

# CHURCHILL WAY OUTFALL STABILIZATION

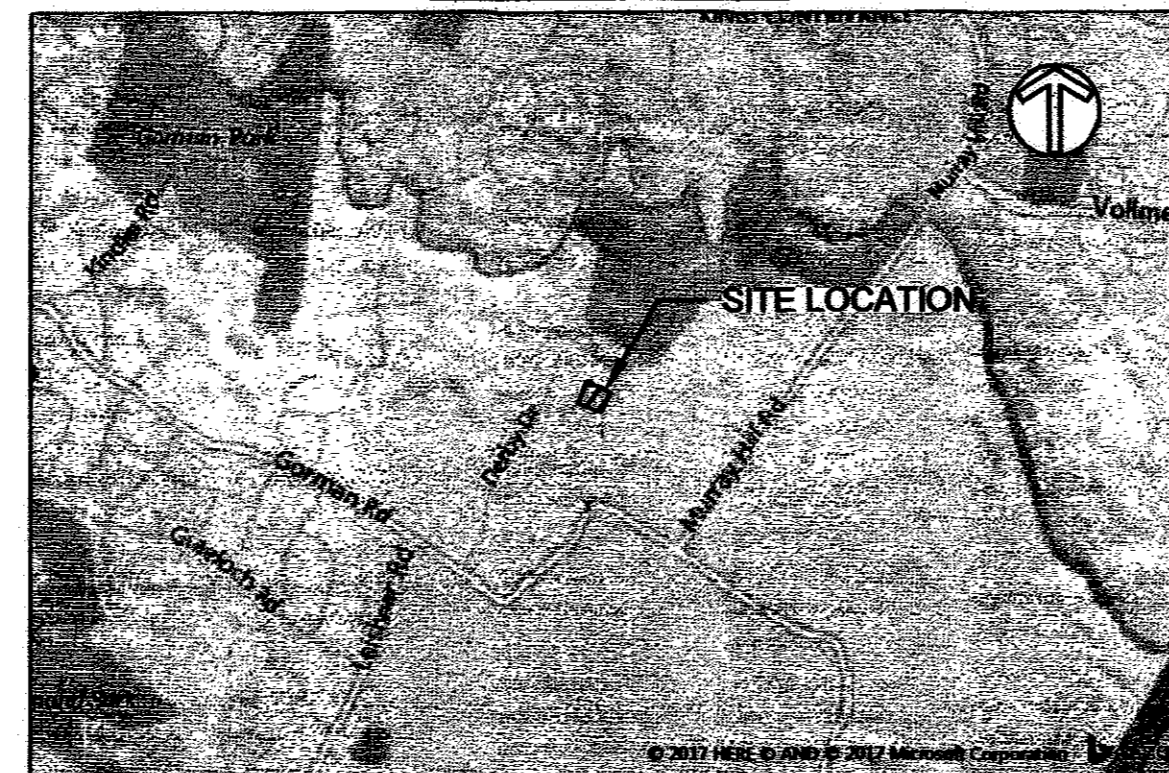
## CAPITAL PROJECT # D-1158

**CLIENT**  
 HOWARD COUNTY  
 STORMWATER MANAGEMENT DIVISION  
 6751 GATEWAY DRIVE, SUITE 514  
 COLUMBIA, MD 21046  
 PHONE: (410) 313-6413

### LEGEND

EXISTING		PROPOSED	
- - - -	MAJOR CONTOUR	425	MAJOR CONTOUR
- · - · -	MINOR CONTOUR	424	MINOR CONTOUR
SS	SANITARY SEWER	- - - - -	BOTTOM OF TRAPEZOIDAL CHANNEL
SD	STORM DRAIN	- · - · - · -	TOP OF TRAPEZOIDAL CHANNEL
W	WATER SUPPLY	- - - · - - -	STREAM CENTERLINE
OHE	OVERHEAD ELECTRIC	LOD	LIMIT OF DISTURBANCE
UGE	UNDERGROUND ELECTRIC	SSF	SUPER SILT FENCE
G	GAS	FL-18	18-INCH FILTER LOG
100YR	EXISTING 100 YEAR FLOODPLAIN	⊗	TREE REMOVAL
~~~~~	TREELINE	○	TREE PLANKING
- - - - -	PROPERTY LINE (GIS)	[Diagonal Hatching]	STAGING AND STOCKPILING AREA
- - - - -	ROAD EDGE (GIS)	[Cross Hatching]	MULCH ACCESS ROAD
- - - - -	BUILDINGS (GIS)	[HWM]	HARDWOOD MATTING
- - - - -	STREAM CENTERLINE (GIS)	[SCF]	STABILIZED CONSTRUCTION ENTRANCE
WUS	STREAM EXTENTS	⊗FB	FILTER BAG
SB	75' STREAM BUFFER	Ⓟ	PUMP
GbC UaF	SOIL BOUNDARIES	=====	INTAKE/DISCHARGE HOSE
[Dark Grey Box]	HIGHLY ERODIBLE SOILS (15% - 19.99% OR $Kw > 0.35$ WITH SLOPE > 5%)	⊞⊞⊞⊞	SAND BAG DIKES
[Light Grey Box]	STEEP SLOPES (20% OR GREATER SLOPES)		
⊙	TREE		
△	TRAVERSE POINT		
●	WOOD POST		
⊕	STORMDRAIN MANHOLE		
