Appendix Table of Contents

ABBREVIATIONS on DRAWINGS

Abbreviations used on drawings shall be "Abbreviations for Use of Drawings and Text"; published by the American National Standards Institute, Inc. (ANSI). Abbreviations should be used only where their meaning is unquestionably clear and when necessary in call-outs. When in doubt—spell out. Do not use abbreviations in general notes except for agency names. Use periods after abbreviations only if the abbreviation itself spells a word. For example, sewer can be abbreviated by "sew", since this is a word; a period is required after the "w". Do not use periods after each letter of an agency. For example, Maryland National Capital Park & Planning Commission shall be abbreviated M-NCPPC not M.N.C.P. & P.C.

A

American Society for Testing Material	ASTM
American Water Works Association	AWWA
Amount	AMT
Approve	APPV
Approximate	APPROX
Architect	ARCH.
Architectural	ARCH.
Architecture	ARCH.
Area Drain	AD
As Soon As Possible	ASAP
Asbestos-Cement Pipe	ACP
Asphalt	ASPH
At	@
Avenue	AVE
Average	AVG

B

Baltimore Gas and Electric Company	BGE
Base Line	BL
Basement	BSMT
Bearing	BRG
Bench Mark	BM
Best Management Practice	BMP
Bituminous	BITUM
Bituminous Coated Corrugated Metal Pipe	BCCMP
Blocking	BLKG
Bottom of Wall	BW
Boundary	BDY
Branch	BR
Brick	BRK
Bridge	BRDG

Building	BLDG
By (Between Dimensions)	X

C

Cable	CA
Cable Duct	CD
Cast In Place Concrete	CIPC
Cast Iron Pipe	CIP
Catch Basin	CB
Cellar	C
Cement	CEM
Center	CTR
Center-Line	CL
Center To Center	C TO C
Channel	CHAN
Chesapeake Bay Critical Area	CBCA
Class	CL
Clay Pipe	CP
Cleanout	CO
Clear	CLR
Clearance	CL
Collar	CLR
Concrete	CONC
Concrete Masonry Unit	CMU
Concrete Sewer Pipe-Extra Strength	CSPX
Conduit	CND
Construction	CONST
Construction Joint	CJ
Continuous or Continue	CONT
Contractor	CONTR
Corporation	CORP
Corps of Engineers	COE
Corrugated Metal Pipe	CMP
Company	CO
Council of Governments	COG
Cross Section	XSECT
Cubic Foot	CU FT or CF
Cubic Foot per Minute	CFM
Cubic Foot per Second	CFS
Cubic Yard	CU YD or CY

D

Degree	° or DEG
Degree Fahrenheit	F
Delete	DEL

Demolish or Demolition	DEM
Department	DEPT
Depressed	DEP
Design	DSGN
Development	DEV
Diameter	DIA Or
Dimension	DIM.
Discharge	Q
Distance	DST
Division	DIV
Double Yellow	DY
Downspout	DS
Drainage Area Map	DAM
Drain Tile	DT
Drawing	DWG
Dry Well	DW
Duplicate	DUP

E

East	E
Elbow	ELB
Electric	ELEC
Elliptical Reinforced Concrete Pipe	ELRCP
Elevation	ELEV
Emergency	EMER
Energy Grade Line	EGL
Engineer	ENGR
Entrance	ENTR
Equal	EQ
Equipment	EQUIP.
Equivalent	EQUIV
Existing	EXST
Excavation	EXC
Extended Detention	ED

F

Far Side	FS
Federal	FED.
Federal Emergency Management Administration	FEMA
Field Inspection Report	FIR
Feet or Foot	′ OR FT
Feet per Second	FPS
Fence	FN
Field	FLD

Finish	FIN.
Fire Hydrant	FH
First Floor	FF
Floodplain	FP
Footing	FTG
Foundation	FDN
Future	FUT

G

Gage, Gauge	GA
Gallon	GAL.
Gallons per Minute	GPM
Galvanize	GALV
Galvanized Iron	GI
Galvanized Steel	GS
Gas Line (Natural)	G
Gate Valve	GTV
Geographic Information System	GIS
Grade	GR
Grating	GRTG
Gravel	GVL
Ground	GND
Grout	GT
Guardrail	GDR

H

Hand hole	HH
Head	HD
Heavy Duty	HD
Height	HGT
Highway	HWY
High Point	HP
Horizontal	HORIZ
Horizontal Elliptical Reinforced Concrete Pipe	HERCP
House	HSE
Hydraulic Engineering Center	HEC
Hydraulic Grade Line	HGL

I

Identification	IDENT
Inch	" or IN
Include (D), (Ing)	INCL
Increase	INCR
Inlet	INL

Inner ..... INR
Inside Diameter ..... ID
Installation ..... INSTAL
Internal ..... INT
Invert ..... INV
Iron Pipe ..... IP

J

Joint ..... JT
Junction Box ..... JB

K

Keyway ..... KWY

L

Label ..... LBL
Lateral ..... LAT
Left L
Length ..... LG
Longitude ..... LONG.
Low Point ..... LP

M

Main ..... MN
Major ..... MAJ
Manhole ..... MH
Manhole Cover ..... MC
Maryland National Capital Park and Planning Commission..... M-NCPPC
Maryland Department of the Environment ..... MDE
Maryland State Highway Administration ..... MSHA
Masonry ..... MSNRY
Mastic Joint ..... MJ
Maximum ..... MAX
Maximum Capacity ..... MAXCAP
Mechanical ..... MECH
Median ..... MDN
Membrane ..... MEMB
Metal ..... MET.
Mezzanine ..... MEZZ
Minimum ..... MIN
Minute ..... ‘ or MIN
Miscellaneous ..... MISC

Modify	MOD
Multiple	MULT

N

Nail	N
Narrow	NAR
National	NATL
National Bureau of Standards	NBS
National Pollutant Discharge Elimination System	NPDES
Natural Resources Conservation Service	NRCS
Natural	NAT.
Neutral	NEUT
Nomenclature	NOMEN
Nominal	NOM
Normal	NORM
North	N
Not Applicable or Not Available	NA
Not In Contract	NIC
Not To Scale	NTS
Number	NO. or #

O

Office	OFF
On Center	OC
Opening	OP
Organization	ORG
Original	ORIG
Outlet	OUT.
Outside	OUT.
Outside Diameter	OD
Outside Face	OF
Over	OV
Overflow	OVFL

P

Pair	PR
Parallel	PRL
Parking	PK
Parkway	PKWY
Part	PT
Part of	P/O
Partial	PART.
Pavement	PVMT
Percent	PCT or %

Perforated	PERF
Perimeter	PERI
Permanent	PERM.
Perpendicular	PERP
Pipeline	PPLN
Plan View	PV
Point	PT
Point on Curve	POC
Point of Intersection	PI
Point of Reverse Curve	PRC
Point of Tangent	PT
Point of Curve	PC
Point of Vertical Intersection	PVI
Point of Vertical Reverse Curve	PVRC
Point of Vertical Tangent	PVT
Point of Vertical Curve	PVC
Polyvinyl Chloride Pipe	PVC
Position	POSN
Potomac Electric Power Company	PEPCO
Pound	LB
Pounds per Cubic Foot	PCF
Pounds per Square Foot	PSF
Precast	PRCST
Precast Concrete	PCC
Preliminary	PRELIM
Pressure Reducing Valve	PRV
Prestressed Concrete Cylinder Pipe	PCCP
Primary	PRI
Prince George's County Department of Environment	PGDOE
Prince George's County Department of Housing And Community Development	PGHCD
Prince George's County Department of Permitting, Inspections and Enforcement	PGDPIE
Prince George's County Department of Public Works and Transportation	PGDPWT
Prince George's Soil Conservation District	PGSCD
Property	PROP
Property Line	PL
Proposed	PRPSD

Q

Quality	QUAL
Quantity	QUANT
Quarter	QTR

R

Radius…… RAD or R
Railroad ..... RR
Reducer..... RED.
Remove ..... REM
Recreation..... RCN
Reference ..... REF
Reference Line ..... REFL
Reinforced Concrete ..... RC
Reinforced Concrete Culvert Pipe ..... RCCP
Reinforced Concrete Pipe..... RCP
Relocated ..... RELOC
Remove ..... REM
Replace..... REPL
Require..... REQ
Required ..... REQD
Requirement..... REQT
Reservoir..... RSVR
Return ..... RTN
Revise (D) ..... REV
Right..... R
Right-Of-Way……... R/W or ROW
Riser ..... R
Road ..... RD
Roof Drain..... RD
Round ..... RND
Runoff Curve Number ..... RCN

S

Sanitary..... SAN
Scale..... SC
Schedule ..... SCH
Second..... " or SEC
Section..... SECT
Service..... SVC
Sewer…….. S or SEW.
Shoulder ..... SHLDR
Shutoff Valve ..... SOV
Single..... SGL
Site Development Concept Plan ..... SDCP
Site Development Plan ..... SDP
Sketch..... SK
Sleeve ..... SLV
Slope..... SLP
Slotted ..... SLTD

Small	SM
Solid	SOL
South	S
Space	SP
Specification	SPEC
Splash Block	SB
Spring	SPR
Square	SQ
Square Foot	SQ FT or SF
Square Inch	SQ IN
Stairway	STWY
Standard	STD
Steel	STL
Stone	STN
Storm Drain	SD
Storage	STOR
Stormwater Management	SWM
Stormwater Management Facility	SWMF
Street	STR
Structural	STR
Sump Pit	SP
Symbol	SYM

T

Tangent	TAN.
Tank	TK
Tee	T
Temperature	TEMP
Temporary	TEMP
Terra Cotta Pipe	TCP
Thick (Ness)	THK
Through	THRU
Time of Concentration	TC
Top, Bottom & Sides	TB&S
Top of Slab	TSL
Top of Wall	TW
Total	TOT
Transportation	TRANSP
Treated	TRTD
Tunnel	TNL
Typical	TYP
NRCS Technical Release 20 (Project Formulation Hydrology)	TR20
NRCS Technical Release 55 (Urban Hydrology for Small Watersheds)	TR55

U

Ultimate	ULT
United States Geological Survey	USGS
Unknown	UNK
Utility	UTIL

V

Valve	V
Valve Box	VB
Velocity	V
Versus	VS
Vertical	VERT
Vertical Elliptical Reinforced Concrete Pipe	VERCP
Vitrified Clay Pipe	VCP
Vitrified Clay Pipe-Extra Strength	VCPES
Volume	VOL

W

Washington Gas Light Company	WGL
Washington Suburban Sanitary Commission	WSSC
Water	W or WTR
Water Line	WL
Water Meter	WM
Waterstop	WS
Watertight	WTRTT
Weep hole	WH
Welded	WLD
Welded Wire Fabric	WWF
West	W
Width	WD
Wire Mesh	WM
With (Combine from)	W/
Without	W/O
Work	WK
Working	WKG
Wrought Iron Pipe	WIP

Y

Year	YR
Yellow	YE

PLAN NOTES – SAMPLE FORMAT

GENERAL STORM DRAIN NOTES

1) ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STORMWATER STANDARDS AND SPECIFICATIONS OF PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES, UNLESS OTHERWISE NOTED.

2) FOR TYPES OF STRUCTURES REFER TO THE LATEST STORMWATER MANAGEMENT STANDARD DETAILS, DER (SWMSD), UNLESS OTHERWISE NOTED.

3) INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILIABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE UTILITIES BY DIGGING TEST PITS AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED, CONTACT THE ENGINEER, AND THE OWNER OF OTHER INVOLVED UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

4) ALL STORM DRAIN PIPES MUST HAVE A MINIMUM OF 1 FOOT COVER.

5) ALL INLETS TOP SLAB FRONT FACES SHALL BE PAINTED WITH THE FOLLOWING CHESAPEAKE BAY DRAINAGE, "DON'T DUMP" (STANDARD 82.0).

6) CONTRACTORS SHALL ADJUST ALL EXISTING UTILITIES AS NEEDED TO CONSTRUCT PROPOSED ROAD IMPROVEMENTS. ADJUSTMENTS MAY INCLUDE BUT NOT LIMITED TO MANHOLE COVERS, VALVES, FIRE HYDRANTS, STORM DRAIN INLETS, STREET LIGHTS, TRAFFIC SIGNALS STRUCTURES, UTILITY POLES, SIDEWALKS, BURIED UTILITY CONDUIT AND PIPES.

GENERAL INSTRUCTIONS TO CREATE PLAN NOTES

1. Maximum width of the note shall be 6.5".
2. Separate each item with a space.
3. Separate text from item number and maintain text in an even line on at least the right side down the page.
4. All text shall be CAPITALIZED.
5. Height of text is at least 0.1" or 10 font.

ENGINEERS & DRAINAGE CERTIFICATIONS

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE REQUIREMENTS OF SUBTITLE 32. DIVISION 2 OF THE CODE OF PRINCE GEORGE'S COUNTY WATER RESOURCES PROTECTION AND GRADING CODE; AND THAT I OR MY STAFF HAVE INSPECTED THIS SITE AND THAT DRAINAGE FLOWS FROM UPHILL PROPERTIES ONTO THIS SITE, AND FROM THIS SITE ONTO DOWNHILL PROPERTIES, HAVE BEEN ADDRESSED IN SUBSTANTIALACCORDANCE WITH APPLICABLE CODES.

SIGNATURE: _____

NAME: _____ DATE:_____

MD. REG. NO.: _____

STORM DRAIN AS-BUILT CERTIFICATION

"I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS AS-BUILT TRULY REPRESENTS EXISTING FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO SIZES, DIAMETERS, LINE AND GRADE, AND ELEVATIONS."

SIGNATURE: _____

NAME: _____ DATE: _____

MD. REG. NO.: _____

BMP AND ESD DEVICE AS-BUILT CERTIFICATION

"I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE STORMWATER MANAGEMENT FACILITIES (BOTH BMP AND ESD) SHOWN ON THE PLANS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY PRINCE GEORGE'S COUNTY DEPARTMENT OF PERMITTING, INSPECTION AND ENFORCMENT."

SIGNATURE: _____

NAME: _____ DATE: _____

MD. REG. NO.: _____

SMALL POND AS-BUILT CERTIFICATIONS

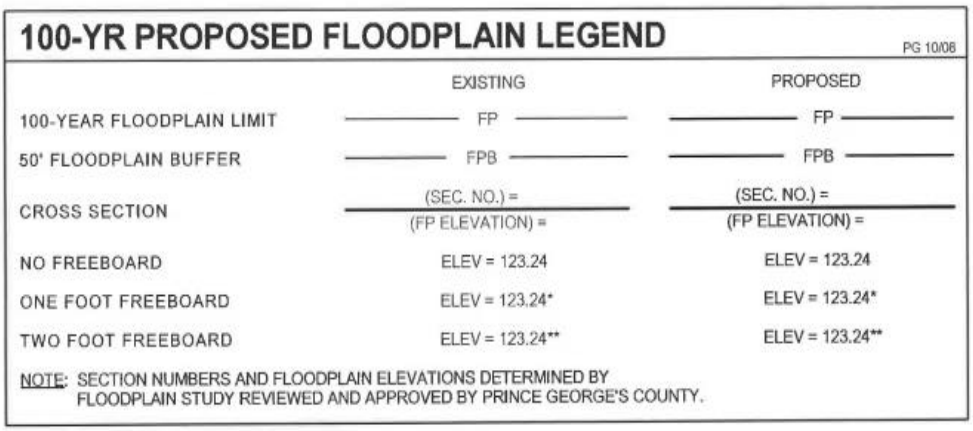
"I HEREBY CERTIFY THAT THE FACILITY WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEETS OR EXCEEDS THE REQUIREMENTS OF THE NATURAL RESOURCES CONSERVATION SERVICE- MARYLAND CONSERVATION PRACTICE STANDARD FOR PONDS (MD-378) AND THE APPROVED POND PLANS AND SPECIFICATIONS".

_____

SIGNATURE ENGINEER–IN-CHARGE DATE MD SEAL/DATE

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS, WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

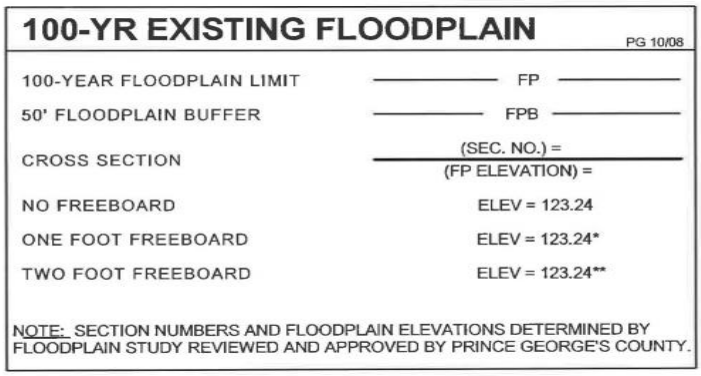
SAMPLE LEGEND FORMAT



100-YR PROPOSED FLOODPLAIN LEGEND PG 10/08

	EXISTING	PROPOSED
100-YEAR FLOODPLAIN LIMIT	FP	FP
50' FLOODPLAIN BUFFER	FPB	FPB
CROSS SECTION	(SEC. NO.) = / (FP ELEVATION) =	(SEC. NO.) = / (FP ELEVATION) =
NO FREEBOARD	ELEV = 123.24	ELEV = 123.24
ONE FOOT FREEBOARD	ELEV = 123.24*	ELEV = 123.24*
TWO FOOT FREEBOARD	ELEV = 123.24**	ELEV = 123.24**

NOTE: SECTION NUMBERS AND FLOODPLAIN ELEVATIONS DETERMINED BY FLOODPLAIN STUDY REVIEWED AND APPROVED BY PRINCE GEORGE'S COUNTY.

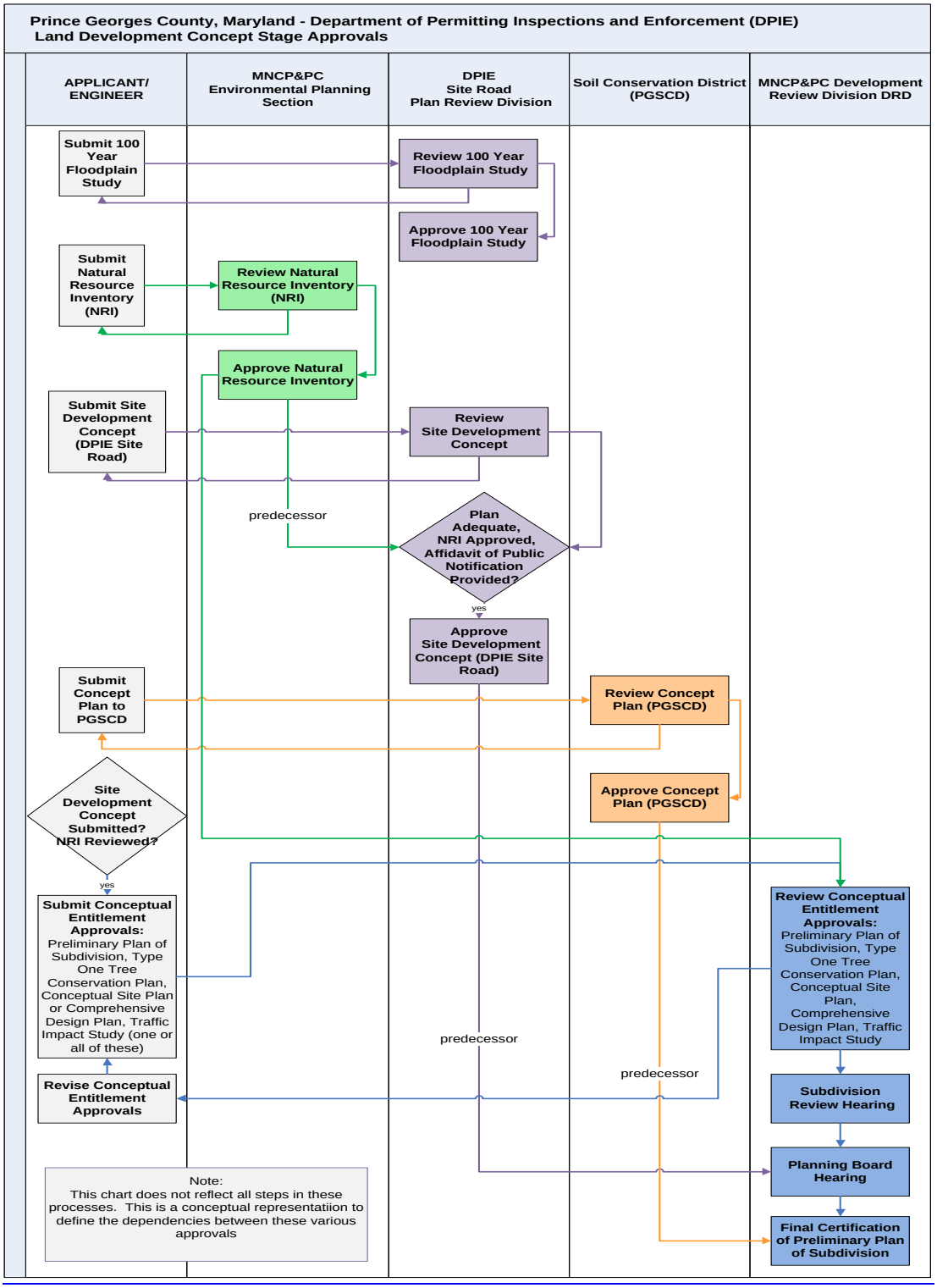


100-YR EXISTING FLOODPLAIN PG 10/08

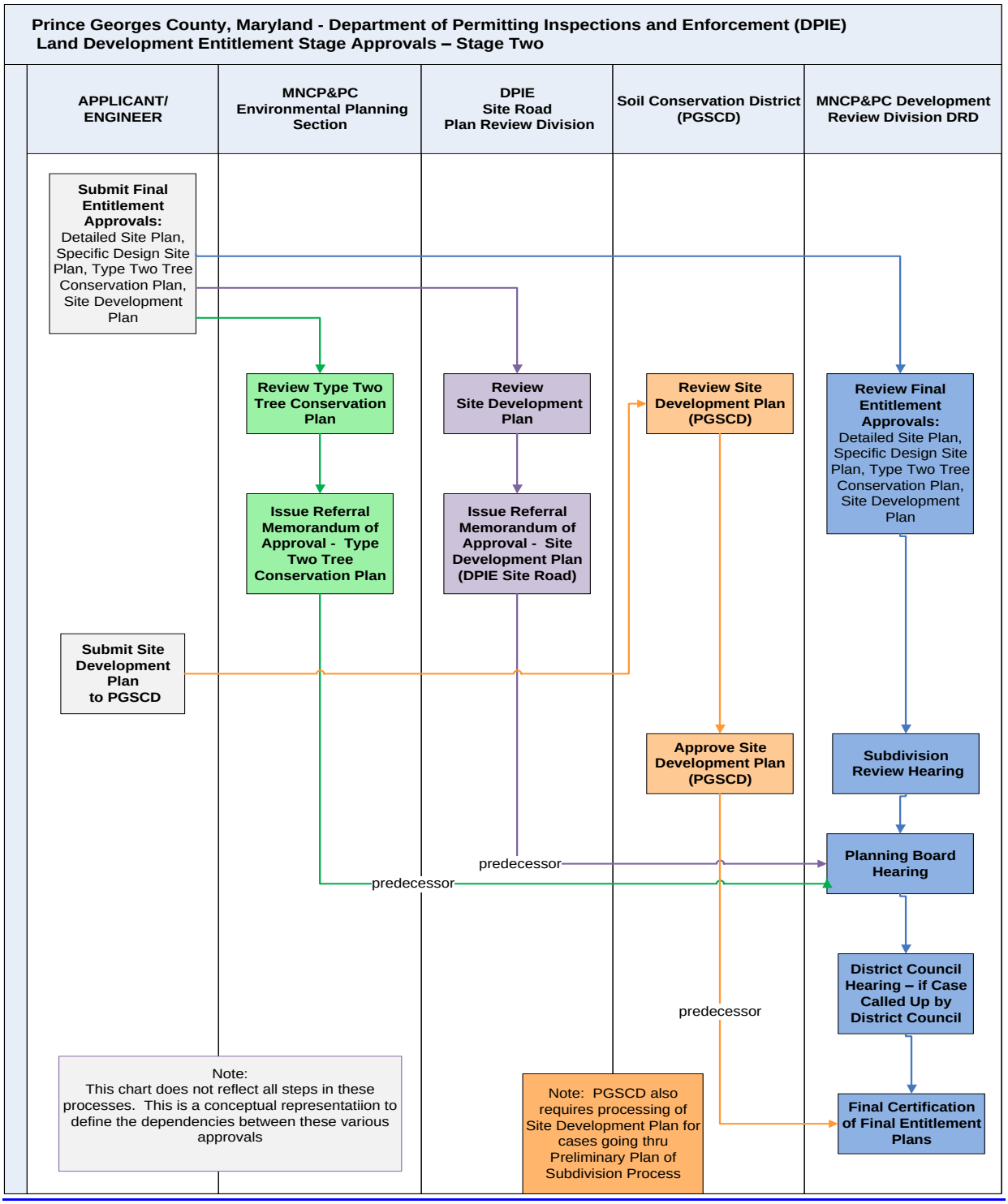
100-YEAR FLOODPLAIN LIMIT	FP
50' FLOODPLAIN BUFFER	FPB
CROSS SECTION	(SEC. NO.) = / (FP ELEVATION) =
NO FREEBOARD	ELEV = 123.24
ONE FOOT FREEBOARD	ELEV = 123.24*
TWO FOOT FREEBOARD	ELEV = 123.24**

NOTE: SECTION NUMBERS AND FLOODPLAIN ELEVATIONS DETERMINED BY FLOODPLAIN STUDY REVIEWED AND APPROVED BY PRINCE GEORGE'S COUNTY.

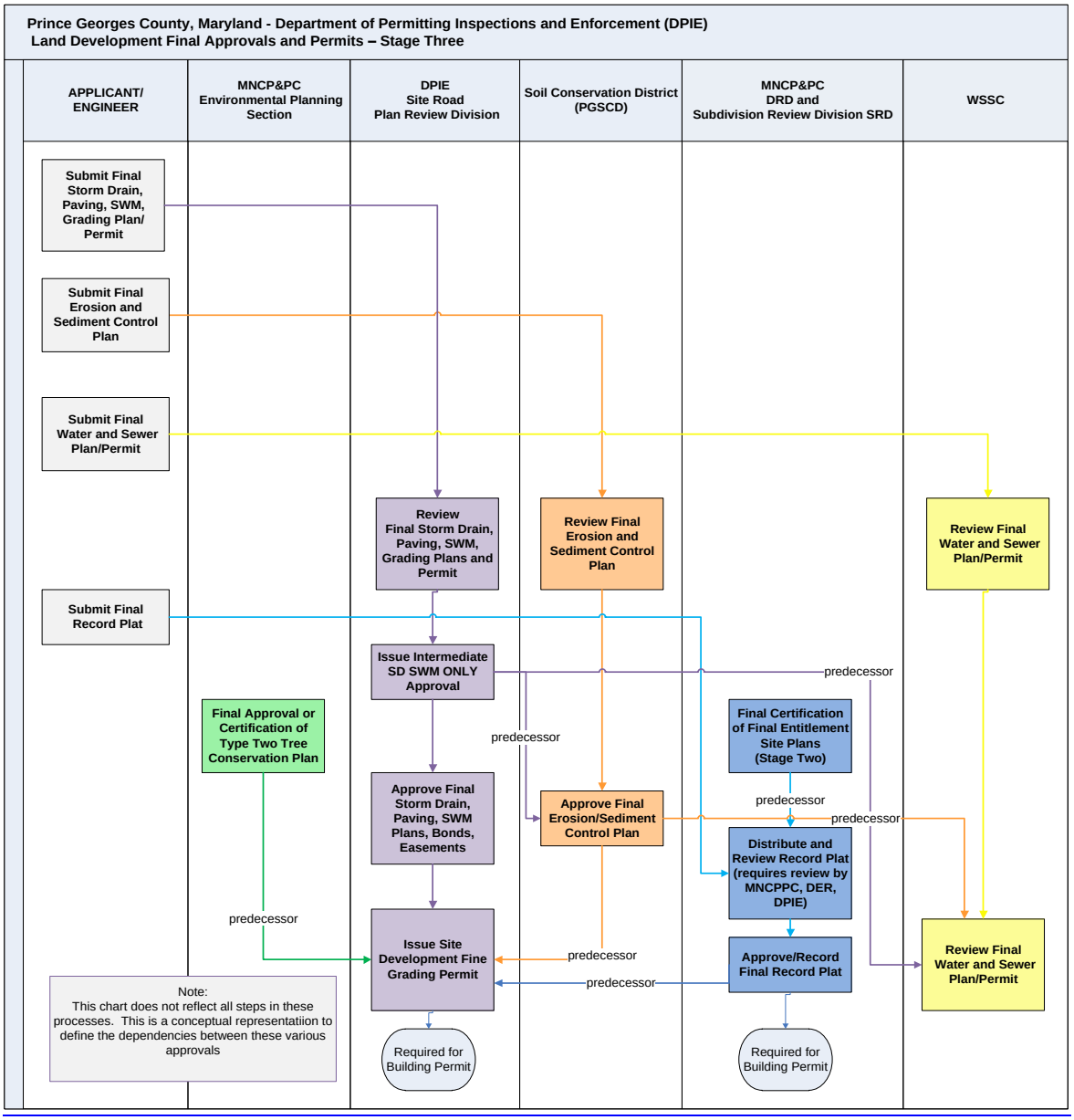
SITE DEVELOPMENT CONCEPT PLAN FLOW CHART



SITE DEVELOPMENT PLAN FLOW CHART



PERMITS FLOW CHART



SAMPLE CONSTRUCTION PERMITS

1. Site Development Rough Grading Permit
2. Site Development Fine Grading Permit
3. Street Construction Permit
4. Special Drain Permit

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CASE NAME: **SUITLAND STRAYER UNIVERSITY** CASE NUMBER: **38497-2012-01**

CASE TYPE: **SITE DEVELOPMENT ROUGH GRADING PERMIT** DISTRICT: **SOUTH**

THIS IS TO CERTIFY THAT THE **PERMITTEE** :

CAMPUS PROPERTIES, LLC
16501 NORTH CROSS
HUNTERSVILLE NC 28078

Owner of Property
CAMPUS PROPERTIES, LLC
16501 NORTH CROSS
HUNTERSVILLE NC 28078

Officer Name : HANKINS, STEVEN
Officer Title : MANAGER
Telephone No: (704) 650-3964

Contact Person: ADRIANWIECHERT,

HAS PERMISSION TO PERFORM WITHIN THE PUBLIC RIGHT-OF-WAY or/and ON_SITE:

___ BRIDGE	___ GRAVEL	___ SIDEWALK	___ TRAFFIC STUDY
___ CIP PROJECT	___ HAUL ROAD	___ SIDEWALK RAMPS	___ RESIDENTIAL DRIVEWAY APRON
___ COMMERCIAL ENTRANCE	___ HEADWALLS	___ SIGN	___ DOUBLE
___ COMMUNICATIONS	___ INTERNAL STREETS	___ STORM DRAIN	___ SINGLE
___ CROSSWALK	___ LANDSCAPING	___ STREET LIGHTS*	___ DRIVEWAY SWALE
___ CURB & GUTTER	___ MILL OVERLAY	___ STREET TREES	___ PIPE
___ DEVELOPER CONTRIBUTION	___ MODIFIED	___ STREET NAME SIGNS	X OTHER :
___ END SECTION	___ PAVING	___ TEMP ENTRANCE	5.56 ACS. ON-SITE GRADING, BIORETENTION/BIO
___ FEE - IN - LIEU	___ PAVEMENT STRIPING	___ TRAFFIC SIGNALS	
___ FENCE	___ PLANTER BOX	___ UNDERDRAIN	
___ GATEHOUSE	___ RESTORATION	___ UTILITY WORK AND RESTORATION	___ CMP DESCRIPTION:
X GRADING	___ RETAINING WALLS		

THE PROPOSED CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED BY THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY AND IN ACCORDANCE WITH SUBTITLE 23 AND SUBTITLE 32 OF THE PRINCE GEORGE'S COUNTY CODE AND THE GENERAL SPECIFICATIONS AND STANDARDS FOR HIGHWAY AND STREET CONSTRUCTION, AND SUBJECT TO THE INSPECTION AND CONTROL OF THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY.

* ALL STREET LIGHTING REQUIREMENTS MUST BE SATISFIED, INCLUDING THE SUBMISSION OF A STREET LIGHTING PLAN AND THE ORDERING OF AND PAYMENT FOR STREET LIGHTING WORK TO THE LOCAL UTILITY COMPANY.

SEDIMENT CONTROL# : 101-13
RELATED SITE/ROAD PERMIT# :

RELATED BUILDING PERMIT# :
STORMWATER PERMIT# :

LOCATION OF PROPOSED WORK

STREET NAME :
AUTH (5110) WAY, BRITANIA WAY,

LOT(S):	BLOCK(S):	PARCEL(S):	DPW&T MAP PAGE & GRID:
		482	5650C8

EMBANKMENT USED IN THE ROADWAY SHOULD BE MONITORED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE OR COUNTY LAB PERSONNEL TO ENSURE A STABILIZED SUBGRADE.

NOTE: THE APPLICANT SHALL BE ADVISED THAT THE PERMIT ISSUED BY THIS DEPARTMENT DOES NOT IN ANY WAY RELIEVE THE APPLICANT FROM OBTAINING A STATE DEPARTMENT OF NATURAL RESOURCES NON-TIDAL WETLANDS PERMIT COVERING ALL THE REQUIRED WORK, OR OBTAINING ANY NECESSARY SIGN-OFF FROM THE PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES THAT NO REGULATED WETLANDS ARE PRESENT OR SIGNIFICANTLY AFFECTED BY THE SAID WORK OR THAT THE SAID WORK IS ENTITLED TO ANY AUTOMATIC EXEMPTION UNDER THE STATE NON-TIDAL REGULATIONS.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FEE :	$30.00	**PAID :**	**STREET SIGN(S) FEE:**	$0.00	**PAID :**
BOND:		**PAID:**	**BOND #:**		
BOND CO:			**BOND TYPE:**		

PERMIT ISSUANCE DATE: July 17, 2013

PERMIT EXPIRATION DATE: **July 17, 2015**

HAITHAM A. HIJAZI, DPIE DIRECTOR

IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO APPLY FOR AN EXTENSION IN WRITING NOT LESS THAN THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. THE APPLICANT SHALL NOTIFY THE DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION OR RESTARTING CONSTRUCTION BY CONTACTING DPIE'S INSPECTIONS DIVISION AT 301-883-3820. SELECT THE PROMPT FOR SITE DEVELOPMENT INSPECTION.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE — DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CASE NAME: **COLLEGE PARK** CASE NUMBER: **23502-2013-00**

CASE TYPE: **SITE DEVELOPMENT FINE GRADING PERMIT** DISTRICT: **NORTH**

THIS IS TO CERTIFY THAT THE **PERMITTEE** :

R & J 7501 LLC
8 NOVA
BAYVILLE NY 11709

Owner of Property
R&J COMPANY (MD) LLC
8 NOVA
BAYVILLE NY 11709

Officer Name : MITTLEMANN, JOSEF
Officer Title : MANAGING MEMBER
Telephone No: (516) 922-1704

Contact Person: WALTZAWISLAK,

HAS PERMISSION TO PERFORM WITHIN THE PUBLIC RIGHT-OF-WAY or/and ON_SITE:

- ___ BRIDGE
- ___ CIP PROJECT
- ___ COMMERCIAL ENTRANCE
- ___ COMMUNICATIONS
- ___ CROSSWALK
- X CURB & GUTTER
- ___ DEVELOPER CONTRIBUTION
- ___ END SECTION
- ___ FEE - IN - LIEU
- ___ FENCE
- ___ GATEHOUSE
- X GRADING
- ___ GRAVEL
- ___ HAUL ROAD
- ___ HEADWALLS
- ___ INTERNAL STREETS
- X LANDSCAPING
- ___ MILL OVERLAY
- ___ MODIFIED
- X PAVING
- ___ PAVEMENT STRIPING
- ___ PLANTER BOX
- X RESTORATION
- ___ RETAINING WALLS
- X SIDEWALK
- ___ SIDEWALK RAMPS
- ___ SIGN
- X STORM DRAIN
- ___ STREET LIGHTS*
- ___ STREET TREES
- ___ STREET NAME SIGNS
- ___ TEMP ENTRANCE
- ___ TRAFFIC SIGNALS
- ___ UNDERDRAIN
- X UTILITY WORK AND RESTORATION
- ___ TRAFFIC STUDY
- ___ RESIDENTIAL DRIVEWAY APRON
  - ___ DOUBLE
  - ___ SINGLE
- ___ DRIVEWAY SWALE
- ___ PIPE
- X OTHER :
  ON-SITE D.A. = 2.98 AC
  ON-SITE SD
- ___ CMP DESCRIPTION:

THE PROPOSED CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED BY THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY AND IN ACCORDANCE WITH SUBTITLE 23 AND SUBTITLE 32 OF THE PRINCE GEORGE'S COUNTY CODE AND THE GENERAL SPECIFICATIONS AND STANDARDS FOR HIGHWAY AND STREET CONSTRUCTION, AND SUBJECT TO THE INSPECTION AND CONTROL OF THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY.

* ALL STREET LIGHTING REQUIREMENTS MUST BE SATISFIED, INCLUDING THE SUBMISSION OF A STREET LIGHTING PLAN AND THE ORDERING OF AND PAYMENT FOR STREET LIGHTING WORK TO THE LOCAL UTILITY COMPANY.

SEDIMENT CONTROL# : 149-13
RELATED SITE/ROAD PERMIT# :
RELATED BUILDING PERMIT# :
STORMWATER PERMIT# :

LOCATION OF PROPOSED WORK

STREET NAME :
BALTIMORE AVE, COLLEGE AVE, YALE AVE,

LOT(S):	BLOCK(S):	PARCEL(S):	DPW&T MAP PAGE & GRID:
1 THRU 10	29	0000	5409K3
		214	
	29	I	5409k3

EMBANKMENT USED IN THE ROADWAY SHOULD BE MONITORED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE OR COUNTY LAB PERSONNEL TO ENSURE A STABILIZED SUBGRADE.

NOTE: THE APPLICANT SHALL BE ADVISED THAT THE PERMIT ISSUED BY THIS DEPARTMENT DOES NOT IN ANY WAY RELIEVE THE APPLICANT FROM OBTAINING A STATE DEPARTMENT OF NATURAL RESOURCES NON-TIDAL WETLANDS PERMIT COVERING ALL THE REQUIRED WORK, OR OBTAINING ANY NECESSARY SIGN-OFF FROM THE PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES THAT NO REGULATED WETLANDS ARE PRESENT OR SIGNIFICANTLY AFFECTED BY THE SAID WORK OR THAT THE SAID WORK IS ENTITLED TO ANY AUTOMATIC EXEMPTION UNDER THE STATE NON-TIDAL REGULATIONS.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FEE :	$2,857.30	**PAID :** October 28, 2013	**STREET SIGN(S) FEE:**	$0.00	**PAID :**
BOND:	$102,450.00	**PAID:** November 01, 2013	**BOND #:**	41275038	
BOND CO:	PLATTE RIVER INSURANCE COMPANY		**BOND TYPE:**	S	

PERMIT ISSUANCE DATE: November 05, 2013

PERMIT EXPIRATION DATE: **November 05, 2015**

HAITHAM A. HIJAZI, DPIE DIRECTOR

IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO APPLY FOR AN EXTENSION IN WRITING NOT LESS THAN THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. THE APPLICANT SHALL NOTIFY THE DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION OR RESTARTING CONSTRUCTION BY CONTACTING DPIE'S INSPECTIONS DIVISION AT 301-883-3820. SELECT THE PROMPT FOR SITE DEVELOPMENT INSPECTION.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE — DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CASE NAME: **OSBORNE SHOPPING CENTER** CASE NUMBER: **22113-2013-00**

CASE TYPE: **STREET CONSTRUCTION PERMIT** DISTRICT: **CENTRAL**

THIS IS TO CERTIFY THAT THE **PERMITTEE** :

PROPERTY DEVELOPMENT CENTERS
5918 STONERIDGE MALL
PLEASANTON CA 94588

Owner of Property

Officer Name : KINN, JOE
Officer Title : CONSTRUCTION MANAGER
Telephone No: (925) 738-1209

Contact Person: MATTHEWJONES,

HAS PERMISSION TO PERFORM WITHIN THE PUBLIC RIGHT-OF-WAY or/and ON_SITE:

___ BRIDGE	___ GRAVEL	X SIDEWALK	___ TRAFFIC STUDY
___ CIP PROJECT	___ HAUL ROAD	X SIDEWALK RAMPS	___ RESIDENTIAL DRIVEWAY
X COMMERCIAL ENTRANCE	___ HEADWALLS	___ SIGN	___ APRON
___ COMMUNICATIONS	___ INTERNAL STREETS	X STORM DRAIN	___ DOUBLE
X CROSSWALK	___ LANDSCAPING	X STREET LIGHTS*	___ SINGLE
X CURB & GUTTER	X MILL OVERLAY	X STREET TREES	___ DRIVEWAY SWALE
___ DEVELOPER CONTRIBUTION	___ MODIFIED	___ STREET NAME SIGNS	___ PIPE
___ END SECTION	X PAVING	___ TEMP ENTRANCE	X OTHER :
___ FEE - IN - LIEU	X PAVEMENT STRIPING	___ TRAFFIC SIGNALS	R/W SD
___ FENCE	___ PLANTER BOX	X UNDERDRAIN	
___ GATEHOUSE	___ RESTORATION	X UTILITY WORK AND RESTORATION	
X GRADING	___ RETAINING WALLS		___ CMP DESCRIPTION:

THE PROPOSED CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED BY THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY AND IN ACCORDANCE WITH SUBTITLE 23 AND SUBTITLE 32 OF THE PRINCE GEORGE'S COUNTY CODE AND THE GENERAL SPECIFICATIONS AND STANDARDS FOR HIGHWAY AND STREET CONSTRUCTION, AND SUBJECT TO THE INSPECTION AND CONTROL OF THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY.

* ALL STREET LIGHTING REQUIREMENTS MUST BE SATISFIED, INCLUDING THE SUBMISSION OF A STREET LIGHTING PLAN AND THE ORDERING OF AND PAYMENT FOR STREET LIGHTING WORK TO THE LOCAL UTILITY COMPANY.

SEDIMENT CONTROL# : 161-12
RELATED SITE/ROAD PERMIT# : 23894-2009-00
RELATED BUILDING PERMIT# :
STORMWATER PERMIT# :

LOCATION OF PROPOSED WORK

STREET NAME :
SOUTH OSBORNE RD,

LOT(S):	BLOCK(S):	PARCEL(S):	DPW&T MAP PAGE & GRID:
		F	5768C5
		G	

EMBANKMENT USED IN THE ROADWAY SHOULD BE MONITORED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE OR COUNTY LAB PERSONNEL TO ENSURE A STABILIZED SUBGRADE.

NOTE: THE APPLICANT SHALL BE ADVISED THAT THE PERMIT ISSUED BY THIS DEPARTMENT DOES NOT IN ANY WAY RELIEVE THE APPLICANT FROM OBTAINING A STATE DEPARTMENT OF NATURAL RESOURCES NON-TIDAL WETLANDS PERMIT COVERING ALL THE REQUIRED WORK, OR OBTAINING ANY NECESSARY SIGN-OFF FROM THE PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES THAT NO REGULATED WETLANDS ARE PRESENT OR SIGNIFICANTLY AFFECTED BY THE SAID WORK OR THAT THE SAID WORK IS ENTITLED TO ANY AUTOMATIC EXEMPTION UNDER THE STATE NON-TIDAL REGULATIONS.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FEE :	$12,247.50	**PAID :**	September 19, 2013	**STREET SIGN(S) FEE:**	$0.00	**PAID :**	
BOND:	$146,350.00	**PAID:**	August 29, 2013	**BOND #:**	070014857		
BOND CO:	LIBERTY MUTUAL INSURANCE CO			**BOND TYPE:**	S		

PERMIT ISSUANCE DATE: September 25, 2013

PERMIT EXPIRATION DATE: **September 25, 2015**

HAITHAM A. HIJAZI, DPIE DIRECTOR

IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO APPLY FOR AN EXTENSION IN WRITING NOT LESS THAN THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. THE APPLICANT SHALL NOTIFY THE DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION OR RESTARTING CONSTRUCTION BY CONTACTING DPIE'S INSPECTIONS DIVISION AT 301-883-3820. SELECT THE PROMPT FOR SITE DEVELOPMENT INSPECTION.

PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CASE NAME: **NORTHERN ESTATES SPECIAL STORM DRAIN** CASE NUMBER: **28183-2013-00**

CASE TYPE: **SPECIAL DRAIN PERMIT** DISTRICT: **NORTH**

THIS IS TO CERTIFY THAT THE **PERMITTEE** :

Caruso Homes Inc
1655 Crofton Blvd 200
Crofton MD 21114

Owner of Property
Caruso Homes Inc
1655 Crofton Blvd 200
Crofton MD 21114

Officer Name : N/A
Officer Title :
Telephone No: (301) 261-0277

Contact Person: MARK SOMERVILLE,

HAS PERMISSION TO PERFORM WITHIN THE PUBLIC RIGHT-OF-WAY or/and ON_SITE:

___ BRIDGE	___ GRAVEL	___ SIDEWALK	___ TRAFFIC STUDY
___ CIP PROJECT	___ HAUL ROAD	___ SIDEWALK RAMPS	___ RESIDENTIAL DRIVEWAY APRON
___ COMMERCIAL ENTRANCE	___ HEADWALLS	___ SIGN	___ DOUBLE
___ COMMUNICATIONS	___ INTERNAL STREETS	___ STORM DRAIN	___ SINGLE
___ CROSSWALK	___ LANDSCAPING	___ STREET LIGHTS*	___ DRIVEWAY SWALE
___ CURB & GUTTER	___ MILL OVERLAY	___ STREET TREES	___ PIPE
___ DEVELOPER CONTRIBUTION	___ MODIFIED	___ STREET NAME SIGNS	X OTHER :
___ END SECTION	___ PAVING	___ TEMP ENTRANCE	SPECIAL DRAIN PERMIT
___ FEE - IN - LIEU	___ PAVEMENT STRIPING	___ TRAFFIC SIGNALS	
___ FENCE	___ PLANTER BOX	___ UNDERDRAIN	
___ GATEHOUSE	___ RESTORATION	___ UTILITY WORK AND	
___ GRADING	___ RETAINING WALLS	___ RESTORATION	___ CMP DESCRIPTION:

THE PROPOSED CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED BY THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY AND IN ACCORDANCE WITH SUBTITLE 23 AND SUBTITLE 32 OF THE PRINCE GEORGE'S COUNTY CODE AND THE GENERAL SPECIFICATIONS AND STANDARDS FOR HIGHWAY AND STREET CONSTRUCTION, AND SUBJECT TO THE INSPECTION AND CONTROL OF THE DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT OF PRINCE GEORGE'S COUNTY.

* ALL STREET LIGHTING REQUIREMENTS MUST BE SATISFIED, INCLUDING THE SUBMISSION OF A STREET LIGHTING PLAN AND THE ORDERING OF AND PAYMENT FOR STREET LIGHTING WORK TO THE LOCAL UTILITY COMPANY.

SEDIMENT CONTROL# : 000-00
RELATED SITE/ROAD PERMIT# :
RELATED BUILDING PERMIT# :
STORMWATER PERMIT# :

LOCATION OF PROPOSED WORK

STREET NAME :

LOT(S): **BLOCK(S):** **PARCEL(S):** **DPW&T MAP PAGE & GRID:**

EMBANKMENT USED IN THE ROADWAY SHOULD BE MONITORED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE OR COUNTY LAB PERSONNEL TO ENSURE A STABILIZED SUBGRADE.

