

GREENCASTLE WOODS

BALLINGER DRIVE (MCDEP ASSET # 11541)

STORMWATER MANAGEMENT POND RETROFIT

COLESVILLE (5th) ELECTION DISTRICT MONTGOMERY COUNTY, MARYLAND

Notes:
A. Sediment controls may be added, deleted, or field adjusted by the MCDEP Sediment Control Inspector at any time.
B. For all stakeouts involving grading of any kind, contractor to provide Owner and Engineer with cut sheet a minimum of 72 hours in advance of grading.

- Preconstruction**
- Prior to clearing of trees, installing sediment control measures, grading, or any other land disturbing activities, a preconstruction meeting must be conducted on-site with the:
 - Montgomery County Department of Permitting Services (MCDEP) Sediment Control Inspector (240) 777-6210 (48 hours' notice)
 - MCDEP Right of Way Inspector (240) 777-6210 (48 hours' notice)
 - M-NCPPC Forest Conservation Inspector (301) 495-4581 (48 hours' notice)
 - Owner's representative (240) 777-7772 (5 days' notice)
 - Engineer (301) 434-7000 (5 days' notice)

The limits of disturbance must be field-marked prior to holding the preconstruction meeting.

- Sediment Control Installation**
- Clear and grade for installation of sediment control devices only
 - Install sediment control devices.
 - Once the sediment control devices are installed, the contractor must obtain written approval from the MCDEP inspector before proceeding with any additional clearing, grubbing, or grading.

Pond Dredging

- Note:**
- Temporary 36" H.D.P.E. diversion pipe is to be provided by the Owner. The Contractor shall pick up the pipe at the Owner's storage site and return to the same site at the end of the project. The contractor shall provide the necessary fittings to provide lateral diversion pipes and join to the main diversion as shown on the plan.
 - Remove the existing fences as required for the project.
 - Completely dewater the pond. All water must be pumped through the portable sediment tank installed per plan and appropriate sized for the pump used. Maintain watertight connections on the entire dewatering system at all times.
 - Once the pond is completely dewatered, install downstream diversion wall.
 - Install temporary 36" H.D.P.E. diversion pipe and both storm drain lateral pipes from downstream to upstream as shown on plan.
 - Install upstream diversion wall at upstream end of the pond.
 - Grade the basin based on the final design contours.
 - Grade the safety benches.

Clay Liner Installation

- Notes:**
- Items 12-15 to be done under supervision of the professional geotechnical engineer of record.
 - This work can be done concurrently with item 16-23.
 - Excavate embankment for installation of clay-liner and cut-off trench.
 - Install the clay-liner per the installation notes on the plans.
 - Backfill the clay-liner in compacted lifts per MD-378 guidelines.
 - Complete bench grading and install wave protection stone.

Riser Structure Modifications

- Note:**
- Items 18-19 to be done under supervision of the professional geotechnical engineer of record.
 - All reinforcement & formwork is to be inspected by the geotechnical engineer of record prior to closing forms.
 - Forms shall not be removed for seven days after pour.
 - All hot & cold weather concreting should be done as required per ACI-308 & 306 (respectively latest revision).
 - Prior to riser construction, a pre-pour meeting should be held on site with the owner's representative, Engineer-in-charge, Geotechnical Engineer, General Contractor and Concrete Contractor.
 - Carefully remove existing trash racks.
 - Complete selective demolition of riser per details on sheet STR-2.
 - Install the formwork and reinforcement for modifications to the riser structure as shown on the plans (Sheet STR-2). All formwork and reinforcement is to be checked by the geotechnical engineer of record prior to closing the forms.
 - Pour the concrete for the riser structure modifications. Forms should not be removed from the riser until the concrete reaches its 7 day design strength.
 - Install new trash racks on riser.
 - Install pond drain intake.
 - Lubricate and Exercise the drain valve.
 - Install riser steps.
 - Install Bulkhead at downstream end of 21" CMP.
 - Grout 21" CMP.
 - Once all dredged material is removed from the site, the riser is modified, and with the written approval of the MCDEP Sediment Control Inspector, remove the temporary dewatering area.
 - Once riser modifications are complete, remove downstream diversion walls and temporary diversion pipe.

Forebay Grading and Excavation

- Note:**
- During relocation of 36" HDPE, clean water pump around may be required.
 - Grade the proposed forebay within the limits shown.
 - Relocate temporary 36" HDPE diversion pipes as necessary to accomplish dredging/excavating operations.
 - Install Armoring on forebay spillway.
 - Following completion of the facility retrofit, remove the diversion walls and temporary diversion pipes.
 - Remove upstream diversion wall and diversion pipe.

Downstream Slope and Outfall Grading

- Note:**
- Items 33-40 can be done at any time after item 4 with permission of the MCDEP Sediment Control Inspector.
 - Excavate downstream embankment for installation of the filter diaphragm and toe-drain pipes.
 - Install filter diaphragm and toe-drain pipes in excavated embankment per installation notes (see sheet SWM-6).
 - Backfill filter diaphragm excavation to finished grade.
 - Re-grade slope to its final contours.
 - Install abutment drainage swale.
 - Install riprap within the limits shown.
 - Re-establish Plunge Pool as shown on the plan.
 - Install riprap within limits shown.

Miscellaneous Repairs and Modifications

- Install safety fencing.
- Install all landscaping.
- Permanently seed and stabilize the limits of disturbance.

Project Closeout

- Obtain a punch list inspection from the Owner, Engineer, and MCDEP Sediment Control Inspector.
 - Address all punch list items to the satisfaction of the Owner, Engineer, and MCDEP sediment control inspector.
 - Hold a final inspection with the Owner and Engineer.
 - Obtain written approval from the MCDEP Sediment Control Inspector to remove all sediment control devices.
- Engineer to complete as-built survey and obtain approval of as-built drawings and final report within 60 days of completion of final inspection by MCDEP.

ENGINEER'S CERTIFICATION

I CERTIFY THAT THIS DESIGN PLAN FOR THE CONSTRUCTION OF THE EMBANKMENT AND/OR OF THE SITE, AND WAS DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOIL CONSERVATION DISTRICT - MARYLAND STANDARDS AND SPECIFICATIONS FOR PONDS (MD-578). I HAVE REVIEWED THIS PLAN WITH THE OWNER/DEVELOPER.

Signature: *Jeffrey B. Bliss* Maryland License #32457

Name (Printed): JEFFREY B. BLISS Date: 05-20-2015

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Water Management Administration • Dam Safety Division
1800 Washington Blvd., Suite 440 • Baltimore, MD 21230-1708
Phone: (410) 537-5338 or 1-800-633-6101 ext.5338 • FAX: (410) 537-5353

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

January 28, 2014

Craig Carson
Montgomery County DEP
255 Rockville Pike, Suite 120
Rockville, MD 20850

Project: Ballinger Drive SWM Pond
WMA No: 13-XP-0074
Agency Interest (AI): 140281
County: Montgomery
Tracking No: 201360682

Dear Mr. Carson:

Your application was forwarded to the Dam Safety Division by the Regulatory Services Coordination Office because the project includes construction, alteration, or repair of a pond. Typically, the construction or repair of a pond requires a permit to be issued by the Dam Safety Division pursuant to Annotated Code of Maryland, Environment Article § 5-503.

However, the statute allows an exemption to this process for certain small ponds, provided that minimum criteria found in Environment Article § 5-503(b) are satisfied. Under the exemption, the plans may be reviewed and approved by the local Soil Conservation District (SCD). The exemption criteria include:

- Drainage area to the pond is less than 640 acres; and
- Embankment height (top of dam to the upstream toe) is not greater than 20 feet; and
- The pond is a low hazard (class 'a') structure whose failure will not likely cause loss of life or property damage.

The dam hazard classification study submitted with your application classifies the dam as "low hazard." Therefore, the Dam Safety Division is exempting this project from the Dam Safety permit requirements. You may elect to have your pond plans processed through the local SCD.

This Small Pond Exemption does not relieve you from the requirement of obtaining any other necessary State or U.S. Army Corps of Engineers permits. Your application may have also been forwarded to the MDEE Non-Tidal Wetlands and Waterways Division and the U.S. Army Corps of Engineers for review. You will be contacted directly by those agencies which have regulatory authority over your project.

Please be advised that we intend to close this file. Please notify us within 4 weeks if you decide not to pursue approval at the local SCD, or do not notify for the exemption due to a higher hazard classification ('b' or 'c') of the pond.

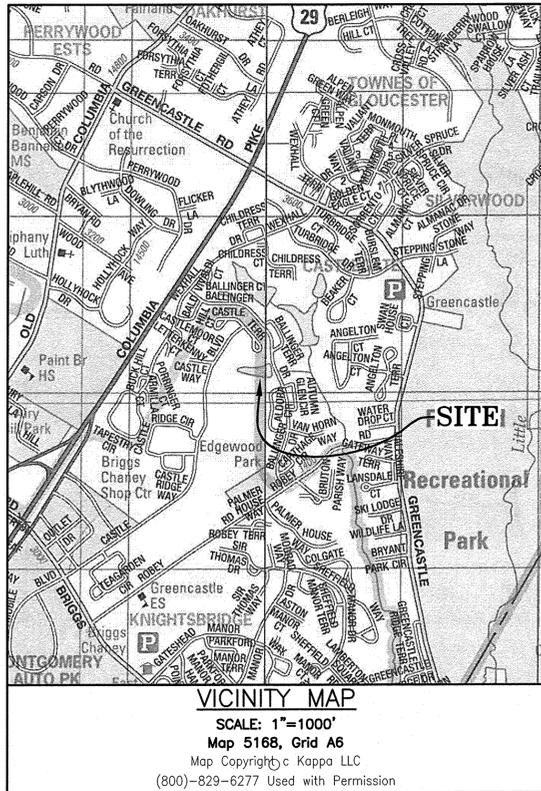
Should you have any questions, feel free to call Mr. Visty Dalal of my staff at (410) 537-3453.

Sincerely,

Brian S. Clevenger

Brian S. Clevenger
Program Manager
Sediment, Stormwater, and Dam Safety Program

cc: Engineer (Jeff Bliss, Charles P. Johnson & Associates, Inc.)
MDE Wetlands and Waterways Program
Montgomery SCD



TRAVERSE CHART

BENCHMARK	NORTHING	EASTING	ELEV.	DESCRIPTION
1	517821.9950	1330229.7350	379.08	REBAR & CAP FOUND (JMT)
2	517597.6490	1330358.2470	383.01	REBAR & CAP FOUND (JMT)
3	517869.4650	1330368.0810	376.84	REBAR & CAP FOUND (JMT)

MS4 INFORMATION TABLE (MCDEP ASSET NO. 11541)

PARAMETER	REQUIRED	UNIT	PROVIDED
D.A.	100.10	AC	100.10
IMP. D.A.	28.15	AC	28.15
CPv	5.33	AC-Ft	---
WQv	2.53	AC-Ft	5.58
1 YEAR Q	3.09	CFS	34.35

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M.File No.		MCDEP APPROVAL DOES NOT NEGATE THE NEED OF A MCDEP ACCESS PERMIT.



DEPARTMENT OF PERMITTING SERVICES
June 4, 2013
Diane R. Schwartz Jones
Director

Isiah Leggett
County Executive

Mr. Jeff Bliss, P.E.
Charles P. Johnson & Associates
1751 Elton Road, Suite 300
Silver Spring, MD 20903

Re: Stormwater Management CONCEPT Request for Ballinger Drive SWM Pond Retrofit # 11541
Preliminary Plan #: N/A
SM File #: 252515
Tract/Sheet/Zone: 16, 74R-90
Total Concept Area: 3.1ac
Lots/Block: N/A
Parcel(s): B/C, G
Watershed: Little Paint Branch

Dear Mr. Bliss:

Based on a review by the Department of Permitting Services (DPS) Review Staff, the stormwater management concept for the above mentioned site is acceptable. The stormwater management concept consists of retrofitting an existing stormwater management structure to achieve what the Montgomery County Department of Environmental Protection (MCDEP) believes will be an additional environmental benefit. This project is not associated with new development; therefore it is not subject to minimum stormwater management treatment criteria. DPS will not review it for conformance with any such standards. Safe conveyance through the facility must be demonstrated.

The following items and conditions will need to be addressed during or prior to the detailed sediment control/stormwater management plan stage:

- Prior to permanent vegetative stabilization, all disturbed areas must be topsoiled per the latest Montgomery County Standards and Specifications for Topsoiling.
- A detailed review of the conveyance computations will occur at the time of detailed plan review.
- An engineered sediment control plan must be submitted for this project.
- A dam breach analysis must be approved by the Maryland Department of the Environment (MDE) prior to submission of detailed construction plans to DPS for review. If the breach analysis indicates that the pond is or will be considered a moderate or high hazard facility, DPS will urge MCDEP to consider removal of the pond, or to abandon the retrofit project. MCDEP and DPS have agreed not to allow construction of ponds that are considered to be moderate or high hazard facilities.
- Must verify that the existing components of the pond meet MD-378 standards or bring the pond into MD-378 compliance with the proposed retrofit. Determination for dam safety review responsibility will have to be made prior to the first submission of detailed plan review.
- Approval from the MCDEP Right-of-Way section will be required to place the proposed fill within the right of way prior to the first submission of detailed plan review.
- WSSC and Silver Spring CC off site grading permission will be required for this proposed project.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is not required.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office, or additional information received during the development process, or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Thomas Weardon at 240-777-6309.

Sincerely,

Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes No If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
_____ square feet	_____ square feet
Shade Trees Required	Shade Trees Proposed to be Planted
_____	_____
Fee in Lieu (Trees Required - Trees Planted) x \$250	\$
_____	_____
Required Number of Shade Trees	
Area (sq. ft.) of the Limits of Disturbance	Number of Shade Trees Required
FROM TO	
1 6,000	3
2 6,001 8,000	6
3 8,001 12,000	9
4 12,001 14,000	12
5 14,001 40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:
(Number of Square Feet in Limits of Disturbance ÷ 40,000) x 15

EXEMPTION CATEGORIES:

<input type="checkbox"/> 55-5(a) any activity that is subject to Article II of Chapter 22A;	<input type="checkbox"/> maintenance has obtained all required permits;
<input type="checkbox"/> 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;	<input type="checkbox"/> 55-5(b) any person performing the work has obtained all necessary permits;
<input type="checkbox"/> 55-5(c) any activity conducted by the County Parks Department;	<input type="checkbox"/> 55-5(d) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
<input type="checkbox"/> 55-5(d) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the	<input type="checkbox"/> OTHER: Specify per Section 55-5 of the Code.

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6	SEDIMENT CONTROL NOTES AND DETAILS	SC-2
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REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control/Stormwater Management plan set for all projects.

IT IS THE RESPONSIBILITY OF THE PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT.

TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
MCDEP Floodplain District	x				
WATERWAYS/ WETLAND(S)	x				
a. Corps of Engineers	x		201360682	9/30/2016	MARCH 1 - JUNE 15
b. MDE	x		13-NT-3139	5/28/2016	MARCH 1 - JUNE 15
c. MDE Water Quality Certification	x		13-NT-3139	5/28/2016	MARCH 1 - JUNE 15
MDE Dam Safety		x			
DNR Roadside Tree Care Permit	x				Approval Date
DPS Roadside Tree Protection Plan	x				Approval Date
N.P.D.E.S. NOTICE OF INTENT	x		MORCP0040	N/A	DATE FILED 1/23/2015
OTHERS (Please List): WSSC	x		15RMS7981A		
MCDEP Access		x	304868	11/22/2015	

COVER SHEET
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
1751 Elton Rd., Ste 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9994
www.cjpa.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT:	PRELIMINARY PLAN NO.:	SITE PLAN NO.:
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7725	N/A	N/A
DESIGN: JBB	SHEET: 1	OF: 25
DRAFT: ADG	DATE: MARCH, 2015	FILE NO.:
SCALE: 1"=20'	DATE: 4/21/14	42-114-244

MASTER LEGEND

EXISTING CONTOURS	
EXISTING INDEX CONTOURS	
PROPOSED CONTOURS	
PROPOSED INDEX CONTOURS	
EXISTING STORM DRAIN PIPE	
PROPOSED STORM DRAIN PIPE	
PROPOSED LIMITS OF DISTURBANCE	
DRAINAGE DIVIDE	
DRAINAGE FLOWPATH POINT	
FLOWPATH	
LAND USE/LAND COVER BOUNDARY LINE	
EXISTING SOIL DIVIDE	
SOIL TYPE DEMARICATION	
EXISTING NORMAL POOL	
PROPOSED NORMAL POOL	
1 YEAR WATER SURFACE ELEV.	
10 YEAR WATER SURFACE ELEV.	
100 YEAR WATER SURFACE ELEV.	
PROPOSED/EXISTING RIPRAP	
GUARD RAIL	
WOOD FENCE	
CHAINLINK FENCE	
EXISTING SEWER LINE	
EXISTING UNDERGROUND ELECTRIC	
EXISTING WATER LINE	
EXISTING PROPERTY LINE	
EXISTING PUBLIC UTILITY EASEMENT	
EXISTING SWM EASEMENT	
EXISTING WSSC RIGHT OF WAY	
PROPOSED SWM EASEMENT	
FOUND PROPERTY CORNER	

EXISTING SEWER MANHOLE	
EXISTING STORMDRAIN MANHOLE	
EXISTING LIGHT POLE	
EXISTING WATER VALVE	
EXISTING SIGN	
EXISTING FIRE HYDRANT	
EXISTING TREE TO BE REMOVED	
EXISTING TREE TO REMAIN	
EXISTING LANDSCAPED AREA	
EXISTING TREE LINE	
PROPOSED TREE LINE	
SUMP PIT	
PUMP	
PORTABLE SEDIMENT TANK	
STAGING/STOCKPILE AREA	
STRUCTURAL LABEL	
BENCHMARK	
STABILIZED CONSTRUCTION ENTRANCE	
DRAINAGE SLOPE	
STAGING AND STOCKING AREA	
SUPER SILT FENCE	
BLAZE ORANGE FENCE	
TREE PROTECTION FENCE	
CURB INLET PROTECTION	
DIVERSION WALL	
DEWATERING DEVICE	
SOIL BORING	
SAFETY BENCH	
CLAY LINER	

MASTER LIST OF ABBREVIATIONS

Ac.	-	ACRE(S)	L	-	LENGTH OF CURVE (CURVE DATA)
ACI	-	AMERICAN CONCRETE INSTITUTE	L.F.	-	LINEAR FEET
ASTM	-	AMERICAN SOCIETY FOR TESTING MATERIALS	MCDPS	-	MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES
BCCMP	-	BITUMEN COATED CORRUGATED METAL PIPE	MDE	-	MARYLAND DEPARTMENT OF THE ENVIRONMENT
BB	-	BALLED IN BURLAP	MH	-	MANHOLE
CIP	-	CURB INLET PROTECTION	MNCPPC	-	MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION
ε	-	CENTERLINE	MSHA	-	MARYLAND STATE HIGHWAY ADMINISTRATION
CWS	-	CONCRETE WASH STATION	No.	-	NUMBER
CS	-	CONTROL STRUCTURE	NPDES	-	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
CAL	-	CALIPER	NFV	-	NOT FIELD VERIFIED
CONT.	-	CONTAINER	N/A	-	NOT APPLICABLE
C/C	-	CENTER-TO-CENTER	NTS	-	NOT TO SCALE
CF	-	CUBIC FEET	OC	-	ON CENTER
cfs	-	CUBIC FEET PER SECOND	PROP.	-	PROPOSED
CL	-	CLASS	PUE	-	PUBLIC UTILITY EASEMENT
C.M.P.	-	CORRUGATED METAL PIPE	PVC	-	POLYVINYL CHLORIDE PIPE
CPv	-	CHANNEL PROTECTION VOLUME	PSI	-	POUNDS PER SQUARE INCH
D	-	DEPTH	Q	-	FLOW RATE
DA	-	DRAINAGE AREA	R/W	-	RIGHT OF WAY
D50	-	50TH PERCENTILE OF DIAMETER	RCN	-	RUNOFF CURVE NUMBER
D.I.P.	-	DUCTILE IRON PIPE	R.C.P.	-	REINFORCED CONCRETE PIPE
EX.	-	EXISTING	SC	-	SEDIMENT CONTROL
EW	-	EACH WAY	SB	-	SOIL BORING
ELEV.	-	ELEVATION	SCH	-	SCHEDULE
ELEC.	-	ELECTRIC	S.S.	-	SIDE SLOPE
f.p.s.	-	FEET PER SECOND	S.W.M.	-	STORMWATER MANAGEMENT
FT	-	FEET	T	-	THICKNESS
f'c	-	COMPRESSIVE STRENGTH	T	-	TANGENT (CURVE DATA)
FEMA	-	FEDERAL EMERGENCY MANAGEMENT AGENCY	Tc	-	TIME OF CONCENTRATION
FIRM	-	FLOOD INSURANCE RATE MAP	TYP.	-	TYPICAL
GALV.	-	GALVANIZED	UG	-	UNDERGROUND
GW	-	GRANDWATER	V	-	VELOCITY
H.D.P.E.	-	HIGH DENSITY POLYETHYLENE	YR	-	YEAR
HGL	-	HYDRAULIC GRADE LINE	WQv	-	WATER QUALITY VOLUME
HSG	-	HYDROLOGIC SOIL GROUP	W	-	WIDTH
INV.	-	INVERT	WSEL	-	WATER SURFACE ELEVATION
OSHA	-	OCCUPATIONAL HEALTH AND SAFETY ACT	∅	-	DIAMETER
LP	-	LOW POINT			
LOD	-	LIMITS OF DISTURBANCE			



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
252515 S.M.File No.		SEDIMENT CONTROL PERMIT No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

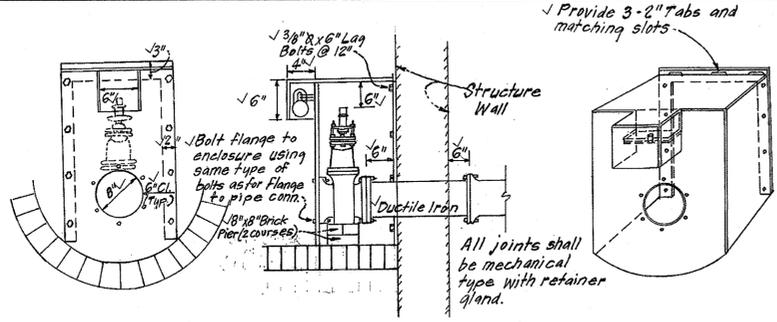
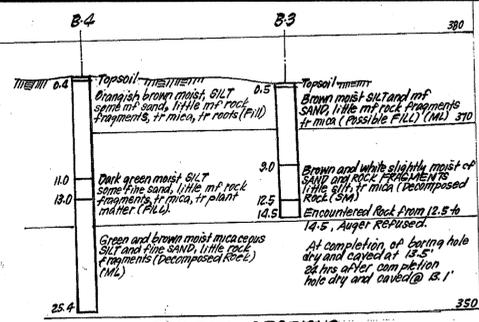
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

MASTER LEGEND AND ABBREVIATIONS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
1751 Elton Rd., Ste 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 285 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7713	PRELIMINARY PLAN NO.: N/A	SITE PLAN NO.: N/A
DESIGN: JBB	SHEET: 2	OF: 25
DRAFT: ADG	G-2	G-2
DATE: MARCH, 2015	FILE NO.:	
SCALE: 1" = 20'	42-114-24.4	

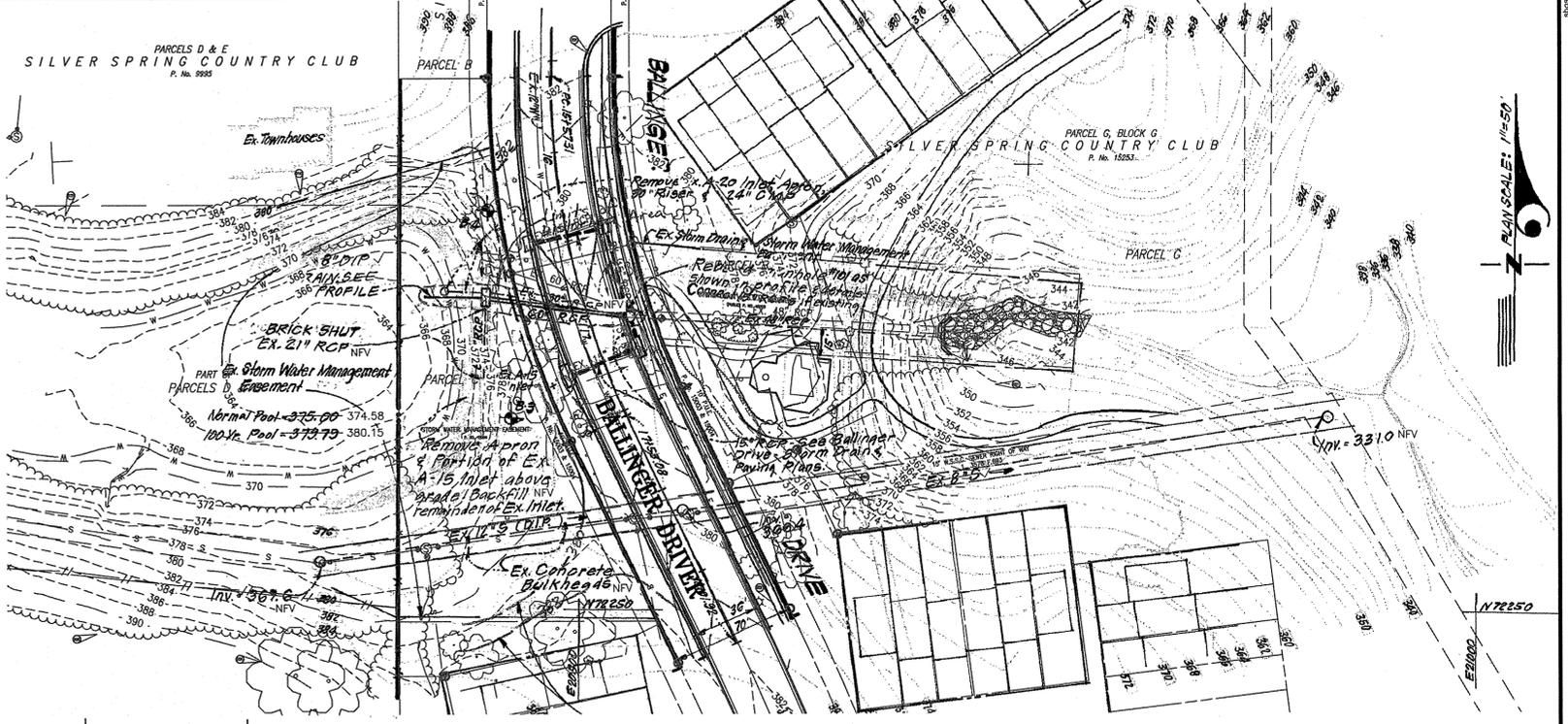
COPYRIGHT © LATEST DATE HERON CHARLES P. JOHNSON & ASSOCIATES, INC. ALL RIGHTS RESERVED. UNAUTHORIZED USE OR REPRODUCTION IS PROHIBITED.



NOTES: 1) Valve shall be AWWA Gate Valve with Flanged ends as manufactured by Mueller Co., Decatur, IL, or by an approved equal. 2) Enclosure shall be fabricated from 12 gauge steel, then hot dipped galvanized. 3) All bolts shall be galvanized. 4) Lock shall be supplied with 2 sets of keys turned over to the Inspector. 5) Shop drawing for enclosure shall be submitted to Clark, Finetrock & Sackett for approval prior to fabrication.

VALVE ENCLOSURE DETAIL

No Scale



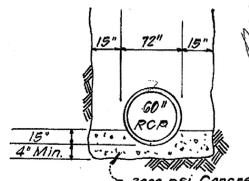
BORING SECTIONS

No Scale

Reviewed for **Montgomery Co. S.C.D.** by **William** Date **8-1-85**
Signature **William**
U.S. Soil Conservation Service, MPA

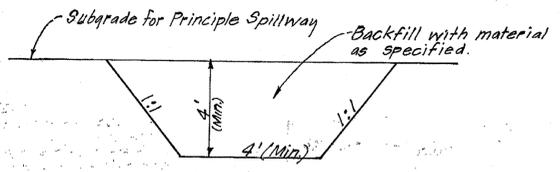
APPROVED FOR PONDS BY **Montgomery Soil Conservation District** District Program Coordinator **DAF** Date **8-1-85**

MSCD APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED AND/OR DOES NOT CONTINUE ON SCHEDULE.



