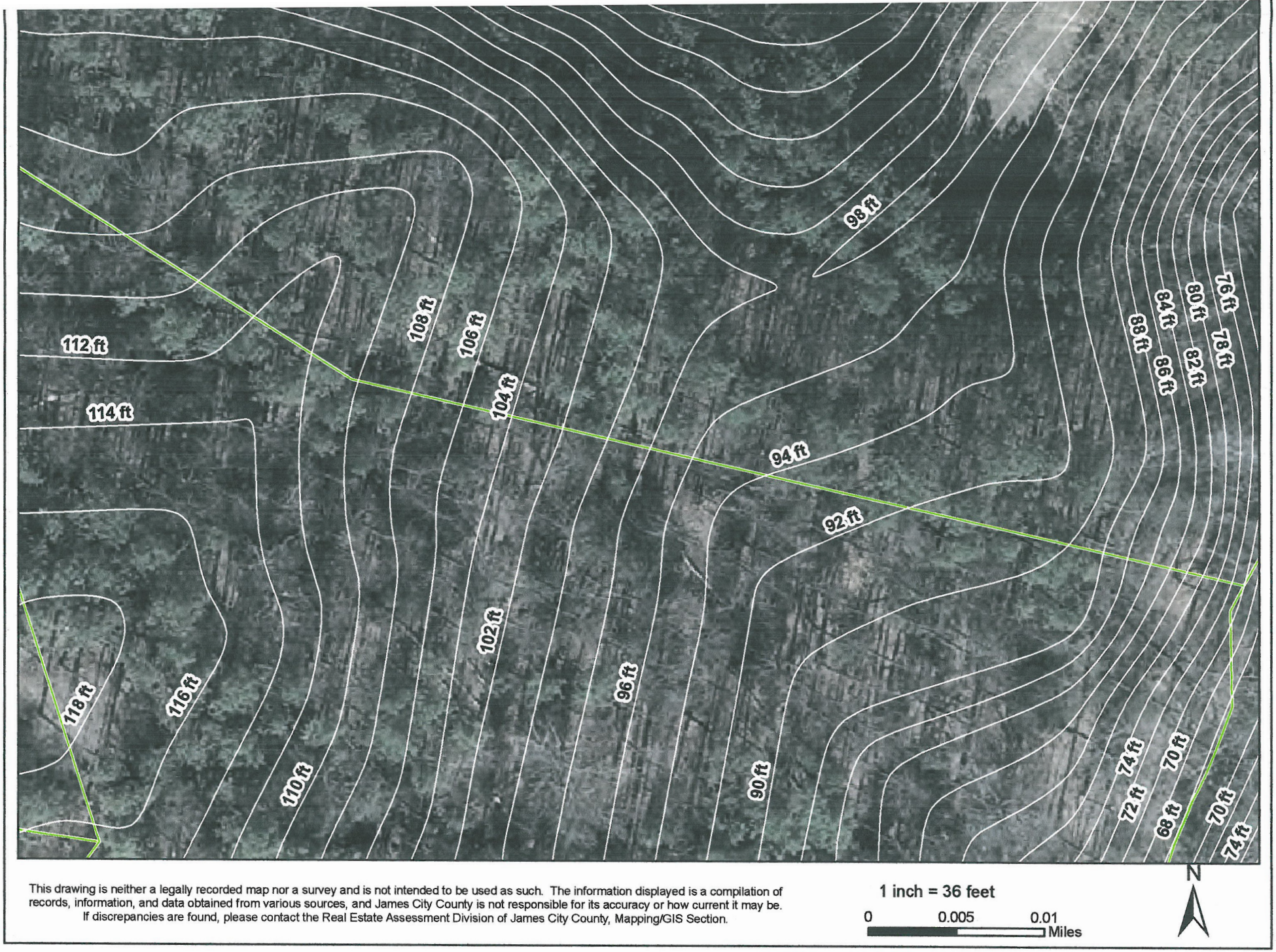
MISC/COMMENTS

Emergency spillway deteriorated.
Surrounding fence.

Additional Comments:



YC009
Chickahominy Rd
CBE-11-051; D-01-10
JCC Storwmater - Toano MS BMP Repair
GPIN 1240100051
YC007
Ridgedale Ave
Woodridge Ct
Creekview Dr
Turnington Rd



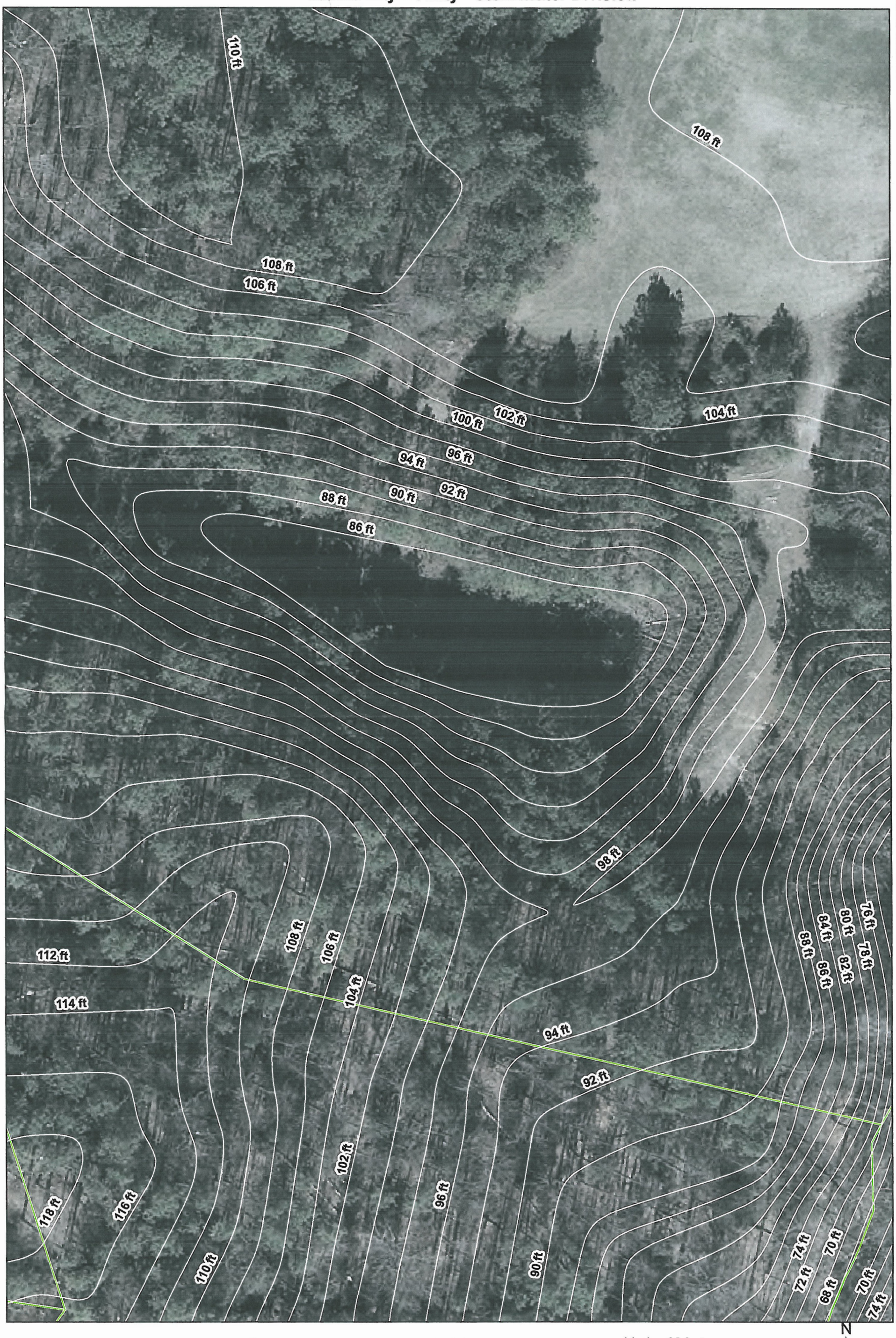
This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and James City County is not responsible for its accuracy or how current it may be. If discrepancies are found, please contact the Real Estate Assessment Division of James City County, Mapping/GIS Section.

1 inch = 36 feet

0 0.005 0.01 Miles

N

James City County - Stormwater Division



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1 inch = 36 feet

0 0.005 0.01 Miles

N

III CHANGE ORDER

No. 01

DATE OF ISSUANCE 02/24/2011 EFFECTIVE DATE 02/24/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: 15" RCP extension with adjustment of structure

Reason for Change Order: BMP structure location was adjusted requiring an extra piece of RCP to extend to the new structure location from the existing RCP already in the ground.

Attachments: (List documents supporting change)

Original Contract Price $ 39,523.29 ✓	Original Contract Times: Final Completion: N/A (days or dates)
Net Increase (Decrease) from previous Change Orders No. 0 to 0: $ 0.00 ✓	Net change from previous Change Orders No. ____ to No. ____: Final Completion: ____ (days)
Contract Price prior to this Change Order: $ 39,523.29	Contract Times prior to this Change Order: Final Completion: ____ (days or dates)
Net increase (decrease) of this Change Order: $ 306.46	Net increase (decrease) of this Change Order: Final Completion: ____ (days)
Contract Price with all approved Change Orders: $ 39,829.75 ✓	Contract Times with all approved Change Orders: Final Completion: ____ (days or dates)

RECOMMENDED:	APPROVED:	ACCEPTED:
By: ____ ENGINEER (Authorized Signature)	By: Joanna Kirby OWNER (Authorized Signature)	By: Nathan Skalak CONTRACTOR (Authorized Signature) Nathan Skalak, PM
Date: ____	Date: 4/15/11	Date: February 24, 2011

4/19/11

III CHANGE ORDER

No. 01

DATE OF ISSUANCE 02/24/2011 EFFECTIVE DATE 02/24/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
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CHANGE IN CONTRACT PRICE:
Original Contract Price $ 39,523.29
Net Increase (Decrease) from previous Change Orders No. 0 to 0: $ 0.00 Contract Price prior to this Change Order: $ 39,523.29 Net increase (decrease) of this Change Order: $ 306.46
Contract Price with all approved Change Orders: $ 39,829.75

CHANGE IN CONTRACT TIMES:
Original Contract Times: Final Completion: N/A (days or dates)
Net change from previous Change Orders No. ____ to No. ____: Final Completion: ____ (days) Contract Times prior to this Change Order: Final Completion: ____ (days or dates) Net increase (decrease) of this Change Order: Final Completion: ____ (days)
Contract Times with all approved Change Orders: Final Completion: ____ (days or dates)

RECOMMENDED:

By: _____
ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____
OWNER(Authorized Signature)

Date: _____

ACCEPTED:

By: Nathan Skalak
CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: February 24, 2011

DAVID A. NICE Builders, Inc.
4571 Ware Creek Road, Williamsburg, VA 23188
(757) 566-3032 - FAX (757) 566-4686 - www.davidnicebldrs.com

Project Name:	Toano Middle School BMP Repair & Retrofit
Location:	Toano Middle School, Toano, Virginia
Change Order #:	1
Reason:	15" RCP extension and new structure location

Overhead and Profit in Contract: 15%

Task for additional work	Labor	Time (hr)	Rate	Total Cost	Equipment	Time	Rate	Total Equip	Total Cost
Labor and Equipment	O-1	1	$ 25.00	$ 25.00 ✓	JD 230	1	$ 45.00	$ 45.00 ✓	
Install RCP and relocate	L-1	1	$ 20.00	$ 20.00 ✓					
Structure in accordance	L-2	1	$ 18.00	$ 18.00 ✓	Fuel	4	$ 3.50	$ 14.00 ✓	
with new pipe				$					
	Payroll Liability		35%	$ 22.05					
Total:				**$ 85.05**				**$ 59.00**	**$ 144.05** ✓
Material	Material		Quantity	($/LF)	Cost			$ -	
RCP	RCP Pipe		8	$ 9.00	$ 72.00 ✓				
	#57 Stone		2	$ 22.72	$ 45.44 ✓				
	Hauling		2	$ 2.50	$ 5.00 ✓				
Total:					**$ 122.44**			**$ -**	**$ 122.44**

Notes: No line item bids in contract for the requested CO work.

Total Cost of Additional Work Requested: $ 266.49

Unit Price Costs	Bid#	Amt	Unit		Rate			Total
Item	0							
Sub Item		0		@				$ -
Item	0							
Sub Item		0		@				$ -

Total Cost of Work Permformed based on Unit Pricing: $ -

Subtotal of Change Order:	**$ 266.49**
Contracted Overhead and Profit:	15%
Total Cost of Change Order:	**$ 306.46**

#57 bedding stone 414-1
installed 85.10 per ton
302.6 reinstall existing

2.5x
2 =
5.00*

72.00+
45.44+
5.00+
122.44*

122.44+
144.05+
266.49*

266.49x
15.%
39.97*

~~266.49*~~

~~39.97+~~
~~39.97*~~

39.97+
266.49+
306.46*

#2

III CHANGE ORDER

No. 02 - REVISED

DATE OF ISSUANCE 03/01/2011 EFFECTIVE DATE 03/01/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: RipRap with fabric underneath stream in pond and rock outfall replacement.

Reason for Change Order: Erosion control rip rap installed in bottom of BMP and emergency spillway of dam embankment at 8.43 SY for a total of $3,325.37 in accordance with line item #414-2. ✓

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price $ 39,523.29 ✓	Original Contract Times: Final Completion: N/A (days or dates)
Net Increase (Decrease) from previous Change Orders No. 1 to 1 : $ 306.46	Net change from previous Change Orders No. ____ to No. ____ : Final Completion: ____ (days)
Contract Price prior to this Change Order: $ 39,829.75	Contract Times prior to this Change Order: Final Completion: ____ (days or dates)
Net increase (decrease) of this Change Order: $ 3,325.37 ✓	Net increase (decrease) of this Change Order: Final Completion: ____ (days)
Contract Price with all approved Change Orders: $ 43,155.12	Contract Times with all approved Change Orders: Final Completion: ____ (days or dates)

RECOMMENDED:

By: _____ ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____ OWNER(Authorized Signature)

Date: 4/19/11

ACCEPTED:

By: _____ CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: March 1, 2011

YC007_TOANO_MIDDLE_SCHOOL_WJCC_SCHOOLS - 234

III CHANGE ORDER

No. 02-REVISED

DATE OF ISSUANCE 03/01/2011 EFFECTIVE DATE 03/01/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: RipRap with fabric underneath stream in pond and rock outfall replacement.

Reason for Change Order: Erosion control rip rap installed in bottom of BMP and emergency spillway of dam embankment at 8.43 SY for a total of $3,325.37 in accordance with line item #414-2.

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:
Original Contract Price $ 39,523.29
Net Increase (Decrease) from previous Change Orders No. 1 to 1 : $ 306.46 Contract Price prior to this Change Order: $ 39,829.75 Net increase (decrease) of this Change Order: $ 3,325.37
Contract Price with all approved Change Orders: $ 43,155.12

CHANGE IN CONTRACT TIMES:
Original Contract Times: Final Completion: N/A (days or dates)
Net change from previous Change Orders No.____ to No._____: Final Completion: _____ (days) Contract Times prior to this Change Order: Final Completion: _____ (days or dates) Net increase (decrease) of this Change Order: Final Completion: _____ (days)
Contract Times with all approved Change Orders: Final Completion: _____ (days or dates)

RECOMMENDED:

By: _____
ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____
OWNER(Authorized Signature)

Date: _____

ACCEPTED:

By: _____
CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: March 1, 2011

#3

III CHANGE ORDER

No. 03 REVISED

DATE OF ISSUANCE 03/01/2011 EFFECTIVE DATE 03/01/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: Removal of large tree near pond

Reason for Change Order: Tree near pond is to be removed.

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price $ 39,523.29	Original Contract Times: Final Completion: N/A (days or dates)
Net Increase (Decrease) from previous Change Orders No. 1 to 2R : $ 3,631.83 Contract Price prior to this Change Order: $ 43,155.12 Net increase (decrease) of this Change Order: $ 137.71 ✓	Net change from previous Change Orders No. ____ to No. ____ : Final Completion: ____ (days) Contract Times prior to this Change Order: Final Completion: ____ (days or dates) Net increase (decrease) of this Change Order: Final Completion: ____ (days)
Contract Price with all approved Change Orders: $ 43,292.83 ✓	Contract Times with all approved Change Orders: Final Completion: ____ (days or dates)

RECOMMENDED:

By: _____ ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____ OWNER(Authorized Signature)

Date: 4.19.11

ACCEPTED:

By: _____ CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: March 01, 2011

OK

III CHANGE ORDER

No. 03

DATE OF ISSUANCE 02/24/2011 EFFECTIVE DATE 02/24/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: Removal of large tree near pond

Reason for Change Order: Tree near pond is to be removed.

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:
Original Contract Price $ 39,523.29
Net Increase (Decrease) from previous Change Orders No. 1 to 2: $ 1,528.09 Contract Price prior to this Change Order: $ 41,051.38 Net increase (decrease) of this Change Order: $ 137.71
Contract Price with all approved Change Orders: $ 41,189.09

CHANGE IN CONTRACT TIMES:
Original Contract Times: Final Completion: N/A (days or dates)
Net change from previous Change Orders No.____ to No._____: Final Completion: _____ (days) Contract Times prior to this Change Order: Final Completion: _____ (days or dates) Net increase (decrease) of this Change Order: Final Completion: _____ (days)
Contract Times with all approved Change Orders: Final Completion: _____ (days or dates)

RECOMMENDED:

By: _____
ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____
OWNER(Authorized Signature)

Date: _____

ACCEPTED:

By: Nathan Skalak
CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: February 24, 2011

III CHANGE ORDER

No. 03-REVISED

DATE OF ISSUANCE 03/01/2011 EFFECTIVE DATE 03/01/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: Removal of large tree near pond

Reason for Change Order: Tree near pond is to be removed.

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:
Original Contract Price $ 39,523.29
Net Increase (Decrease) from previous Change Orders No. 1 to 2R : $ 3,631.83 Contract Price prior to this Change Order: $ 43,155.12 Net increase (decrease) of this Change Order: $ 137.71
Contract Price with all approved Change Orders: $ 43,292.83

CHANGE IN CONTRACT TIMES:
Original Contract Times: Final Completion: N/A (days or dates)
Net change from previous Change Orders No.____ to No._____: Final Completion: (days) Contract Times prior to this Change Order: Final Completion: (days or dates) Net increase (decrease) of this Change Order: Final Completion: (days)
Contract Times with all approved Change Orders: Final Completion: (days or dates)

RECOMMENDED:

By: ENGINEER(Authorized Signature)

Date:

APPROVED:

By: OWNER(Authorized Signature)

Date:

ACCEPTED:

By: CONTRACTOR(Authorized Signature)
Nathan Skalak, PM

Date: March 01, 2011

DAVID A. NICE Builders, Inc.
4571 Ware Creek Road, Williamsburg, VA 23188
(757) 566-3032 - FAX (757) 566-4686 - www.davidnicebldrs.com

Project Name:	Toano Middle School BMP Repair & Retrofit
Location:	Toano Middle School, Toano, Virginia
Change Order #:	3
Reason:	Removal of Large Tree near pond

Overhead and Profit in Contract: 15%

Task for additional work	Labor	Time (hr)	Rate	Total Cost	Equipment	Time	Rate	Total Equip	Total Cost
Labor and Equipment	O-1	1	$ 25.00	$ 25.00 ✓	JD 230	1	$ 45.00	$ 45.00 ✓	
	L-1	1	$ 20.00	$ 20.00 ✓					
				$ -	Fuel	4	$ 3.50	$ 14.00 ✓	
Cut down large tree near pond				$ -					
	Payroll Liability		35%	$ 15.75					
Total:				**$ 60.75**				**$ 59.00**	**$ 119.75**
Material	Material		Quantity	($/LF)	Cost			$ -	
None					$ -				
Total:					$ -			$ -	$ -

Notes: No line item bids in contract for the requested CO work.

Total Cost of Additional Work Requested: $ 119.75

Unit Price Costs	Bid#	Amt	Unit		Rate			Total
Item	0							
Sub Item		0		@				$ -
Item	0							
Sub Item		0		@				$ -

Total Cost of Work Permformed based on Unit Pricing: $ -

Subtotal of Change Order:	**$ 119.75**
Contracted Overhead and Profit:	15%
Total Cost of Change Order:	**$ 137.71**

Labor and Operator Rates include Payroll Liability

0 *
25.00 +
20.00 +
45.00 *
45.00 x
35 %
15.75 *
15.75 +
60.75 *
45.00 +
3.50 +
3.50 +
3.50 +
3.50 +
59.00 *
60.75 +
59.00 +
119.75 *
119.75 x
15 %
17.96 *
17.96 +
137.71 *

PURCHASE ORDER

COUNTY OF JAMES CITY, VIRGINIA

Purchase Order No: 114276

Date; 14-Jan-2011

PO # must appear on all invoices and packages

Fund	Activity	Exp Code	Amount
013	020	0300	$43,292.83

Vendor No: 1830

DAVID A. NICE BUILDER
129 INDUSTRIAL BLVD

TOANO VA 23168

Ship To: SEE BELOW

SUBMIT INVOICES IN TRIPLICATE

To
JAMES CITY COUNTY
ACCOUNTING OFFICE
PO BOX 8784
WILLIAMSBURG, VIRGINIA 23187-8784

Item	Description of Articles or Services	Quantity	Unit	Unit Price	Amount
	TOANO MIDDLE SCHOOL BMP REPAIRS				
1	TOANO BMP REPAIRS, PER TERMS AND CONDITIONS OF IFB# 11-4276, AND VENDOR BID	1	EA	$39,523.29	$39,523.29
2	CHANGE ORDER #1 4/19/11. KH	1	EA	$3,769.54	$3,769.54
				Total	$43,292.83

Delivery Date:

****** The conditions of this order may not be modified by any verbal understanding******

This PO subject to James City County's General Terms and Conditions.
Copies are available upon request or at:
www.james-city.va.us/resources/fms/div_fms_purchasing.html
Point of contact Purchasing 757-253-6646

NOTE: Vendor Shall Provide Materials Safety Data Sheets and Extra Labels With Materials When Shipped

Certified As To Availability of Funds	Date	Initialed (Director)	Authorized Signature

III CHANGE ORDER

No. 05

DATE OF ISSUANCE 02/24/2011 EFFECTIVE DATE 02/24/2011

OWNER James City County Purchasing Department
CONTRACTOR David A. Nice Builders, Inc.
Contract
Project Toano Middle School BMP Repairs
OWNER'S Contract No. 11-4276 ENGINEER'S Contract No.
ENGINEER

You are directed to make the following changes in the Contract Documents:

Description: Modification of trash rack

Reason for Change Order: Trash rack was modified to client's specifications beyond the original requested item from plans.

Attachments: (List documents supporting change)
Ferguson Waterworks Price Quote(s) #B118689 / #B119635

CHANGE IN CONTRACT PRICE:
Original Contract Price $ 39,523.29
Net Increase (Decrease) from previous Change Orders No. 1 to 2 : $ 3,769.54 Contract Price prior to this Change Order: $ 43,292.83 Net increase (decrease) of this Change Order: $ 650.61
Contract Price with all approved Change Orders: $ 43,943.44

CHANGE IN CONTRACT TIMES:
Original Contract Times: Final Completion: N/A (days or dates)
Net change from previous Change Orders No. ____ to No. ____: Final Completion: ____ (days) Contract Times prior to this Change Order: Final Completion: ____ (days or dates) Net increase (decrease) of this Change Order: Final Completion: ____ (days)
Contract Times with all approved Change Orders: Final Completion: ____ (days or dates)

RECOMMENDED:

By: _____
ENGINEER(Authorized Signature)

Date: _____

APPROVED:

By: _____
OWNER(Authorized Signature)

Date: _____

ACCEPTED:

By: _____
CONTRACTOR(Authorized Signature)
Nathan Skalak,PM

Date: February 24, 2011

TOANO MIDDLE SCHOOL BMP REPAIR
Monthly Billing
Month of February

DAVID A. NICE Builders, Inc.
4571 Ware Creek Road, Williamsburg, VA 23188
(757) 566-3032 - FAX (757) 566-4686 - www.davidnicebldrs.com

A	B	C		
NO.	DESCRIPTION OF WORK	CONTRACT VALUE	WORK COMPLETED	TOTAL BILLED
	DIVISION 1 - GENERAL PROVISIONS			
1	110-1 BMP TRASH AND DEBRIS REMOVAL	$1		
2	110-2 SURVEY, STAKEOUT, FLAGGIN	$607.41	100%	$607.41
	DIVISION 3 - CONSTRUCTION			
3	301-1 CLEARING & CHIPPING TREES	$5,767.41	100%	$5,767.41
4	301-2 GRADING FOR CONSTRUCTION ACCESS	$917.12	100%	$917.12
5	302-2 MODIFIED PRECAST SWM POND RISER STRUCTURE	$13,948.17	70%	$9,763.72
6	302-4 6" SCHEDULE 40 PVC DRAIN PIPE (RISER/CAP INST.)	$206.32	100%	$206.32
7	302-5 6" DIAM GATE VALVE	$389.54	100%	$389.54
8	302-6 REINSTALL EXISTING 15"RCP INTO POND RISER	$286.41	50%	$143.21
9	302-7 15" KOR-N-SEAL RUBBER BOOT SYSTEM	$188.86	50%	$94.43
10	302-8 6" KOR-N-SEAL RUBBER BOOT SYSTEM	$158.41	100%	$158.41
11	302-9 GABION BASKET BAFFLE WALL INSTALLED	$2,725.10	100%	$2,725.10
12	302-10 CONCRETE FLOOR POURED INSIDE POND RISER	$296.99	100%	$296.99
13	303-1 EXCAVATE FOR DEWATERING PIT	$1,606.41	100%	$1,606.41
14	303-2 OPERATE/MAINTAIN DEWATERING PUMPING...	$243.01	100%	$243.01
15	303-3 EXCAVATION OF POND BASIN/RELOCATE SOILS	$3,690.76	100%	$3,690.76
16	303-4 STRIP TOPSOIL & STOCK PILE	$766.19	100%	$766.19
17	303-5 CONSTRUCT UPSLOPE EARTHEN BERM	$1,423.61	70%	$996.53
18	303-6 SPREAD STOCKPILED TOPSOIL	$667.41	70%	$467.19
19	303-7 INSTALL PERMANENT SEEDING, LIME, FERTILIZER	$212.01	100%	$212.01
20	303-8 INSTALL EC-2 STABILIZATION BLANKETS	$178.46	100%	$178.46
21	303-9 INSTALL SILT FENCE	$246.06	100%	$246.06
22	303-10 INSTALL INLET PROTECTION	$140.96	100%	$140.96
23	304-11 MAINT. OF EROSION CONTROL MEASURES	$314.51	100%	$314.51
	DIVISION 4 - MISCELLANEOUS			
24	414-1 BEDDING STONE	$425.52	100%	$425.52
25	414-2 EROSION CONTROL RIP RAP	$789.21	100%	$789.21
	DIVISION 5 - INCIDENTAL CONSTRUCTION			
26	507-1 REMOVE 60 LF OF 6' CHAIN LINK FENCE	$425.21	100%	$425.21
27	507-2 MOBILIZATION	$1,207.41	75%	$905.56
	GRAND TOTALS	$39,523.29		**$34,172.05**

13,948.17
- 4,341.67 trash rack

9,606.50 X 70% = 6,724.55

34,172.05
- 3,039.17

31,132.88

TOANO MIDDLE SCHOOL BMP REPAIR
Monthly Billing
Month of February

DAVID A. NICE Builders, Inc.
4571 Ware Creek Road, Williamsburg, VA 23188
(757) 566-3032 - FAX (757) 566-4686 - www.davidnicebldrs.com

A	B	C		
NO.	DESCRIPTION OF WORK	CONTRACT VALUE	WORK COMPLETED	TOTAL BILLED
	DIVISION 1 - GENERAL PROVISIONS			
1	110-1 BMP TRASH AND DEBRIS REMOVAL	$1,694.81	100%	$1,694.81
2	110-2 SURVEY, STAKEOUT, FLAGGIN	$607.41	100%	$607.41
	DIVISION 3 - CONSTRUCTION			
3	301-1 CLEARING & CHIPPING TREES	$5,767.41	100%	$5,767.41
4	301-2 GRADING FOR CONSTRUCTION ACCESS	$917.12	100%	$917.12
5	302-2 MODIFIED PRECAST SWM POND RISER STRUCTURE	$13,948.17	70%	$9,763.72
6	302-4 6" SCHEDULE 40 PVC DRAIN PIPE (RISER/CAP INST.)	$206.32	100%	$206.32
7	302-5 6" DIAM GATE VALVE	$389.54	100%	$389.54
8	302-6 REINSTALL EXISTING 15"RCP INTO POND RISER	$286.41	50%	$143.21
9	302-7 15" KOR-N-SEAL RUBBER BOOT SYSTEM	$188.86	50%	$94.43
10	302-8 6" KOR-N-SEAL RUBBER BOOT SYSTEM	$158.41	100%	$158.41
11	302-9 GABION BASKET BAFFLE WALL INSTALLED	$2,725.10	100%	$2,725.10
12	302-10 CONCRETE FLOOR POURED INSIDE POND RISER	$296.99	100%	$296.99
13	303-1 EXCAVATE FOR DEWATERING PIT	$1,606.41	100%	$1,606.41
14	303-2 OPERATE/MAINTAIN DEWATERING PUMPING...	$243.01	100%	$243.01
15	303-3 EXCAVATION OF POND BASIN/RELOCATE SOILS	$3,690.76	100%	$3,690.76
16	303-4 STRIP TOPSOIL & STOCK PILE	$766.19	100%	$766.19
17	303-5 CONSTRUCT UPSLOPE EARTHEN BERM	$1,423.61	70%	$996.53
18	303-6 SPREAD STOCKPILED TOPSOIL	$667.41	70%	$467.19
19	303-7 INSTALL PERMANENT SEEDING, LIME, FERTILIZER	$212.01	100%	$212.01
20	303-8 INSTALL EC-2 STABILIZATION BLANKETS	$178.46	100%	$178.46
21	303-9 INSTALL SILT FENCE	$246.06	100%	$246.06
22	303-10 INSTALL INLET PROTECTION	$140.96	100%	$140.96
23	304-11 MAINT. OF EROSION CONTROL MEASURES	$314.51	100%	$314.51
	DIVISION 4 - MISCELLANEOUS			
24	414-1 BEDDING STONE	$425.52	100%	$425.52
25	414-2 EROSION CONTROL RIP RAP	$789.21	100%	$789.21
	DIVISION 5 - INCIDENTAL CONSTRUCTION			
26	507-1 REMOVE 60 LF OF 6' CHAIN LINK FENCE	$425.21	100%	$425.21
27	507-2 MOBILIZATION	$1,207.41	75%	$905.56
	GRAND TOTALS	$39,523.29		**$34,172.05**

VI NOTICE TO PROCEED

TO: David A. Nice Builders, Inc. DATE: January 21, 2011

PROJECT: Bid 11-4276 Toano Middle School BMP Repairs & Retrofit

You are hereby notified to commence Work in accordance with the Agreement dated January 14, 2011, on or before JANUARY 24, 20___, and reach Final Completion of the Work within Sixty (60) Days thereafter. The date of Final Completion of all Work is therefore MARCH 25, 2011.