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PRINCE GEORGE'S COUNTY, MARYLAND

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE/ROAD PERMIT PROCESSING UNIT

PERMIT FOR CONSTRUCTION AND RELATED ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND PRIVATE PROPERTY SITE WORK

FEE :	$100.00	**PAID :**	**STREET SIGN(S) FEE:**	$0.00	**PAID :**
BOND:		**PAID:**	**BOND #:**		
BOND CO:			**BOND TYPE:**		

PERMIT ISSUANCE DATE:

PERMIT EXPIRATION DATE:

HAITHAM A. HIJAZI, DPIE DIRECTOR

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SPECIAL DRAIN PERMIT APPLICATION

Prince George's County
Department of Permitting, Inspections and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

SPECIAL DRAIN PERMIT APPLICATION

Date of Issue: _____ DPIE Permit No: _____

Subdivision: _____ Lot/Block: _____

Owners Name: _____ Telephone: _____

Building Address: _____

City: _____ State: _____ Zip: _____

Owners/Agents Signature: _____

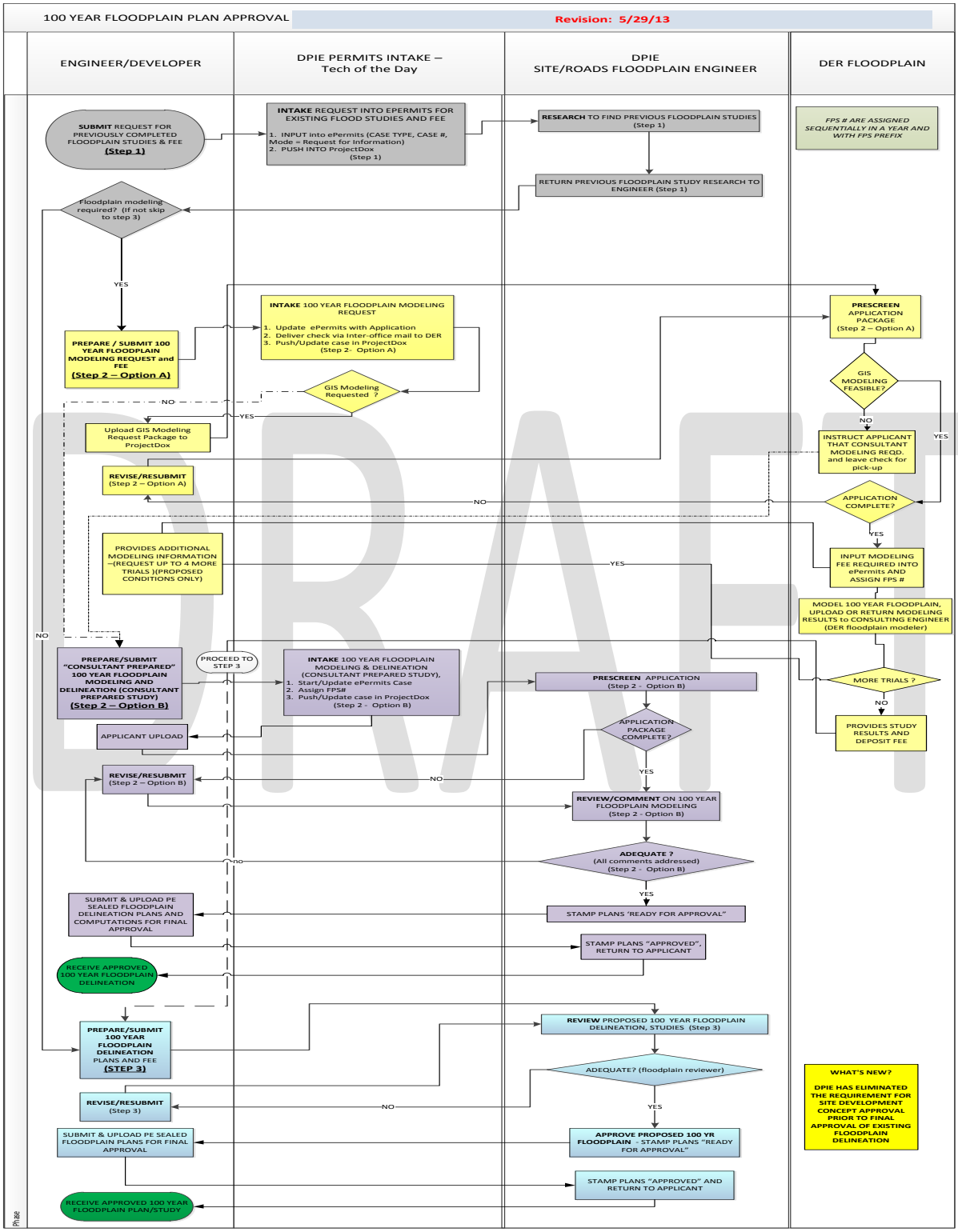
1. In public space use only cast iron, steel, PVC or reinforced concrete pipe. PVC is not acceptable for held connections but may be used for connection to an inlet or manhole.
2. All construction and future maintenance will be at the expense and sole responsibility of the property owner.
3. For location of underground utilities, call Miss Utility at 800-257-7777, at least 48 hours prior to starting construction.
4. Contact Prince George's County Inspection and Code Compliance Section automatic inspection request information system for inspection at (301) 883-5390.
5. Contact Department of Permitting Inspections and Enforcement at (301) 499-8500 at least 24 hours prior to starting construction.
6. This permit expires 12 months from date of issuance.
7. Use SD 50.0 for field connection.

THIS PERMIT DOES NOT RELIEVE THE APPLICANT FROM OBTAINING PERMISSION FROM ANY FEDERAL, STATE, AND/OR MUNICIPAL PERMIT AUTHORITY HAVING JURISDICTION OVER ANY CONSTRUCTION PURSUANT TO ISSUANCE OF THIS PERMIT.

Permit Charge $ _____
Prince George's County

1. Draw the property dimensions to scale.
2. Show property lines and existing storm drains and easements.
3. Show north arrow.
4. Show street names and rights-of-way.
5. Show proposed storm drain connection invert elevation, pipe size, and type of material.
6. Show lot and block numbers on sketch.

FLOODPLAIN REVIEW AND REQUEST FLOW CHART



FLOODPLAIN APPROVAL BLOCK

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT (DPIE)
UTILITY AND TECHNICAL SUPPORT SECTION

PRINCE GEORGE'S COUNTY, MARYLAND

PERMIT NAME: _____

CASE NUMBER: _____

FLOODPLAIN STUDY NUMBER: _____

EXISTING FLOODPLAIN DELINEATION REQUIRED: YES ☐ NO ☐

PROPOSED FLOODPLAIN DELINEATION REQUIRED: YES ☐ NO ☐

APPROVED

BY: _____ DATE: _____

For Existing Floodplain Delineation Only

SITE DEVELOPMENT CONCEPT PLAN APPLICATION

Prince George's County
Department of Permitting, Inspections and Enforcement
SITE/ROAD PLAN REVIEW DIVISION

9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

STANDARD PLAN APPLICATION

Building Permit: _____
Grading Permit: _____

_____ _____ ___ _____ _____
Last Name First Name MI Phone E-mail address

_____ _____ _____ _____
Present Address (No. & Street) City/Town State Zip

_____ _____ _____ _____
Project Address (No. & Street) City/Town State Zip

_____ _____ _____ _____ _____
Tax Map Liber Folio Parcel Block

_____ _____
Builder Phone

Lot Size: _____ square feet.

Total area of disturbance: _____ square feet.

Total Impervious Area: _____ square feet.

The requirements for stormwater management found in Prince George's County Code Subtitle 32and the Code of Maryland Regulations (COMAR) will be satisfied if environmental site design (ESD) practices are used to the maximum extent practicable (MEP) to treat runoff according to Chapter 5 of the **2000 Maryland Stormwater Design Manual** (Manual).

Limitations

1. The project is a single lot residential construction, not within a developing subdivision, and there is no contiguous land undergoing development by the same owner, builder, or developer;
2. Total site impervious cover shall not exceed 15% of the lot size;
3. Total land area disturbed during construction shall be less than 30,000 square feet;
4. Land area that is disturbed for septic system construction may be subtracted from the total disturbed area provided it is re-vegetated;
5. This Standard Plan shall not be used in areas of special concern (e.g., karst geology, sinkhole activity, surface water supply reservoirs, wellhead protection areas, sensitive stream systems, etc.) or if soil or site conditions such as slope, soil type, high groundwater, etc. present a challenge; and
6. Documentation must be submitted to show that ESD has been implemented to the MEP before structural practices found in the (Manual) that address these characteristics and specified by the Prince George's County is/are used.

Conditions

The following conditions for design and construction shall be met and maintained. All stormwater management systems shall be designed by integrating site design, natural hydrology, and smaller controls to capture and treat runoff onsite. The standard for characterizing predevelopment runoff characteristics for new development projects shall be woods in good hydrologic condition. If the following design conditions are met, all stormwater management obligations will be satisfied.

Design

1. All ESD practices shall be designed and located to prevent basement seepage, flooding, soil erosion, increases in nonpoint pollution and minimize pollutants in stormwater runoff from both new and redevelopment.
2. All rooftop downspouts shall discharge to and drain continuously through at least 75 feet of vegetation (e.g., vegetated channel, swale, or filter strip) in a non-erosive manner to the property line.
3. To the extent practical, all other site impervious areas shall drain and discharge continuously through vegetation in a non-erosive manner. The length shall be equal to that of contributing impervious area.
4. All access roads and/or driveways constructed for this project shall use open sections in lieu of curb and gutter.
5. ESD practices may be used in lieu of providing the required rooftop and other impervious area vegetation lengths.
6. Design constraints specific to each ESD practice as specified in the Manual must be addressed.
7. The total impervious area draining to any ESD practice shall conform to the design criteria in the Manual.
8. The drainage area to each rooftop downspout shall be 500 square feet or less. Drainage areas to individual downspouts greater than 500 square feet shall be treated using rain gardens, rain barrels, or other similar practices as approved by the [MDE/WMA or Prince George's County].

B. The following information must be attached to this application for coverage under the Standard Plan:

1. Plat showing the dimensions of property lines and road frontage;
2. Location and dimensions of all proposed structures (e.g., house, garage, driveway, well, septic system);
3. If present, the location of the Critical Area buffer, nontidal and tidal wetlands, and perennial streams and their associated floodplain;
4. Limits of disturbance; and
5. The location of all disconnected impervious areas and ESD practices.

Construction

1. Prince George's County shall be contacted at least 48 hours prior to the start of construction.
2. All stormwater practices and/or runoff controls shall be installed and maintained according to this Standard Plan and the criteria contained in Chapter 5 of the Manual. Subsequent alteration or modification of these practices requires the approval from the Prince George's County.
3. Access to the site will be made available at all reasonable times during construction and with reasonable notification after construction for inspection by the [the local approval authority].
4. The applicant/homeowners shall promptly repair and/or restore all stormwater practices found in noncompliance by Prince George's County.
5. Prince George's County reserves the right to deny approval under this Standard Plan and require that a design be prepared according to County Code Subtitle 32 and the Manual.
6. Nothing in this Standard Plan relieves the applicant from complying with any and all federal, State, and local laws and regulations.

7. At a minimum, inspections shall be made by county or municipal staff or by a professional engineer licensed in the State and documented for each ESD planning technique and practice upon completion of final grading, establishment of permanent stabilization, and before issuance of use and occupancy approval.
8. Coverage under this Standard Plan shall remain valid for [two] years from the date of approval.

I hereby certify that I have the authority to make application to this Standard Plan; that the information contained herein is correct and accurate; and that all clearing, grading, construction, and development will be conducted according to the above Requirements, Conditions and Project Information.

Signature of Applicant Date

Printed Name of Applicant

Approved by Date

ESD MATRIX

Environmental Site Design Maximum Extent Practicable Determination

		A-1 Green Roof	A-2 Permeable Concrete	A-3 Reinforced Turf (interlocking Structural Units)	N-1 Disconnection of Rooftop Runoff	N-2 Disconnection of Non-Rooftop Runoff	N-3 Sheet flow to Conservation Area
Slope Limitations		None	< 5 %	< 5 %	< 5 % unless terraces or berms	< 5 % unless terraces or berms	< 5 % or with level spreaders
Soils	A	Yes	Yes	Yes	Yes	Yes	Yes
	B	Yes	Yes	Yes	Yes	Yes	Yes
	C	Yes	Yes	Yes	Yes	Yes	Yes
	D	Yes	No [6]	No [6]	Yes	Yes	Yes
	Marlboro	Yes	No	No	Yes	Yes	Yes
	Compacted Fill	Yes	No [6]	No [6]	Yes	Yes	Yes
High Groundwater		Yes	Yes [2]	Yes	Yes	Yes	Yes
Maint. Resp.	DPWT	No	No	No	No	No	No
	Private	Yes	Yes	Yes	Yes	Yes	Yes
Road R/W		No	No	No	No	Yes	Yes
Residential	> 1 ac lot	Not desirable	Yes [1]	Yes [1]	Yes	Yes	Yes
	>0.5 ac lot	Not desirable	Yes [1]	Yes [1]	Yes	Yes	Yes
	<0.5 ac lot	Not desirable	Yes [1]	Yes [1]	Yes	Yes	Yes
	Multi	Not desirable	Yes [1]	Yes [1]	Yes	Yes	Yes
Commercial		Yes	Yes	Yes	Yes	Yes	Yes
Stormwater Hotspot		Yes	No	No	No [7]	No [7]	No
DrainageArea	<500 sf	Yes	Yes	Yes	Yes	Yes	Yes
	<1,000 sf	Yes	Yes	Yes	No	Yes	Yes
	<10,000 sf	Yes	Yes	Yes	No	No	Yes
	Other		Yes [3]				
Notes			Permeable asphalt not permitted.				Conservation area min 20,000 sf., min. width 50 ft.

1 Acceptable for pedestrian walkways, parking lots, driveways, plazas and access roads. 2 Facility sub-base must be a minimum 4' above high water table. 3 Facilities shall be designed as infiltration practices, as outlined in Appendix D.13 in the MD Design Manual. 4 Special design required. Standard rain barrel not acceptable. 5 Not acceptable on soils that have low shear strength, or identified as "slough prone" or "landslide prone." 6 If designed per County detail, then Yes. 7 If discharge is beyond hotspot use, the Yes. 8 Pretreatment and soil testing to verify infiltration rates are required for drainage areas larger than 10,000 sf. Footnotes:

		M-1 Rainwater Harvesting (Rain Barrell)	M-2 Submerged Gravel Wetlands	M-3 Landscape Infiltration	M-4 Infiltration Berms	M-5 Dry Wells
Slope Limitations		None	<2%	sheet flow or level spreader	up to 10 %	up to 20 %
Soils	A	Yes	If lined	Yes	Yes [5]	Yes
	B	Yes	If lined	Yes	Yes [5]	Yes
	C	Yes	Yes	No	Yes [5]	No
	D	Yes	Yes	No	Yes [5]	No
	Marlboro	No	If lined	No	No	No
	Compacted Fill	Yes	No	No	No	No
High Groundwater		Yes	Yes	Yes [2]	Yes	Yes [2]
Maint. Resp.	DPWT	No	No	No	No	No
	Private	Yes	Yes	Yes	Yes	Yes
Road R/W		No	No	No	No	No
Residential	> 1 ac lot	Yes	Common areas only	Common areas only	Common areas only	Yes
	>0.5 ac lot	Yes	Common areas only	Common areas only	Common areas only	Yes
	<0.5 ac lot	Yes	Common areas only	Common areas only	Common areas only	Yes
	Multi	Yes	Common areas only	Common areas only	Common areas only	Yes
Commercial		Yes	Yes	Yes	Yes	Yes [3]
Stormwater Hotspot		Rooftop runoff only	Yes with Liner	No	No	No
Drainage Area	<500 sf	Yes	No	Yes	Yes	Yes
	<1,000 sf	Yes [4]	No	Yes	Must sheet flow into berm	Yes
	<10,000 sf	Yes [4]	No	Yes	Must sheet flow into berm	Yes [3]
	Other		1 Ac Minimum	Yes [8]		Yes [3]
Notes					Used to augment other devices, or for pretreatment	Setback 100' from 15% fill slopes, 200' from 25% fill slopes

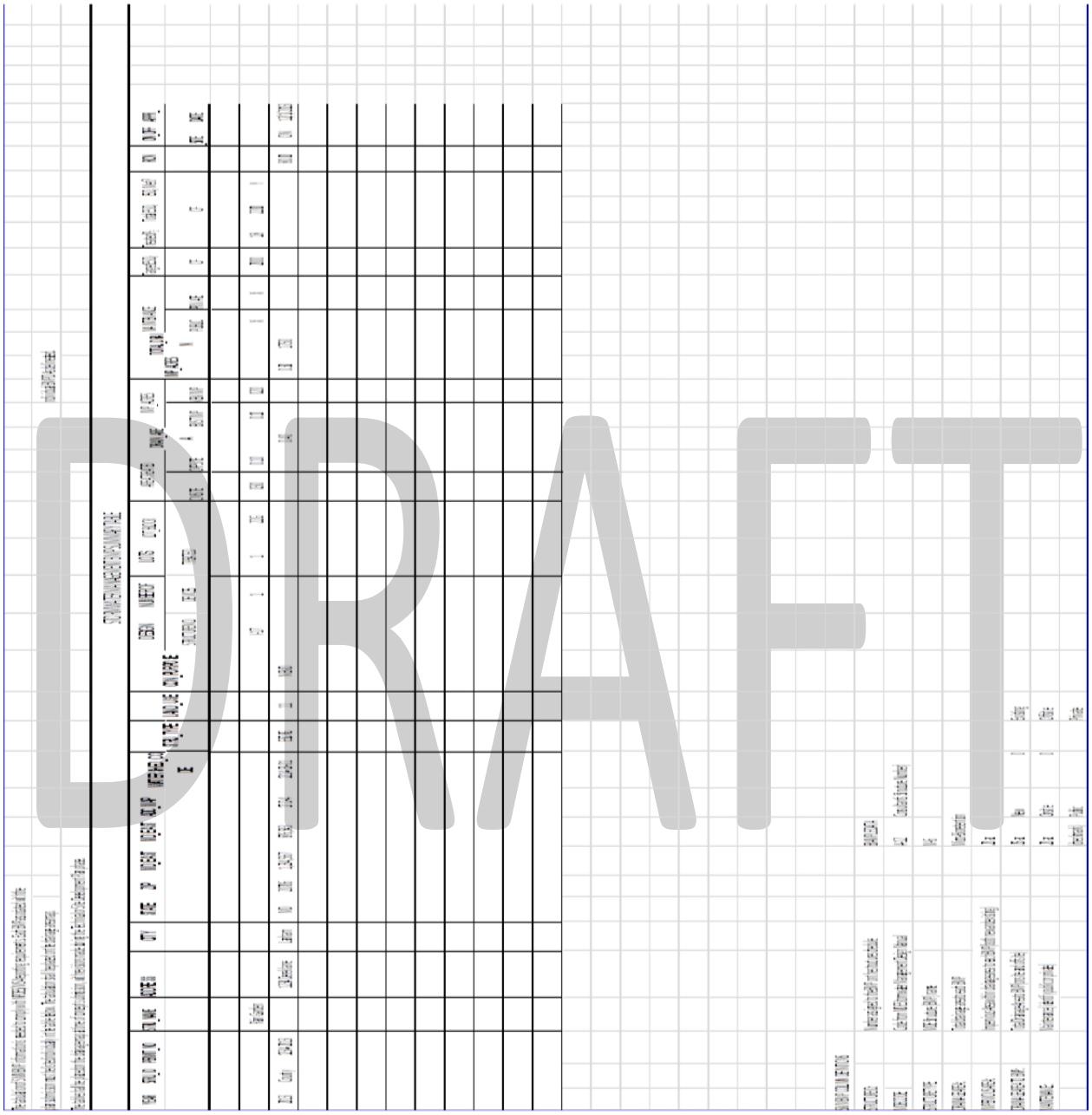
Footnotes:

1 Acceptable for pedestrian walkways, parking lots, driveways, plazas and access roads.
2 Facility subbase must be a minimum 4' above high water table.
3 Facilities shall be designed as infiltration practices, as outlined in Appendix D.13 in the MD Design Manual.
4 Special design required. Standard rain barrel not acceptable.
5 Not acceptable on soils that have low shear strength, or identified as "slough prone" or "landslide prone."
6 If designed per County detail, then Yes.
7 If discharge is beyond hotspot use, the Yes.
8 Pretreatment and soil testing to verify infiltration rates are required for drainage areas larger than 10,000 sf.

		M-6 Micro-Bioretention	M-7 Rain Gardens	M-8 Grass Swales	M-8 Bio Swales	M-8 Wet Swales
Slope Limitations		< 5 % or with level spreaders	< 5 % unless terraces or berms	1 % min, 4 % max	1 % min, 4 % max	1 % min, 4 % max
Soils	A	Yes	Yes	Yes	Yes	No
	B	Yes	Yes	Yes	Yes	No
	C	Yes, with underdrain	Yes	Yes	Yes, with underdrain	Yes
	D	Yes, with underdrain	No	Yes	Yes, with underdrain	Yes
	Marlboro	Yes, with underdrain	No	Yes, if flow is < 3 cfs	Yes, with underdrain	No
	Compacted Fill	Yes, with underdrain	No	Yes	Yes, with underdrain	No
High Groundwater		Yes, above	Yes, 2' above	Yes	Yes, with underdrain	Yes
Maint. Resp.	DPWT	No	No	Yes	No	No
	Private	Yes	Yes	Yes	Yes	Yes
Road R/W		No	No	Rural - open section only	No	No
Residential	> 1 ac lot	Common areas only	Common areas only	Yes	Common areas only	Common areas only
	>0.5 ac lot	Common areas only	Common areas only	Yes	Common areas only	Common areas only
	<0.5 ac lot	Common areas only	Common areas only	No	Common areas only	Common areas only
	Multi	Common areas only	Common areas only	No	Common areas only	Common areas only
Commercial		Yes	Yes	Yes	Yes	Yes
Stormwater Hotspot		No	No	No	No	No
Drainage Area	<500 sf	Yes	Yes	Yes	Yes	Yes
	<1,000 sf	Yes	Yes	Yes	Yes	Yes
	<10,000 sf	Yes	Commercial max 10,000 sf	Yes	Yes	Yes
	Other	Max 0.5 ac	Residential max 2,000 sf			
Notes		4' above groundwater if inflitrating.				

Footnotes:
1 Acceptable for pedestrian walkways, parking lots, driveways, plazas and access roads.
2 Facility subbase must be a minimum 4' above high water table.
3 Facilities shall be designed as infiltration practices, as outlined in Appendix D.13 in the MD Design Manual.
4 Special design required. Standard rain barrel not acceptable.
5 Not acceptable on soils that have low shear strength, or identified as "slough prone" or "landslide prone."
6 If designed per County detail, then Yes.
7 If discharge is beyond hotspot use, the Yes.
8 Pretreatment and soil testing to verify infiltration rates are required for drainage areas larger than 10,000 sf.

BMP SUMMARY TABLE



SAMPLE STREAM INVENTORY CHECKLIST

Prince George's County
Department of Permitting, Inspections and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

SAMPLE STREAM INVENTORY CHECKLIST

STREAM SURVEY FOR DESIGN OF BIO-SENSITIVE STREAM CROSSINGS

Project Name:		**Site Inspector:**	
Project Number:		**Site Inspector:**	
Visit Date:		**DPIE Reviewer:**	
Crossing # or Station:			

Stream Order	
STATE USE CLASS	
USE I & I-P	
USE III &III-P	
USE IV & IV-P	
Specially Designated	
STREAM QUALITY	
Biotic Community Quality (As determined by DPIE Staff or Equivalent Monitoring Protocol)	
STREAM FLOW TYPE	
Ephemeral	
Intermittent	
Perennial (Constant Flow)	
NORMAL (BASEFLOW) CHARACTERISTICS	
< 3 Months	
> 3 Months	
WATERSHED CHARACTERISTICS	
Fully Developed	
Partially Developed (Including Agriculture)	
Undeveloped	
FUTURE OR PROPOSED DEVELOPMENT	
< 8% Impervious	
> 8% Impervious	
STREAM BED CHARACTERISTICS	
Bed Materials	
Cobble, Gravel, Sand , Silts	
Solid Rock, Hard Clay, etc.	
Gradient	
Shallow (<0.5%)	
Moderate ((0.5% to 2%)	
Steep (>2%)	
Platform	
Meandeering (Sinuosity <1.5%)	
Sinuous (Sinuosity 1.2% to 1.5%)	
Straight (Sinuosity >1.2%)	
Valley Confinement	
High (Steep Valley Walls, Relatively Narrow FP)	
Moderate (Slight to moderate sloped walls; relatively wide FP)	
Low (No definable valley walls, Broad FP)	
SITE CONSIDERATIONS	
Wetland Impact (Y or N)	
Forested	
Scrubs/shrub	
Emergent	
Specimen Trees Present (Y or N)	

Species	**Size**	**Species**	**Size**	**Species**	**Size**

Sample Stream Inventory Checklist
Issue Date: July 26, 2014

SAMPLE NOTIFICATION LETTER

[Date]

[Recipient]

Dear:

Re: *[Site Development Concept Plan Number and Name of Project]*

A Site Development Concept Plan application for the above-referenced project was filed on [Date] (The date that a Site Development Concept number is issued by DPIE) for review to the Department of Permitting, Inspections and Enforcement ("DPIE").

The subject property consists of approximately [___] acres with an address of *[address, if applicable]*, which is located *[Give nearest point of reference by road frontage or distance from nearest intersection]*. The nature of the review includes a conceptual stormwater management plan for proposed development of the subject property as [give general description of development for example residential, commercial, mixed use]

If you wish to obtain more information about the proposed Site Development Concept Plan you should contact (Design Consultant) at (Consultants Phone number), visit the Department of Permitting, Inspections and Enforcement noted here where the plan and application may be reviewed, or you may contact the applicant's engineer of record at [provide engineer's contact info].

IMPORTANT: This notice is your opportunity to interact with the applicant. Contacting the applicant as soon as possible after receiving this notice will help facilitate your ability to receive information and/or establish a time when the applicant may meet with you or your civic group to provide information and answer questions about the development proposed.

Sincerely,

SAMPLE AFFIDAVIT

AFFIDAVIT

The purpose of this affidavit is to certify that pursuant to *CB-15-2011*, Informational Mailing letters regarding the application for Site Development Concept Plan approval [*Plan No.*]*;* [*Project Name*], were mailed to all adjoining property owners, registered associations, municipalities within a mile, and previous parties of record on *[Date]*.

I, *(*_____*)*, solemnly affirm under the penalties of perjury and upon personal knowledge that the contents of the foregoing paper are true.

_____
Name

_____
Date

STATE OF MARYLAND
COUNTY OF PRINCE GEORGE'S, ss:

I HEREBY CERTIFY that on this _____ day of _____, 20__, before me, the subscriber, a Notary Public, for the State and County aforesaid, personally appeared *(*_____ _____*)*, being authorized to execute this Affidavit in accordance with the requirements of the Prince George's County Zoning Ordinance for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

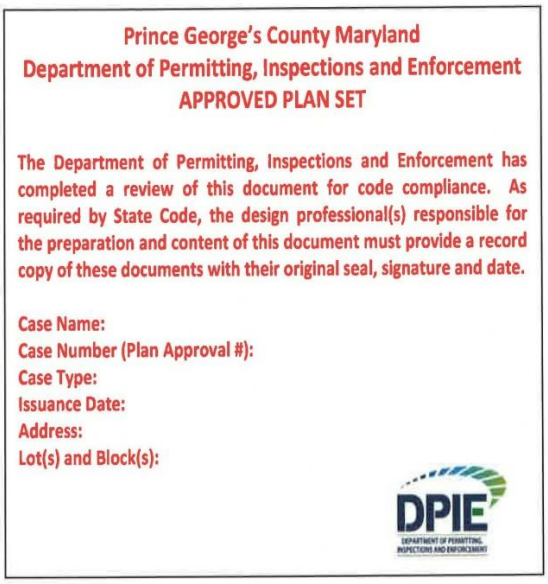
My Commission Expires: _____

[NOTARIAL SEAL]

SAMPLE APPROVAL LETTER & BLOCK

1. Approval Letter
2. Approval Block

DPIE STAMP THREE



THE PRINCE GEORGE'S COUNTY GOVERNMENT

Department of Permitting, Inspections and Enforcement
Site/Road Plan Review Division
9400 Peppercorn Place, Suite 420
Largo, Maryland 20774
(301) 883-5710

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

STORMWATER MANAGEMENT CONCEPT APPROVAL

CASE NAME: PG.CO.BOE_SUITLAND HIGH SCHOOL AND ANNEX CASE #: 10906-2014-00

APPLICANT'S NAME: PG.CO. BOARD OF EDUCATION

ENGINEER : LANDESIGN

REQUIREMENTS:

Technical Review is required for PUBLIC/PRIVATE Storm Drain/SWM Construction.

Type of Storm Drainage/SWM Construction is PRIVATE.

These additional approvals are required: None.

These fees apply: None.

These bonds apply: None.

Required water quality controls: MICRO-BIORETENTION.

Required water quantity controls: None.

A maintenance agreement is required.

No special conditions apply.

Required easements: None.

Storm Water Management fee payment of none in lieu of providing on-site attenuation/quality control measures.
(Fee-In-Lieu subject to change during technical review.)

CONDITIONS OF APPROVAL:

Please see second page.

APPROVED BY:

Rey De Guzman

APPROVAL DATE: May 12, 2014
EXPIRATION DATE: May 12, 2017

FOR OFFICE USE ONLY

ADC MAP:	5650 D-4	200' SHEET:	204SE05
STREET NAME:	SILVER HILL RD		
WATERSHED:	40-Oxon Run		
NUMBER OF DU'S:	0	COST PER DWELLING:	0

CC: APPLICANT, SCD, PERMITS

P.G.C. FORM #3693 (REV 04/93)

THE PRINCE GEORGE'S COUNTY GOVERNMENT

Department of Permitting, Inspections and Enforcement
Site/Road Plan Review Division
9400 Peppercorn Place, Suite 420
Largo, Maryland 20774
(301) 883-5710

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

STORMWATER MANAGEMENT CONCEPT APPROVAL

CASE NAME: PG.CO.BOE_SUITLAND HIGH SCHOOL AND ANNEX CASE #: 10906-2014-00

CONDITIONS OF APPROVAL:

1. THIS PROJECT INVOLVES REDEVELOPMENT OF AN EXISTING DEVELOPED SITE. SITE SHALL BE DESIGNED TO TREAT FOR 50% WQv OF THE IMPERVIOUS AREA WITHIN THE PROPOSED DISTURBED AREA AND 100% WQv AND CPV FOR NEW IMPERVIOUS AREA USING ESD PRACTICES AND TECHNIQUES.
2. THE PROPOSED DEVELOPMENT IS FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING 8 INCH WATERLINE. NO ADDITIONAL IMPERVIOUS COVER IS PROPOSED WITH THE REPLACEMENT.
3. ESD TO THE MEP IS PROVIDED IN MICRO-BIO RETENTION.
4. SITE DEVELOPMENT FINE GRADING PERMIT FROM DPIE FOR THE PROPOSED IMPROVEMENTS WILL BE REQUIRED.
5. A LETTER OF RESPONSIBILITY BY THE BOARD OF EDUCATION SHOULD BE FURNISHED AT THE TIME OF THE PERMIT ISSUANCE.

REVIEWED BY MS.

SAMPLE APPROVAL MEMO

THE PRINCE GEORGE'S COUNTY GOVERNMENT
Department of Permitting, Inspections and Enforcement IJI 11

Site/Road Plan Review Division **SAMPLE**
DPIE Referral

MEMORANDUM

2014

TO: Meika Fields, Urban Design Section
Development Review Division, M-NCPPC
FROM: Mary C. Giles, P.E. Associate Director
Site/Road Plan Review Division, DPIE
RE: (Site Name)
Detailed Site Plan No. DSP-

In response to the Detailed Site Plan No. DSP- referral, the Department of Permitting, Inspections and Enforcement (DPIE) offer the following:

The property is located on the east side of Avenue, west of Street.
Avenue and Street are State of Maryland maintained roadways; therefore, coordination with the Maryland State Highway Administration (SHA) is required.
Street and Street are Town of Brentwood maintained roadways; therefore, coordination with the Town of Brentwood is required.

A soils investigation report which includes subsurface exploration and geotechnical engineering evaluation for the proposed buildings and ESD is required.
All storm drainage systems and facilities are to be in accordance with DPW&T's Specifications and Standards.

The proposed Detailed Site Plan is consistent with the approved stormwater management Concept Plan No. .
The stormwater management pond east of the intersection of Avenue and Street is a SHA facility. Modification of this stormwater management pond to add an ESD device must be coordinated with SHA, or modification of project to incorporate ESD onsite.

9400 Peppercorn Place, 4^ Floor, Largo, Maryland 20774 Phone: 301.636.2060 •
http://dpie.mypgc.us • FAX: 301.636.2069

Meika Fields
, 2014
Page 2

- This memorandum incorporates the Site Development Plan Review pertaining to Stormwater Management (County Code 32-182(b)). The following comments are provided pertaining to this approval phase:
  a) Final site layout, exact impervious area locations are shown on plans.
  b) Exact acreage of impervious areas has not been provided.
  c) Proposed grading is shown on plans.
  d) Delineated drainage areas at all points of discharge from the site have been provided.
  e) Stormwater volume computations have not been provided. Provide BMP summary table to define ESD target volumes and ESD provided volumes for entire LOD.
  f) Erosion/sediment control plans that contain the construction sequence, and any phasing necessary to limit earth disturbances and impacts to natural resources, and an overlay plan showing the types and locations of ESD devices and erosion and sediment control practices are not included in the submittal.
  g) A narrative in accordance with the code has not been provided.

  Please submit any additional information described above for further review.

If you have any questions or need additional information, please contact Mr. Steve Snyder, District Engineer for the area, at 301.636.2060.

MCG:SS:dab
cc: Rey de Guzman, P.E., Chief, Site/Road Section, S/RPRD, DPIE Steve Snyder, P.E., District Engineer, S/RPRD, DPIE
(Applicant, address)
(Engineer, address)

PLAN APPROVAL BLOCKS

Stamp 1 Signature Set

Stamp 2 Approved Permit Set

Stamp 3 Approved Plan Set

Stamp 4 Approved Not Permitted Set

Stamp 5 Approved Permit SD-SWM Only

Stamp 6 Approved As-Built Set

PGSCD Small Pond Approval

DPIE STAMP ONE

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
SIGNATURE READY SET

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

THIS DOCUMENT MAY NOT BE MODIFIED IN ANY WAY, OTHER THAN TO AFFIX A SEAL, SIGNATURE AND DATE IN THE SPACE PROVIDED.

The signed "Signature Ready Set" will give the electronic document from which it was created the same force and impact as if the electronic document were signed and sealed.

Case Name:
Case Number (Permit or Approval #):
Case Type:
Signature Ready Date:
Address:
Lot(s) and Block(s):

By signing this set, I am confirming that the "Signature Ready Set" has not been modified in any way that would make it different from the electronic document from which it was created.

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

DPIE STAMP TWO

STAMP TWO

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
APPROVED PERMIT SET

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

Case Name:
Case Number (Permit #):
Case Type:
Issuance Date:
Address:
Lot(s) and Block(s) and Parcel(s):

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

DPIE STAMP THREE

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
APPROVED PLAN SET

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

Case Name:
Case Number (Plan Approval #):
Case Type:
Issuance Date:
Address:
Lot(s) and Block(s):

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

STAMP FOUR

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
APPROVED NOT PERMITTED SET
(CONDITIONAL APPROVAL)

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

Case Name:
Case Number (Permit #):
Case Type:
Issuance Date:
Address:
Lot(s) and Block(s):

Conditions of Approval

The above approval is conditioned upon the following:

- **This DOES NOT REPRESENT A PERMIT TO CONSTRUCT.**
- This represents complete plan approval by DPIE for roadway and drainage systems included in the plan (storm drain, stormwater management, paving, sidewalk, curb/gutter, pavement marking, signage, signals and other roadway appurtenances, grading).
- Additional outstanding permit requirements, including payment of fees and posting of bonds must be satisfied prior to final permit issuance.
- If a permit for this work is not secured within 6 months of this approval, this approval expires and all previously paid permit fees are forfeited. In this instance, the permittee shall file for permit extension and pay the required filing fees.

STAMP FIVE

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
APPROVED PLAN SET
SD-SWM ONLY

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

Case Name:
Case Number (Plan Approval #):
Case Type:
Issuance Date:
Address:
Lot(s) and Block(s):

Conditions of Approval

The above approval is conditioned upon the following:

- This approval includes plan approval by DPIE for storm drain and stormwater management systems ONLY.
- Roadway systems (paving, sidewalk, curb/gutter, pavement marking, signage, signals and other roadway appurtenances), grading and permitting require further review.
- **This approval does NOT represent a permit to construct.**

STAMP SIX

Prince George's County Maryland
Department of Permitting, Inspections and Enforcement
APPROVED AS BUILT PLAN SET

The Department of Permitting, Inspections and Enforcement has completed a review of this document for code compliance. As required by State Code, the design professional(s) responsible for the preparation and content of this document must provide a record copy of these documents with their original seal, signature and date.

Case Name:
Case Number (Permit Approval #):
Case Type:
Issuance Date:
Address:
Lot(s) and Block(s):

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

DELEGATED PROFESSIONAL ENGINEER CERTIFICATION

PRINCE GEORGE'S SOIL
CONSERVATION DISTRICT
SMALL POND APPROVAL

Prince George's County, Maryland
Department of Permits Inspections &
Enforcement: Site/Road Plan Review

( ) Certifies Water Quality
Structure Exempt From
MD-378 Approval

_____
Signature Date

( ) Certifies Pond Meets
MD-378 & Recommend
PGSCD Approval

_____
Signature Date

( ) Certifies Pond Meets
MD-378 & Forward For
Final PGSCD Review &
Approval

_____
Signature Date

( ) As Built Meets All
Requirements of MD-378

_____
Signature Date

GENERAL STORM DRAIN and PLAN GENERAL NOTES

1. General Storm Drain and Paving Notes

2. Paving Notes

GENERAL STORM DRAIN AND PAVING NOTES

1) INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND OR VACUUM, AT UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES TO WATER AND SEWER LINES ARE LESS THAN SHOWN ON THIS PLAN, OR LESS THAN TWELVE (12) INCHES, CONTACT THE DEPARTMENT OF PERMITTING INSPECTION AND ENFORCEMENT (DPIE) INSPECTOR BEFORE PROCEEDING WITH CONSTRUCTION.

2) ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STORMWATER MANAGEMENT STANDARDS AND SPECIFICATIONS OF PRINCE GEORGE'S COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION.

3) FOR TYPES OF STORM DRAIN STRUCTURES, REFER TO THE LATEST STANDARD DETAILS OF PRINCE GEORGE'S COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION, UNLESS OTHERWISE NOTED.

4) ALL ROADWAY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING: THE DPW&T SPECIFICATIONS AND STANDARDS FOR ROADWAYS AND BRIDGES; THE PRINCE GEORGE'S COUNTY CODE, SUBTITLE 23, ROAD ORDINANCE; AND THE PRINCE GEORGE'S COUNTY POLICY AND SPECIFICATION FOR UTILITY INSTALLATION AND MAINTENANCE.

5) PRIOR TO DIGGING WITHIN THE PUBLIC RIGHT-OF-WAY, CALL "MISS UTILITY" TOLL FREE AT (800) 257-7777 FOR UTILITY LOCATION AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.

6) PRIOR TO PERMIT ISSUANCE AND STARTING ANY WORK SHOWN ON THIS PLAN, THE PERMITTEE SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH THE DPIE INSPECTOR BY CALLING (301) 883-5730. AN INITIAL INSPECTION IS REQUIRED PRIOR TO FULL MASS GRADING OF THE SITE.

7) IN ACCORDANCE WITH SECTION 23-128, THE COUNTY'S ROAD ORDINANCE, A PROJECT SIGN SHALL BE POSTED PROMINENTLY DESCRIBING THE FOLLOWING:

- SUBDIVISION NAME (AS SHOWN ON PERMIT APPLICATION)
- OWNER/PERMITTEE NAME
- OWNER/PERMITTEE ADDRESS AND PHONE
- DPW&T PERMIT NUMBER

8) ALL ELEVATIONS SHOWN ON THIS PLAN ARE IN ACCORDANCE WITH THE FOLLOWING: HORIZONTAL – MARYLAND COORDINATE SYSTEM (STATE PLANE GRID) BASED ON NORTH AMERICAN DATUM OF 1983 (NAD 83); NATIONAL GEODOTIC VERTICAL DATUM OF 1929 (NG VD 29).

9) TEMPORARY TRAFFIC CONTROL AND PERMANENT TRAFFIC SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION'S *MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES* (MUTCD).

10) IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO ARRANGE FOR THE ADJUSTMENT OR RELOCATION OF ALL UTILITIES.

11) ALL UNSUITABLE MATERIAL MUST BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO A DEPTH AS DIRECTED BY THE GEOTECHNICAL ENGINEER, THE DPW&T INSPECTOR, AND/OR THE DEPARTMENT'S ENGINEER.

12) EXCAVATION AND PLACEMENT OF FILL MATERIAL SHALL BE PERFORMED UNDER THE SUPERVISION OF A MARYLAND-LICENSED ENGINEER.

13) THE PERMITTEE WILL BE REQUIRED TO FURNISH COMPACTION REPORTS CERTIFIED BY A MARYLAND-LICENSED ENGINEER ON EACH LAYER OF FILL MATERIAL PRIOR TO PLACING SUBSEQUENT LAYERS.

14) DURING THE PLACEMENT OF A STANDARD PAVEMENT SECTION, NO PAVEMENT COURSE OR STONE LIFT SHALL BE PLACED UNTIL THE UNDERLYING COURSE OR SUBGRADE IS APPROVED BY THE DPW&T INSPECTOR. THE APPROVAL SHALL EXPIRE IF TRAFFIC OR INCLEMENT WEATHER AFFECTS THE SITE PRIOR TO PAVING.

15) AS SOON AS THE ASPHALT BASE COURSE IS APPROVED, THE INTERMEDIATE ASPHALT COURSE SHALL BE PLACED IMMEDIATELY OVER IT TO FORM A PROTECTIVE SEAL.

16) TEMPORARY STREET NAME SIGN INSTALLATION AND MAINTENANCE IS THE OBLIGATION OF THE PERMITTEE ONCE BASE PAVING IS COMPLETED.

17) WHERE ROADWAY CONSTRUCTION IS ON OR IN THE VICINITY OF AN EXISTING ROAD, IN-KIND PAVEMENT MARKING AND STRIPING REPLACEMENT (E.G., THERMOPLASTIC, PAINTED, ETC.) ARE REQUIRED. ALSO, APPROPRIATE PAVEMENT MARKING AND STRIPING SHALL BE PROVIDED IN THE AREA OF PAVEMENT WIDENING AND/OR RECONSTRUCTION AND/OR OVERLAY OF AN EXISTING ROAD.

18) SAW CUT AND MILL A 2-INCH DEEP, 10-FOOT-WIDE NOTCH AT EXISTING EDGE OF PAVEMENT WHERE IT IS NECESSARY TO CONNECT TO OR TO EXTEND AN EXISTING ROAD. OVERLAY AT POINT OF TIE-IN TO ENSURE A SMOOTH TRANSITION AND POSITIVE DRAINAGE.

19) WHERE IT IS NECESSARY TO WIDEN AN EXISTING ROAD, AND MILLING AND OVERLAY REQUIREMENTS HAVE BEEN WAIVED OR REDUCED, THE WIDENING AND THE EDGE TREATMENT OF EXISTING ROAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH DPW&T STANDARD NO. 300.20 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.

20) ALL RESIDENTIAL ROADWAY FILLET RADII SHALL BE AT LEAST 37 FEET, UNLESS OTHERWISE NOTED. ROADWAYS WITH HIGHER CLASSIFICATION REQUIRE 45 FEET AND/OR 50 FEET RADII.

21) AN UNDERDRAIN SYSTEM IS REQUIRED FOR THE FULL LENGTH OF ALL PROPOSED AND MODIFIED ROADWAYS, ON BOTH SIDES, AND TO THE LIMITS OF THE PERMIT SHOWN ON THIS PLAN.

22) ALL CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH DPW&T STANDARDS NO. 300.01 THROUGH 300.04 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.

23) BRICK CHANNELIZATION IS REQUIRED IN ALL PUBLIC DPW&T STORM DRAIN STRUCTURES. CONCRETE CHANNELIZATION IS NOT ALLOWED.

24) POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE AREA COVERED BY THIS PERMIT AND THROUGH ADJACENT PROPERTY FRONTAGES.

25) ALL UNPAVED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE SODDED.

26) ALL SIDEWALK RAMPS SHOWN ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH DPW&T STANDARDS 300.05 THROUGH 300.10 AND SHALL COMPLY WITH THE LATEST REVISION TO THE FEDERAL ACCESSIBILITY GUIDELINES OF THE AMERICANS WITH DISABILITIES ACT.

27) ALL SIDEWALKS SHOWN ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DPW&T STANDARDS AND SHALL COMPLY WITH THE LATEST REVISION TO THE FEDERAL ACCESSIBILITY GUIDELINES OF AMERICANS WITH DISABILITIES ACT.

28) ALL SIDEWALKS (EXCEPT AS NOTED HEREIN) ARE TO BE CONSTRUCTED BY THE SITE DEVELOPER.

29) SIDEWALKS ALONG FRONTAGES OF OPEN-SPACE PARCELS AND THOSE NOT COVERED BY A SINGLE-FAMILY BUILDING PERMIT SHALL BE CONSTRUCTED UNDER THIS STREET CONSTRUCTION PERMIT.

30) THE WIDTH OF A RESIDENTIAL DRIVEWAY APRON AT THE PROPERTY LINE SHALL NOT BE LESS THAN THE WIDTH OF THE ON-SITE PARKING PAD AT ITS WIDEST POINT, A MAXIMUM WIDTH OF 20 FEET, AND A MINIMUM WIDTH OF 10 FEET. A RESIDENTIAL DRIVEWAY APRON FLARE SHALL NOT BE CONSTRUCTED CLOSER THAN 3.5 FEET TO THE NEAREST ABUTTING PROPERTY LINE.

31) ALL DRIVEWAY APRONS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPER.

32) ENSURE THAT STREET TREES ARE NO CLOSER THAN 1 FOOT TO THE RIGHT-OF-WAY LINE, IN AN OPEN SPACE SECTION CONFIGURATION, AND NO CLOSER THAN 15 FEET FROM STREET LIGHT OR POLE, AND OF APPROPRIATE HEIGHT SO AS NOT TO INTERFERE WITH EXISTING OR PROPOSED OVERHEAD UTILITY LINES. ALL STREETSCAPE PLANTING SHALL BE IN ACCORDANCE WITH DPW&T STANDARDS 600.01 THROUGH 600.20 UNLESS DIRECTED OTHERWISE BY THE DEPARTMENT.