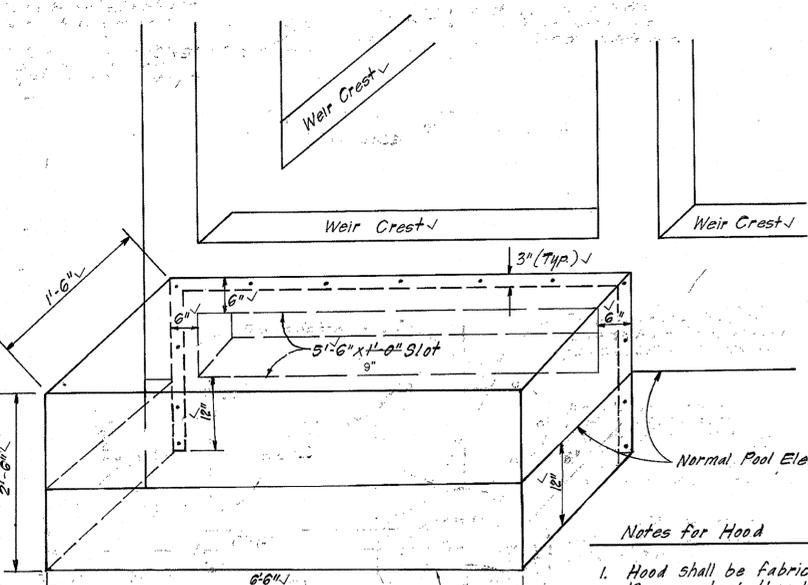
LOW GRADE DETAIL

No Scale



CUTOFF TRENCH DETAIL

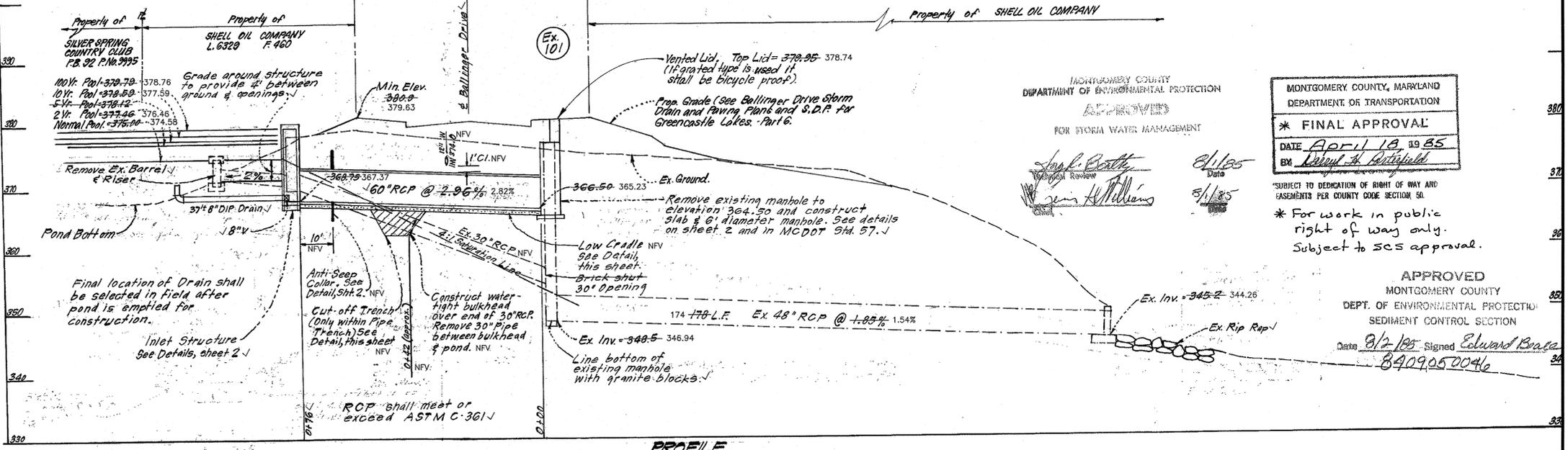
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HOOD DETAIL

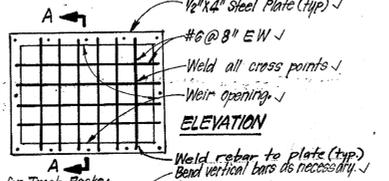
No Scale

Notes for Hood: 1. Hood shall be fabricated from 12 gauge steel, then hot dipped galvanized. 2. Hood shall be securely bolted to inlet structure using 3/8" x 6" galvanized lag bolts in pattern shown.



PROFILE

SCALE: HORIZ. 1" = 20' VERT. 1" = 10'



TRASH RACK DETAILS

No Scale

Notes for Trash Racks: 1. 3/8" x 3/8" Steel Bars may be substituted for rebar. 2. Vertical bars shall be on outside as shown. 3. Trash racks shall be assembled then either hot dipped galvanized or painted with two coats of a galvanized paint. 4. Finished trash racks shall be bolted to structure using 3/8" x 6" galvanized lag bolts.

OWNERS/DEVELOPERS CERTIFICATION
"I/We hereby certify that all clearing, grading, construction and/or development will be done pursuant to this plan and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project."
Tom Murdorff (name and title)
Date **8/10/84**

DESIGN CERTIFICATION
"I hereby certify that this plan has been prepared in accordance with the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control", Montgomery County Department of Environmental Protection "Erosion and Sediment Control and Stormwater Management Rules and Regulations" dated August 31, 1984 and Montgomery County Department of Transportation "Interim Storm Drain Design Criteria" dated July 1, 1968."
Charles P. Johnson (name and title)
Date **5-26-85**
Registration No. **7137**

MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPROVED FOR STORM WATER MANAGEMENT
Jayl B. Smith (Signature)
5/1/85 (Date)

MONTGOMERY COUNTY, MARYLAND DEPARTMENT OF TRANSPORTATION
* FINAL APPROVAL
DATE **April 18 1985**
BY **Robert A. Hartfield**

SUBJECT TO DEDICATION OF RIGHT OF WAY AND EASEMENTS PER COUNTY CODE SECTION 50.
* For work in public right of way only. Subject to SCS approval.

APPROVED MONTGOMERY COUNTY DEPT. OF ENVIRONMENTAL PROTECTION SEDIMENT CONTROL SECTION
Date **8/2/85** Signed **Edward Beate**
8409050046

EXISTING CONDITION PLAN
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
1751 Elton Rd., Ste 500 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
www.cpja.com • Silver Spring, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7715	PRELIMINARY PLAN NO. N/A	SITE PLAN NO. N/A
DESIGN: JBB	SHEET: 3	OF: 25
DRAFT: ADG	AB-1	AB-2
DATE: MARCH, 2015	FILE NO.:	
SCALE: AS SHOWN	42-114-24.4	

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STORM WATER MANAGEMENT POND NOTES

I. SITE PREPARATION

- A. Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped no steeper than 1:1.
- B. Areas to be covered by pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface.
- C. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on this embankment and other designated areas.

II. BACKFILL

- A. **WATERFILL:** The fill material shall conform to SBA specification Section 206 and these specifications: The fill material shall be taken from an approved borrow area. The first two feet of excavation under the embankment is to be watered as the designated spoil area. The final decision as to the suitability of the exposed soil shall be made by the Soils Engineer at the time of construction. All material shall be free from roots, stumps, wood, rubbish, oversized stones, frozen or other objectionable materials. The dam embankment should be formed of material conforming to the Unified Soil Classification Cl, M, SM and SC can be used if controlled compaction is used. As a minimum criteria, the fill material for the dam embankment (except as noted below) will have a maximum density not less than 100 pcf as determined by ASTM D 1557 Method A. The liquid shall not exceed 40 and the Plasticity Index must be between 12 and 25. All material shall contain no stone larger than three inches in the greatest dimension. Such stones shall not be more than 25 percent by volume of the fill material. For dam core trenches, the material used can include clean and organic-free Cl and M material in addition to Cl and M. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least ten percent above the design elevation (including freeboard) unless otherwise shown on the plans.
- B. **PLACEMENT:** Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in eight-inch maximum thickness (before compaction) layers and shall be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.
- C. **COMPACTION:** The movement of hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be compacted to a minimum of 95 percent of the maximum dry density obtained in compaction tests of the fill materials performed in accordance with the requirements of the ASTM designation T99 Method A, prior to next lift being spread and be certified by the Soils Engineer at the time of construction. The fill density shall meet minimum specified density regardless of the compaction method used. The moisture content of the embankment material shall be within the designated upper and lower limits of the optimum moisture content. If moisture content may be modified by the engineer during construction depending upon material encountered. Fill placed at densities lower than the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be reworked to meet the requirements or removed and replaced by acceptable fill.
- D. **CUTOFF TRENCH:** Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings with the maximum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL:

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall be driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of the structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS: (All pipes shall be circular in cross-section)

A. CORRUGATED METAL PIPE:

- 1. **MATERIALS (Steel Pipe):** This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-100 Type A with water-tight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (1.0 mil) on both sides of the pipe. The following coatings are commercially available: Nexon, Plast-Cote, Bloc-Klad, and Bith-Cu-Loy Coated Corrugated Steel Pipe shall meet the requirements of AASHTO M-245 and M-246.
- 2. **MATERIALS (Aluminized Steel Pipe):** This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-701 with water-tight coupling bands or flanges.
- 3. **MATERIALS (Aluminum Pipe):** This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-106 or M-211 with water-tight coupling bands or flanges. Coupling bands, anti-seep collars, and sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of Zinc Chromate Primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.
- 4. **CONNECTIONS:** All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.
- 5. **BEDDING:** The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- 6. **LAYING PIPE:** The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
- 7. **Backfilling:** shall conform to structural backfill as shown above.
- 8. **Other details (anti-seep collars, valves, etc.)** shall be as shown on the drawings.

B. REINFORCED CONCRETE PIPE

- 1. **MATERIALS:** Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-301, an approved equivalent is AWWA Specification C-301.
- 2. **BEDDING:** All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3", or as shown on the drawings.
- 3. **LAYING PIPE:** Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.
- 4. **Backfilling:** shall conform to structural backfill as shown above.
- 5. **Other details (anti-seep collars, valves, etc.)** shall be shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

CONSTRUCTION SEQUENCE:

- 1. Drain Pond to level where work can be performed.
- 2. Install new pipe and anti-seep collar.
- 3. Construct new inlet structure. Pipes shall be grouted watertight to structure.
- 4. Restore disturbed areas not scheduled for restoration under Ballinger Drive Rough Grading Plan.

V. CONCRETE

A. MATERIALS

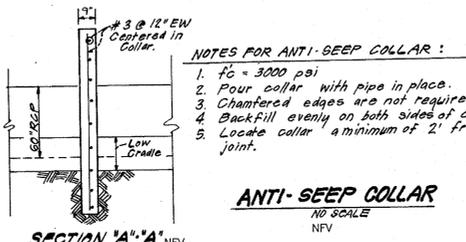
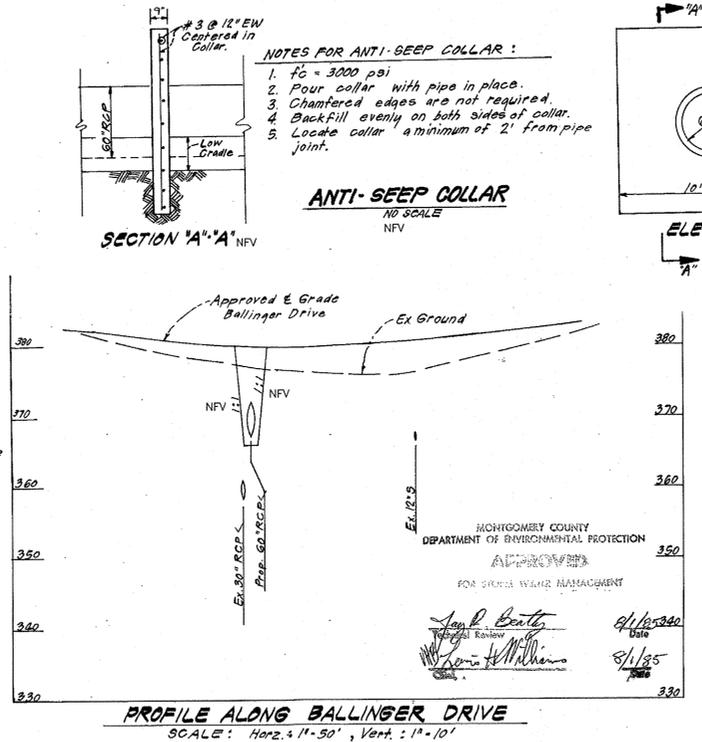
- 1. **CEMENT:** Normal Portland cement shall conform to latest ASTM Specification C-150.
- 2. **WATER:** The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
- 3. **SAND:** The sand used in concrete shall be clean, hard, strong, and durable, and shall be well graded with 100% passing a one quarter inch sieve. Limestone sand shall not be used.
- 4. **COURSE AGGREGATE:** The coarse aggregate shall be clean, hard, strong and durable, and free from clay and dirt. It shall be well graded with a maximum size of one-and-one-half (1 1/2) inches.
- 5. **REINFORCING STEEL:** The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.
- 6. **DESIGN MIX:** The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5 1/2 to 6 U.S. Gals. of water (34-pound bag of cement). The proportion of materials for the trial mix shall be 1:2:3 1/2. The combination of the aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.
- 7. **MIXING:** The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The maximum mixing time is restricted to proper control of the speed of rotation of the mixer and to the suction of the materials including water into the mixer. Water shall be added or to during and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.
- 8. **FORMS:** The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping and vibration without deflection from the prescribed lines. They should be mortar-tight and constructed so they can be removed without hammering or prying against the concrete. The inside of the forms will be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed. Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.
- 9. **REINFORCING STEEL:** All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.
- 10. **CONSOLIDATION:** Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces in corners, and around embedded items.
- 11. **FINISHING:** Defective concrete, honeycombed areas, voids left by removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry packing mortar.
- 12. **PROTECTION AND CURING:** Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compound may also be used.
- 13. **PLACING TEMPERATURE:** Concrete may not be placed at temperature below 32°F with the temperature falling, or 34°F with the temperature rising.

VI. STABILIZATION

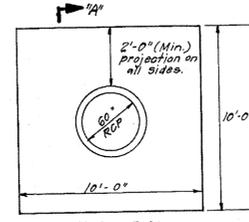
All borrow areas shall be graded to provide drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and boms shall be stabilized by seeding, liming, fertilizing, and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

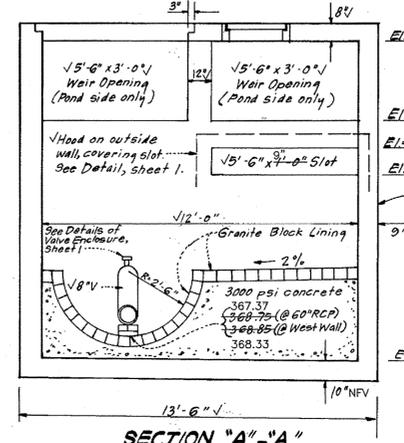
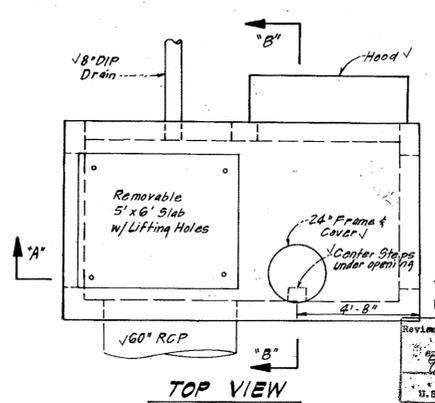


- NOTES FOR ANTI-SEEP COLLAR:**
- 1. To 3000 psi
 - 2. Pour collar with pipe in place.
 - 3. Chamfered edges are not required.
 - 4. Backfill evenly on both sides of collar.
 - 5. Locate collar a minimum of 2' from pipe joint.



MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
*** FINAL APPROVAL ***
DATE: April 18, 2015
BY: [Signature]

*For work in public right of way only. Subject to SCS approval.



NOTES FOR INLET STRUCTURE:

- Structure shall be manufactured by the A.C. Miller Company, Devault, Pennsylvania. The reinforcing sizes and pattern shall be in accordance with the S.C.S. approved shop drawings used to manufacture the structures for Greencastle Lakes, Ponds A & B.
- Working drawings shall be submitted to Clark, Finerock & Sackett for approval, prior to fabrication.
- A.C. Miller shall provide sufficient sealant to properly seal adjoining sections of the structure.

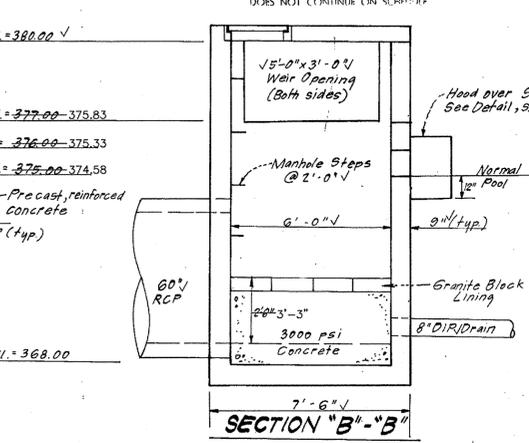
* Montgomery Department of Environmental Protection Permit # 830270024

APPROVED FOR MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
Signature: [Signature] Date: 3-1-15
U.S. Soil Conservation Service (NRCS)

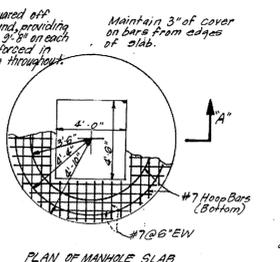
APPROVED FOR PONDS BY MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
Signature: [Signature] Date: 8-1-85
DISTRICT PROGRAM COORDINATOR (DAW)

MSCD APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED AND/OR DOES NOT CONTINUE ON SHEET #2

TRASH TRAPS SHALL BE PROVIDED FOR ALL WEIR OPENINGS SEE DETAIL, SHEET 1.



INLET STRUCTURE
SCALE: 3/8" = 1'-0"



MODIFICATIONS TO EXISTING MANHOLE #10 APPROVED
NO SCALE
NFV

MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
SEDIMENT CONTROL SECTION
Date: 8/2/85 Signed: [Signature]
840925-0046

EXISTING CONDITIONS NOTES AND DETAILS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors

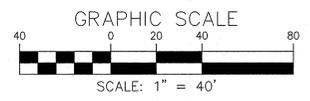
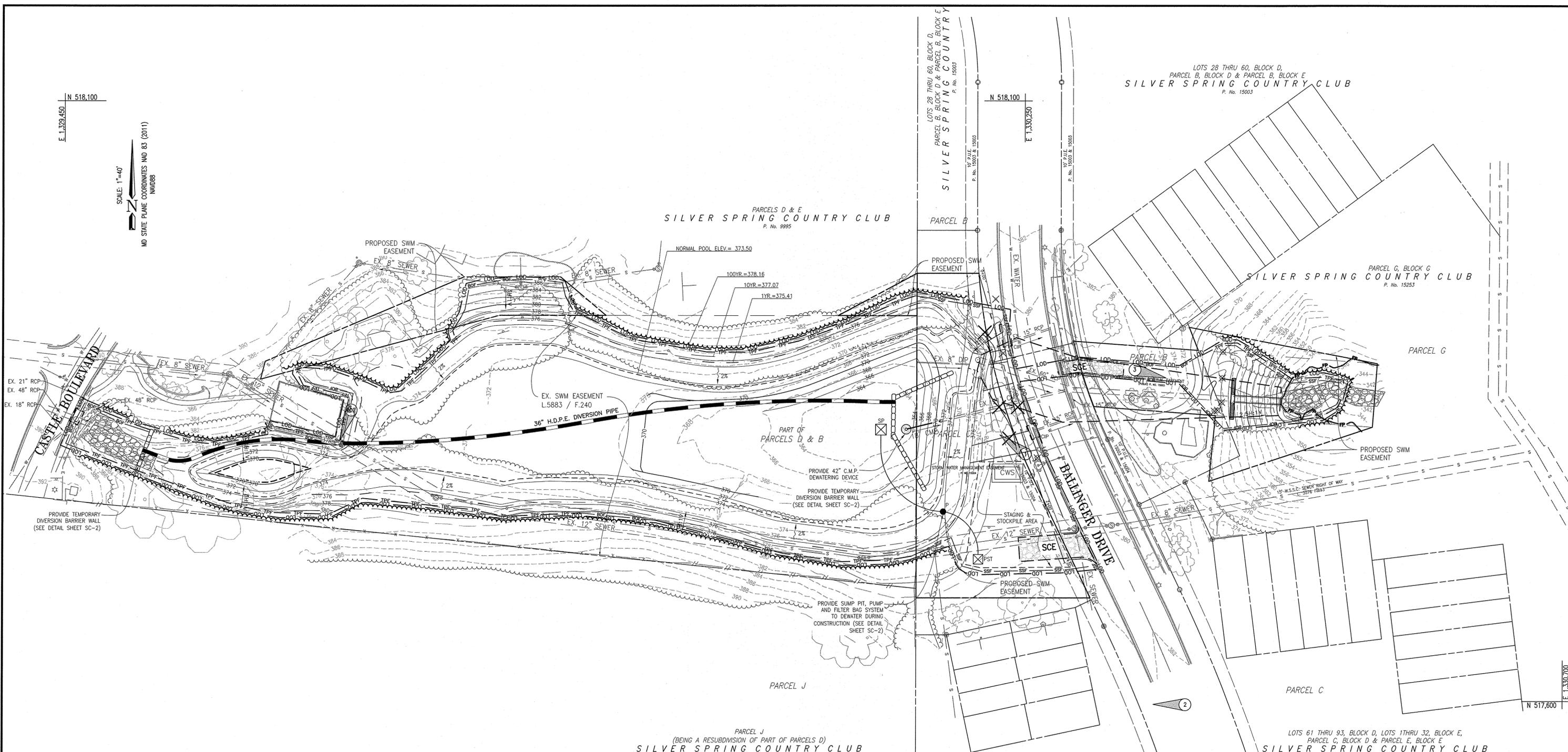
1751 Elton Rd., Ste 300 Silver Spring, MD 20905 301-434-7000 Fax: 301-434-9394
www.cpjia.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 771-7715	PRELIMINARY PLAN NO. N/A	SHEET 4 OF 25
DESIGN: JBB	DATE: MARCH, 2015	FILE NO.: 42-114-244
DRAFT: ADG	SCALE: NOT TO SCALE	

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- NOTES:**
- RED-LINES REPRESENT FIELD CONDITIONS AT THE TIME OF FIELD-RUN SURVEYS COMPLETED BY JOHNSON, MIRMIRAN & THOMPSON DATED 09/11/2012 AND BY CHARLES P. JOHNSON & ASSOCIATES, INC. DATED 09/11/2012 OVERLAIN ON EXISTING DESIGN DRAWINGS BY CLARK, FINEROCK, & SACKETT APPROVED 2 AUGUST 1985.
 - THE APPROXIMATE VERTICAL DATUM DIFFERENCE BETWEEN THE DESIGN DRAWINGS AND FIELDER SURVEYS IS -1.26 FEET.
 - NO AS-BUILT OR RECORD DRAWINGS WERE AVAILABLE BASED ON A REVIEW OF AVAILABLE INFORMATION.

N 518,100
E 1,329,450
SCALE: 1"=40'
MD STATE PLANE COORDINATES MD 83 (2011)
11N0088



FOR SEDIMENT CONTROL ONLY

MISS UTILITY
Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

GENERAL NOTES:
1. THIS PLAN SHALL ONLY BE USED FOR CONSTRUCTION OF SEDIMENT CONTROL AND ASSOCIATED SEDIMENT CONTROL IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. THIS PLAN SHALL NOT BE USED FOR GRADING OF THE SITE.

TOTAL DISTURBED AREA=3.11 Ac.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M.File No.		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

SEDIMENT CONTROL PLAN VIEW
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASLE WOODS
COLEVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7715	PRELIMINARY PLAN NO: N/A DESIGN: JBB DRAFT: ADG DATE: MARCH, 2015 SCALE: 1" = 40'	SITE PLAN NO: N/A SHEET: 5 OF 25 SC-1 SC-3 FILE NO: 42-114-24.4
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STANDARD EROSION AND SEDIMENT CONTROL NOTES

- The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.
- The permittee must obtain inspection and approval by DPS at the following points:
 - At the required pre-construction meeting.
 - Following installation of sediment control measures and prior to any other land disturbing activity.
 - During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
 - Prior to removal or modification of any sediment control structure(s).
 - Prior to final acceptance.
- The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbing activities, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.
- The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfares (A). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
 - Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
 - Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1), and
 - Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
 - All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
- The permittee shall apply top, seed, and anchored straw mulch, or other approved stabilization measures within seven (7) calendar days after striping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
- Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
- The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
- Surface drainage flows over unestablished cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
- Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.
- Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
- For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.
- Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.
- The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
- All trap elevations are relative to the outlet elevation, which must be on an existing undisturbed ground.
- Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
- Sediment trap(s) basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-II) or when required by the sediment control inspector.
- Sediment removed from trap/basins shall be placed and stabilized in approved areas, but not within a floodplain.
- All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater than two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
- No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work.
- Off-site spoil or borrow areas must have prior approval by DPS.
- Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:
 - Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
 - the pump intake may utilize a Removable Pumping Station and discharge into an undisturbed area through a non-erosive outlet; or
 - the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric), or approval equivalent, located in an undisturbed buffer area.
- Remember: Dewatering operation and method must have prior approval by the DPS inspector.
- The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
- Topsoil must be applied to all previous areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition
 To stabilize disturbed soils with permanent vegetation.

Purpose
 To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies
 Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use

- Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
- Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in:
 - USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures

- Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

1. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

2. Kentucky Bluegrass/Perennial Ryegrass: Full Sun Mixture: For use in full sun areas where B.22 rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Cultivars Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

3. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

4. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
 Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

- Ideal Times of Seeding for Turf Grass Mixtures
 - Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
 - Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
 - Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
- Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grass will pose no difficulty.
 - If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/4 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardness Zone (from Figure B.3)	Seed Mixture (from Table B.3)	Application Rate (lb./ac)	Seeding Dates	N	P2O5	K2O	Lime Rate
1	Deerounge	20	March 1 to May 15, Aug. 15 to Oct. 15	45 pounds per acre (1.0lb./1000sf)	90 pounds per acre (2lb./1000sf)	90 pounds per acre (2lb./1000sf)	2 tons per acre (90lb./1000sf)
2	Conado Wild Rye	3	March 1 to May 15, Aug. 15 to Oct. 15	1/4"-3/8"			
3	Common Lespedeza	10	March 1 to May 15, Aug. 15 to Oct. 15	1/4"-3/8"			

Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- General Specifications
 - Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grip on the upper 10 percent of the section.
 - Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
- Sod Installation
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Lay the first row of sod in a straight line with wedged against each other and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
- Sod Maintenance
 - In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - Do not mow until the sod is firmly rooted. No more than 1/8 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

DESIGN CERTIFICATION

I hereby certify that this plan has been prepared in accordance with the "2011 Maryland Standards and Specification for Soil Erosion and Sediment Control," Montgomery County Department of Permitting Services Executive Regulations 5-90, 7-02AM and 36-90, and Montgomery County Department of Public Works and Transportation "Storm Drain Design Criteria" dated November, 2013.

Design Engineer Signature: Jeffrey Bloss Date: 05-20-2015

Printed Name: Jeffrey Bloss Registration Number: 32457

CUT AND FILL CERTIFICATION

I hereby certify that the estimated total amount of excavation and fill as shown on these plans has been computed to be 2190 cu. yds. of excavation and 2096 cu. yds. of fill and the total area to be disturbed as shown on these plans has been determined to be 135,402 sq. ft. (3.11 Acres).

Owner/Developer Signature: Jeffrey Bloss Date: 05-20-2015

Printed Name: Jeffrey Bloss Date: 05-20-2015

Owners/Developer Certification: I/We hereby certify that all clearing, grading, construction and/or development will be done pursuant to this plan and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project.

Owner/Developer Signature: Craig Carson, Manager Date: _____

Printed Name and Title: Craig Carson, Manager

B-4-2 STANDARDS AND SPECIFICATIONS SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition
 The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose
 To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies
 Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

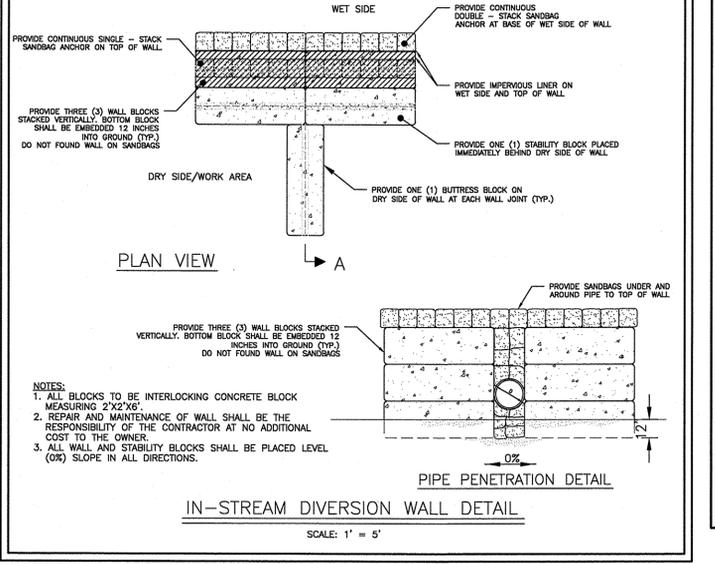
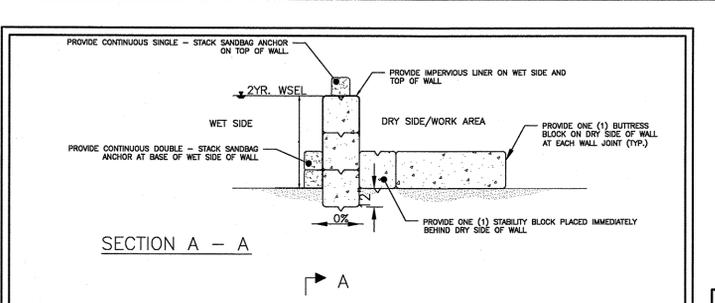
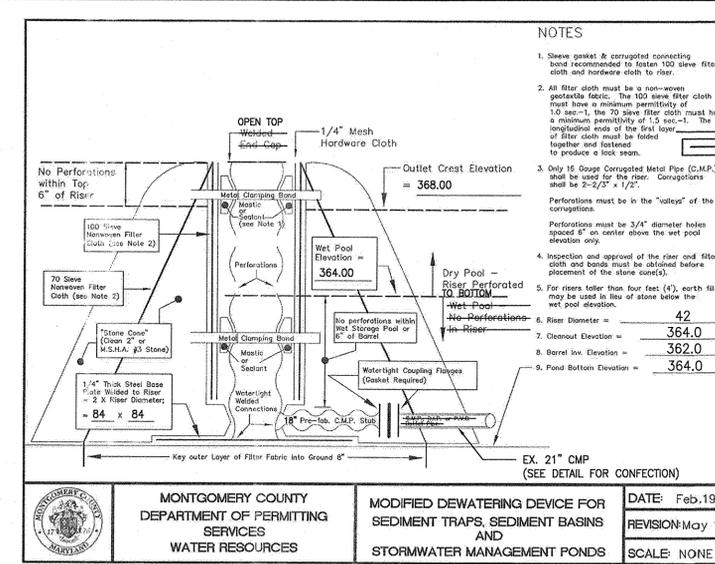
- Temporary Stabilization
 - Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soil contains less than 30 percent silt plus clay) would be acceptable.
 - Soil contains less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

- Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - Areas having slopes steeper than 2:1 require special consideration and design.
- Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used as recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, grass, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Topsoil Application
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

- Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- Lime material must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.