You will be contacted to schedule a Pre-Construction Conference and establish a Construction Progress Schedule as described in Section 108, pages 108-1&2, paragraphs IV &V.

Liquidated damages as stipulated in the Bid Form, in the amount of $ 250.00 per Day for failure to complete the Work by the date for Final Completion, will be assessed by the Owner as stated above or as may be modified by duly executed Change Orders.

OWNER: James City County, VA

BY: Patrick Menichino

TITLE: Pat Menichino, Project Manager

ACCEPTANCE OF NOTICE:

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by:

Nathan Skalak

this the 21 day of

January, 20 11

CONTRACTOR: David A. Nice Builders, Inc.

BY: Nathan Skalak

TITLE: Project Management

Pat Merichino Needs to -

David A. Nice Builders, Inc.
4571 Ware Creek Road
Williamsburg, VA 23188

Invoice No.	7403
Page	1

BILL TO	JOB NO
James City Cty Purchasing Dept 101-F Mounts Bay Road Suite 300 Williamsburg, VA 23185	113901 Toano MS BMP - JCC, VA 7817 Richmond Road Toano, VA 23168

Invoice Date	Invoice No.	Customer No.	Payment Terms	Contract No.
02/28/11	7403	JAMES1	Due Upon Receipt	CONTRACT #

Quantity	Description	Unit Price	Extended Price
	AIA PAY APPLICATION #1		29,813.29
	**********		
	SUBMITTED TO STEPHANIE LUTON VIA EMAIL AND US MAIL ON 3/1/2011		

OK for payment 3/9/11
GTM

Gross	Retainage	Tax	Net Amount
29,813.29	.00	.00	29,813.29

3/9 - Pat

CONTINUATION SHEET

AIA DOCUMENT G703

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 1
APPLICATION DATE: 28-Feb-11
PERIOD TO: 2/1-28/2011
ARCHITECT'S PROJECT NO: **TOANO MIDDLE SCHOOL BMP**
GOVERNMENT'S PROJECT NO:

A	B	C	D	E	F	G		H	I
NO.	DESCRIPTION OF WORK	CONTRACT VALUE	WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)	WORK COMPLETED THIS PERIOD	MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)	BALANCE TO FINISH (C - G)	RETAINAGE
	DIVISION 1 - GENERAL PROVISIONS								
1	110-1 BMP TRASH AND DEBRIS REMOVAL	$1,694.81	$0.00	$1,694.81	$0.00	$1,694.81	100.00%	$0.00	$84.74
2	110-2 SURVEY, STAKEOUT, FLAGGIN	$607.41	$0.00	$607.41	$0.00	$607.41	100.00%	$0.00	$30.37
	DIVISION 3 - CONSTRUCTION								
3	301-1 CLEARING & CHIPPING TREES	$5,767.41	$0.00	$5,767.41	$0.00	$5,767.41	100.00%	$0.00	$288.37
4	301-2 GRADING FOR CONSTRUCTION ACCESS	$917.12	$0.00	$917.12	$0.00	$917.12	100.00%	$0.00	$45.86
5	302-2 MODIFIED PRECAST SWM POND RISER STRUCTURE	$13,948.17	$0.00	$6,974.09	$0.00	$6,974.09	50.00%	$6,974.09	$348.70
6	302-4 6" SCHEDULE 40 PVC DRAIN PIPE (RISER/CAP INST.)	$206.32	$0.00	$206.32	$0.00	$206.32	100.00%	$0.00	$10.32
7	302-5 6" DIAM GATE VALVE	$389.54	$0.00	$389.54	$0.00	$389.54	100.00%	$0.00	$19.48
8	302-6 REINSTALL EXISTING 15"RCP INTO POND RISER	$286.41	$0.00	$143.21	$0.00	$143.21	50.00%	$143.21	$7.16
9	302-7 15" KOR-N-SEAL RUBBER BOOT SYSTEM	$188.86	$0.00	$94.43	$0.00	$94.43	50.00%	$94.43	$4.72
10	302-8 6" KOR-N-SEAL RUBBER BOOT SYSTEM	$158.41	$0.00	$158.41	$0.00	$158.41	100.00%	$0.00	$7.92
11	302-9 GABION BASKET BAFFLE WALL INSTALLED	$2,725.10	$0.00	$2,725.10	$0.00	$2,725.10	100.00%	$0.00	$136.26
12	302-10 CONCRETE FLOOR POURED INSIDE POND RISER	$296.99	$0.00	$296.99	$0.00	$296.99	100.00%	$0.00	$14.85
13	303-1 EXCAVATE FOR DEWATERING PIT	$1,606.41	$0.00	$1,606.41	$0.00	$1,606.41	100.00%	$0.00	$80.32
14	303-2 OPERATE/MAINTAIN DEWATERING PUMPING...	$243.01	$0.00	$243.01	$0.00	$243.01	100.00%	$0.00	$12.15
15	303-3 EXCAVATION OF POND BASIN/RELOCATE SOILS	$3,690.76	$0.00	$3,690.76	$0.00	$3,690.76	100.00%	$0.00	$184.54
16	303-4 STRIP TOPSOIL & STOCK PILE	$766.19	$0.00	$766.19	$0.00	$766.19	100.00%	$0.00	$38.31
17	303-5 CONSTRUCT UPSLOPE EARTHEN BERM	$1,423.61	$0.00	$996.53	$0.00	$996.53	70.00%	$427.08	$49.83
18	303-6 SPREAD STOCKPILED TOPSOIL	$667.41	$0.00	$467.19	$0.00	$467.19	70.00%	$200.22	$23.36
19	303-7 INSTALL PERMANENT SEEDING, LIME, FERTILIZER	$212.01	$0.00	$212.01	$0.00	$212.01	100.00%	$0.00	$10.60
20	303-8 INSTALL EC-2 STABILIZATION BLANKETS	$178.46	$0.00	$178.46	$0.00	$178.46	100.00%	$0.00	$8.92
21	303-9 INSTALL SILT FENCE	$246.06	$0.00	$246.06	$0.00	$246.06	100.00%	$0.00	$12.30
22	303-10 INSTALL INLET PROTECTION	$140.96	$0.00	$140.96	$0.00	$140.96	100.00%	$0.00	$7.05
23	304-11 MAINT. OF EROSION CONTROL MEASURES	$314.51	$0.00	$314.51	$0.00	$314.51	100.00%	$0.00	$15.73
	DIVISION 4 - MISCELLANEOUS								
24	414-1 BEDDING STONE	$425.52	$0.00	$425.52	$0.00	$425.52	100.00%	$0.00	$21.28
25	414-2 EROSION CONTROL RIP RAP	$789.21	$0.00	$789.21	$0.00	$789.21	100.00%	$0.00	$39.46
	DIVISION 5 - INCIDENTAL CONSTRUCTION								
26	507-1 REMOVE 60 LF OF 6' CHAIN LINK FENCE	$425.21	$0.00	$425.21	$0.00	$425.21	100.00%	$0.00	$21.26
27	507-2 MOBILIZATION	$1,207.41	$0.00	$905.56	$0.00	$905.56	75.00%	$301.85	$45.28
	GRAND TOTALS	$39,523.29	$0.00	$31,382.41	$0.00	$31,382.41	79.40%	$8,140.88	$1,569.12

AIA DOCUMENT G703 · CONTINUATION SHEET FOR G702 · 1992 EDITION · AIA · ©1992
THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE, N.W. WASHINGTON, D.C. 20006-5232

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702 PAGE ONE OF TWO PAGE(S)

TO OWNER: JAMES CITY COUNTY PURCHASING DEPT.
101-F MOUNTS BAY ROAD
WILLIAMSBURG, VA 23185

PROJECT: TOANO MIDDLE SCHOOL BMP

DNB JOB NO: 113901

DNB INVOICE NO: 7403

FROM CONTRACTOR:
DAVID NICE BUILDERS, INC.
4571 WARE CREEK ROAD
WILLIAMSBURG, VA 23188

APPLICATION NO: 1
DATE: 02/28/11
PERIOD TO: 2/1-28/2011
PROJECT NO:

Distribution to:
[X] OWNER (3 COPIES)
[ ] ARCHITECT
[X] CONTRACTOR (1 COPY)
[ ]

CONTRACT DATE: 01/14/11

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet, AIA Document G703, is attached.

SEE ATTACHED SWORN STATEMENT FROM CONTRACTOR TO OWNER

1. ORIGINAL CONTRACT SUM			$ 39,523.29
2. Net change by Change Orders			$ 0.00
3. CONTRACT SUM TO DATE (Line 1 ± 2)	$		$ 39,523.29
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)			$ 31,382.41
5. RETAINAGE: (Original Contract Only)			
a. 5 % of Completed Work (Column D + E on G703)	$	1,569.12	
b. 0 % of Stored Material (Column F on G703)	$	0.00	
Total Retainage (Lines 5a + 5b or Total in Column I of G703)			$ 1,569.12
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)			$ 29,813.29
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)			$ 0.00
8. CURRENT PAYMENT DUE			$ 29,813.29
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	$		9,710.00

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	$0.00	$0.00
Total approved this Month	$0.00	$0.00
TOTALS	$0.00	$0.00
NET CHANGES by Change Order	$0.00	$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: DAVID A NICE BUILDERS, INC.

By: _____ Date: 02/28/11
Stacy Arnold AR Manager/Contract Administrator

State of Virginia, County of James City
Subscribed and sworn to before me this 28th day of February 2011.
Notary Public: Danielle M. Creekmore
My Commission expires: 10/31/2013 #307058

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED . . . . . $ 29,813.29

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
ARCHITECT: N/A

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

AIA DOCUMENT G702 · APPLICATION AND CERTIFICATION FOR PAYMENT · 1992 EDITION · AIA · ©1992
THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVE., N.W., WASHINGTON, DC 20006-5292

CONDITIONAL WAIVER OF LIEN

KNOW ALL MEN BY THESE PRESENTS, That the undersigned David A.Nice Builders, Inc. for and in consideration of $ 29,813.29 representing the amount paid to the undersigned, receipt whereof is hereby acknowledged, does hereby acknowledge, does hereby waive, release and surrender any and all lien or claim or right of lien, to the date of this waiver, for labor and/or services in the above amount furnished upon the premises situated in the City / County of Williamsburg , State of VA , described as follows:
Toano Middle School BMP – James City County, VA

BY: _____
Stacy Arnold

TITLE: AR Manager/Contract Administrator

DATE: 02/28/2011

SUBJECT ONLY TO THE ACTUAL RECEIPT OF PAYMENT FOR THE AMOUNTS REQUESTED IN ACCORDANCE WITH PAYMENT REQUEST NO: 1

State of Virginia

County of James City

Subscribed and sworn to before me this 28th day of February , 2011.

DANIELLE M. CREEKMORE COMMONWEALTH OF VIRGINIA NOTARY PUBLIC

_____
NOTARY PUBLIC #307058
My Commission expires: 10/31/2013

U:forms/LienWaiver

Nathan Skalak

From: Patrick Nugent - 1579 TIDEWATER_WATERWORKS [patrick.nugent@ferguson.com]
Sent: Thursday, February 17, 2011 12:57 PM
To: Nathan Skalak
Subject: Email Bid# B119635

THIS IS THE NEW PRICE FOR THE TRASH RACK FOR THE TOANO MIDDLE SCHOOL BMP.

Price Quotation # B119635

FERGUSON WATERWORKS #1579
6540-A MOORETOWN ROAD
WILLIAMSBURG, VA 23188-0000

Phone : 757-220-0556
Fax : 757-220-3057

Bid No.....: B119635
Bid Date...: 02/17/11
Quoted By: PTN
Customer.: DAVID A NICE BUILDERS INC
4571 WARE CREEK ROAD
WILLIAMSBURG, VA 23185

Cust Phone: 757-566-3032
Terms.....: NET 30 DAYS
Ship To.....: DAVID A NICE BUILDERS INC
4571 WARE CREEK ROAD
WILLIAMSBURG, VA 23185

Cust PO#..:

Job Name.:

Item	Description	Quantity	Net Price	UM	Total
SP-C48PSTR	48" PYRAMID TRASH RACK ANTI-VORTEX	1	4134.920	EA	4134.92

Net Total: 4134.92
Tax: 206.75
Total: 4341.67

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at http://wolseleyna.com/terms_conditionsSale.html. Govt Buyers: All items quoted are open market unless noted otherwise.

III BID FORM

Bids to be opened:	Time: **2:00 p.m.** **December 14, 2010**
Work to be Completed in:	**Sixty (60) Days from date fixed in Notice to Proceed**
Liquidated Damages:	**$250** per calendar day after time for Final Completion has expired.
Performance Bond:	100%
Payment Bond:	100%
~~Bid Security:~~	~~5%~~

To: Purchasing Director
James City County
101-F Mounts Bay Road
Williamsburg, Virginia 23185

Bid Number and Project Name: Toano MS BMP Repairs and Retrofit

A.BID PRICE

UNIT PRICE BID

In compliance with the Bid Documents, titled Toano MS BMP Repairs and Retrofit, and all Addenda issued to date all of which are part of this Bid, the undersigned hereby proposes to furnish all items including materials, supervision, labor, and equipment in strict accordance with, said Contract Documents, for the sum of :

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 1 – GENERAL PROVISIONS					
110-1	BMP TRASH & DEBRIS REMOVAL INCLUDING OLD CMP RISER, BASE, FALLEN TREES, LIMBS, ETC.	LS	1	1,694.81	1,694.81
110-2	SURVEY, STAKEOUT, FLAGGING (AS NEEDED)	LS	1	607.41	607.41
				DIVISION 1 SUBTOTAL $	2,302.22
DIVISION 3 - CONSTRUCTION					
301-1	CLEARING & CHIPPING TREES (NO GRUBBING) APPROX 30.000 SF	LS	1	5,767.41	5,767.41
301-2	GRADING FOR CONSTRUCTION ACCESS & OPERATIONS	SF	5,000	0.18	917.12
302-2	MODIFIED PRECAST SWM POND RISER STRUCTURE W/ TRASH RACK & GUARDS INSTALLED	EA	1	13,948.17	13,948.17

SECTION	ITEM	UNIT	QUAN	UNIT PRICE	TOTAL PRICE
302-4	6" DIAM. SCEHDULE 40 PVC DRAIN PIPE W/ PERFORATED RISER & CAP INSTALLED	EA	1	206.32	206.32
302-5	6" DIAM. GATE VALVE (VALTERRA) W/ EXTENSION RODS TO TOP OF RISER INSTALLED	EA	1	389.54	389.54
302-6	REINSTALL EXISTING 15"RCP INTO POND RISER	LS	1	286.41	286.41
302-7	15" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1	188.86	188.86
302-8	6" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1	158.41	158.41
302-9	GABION BASKET BAFFLE WALL INSTALLED	LS	1	2,725.10	2,725.10
302-10	CONCRETE FLOOR POURED INSIDE POND RISER	LS	1	296.99	296.99
303	**EARTHWORK**				
303-1	EXCAVATE FOR DEWATERING PIT	LS	1	1,606.41	1,606.41
303-2	OPERATE & MAINTAIN DEWATERING PUMPING WITHIN DEWATERING PIT AS NEEDED.	LS	1	243.01	243.01
303-3	EXCAVATION OF POND BASIN AS SHOWN ON PLAN AND RELOCATE EXCAVATED SOILS UPSLOPE.	CY	400	9.23	3,690.76
303-4	STRIP TOPSOIL (BERM AREA), & STOCK PILE	SY	400	1.92	766.19
303-5	CONSTRUCT UPSLOPE EARTHEN BERM REUSING EXCAVATED BASIN SOILS	CY	400	3.56	1,423.61
303-6	SPREAD STOCKPILED TOPSOIL OVER BERM	SY	400	1.67	667.41
303-7	INSTALL PERMANENT SEEDING, LIME, FERTILIZER & STRAW.	SY	600	0.35	212.01

SECTION	ITEM	UNIT	QUAN	UNIT PRICE	TOTAL PRICE
303-8	INSTALL EC-2 STABILIZATION BLANKETS	SY	400	0.45	178.46
303-9	INSTALL SILT FENCE	LF	150	1.64	246.06
303-10	INSTALL INLET PROTECTION	LS	1	140.96	140.96
304-11	MAINTANENCE OF EROSION CONTROL MEASURES	LS	1	314.51	314.51
				DIVISION 3 SUBTOTAL $	34,373.72
DIVISION 4- MISCELLANEOUS					
414	**STONE & RIPRAP**				
414-1	BEDDING STONE # 57 INSTALLED	TON	5	85.10	425.52
414-2	EROSION CONTROL RIP RAP, 1.5' DEEP, ON FILTER CLOTH INSTALLED	SY	2	394.60	789.21
				DIVISION 4 SUBTOTAL $	1,214.73
DIVISION 5 – INCIDENTAL CONSTRUCTION					
507	**FENCES**				
507-1	REMOVE 60 LF OF 6' CHAIN LINK FENCE WITH TOP RAIL AND BARBED WIRE AND REINSTALL UPON COMPLETION OF PONDRISER INSTALLATION.	LF	60	7.09	425.21
507-2	MOBILIZATION	LS	1	1,207.41	1,207.41
				DIVISION 5 SUBTOTAL $	1,632.62

(DIV 1 SUBTOTAL+DIV 3 SUBTOTAL+DIV 4 SUBTOTAL-DIV 5 SUBTOTAL)=

TOTAL BASE BID: ($ 39,523.29) Thirty-nine thousand five-hundred twenty-three dollars 29/100 cents

In Words

AS NEEDED UNIT PRICES:

The Undersigned submits the following as needed unit costs for the Work. Prices shall include the item installation, materials, labor, overhead and profit costs for the work to be completed 100 percent. Failure to quote as needed unit prices may result in the rejection of the bid. The Owner reserves the right to delete as needed unit prices from the executed contract that are deemed unreasonable.

1. BYPASS STORMWATER PUMPING
   INSTALL A TEMORARY PLUG IN THE UPSLOPE YARD DRAIN MANHOLE AND PUMP STORMWATER AWAY FROM THE STORMWATER POND DURING STORM EVENTS.

   $ 275.00 per day.

2. PROVIDE STREET SWEEPING OF PAVED SURFACES IF SEDIMENT TRACKING OCCURS AS A RESULT OF CONSTRUCTION EGRESS.

   $ 45.00 per hr.

3. INSTALLATION OF A CONSTRUCTION ENTRANCE 12' X 70', VDOT # 1 STONE ON FILTER FABRIC.

   $ 2,500.00 LS

4. TEMPORARY USE OF TIMBER MATTING FOR GROUND STABILIZATION

   $ 35.00 per LF.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. The prices quoted shall include without exception all materials, supervision, labor, equipment, appliances, clean-up, applicable sales, use and other taxes, insurance, building permit or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Contract Documents. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the Contract Time. Unit prices shall be used in determining additions or deductions from the total Contract Price in the event of changes due to unforeseen conditions in the Work.

Bidders shall use the procedures for calculating mobilization costs as outlined in Section 513 of the Hampton Roads Planning District Commission (HRPDC) Regional Construction Standards (Current Edition)

III BID FORM

Bids to be opened:	Time: **2:00 p.m.** **December 14, 2010**
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~~Bid Security:~~	~~5%~~

To: Purchasing Director
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303-6	SPREAD STOCKPILED TOPSOIL OVER BERM	SY	400	1.67	667.41
303-7	INSTALL PERMANENT SEEDING, LIME, FERTILIZER & STRAW.	SY	600	0.35	212.01

SECTION	ITEM	UNIT	QUAN	UNIT PRICE	TOTAL PRICE
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303-9	INSTALL SILT FENCE	LF	150	1.64	246.06
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   MANHOLE AND PUMP STORMWATER AWAY FROM THE STORMWATER POND
   DURING STORM EVENTS.

   $ 275.00 per day.

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Bidders shall use the procedures for calculating mobilization costs as outlined in Section 513 of the Hampton Roads Planning District Commission (HRPDC) Regional Construction Standards (Current Edition)

B. ADDENDA

The undersigned acknowledges receipt of the following addenda:

Addendum No. #1 Dated: 12/2/2010.

Addendum No. #2 Dated: 12/8/2010.

Addendum No. N/A Dated: _____.

C. We agree to enter into an Agreement with James City County, Virginia within ten (10) days of the award of same to us for the price named in our Bid.

D. It is expressly agreed by us that James City County, Virginia shall have the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid and accept the Bid in James City County's, best interest.

~~E. In default of the performance on our part of the conditions of Bid, our failure to enter into an Agreement with James City County/James City Service Authority, Virginia, within the time above set, we herewith furnish a Bid Security in the amount of $_____, which shall be absolutely forfeited to James City County/James City Service Authority, Virginia, but otherwise the said Bid Security shall be returned.~~

F. We agree to begin Work at any time we may be notified by the Owner, and complete all of the Work embraced in the Agreement within Sixty (60) Days of the date set in the Notice to Proceed;

G. *[This applies to projects over $200,000 unless otherwise indicated].* I/We elect to utilize the Escrow Account Procedure described in the provision of this bid if determined to be the successful low Bidder. _____ (write "Yes" or "No").

No
_____ Bid total does not qualify for escrow account option

H. The undersigned has read all sections under "Instructions to Bidders."

I. CONTRACTOR'S REGISTRATION AND SIGNATURE

Registered Virginia Contractor Class and No. 2701 016429A
Registration Expires RENEWED ANNUALLY

(NOTE: FAILURE TO INCLUDE CONTRACTOR'S REGISTRATION NUMBER IS GROUNDS FOR REJECTION OF THE BID.)

Contractor David A. Nice Builders, Inc. Signed _____

Date December 14,2010 Title President/Owner

State Corporation Commission ID # _____

NOTE: If Bidder is a corporation, write state of incorporation under signature.

MAILING ADDRESS AND TELEPHONE/FAX NUMBER OF BIDDER:

4571 Ware Creek Road, Williamsburg, VA
P: (757) 566-3032 / F: (757) 566-4686

See above

( ) [Telephone] Email ; FAX

IF CORPORATION, PROVIDE NAME AND MAILING ADDRESS AS REQUIRED BELOW.

PRESIDENT	SECRETARY	TREASURER
David A. Nice	Deborah L. Nice	Linda L. Butler
	same as above	

IF PARTNERSHIP, PROPRIETORSHIP, LIMITED LIABILITY COMPANY OR OTHER FIRM, PROVIDE NAME AND MAILING ADDRESS OF EACH PARTNER, PROPRIETOR, OR MEMBER OF FIRM.

	N/A	

TOANO MIDDLE SCHOOL BMP REPAIR PROJECT PRECON

JANUARY 27, 2011

SEQUENCE OF CONSTRUCTION:

1. Mobilization
2. Begin the removal of trees from the dam embankment and other areas designated on the site plan (no stump removal).
3. Clear area designated on the plan for the construction of an earthen berm.
4. Install erosion control measures as shown on plan.
5. Excavate dewatering pit within the pond and begin dewatering operations, if discharged water is sediment laden, the discharge shall be filtered. Excavated soils may be placed upslope in the designated berm area.
6. Remove trees, trash and debris from within the pond area.
7. Following dewatering, excavate the pond bottom as per plan, remove excavated material upslope to berm area.
8. Remove old riser, install new riser re-connect 15" RCP pipe, install 6" low drain, gabion baskets etc, complete the riser installation.
9. Allow pond to begin to fill with water, check riser structure and pipes to insure no leaks.
10. Stabilize disturbed areas and earthen berm as per plan and specifications.
11. Remove erosion control measures following the establishment of a uniform grass cover.

Nathan Skalak

From: Patrick Nugent - 1579 TIDEWATER_WATERWORKS [patrick.nugent@ferguson.com]
Sent: Monday, December 13, 2010 2:49 PM
To: Nathan Skalak
Subject: Email Bid# B118689

Price Quotation # B118689

FERGUSON WATERWORKS #1579

6540-A MOORETOWN ROAD
WILLIAMSBURG, VA 23188-0000

Phone : 757-220-0556
Fax : 757-220-3057

Bid No.....: B118689
Bid Date...: 12/08/10
Quoted By: WAD
Customer.: CONTRACTOR QUOTATION
MATERIALS PRICING QUOTE
DO NOT USE FOR SALES ORDER
COPY BID TO CUSTOMER ORDER
CHESAPEAKE, VA 23321
Cust PO#..: JAMES CITY CNTY, VA

Cust Phone: 757-826-4127
Terms.....: NET 30 DAYS
Ship To.....: CONTRACTOR QUOTATION
MATERIALS PRICING QUOTE
DO NOT USE FOR SALES ORDER
COPY BID TO CUSTOMER ORDER
CHESAPEAKE, VA 23321
Job Name.: TOANO BMP REPAIR

Item	Description	Quantity	Net Price	UM	Total

	EROSION CONTROL BLANKET				

WSR175120	SGL NET STRAW 7.5 X 120 100 SY	400	0.220	SY	88.00
ISODSTAPLE11	6 U SHAPE 11 GA SOD STAPLE 1000 BX	1	29.080	BX	29.08

	SILT FENCE				

DBSF36300	BLAC SILT FENCE 36X300	1	28.000	EA	28.00
RA020020048	WOOD STAKE 2X2X48 NOM	25	0.750	EA	18.75

	GABION BASKETS				

MPLA	6X3X3 GABION TYPE A PVC BSKT	1	92.230	EA	92.23
MPLG	6X3X1 GABION TYPE G PVC BSKT	1	54.530	EA	54.53

	PYRAMID SERIES TRASH RACK				

SP-C48PSTR	48" PYRAMID TRASH RACK ANTI-VORTEX	1	3584.140	EA	3584.14
SP-C48IDCONCRSR	48" ID TRSH RACK CONC RISER	1	420.310	EA	420.31

Net Total:	**4315.04**
Tax:	**215.76**
Total:	**4530.80**

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at http://wolseleyna.com/terms_conditionsSale.html. Govt Buyers: All items quoted are open market unless noted otherwise.

AMERICAST
not just concrete, concrete solutions.