⊚	GAS METER		
⊚	SEWER MANHOLE		
⊚	TELCO MANHOLE		
⊚	SIGN		
⊚	ELECTRIC MANHOLE		
MB	MAILBOX		

### VICINITY MAP



ADC MAP COORDINATES:  
 MAP: 19 LETTER: F, G NUMBER: 4, 4  
 0 1000 2000

DESIGN NARRATIVE:  
 CHURCHILL WAY OUTFALL STABILIZATION DESIGN WAS COMPLETED WITH THE FOLLOWING IN MIND:

- OUTFALL STABILIZATION IS PROPOSED WITHIN THE LIMITS OF THE EXISTING OUTFALL CHANNEL TO STABILIZE AND IMPROVE THE EXISTING ERODING CHANNEL. MAJOR IMPACTS TO EXISTING TREES WERE AVOIDED AND MINIMIZED TO THE EXTENT POSSIBLE. NO WETLANDS AND/OR WETLAND BUFFERS ARE WITHIN THE PROJECT EXTENTS.
- ALL PROPOSED GRADING MAINTAINS NATURAL FLOW PATTERNS OF THE OUTFALL CHANNEL AND SURROUNDING FLOODPLAIN FLOWING INTO THE DOWNSTREAM UNNAMED TRIBUTARY THAT FLOWS AND DISCHARGES THE MIDDLE PATUXENT RIVER.
- NO CHANGES IN IMPERVIOUS COVER OR NON-IMPERVIOUS AREAS ARE PROPOSED. EROSION AND SEDIMENT CONTROLS INCLUDING STANDARD FILTERING PRACTICES AND CLEAN WATER DIVERSION (PUMP AROUND) WILL BE PROPERLY IMPLEMENTED TO CONTROL ALL SEDIMENT LADEN RUNOFF FROM THE CONSTRUCTION SITE AND PROTECT ALL DOWNSTREAM BODIES OF WATER IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. SWM IS NOT REQUIRED FOR THIS OUTFALL STABILIZATION PROJECT.
- NO ESD PRACTICES ARE BEING IMPLEMENTED.
- ALL EXISTING TREE LINES WILL BE REESTABLISHED WITH NATIVE VEGETATION.