MISS UTILITY

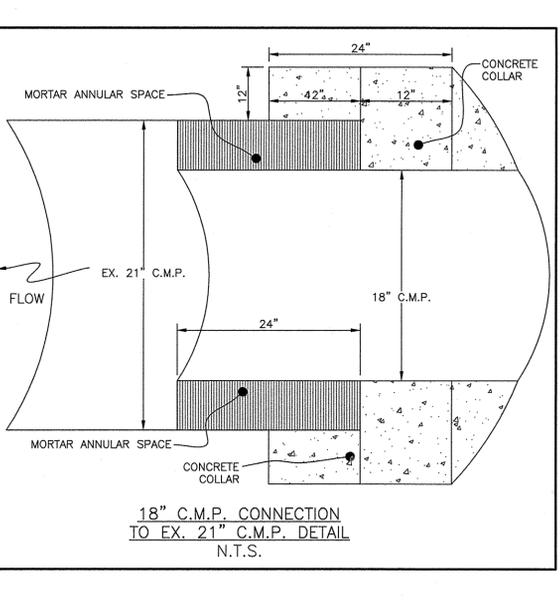
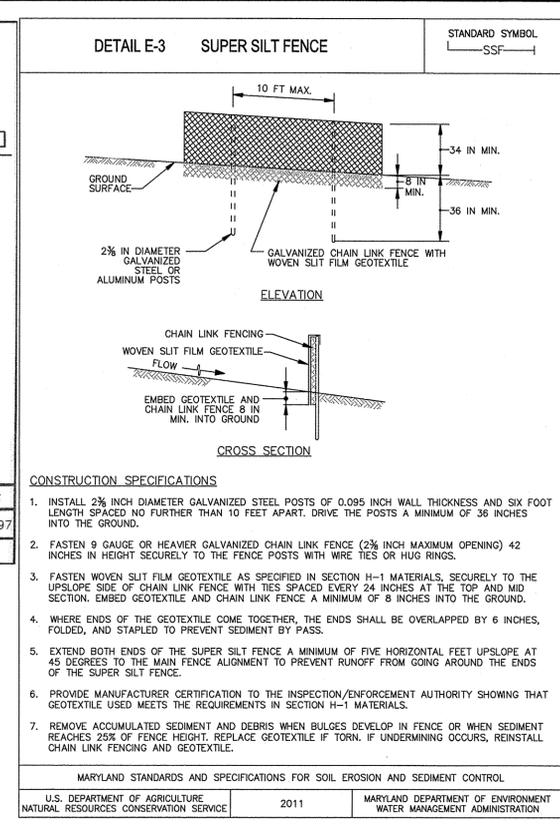
Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

FOR SEDIMENT CONTROL ONLY

GENERAL NOTES:
 1. THIS PLAN SHALL ONLY BE USED FOR CONSTRUCTION OF SEDIMENT CONTROL AND ASSOCIATED SEDIMENT CONTROL IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. THIS PLAN SHALL NOT BE USED FOR GRADING OF THE SITE.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
Approved _____ Date _____	Approved _____ Date _____	SEDIMENT CONTROL PERMIT No.
252515	252515	MDCPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.
S.M.File No.	S.M.File No.	

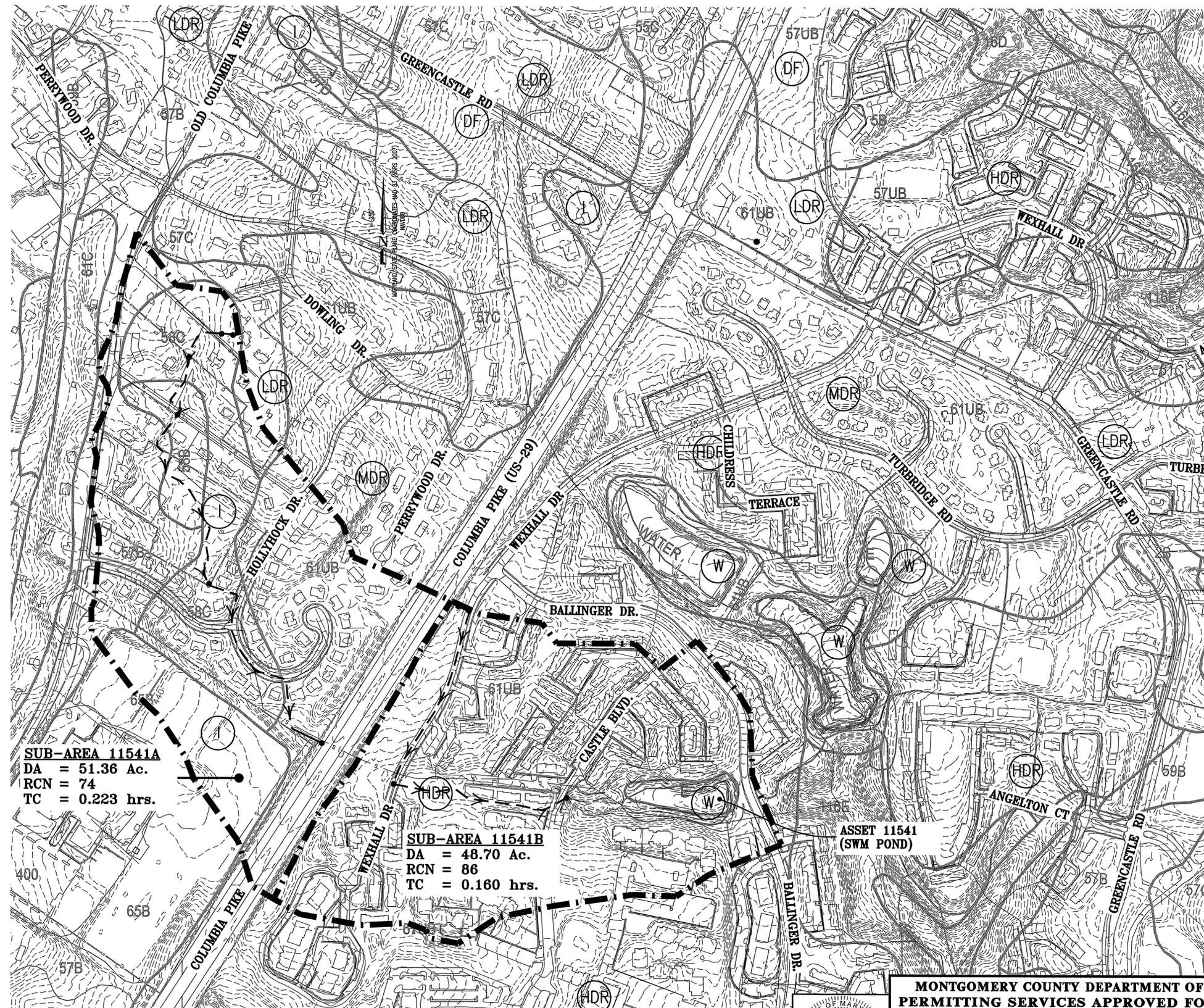


SEDIMENT CONTROL NOTES AND DETAILS
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
 GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
 Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
 Associates 1751 Elton Rd., Ste 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
 www.cpj.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT:	MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION	PRELIMINARY PLAN NO.	SITE PLAN NO.
DESIGN	JBB	SHEET	6 OF 25
DRAFT	ADG	FILE NO.	SC-2 SC-3
DATE	MARCH, 2015	SCALE	1" = 20'
UNAUTHORIZED USE OR REPRODUCTION IS PROHIBITED.			42-114-244

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SUB-AREA 11541A
 DA = 51.36 Ac.
 RCN = 74
 TC = 0.223 hrs.

SUB-AREA 11541B
 DA = 48.70 Ac.
 RCN = 86
 TC = 0.160 hrs.

ASSET 11541
 (SWM POND)

LEGEND	
EXISTING CONTOURS	--- 452 ---
EXISTING INDEX CONTOURS	--- 450 ---
DRAINAGE DIVIDE	— — — — —
FLOWPATH POINT	(A)
FLOWPATH	— — — — —
LAND USE/LAND COVER BOUNDARY LINE	— — — — —
EXISTING SOIL DIVIDE	— — — — —
EXISTING SOIL TYPE LABEL	1B
HIGH DENSITY RESIDENTIAL LANDUSE	(HDR)
LOW DENSITY RESIDENTIAL LANDUSE	(LDR)
MEDIUM DENSITY RESIDENTIAL LANDUSE	(MDR)
COMMERCIAL LANDUSE	(COM)
INSTITUTIONAL LANDUSE	(I)
OPEN URBAN LAND LANDUSE	(OUL)
WATER	(W)
DECIDUOUS FOREST	(DF)

DRAINAGE AREA, SOILS, AND LAND USE MAP
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

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 www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 265 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7713	PRELIMINARY PLAN NO. N/A	SITE PLAN NO. N/A
DESIGN JBB	SHEET	OF
DRAFT ADG	8	18
DATE MARCH, 2015	FILE NO:	
SCALE 1" = 250'		42-114-24.4

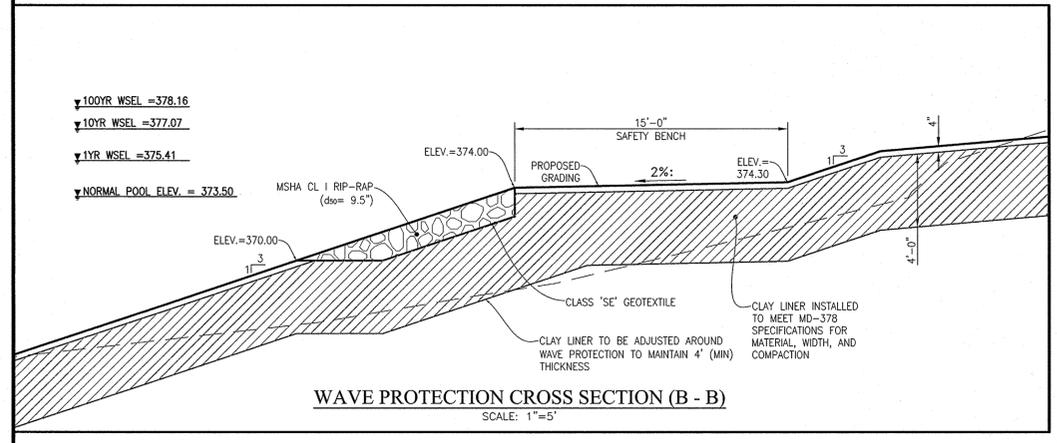
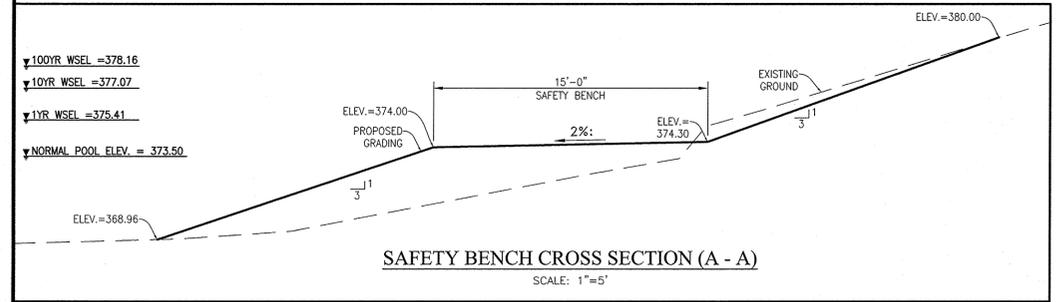
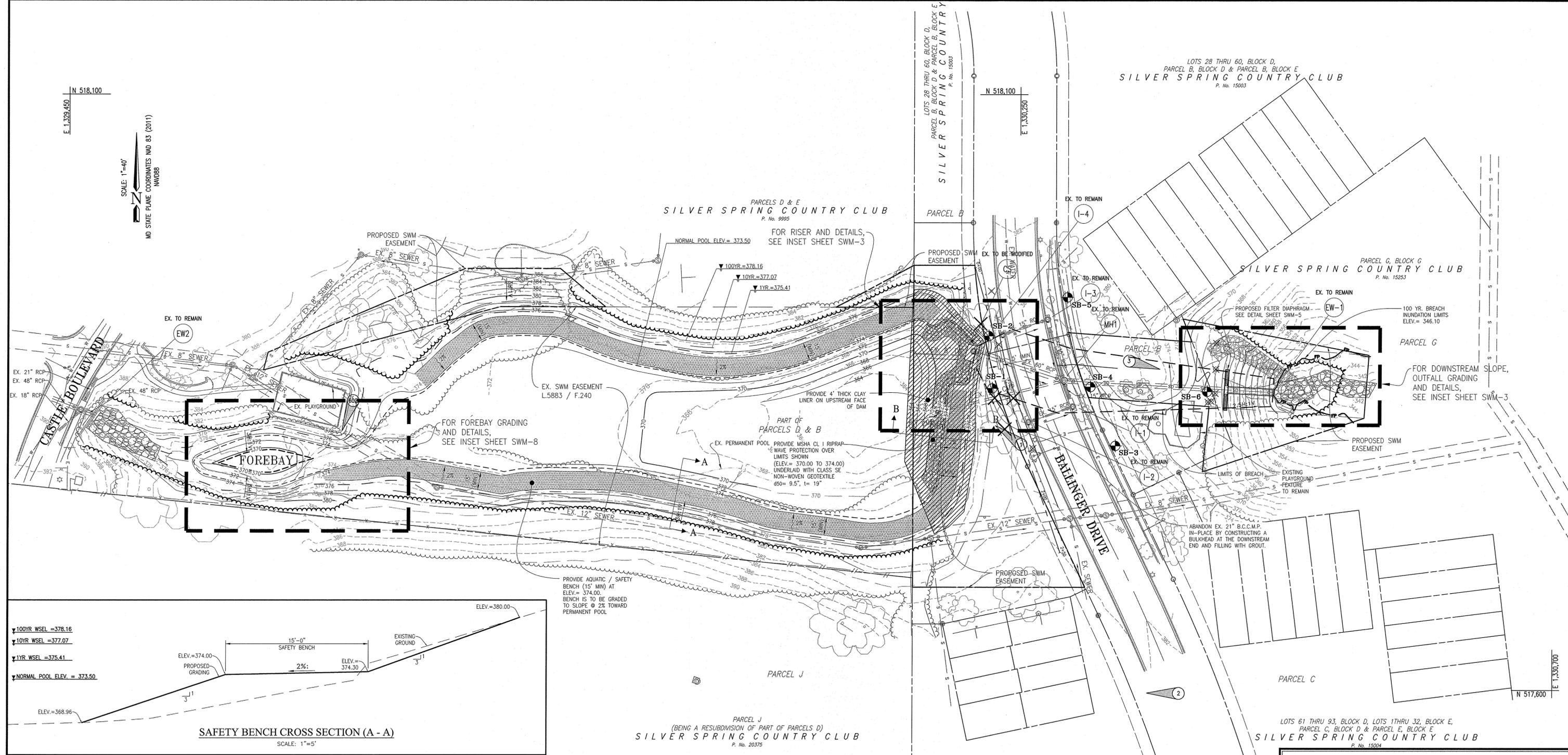
MISS UTILITY
 Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
252515 S.M. File No.		SEDIMENT CONTROL PERMIT No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.
 MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

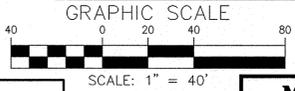
N 518,100
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SCALE: 1"=40'
MD STATE PLANE COORDINATES NAD 83 (2011)
NAD83



PROVIDE AQUATIC / SAFETY BENCH (15' MIN) AT ELEV. = 374.00. BENCH IS TO BE GRADED TO SLOPE OF 2% TOWARD PERMANENT POOL

PARCEL J
(BEING A RESUBDIVISION OF PART OF PARCELS D)

TOTAL DISTURBED AREA = 3.11 Ac.



GENERAL NOTES:
1. THIS PLAN SHALL ONLY BE USED FOR THE CONSTRUCTION OF STORMWATER MANAGEMENT AND ASSOCIATED STORMWATER MANAGEMENT IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. THIS PLAN SHALL NOT BE USED FOR GRADING OF THE SITE OTHER THAN AREAS WITHIN THE SWM EASEMENT.
2. THE EXISTING UTILITIES SHOWN HEREON HAVE BEEN LOCATED USING INFORMATION AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. PRIOR TO DIGGING, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VIA TEST PIT WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THIS PLAN AND CONFIRM THAT NO CONFLICTS EXIST. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF CPJ AND THE OWNER PRIOR TO STARTING CONSTRUCTION.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____
252515 S.M.File No.	

MISS UTILITY

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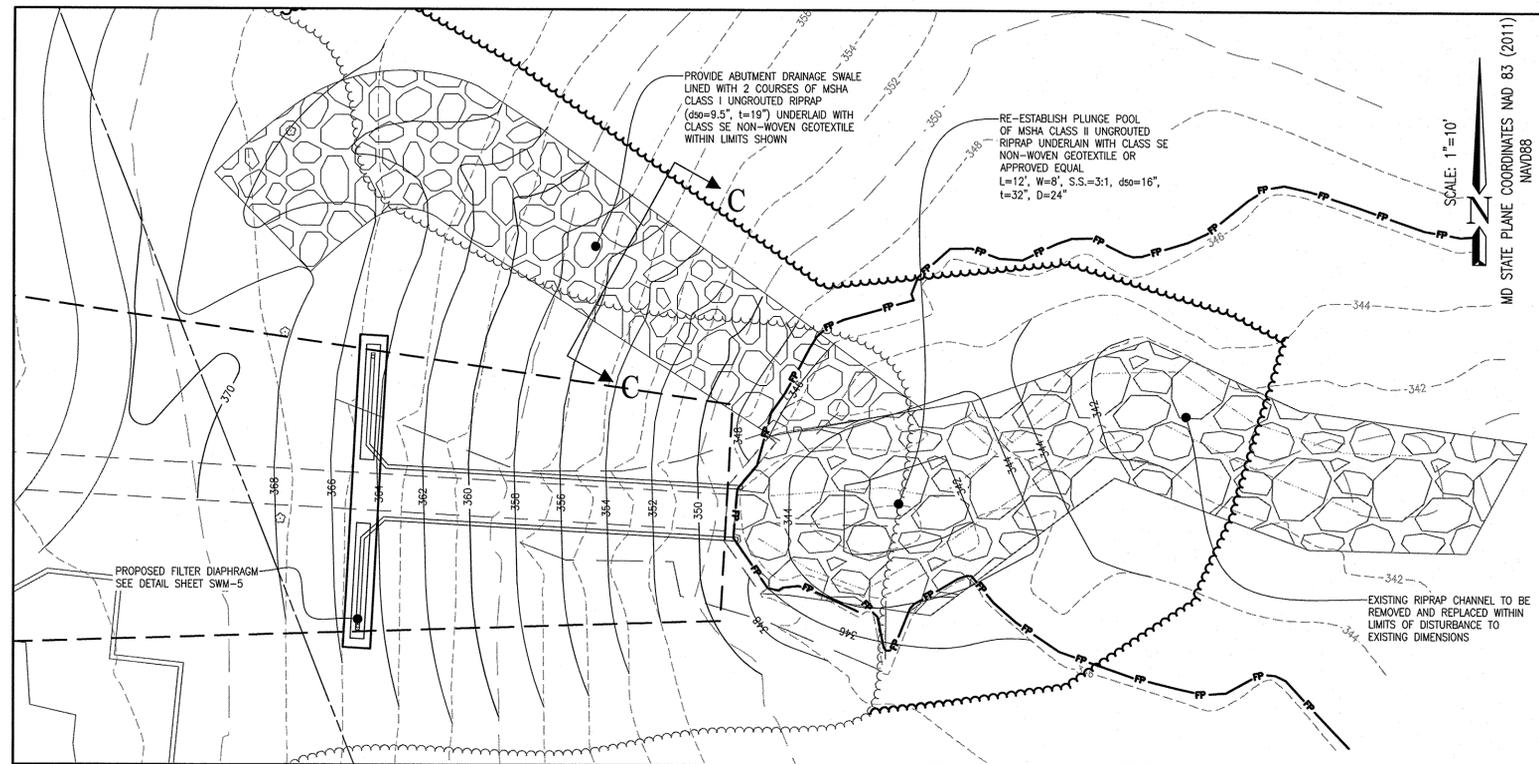
NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Administrative Requirements:
Reviewed _____ Date _____
258636
SEDIMENT CONTROL PERMIT No.
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

STORMWATER MANAGEMENT PLAN VIEW
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

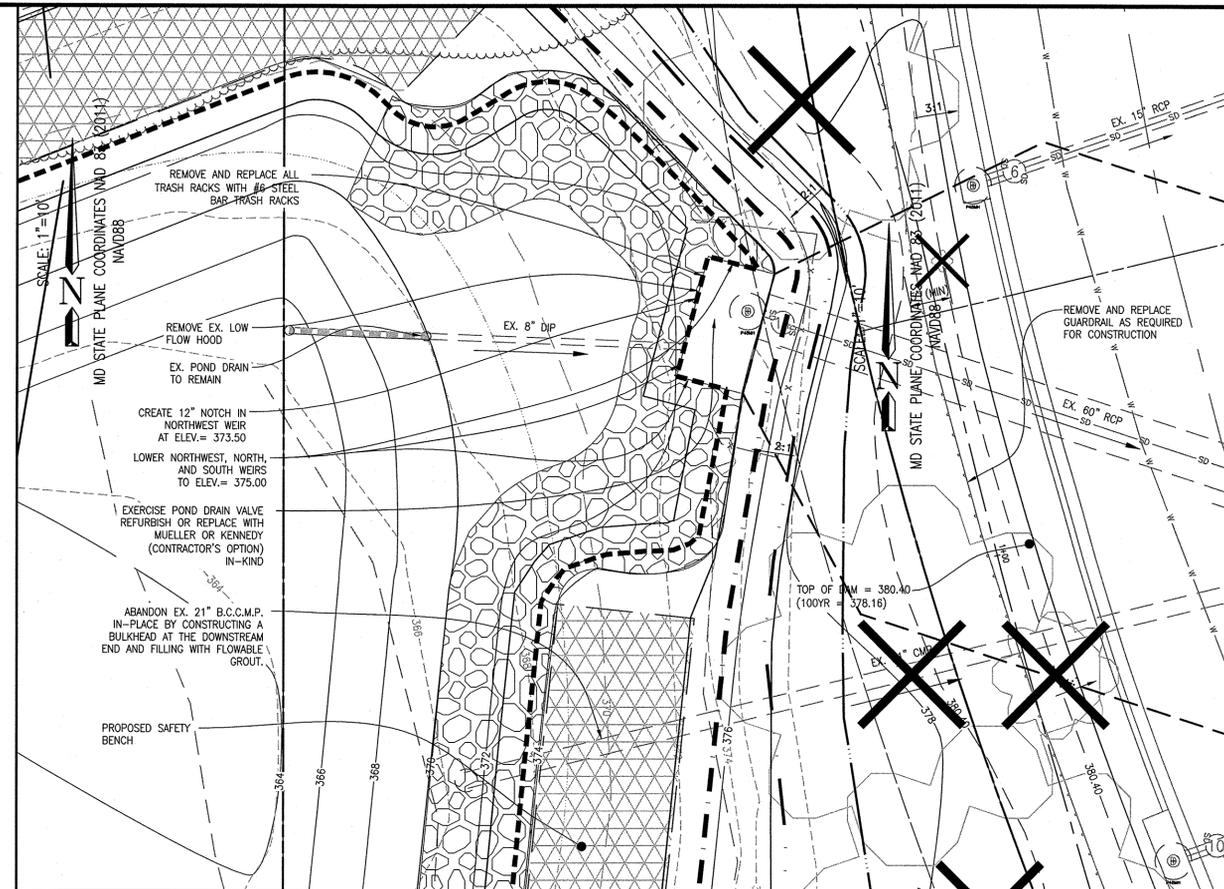
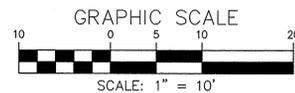
CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
1751 Elton Rd., Ste 300 Silver Spring, MD 20903 301-454-7000 Fax: 301-434-9594
www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7733	PRELIMINARY PLAN NO: N/A SITE PLAN NO: N/A
DESIGN: JBB DRAFT: ADG DATE: MARCH, 2015 SCALE: 1" = 40'	SHEET 9 OF 25 SWM-2 SWM-11 FILE NO: 42-114-244



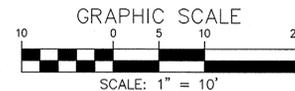
DOWNSTREAM SLOPE AND OUTFALL INSET

SCALE: 1"=10'



RISER INSET

SCALE: 1"=10'



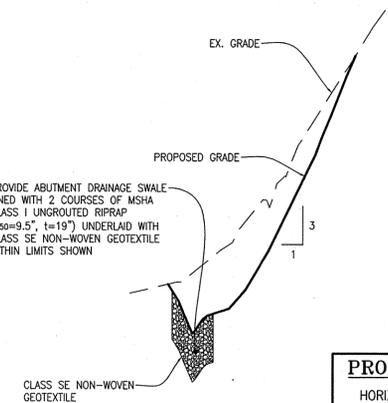
370

365

360

355

350



PROFILE SCALE

HORIZONTAL: 1"=30'
VERTICAL: 1"=3'

ABUTMENT DRAINAGE SWALE (C - C)

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

GENERAL NOTES:

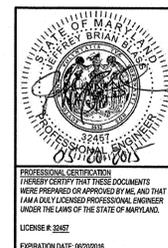
1. THIS PLAN SHALL ONLY BE USED FOR THE CONSTRUCTION OF STORMWATER MANAGEMENT AND ASSOCIATED STORMWATER MANAGEMENT IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. THIS PLAN SHALL NOT BE USED FOR GRADING OF THE SITE OTHER THAN AREAS WITHIN THE SWM EASEMENT.
2. THE EXISTING UTILITIES SHOWN HEREON HAVE BEEN LOCATED USING INFORMATION AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. PRIOR TO DIGGING, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VIA TEST PIT WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THIS PLAN AND CONFIRM THAT NO CONFLICTS EXIST. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF CPU AND THE OWNER PRIOR TO STARTING CONSTRUCTION.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
252515 S.M.File No.		SEDIMENT CONTROL PERMIT No.