Hanover Pipe Plant
P.O. Box 1685
Ashland, VA 23005
(804) 752-1311
FAX (804) 752-7483

Money Point Pipe Plant
3900 Shannon Street
Chesapeake, VA 23324
(757) 494-7473
FAX (757) 494-0846

Charleston Pipe Plant
P.O. Box 70006
Charleston, SC 29415
(843) 744-5376
FAX (843) 566-7956

PROJECT: **JAMES CITY COUNTY--PIPE- BUDGET NUMBERS** DATE: **7/21/10**
LOCATION: **JAMES CITY** BID DATE:

Approx. Qty.	Size	Specifications	Unit Price	Ext. Price
1 FT	12"	CL 3 RCP OFFSET W/GASKET	$12.22	$12.22
1 FT	15"	CL 3 RCP OFFSET W/GASKET	$14.61	$14.61
1 FT	18"	CL 3 RCP OFFSET W/GASKET	$19.19	$19.19
1 FT	24"	CL 3 RCP OFFSET W/GASKET	$29.80	$29.80
1 FT	30"	CL 3 RCP OFFSET W/GASKET	$44.23	$44.23
1 FT	42"	CL 3 RCP OFFSET W/GASKET	$80.73	$80.73
1 FT	48"	CL 3 RCP OFFSET W/GASKET	$101.52	$101.52
		PIPE IN 8' LENGTHS ONLY		
		DELIVERY CHARGES MAY APPLY IF		
		LESS THAN A FULL LOAD		
			Net Amount	$302.30

NOTES:

1. This quotation is good for 60 days from the above date.
2. Prices quoted are for truckload lots to accessible points by our trucks, at or near your jobsite. Less than truckload lots carry additional short load hauling charge of $225.
3. Contractor responsible to unload all product.
4. All returns must be pre-approved and are subject to restocking, repairs and freight charges.
5. 2% discount if paid by 15th day following invoice date. Net 30 days.
6. All prices are subject to sales tax when applicable.
7. Joint material for round and elliptical pipe is included in per foot price, except where noted.

Please visit our web site at www.AmericastUSA.com for additional information on our products and services.
We thank you for the opportunity to quote and hope to have the pleasure of serving you.

Sincerely,

EST: **RKH**

R. KELLY HAYES
Sales Representative
757-869-2546
khayes@americastusa.com

Ashland Plant
11352 Virginia Precast Road
Ashland, VA 23005
(800) 999-2278
FAX (804) 798-3426

Halltown Plant
P.O. Box 120
Halltown, WV 25423
(800) 648-4580
FAX (304) 798-3426

Harrisonburg Plant
210 Stone Spring Road
Harrisonburg, VA 22801
(800) 648-2278
FAX (540) 434-3364

C:\Documents and Settings\PATM\Local Settings\Temporary Internet Files\Content.Outlook\GX2XST2C\JAMES CITY COUNTY--PIPE- BUDGET NUMBERS

21,900

TOANO Middle School

Clear Embankment of Trees & wood vegetation
.15 Acres @ $20,000. per = $3,000.-

+ 1,000-

Clear ACCESS WAY & WORK AREA within Bmp
+ 10 Acres @ $20,000 per = 2,000.-

Remove damaged Riser & ANTI VORTEX & FLAP VALVE, separate from the barrel. SAVE FLAP VALVE and dispose of Riser, Concrete Etc @ 3,000.-

INSTALL 48" concrete riser; Crest ELV. 96.2
15" RCP INVERT OUT 73.5
New concrete Riser Height 22.7 FT
48" Riser w/steps & 8' dia base SLAB = 1 - @ $300 per = 6,900.
INSTALL 1-15" RCP barrel TO 48" Riser &
ATTACH. RISER/ grout JOINT (MAY Need 8' 15" RCP) @ 3,000 = 3,000.

INSTALL 6" FLAP/GATE VALVE bottom drain IN
48" RISER 1-6" VALVE @ 1,000.-

INSTALL 48" Pyramid style PLASTIC TRASH RACK @ $2,000
(COST of TR 1,770-)

CLEAN out debris from Bmp (TREES, TIRES Litter ETC) 1,000-

STABILIZE ALL disturbed AREAS with seed/straw - 1,000.-

$ 22,900.-

MOBILIZATION of CONTRACTOR 5% = 1,045.
ENGINEERING & GEOTECH 20% = 4,180.

$ 28,125.00

clearing	+	1,000
dewatering Ex.	+	1,000
dewatering pump	+	1,000
EXCAVATE 500 YRDS sediment	+	10,000
Riser	+	3,000
STABILE Sediment	+	4500

DRAINAGE SOLUTIONS, INC

771 International Drive
Franklin, IN. 46131
Phone (317) 346-4110
Fax (317) 346-4109

Fax

To: Pat Menichino

From: Don Colip
dcolip@drainagesolutionsinc.com

Fax: 757-259-5833

Phone:

Date: Oct. 15, 2010

Pages: 1 total

Subject: Valterra Valve Extensions

Pat,

I received the pricing for the 6" Valterra Gate Valve Extensions.

X8-72 = $66.70 each
X8-36 = $43.50 each
X8-12 = $34.30 each

If you need any further information let me know.

Don Colip

DRAINAGE SOLUTIONS, INC
SUPPLIER / DISTRIBUTOR

(317) 346-4110

View Cart Checkout
Amount in Cart: $0.00

Search Results

Found **8** product(s) for **Valves-Valterra Gate** (1-8 of 8)

Valves-Valterra Gate

Valterra 1 1/2" PVC Gate Valve w/Plastic Paddle (S x S)
Vacuum or low pressure applications
PRICE: $8.63
Add to Cart -->
Buy Now! -->

Valterra 2" PVC Gate Valve w/Plastic Paddle (S x S)
Vacuum or low pressure applications
PRICE: $13.96
Add to Cart -->
Buy Now! -->

Valterra 3" PVC Gate Valve w/Plastic Paddle (S x S)
Vacuum or low pressure applications
PRICE: $16.64
Add to Cart -->
Buy Now! -->

Valterra 4" PVC Gate Valve w/Stainless

Valterra 6" PVC Gate Valve w/Stainless

Valterra 8"PVC Gate Valve w/Stainless

Need (1) = # 265.73

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FAX (757) 494-0846

Charleston Pipe Plant
P.O. Box 70006
Charleston, SC 29415
(843) 744-5376
FAX (843) 566-7956

PROJECT: **JAMES CITY COUNTY POND RISER REPAIR** DATE: **10/8/10**
LOCATION: **JAMES CITY** BID DATE:

Approx. Qty.		Size	Specifications	Unit Price	Ext. Price
1	EA	24.5'	48" RISER W/EXT BASE, BOOTS, trash racks	$4,842.00	$4,842.00
1	EA	24.5'	RISER W/EXT BASE, BOOTS, trash racks	$5,757.00	$5,757.00
			4'10" 60" EXT BASE, 60X48" REDUCER CONE		
			AND 48" THE REST OF THE WAY UP		
				Net Amount	$10,599.00

NOTES:

1. This quotation is good for 60 days from the above date.
2. Prices quoted are for truckload lots to accessible points by our trucks, at or near your jobsite. Less than truckload lots carry additional short load hauling charge of $225.
3. Contractor responsible to unload all product.
4. All returns must be pre-approved and are subject to restocking, repairs and freight charges.
5. 2% discount if paid by 15th day following invoice date. Net 30 days.
6. All prices are subject to sales tax when applicable.
7. Joint material for round and elliptical pipe is included in per foot price, except where noted.

Please visit our web site at www.AmericastUSA.com for additional information on our products and services.
We thank you for the opportunity to quote and hope to have the pleasure of serving you.

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771 International Drive
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Phone (317) 346-4110
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Fax

To: Pat Menichino

From: Don Colip
dcolip@drainagesolutionsinc.com

Fax: 757-259-5833

Phone:

Date: Oct. 15, 2010

Pages: 1 total

Subject: Valterra Valve Extensions

Pat,

I received the pricing for the 6" Valterra Gate Valve Extensions.

X8-72 = $66.70 each ← Need (3) = #200.10
X8-36 = $43.50 each ← Need (1) = 43.50
X8-12 = $34.30 each
#243.60

If you need any further information let me know.

Don Colip

SITE-WORX PLUS

10/26/2010

Per

JOB: TOANO MIDDLE SCHOOL - BMP DEMO AND RECONSTRUCTION					10/26/2010	
	DESCRIPTION	DAYS	UNIT	QTY.	PRICE	
1	STAKEOUT	1	L/S	1	$ 1,950	
2	CLEAR & CHIP ON SITE	2	ACRE	0	$ 4,550	
3	DEMOLITION - EXISTING STRUCTURE	1	L/S	1	$ 2,535	
4	SILT FENCE & REMOVAL	1	L/F	220	$ 1,008	
5	INLET PROTECTION & REMOVAL	1	EA	1	$ 77	
6	STRIP TOPSOIL - STOCKPILE	0.5	C/Y	50	$ 1,040	
7	TOPSOIL - RESPREAD	0.5	C/Y	50	$ 975	
8	CUT FOR FILL	2	C/Y	450	$ 4,680	10.40
9	GRADE- SUBGRADE	2	S/Y	4,800	$ 2,860	.59
10	EXPORT EXCESS	1	C/Y	200	$ 3,770	18.85
11	NEW PRECAST STRUCTURE w/RACK	3	L/S	1	$ 24,895	
12	GABION BASKETS	1	L/F	18	$ 4,160	231.00
13	C/L FENCE REMOVAL & REPLACEMENT	2	L/F	180	$ 2,340	13,-
14	SEED / STRAW / EC- MATTING	1	S/Y	1,300	$ 4,726	
	TOTAL DAYS=	18	TOTAL:		$ 59,565	

Toano Middle School Estimate

Description	Material	Quantity	Unit Cost $	Total Cost $
Land Clearing – Embankment		.25 acres	20,000.00	5,000.00
- Construction Access/Fill Area		.10 acres	20,000.00	2,000.00
Erosion Control – Silt Fence, Inlet protection, etc.		150 ft	5.00	750.00
Dewater BMP - Excavate a pit to dewater soils to elevation 70.00		50 cy	20.00	1,000.00
Pump water from pit & By Pass pumping		2 days	500.00	1,000.00
Excavate sediment - to elevation 72.00 & place fill upslope shape BMP bottom		500 cy	20.00	10,000.00
Remove - damaged riser pipe, flap valve, concrete base, etc., & disconnect from barrel.		(1)	3,000.00	3,000.00
Install - New 48" Concrete Riser w/ 8' base slab, w/ gasket joints, rubber boots, & internal steps.	48" MH	25 ft	400.00	10,000.00
Install - New 48" riser to 15" RCP barrel, using (1) new 15" RCP w/ rubber boot,	15" RCP	8 ft	30.00	240.00
Install - New 6" lower drain w/ internal 6 " sluice valve & boot.	6" sluice valve	(1)	500.00	500.00
Install - New 48" pyramidal trash guard & attach to 48" riser.	48" trash guard	(1)	2,000.00	2,000.00

Remove - Trash, tree limbs, & dead trees From within BMP and dispose of.	45 cy	20.00	900.00
		Subtotal:	$36, 390.00
Grade & Stabilize: w/ topsoil, seed and erosion control blankets, all sediment and fill excavated from the BMP.	500 sy (500 cy)	10.00	4,500.00
		Subtotal	40,890.00
Contractor Mobilization		5%	2,044.00
Engineering & Geotech Services		20%	8,178.00

BID OPENING TABULATION FORM

James City County, Virginia

Bid Number: I-4276 Time: 2:00 p.m. Prepared by: [illegible]

Project: TMS SWP Repairs Date: 12/19/13 Witness: Wendy Wiggins

DESCRIPTION	Qty / Unit	BIDDERS: ATS Inc.		Bush Const.		Carolina Marine		Howard Wilcox	
		Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Total Base Bid		39,300	—	122,096.80	—	94,413 -		74,616 -	
					—				
As Needed Unit Prices									
Pump Per day 1	lsl	400.00	—	500 -	—	800 -		1500 -	
Street sweeping 2	hr	400 00	—	75 -	—	100 -		20 -	
Const Entrance 3	LS	1,200 -	—	2,000 -	—	8 000 -		1 600 -	
Timber Matting 4.	LF	20	—	10. -	—	150. -		20 -	
	Total								
	Delivery								
	Terms								

BID OPENING TABULATION FORM

James City County, Virginia

Bid Number: 11-4276 Time: 2:00 p.m. Prepared by: Rice

Project: TKS Bldg Repairs Date: 12/14/10 Witness: Wendy Wiggs

DESCRIPTION	Qty / Unit	BIDDERS: Earley Marine		Bryants Excavation		W. Padden		Pur year Enviro.	
		Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Total Base Bid			79,350		~~71,950~~ 50,688 -		45,974.74		52,241.63
As Needed Unit Prices									
1	day		2500 -		~~300~~ 300 -		300 -		300 -
2	hr		250 -		~~75~~ 75 -		45 -		20 -
3	LS		1500 -		1500 -		7300 -		10,200 -
4	LF		100 -		70 -		80 -		20 -
	Total								
	Delivery								
	Terms								

BID OPENING TABULATION FORM

James City County, Virginia

Bid Number: 11-4276 Time: 2:00 p.m. Prepared by: Rae

Project: TMS BMP Repairs Date: 12/14/10 Witness: Wendy Wiggs

DESCRIPTION	Qty / Unit	BIDDERS: C. Williamswills		Harbor Dredge		Jamestown Contracting		Walter Via Enterprises	
		Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Total Base Bid			43467.04		43150 -		75,382.75		50 355 -
As Needed Unit Prices									
1	day		215.-		200 -		500 -		500 -
2	hr		125 -		200 -		65 -		125 -
3	LS		2,200-		2,200 -		1,900 -		2,500 -
4	LF		30 -		16. -		3, -		20. -
	Total								
	Delivery								
	Terms								

BID OPENING TABULATION FORM

James City County, Virginia

Bid Number: 11-4276 Time: 2:00 p.m. Prepared by: [signature]

Project: TMS BMP Repairs Date: 12/14/10 Witness: [signature]

DESCRIPTION	Qty / Unit	BIDDERS: David A Nice Bldrs		J. Sanders Const.		Toano Contractors		Henry L Branscome LLC	
		Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Total Base Bid			39,523.24		58770.-		63520.-		54,680.45
As Needed Unit Prices									
1	day		275-		800-		1500.-		1,000-
2	hr.		45-		90-		200-		100-
3	LS		2,500.-		1,280.-		2,000-		1500-
4.	LF		35.-		100-		100-		42.-
	Total								
	Delivery								
	Terms								

TOANO MS PRE-BID

12/1/10
10 AM

All info on website -

should not need to go to BOS -
hope to award by end of ~~1st~~ 1st week in January
- finish by 3/8/11 - 60 days
Mr Fudge is the principal.
When can they ~~access~~ access the site? Time of day?
Need to coordinate w/schools on ~~time~~ buses
Can they work on weekend?
Need to protect the field

Chips to be left onsite
Soil left onsite - not removed from site - create berm

D-001-10

Stormwater Division
Drainage (D) Projects

	Project Type	Classification	Disturbance	Process	Plan	Env Inv	RPA Approval	LDP (3)	E&S Plan (4)	WQIA (5)	LDP Application	Bond
MR-1	Maintenance/Repair	Small	< 5,000 sf	ENV DIV only	D	No (1)	Exemption (2)	Yes	Yes	Minor	Yes	No
MR-2	Maintenance/Repair	Medium	5,000-10,000 sf	ENV DIV only	D	Yes	Exemption (2)	Yes	Yes	Minor	Yes	No
MR-3	Maintenance/Repair	Large	>10,000 sf	ENV DIV only	D	Yes	Exemption (2)	Yes	Yes	Minor	Yes	No
I-1	Improvement	Small	< 5,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Minor	Yes	No
I-2	Improvement	Medium	5,000-10,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Minor	Yes	No
I-3	Improvement	Large	>10,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Minor	Yes	No
N-1	New	Small	< 5,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Major	Yes	Yes (7)
N-2	New	Medium	5,000-10,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Major	Yes	Yes (7)
N-3	New	Large	>10,000 sf	Planning & ENV DIV	SP	Yes	Administrative (6)	Yes	Yes	Major	Yes	Yes (7)

(1) Except for 23-10(2)(d) perennial stream component
(2) To qualify for exemption, must comply with subsections a through d of Section 23-13(a)(2) of the CBPO (must be maintenance/repair only)
(3) Only if true "emergency" could it be exempt from needing a Land-Disturbing permit per Section 8-2 of the ESO. Very rare case for drainage projects.
(4) E&S Plan: disturbed area, narrative, standard County notes, plan, details and sequence of construction.
(5) WQIA: purpose of project, RPA impact estimate, mitigation & measures to offset impact, and comply with 23-12(a)(2) of CBPO.
(6) Administrative review and approval under water dependent clause of Section 23-7 & 23-14(e) of the CBPO
(7) Bonding through the standard County procurement process through Purchasing (ie. bid process)

III AGREEMENT (IFB No. 11-4276)

This AGREEMENT, dated this _____ day of _____, 20___, by and between James City County hereinafter called the Owner; and David A. Nice Builders, Inc., a corporation organized and existing under the laws of the Commonwealth of Virginia, hereinafter called the Contractor.

WITNESSETH: The Owner and Contractor, for the consideration stated herein, agree as follows:

A. Scope of Work

The Contractor shall perform all required Work and shall provide and furnish all labor, materials, necessary tools, expendable equipment and utility and transportation service and all else required to complete the construction of the Invitation for Bids 11-4276 Toano Middle School BMP Repairs & Retrofit project all in strict accordance with the Drawings and Specifications, including any and all Addenda, and in strict compliance with the Contract Documents, the terms of which are incorporated herein by reference.

It is understood and agreed that said labor, materials, tools, equipment and service shall be furnished and said Work performed and completed under the direction and supervision of the Contractor and subject to the approval of the Owner or its authorized representative.

B. Engineer

This Project has been designed by Pat Menichino, James City County Stormwater Division, who is hereinafter called the Engineer and who is to act as the Owner's Representative, assume all duties and responsibilities, and have the rights and authority assigned to the Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents. In the event the Owner should not require the services of the Engineer for any or all parts of the project, the power, duties, and responsibilities conferred hereto to the Engineer shall be construed to be those of the Owner or its authorized representative.

C. Guarantee

All materials and equipment, furnished by the Contractor, and all construction involved in this Agreement are hereby guaranteed by the Contractor to be free from defects owing to faulty materials or workmanship for a period of one year after date of Substantial Completion of the Work. All Work that proves defective, by reason of faulty material or workmanship within said period of one year, shall be replaced by the Contractor free of cost to the Owner. These guarantees shall not operate as a waiver of any of the Owner's rights and remedies for default under or breach of the Agreement which rights and remedies may be exercised at any time within the period of any applicable statute of limitations.

D. Contract Price

The Owner shall pay the Contractor as just compensation for the satisfactory performance of the Work, subject to any additions or deductions as provided in the Contract Documents, the unit and/or lump sum price as contained in the Bid Schedule attached hereto.

The Contract Price is Thirty-Nine Thousand Five Hundred Twenty-Three Dollars and 29/100 Cents ($39,523.29) based upon unit and/or lump sum prices extended as herein contained.

E. Payments

The Owner will pay the Contract Price to the Contractor in the manner and at such times as set forth in Section 109 of the Hampton Roads Planning District Commission *Regional Construction Standards*, Fourth Edition, as referenced in Section I. below and as specifically revised for this Project.

F. Time

The undersigned Contractor agrees to commence Work within **10** Days after the date of Notice to Proceed and further agrees to ~~substantially~~ Complete ~~all Work under this Agreement within _____ Days from the date of the Notice to Proceed and to reach Final Completion of~~ all Work under this Agreement within **Sixty (60) Days** from the date of the Notice to Proceed.

G. Applicable Law/Compliance

(1) Applicable Law

This Agreement shall be deemed to be a Virginia contract and shall be governed as to all matters of validity, interpretations, obligations, performance, or otherwise, exclusively by the laws of the Commonwealth of Virginia, and all questions arising with respect thereto shall be determined in accordance with such laws. Regardless of where actually delivered and accepted, this Agreement shall be deemed to have been delivered and accepted by the parties in the Commonwealth of Virginia.

(2) Compliance with all Laws

Contractor shall comply with all federal, state and local statutes, ordinances, and regulations, now in effect or hereafter adopted, in the performance of Work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional license and permits necessary for performance of this Agreement prior to the initiation of Work. [If the Contractor is a corporation] Contractor further expressly represents that it is a corporation in good standing in the Commonwealth of Virginia and will remain in good standing throughout the term of the contract. Contractor shall at all times observe all health and safety measures and precautions necessary for the sanitary and safe performance of the contract Work.

(3) Venue

Any and all suits for any claims or for any breach or dispute arising out of these Contract Documents shall be maintained in the appropriate court of competent jurisdiction in James City County.

(4) Environmental Considerations

Any cost or expense associated with environmentally related violations of the law, the creation or maintenance of a nuisance, or releases of hazardous substance, including but not limited to, the cost of any clean up activities, removals, remediation, responses, damages, fines, administrative or civil penalties or charges imposed on the Owner, whether because of actions or suits by any governmental or regulatory agency or by any private party, as a result of the release of any hazardous substances, or any noncompliance with or failure to meet any federal, state or local standards, requirements, laws, statutes, regulations or the law of nuisance by the Contractor (or its agents, officers, employees, subcontractors, consultants, subconsultants, or any other persons, corporations, or legal entities employed, utilized, or retained by the Contractor) in the performance of this Agreement or related activities, shall be paid by the Contractor.

(5) Non-Discrimination/Drug-Free Workplace Provisions

(a) Employment discrimination by Contractor shall be prohibited. **By submitting their bids, Bidders certify to James City County/James City Service Authority that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act, and the Code of Virginia § 43.2.2-4311. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (Code of Virginia § 43.2.2-4343.1.E.)** During the performance of this Agreement, Contractor agrees as follows:

(i) Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification/consideration reasonably necessary to the normal operation of Contractor. Contractor will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act, and the Code of Virginia § 2.2-4311. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the Agreement on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to

account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

(ii) Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that Contractor is an equal opportunity employer.

(iii) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulations shall be deemed sufficient for the purpose of meeting the requirements of this section.

(iv) Contractor will include the provisions of the foregoing subsections (i) and (ii), and (iii) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(v) **For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of any controlled substance or marijuana during the performance of the contract.**

(b) During the performance of this Agreement, Contractor agrees as follows:

(i) Contractor will provide a drug-free workplace for Contractor's employees.

(ii) Contractor will post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(iii) Contractor will state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.

(iv) Contractor will include the provisions of the foregoing subsections (i), (ii) and (iii) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(v) For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation,

possession, or use of any controlled substance or marijuana during the performance of the contract."

H. Liquidated Damages

The damage and loss to the Owner resulting from failure of the Contractor to complete the Work within the time specified in this Agreement, plus any extension of time granted, shall be stipulated in Section 108.X, and Section 102.III, Bid Form. Damage monies may be withheld on partial and final payment to the Contractor. (See Section 102.III Bid Form and Section 108.X for explanation and specified dollar amounts.)

I. Component Parts of the Contract

This Agreement includes all completed components of the Bid and Contract Documents as defined in Section 101 of the HRPDC *Regional Construction Standards* (Latest Edition indicated in the Invitation For Bids), as revised for this Project all of which are incorporated herein by reference.

J. Binding

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

K. Changes to the Agreement

No provision of this Agreement shall be changed, amended, modified, waived, or discharged except as agreed to in writing by the Owner and the Contractor.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and first above written in two (2) counterparts each of which shall for all purposes be deemed an original.

OWNER

James City County

By: _____
Stephanie Luton

Title: Purchasing/Management Services Director

Attest: _____

Address: _____

_____

_____

_____

No.: _____

CONTRACTOR

David A. Nice Builders, Inc.

By: _____
Name

Title: _____

Attest: _____

Address: _____

_____

_____

_____

Contractor's Registration

(If Contractor is a corporation or an unincorporated organization, attach evidence of authority to sign)

[Corporate Seal]

12/21/10

Toano Middle School BMP

Point	BS	HI	FS	Elev	Comment
EW#99	0.34	89.84		89.50 (73.5)	Use as BM - Inv 30" Pipe
Barrel Inv		89.84	14.84	75.0	Bottom of Riser * Conc. Bottom
Turning Pt	14.93 Headwall + 3.80 To Inv 18.73	108.23		89.5 (105.5)	Inv. 30" Pipe
DI #100		108.23	2.78	105.45 (90.14)	Top
DI #100			Depth of DI 15.3	90.15	Inv 30" Pipe
Turning Point	10.6	116.05		105.45 (107.5)	DI #100 Top
DI #114		116.05	7.66	108.39 (109.0)	Bus Loop
School FF		116.05	6.12	109.93 (105.34)	
DI #109		116.05		105.19	

Existing Riser - 9.2' - vertical
12.4' - top (horiz)
21.6

Dam Design -

NP Elev = 90.0 - 5" ø orifice

Riser base = 73.5 > 22.7'

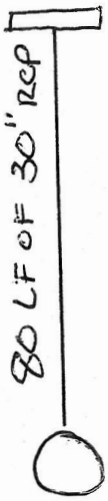
Top of Riser = 96.2

Top of dam = 100.3

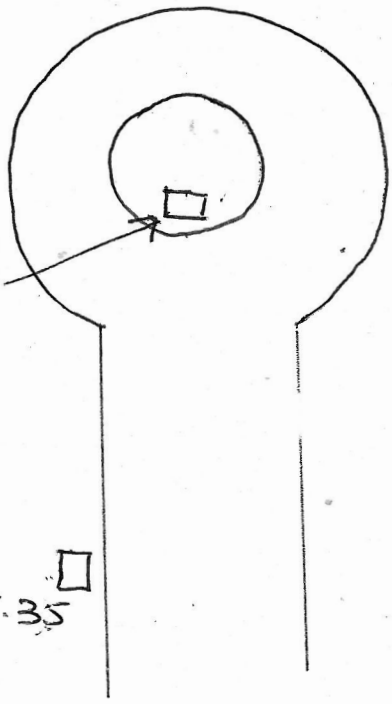
Emer Spillway = 98.1 - 15' wide

Principal spillway
as per revised plan sheet
dated 5-7-91
INV. OUT — 73.50

EW # 99
INV OUT - 89.50



DI # 100 (yard drain)
TOP EL. - 105.5
INV. OUT - 90.14



DI # 114 (Bus Loop)
TOP 107.5

School
FF - 109.0

DI # 109
TOP 105.35

BM @ main entrance
BATHEY MONUMERIT STAMP 393
BM EL. 108.93 → X
(NOT LOCATED IN FLD)

VI NOTICE TO PROCEED

TO: _____ DATE: _____

_____ PROJECT: _____

_____ _____

_____ _____

You are hereby notified to commence Work in accordance with the Agreement dated _____, 20___, on or before _____, 20___, and you are to substantially complete the Work within _____ Days thereafter and reach Final Completion of the Work within _____ Days thereafter. The date of Final Completion of all Work is therefore _____, 20___.

You will be contacted to schedule a Pre-Construction Conference and establish a Construction Progress Schedule as described in Section 108, pages 108-1&2, paragraphs IV &V.

Liquidated damages as stipulated in the Bid Form, in the amount of $_____per Day for failure of the Contractor to substantially complete the Work by the date for Substantial Completion and $_____ per Day for failure to complete the Work by the date for Final Completion, will be assessed by the Owner as stated above or as may be modified by duly executed Change Orders.