- SITE ANALYSIS DATA:
- TOTAL PROJECT AREA = 0.3 AC
  - WETLAND TOTAL AREA = 0.0 AC
  - WETLAND BUFFER TOTAL AREA = 0.0 AC
  - FLOODPLAIN AREA = 0.0 AC
  - FOREST AREA = 0.0 AC
  - STEEP SLOPES AREA = 0.1 AC
  - ERODIBLE SOILS AREA = 0.1 AC
  - DISTURBED AREA = 0.3 AC
  - PROPOSED SITE USE = FLOODPLAIN FOREST
  - PROPOSED IMPERVIOUS AREA = 0.0 AC

#### TRAVERSE COORDINATE LIST

PT #	NORTHING	EASTING	ELEVATION
51	542209.475'	1350903.670'	340.92'
100	542242.022'	1351073.256'	328.58'
101	542006.416'	1351087.708'	317.63'
102	542103.680'	1350870.461'	344.92'

#### Property Owners

Board of County Comm	Deed	Map	Parcel	Plot No.
BOARD OF COUNTY COMM HOWARD COUNTY (HOWARD COUNTY PARKS BOARD)	487/201	42	378	-
BROOKS CHARLES D TRUSTEE AND LAURE W TRUSTEE	13946/34	42	81	8563
DOVE RANDOLPH V AND JOANNA S T/E	3922/694	42	81	8563
DIARTE FERNANDO AND LAURA M T/E	6115/236	42	81	8563
FITZGERALD EDWARD T JR AND LALWANEY KIRAN	1730/10	42	81	8563
FLYNN LAURA M AND BRENT A	13428/235	42	81	8563
GREER BROOK C AND KERRY B T/E	2832/709	42	81	8563
GRIEGO EDWIN V AND SANDRA D	16856/265	42	81	8563
HOWARD COUNTY, MARYLAND DEPARTMENT OF REC AND PARKS	1910/535	42	81	8563
HOWARD COUNTY, MARYLAND DEPARTMENT OF REC AND PARKS	1987/221	42	81	8563
MILLER MARY ANN	2661/330	42	81	8563
MYERS LEE H AND ELIZABETH A	2638/562	42	81	8563
NOLEN JOHN M AND SKELLY NOLEN MARGARET A T/E	2560/553	42	81	8563
ROMEO THOMAS D JR AND CATHY C T/E	3437/168	42	81	8563
WINING DIANE I	11217/593	42	81	8563

#### SHEET LIST TABLE

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1	TITLE SHEET	AS-BUILT
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### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. HOWARD COUNTY DOES NOT GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE SHOWN INFORMATION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, PHOTOGRAPHS OF THE PROPOSED WORK AREA AND ACCESS SHALL BE TAKEN.
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED AND APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT (CENAB-OP-RMN (HO SVM/CHURCHILL CHANNEL STABILIZATION) 2017-61366). PROJECT IMPACTS INCLUDE WORK IN A USE IV-P STREAM. UNDER THIS PERMIT, IN-STREAM WORK IS PROHIBITED FROM MARCH 1 TO MAY 31, INCLUSIVE OF ANY YEAR.
- THE EXISTING TOPOGRAPHY WAS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY AB CONSULTANTS, INC. IN DECEMBER 2016.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 37BC AND 37BA WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- 100-YEAR FLOODPLAIN ELEVATION IS SHOWN ON THE PLANS. THERE ARE NO FEMA MAPPED FLOODPLAINS WITHIN THE PROJECT LIMITS. DUE TO THE SHORT LENGTH OF THE PROJECT, A HYDRAULIC ANALYSIS WAS NOT CONDUCTED; THE FLOODPLAIN SHOWN ON THE PLANS WAS ESTIMATED FOR THE OUTFALLING STREAM AS FLOODPRONE AREA GIVEN A BANKFULL HEIGHT OF 1.5 FT.
- THE STREAM IS NOT A TIER II WATER. AS A TRIBUTARY TO MIDDLE PATUXENT RIVER WITHIN THE MIDDLE PATUXENT RIVER WATERSHED, THE STREAM IS NOT AN IMPAIRED WATERWAY.