PRELIMINARY PLAN NO. N/A	SITE PLAN NO. N/A
DESIGN JBB	SHEET 10 OF 25
DRAFT ADG	SWM-3 SWM-11
DATE MARCH, 2015	FILE NO: 42-114-244
SCALE 1" = 20'	



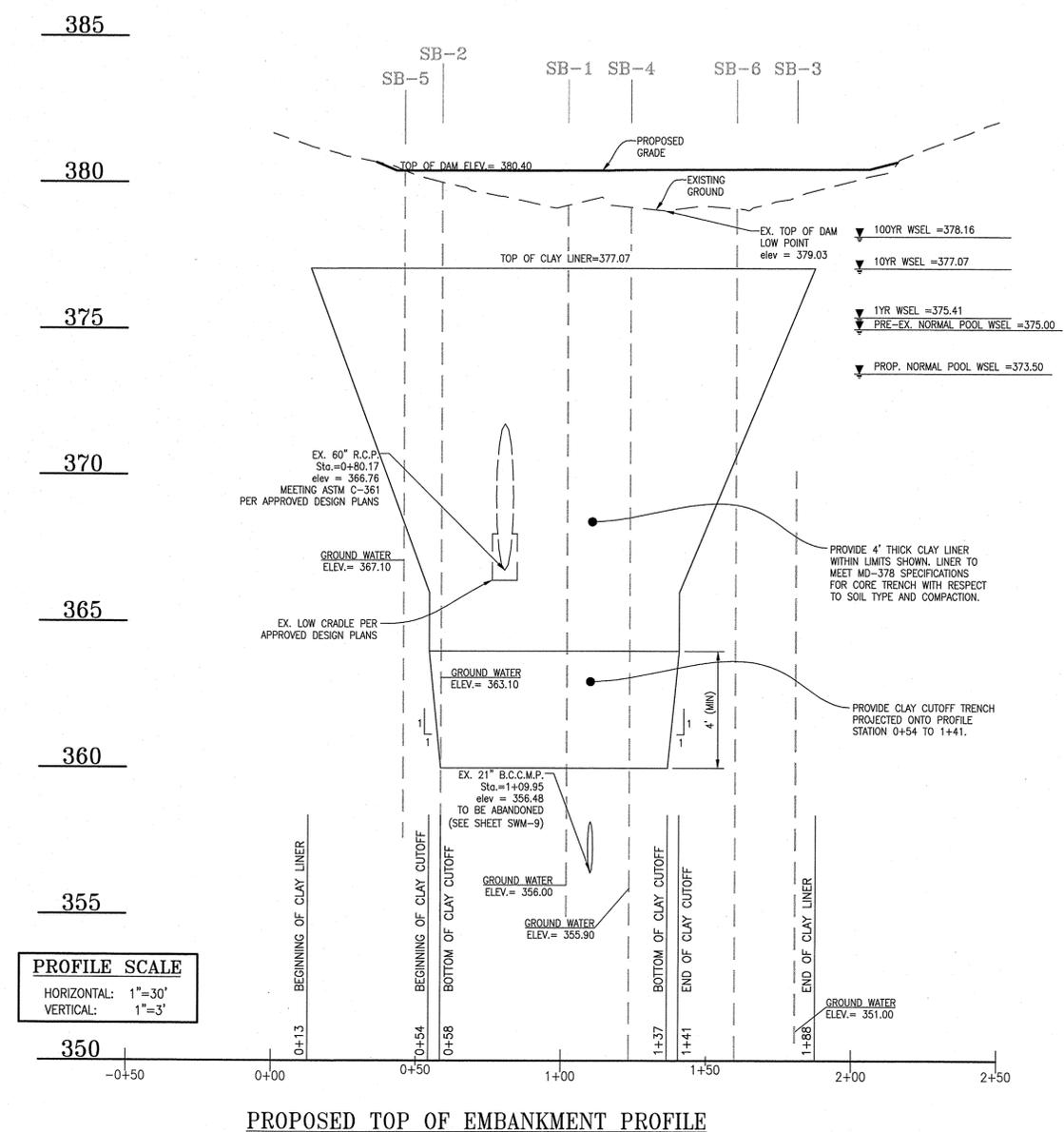
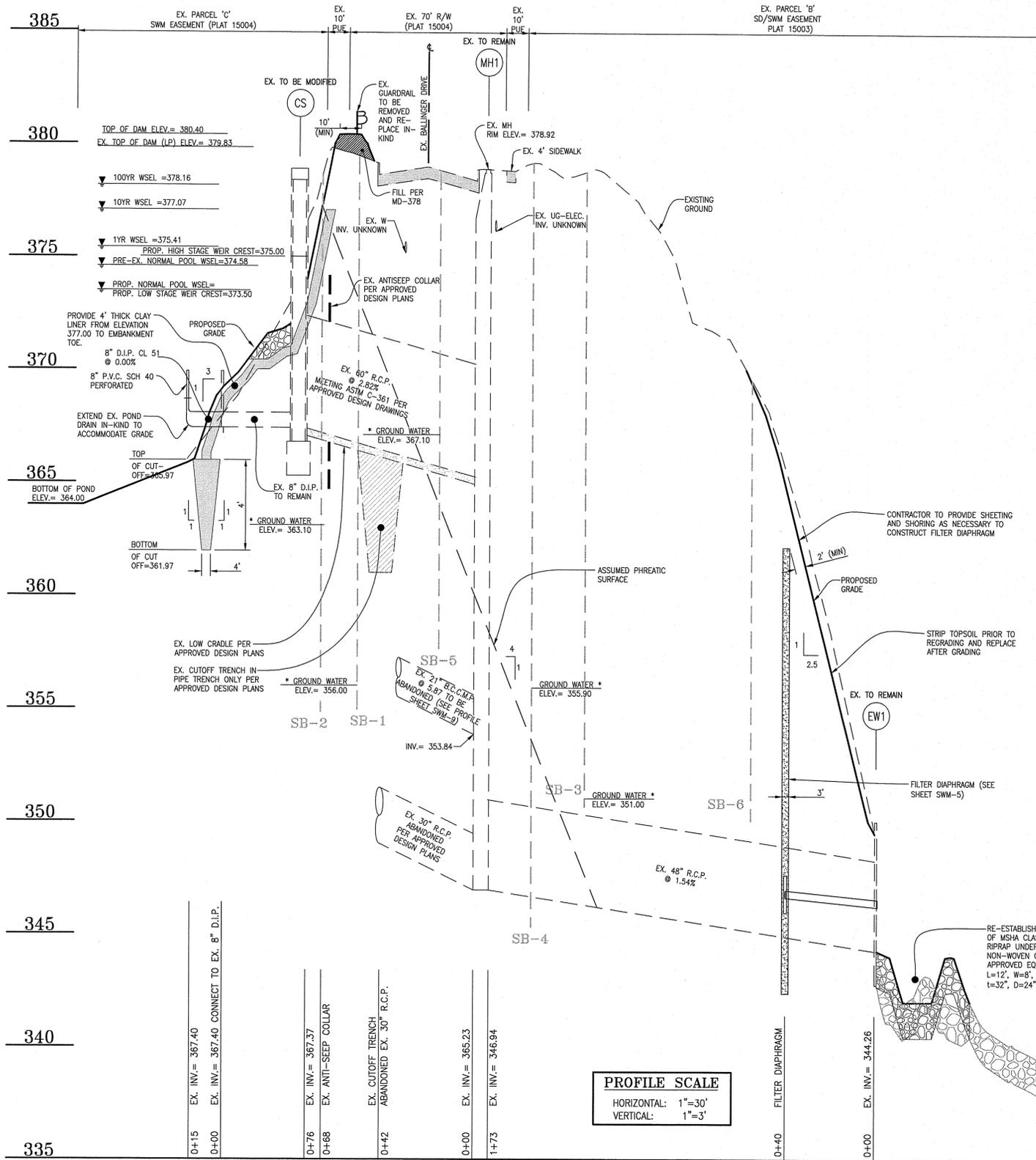
STORMWATER MANAGEMENT INSET VIEWS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850
CONTACT: MR. CRAIG CARSON
TEL: (240) 777-7773

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

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MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M.File No.		

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7753	PRELIMINARY PLAN NO: N/A DESIGN: JBB DRAFT: ADG DATE: MARCH, 2015 SCALE: 1"=20'	SITE PLAN NO: N/A SHEET: 11 OF 25 FILE NO: SWM-4 SWM-11 42-114-24.4
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STORMWATER MANAGEMENT PROFILES
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
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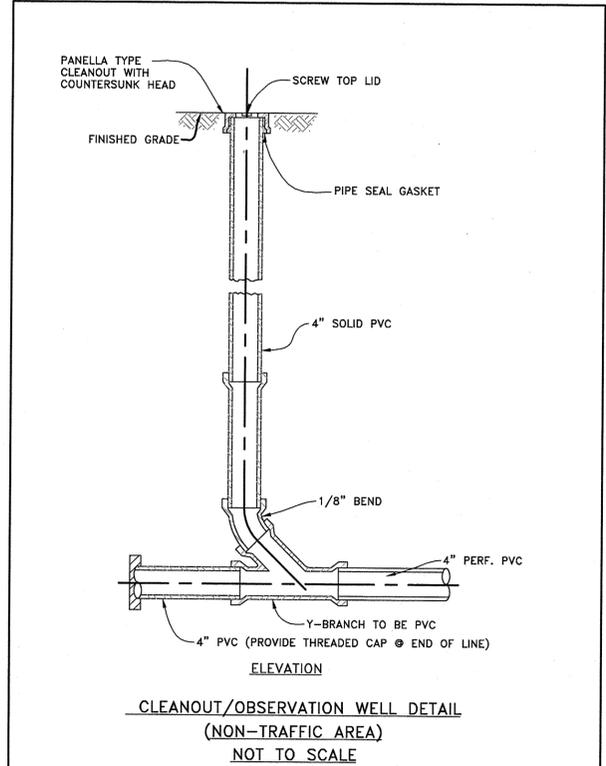
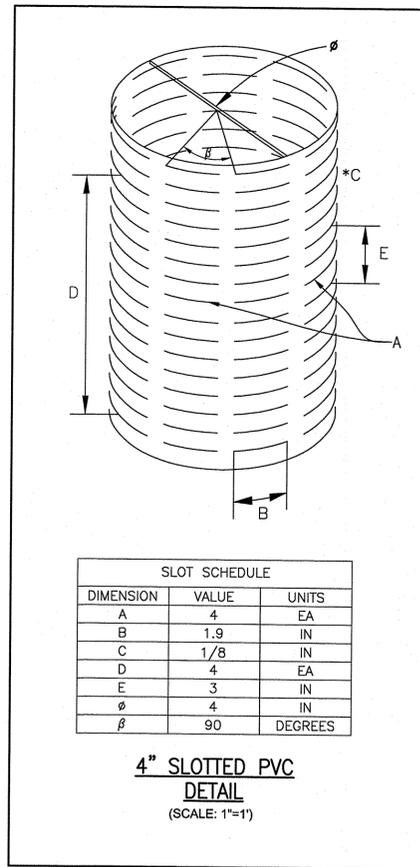


Attached Xrefs: TB22a.34 - Greencastle Woods_TB22a.34/08-01

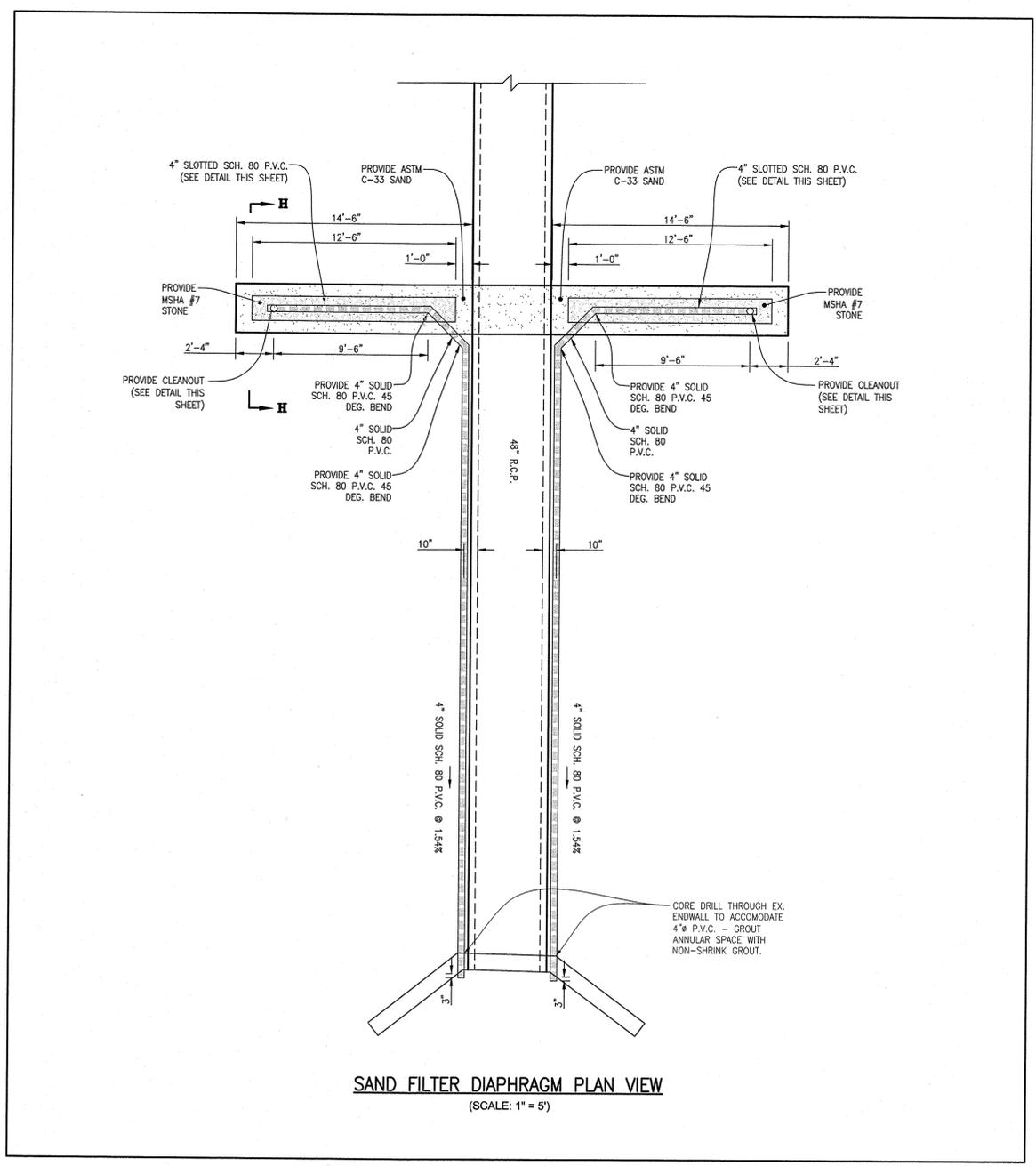
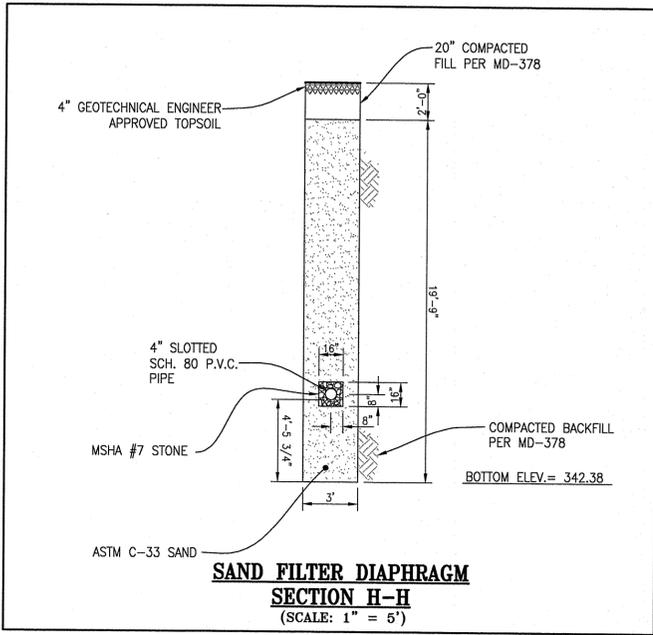
CONSTRUCTION NOTES:

FILTER DIAPHRAGM INSTALLATION NOTES:

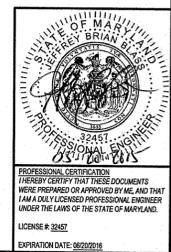
- 1) ALL MATERIALS FOR FILTER DIAPHRAGM INSTALLATION MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER-IN-CHARGE AND THE OWNER'S PROJECT MANAGER PRIOR TO DELIVERY TO SITE. SAMPLES OF SAND AND STONE MATERIAL TO BE USED IN THE FILTER DIAPHRAGM SHALL BE TESTED BY THE GEOTECHNICAL ENGINEER OF RECORD TO ENSURE COMPLIANCE WITH CORRECT GRADATIONS OF THE SPECIFIED MATERIALS.
- 2) MATERIALS TO BE USED ON THIS PROJECT CONSIST OF THE FOLLOWING:
 - i) ASTM C-33 SAND - THE MINIMUM DRY DENSITY OF THE COMPACTED SAND SHALL BE EQUAL TO 70 PERCENT OF THE DRY DENSITY OBTAINED BY COMPACTING A SINGLE SPECIMEN OF SAND USING THE ENERGY AND METHODS DESCRIBED IN ASTM D698A. THE TEST CONSISTS OF A ONE POINT TEST PERFORMED ON SAND THAT HAS BEEN AIR DRIED THOROUGHLY PRIOR TO COMPACTION. THE SAND SHALL HAVE NO MORE THAN 3% MATERIAL PASSING A #200 SIEVE AS STOCKPILED ON-SITE AND NO MORE THAN 5% MATERIAL PASSING A #200 SIEVE AS INSTALLED. THE GEOTECHNICAL ENGINEER OF RECORD SHALL CONFIRM THIS REQUIREMENT.
 - ii) STONE AGGREGATE SHALL BE DOUBLE-WASHED WITH A GRADATION MEETING AASHTO M43 SIZE #7.
 - iii) UNDER DRAIN PIPE AND FITTINGS SHALL BE 4" DIAMETER POLYVINYL CHLORIDE (P.V.C.) MEETING SCHEDULE 80. SLOTTED PIPE, WHERE SHOWN, SHALL CONSIST OF 1/8" WIDE BY 1.9 INCHES LONG SLOTS ORIENTED FOUR (4) SLOTS PER LF. AND FOUR ROWS SPACED EQUALLY AROUND THE CIRCUMFERENCE OF THE PIPE. SLOTS MUST BE MACHINED PRIOR TO DELIVERY TO THE SITE.
- 3) ALL FILTER DIAPHRAGM INSTALLATION WORK IS TO BE DONE UNDER SUPERVISION OF A PROFESSIONAL GEOTECHNICAL ENGINEER.
- 4) FILTER DIAPHRAGM MATERIAL IS TO BE PLACED IN A MAXIMUM OF 8" THICK LIFTS COMPACTING IN BETWEEN EACH LIFT.
- 5) COMPACTION OF EACH LIFT OF SAND SHALL BE ACCOMPLISHED VIA THE FOLLOWING PROCESS:
 - i) PLACE LIFT THE FULL LENGTH OF THE FILTER DIAPHRAGM PRIOR TO COMPACTION.
 - ii) FLOOD THE LIFT WITH CLEAN POTABLE WATER IMMEDIATELY PRIOR TO COMPACTION FROM A SOURCE APPROVED BY THE ENGINEER-IN-CHARGE AND THE OWNER'S PROJECT MANAGER.
 - iii) MAKE A MINIMUM OF TWO (2) PASSES WITH A VIBRATORY PLATE COMPACTOR WEIGHING AT LEAST 100 POUNDS WITH A MINIMUM CENTRIFUGAL WEIGHT OF 2,450 POUNDS AT A VIBRATING FREQUENCY OF NO LESS THAN 5,000 CYCLES PER MINUTE OR BY A VIBRATORY SMOOTH-WHEELED ROLLER WEIGHING AT LEAST 325 POUNDS WITH A CENTRIFUGAL WEIGHT OF 2,250 POUNDS AT A VIBRATING FREQUENCY OF NO LESS THAN 4,500 CYCLES PER MINUTE JUST AFTER THE WATER LEVEL HAS DROPPED BELOW THE SURFACE OF THE SAND.
- 6) FILTER DIAPHRAGM MATERIAL SHALL BE PLACED TO AVOID SEGREGATION OF PARTICLE SIZES AND TO ENSURE THE CONTINUITY AND INTEGRITY OF ALL ZONES. NO FOREIGN MATERIAL SHALL BE ALLOWED TO INTERMIX WITH OR OTHERWISE CONTAMINATE THE FILTER DIAPHRAGM MATERIALS. THE CONTRACTOR SHALL COMPLETELY REMOVE ANY FILTER DIAPHRAGM MATERIAL FOUND TO BE CONTAMINATED WITH FOREIGN MATERIALS PRIOR TO INSTALLING ADDITIONAL DIAPHRAGM MATERIAL.
7. TRAFFIC SHALL NOT BE PERMITTED TO CROSSOVER FILTER ZONES AT RANDOM. EQUIPMENT CROSSOVERS SHALL BE MAINTAINED, AND THE NUMBER AND LOCATION OF SUCH CROSSOVERS SHALL BE ESTABLISHED AND APPROVED PRIOR TO BEGINNING THE FILTER DIAPHRAGM PLACEMENT. EACH CROSS OVER SHALL BE CLEARED OF CONTAMINATING MATERIAL AND SHALL BE INSPECTED AND APPROVED BY THE PROFESSIONAL GEOTECHNICAL ENGINEER SUPERVISING THE INSTALLATION BEFORE PLACEMENT OF ADDITIONAL FILTER DIAPHRAGM MATERIAL.
- 8) ANY DAMAGE TO THE FOUNDATION SURFACE OR THE TRENCH SIDES OR BOTTOM OCCURRING DURING PLACEMENT OF FILTER DIAPHRAGM MATERIAL SHALL BE REPAIRED BEFORE FILTER DIAPHRAGM PLACEMENT IS CONTINUED.
- 9) THE UPPER SURFACE OF THE FILTER DIAPHRAGM SHOULD BE CONSTRUCTED CONCURRENTLY WITH ADJACENT ZONES OF EARTH FILL AND SHALL BE MAINTAINED AT A MINIMUM ONE LIFT ABOVE THE UPPER SURFACE OF THE ADJACENT EARTH FILL.



1. FOR AN UNDERGROUND OBSERVATION WELL/CLEANOUT MOUNTED APPROXIMATELY FLUSH WITH FINISHED GRADE, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 80 PVC, OR EQUAL, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST FOUR INCHES.
2. THE TUBE SHALL HAVE A FACTORY-ATTACHED CAST IRON OR HIGH-IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW-TOP LID. THE SCREW-TOP LID SHALL BE CAST IRON OR HIGH-IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.



MISS UTILITY
Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.

252515
S.M.File No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

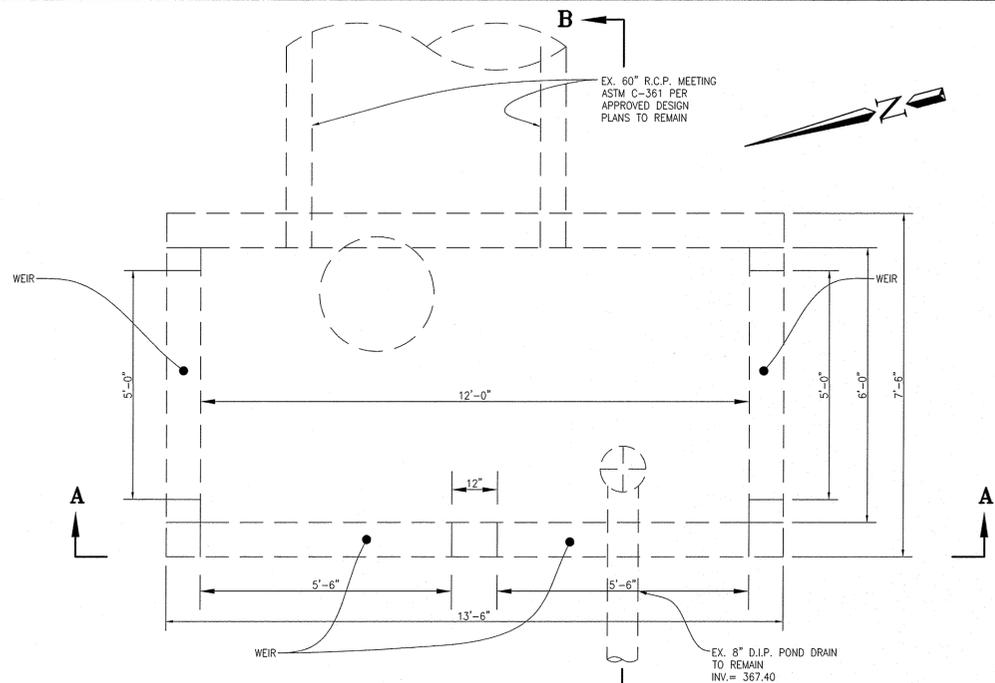
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

FILTER DIAPHRAGM DETAILS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

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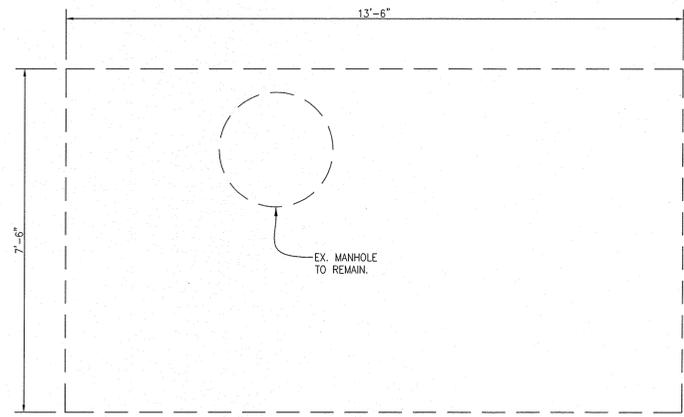
CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7735	PRELIMINARY PLAN NO: N/A SITE PLAN NO: N/A
DESIGN: JBB	SHEET OF 25
DRAFT: ADG	SWM-5 SWM-11
DATE: MARCH, 2015	FILE NO: 42-114-24.4
SCALE: 1" = 20'	

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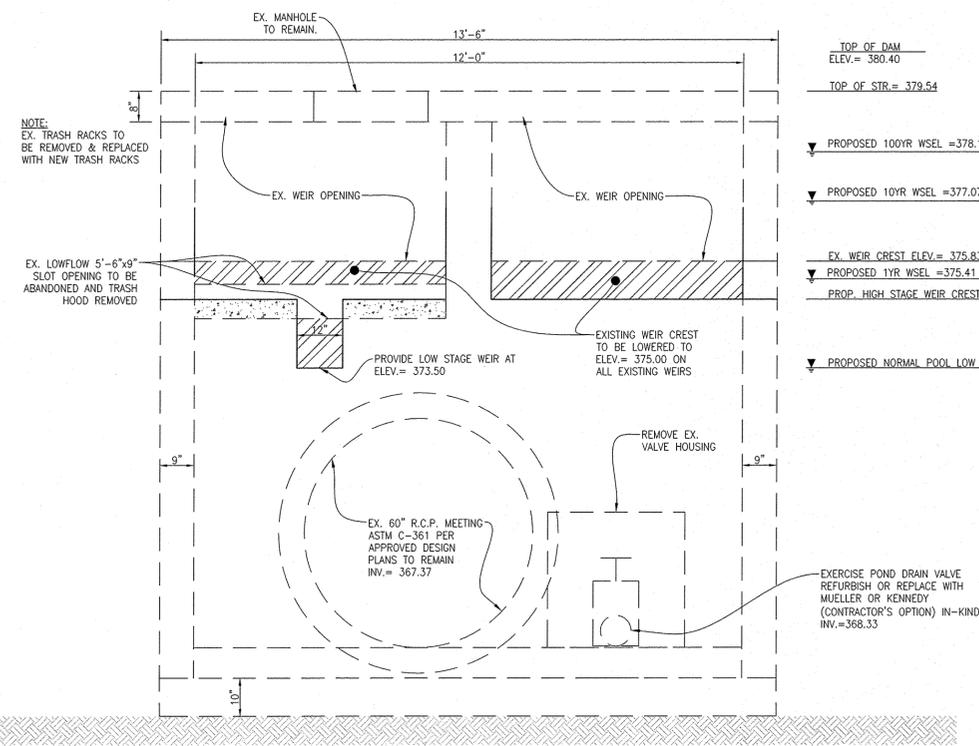
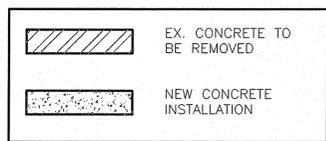
RISER DETAILS (TOP SLAB REMOVED)

SCALE: 1"=2'



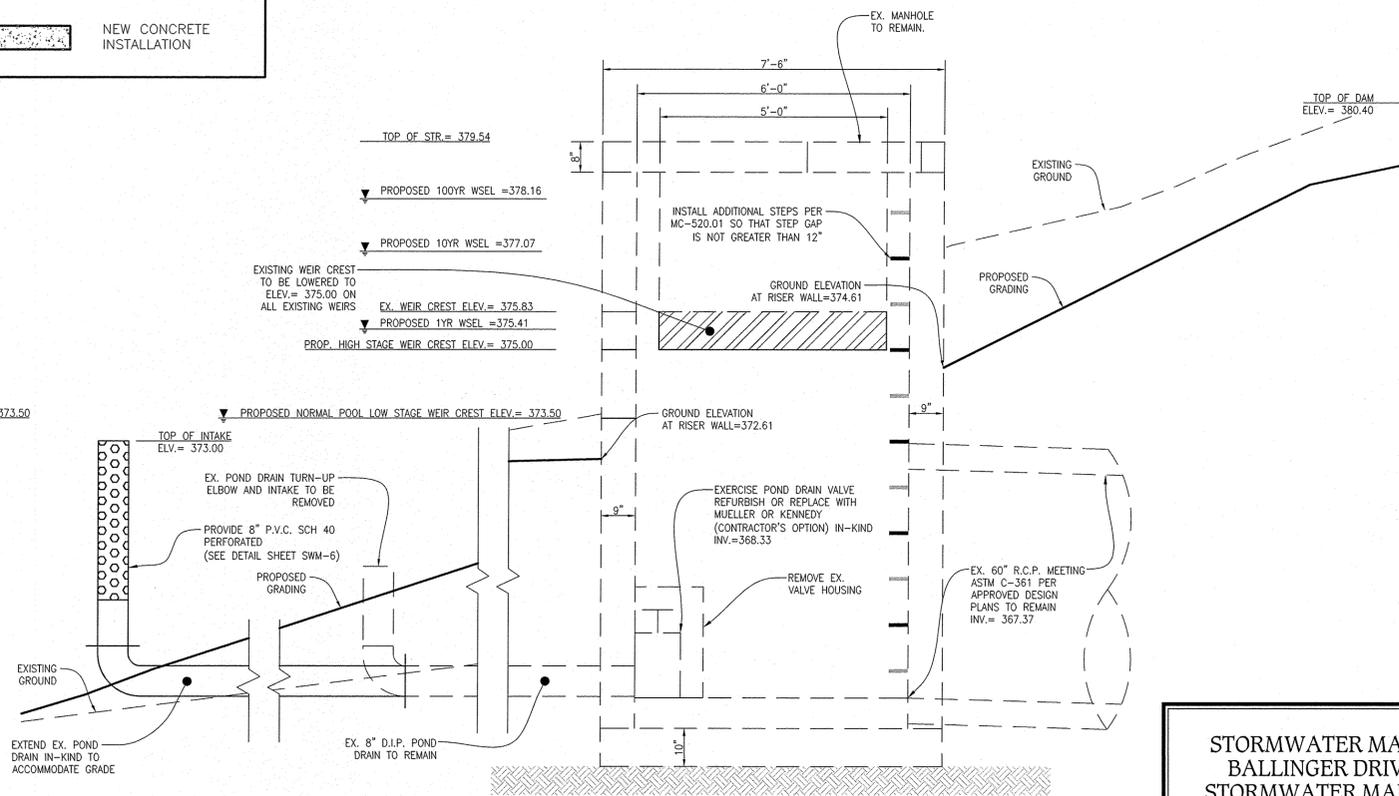
TOP SLAB

SCALE: 1"=2'



SECTION A-A

SCALE: 1"=2'



SECTION B-B

SCALE: 1"=2'

TOP OF DAM ELEV. = 380.40

TOP OF STR. = 379.54

PROPOSED 100YR WSEL = 378.16

PROPOSED 10YR WSEL = 377.07

EX. WEIR CREST ELEV. = 375.83

PROPOSED 1YR WSEL = 375.41 Q = 34.35 cfs

PROP. HIGH STAGE WEIR CREST ELEV. = 375.00

PROPOSED NORMAL POOL LOW STAGE WEIR CREST ELEV. = 373.50

TOP OF STR. = 379.54

PROPOSED 100YR WSEL = 378.16

PROPOSED 10YR WSEL = 377.07

EX. WEIR CREST ELEV. = 375.83

PROPOSED 1YR WSEL = 375.41

PROP. HIGH STAGE WEIR CREST ELEV. = 375.00

PROPOSED NORMAL POOL LOW STAGE WEIR CREST ELEV. = 373.50

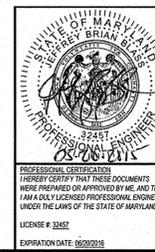
STORMWATER MANAGEMENT RISER DETAILS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7713	PRELIMINARY PLAN NO. N/A	SITE PLAN NO. N/A
DESIGN JBB	SHEET 13	OF 25
DRAFT ADG	DATE MARCH, 2015	FILE NO. SWM-6 SWM-11
SCALE 1" = 20'	42-114-24.4	

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MISS UTILITY
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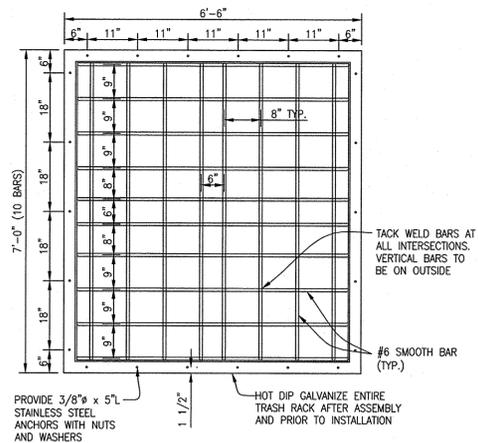


MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

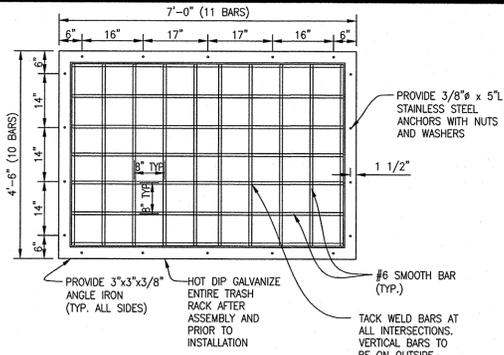
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
252515 S.M.File No.		SEDIMENT CONTROL PERMIT No.