33) PAVEMENT QUALITY CONTROL AND CORING WILL BE REQUIRED OF THE PERMITTEE FOR ALL PAVEMENT COURSES USING THE FOLLOWING PROCESS:

a. PRIOR TO PAVING, PERMITEE/PAVING CONTRACTOR SHALL ELECTRONICALLY NOTIFY INSPECTOR OF PAVING DATES (FAX CAN OCCASIONALLY BE ACCEPTED), AND PROVIDE INFORMATION NEEDED FOR CORE TESTING REQUEST (CTR FORM #1). DPW&T INSPECTOR FILLS OUT THE CTR FORM THEN SENDS IT TO THE MATERIALS LAB.

b. CONTRACTORS, WHO ARE NEW TO THE MATERIALS LAB, SHALL ELECTRONICALLY SUBMIT QC PLANS TO IT, AND ARRANGE TO BE INITIATED BY IT PRIOR TO PAVING.

c. THE PERMITEE/PAVING CONTRACTOR MUST PROVIDE A MD-CERTIFIED FIELD TECHNICIAN FOR DAILY QUALITY CONTROL (QC) TESTING DURING THE ENTIRE

PAVING OPERATION (NOT JUST ITS END). FIELD TECHNICIAN SHALL BE ADEQUATELY EQUIPPED WITH A PHONE, CALIBRATED THERMOMETER, AND A CALIBRATED THIN-LIFT DENSITY GAUGE FOR QC AND INSPECTOR-REQUESTED TESTING.

d. HMA DENSITY GAUGES SHALL BE VALIDATED AND CALIBRATED DAILY (SHA 504.03.10. A.2), SO THEIR READINGS CAN BE ACCEPTED FOR COURSE PLACED WITH A TOTAL TONNAGE UNDER 200 TONS OR ACCEPTABLE THICKNESS UNDER 1.2" DUE TO PATCHING, WEDGE & LEVELING, BRIDGE DECKS, … ETC.

e. FIELD TECH. SHALL CALL THE MATERIALS LAB WITH DATE & TIME OF CORE CUTTING SO IT CAN BE WITNESSED, AND CORES & HMA SAMPLES CAN BE RECEIVED ON SITE BY A LAB INSPECTOR.

f. INSPECTOR RANDOMLY SELECTS & MARKS CORE LOCATIONS IN THE FIELD; NOTES THEM DOWN ON THE CTR STATING STREET'S NAME AND ADDRESS, LOT #, STA #, OR DISTANCE FROM NEAREST INTERSECTION; THEN FAXES THE CTR AGAIN TO THE LAB, AND GIVES TO FIELD TECH BOXES FOR ONLY PR. GEOGE'S COUNTY HMA SAMPLES.

g. FIELD TECH. SHALL CHECK DELIVERY TICKETS FOR COUNTY-REQUIRED INFO, COLLECT AT LEAST ONE BEHIND-THE-PAVER HMA SAMPLE/MIX/DAY, AND CUT AT LEAST 5 CORES/MIX/DAY BUT NO LESS THAN 2 CORES FROM EACH STREET, UNLESS OTHERWISE INSTRUCTED BY AN INSPECTOR; THEN HAND OVER THE SAMPLES TO DPWT INSPECTOR NO LATER THAN ONE (1) BUSINESS DAY FROM THE PAVING.

h. IF, AT THE LAB'S DISCRETION, THE CORES' CUTTING IS NOT WITNESSED, CORES SHALL BE RECEIVED IN THE LAB, IN ONE BUSINESS DAY FROM PAVING, AS LONG AS THEY ARE NUMBERED AND WELL IDENTIFIED ON FORM #2 BY: PROJECT NAME, STREET NAME, CORE LOCATION, PAVING DATE, CORING DATE, MIX CODE, … ETC. IF NOT PROPERLY IDENTIFIED, CORES WILL NOT BE ACCEPTED.

i. IF, AT THE LAB'S DISCRETION, A BEHIND-THE-PAVER HMA SAMPLE IS NOT RECEIVED ON SITE, IT SHALL BE RECEIVED IN THE LAB ALONG WITH CERTIFIED DELIVERY TICKETS, IN ONE (1) BUSINESS DAY, AND BE IDENTIFIED BY: PROJECT NAME, SAMPLING LOCATION, PAVING DATE, & STATE MIX DESIGNATION. IF NOT PROPERLY LABELED, HMA SAMPLES WILL NOT BE ACCEPTED.

j. IF CORES ARE TESTED AT AN INDEPENDENT THIRD PARTY'S TESTING LAB, THAT LAB MUST BE AASHTO ACCREDITED FOR SPECIFIC TESTS, AND BE INITIATED BY THE MATERIALS LAB, WHICH SHALL BE NOTIFIED (FAX CAN OCCASIONALLY BE ACCEPTED), OF THE TESTING DATE & TIME SO IT MAY WITNESS THE 3RD PARTY TESTING.

k. CORE RESULTS SHALL BE REPORTED ON CORE ANALYSIS (FORM #2), E-MAILED1 TO MATERIALS LAB & INSPECTOR NO LATER THAN ONE BUSINESS DAY FROM TESTING (ONE DAY FROM CUTTING FOR COMPANION CORES), AND MAILED OUT TO PERMITEE.

l. FIELD TECHNICIANS AND THIRD PARTY TESTING LABS SHALL MAINTAIN A LOG OF THEIR TEST RESULTS; RECOMMENDATIONS, AND ACTIONS TAKEN TO CORRECT THE PROBLEMS, IF ANY. THE LOG SHALL BE AVAILABLE TO DPW&T FOR REVIEW UPON ANY DPW&T INSPECTOR'S REQUEST.

34) PERMITTEE SHALL SUBMIT PROPERTY CORNER CERTIFICATIONS AND UTILIZE METAL PROPERTY MARKERS PER PRINCE GEORGE'S COUNTY CODE, SECTION 24–120, PRIOR TO ACCEPTANCE OF STREETS.

35) WASHINGTON SUBURBAN SANITARY COMMISSION 200 FOOT SHEET NO.:_____

36) DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION SITE CONCEPT APPROVAL NUMBER:_____

37) SEDIMENT CONTROL APPROVAL NUMBER: _____

38) PRELIMINARY PLAN APPROVAL NUMBER: _____

39) RECORD PLAT RECORDING NUMBER: _____

40) APPROVED STREET GRADE ESTABLISHMENT INFORMATION:

ORIGINAL STREET NAME	APPROVAL NUMBER

41) AT THE TIME OF PERMIT RELEASE, THE FOLLOWING MINIMUM SUBMITTAL REQUIREMENTS WHERE APPLICABLE SHALL APPLY:

- WASHINGTON SUBURBAN SANITARY COMMISSION PAVING CLEARANCE CERTIFICATION;
- BITUMINOUS CONCRETE CORE CERTIFICATIONS, ALL PAVEMENT COURSES;
- PROPERTY MARKER CERTIFICATION;
- DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION LETTER APPROVING STORM DRAIN AS-BUILT;
- TREE APPROVAL AND TREE BOND POSTED, IF NECESSARY;
- STREET LIGHT PROOF OF PAYMENT (MUST BE ACCOMPANIED BY A MEMORANDUM FROM DPW&T'S TRAFFIC SAFETY DIVISION ACCEPTING THE PROOF OF PAYMENT); AND
- PROOF/STATEMENT THAT ALL FINANCIAL MATTERS HAVE BEEN SETTLED.

42) THE PERMITTEE IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TRAFFIC SIGNS, TRAFFIC SIGNALS, AND ROADWAY MARKINGS FOR ROADWAY IMPROVEMENTS ON SUBDIVISION ACCESS ROADS WHICH INCLUDE ARTERIAL, COLLECTOR, INDUSTRIAL, AND ANY NECESSARY OFFSITE CONDITIONS WHICH REQUIRE ROADWAY IMPROVEMENTS. THE DESIGN AND/OR CONSTRUCTION DRAWINGS SHALL BE INCLUDED ALONG WITH THE PERMIT PLANS, AND SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT'S TRAFFIC SAFETY DIVISION PRIOR TO PERMIT ISSUANCE.

43) THE PERMITTEE IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TRAFFIC MARKINGS, TRAFFIC SIGNALS, IF REQUIRED, AND PAYMENT OF FEE FOR STREET NAME SIGNS ON INTERNAL SUBDIVISION STREETS. TRAFFIC SIGNS WILL BE FURNISHED AND INSTALLED BY THE COUNTY.

44) ALL CONCRETE PIPE SYSTEMS 48 INCHES OR LESS SHALL BE INSPECTED WITH A VIDEO CAMERA AS PART OF THE FINAL "AS BUILT" CONSTRUCTION REQUIREMENTS.

GENERAL STORM DRAIN NOTES

1) ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STORMWATER STANDARDS AND SPECIFICATIONS OF PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES, UNLESS OTHERWISE NOTED.

2) FOR TYPES OF STRUCTURES REFER TO THE LATEST STORMWATER MANAGEMENT STANDARD DETAILS, DER (SWMSD), UNLESS OTHERWISE NOTED.

3) INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILIABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE UTILITIES BY DIGGING TEST PITS AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED, CONTACT THE ENGINEER, AND THE OWNER OF OTHER INVOLVED UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

4) ALL STORM DRAIN PIPES MUST HAVE A MINIMUM OF 1 FOOT COVER.

5) ALL INLET TOP SLAB FRONT FACES SHALL BE PAINTED WITH THE FOLLOWING CHESAPEAKE BAY DRAINAGE, "DON'T DUMP" (STANDARD 82.0).

6) CONTRACTORS SHALL ADJUST ALL EXISTING UTILITIES AS NEEDED TO CONSTRUCT PROPOSED ROAD IMPROVEMENTS. ADJUSTMENTS MAY INCLUDE BUT NOT LIMITED TO MANHOLE COVERS, VALVES, FIRE HYDRANTS, STORM DRAIN INLETS, STREET LIGHTS, TRAFFIC SIGNALS STRUCTURES, UTILITY POLES, SIDEWALKS, BURIED UTILITY CONDUIT AND PIPES.

MARLBORO CLAY GEOTECHNICAL INVESTIGATION

Marlboro Clays are extremely expansive clays of marine deposition. They are basal member of the Nanjemoy geologic formation. In appearance, they generally range from pale red to brown and most often outcrop on slopes.

Criteria for soil investigations and reports on the presence and effect of Marlboro clay upon proposed developments.

Field Investigation

Test borings

- To be adequate in number and location to address all stability concerns.
- To be of adequate depth – equal to the height of existing slopes or penetrating into the Aquia formation at least 10-15 feet.
- To be performed in accordance with ASTM D 1586-67 "Penetration Test and Split Barrel Sampling of Soils".
- Subsurface soil samples to be classified using both the USDA and USCS soils classification system.
- Specify presence of all slicken sided joints.
- Soil samples also to be classified by geologic formation.
- Presence of groundwater to be noted (at time of borings' completion and after 24 hours).
- Slope profiles to be provided which show the location of geologic strata, soil boring location, and existing & proposed slope gradients.

Laboratory Analysis

All tests to be performed in accordance with applicable ASTM criteria.

- A minimum of three 3-point direct shear tests to be performed on representative samples from Marlboro formation to establish residual shear strength parameters.
- Natural moisture %
- Liquid limit
- Plastic limit
- Plastic Index
- Residual Shear Angle (degrees)
- Residual cohesion – psf

Slope Stability Analysis of all Critical Slopes

- Note internal angles of friction used on geologic formation, which are to be estimated using Standard Penetration Test results.
- For the Marlboro deposits, the lowest laboratory residual shear strength parameters are to be used in the analysis.
- Analyze natural gradients to determine factor of safety.
- A required factor of safety of 1.5 must be met or recommendation presented to provide the necessary factor of safety.

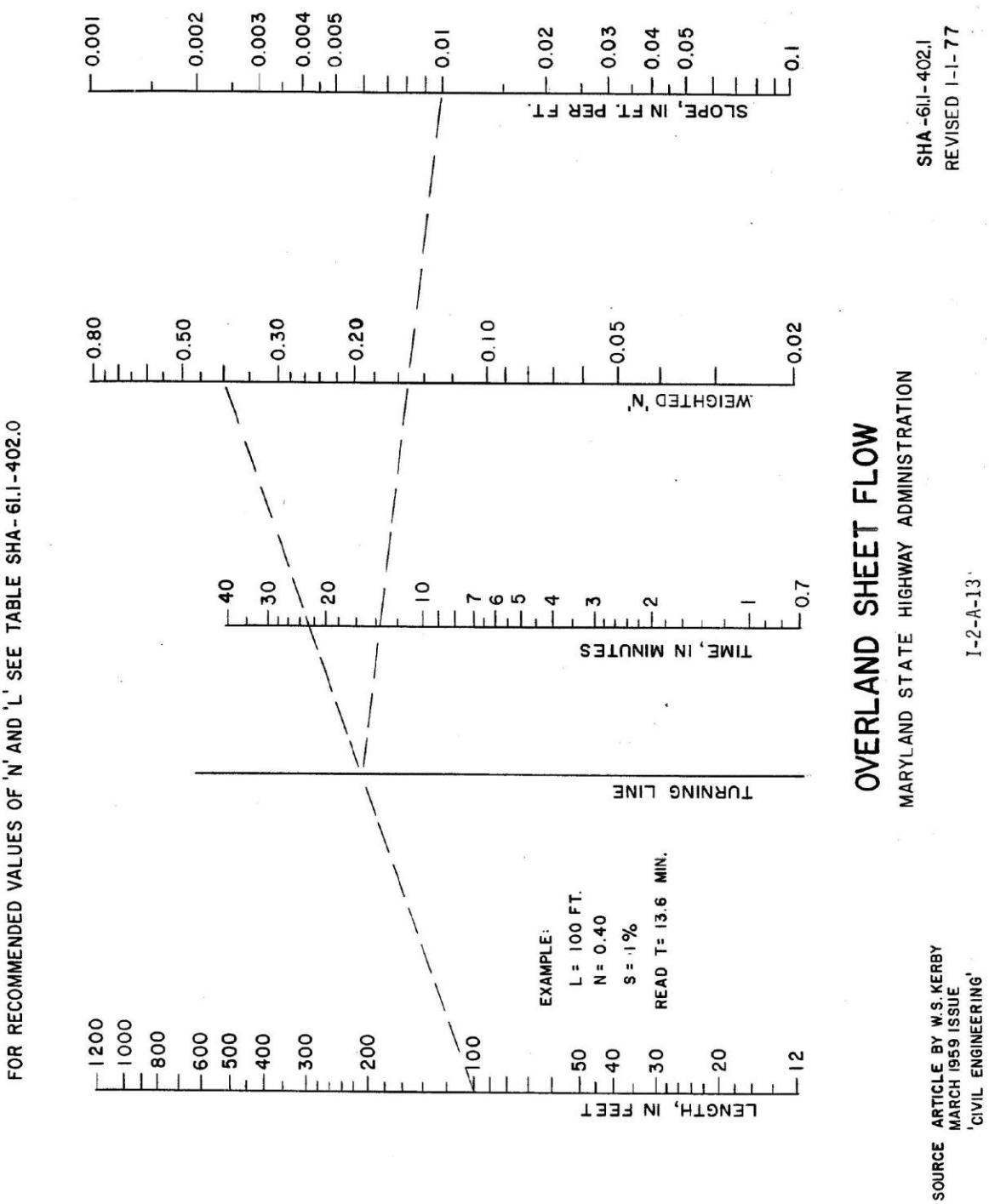
Conclusions and Recommendations

- Address long-term stability
- Include necessary precaution
- Identify areas where structures should not be located, based on potential shear planes, and the 1.5 factor of safety (FOS) line.
- Show the 1.5 FOS line and the Marlboro Clay limits on the site plans.

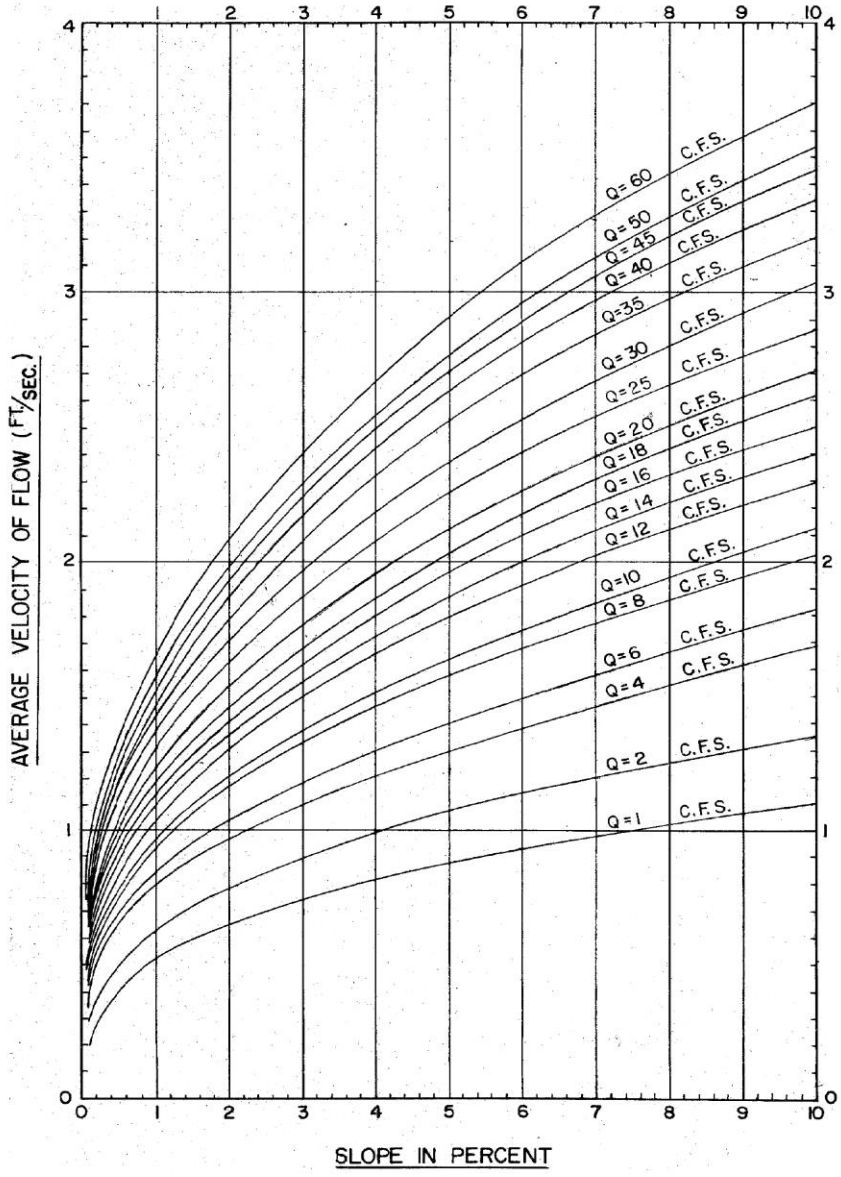
Disclaimer

These are general guidelines to aid in the geotechnical investigation of potential development sites in the vicinity of suspected Marlboro Clay outcrops. They do not necessarily address all factors which should be evaluated during such investigations. Nor do these relieve the geotechnical engineer of the responsibility for determining and conducting other appropriate tests as may be necessary for a specific site or proposed use.

OVERLAND SHEET FLOW (MSHA-61.1-402.1)



GRASS SWALE FLOW VELOCITY (MSHA-61.1-402.3)

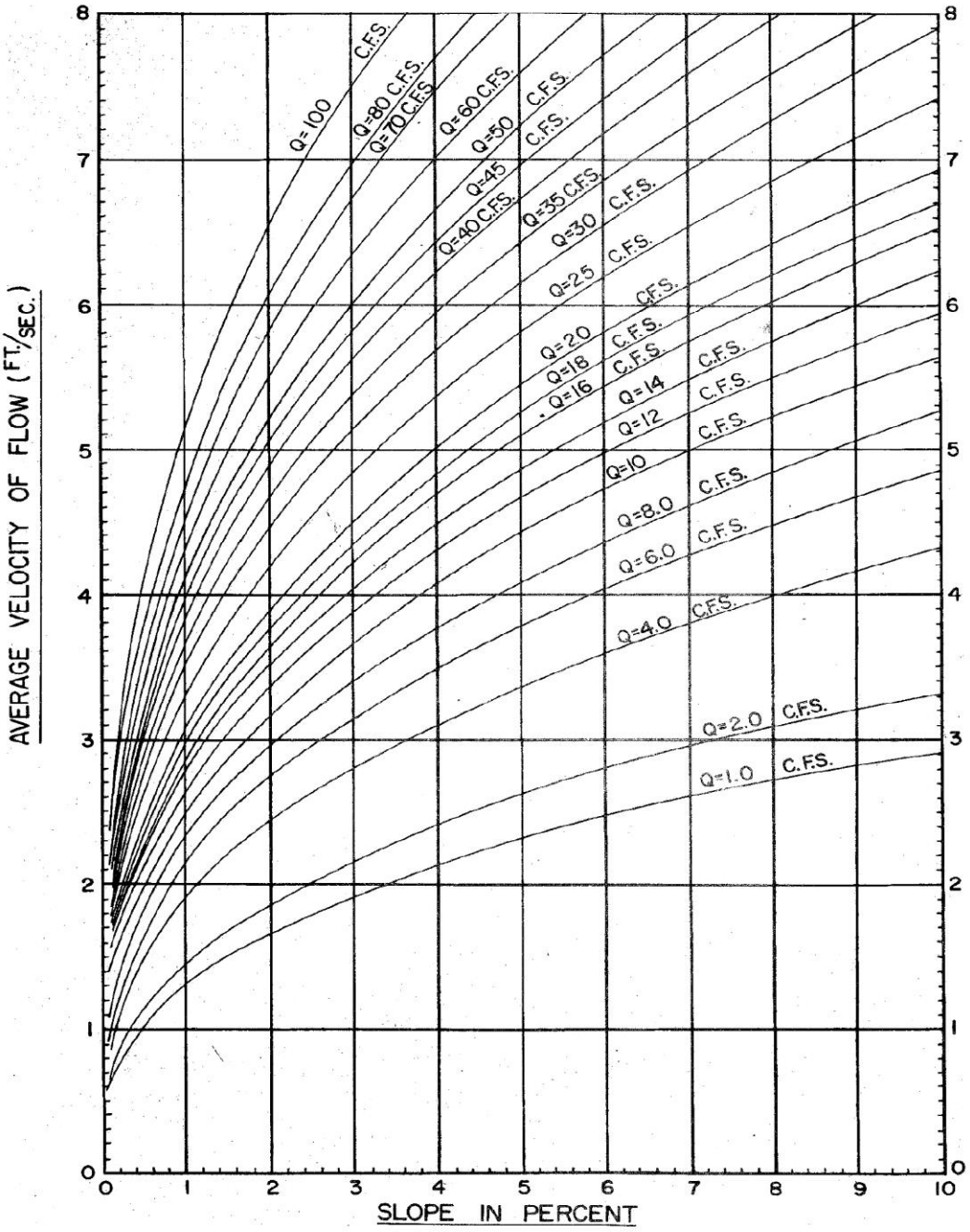


GRASS SWALE FLOW VELOCITY

(N=0.06)

MARYLAND STATE HIGHWAY ADMINISTRATION I-2-A-17 8/5/80 SHA-61.1-402.3

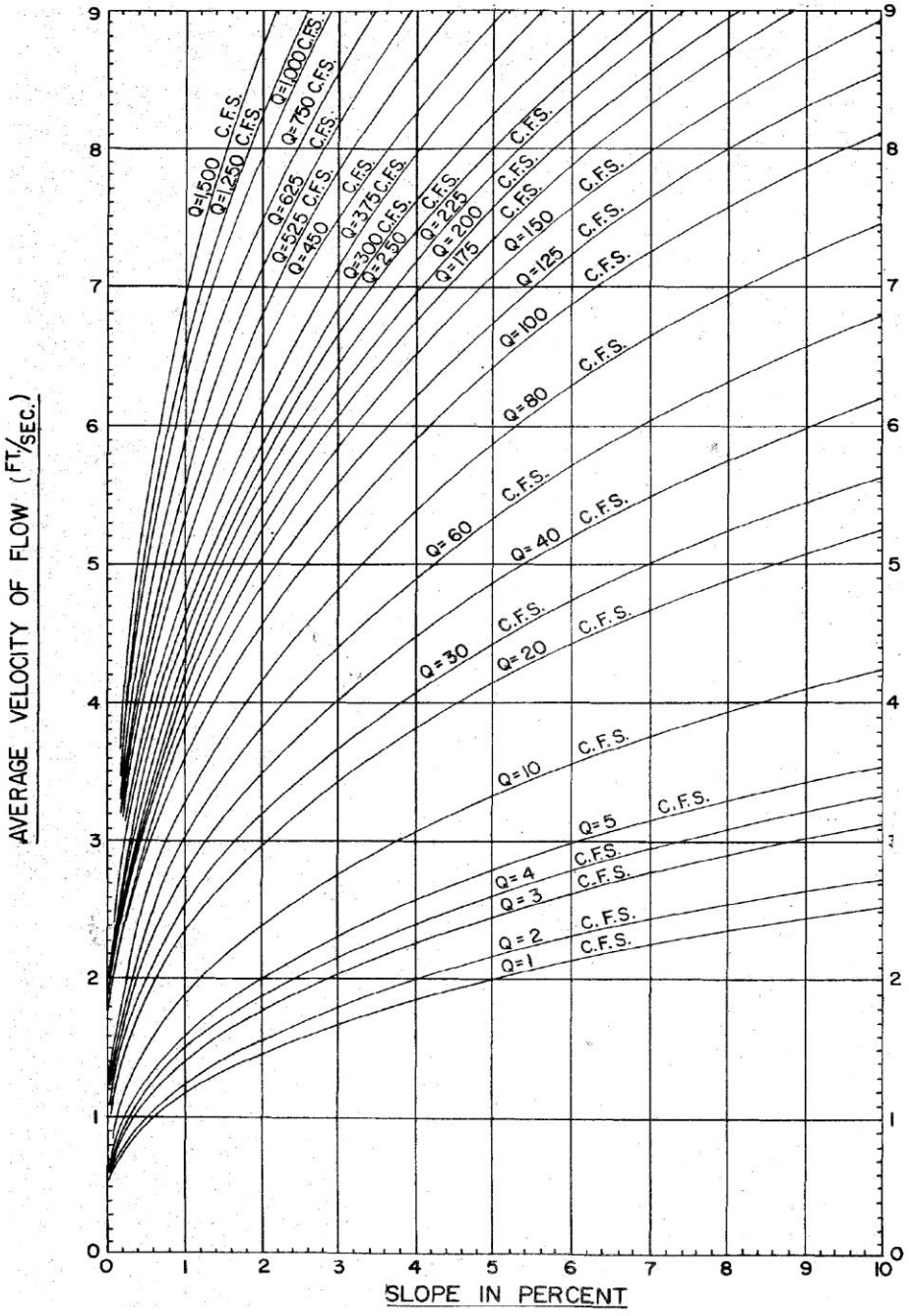
CONCRETE SWALE FLOW VELOCITY (MSHA-61.1-402.4)



CONCRETE SWALE FLOW VELOCITY
(N=0.015)

MARYLAND STATE HIGHWAY ADMINISTRATION I-2-A-19 8/5/80 SHA.-61.1-402.4

GRASS DITCH FLOW VELOCITY (MSHA-61.1-402.5)

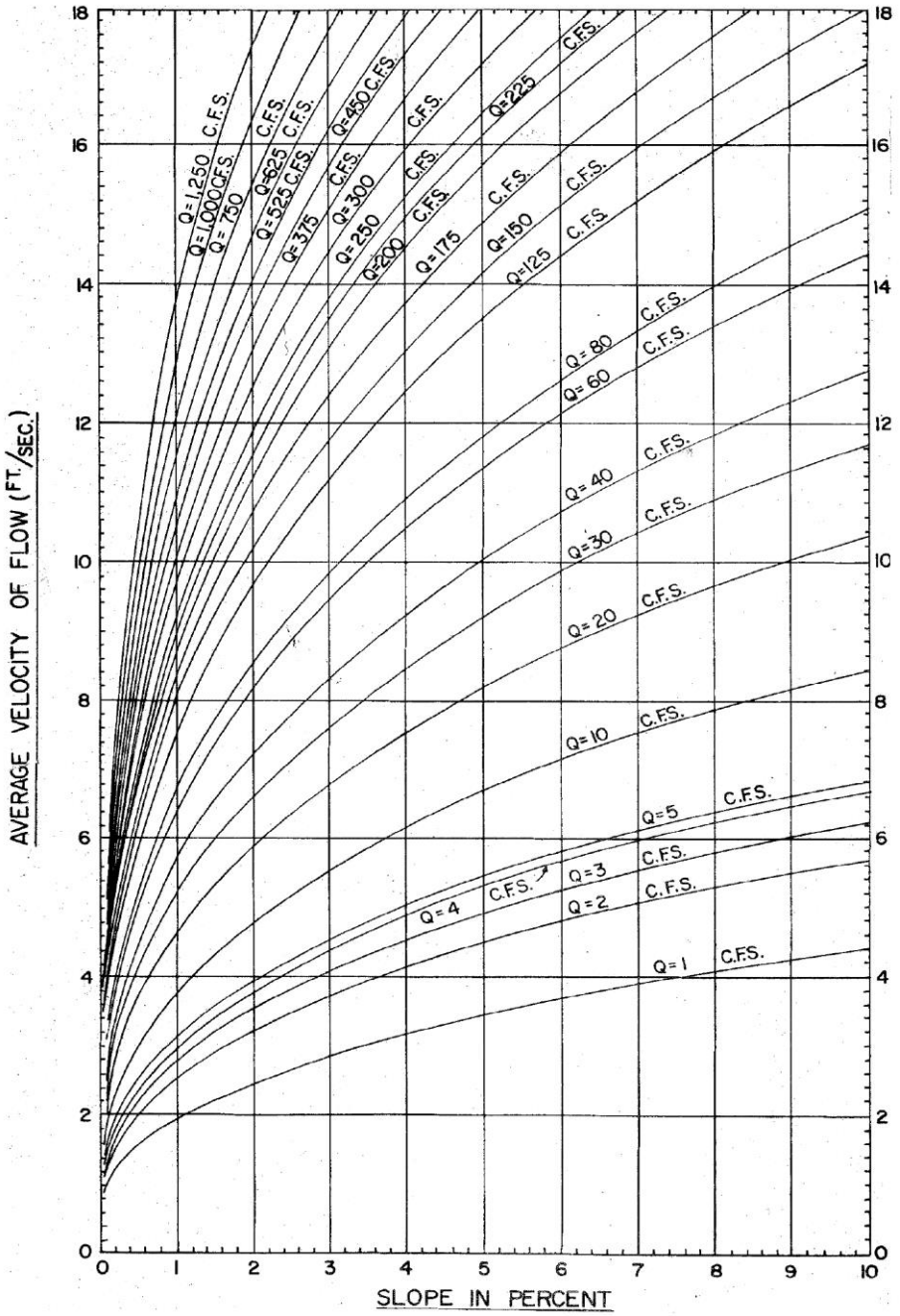


GRASS DITCH FLOW VELOCITY

(N=0.04)

MARYLAND STATE HIGHWAY ADMINISTRATION I-2-A-21 8/5/80 SHA-61.1-402.5

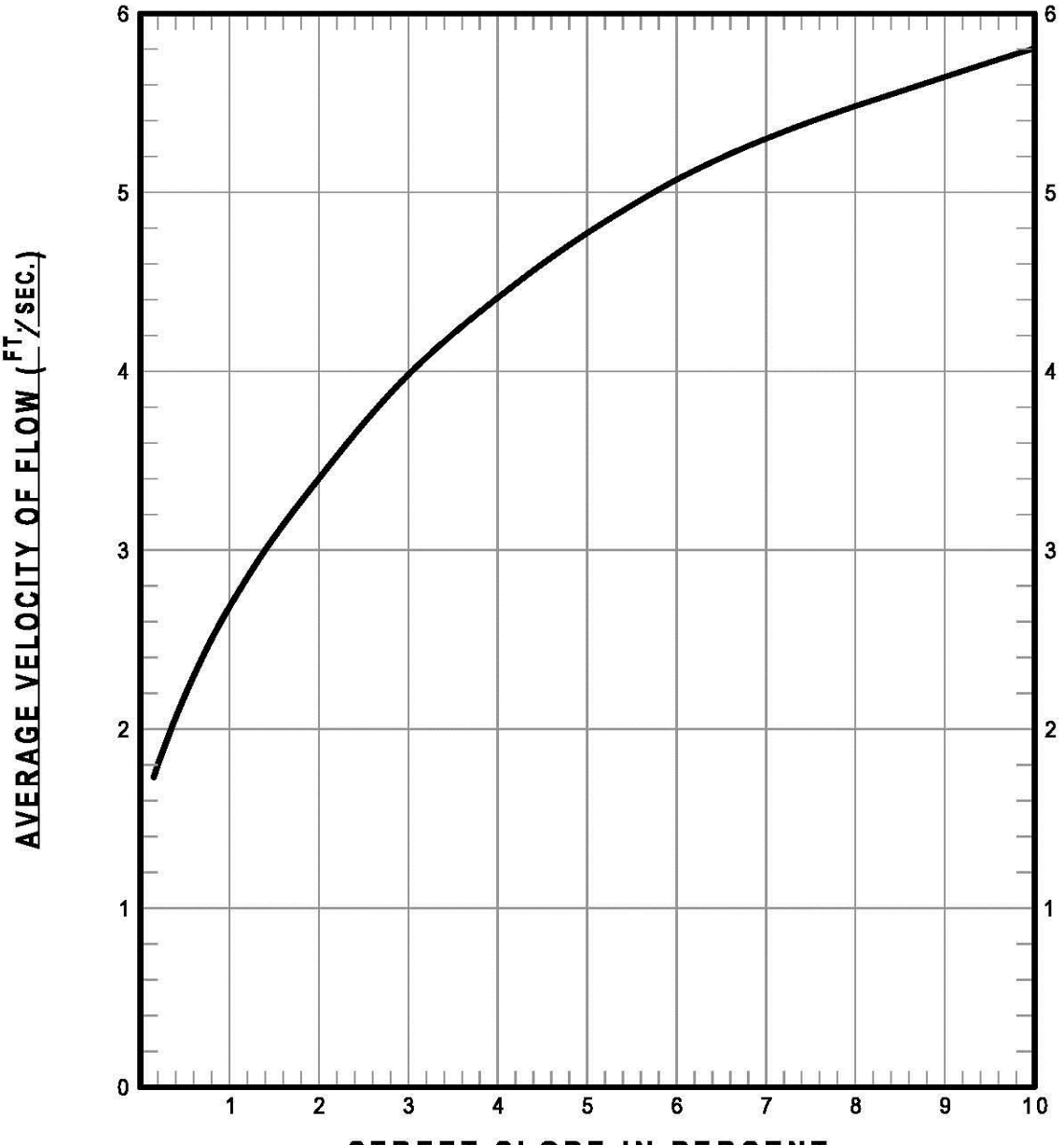
CONCRETE DITCH FLOW VELOCITY (MSHA-61.1-402.6)



CONCRETE DITCH FLOW VELOCITY
(N = 0.015)

MARYLAND STATE HIGHWAY ADMINISTRATION I-2-A-23 8/5/80 SHA-61.1-402.6

GUTTER FLOW VELOCITY (MSHA-61.1-402.7)



GUTTER FLOW VELOCITY

MODIFIED
8/5/80

MARYLAND STATE HIGHWAY ADMINISTRATION I-2-A-25 SHA-61.1-402.7

RATIONAL METHOD RAINFALL INTENSITY TABLE

	NOAA 14-2004: Intermediate Values from Interpolation						
	(Upper Marlboro 3 NNW: 18-9070)						
	PRINCE GEORGE'S COUNTY MARYLAND RAINFALL INTENSITY						
	(INCHES/HOUR)						
DURATION	RETURN PERIOD (YEARS)						
(MINUTES)	1	2	5	10	25	50	100
5.00	4.20	5.04	6.00	6.72	7.56	8.28	8.88
6.00	4.03	4.84	5.76	6.44	7.26	7.93	8.51
7.00	3.86	4.63	5.52	6.17	6.96	7.58	8.14
8.00	3.70	4.43	5.28	5.89	6.66	7.24	7.76
9.00	3.53	4.22	5.04	5.62	6.36	6.89	7.39
10.00	3.36	4.02	4.80	5.34	6.06	6.54	7.02
11.00	3.25	3.89	4.65	5.18	5.86	6.34	6.80
12.00	3.14	3.76	4.50	5.01	5.67	6.13	6.58
13.00	3.02	3.62	4.34	4.85	5.47	5.93	6.36
14.00	2.91	3.49	4.19	4.68	5.28	5.72	6.14
15.00	2.80	3.36	4.04	4.52	5.08	5.52	5.92
16.00	2.74	3.29	3.96	4.44	4.99	5.43	5.83
17.00	2.68	3.22	3.89	4.35	4.91	5.34	5.74
18.00	2.62	3.16	3.81	4.27	4.82	5.25	5.64
19.00	2.57	3.09	3.73	4.19	4.73	5.16	5.55
20.00	2.51	3.02	3.65	4.11	4.65	5.07	5.46
21.00	2.45	2.95	3.58	4.02	4.56	4.98	5.37
22.00	2.39	2.88	3.50	3.94	4.47	4.89	5.28
23.00	2.33	2.82	3.42	3.86	4.39	4.79	5.18
24.00	2.27	2.75	3.34	3.78	4.30	4.70	5.09
25.00	2.21	2.68	3.27	3.69	4.21	4.61	5.00
26.00	2.15	2.61	3.19	3.61	4.13	4.52	4.91
27.00	2.10	2.54	3.11	3.53	4.04	4.43	4.82
28.00	2.04	2.48	3.03	3.45	3.95	4.34	4.72
29.00	1.98	2.41	2.96	3.36	3.87	4.25	4.63
30.00	1.92	2.34	2.88	3.28	3.78	4.16	4.54
31.00	1.90	2.31	2.85	3.24	3.74	4.12	4.49
32.00	1.87	2.28	2.81	3.20	3.70	4.07	4.45
33.00	1.85	2.25	2.78	3.17	3.65	4.03	4.40
34.00	1.82	2.22	2.74	3.13	3.61	3.98	4.35
35.00	1.80	2.19	2.71	3.09	3.57	3.94	4.31
36.00	1.78	2.16	2.67	3.05	3.53	3.89	4.26
37.00	1.75	2.13	2.64	3.01	3.48	3.85	4.21
38.00	1.73	2.11	2.60	2.97	3.44	3.80	4.16
39.00	1.70	2.08	2.57	2.94	3.40	3.76	4.12
40.00	1.68	2.05	2.53	2.90	3.36	3.71	4.07
41.00	1.66	2.02	2.50	2.86	3.31	3.67	4.02
42.00	1.63	1.99	2.46	2.82	3.27	3.62	3.98
43.00	1.61	1.96	2.43	2.78	3.23	3.58	3.93
44.00	1.58	1.93	2.39	2.74	3.19	3.53	3.88
45.00	1.56	1.90	2.36	2.71	3.15	3.49	3.84
60.00	1.20	1.46	1.84	2.13	2.51	2.82	3.13

PIPE MATERIAL SPECIFICATION TABLE

Type	Specification		Limitations
	AASHTO	**ASTM**	
Reinforced Concrete Pipe (RCP)	M170	C76	Reinforced Concrete Pipe (RCP)
Preformed, Rubber Joint for Circular Reinforced Concrete Pipe	M198 Type A	C443	Preformed, Rubber Joint for Circular Reinforced Concrete Pipe
Reinforced Concrete Pipe		C361	Reinforced Concrete Pipe
Polyvinyl Chloride (PVC) (solid), Plastic Pipe and Drain Pipe	M278	D1785 or D3034	Polyvinyl Chloride (PVC) (solid), Plastic Pipe and Drain Pipe
Polyvinyl Chloride (PVC) (perforated), Plastic Pipe and Drain Pipe	M278	F758 Type PS 28	Polyvinyl Chloride (PVC) (perforated), Plastic Pipe and Drain Pipe
Polyethylene (HDPE) Plastic, Drain Pipe	M252 or M294	D2321	Polyethylene (HDPE) Plastic, Drain Pipe
Reinforced Concrete Arch, Culvert	M206	C506	Reinforced Concrete Arch, Culvert
Reinforced Concrete Elliptical Pipe	M207	C507	Reinforced Concrete Elliptical Pipe
Corrugated Steel Pipe, Pipe Arches	M36	A760	Corrugated Steel Pipe, Pipe Arches
Corrugated Aluminized, Steel Pipe	M36	A760	Corrugated Aluminized, Steel Pipe
Aluminum Steel, Spiral Rib Pipe	M36	A760	Aluminum Steel, Spiral Rib Pipe
Aluminum Steel, Spiral Rib Pipe	M196	B745	Aluminum Steel, Spiral Rib Pipe
Corrugate, Aluminum Alloy Pipe	M196	B745	Corrugate, Aluminum Alloy Pipe
Aluminum, Structural, Plate Pipe, Pipe Arches, and Arches	M219	B746	Aluminum, Structural, Plate Pipe, Pipe Arches, and Arches

This table was modified from Table I-10 from the Departmnet of Public Works and transportation "Specification and Standards for Roadways and Bridges"

SAMPLE PIPE COMPUTATION FORM

Sample Pipe Computation Form
Issue Date: July 26, 2014

MCDOT JULY, 1983 .

PIPE COMPUTATIONS

PIPE		AREA		R=C	AR	ΣAR	TC	I	Q	PIPE SIZE	MIN SLOPE	V	PIPE LENGTH	TIME IN PIPE	REMARKS
FROM	TO	INCR. AREA	TOTAL AREA				(min)	(in/hr)	(cfs)	(inches)	(%)	(fps)	(feet)	(min)	

(FIRM NAME)	PIPE COMPUTATIONS	COMPUTED	DATE
		CHECKED	
	(PROJECT NAME)	SHEET NO.	PROJECT NO.

SAMPLE STRUCTURE SCHEDULE

STRUCTURE SCHEDULE

BONDED AND INSPECTED BY	NO.	TYPE	WIDTH DIAM.	INV. ELEV.	TOP ELEVATION		STANDARD DETAIL
					UPPER	LOWER	
DPW&T	6	Endwall For 30" RCP	-	166.40	170.23		Modified DER Standard SD/30.0 *1
DPW&T	7	SHA Drop MH	5'	166.67	187.30		MD SHA Standard MD-383.11 *2
DPW&T	8	Type 'A' MH	5'	180.14	188.10		DER Standard SD/20.0 or 21.2
DER	9	Concrete Riser	5' x 5'	192.75	192.75		See Detail Sheet 4 *3
DER	10	Endwall For 30" RCP	-	185.40	-		DER Standard SD/30.0
D.P.W.&T. (Public)	11	Type 'B' MH	5'	186.06	194.00		DER Standard SD/22.0 *3
D.P.W.&T. (Public)	12	Type 'B' MH	5'	192.08	197.50		DER Standard SD/22.0 *3
D.P.W.&T. (Public)	13	'A-10' Inlet modified	5'	186.50	199.90		DER Standard SD/10.1 see sht. 3
D.P.W.&T. (Public)	14	Type 'B' MH	5'	195.70	203.50		DER Standard SD/22.0 *3
D.P.W.&T. (Public)	15	'A-10' Inlet	2'-6"	200.50	210.50		DER Standard SD/10.0 or 10.1
D.P.W.&T. (Public)	16	Type 'A' MH precast	4'	201.66	212.30		DER Standard SD/21.1
D.P.W.&T. (Public)	17	Type 'A' MH precast	4'	202.32	214.10		DER Standard SD/21.1
D.P.W.&T. (Public)	18	'A-10' Inlet	2'-6"	208.87	219.70		DER Standard SD/10.0 or 10.1
D.P.W.&T. (Public)	19	Type 'B' MH	4'	217.16	222.20		DER Standard SD/22.0 *3
D.P.W.&T. (Public)	20	'D-2' Inlet, modified	2'-6"	219.21	225.83		DER Standard SD/14.0 *4
D.P.W.&T. (Public)	21	'A-10' Inlet	2'-6"	194.32	198.53	198.08	DER Standard SD/10.0 or 10.1
D.P.W.&T. (Public)	22	'D-2' Inlet, modified	2'-6"	194.77	198.33		DER Standard SD/14.0 *4
D.P.W.&T. (Public)	23	'A-10' Inlet	2'-6"	198.04	203.90		DER Standard SD/100 or 10.1
D.P.W.&T. (Public)	24	'D-2' Inlet, modified	2'-6"	203.36	207.33		DER Standard SD/14.0
D.P.W.&T. (Public)	25	Type 'B' MH	4'	187.50	195.00		DER Standard SD/22.0 *3
DER	13B	Observation Well	6" dia.	189.50	197.90		See Detail Sheet 3
DER	13C	Observation Well	6" dia.	189.50	196.00		See Detail Sheet 3
DER	26	Type 'B' MH	4'	218.75	228.00		DER Standard SD/22.0 *3

REMARKS:

*1 Remove wing of existing endwall as required to structurally tie existing and proposed endwalls together.
*2 Precast structure may be substituted. Approval of shop drawings by DPW&T is required.
*3 Precast structure maybe substituted. Approval of shop drawings by DER is required.
*4 Standard opening on all four sides.

PIPE LOADING CHART (C-76)

R.C.P. PIPE DIAMETER	CLASS (ASTM C76)	DEPTH TO INVERT GRANULAR BED
12”	III	2.7’ – 9.9’
12”	IV	V.L – 17.2’
12”	V	V.L – V.G.
15”	III	2.8’ – 11.2’
15”	IV	V.L – 21.5’
15”	V	V.L –V.G.
18”	III	3.1’ – 10.3’
18”	IV	V.L. – 19.4’
18”	V	V.L – V.G.
21”	III	3.4’ – 11.4’
21”	IV	V.L. – 18.8’
21”	V	V.L –V.G.
24”	III	3.7’ – 11.7’
24”	IV	V.L. – 18.1’
24”	V	V.L – V.G.
27”	III	3.8’ – 11.9’
27”	IV	V.L. – 18.1’
27”	V	V.L – V.G.
30”	III	3.8’ – 13.7’
30”	IV	V.L – 20.9’
30”	V	V.L – V.G.
33”	III	V.L. – 12.3’
33”	IV	V.L – 17.9’
33”	V	V.L – 30.2’
36”	III	V.L – 12.7’
36”	IV	V.L – 18.0’
36”	V	V.L -29.4’
42”	III	V.L. – 13.6’
42”	IV	V.L – 19.7’
42”	V	V.L. – 32.3
48”	III	V.L. – 14.0’
48”	IV	V.L. – 19.7’
48”	V	V.L – 30.8
54”	III	V.L. – 15.1’
54”	IV	V.L. – 21.1’
54”	V	V.L. – 33.0
60”	III	V.L. -16.1’
60”	IV	V.L. – 22.5’
60”	V	V.L – 34.5’
66”	III	V.L. – 17.0’
66”	IV	V.L – 23.6’
66”	V	V.L – V.G.
72”	III	V.L – 18.0’
72”	IV	V.L. – 24.8’
72”	V	V.L – V.G.