OWNER: _____

BY: _____

TITLE: _____

ACCEPTANCE OF NOTICE:

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by:

_____

this the _____ day of

_____, 20 ____

CONTRACTOR: _____

BY: _____

TITLE: _____

Pat -
I don't have any other suggestions
Daryl

Longhill Excavating Inc.
5099 Longhill Rd
Williamsburg, VA 23188
757-220-0760

Site Worx Plus
PO Box 6683
Williamsburg, VA 23188
757-220-0320

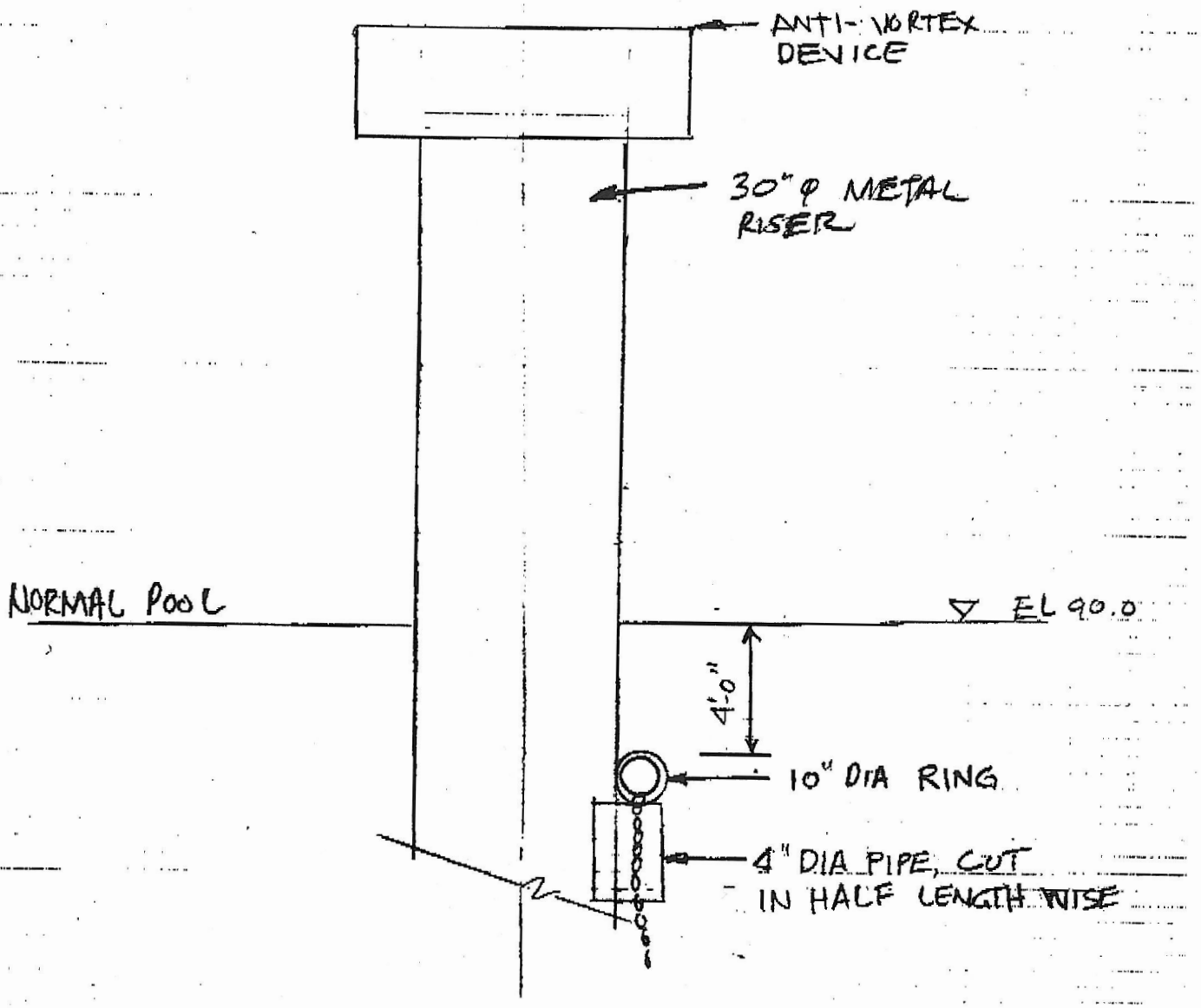
Toano Contractors
8589 Richmond Road
Toano, VA 23168
757-566-0097

Precision Services
106 Sand Hill Road
Williamsburg, VA 23188-6606
757-566-8539

Perdue II Construction
9 Rhodelia Lane
Poquoson, VA 23662
757-659-0179

Henry S. Branscome, LLC
PO Box 6478
Williamsburg, VA 23188
VOICE: 757-221-7221
FAX: 757-221-7220

George Nice & Sons
129 Industrial Boulevard
Toano, VA 23168
757-565-2885

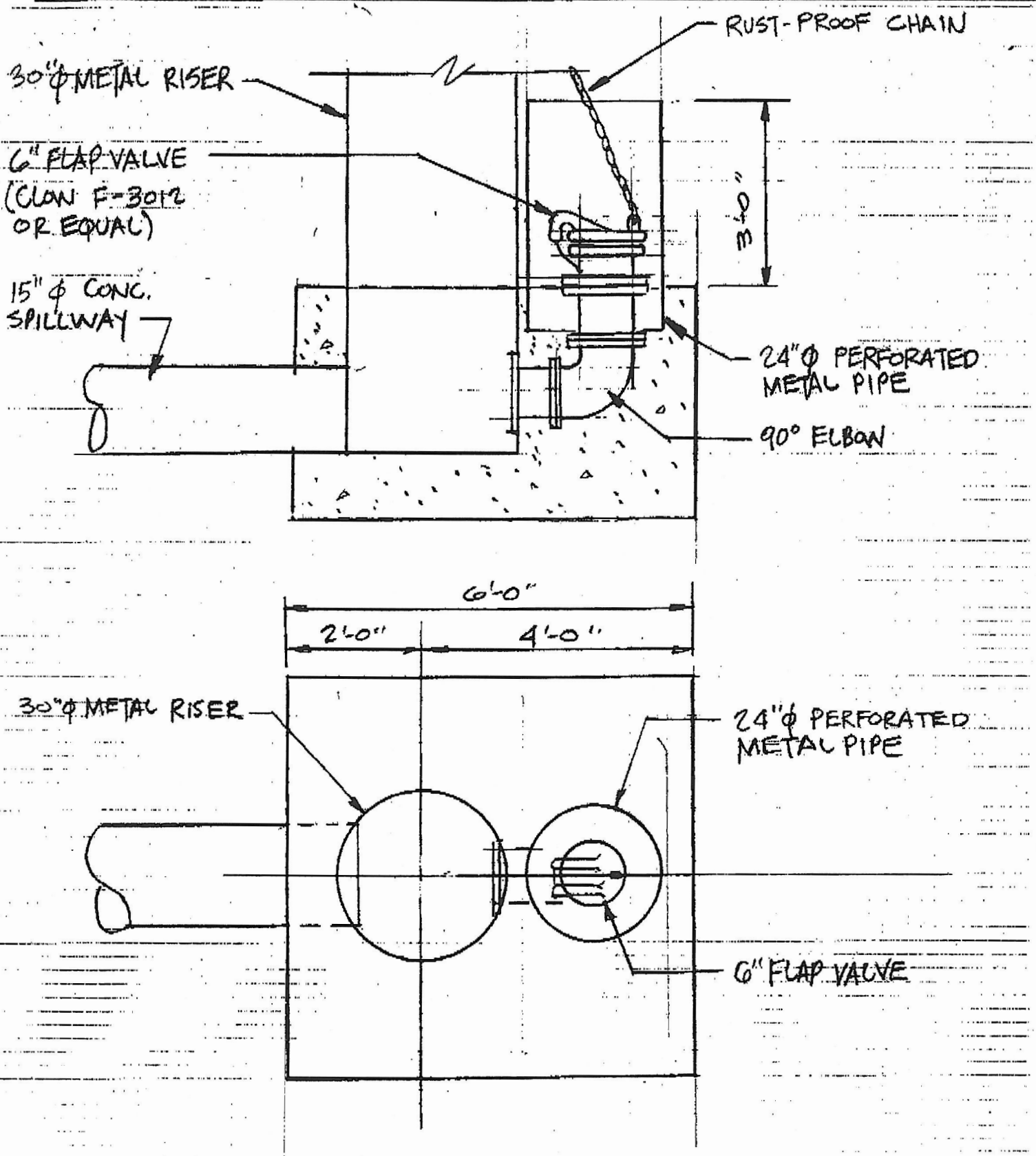


Roanoke (703)774-4493 Richmond (804)379-8112 Fredericksburg (703)373-0431 High Point, NC (919)884-1225

Smithey & Boynton
Architecture Engineering Planning

PROJECT WILLIAMSBURG MIDDLE SCHOOL
DRAIN FOR DET. POND
COMMISSION NO. 8972100 BY CAT

SHEET NO.
DATE 3-29-91
OFFICE



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Smithey & Boynton
Architecture Engineering Planning

PROJECT WILLIAMSBURG MIDDLE SCHOOL
DRAIN FOR DET. POND
COMMISSION NO. 1892100 BY CAT

SHEET NO.
DATE 3-29-91
OFFICE

To: Melanie Davis
Environmental Div.

COUNTY OF JAMES CITY, VIRGINIA

LAND DISTURBING PERMIT APPLICATION

JCC Environmental Division
101-E Mounts Bay Road
Williamsburg, VA 23185
(757) 253-6670
www.jccegov.com

Date: 12-14-2010

Landowner: Williamsburg James City County Schools Phone: 259-7157 Fax: _____
Mailing Address: PO Box 8783, 101D Mounts Bay Road, Williamsburg, VA 23187-8783
(street) (city) (state) (zip)

Contact: Darryl Cook - Stormwater Division Phone: ~~259-7467~~ 259-1442 Fax: _____
Email: decook@james-city.va.us

Project Name: Toano Middle School BMP Repair
Project Street Address: 7817 Richmond Road, Toano, VA
County Plan #: D-001-10 Parcel ID(s) 12401000051

Total Size of Tract or Lot: 5,000 SF Total Area to Be Disturbed: 5,000 SF

Description of Land Disturbing Activity: Repair of an existing stormwater management facility, including tree removal, pond dredging and pond riser replacement.

Owner's Certification and Right of Entry

The undersigned owner hereby grants employees of James City County, Virginia and its agents the right to enter the above referenced property for the purpose of inspection or monitoring for compliance with the approved erosion and sedimentation control plan ("Plan") for the above-referenced project and further certifies that he/she understands the provisions of the Erosion and Sediment Control Ordinance and agrees to carry out the approved Plan for above-referenced project and understands that the approved Plan becomes null and void one year after issuance of the permit and no further work, subject to Chapter 8 of the County Code, shall be allowed unless and until an additional or updated Plan has been submitted and approved in accordance with Chapter 8 of the County Code or unless all requirements of the approved Plan have been completed one year after issuance of this permit in accord with such Plan and verified by on-site inspection by the Administrator or his designee.

Alan Robertson - Facilities Manager _____
(Print Name and Title of Landowner) (Signature of Landowner)

A Land Disturbing Permit does not authorize the installation of water and sewer utilities or stormwater facilities. The Certificate to Construct for water and sewer utilities is issued by the James City Service Authority, 757-253-6805. The Certificate to Construct for stormwater facilities is issued by the James City County Stormwater Division, 757-259-1460. Registration under the VSMP General Permit for Discharges of Stormwater from Construction Activities from the Virginia DCR is also required. Visit www.dcr.virginia.gov for additional information.

(For Office Use Only) Reviewed by: Melanie Davis Date: 1/21/11
Permit No.: 11-30 Bond Amount: $ N/A
Permit Conditions: Project is subject to the provisions of approved Chesapeake Bay Exception CBE-011-051. County BMP ID Code YC007.

Approved by: _____ Date: 01/21/11 Expiration Date: _____
(Administrator - Erosion and Sediment Control Ordinance)

Project Code: YC-165 HUC: JL-28 Planner: N/A Proffer: N/A Stormwater: N/A

Lddist..doc Revised: 10/09

COUNTY OF JAMES CITY, VIRGINIA

LAND DISTURBING PERMIT APPLICATION

JCC Environmental Division
101-E Mounts Bay Road
Williamsburg, VA 23185
(757) 253-6670
www.jccegov.com

Date: 12-14-2010

Landowner: Williamsburg James City County Schools Phone: 259-7157 Fax: _____
Mailing Address: PO Box 8783, 101D Mounts Bay Road, Williamsburg, VA 23187-8783
(street) (city) (state) (zip)

Contact: Darryl Cook - Stormwater Division Phone: 259-7157 Fax: _____
Email: dacook@james-city.va.us

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Alan Robertson - Facilities Manager _____
(Print Name and Title of Landowner) (Signature of Landowner)

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(For Office Use Only) Reviewed by: _____ Date: _____
Permit No.: _____ Bond Amount: $ _____
Permit Conditions: _____

Approved by: _____ Date: _____ Expiration Date: _____
(Administrator - Erosion and Sediment Control Ordinance)

Project Code: _____ HUC: _____ Planner: _____ Proffer: _____ Stormwater: _____

Lddist..doc Revised: 10/09

COUNTY OF JAMES CITY, VIRGINIA

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101-E Mounts Bay Road
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_____ _____
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(For Office Use Only) Reviewed by: _____ Date: _____
Permit No.: _____ Bond Amount: $_____
Permit Conditions: _____

Approved by: _____ Date: _____ Expiration Date: _____
(Administrator - Erosion and Sediment Control Ordinance)

Project Code: _____ HUC: _____ Planner: _____ Proffer: _____ Stormwater: _____

TOANO MIDDLE SCHOOL BMP REPAIR PROJECT PRECON

JANUARY 27, 2011

SEQUENCE OF CONSTRUCTION:

1. Mobilization
2. Begin the removal of trees from the dam embankment and other areas designated on the site plan (no stump removal).
3. Clear area designated on the plan for the construction of an earthen berm.
4. Install erosion control measures as shown on plan.
5. Excavate dewatering pit within the pond and begin dewatering operations, if discharged water is sediment laden, the discharge shall be filtered. Excavated soils may be placed upslope in the designated berm area.
6. Remove trees, trash and debris from within the pond area.
7. Following dewatering, excavate the pond bottom as per plan, remove excavated material upslope to berm area.
8. Remove old riser, install new riser re-connect 15" RCP pipe, install 6" low drain, gabion baskets etc, complete the riser installation.
9. Allow pond to begin to fill with water, check riser structure and pipes to insure no leaks.
10. Stabilize disturbed areas and earthen berm as per plan and specifications.
11. Remove erosion control measures following the establishment of a uniform grass cover.

DAVID A. NICE Builders, Inc.

PROJECT NAME:	**Toano BMP Repairs**
DATE:	1/14/2011
ARCHITECT & ADDRESS:	Darryl Cook, James City County Stormwater
CONTRACTOR & ADDRESS:	David Nice Builders, Inc. 4571 Ware Creek Rd, Williamsburg, Virginia 23188
SUBCONTRACTOR & ADDRESS:	
SUPPLIER & ADDRESS:	
MANUFACTURER & ADDRESS:	
SUBMITTAL NUMBER:	**302.1**
SPEC. SECTION & TITLE:	Drainage structures and piping

REVIEW NOTES AND APPROVALS

All submittals for HD Supply - WATERWORKS ARE APPROVED.

Americast Submittal

1. Trash rack does not meet plan specifications - it is to have a maintenance access hatch and an anti-vortex plate.
2. For riser structure, tag 3 - 7" ø opening, should be at an angle of 225° rather than 200°.
3. Need to verify Vertical locations with Americast on 1/17/11. (Johanna Townsend) - Vertical locations are acceptable. DEC 1/17/11

* Riser Structure approved with change as specified in item #2.

To the best of my knowledge, the equipment and Material shown and marked in this submittal is that proposed to be incorporated into this project, is in accordance with the contract documents and specifications and can be installed in the allocated spaces

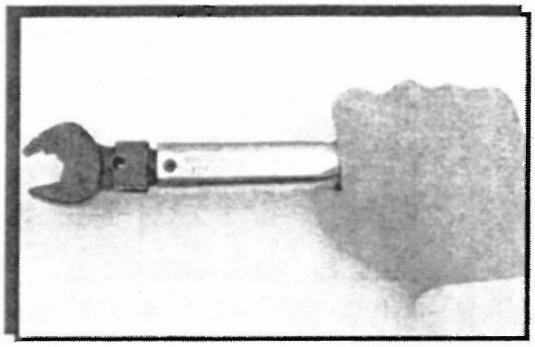
Reviewed by: Dayl E Cook Date: 1/14/2011

12/15/10

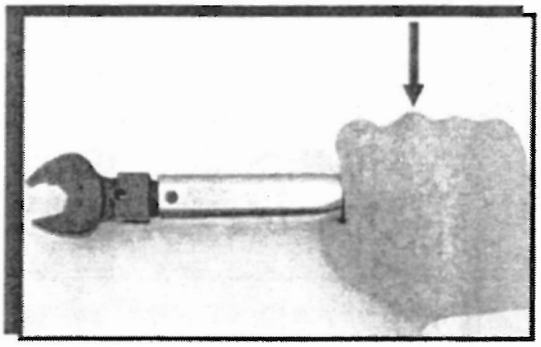
Toano Middle School BMP Repair

- Work eligible for NWP #43
- No pre-discharge notification req'd.
- RTE - per Mike Woolson
  - not habitat for Small Whorled Pegonia
  - extensively disturbed site
  - shaded site - not good for New Jersey Rush

TORQUE WRENCH TECHNIQUES

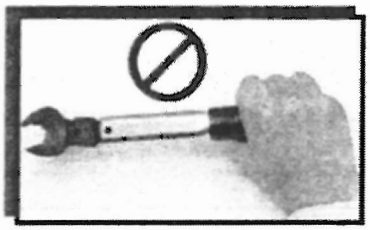


This is the correct grip. The center of the hand is aligned with the center of the vinyl hand grip.

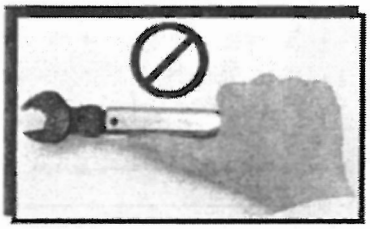


Pull the wrench steadily until it "clicks" or cams over slightly. When this occurs, the correct torque has been reached. Do not pull past the click.

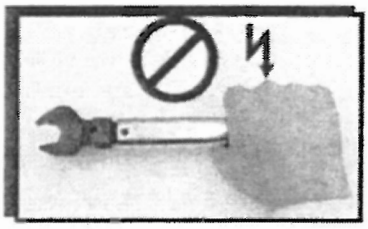
Do NOT "short grip" the wrench.



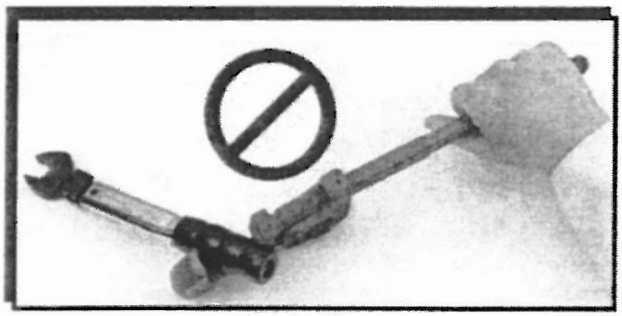
Do NOT "long grip" the wrench.



Do NOT extend your thumb for leverage.



Do NOT jerk the wrench.



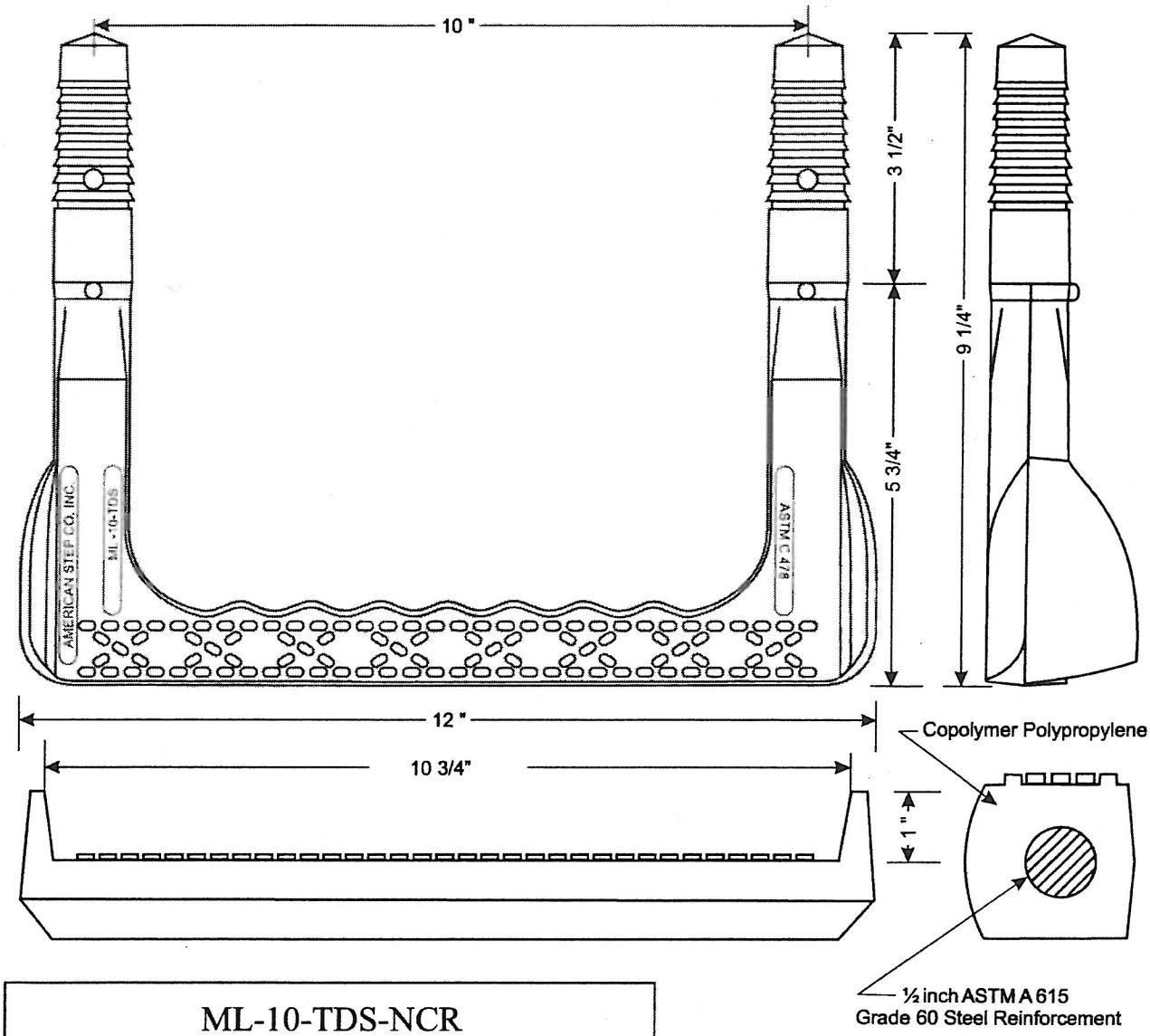
Do NOT use any form of "cheater bar"

Press-Seal believes all information is accurate as of its publication date. Information, specifications, and prices are all subject to change without notice. Press-Seal is not responsible for any inadvertent errors.

PRESS-SEAL GASKET CORPORATION
P.O. Box 10482, Fort Wayne, Indiana 46852
Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

http://www.americanstep.com

ML-10-TDS-NCR



ML-10-TDS-NCR

Mechanical Lock Installation Methods
Minimum Concrete Strength Must Be 3000 psi.

Preformed Holes

Two preformed holes on 10" centers
Holes must be parallel
Diameter of holes are 1.1" tapering to 7/8" in 3 ½" of depth

Drilled Holes

Drill two 1" holes on 10" centers with a minimum depth of 3 3/4"
Use 1" masonry bit for drilling.
Holes must be parallel.

Drive step with sledge hammer until both legs are completely seated

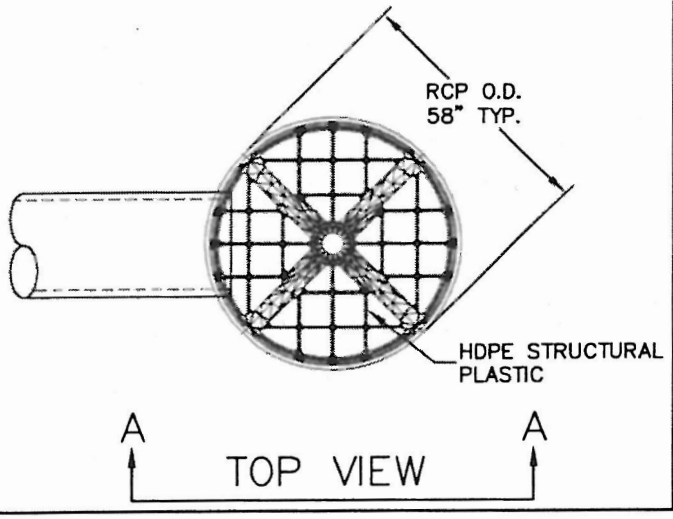
This step meets or exceeds ASTM C 478 and OSHA Standards when properly installed.

AMERICAN Step Company, Inc.

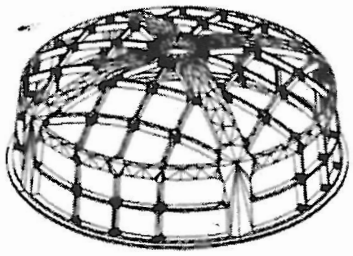
American Step Company, Inc.
P.O. Box 137
830 East Broadway
Griffin, GA 30224-0137

800-988-STEP
770-467-9844 (OFFICE)
770-467-8011 (FAX)

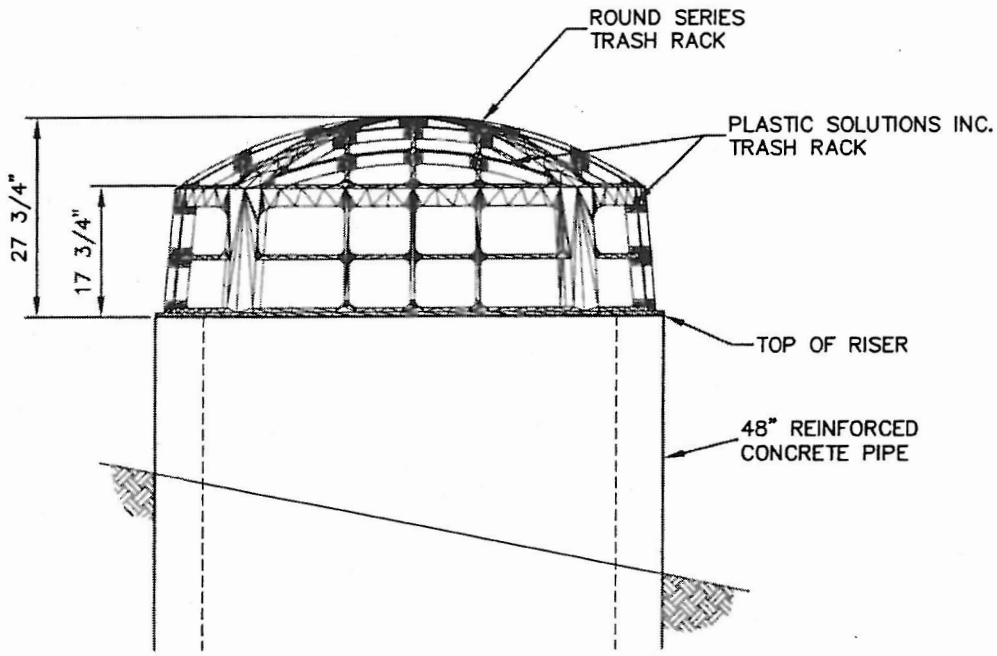
http://www.americanstep.com



TOP VIEW

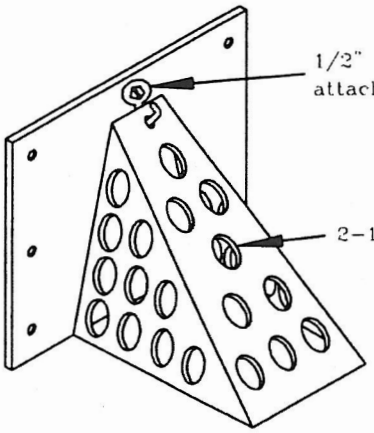


TRASH RACK ASSEMBLY

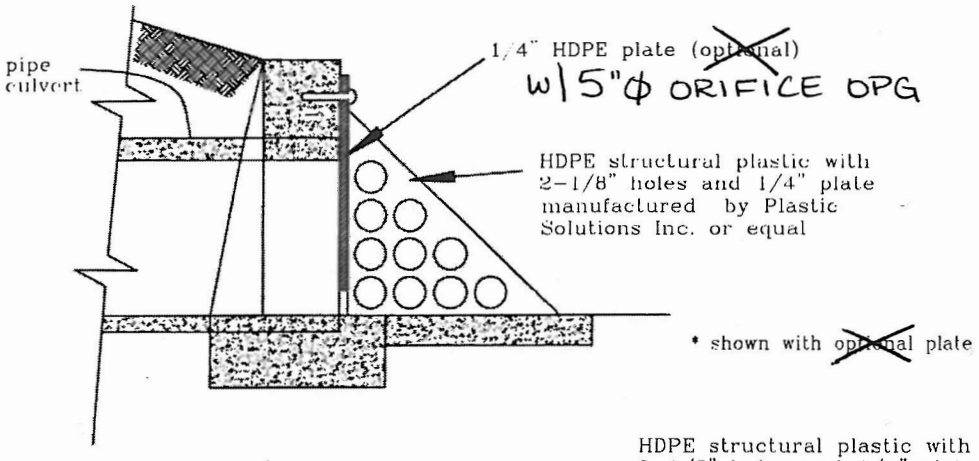


ELEV. A–A

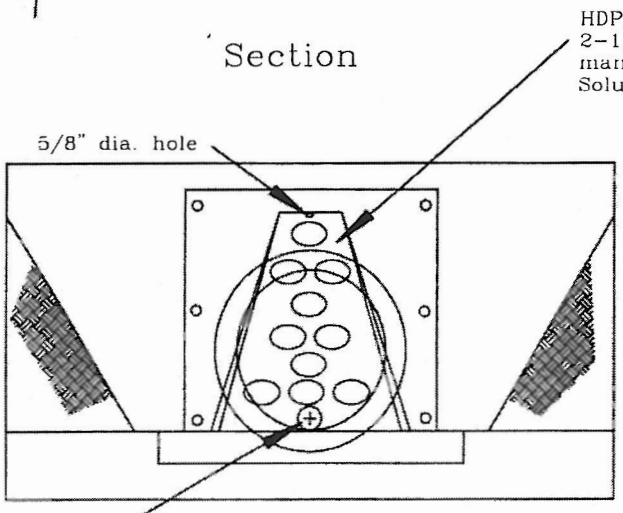
PART NO	48" ROUND SERIES TRASH RACK	PLASTIC SOLUTIONS INC.	240 McGhee Road P.O. Box 4386 Winchester, VA 22604 540–722–4694 www.plastic–solution.com
RS-48	WITH CONCRETE RISER		