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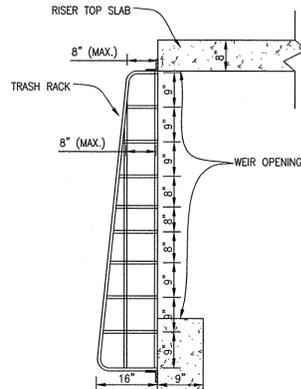
Reviewed _____ Date _____	258636
SEDIMENT CONTROL PERMIT No.	
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.	



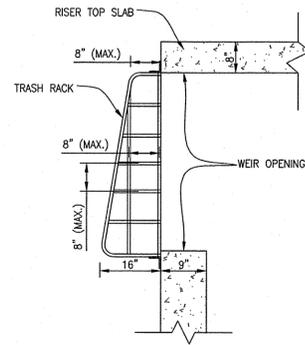
FRONT FACE TRASH RACK (2 EA FACE)
SCALE: 1"=2'



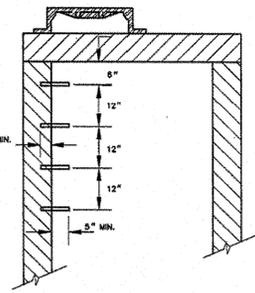
SIDE FACE TRASH RACK (1 EA FACE)
SCALE: 1"=2'



FRONT FACE TRASH RACK
SCALE: 1"=2'



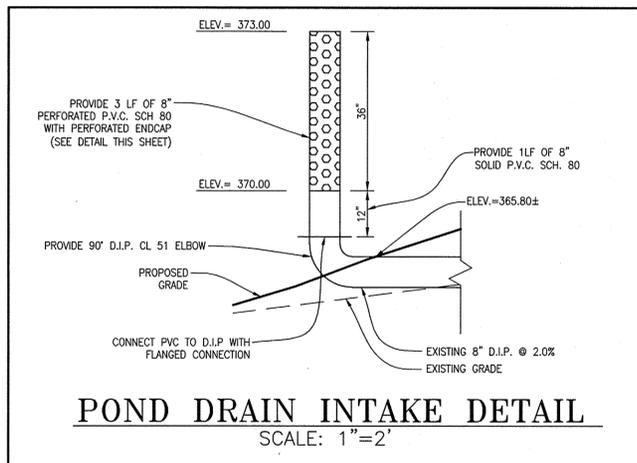
SIDE FACE TRASH RACK
SCALE: 1"=2'



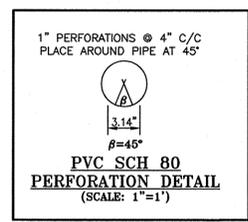
GENERAL NOTES

- STEPS ARE TO BE MADE OF: (1) CAST IRON, 1 INCH SQUARE; (2) 3/8 INCH STEEL ROD EMBEDDED IN POLYPROPYLENE PLASTIC; OR (3) ALUMINUM ALLOY, 7/8 INCH BY 13/16 INCH WITH A MINIMUM EMBEDMENT OF 3 INCHES, A MINIMUM PROJECTION OF 5 INCHES, AND A MINIMUM WIDTH OF 10 INCHES.
- STEPS SHALL BE PLACED IN VERTICAL ALIGNMENT, 12 INCHES APART, AND SHALL ALIGN WITH THE COVER OPENING.
- STEPS ARE NOT REQUIRED IN STRUCTURES LESS THAN 4 FEET IN DEPTH.

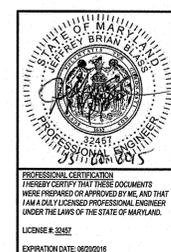
APPROVED <u>JAN 5/98</u> DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
<i>[Signature]</i> DIRECTOR, DEPT. OF TRANSP.		MANHOLE AND INLET STEPS
<i>[Signature]</i> CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC-520.01



POND DRAIN INTAKE DETAIL
SCALE: 1"=2'



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Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M.File No.		

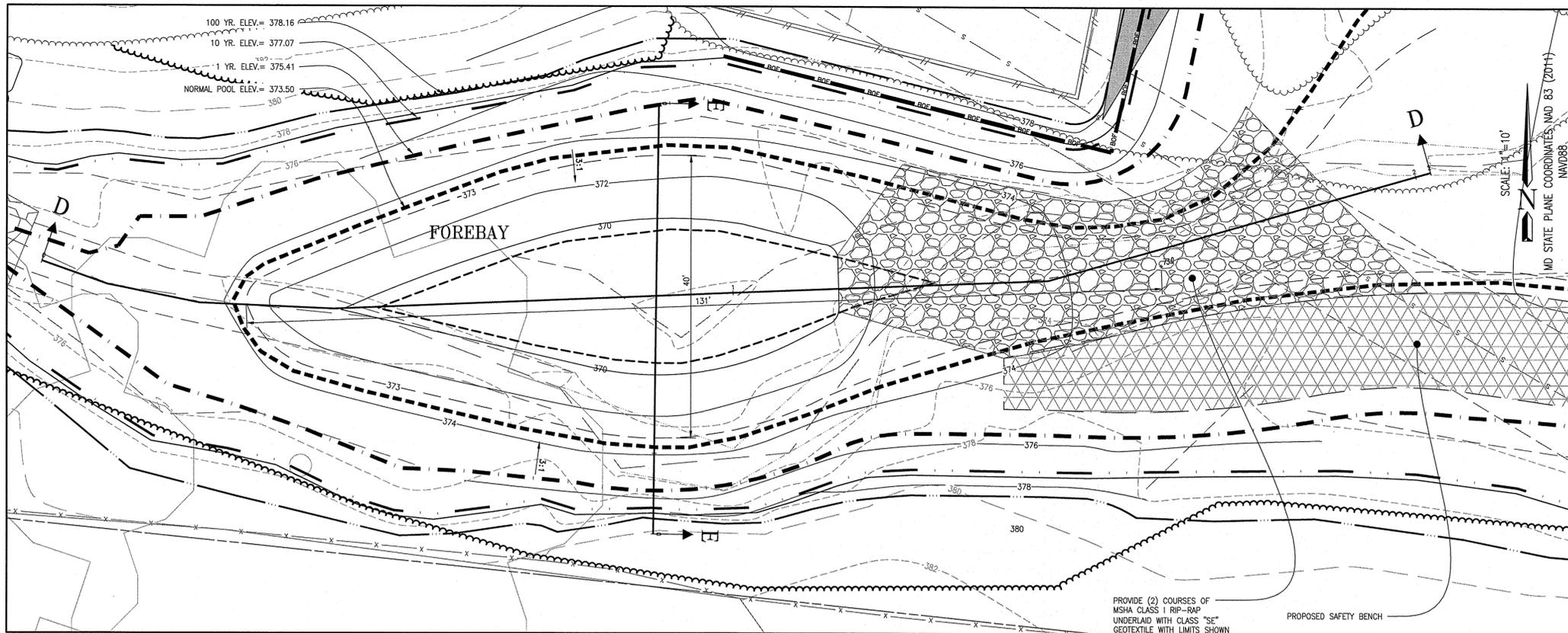
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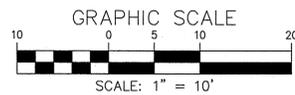
STORMWATER MANAGEMENT RISER DETAILS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASCADE WOODS
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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION	PRELIMINARY PLAN NO: N/A	SITE PLAN NO: N/A
DESIGN: JBB	SHEET: 14	OF: 25
DRAFT: ADG	DATE: MARCH, 2015	SCALE: 1"=20'
FILE NO: 42-114-244		



FOREBAY INSET
SCALE: 1"=10'



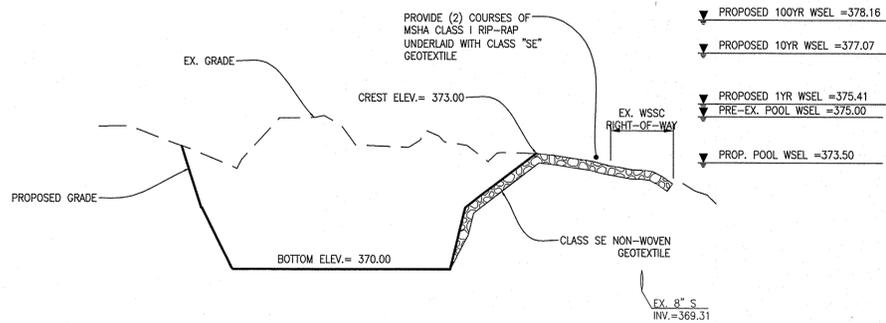
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375

370

365

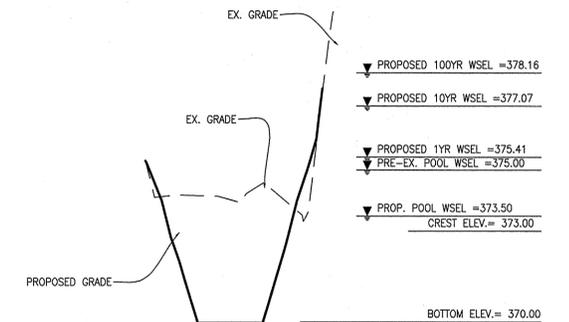
360



PROFILE SCALE
HORIZONTAL: 1"=30'
VERTICAL: 1"=3'

FOREBAY INSET SECTION (D - D)

385
380
375
370
365



PROFILE SCALE
HORIZONTAL: 1"=30'
VERTICAL: 1"=3'

FOREBAY INSET SECTION (E - E)

MISS UTILITY
Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636
252515	252515	SEDIMENT CONTROL PERMIT No.
S.M.File No.	S.M.File No.	

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

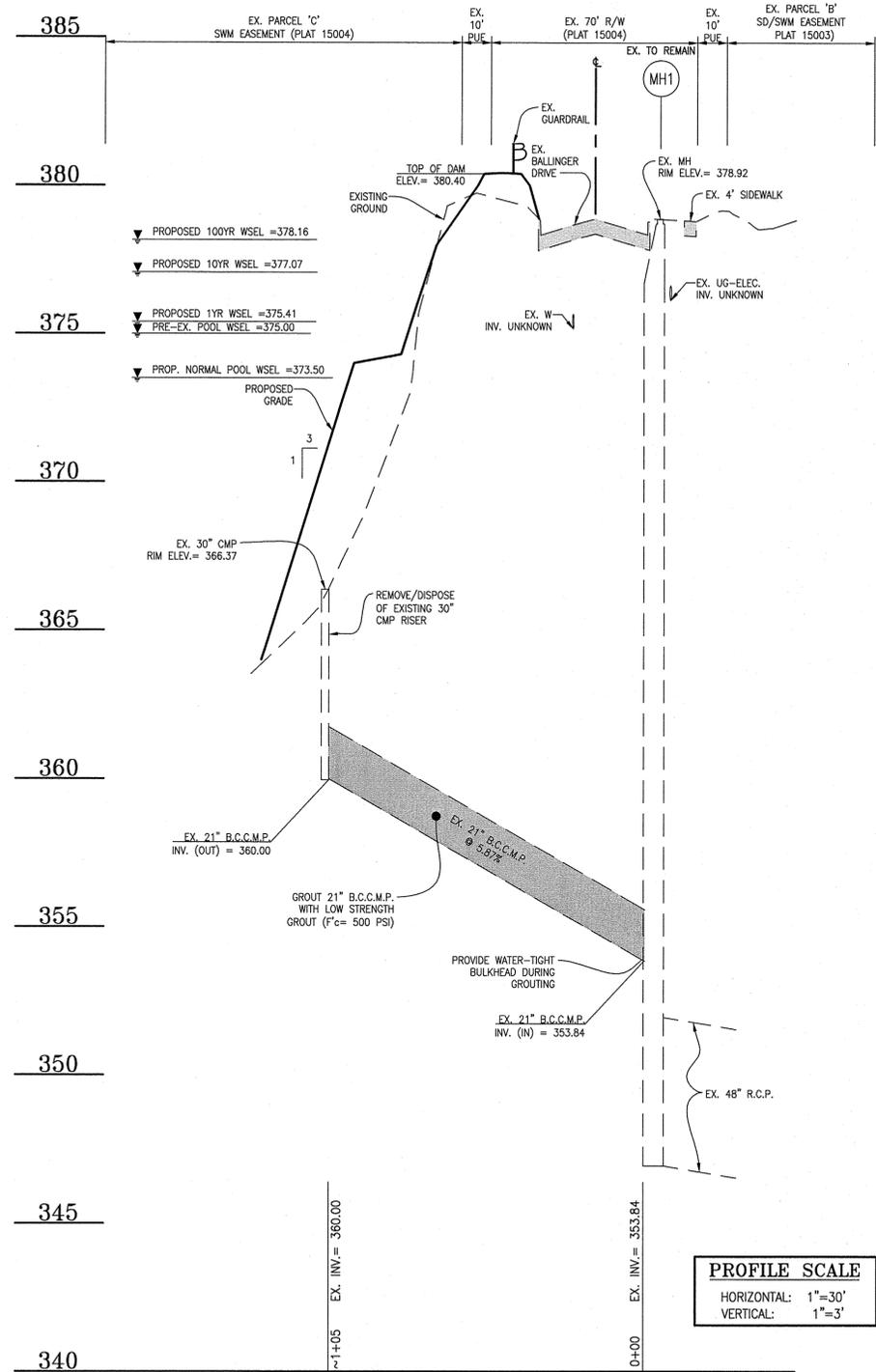
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

FOREBAY PLAN
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

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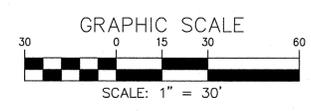
CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 285 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG GARSON TEL: (240) 777-7753	PRELIMINARY PLAN NO: N/A	SITE PLAN NO: N/A
DESIGN: JBB	SHEET: 15	OF: 25
DRAFT: ADG	DATE: MARCH, 2015	FILE NO: SWM-8 SWM-11
SCALE: AS-SHOWN		42-114-24.4

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EX. 21" B.C.C.M.P. TO BE ABANDONED PROFILE

PROFILE SCALE
 HORIZONTAL: 1"=30'
 VERTICAL: 1"=3'



MISS UTILITY
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Cement Based Grout for Sliplining
Description and Materials: Grout must be composed of Portland cement, fine sand, admixtures, and potable water proportioned as to create a concrete that is pumpable yet remains dense, to completely fill void between the host pipe and the pipe liner. It is preferred that the grout be mixed on site. The grout mix will be cement and water proportioned in the ratio of 1 cubic foot of cement to 1 cubic foot (7.5 gallons) of water. The mix ratio may be modified by grout pump operator to insure filling of all voids. Grout must meet ASTM C1107. Grout must remain fluid for at least 2 hours after it was pumped, and must develop minimum compressive strength of 500 psi within 7 days. Grout must be tested in accordance with ASTM C109.
Execution: The annular void shall be grouted solid by injecting grout from one end of the pipe run and allowing it to flow toward the other end either by gravity or pump. Venting of the annular void shall be performed to assure uniform filling of the void space during the grouting process. Care must be taken so that the grout does not float or damage the liner. The contractor must follow the HDPE liner manufacturer's recommendations for allowable grouting pressure based on the pipe size.

ABANDONMENT PROFILE
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

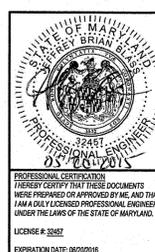
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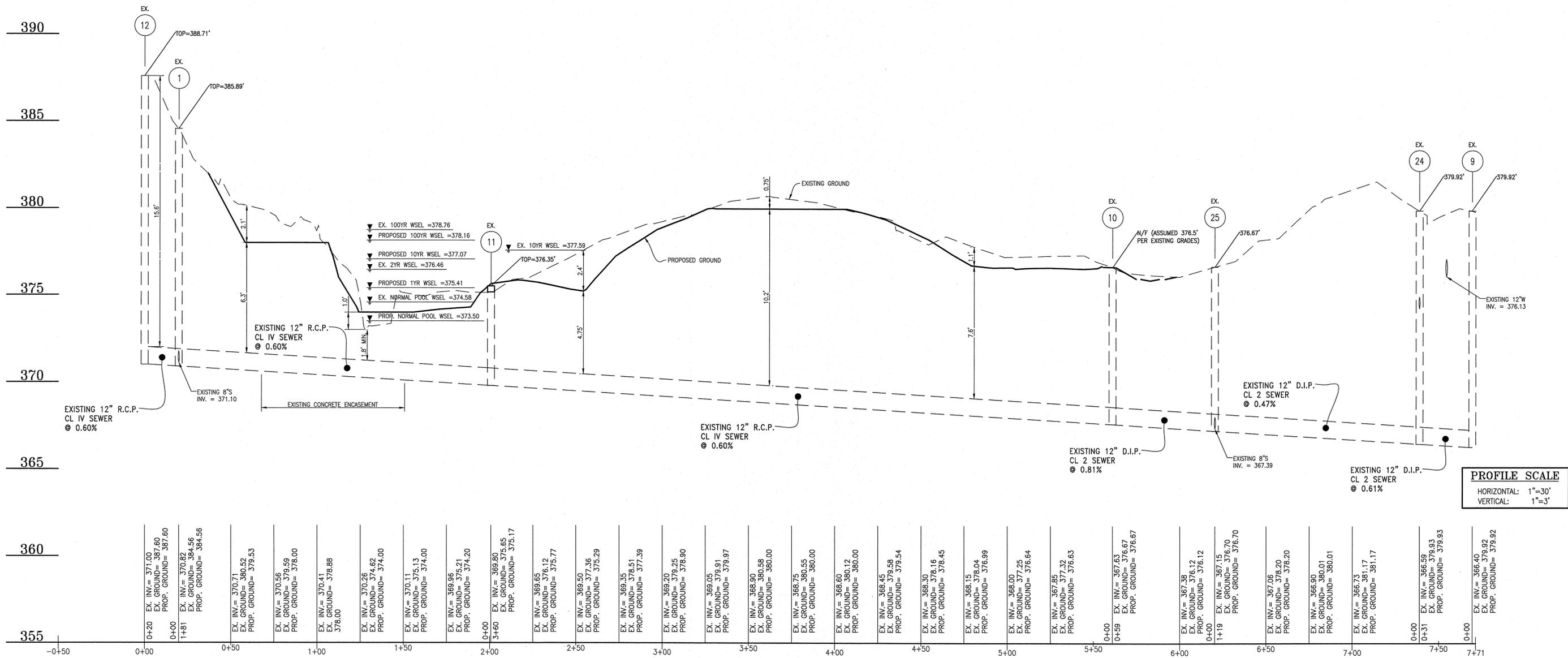
CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 235 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7713	PRELIMINARY PLAN NO. N/A DESIGN JBB DRAFT ADG DATE MARCH, 2015 SCALE AS-SHOWN	SITE PLAN NO. N/A SHEET 16 OF 25 FILE NO.: SWM-9 SWM-11 42-114-24.4
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MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

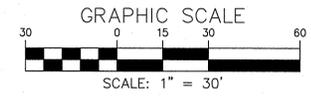
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M. File No.		MCDEP APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.





PROFILE SCALE
 HORIZONTAL: 1"=30'
 VERTICAL: 1"=3'

0+20	EX. INV.= 371.00 EX. GROUND= 387.60 PROP. GROUND= 387.60
0+00	EX. INV.= 370.82 EX. GROUND= 384.56 PROP. GROUND= 384.56
1+81	EX. INV.= 370.71 EX. GROUND= 380.52 PROP. GROUND= 379.53
0+50	EX. INV.= 370.56 EX. GROUND= 379.59 PROP. GROUND= 378.00
1+00	EX. INV.= 370.41 EX. GROUND= 378.88 PROP. GROUND= 378.00
1+50	EX. INV.= 370.26 EX. GROUND= 374.62 PROP. GROUND= 374.00
1+50	EX. INV.= 370.11 EX. GROUND= 375.13 PROP. GROUND= 374.00
2+00	EX. INV.= 369.96 EX. GROUND= 375.21 PROP. GROUND= 374.20
3+60	EX. INV.= 369.80 EX. GROUND= 375.65 PROP. GROUND= 375.17
2+50	EX. INV.= 369.65 EX. GROUND= 376.12 PROP. GROUND= 375.77
2+50	EX. INV.= 369.50 EX. GROUND= 377.36 PROP. GROUND= 375.29
3+00	EX. INV.= 369.35 EX. GROUND= 378.51 PROP. GROUND= 377.39
3+50	EX. INV.= 369.20 EX. GROUND= 379.25 PROP. GROUND= 378.90
3+50	EX. INV.= 369.05 EX. GROUND= 379.91 PROP. GROUND= 379.97
4+00	EX. INV.= 368.90 EX. GROUND= 380.88 PROP. GROUND= 380.00
4+00	EX. INV.= 368.75 EX. GROUND= 380.85 PROP. GROUND= 380.00
4+50	EX. INV.= 368.60 EX. GROUND= 380.12 PROP. GROUND= 380.00
4+50	EX. INV.= 368.45 EX. GROUND= 379.58 PROP. GROUND= 379.54
5+00	EX. INV.= 368.30 EX. GROUND= 378.16 PROP. GROUND= 378.45
5+00	EX. INV.= 368.15 EX. GROUND= 378.04 PROP. GROUND= 378.99
5+50	EX. INV.= 368.00 EX. GROUND= 377.25 PROP. GROUND= 376.84
5+50	EX. INV.= 367.85 EX. GROUND= 377.32 PROP. GROUND= 376.63
6+00	EX. INV.= 367.63 EX. GROUND= 376.67 PROP. GROUND= 376.67
6+00	EX. INV.= 367.38 EX. GROUND= 376.12 PROP. GROUND= 376.12
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7+00	EX. INV.= 366.90 EX. GROUND= 380.01 PROP. GROUND= 380.01
7+00	EX. INV.= 366.73 EX. GROUND= 381.17 PROP. GROUND= 381.17
7+50	EX. INV.= 366.59 EX. GROUND= 379.93 PROP. GROUND= 379.93
7+71	EX. INV.= 366.40 EX. GROUND= 379.92 PROP. GROUND= 379.92



MISS UTILITY
 Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.
 MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

EXISTING SEWER LINE PROFILE
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 285 ROCKVILLE FIRE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7773	PRELIMINARY PLAN NO: N/A DESIGN: JBE DRAFT: ADG DATE: MARCH, 2015 SCALE: AS-SHOWN	SITE PLAN NO: N/A SHEET 17 OF 25 SWM-10 SWM-11 FILE NO: 42-114-24.4
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These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378.
 All references to ASTM, MSHA, and AASHTO specifications apply to the most recent version.

A. Construction Inspection by Designated Engineer

The construction of the pond and embankment shall be under the supervision of a Registered Professional Engineer. The engineer must submit written certification that the pond and embankment have been built in accordance with the approved plans to the Department of Permitting Services (DPS) along with a record drawing, soil compaction tests, concrete tests, and other required construction documentation. This should be done immediately following the completion of the project, unless otherwise designated on the plans. The engineer shall have the responsibility and authority to make minor changes in the plans in order to compensate for unusual soil conditions encountered during construction as long as changes do not adversely affect the integrity of the dam. Major changes to the design, which may result from site conditions encountered during construction, must be reviewed and approved by the Design Engineer, DPS, and the Montgomery Soil Conservation District prior to initiation of construction.

B. Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed, and stripped of topsoil. All trees, vegetation, roots, and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment. Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish, and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the initial structure shall be cleared. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir if accepted by the owner or his representative. A sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

C. Earth Fill

Material. - The fill material shall be taken from approved designated borrow areas. It shall be free of rocks, stumps, wood, rubbish, stones greater than 4 inches, frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL, and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. **Materials used in the outer shell of the embankment must have the ability to support vegetation of the quality required to prevent erosion of the embankment. Placement.** - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portion of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment. **Compaction.** - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a roller, vibrator roller, or rubber tire roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball, it will not crumble; yet, not so wet that water can be squeezed out. The density of each lift shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor). **Cut Off Trench.** - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be determined by the equipment used for excavation with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be one to one or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core
 The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be minimum of four feet. The height shall extend up to at least the 10-year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

D. Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material must fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24 inches or greater over the structure or pipe. Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The material shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of six inches (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7 inches to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the back fill operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24 inches or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

E. Pipe Conduits

All pipes shall be circular in cross section. **Corrugated Metal Pipe.** - All of the following criteria shall apply for corrugated metal pipe:
 1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-245 & M-246 with watertight coupling bands or flanges. **Materials.** - (aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. **Materials.** - (aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 6.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
 3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connections to the structure shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Simple bands are not considered to be watertight. All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. Pipe ends must be matched and numbered by the manufacturer. The following pipe connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circles, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8 inch thick, closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/4-inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24-inch long annular computer band using a minimum of 4 (four) rods and lugs. 2 on each connecting pipe end, per current DPS band detail. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8-inch closed cell gaskets the full width of the flange is also acceptable. Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.
 4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 5. Backfilling shall conform to "Structure Backfill."
 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe. - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - RCP shall have bell and spigot joints with rubber gaskets and shall meet ASTM Designation C-361. Pipes must be labeled in full accordance with ASTM C-361, including the ASTM C-361 designation on the inside of each section of pipe, and all pipes must be clearly marked by the manufacturer prior to delivery to the job site. Pipes with multiple designations will be rejected.
 2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6-inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.
 3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within four feet from the riser.
 4. Backfilling shall conform to "Structure Backfill."
 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
Plastic Pipe. - The following criteria shall apply for plastic pipe:
 1. Materials - RCP shall have bell and spigot joints with rubber gaskets and shall meet ASTM Designation D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4 - 10 inch pipe shall meet the requirement of AASHTO M252 Type S, and 12 through 24 inch shall meet the requirements of AASHTO M294 Type S.
 2. Joints and connections to anti-seep collars shall be completely watertight.
 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 4. Backfilling shall conform to "Structure Backfill."
 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

F. Drainage Diaphragms

When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

G. Concrete

Concrete design 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 4500 psi for cast in place and 5000 psi for pre-cast structures. Concrete shall also meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 409, Mix No. 6.

H. Rock Rip-rap

Rock rip-rap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specification for Construction and Materials, Section 311. Geotextile shall be placed under all rip-rap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 621.09, Class C.