ABBREVIATIONS

V.L. – Very Little – 1’ Of Cover (Min.)
V.G. – Very Great – 30’ Of Cover

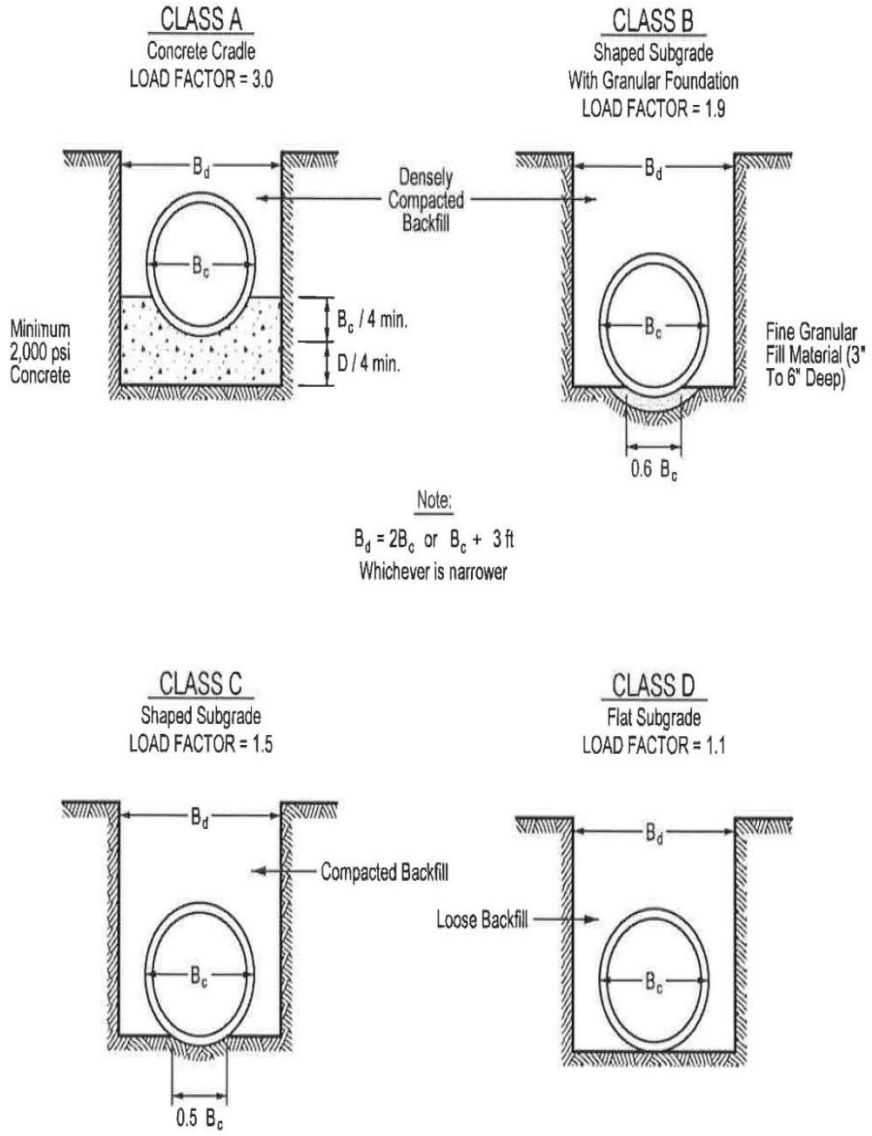
CRITERIA

Dead Load Based On Marston Formula With Saturated Clay; W-120 PCF.
H-20 L.L. & AASHTO Impact

Granular Cradle-Bedding Factor = 1.50

Safety Factor 1.0 @ 0.01” Crack

Note: Storm Drain Pipe Located Within The Public Road R/W Must Also Meet DPIE Criteria.


CLASS A
Concrete Cradle
LOAD FACTOR = 3.0
CLASS B
Shaped Subgrade
With Granular Foundation
LOAD FACTOR = 1.9
Bd
Densely
Compacted
Backfill
Bc
Bc / 4 min.
D / 4 min.
Minimum
2,000 psi
Concrete
Fine Granular
Fill Material (3"
To 6" Deep)
0.6 Bc
Note:
Bd = 2Bc or Bc + 3 ft
Whichever is narrower
CLASS C
Shaped Subgrade
LOAD FACTOR = 1.5
CLASS D
Flat Subgrade
LOAD FACTOR = 1.1
Compacted Backfill
Loose Backfill
0.5 Bc

SAMPLE PIPE SCHEDULE

BONDED AND INSPECTED BY	PIPE SCHEDULE				
	FROM	TO	SIZE	TYPE	LENGTH
DER	1	2	24"	R.C.P. CL-III	126.00'
D.P.W.&T	2	3	27"	R.C.P. CL-IV	96.00'
	3	4	30"	R.C.P. CL-IV	27.33'
	4	5	30"	R.C.P. CL-IV	66.50'
	6	7	18"	R.C.P. CL-IV	175.00'
	7	8	18"	R.C.P. CL-IV	79.00'
D.E.R.	9	10	24"	R.C.P. CL-III	15.00'
	10	11	42"	R.C.P. ASTM C-361 TYPE B-25	263.00'
D.P.W&T	12	14	15"	R.C.P. CL-III	36.00'
	14	F.C. 15	15"	R.C.P. CL-III	21.00'
	16	17	7'-0"x5'-1	TWIN CMP ARCH	107.00'
DER	111	111	21"	R.C.P. CL-III	382.00'
	112	1	24"	R.C.P. CL-III	126.00'

Pipe Schedule

Pipe Size	ASTM/AASHTO Standard	Material	Class or Gauge	Public - Design	Public - As-Built	Other - Design	Other - As-Built
Pipe Total							

1. All round concrete pipe will be installed using manufacturer provided rubber gaskets
2. All concrete pipe delivered with lifting holes will block the lifting hole with a concrete plug.

HEADLOSS COEFFICIENT MSHA 61.1 – 408.1(K_B)

ANGLE	INLET	MANHOLE	BEND STRUCTURE		ANGLE	INLET	MANHOLE	BEND STRUCTURE
0	0.5	0.15	0.01		**46**	1.11	0.76	0.18
1	0.51	0.16	0.01		**47**	1.12	0.76	0.19
2	0.52	0.18	0.02		**48**	1.13	0.77	0.19
3	0.53	0.19	0.02		**49**	1.14	0.78	0.19
4	0.54	0.2	0.03		**50**	1.15	0.78	0.19
5	0.54	0.22	0.03		**51**	1.16	0.79	0.19
6	0.55	0.22	0.03		**52**	1.17	0.8	0.19
7	0.56	0.24	0.04		**53**	1.18	0.8	0.19
8	0.57	0.26	0.05		**54**	1.19	0.81	0.2
9	0.58	0.27	0.05		**55**	1.2	0.82	0.2
10	0.59	0.28	0.06		**56**	1.21	0.82	0.2
11	0.6	0.3	0.06		**57**	1.22	0.83	0.2
12	0.61	0.31	0.07		**58**	1.23	0.84	0.2
13	0.62	0.34	0.07		**59**	1.24	0.84	0.2
14	0.62	0.34	0.07		**60**	1.25	0.85	0.2
15	0.63	0.35	0.08		**61**	1.26	0.85	0.2
16	0.64	0.36	0.08		**62**	1.27	0.86	0.2
17	0.65	0.38	0.09		**63**	1.27	0.86	0.2
18	0.66	0.39	0.09		**64**	1.28	0.87	0.2
19	0.67	0.4	0.09		**65**	1.29	0.87	0.2
20	0.68	0.42	0.1		**66**	1.3	0.88	0.21
21	0.69	0.43	0.1		**67**	1.31	0.88	0.21
22	0.7	0.44	0.11		**68**	1.32	0.89	0.21
23	0.71	0.46	0.11		**69**	1.32	0.89	0.21
24	0.73	0.47	0.11		**70**	1.33	0.9	0.21
25	0.74	0.48	0.12		**71**	1.34	0.91	0.21
26	0.76	0.5	0.12		**72**	1.35	0.91	0.21
27	0.78	0.51	0.13		**73**	1.36	0.91	0.21
28	0.8	0.52	0.13		**74**	1.37	0.92	0.22
29	0.82	0.54	0.13		**75**	1.37	0.92	0.22
30	0.83	0.55	0.14		**76**	1.38	0.93	0.22
31	0.85	0.56	0.14		**77**	1.39	0.93	0.22
32	0.87	0.58	0.14		**78**	1.4	0.94	0.22
33	0.89	0.59	0.14		**79**	1.41	0.94	0.22
34	0.9	0.6	0.14		**80**	1.42	0.95	0.23
35	0.92	0.62	0.15		**81**	1.42	0.95	0.23
36	0.94	0.63	0.15		**82**	1.43	0.96	0.23
37	0.96	0.64	0.16		**83**	1.44	0.96	0.23
38	0.98	0.66	0.16		**84**	1.45	0.97	0.24
39	0.99	0.67	0.16		**85**	1.46	0.97	0.24
40	1.01	0.68	0.17		**86**	1.47	0.98	0.24
41	1.03	0.7	0.17		**87**	1.47	0.98	0.24
42	1.05	0.71	0.17		**88**	1.49	0.99	0.25
43	1.06	0.72	0.17		**89**	1.49	0.99	0.25
44	1.08	0.74	0.18		**90**	1.5	1	0.25
45	1.1	0.75	0.18					

SAMPLE HEADLOSS CALCULATION

GENERAL EQUATIONS FOR HEADLOSS COMPUTATION

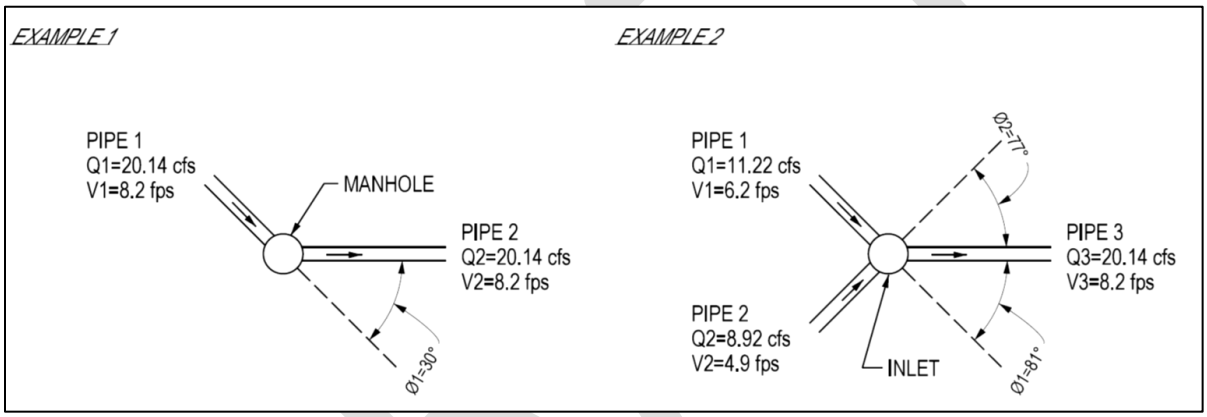
$$H_{B=} \quad \frac{K_B V_F^2}{2g}$$

Where: H_B = Head loss (in feet)

K_B = Head loss coefficient (Appendix 8-14 which is MSHA form 61.1 – 408.1)

V_F = Velocity in the outlet pipe in feet per second based on flowing full.

g = Acceleration due to gravity (in feet per second, per second).



Example 1:
$Ø_1$=30˚ and Structure type is Manhole,
so K_B=0.55 (from Appendix 8-14)
V_F=V_2=8.2 fps
Therefore, $H_B=\frac{(0.55 \times 8.2^2)}{64.4}$=0.58 ft

Example 2 (Junctions):
Structure Type is Inlet. From Appendix 8-14
Pipe 1: $V_{1/3}$=2.1 fps & $Ø_1$=81˚, So K_1=1.42
$\Rightarrow\gg H_1=\frac{(1.42 \times 2.1^2)}{64.4}$=0.10 ft

Pipe 2: $V_{2/3}$=2.5 fps & $Ø_2$=77˚, So K_2=1.39
$\Rightarrow\gg H_2=\frac{(1.39 \times 2.5^2)}{64.4}$=0.14 ft

H_2>H_1. so $Ø_2$ is the controlling angle.
so K_B= K_2=1.39 (from Appendix 8-14)
V_F=V_3=8.2 fps
Therefore, $H_B=\frac{(1.39 \times 8.2^2)}{64.4}$=1.45 ft

SAMPLE HEADLOSS FORM

SHA-6LI-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET __OF__

HYDRAULIC GRADIENT FOR STORM SEWERS

DATE _______

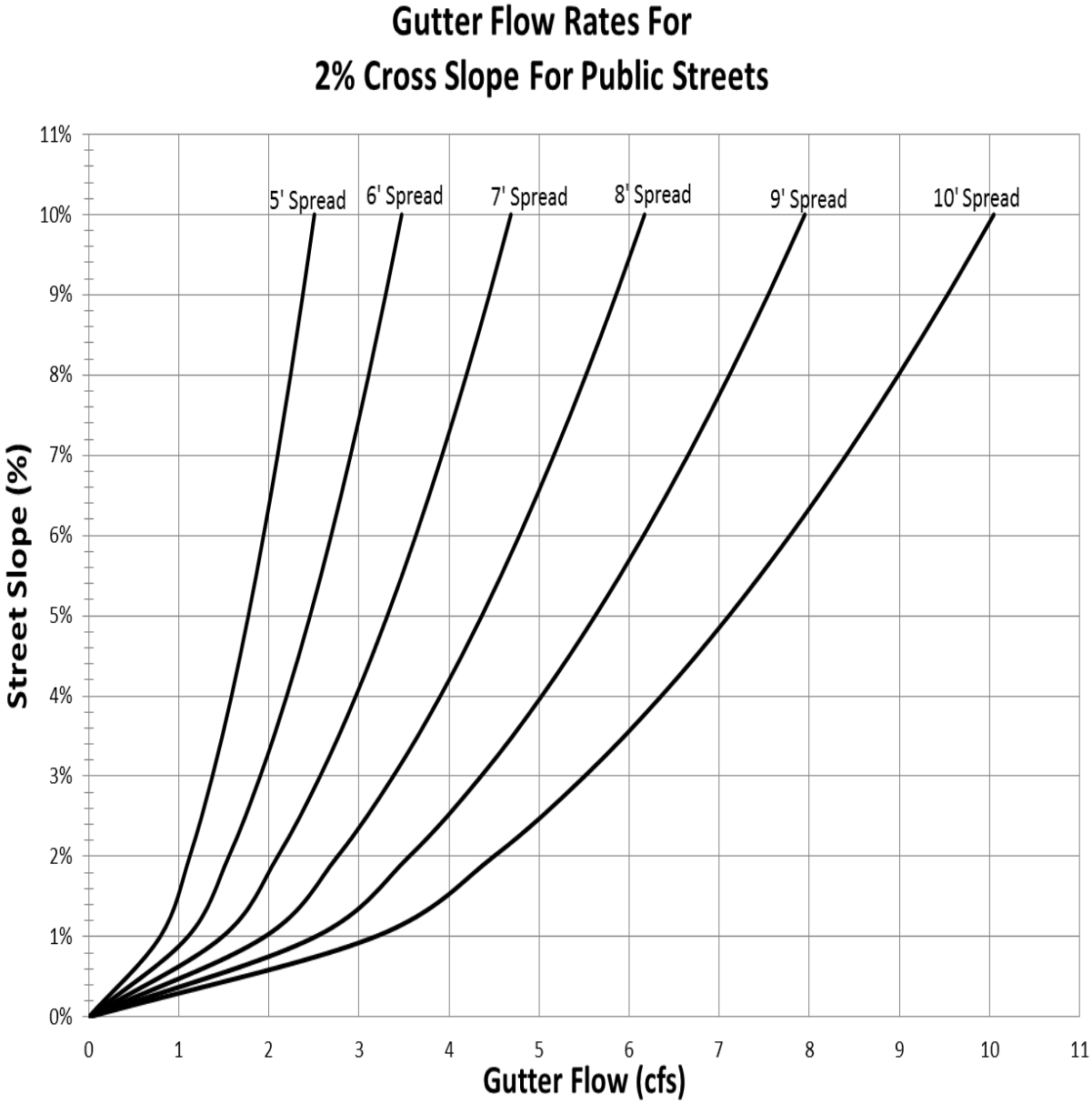
DESIGNED BY: ____________
CHECKED
RAINFALL FACTOR__________

CONTRACT ______________________________
TITLE ______________________________

*FROM FORM SHA-6LI-420

Structure		__ Year Runoff				Pipe								Hydraulic Gradient	
From	To	ΣCA *	t_c *	i Rainfall intens. in/hr.	Q cfs.	Size In. *	n * Manning's Coef	S_o Slope * %	S_f Slope %	V_f Vel ft./sec	L Length Ft. *	d_n Normal Depth ft	K_b	Desciption of Loss	Elevation

CURB AND GUTTER SPREAD GRAPH



INLET CAPACITY

1. Inlet Capacity Form
2. 5’ Curb Opening Inlet Capacity
3. 10’ Curb Opening Inlet Capacity
4. 15’ Curb Opening Inlet Capacity
5. 2’ Curb Opening Inlet Capacity

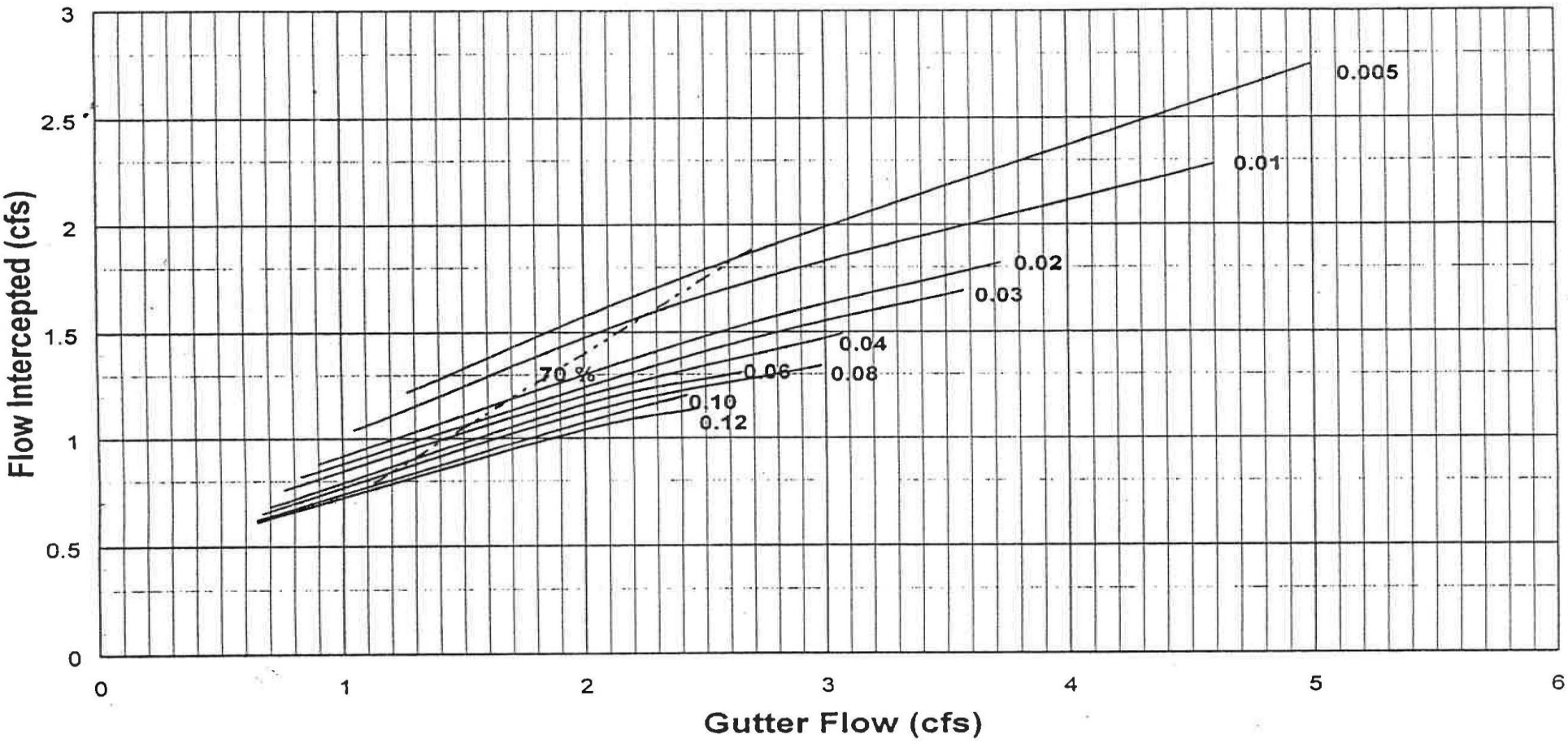
MCDOT JULT,t101

INLET NO.	INCR. AREA (ac)	TOTAL AREA (ac)	C*A	AR	ΣAR	T.C. (min)	I (in/hr)	Base Flow (cfs)	OVER FLOW (cfs)	TOTAL INFLOW (cfs)	FLOW INTER. (cfs)	FLOW BYPASS		INLET LENGTH		STREET SLOPE (%)	CROSS SLOPE (ft/ft)	CURB HEIGHT (ft)	THROAT DEPRESS. (in)	GUTTER FLOW	
												cfs	TO	COMP. (ft)	ACTUAL (ft)					DEPTH (ft)	SPREAD (ft)

(FIRM NAME)	INLET COMPUTATIONS	COMPUTED	DATE
		CHECKED	
	(PROJECT NAME)	SHEET NO.	PROJECT NO.

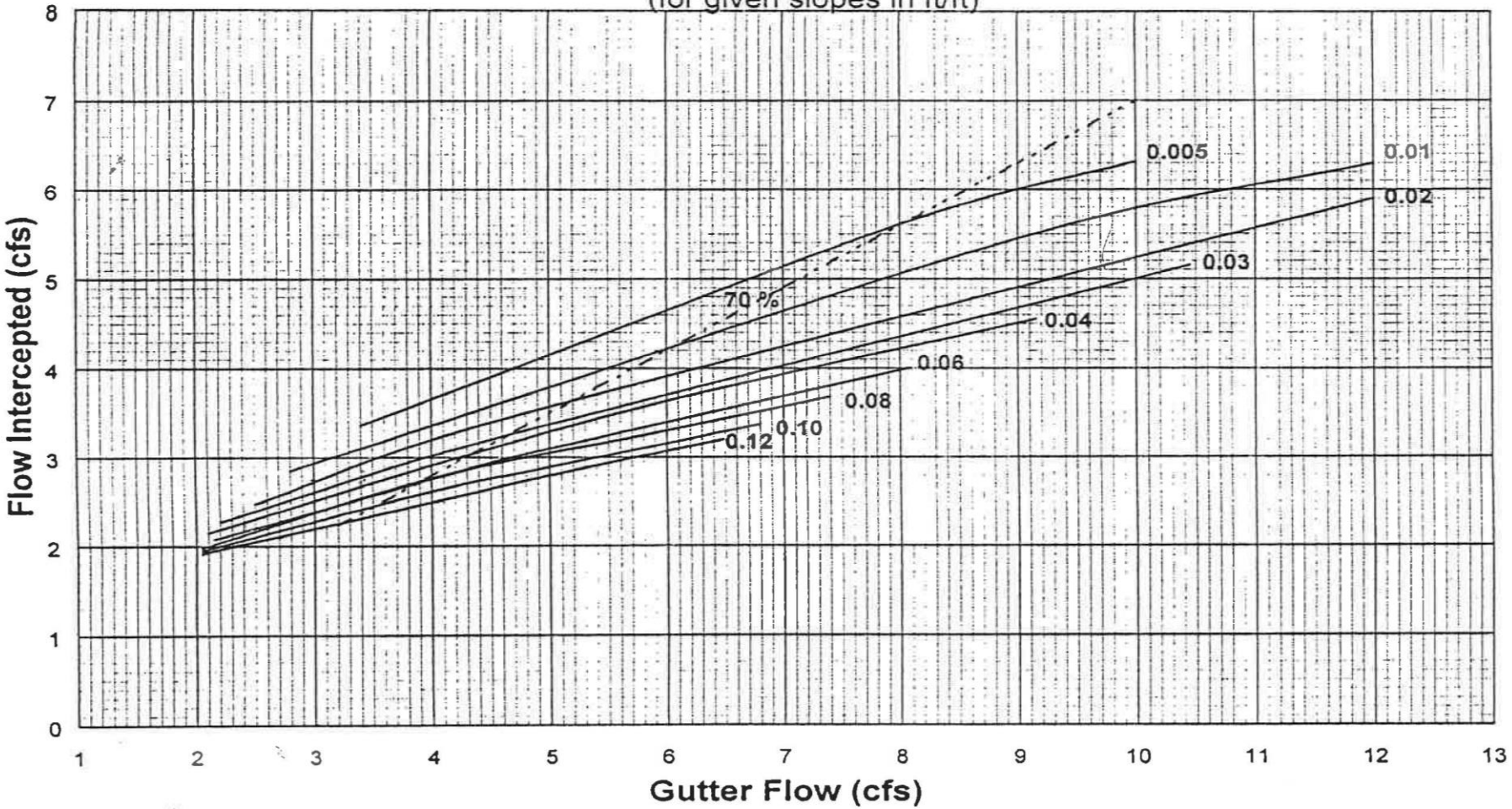
5' Curb Opening Inlet Capacity

(for given slopes in ft/ft)



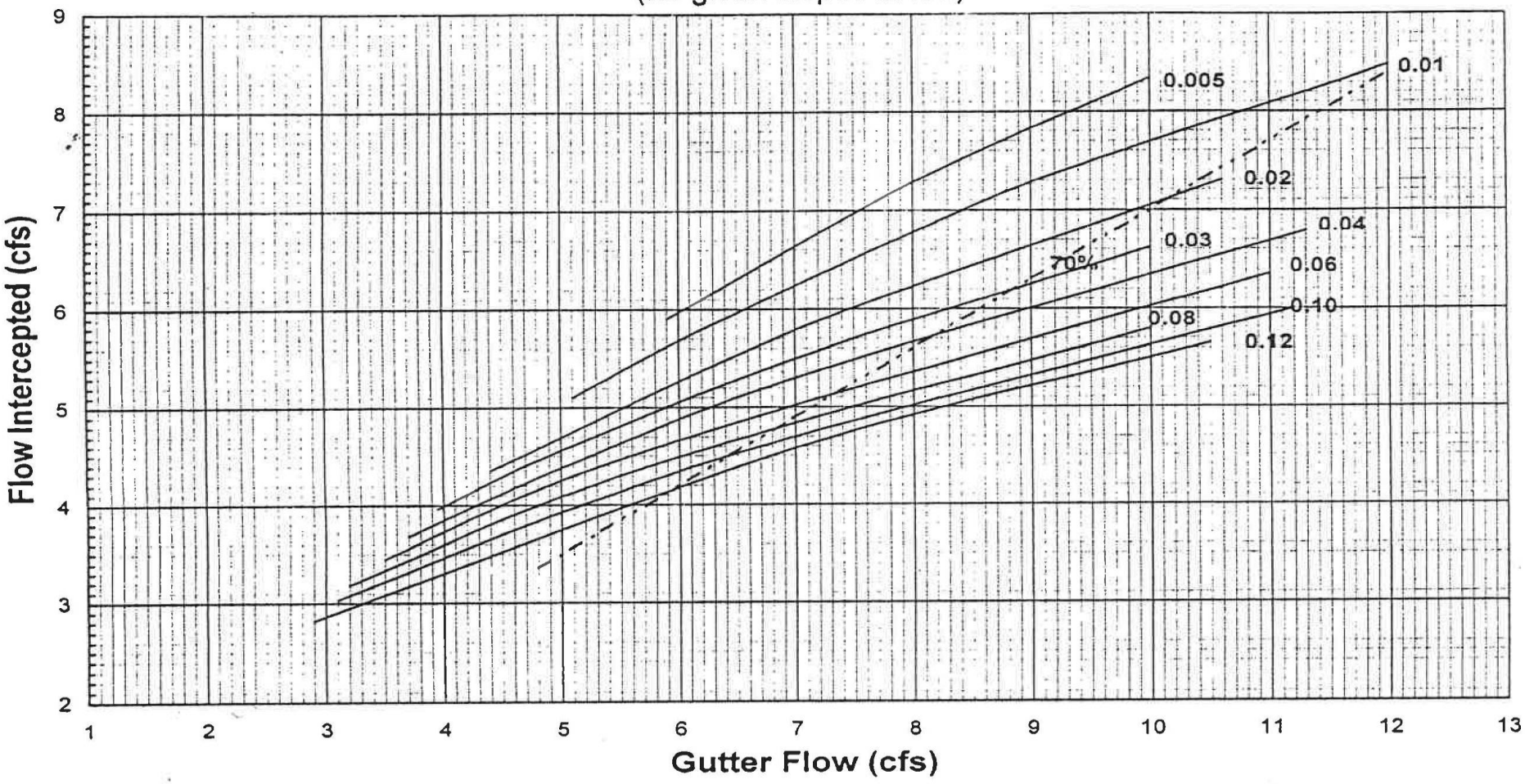
10' Curb Opening Inlet Capacity

(for given slopes in ft/ft)



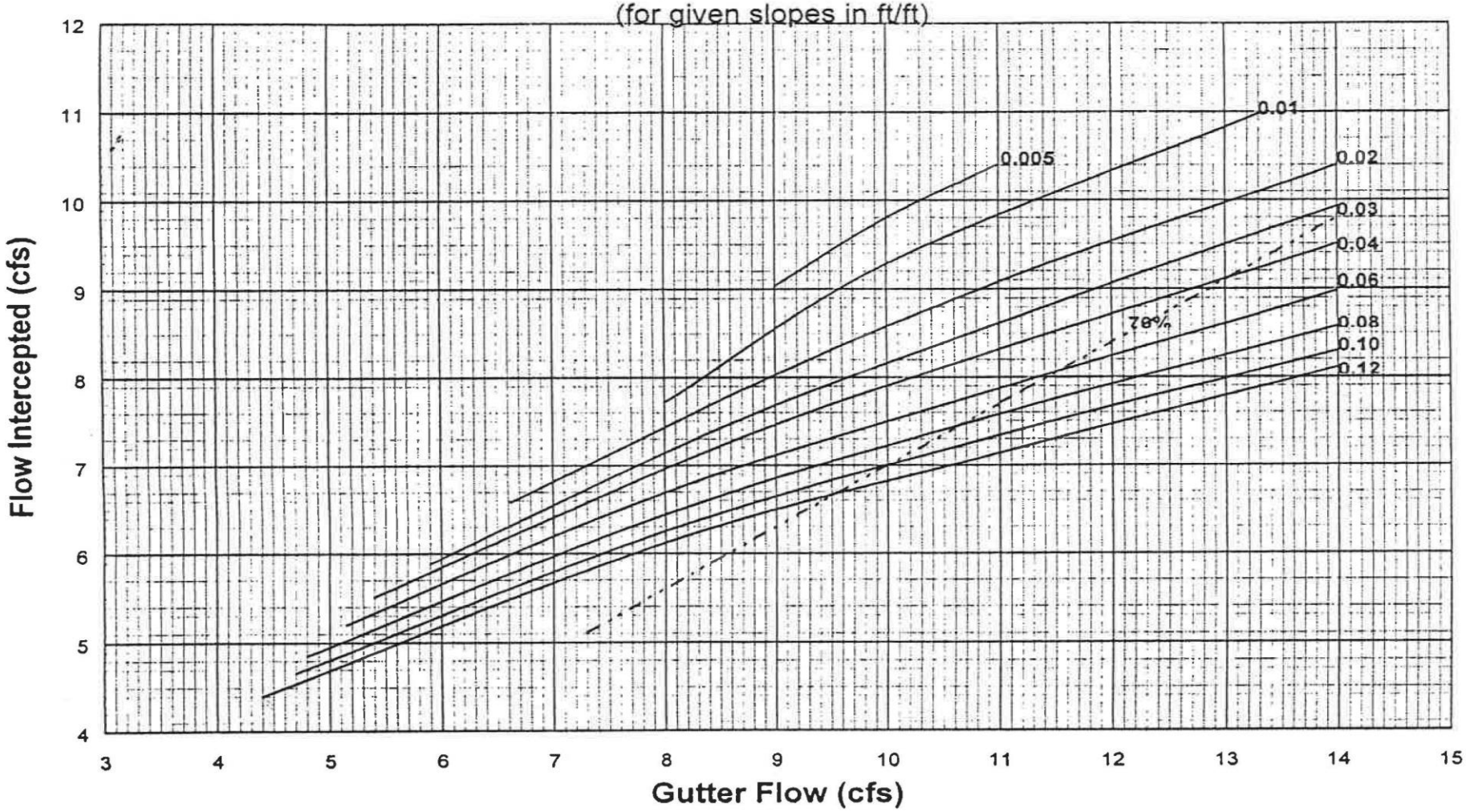
15' Curb Opening Inlet Capacity

(for given slopes in ft/ft)

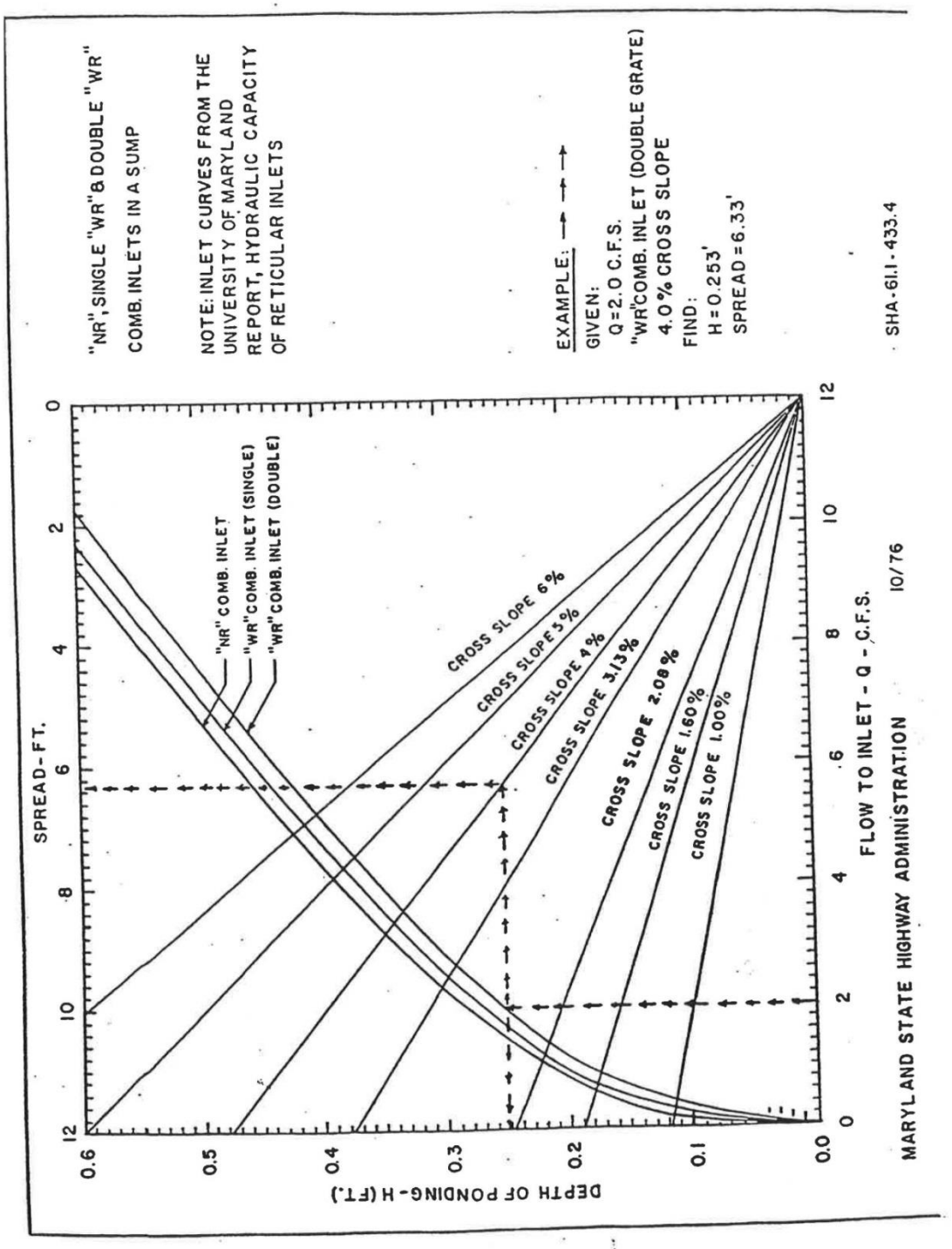


20' Curb Opening Inlet Capacity

(for given slopes in ft/ft)



MSHA INLET INTERCEPTION AND EFFICIENCY CAPACITY CURVE



STRUCTURE WIDTH SAMPLE COMPUTATION

$D = 2\left(\frac{d}{12} + 1\right) + d$

$\sin\theta = \frac{D}{x_2} \Rightarrow X_2 = \frac{D}{\sin\theta}$

$\tan\theta = \frac{T}{X_1} \Rightarrow X_1 = \frac{T}{\tan\theta =}$

$W_{min} = X_1 + X_2 = \frac{D}{sin\theta} + \frac{T}{tan\theta}$

d = inside (nominal) diameter (inches)

D = outside pipe diameter (inches)

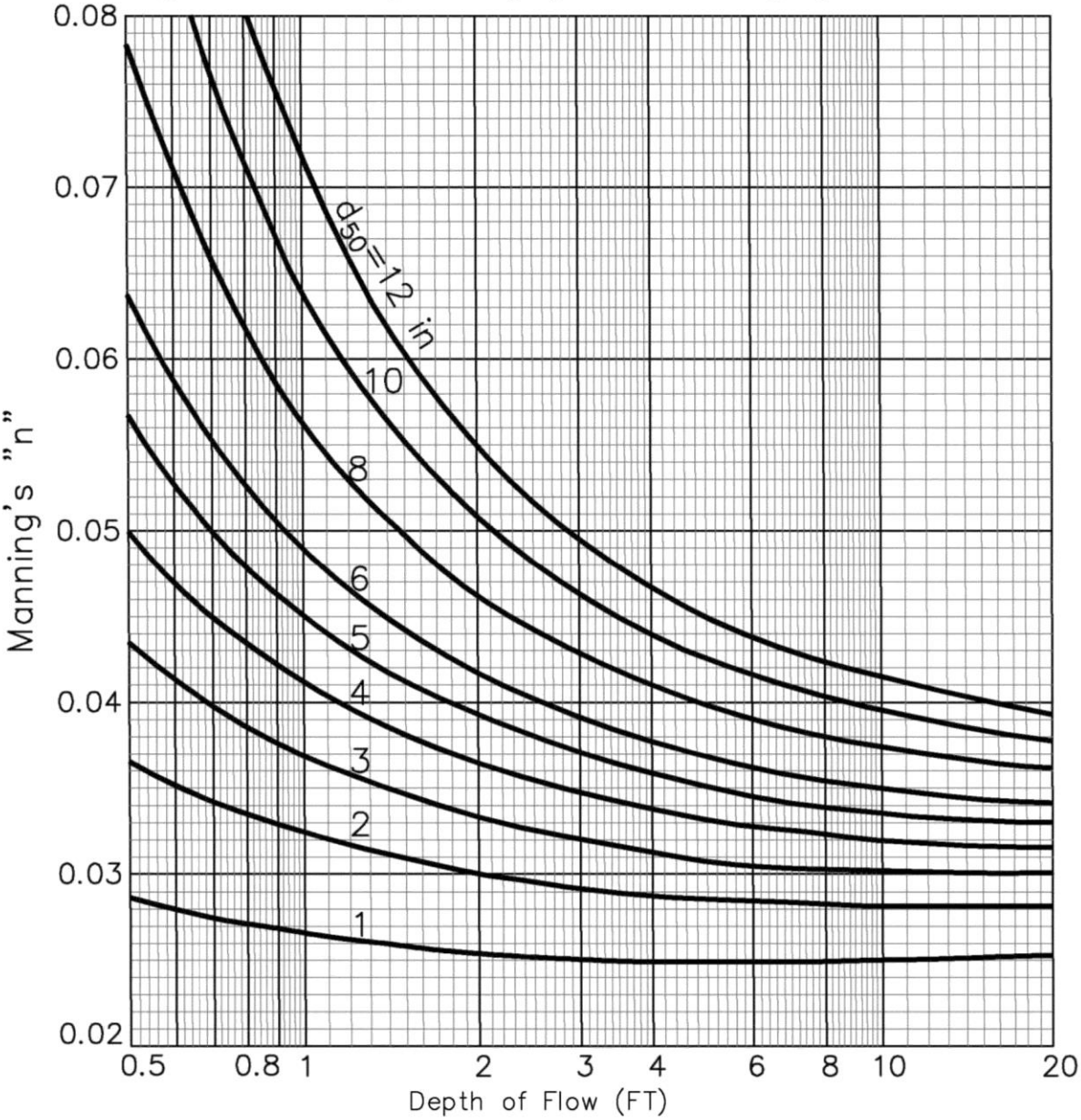
T = wall thickness (inches)

W = inside dimension of the structure (inches)

W_{min} = minimum inside dimension of the structure wall (inches

DETERMINING "n" FOR RIPRAP LINED CHANNEL USING DEPTH OF FLOW

Figure H.2: Determining "n" for Riprap Lined Channel using Depth of Flow



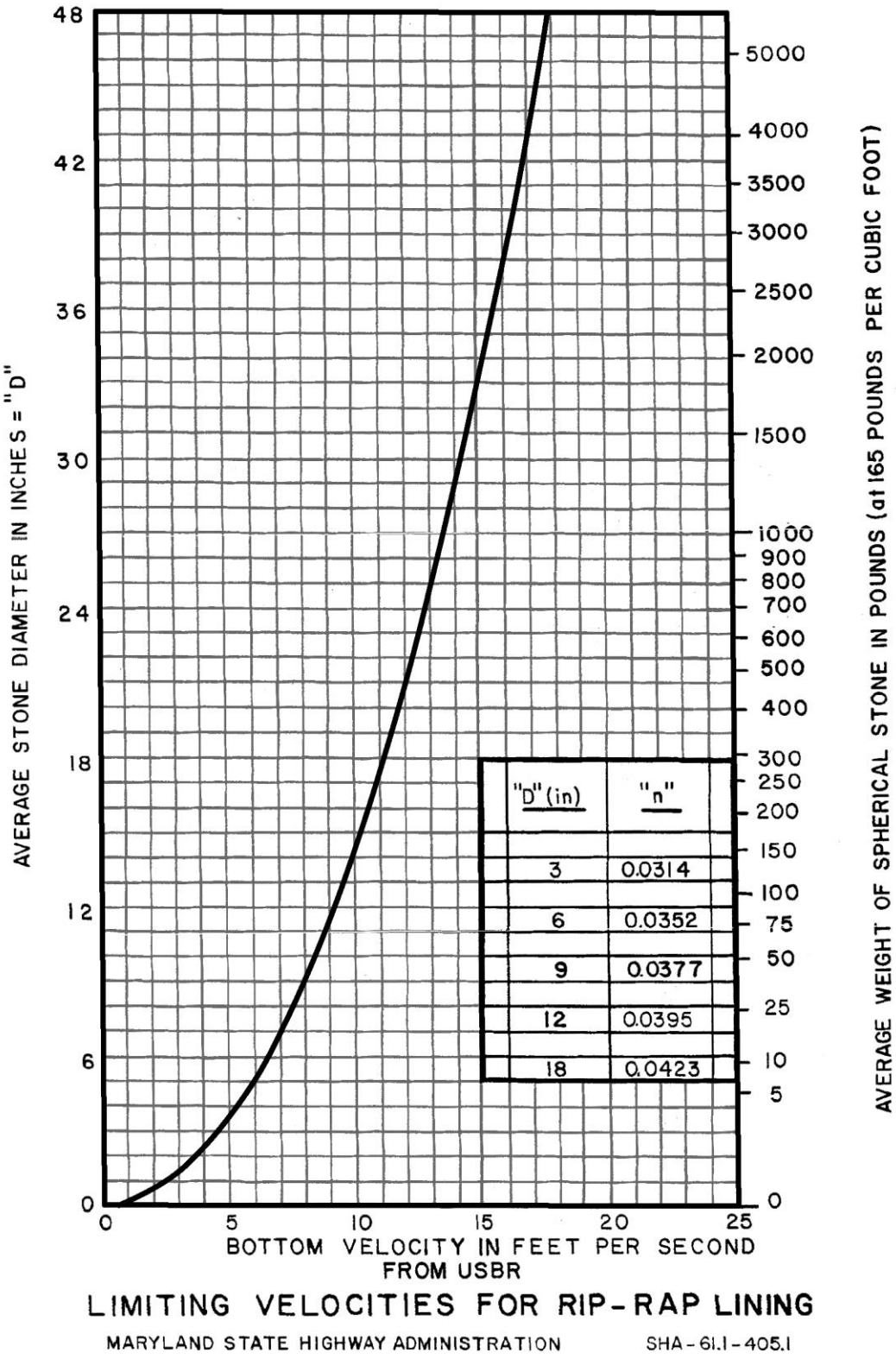
$$n = \frac{y^{1/8}}{[21.6\log_{10}(y/d_{50}) + 14.0]}$$

(y =Depth of Flow)

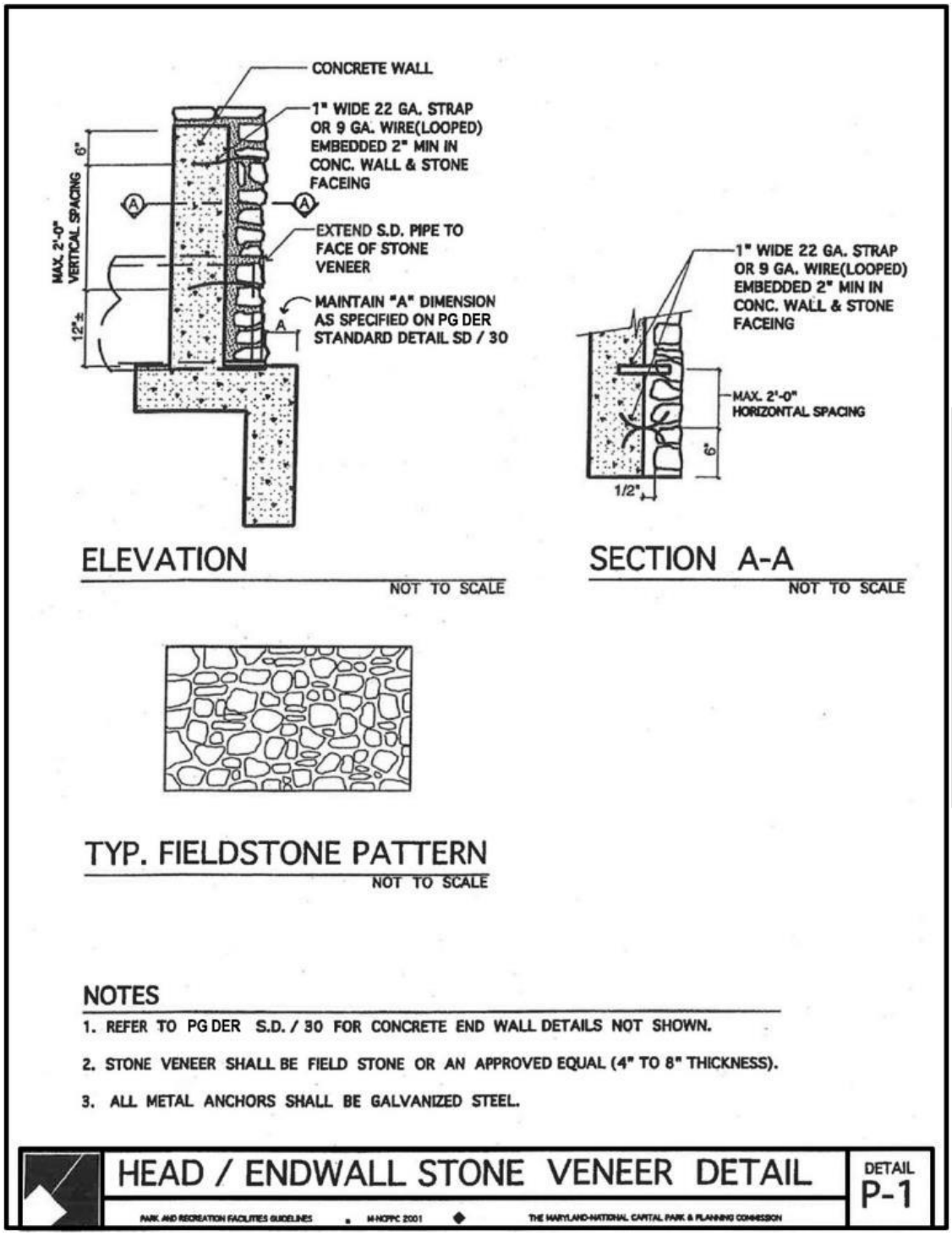
PAGE H.13

2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

LIMITING VELOCITIES FOR RIP-RAP LINING (MSHA-61.1-405.1)



M-NCPPC HEAD/ENDWALL STONE VENEER DETAIL



SWM LANDSCAPE CRITERIA

To be provided later

SWM FACILITY VEGETATION GUIDELINES

PLANTS FOR STORMWATER MANAGEMENT FACILITIES
In
PRINCE GEORGE'S COUNTY, MARYLAND

The lists on the following pages are intended as a starting point for those who are creating or enhancing wetlands for stormwater management facilities in Prince George's County. Other species may be included on the Landscape Plan plant schedule for consideration by PRD on a case-by-case basis. For stormwater management facilities in upland areas, designers should consult the Prince George's County Bioretention plant list available from DER PPD.