Isometric



Section



Elevation

DEBRIS CAGE

PLASTIC SOLUTIONS INC.
P.O. Box 4386
Winchester VA 22604
877-877-5727
www.plastic-solution.com

Toano MS BMP Submittal

1. Vertical location for riser opening - how computed -

2. Does Plastic Solm trash rack have an opening? - See sheet 4 - reqd

3. What is proposed for rubber boot for 15" RCP? - ok
   PSX: Direct Drive -

4. Are steps shown for outside of manhole as well as inside?
   Are these field installed? - Hole former inside MH -
   Note - install steps on outside @ stnd interval

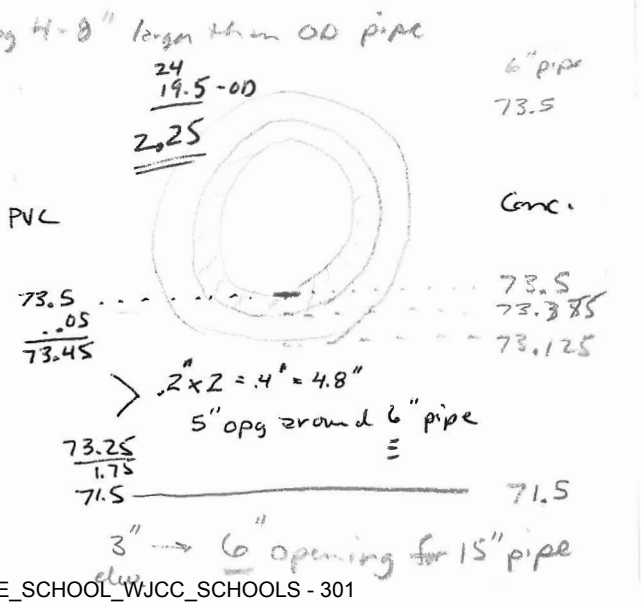
5. Specify amt. of extension rods for gate valve

6. Check to see if "Customer Specs" on gabion are eqiv. to ok ASTM A974-97

7. Change angle of orifice from 20° to something else -

20° → 45°

Circumference of ID = $12.56/360 \times 20 = 8"$ $\quad 1 = (x)\frac{12.56}{360} \Rightarrow 30°$ would be 1'



SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 1 – GENERAL PROVISIONS					
110-1	BMP TRASH & DEBRIS REMOVAL INCLUDING OLD CMP RISER, BASE, FALLEN TREES, LIMBS, ETC.	LS	1		
110-2	SURVEY, STAKEOUT, FLAGING (AS NEEDED)	LS	1		
				DIVISION SUBTOTAL ----------	
DIVISION 3 - CONSTRUCTION					
301-1	CLEARING & CHIPPING TREES (NO GRUBBING)	LS	30,000 SF		
301-2	GRADING FOR CONSTRUCTION ACCESS & OPERATIONS	SF	5,000 SF		
302-2	MODIFIED PRECAST SWM POND RISER STRUCTURE W/ TRASH RACK & GUARDS INSTALLED	EA	1		
302-4	6" DIAM. SCEHDULE 40 PVC DRAIN PIPE W/ PERFORATED RISER & CAP INSTALLED	EA	1		
302-5	6" DIAM. GATE VALVE (VALTERRA) W/ EXTENSION RODS TO TOP OF RISER INSTALLED	EA	1		
302-6	REINSTALL EXISTING 15"RCP INTO POND RISER	LS	1		
302-7	15" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1		
302-8	6" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1		
302-9	GABION BASKET BAFFLE WALL INSTALLED	LS	1		
302-10	CONCRETE FLOOR POURED INSIDE POND RISER	LS	1		
303	EARTHWORK				
303-1	EXCAVATE FOR DEWATERING PIT	LS	1		
303-2	OPERATE & MAINTAIN DEWATERING PUMPING WITHIN DEWATERING PIT AS NEEDED.	LS	1		
303-3	EXCAVATION OF POND BASIN AS SHOWN ON PLAN AND RELOCATE EXCAVATED SOILS UPSLOPE.	CY	400		

303-4	STRIP TOPSOIL (BERM AREA), & STOCK PILE	SY	400		
303-5	CONSTRUCT UPSLOPE EARTHEN BERM REUSING EXCAVATED BASIN SOILS	CY	400		
303-6	SPREAD STOCKPILED TOPSOIL OVER BERM	SY	400		
303-7	INSTALL PERMANENT SEEDING, LIME, FERTILIZER & STRAW.	SY	600		
303-8	INSTALL EC-2 STABILIZATION BLANKETS	SY	400		
303-9	INSTALL SILT FENCE	LF	150		
303-10	INSTALL INLET PROTECTION	LS	1		
304-11	MAINTANENCE OF EROSION CONTROL MEASURES	LS	1		

DIVISION 4- MISCELLANEOUS					
414	STONE & RIPRAP				
414-1	BEDDING STONE # 57 INSTALLED	TON	5		
414-2	EROSION CONTROL RIP RAP, 1.5' DEEP, ON FILTER COLTH INSTALLED	SY	2		

DIVISION 5 – INCIDENTAL CONSTRUCTION					
507	FENCES				
507-1	REMOVE 60 LF OF 6' CHAIN LINK FENCE WITH TOP RAIL AND BARBED WIRE AND REINSTALL UPON COMPLETION OF PONDRISER INSTALLATION.	LF	60		
507-2	MOBILIZATION	LS	1		

C. UNIT PRICES:

The Undersigned submits the following unit costs for the Work. Prices shall be given for both deductions and additions to the work and shall include the item installation, materials, labor, overhead and profit costs for the work to be completed 100 percent. Failure to quote unit prices may result in the rejection of the bid. The Owner reserves the right to delete unit prices from the executed contract that are deemed unreasonable.

1. BYPASS STORMWATER PUMPING
   INSTALL A TEMORARY PLUG IN THE UPSLOPE YARD DRAIN
   MANHOLE AND PUMP STORMWATER AWAY FROM THE STORMWATER POND
   DURING STORM EVENTS.

   $_____ per day.

2. PROVIDE STREET SWEEPING OF PAVED SURFACES IF SEDIMENT TRACKING OCCURS AS A RESULT OF CONSTRUCTION EGRESS.

   $_____ per hr.

3. INSTALLATION OF A CONSTRUCTION ENTRANCE 12' X 70', VDOT # 1 STONE ON FILTER FABRIC.

   $_____ LS

4. TEMPORARY USE OF TIMBER MATTING FOR GROUND STABILIZATION

   $ _____ per LF.

VIII STANDARD BID ITEMS AND UNITS

Section	Bid Item	Category	Unit
301	Clearing and grubbing	Clearing and Grubbing	ACRE or LS
301	Tree protection fencing	Clearing and Grubbing	LF or EA
302	Storm sewer pipe (diameter and type)	Drainage Structures	LF
302	Pipe culverts (waterway opening)	Drainage Structures	LF
302	Pipe reducers (larger diameter)	Drainage Structures	LF
302	Jacked pipe (diameter and type)	Drainage Structures	LF
302	Reinstalled pipe (diameter)	Drainage Structures	LF
302	End sections (standard and size)	Drainage Structures	EA
302	End walls	Drainage Structures	EA
302	Box culverts (waterway opening)	Drainage Structures	LF
302	Pipe grate	Drainage Structures	LF
302	Drop / yard inlets, catch basins, and intake boxes	Drainage Structures	EA
302	Base section (drop inlets and manholes)	Drainage Structures	LF
302	Manhole (0-6' depth) (4 or 5 foot diameter)	Drainage Structures	EA
302	Manhole (>6' depth) (4 or 5 foot diameter)	Drainage Structures	VF
302	Conflict manhole	Drainage Structures	EA
302	Concrete spring boxes	Drainage Structures	EA
302	Junction boxes	Drainage Structures	EA
302	Reconstructed manholes	Drainage Structures	EA
302	Precast Arches	Drainage Structures	LF
303	Regular excavation	Earthwork	CY
303	Pavement demolition (type and depth of pavement) [in proposed pavement]	Earthwork	SY
303	Pavement demolition (type and depth of pavement) [outside proposed pavement]	Earthwork	SY
303	Curb & gutter demolition	Earthwork	LF
303	Existing structure demolition	Earthwork	EA
303	Existing pipe demolition	Earthwork	LF
303	Undercut Excavation (regular)	Earthwork	CY
303	Select Material (min. CBR)	Earthwork	CY
303	Select Bedding (regular)	Earthwork	CY
303	Suitable Fill (regular)	Earthwork	CY
303	Backfill of Undercut Excavation (regular)	Earthwork	CY or TON
303	Surcharge placement and removal	Earthwork	CY
303	Settlement plate	Earthwork	EA
303	Geotextile fabric for Base Preparation	Earthwork	SY
303	Select Bedding/Backfill of Undercut Excavation (trenching)	Earthwork	CY or TON
303	Check dam (log or rock)	Earthwork	EA
303	Undercut Excavation (trenching)	Earthwork	CY

Section	Bid Item	Category	Unit
303	Sheeting, bracing, and shoring left in place (trenching)	Earthwork	LS
303	Rip-Rap for erosion control	Earthwork	TON
303	Baled straw check dam	Earthwork	EA
303	Temporary silt fence	Earthwork	LF
303	Geotextile fabric for Erosion Control	Earthwork	SY
303	Temporary filter barrier	Earthwork	LF
303	Slope drain	Earthwork	EA
303	Sediment basin excavation	Earthwork	CY
303	Siltation control excavation	Earthwork	CY
303	Inlet Protection (type of device)	Earthwork	EA
303	Construction entrance	Earthwork	EA
305	Select material - Type I	Subgrade and Shoulders	TON
305	Select material - Types II or III	Subgrade and Shoulders	CY
305	Gravel Driveway Replacement	Subgrade and Shoulders	EA
309	Aggregate material (base course)	Aggregate Base Course	CY or TON
309	Aggregate base material (base course for curb and gutter)	Aggregate Base Course	CY or TON
310	Tack coat	Tack and Prime Coat	GALLON
310	Prime coat	Tack and Prime Coat	GALLON
313	Asphalt surface treatment	Asphalt Surface Treatment	SY
315/ 315A	Asphalt concrete (type and class)	Asphalt Concrete Pavement	TON or SY
315/ 315A	Bituminous Leveling Course	Asphalt Concrete Pavement	TONS
315/ 315A	Edge clipping of shoulders	Asphalt Concrete Pavement	LF
317	Pavement Patch	Pavement Patching	LF
406	Reinforcing steel or welded wire mesh	Reinforcing Steel	POUND
406	Epoxy-coated reinforcing steel	Reinforcing Steel	POUND
414	Dry riprap (class and depth)	Riprap	SY or TON
414	Grouted riprap	Riprap	SY or TON
414	Stone riprap for foundation protection (depth)	Riprap	SY or TON
414	Dumped riprap	Riprap	SY or TON
414	Mortared riprap	Riprap	SY
414	Concrete riprap in bags	Riprap	CY
414	Erosion control rip rap	Riprap	SY or TON
501	Underdrain and combination underdrain	Underdrains	LF
502	Curb, combination curb and gutter (detail designation)	Concrete Items	LF
502	Gutter, standard, radial and entrance	Concrete Items	SY or LF
502	Paved ditch	Concrete Items	SY
502	Paved flume	Concrete Items	SY
502	Street Connection pavement	Concrete Items	SY

Section	Bid Item	Category	Unit
502	Bridge drainage aprons and chutes	Concrete Items	SY
502	Energy Dissipators	Concrete Items	EA
502	Sign island	Concrete Items	EA or SY
502	Median barriers (including delineators)	Concrete Items	LF
502	Median Strips	Concrete Items	LF or SY
502	Directional island curb	Concrete Items	LF
502	Hydraulic cement concrete sidewalks (thickness)	Concrete Items	SY
502	Concrete steps (concrete)	Concrete Items	CY
502	Handrails	Concrete Items	LF
502	Geotextile drainage fabric	Concrete Items	SY
502	Curb Cut Ramps	Concrete Items	SY
502	Composite Detectable Warning Panels	Concrete Items	SF
502	Concrete Driveway Replacement (Pipe Installation)	Concrete Items	EA
502	Concrete Driveway	Concrete Items	SY
505	Guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Reuse guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Radial guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Guardrail terminal (Standard and type)	Guardrail and Steel Median Barriers	LF or EA
505	Intermediate anchorage assembly	Guardrail and Steel Median Barriers	EA
505	Median barrier (Standard)	Guardrail and Steel Median Barriers	LF
505	Radial median barrier (Standard)	Guardrail and Steel Median Barriers	LF
505	Median barrier terminal (Standard and type)	Guardrail and Steel Median Barriers	EA
505	Cable barricade (Standard)	Guardrail and Steel Median Barriers	EA
505	Fixed object attachment (Standard)	Guardrail and Steel Median Barriers	EA
505	Special design guardrail bridge attachment (B or Str. No.)	Guardrail and Steel Median Barriers	LS
505	Reuse guardrail terminal (Standard and type)	Guardrail and Steel Median Barriers	LF
505	Guardrail terminal site preparation (Standard)	Guardrail and Steel Median Barriers	EA
505	Bull nose barrier	Guardrail and Steel Median Barriers	EA
507	Fences (Standard and Height)	Fences	LF
507	Gate (Standard and Length)	Fences	EA
510	Remove, reset, relay, adjust, install, modify, reconstruct relocate, existing (Item or standard)	Relocating or Modifying Existing Miscellaneous Items	EA, LF, SY, CY or LS
510	Adjust structure heights	Relocating or Modifying Existing Miscellaneous Items	EA
511	Allaying dust	Allaying Dust	HR
512	Flagger Service (Certified)	Maintaining Traffic	HR
512	Flagger Service (Police-assisted))	Maintaining Traffic	HR
512	Pilot vehicle	Maintaining Traffic	HR

Section	Bid Item	Category	Unit
512	PDMS (Type)	Maintaining Traffic	DAY,WEEK or MONTH
512	TMA	Maintaining Traffic	HR, DAY, WEEK or MONTH
512	Electronic Arrow	Maintaining Traffic	HR, DAY, WEEK or MONTH
512	Warning Light	Maintaining Traffic	DAY, WEEK or MONTH
512	Group 2 Channelizing Devices	Maintaining Traffic	DAY, WEEK or MONTH
512	Traffic barrier service (per location) (Type and/or standard)	Maintaining Traffic	LF
512	Traffic barrier service guardrail termination (standard)	Maintaining Traffic	EA or LF
512	Impact attenuator service (Type)	Maintaining Traffic	EA
512	Temporary signalization	Maintaining Traffic	LS
512	Construction pavement marking (type and message)	Maintaining Traffic	LF
512	Construction pavement message marking (type and width)	Maintaining Traffic	EA
512	Eradication of existing pavement marking (per 6-inch width)	Maintaining Traffic	LF
512	Temporary Pavement marker ([ ]-way)	Maintaining Traffic	EA
512	Temporary Detour (standard and type)	Maintaining Traffic	LF
512	Crusher run aggregate (No. 25 or 21A)	Maintaining Traffic	TON
512	Type III Barricades	Maintaining Traffic	EA
512	Construction Signs	Maintaining Traffic	EA/DAY or SF
513	Mobilization (3 payments)	Mobilization & Demobilization	LS
515	Milling Pavement	Milling Pavement	SY
521	Pavers	Pavers	SF
521	Spare Pavers	Pavers	SF
530	Abandon Laterals and Cleanouts (on Abandoned Mains)	Abandonment of Existing Pipelines and Structures	LF or EA
530	Abandon Pipe, (diameter) < larger than 2-inch>	Abandonment of Existing Pipelines and Structures	LF
530	Abandon Meter Boxes	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Laterals and Cleanouts (on Active Mains)	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Manholes	Abandonment of Existing Pipelines	EA
530	Abandon Drainage Structures	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Meter/Valve Vaults/Boxes	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Metallic Structures	Abandonment of Existing Pipelines and Structures	EA

Section	Bid Item	Category	Unit
602	Topsoil (4-or 6-inch depth)	Topsoil	ACRE or SY
603	Lime, fertilizer, seed and mulch	Seeding	ACRE or SY
604	Sod, fertilizer and lime	Sodding	SY
605	Plants (Type and size)	Planting	EA
605	Mulching and remulching	Planting	100 SF
608	Mowing	Mowing	HR or LS
700	Concrete foundation (Standard, type and, size)	Traffic Control Devices	EA
700	Electrical service (Standard and type)	Traffic Control Devices	EA
700	Luminaire arm (Length)	Traffic Control Devices	EA
700	Lighting pole (Standard luminaire mounting height, and length of luminaire arm)	Traffic Control Devices	EA
700	Signal pole (Standard, length, number, and length of arms)	Traffic Control Devices	EA
700	Overhead sign structure	Traffic Control Devices	EA
700	Bridge-mounted sign structure (Location)	Traffic Control Devices	EA
700	Pedestal pole (Standard and length)	Traffic Control Devices	EA
700	Wood pole (Class and length)	Traffic Control Devices	EA
700	Conductor Cable (Size/number)	Traffic Control Devices	LF
700	Conduit (Type and size)	Traffic Control Devices	LF
700	Trench Excavation (Standard)	Traffic Control Devices	LF
700	Junction box (Standard)	Traffic Control Devices	EA
704	Pavement line marking (Type and/or class and width)	Traffic Control Devices	LF
704	Pavement message marking (Message)	Traffic Control Devices	EA
704	Pavement marker (Type, [ ]-way, and/or type pavement)	Traffic Control Devices	EA
801	Ductile iron water main (diameter)	Water Distribution Systems	LF
801	PVC water main (diameter)	Water Distribution Systems	LF
801	PVCO (diameter)	Water Distribution Systems	LF
801	HDPE (diameter)	Water Distribution Systems	LF
801	Fire hydrant assembly	Water Distribution Systems	EA
801	Water sampling stations	Water Distribution Systems	EA
801	Gate valves (diameter)	Water Distribution Systems	EA
801	Butterfly Valves (diameter)	Water Distribution Systems	EA
801	Water Meter Box	Water Distribution Systems	EA
801	Tapping sleeve/valve (diameter)	Water Distribution Systems	EA
801	Blowoff Assembly	Water Distribution Systems	EA
801	Manual air vent assembly	Water Distribution Systems	EA
801	Type K copper service lines (jack and pull)	Water Distribution Systems	LF or EA
801	Type K copper service lines (open cut)	Water Distribution Systems	LF or EA
801	Type K copper dual service lines (jack and pull)	Water Distribution Systems	LF or EA

Section	Bid Item	Category	Unit
801	Type K copper dual service lines (open cut)	Water Distribution Systems	LF or EA
801	Polyethylene encasement	Water Distribution Systems	LF
801	Connections to existing water mains	Water Distribution Systems	EA
801	Plugging Existing 2" Water Main	Water Distribution Systems	EA
801	Offset of Existing Water Main	Water Distribution Systems	LF
801	Cut in Tees	Water Distribution Systems	EA
801	Cut in Crosses	Water Distribution Systems	EA
801	Cut in Valves	Water Distribution Systems	EA
802	Gravity sewer pipe (diameter, type and depth 0-6, 6-8, 8-10,10-12,12-14,14-16,16-18,18-20, >20')	Sanitary Gravity Sewer Systems	LF
802	Sewer laterals (type and diameter)	Sanitary Gravity Sewer Systems	LF or EA
802	Manhole, 0' to 6' in depth (4-or 5-foot dia.)	Sanitary Gravity Sewer Systems	EA
802	Manhole extra depth (4-or 5-foot dia.)	Sanitary Gravity Sewer Systems	VF
802	Drop Manhole (inside or outside)	Sanitary Gravity Sewer Systems	EA
802	Standard manhole frame and cover	Sanitary Gravity Sewer Systems	EA
802	Watertight manhole frame and cover	Sanitary Gravity Sewer Systems	EA
802	Clean-out assemblies (mainline and service lateral)	Sanitary Gravity Sewer Systems	EA
802	Remote Camera/TV Inspection	Sanitary Gravity Sewer Systems	LF
802	Connections to existing manholes	Sanitary Gravity Sewer Systems	EA
802	Manhole and Mainline Cleanout adjustment rings	Sanitary Gravity Sewer Systems	EA
802	Manhole/Structure Coatings (Type A or B, 4- or 5-foot manhole diameter)	Sanitary Gravity Sewer Systems	VF or EA
803	Ductile iron force main (diameter)	Sanitary Force Main Systems	LF
803	HDPE force main (diameter)	Sanitary Force Main Systems	LF
803	PVC force main (diameter)	Sanitary Force Main Systems	LF
803	Manual air vent assembly	Sanitary Force Main Systems	EA
803	Gate valves (diameter)	Sanitary Force Main Systems	EA
803	Tapping sleeve/valve (diameter)	Sanitary Force Main Systems	EA
803	Connections to existing force mains or manholes	Sanitary Force Main Systems	EA
803	Interior Pipe Corrosion Lining (Diameter)	Sanitary Force Main Systems	LF
803	Offset of Existing Force Main	Sanitary Force Main Systems	LF
803	Cut in Tees	Sanitary Force Main Systems	EA
803	Cut in Crosses	Sanitary Force Main Systems	EA
803	Cut in Valves	Sanitary Force Main Systems	EA
804	Bore and jack casing (diameter)	Boring and Jacking	LF
806	Horizontal Directional Drill	Horizontal Directional Drilling	LS
	Sanitary Sewer Rehabilitation	**(Sections 810-822)**	
810	Light Cleaning (diameter)	Sewer Line Cleaning	LF

Section	Bid Item	Category	Unit
810	Heavy Cleaning (diameter and number of passes greater than 3)	Sewer Line Cleaning	LF
810	Manhole Cleaning	Sewer Line Cleaning	EA
811	Television Inspection (CCTV Only)	Television Inspection	LF
812	Bypass Pumping / Flow ~_____ MGD (Flow > 2 MGD)	Bypass Pumping	LS
813	CIPP Method/Wall Thickness=___mm (Diameter)	Pipe Rehabilitation By Cured-In-Place Method	LF
813	Removal of Intruding Service Lateral Connections (Ferrous or Non-Ferrous)	Pipe Rehabilitation By Cured-In-Place Method	EA
814	Fold and Form Method / Wall Thickness = SDR _____ (diameter)	Pipe Rehabilitation By Fold and Form Pipe Method	LF
814	Removal of Intruding Service Lateral Connections (Ferrous or Non-Ferrous)	Pipe Rehabilitation By Fold and Form Pipe Method	EA
816	Sewer Joint Testing (diameter)	Sewer Joint Testing	EA
817	Chemical Joint Sealing / Grouting	Chemical Grouting	GAL
818	Sewer Point Repair (diameter, material, and depth 0-6, 6-8, 8-10, 10-12, 12-14, 14-16,16-18, 18-20, >20')	Point Repair By Excavation	LF
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 0-3 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 3-6 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 6-9 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 9-12 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 12-15 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 6-9 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 9-12 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 12-15 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
821	Service Laterals (diameter and material)	Sanitary Sewer Service Reconnection	LF
822	Manhole Cementitious Coating, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Cementitious Coating extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF

Section	Bid Item	Category	Unit
822	Manhole Fiberglass Insert Liner, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Fiberglass Insert Liner extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF
822	Manhole Epoxy Coating, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Epoxy Coating extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF
822	Manhole Frame Seals	Manhole Rehabilitation	EA

End of Section

B. ADDENDA

The undersigned acknowledges receipt of the following addenda:

Addendum No._____Dated:_____.

Addendum No._____Dated:_____.

Addendum No._____Dated:_____.

C. We agree to enter into an Agreement with James City County/James City Service Authority, Virginia, within ten (10) days of the award of same to us for the price named in our Bid.

D. It is expressly agreed by us that James City County/James City Service Authority, Virginia, shall have the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid and accept the Bid in James City County/James City Service Authority, best interests.

E. In default of the performance on our part of the conditions of Bid, our failure to enter into an Agreement with James City County/James City Service Authority, Virginia, within the time above set, we herewith furnish a Bid Security in the amount of $_____, which shall be absolutely forfeited to James City County/James City Service Authority, Virginia, but otherwise the said Bid Security shall be returned.

F. We agree to begin Work at any time we may be notified by the Owner, and complete all of the Work embraced in the Agreement within **150** Days;

G. *[This applies to projects over $200,000 unless otherwise indicated].* I/We elect to utilize the Escrow Account Procedure described in the provision of this bid if determined to be the successful low Bidder. _____ (write "Yes" or "No").

_____ Bid total does not qualify for escrow account option

H. The undersigned has read all sections under "Instructions to Bidders."

I. CONTRACTOR'S REGISTRATION AND SIGNATURE

Registered Virginia Contractor Class and No._____
Registration Expires _____

(NOTE: FAILURE TO INCLUDE CONTRACTOR'S REGISTRATION NUMBER IS GROUNDS FOR REJECTION OF THE BID.)

Contractor_____ Signed_____

Date_____ Title_____

NOTE: If Bidder is a corporation, write State of incorporation under signature.

MAILING ADDRESS AND TELEPHONE/FAX NUMBER OF BIDDER:

_____

_____

_____

(_____)_____[Telephone] Email_____; FAX_____

IF CORPORATION, PROVIDE NAME AND MAILING ADDRESS AS REQUIRED BELOW.

PRESIDENT	SECRETARY	TREASURER
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IF PARTNERSHIP, PROPRIETORSHIP, LIMITED LIABILITY COMPANY OR OTHER FIRM, PROVIDE NAME AND MAILING ADDRESS OF EACH PARTNER, PROPRIETOR, OR MEMBER OF FIRM.

_____	_____	_____
_____	_____	_____

J. NON COLLUSION AFFIDAVIT

James City County/James City Service Authority, Virginia Project: **Bid No: 10-3725**

_____ Bid Date:_____

COMMONWEALTH OF VIRGINIA
(City/County)

This day personally appeared before the undersigned, a Notary Public in and for the City/County and State aforesaid,

_____ who having been first duly sworn according to law, did depose and aver as follows:

(a) That he/she is_____
(Owner, Partner, President, etc.)

of _____
(insert name of Bidder)

(b) That he/she is personally familiar with the Bid of _____
(Insert Company Name)
submitted in connection with the above captioned Owner's project.

(c) That said Bid was formulated and submitted in good faith as the true bid of said Bidder.

1. In preparation and submission of this Bid, the Bidder did not either directly or indirectly, enter into any combination or agreement with any person, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

2. The undersigned Bidder hereby certifies that neither this Bid nor any claim resulting therefrom, is the result of, or affected by, any act of collusion with, or any act of another person or persons, firm or corporation engaged in the same line of business or commerce; and that no person acting for or employed by the Owner has any personal interest in this Bid.

3. The undersigned hereby further agrees that upon request of the Owner, the records and books pertaining to this Bid will be voluntarily supplied, furnished, and released to the Owner.

4. The undersigned hereby further certifies that the Bidder has not knowingly falsified, concealed, misled, or covered up by any trick, scheme, or device a material fact in connection with this bid. The undersigned also certifies that the Bidder has not made any false, fictitious or fraudulent statements or representations or made or used any false writing or documents knowing the same to contain any false, fictitious, or fraudulent statement or entry in connection with this Bid.

5. The undersigned further agrees that the Bidder will comply with Section 2.2-4374 of the Code of Virginia, 1950, as amended, and has not bought or purchased any equipment from any person employed by the Owner as an independent contractor to furnish architectural or engineering services for this Project, nor from any partnership, association, or corporation in which such architect or engineer has a pecuniary interest.

6. The undersigned further agrees to inform and require compliance by the following persons and entities with this anti-collusion statement as a condition of payment: all subcontractors, consultants, subconsultants, or any person, corporation, or legal entities that provide or furnish labor, material, equipment, or work related to this project.

7. All Covenants and Agreements made by the Contractor are made by it on behalf of the Contractor and its successors, personal representatives and assigns, the same as if they had been specifically named in each instance.

8. The signature on the Bid Form of this solicitation constitutes certification by the bidder or the bidder's designated representative that the bidder has inspected the job site(s) and is aware of the conditions under which the work must be accomplished. Claims, as a result of failure to inspect the job site, will not be considered by the Owner.

And further this deponent saith not.

_____
Name of Company/Bidder

_____
Title (Owner, Partner, President)

Subscribed and sworn to before me this_____day of_____, 20___

My commission expires:_____, 20___

_____
Notary Public

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____as Principal, and _____as Surety, are hereby held and firmly bound unto _____ as OWNER in the penal sum of _____ _____(Five Percent) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____day of _____, 20__.

The Condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain BID, attached hereto and hereby made a part hereof to enter into an Agreement in writing, for the _____ _____

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver an Agreement in the Form of Agreement attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said Agreement, and for the payment of all persons performing labor or furnishing materials in connection therewith, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

_____
Principal

_____
Surety

By: _____
Attorney-in-Fact

IMPORTANT - Surety companies executing BONDS shall appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the Commonwealth of Virginia.

V QUESTIONNAIRE (IFB No. 10-3725)

EACH BIDDER SHALL SUBMIT THE COMPLETED QUESTIONNAIRE WITH THEIR BID.