I. Care of Water during Construction

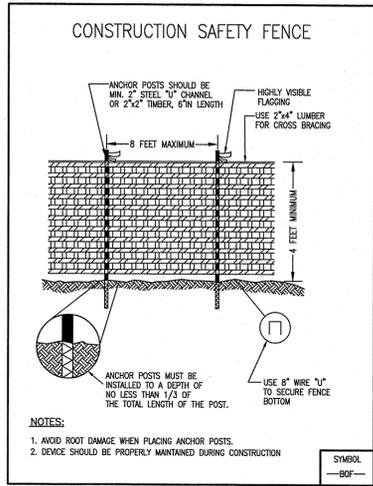
All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled, and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works, and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

J. Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

K. Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

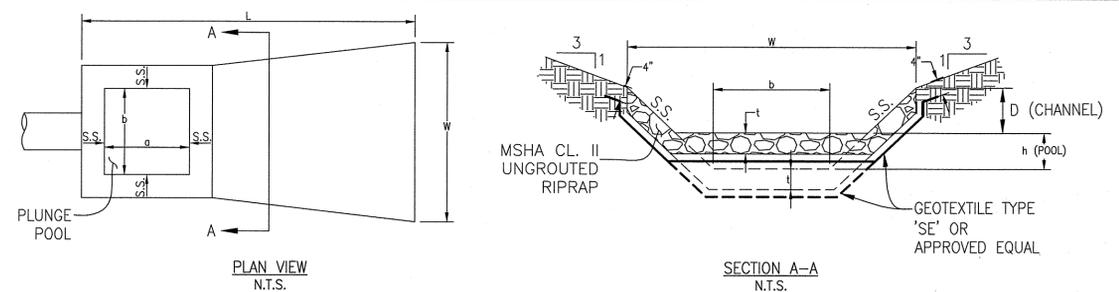


NOTES:
 1. AVOID ROCK DAMAGE WHEN PLACING ANCHOR POSTS.
 2. DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION.
SYMBOL
 —BOP—

**CONSTRUCTION INSPECTION
 CHECK-OFF LIST FOR STORMWATER MANAGEMENT PONDS**

STAGE	DESIGN ENGINEER (DE)	GEOTECHNICAL ENGINEER (GEO)	COUNTY INSPECTOR	MNCP&PC & OTHER
*MANDATORY NOTIFICATION: Inspection and approval by the party indicated is required at these points prior to proceeding with construction. The permittee is required to give the required inspection parties twenty-four (24) hours notice (DPS telephone 240/777-6210). The DPS inspector may waive an inspection, provided the design engineer (DE) and/or geotechnical engineer (GEO) make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector. Work completed without the necessary party's approval may result in the permittee having to remove and reconstruct the unapproved work. The permittee must maintain a "record set" of approved SCSM plans on-site.	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE
1. Pre-construction meeting & field review of tree save flagging/protection	*	*	*	*
2. Sediment control installation			*	
3. Dewatering (GEO) and stream diversion (DE)	*	*	*	*
4. Clearing, grubbing and dewatering, if requires (GEO)		*	*	*
5. Core trench excavation and dewatering, if required (GEO)		*	*	*
6. Core trench dimensions, location (DE) or (GEO), backfill and compaction tests (GEO)	*	*	*	*
7. Construction of principal spillway and riser.	*	*	*	*
7a - Barrel class. (ASTM C361) (DE) - Pipe certification from supplier (DE) - Pipe assembled in place on acceptable subgrade (GEO) - Watertight joints (DE) - Articulated joint 4 feet from riser (DE) - Lifts, compaction soil material (GEO) - Location dimensions (DE)	N/A			
7b - Concrete cradle dimensions (DE) - Concrete strength tests (GEO)	*	N/A	*	*
7c - Anti-seep collars (location collar dimensions and re-bar size) (DE) - Concrete strength tests (GEO)	*	N/A	*	*
7d - Filter diaphragm gradation and dimensions (if applicable) (GEO)		N/A	*	*
7e - Riser footing subgrade (GEO), dimensions, re-bar (DE) - Concrete strength tests (GEO)	*	N/A	*	*
7f. Precast Riser: - Shop drawings approved by DE, accepted by County - Visual inspection of riser no cracks spaulding exposed steel incorrect dimensions, honeycombing (DE) - Certification from supplier (DE) - Watertight joints (DE) - Wall and opening dimensions per plan (DE)	N/A		*	*
7g. Cast-in-Place Riser: - Wall and opening dimensions per plan (DE) - Re-bar size, number, spacing acceptable (DE) - Concrete testing and certification (GEO) - Watertight joints (DE) - Extreme weather provisions (DE)	*	*	*	*
7h. Valve/orifice plate installation (DE). Note: may be delayed for SC purposes.	*	N/A		*
8. Backfilling of principal spillway (GEO)		N/A	*	*
9. Underdrain (if applicable) location (DE), pipe size (DE) filter cloth (DE), gravel (DE), field adjustments (GEO).	*	N/A	*	*
10. Channelization work and pond outfall protection (DE) or (GEO)	*		*	*
11. Diversion of stream through principal spillway (DE)	*	*	*	*
12. Construction of embankment - Lifts, compaction soil material (GEO) - Location dimension (DE)	*		*	*
13. Construction of emergency spillway in cut (DE)	*	N/A		*
14. Field verification of constructed contours (DE)	*		*	*
15. Permanent vegetative stabilization delivery tickets from supplier			*	*
16. Submit record drawing and documentation (DE) and (GEO)	*		*	*
17. Other items. (Set valve(s) to design opening values, if required) (DE)	*		*	*
18. Final inspection (DE) and (GEO)	*	*	*	*

NOTES:
 1. Permittee to supply Design Engineer with delivery tickets for all materials used in Pond construction for submission with the as-built package. DPS inspection telephone (240) 777-6210
 2. See construction specifications this plan for detailed requirements.
 3. A copy of this completed checklist must be submitted as part of the stormwater management as-built package. MNCP&PC Inspection Telephone: (301) 495-4571



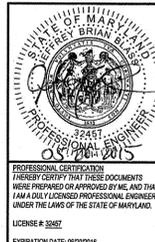
RIPRAP PLUNGE POOL AND CHANNEL DETAILS

STR. No.	OUTLET PROTECTION DIMENSIONS						CHANNEL			
	a	b	h	S.S.	t	L	W	D	S.S.	t
ES-1	12'	8'	24"	3:1	32"	18'	6'-24'	36"-0"	3:1 TO 100:1	32"

MISS UTILITY

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SIZE	PIPE AND FITTING SCHEDULE	QTY/LENGTH
8"	CL 51 D.I.P. PIPE	18 LF
8"	P.V.C. SCH. 80 PERFORATED	3 LF
8"	CL 51 D.I.P. ELBOW	1
4"	P.V.C. SCH. 80 SLOTTED	20 LF
4"	P.V.C. SCH. 80 SOLID	168 LF



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: _____

Sediment Control Technical Requirements: _____

Reviewed _____ Date _____

Approved _____ Date _____

252515
 S.M.File No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Administrative Requirements: _____

Reviewed _____ Date _____

258636

SEDIMENT CONTROL PERMIT No. _____

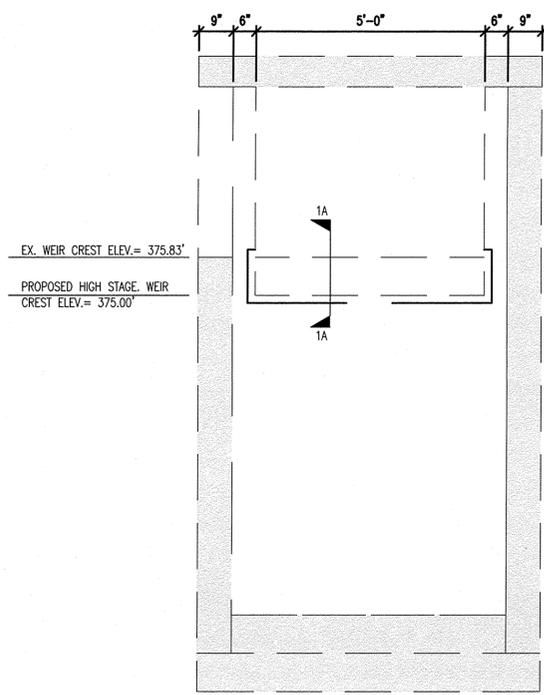
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

STORMWATER MANAGEMENT DETAILS
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

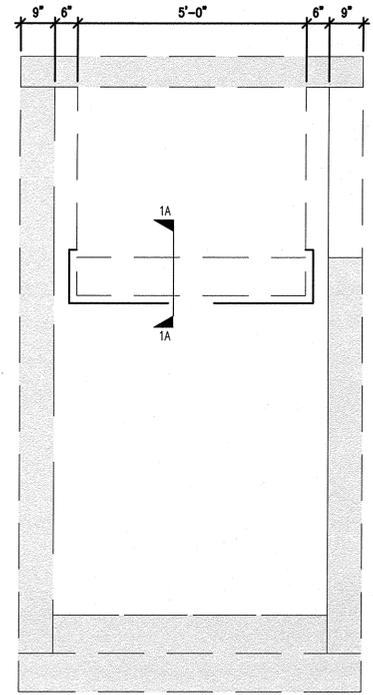
CPJ Charles P. Johnson & Associates, Inc.
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 Associates 1751 Elton Rd., Ste 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
 www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7753	PRELIMINARY PLAN NO. N/A SHEET 18 OF 25 DATE MARCH, 2015 SCALE 1" = 20'	SITE PLAN NO. N/A SWM-11 FILE NO.: 42-114-24.4
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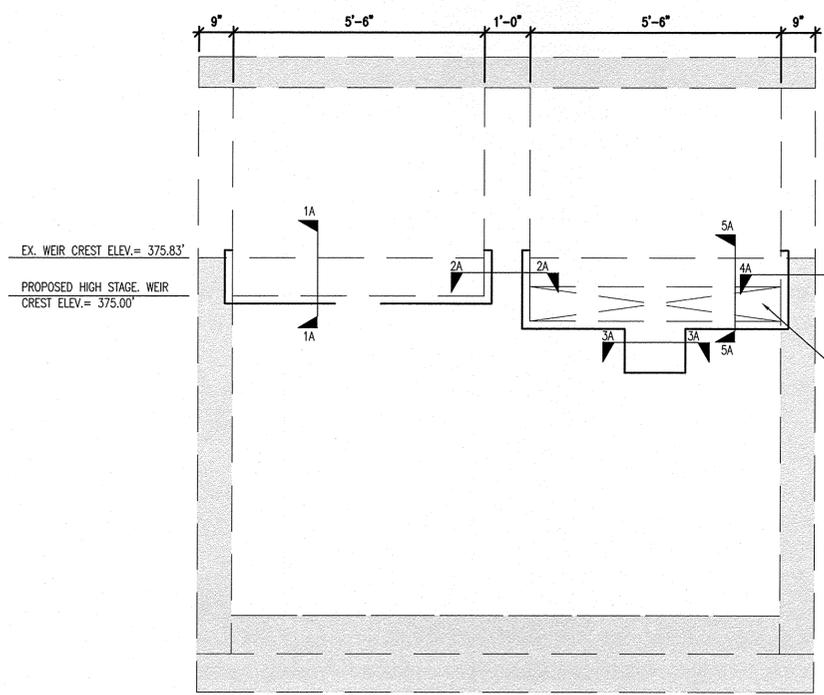
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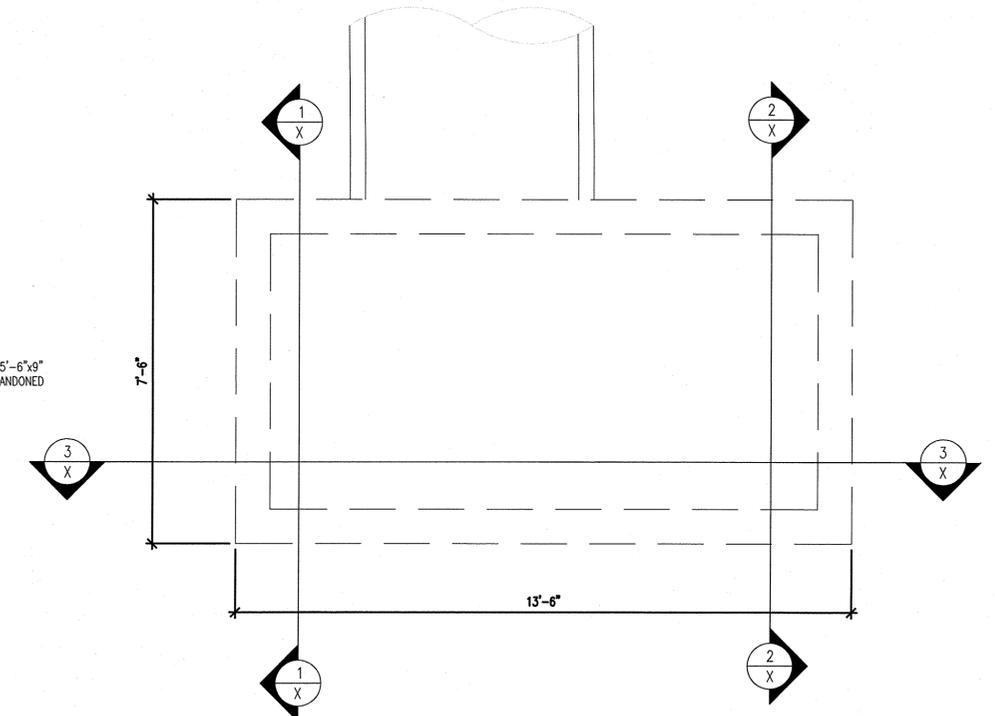
EXISTING
SECTION 1
SCALE 1/2" = 1'-0"



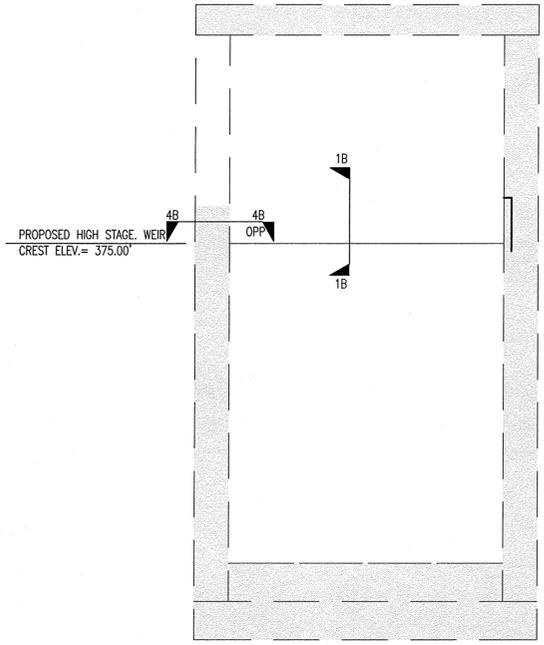
EXISTING
SECTION 2
SCALE 1/2" = 1'-0"



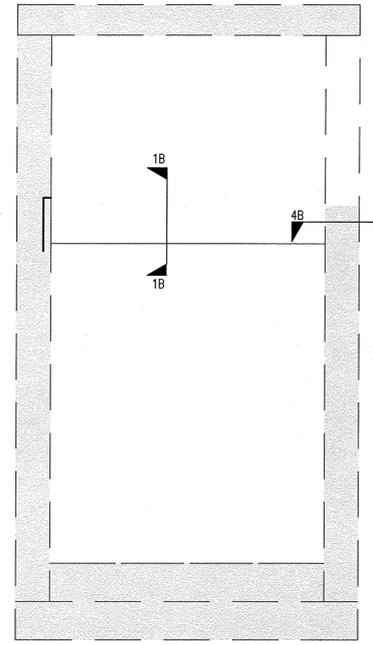
EXISTING
SECTION 3
SCALE 1/2" = 1'-0"



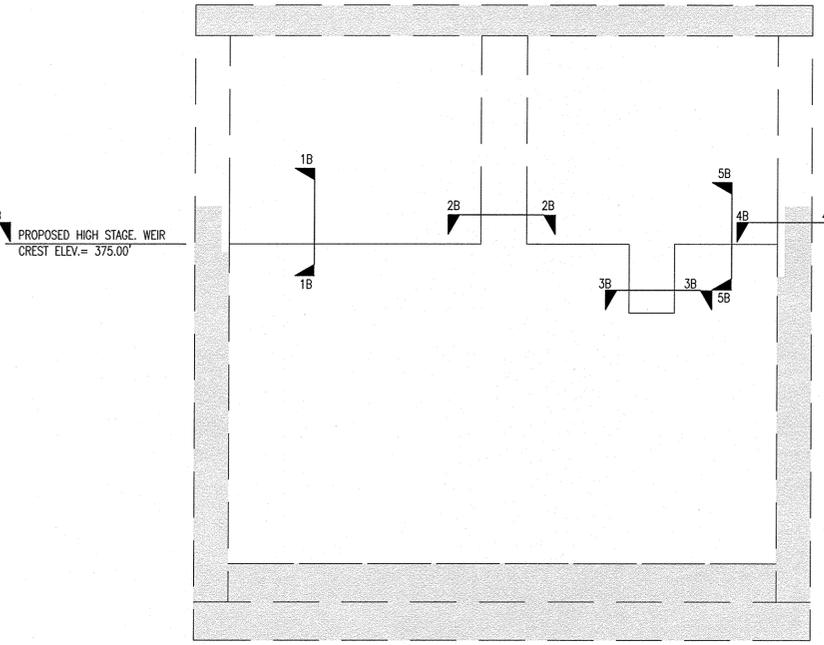
EXISTING RISER PLAN



PROPOSED
SECTION 1
SCALE 1/2" = 1'-0"



PROPOSED
SECTION 2
SCALE 1/2" = 1'-0"



PROPOSED
SECTION 3
SCALE 1/2" = 1'-0"

MISS UTILITY
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STRUCTURAL CERTIFICATION
I hereby certify that the structural design of this stormwater management facility is in accordance with applicable codes and that the plan for this has been designed for specified loading(s) as indicated hereon.

Design/Engineer Signature: *Patricia Palavecino* Date: 5-6-15
Printed Name: Patricia Palavecino Registration Number: 20477
Design Loading: AC1350

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:	
Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

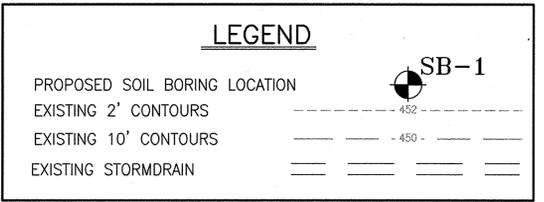
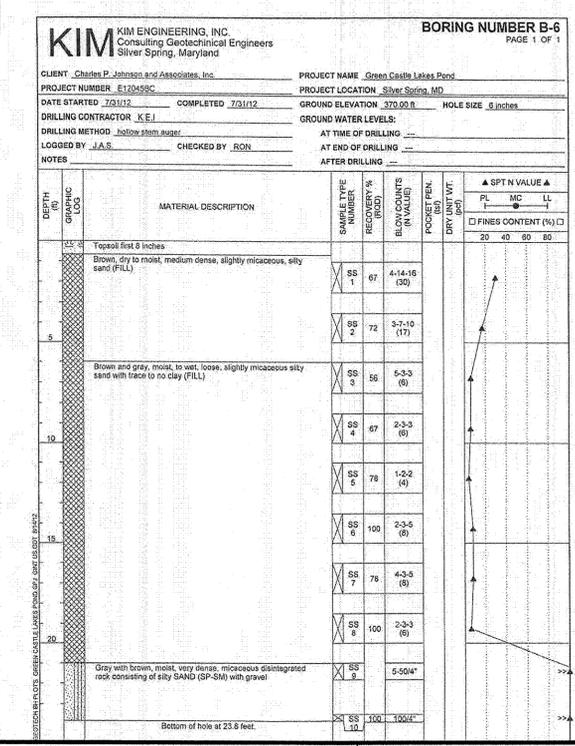
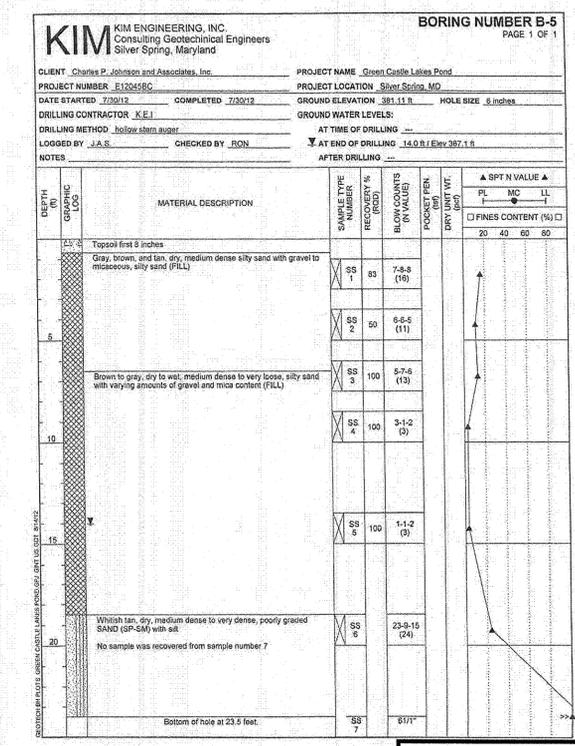
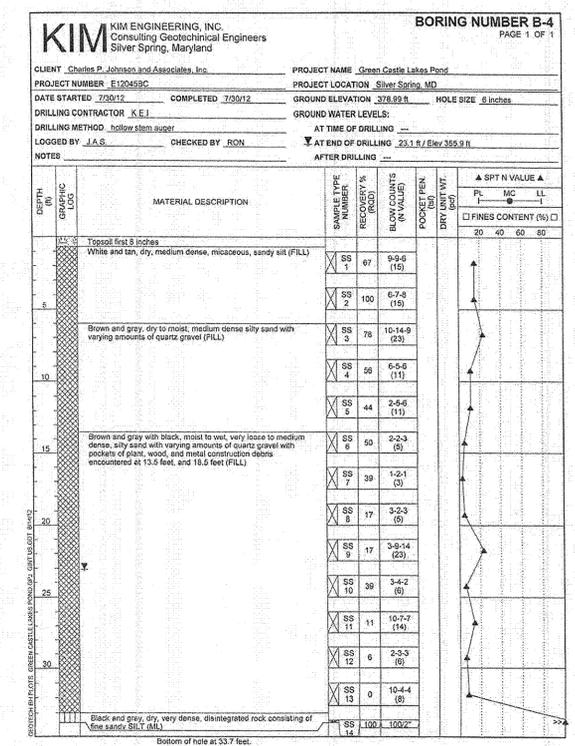
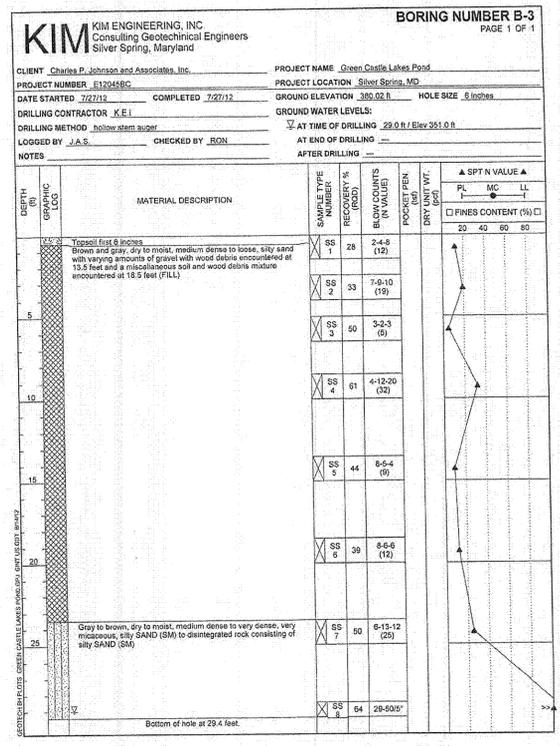
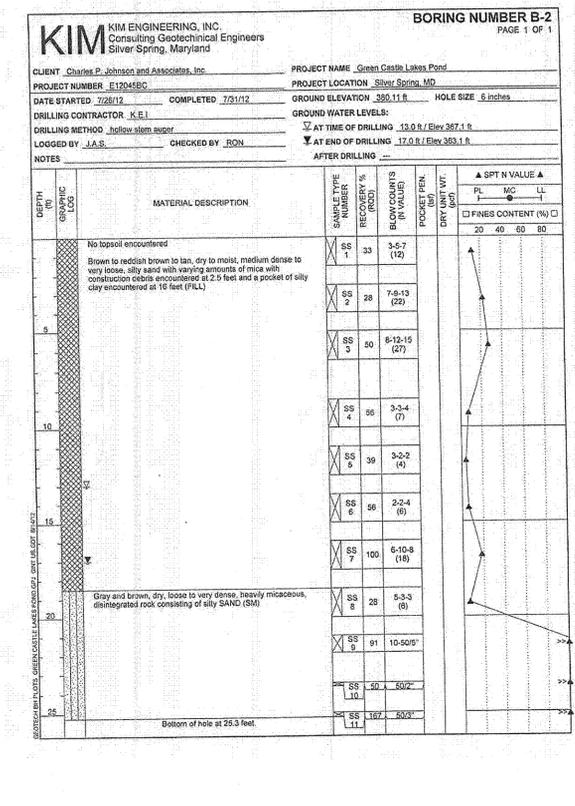
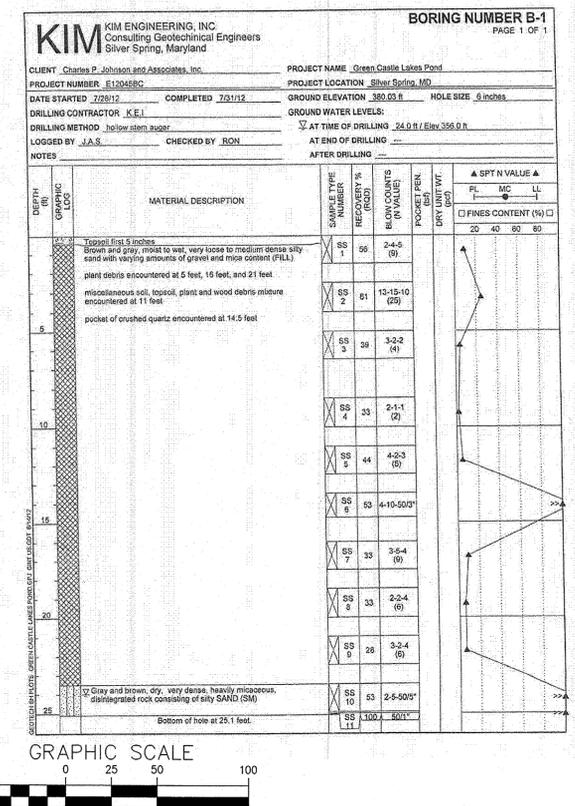
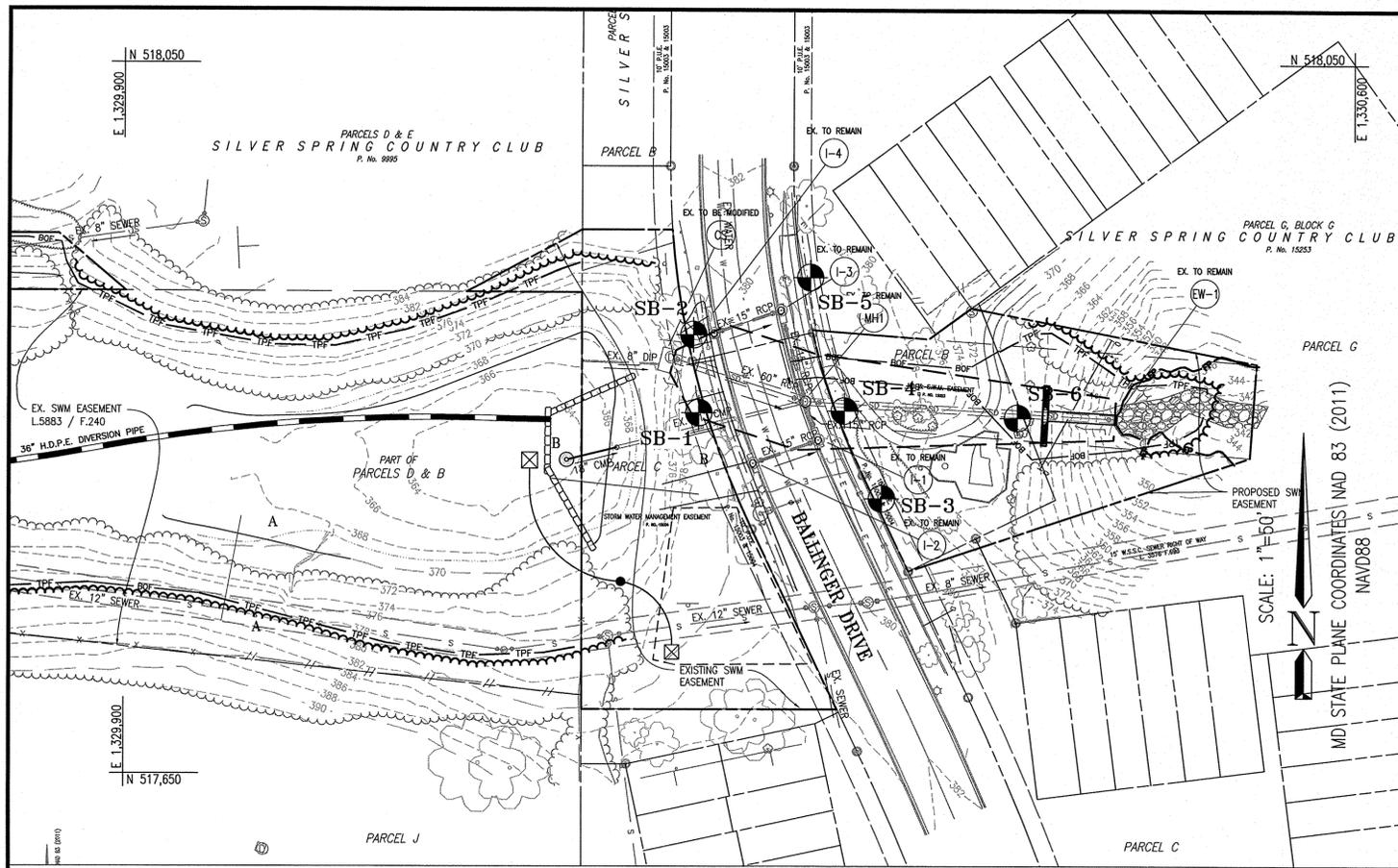
Administrative Requirements:
Reviewed _____ Date _____
258636
SEDIMENT CONTROL PERMIT No.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

RISER STRUCTURAL DESIGN
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Associates Charles P. Johnson & Associates, Inc.
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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 285 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL (240) 777-7713	PRELIMINARY PLAN NO: N/A	SITE PLAN NO: N/A
DESIGN JBB	SHEET 19	OF 25
DRAFT ADG	STR-1	STR-2
DATE MARCH, 2015	FILE NO: 42-114-244	
SCALE 1/2" = 1'-0"		



SOIL BORING TABLE					
BORING ID	NORTHING	EASTING	EX. ELEVATION	DEPTH	BORING INVERT
SB-1	N 517853.29	E 1330226.88	380.03	25.1	354.93
SB-2	N 517897.27	E 1330223.91	380.11	25.3	354.81
SB-3	N 517805.10	E 1330330.75	380.02	29.4	350.62
SB-4	N 517854.46	E 1330309.62	378.99	33.7	345.29
SB-5	N 517829.78	E 1330290.11	381.11	23.5	357.61
SB-6	N 517850.58	E 1330407.82	370.00	23.8	346.20



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: _____

Sediment Control Technical Requirements: _____

Administrative Requirements: _____

Reviewed _____ Date _____

Approved _____ Date _____

252515
S.M.File No.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Reviewed _____ Date _____

Approved _____ Date _____

252515
S.M.File No.

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SOIL BORING PLAN
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
PRELIMINARY PLAN NO: N/A
SITE PLAN NO: N/A
DESIGN: JBB
SHEET: 21 OF 25
DRAFT: ADG
DATE: MARCH, 2015
FILE NO: B-1
SCALE: 1" = 20'
42-114-24.4