The attached lists give information on three variables; wildlife value, adaptation to wetland growing conditions and tolerance to periodic flooding. These are discussed below.

Wildlife values are given as high, medium or low. Information on which plant species are useful to various wildlife species is available in existing publications and will be of particular interest to those designing for wildlife management.

Wetland indicators are taken from the National List of Plant Species That Occur in Wetlands: Northeast (Region 1). USDI/Fish and Wildlife Service, 1988. While compiled as an aid to wetland identification, they may be used as a guide to the adaptability of various species to various prevailing soil moisture conditions. The categories are defined as follows:

Obligate Wetland (BL): Occur almost always (estimated 90% probability) under natural conditions in wetlands.

Facultative Wetland (FACW)): Usually occur in wetlands (estimated probability 67-99%), but occasionally found in nonwetlands.

Facultative (FAC): Equally likely to occur in wetlands or nonwetlands (estimated probability 34-67%)

Facultative Upland (FACU): Usually occur in nonwetlands (estimated probability 76-99%), but occasionally found in wetlands (estimated probability 1-33%)

Obligate Upland (UPL): Occur in wetlands in another region, but occur almost always (estimated probability > 99%) under natural conditions in nonwetlands in this region. If a species does not occur in wetlands in any region, it is not included on this list.

A plus or minus sign indicates if the species is usually found in the wetter (+) or drier (-) end of its category.

Flood tolerance refers to the ability to survive periodic flooding. While this is shown as "yes" or "no", these are not absolutes. Actual plant survival will also depend on such variables as the amount of soil loss around roots and the amount of silt deposited over the root zone during the storm event.

Woody plants, which typically grow to more than twenty feet in height, are listed as "trees". Shorter woody plants are listed as "shrubs" or "woody vines".

DECIDUOUS TREES

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Acer rubrum	Red Maple	high	FAC	yes	rapid growth
Alnus glutinousa	Black Alder		FACW	yes	rapid growth; streambanks
Alnus serrulata	Common Alder		OBL		
Amelanchier canadensis	Serviceberry	high	FAC	yes	prefers shad; understory
Asimina triloba	Common Paw-Paw		FACU+		
Betula nigra	River Birch	low	FACW	yes	streambank stabilizer
Carpinus caroliniana	American Hornbeam		FACU		
Carya cordiformis	Bitternut Hickory	high	FACU+		
Carya ovata	Shagbark Hickory	high	FACU-		
Celtis laevagata	Sugar Hackberry		FACW		
Chionanthus virginicus	Fringe Tree		FAC+	probably	
Crataegus spp.	Hawthorns	high	FACU		
Diospyros virginiana	Persimmon	mod.	FAC-	no	needs full sun
Fagus grandiflora	American Beech	high	FACU	no	prefers shad; well-drained loam
Fraxinus pennsylvanica	Green Ash	mod.	FACW	yes	stream stabilizer
Franxinus nigra	Black Ash	mod.	FACW	yes	stream stabilizer
Juglans nigra	Black Walnut	high	FACU		
Larix laricina	Larch or Tamarack	low		yes	conifer; full sun; acid, boggy soil
Liriodendron tulipifera	Tulip Tree	mod.		no	rapid growth
Liquidamber styraciflua	Sweet Gum	mod.	FAC	yes	tolerates acid or clay soils
Magnolia virginiana	Sweetbay	low	FACW+	yes	requires some shade
Metasequoia glyptostroboides	Dawn Redwood				
Morus rubra	Red Mulberry	mod.	FACU		
Nyssa sylvatica	Black Gum	high	FAC	yes	
Populus deltoides	Eastern Cottonwood		FACW		
Platanus occidentalis	Sycamore	low	FACW	yes	rapid growth
Prunus serotina	Black Cherry	high	FACU		
Prunus virginiana	Purple Chokecherry	high	FACU	no	
Quercus bicolor	Swamp White Oak	high	OBL	yes	
Quercus falcata	Southern Red Oak	high	FACU		

DECIDUOUS TREES

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Quercus michauii	Swamp Chestnut Oak	high	FACW	yes	
Quercus palustris	Pin Oak	high	FACW		
Quercus phellos	Willow Oak	high	FACW	no	
Salix alba	White Willow		FACW	yes	
Salix babylonica	Weeping Willow		FACW-	yes	
Salix nigra	Black Willow	low	FACW+	yes	streambanks
Sorbus americana	Mountain Ash		FACU		
Sorbus aucuparia	European Ash		FACU		
Taxodium distichum	Common Bald Cypress	mod.	FACW+	yes	prefers full sun

EVERGREEN TREES

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Abies balsamea	Balsam Fir	cover	FAC	no	
Chamacypars thyoides	Cedar, Atlantic White	cover	OBL	no	
Ilex opaca	Holly, American	food	FAC	infrequent	plant 1 male, 10 females
Juniperus virginiana	Eastern Redcedar	food	FACU	no	
Magnolia virginiana	Swamp Magnolia or Sweetbay	low	FACW+	yes	semi-evergreen
Pinus rigida	Pitch Pine	low	FACU	no	
Pinus taeda	Loblolly Pine	high	FAC-	some	
Thuja occidentalis	Eastern Arborvitae	cover	FACW	no	

DECIDUOUS SHRUBS

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Aronia arbutifolia	Red Chokeberry	mod.	FACW	yes	
Aronia melanocarpa	Black Chokeberry		FACU	no	thorny
Calycanthus floridus	Sweet Shrub				
Cephalanthus occidentalis	Buttonbush	high	OBL	yes	
Clethra alnifolia	Sweet Pepperbush		FAC+	yes	
Cornus amonum	Silky Dogwood	mod.	FACW	yes	shade; drought tolerant
Cornus stolinifera	Red Osier Dogwood	mod.	FACW+	yes	shade tolerant
Crataegus spp.	Hawthorns		FACU	no	

DECIDUOUS SHRUBS

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Gaylussacia spp.	Huckleberries	high	FAC		
Hamamelis virginiana	Witch Hazel	low	FAC-	no	
Ilex laevigata	Smooth Winterberry	mod.	OBC	no	
Ilex verticillata	Common Winterberry	high	FACW		
Lindera benzoin	Spice Bush	mod.	FACW	no	
Myrica pennsylvanica	Northern Bayberry	high	FAC		
Prunus virginiana	Purple Chokecherry	high	FACU	no	
Rhododendron arborescens	Smooth Azalea		FAC		
Rhododendron maxima	Rosebay Rhododendon		FAC		
Rhododendron viscosum	Swamp Azalea	low	OBL	yes	
Rhus typhina	Staghorn Sumac	mod.			
Rosa palustris	Swamp Rose		OBL		
Rosa rogosa	Rugosa Rose	high	FACU-		
Rubus hispida	Bristly Hispoides Blackberry - BOG	high	FACW		
Sambucus canadensis	Amerian Elder	high	FACW-	yes	
Salix purpurea 'Streamco'	Purple-osier Willow	mod.	FACW		streambank stabilizer
Spirea tormentosa	Steeple Bush		FACW		
Vaccinium corymbosum	Highbush Blueberry	high	FACW-		
Viburnum dentatum	Southern Arrowwood		FAC		
Viburnum opulus	European Cranberry				
Viburnum prunifolium	Black Haw		FACU		

BROADLEAF EVERGREEN SHRUBS

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Euonymus americanus	Strawberry-bush, American	mod.	FAC	no	
Ilex glabra	Inkberry	yes	FACW-	yes	
Kalmia augustifolia	Sheep-Laurel		FAC	no	
Kalmia latifolia	Mountain Laurel	low	FACU	no	tolerates acid soils

WOOD VINES

Capsis radicans	Trumpet Vine		FAC	no	rampant
Celastris scandens	Bittersweet	low	FACU-	no	rampant
Clematis paniculata	Autum Clematis	low		no	
Parthenocissus quinquefolia	Virginia Creeper		FACU		
Rubus hispidus	Swamp Dewberry	high	FACW	no	
Vitis riparia	Riverbank Grapes	high	FACW	no	
Vitis vulpina	Winter Grapes	high	FAC	no	

EMERGENT & AQUATIC PLANTS

Botanical Name	Common Name	Wildlife	Wetland Status	Flood Tol.	Comments
Acorus calamus	Sweet Flag	low	OBL	yes	emergent
Cephalanthus occidentalis	Buttonbush	high	OBL	yes	emergent
Ceratophyllum demersum	Coontail	low	OBL	yes	emergent
Cyperus spp.	Sedges	mod.	varies	yes	emergent
Hibiscus moscheutos	Marsh Hibiscus	low	OBL	yes	emergent
Leersia oryzoides	Rice Cutgrass	mod.	OBL	yes	emergent
Nasturtium officinale	Water Cress	mod.	OBL	yes	perimeter
Nuphar luteum	Spatterdock	mod.	OBL	yes	emergent
Peltandra virginca	Arrow Arum/Duck Corn	wood ducks	OBL	yes	emergent
Polygonum spp.	Smartweed	high	varies	yes	emergent
Pontederia cordata	Pickerelweed	low	OBL	yes	emergent
Potamegaton spp.	Pond Weed	high	OBL	yes	submergent
Saggitaria latifolia	Arrowhead/Duck Potato	mod.	OBL	yes	emergent
Saururus cernuus	Lizard's Tail	low	OBL	yes	emergent
Scirpus americanus	Common Three-Square	high	OBL	yes	emergent
Scirpus validus	Soft-stem Bulrush	mod.	OBL	yes	emergent
Viburnum recognitum 'Fernald'	Smooth Arrowwood		FACW- FACW		
Viburnum trilobum	Highbush Cranberry	mod.	FACW	yes	

WARNING SIGN

To be provided later

STORM DRAIN DISCHARGE OPTIONS INTO SWM FACILITY

To Be Provided Later

M-NCPPC GUIDELINES FOR STORMWATER MANAGEMENT FACILITIES

GUIDELINES FOR STORMWATER MANAGEMENT FACILITIES TO BE LOCATED ON M-NCPPC PROPERTY IN PRINCE GEORGE'S COUNTY

There are three levels of SWM/ESD facilities that will be approved for installation on Maryland National Capital Park and Planning Commission (M-NCPPC) property. The first level are large facilities incorporated into the park recreation area. Examples include Cosca Lake. The second level of SWM facilities are those that control SWM or provide water quality for park development facilities or private development using M-NCPPC property and generally have drainage areas less than 50 acres. The third level of facilities is the small ESD devices required by the Maryland 2007 SWM Act and generally have drainage areas less than 2 acres. They may be used either for Developer projects with permission from Department of Parks and Recreation (DPR) or for M-NCPPC projects.

A. The following guidelines shall be considered in the location and design all Level 1 SWM facilities proposed on M-NCPPC property. These are in addition to the requirements established by DPIE in their design manual.

1. SWM facilities will be considered for placement on M-NCPPC property either existing or to be conveyed as part of a subdivision requirement after all alternatives for locating the facility on private property have been exhausted. This includes any portion of the proposed pond including areas to be flooded by 1-, 10-, and 100-year flood pool. Refer to "Public Stormwater Management Pond Ownership and Maintenance Policy" for guidance on these issues.

2. The preferred alternative for all level 1 Stormwater Management (SWM) facilities located on the M-NCPPC property in Prince George's County is a wet pond.

3. The SWM facility shall be part of a community open space system with a park land connection(s) to other park areas such as Stream Valley Parks Community Parks, Natural Corridors, Environmentally Unique or Sensitive areas, etc. The SWM facility shall be designed to be accessible for community level use when appropriate, serving an area with a population of approximately 24,000 to 40,000 people living within a 15 minute driving time.

4. A Recreation Plan shall be submitted for the SWM facility by the Developer, in conjunction with DPR.

a. The plan shall stress the proposed recreation uses for the facility such as nature study, non-motorized boating, and fishing.

b. The physical layout of the SWM facility shall reflect the proposed recreation use through the development of facilities, which may include trails, fishing docks, boat access points, etc.

c. The recreation plan shall be reviewed and approved by DPR at the Site Development Concept Plan phase of the project. Final construction documents for the SWM facility will also require DPR review and approval.

5. Vehicular access to the SWM facility shall be from a through street or road. Access from the cul-de-sac is only acceptable for maintenance access of the SWM/Park facility.

6. The shapes of the facility shall be as natural as possible and in keeping with the general topography of the area.

7. The slopes around the facility and dam embankment should be 4:1 or flatter. However, where that is not feasible, the steepest acceptable slopes are 3:1 only for the dam embankment.

8. A minimum 15-foot wide upland bench shall be provided around the pond, with a 2% cross slope draining toward the pond. The bench shall be located in between the 1 and 10-year pool elevations. These requirements may vary where existing wooded slopes adjacent to the normal pool are to be retained.

9. An aquatic shelf shall be located 6”-12” below the permanent pool and shall be a minimum of 10 feet in width around the entire shoreline of the pond, except where the riser structure and outfalls require greater depth. These benched areas are primarily for the safety of the park users.

10. SWM facilities shall not be fenced unless DPR requires fencing.

11. A maintenance access road/trail shall be provided around the entire SWM pond. The road/trail shall be 12 feet wide, with asphalt paving meeting the County road standard for secondary residential road from the initial access point to the riser structure. The remainder of the road/trail may be 4” thick asphalt paving and suitable for use by maintenance trucks as well as pedestrians and bicycles.

a. The road/trail shall be located on the shoreline bench where possible.

b. In other "natural" shoreline areas the road/trail shall be concealed where possible, behind existing trees or other plantings, providing access to the edge of the pond as needed for maintenance and recreation purposes.

12. An adequate buffer strip shall be included around the entire SWM pond. The buffer shall be minimum 100-foot wide strip of well-vegetated park property between the 100-year flood elevation and any adjacent private property line.

13. DPR shall approve a separate Landscape Plan for the SWM facility as part of their approval of the SWM plan.

a. The entire aquatic shelf shall be planted in a mix of aggressive colonizing native emergent plants installed a maximum 1'6" on center.

b. All graded side slopes above the upland bench outside of the embankment limits shall be reforested with a mix of native tree species 15' on center, ½ "caliper, placed in a random pattern.

c. Include masses of native flowering trees and shrubs at visible edges of reforested areas.

d. Individual specimen trees may be installed at spacing greater than 15' where views of the pond from adjacent areas of developed park or residences are desirable.

14. All storm drain outfalls shall have a stone veneer or stamped concrete on the head wall, per the M-NCPPC detail in the County SWM Design Manual for pipe sizes greater than 12 inches.

a. End sections are acceptable for pipes sizes 24" or smaller.

b. The stamped concrete shall be a rusticated ashlar stone created with a form liner by Scofield or approved equal is acceptable. Shop drawings are to be approved by DPR.

c. The concrete mix shall meet Maryland State Highway Administration (MSHA) Mix 3 for strength and shall include a brownish tan pigment.

d. The riser structure shall also provide for a stone veneer or stamped concrete.

15. For additional design criteria and suitable plant species see Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMP's by Thomas R. Schueler, Chapters 4 and 9, published by Metropolitan Washington Council of Governments.

16. A MOU is required to be signed by the Developer, DPIE, and M-NCPPC outlining the maintenance responsibilities and any payments. For projects that are residential in nature, the County may perform the functional maintenance whereas M-NCPPC will perform the daily maintenance.

B. The following guidelines shall be considered in the location and design all Level 2 SWM facilities proposed on M-NCPPC property. These are in addition to the requirements established by DPIE in their design manual.

1. SWM facilities will be considered for placement on M-NCPPC property after all alternatives for locating the facility on private property have been exhausted. This includes any portion of the proposed pond including areas to be flooded by 1-, 10-, and 100-year flood pool. Refer to "Public Stormwater Management Pond Ownership and Maintenance Policy" for guidance on these issues.

2. Vehicular access to the SWM facility shall be from a through street or road. Access from the cul-de-sac is only acceptable for maintenance access of the SWM facility.

3. The shapes of the ponds shall be as natural as possible and in keeping with the general topography of the area.

4. Where excavation has to be restored to, it is preferred that the slopes around the ponds and dams be 4:1 or flatter, however, where that is not possible, the steepest acceptable slopes are 3:1 for the dams embankment only.

5. An adequate buffer strip shall be included around the entire SWM pond. The buffer shall be minimum 50 feet wide strip of well-vegetated park property between the 100-year flood pool line and any adjacent private property line.

6. DPR shall approve a separate Landscape Plan for the SWM facility as part of their approval of the SWM plan.

a. The entire aquatic shelf shall be planted in a mix of aggressive colonizing native emergent plants installed a maximum 1'6" on center.

b. All graded side slopes above the upland bench outside of the embankment limits shall be reforested with a mix of native tree species 15' on center, ½ "caliper, placed in a random pattern.

c. Include masses of native flowering trees and shrubs at visible edges of reforested areas.

d. Individual specimen trees may be installed at spacing greater than 15' where views of the pond from adjacent areas of developed park or residences are desirable.

7. All storm drain outfalls shall have a stone veneer or stamped concrete on the head wall, per the M-NCPPC detail in the County SWM Design Manual for pipe sizes greater than 12 inches.

a. End sections are acceptable for pipes sizes 24" or smaller.

b. The stamped concrete shall be a rusticated ashlar stone created with a form liner by Scofield or approved equal is acceptable. Shop drawings are to be approved by DPR.

c. The concrete mix shall meet MSHA Mix 3 for strength and shall include a brownish tan pigment.

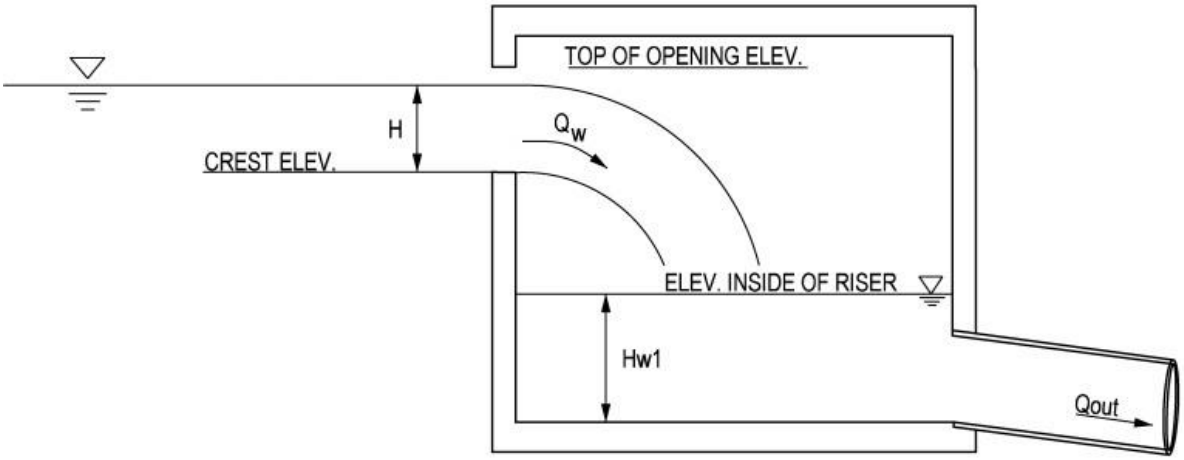
d. The riser structure shall also provide for a stone veneer or stamped concrete.

8. A MOU is required to be signed by the Developer, DPIE, and M-NCPPC outlining the maintenance responsibilities and any payments. For projects that are residential in nature, the County may perform the functional maintenance whereas M-NCPPC will perform the daily maintenance.

C. The following additional guidelines shall be considered in the location and design all Level 3 SWM facilities proposed on M-NCPPC property. These are in addition to the requirements established by DPIE in their design manual.

A MOU is required to be signed by the Developer, DPIE, and M-NCPPC outlining the maintenance responsibilities and any payments. For projects that are residential in nature, the County may perform the functional maintenance whereas M-NCPPC will perform the daily maintenance.

RISER WEIR AND ORIFICE FLOW SCENARIOS



ELEV. OUTSIDE OF RISER < TOP OF OPENING ELEV.
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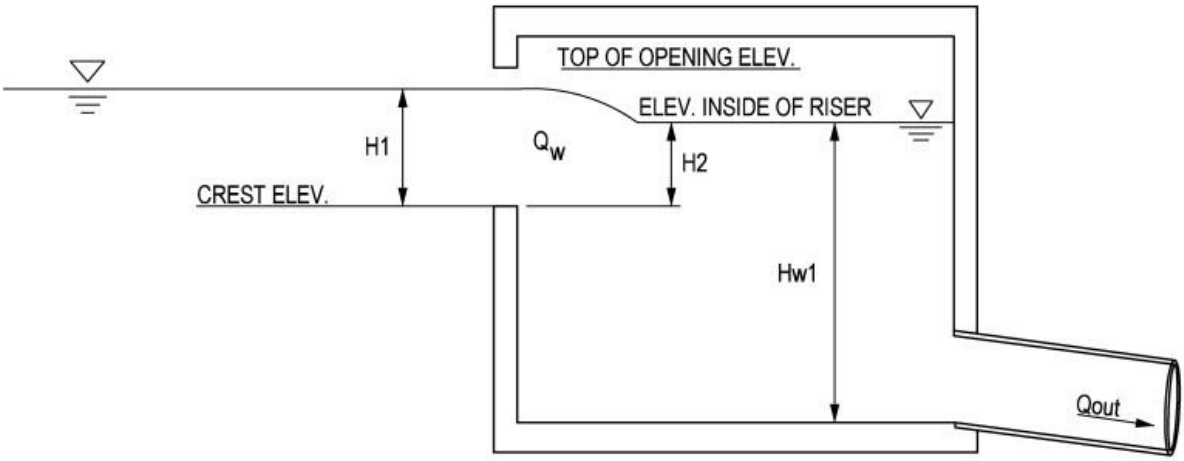
WEIR FLOW FREE FALL CONDITION



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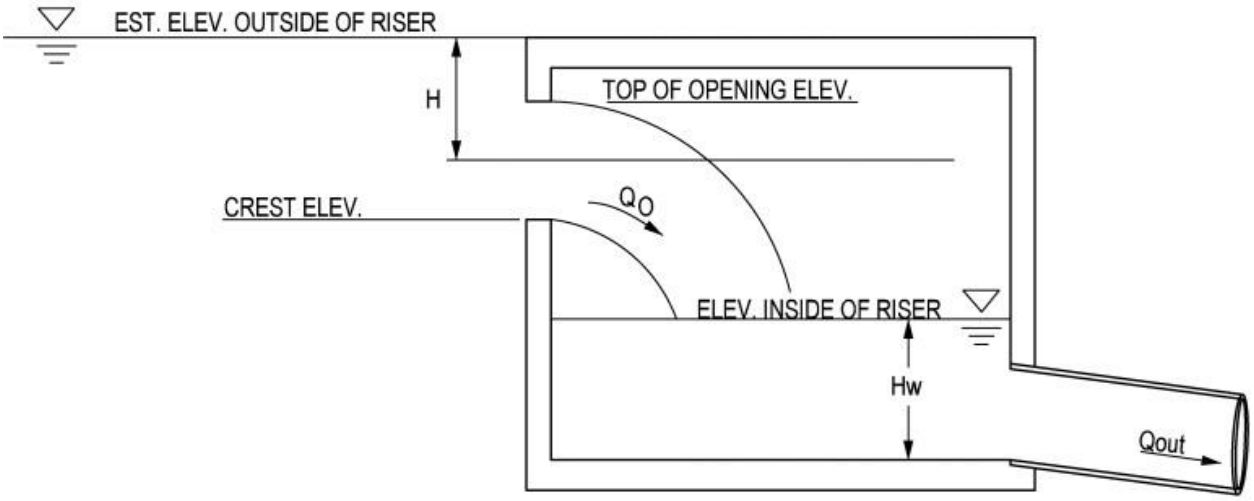
WEIR FLOW SUBMERGED CONDITION



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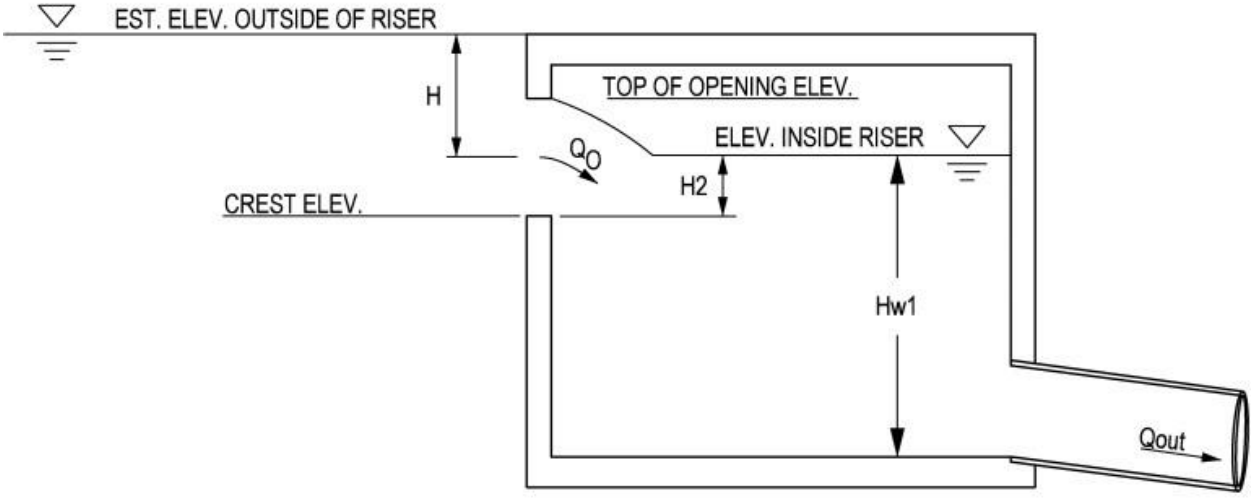
ORIFICE FLOW FREE FALL CONDITION - NOT PREFERRED



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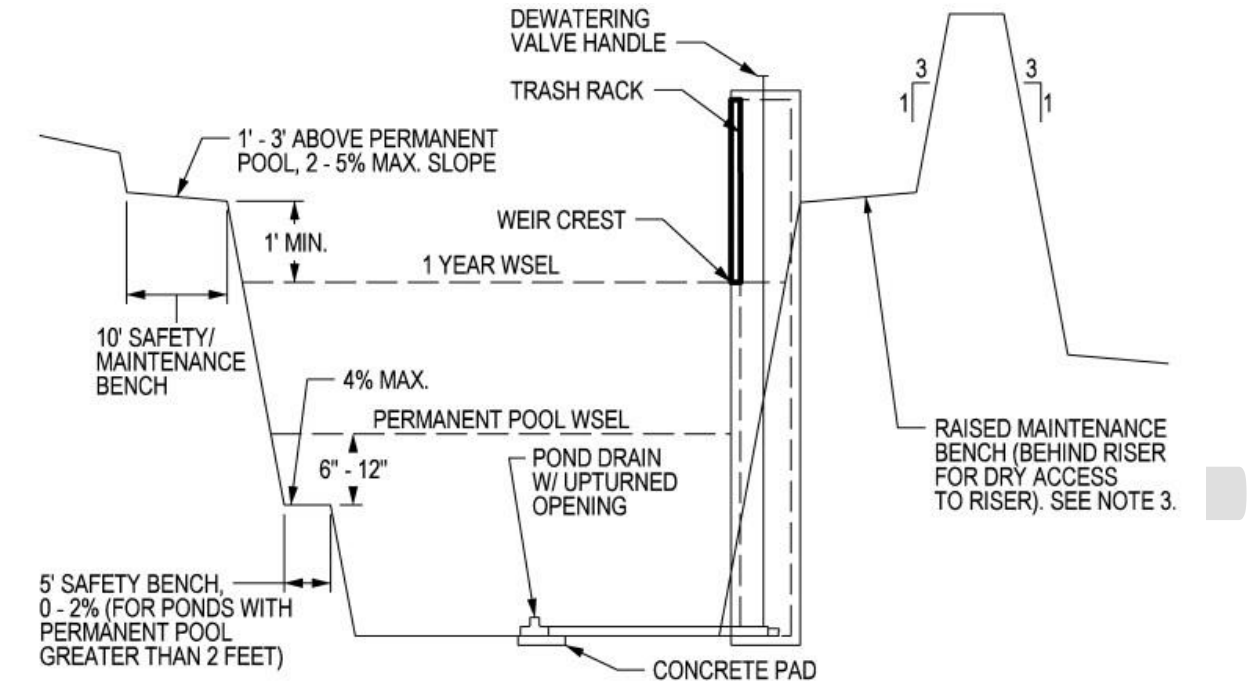
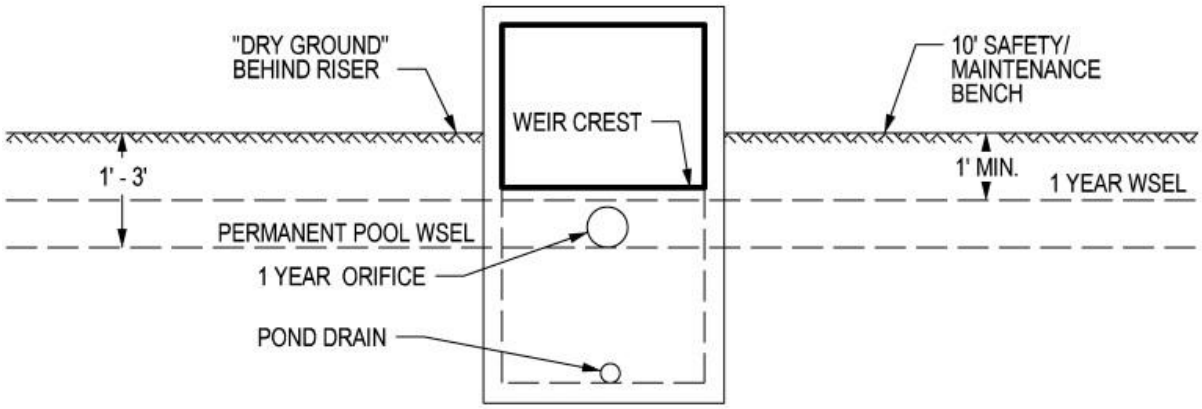
ELEV. INSIDE OF RISER > ℄ OF OPENING ELEV.

ORIFICE FLOW SUBMERGED CONDITION - PREFERRED

RISER LOCATION SKETCH



RISER PROFILE



RISER FRONT

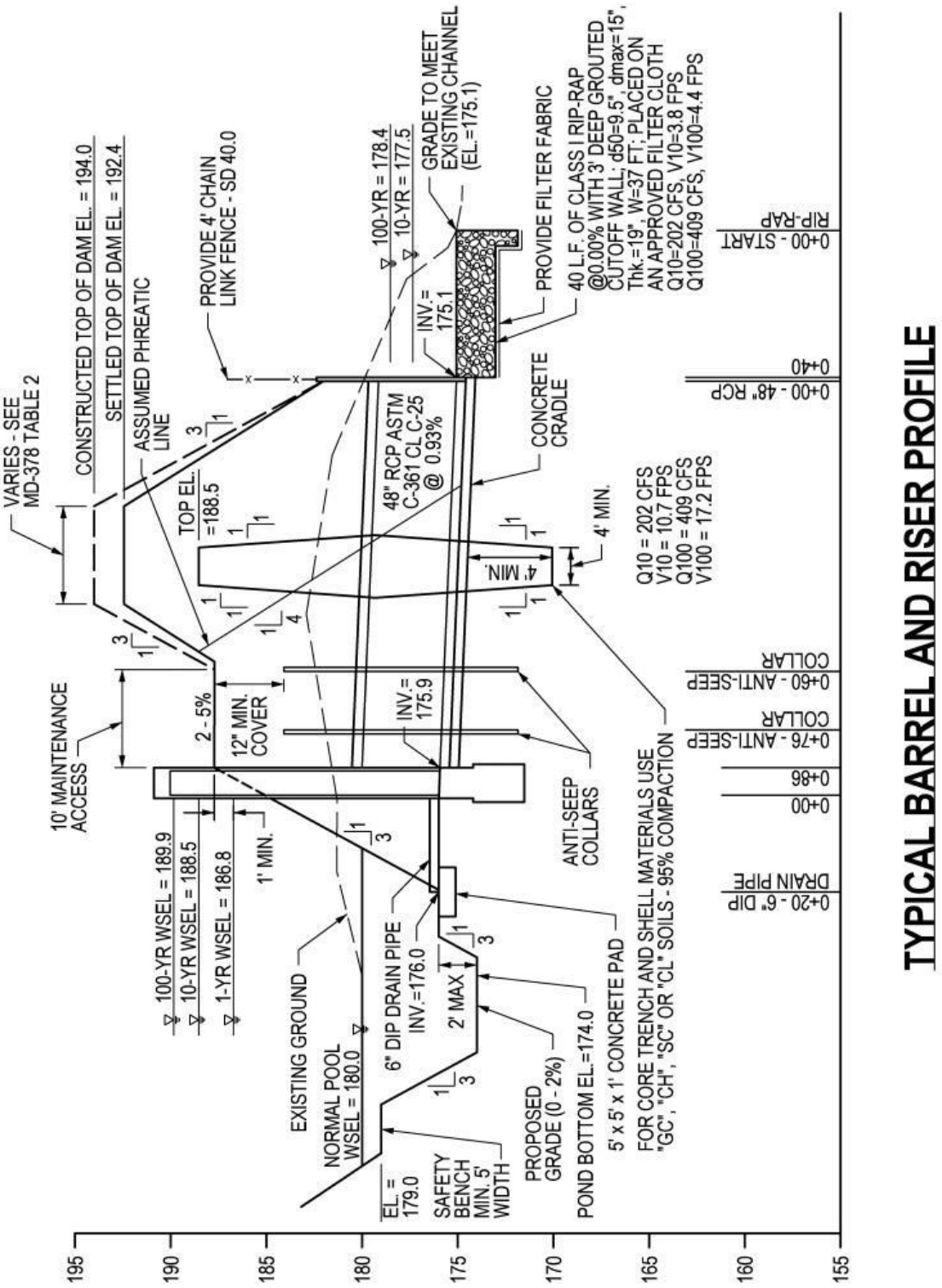
BENCHES:

1. A 10 FOOT WIDE MAINTENANCE/SAFETY BENCH SHALL BE LOCATED AT LEAST 1 FOOT BELOW THE 1 YEAR WEIR (THE WEIR SET AT THE EXTENDED DETENTION WATER SURFACE ELEVATION).
2. FOR WET EXTENDED DETENTION PONDS, A 5' WIDE SAFETY BENCH WILL BE PLACED 6" - 1' BELOW PERMANENT POOL DEEPER THAN 2'.
3. ACCESS TO THE REAR OF THE RISER STRUCTURE SHALL BE MAINTAINED BY EMBEDDING THE RISER INTO THE EMBANKMENT SO IT CAN BE ACCESSED IF THE 1 YEAR CONTROL OPENING IS CLOGGED.

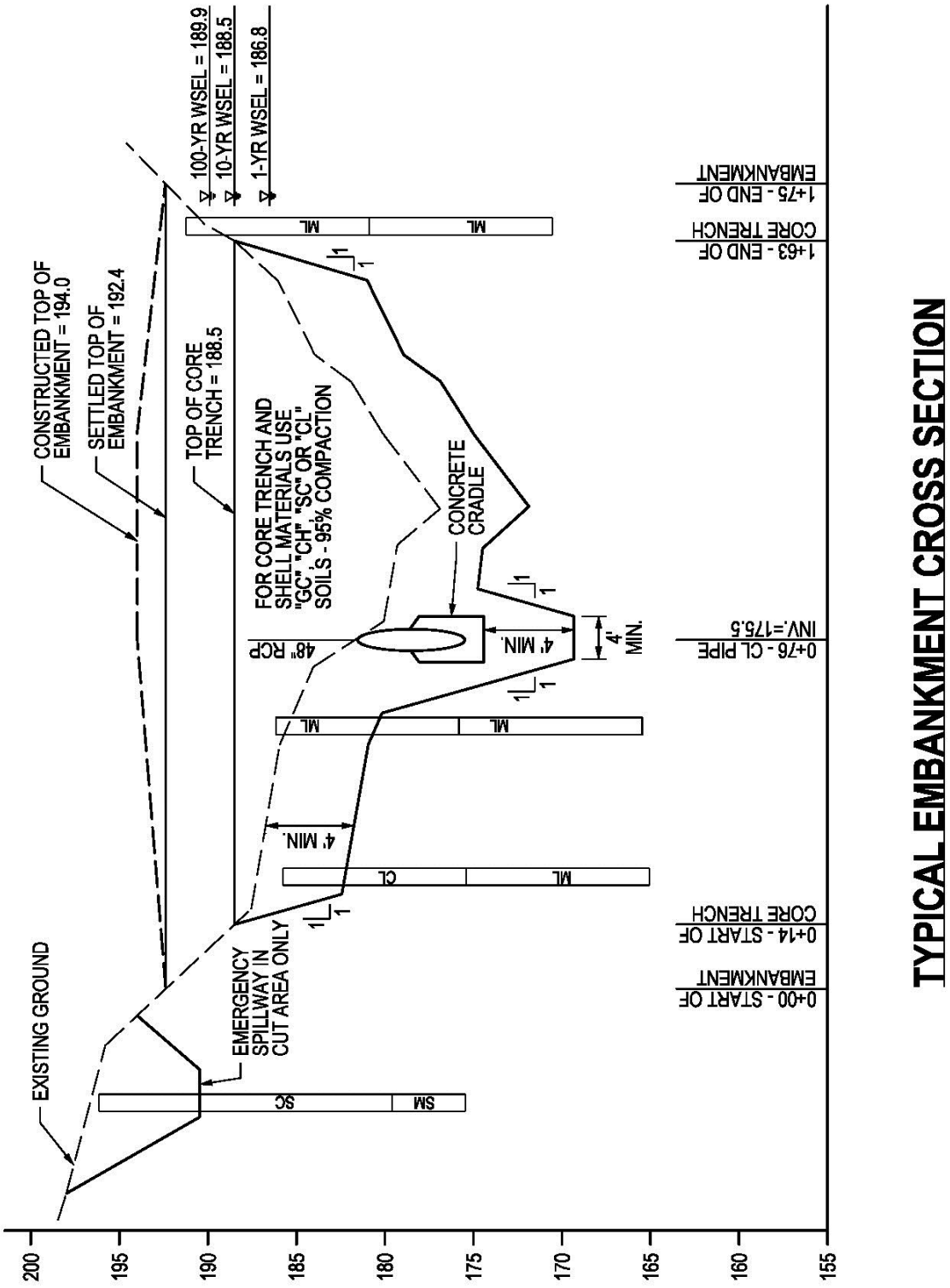
LOW FLOW PIPE EXAMPLES

To Be Provided Later

TYPICAL BARREL & RISER PROFILE



TYPICAL EMBANKMENT CROSS SECTION



TYPICAL EMBANKMENT CROSS SECTION

EMERGENCY SPILLWAY CROSS SECTION & PROFILES

To be provided later

GEOTECHNICAL TESTING REQUIREMENT FOR INFILTRATION SYSTEMS

Documentation

Infiltration testing data shall be documented, and include a description of the infiltration testing method. This is to ensure that the tester understands the procedure.

Test Pit/Boring Requirement

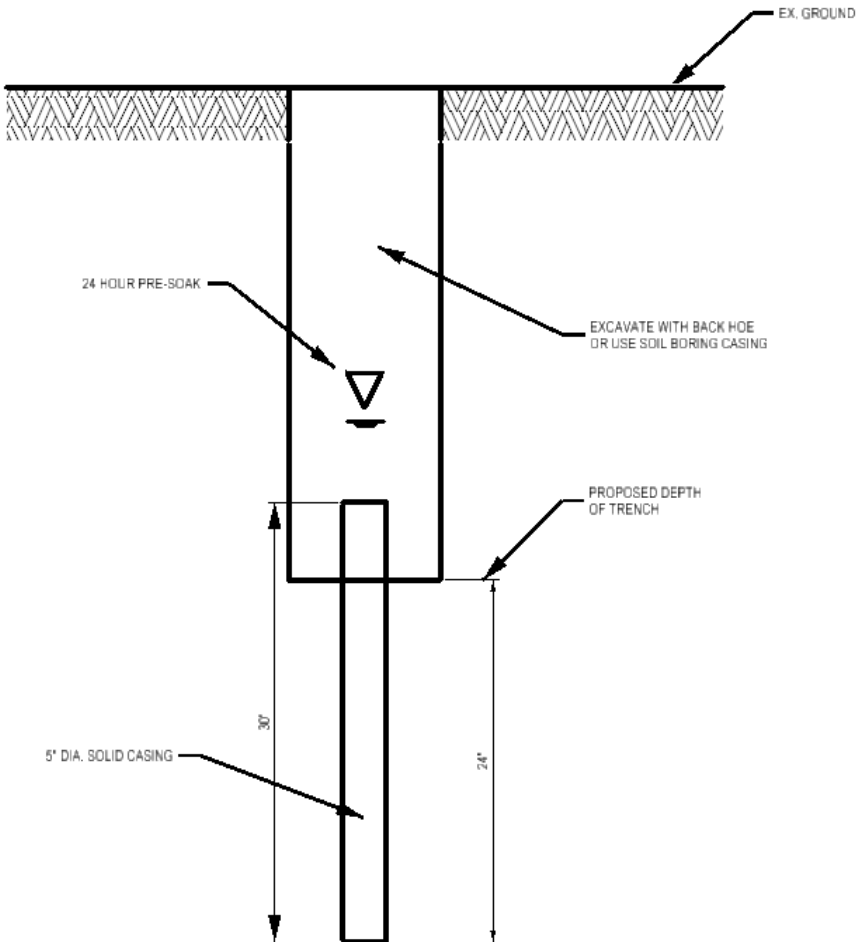
a. Excavated a test pit or dig a standard soil boring to a depth of 4 feet below the proposed facility bottom;
b. Determine depth to groundwater table (if within 4 feet of proposed bottom) upon initial digging or drilling, and again 24 hours later;
c. Conduct Standard Penetration Testing (SPT) every 2' to a depth of 4 feet below the facility bottom;
d. Determine United States Department of Agriculture (USDA) or Unified Soil Classification (USC) System textures at the proposed bottom and 4 feet below the bottom of the best management practice (BMP);
e. Determine depth to bedrock (if within 4 feet of proposed bottom);
f. The soil description should include all soil horizons; and
g. The location of the test pit or boring shall correspond to the BMP location; test pit/soil boring stakes are to be left in the field for inspection purposes and shall be clearly labeled as such.

Infiltration Testing Requirements (field testing required)

a. Install casing (solid 5 inch diameter, 30" length) to 24" below proposed BMP bottom (See Figure D.1.1).
b. Remove any smeared soiled surfaces and provide a natural soil interface into which water may percolate. Remove all loose material from the casing. Upon the tester's discretion, a two (2) inch layer of course sand or fine gravel may be placed to protect the bottom from scouring and sediment. Fill casing with clean water to a depth of 24' and allow pre-soaking for twenty-four hours.
c. Twenty-four hours later, refill casing with another 24" of clean water and monitor water level (measured drop from the top of the casing) for 1 hour. Repeat this procedure (filling the casing each time) three additional times, for a total of four observations. Upon the tester's discretion, the final field rate may either be the average of the four observations, or the value of the last observation. The final rate shall be reported in inches per hour.
d. May be done through a boring or open excavation.
e. The location of the test shall correspond to the BMP location.
f. Upon completion of the testing, the casings shall be immediately pulled, and the test pit shall be back-filled.

Laboratory Testing

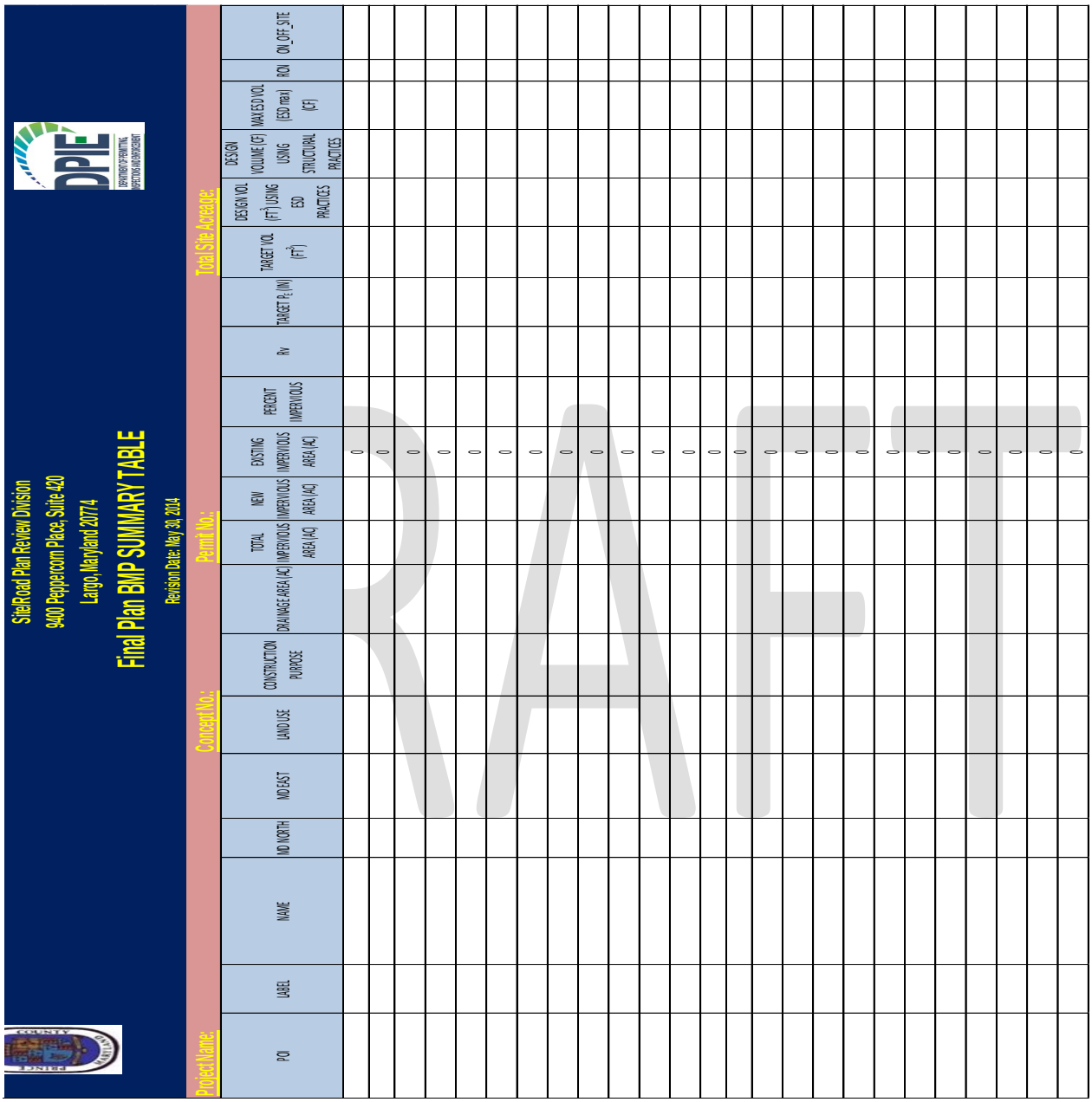
Use grain-size sieve analysis and hydrometer tests (where appropriate) to determine USDA soils classification and textural analysis. Visual field inspection by a qualified professional may also be used, provided it is documented. The use of lab testing to establish infiltration rates is prohibited.