1. Name of Company: _____
   Trade Name (if different from Company Name): _____
   Principal Office Address: _____
   _____
   Telephone No(s).: _____
   Fax No(s).:_____

****LOWEST RESPONSIVE AND RESPONSIBLE BIDDER WILL BE REQUIRED TO SUBMIT THE LATEST DUN & BRADSTREET REPORT FOR THEIR FIRM****

a. If a Corporation, answer the following:

When Incorporated: _____

In What State: _____

Names and Addresses of Directors: _____
_____
_____

Names and Addresses of Shareholders: _____
_____
_____

b. If an Unincorporated Organization, answer the following:

Date of Organization: _____

Names and Addresses of Owners or Members: _____
_____
_____

Type and State of Organization: _____

c. If a Partnership, state whether Partnership is General or Limited: _____

Names and Addresses of Owners or Partners:
_____
_____

2. a. How many years has this Bidder been in business as a Contractor under its present business name? _____

b. What are prior names of this Bidder, if any? _____

_____

3. How many years' experience in this type of construction work has this Bidder had:

1) As a Contractor _____ 2) As a Subcontractor _____

4. Provide a list of uncompleted Contracts at present held by this Bidder (attach supplemental sheet if necessary):

Contract	Type of Work	Amount	Percentage Completed

5. List the Bidder's crew foremen and supervisors proposed for this Project and their years of related experience:

Name	Years of Experience	Dates of Employment with Bidder

6. What construction equipment does this Bidder own that is available for the proposed work (attach supplemental sheet if necessary)?

_____

_____

_____

7. Does this Bidder plan to subcontract any part of this work? If so, list name, address, year's experience, and type and amount of work to be performed by each subcontractor:

_____

_____

_____

_____

_____

_____

_____

8. Provide a list of projects <u>similar in character and scope</u> to the Work specified under this Contract which have been successfully completed by this Bidder during the <u>past three years</u> (attach supplemental sheet if necessary).

(The term "completed" means accepted and final payment received from the Owner or authorized representative).

Location & Type of Work	Owner's Name/ Address	Contact Person (Name and Telephone)	Date Completed	Contract Price

9. Have you ever performed work for a municipal corporation, local governing body, or similar agency previously? (If all such bodies are listed under 8, this question need not be completed).

_____

_____

_____

10. a. Has this Bidder ever failed to complete any work awarded to it? _____ If yes, give name of Owner, name of Bonding Company and circumstances:

_____

_____

_____

b. Is this Bidder debarred by the Federal Government or by the Commonwealth of Virginia or by any other State, or by any town, city, or county?

Yes _____ No _____ If yes, please provide details:

_____

_____

c. Has this Bidder ever had any judgments entered against it for the breach of contract for construction? _____ If yes, please provide details:

_____

_____

d. Give a summary of your financial statement. (List assets and liabilities; use an insert sheet, if necessary).

_____

_____

_____

_____

_____

11. State approximate largest dollar volume of work performed by this Bidder in one year:

_____

12. Give two (2) Banking Institution References:

a. Name: _____

Address: _____
Credit Available: _____

b. Name: _____

Address: _____

Credit Available: _____

13. List three material suppliers and amount of credit available:

_____ _____

_____ _____

_____ _____

14. List insurance coverage and amount (or attach certificate of insurance):

_____ _____
Liability-Property

_____ _____
Liability-Personal Injury

_____ _____
Vehicle and Equipment

_____ _____
Other - Identify

15. Bonding reference - List Surety Company and highest coverage:

_____

~~16. Have you or your authorized representative, personally inspected the location of the proposed Work, and do you have a clear understanding of the requirements of the Bid Documents?~~

_____
_____
_____
_____

The undersigned hereby authorizes and consents to any person, firm or corporation to furnish any information requested by the Owner in verification of this statement of contractor's qualifications. Also, if it is the apparent low Bidder, the undersigned hereby agrees to furnish the Owner upon request, a complete and current financial statement:

Contractor: _____

By: _____

Title: _____ Date: _____

VI CERTIFICATION REGARDING DEBARMENT

This is to certify that this person/firm/corporation is not now debarred by the Federal Government or by the Commonwealth of Virginia or by any other state, or by any town, city, or county, from submitting Bids on contracts for construction covered by this solicitation, nor are they an agent of any person or entity that is now so debarred.

_____
Name of Official

_____
Title

_____
Firm or Corporation

_____
Date

VII SAFETY CERTIFICATION FORM

To: James City County/James City Service Authority

Project Title: _____ **Contract No.** _____

Project Safety Responsibility (Name) _____ **Number:** _____

Emergency Contact (Name) _____ **Number:** _____

The undersigned hereby attests that the project has been carefully evaluated for the safety risks it presents and all safety procedures required based on these risks by Virginia Occupational Safety & Health, referenced in the bid document, will be implemented. Virginia Occupational Safety & Health and all other applicable Federal, State, and local laws referenced in the bid document, will be implemented. All workers on this project will be properly trained on the use of safety equipment and safe work practices.

By: _____

(Type Name and Title)

_____ _____

(Signature) **(Date)**

IFB
#11-4276

ADDENDUM NO. 1 APRIL 2,2010

III. BID FORM

Bids to be opened:	Time: **2:00 p.m.** **April 15, 2010**
Work to be Completed in:	**150 Days**
Liquidated Damages:	$500 per calendar day after time for Final Completion has expired.
Performance Bond:	100%
Payment Bond:	100%
Bid Security:	**5%**

To: Purchasing Director
James City County/James City Service Authority
101-F Mounts Bay Road
Williamsburg, Virginia 23185

Bid Number and Project Name: Ironbound Road Regional BMP – IFB No. 10-3725

A. BID PRICE

UNIT PRICE BID

In compliance with the Bid Documents, titled Ironbound Road Regional BMP, and all Addenda issued to date all of which are part of this Bid, the undersigned hereby proposes to furnish all items including materials, supervision, labor, and equipment in strict accordance with, said Contract Documents, for the sum of:

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 1 - GENERAL PROVISIONS					
110	**Special Provisions**				
110-1	BMP CMP RISER, ~~Household~~ Trash Removal and ~~Disposal~~ CMP BASE, FALLEN TREES, DEBRIS, &	LS	1 OFFSITE disposal		
110-2	Survey & Staking	LS	1		
110-3	As-built Drawings	LS	1		
				Division 1 Subtotal: _____	
DIVISION 3 - ROADWAY CONSTRUCTION					
301	**Clearing and Grubbing**				
301-1	Clearing ~~and Grubbing~~ and ~~Offsite~~ chipping Disposal ONSITE	ACRE	2.3		

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 5 - INCIDENTAL CONSTRUCTION					
507	**Fences**				
507-1	6' Chain Link Fence with Top Rail & barbed wire, Remove & REINSTALL	LF	~~580~~ 60		
507-2	6' Black Vinyl Coated Chain Link Fence with Top Rail	LF	390		
507-3	Fence Gate (2-6' x 8' double swing gates)	EA	2		
513	**Mobilization & Demobilization**				
513-1	Mobilization	LS	1		
				Division 5 Subtotal: _____	

*ITEMS 303-5 AND 303-6 TO BE PAID OUT BASED ON BID DOCUMENT/PLAN QUANTITIES

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 6 – LANDSCAPING					
602	**Topsoil**				
602-1	Topsoil (4-inch depth)	ACRE	1.8		
603	**Seeding**				
603-1	Lime, Fertilizer, Seed, and Mulch	ACRE	1.8		
603-2	COIR 700 EC-3 Soil Stabilization Fabric	SY	~~1400~~		
603-3	EC-2 Soil Stabilization Fabric (ALLOWANCE)	SY	500		

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
605	**Planting**				
605-1	Native Deciduous Shade Trees, 2.5" Caliper, Furnish, Install and Warranty	EA	7		
605-2	Native Evergreen Shrubs, 24" height, Furnish, Install and Warranty	EA	21		
				Division 6 Subtotal: _____	

TOTAL BASE BID: ($_____) _____
In Words

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents, ***unless otherwise noted***. The prices quoted shall include without exception all materials, supervision, labor, equipment, appliances, clean-up, applicable sales, use and other taxes, insurance, building permit or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Contract Documents. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the Contract Time. Unit prices shall be used in determining additions or deductions from the total Contract Price in the event of changes due to unforeseen conditions in the Work.

Bidders shall use the procedures for calculating mobilization costs as outlined in Section 513 of the Hampton Roads Planning District Commission (HRPDC) Regional Construction Standards (Current Edition)

302	Drainage Structures				
SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
302-1	Modified VDOT EW-1	EA	1		
302-2	Modified VDOT SWM-1 including trash racks	EA	1		
302-3	36" CLIII RCP O-Ring Storm Sewer Pipe including concrete cradle and flexible connection to riser	LF	68		
302-4	12" Diam. Class 52 Ductile Iron Pond Drain Pipe	LS	1		
302-5	6" 12" Diam. ~~Plug~~ Valve, ~~Dezurik Eccentric~~ or approved equal GATE VALTERRA SS — with extension Rods.	LS	1		
302-6	6" Diam. Schedule 40 PVC ~~Reverse Slope Pipe w/ 3" Orifice~~ Dewatering Pipe	LS	1		
302-7	Gabion Basket Baffle Wall	LS	1		
302-8	Toe Drain including clean outs	LF	160		
303	**Earthwork**				
303-1	36" Temporary CMP Pipe for Water Management (ALLOWANCE)	LF	100		
303-2	12" Diam. Slope Drain complete in place per E&SC Handbook (ALLOWANCE)	LF	200		
303-3	Upstream pump around system complete in place for duration of construction, including temp. plugging and unplugging of upstream ~~BMP low flow orifice~~ MANHOLE (IF Required)	LS	1		
303-4	Dewatering Pit ~~Wellpoint system~~ complete in place for duration of construction as necessary to provide "In the Dry" construction ~~(ALLOWANCE)~~ — AND PUMP System ON	LS	1		
303-5 *	Basin Excavation and ~~off~~-site disposal	CY	~~10,800~~ 400		
303-6 *	Construct ~~dam embankment selectively~~ EARTHEN BERM re-using on-site basin excavation soils	CY	~~2,000~~ 400		
303-7	Shoring as required for dam core construction	LS	1		
303-8	Undercut Excavation/Offsite Disposal (ALLOWANCE)	CY	500		
303-9	Replace Undercut Excavation with On Site Soil (ALLOWANCE)	CY	500		
303-10	Off-site select material for dam embarkment (ALLOWANCE)	CY	500		

EAST Page

303-11	Non-woven or woven Geotextile Fabric (ALLOWANCE)	SY	200		
SECTION	**ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
303-12	Temporary 42" Orange Safety Fence	LF	400		
303-13	Temporary Silt Fence	LF	~~1250~~ 120		
303-14	INLET Protection ~~Temporary Diversion Dikes~~	LF	~~830~~ 20		
303-15	Construction Entrance (IF Required)	EA	~~2~~ 1		
303-16	Maintenance of Erosion and Sediment Control Measures	LS	1		
303-17	Temporary Sediment Trap	LS	1		

SECTION	**ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
309	**Aggregate Base Course – Gravel Access Roads**				
309-1	Grading/Topsoil Removal and Disposal	LF	1020		
309-2	12" Access Road Construction including geotextile (Mirafi 180N or approved equal)	LF	1020		
				Division 3 Subtotal: _____	
	DIVISION 4 - MISCELLANEOUS				
414	**Riprap**				
414-1	Erosion Control Riprap - Class II Rip Rap Outfall including geotextile	TON	105		
414-2	Std. Rip Rap/Gravel Check Dam Below Outfall, complete in place	LS	1		
414-3	105 LF Class I Rip Rap Inflow Channel including filter fabric	TON	265		
414-4	Class A1 Slope Armor Stone including geotextile (ALLOWANCE)	TON	800		
				Division 4 Subtotal: _____	

TOANO MIDDLE SCHOOL RISER REPL.

1. Area of Riser excavation - 35x20 = 700

2. Area of Spoil Disposal & Berm Creation - 120x25 = 3000

3. Area of Access = 10'x100' = 1000'

TOTAL = 4700 SF

STORMWATER DIVISION ACCOUNT DEBIT FORM

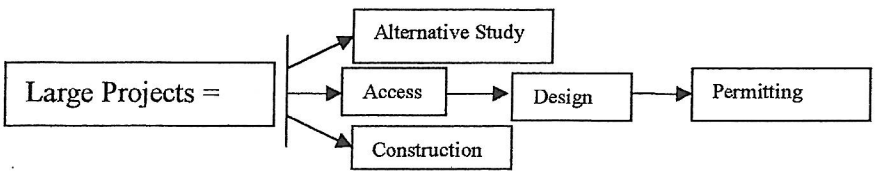
Directions: Take your project or purchase request documentation to the Stormwater Director along with this form. The Stormwater Director must fill out this form and sign to approve funding the project or purchase request. Then submit completed form and supporting documentation to Jo Anna Ripley, failure to do so will result in your request not being processed.

Project or Item:
(brief description) # 11-4276 Est. IFB Toano Middle School

Check the box	Amount	Account Name	Project Phase	Account Code
☐	$	Professional Services		001-135-0203
☐	$	Dues, Memberships, Subscriptions		001-135-0206
☐	$	Utilities		001-135-0207
☐	$	Duplicating		001-135-0214
☐	$	Equipment Maintenance		001-135-0215
☐	$	Postage		001-135-0218
☐	$	Travel and Training		001-135-0220
☐	$	Motor Fuels		001-135-0312
☐	$	Operating Supplies		001-135-0318
☐	$	Office Supplies		001-135-0319
☐	$	Printing and Publications		001-135-0323
☐	$	Clothing Purchases		001-135-0325
☐	$	Proffer		013-135-1000
☐	$ 40,000 +	Drainage Improvements		024-135-0100
☐	$	Water Quality Improvements		013-020-0300
☐	$	Community Services Ironbound Square BMP		010-021-9001
☐	$	Proffer Account		013-135-1000

Signature: _____ Date: _____
Frances Geissler, Stormwater Director

Examples of Project Phase(s): Small drainage projects = maintenance



Toano Middle School Estimate

Description	Material	Quantity	Unit Cost $	Total Cost $
Land Clearing – Embankment		.20 acres	20,000.00	4,000.00
- Construction Access/Fill Area		.10 acres	20,000.00	2,000.00
Dewater BMP - Excavate a pit to dewater soils to elevation 75.00		50 cy	20.00	1,000.00
Pump water from pit & By Pass pumping		2 days	500.00	1,000.00
Excavate sediment - to elevation 75.00 & place fill upslope shape BMP bottom		500 cy	20.00	10,000.00
Remove - damaged riser pipe, flap valve, concrete base, etc., & disconnect from barrel.		(1)	3,000.00	3,000.00
Install - New 48" Concrete Riser w/ 8' base slab, w/ gasket joints, rubber boots, & internal steps.		23 ft	400.00	9,200.00
Install - New 48" riser to 15" RCP barrel, using (1) new 15" RCP w/ rubber boot,	15" RCP	8 ft	30.00	240.00
Install - New 6" lower drain w/ gate valve & boot.	6" gate valve	(1)	500.00	500.00
Install - New 48" pyramidal trash guard & attach to 48" riser.	48" trash guard	(1)	2,000.00	2,000.00
Remove - Trash, tree limbs, & dead trees From within BMP and dispose of.		45 cy	20.00	900.00

Subtotal $33, 840.00

Toano Middle School Estimate

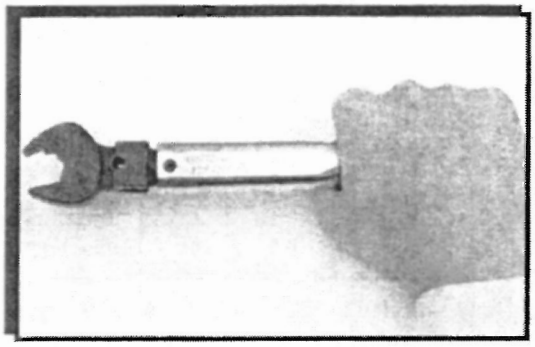
		Subtotal from previous page:	$33, 840.00
Grade & Stabilize: w/ topsoil, seed and erosion control blankets, all sediment and fill excavated from the BMP.	500 sy (500 cy)	10.00	4,500.00
		Subtotal	38,340.00
Contractor Mobilization		5%	1,917.00
Engineering & Geotech Services		10%	3,834.00

12/15/10

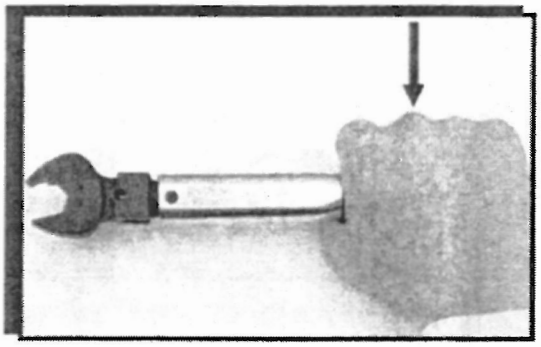
Toano Middle School BMP Repair

- Work eligible for NWP #43
- No pre-discharge notification req'd.
- RTE - per Mike Woolson
  - not habitat for Small Whorled Pegonia
  - extensively disturbed site
  - shaded site - not good for New Jersey Rush

TORQUE WRENCH TECHNIQUES

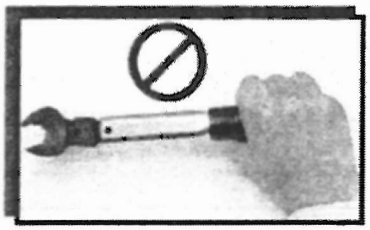


This is the correct grip. The center of the hand is aligned with the center of the vinyl hand grip.

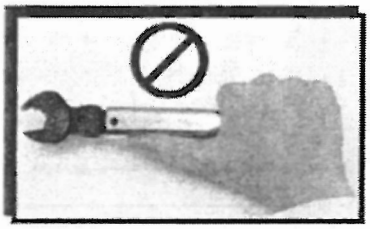


Pull the wrench steadily until it "clicks" or cams over slightly. When this occurs, the correct torque has been reached. Do not pull past the click.

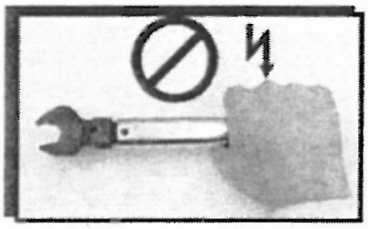
Do NOT "short grip" the wrench.



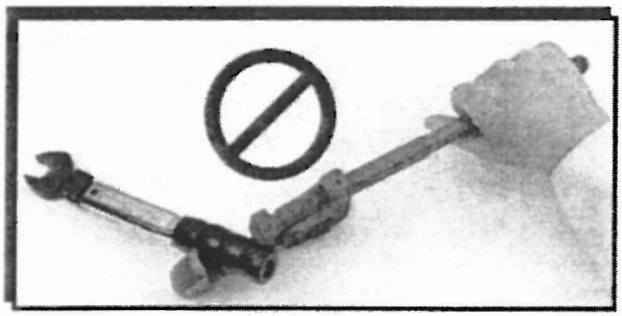
Do NOT "long grip" the wrench.



Do NOT extend your thumb for leverage.



Do NOT jerk the wrench.



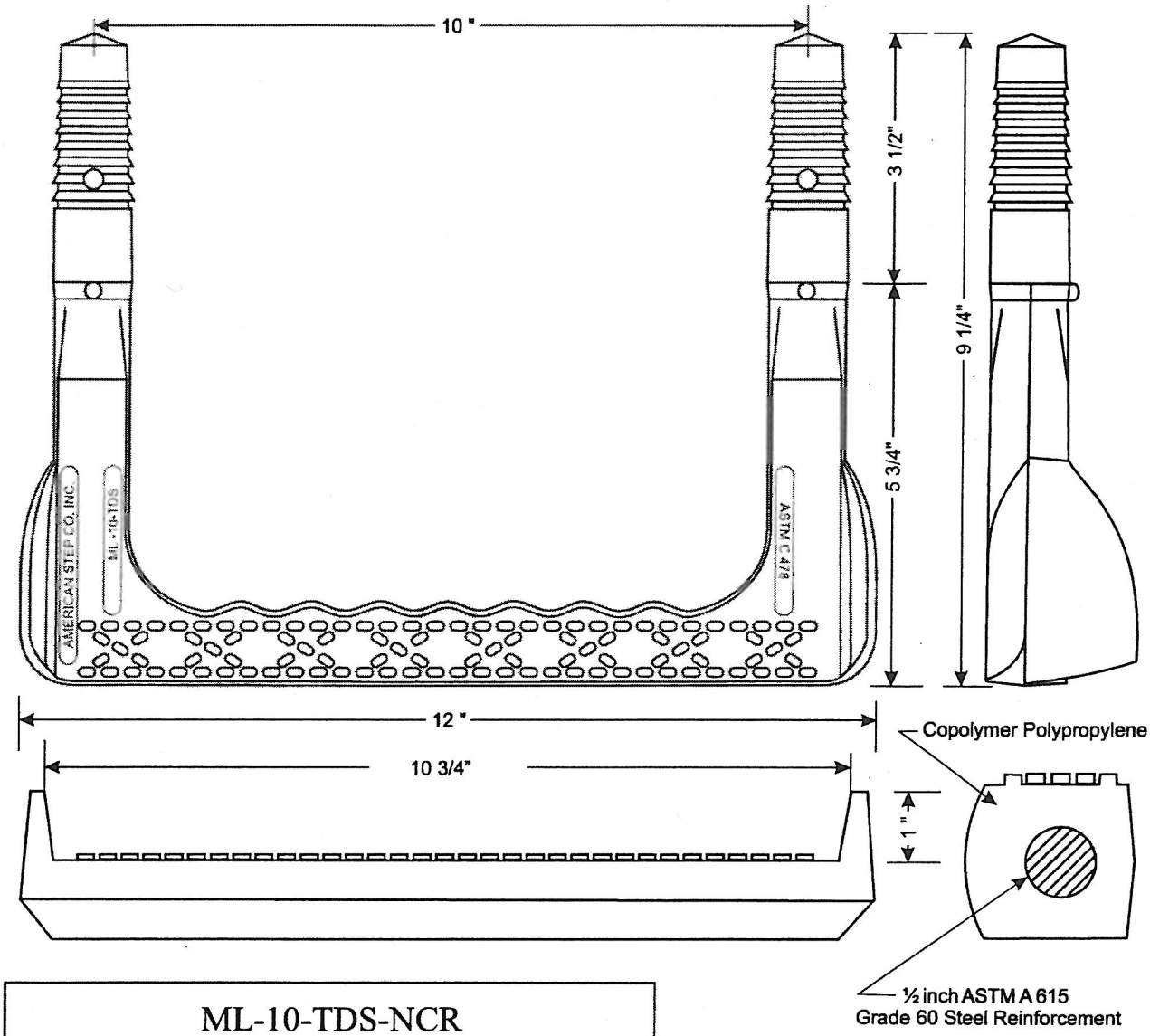
Do NOT use any form of "cheater bar"

Press-Seal believes all information is accurate as of its publication date. Information, specifications, and prices are all subject to change without notice. Press-Seal is not responsible for any inadvertent errors.

PRESS-SEAL GASKET CORPORATION
P.O. Box 10482, Fort Wayne, Indiana 46852
Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

http://www.americanstep.com

ML-10-TDS-NCR



ML-10-TDS-NCR

Mechanical Lock Installation Methods
Minimum Concrete Strength Must Be 3000 psi.

Preformed Holes

Two preformed holes on 10" centers
Holes must be parallel
Diameter of holes are 1.1" tapering to 7/8" in 3 ½" of depth

Drilled Holes

Drill two 1" holes on 10" centers with a minimum depth of 3 3/4"
Use 1" masonry bit for drilling.
Holes must be parallel.

Drive step with sledge hammer until both legs are completely seated

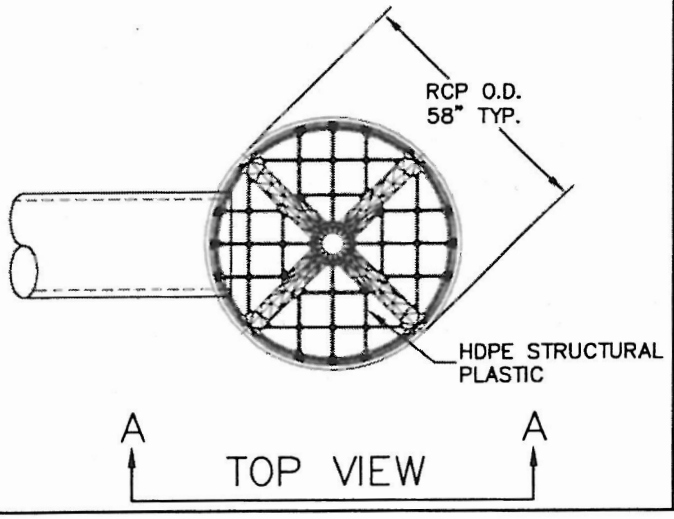
This step meets or exceeds ASTM C 478 and OSHA Standards when properly installed.

AMERICAN Step Company, Inc.