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PARCEL B

LEGEND

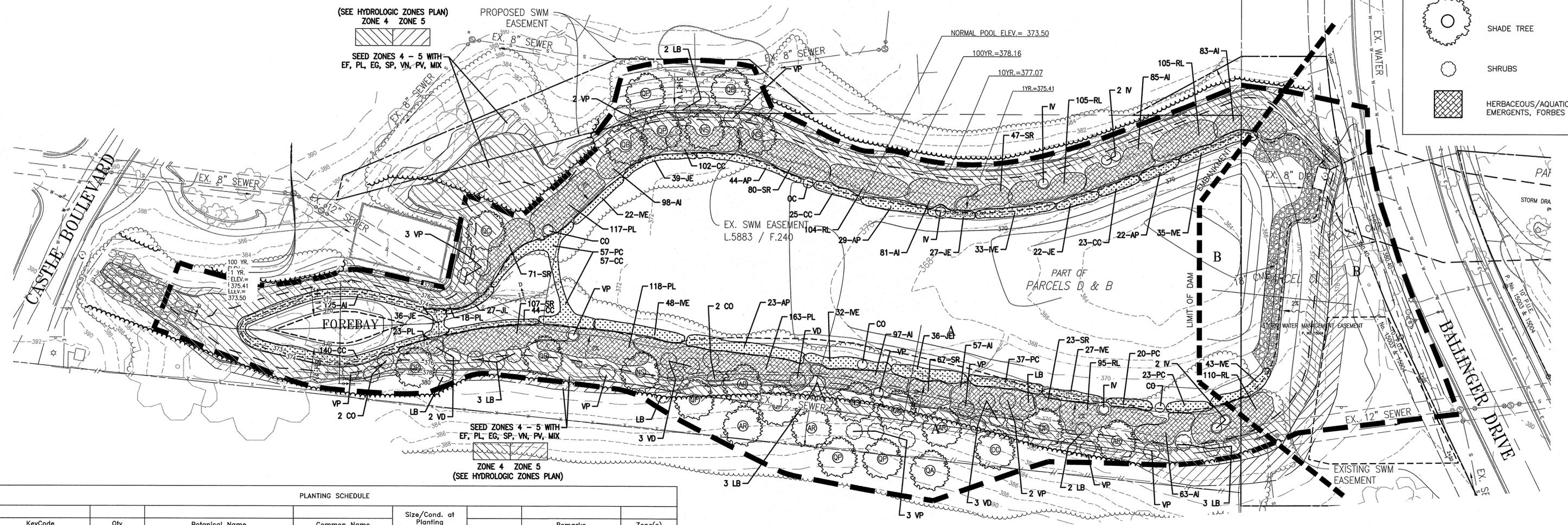
- SHADE TREE
- SHRUBS
- HERBACEOUS/AQUATIC EMERGENTS, FORBES

(SEE HYDROLOGIC ZONES PLAN)
ZONE 4 ZONE 5
SEED ZONES 4 - 5 WITH
EF, PL, EG, SP, VN, PV, MIX

PROPOSED SWM
EASEMENT

CASTLE BOULEVARD

BALLINGER DRIVE



PLANTING SCHEDULE

KeyCode	Qty	Botanical Name	Common Name	Size/Cond. at Planting	Remarks	Zone(s)
CANOPY TREES*, UNDERSTORY TREES						
AR	5	Acer rubrum	Red Maple	3" cal. BB/cont.	Uniform/full	2,3,4,5
CC	1	Carpinus caroliniana	American Hornbeam	2.5" cal. BB/cont.	Uniform/full	3,4,5
NS	4	Nyssa sylvatica	Black Gum	2.5" cal. BB/cont.	uniform/full	3,4
QA	2	Quercus alba	White Oak	3" cal. BB	uniform/full	3,4,5
QB	4	Quercus bicolor	Swamp White Oak	3" cal. BB	uniform/full	2,3,4,5
QP	8	Quercus phellos	Willow Oak	3" cal. BB	uniform/full	3,4,5
Shrubs						
CO	8	Cephalanthus occidentalis	Buttonbush	36" BB/Cont.	full	2,3
LB	17	Lindera benzoin	Spicebush	36" BB/cont.	full	3,4
IV	7	Ilex verticillata 'Winter Gem'	Winter Gem Winterberry	36" BB/cont.	full	3,4,5
VD	6	Viburnum dentatum	Arrowhead Viburnum	36" BB/cont.	full	3,4
VP	18	Viburnum prunifolium	Cranberrybush Viburnum	36" BB/cont.	full	3,4

* All "Trees" shall have straight, non bowing, or irregular trunks and leaders and be uniformly branched out with vibrant well developed root systems.

Forbs (Aquatic emergents)	Qty	Botanical Name	Common Name	Size/Cond.	Remarks	Zone(s)
AI	811	Aesclepias incarnata	Swamp Milkweed	cont.	1' O.C.	3.0
AP	145	Aster puniceus	Purplestem Aster	cont.	1' O.C.	2,3
CC	391	Carex comosa	bristly sedge	cont.	1' O.C.	2,3
IVE	240	iris versicolor	ble flag	cont.	1' O.C.	2,3
JE	124	Juncus effusus	Soft Rush	cont.	1' O.C.	2,3
PC	139	Pontederia cordata	Pickereelweed	cont.	1' O.C.	2.0
Forbes Sedges						
PP	604	Polygonum pensylvanicum	Pennsylvania Smartweed	cont.		3.0
RL	519	Rudbeckia laciniata	Cutleaf Coneflower	cont.	1' O.C.	3.0
SR	395	Solidago rugosa	Wrinkleleaf Goldenrod	cont.	1' O.C.	3.0
CP	200	Carex pennsylvanica	Pennsylvanis Sedge	1 gal.	full	3.0

GENERAL NOTES:
1. THIS PLAN SHALL ONLY BE USED FOR LANDSCAPE IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. SEE THE SITE PLAN FOR SITE GRADING.
2. THE EXISTING UTILITIES SHOWN HEREON HAVE BEEN LOCATED USING INFORMATION AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. PRIOR TO DIGGING, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VIA TEST PIT WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THIS PLAN AND CONFIRM THAT NO CONFLICTS EXIST. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF CPJ AND THE OWNER PRIOR TO STARTING CONSTRUCTION.

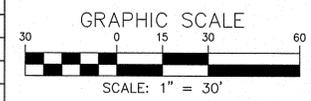
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HYDROLOGIC ZONES

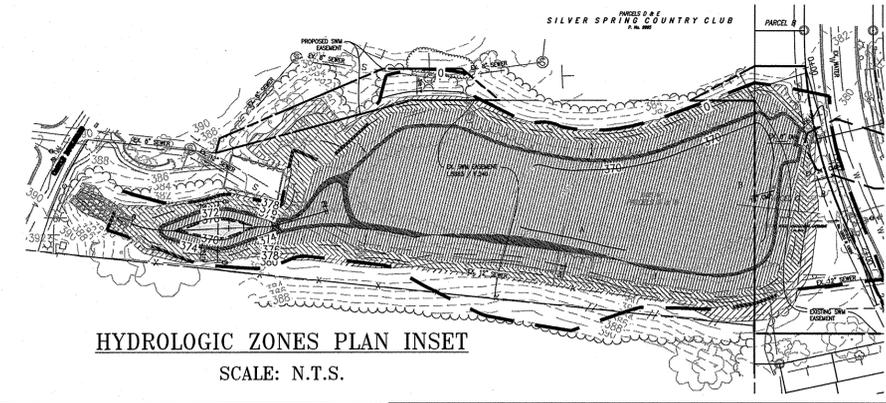
ZONE	ZONE DESCRIPTION	HYDROLOGIC CONDITIONS
1	DEEP WATER POOL	1'-6" DEPTH BELOW NORMAL POOL ELEVATION
2	SHALLOW WATER BENCH (LOW MARSH)	0"-12" DEPTH BELOW NORMAL POOL ELEVATION
3	SHORELINE FRINGE (HIGH MARSH)	0"-12" ELEVATION ABOVE NORMAL POOL (REGULARLY INUNDATED)
4	RIPARIAN FRINGE	1'-4" ELEVATION ABOVE NORMAL POOL (PERIODICALLY INUNDATED)
5	FLOODPLAIN TERRACE	2YR TO 10YR WATER SURFACE ELEVATION (INFREQUENTLY INUNDATED)
6	UPLAND SLOPES	100YR WATER SURFACE ELEVATION AND ABOVE (SELDOM/NEVER INUNDATED)

- NOTES:**
- Plant list categories reflect the primary zone each plant will tolerate. Some plants have ranges that include several zones. See planting plan for actual limits of all plant materials.
 - All areas within the LOD not receiving other specified plant material shall be seeded with the turfgrass seed mix, see specifications on Planting Plan(s).
 - Seed quantities, percentages and mixes are based on pure live seed.
 - The embankment area shall be cleared of all woody vegetation. The embankment shall remain free of woody vegetation through appropriate maintenance and regular mowing.



LEGEND

PROPOSED LIMIT OF LANDSCAPING
APPROX. DAM EMBANKMENT ZONE
(TURF GRASS ONLY)



LANDSCAPE ARCHITECT CERTIFICATE

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND TAKEN FROM AVAILABLE PLANS AND RECORDS.

ERIC J. STURM
REGISTERED LANDSCAPE ARCHITECT MD. # 755

LANDSCAPE PLAN
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.

NOTE: MCDCPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDCPS ACCESS PERMIT.

258636
S.M.File No.

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE FIVE
ROCKVILLE, MD 20850
CONTACT: MR. CRAIG CARSON
TEL: (240) 777-7715

PRELIMINARY PLAN NO. N/A SITE PLAN NO. N/A
DESIGN JBB SHEET 22 OF 25
DATE MARCH, 2015 FILE NO. LS-1 LS-2
SCALE 1" = 20' 42-114-24.4

GENERAL PLANTING NOTES

- ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI Z60.1, LATEST EDITION.
- ALL PLANTING SHALL BE IN ACCORDANCE WITH STANDARD AMERICAN ASSOCIATION OF NURSERYMEN PROCEDURES AND SPECIFICATIONS.
- CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
- PLANT MATERIAL LOCATION TO BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- ALL PLANT BEDS AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 2" SHREDDED HARDWOOD BARK UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS.
- ALL AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE FINE GRADED AND SEEDED
- OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE BEFORE MAKING ANY SUBSTITUTIONS OR CHANGES
- ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS
- QUANTITIES SHOWN ON PLANT LIST ARE FOR THE CONTRACTORS CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL APPLY.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF MONTGOMERY COUNTY, MARYLAND.
- CONTRACTOR IS TO PROVIDE ALL MATERIALS AND LABOR INCLUDING PLANTS, PLANTER FILL MATERIALS, MULCHES, SOIL PREPARATION, DECORATIVE ITEMS, INSPECTION, AND TRANSPORTATION.
- TOPSOIL TO A DEPTH OF 4" IN ALL AREAS TO BE SEEDED OR SODDED
- EACH PLANTING BED AREA IS TO RECEIVE A MINIMUM OF 6" OF PREPARED SOIL CULTIVATED TO A 12" DEPTH. PREPARED SOIL SHALL BE MIXED AS FOLLOWS: 2/3 SANDY LOAM TOPSOIL FREE OF ROOTS, ROCKS, WEEDS, AND OTHER DEBRIS AND 1/3 PEAT MOSS OR APPROVED ORGANIC MULCH.
- SOIL ADDITIVES TO BE GRANULAR FERTILIZER OF A 1:2:1 RATIO. SOIL OUTSIDE RANGE OF 5.0 - 7.0 pH SHALL BE TREATED APPROPRIATELY TO CORRECT FOR HIGH ALKALINITY OR ACIDITY.
- THE USE OF ON-SITE TOPSOIL MUST BE APPROVED IN ADVANCE BY LANDSCAPE ARCHITECT.
- SODDED AND SEEDED AREAS SHALL BE PROPERLY PREPARED, FINISH GRADED AND HAND ROLLED PRIOR TO SOD PLACEMENT OR SEEDING. SEEDED AREAS SHALL BE RE-SEEDED AS NECESSARY TO PROVIDE AN EVEN STAND OF SPECIFIED PLANTINGS.
- TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGRADED SURFACES PROVIDING A MINIMUM OF 4" OF EVEN COVER TO ALL DISTURBED AREAS. SUCH AREAS SHALL BE STABILIZED THROUGH SEEDING AS SHOWN.

AREAS TO BE TOP DRESSED

- PRIOR TO ALL SOIL PREPARATION WORK, ALL CONSTRUCTION AND PLANTING IN THE AREA SHALL HAVE BEEN COMPLETED.
- CLEARING: PRIOR TO APPLICATION OF TOP DRESS MATERIAL, THE GROUND SURFACE SHALL BE WELL DRAINED AND CLEAR OF ALL DEBRIS OR ANY OTHER MATERIAL WHICH MAY HINDER THE PROPER APPLICATION OF SUBSEQUENT MAINTENANCE OPERATIONS.
- PRECAUTIONS: DO NOT WORK SOIL WHILE FROZEN OR WET. DO NOT WORK SOIL IN A DUSTY CONDITION, BUT MOISTEN TO PREVENT A DUST NUISANCE.
- AERATE ALL THE TOP DRESSED AREAS, USING A CORE REMOVING AERATOR.
- ANY BARE AREAS LARGER THAN 1 SQ. FT. SHOULD BE RESTORED TO FINISHED GRADE WITH SCREENED COMPOSTED SEWAGE SLUDGE OR FINE GRADE TOPSOIL (SUBMIT SAMPLE FOR APPROVAL). USE EQUIPMENT AND METHODS COMMON TO SUCH WORK AND TILL SOIL TO THOROUGHLY INCORPORATE THE SCREENED COMPOSTED SLUDGE INTO EXISTING SOIL.
- FERTILIZER: FOLLOWING THE AERATION PROCESS, APPLY A STARTER FERTILIZER EVENLY AT THE RATE OF 1 CY/1000 SQ. FT. INTO THE TOP 2 INCHES OF SOIL BY CROSS DISKING OR OTHER APPROPRIATE METHOD.
- SOW SEED ONLY AFTER THE SCREENED SOIL AMENDMENT AND FERTILIZER HAVE BEEN APPLIED AND THOROUGHLY SETTLED BY RAINFALL OR WATERING. OVERSEED LAWN AREAS EVENLY AT A RATE OF 2 LBS/1000 SQ. FT. SEED WITH EQUIPMENT THAT PROVIDES A MULTI-DIRECTIONAL SEEDING PATTERN TO ENSURE PROPER SEEDING RATE AND UNIFORMITY OF SEEDING.
- MULCHING: AFTER SEEDING, COVER BARE AREAS THAT HAVE BEEN REPAIRED WITH CLEAN WHEAT STRAW. A MINIMUM OF 50% OF THE SOIL SURFACE SHALL BE COVERED UNTIL GERMINATION HAS OCCURRED.

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

LANDSCAPE ARCHITECT CERTIFICATE

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND TAKEN FROM AVAILABLE PLANS AND RECORDS.

20 MAY 2015
DATE

ERIC J. STURM
REGISTERED LANDSCAPE ARCHITECT MD. # 755

SHA TURFGRASS SEED MIX		
MIX %	Common Name	Scientific Name
90	tall fescue	<i>Schedonorus phoenix (Scop.) Holub</i>
5	Kentucky bluegrass	<i>Poa pratensis L. ssp. pratensis</i>
5	perennial ryegrass	<i>Lolium perenne L. ssp. perenne</i>

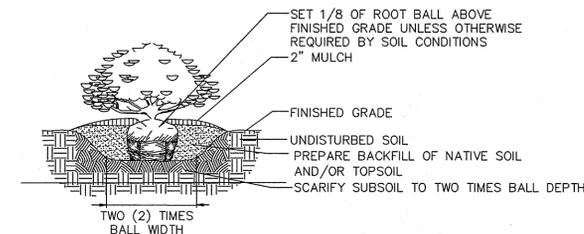
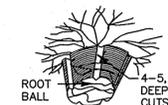
SEEDING SEASONS AND SEED MIXES				
REGION	SEEDING SEASON - MONTH/DAY			
	Spring	Summer	Fall	Late Fall
	SHA Turfgrass Seed Mix			
1	4/1 to 6/15	6/16 to 7/31	8/1 to 10/1	10/2 to 11/1
2	3/1 to 5/15	5/16 to 7/31	8/1 to 10/20	10/21 to 11/20
3	3/1 to 5/1	5/2 to 7/31	8/1 to 10/31	11/1 to 11/30
		Plus Additive A or B		Plus Additive C
Plus Additive D when seeding: • Areas 30 ft and greater from the pavement edge • Slopes 4:1 and steeper				
When seeding areas within 4 miles of a State airport: Areas flatter than 4:1 - Use no Additives Slopes 4:1 and steeper - Use SHA Special Purpose Seed Mix in lieu of SHA Turfgrass Seed Mix				
Additives A = Weeping Lovegrass C = SHA Temporary Seed Mix B = Foxtail Bristlegress D = Setaria Lespedeza				

Follow Maryland State Highway Administration specifications and guidelines for turfgrass establishment and seed applications.

TURFGRASS SEED DETAILS

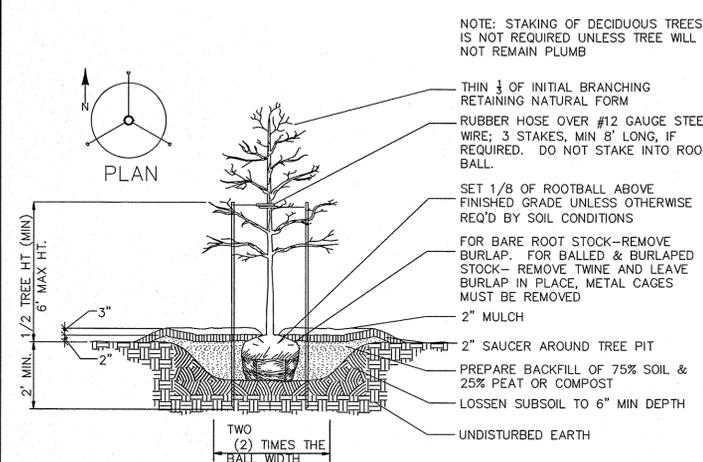
NOT TO SCALE

NOTES:
-FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOT BALL
-FOR B&B SHRUBS, CUT AND REMOVE METAL CAGE, TWINE, BURLAP CAN REMAIN



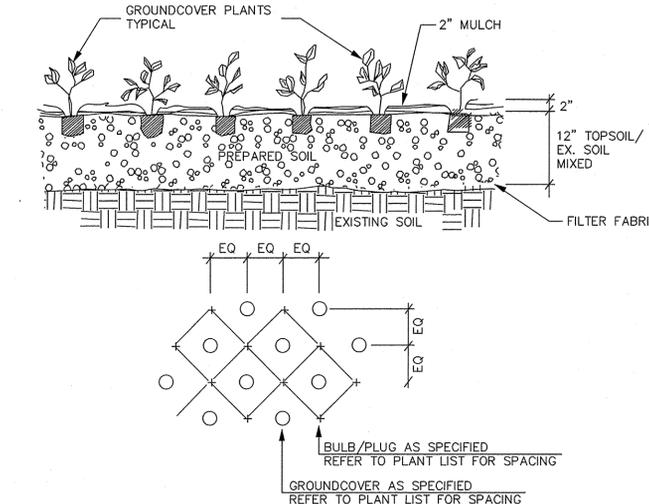
SHRUB PLANTING DETAIL

NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



PERENNIAL PLANTING DETAIL

NOT TO SCALE

NOTES

- TREES ARE NOT PERMITTED WITHIN TEN (10) FEET OF PUBLIC UTILITIES.
- ALL REQUIRED LANDSCAPE MATERIAL INDICATED ON APPROVED PLANS WILL BE REQUIRED THROUGH THE LIFE OF THE PROJECT AND MUST BE REPLACED IF REMOVED OR DEAD AFTER IMPLEMENTATION BY THE PROPERTY OWNER.
- NO PLANT SUBSTITUTIONS, TYPE, SIZE, OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE OR BUFFER PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL FROM THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	258636 SEDIMENT CONTROL PERMIT No.
252515 S.M.File No.		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Administrative Requirements:	Reviewed _____ Date _____
258636 SEDIMENT CONTROL PERMIT No.	
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.	

LANDSCAPE DETAILS
BALLINGER DRIVE (MCDEP ASSET No. 11541)
STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
COLESVILLE (5TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
1751 Elton Rd., Ste 300 Silver Spring, MD 20905 301-434-7000 Fax: 301-434-9394
www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7735	PRELIMINARY PLAN NO. N/A SITE PLAN NO. N/A
DESIGN JBB	SHEET 23 OF 25
DRAFT ADG	LS-2 LS-2
DATE MARCH, 2015	FILE NO: 42-114-24.4
SCALE 1" = 20'	

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TEMPORARY TRAFFIC CONTROL REQUIREMENTS

1. THE PERMITTEE SHALL REFER TO THE ATTACHED TEMPORARY TRAFFIC CONTROL PLAN (TTCP) DRAWINGS TO SELECT THE APPROPRIATE WORK ZONE TRAFFIC CONTROLS FOR EACH PHASE OF CONSTRUCTION. WORK ZONE SITUATIONS WHICH ARE NOT ADDRESSED IN THE ATTACHED TTCP SHALL CONFORM TO THE GUIDELINES SET FORTH IN SECTION 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY (MUTCD), MOST RECENT EDITION.
2. THE PERMITTEE MUST HAVE A "CERTIFIED" TRAFFIC CONTROL MANAGER ON SITE DURING ALL PHASES OF CONSTRUCTION AT ALL TIMES.
3. EACH PHASE OF CONSTRUCTION, INCLUDING THE FOLLOW UP RESTORATION OPERATIONS SHALL BE PROVIDED WITH APPROPRIATE WORK ZONE TRAFFIC CONTROLS.
4. ROAD CLOSURES OF ANY DURATION SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION WITH JUSTIFICATION AS TO WHY WORK ACTIVITY CANNOT OCCUR WHILE TRAFFIC IS BEING MAINTAINED. ROAD CLOSURE SHALL REQUIRE ADDITIONAL TRAFFIC CONTROLS INCLUDING ADVANCE NOTIFICATION, APPROACH, AND DETOUR SIGNAGE, AS APPROVED BY TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION.
5. ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION. ANY SIDEWALK CLOSURE GREATER THAN TWO (2) WEEKS SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS AND MAY REQUIRE ADDITIONAL TEMPORARY TRAFFIC CONTROLS AND/OR TEMPORARY SIDEWALK BY-PASS. ANY WORK AFFECTING SIDEWALK SHALL BE SPECIFIED AND A PROPER PEDESTRIAN DETOUR SHALL BE SHOWN ON PLANS AND SUBMITTED FOR REVIEW. SIDEWALK CLOSURES SHALL BE LIMITED TO OCCUR ONLY DURING THE ACTUAL WORK ACTIVITY. DURING CLOSURE, SIDEWALKS SHALL BE BARRICADED TO PHYSICALLY PREVENT PEDESTRIAN PASSAGE AND APPROPRIATE PEDESTRIAN DETOURS SHALL BE POSTED. DURING ALL OTHER TIMES, PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK AREA, VIA A TEMPORARY WALKWAY SHALL BE PROVIDED.
6. ANY WORK WITHIN THE TRAVELED PORTION OF ROADWAYS SHALL BE RESTRICTED TO THE HOURS OF 9:00 AM TO 3:30 PM, MONDAY THROUGH FRIDAY. WORK ON HOLIDAYS AND WEEKENDS SHALL NOT OCCUR UNLESS AN EXCEPTION IS GRANTED IN WRITING BY THE COUNTY'S DPS INSPECTOR.
7. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THAN THOSE DELINEATED WITHIN THE WORK ZONE.
8. EXCLUSIVE OF EMERGENCY WORK, THE PERMITTEE SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND INFORM THEM OF THE SCOPE AND THE TIMING OF CONSTRUCTION. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE REQUIRED PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY ON THE SITE.
9. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY OWNER/MANAGER. HOWEVER, ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
10. PAVEMENT EXCAVATION SHALL BE LIMITED TO A MAXIMUM OF ONE TRAVEL LANE AT ANY TIME UNLESS OTHERWISE SPECIFIED ON THE TTCP.
11. IF ANY TRAFFIC CONTROL SIGNS ARE TO BE PLACED ALONG A MSHA ROADWAY OR WITHIN THE LIMITS OF AN INCORPORATED AREA, THE PERMITTEE SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.
12. NO HAZARDOUS MATERIALS SHALL BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACES OR SIDEWALK DURING NON-WORK HOURS.
13. ALL EXISTING TRAFFIC CONTROL DEVICES (I.E. SIGNS, MARKING, ETC.) THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE PERMITTEE.
14. FOR MERGING, SHIFTING, SHOULDER TAPER, THE MAXIMUM SPACING BETWEEN DEVICES EQUALS THE POSTED SPEED IN FEET.
15. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MUTCD. ALL SIGNS, TRAFFIC DRUMS AND CONES SHALL BE FULLY REFLECTORIZED WITH HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MUTCD.
16. PROVISION SHALL BE MADE FOR SAFE MAINTENANCE OF PEDESTRIAN AND BICYCLE TRAFFIC, SUBJECT TO APPROVAL OF THE COUNTY'S DPS INSPECTOR. AT LEAST ONE 10-FOOT TRAVEL LANE SHALL BE AVAILABLE FOR TRAFFIC AT ALL TIMES.
17. SIGNAGE, TRAFFIC DRUMS, TRAFFIC CONES, AND ARROW PANELS SHALL BE PLACED IN ACCORDANCE WITH THE APPROPRIATE TYPICAL AND SPACING CHART. WORK AREA AHEAD (W20-1 MODIFIED) SIGNS MUST BE INSTALLED AT THE END OF EACH WORKDAY WHEN TEMPORARY AGGREGATE RAMPING IS IMPLEMENTED. CHANNELIZING DEVICES SHALL BE PLACED ALONG EXCAVATIONS AT TEN (10) FOOT INTERVALS. ARROW PANELS (FLASHING MODE ONLY) SHALL BE USED AT THE BEGINNING OF ANY LANE CLOSURE ON A MULTI-LANE ROADWAY.
18. APPROPRIATE DISTANCES FOR SIGN LEGENDS ARE "AHEAD", "500 FT", "1000 FT", "1500 FT", OR "1/2 MILE". FOR DISTANCES LESS THAN 500 FEET, "AHEAD" SHALL BE USED.
19. ALL WARNING SIGNS, UNLESS OTHERWISE SPECIFIED, SHALL BE A MINIMUM OF 48" X 48", BLACK SYMBOL OR LEGEND ON ORANGE BACKGROUND AND DIAMOND SHAPED. ALL WARNING SIGNS NOT APPLICABLE TO THE ACTUAL SITUATION SHALL BE REMOVED OR COVERED DURING NON-APPLICABLE PERIODS. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF ONE (1) FOOT ABOVE THE LEVEL OF THE ROADWAY, WITH HIGHER MOUNTING HEIGHTS DESIRABLE.
20. DURING NIGHTTIME OPERATIONS TRAFFIC DRUMS SHALL BE USED. HOWEVER, FOR EMERGENCY WORK ACTIVITIES WHERE TRAFFIC DRUMS ARE NOT READILY AVAILABLE, REFLECTORIZED TRAFFIC CONES THAT ARE A MINIMUM OF TWENTY EIGHT (28) INCHES IN HEIGHT AND HAVING SIX (6) INCH AND FOUR (4) INCH REFLECTIVE COLLARS WITHIN THE TOP SIXTEEN (16) INCHES OF THE CONE MAY BE USED. ALL WORK AREAS LEFT UNATTENDED AT NIGHT SHALL BE DELINEATED WITH TRAFFIC DRUMS.
21. WHEN TEMPORARY CONCRETE BARRIER (TCB) IS USED, REFLECTORIZED MARKERS ARE REQUIRED AS PER TTP 109.02. ALSO, A 12" X 36" OBJECT MARKER (VERTICAL PANEL AS PER TTP 109.01) SHALL BE INSTALLED.
22. WHEN PAVEMENT MARKINGS HAVE BEEN OBLITERATED BY THE WORK ACTIVITY, THE PERMITTEE SHALL INSTALL ANY CRITICAL INTERIM PAVEMENT MARKINGS PRIOR TO THE END OF THE WORKDAY AS SPECIFIED BY THE COUNTY'S DPS INSPECTOR AND/OR THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS. ON ROAD SECTIONS THAT ARE NOT SCHEDULED TO BE OVERLAID, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE (REMOVABLE) DETOUR GRADE MARKING TAPE. ANY CONFLICTING MARKINGS, WHICH NEED TO BE TEMPORARILY REMOVED, ARE TO BE MASKED USING "3M REMOVABLE BLACK LANE MASK" OR AN APPROVED EQUAL. ON ROAD SECTIONS THAT ARE TO BE OVERLAID, TEMPORARY MARKINGS CAN BE EITHER TAPE OR PAINT. ANY CONFLICTING MARKINGS SHOULD BE REMOVED WITH A PAVEMENT GRINDER.

FLAGGING OPERATIONS

1. WHEN POSSIBLE, TWO-WAY TRAFFIC SHALL BE MAINTAINED, OTHERWISE, FLAGGERS SHALL BE USED TO CONTROL TRAFFIC.
2. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR A/SA APPROVED FLAGGERS AND SHALL BE USED AT THE DIRECTION OF THE COUNTY INSPECTOR. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.
3. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE COUNTY INSPECTOR OR UNDER THE FOLLOWING CONDITIONS:
 - A. IF THE FLAGGERS CANNOT SEE EACH OTHER.
 - B. IF THE LANE CLOSURE EXCEEDS 200 FEET.