EX. GROUND
24 HOUR PRE-SOAK
EXCAVATE WITH BACK HOE
OR USE SOIL BORING CASING
PROPOSED DEPTH
OF TRENCH
30"
24"
5" DIA. SOLID CASING

INFILTRATION TRENCH SPECIFICATIONS & NOTES

To be provided later

BMP SUMMARY TABLE



SAMPLE BMP CALCULATIONS –

1. Rooftop Disconnect
2. Non Rooftop Disconnect
3. Sheet Flow to Conservation Area
4. Dry Well
5. Grass Swale
6. Bio Swale

To be provided later

BMP SPECIFICATION

1. Landscape Specification
2. Submerged Gravel Wetlands
3. Wet Swales
4. Bio Device Specification
5. Dry Well Specification
6. Permeable Paving – **TO BE PROVIDED LATER**
7. Green Roof – **TO BE PROVIDED LATER**

LANDSCAPE SPECIFICATIONS

LANDSCAPE SPECIFICATIONS SHALL BE AS OUTLINED BELOW OR AS SPECIFIED AS BEST PRACTICES IN THE INDUSTRY. ANY ITEM OR PROCEDURE NOT MENTIONED BELOW SHALL BE AS SPECIFIED IN THE LANDSCAPE SPECIFICATION GUIDELINES PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION (LATEST EDITION) OR AS SUBSEQUENTLY AMENDED.

(a) PLANT MATERIALS

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP, AND TRANSPLANT ALL OF THE PLANT MATERIALS CALLED FOR ON THE DRAWING AND/OR LISTED IN THE PLANT SCHEDULE.

(b) PLANT NAMES

PLANT NAMES USED IN THE PLANT SCHEDULE SHALL BE IDENTIFIED IN ACCORDANCE WITH HORTUS THIRD, BY L.H. BAILEY, 1976 OR ANY SUBSEQUENT EDITION.

(c) PLANT STANDARDS

ALL PLANT MATERIALS SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (HEREAFTER REFERRED TO AS "ANLA STANDARDS"). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH, AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED, AND WITH HEALTHY WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, AND MECHANICAL INJURIES.

(1) ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATIC CONDITIONS AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HEELED-IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

(2) COLLECTED PLANTS OR TRANSPLANTED TREES MAY BE CALLED FOR BY THE LANDSCAPE ARCHITECT AND USED, PROVIDED, HOWEVER, THAT LOCATIONS AND SOIL CONDITIONS WILL PERMIT PROPER BALLING.

(d) PLANT MEASUREMENTS

ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE.

(1) CALIPER MEASUREMENTS SHALL BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCH CALIPER AND TWELVE (12) INCHES ABOVE GRADE FOR TREES FOUR (4) INCHES CALIPER AND OVER.

(2) MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX (6) TO EIGHT (8) FEET.

(3) MINIMUM SIZE FOR PLANTING SHADE TREES SHALL BE TWO AND ONE HALF TO THREE (2-½ -3) INCHES CALIPER, TWELVE TO FOURTEEN (12-14) FEET IN HEIGHT.

(4) MINIMUM SIZE FOR PLANTING MINOR SHADE TREES SHALL BE TWO AND ONE HALF TO THREE (2 ½-3) INCHES CALIPER, EIGHT TO TEN FEET (8-10) FEET IN HEIGHT.

(5) MINIMUM SIZE FOR PLANTING ORNAMENTAL TREES SHALL BE ONE AND A HALF TO ONE AND THREE-FOURTHS (1- ½ -1- ¾) INCHES CALIPER, SEVEN TO NINE (7-9) FEET IN HEIGHT.

(6) MINIMUM SIZE FOR PLANTING EVERGREEN TREES SHALL BE SIX TO EIGHT (6-8) FEET IN HEIGHT.

(7) CALIPER, HEIGHT, AND SPREAD SHALL BE GENERALLY AS FOLLOWS:

CALIPER	HEIGHT	SPREAD
2-2-½″	12′-14′	6′-8′
2-1/2″-3	12′-14′	6′-8′
3″-3-½″	14′-16′	6′-8′
3-1/2″-4″	14′-16′	8′-10
4″-4-½″	16′-18′	8′-10′
4-1/2″-5″	16′-18′	10′-12′
5″-5-1/2″	18′-20′	10′-12′
5-1/2″-6″	18′-20′	12′-14′

ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AND AS INDICATED IN THE ANLA STANDARDS.

(8) MINIMUM SIZE FOR PLANTING SHRUBS SHALL BE, IN GENERAL, EIGHTEEN TO TWENTY-FOUR (18-24) INCHES IN HEIGHT OR SPREAD, AS APPROPRIATE, EXCEPT THAT A LARGER SIZE MAY BE REQUIRED WHEN DEEMED

APPROPRIATE BY THE PLANTING DIRECTOR (OR DESIGNEE) IN THE CASE OF PARTICULAR SPECIES OR PLANTING SITUATIONS.

(e) PLANTING METHODS

ALL PROPOSED PLANT MATERIAL THAT MEETS THE SPECIFICATION IN APPENDIX 4, SECTION (A), PLANT MATERIALS, ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING PLANTING METHODS DURING THE PROPER SEASONS AS DESCRIBED BELOW.

(1) PLANTING SEASONS

A PROFESSIONAL HORTICULTURALIST/NURSERYMAN SHALL BE CONSULTED TO DETERMINE THE PROPER TIME, BASED ON PLANT SPECIES AND WEATHER CONDITIONS, TO MOVE AND INSTALL PARTICULAR PLANT MATERIAL TO MINIMIZE STRESS TO THE PLANT. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOP SOIL PLANTING MIXTURES ARE USED.

(2) DIGGING

ALL PLANT MATERIAL SHALL BE DUG, BALLED, AND BURLAPPED OR BARE ROOT IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

(3) EXCAVATION OF PLANT PITS

THE LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS AS FOLLOWS:

(A) ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, WITH BOWL SHAPED SIDES. THE TREE PIT SHALL BE DEEP ENOUGH TO ALLOW ONE-EIGHTH (1/8) OF THE BALL TO BE ABOVE THE EXISTING GRADE. PLANTS SHALL REST ON UNDISTURBED EXISTING SOIL OR WELL-COMPACTED BACKFILL. THE TREE PIT MUST BE A MINIMUM OF NINE (9) INCHES LARGER ON EVERY SIDE THAN THE BALL OF THE TREE.

(B) IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE CULTIVATED TO AT LEAST AN EIGHTEEN (18) INCHES IN DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE CULTIVATED TO AT LEAST TWELVE (12) INCHES IN DEPTH MINIMUM.

(4) STAKING, GUYING, AND WRAPPING

SEE THE LANDSCAPE SPECIFICATION GUIDELINES.

(5) PLANT PRUNING, EDGING, AND MULCHING

(A) EACH TREE, SHRUB, OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICES AS STATED IN ANSI STANDARDS A300 FOR PRUNING. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS MADE ON AN ANGLE FROM THE BARK RIDGE TO THE BRANCH COLLAR, NO FLUSH CUTS, TO MINIMIZE THE AREA CUT. ALL CUTS SHALL BE MADE WITH SHARP TOOLS. TRIM ALL EDGES SMOOTH. NO TREE WOUND DRESSINGS SHALL BE APPLIED.

(B) ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOD THAT HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.

(C) AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A TWO OR THREE (2-3) INCH LAYER OF TAN BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.

(f) SEEDING AND SODDING

ALL SEEDING AND SODDING SHALL BE AS PER 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR THE LATEST EDITION.

(g) TOP SOIL

TOP SOIL SHALL BE RETAINED AND/OR PROVIDED ON ALL SITES AND SPREAD OVER ALL UNIMPROVED AREAS.

PLANTING DETAILS

SHALL BE IN ACCORDANCE WITH STANDARD PRACTICES IN THE INDUSTRY.

TREE PRESERVATION MEASURES

FOR MORE INFORMATION ON THIS SUBJECT, CONTACT THE ENVIRONMENTAL PLANNING SECTION, COUNTYWIDE PLANNING DIVISION OF THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION.

SUBMERGED GRAVEL WETLAND (SGW) MATERIAL AND CONSTRUCTION SPECIFICATIONS (not finished)

EXCAVATION

1. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE FACILITY SIDES TO AVOID CONTAMINATION AND POSSIBLE SIDEWALL INSTABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE SIDEWALLS OF THE TRENCH USING ROOT PRUNING TECHNIQUES AND THE SIDEWALLS ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.

SOIL TEXTURE AND STRUCTURE

1. TOPSOIL FOR SUBMERGED GRAVEL WETLAND SHALL HAVE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE PER USDA TEXTURAL TRIANGLE. NO CLAY CONTENT IS PERMITTED. THE SOIL MEDIA MIXTURE SHALL BE;
   A. 50-60% SAND;
   B. 20-30% LEAF MULCH; AND
   C. 20-30% TOPSOIL.

2. THE SOIL SHALL BE 20"-30" DEEP WITH A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO (2) INCHES.

3. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE SUBMERGED GRAVEL WETLAND THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

4. THE SOIL MEDIA SHALL BE FREE OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, TEARTHUB, OR OTHER NOXIOUS WEEDS.

SOIL TESTING

1. THE SOIL SHOULD MEET THE FOLLOWING CRITERIA (LANDSCAPE CONTRACTORS ASSOCIATION, 1986).
   A. PH RANGE: 5.5-6.5
   B. ORGANIC MATTER: 1.5-3.0%
   C. IT IS REQUIRED THAT A SIEVE ANALYSIS, PH, AND ORGANIC MATTER TEST BE PERFORMED FOR EACH SUBMERGED GRAVEL WETLAND AREA.

CHECK DAMS

1. ONLY EARTH CHECK DAMS ARE ALLOWED WITH GABION INFLOW PROTECTION AS SHOWN IN DETAIL ??

2. THE MAXIMUM SIDE SLOPE IS 3:1.

3. NON-WOVEN GEOTEXTILE FABRIC SHALL MEET:
    A. ASTM D-6241 (PUNCTURE STRENGTH – 450 LB)
    B. ASTM D-4632 (GRAB TENSILE STRENGTH – 200 LB; ELONGATION 50%)
    C. ASTM D-4533 (TRAPEZOIDAL TEAR STRENGTH – 80 LB)
    D. FABRIC SHALL HAVE US SIEVE 70 APPARENT OPENING SIZE, 1.1/SECOND PERMITTIVITY AND 70% STRENGTH IN TERMS OF ULTRAVIOLET RESISTANCE RETAINED AT 500 HOURS.

4. STONE SHALL BE 2 TO 3 INCHES.

5. BASKET SHALL BE MADE OF MINIMUM 11 GAUGE WIRE AND ARRANGED AT 4X1X0.5 FOOT SPACING.

SOIL INSTALLATION

1. AFTER SCARIFYING THE BOTTOM AREA OF THE PROPOSED FACILITY, PLACE SOIL AT 8”-12” LIFTS. LIFTS ARE NOT TO BE COMPACTED.

2. AVOID OVER-COMPACTION BY ALLOWING TIME FOR NATURAL COMPACTION AND SETTLEMENT. ADDITIONAL MANUAL SOIL COMPACTION MUST NOT BE PERFORMED. RAKE SOIL MATERIAL AS NEEDED TO LEVEL OUT. OVERFILL ABOVE THE PROPOSED SURFACE INVERT TO ACCOMMODATE UP TO 20% NATURAL SETTLEMENT TO PROPER GRADE.

3. PRESOAKING MAY BE PERFORMED TO HASTEN NATURAL COMPACTION, PREFERABLY BY RAIN EVENTS.

PLANT MATERIALS

1. SEED WITH FLOOD/DROUGHT RESISTANT GRASSES, AS INCLUDED IN APPENDIX A, SECTION 2.4 OF THE MDE SWM MANUAL.

2. IF PLANT MATERIALS ARE STOCKPILED ON SITE, ROOT BALLS MUST BE KEPT WET TO ENABLE PLANTS’ SURVIVAL PRIOR TO INSTALLATION.

3. PLANT INSTALLATION SHOULD BE PLANNED TO MINIMIZE ADDITIONAL SOIL COMPACTION BY PERSONS ACCESSING THE BIO-FILTRATION AREA.

MAINTENANCE

1. THE CONTRACTIOR IS RESPONSIBLE FOR WATERING AND MAINTAINING PLANTS DURING THE PLANT ESTABLISHMENT PHASE.

WET SWALE MATERIAL AND CONSTRUCTION SPECIFICATIONS

EXCAVATION

2. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE FACILITY SIDES TO AVOID CONTAMINATION AND POSSIBLE SIDEWALL INSTABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE SIDEWALLS OF THE TRENCH USING ROOT PRUNING TECHNIQUES AND THE SIDEWALLS ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.

SOIL TEXTURE AND STRUCTURE

5. TOPSOIL FOR WET SWALE SHALL HAVE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE PER USDA TEXTURAL TRIANGLE. NO CLAY CONTENT IS PERMITTED. THE SOIL MEDIA MIXTURE SHALL BE;
    D. 50-60% SAND;
    E. 20-30% LEAF MULCH; AND
    F. 20-30% TOPSOIL.

6. THE SOIL SHALL BE 20"- 30" DEEP WITH A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO (2) INCHES.

7. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE WET SWALE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

8. THE SOIL MEDIA SHALL BE FREE OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, TEARTHUB, OR OTHER NOXIOUS WEEDS.

SOIL TESTING

2. THE SOIL SHOULD MEET THE FOLLOWING CRITERIA (LANDSCAPE CONTRACTORS ASSOCIATION, 1986).
    D. PH RANGE: 5.5-6.5
    E. ORGANIC MATTER: 1.5-3.0%
    F. IT IS REQUIRED THAT A SIEVE ANALYSIS, PH, AND ORGANIC MATTER TEST BE PERFORMED FOR EACH WET SWALE AREA.

CHECK DAMS

6. ONLY EARTH CHECK DAMS ARE ALLOWED WITH GABION INFLOW PROTECTION AS SHOWN IN DETAIL ??

7. THE MAXIMUM SIDE SLOPE IS 3:1.

8. NON-WOVEN GEOTEXTILE FABRIC SHALL MEET:

A. ASTM D-6241 (PUNCTURE STRENGTH – 450 LB)
B. ASTM D-4632 (GRAB TENSILE STRENGTH – 200 LB; ELONGATION 50%)
C. ASTM D-4533 (TRAPEZOIDAL TEAR STRENGTH – 80 LB)
D. FABRIC SHALL HAVE US SIEVE 70 APPARENT OPENING SIZE, 1.1/SECOND PERMITTIVITY AND 70% STRENGTH IN TERMS OF ULTRAVIOLET RESISTANCE RETAINED AT 500 HOURS.

9. STONE SHALL BE 2 TO 3 INCHES.

10. BASKET SHALL BE MADE OF MINIMUM 11 GAUGE WIRE AND ARRANGED AT 4X1X0.5 FOOT SPACING.

SOIL INSTALLATION

4. AFTER SCARIFYING THE BOTTOM AREA OF THE PROPOSED FACILITY, PLACE SOIL AT 8"-12" LIFTS. LIFTS ARE NOT TO BE COMPACTED.

5. AVOID OVER-COMPACTION BY ALLOWING TIME FOR NATURAL COMPACTION AND SETTLEMENT. ADDITIONAL MANUAL SOIL COMPACTION MUST NOT BE PERFORMED. RAKE SOIL MATERIAL AS NEEDED TO LEVEL OUT. OVERFILL ABOVE THE PROPOSED SURFACE INVERT TO ACCOMMODATE UP TO 20% NATURAL SETTLEMENT TO PROPER GRADE.

6. PRESOAKING MAY BE PERFORMED TO HASTEN NATURAL COMPACTION, PREFERABLY BY RAIN EVENTS.

PLANT MATERIALS

4. SEED WITH FLOOD/DROUGHT RESISTANT GRASSES, AS INCLUDED IN APPENDIX A, SECTION 2.4 OF THE MDE SWM MANUAL.

5. IF PLANT MATERIALS ARE STOCKPILED ON SITE, ROOT BALLS MUST BE KEPT WET TO ENABLE PLANTS' SURVIVAL PRIOR TO INSTALLATION.

6. PLANT INSTALLATION SHOULD BE PLANNED TO MINIMIZE ADDITIONAL SOIL COMPACTION BY PERSONS ACCESSING THE BIO-FILTRATION AREA.

MAINTENANCE

2. THE CONTRACTIOR IS RESPONSIBLE FOR WATERING AND MAINTAINING PLANTS DURING THE PLANT ESTABLISHMENT PHASE.

BIORETENTION MATERIAL AND CONSTRUCTION SPECIFICATIONS

TIMING

1. A BIORETENTION FACILITY SHALL NOT BE PLACED IN SERVICE UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED AND INSTALLATION APPROVED BY THE INSPECTOR. PROVISIONS FOR SEDIMENT CONTROL SHALL BE IN PLACE AS SPECIFIED WITHIN THE SEDIMENT CONTROL PLAN.

2. DELIVERY OF MATERIALS SUCH AS SOIL MEDIA, PLANTS, GRAVEL, GEOTEXTILE FABRIC, AND UNDERDRAINS MUST BE COORDINATED TO AVOID STOCKPILING AND CONTAMINATION PROBLEMS. SOIL MEDIA SHOULD NOT BE DELIVERED UNTIL THE BIORETENTION FACILITY LOCATION HAS BEEN EXCAVATED OR GRADED TO THE DESIGN ELEVATIONS WITH THE GEOTEXTILE FABRIC AND UNDERDRAIN SYSTEM IN PLACE. PLANT MATERIALS SHOULD NOT BE DELIVERED UNTIL AFTER THE SOIL MEDIA HAS SETTLED AND BEEN TRIMMED TO THE PROPER GRADE ELEVATION.

3. PRIOR TO THE INSTALLATION OF SOIL MEDIA, UNDERDRAIN SYSTEM, GEOTEXTILE FABRIC AND PLANTING MATERIAL, THE COUNTY INSPECTOR MUST APPROVE THAT THE EXCAVATION HAS BEEN PREPARED PROPERLY.

EXCAVATION

3. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE FACILITY SIDES TO AVOID CONTAMINATION AND POSSIBLE SIDEWALL INSTABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE SIDEWALLS OF THE TRENCH USING ROOT PRUNING TECHNIQUES AND THE SIDEWALLS ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.

SOIL TEXTURE, STRUCTURE, AND PREPARATION

9. SOIL MEDIA SHALL MEET THE MSHA SPECIFIVCATIONS 920.01.02 AND SHALL HAVE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE PER USDA TEXTURAL TRIANGLE.

10. THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO (2) INCHES.

11. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

12. THE SOIL MEDIA SHALL BE FREE OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, TEARTHUB, OR OTHER NOXIOUS WEEDS.

13. THE SOIL MEDIA FOR BIORETENTION AREAS MUST BE TESTED PRIOR TO INSTALLATION FOR NUTRIENTS, PH AND ORGANIC MATTER. A SHOP DRAWING REVIEW AND APPROVAL OF THE SOIL MIX SHALL BE PROVIDED TO THE COUNTY SITE/ROAD INSPECTOR. THE SOIL SAMPLE MUST BE CERTIFIED AS MEETING THE CRITERIA ESTABLISHED FOR THE SOIL MEDIA

14. INSUTU SOIL USED FOR BIORETENTION MUST ALSO BE PREPARED. SCARIFICATION OF SOIL SURFACES BY MANUALLY RAKING TO AERATE AND REDUCING SOIL COMPACTION IS RECOMMENDED.

15. SOIL MEDIA THAT DOES NOT CONFORM TO COMPOSITION REQUIREMENTS FOR PH OR NUTRIENT ANALYSIS SHALL BE AMENDED AS SPECIFIED BY THE NMP. SOIL MEDIA THAT EXCEEDS MAXIMUM PHOSPHORUS CONCENTRATION OR FAILS OTHER COMPOSITION REQUIREMENTS WILL NOT BE ACCEPTED, AND SHALL NOT BE DELIVERED OR USED AS SOIL MEDIA.

16. SOIL MEDIA SHALL BE STORED IN A STOCKPILE THAT IS PROTECTED FROM WEATHER UNDER TARP OR SHED. BSM STORED FOR 6 MONTHS OR LONGER SHALL BE RESAMPLED, RETESTED, AND REAPPROVED BEFORE USE.

SOIL TESTING

UNDERDRAINS AND FILTER MATERIALS

1. UNDERDRAIN PIPE JOINTS AND STORM DRAIN STRUCTURE CONNECTIONS MUST BE ADEQUATELY SEALED TO AVOID PIPING CONDITIONS. PIPE SECTIONS SHALL BE COUPLED USING SUITABLE CONNECTION RINGS, GASKETS, AND FLANGES. FIELD CONNECTIONS TO STORM DRAIN STRUCTURES AND PIPES SHALL BE SEALED WITH POLYMER GROUT MATERIAL THAT IS CAPABLE OF ADHERING TO SURFACES. UNDERDRAIN PIPE SHALL BE CAPPED (AT STRUCTURE) UNTIL COMPLETION OF SITE.

2. UNDERDRAIN PIPES MUST NOT BE WRAPPED IN FILTER FABRIC.

3. DURING GRAVEL BED INSTALLATION, GRAVEL SHALL BE SPILLED DIRECTLY OVER UNDERDRAIN AND SPREAD MANUALLY.

GEOTEXTILE SPECIFICATIONS

11. GEOTEXTILE FABRIC SHALL MEET:
    A. ASTM D-751 (PUNCTURE STRENGTH – 125 LB)
    B. ASTM D-1117 (MULLEN BURST STRENGTH – 400 PSI)

C. ASTM D-1682 (TENSILE STRENGTH – 300 LB)
D. FABRIC SHALL HAVE 0.08" THICK E.O.S.OF#80 SIEVE, AND MAINTAIN 125 GPM PER SQ. FT. FLOW RATE.

SAND AND GRAVEL SPECIFICATIONS

1. UNDERDRAIN GRAVEL SHALL MEET MSHA TABLE 901A FOR NO. 57 STONE. PEA GRAVEL SHALL MEET SIZE 7 FROM MSHA TABLE 901A

2. PROVIDE CLEAN SAND, FREE OF DELETERIOUS MATERIALS. SAND SHALL MEET MSHA TABLE 901A FOR "FINE AGGRAGATE/LIGHTWEIGHT PORTLAND CEMENT CONCRETE. MANUFACTURED SAND IS NOT ACCEPTABLE.

SOIL INSTALLATION

7. AFTER SCARIFYING THE BOTTOM AREA OF THE PROPOSED FACILITY, PLACE SOIL AT 8"-12" LIFTS. LIFTS ARE NOT TO BE COMPACTED.

8. AVOID OVER-COMPACTION BY ALLOWING TIME FOR NATURAL COMPACTION AND SETTLEMENT. ADDITIONAL MANUAL SOIL COMPACTION MUST NOT BE PERFORMED. RAKE SOIL MATERIAL AS NEEDED TO LEVEL OUT. OVERFILL ABOVE THE PROPOSED SURFACE INVERT TO ACCOMMODATE UP TO 20% NATURAL SETTLEMENT TO PROPER GRADE.

9. PRESOAKING MAY BE PERFORMED TO HASTEN NATURAL COMPACTION, PREFERABLY BY RAIN EVENTS.

10. CONSTRUCTION ACTIVITIES MUST BE PLANNED SUCH THAT EQUIPMENT DOES NOT CROSS THE BIORETENTION AREA FOLLOWING SOIL INSTALLATION.

11. CONTRACTOR SHALL ARRANGE FOR AS-BUILT SURVEY PRIOR TO LANDSCAPE INSTALATION AND FINAL MULCHING OF AREA.

PLANT MATERIALS

7. IF PLANT MATERIALS ARE STOCKPILED ON SITE, ROOT BALLS MUST BE KEPT WET TO ENABLE PLANTS' SURVIVAL PRIOR TO INSTALLATION.

8. PLANT INSTALLATION SHOULD BE PLANNED TO MINIMIZE ADDITIONAL SOIL COMPACTION BY PERSONS ACCESSING THE BIORETENTION AREA.

9. SOD FOR SIDE SLOPES SHALL BE PLACED PRIOR TO FINAL MULCH INSTALLATION.

MULCH INSTALLATION

1. ACCEPTABLE MULCH SHALL BE SHREDDED HARDWOOD ONLY. MULCH MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING

PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

2. MULCH SHALL BE PLACED AFTER TREES, SHRUBS, GROUNDCOVER, SOD, ETC. HAS BEEN INSTALLED. VEGETATION SHOULD BE PROTECTED AND LIFTED TO PLACE MULCH UNDERNEATH AND BETWEEN PLANTINGS.

MAINTENANCE

3. THE CONTRACTIOR IS RESPONSIBLE FOR WATERING AND MAINTAINING PLANTS DURING THE PLANT ESTABLISHMENT PHASE.

DRY WELL MATERIAL AND CONSTRUCTION SPECIFICATIONS

EXCAVATION

4. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE FACILITY SIDES TO AVOID CONTAMINATION AND POSSIBLE SIDEWALL INSTABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE SIDEWALLS OF THE TRENCH USING ROOT PRUNING TECHNIQUES AND THE SIDEWALLS ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.

UNDERDRAINS AND CLEANOUTS

4. RUNOFF SHALL ENTER THE DRY WELL VIA MINIMUM 4 INCH DIAMETER SCHEDULE 40 PVC DOWNSPOUT PIPING OR STRONGER. PIPE MUST BE SOLID FOR FIRST 6 INCHES AFTER THE PIPE ENTERS THE DRY WELL. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. UNDERDRAIN PIPES MUST NOT BE WRAPPED IN FILTER FABRIC. AN ACCEPTABLE ALTERNATIVE TO PERFORATED PIPE IS 6" DIAMETER SCHEDULE 40 SLOTTED PVC PIPE WITH 0.125 INCH SLOTS. SLOTS SHALL BE 0.125 INCHES WIDE AND A MINIMUM OF 1.9 INCHES IN LENGTH, WITH A MINIMUM OF 4 SLOTS PER ROW AND 4 ROWS PER LINEAR FOOT OF PIPE. THE UNDERDRAIN MUST BE FITTED WITH A REMOVABLE CAP. THIS CAP MUST BE PERFORATED WITH SEVEN(7) 3/8" HOLES

5. UNDERDRAIN PIPE JOINTS AND STORM DRAIN STRUCTURE CONNECTIONS MUST BE ADEQUATELY SEALED TO AVOID PIPING CONDITIONS. PIPE SECTIONS SHALL BE COUPLED USING SUITABLE CONNECTION RINGS, GASKETS, AND FLANGES. FIELD CONNECTIONS TO STORM DRAIN STRUCTURES AND PIPES SHALL BE SEALED WITH POLYMER GROUT MATERIAL THAT IS CAPABLE OF ADHERING TO SURFACES. UNDERDRAIN PIPE SHALL BE CAPPED (AT STRUCTURE) UNTIL COMPLETION OF SITE.

6. ACCESS FOR CLEANING ALL UNDERDRAIN PIPING IS NEEDED. WATERTIGHT CLEAN-OUTS FOR EACH PIPE SHALL BE LEVEL WITH THE SURFACE OF THE MEDIA. ALL CLEANOUTS SHALL HAVE A REMOVABLE WATERPROOF CAP. CLEANOUTS MUST BE CAPPED IMMEDIATELY AFTER FILTER MEDIA IS IN PLACE.

FILTER STONE AND SAND BED

1. DRY WELLS SHALL BE FILLED WITH CLEAN 1.5-3.0 INCH DIAMETER STONE MEETING ASTM D448, SIZE NO. 1. GEOTEXTILE FABRIC SHALL BE PLACED ON THE TOP AND SIDES OF THE FACILITY. NO GEOTEXTILE IS ALLOWED TO BE PLACED ON THE BOTTOM OF THE FACILITY OR IN ANY OTHER LOCATION NOT CALLED FOR SPECIFICALLY ON THE DESIGN DETAIL.

2. A 12-INCH LAYER OF FINE AGGREGATE SAND SHALL BE PROVIDED AT THE

BOTTOM OF THE EXCAVATION WITH CLEAN ASTM C33 OR AASHTO M6 FINE AGGREGATE CONCRETE SAND.

GEOTEXTILE SPECIFICATIONS

12. GEOTEXTILE FABRIC SHALL MEET:
    A. ASTM D-751 (PUNCTURE STRENGTH – 125 LB)
    B. ASTM D-1117 (MULLEN BURST STRENGTH – 400 PSI)
    C. ASTM D-1682 (TENSILE STRENGTH – 300 LB)
    D. FABRIC SHALL HAVE 0.08" THICK E.O.S.OF#80 SIEVE, AND MAINTAIN 125 GPM PER SQ. FT. FLOW RATE.
13. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN THE FILTER MEDIA.

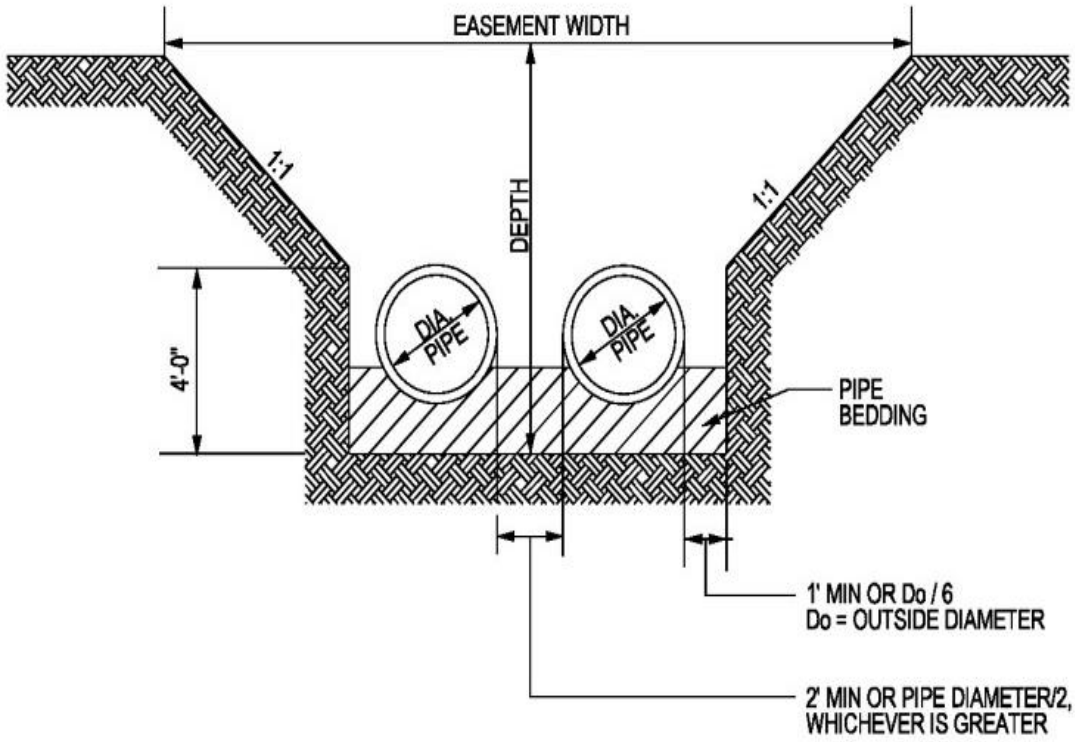
MAINTENANCE

4. THE CONTRACTIOR IS RESPONSIBLE FOR KEEPING THE DRYWELL AREA CLEAN AND FREE OF SEDIMENT DURING THE CONSTRUCTION PHASE.

EASEMENT PROCESSING FLOW CHART

To Be Provided Later

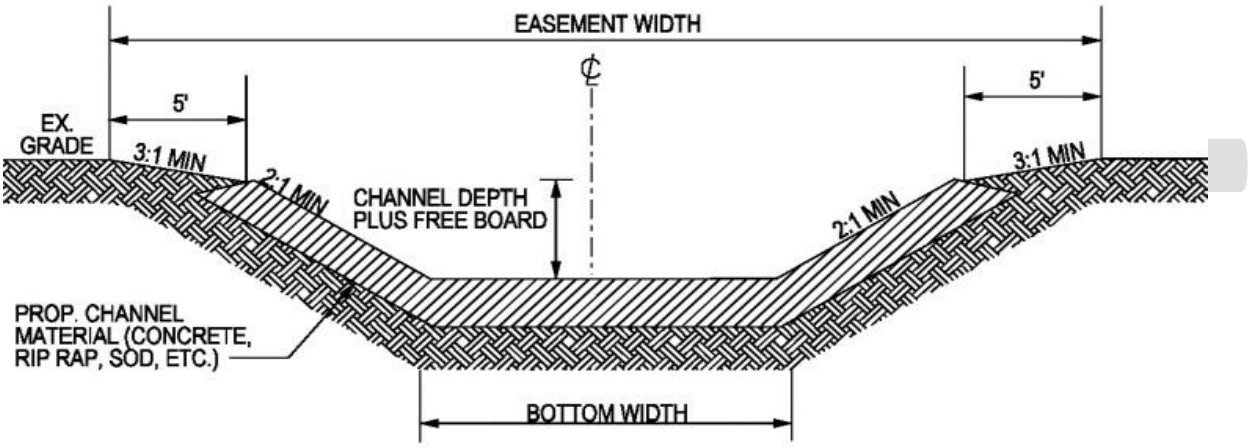
EASEMENT WIDTH FOR MULTIPLE PIPES



NOTES:

1. SINCE THE DEPTH OF THE PIPE IS VARIABLE, THE EASEMENT SIZE DETERMINATION WILL BE BASED ON THE HIGHEST COVER PIPE.
2. FOR STORM DRAIN PIPE THAT IS DESIGNED DEEPER THAN 8 FEET DEPTH, ADD 2 FEET FOR EVERY FOOT DROP TO THE EASEMENT REQUIREMENT.
3. FOR ELLIPTICAL PIPE, USE THE EQUIVALENT ROUND PIPE STANDARD EASEMENT REQUIREMENT.
4. THIS DETAIL IS NOT APPLICABLE TO MD-378 POND OUTFALLS.

CHANNEL/SWALE EASEMENT WIDTH



CHANNEL / SWALE EASEMENT WIDTH

* Based on a 10-year storm and 6″ freeboard

BLOCK EASEMENT SKETCH ALONG PUBLIC R/W

To be provided later

COUNTY BOILER PLATE EASEMENT LANGUAGE

1. Storm Drain and SWM
2. Floodplain
3. Grading
4. Conservation
5. Ingress- Egress
6. Public Utility Easement (L F)

To Be Provided Later

RIGHT-OF-WAY SURVEY TRANSMITTAL

PRINCE GEORGE'S COUNTY GOVERNMENT
Department of Permitting, Inspections and Enforcement
(301) 636-2060

RIGHTS-OF-WAY SURVEY TRANSMITTAL
(for submittal and processing of easements and deeds)

Name of Project: _____ Date Submitted: _____

Name of Street: _____
(For Street Dedication)
SD #: _____ 200' Sheet No.: _____

DPIE Permit #: _____ Subdivision: _____

DPIE District Engr: _____ Lot(s): _____

Election District: _____ Block(s): _____

Tax Account #: _____ Plat Reference: _____

_____

Tax Map: _____ Tax Grid: _____

Parcel: _____

Owner/**Grantor**: _____

IMPORTANT: Provide document which confirms the organization, signatory, and title.

Signatory: _____ Title/Capacity: _____

Name, Address to where document is to be mailed for signature or instructions for method of delivery (includephone number, email address for contact):

For Signature Send to: _____ Telephone #: _____

Address: _____ Email Address: _____

City/State/Zip: _____

General:

Total Number of R/W's Included in this Submission/Transmittal:

_____ On-Site _____ Off-site _____ Total

Total Number of R/W's Transmitted (Per Grantor)

_____ Number of On-site R/W's Transmitted Herewith

_____ (Parts if Applicable)

_____ Number of Off-site R/W's Transmitted Herewith

_____ (Parts if Applicable)

NOTE: ALL RIGHTS-OF-WAY SHALL BE PROVIDED GRATIS TO PRINCE GEORGE'S COUNTY.

Submitted/Prepared By: _____

Consultant Name: _____ Contact Person: _____

SAMPLE SECURITY FORMS

1. Sample Performance Bond
2. Labor and Materials Bond
3. Bond Instruction
4. Sample Certified Release of Lien Form
5. Certified List of Contractors, Supplies, and Material man

Prince George's County
Department of Permitting, Inspections and Enforcement
Site/Road Permit Processing Unit
Performance Bond No. -PB

Case Number:

DATE: _____

for construction in Subdivision/Case Name:

KNOW ALL MEN BY THESE PRESENTS THAT :
As a condition precedent to the approval and/or issuance of the above application/permit (the "Permit"), PERMITTEE

hereby binds itself and its successors and assigns, to pay to Prince George's County, Maryland (the "County") the full amount of

dollars,

() , subject to the conditions stated below. To secure said payment, Permittee has provided the County with the following security in the full amount of this Bond:

__ **Irrevocable Letter of Credit No.** _____ **from** _____

__ **Assignment of Funds with** _____

__ **Surety Bond No.** _____

__ **Assignment of Account No.** _____ **from** _____

__ **Cash, County to hold in non-interest escrow**

__ **Certificate of Guaranty No.** _____

__ **Certificate of Deposit No.** _____ **from** _____

The condition of this Bond is that if Permittee fulfills the Requirements listed below in a manner satisfactory to the County, this Bond shall be discharged, but otherwise it shall remain in full force and effect.

1. Comply with all requirements of the Prince George's County Code, including all applicable statutes, provisions and code sections.
2. Fully perform and complete within the prescribed time limits all work under the Permit in accordance with all the requirements, specifications and standards of the Permit, which includes the application, plans and specifications as approved by the County.
3. Indemnify and save harmless the County from any expenses incurred because of non -completion of the work, any damages growing out of the performance or non-performance of the work, or any failure to pay any bills incurred by the County arising out of the work covered by the Permit.
4. Provide and maintain Security in full force and effect until all work under the Permit has been accepted by the County

If Permittee fails to satisfy any of the above Requirements, the County shall enforce this Bond and draw upon the Security for up to the full amount thereof unless Permittee promptly completes, and has accepted by the County, all work required under the Permit, or, when applicable, posts substitute Security. If the Permittee afterwards completes the work as required, the County shall return the amount of the Security less the amount of any claims, damages or costs incurred by the County in connection with this Bond.

If payment is not made within thirty (30) days, Permittee shall pay interest on the unpaid amount of the demand at the rate of ten percent (10%) per annum. If suit is filed to collect on this Bond or the Security, Permittee shall pay the costs of the collection, including attorney's fees at the rate of $60 per hour (subject to change).

SURETY _____ binds itself and its successors and assigns to pay the full amount of this Bond in accordance with and subject to the terms and conditions set forth above.

SIGNED AND SEALED on the date set forth above.

PERMITTEE:

_____
WITNESS

BY: _____
SIGNATURE AND TITLE

DATE: _____

SURETY: _____

_____
WITNESS

BY: _____
(Attorney-in-Fact)

AGENCY NAME: _____

APPROVED:

ADDRESS: _____

_____

_____
DEPARTMENT DIRECTOR

Certification/License No. _____

Counter-signed by Maryland Resident Agent
(If required by Maryland law)

_____
COUNTY ATTORNEY

_____

ACKNOWLEDGEMENT

State of _____ County of _____

On this _____ day of _____ 20_____, before me, a Notary Public of the State and County aforesaid , personally appeared _____ ,who acknowledged that he/she is the _____ of the Permittee identified in the above Bond and that being so authorized , he/she executed the above Bond for and on behalf of the Permittee.

My Commission expires: _____ _____
Notary Public

PRINCE GEORGE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
LABOR & MATERIALMAN'S BOND NO.

DPW&T

Case Number: DATE: _____

for construction in Subdivision/Case Name:

KNOW ALL MEN BY THESE PRESENTS THAT :
As a condition precedent to the approval and/or issuance of the above application/permit (the "Permit"), PERMITTEE

hereby binds itself and its successors and assigns, to pay to Prince George's County, Maryland (the "County") the full amount of dollars,

() , subject to the conditions stated below. To secure said payment, Permittee has provided the County with the following security in the full amount of this Bond:

__ **Irrevocable Letter of Credit No .** _____ **from** _____
__ **Assignment of Funds with** _____
__ **Surety Bond No.** _____
__ **Assignment of Account No.** _____ **from** _____
__ **Cash, County to hold in non-interest escrow**
__ **Certificate of Guaranty No.** _____
__ **Certificate of Deposit No.** _____ **from** _____

The condition of this Bond is that if Permittee fulfills the Requirements listed below in a manner satisfactory to the County, this Bond shall be discharged, but otherwise it shall remain in full force and effect .

1. Comply with all requirements of the Prince George's County Code, including all applicable statutes, provisions and code sections.
2. Promptly make payment to all persons supplying labor and materials, including lessors of the equipment to the extent of the fair rental value thereof, for all work under the Permit, which includes the application , plans and specifications, as approved by the County.
3. Provide and maintain Security in full force and effect until all work under the Permit has been accepted by the County and for one calendar year thereafter or until all claims against the Bond have been resolved, whichever is the later, unless the Permittee earlier provides proof satisfactory to the County of payment of all its obligations for labor and materials set forth above .
4. Indemnify the County against all costs, claims and damages asserted against or incurred by the County in connection with this Bond .

If Permittee fails to satisfy any of the above Requirements, the County shall enforce this Bond and draw upon the Security for up to the full amount thereof unless Permittee promptly provides the County substitute Security or proves to the County that Permittee has satisfied all Requirements. In making a demand under this Bond, the County shall not thereby incur any liability to satisfy the Requirements except in regard to proven claims on the Bond. Upon satisfaction or discharge of all claims under this Bond and reimbursement of any costs incurred in connection with this Bond, the County shall return any remaining funds to the Permittee .

If payment is not made within thirty (30) days, Permittee shall pay interest on the unpaid amount of the demand at the rate of ten percent (10%) per annum. If suit is filed to collect on this Bond or the Security, Permittee shall pay the costs of the collection, including attorney's fees at the rate of $60 per hour (subject to change).

SURETY_____ binds itself and its successors and assigns to pay the full amount of this Bond in accordance with and subject to the tems and conditions set forth above.

SIGNED AND SEALED on the date set forth above.

PERMITTEE:

_____
WITNESS

BY: _____
SIGNATURE AND TITLE
DATE: _____

SURETY: _____

_____
WITNESS

BY: _____
(Attorney-in-Fact)

AGENCY NAME: _____
ADDRESS: _____
_____

APPROVED:

_____
DEPARTMENT DIRECTOR

Certification/License No. _____

Counter-signed by Maryland Resident Agent
(If required by Maryland law)

_____
COUNTY ATTORNEY

_____

ACKNOWLEDGEMENT

State of _____ County of _____

On this _____ day of _____ 20_____, before me, a Notary Public of the State and County aforesaid , personally appeared _____ ,who acknowledged that he/she is the _____ of the Permittee identified in the above Bond and that being so authorized , he/she executed the above Bond for and on behalf of the Permittee.

My Commission expires: _____

_____
Notary Public

Rushern L. Baker, III
County Executive

THE PRINCE GEORGE'S COUNTY GOVERNMENT
Department of Permitting, Inspections and Enforcement
Permitting & Licensing Division

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

BOND FORM INSTRUCTIONS

GENERAL INSTRUCTIONS

1. The permittee must execute/post ALL bonds.
2. All cash bond refunds will be returned to the permittee listed on the permit.
3. Do not use white out when making corrections to the bond form. Instead, "XXXX" out and have appropriate person initial the corrections.
4. All bond forms must be originals (ie: must remain in legal size - 8 ½ x 14, must have original signatures and no alterations to the document will be permitted) and submitted in triplicate.
5. Upon completion of the bond form, bonds should be returned to the department issuing the permit and not the Office of Law.
6. Inquiries regarding whether a bond has been approved or rejected should be directed to the agency it was submitted to, not the Office of Law.

FILLING OUT THE BOND FORM

*****PLEASE read the following instructions carefully*****

As YOU, the permittee, are ultimately responsible for your bond being accepted as legally sufficient.

1. Date in upper right hand corner of bond should be filled in. This is the bond date.
2. Application/Permit Number should be listed.
3. Name of subdivision or street address must be filled in for the Department of Permitting Inspections and Enforcement (DPIE) bonds. If the bond is for the Department of Environmental Resources (DER), provide subdivision's name, the street address and, if known, city, state, and zip code.
4. In the blank that follows "Permittee", permittee's name and address must be filled in. **Remember to also indicate permittee's type of entity (e.g. owner, partnership/corporation).**
   a) If the permittee is an individual trading as a corporation, please indicate using the following form: John Doe t/a Mechanical, Inc.
   b) If the permittee is a corporation or L.L.C. with a non-Maryland address on the bond form, provide a copy of the corporation's Certificate of Authority to do business in Maryland. A copy of this certificate can be obtained from the State Department of Assessments and Taxation (SDAT) located at 301 West Preston Street,

Baltimore, MD 21201. (The telephone number is (410) 225-1340.) The certificate cannot be more than six (6) months older than the bond.

5. Dollar amount of bond must be written out and numerically listed. These two figures must agree.
6. Type of security must be checked off and filled out.
7. The permittee name must be the same as the name on the application and/or on the permittee signature line.
8. All signatures must be originals.
9. In the space provided, indicate permittee; also, affix signature and print the name of the signatory, their title, and the date signed (this date must be the same as or after the bond date). If the Permittee is a business entity, the type of entity must be clearly indicated on the form; (i.e., partnership, corporation).
    a) If permittee is a corporation, then President or Vice-President must sign. The corporation must provide documentation (such as a board resolution) that the designated officer has actual authority to bind the corporation.
    b) If permittee is a partnership, then the general or managing partner must sign.
    c) If the general/managing partner is a corporation, please indicate this fact and have the President or Vice-President sign on behalf of the corporation. In this case, the title would read, for example, "President of the General Partner X Corporation."
    d) If permittee is the owner, then the owner himself signs the bond; his title is "owner."
    e) If permittee is a limited liability company ("L.L.C."), then provide documentation to indicate that the signatory has the ability to bind the limited liability company, such as the articles of organization, Resolutions of the Members, and the operating agreement and any amendments, if any.
    f) Plus provide an original statement signed by all of the members of the L.L.C. stating that "the articles of organization and the operating agreement were entered into on blank date. That there have been no amendments – if true, if not – then state all of the amendments and the dates the amendments were passed – and that the articles of organization and that the operating agreement remain in full force and effect." This statement must be dated the bond date or after, but not before the bond date.
    g) If the Limited Liability Company submitting the bond is a subsidiary of multiple-level entities that are LLCs, applicant must provide an organization chart that discloses the ownership structure for at least three levels, if applicable, and proof that each separate entity is duly incorporated and in good standing, and proof that the declared authorized agent for each entity is vested with actual authority by all of the members of that particular entity to act on behalf of the respective LLC. If the authorizing agent of the LLC is a Corporation, applicant must provide documentation that the officer has actual authority to act on behalf of the parent corporation.
    h) If permittee is a close corporation, supply a copy of the statement of election which is in either the articles of incorporation or an amendment to the corporation's charter. The statement of election must identify the individual with actual authority to bind the corporation. The permittee's Certificate of Good Standing must also expressly reference a designation of close corporation.
10. The witness shall sign as to the permittee's signature. This Witness cannot be the same person who signs the acknowledgement.