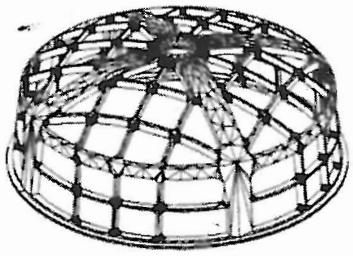
American Step Company, Inc.
P.O. Box 137
830 East Broadway
Griffin, GA 30224-0137

800-988-STEP
770-467-9844 (OFFICE)
770-467-8011 (FAX)

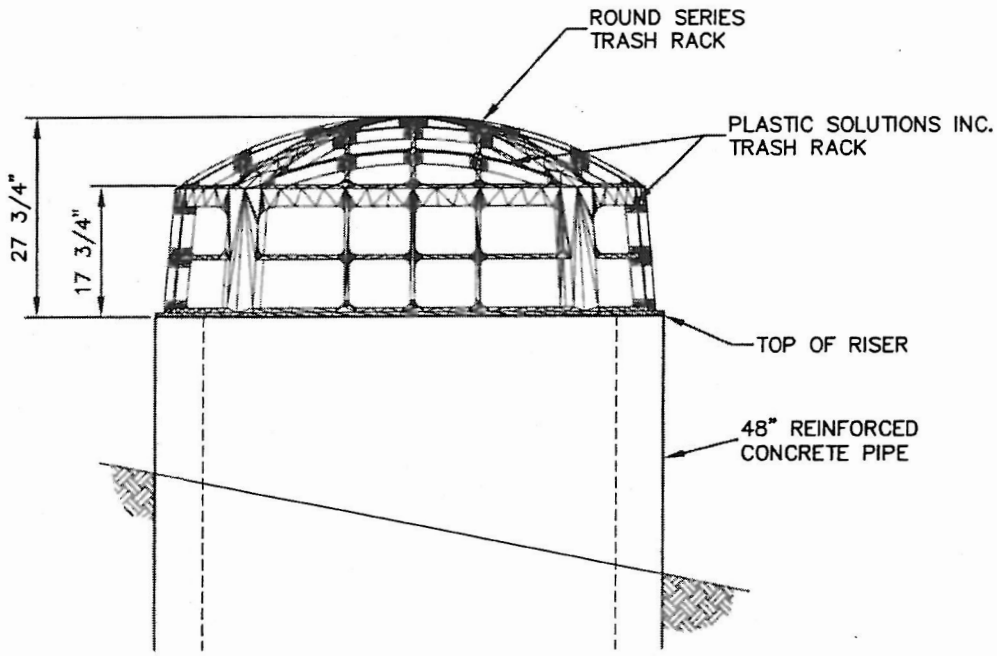
http://www.americanstep.com



TOP VIEW

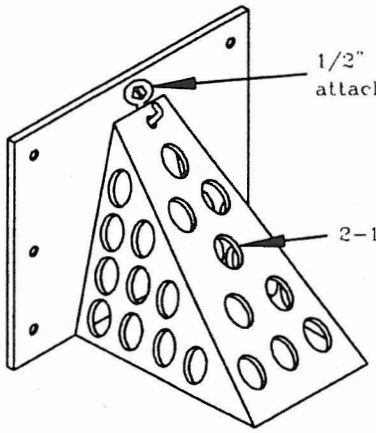


TRASH RACK ASSEMBLY

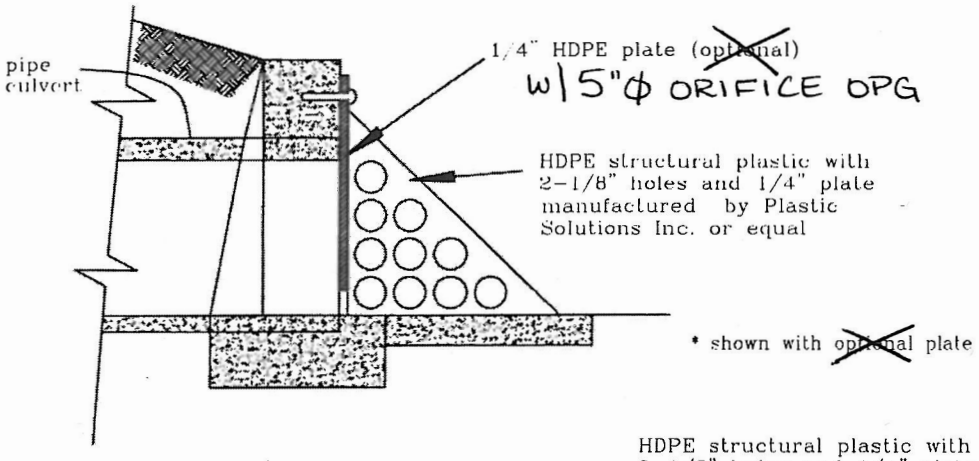


ELEV. A–A

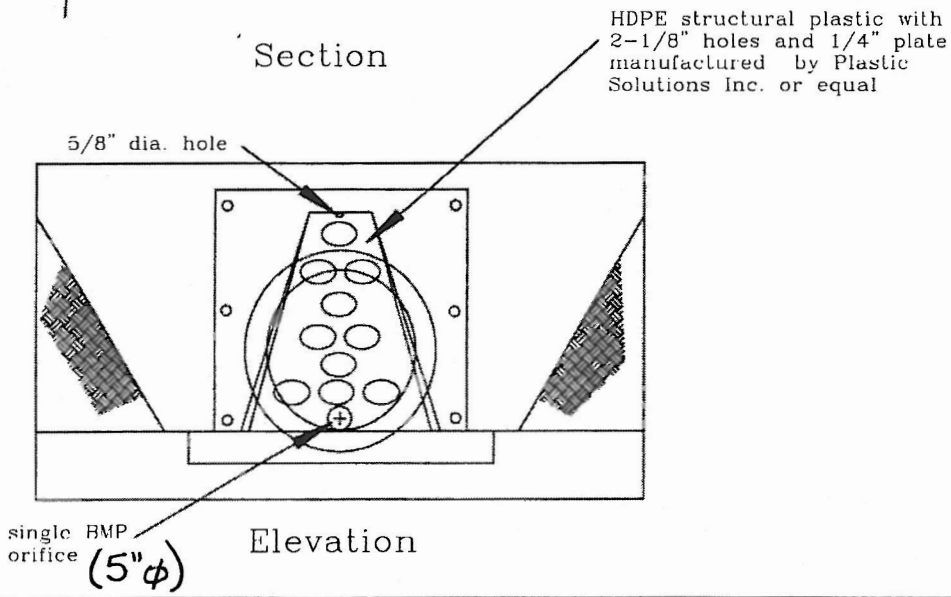
PART NO	48" ROUND SERIES TRASH RACK	PLASTIC SOLUTIONS INC.	240 McGhee Road P.O. Box 4386 Winchester, VA 22604 540–722–4694 www.plastic–solution.com
RS-48	WITH CONCRETE RISER		



Isometric



Section



Elevation

DEBRIS CAGE

PLASTIC SOLUTIONS INC.
P.O. Box 4386
Winchester VA 22604
877-877-5727
www.plastic-solution.com

Toano MS BMP Submittal

1. Vertical location for riser opening - how computed -

2. Does Plastic Solm trash rack have an opening? - See sheet 4 - reqd

3. What is proposed for rubber boot for 15" RCP? - ok
   PSX: Direct Drive -

4. Are steps shown for outside of manhole as well as inside?
   Are these field installed? - Hole former inside MH -
   Note - install steps on outside @ stnd interval

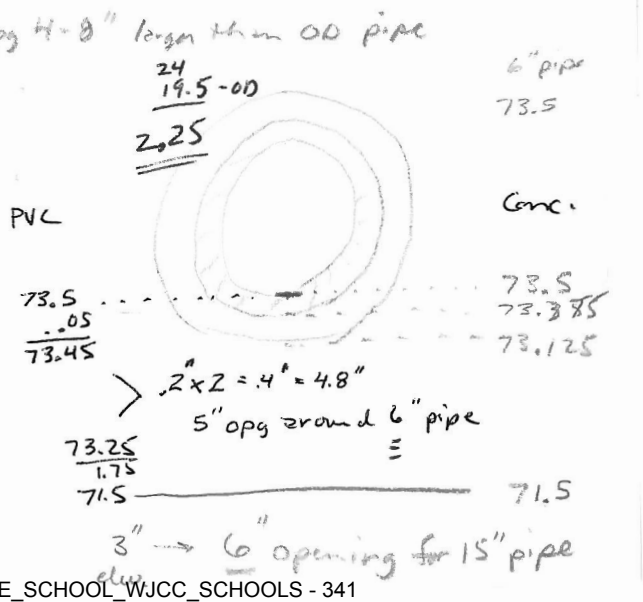
5. Specify amt. of extension rods for gate valve

6. Check to see if "Customer Specs" on gabion are equiv. to ASTM A974-97 ok

7. Change angle of orifice from 20° to something else -

20° → 45°

Circumference of ID = $12.56/360 \times 20 = 8"$ $\quad 1 = (x)\frac{12.56}{360} \Rightarrow 30°$ would be 1'



SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 1 – GENERAL PROVISIONS					
110-1	BMP TRASH & DEBRIS REMOVAL INCLUDING OLD CMP RISER, BASE, FALLEN TREES, LIMBS, ETC.	LS	1		
110-2	SURVEY, STAKEOUT, FLAGING (AS NEEDED)	LS	1		
DIVISION SUBTOTAL ----------					
DIVISION 3 - CONSTRUCTION					
301-1	CLEARING & CHIPPING TREES (NO GRUBBING)	LS	30,000 SF		
301-2	GRADING FOR CONSTRUCTION ACCESS & OPERATIONS	SF	5,000 SF		
302-2	MODIFIED PRECAST SWM POND RISER STRUCTURE W/ TRASH RACK & GUARDS INSTALLED	EA	1		
302-4	6" DIAM. SCEHDULE 40 PVC DRAIN PIPE W/ PERFORATED RISER & CAP INSTALLED	EA	1		
302-5	6" DIAM. GATE VALVE (VALTERRA) W/ EXTENSION RODS TO TOP OF RISER INSTALLED	EA	1		
302-6	REINSTALL EXISTING 15"RCP INTO POND RISER	LS	1		
302-7	15" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1		
302-8	6" KOR-N-SEAL RUBBER BOOT SYSTEM INSTALLED	EA	1		
302-9	GABION BASKET BAFFLE WALL INSTALLED	LS	1		
302-10	CONCRETE FLOOR POURED INSIDE POND RISER	LS	1		
303	EARTHWORK				
303-1	EXCAVATE FOR DEWATERING PIT	LS	1		
303-2	OPERATE & MAINTAIN DEWATERING PUMPING WITHIN DEWATERING PIT AS NEEDED.	LS	1		
303-3	EXCAVATION OF POND BASIN AS SHOWN ON PLAN AND RELOCATE EXCAVATED SOILS UPSLOPE.	CY	400		

303-4	STRIP TOPSOIL (BERM AREA), & STOCK PILE	SY	400		
303-5	CONSTRUCT UPSLOPE EARTHEN BERM REUSING EXCAVATED BASIN SOILS	CY	400		
303-6	SPREAD STOCKPILED TOPSOIL OVER BERM	SY	400		
303-7	INSTALL PERMANENT SEEDING, LIME, FERTILIZER & STRAW.	SY	600		
303-8	INSTALL EC-2 STABILIZATION BLANKETS	SY	400		
303-9	INSTALL SILT FENCE	LF	150		
303-10	INSTALL INLET PROTECTION	LS	1		
304-11	MAINTANENCE OF EROSION CONTROL MEASURES	LS	1		

DIVISION 4- MISCELLANEOUS					
414	STONE & RIPRAP				
414-1	BEDDING STONE # 57 INSTALLED	TON	5		
414-2	EROSION CONTROL RIP RAP, 1.5' DEEP, ON FILTER COLTH INSTALLED	SY	2		

DIVISION 5 – INCIDENTAL CONSTRUCTION					
507	FENCES				
507-1	REMOVE 60 LF OF 6' CHAIN LINK FENCE WITH TOP RAIL AND BARBED WIRE AND REINSTALL UPON COMPLETION OF PONDRISER INSTALLATION.	LF	60		
507-2	MOBILIZATION	LS	1		

C. UNIT PRICES:

The Undersigned submits the following unit costs for the Work. Prices shall be given for both deductions and additions to the work and shall include the item installation, materials, labor, overhead and profit costs for the work to be completed 100 percent. Failure to quote unit prices may result in the rejection of the bid. The Owner reserves the right to delete unit prices from the executed contract that are deemed unreasonable.

1. BYPASS STORMWATER PUMPING
   INSTALL A TEMORARY PLUG IN THE UPSLOPE YARD DRAIN
   MANHOLE AND PUMP STORMWATER AWAY FROM THE STORMWATER POND
   DURING STORM EVENTS.

   $_____ per day.

2. PROVIDE STREET SWEEPING OF PAVED SURFACES IF SEDIMENT TRACKING OCCURS AS A RESULT OF CONSTRUCTION EGRESS.

   $_____ per hr.

3. INSTALLATION OF A CONSTRUCTION ENTRANCE 12' X 70', VDOT # 1 STONE ON FILTER FABRIC.

   $_____ LS

4. TEMPORARY USE OF TIMBER MATTING FOR GROUND STABILIZATION

   $ _____ per LF.

VIII STANDARD BID ITEMS AND UNITS

Section	Bid Item	Category	Unit
301	Clearing and grubbing	Clearing and Grubbing	ACRE or LS
301	Tree protection fencing	Clearing and Grubbing	LF or EA
302	Storm sewer pipe (diameter and type)	Drainage Structures	LF
302	Pipe culverts (waterway opening)	Drainage Structures	LF
302	Pipe reducers (larger diameter)	Drainage Structures	LF
302	Jacked pipe (diameter and type)	Drainage Structures	LF
302	Reinstalled pipe (diameter)	Drainage Structures	LF
302	End sections (standard and size)	Drainage Structures	EA
302	End walls	Drainage Structures	EA
302	Box culverts (waterway opening)	Drainage Structures	LF
302	Pipe grate	Drainage Structures	LF
302	Drop / yard inlets, catch basins, and intake boxes	Drainage Structures	EA
302	Base section (drop inlets and manholes)	Drainage Structures	LF
302	Manhole (0-6' depth) (4 or 5 foot diameter)	Drainage Structures	EA
302	Manhole (>6' depth) (4 or 5 foot diameter)	Drainage Structures	VF
302	Conflict manhole	Drainage Structures	EA
302	Concrete spring boxes	Drainage Structures	EA
302	Junction boxes	Drainage Structures	EA
302	Reconstructed manholes	Drainage Structures	EA
302	Precast Arches	Drainage Structures	LF
303	Regular excavation	Earthwork	CY
303	Pavement demolition (type and depth of pavement) [in proposed pavement]	Earthwork	SY
303	Pavement demolition (type and depth of pavement) [outside proposed pavement]	Earthwork	SY
303	Curb & gutter demolition	Earthwork	LF
303	Existing structure demolition	Earthwork	EA
303	Existing pipe demolition	Earthwork	LF
303	Undercut Excavation (regular)	Earthwork	CY
303	Select Material (min. CBR)	Earthwork	CY
303	Select Bedding (regular)	Earthwork	CY
303	Suitable Fill (regular)	Earthwork	CY
303	Backfill of Undercut Excavation (regular)	Earthwork	CY or TON
303	Surcharge placement and removal	Earthwork	CY
303	Settlement plate	Earthwork	EA
303	Geotextile fabric for Base Preparation	Earthwork	SY
303	Select Bedding/Backfill of Undercut Excavation (trenching)	Earthwork	CY or TON
303	Check dam (log or rock)	Earthwork	EA
303	Undercut Excavation (trenching)	Earthwork	CY

Section	Bid Item	Category	Unit
303	Sheeting, bracing, and shoring left in place (trenching)	Earthwork	LS
303	Rip-Rap for erosion control	Earthwork	TON
303	Baled straw check dam	Earthwork	EA
303	Temporary silt fence	Earthwork	LF
303	Geotextile fabric for Erosion Control	Earthwork	SY
303	Temporary filter barrier	Earthwork	LF
303	Slope drain	Earthwork	EA
303	Sediment basin excavation	Earthwork	CY
303	Siltation control excavation	Earthwork	CY
303	Inlet Protection (type of device)	Earthwork	EA
303	Construction entrance	Earthwork	EA
305	Select material - Type I	Subgrade and Shoulders	TON
305	Select material - Types II or III	Subgrade and Shoulders	CY
305	Gravel Driveway Replacement	Subgrade and Shoulders	EA
309	Aggregate material (base course)	Aggregate Base Course	CY or TON
309	Aggregate base material (base course for curb and gutter)	Aggregate Base Course	CY or TON
310	Tack coat	Tack and Prime Coat	GALLON
310	Prime coat	Tack and Prime Coat	GALLON
313	Asphalt surface treatment	Asphalt Surface Treatment	SY
315/ 315A	Asphalt concrete (type and class)	Asphalt Concrete Pavement	TON or SY
315/ 315A	Bituminous Leveling Course	Asphalt Concrete Pavement	TONS
315/ 315A	Edge clipping of shoulders	Asphalt Concrete Pavement	LF
317	Pavement Patch	Pavement Patching	LF
406	Reinforcing steel or welded wire mesh	Reinforcing Steel	POUND
406	Epoxy-coated reinforcing steel	Reinforcing Steel	POUND
414	Dry riprap (class and depth)	Riprap	SY or TON
414	Grouted riprap	Riprap	SY or TON
414	Stone riprap for foundation protection (depth)	Riprap	SY or TON
414	Dumped riprap	Riprap	SY or TON
414	Mortared riprap	Riprap	SY
414	Concrete riprap in bags	Riprap	CY
414	Erosion control rip rap	Riprap	SY or TON
501	Underdrain and combination underdrain	Underdrains	LF
502	Curb, combination curb and gutter (detail designation)	Concrete Items	LF
502	Gutter, standard, radial and entrance	Concrete Items	SY or LF
502	Paved ditch	Concrete Items	SY
502	Paved flume	Concrete Items	SY
502	Street Connection pavement	Concrete Items	SY

Section	Bid Item	Category	Unit
502	Bridge drainage aprons and chutes	Concrete Items	SY
502	Energy Dissipators	Concrete Items	EA
502	Sign island	Concrete Items	EA or SY
502	Median barriers (including delineators)	Concrete Items	LF
502	Median Strips	Concrete Items	LF or SY
502	Directional island curb	Concrete Items	LF
502	Hydraulic cement concrete sidewalks (thickness)	Concrete Items	SY
502	Concrete steps (concrete)	Concrete Items	CY
502	Handrails	Concrete Items	LF
502	Geotextile drainage fabric	Concrete Items	SY
502	Curb Cut Ramps	Concrete Items	SY
502	Composite Detectable Warning Panels	Concrete Items	SF
502	Concrete Driveway Replacement (Pipe Installation)	Concrete Items	EA
502	Concrete Driveway	Concrete Items	SY
505	Guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Reuse guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Radial guardrail (Standard)	Guardrail and Steel Median Barriers	LF
505	Guardrail terminal (Standard and type)	Guardrail and Steel Median Barriers	LF or EA
505	Intermediate anchorage assembly	Guardrail and Steel Median Barriers	EA
505	Median barrier (Standard)	Guardrail and Steel Median Barriers	LF
505	Radial median barrier (Standard)	Guardrail and Steel Median Barriers	LF
505	Median barrier terminal (Standard and type)	Guardrail and Steel Median Barriers	EA
505	Cable barricade (Standard)	Guardrail and Steel Median Barriers	EA
505	Fixed object attachment (Standard)	Guardrail and Steel Median Barriers	EA
505	Special design guardrail bridge attachment (B or Str. No.)	Guardrail and Steel Median Barriers	LS
505	Reuse guardrail terminal (Standard and type)	Guardrail and Steel Median Barriers	LF
505	Guardrail terminal site preparation (Standard)	Guardrail and Steel Median Barriers	EA
505	Bull nose barrier	Guardrail and Steel Median Barriers	EA
507	Fences (Standard and Height)	Fences	LF
507	Gate (Standard and Length)	Fences	EA
510	Remove, reset, relay, adjust, install, modify, reconstruct relocate, existing (Item or standard)	Relocating or Modifying Existing Miscellaneous Items	EA, LF, SY, CY or LS
510	Adjust structure heights	Relocating or Modifying Existing Miscellaneous Items	EA
511	Allaying dust	Allaying Dust	HR
512	Flagger Service (Certified)	Maintaining Traffic	HR
512	Flagger Service (Police-assisted))	Maintaining Traffic	HR
512	Pilot vehicle	Maintaining Traffic	HR

Section	Bid Item	Category	Unit
512	PDMS (Type)	Maintaining Traffic	DAY,WEEK or MONTH
512	TMA	Maintaining Traffic	HR, DAY, WEEK or MONTH
512	Electronic Arrow	Maintaining Traffic	HR, DAY, WEEK or MONTH
512	Warning Light	Maintaining Traffic	DAY, WEEK or MONTH
512	Group 2 Channelizing Devices	Maintaining Traffic	DAY, WEEK or MONTH
512	Traffic barrier service (per location) (Type and/or standard)	Maintaining Traffic	LF
512	Traffic barrier service guardrail termination (standard)	Maintaining Traffic	EA or LF
512	Impact attenuator service (Type)	Maintaining Traffic	EA
512	Temporary signalization	Maintaining Traffic	LS
512	Construction pavement marking (type and message)	Maintaining Traffic	LF
512	Construction pavement message marking (type and width)	Maintaining Traffic	EA
512	Eradication of existing pavement marking (per 6-inch width)	Maintaining Traffic	LF
512	Temporary Pavement marker ([ ]-way)	Maintaining Traffic	EA
512	Temporary Detour (standard and type)	Maintaining Traffic	LF
512	Crusher run aggregate (No. 25 or 21A)	Maintaining Traffic	TON
512	Type III Barricades	Maintaining Traffic	EA
512	Construction Signs	Maintaining Traffic	EA/DAY or SF
513	Mobilization (3 payments)	Mobilization & Demobilization	LS
515	Milling Pavement	Milling Pavement	SY
521	Pavers	Pavers	SF
521	Spare Pavers	Pavers	SF
530	Abandon Laterals and Cleanouts (on Abandoned Mains)	Abandonment of Existing Pipelines and Structures	LF or EA
530	Abandon Pipe, (diameter) < larger than 2-inch>	Abandonment of Existing Pipelines and Structures	LF
530	Abandon Meter Boxes	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Laterals and Cleanouts (on Active Mains)	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Manholes	Abandonment of Existing Pipelines	EA
530	Abandon Drainage Structures	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Meter/Valve Vaults/Boxes	Abandonment of Existing Pipelines and Structures	EA
530	Abandon Metallic Structures	Abandonment of Existing Pipelines and Structures	EA

Section	Bid Item	Category	Unit
602	Topsoil (4-or 6-inch depth)	Topsoil	ACRE or SY
603	Lime, fertilizer, seed and mulch	Seeding	ACRE or SY
604	Sod, fertilizer and lime	Sodding	SY
605	Plants (Type and size)	Planting	EA
605	Mulching and remulching	Planting	100 SF
608	Mowing	Mowing	HR or LS
700	Concrete foundation (Standard, type and, size)	Traffic Control Devices	EA
700	Electrical service (Standard and type)	Traffic Control Devices	EA
700	Luminaire arm (Length)	Traffic Control Devices	EA
700	Lighting pole (Standard luminaire mounting height, and length of luminaire arm)	Traffic Control Devices	EA
700	Signal pole (Standard, length, number, and length of arms)	Traffic Control Devices	EA
700	Overhead sign structure	Traffic Control Devices	EA
700	Bridge-mounted sign structure (Location)	Traffic Control Devices	EA
700	Pedestal pole (Standard and length)	Traffic Control Devices	EA
700	Wood pole (Class and length)	Traffic Control Devices	EA
700	Conductor Cable (Size/number)	Traffic Control Devices	LF
700	Conduit (Type and size)	Traffic Control Devices	LF
700	Trench Excavation (Standard)	Traffic Control Devices	LF
700	Junction box (Standard)	Traffic Control Devices	EA
704	Pavement line marking (Type and/or class and width)	Traffic Control Devices	LF
704	Pavement message marking (Message)	Traffic Control Devices	EA
704	Pavement marker (Type, [ ]-way, and/or type pavement)	Traffic Control Devices	EA
801	Ductile iron water main (diameter)	Water Distribution Systems	LF
801	PVC water main (diameter)	Water Distribution Systems	LF
801	PVCO (diameter)	Water Distribution Systems	LF
801	HDPE (diameter)	Water Distribution Systems	LF
801	Fire hydrant assembly	Water Distribution Systems	EA
801	Water sampling stations	Water Distribution Systems	EA
801	Gate valves (diameter)	Water Distribution Systems	EA
801	Butterfly Valves (diameter)	Water Distribution Systems	EA
801	Water Meter Box	Water Distribution Systems	EA
801	Tapping sleeve/valve (diameter)	Water Distribution Systems	EA
801	Blowoff Assembly	Water Distribution Systems	EA
801	Manual air vent assembly	Water Distribution Systems	EA
801	Type K copper service lines (jack and pull)	Water Distribution Systems	LF or EA
801	Type K copper service lines (open cut)	Water Distribution Systems	LF or EA
801	Type K copper dual service lines (jack and pull)	Water Distribution Systems	LF or EA

Section	Bid Item	Category	Unit
801	Type K copper dual service lines (open cut)	Water Distribution Systems	LF or EA
801	Polyethylene encasement	Water Distribution Systems	LF
801	Connections to existing water mains	Water Distribution Systems	EA
801	Plugging Existing 2" Water Main	Water Distribution Systems	EA
801	Offset of Existing Water Main	Water Distribution Systems	LF
801	Cut in Tees	Water Distribution Systems	EA
801	Cut in Crosses	Water Distribution Systems	EA
801	Cut in Valves	Water Distribution Systems	EA
802	Gravity sewer pipe (diameter, type and depth 0-6, 6-8, 8-10,10-12,12-14,14-16,16-18,18-20, >20')	Sanitary Gravity Sewer Systems	LF
802	Sewer laterals (type and diameter)	Sanitary Gravity Sewer Systems	LF or EA
802	Manhole, 0' to 6' in depth (4-or 5-foot dia.)	Sanitary Gravity Sewer Systems	EA
802	Manhole extra depth (4-or 5-foot dia.)	Sanitary Gravity Sewer Systems	VF
802	Drop Manhole (inside or outside)	Sanitary Gravity Sewer Systems	EA
802	Standard manhole frame and cover	Sanitary Gravity Sewer Systems	EA
802	Watertight manhole frame and cover	Sanitary Gravity Sewer Systems	EA
802	Clean-out assemblies (mainline and service lateral)	Sanitary Gravity Sewer Systems	EA
802	Remote Camera/TV Inspection	Sanitary Gravity Sewer Systems	LF
802	Connections to existing manholes	Sanitary Gravity Sewer Systems	EA
802	Manhole and Mainline Cleanout adjustment rings	Sanitary Gravity Sewer Systems	EA
802	Manhole/Structure Coatings (Type A or B, 4- or 5-foot manhole diameter)	Sanitary Gravity Sewer Systems	VF or EA
803	Ductile iron force main (diameter)	Sanitary Force Main Systems	LF
803	HDPE force main (diameter)	Sanitary Force Main Systems	LF
803	PVC force main (diameter)	Sanitary Force Main Systems	LF
803	Manual air vent assembly	Sanitary Force Main Systems	EA
803	Gate valves (diameter)	Sanitary Force Main Systems	EA
803	Tapping sleeve/valve (diameter)	Sanitary Force Main Systems	EA
803	Connections to existing force mains or manholes	Sanitary Force Main Systems	EA
803	Interior Pipe Corrosion Lining (Diameter)	Sanitary Force Main Systems	LF
803	Offset of Existing Force Main	Sanitary Force Main Systems	LF
803	Cut in Tees	Sanitary Force Main Systems	EA
803	Cut in Crosses	Sanitary Force Main Systems	EA
803	Cut in Valves	Sanitary Force Main Systems	EA
804	Bore and jack casing (diameter)	Boring and Jacking	LF
806	Horizontal Directional Drill	Horizontal Directional Drilling	LS
	Sanitary Sewer Rehabilitation	**(Sections 810-822)**	
810	Light Cleaning (diameter)	Sewer Line Cleaning	LF

Section	Bid Item	Category	Unit
810	Heavy Cleaning (diameter and number of passes greater than 3)	Sewer Line Cleaning	LF
810	Manhole Cleaning	Sewer Line Cleaning	EA
811	Television Inspection (CCTV Only)	Television Inspection	LF
812	Bypass Pumping / Flow ~_____ MGD (Flow > 2 MGD)	Bypass Pumping	LS
813	CIPP Method/Wall Thickness=___mm (Diameter)	Pipe Rehabilitation By Cured-In-Place Method	LF
813	Removal of Intruding Service Lateral Connections (Ferrous or Non-Ferrous)	Pipe Rehabilitation By Cured-In-Place Method	EA
814	Fold and Form Method / Wall Thickness = SDR _____ (diameter)	Pipe Rehabilitation By Fold and Form Pipe Method	LF
814	Removal of Intruding Service Lateral Connections (Ferrous or Non-Ferrous)	Pipe Rehabilitation By Fold and Form Pipe Method	EA
816	Sewer Joint Testing (diameter)	Sewer Joint Testing	EA
817	Chemical Joint Sealing / Grouting	Chemical Grouting	GAL
818	Sewer Point Repair (diameter, material, and depth 0-6, 6-8, 8-10, 10-12, 12-14, 14-16,16-18, 18-20, >20')	Point Repair By Excavation	LF
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 0-3 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 3-6 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 6-9 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 9-12 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
819	Insitu Structural Point Repair / Wall Thickness = ____ mm 12-15 Foot Section Length (diameter)	Insitu Structural Point Repair	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 6-9 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 9-12 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
820	Insitu Point Repair by Sectional Lining / Wall Thickness =___mm 12-15 Foot Section Length (diameter)	Insitu Point Repair By Sectional Lining	EA
821	Service Laterals (diameter and material)	Sanitary Sewer Service Reconnection	LF
822	Manhole Cementitious Coating, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Cementitious Coating extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF

Section	Bid Item	Category	Unit
822	Manhole Fiberglass Insert Liner, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Fiberglass Insert Liner extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF
822	Manhole Epoxy Coating, 0-6' depth (4- or 5-ft diameter)	Manhole Rehabilitation	EA
822	Manhole Epoxy Coating extra depth (4- or 5-ft diameter)	Manhole Rehabilitation	VF
822	Manhole Frame Seals	Manhole Rehabilitation	EA

End of Section

B. ADDENDA

The undersigned acknowledges receipt of the following addenda:

Addendum No._____Dated:_____.

Addendum No._____Dated:_____.

Addendum No._____Dated:_____.

C. We agree to enter into an Agreement with James City County/James City Service Authority, Virginia, within ten (10) days of the award of same to us for the price named in our Bid.

D. It is expressly agreed by us that James City County/James City Service Authority, Virginia, shall have the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid and accept the Bid in James City County/James City Service Authority, best interests.

E. In default of the performance on our part of the conditions of Bid, our failure to enter into an Agreement with James City County/James City Service Authority, Virginia, within the time above set, we herewith furnish a Bid Security in the amount of $_____, which shall be absolutely forfeited to James City County/James City Service Authority, Virginia, but otherwise the said Bid Security shall be returned.

F. We agree to begin Work at any time we may be notified by the Owner, and complete all of the Work embraced in the Agreement within **150** Days;

G. *[This applies to projects over $200,000 unless otherwise indicated].* I/We elect to utilize the Escrow Account Procedure described in the provision of this bid if determined to be the successful low Bidder. _____ (write "Yes" or "No").

_____ Bid total does not qualify for escrow account option

H. The undersigned has read all sections under "Instructions to Bidders."

I. CONTRACTOR'S REGISTRATION AND SIGNATURE

Registered Virginia Contractor Class and No._____
Registration Expires _____

(NOTE: FAILURE TO INCLUDE CONTRACTOR'S REGISTRATION NUMBER IS GROUNDS FOR REJECTION OF THE BID.)

Contractor_____ Signed_____

Date_____ Title_____

NOTE: If Bidder is a corporation, write State of incorporation under signature.

MAILING ADDRESS AND TELEPHONE/FAX NUMBER OF BIDDER:

_____

_____

_____

(_____)_____[Telephone] Email_____; FAX_____

IF CORPORATION, PROVIDE NAME AND MAILING ADDRESS AS REQUIRED BELOW.

PRESIDENT	SECRETARY	TREASURER
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IF PARTNERSHIP, PROPRIETORSHIP, LIMITED LIABILITY COMPANY OR OTHER FIRM, PROVIDE NAME AND MAILING ADDRESS OF EACH PARTNER, PROPRIETOR, OR MEMBER OF FIRM.