CONTACT INFORMATION

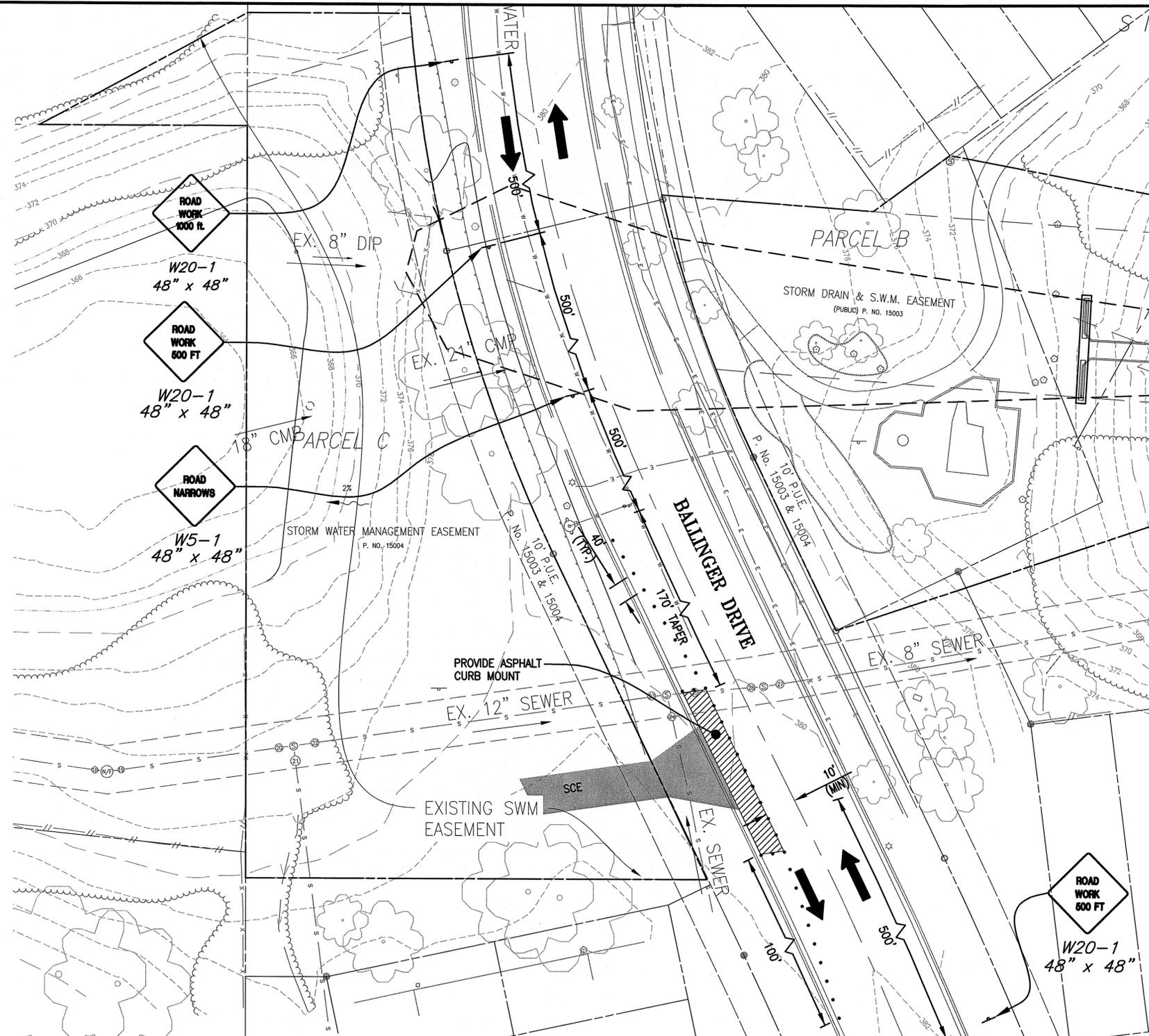
1. THE PERMITTEE SHALL CONTACT THE TRAFFIC ENGINEERING DESIGN & OPERATIONS SECTION (TEDO) AT 240-777-6000 AT LEAST TEN (10) WORKING DAYS IN ADVANCE OF THE FINAL PAVING OPERATION TO SCHEDULE THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS AND SIGNS.
2. FIELD ASSISTANCE BY THE MCDOT, DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS IS AVAILABLE UPON REQUEST. CONTACT TRAFFIC ENGINEERING DESIGN & OPERATIONS SECTION (TEDO) AT 240-777-6000.

PARKING RESTRICTIONS

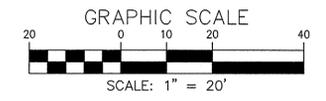
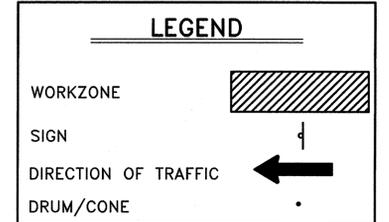
1. PERMITTEE SHALL CONTACT THE MCDOT, DIVISION OF PARKING MANAGEMENT AT 240-777-6000 A MINIMUM OF 48 HOURS IN ADVANCE TO ARRANGE FOR PAYMENT AND THE BAGGING OF ALL PARKING METERS WITHIN THE WORK ZONE. METER NUMBERS AND LOCATION MUST BE SPECIFIED.
2. DPS INSPECTOR AT ANY TIME. PROHIBITING THE USE OF METERED SPACES BY THE CONTRACTOR/PERMITTEE WITHOUT RECEIPT OF "BAGGING AGREEMENT" IS SUBJECT TO FINES.
3. CONTRACTOR/PERMITTEE SHALL COORDINATE WITH DIVISION OF PARKING MANAGEMENT TO MAKE PAYMENT FOR ADDITIONAL BAGGING AND REMOVAL WHENEVER MORE SPACES ARE TEMPORARILY REQUIRED
4. ALL EXISTING MONTGOMERY COUNTY "PARKING" SIGNS SHALL BE COVERED OR BAGGED BY THE CONTRACTOR/PERMITTEE FOR THE DURATION OF WORK; AND A TEMPORARY "NO PARKING ANYTIME" (R7-4) SIGN SHALL BE INSTALLED IN THE AFFECTED PARKING SPACE(S). EXISTING MONTGOMERY COUNTY PARKING METER PIPES/POLES SHALL NOT BE USED FOR TEMPORARY INSTALLATION.
5. WHEN IT IS NECESSARY TO RESTRICT PARKING IN A NON-METERED AREA TO FACILITATE WORK ACTIVITY, THE PERMITTEE SHALL CONTACT THE APPROPRIATE COUNTY POLICE STATION FOR TEMPORARY "NO PARKING" SIGNS.
6. THE CONTRACTOR/PERMITTEE SHALL RESTORE ALL AFFECTED MONTGOMERY COUNTY PARKING SIGNAGE TO THEIR PREVIOUS CONDITION.

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



PHASE I - CONSTRUCTION ENTRANCE INSTALLATION
 1. INSTALL MAINTENANCE OF TRAFFIC FOR PHASE I.
 2. INSTALL CONSTRUCTION ENTRANCE.
 3. RETURN ROADWAY TO EXISTING CONDITION.



PAVEMENT DROP-OFF

1. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORKDAY. "STEEL PLATES" (W8-5(1)) SIGNS SHALL BE PLACED APPROXIMATELY 250 FEET IN ADVANCE OF ANY STEEL PLATE. ANY EXCAVATIONS IN THE SIDEWALK SHALL BE BACKFILLED OR PLATED PRIOR TO THE END OF EACH WORKDAY AND SIDEWALK REOPENED TO ITS FULL CROSS SECTION.
2. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN (10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TEMPORARY TRAFFIC CONTROL DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE SLOPE.
3. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO (2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN TWO (2) INCHES BUT NO MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE, PROVIDED WITH AN ABUTTING WEDGE OF BITUMINOUS MATERIAL AT A 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC DRUMS.
4. IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO (2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:
 - A. WHERE LONGITUDINAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS SHALL BE POSTED INDICATING "UNEVEN LANES" (W8-11). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.
 - B. WHERE LATERAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A "BUMP" (W8-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.
 - C. WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC A "ROUGH ROAD" (W8-8) OR "GROOVED PAVEMENT" (W8-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA.

INSPECTOR AUTHORITY

1. THE COUNTY'S DEPARTMENT OF PERMITTING SERVICES (DPS) INSPECTOR HAS THE AUTHORITY TO MODIFY THE TTCP AS DEEMED NECESSARY. THE INSPECTOR HAS THE AUTHORITY TO ORDER THE PERMITTEE TO STOP WORK AND VACATE THE PUBLIC RIGHT-OF-WAY IF THE TTCP IS NOT COMPLIED WITH.
2. THE IMPLEMENTATION DATE AND CONTINUANCE OF WORK ACTIVITIES MAY BE ALTERED AT THE DISCRETION OF THE COUNTY'S DPS INSPECTOR IN THE EVENT OF CONFLICTS WITH PREVIOUSLY APPROVED OR EMERGENCY ACTIVITIES.

MISCELLANEOUS

1. THE PERMITTEE WILL BE SOLELY RESPONSIBLE FOR ALL ACCIDENTS AND/OR DAMAGE TO PERSONS AND/OR PROPERTY DAMAGE RESULTING FROM HIS OPERATIONS.
2. HAZARDOUS MATERIALS SHALL NOT BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACE OR SIDEWALK DURING NON-WORK PERIODS. ALL STORED MATERIALS AND EQUIPMENT SHALL BE SET BACK AT LEAST SIX (6) FEET BEHIND THE CURB ALONG A CLOSED SECTION ROADWAY AND AT LEAST TWELVE (12) FEET FROM THE EDGE OF AN OPEN SECTION ROADWAY.
3. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.
4. AT THE COMPLETION OF WORK ACTIVITIES, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THOSE THAT EXISTED PRIOR TO THE WORK ACTIVITY.

Montgomery County, Maryland
 Traffic Engineering and Operations Section
APPROVED
 FOR *MOT/TTCP*
 BY: *[Signature]* Date *3/11/14*



MAINTENANCE OF TRAFFIC PLAN PHASE I
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT
GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

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CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7713	PRELIMINARY PLAN NO: N/A DESIGN: JBB DRAFT: ADG DATE: MARCH, 2015 SCALE: 1" = 20'	SITE PLAN NO: N/A SHEET: 24 OF 25 MOT-1 MOT-2 FILE NO: 42-114-24.4
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TEMPORARY TRAFFIC CONTROL REQUIREMENTS

1. THE PERMITEE SHALL REFER TO THE ATTACHED TEMPORARY TRAFFIC CONTROL PLAN (TTCP) DRAWINGS TO SELECT THE APPROPRIATE WORK ZONE TRAFFIC CONTROLS FOR EACH PHASE OF CONSTRUCTION. WORK ZONE SITUATIONS WHICH ARE NOT ADDRESSED IN THE ATTACHED TTCP SHALL CONFORM TO THE GUIDELINES SET FORTH IN SECTION 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY (MUTCD), MOST RECENT EDITION.
2. THE PERMITEE MUST HAVE A "CERTIFIED" TRAFFIC CONTROL MANAGER ON SITE DURING ALL PHASES OF CONSTRUCTION AT ALL TIMES.
3. EACH PHASE OF CONSTRUCTION, INCLUDING THE FOLLOW UP RESTORATION OPERATIONS SHALL BE PROVIDED WITH APPROPRIATE WORK ZONE TRAFFIC CONTROLS.
4. ROAD CLOSURES OF ANY DURATION SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION WITH JUSTIFICATION AS TO WHY WORK ACTIVITY CANNOT OCCUR WHILE TRAFFIC IS BEING MAINTAINED. ROAD CLOSURE SHALL REQUIRE ADDITIONAL TRAFFIC CONTROLS INCLUDING ADVANCE NOTIFICATION, APPROACH, AND DETOUR SIGNAGE, AS APPROVED BY TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION.
5. ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION. ANY SIDEWALK CLOSURE GREATER THAN TWO (2) WEEKS SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS AND MAY REQUIRE ADDITIONAL TEMPORARY TRAFFIC CONTROLS AND/OR TEMPORARY SIDEWALK BY-PASS. ANY WORK AFFECTING SIDEWALK SHALL BE SPECIFIED AND A PROPER PEDESTRIAN DETOUR SHALL BE SHOWN ON PLANS AND SUBMITTED FOR REVIEW. SIDEWALK CLOSURES SHALL BE LIMITED TO OCCUR ONLY DURING THE ACTUAL WORK ACTIVITY. DURING CLOSURE, SIDEWALKS SHALL BE BARRICADED TO PHYSICALLY PREVENT PEDESTRIAN PASSAGE AND APPROPRIATE PEDESTRIAN DETOURS SHALL BE POSTED. DURING ALL OTHER TIMES, PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK AREA, VIA A TEMPORARY WALKWAY SHALL BE PROVIDED.
6. ANY WORK WITHIN THE TRAVELED PORTION OF ROADWAYS SHALL BE RESTRICTED TO THE HOURS OF 9:00 AM TO 3:30 PM, MONDAY THROUGH FRIDAY. WORK ON HOLIDAYS AND WEEKENDS SHALL NOT OCCUR UNLESS AN EXCEPTION IS GRANTED IN WRITING BY THE COUNTY'S DPS INSPECTOR.
7. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THAN THOSE DELINEATED WITHIN THE WORK ZONE.
8. EXCLUSIVE OF EMERGENCY WORK, THE PERMITEE SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND INFORM THEM OF THE SCOPE AND THE TIMING OF CONSTRUCTION. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE REQUIRED PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY ON THE SITE.
9. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY OWNER/MANAGER. HOWEVER, ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
10. PAVEMENT EXCAVATION SHALL BE LIMITED TO A MAXIMUM OF ONE TRAVEL LANE AT ANY TIME UNLESS OTHERWISE SPECIFIED ON THE TTCP.
11. IF ANY TRAFFIC CONTROL SIGNS ARE TO BE PLACED ALONG A MSHA ROADWAY OR WITHIN THE LIMITS OF AN INCORPORATED AREA, THE PERMITEE SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.
12. NO HAZARDOUS MATERIALS SHALL BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACES OR SIDEWALK DURING NON-WORK HOURS.
13. ALL EXISTING TRAFFIC CONTROL DEVICES (I.E. SIGNS, MARKING, ETC.) THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE PERMITEE.
14. FOR MERGING, SHIFTING, SHOULDER TAPER, THE MAXIMUM SPACING BETWEEN DEVICES EQUALS THE POSTED SPEED IN FEET.
15. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MUTCD. ALL SIGNS, TRAFFIC DRUMS AND CONES SHALL BE FULLY REFLECTORIZED WITH HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MUTCD.
16. PROVISION SHALL BE MADE FOR SAFE MAINTENANCE OF PEDESTRIAN AND BICYCLE TRAFFIC, SUBJECT TO APPROVAL OF THE COUNTY'S DPS INSPECTOR. AT LEAST ONE 10-FOOT TRAVEL LANE SHALL BE AVAILABLE FOR TRAFFIC AT ALL TIMES.
17. SIGNAGE, TRAFFIC DRUMS, TRAFFIC CONES, AND ARROW PANELS SHALL BE PLACED IN ACCORDANCE WITH THE APPROPRIATE TYPICAL AND SPACING CHART. WORK AREA AHEAD (W20-1 MODIFIED) SIGNS MUST BE INSTALLED AT THE END OF EACH WORKDAY WHEN TEMPORARY AGGREGATE RAMPING IS IMPLEMENTED. CHANNELIZING DEVICES SHALL BE PLACED ALONG EXCAVATIONS AT TEN (10) FOOT INTERVALS. ARROW PANELS (FLASHING MODE ONLY) SHALL BE USED AT THE BEGINNING OF ANY LANE CLOSURE ON A MULTI-LANE ROADWAY.
18. APPROPRIATE DISTANCES FOR SIGN LEGENDS ARE "AHEAD", "500 FT", "1000 FT", "1500 FT", OR "1/2 MILE". FOR DISTANCES LESS THAN 500 FEET, "AHEAD" SHALL BE USED.
19. ALL WARNING SIGNS, UNLESS OTHERWISE SPECIFIED, SHALL BE A MINIMUM OF 48" X 48", BLACK SYMBOL OR LEGEND ON ORANGE BACKGROUND AND DIAMOND SHAPED. ALL WARNING SIGNS NOT APPLICABLE TO THE ACTUAL SITUATION SHALL BE REMOVED OR COVERED DURING NON-APPLICABLE PERIODS. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF ONE (1) FOOT ABOVE THE LEVEL OF THE ROADWAY, WITH HIGHER MOUNTING HEIGHTS DESIRABLE.
20. DURING NIGHTTIME OPERATIONS TRAFFIC DRUMS SHALL BE USED. HOWEVER, FOR EMERGENCY WORK ACTIVITIES WHERE TRAFFIC DRUMS ARE NOT READILY AVAILABLE, REFLECTORIZED TRAFFIC CONES THAT ARE A MINIMUM OF TWENTY EIGHT (28) INCHES IN HEIGHT AND HAVING SIX (6) INCH AND FOUR (4) INCH REFLECTIVE COLLARS WITHIN THE TOP SIXTEEN (16) INCHES OF THE CONE MAY BE USED. ALL WORK AREAS LEFT UNATTENDED AT NIGHT SHALL BE DELINEATED WITH TRAFFIC DRUMS.
21. WHEN TEMPORARY CONCRETE BARRIER (TCB) IS USED, REFLECTORIZED MARKERS ARE REQUIRED AS PER TTP 109.02. ALSO, A 12" X 36" OBJECT MARKER (VERTICAL PANEL AS PER TTP 109.01) SHALL BE INSTALLED.
22. WHEN PAVEMENT MARKINGS HAVE BEEN OBLITERATED BY THE WORK ACTIVITY, THE PERMITEE SHALL INSTALL ANY CRITICAL INTERIM PAVEMENT MARKINGS PRIOR TO THE END OF THE WORKDAY AS SPECIFIED BY THE COUNTY'S DPS INSPECTOR AND/OR THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS, ON ROAD SECTIONS THAT ARE NOT SCHEDULED TO BE OVERLAD. ALL TEMPORARY PAVEMENT MARKINGS SHALL BE (REMOVABLE) DETOUR GRADE MARKING TAPE. ANY CONFLICTING MARKINGS, WHICH NEED TO BE TEMPORARILY REMOVED, ARE TO BE MASKED USING "3M REMOVABLE BLACK LANE MASK" OR AN APPROVED EQUAL. ON ROAD SECTIONS THAT ARE TO BE OVERLAD, TEMPORARY MARKINGS CAN BE EITHER TAPE OR PAINT. ANY CONFLICTING MARKINGS SHOULD BE REMOVED WITH A PAVEMENT GRINDER.

FLAGGING OPERATIONS

1. WHEN POSSIBLE, TWO-WAY TRAFFIC SHALL BE MAINTAINED, OTHERWISE, FLAGGERS SHALL BE USED TO CONTROL TRAFFIC.
2. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR AATSA APPROVED FLAGGERS AND SHALL BE USED AT THE DIRECTION OF THE COUNTY INSPECTOR. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.
3. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE COUNTY INSPECTOR OR UNDER THE FOLLOWING CONDITIONS:
 - A. IF THE FLAGGERS CANNOT SEE EACH OTHER.
 - B. IF THE LANE CLOSURE EXCEEDS 200 FEET.

CONTACT INFORMATION

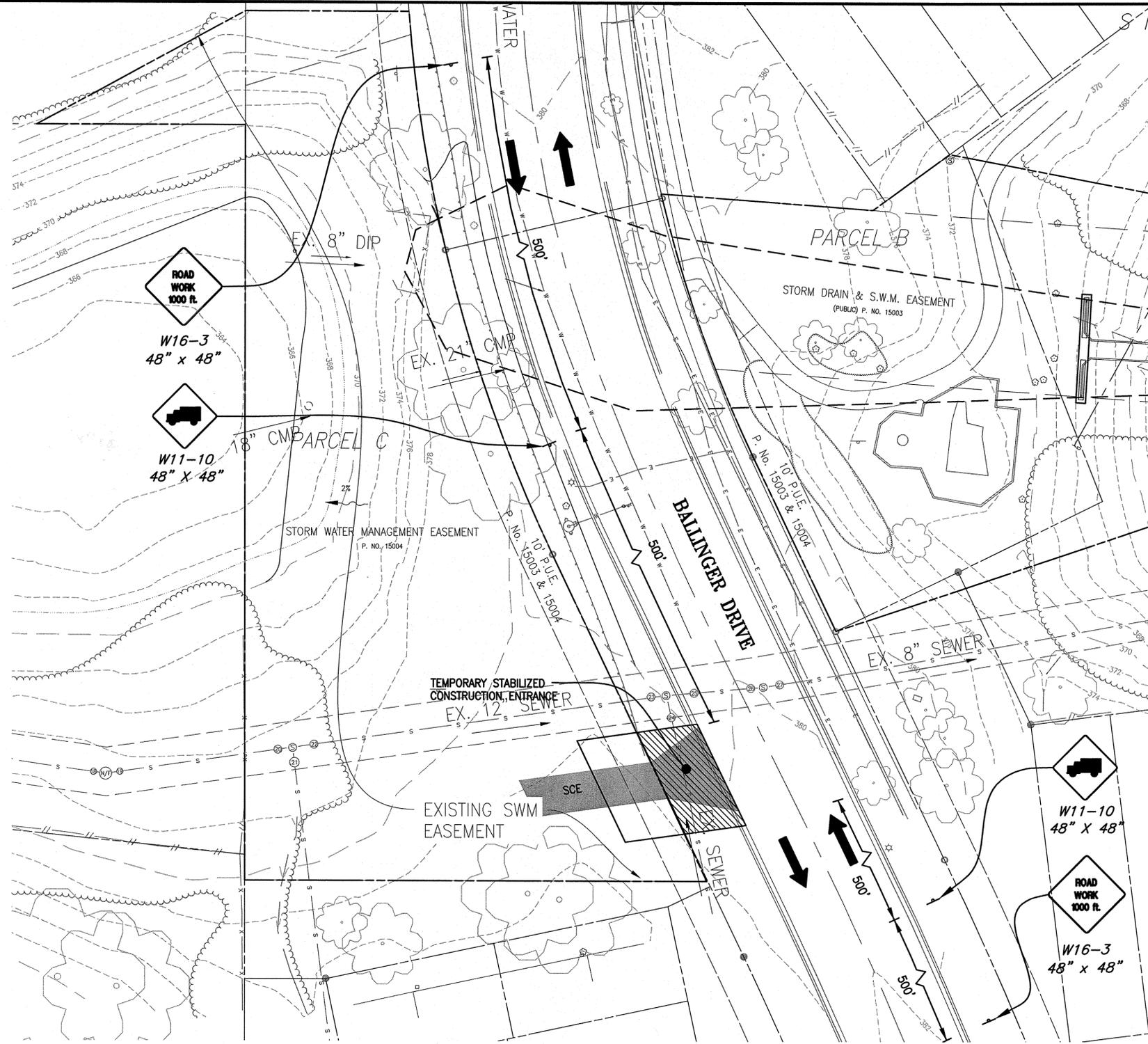
1. THE PERMITEE SHALL CONTACT THE TRAFFIC ENGINEERING DESIGN & OPERATIONS SECTION (TEDO) AT 240-777-6000 AT LEAST TEN (10) WORKING DAYS IN ADVANCE OF THE FINAL PAVING OPERATION TO SCHEDULE THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS AND SIGNS.
2. FIELD ASSISTANCE BY THE MCDOT, DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS IS AVAILABLE UPON REQUEST. CONTACT TRAFFIC ENGINEERING DESIGN & OPERATIONS SECTION (TEDO) AT 240-777-6000.

PARKING RESTRICTIONS

1. PERMITEE SHALL CONTACT THE MCDOT, DIVISION OF PARKING MANAGEMENT AT 240-777-6000 A MINIMUM OF 48 HOURS IN ADVANCE TO ARRANGE FOR PAYMENT AND THE BAGGING OF ALL PARKING METERS WITHIN THE WORK ZONE. METER NUMBERS AND LOCATION MUST BE SPECIFIED.
2. DPS INSPECTOR AT ANY TIME, PROHIBITING THE USE OF METERED SPACES BY THE CONTRACTOR/PERMITEE WITHOUT RECEIPT OF "BAGGING AGREEMENT" IS SUBJECT TO FINES.
3. CONTRACTOR/PERMITEE SHALL COORDINATE WITH DIVISION OF PARKING MANAGEMENT TO MAKE PAYMENT FOR ADDITIONAL BAGGING AND REMOVAL WHENEVER MORE SPACES ARE TEMPORARILY REQUIRED
4. ALL EXISTING MONTGOMERY COUNTY "PARKING" SIGNS SHALL BE COVERED OR BAGGED BY THE CONTRACTOR/PERMITEE FOR THE DURATION OF WORK; AND A TEMPORARY "NO PARKING ANYTIME" (R7-4) SIGN SHALL BE INSTALLED IN THE AFFECTED PARKING SPACE(S). EXISTING MONTGOMERY COUNTY PARKING METER PIPES/POLES SHALL NOT BE USED FOR TEMPORARY INSTALLATION.
5. WHEN IT IS NECESSARY TO RESTRICT PARKING IN A NON-METERED AREA TO FACILITATE WORK ACTIVITY, THE PERMITEE SHALL CONTACT THE APPROPRIATE COUNTY POLICE STATION FOR TEMPORARY "NO PARKING" SIGNS.
6. THE CONTRACTOR/PERMITEE SHALL RESTORE ALL AFFECTED MONTGOMERY COUNTY PARKING SIGNAGE TO THEIR PREVIOUS CONDITION.

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.



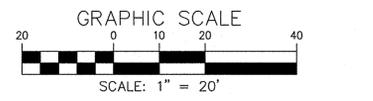
PHASE II - OFFSITE GRADING WORK
 1. INSTALL MAINTENANCE OF TRAFFIC FOR PHASE II.
 2. PERFORM WORK IN POND.
 3. RETURN ROADWAY TO EXISTING CONDITIONS.

LEGEND

WORKZONE [Hatched Box]

SIGN [Arrow]

DIRECTION OF TRAFFIC [Arrow]



PAVEMENT DROP-OFF

1. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORKDAY. "STEEL PLATES" (W95-5(1)) SIGNS SHALL BE PLACED APPROXIMATELY 250 FEET IN ADVANCE OF ANY STEEL PLATE. ANY EXCAVATIONS IN THE SIDEWALK SHALL BE BACKFILLED OR PLATED PRIOR TO THE END OF EACH WORKDAY AND SIDEWALK REOPENED TO ITS FULL CROSS SECTION.
2. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN (10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TEMPORARY TRAFFIC CONTROL DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE SLOPE.
3. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO (2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE, PROVIDED WITH AN ABUTTING WEDGE OF BITUMINOUS MATERIAL AT A 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC DRUMS.
4. IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO (2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:
 - A. WHERE LONGITUDINAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS SHALL BE POSTED INDICATING "UNEVEN LANES" (W8-11). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.
 - B. WHERE LATERAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A "BUMP" (W8-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.
 - C. WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC A "ROUGH ROAD"(W8-8) OR "GROOVED PAVEMENT" (W8-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA.

INSPECTOR AUTHORITY

1. THE COUNTY'S DEPARTMENT OF PERMITTING SERVICES (DPS) INSPECTOR HAS THE AUTHORITY TO MODIFY THE TOP AS DEEMED NECESSARY. THE INSPECTOR HAS THE AUTHORITY TO ORDER THE PERMITEE TO STOP WORK AND VACATE THE PUBLIC RIGHT-OF-WAY IF THE TTCP IS NOT COMPLIED WITH.
2. THE IMPLEMENTATION DATE AND CONTINUANCE OF WORK ACTIVITIES MAY BE ALTERED AT THE DISCRETION OF THE COUNTY'S DPS INSPECTOR IN THE EVENT OF CONFLICTS WITH PREVIOUSLY APPROVED OR EMERGENCY ACTIVITIES.

MISCELLANEOUS

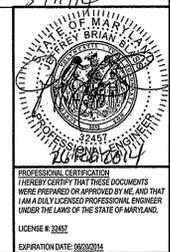
1. THE PERMITEE WILL BE SOLELY RESPONSIBLE FOR ALL ACCIDENTS AND/OR DAMAGE TO PERSONS AND/OR PROPERTY DAMAGE RESULTING FROM HIS OPERATIONS.
2. HAZARDOUS MATERIALS SHALL NOT BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACE OR SIDEWALK DURING NON-WORK PERIODS. ALL STORED MATERIALS AND EQUIPMENT SHALL BE SET BACK AT LEAST SIX (6) FEET BEHIND THE CURB ALONG A CLOSED SECTION ROADWAY AND AT LEAST TWELVE (12) FEET FROM THE EDGE OF AN OPEN SECTION ROADWAY.
3. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.
4. AT THE COMPLETION OF WORK ACTIVITIES, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THOSE THAT EXISTED PRIOR TO THE WORK ACTIVITY.

Montgomery County, Maryland
 Traffic Engineering and Operations Section

APPROVED

FOR MOT/TTCP

BY: [Signature] Date 3/11/14



MAINTENANCE OF TRAFFIC PLAN PHASE II
 BALLINGER DRIVE (MCDEP ASSET No. 11541)
 STORMWATER MANAGEMENT POND RETROFIT

GREENCASTLE WOODS
 COLESVILLE (5TH) ELECTION DISTRICT
 MONTGOMERY COUNTY, MARYLAND

CPJ Charles P. Johnson & Associates, Inc.
 Civil and Environmental Engineers • Planners • Landscape • Architects • Surveyors
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 www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

CLIENT: MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION 255 ROCKVILLE PIKE ROCKVILLE, MD 20850 CONTACT: MR. CRAIG CARSON TEL: (240) 777-7715	PRELIMINARY PLAN NO. N/A	SITE PLAN NO. N/A
DESIGN JBB	SHEET 25	OF 25
DRAFT ADG	DATE MARCH, 2015	FILE NO: MOT-2 MOT-2
SCALE 1" = 20'	FILE NO: 42-114-244	

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