11. Acknowledgement must be completed by a Notary Public indicating:
    a) State and County where notary is commissioned.
    b) Day, month, and year (this date must be same or later date than permittee's signature).
    c) Permittee's name and title.
    d) Notary's signature, seal, and date of commission's expiration.
12. Submit bond for the appropriate Department Director's signature at that department.

BOND TYPES

LETTER OF CREDIT

- Fill in Letter of Credit number.
- Fill in name of financial institution.
- Letter of Credit date must be prior to or the same as the bond date.
- A least one original and two copies of the Letter of Credit must be submitted.
- Bond number must be included in the Letter of Credit.
- Permit Number must be included in the Letter of Credit.
- Permittee's address must be the same on the Bond application form and the Letter of Credit.

(*Letter of Credit must be issued by a financial institution approved by the Prince George's County Office of Law and Office of Finance.* Financial institutions will prepare Letters of Credit on bank's letterhead in accordance with format and requirements previously approved by the Prince George's County Office of Law. All approved financial institutions possess copies of the appropriate format.)

ASSIGNMENT OF ACCOUNT/FUNDS

- Fill in Assignment of Account/Funds number.
- Fill in name of financial institution.
- Assignment of Account/Funds form must be dated the same date as or prior to the bond date.
- At least one original and two copies of the Assignment of Account/Funds forms must be submitted.

(See attached instructions for completion of Assignment of Account/Funds form. These forms are available upon request from the appropriate permit office.)

SURETY

- Indicate surety bond number
- Indicate surety (insurance) company in the space provided in the last paragraph on the bond form.
- Authorized attorney-in-fact must sign in space provided on the bond form and print his/her name underneath the signature. (The authorized attorney-in-fact is any of the named persons on the Power of Attorney certificate provided by your bonding company.)

- Witness must sign as to attorney-in-fact's signature.
- Agency's name, address and certifications/license number of agent must also be furnished.
- If required by Maryland law, the Maryland resident agent must sign in the space provided for counter-signature.
- Surety (Insurance) company must furnish at least one (1) original power of attorney certificate for each bond (i.e., Performance Bond and Labor & Materialman's Bond) and two (2) copies.
- Power of Attorney certificate must be dated the same as the bond date.
- Surety number must be included on the Power of Attorney certificate.
- Surety (Insurance) company must include a copy of surety's certificate of authority to do business in Maryland with each bond document. This certificate must be current and is good for one (1) year.

CASH

- Prepare the same as other bonds using instructions, Part II – 1-5 and 7-10. Items (a), (b), and (c) are not related to cash bonds. Check or money order is to be made out to Prince George's County, Maryland for the amount of the bond. Check must be from the permittee listed on the permit. If the bond amount is paid with cash, the bond will be refunded to the permittee after work is complete.

INSTRUCTIONS FOR COMPLETION OF ASSIGNMENT OF ACCOUNT/FUNDS

1. Fill in appropriate date.
2. Fill in permit number.
3. Fill in appropriate account number.
4. Fill in appropriate bond amount.
5. President or Vice-President of financial institution must sign form and indicate title.
6. Fill in bank name and address.
7. Permittee must sign form and indicate title.
8. Witness (es) must sign as to both signatures. The witness (es) cannot be the same person (s) who signs the acknowledgement.
9. Acknowledgement date must be same as assignment of account date.
10. Acknowledgement as to each individual's signature must be completed by notary public.
11. The contractor on this form means the permittee.

ASSIGNMENT OF ACCOUNT/FUNDS FUNDS FORMS ARE AVAILABLE AT PERMITS OFFICE UPON REQUEST.

PARTNERSHIPS and PERFORMANCE/LABOR BONDS

Limited Partnership (LP)

In limited partnerships (LPs), at least one of the owners is considered a "general" partner who makes business decisions and is personally liable for business debts. General or Managing Partner must sign on behalf of permittee partnership. Indicate relationship on the title line. Should general or managing partner be a corporation, please have president or vice president of corporation sign. Indicate such a relationship on title line. Provide copy of partnership agreement.

Limited Liability Partnership (LLP)

Each member of an LLP is an agent for that LLP and can bind that LLP, except in limited circumstances. LLP member must sign on behalf of permittee partnership and indicate relationship on title line. Provide copy of partnership agreement.

Rushern L. Baker, III
County Executive

THE PRINCE GEORGE'S COUNTY GOVERNMENT

Department of Permitting, Inspections and Enforcement
Permitting & Licensing Division

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CERTIFIED RELEASE OF LIENS

(PLEASE COMPLETE AND RETURN TO ADDRESS BELOW)

Re: _____ Subdivision

Permit Number: _____

Gentlemen:

This is to certify that I/we, _____,
(Name of Contractor/Supplier)

did provide the following work on the above referenced permit:

(Check Appropriate Items)

___ Excavation ___ Bituminous Base ___ Entrance Driveway

___ Sediment Control ___ Bituminous Surface ___ Storm Drainage

___ Gravel Base ___ Concrete Work ___ Landscaping

___ Other Work: _____
(describe work performed)

I/We have been paid in full and there are no outstanding claims; liens, or unpaid bills for any of the work contracted for/by _____
(Name of Permittee)

I/We hereby release and waive any and all rights, claims, liens and damages arising in any manner in connection with the project.

_____
Name of Contractor/Supplier

_____ _____
Witness Signature and Title

Date: _____ Date: _____

Rushern L. Baker, III
County Executive

THE PRINCE GEORGE'S COUNTY GOVERNMENT

Department of Permitting, Inspections and Enforcement
Permitting & Licensing Division

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CERTIFIED LIST OF CONTRACTORS, SUPPLIERS, AND MATERIALMAN

(PLEASE COMPLETE AND RETURN TO ADDRESS BELOW)

DATE: _____

PROJECT/SUBDIVISION: _____

PERMIT NUMBER: _____

PERMITTEE: _____

I/We, _____, the permittee, hereby certify that the following list is inclusive of all of the contractors, suppliers and materialmen contracted by me/us that were utilized on the above referenced project under the above referenced permit number and all have been paid in full in accordance with the terms and conditions of their contract:

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.

_____ _____
WITNESS PERMITTEE

NOTARY

SUBSCRIBED AND SWORN BEFORE ME THIS _____ DAY OF _____, 20___.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

SAMPLE CONSTRUCTION COST ESTIMATE

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT (DPIE)
APPLICATION/PERMIT FEE AND BOND CALCULATION WORKSHEET

Case Name: _____ **Case/Permit #** _____

Permit Type: SITE DEVELOPMENT - FINE GRADING **Prepared by:** MT **Date:** July 20, 2014

		FEE AMOUNTS	BOND AMOUNTS
Street Construction (Grading, SD, Paving, Etc. within the R/W) Fee	Estimated Cost = $737,319.11	Fee = 10% of Cost $73,731.91	PB = 125% of Cost **$921,648.89**
Restoration or Temporary Entrance Permit Note: Refer to Fee Schedule		$0.00	**$0.00**
On-site Grading/ Disturbed Area (Ac) Note: 0.006¢ per sf for a portion of an acre	Whole Area 9 / Partial Area 0.17	$1,638.20	PB = 12¢ per sf **$47,933.42**
	Full Permit Fee	**$75,370.11**	
Maryland-National Capital Park & Planning Commission Fee Note: Add this into the full fee on the bond cover letter		$5.00	
Street Name Signs	Number of Signs 1 Fee = $228.94/ Sign(s)	$228.94	
Special Utility fee	Administrative Fee	$300.00	
	Length of Longitudinal Cut (LF) 47	$94.00	
	Number of Lateral Cuts 0	$0.00	
	Length of Lateral Cuts > 75 (LF) 0	$0.00	
Note: $150/ lateral cut or $2/ LF if longer than 75 LF		$394.00	
SD Review Fee ($3/LF Public or $1.50/LF Private)	Public System (LF) 1413	$4,239.00	
	Private System (LF) 0	$0.00	
	TOTAL	**$4,239.00**	
Note: SD includes any pipes for SWM Pond outfalls			
	Estimated SD Construction Cost 1)	$24,807.47	
	Estimated Pond Construction Cost - **New** 2)	$0.00	
	Estimated Pond Construction Cost - **Retrofit** 3)	$0.00	
Total Cost of SD/ SWM Construction = 1) + 2) + 3)		$24,807.47	PB = 125% of Cost **$31,009.34**
SWM Fee-In-Lieu **Site Concept No.:** 44738-2005-01 Note: Refer to SWM Concept Approval letter		$6,500.00	
Street Construction Fee-In-Lieu Note: Includes Developer's Contribution			
Tree Preservation Fee Note: Refer to approved TCP-2 Plan		$0.00	$0.00
Chesapeake Bay Criteria Area (CBCA) Reforestation Fee Note: Refer to approved CBCA Plan		$0.00	$0.00
Pond Maintenance Fee	Estimated Cost of Construction $0.00	**$0.00**	
Note: 10% of construction or $10,000 minimum. No Private Facilities			
Floodplain Review Fee		$0.00	

Note: No L&M Bond required for On-site grading only
L&M equals 40% of Performance Bond if Street Construction has on-site grading
L&M equals 50% of Construction estimate if Street Construction only

Total Performance Bond (PB) **$1,000,600.00**

Labor & Materials Bond **$400,250.00**

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT (DPIE)
APPLICATION/PERMIT FEE AND BOND CALCULATION WORKSHEET

Case Name: _____ **Case/Permit #** _____

Permit Type: SITE DEVELOPMENT - FINE GRADING **Prepared by:** MT **Date:** July 20, 2014

ADDITIONAL PERMIT COMMENTS

1. SC NO.
2. Concept No.
3. Project Impervious Area = 13.3 Ac

REV. DATE: 2/4/2014

PROJECT NAME:

PREPARED BY:

Site Development Permit #

TOTAL FILING AND REVIEW FEES FOR SD & PAVING

Filing fee for Storm Drain & Paving Permit (3.3% of the cost estimate) (Sheet 2)	$24,577
Filing fee for Grading (Sheet 6)	$940
Total Fees	**$25,517**

PRINCE GEORGE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC INSPECTION AND ENFORCEMENT

COST ESTIMATE (ROW)

DATE: 02/04/2014

APPLICATION/Permit #

PROJECT NAME:

Item No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
	MISCELLANEOUS - LIGHTING				
1010	RELOCATE UTILITY POLE	4	EA	$ 15,000.00	$60,000.00
1013	STREET LIGHT COLONIAL POST	9	EA	$ 1,450.00	$13,050.00
1016	STREET LIGHT W/ CUT-OFF OPTIC LUMINAIRE ON EXISTING POLE	2	EA	$ 1,050.00	$2,100.00
	MISCELLANEOUS - SITE GENERAL				
1054	MOBILIZATION (CONSTRUCTION COST $500K-1000K)	1	LS	$ 20,000.00	$20,000.00
	REMOVALS - SITE REMEDIATION				
2101	MILL EXISTING PAVEMENT 2 INCH	839	SY	$ 5.00	$4,195.00
	SITE WORK-SITE PREPARATION				
2202	CLEAR AND GRUB HEAVY	11.09	AC	$ 11,000.00	$121,990.00
2204	FINAL GRADING (ROAD)	1.92	AC	$ 6,160.00	$11,827.20
	EARTHWORK-SITE				
2300	CUT AND FILL	3098	CY	$ 10.00	$30,980.00
2303	DITCH EXCAVATION	55	CY	$ 38.00	$2,090.00
	GRADED AGGREGATE SUBBASE (GASB)				
2704	4 INCH GRADED AGGREGATE SUBBASE (GASB) COURSE	4788	SY	$ 6.00	$28,728.00
2706	6 INCH GRADED AGGREGATE SUBBASE (GASB) COURSE	744	SY	$ 8.00	$5,952.00
	SUPERPAVE-FLEXIBLE HOX MIX ASPHALT (HMA)				
4000	1 1/2 INCH HOT MIX ASPHALT (HMA) SURFACE 9.5MM PG64-22 (FIN)	4788	SY	$ 8.00	$38,304.00
4000	1 1/2 INCH HOT MIX ASPHALT (HMA) SURFACE 9.5MM PG64-22 (INT)	4788	SY	$ 8.00	$38,304.00
4009	2 INCH HOT MIX ASPHALT (HMA) SURFACE 9.5MM PG 70-22 (FIN)	1583	SY	$ 10.00	$15,830.00
4025	2 INCH HOT MIX ASPHALT (HMA) SURFACE 12.5MM PG 70-22 (INT)	744	SY	$ 10.00	$7,440.00
4040	3 INCH HMA BASE 19MM PG64-22	4788	SY	$ 15.00	$71,820.00
4047	4 1/2 INCH HMA BASE 25MM PG64-22	744	SY	$ 23.00	$17,112.00
	STORM DRAIN-REINFORCED CONCRETE PIPE (RCP) CLASS III ROUND				
4750	15 INCH RCP CL III W/ RUBBER GASKET	152	LF	$ 44.00	$ 6,688.00
	STORM DRAIN-REINFORCED CONCRETE PIPE (RCP) CLASS IV ROUND				
4828	15 INCH RCP CL IV W/ RUBBER GASKET	187	LF	$ 60.00	$11,220.00
	STORM DRAIN-REINFORCED CONCRETE PIPE (RCP) CLASS IV ELLIPTICAL				
4933	12 INCH X 18 INCH RCP CL IV W/ RUBBER GASKET	47	LF	$ 66.00	$3,102.00
	STORM DRAIN-REINFORCED CONCRETE PIPE-ROUND-END SECTIONS				
5050	15 INCH END SECTION	52	EA	$ 380.00	$19,760.00
	STORM DRAIN - UNDERDRAINS				
5250	6 INCH PVC UNDERDRAIN	615	LF	$ 13.00	$7,991.10
	STORM DRAIN STRUCTURES - INLETS				
5708	A-10 INLET 3.0 FOOT <=3V.F	3	EA	$ 3,110.00	$9,330.00
5713	A-10 > 3.0 V.F.	2.7	VF	$ 240.00	$645.60
5783	E-INLET	1	EA	$ 3,700.00	$3,700.00
5785	K-INLET	4	EA	$ 1,800.00	$7,200.00
	CONCRETE WORK				
5870	CONCRETE CURB AND GUTTER	615	LF	$ 16.00	$9,835.20
5882	RURAL RESIDENTIAL DRIVEWAY ENTRANCE W/ PIPE - DOUBLE	26	EA	$ 2,500.00	$65,000.00
5884	CONCRETE SIDEWALK - 4 FOOT WIDE	463	LF	$ 18.00	$8,334.00
5886	CONCRETE SIDEWALK RAMP TYPE "A"	4	EA	$ 600.00	$2,400.00
	STABILIZATION				
7300	SODDING	2778	SY	$ 4.00	$11,112.00
	LANDSCAPING				
7700	DPW&T STREET TREE (SHADE TREE)	57	EA	$ 250.00	$14,250.00

PRINCE GEORGE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC INSPECTION AND ENFORCEMENT

Item No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SUBTOTAL					$670,290.10
	SEDIMENT CONTROL (10% SUBTOTAL)				$67,029.01
TOTAL					$737,319.11

ADDITIONAL		ORIGINAL	
EST. COSTS	_____	APPLICANT EST.	737,319
+ % CONTING.	_____	ESD EST. AMT.	
TOTAL COST	_____	+25.00% CONTING.	$921,649
FEE	_____	ESD TOTAL EST.	
BOND AMOUNT	_____	PREPARED BY*	
TOTAL BOND	_____	DATE*	
TOTAL FEES	_____	FILING FEE; 3.3%	$24,577
PREPARED BY*		PERMIT FEE; 10%	$73,732
DATE*			

NUMBER OF STREET SIGNS:
STREET LIGHTS WILL BE NECESSARY (Y/N)
ENGINEERING COMPANY: DEWBERRY CONSULTANTS LLC

***BY ESD (ENGINEERING SERVICES DIVISION, DPW&T)**

PGC FORM #1042 (REV. 7/93)

PRINCE GEORGE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC INSPECTION AND ENFORCEMENT

COST ESTIMATE - ON SITE GRADING (OUTSIDE ROW)

APPLICATION/Permit #

PROJECT NAME:

Item No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
	SITE WORK-SITE PREPARATION				
2206	FINAL GRADING (SLOPE - ON SITE)	9.17	AC	$ 5,227.20	$47,933.42
					$47,933.42
	SEDIMENT CONTROL (10% SUBTOTAL)				$4,793.34
TOTAL					$52,726.77

ADDITIONAL

EST. COSTS
\+ % CONTING.
TOTAL COST
FEE
BOND AMOUNT
TOTAL BOND
TOTAL FEES
PREPARED BY*
DATE*

ORIGINAL

250 APPLICANT EST. 52,727
ESD EST. AMT. _____
+25.00% CONTING. $65,908
ESD TOTAL EST. _____
PREPARED BY* _____
DATE* _____
FILING FEE; 3.3% N/A
PERMIT FEE; 10% N/A

NUMBER OF STREET SIGNS:
STREET LIGHTS WILL BE NECESSARY (Y/N)
ENGINEERING COMPANY: DEWBERRY & CONSULTANTS LLC

***BY ESD (ENGINEERING SERVICES DIVISION, DPW&T)**

PGC FORM #1042 (REV. 7/93)

PRINCE GEORGE'S COUNTY, MARYLAND
DEPARTMENT OF PUBLIC INSPECTION AND ENFORCEMENT

COST ESTIMATE - ON SITE STORM DRAIN (OUTSIDE ROW)

APPLICATION/Permit #

PROJECT NAME: '

Item No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
	STORM DRAIN-REINFORCED CONCRETE PIPE (RCP) CLASS III ROUND				
4750	15 INCH RCP CL III W/ RUBBER GASKET	412	LF	$ 44.00	$ 18,128.00
	STORM DRAIN STRUCTURES - CONCRETE ENDWALLS				
5811	ENDWALL 15 INCH RCP	3	EA	$ 930.00	$2,790.00
	STONE PROTECTION				
5900	RIP-RAP CLASS I GROUTED	7	SY	$ 95.00	$633.33
5901	RIP-RAP CLASS I UNGROUTED	20	SY	$ 50.00	$1,000.00
SUBTOTAL					$22,551.33
	SEDIMENT CONTROL (10% SUBTOTAL)				
TOTAL					$24,806.47

ADDITIONAL		ORIGINAL	
EST. COSTS	_____	APPLICANT EST.	24,806
+ % CONTING.	_____	ESD EST. AMT.	
TOTAL COST	_____	+25.00% CONTING.	$31,008
FEE	_____	ESD TOTAL EST.	
BOND AMOUNT	_____	PREPARED BY*	
TOTAL BOND	_____	DATE*	
TOTAL FEES	_____	FILING FEE; 3.3%	N/A
PREPARED BY*		PERMIT FEE; 10%	N/A
DATE*			

NUMBER OF STREET SIGNS:
STREET LIGHTS WILL BE NECESSARY (Y/N)
ENGINEERING COMPANY: DEWBERRY & CONSULTANTS LLC

***BY ESD (ENGINEERING SERVICES DIVISION, DPW&T)**

PGC FORM #1042 (REV. 7/93)

REV. DATE: 2/4/2014

PROJECT NAME:

PREPARED BY:

Site Development Permit #

REVIEW FEES FOR GRADING

Disturbed Area (ac) =	11.09
Review Fee =	$1861 + $90 x 0.09
Review Fee =	$1,869
Park & Planning Fee =	$5
Filing Fee = 1/2 Review Fee + P&P Fee =	**$940**

OFFICE OF LAW BOND REVIEW CHECKLIST

To Be Provided Later

SAMPLE ACCEPTANCE MEMORANDUM

INTER-OFFICE MEMORANDUM

PRINCE GEORGE'S COUNTY,
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT
CONSTRUCTION INSTRUCTION INSPECTION REPORT
SITE/ ROAD INSPECTIONS

Date: **July 15, 2014**

To: **James Coutourier, Chief, Permits Section**
(No Attachments)

From: **Joe D. Brown**
Chief Inspector dist. 1
301-883-5741

Thru: **Michael Reahl**
Code Enforcement Officer

Cc: **Tayman, Juanita F. (JFTayman@co.pg.md.us)**
301-883-3822
1801 McCormick Drive
Largo, MD 20774

Re:

The work performed under the referenced permit has been recommended for acceptance by the area_____. Prior to the release of the performance bond, please obtain the following from the permittee:

Partial Bond(s):

None.

SHOP DRAWING SUBMITTAL FORM

Prince George's County
Department of Permitting, Inspections and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

SHOP DRAWING REVIEW CHECKLIST

PROJECT NAME: _____ **CASE NUMBER:** _____

STRUCTURE NUMBER: _____

This checklist is to be completed by the design engineer submitting shop drawings for approval by DPIE. The precaster is to send the shop drawings with structural computations to the design engineer after plan approval, but prior to construction. The design engineer must review and approve the shop drawing dimensions per this checklist and submit two additional copies of the approved shop drawings, to the DPIE Site Road Plan Review Revision Division. This checklist must be approval by DPIE prior to fabrication of the structure.

When certifying the correctness of shop drawings for acceptance by DPIE the following (at a minimum) must be verified by the design engineer:

[ ] Interior dimensions as per the approved plan.
[ ] Wall and slab thickness as per the approved plan.
[ ] Correct size, number and placement of openings, orifices and manholes per the approved plan and any precast anchor points necessary for installation of the structure. **Coring of structures is not acceptable.**
[ ] Structural design certification and P.E. seal by preparer of shop drawing ("I hereby certify that the structural design of this structure is in accordance with applicable codes and that this structure has been designed for the specified loadings as indicated on the plan.")
[ ] The following notes are to appear on the drawing:

- Structure must be watertight.
- Annular space between pipe and hole to be filled with an approved non-shrink grout or concrete (as specified). For Stormceptor and Stormfilter, a rubber boot connection is required. Adapters are available for HDPE pipe.
- Butyl rubber to be used in all joints. All joints to be grouted with non-shrink grout, inside and out.

[ ] Structural computations sealed by preparer of shop drawings.
[ ] Anti-flotation restraints at construction joints (where applicable).
[ ] Flotation computations (if any dimensions are changed from the approved plan).
[ ] Steps (if required).
[ ] Reference on shop drawings that concrete shall meet the requirements of ACI 350, Environmental Engineering Concrete Structures, with freezing and thawing exposures. Concrete shall be a type II or IIA cement, with a 28 day compressive strength of 5,000 psi. Concrete shall also be in

conformance with the latest edition and addenda of the MSHA Standards and Specifications for Construction and Materials.

[} Other_____

Dimensional conformity with the approved permit drawings is essential. Structures with dimensions that differ from the approved drawings will be rejected. Dimensional modifications to the structure will not be allowed once the structure has been cast. It is the responsibility of the design engineer to insure the correctness of the shop drawings.

SUBMITTEDBY: _____ Firm: _____

Address: _____

Phone #: _____

Prepared By: _____ DATE: _____

CHECKLIST APPROVED BY DPIE:

NAME:_____ DATE: _____

SAMPLE CONSTRUCTION INSPECTION FORM

The latest forms are available on the DPIE website. These are for information only.

1. Preconstruction Meeting
   A. Site Grading Certification
   B. Landscape Certification
   C. Fill/Soil Certification
2. Construction Inspection Report (2 pages)
3. General Inspection Report (2 pages)
4. Notice of Violation (2 pages) 2 versions
5. Correction Order
6. Construction Completion Form
7. Inspection Checklist for Paving
8. Final Inspections Report
   A. Site Grading Certification
   B. Landscape Certification
   C. Structure Location Certification (Property Corners)
   D. Fill/Soil Certification

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

PRE-CONSTRUCTION MEETING

The objective of the Initial Meeting is to assist in better understanding the responsibilities of the Department of Permitting, Inspections and Enforcement and the responsibilities of the permittee and/or developer toward environmentally safe quality development.

a) **Erosion and Sediment Control Plan;**
b) **Woodland Conservation Plan — Type II or a letter of exemption;**
c) **Grading/Site Development Plan**

1) **CALL MISS UTILITY AT 1-800-257-7777.** Call 48 hours BEFORE beginning work and **OBTAIN approval**. Approval is good for ten (10) days and can be renewed over the phone.

2) **MANDATORY INSPECTIONS/SEQUENCE OF WORK. Very Important.** The following sequence of Inspections **ARE MANDATORY INSPECTIONS.** ***Obtain written Inspection approval prior to proceeding to each activity.***
   a) Obtain erosion and sediment control approval, Maryland-National Capital Park and Planning Commission (M-NCPPC) TCP II plan approval, and obtain DPIE permits.
   b) Pre-construction Meeting to review permits and inspect installation of TCP II.
   c) Initial meeting to inspect installation of erosion and sediment (E&S) controls. Then authorize to clear and grade.
   d) Authorization to Remove Sediment Controls — Obtain written authorization from Inspector prior to removal of any E&S controls.

   Failure to obtain these Inspections will result in Violations, Stop Work Orders, and Fines up to $1,000 per day.

3) **FOLLOW THE PLAN SEQUENCE OF CONSTRUCTION!** Observe the requirements as they relate between the Woodland Conservation Plan — Type II, the Erosion and Sediment Control Plan, and the Grading/Site Development Plan. Obtain clarification from the Site Development Inspector as to which work items can be done simultaneously, if any.

4) **ADHERE CLOSELY TO PLAN DETAILS FOR EACH EROSION AND SEDIMENT CONTROL DEVICE.** Observe all relative elevations and dimensions. Each device required should have detail in that plan.

5) **INITIAL CLEARING WORK ONLY FOR EROSION AND SEDIMENT CONTROLS.**

6) **INITIAL INSPECTION APPROVAL.** After erosion and sediment controls have been installed and stabilized, **obtain written inspections approval prior** to further grading and subsequent site development.

7) **DO NOT GO BEYOND THE APPROVED LIMITS OF DISTURBANCE!** Buffer areas, wetland/floodplain areas and tree/vegetative save areas are to be protected to prevent disturbance. If unauthorized disturbance has occurred, notify the Site Development Inspector immediately to resolve the matter. ***Note:*** It is the responsibility of the owner/ permittee to utilize the necessary resources to assure that the location of tree save areas and limits of disturbance are in full accord with the approved plans.

8) **EXCAVATIONS.** The sides of temporary excavations/trenches made for foundations, buildings and utility installations shall be protected, shored or sloped as required by regulations of the Maryland State Department of Labor and Industry. Their toll-free number in Maryland is 1-800-492-6226.

9) **STABILIZATION. Very Important.** Erosion and Sediment Controls must be stabilized within **3 days**. Areas that have been disturbed and are not actively being worked as well as areas that are on final grade must be stabilized within **7 days**. Stabilization requirements are detailed in the plan. Unless otherwise indicated, the area to be stabilized may require four inches of topsoil.

10) **KEEP STREETS, CURBS, GUTTERS, AND SIDEWALKS CLEAN AT ALL TIMES.** If mud is tracked onto a street, do not hose into any storm drain unless the storm drain outfalls into an approved erosion and sediment control device.

11) **TRANSITION FROM ROUGH GRADE TO FINAL GRADE.** Sites that are opened and mass graded under a Rough Grading Permit are required to revise the Grading Permit to a Fine Grade/Site Development Permit prior to initiating other site work such as house construction, recreational areas, athletic fields, tot-lots and hiker/biker trails or other site amenities pursuant to an approved Site Plan. Upon submitting the appropriate plans, obtaining all agency review approvals, changing the work description to "Fine Grading/Site Development," the existing Grading Permit can then be revised to include such work.

12) **SCD (EROSION & SEDIMENT CONTROL PLANS) PLANS/UPDATE & RENEWAL.** Approved SCD plans remain valid for two (2) years, (except surface mines and landfill plans which remain valid for five (5) years). It is the responsibility of the Permittee to maintain current SCD plans until Final acceptance of the permit. (Subtitle 4, Division 3, 4-299, & COMAR 26.17.01.08F.09C)

13) **MAINTENANCE OF EROSION & SEDIMENT CONTROLS/SELF-DIRECTED REPAIRS. Very Important.** Maryland State Law (COMAR 26.09.01.06) requires "responsible personnel" (*i.e.*, owner, contractor, foreman, superintendent, project engineer, etc.) who is in charge of on-site clearing and grading operations or sediment control associated with a project shall hold a current State Certificate of Training in Erosion & Sediment Control. It is further required that "Self-Directed Repairs" of on-site erosion & sediment controls be implemented by the Permittee. This person shall inspect the erosion and sediment controls on a daily basis and make self-directed repairs. Consult with the Inspector if there are any questions or necessary changes to the plans.
Failure to maintain these controls will result in Violations, Stop Work Orders, and Fines up to $1,000 per day.

14) **SEPTIC SYSTEMS. Very Important.** Sites utilizing Septic Systems must provide particular attention to the proposed limits of disturbance for septic areas. Encroachment or disturbance in these areas may result in significant delays or suspension of permit. It is the responsibility of the permittee to obtain all necessary inspections from the Health Department. Any questions regarding septic systems may be referred to the Health Department at (301) 883-7681.

15) **PERMITS/PLANS.** All work must be performed in accordance with the approved plans and completed within the time frame of the Permit. It is the responsibility of the Permittee to maintain current plans, to include all applicable revisions and permits.

16) **FILLS.** Areas receiving FILL under a grading permit, which are shown on the approved plan as supporting structures or pavement, must be properly placed and compacted as required for that class of fill and be certified by a Maryland Registered Professional Engineer. Fill must be placed in locations as noted on the approved permitted grading and/or site development plan — any changes require plan/permit revision.

17) **CERTIFICATION.** Upon completion of any or all of the following work stages — rough grading, site development, permanent fine grading and landscaping — a Certification may be required from the permittee's engineer attesting that all work (*i.e.*, grade elevations, type of fill placed, etc.) has been completed in accordance with the approved plan and the Prince George's County Code.

18) **SAFETY FENCING FOR EROSION AND SEDIMENT CONTROL DEVICES. Very Important.** Sediment traps and basins located within a densely populated area or in the proximity of an elementary school, playground or other area where small children may congregate without adult supervision, MUST be enclosed with a minimum 42-inch-high safety fence.

19) **ADDITIONAL COMMENTS:** _____

_____

_____

_____

_____

_____

I/We have personally reviewed the information contained herein.

_____

Certified Responsible Personnel for Erosion & Sediment Control *Card Number* *Date Issued*

_____ _____

Owner/Developer's Representative *Date* *Contractor's Representative* *Date*

_____

Inspector *Permit #* *SCD #* *Date*

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

TYPES OF INSPECTIONS

The inspections below are not all inclusive — other inspections may be required pursuant to permit and plan conditions, and County Code requirements.

Many Inspections are mandatory prior to proceeding with other work. Review the conditions of your permit and plan in consideration of sequence of construction. Consult with your Inspector regarding mandatory inspection requirements. FAILURE TO OBTAIN REQUISITE INSPECTIONS MAY JEOPARDIZE THE PROGRESS OF THE SITE AND RESULT IN VIOLATIONS, STOP WORK ORDERS, AND FINES UP TO $1,000 PER DAY.

PRE-CONSTRUCTION MEETING. Meeting between the owner, contractor, engineer and Inspection personnel to review the requirements and conditions as established by the Erosion/Sediment Control Plan, the Woodland Conservation Plan — Type II and the Grading/Site Development Plan along with Prince George's County policy, procedures and required inspections. ***Note:*** When the pre-construction meeting is approved, the permittee receives a written report validating the pre-construction meeting.

WOODLAND CONSERVATION PLAN — TYPE II INSPECTION. Unless otherwise agreed upon by the Inspector at the pre-construction meeting, once the permit has been obtained, the only work that may start is the placement of the tree protection devices according to the approved woodland conservation Type II plan. These tree protection devices must then be inspected and approved before the erosion and sediment controls can be installed. ***Note:*** It is the responsibility of the owner/permittee to utilize the necessary resources to assure that the location of the tree save areas and devices and the limits of disturbance are in full accord with the plans.

INITIAL SEDIMENT CONTROL INSPECTION. This occurs before any clearing of trees or grading occurs. This inspection verifies permittee has installed TCP II controls. When the initial sediment control inspection is approved, the permittee receives written authorization to install erosion and sediment controls.

ROUTINE INSPECTION. This inspection verifies compliance and performance of erosion and sediment control maintenance, site development requirements, and compliance with sequence of construction, approved permit and plans, and Prince George's County Code. Self-directed repairs of erosion and sediment controls are required of permittee. Consult with Inspector for guidance and assistance.

STORMWATER MANAGEMENT INSPECTION. The Department of Permitting, Inspections and Enforcement Management Design Manual, Chapter 10, "Inspection and Enforcement Procedures" sets forth the inspection and enforcement guidelines to be followed for inspections of stormwater management/water quality measures.

AUTHORIZATION TO REMOVE SEDIMENT CONTROLS. Written authorization to remove ANY sediment controls must be obtained from the Inspector PRIOR to removal of controls. As a general rule, a minimum 75% of the contributing drainage area must be complete and permanently stabilized to request removal of any E&S controls.

FINAL INSPECTION. When occupancy is involved, this inspection verifies that the site development is in compliance. Individual occupancies may then be recommended by the Site Development Inspection Section.

Note: For final approval and bond release of a Grading Permit and/or the Stormwater Management Permit, all grading, permanent stabilization and site development shall be 100% complete, and all required Engineer's certifications, final reports and/or "as built" plans must be approved, certifying compliance with the approved permit and plans.

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FINAL ACCEPTANCE OF SITE AND BOND RELEASE

The majority of delays associated with final acceptance of site and bond release can be avoided if the following issues are addressed prior to final inspection. This "Final Acceptance of Site and Bond Release" is NOT to be taken as a comprehensive list of permit and plan requirements and does not waive any provision thereof. REVIEW THE CONDITIONS OF THE PERMIT AND APPROVED PLANS COMPLETELY!

DRAINAGE. All graded/disturbed areas must have positive drainage. Surface runoff must discharge acceptably, *i.e.*, across no more than one adjacent lot unless an approved surface drainage easement exists to accommodate its flow into a publicly maintained drainage system, street or continuously flowing natural watercourse. Springs, seeps, or groundwater having objectionable effects must be capped and conveyed into a piped outfall to a public drainage system or continuously flowing natural watercourse.

FILLS. All Class I & II fills or other structural fill soils placed on site shall be certified by a licensed Maryland Professional Engineer certifying acceptable placement and compaction including necessary supporting documentation. The certification shall include the permit number, address of the site, and P.E. seal with registration number.

FINAL REPORT/SITE CERTIFICATION. A certification must be submitted from a licensed Maryland Professional Engineer certifying that "all grading and site development has been completed in accordance with the plans and Subtitle 4, Division 3 of the Prince George's County ordinance." The certification shall include the permit number, address of the site, and P.E. seal with registration number. The Final Report shall include any and all approved waivers.

GRADING. All grades and final elevations must be in accordance with the approved grading/site development plans and Subtitle 32, Division 3, Grading Ordinance. Any modifications must be authorized by waiver or approved revisions to the plan.

LANDSCAPING/WOODLAND CONSERVATION. All requisite landscaping, reforestation, afforestation, wetland plantings shall be completed in accordance with the approved Landscaping and/or TCP II plans, including location(s), size, type, and quantity. Any substitutions shall be approved in writing by M-NCPPC. All landscaping shall be properly labeled for Inspection. A Landscaping Certification shall be submitted by a licensed Maryland Professional Engineer, or Registered Landscape Architect certifying that all landscaping and/or reforestation work has been completed in accordance with the approved plans and that the planted material is healthy.

OTHER AGENCIES

- Chesapeake Bay Critical Area
- M-NCPPC
- Department of Public Works & Transportation
- Wetland/Floodplain
- Planning Board
- Tree Conservation
- Health Department
- State of Maryland
- Department of the Environment
- Department of Natural Resources

PARKING LOT/MAC/ADA ACCESSIBILITY REQUIREMENTS. Is the topcoat paving completed? Does the parking space layout and number of parking spaces agree with the approved plan? Are parking spaces properly sized (standard = 9.5• x 19•; compact = 8• x 16.5•; handicapped = 13• x 19• or 5• access lane with 8• parking space)? Are the handicapped signs properly installed? Are the handicapped curb cuts/ramps installed for free access? Are all other MAC/ADA accessibility requirements met?

RECREATIONAL AREAS. Have all recreational areas, *i.e.*, open play areas, tot-lots, hiker/biker trails been properly installed? Has the M-NCPPC given final inspection approval and acceptance of the recreational requirements? If yes, provide copies of written final inspection approval of all recreational areas to the inspector. If no, obtain M-NCPPC written final inspection approval.

SEDIMENT CONTROLS. All storm drain systems and outfalls (riprap, grassed waterways, etc.) must be free of sediment. All areas must be permanently stabilized to prevent erosion. All erosion and sediment controls must be removed. ***Note:*** Obtain written authorization from the inspector **BEFORE** removing any sediment control.

SITE DEVELOPMENT. Site development shall be completed in accordance with the approved plans prior to granting occupancy of any building or structure on site. Adequate and acceptable completion of recreational facilities, landscaping, parking, lighting, retaining walls, and other site work may occur with the progress of the development of any project as determined by the Director. Ensure any changes or deviations to the permit plans are approved and reflect revised plans and permits.

STABILIZATION. All areas MUST have acceptable PERMANENT STABILIZATION well established prior to final acceptance. Poor soil areas may require a minimum of 4• of acceptable topsoil. ***Note:*** Excessive weeds throughout the grass cover is **NOT** acceptable.

STORMWATER MANAGEMENT.

Typical Certifications and Reports may include:

- As-Builts
- Landscape Certification
- Maintenance Agreement
- Pipe Certification
- Engineer Certification Letter
- Release of Liens
- Structure Certifications
- Embankment Certification

TRASH/DEBRIS. All objectionable and/or waste materials (excess spoil material, dead trees, tree limbs, stumps, building trash/materials) must be removed from the site to an authorized disposal facility.

VIOLATIONS/COMPLAINTS. Any outstanding violations/complaints must be closed prior to final inspection approval and subsequent bond release.

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE GRADING CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Building Permit #: _____

This is to certify to the best of my knowledge, information and belief that all grading, drainage, erosion control facilities, landscaping, stormwater management/ water quality facilities, woodland conservation and other site work at this address have been completed in accordance with the permit, approved plans, and the Maryland–National Capital Park and Planning Commission approved detailed site, tree conservation, and landscaping plans dated (_____) and revised on (_____), except as noted.
Insert Date *Insert Date*

Exceptions:

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

LANDSCAPING CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Building Permit #: _____

This is to certify to the best of my knowledge, information and belief that all landscaping on the above-referenced site is in accordance with the permit, approved plans, and latest revision to the Maryland–National Capital Park and Planning Commission approved detailed site, tree conservation, and landscaping plans dated (_____) and revised on (_____), except as noted.
Insert Date *Insert Date*

Exceptions:

_____

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FILL/SOIL CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Permit #: _____

This is to certify to the best of my knowledge, information and belief, and based on the attached compaction test results and documentation prepared by our representatives, all Class #1 and/or Class #2 fills as delineated on the approved plans has been properly placed and compacted as required in accordance with Subtitle 32, Division 3 of the Prince George's County Code on the above referenced permit(s).

Exceptions:

_____

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

MANDATORY INSPECTIONS/SEQUENCE OF WORK.

The following sequence of inspections **ARE MANDATORY INSPECTIONS (4-290 Inspections & Supervision).**
Obtain written Inspection approval prior to proceeding to each activity.

Pre-Construction Meeting
TCP II Inspection — Installation of Tree Conservation/Protection
Initial Inspection — Installation of all required Erosion & Sediment Controls to include Stabilization
Authorization to Clear/Grade — Upon written approval of Initial Inspection, okay to enter clearing/grading phase
Authorization to Remove Sediment Controls — Obtain written authorization from Inspector prior to removal of any E&S controls

FAILURE TO OBTAIN THESE INSPECTIONS WILL RESULT IN VIOLATIONS, STOP WORK ORDERS, AND FINES UP TO $1,000 PER DAY.

FOLLOW THE PLAN SEQUENCE OF CONSTRUCTION! Observe the requirements as they relate between the Woodland Conservation Plan — Type II, the Erosion and Sediment Control Plan, Storm Drain–Stormwater Management Plan, and the Grading/Site Development Plan. Obtain clarification from the Site Development Inspector as to which work items can be done simultaneously, if any.

EROSION & SEDIMENT CONTROLS STANDARDS. Adhere closely to plan details for each erosion and sediment control device. Observe all relative methods, specifications, elevations and dimensions. Each device required should have detail in the plan. Refer to the latest edition of the *Maryland Standards and Specifications for Erosion and Sediment Control*. These are the MINIMUM requirements — **NO EXCEPTIONS.**

DO NOT GO BEYOND THE APPROVED LIMITS OF DISTURBANCE! Buffer areas, wetland/floodplain areas and tree/vegetative save areas are to be protected to prevent disturbance. If unauthorized disturbance has occurred, notify the Site Development Inspector immediately to resolve the matter. ***Note:*** It is the responsibility of the owner/permittee to utilize the necessary resources to verify the location of tree save areas and limits of disturbance are in full compliance with the approved plans.
INITIAL CLEARING WORK ONLY FOR EROSION AND SEDIMENT CONTROLS.

INITIAL INSPECTION APPROVAL. Mandatory Inspection. After erosion and sediment controls have been installed and stabilized, **obtain written inspection approval prior** to any further disturbance or grading and subsequent site development.

EXCAVATIONS. The sides of temporary excavations and trenches made for foundations, buildings and utility installations shall be protected, shored or sloped as required by regulations of the Maryland State Department of Labor and Industry. The toll-free number in Maryland is 1–800–492–6226.

STABILIZATION. Very important. Seed, Lime Fertilizer, Mulch, & Tack. Hydro-seeding or Sod.
STABILIZATION IS THE BEST DEFENSE AGAINST EROSION — AND REDUCES MAINTENANCE COSTS. Erosion and Sediment Controls must be stabilized within **3 days**. Areas that have been disturbed and are not actively being worked as well as areas that are on final grade must be stabilized within **7 days**. Stabilization requirements are detailed in the plan. Unless otherwise indicated, areas to be stabilized shall require four inches of topsoil and other soil amendments as necessary. Refer to Stabilization Notes and Details on Plans.

KEEP STREETS, CURBS, GUTTERS, AND SIDEWALKS CLEAN AT ALL TIMES. If mud is tracked onto a street, do not hose into any storm drain unless the storm drain outfalls into an approved erosion and sediment control device. Sediment tracked onto streets is subject to immediate issuance of a civil citation up to $1,000 per day.

TRANSITION FROM ROUGH GRADE TO FINAL GRADE. Sites that are opened and mass graded under a Rough Grading Permit are required to revise the Grading Permit to a Fine Grade/Site Development Permit prior to initiating other site work such as house construction, recreational areas, athletic fields, tot-lots and hiker/biker trails or other site amenities pursuant to an approved Site Plan.

SCD (EROSION & SEDIMENT CONTROL PLANS) PLANS/UPDATE & RENEWAL. Approved SCD plans remain valid for two (2) years, (except surface mines and landfill plans, which remain valid for five (5) years). It is the responsibility of the Permittee to maintain current SCD plans until Final acceptance of the permit. (Subtitle 4, Division 3, 4-299, & COMAR 26.17.01.08F.09C)

MAINTENANCE OF EROSION & SEDIMENT CONTROLS/SELF-DIRECTED REPAIRS. Very Important. Maryland State Law (COMAR 26.09.01.06) requires "responsible personnel" (*i.e.*, owner, contractor, foreman, superintendent, project engineer, etc.) who is in charge of on-site clearing and grading operations or sediment control associated with a project shall hold a current State Certificate of Training in Erosion & Sediment Control. It is further required that "Self-Directed Repairs" of on-site erosion & sediment controls be implemented by the Permittee. This person shall inspect the erosion and sediment controls on a daily basis and make self-directed repairs in accordance with the approved plans and specifications. Consult with the Inspector if there are any questions or necessary changes to the plans.
FAILURE TO MAINTAIN E&S CONTROLS WILL RESULT IN VIOLATIONS, STOP WORK ORDERS, AND FINES UP TO $1,000 PER DAY.

SEPTIC SYSTEMS. Very Important. Sites utilizing Septic Systems must pay particular attention to the proposed limits of disturbance of septic areas. Encroachment or disturbance in these areas may result in significant delays or suspension of permit. It is the responsibility of the permittee to obtain all necessary inspections from the Health Department. Any questions regarding septic systems may be referred to the Health Department at (301) 883–7681.

PERMITS/PLANS. All work must be performed in accordance with the approved plans, Code, Standards and Specifications, and completed within the time frame of the Permit. It is the responsibility of the Permittee to maintain current plans, to include all applicable revisions and permits.

FILLS. Areas receiving FILL under a grading permit, which are shown on the approved plan as supporting structures or pavement, must be properly placed and compacted as required for that class of fill and be certified by a Maryland Registered Professional Engineer. Fill must be placed in locations as noted on the approved permitted grading and/or site development plan — any changes require plan/permit revision.

CERTIFICATIONS & REPORTS. ***Certifications shall be signed and sealed by a Maryland Registered Professional Engineer.***
Any work requiring Certification and/or Reports pursuant to Code and/or at the discretion of the Director shall be submitted within thirty (30) days of completion, including but not limited to: Fills, Grading, Storm Drain & SWM Systems, Pipes, Structures, Embankment/Core Trench, Anti-Seep Collars, Concrete, Retaining Structures, Reforestation, CBCA, Landscaping ADA/Handicap, and Site Development. Certifications shall attest that all work has been completed in accordance with the approved plan, specifications, and the Prince George's County Code.

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DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

GENERAL INSPECTION REPORT

Site: _____ Inspector: _____ Date: _____

Permit #: _____ Expires: _____ ☐ Revision ☐ Renewal ☐ Required

SCD #: _____ Expires: _____ ☐ Revision ☐ Renewal ☐ Required

Notified Owner: _____ Contractor: _____ Other: _____

Inspection Type: ☐ Pre-Construction ☐ Initial ☐ Complaint ☐ Meeting ☐ Routine ☐ Follow-up

Responsible Party On Site: ☐ Yes ☐ No **Site Activity:** ☐ Clearing ☐ Grading ☐ Site Work ☐ SWM ☐ Utilities ☐ Bldg. ☐ Road Const.

COMMENTS: _____

All items in non-compliance must be repaired in accordance with all applicable codes, standards, specifications, and the approved plans by the compliance date shown. Failure to comply may result in any or all of the following actions being taken on this site:

ENFORCEMENT ACTION TAKEN: ☐ **Violation Notice** ☐ **Stop Work Order** ☐ **Civil Citation/Amount: $** _____

Compliance Date: _____ **Extended From:** _____

_____ _____

Permittee Representative Signature *Date*

MANDATORY INSPECTIONS/SEQUENCE OF WORK.

The following sequence of inspections **ARE MANDATORY INSPECTIONS (4-290 Inspections & Supervision).**
Obtain written Inspection approval prior to proceeding to each activity.

Pre-Construction Meeting — Obtain Permit
TCP II Inspection — Installation of Tree Conservation/Protection
Initial Inspection — Installation of all required Erosion & Sediment Controls to include Stabilization
Authorization to Clear/Grade — Upon written approval of Initial Inspection, okay to enter clearing/grading phase
Authorization to Remove Sediment Controls — Obtain written authorization from Inspector prior to removal of any E&S controls

FAILURE TO OBTAIN THESE INSPECTIONS WILL RESULT IN VIOLATIONS, STOP WORK ORDERS, AND FINES UP TO $1,000 PER DAY.

FOLLOW THE PLAN SEQUENCE OF CONSTRUCTION! Observe the requirements as they relate between the Woodland Conservation Plan — Type II, the Erosion and Sediment Control Plan, Storm Drain–Stormwater Management Plan, and the Grading/Site Development Plan. Obtain clarification from the Site Development Inspector as to which work items can be done simultaneously, if any.