_____	_____	_____
_____	_____	_____

J. NON COLLUSION AFFIDAVIT

James City County/James City Service Authority, Virginia Project: **Bid No: 10-3725**

_____ Bid Date:_____

COMMONWEALTH OF VIRGINIA
(City/County)

This day personally appeared before the undersigned, a Notary Public in and for the City/County and State aforesaid,

_____ who having been first duly sworn according to law, did depose and aver as follows:

(a) That he/she is_____
(Owner, Partner, President, etc.)

of _____
(insert name of Bidder)

(b) That he/she is personally familiar with the Bid of _____
(Insert Company Name)
submitted in connection with the above captioned Owner's project.

(c) That said Bid was formulated and submitted in good faith as the true bid of said Bidder.

1. In preparation and submission of this Bid, the Bidder did not either directly or indirectly, enter into any combination or agreement with any person, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

2. The undersigned Bidder hereby certifies that neither this Bid nor any claim resulting therefrom, is the result of, or affected by, any act of collusion with, or any act of another person or persons, firm or corporation engaged in the same line of business or commerce; and that no person acting for or employed by the Owner has any personal interest in this Bid.

3. The undersigned hereby further agrees that upon request of the Owner, the records and books pertaining to this Bid will be voluntarily supplied, furnished, and released to the Owner.

4. The undersigned hereby further certifies that the Bidder has not knowingly falsified, concealed, misled, or covered up by any trick, scheme, or device a material fact in connection with this bid. The undersigned also certifies that the Bidder has not made any false, fictitious or fraudulent statements or representations or made or used any false writing or documents knowing the same to contain any false, fictitious, or fraudulent statement or entry in connection with this Bid.

5. The undersigned further agrees that the Bidder will comply with Section 2.2-4374 of the Code of Virginia, 1950, as amended, and has not bought or purchased any equipment from any person employed by the Owner as an independent contractor to furnish architectural or engineering services for this Project, nor from any partnership, association, or corporation in which such architect or engineer has a pecuniary interest.

6. The undersigned further agrees to inform and require compliance by the following persons and entities with this anti-collusion statement as a condition of payment: all subcontractors, consultants, subconsultants, or any person, corporation, or legal entities that provide or furnish labor, material, equipment, or work related to this project.

7. All Covenants and Agreements made by the Contractor are made by it on behalf of the Contractor and its successors, personal representatives and assigns, the same as if they had been specifically named in each instance.

8. The signature on the Bid Form of this solicitation constitutes certification by the bidder or the bidder's designated representative that the bidder has inspected the job site(s) and is aware of the conditions under which the work must be accomplished. Claims, as a result of failure to inspect the job site, will not be considered by the Owner.

And further this deponent saith not.

_____
Name of Company/Bidder

_____
Title (Owner, Partner, President)

Subscribed and sworn to before me this_____day of_____, 20___

My commission expires:_____, 20___

_____
Notary Public

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____as Principal, and _____as Surety, are hereby held and firmly bound unto _____ as OWNER in the penal sum of _____ _____(Five Percent) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____day of _____, 20__.

The Condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain BID, attached hereto and hereby made a part hereof to enter into an Agreement in writing, for the _____ _____

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver an Agreement in the Form of Agreement attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said Agreement, and for the payment of all persons performing labor or furnishing materials in connection therewith, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

_____
Principal

_____
Surety

By: _____
Attorney-in-Fact

IMPORTANT - Surety companies executing BONDS shall appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the Commonwealth of Virginia.

V QUESTIONNAIRE (IFB No. 10-3725)

EACH BIDDER SHALL SUBMIT THE COMPLETED QUESTIONNAIRE WITH THEIR BID.

1. Name of Company: _____
   Trade Name (if different from Company Name): _____
   Principal Office Address: _____
   _____
   Telephone No(s).: _____
   Fax No(s).:_____

****LOWEST RESPONSIVE AND RESPONSIBLE BIDDER WILL BE REQUIRED TO SUBMIT THE LATEST DUN & BRADSTREET REPORT FOR THEIR FIRM****

a. If a Corporation, answer the following:

When Incorporated: _____

In What State: _____

Names and Addresses of Directors: _____
_____
_____

Names and Addresses of Shareholders: _____
_____
_____

b. If an Unincorporated Organization, answer the following:

Date of Organization: _____

Names and Addresses of Owners or Members: _____
_____
_____

Type and State of Organization: _____

c. If a Partnership, state whether Partnership is General or Limited: _____

Names and Addresses of Owners or Partners:
_____
_____

2. a. How many years has this Bidder been in business as a Contractor under its present business name? _____

b. What are prior names of this Bidder, if any? _____

_____

3. How many years' experience in this type of construction work has this Bidder had:

1) As a Contractor _____ 2) As a Subcontractor _____

4. Provide a list of uncompleted Contracts at present held by this Bidder (attach supplemental sheet if necessary):

Contract	Type of Work	Amount	Percentage Completed

5. List the Bidder's crew foremen and supervisors proposed for this Project and their years of related experience:

Name	Years of Experience	Dates of Employment with Bidder

6. What construction equipment does this Bidder own that is available for the proposed work (attach supplemental sheet if necessary)?

_____

_____

_____

7. Does this Bidder plan to subcontract any part of this work? If so, list name, address, year's experience, and type and amount of work to be performed by each subcontractor:

_____

_____

_____

_____

_____

_____

_____

8. Provide a list of projects <u>similar in character and scope</u> to the Work specified under this Contract which have been successfully completed by this Bidder during the <u>past three years</u> (attach supplemental sheet if necessary).

(The term "completed" means accepted and final payment received from the Owner or authorized representative).

Location & Type of Work	Owner's Name/ Address	Contact Person (Name and Telephone)	Date Completed	Contract Price

9. Have you ever performed work for a municipal corporation, local governing body, or similar agency previously? (If all such bodies are listed under 8, this question need not be completed).

_____

_____

_____

10. a. Has this Bidder ever failed to complete any work awarded to it? _____ If yes, give name of Owner, name of Bonding Company and circumstances:

_____

_____

_____

b. Is this Bidder debarred by the Federal Government or by the Commonwealth of Virginia or by any other State, or by any town, city, or county?

Yes _____ No _____ If yes, please provide details:

_____

_____

c. Has this Bidder ever had any judgments entered against it for the breach of contract for construction? _____ If yes, please provide details:

_____

_____

d. Give a summary of your financial statement. (List assets and liabilities; use an insert sheet, if necessary).

_____

_____

_____

_____

_____

11. State approximate largest dollar volume of work performed by this Bidder in one year:

_____

12. Give two (2) Banking Institution References:

a. Name: _____

Address: _____
Credit Available: _____

b. Name: _____

Address: _____

Credit Available: _____

13. List three material suppliers and amount of credit available:

_____ _____

_____ _____

_____ _____

14. List insurance coverage and amount (or attach certificate of insurance):

_____ _____
Liability-Property

_____ _____
Liability-Personal Injury

_____ _____
Vehicle and Equipment

_____ _____
Other - Identify

15. Bonding reference - List Surety Company and highest coverage:

_____

~~16. Have you or your authorized representative, personally inspected the location of the proposed Work, and do you have a clear understanding of the requirements of the Bid Documents?~~

_____
_____
_____
_____
_____

The undersigned hereby authorizes and consents to any person, firm or corporation to furnish any information requested by the Owner in verification of this statement of contractor's qualifications. Also, if it is the apparent low Bidder, the undersigned hereby agrees to furnish the Owner upon request, a complete and current financial statement:

Contractor: _____

By: _____

Title: _____ Date: _____

VI CERTIFICATION REGARDING DEBARMENT

This is to certify that this person/firm/corporation is not now debarred by the Federal Government or by the Commonwealth of Virginia or by any other state, or by any town, city, or county, from submitting Bids on contracts for construction covered by this solicitation, nor are they an agent of any person or entity that is now so debarred.

_____
Name of Official

_____
Title

_____
Firm or Corporation

_____
Date

VII SAFETY CERTIFICATION FORM

To: James City County/James City Service Authority

Project Title: _____ **Contract No.** _____

Project Safety Responsibility (Name) _____ **Number:** _____

Emergency Contact (Name) _____ **Number:** _____

The undersigned hereby attests that the project has been carefully evaluated for the safety risks it presents and all safety procedures required based on these risks by Virginia Occupational Safety & Health, referenced in the bid document, will be implemented. Virginia Occupational Safety & Health and all other applicable Federal, State, and local laws referenced in the bid document, will be implemented. All workers on this project will be properly trained on the use of safety equipment and safe work practices.

By: _____

(Type Name and Title)

_____ _____

(Signature) **(Date)**

IFB
#11-4276

ADDENDUM NO. 1 APRIL 2,2010

III. BID FORM

Bids to be opened:	Time: **2:00 p.m.** **April 15, 2010**
Work to be Completed in:	**150 Days**
Liquidated Damages:	$500 per calendar day after time for Final Completion has expired.
Performance Bond:	100%
Payment Bond:	100%
Bid Security:	**5%**

To: Purchasing Director
James City County/James City Service Authority
101-F Mounts Bay Road
Williamsburg, Virginia 23185

Bid Number and Project Name: Ironbound Road Regional BMP – IFB No. 10-3725

A. BID PRICE

UNIT PRICE BID

In compliance with the Bid Documents, titled Ironbound Road Regional BMP, and all Addenda issued to date all of which are part of this Bid, the undersigned hereby proposes to furnish all items including materials, supervision, labor, and equipment in strict accordance with, said Contract Documents, for the sum of:

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 1 - GENERAL PROVISIONS					
110	**Special Provisions**				
110-1	BMP CMP RISER, ~~Household~~ Trash Removal and ~~Disposal~~ CMP BASE, FALLEN TREES, DEBRIS, &	LS	1 OFFSITE disposal		
110-2	Survey & Staking	LS	1		
110-3	As-built Drawings	LS	1		
				Division 1 Subtotal: _____	
DIVISION 3 - ROADWAY CONSTRUCTION					
301	**Clearing and Grubbing**				
301-1	Clearing ~~and Grubbing~~ and ~~Offsite~~ chipping ONSITE Disposal	ACRE	2.3		

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 5 - INCIDENTAL CONSTRUCTION					
507	**Fences**				
507-1	6' Chain Link Fence with Top Rail & barbed wire, Remove & REINSTALL	LF	~~580~~ 60		
507-2	6' Black Vinyl Coated Chain Link Fence with Top Rail	LF	390		
507-3	Fence Gate (2-6' x 8' double swing gates)	EA	2		
513	**Mobilization & Demobilization**				
513-1	Mobilization	LS	1		
				Division 5 Subtotal: _____	

*ITEMS 303-5 AND 303-6 TO BE PAID OUT BASED ON BID DOCUMENT/PLAN QUANTITIES

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
DIVISION 6 – LANDSCAPING					
602	**Topsoil**				
602-1	Topsoil (4-inch depth)	ACRE	1.8		
603	**Seeding**				
603-1	Lime, Fertilizer, Seed, and Mulch	ACRE	1.8		
603-2	COIR 700 EC-3 Soil Stabilization Fabric	SY	1400		
603-3	EC-2 Soil Stabilization Fabric (ALLOWANCE)	SY	500		

SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
605	**Planting**				
605-1	Native Deciduous Shade Trees, 2.5" Caliper, Furnish, Install and Warranty	EA	7		
605-2	Native Evergreen Shrubs, 24" height, Furnish, Install and Warranty	EA	21		
				Division 6 Subtotal: _____	

TOTAL BASE BID: ($_____) _____
In Words

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents, ***unless otherwise noted***. The prices quoted shall include without exception all materials, supervision, labor, equipment, appliances, clean-up, applicable sales, use and other taxes, insurance, building permit or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Contract Documents. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the Contract Time. Unit prices shall be used in determining additions or deductions from the total Contract Price in the event of changes due to unforeseen conditions in the Work.

Bidders shall use the procedures for calculating mobilization costs as outlined in Section 513 of the Hampton Roads Planning District Commission (HRPDC) Regional Construction Standards (Current Edition)

302	Drainage Structures				
SECTION	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
302-1	Modified VDOT EW-1	EA	1		
302-2	Modified VDOT SWM-1 including trash racks	EA	1		
302-3	36" CLIII RCP O-Ring Storm Sewer Pipe including concrete cradle and flexible connection to riser	LF	68		
302-4	12" Diam. Class 52 Ductile Iron Pond Drain Pipe	LS	1		
302-5	6" 12" Diam. ~~Plug~~ Valve, ~~Dezurik Eccentric~~ or approved equal GATE VALTERRA SS — with extension Rods.	LS	1		
302-6	6" Diam. Schedule 40 PVC ~~Reverse Slope Pipe w/ 3" Orifice~~ Dewatering Pipe	LS	1		
302-7	Gabion Basket Baffle Wall	LS	1		
302-8	Toe Drain including clean outs	LF	160		
303	**Earthwork**				
303-1	36" Temporary CMP Pipe for Water Management (ALLOWANCE)	LF	100		
303-2	12" Diam. Slope Drain complete in place per E&SC Handbook (ALLOWANCE)	LF	200		
303-3	Upstream pump around system complete in place for duration of construction, including temp. plugging and unplugging of upstream ~~BMP low flow orifice~~ MANHOLE (IF Required)	LS	1		
303-4	Dewatering Pit ~~Wellpoint system~~ complete in place for duration of construction as necessary to provide "In the Dry" construction ~~(ALLOWANCE)~~ — AND PUMP System ON	LS	1		
303-5 *	Basin Excavation and ~~off~~-site disposal	CY	~~10,800~~ 400		
303-6 *	Construct ~~dam embankment selectively~~ EARTHEN BERM re-using on-site basin excavation soils	CY	~~2,000~~ 400		
303-7	Shoring as required for dam core construction	LS	1		
303-8	Undercut Excavation/Offsite Disposal (ALLOWANCE)	CY	500		
303-9	Replace Undercut Excavation with On Site Soil (ALLOWANCE)	CY	500		
303-10	Off-site select material for dam embarkment (ALLOWANCE)	CY	500		

EAST Page

303-11	Non-woven or woven Geotextile Fabric (ALLOWANCE)	SY	200		
SECTION	**ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
303-12	Temporary 42" Orange Safety Fence	LF	400		
303-13	Temporary Silt Fence	LF	~~1250~~ 120		
303-14	INLET Protection ~~Temporary Diversion Dikes~~	LF	~~830~~ 20		
303-15	Construction Entrance (IF Required)	EA	~~2~~ 1		
303-16	Maintenance of Erosion and Sediment Control Measures	LS	1		
303-17	Temporary Sediment Trap	LS	1		

SECTION	**ITEM**	**UNIT**	**QUANTITY**	**UNIT PRICE**	**TOTAL PRICE**
309	**Aggregate Base Course – Gravel Access Roads**				
309-1	Grading/Topsoil Removal and Disposal	LF	1020		
309-2	12" Access Road Construction including geotextile (Mirafi 180N or approved equal)	LF	1020		
				Division 3 Subtotal: _____	
	DIVISION 4 - MISCELLANEOUS				
414	**Riprap**				
414-1	Erosion Control Riprap - Class II Rip Rap Outfall including geotextile	TON	105		
414-2	Std. Rip Rap/Gravel Check Dam Below Outfall, complete in place	LS	1		
414-3	105 LF Class I Rip Rap Inflow Channel including filter fabric	TON	265		
414-4	Class A1 Slope Armor Stone including geotextile (ALLOWANCE)	TON	800		
				Division 4 Subtotal: _____	

TOANO MIDDLE SCHOOL RISER REPL.

1. Area of Riser excavation - 35x20 = 700

2. Area of Spoil Disposal & Berm Creation - 120x25 = 3000

3. Area of Access = 10'x100' = 1000'

TOTAL = 4700 SF

STORMWATER DIVISION ACCOUNT DEBIT FORM

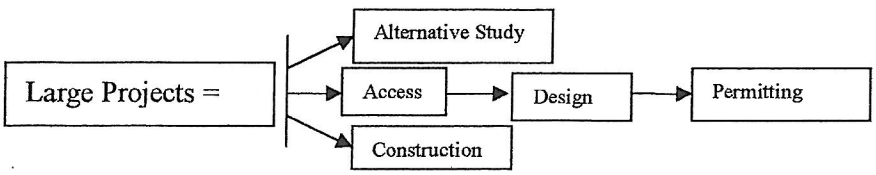
Directions: Take your project or purchase request documentation to the Stormwater Director along with this form. The Stormwater Director must fill out this form and sign to approve funding the project or purchase request. Then submit completed form and supporting documentation to Jo Anna Ripley, failure to do so will result in your request not being processed.

Project or Item:
(brief description) # 11-4276 Est. IFB Toano Middle School

Check the box	Amount	Account Name	Project Phase	Account Code
☐	$	Professional Services		001-135-0203
☐	$	Dues, Memberships, Subscriptions		001-135-0206
☐	$	Utilities		001-135-0207
☐	$	Duplicating		001-135-0214
☐	$	Equipment Maintenance		001-135-0215
☐	$	Postage		001-135-0218
☐	$	Travel and Training		001-135-0220
☐	$	Motor Fuels		001-135-0312
☐	$	Operating Supplies		001-135-0318
☐	$	Office Supplies		001-135-0319
☐	$	Printing and Publications		001-135-0323
☐	$	Clothing Purchases		001-135-0325
☐	$	Proffer		013-135-1000
☐	$ 40,000 +	Drainage Improvements		024-135-0100
☐	$	Water Quality Improvements		013-020-0300
☐	$	Community Services Ironbound Square BMP		010-021-9001
☐	$	Proffer Account		013-135-1000

Signature: _____ Date: _____
Frances Geissler, Stormwater Director

Examples of Project Phase(s): Small drainage projects = maintenance



Toano Middle School Estimate

Description	Material	Quantity	Unit Cost $	Total Cost $
Land Clearing – Embankment		.20 acres	20,000.00	4,000.00
- Construction Access/Fill Area		.10 acres	20,000.00	2,000.00
Dewater BMP - Excavate a pit to dewater soils to elevation 75.00		50 cy	20.00	1,000.00
Pump water from pit & By Pass pumping		2 days	500.00	1,000.00
Excavate sediment - to elevation 75.00 & place fill upslope shape BMP bottom		500 cy	20.00	10,000.00
Remove - damaged riser pipe, flap valve, concrete base, etc., & disconnect from barrel.		(1)	3,000.00	3,000.00
Install - New 48" Concrete Riser w/ 8' base slab, w/ gasket joints, rubber boots, & internal steps.		23 ft	400.00	9,200.00
Install - New 48" riser to 15" RCP barrel, using (1) new 15" RCP w/ rubber boot,	15" RCP	8 ft	30.00	240.00
Install - New 6" lower drain w/ gate valve & boot.	6" gate valve	(1)	500.00	500.00
Install - New 48" pyramidal trash guard & attach to 48" riser.	48" trash guard	(1)	2,000.00	2,000.00
Remove - Trash, tree limbs, & dead trees From within BMP and dispose of.		45 cy	20.00	900.00

Subtotal $33, 840.00

Toano Middle School Estimate

		Subtotal from previous page:	$33, 840.00
Grade & Stabilize: w/ topsoil, seed and erosion control blankets, all sediment and fill excavated from the BMP.	500 sy (500 cy)	10.00	4,500.00
		Subtotal	38,340.00
Contractor Mobilization		5%	1,917.00
Engineering & Geotech Services		10%	3,834.00

2'-10"

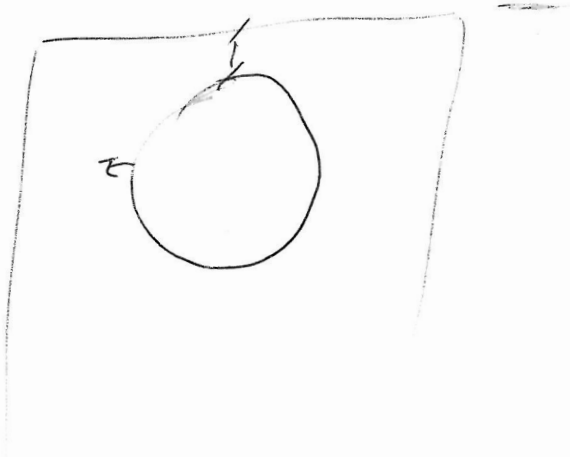
-15"

-8"

-4"

2'-37"

5'



James City County Environmental Division

Project: JCC Stormwater – Toano Middle School
BMP Repair & Retrofit Project
(County BMP ID Code: YC007)

Division Plan No.: D – 001 - 10

Date: October 22, 2010

The erosion and sediment control plan is approved by the Environmental Division. This plan is for maintenance/repair of a riser structure for an existing BMP. Following the County matrix as a type MR-1 Maintenance/Repair, small project, less than 5,000 square feet. A Land-Disturbing Permit is required; however, as it is a County type MR-1 project, fee or surety is not required.

10-22-10

III AGREEMENT (IFB No. 11-4276) – TOANO MIDDLE SCHOOL BMP REPAIRS

This AGREEMENT, dated this 14th day of January, 2011, by and between James City County hereinafter called the Owner; and David A. Nice Builders, Inc., a corporation organized and existing under the laws of the Commonwealth of Virginia, hereinafter called the Contractor.

WITNESSETH: The Owner and Contractor, for the consideration stated herein, agree as follows:

A. Scope of Work

The Contractor shall perform all required Work and shall provide and furnish all labor, materials, necessary tools, expendable equipment and utility and transportation service and all else required to complete the construction of the Invitation for Bids 11-4276 Toano Middle School BMP Repairs & Retrofit project all in strict accordance with the Drawings and Specifications, including any and all Addenda, and in strict compliance with the Contract Documents, the terms of which are incorporated herein by reference.

It is understood and agreed that said labor, materials, tools, equipment and service shall be furnished and said Work performed and completed under the direction and supervision of the Contractor and subject to the approval of the Owner or its authorized representative.

B. Engineer

This Project has been designed by Pat Menichino, James City County Stormwater Division, who is hereinafter called the Engineer and who is to act as the Owner's Representative, assume all duties and responsibilities, and have the rights and authority assigned to the Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents. In the event the Owner should not require the services of the Engineer for any or all parts of the project, the power, duties, and responsibilities conferred hereto to the Engineer shall be construed to be those of the Owner or its authorized representative.

C. Guarantee

All materials and equipment, furnished by the Contractor, and all construction involved in this Agreement are hereby guaranteed by the Contractor to be free from defects owing to faulty materials or workmanship for a period of one year after date of Substantial Completion of the Work. All Work that proves defective, by reason of faulty material or workmanship within said period of one year, shall be replaced by the Contractor free of cost to the Owner. These guarantees shall not operate as a waiver of any of the Owner's rights and remedies for default under or breach of the Agreement which rights and remedies may be exercised at any time within the period of any applicable statute of limitations.

D. Contract Price

The Owner shall pay the Contractor as just compensation for the satisfactory performance of the Work, subject to any additions or deductions as provided in the Contract Documents, the unit and/or lump sum price as contained in the Bid Schedule attached hereto.

The Contract Price is Thirty-Nine Thousand Five Hundred Twenty-Three Dollars and 29/100 Cents ($39,523.29) based upon unit and/or lump sum prices extended as herein contained.

E. Payments

The Owner will pay the Contract Price to the Contractor in the manner and at such times as set forth in Section 109 of the Hampton Roads Planning District Commission *Regional Construction Standards*, Fourth Edition, as referenced in Section I. below and as specifically revised for this Project.

F. Time

The undersigned Contractor agrees to commence Work within **10** Days after the date of Notice to Proceed and further agrees to ~~substantially~~ Complete ~~all Work under this Agreement within _____ Days from the date of the Notice to Proceed and to reach Final Completion of~~ all Work under this Agreement within **Sixty (60) Days** from the date of the Notice to Proceed.

G. Applicable Law/Compliance

(1) Applicable Law

This Agreement shall be deemed to be a Virginia contract and shall be governed as to all matters of validity, interpretations, obligations, performance, or otherwise, exclusively by the laws of the Commonwealth of Virginia, and all questions arising with respect thereto shall be determined in accordance with such laws. Regardless of where actually delivered and accepted, this Agreement shall be deemed to have been delivered and accepted by the parties in the Commonwealth of Virginia.

(2) Compliance with all Laws

Contractor shall comply with all federal, state and local statutes, ordinances, and regulations, now in effect or hereafter adopted, in the performance of Work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional license and permits necessary for performance of this Agreement prior to the initiation of Work. [If the Contractor is a corporation] Contractor further expressly represents that it is a corporation in good standing in the Commonwealth of Virginia and will remain in good standing throughout the term of the contract. Contractor shall at all times observe all health and safety measures and precautions necessary for the sanitary and safe performance of the contract Work.

(3) Venue

Any and all suits for any claims or for any breach or dispute arising out of these Contract Documents shall be maintained in the appropriate court of competent jurisdiction in James City County.

(4) Environmental Considerations

Any cost or expense associated with environmentally related violations of the law, the creation or maintenance of a nuisance, or releases of hazardous substance, including but not limited to, the cost of any clean up activities, removals, remediation, responses, damages, fines, administrative or civil penalties or charges imposed on the Owner, whether because of actions or suits by any governmental or regulatory agency or by any private party, as a result of the release of any hazardous substances, or any noncompliance with or failure to meet any federal, state or local standards, requirements, laws, statutes, regulations or the law of nuisance by the Contractor (or its agents, officers, employees, subcontractors, consultants, subconsultants, or any other persons, corporations, or legal entities employed, utilized, or retained by the Contractor) in the performance of this Agreement or related activities, shall be paid by the Contractor.

(5) Non-Discrimination/Drug-Free Workplace Provisions

(a) Employment discrimination by Contractor shall be prohibited. **By submitting their bids, Bidders certify to James City County/James City Service Authority that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act, and the Code of Virginia § 43.2.2-4311. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (Code of Virginia § 43.2.2-4343.1.E.)** During the performance of this Agreement, Contractor agrees as follows:

(i) Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification/consideration reasonably necessary to the normal operation of Contractor. Contractor will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act, and the Code of Virginia § 2.2-4311. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the Agreement on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to

account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

(ii) Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that Contractor is an equal opportunity employer.

(iii) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulations shall be deemed sufficient for the purpose of meeting the requirements of this section.

(iv) Contractor will include the provisions of the foregoing subsections (i) and (ii), and (iii) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(v) **For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of any controlled substance or marijuana during the performance of the contract.**

(b) During the performance of this Agreement, Contractor agrees as follows:

(i) Contractor will provide a drug-free workplace for Contractor's employees.

(ii) Contractor will post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(iii) Contractor will state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.

(iv) Contractor will include the provisions of the foregoing subsections (i), (ii) and (iii) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

(v) For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation,

possession, or use of any controlled substance or marijuana during the performance of the contract."

H. Liquidated Damages

The damage and loss to the Owner resulting from failure of the Contractor to complete the Work within the time specified in this Agreement, plus any extension of time granted, shall be stipulated in Section 108.X, and Section 102.III, Bid Form. Damage monies may be withheld on partial and final payment to the Contractor. (See Section 102.III Bid Form and Section 108.X for explanation and specified dollar amounts.)

I. Component Parts of the Contract

This Agreement includes all completed components of the Bid and Contract Documents as defined in Section 101 of the HRPDC *Regional Construction Standards* (Latest Edition indicated in the Invitation For Bids), as revised for this Project all of which are incorporated herein by reference.

J. Binding

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

K. Changes to the Agreement

No provision of this Agreement shall be changed, amended, modified, waived, or discharged except as agreed to in writing by the Owner and the Contractor.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and first above written in two (2) counterparts each of which shall for all purposes be deemed an original.

OWNER

James City County

By: _____
Stephanie Luton

Title: Purchasing/Management Services Director

Attest: _____

Address: _____

_____

_____

_____

CONTRACTOR

David A. Nice Builders, Inc.

By: **Kim Woodroffe**
Name

Title: **VP of Administration**

Attest: _____
Stacy Arnold, ARM/Contract Admin

Address: **4571 Ware Creek Road**

Williamsburg, VA 23188

Phone: (757) 566-3032

Fax: (757) 566-4686

Contractor's Registration No.:
VA 2701 016429A

(If Contractor is a corporation or an unincorporated organization, attach evidence of authority to sign)

[Corporate Seal]

VI NOTICE TO PROCEED

TO: David A. Nice Builders, Inc. DATE: January 21, 2011

PROJECT: Bid 11-4276 Toano Middle School BMP Repairs & Retrofit

You are hereby notified to commence Work in accordance with the Agreement dated January 14, 2011, on or before JANUARY 24, 20___, and reach Final Completion of the Work within Sixty (60) Days thereafter. The date of Final Completion of all Work is therefore March 25, 2011.

You will be contacted to schedule a Pre-Construction Conference and establish a Construction Progress Schedule as described in Section 108, pages 108-1&2, paragraphs IV &V.

Liquidated damages as stipulated in the Bid Form, in the amount of $ 250.00 per Day for failure to complete the Work by the date for Final Completion, will be assessed by the Owner as stated above or as may be modified by duly executed Change Orders.

OWNER: James City County, VA

BY: Patrick Menichino

TITLE: Pat Menichino, Project Manager

ACCEPTANCE OF NOTICE:

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by:

Nathan Skalak

this the 21 day of

January, 20 11

CONTRACTOR: David A. Nice Builders, Inc.

BY: Nathan Skalak

TITLE: Project Management