EROSION & SEDIMENT CONTROLS STANDARDS. Adhere closely to plan details for each erosion and sediment control device. Observe all relative methods, specifications, elevations and dimensions. Each device required should have detail in the plan. Refer to the latest edition of the *Maryland Standards and Specifications for Erosion and Sediment Control*. These are the MINIMUM requirements — **NO EXCEPTIONS.**

DO NOT GO BEYOND THE APPROVED LIMITS OF DISTURBANCE! Buffer areas, wetland/floodplain areas and tree/vegetative save areas are to be protected to prevent disturbance. If unauthorized disturbance has occurred, notify the Site Development Inspector immediately to resolve the matter. ***Note:*** It is the responsibility of the owner/permittee to utilize the necessary resources to verify the location of tree save areas and to ensure limits of disturbance are in full compliance with the approved plans.
INITIAL CLEARING WORK ONLY FOR EROSION AND SEDIMENT CONTROLS.

INITIAL INSPECTION APPROVAL. Mandatory Inspection. After erosion and sediment controls have been installed and stabilized, **obtain written inspection approval prior** to any further disturbance or grading and subsequent site development.

EXCAVATIONS. The sides of temporary excavations and trenches made for foundations, buildings and utility installations shall be protected, shored or sloped as required by regulations of the Maryland State Department of Labor and Industry. The toll-free number in Maryland is 1–800–492–6226.

STABILIZATION. Very important. Seed, Lime Fertilizer, Mulch, & Tack. Hydro-seeding or Sod.
STABILIZATION IS THE BEST DEFENSE AGAINST EROSION — AND REDUCES MAINTENANCE COSTS. Erosion and Sediment Controls must be stabilized within **3 days**. Areas that have been disturbed and are not actively being worked as well as areas that are on final grade must be stabilized within **7 days**. Stabilization requirements are detailed in the plan. Unless otherwise indicated, areas to be stabilized shall require four inches of topsoil and other soil amendments as necessary. Refer to Stabilization Notes and Details on Plans.

KEEP STREETS, CURBS, GUTTERS, AND SIDEWALKS CLEAN AT ALL TIMES. If mud is tracked onto a street, do not hose into any storm drain unless the storm drain outfalls into an approved erosion and sediment control device. Sediment tracked onto streets is subject to immediate issuance of a civil citation up to $1,000 per day.

TRANSITION FROM ROUGH GRADE TO FINAL GRADE. Sites that are opened and mass graded under a Rough Grading Permit are required to revise the GradingPermit to a Fine Grade/Site Development Permit prior to initiating other site work such as house construction, recreational areas, athletic fields, tot-lots and hiker/biker trails or other site amenities pursuant to an approved Site Plan.

SCD (EROSION & SEDIMENT CONTROL PLANS) PLANS/UPDATE & RENEWAL. Approved SCD plans remain valid for two (2) years, (except surface mines and landfill plans, which remain valid for five (5) years). It is the responsibility of the Permittee to maintain current SCD plans until Final acceptance of the permit. (Subtitle 4, Division 3, 4-299, & COMAR 26.17.01.08F.09C)

MAINTENANCE OF EROSION & SEDIMENT CONTROLS/SELF-DIRECTED REPAIRS. Very Important. Maryland State Law (COMAR 26.09.01.06) requires "responsible personnel" (*i.e.*, owner, contractor, foreman, superintendent, project engineer, etc.) who is in charge of on-site clearing and grading operations or sediment control associated with a project shall hold a current State Certificate of Training in Erosion & Sediment Control. It is further required that "Self-Directed Repairs" of on-site erosion & sediment controls be implemented by the Permittee. This person shall inspect the erosion and sediment controls on a daily basis and make self-directed repairs in accordance with the approved plans and specifications. Consult with the Inspector if there are any questions or necessary changes to the plans. **FAILURE TO MAINTAIN E&S CONTROLS WILL RESULT IN VIOLATIONS, STOP WORK ORDERS, AND FINES UP TO $1,000 PER DAY.**

SEPTIC SYSTEMS. Very Important. Sites utilizing Septic Systems must pay particular attention to the proposed limits of disturbance of septic areas. Encroachment or disturbance in these areas may result in significant delays or suspension of permit. It is the responsibility of the permittee to obtain all necessary inspections from the Health Department. Any questions regarding septic systems may be referred to the Health Department at (301) 883–7681.

PERMITS/PLANS. All work must be performed in accordance with the approved plans, Code, Standards and Specifications, and completed within the time frame of the Permit. It is the responsibility of the Permittee to maintain current plans, to include all applicable revisions and permits.

FILLS. Areas receiving FILL under a grading permit, which are shown on the approved plan as supporting structures or pavement, must be properly placed and compacted as required for that class of fill and be certified by a Maryland Registered Professional Engineer. Fill must be placed in locations as noted on the approved permitted grading and/or site development plan — any changes require plan/permit revision.

CERTIFICATIONS & REPORTS. ***Certifications shall be signed and sealed by a Maryland Registered Professional Engineer.***
Any work requiring Certification and/or Reports pursuant to Code and/or at the discretion of the Director shall be submitted within thirty (30) days of completion, including but not limited to: Fills, Grading, Storm Drain & SWM Systems, Pipes, Structures, Embankment/Core Trench, Anti-Seep Collars, Concrete, Retaining Structures, Reforestation, CBCA, Landscaping ADA/Handicap, and Site Development. Certifications shall attest that all work has been completed in accordance with the approved plan, specifications, and the Prince George's County Code.

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

NOTICE OF VIOLATION

LOCATION OF VIOLATION: _____ Date: _____

Lot/Liber: _____ Block/Folio: _____ S.C.D. #: _____ Permit #: _____

Subdivision: _____ Tax Map #: _____

Owner: _____ Phone: _____

Address: _____
Street *City* *State* *ZIP Code*

Contractor: _____ Phone: _____

Address: _____
Street *City* *State* *ZIP Code*

I have inspected this site, and I have found the following violation(s) of county ordinances and/or approved plans and specifications as checked:

CODE SECTION & TITLE:

_____
_____
_____
_____
_____
_____
_____
_____
_____

You are hereby notified to comply with the provisions of the law and to correct the deficiencies on or before:

_____
Date of Compliance

CORRECTIVE ACTION REQUIRED

_____
_____
_____
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_____
_____

Failure to fully comply with the above listed violation(s) by the compliance date shall be cause for the ***OFFICE OF LAW to schedule for LITIGATION***. Failure to comply with those violations involving the GRADING, DRAINAGE AND EROSION Ordinance may result in the issuance of a "CIVIL CITATION" that will subject you to a FINE of $250.00 or more for each day that any violation continues.

_____
Signature of Issuing Inspector

_____
Signature of Person Notified/Owner — Date

_____
Signature of Person Notified/Contractor — Date

Office — Original Responsible Party — Yellow Inspector — Pink

RIGHT OF APPEAL

Grading, Drainage and Erosion Ordinance

An APPEAL of a violation notice of the Grading, Drainage and Erosion Ordinance claiming the true intent of the Ordinance has been misconstrued must be filed WITHIN **FIVE (5) DAYS** OF THE RECEIPT OF THE NOTICE.

General Building Code

An APPEAL of a violation notice of the General Building Code claiming the true intent of the Code has been misconstrued must be filed WITHIN **THIRTY (30) DAYS** OF THE RECEIPT OF THE NOTICE.

The above APPEALS must be filed with the BOARD OF APPEALS for Prince George's County, County Administration Building, 14741 Governor Oden Bowie Drive, Room 2173, Upper Marlboro, Maryland 20772. Please call (301) 952–3220 for information.

Electrical Code

An APPEAL of a violation of the Electrical Code claiming the true intent of the Code has been misconstrued or inappropriately applied must be filed with the Electrical Code Official, Department of Permitting, Inspections and Enforcement, WITHIN **THIRTY (30) DAYS** FROM THE RECEIPT OF THE NOTICE. The second step in the electrical appeal procedure is the Board of Registration for Master Electricians and Electrical Contractors and must be filed WITHIN **TEN (10) WORKING DAYS** from the date of the Chief Electrical Inspector's decision.

Stop Work Order

An APPEAL of a Stop Work Order may be made to the Code Official WITHIN **TWENTY-FOUR (24) HOURS** as specified in accordance with Prince George's County Codes and Basic Building Codes.

FOR YOUR INFORMATION

Violation Penalties

Any person, firm, association, partnership, or corporation, or combination thereof, who shall violate a provision of the Basic Code, or of this Subtitle, or fail to comply with any of the requirements thereof, or violate a lawful order issued thereunder, or who shall erect, construct, alter, or repair a building or structure in violation of an approved plan or directive of the Building Official, or of a permit or certificate issued under the provisions of the Basic Code, shall be guilty of a misdemeanor punishable by a fine of not more than one thousand ($1,000.00) dollars per day or by imprisonment for six (6) months, or by both fine and imprisonment. Each day that a violation continues shall be deemed a separate offense, in accordance with Prince George's County Codes and Basic Building Codes.

Investigation Fee

For information on Investigation Fees, please call (301) 883–3820.

Questions

If you have any questions concerning this notice, contact this office at (301) 883–3820 or the issuing inspector at the number on this notice.

REQUESTS FOR EXTENSION OF COMPLIANCE DATE OR WAIVER

All requests for extensions or waiver must be made in writing to the Code Official, Department of Permitting, Inspections and Enforcement, 1801 McCormick Drive, Suite 120, Largo, Maryland 20774. Reasons for request and time needed for compliance must be specified.

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

NOTICE OF VIOLATION

Date: _____

Owner/Permittee: _____ Phone: _____

Address: _____ City: _____ State: _____ ZIP: _____

Contractor: _____ Phone: _____

Address: _____ City: _____ State: _____ ZIP: _____

Name of Project: _____ Tax Map: _____

Location of Violation: _____ City: _____

Lot/Liber: _____ Block/Folio: _____ SCD #: _____ Permit #: _____

The following violation(s) of the County Code Subtitle 32, Divisions 2, 3, 4, 5 and 6; Subtitle 23, Divisions 1, 2, 3, 4, 5 or COMAR were found as a result of an inspection at the address referenced above.

❑ **Subtitle 28/28-261.** Civil Citation issued in the amount of $_____.

CODE SECTION/TITLE CORRECTIVE ACTION REQUIRED: _____

Compliance Date: _____

Failure to implement the above listed corrective actions by the compliance date may be cause for: (1) a penalty to be assessed against you per Section 23-107 of the County Code; (2) the performance of the necessary corrective work by the Department, with the cost of this work to be billed to you; (3) the forwarding of the matter to the OFFICE of LAW for prosecution. Where the non-compliant work is performed under a valid permit from the County, a Stop Work Order will be issued to the permittee for failure to implement the corrective measures within the time frame specified in this Notice of Violation. Violations involving GRADING, DRAINAGE, EROSION CONTROL and STORMWATER MANAGEMENT ordinances may result in the issuance of a civil citation subjecting you to a FINE of $250.00 or more for each day the violation continues. Section 28-253.

_____ _____

Issuing Inspector *Person Notified — Owner/Permittee/Contractor* *Date*

_____

I.D. # *Inspector Telephone #*

Office — Original Responsible Party — Yellow Inspector — Pink

RIGHT OF APPEAL — Subtitle 23, Divisions 1, 2, 3,4 and 5:

Roads and Sidewalks Ordinance

Under County Code Section 23-108, the right to appeal this Notice of Violation is as follows:

"(a) Prior to the commencement of any appeal, any person aggrieved, with the exception of a person aggrieved under Section 23-117(a), shall, within fifteen (15) days of a decision, action, or nonaction by an authorized representative of the Department, make known in writing the basis of his/her complaint to the individual responsible for the decision, action, or nonaction, together with a request for review. If a satisfactory resolution cannot be reached within fifteen (15) days of the receipt of the written complaint, the person aggrieved may request a review of the decision by the next higher level of authority (Division Chief, Associate Director, Director).

(b) Any person may file an appeal to the Board of Administrative Appeals within thirty (30) days (except for a Notice of Violation which shall require the appeal to be filed within fifteen (15) days) after the resolution period provided for in Subsection (a), above, or within thirty (30) days after the expiration of a thirty (30) day period allowed for such resolution. No appeal (with the exception of a Notice of Violation) shall be considered by the Board of Administrative Appeals until the person aggrieved has obtained a decision by the Director, or the thirty (30) day period for resolution has passed without such decision."

RIGHT OF APPEAL — Subtitle 32, Divisions 2 and 4:

Floodplain Ordinance — Subtitle 32, Division 2–Section 4-264

An APPEAL of a Violation Notice of the Floodplain Ordinance claiming the true intent of the Ordinance has been misconstrued must be filed WITHIN TEN (10) DAYS OF RECEIPT OF THIS NOTICE.

Stormwater Management Ordinance — Subtitle 32, Division 4–Section 4-339

An APPEAL of a violation notice of the Stormwater Management Ordinance claiming the true intent of the Ordinance has been misconstrued must be filed WITHIN TEN (10) DAYS OF RECEIPT OF THE NOTICE.

The above APPEALS must be filed with the BOARD OF APPEALS for Prince George's County, County Administration Building, 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772. Please call (301) 952–3220 for information.

Stop Work Order

An APPEAL of a STOP WORK ORDER may be made to the Director or his/her designee within twenty-four (24) hours as specified in accordance with Prince George's County Code and Basic Codes.

If you have any questions concerning this notice, contact this office at (301) 883–3820 or the issuing Inspector at the number on this notice.

REQUESTS FOR EXTENSION OF COMPLIANCE — Subtitle 32, Division 3:

Grading, Drainage & Erosion Control

All requests for time extensions must be made in writing to the Associate Director, Inspections Division, Department of Permitting, Inspections and Enforcement, 1801 McCormick Drive, Suite 120, Largo, Maryland 20774. Detailed reason(s) for the waiver or request for time extension must be specified.

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 • FAX: (301) 883-3873

CORRECTION ORDER

Address: _____

Permit #: _____ Date: _____

Type of Inspection: _____

The discrepancies listed below require correction in order to pass inspection.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

☐ Reinspection Fee $_____

☐ Special Investigation Fee $_____

(Please note this may not be a complete listing.)

For inspection requests, call our Automated Inspection Request/Information System (AIRIS) at (301) 883-5390.

Inspector: _____
(Signature & ID #)

Phone #: _____
(Between 7:00 a.m. and 9:00 a.m. only)

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
Stormwater Management
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

CONSTRUCTION COMPLETION FORM

Name of Project: _____ Date Completed: _____

_____ DPIE Permit No.: _____

Project No.: _____ CIP No.: _____

Location of Project: _____

_____

Owner or Agency
Responsible for Maintenance: _____

DESCRIPTION OF SITE
Type of Development (*i.e.*, ¼ Acre Residential, Commercial, Industrial, etc.):

_____

STORMWATER MANAGEMENT PRACTICE(S):
(Check Appropriate Practice(s) Constructed and List Quantity)

- ❑ On-Site Facility
- ❑ Off-Site Facility
- ❑ Infiltration Practices
  - ❑ Infiltration Basin
  - ❑ Trench
  - ❑ Dry Well
  - ❑ Porous Pavement
  - ❑ Vegetated Swale
- ❑ Oil/Grit Separator
- ❑ Retention Basin
- ❑ Extended Detention Basin
- ❑ Detention Basin
- ❑ Underground Detention
- ❑ Storm Drain
- ❑ "As-Built" Plan on File
- ❑ Letter of Certification on File

❑ Other *(Specify Type on Additional Sheet if Necessary)*: _____

_____

_____

_____

_____
Signature

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

INSPECTOR'S CHECKLIST FOR PAVING

Name of Project: _____ Permit #: _____

Paving Contractor/Asphalt Producer: _____ / _____ Plant Location: _____

(Fill the check boxes with "Yes," "No," or "N/A." If "No," explain under "Comments.")

Before Paving:

- ☐ 1. Ensure that asphalt contractors and producers are all on the approved lists provided annually by our Lab.
- ☐ 2. Remind Contractor to implement paving Policy and Procedures received from you in the pre-construction meeting.
- ☐ 3. Verify that grade is true to County approved cross section and alignment. Subgrade soil has to be free of ruts, contamination, excess dust, stone larger than 3 inches, mud, frozen materials, and recycled materials.
- ☐ 4. Witness and approve of Proof-rolling but not many days before paving, as approvals expire if it rains.
- ☐ 5. Before paving, subgrade has to be still firmly compacted, unaffected by weather or construction traffic.
- ☐ 6. Unless otherwise specified, subbase material must be CR-6 stone mix with 6• typical compacted thickness.
- ☐ 7. Before tack-coating, the existing HMA course must be free of puddled water, milling debris, defects, and trash.
- ☐ 8. Before applying tack-coat, utilities must be sufficiently raised to allow for the approved HMA thickness.
- ☐ 9. Tack must be applied thinly but evenly on existing course and all vertical edges (joints, curbs, utility edges).
- ☐ 10. Ensure that a Technician with current Certification and copies of our Policy & Procedures is on site before paving starts.

During Paving:

- ☐ 1. Observe arriving loads for proper mix size, minimal segregation, consistent color, and being tarp-covered.
- ☐ 2. Collect and check asphalt delivery tickets for correct information (project name, mix ID, tonnage, time, etc.).
- ☐ 3. Check HMA temperature while being loaded into the paver, and/or behind the roller, after its first pass.
- ☐ 4. Paver to maintain correct line, grade, and cross slope; and to minimize automatic controls adjustment.
- ☐ 5. Paver to maintain calculated speed that minimizes its stop/start movements without depleting its hopper.
- ☐ 6. Rolling to be as continuous as possible, and at a consistent "walking speed" during all compaction stages.
- ☐ 7. Paving equipment and vehicles should be adequate & sufficient for the weather and the job, and leakage free.
- ☐ 8. Joints should be tight and **FLUSH** with adjacent surfaces. Longitudinal joints to be overlapped per MD SHA.
- ☐ 9. Mat should have uniform appearance, free of visible marks and defects, except for a line along longitudinal joints.
- ☐ 10. Technician must call Inspector prior to core cutting & box sampling so Inspector can witness it, if available.
- ☐ 11. Contractor must cut QA cores for the County Inspector on site, and cores for his own mandatory QC testing.
- ☐ 12. Contractors must provide 5 cores/mix/day with noted locations unless otherwise instructed by Inspector.
- ☐ 13. QA cores shall come with Cores Lab-Analysis form, and behind-t-paver box samples with a HMA-1 form.
- ☐ 14. Document on CTR & your report: weather conditions, suspicious rollers' type/size, and other issues.

COMMENTS:

_____

_____

_____

This is to certify that suspected asphalt/paving problems were tactfully conveyed to Contractor's Foreman for his cooperation, then to the District Engineer and Lab Engineer at _____a.m./p.m. of the day of paving when Contractor failed/refused to make adjustments that may correct, prevent, or reduce such problems.

_____ _____

Inspector's Name *Date*

Prince George's County
Department of Permitting, Inspections and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DPIE
DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FINAL INSPECTION REPORT

Site:_____ Inspector:_____ Date:_____

Permit #:_____ Expires:_____ ❑ Revision ❑ Renewal ❑ Required

SCD #:_____ Expires:_____ ❑ Revision ❑ Renewal ❑ Required

M-NCPPC Site Plan #:_____ Type: ❑ SP ❑ DSP ❑ SDP ❑ Revision ❑ Renewal ❑ Required

Notified Owner:_____ Contractor:_____ Other:_____

Inspection Type: ❑ Meeting ❑ Routine ❑ Final ❑ Partial Final ❑ Follow-up

Responsible Party On Site: ❑ Yes ❑ No **Site Activity:** ❑ Clearing ❑ Grading ❑ Site Work ❑ SWM ❑ Utilities ❑ Bldg. ❑ Road Const.

SITE WORK TYPE	APPROVED			CERTIFICATIONS	OBTAINED	
Grading/Positive Drainage	❑ Yes	❑ No	❑ N/A	Site Certification	❑ Yes	❑ No
Permanent Stabilization	❑ Yes	❑ No	❑ N/A	Fill Certification	❑ Yes	❑ No
Landscaping	❑ Yes	❑ No	❑ N/A	Landscape Certification	❑ Yes	❑ No
Retaining Walls	❑ Yes	❑ No	❑ N/A	Retaining Wall Certification	❑ Yes	❑ No
Stormwater Management	❑ Yes	❑ No	❑ N/A	Structure Certification	❑ Yes	❑ No
Parking Lot(s)	❑ Yes	❑ No	❑ N/A	SWM Certification	❑ Yes	❑ No
Lighting	❑ Yes	❑ No	❑ N/A	SWM As-Built Approval	❑ Yes	❑ No
Recreational Areas	❑ Yes	❑ No	❑ N/A	Pipe Certification	❑ Yes	❑ No
Handicap Requirements	❑ Yes	❑ No	❑ N/A	Core/Embankment Certification	❑ Yes	❑ No
Street Signs	❑ Yes	❑ No	❑ N/A	Operation Manual	❑ Yes	❑ No
Street Trees	❑ Yes	❑ No	❑ N/A	Property Corner Certification	❑ Yes	❑ No
TCP II Area(s)	❑ Yes	❑ No	❑ N/A	Proof of Payment	❑ Yes	❑ No
CBCA Protection Area(s)	❑ Yes	❑ No	❑ N/A	Pepco/Street Lights	❑ Yes	❑ No
Other_____	❑ Yes	❑ No	❑ N/A	M-NCPPC Approval	❑ Yes	❑ No

NOTE: **All work completed requiring certification, must be submitted within 30 days of completion, including but not limited to:**

❑ Fills ❑ Pipe ❑ Structure ❑ Embankment/Core ❑ Anti-Seep Collar
❑ Landscaping ❑ Site ❑ ADA Requirements ❑ Retaining Walls

❑ **FINAL REJECTED:** ***Items checked above must be complete prior to final inspection approval.***

❑ Inspector has no objection to the DPIE Building Inspector issuing a Temporary Occupancy for Units:

_____

FINAL INSPECTION APPROVAL REGARDING SEDIMENT CONTROLS <u>ONLY</u>. All areas have permanent stabilization. Final grades, landscaping, other site development building permit final and bond release are the responsibility of the DPIE Building Inspector regarding site development, final grades, landscaping, permanent stabilization, grading permit final and bond release.

COMMENTS:_____

_____

_____

_____

_____

All items in non-compliance must be repaired in accordance with all applicable codes, standards, specifications, and the approved plans by the compliance date shown. Failure to comply may result in any or all of the following actions being taken on this site:

ENFORCEMENT ACTION TAKEN: ❑ **Violation Notice** ❑ **Stop Work Order** ❑ **Civil Citation/Amount: $**_____

Compliance Date:_____ **Extended From:**_____

_____ _____

Permittee Representative Signature *Date*

FINAL ACCEPTANCE OF SITE AND BOND RELEASE.

NOTE: All Certifications, Reports, and As-Builts must be submitted within thirty (30) days of performance of work.

The majority of delays associated with final acceptance of site and bond release can be avoided if the following issues are addressed **prior** to final inspection. This "Memorandum of Understanding for Final Acceptance of Site and Bond Release" is **NOT** to be taken as a comprehensive list of permit and plan requirements and does **NOT** waive any provision thereof. **Review the conditions of the permit and approved plans completely!**

DRAINAGE. All graded/disturbed areas must have positive drainage. Surface runoff must discharge acceptably, *i.e.*, across no more than one adjacent lot unless an approved surface drainage easement exists to accommodate its flow into a publicly maintained drainage system, street or continuously flowing natural watercourse. Springs, seeps, or groundwater having objectionable effects must be capped and conveyed into a piped outfall to a public drainage system or continuously flowing natural watercourse.

FILLS. All Class I & II fills or other structural fill soils placed on site shall be certified by a licensed Maryland Professional Engineer certifying acceptable placement and compaction including necessary supporting documentation. The certification shall include the permit number, address of the site, and P.E. seal with registration number.

FINAL REPORT/SITE CERTIFICATION. A certification must be submitted from a licensed Maryland Professional Engineer certifying, "all grading and site development has been completed in accordance with the plans and Subtitle 4, Division 3 of the Prince George's County ordinance." The certification shall include the permit number, address of the site, and P.E. seal with registration number. The Final Report shall include any and all approved waivers.

GRADING. All grades and final elevations must be in accordance with the approved Grading/Site Development Plans and Subtitle 4, Division 3, Grading Ordinance. Any modifications must be authorized by waiver or approved revisions to the plan.

LANDSCAPING/WOODLAND CONSERVATION. All requisite landscaping, reforestation, afforestation, and wetland plantings shall be completed in accordance with the approved Landscaping and/or TCP II plans, including location(s), size, type and quantity. Any substitutions shall be approved in writing by M–NCPPC. All landscaping shall be properly labeled for inspection. A Landscaping Certification shall be submitted by a licensed Maryland Professional Engineer.

STREETS, LIGHTING & PARKING LOT/MAC/ADA ACCESSIBILITY REQUIREMENTS. Are all lighting and surface pavings completed? Does the parking space layout and number of parking spaces agree with the approved plan? Are parking spaces properly sized (standard = 9.5• x 19•; compact = 8• x 16.5•; handicapped = 13• x 19• or 5• access lane with 8• parking space)? Are the handicapped signs properly installed? Are the handicapped curb cuts/ramps installed for free access? Are all other MAC/ADA accessibility requirements met?

RECREATIONAL AREAS. Have all recreational areas, *i.e.*, open play areas, tot-lots, hiker/biker trails been properly installed? Has the M–NCPPC given final inspection approval and acceptance of the recreational requirements? If yes, provide copies of written final inspection approval of all recreational areas to the inspector. If no, obtain M–NCPPC written final inspection approval.

REQUIRED REVISIONS TO PERMIT/PLANS. All plans and permits must reflect current and approved information. Any deviations from the plans must be approved through a waiver or appropriate plan revision. This applies to all plans and permits associated with the project, to include permit revisions/upgrades to incorporate the Site Development Plan, the Stormwater Management Plan, the Landscaping Plan, and others.

SEDIMENT CONTROLS. All storm drain systems and outfalls (rip rap, grassed waterways, etc.) must be free of sediment. All areas must be permanently stabilized to prevent erosion. All erosion and sediment controls must be removed. ***NOTE:*** **Obtain written authorization from the Inspector BEFORE removing any sediment controls.**

SITE DEVELOPMENT. Site Development shall be completed in accordance with the approved plans prior to granting occupancy of any building or structure on site. Adequate and acceptable completion of recreational facilities, landscaping, parking, lighting, retaining walls, and other site work may occur with the progress of the development of any project as determined by the Director. Ensure any changes or deviations to the permit plans are approved and reflected on revised plans and permits.

STABILIZATION. All areas MUST have acceptable PERMANENT STABILIZATION well established prior to final acceptance. Poor soil areas may require a minimum of 4• of acceptable topsoil. ***NOTE:*** **Excessive weeds throughout the grass cover is NOT acceptable.**

STORMWATER MANAGEMENT. Refer to the approved plans and *Prince George's County Stormwater Management Design Manual* for Final Acceptance requirements on SWM facilities. Typical certifications and reports may include: _____

NOTE: **All Certifications, Reports, and As-Builts must be submitted within thirty (30) days of performance of work.**

TRASH/DEBRIS. All objectionable and/or waste materials (excess spoil material, dead trees, tree limbs, stumps, building trash/materials) must be removed from the site to an authorized disposal facility.

TREE SAVE AREAS/LIMITS OF DISTURBANCE. All tree save areas and limits of disturbance must be adhered to per the approved plan. Any deviations from the approved limits of disturbance must be reflected via approved plan revisions.

VIOLATIONS/COMPLAINTS. Any outstanding violations/complaints must be closed prior to final inspection approval and subsequent bond release.

Prince George's County
Department of Permitting, Inspections
and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

SITE GRADING CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Building Permit #: _____

This is to certify to the best of my knowledge, information and belief that all grading, drainage, erosion control facilities, landscaping, stormwater management/ water quality facilities, woodland conservation and other site work at this address have been completed in accordance with the permit, approved plans, and the Maryland–National Capital Park and Planning Commission approved detailed site, tree conservation, and landscaping plans dated (_____) and revised on (_____), except as noted.

Insert Date *Insert Date*

Exceptions:

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

Prince George's County
Department of Permitting, Inspections
and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

LANDSCAPING CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Building Permit #: _____

This is to certify to the best of my knowledge, information and belief that all landscaping on the above-referenced site is in accordance with the permit, approved plans, and latest revision to the Maryland–National Capital Park and Planning Commission approved detailed site, tree conservation, and landscaping plans dated (_____) and revised on (_____), except as noted.
Insert Date *Insert Date*

Exceptions:

_____

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

Prince George's County
Department of Permitting, Inspections
and Enforcement
INSPECTIONS DIVISION
1801 McCormick Drive, Suite 120
Largo, Maryland 20774
(301) 883-3820 ♦ FAX: (301) 883-3873

DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

STRUCTURE LOCATION CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Building Permit #: _____

This is to certify to the best of my knowledge, information and belief that all property corner markers have been set in accordance with Section 24-120 of the Prince George's County Subdivision Code with regard to the above-referenced permit and that the structure(s) on said lot are in compliance with the permit, approved plans, and the Maryland–National Capital Park and Planning Commission approved detailed site, tree conservation, and landscaping plans dated (_____) and revised on (_____), except as noted.
Insert Date *Insert Date*

Exceptions:

_____

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

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DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT

FILL/SOIL CERTIFICATION

Job Address: _____

Lot: _____ Block: _____

Permit #: _____

This is to certify to the best of my knowledge, information and belief, and based on the attached compaction test results and documentation prepared by our representatives, all Class #1 and/or Class #2 fills as delineated on the approved plans has been properly placed and compacted as required in accordance with Subtitle 32, Division 3 of the Prince George's County Code on the above referenced permit(s).

Exceptions:

_____

_____

_____

_____

_____
Signature

SEAL

_____
Print Name

_____
Date

CONSTRUCTION INSPECTION FLOW CHART

To Be Provided Later

SAMPLE PUNCHLIST

TO BE PROVIDED LATER

CONSTRUCTION INSPECTION CHECKLISTS

A-1	Green Roofs
A-2	Permeable Pavements
A-3	Reinforced Turf
F-1	Surface Sand Filter (Mostly Montgomery County
F-2	Underground Sand Filter
F-3	Perimeter Sand Filter
F-4	Organic Filter
F-5	Pocket Sand Filter
F-6	Bioretention
I-1	Infiltration Trench
M-1	Rainwater Harvesting
M-2	Submerged Gravel Wetlands
M-3	Landscape Infiltration
M-4	Infiltration Berms
M-5	Dry Wells
M-6	Micro-Bioretention
M-7	Rain Gardens
M-8	Swales
M-9	Enhanced Filters
N-1	Disconnection of Rooftop Runoff
N-2	Disconnection of Non-Rooftop Runoff
N-3	Sheet flow to Conservation Areas
P Series	MD-378 Ponds
W-1	Shallow Wetland
W-2	ED Shallow Wetland
W-3	Pond/Wetland System
W-4	Pocket Wetland
Z-1	Underground SWM
Z-2	Hydrodynamic Structures
Z-3	Oil Grit Separators
Z-4	Storm Drain

Prince George's County
Department of Permitting, Inspections
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SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

GREENROOF CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps listed below must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		
1. The Third Party Inspector (TPIP) or similar shall verify the roof structure, membrame, drainage system is properly installed before proceeding with media installation.		
2. The soil media, depth, and dimensions matches plan.		
3. Plant material conforms to approved plans.		

For SWM Certification Only.

Total area of Green Roof installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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PERMEABLE PAVEMENT CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390).The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps listed below must be verified by either the DPE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Contributing drainage area is stabilized.		
2. Excavation to subgrade of permeable pavement conforms to approved plans.		
3. Scarify or till the bottom to a depth of 3-4"		
4. Install geo-textile fabric, if required by plan		
5. Placement of any drainage or distribution systems and observation well conforms to approved plans.		
6. Placement of backfilling stone sub base, sand, and gravel conforms to approved plans. Compact using vibratory roller.		
7. Placement of surface permeable paving material conforms to approved plans.		
8. Final inspection of grading and permanent stabilization conforms to approved plans.		

Total area of Permeable Paving installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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REINFORCED TURF CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Mandatory Notification: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours 'notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps listed below must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		
1. Contributing drainage area is stabilized.		
2. Excavation to subgrade of permeable pavement site disturbance and subgrade soil compaction conforms to approved plans.		
3. Scarify or till the bottom to a depth of 3-4"		
4. Install geo-textile fabric, if required by plan		
5. Placement of any drainage or distribution systems and observation well conforms to approved plans.		
6. Placement of backfilling stone sub base, sand, and gravel conforms to approved plans.		
7. Placement of surface material conforms to approved plans.		
8. Final inspection of grading and permanent stabilizations conforms to approved plans.		

Total area of Reinforced Turf installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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SURFACE SAND FILTER CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

NOTE: PLANS SUBMITTED WITHOUT A COMPLETED CHECKLIST MAY BE RETURNED WITHOUT REVIEW.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390).The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee and the completed form submitted with the as-built drawings.		
1. Clearing, grubbing and subgrade preparation.		
2. Core trench excavation and dewatering core trench installation with dimensions, location, backfill, and compaction testing.		
3. Construction of berm including lifts, compaction tests, and soil material, if required.		
4. Underdrain location, observation well(s) and/or cleanouts, pipe size, filter cloth, gravel, and field adjustments to materials.		
5. Installation of sand and/or any additional geotextiles required.**		
6. Installation of top soil, stone, and geotextiles, if required.**		
7. Installation of principal spillway riser and/or trash racks, if required.		
8. Channelization work and outlet protection, if required. Permanent vegetative stabilization.		
9. Unblock any storm drain draining to facility with DPIE inspector's written approval. Install any necessary trash racks with flow splitter structures.		
10. Final inspection and material delivery tickets provided to inspector.		
Notes: ** Installation of an impermeable protective cover may be required by the County Inspector upon completion of filter media placement.		

Total number of Surface Sand Filter(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

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ORGANIC FILTER CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved workEach of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee and the completed form submitted with the as-built drawings..		
1. Clearing, grubbing and subgrade preparation.		
2. Core trench excavation and dewatering core trench installation with dimensions, location, backfill, and compaction testing.		
3. Construction of berm including lifts, compaction tests, and soil material, if required.		
4. Underdrain location, observation well(s) and/or cleanouts, pipe size, filter cloth, gravel, and field adjustments to materials.		
5. Installation of sand and/or any additional geotextiles required.**		
6. Installation of top soil, stone, and geotextiles, if required.**		
7. Installation of principal spillway riser and/or trash racks, if required.		
8. Channelization work and outlet protection, if required. Permanent vegetative stabilization.		
9. Unblock any storm drain draining to facility with DPIE inspector's written approval. Install any necessary trash racks with flow splitter structures.		
10. Final inspection and material delivery tickets provided to inspector.		
Notes: 1 .** Installation of an impermeable protective cover may be required by the County Inspector upon completion of filter media placement.		

Total number of Organic Filter(s) installed for this inspection:_____

- ❖ Required inspection by DPIE Site/Road Inspector.

Date Issued: July 26, 2014

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SITE/ROAD PLAN REVIEW DIVISION
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POCKET SAND FILTER CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee and the completed form submitted with the as-built drawings.		
1. Clearing, grubbing and subgrade preparation.		
2. Core trench excavation and dewatering core trench installation with dimensions, location, backfill, and compaction testing.		
3. Construction of berm including lifts, compaction tests, and soil material, if required.		
4. Underdrain location, observation well(s) and/or cleanouts, pipe size, filter cloth, gravel, and field adjustments to materials.		
5. Installation of sand and/or any additional geotextiles required.**		
6. Installation of top soil, stone, and geotextiles, if required.**		
7. Installation of principal spillway riser and/or trash racks, if required.		
8. Channelization work and outlet protection, if required. Permanent vegetative stabilization.		
9. Unblock any storm drain draining to facility with DPIE inspector's written approval. Install any necessary trash racks with flow splitter structures.		
10. Final inspection and material delivery tickets provided to inspector.		
Notes: ** Installation of an impermeable protective cover may be required by the County Inspector upon completion of filter media placement.		

Total number of Pocket Sand Filter(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

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RAINWATER HARVESTING CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps listed below must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		
1. Excavation conforms to plan, if applicable.		
2. Placement of support base per plan.		
3. Distribution system installed per plan.		
4. All pipes from roof are directed to device		
5. Mosquito screens and overflow device installed.		
6. Test of distribution system per specifications and code requirements.		

Total number of Cistern(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Date Issued: July 26, 2014

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SUBMERGED GRAVEL WETLAND CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Mandatory Notification: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation to subgrade conforms to approved plans.		
2. Wetland construction within an access of wetland construction shall be performed with lightweight, wide tracked equipment to minimize disturbance and compaction. Excavated materials shall be placed in a contained area. Any pumping operations shall discharge filtered water to a stable outlet.		
3. Placement of backfill of perforated inlet pipe and observation well conforms to approved plans.		
4. Placement of geotextile, filter fabric, and backfilling of filter media, sand and gravel conforms to approved plans.		
5. Construction of any appurtenant conveyance systems such as diversion structures, inlets, outlets, and flow distribution structures conforms to approved plans.		
6. Final inspection of grading and establishment of permanent stabilization conform to approved plans.		

Total number of Submerged Gravel Wetland(s) installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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LANDSCAPE INFILTRATION CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps listed below must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation to subgrade conforms to approved plans.		
2. Placement of filter fabric, backfilling of sand, gravel, observation well, and soil filter media conforms to approved plans.		
3. Construction of appurtenant conveyance structures conforms to approved plans.		
4. Final inspection of grading and establishment of permanent stabilization and landscape installation conforms to approved plans.		

Total number of Landscape Infiltration Device(s) installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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INFILTRATION BERM CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Mandatory Notification: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation to subgrade and soil compaction conforms to approved plans.		
2. Placement of backfilling of sand, gravel, and soil media conforms to approved plans.		
3. Final inspection of grading and establishment of permanent stabilization, verify landscape installation conforms to approved plans.		

Total length of Infiltration Berm installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

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DRY WELL CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns.		
1. Excavation to subgrade for Dry Well and verify size conforms to approved plans.		
2. Placement of geotextile fabric, sand, gravel, pipe distribution system, and observation well conforms to approved plans.		
3. Connecting pipes, including connection to downspout, constructed per the approved plans.		
4. Installation of final cover gravel surface to be completely covered with backfill and top soil.		
5. Final inspection of grading and permanent stabilization conforms to approved plans.		

Total number of Dry Well(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

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MICRO BIORETENTION/BIORETENTION CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation for micro bioretention facility conforms to approved plans.		
2. Placement of stone backfill and underdrain distribution system, observation well and cleanout conforms to approved plans.		
3. Placement of sand, gravel, and soil filter media and installation of filter fabric conforms to approved plans.		
4. Connecting pipes, and/or grading conveyance to the facility constructed per the approved plans.		
5. Final inspection of grading mulch and permanent stabilization and landscape installation conforms to approved plans.		

Total number of Micro Bioretention facilities installed for this inspection:_____sf

❖ Required inspection by DPIE Site/Road Inspector.

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RAIN GARDENS CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390).The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation to subgrade of rain garden facility.		
2. Placement of soil filter media conforms to approved plans. If poor soils are encountered beneath the rain garden, a 4-inch layer of washed gravel (¼ to ¾ -inch gravel preferred) may be used below the planting soil mix.		
3. Final inspection of grading and establishment of permanent stabilization and landscape installation conforms to approved plans.		
4. Connecting pipes, and/or grading conveyance to the facility constructed per the approved plans.		
5. Final inspection of grading mulch and permanent stabilization and landscape installation conforms to approved plans.		

Total number of Rain Garden(s) installed for this inspection:_____sf

Required inspection by DPIE Site/Road Inspector.

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SWALE CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Mandatory Notification: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Excavation to swale subgrade conforms to approved plans.		
2. Placement of underdrains and installation of observation well, cleanout, check dams, or weirs conform to approved plans.		
3. Placement of backfill of sand, gravel and soil, if applicable.		
4. Installation of final cover surface to be completely covered with backfill and top soil.		
5. Final inspection of grading and permanent stabilization conforms to approved plans.		

Total length of Swale(s) installed for this inspection:_____lf

Required inspection by DPIE Site/Road Inspector.

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301.636.2060 ◆ FAX: 301.925.8510

DISCONNECT ROOFTOP & NON ROOFTOP CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		

NON-ROOFTOP DISCONNECTION

"The constructed Non-Rooftop Disconnection(s) meet the conditions specified on the approved plans."

_____ _____
Permittee Signature Date

ROOFTOP DISCONNECTION

"The constructed Rooftop Disconnection(s) meet the conditions specified on the approved plans."

_____ _____
Permittee Signature Date

Total number of Disconnect Rooftop or Non Rooftop installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Prince George's County
Department of Permitting, Inspections and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

SHEET FLOW TO CONSERVATION AREA CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Mandatory Notification: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee on their assigns and their assign.		
1. Site disturbance, tilling, and conservation area is clearly marked in the field prior to commencement of grading on the site conforms to approved plan.		
2. Final inspection of grading and stabilization to which conform to approved plans.		

Total length of Sheet Flow installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Prince George's County
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and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

MD-378 POND INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		
1. Pre-construction meeting & field review of tree save flagging/tree protection		
2. Sediment control installation including dewatering and stream diversion		
3. Clearing, grubbing, subgrade preparation		
4. Core trench excavation and dewatering, if required. Core trench dimensions, location, backfill and compaction tests		
5. Construction of principal spillway and riser with Barrel class (ASTM C361), Pipe certification from supplier, Pipe assembled in place on acceptable subgrade with watertight joints, articulated joint 4 feet from riser, with proper lifts, compaction, soil material, location, and dimensions.		
6. Concrete cradle dimensions, concrete strength tests, anti-seep collars (location, collar dimensions and re-bar size), concrete strength tests, riser footing subgrade and dimensions. Filter diaphragm gradation and dimensions (if applicable)		

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MD-378 POND INSPECTION CHECKLIST

7a. Precast Riser Shop drawings approved by Design Consultant, accepted by County, visual inspection of riser (no cracks, spalling, exposed steel, incorrect dimensions, honeycombing, certification from supplier, watertight joints, and wall and opening dimensions per plan. 7b. Cast-In-Place Riser: Wall and opening dimensions per plan, re-bar size, number, spacing acceptable, concrete testing and certification, watertight joints, extreme weather provisions.		
8. Valve/orifice plate installation. Note: may be delayed for Sediment Control purposes.		
9. Backfilling of principal spillway		
10. Underdrain (if applicable) location, pipe size, filter cloth, gravel, field adjustments		
11. Pond channelization work and pond outfall protection		
12. Diversion of stream through principal spillway		
13. Construction of embankment, lifts, compaction, soil material, location, and dimensions		
14. Construction of emergency spillway in cut		
15. Permanent vegetative stabilization, delivery tickets from supplier		
16. Other items. (Set valve(s) to design opening values, if required)		
17. Final inspection		

Total number of Pond(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

NOTES:

- Permittee to supply Design Engineer with delivery tickets for all materials used in Pond construction, for submission with the as-built package.
- See construction specifications this plan for detailed requirements.
- A copy of this completed checklist must be submitted as part of the stormwater management as-built package.

Date Issued: July 17, 2014

Prince George's County
Department of Permitting, Inspections
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SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

SHALLOW WETLANDS CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee and the completed form submitted with the as-built drawings..		
1. Clearing, grubbing and subgrade preparation.		
2. Core trench excavation and dewatering core trench installation with dimensions, location, backfill, and compaction testing.		
3. Construction of berm including lifts, compaction tests, and soil material, if required.		
4. Underdrain location, observation well(s) and/or cleanouts, pipe size, filter cloth, gravel, and field adjustments to materials.		
5. Installation of sand and/or any additional geotextiles required.**		
6. Installation of top soil, stone, and geotextiles, if required.**		
7. Installation of principal spillway riser and/or trash racks, if required.		
8. Channelization work and outlet protection, if required. Permanent vegetative stabilization.		
9. Unblock any storm drain draining to facility with DPIE inspector's written approval. Install any necessary trash racks with flow splitter structures.		
10. Final inspection and material delivery tickets provided to inspector.		
Notes: ** Installation of an impermeable protective cover may be required by the County Inspector upon completion of filter media placement.		

Total number of Shallow Wetland(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Date Issued: July 26, 2014

Prince George's County
Department of Permitting, Inspections
and Enforcement
SITE/ROAD PLAN REVIEW DIVISION
9400 Peppercorn Place
Largo, Maryland 20774
301.636.2060 ◆ FAX: 301.925.8510

POCKET WETLANDS CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee and the completed form submitted with the as-built drawings..		
1. Clearing, grubbing and subgrade preparation.		
2. Core trench excavation and dewatering core trench installation with dimensions, location, backfill, and compaction testing.		
3. Construction of berm including lifts, compaction tests, and soil material, if required.		
4. Underdrain location, observation well(s) and/or cleanouts, pipe size, filter cloth, gravel, and field adjustments to materials.		
5. Installation of sand and/or any additional geotextiles required.**		
6. Installation of top soil, stone, and geotextiles, if required.**		
7. Installation of principal spillway riser and/or trash racks, if required.		
8. Channelization work and outlet protection, if required. Permanent vegetative stabilization.		
9. Unblock any storm drain draining to facility with DPIE inspector's written approval. Install any necessary trash racks with flow splitter structures.		
10. Final inspection and material delivery tickets provided to inspector.		
Notes: ** Installation of an impermeable protective cover may be required by the County Inspector upon completion of filter media placement.		

Total number of Pocket Wetland(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Prince George's County
Department of Permitting, Inspections and Enforcement
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UNDERGROUND SWM CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work.. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		
1. Excavation for stormwater management structure (GEO).		
2. Install stormwater management control structure/storage structure and associated storm drainage.		
3. Backfilling of drainage structure (GEO).		
4. Installation of stormdrain inlet protection or blocking on all inlets draining to structure which may receive silt-laden runoff.		
5. Installation of final compacted cover and grade.		
6. Stabilize drainage area to stormwater management structure and temporary blocking.		
7. Removal of sediment and construction debris from structure.		
8. Final Inspection.		
Notes: 1. Permittee to supply Design Engineer with delivery tickets for all materials used in SM structure construction. 2. See construction specifications for detailed requirements. 3. A copy of this completed checklist must be submitted as part of the stormwater management as-built package.		

❖ Required inspection by DPIE Site/Road Inspector.

Prince George's County
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HYDRODYNAMIC SEPARATOR CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPIE Site/Road Inspector and/or the Permittee.		

Total number of Hydrodynamic Separator(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

Prince George's County
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OIL GRIT SEPARATOR CONSTRUCTION INSPECTION CHECKLIST

This checklist serves as a guide for permittee and DPIE Site/Road Inspector to review construction progress verify acceptance before acceptance of device.

Site/Project Name: _____ Date: _____

Field Engineer: _____ Permittee: _____

Permit No:_____ Structure Number: _____

DESCRIPTION OF STAGE	DPIE	PERMITTEE
Preconstruction Meeting: Inspection and approval of each practice is required at these points prior to proceeding with the next step of construction. Contact the DPIE Site/Road Inspector with twenty-four (24) hours' notice (DPIE telephone: 301-883-3820 or the automated inspection request system at 301-883-5390). The DPIE Site/Road Inspector may waive an inspection and allow the permittee per a prior written scheduled arrangement. Work completed without DPIE approval may result in the permittee having to remove and reconstruct the unapproved work. Each of the steps must be verified by either the DPE Site/Road Inspector and/or the Permittee.		

Total number of Oil Grit Separator(s) installed for this inspection:_____

❖ Required inspection by DPIE Site/Road Inspector.

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