- TEMPORARY STAGING AND/OR STOCKPILING OF ERODIBLE MATERIALS (E.G. EXCAVATED MATERIAL) WITHIN THE 100-YEAR FLOODPLAIN DESIGNATED ON THE PLANS SHALL BE LIMITED TO THE AMOUNT OF MATERIAL THE CONTRACTOR CAN PLACE AND/OR HAUL OFF IN A SINGLE DAY. THE CONTRACTOR SHALL MONITOR THE WEATHER FORECAST AND ADJUST STOCKPILE/STAGING OPERATIONS ACCORDINGLY TO MINIMIZE THE LOSS OF MATERIAL OR OTHER ADVERSE IMPACTS.
- THE CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS, AND/OR SUPPLIES BEYOND THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
- EXISTING UTILITIES ARE BASED ON AVAILABLE RECORDS. THE CONTRACTOR MUST VERIFY INFORMATION TO HIS/HER SATISFACTION.
- THERE ARE NO WETLANDS LOCATED ON THE PROJECT SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES LOCATED ON THE PROJECT SITE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES SHALL HAVE A CLEARANCE BY A MINIMUM OF 6 INCHES VERTICALLY AND A MINIMUM OF 5 FEET HORIZONTALLY.
- THE CONTRACTOR SHALL EXERCISE CARE IN ALL ACTIVITIES INVOLVING EITHER CUT AND FILL OR GRADING IN THE VICINITY OF TREES THAT ARE TO REMAIN. ALL EARTH CUTS AND ACTIVITIES IN THE VICINITY OF TREES TO REMAIN SHALL BE MADE IN A MANNER THAT DOES NOT DISTURB THE CRITICAL ROOT ZONE WITHIN THE DRIPLINE OF THE TREE. TREES TO BE SAVED SHALL BE LOCATED AND SAVED WITH THE ENGINEER ON-SITE PRIOR TO CONSTRUCTION.
- UPON COMPLETION OF THE WORK, BUT PRIOR TO DE-MOBILIZATION, THE CONTRACTOR SHALL REMOVE ALL REMNANTS OF CONSTRUCTION MATERIALS FROM THE SITE. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL OR BETTER THAN THE PRE-CONSTRUCTION CONDITIONS.
- BIOHABITATS SHALL CERTIFY IN WRITTEN LETTER THAT THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED IN ACCORDANCE TO THESE PLANS.
- TEMPORARY DISTURBANCE WITHIN THE 75' PERENNIAL STREAM BUFFER, STREAM CHANNEL, AND 100-YR FLOODPLAIN, ARE NECESSARY FOR CONSTRUCTION OF THE OUTFALL STABILIZATION PROJECT IN ACCORDANCE WITH SECTION 16.116(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATION.

Category	Description	Slope	Hydrology	Stability	Drainage	Notes
GpD	Generally loam, 8 to 8 percent slopes	0.20	Non-Hydric	B	NO	Well Drained
GbD	Generally Urban land complex, 0 to 8 percent slopes	0.20	Non-Hydric	B	NO	Well Drained
GaB	Glenville-Belle all loams, 0 to 8 percent slopes	0.37	Hydric	C	YES	Moderately Well Drained
MeC	Minor loam, 8 to 15 percent slopes	0.24	Non-Hydric	B	NO	Well Drained
MeD	Minor loam, 15 to 28 percent slopes	0.24	Non-Hydric	B	NO	Well Drained

DEPARTMENT OF PUBLIC WORKS, HOWARD CO, MD

*[Signature]*  
 DIRECTOR, DEPARTMENT OF PUBLIC WORKS  
 DATE: 10/25/17

*[Signature]*  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES  
 DATE: 10/19/17

*[Signature]*  
 CHIEF, STORMWATER MANAGEMENT DIVISION  
 DATE: 10/19/17

DEPARTMENT OF RECREATION AND PARKS, HOWARD CO, MD

*[Signature]*  
 DIRECTOR OF RECREATION AND PARKS  
 DATE: 10/20/17

ENGINEERS CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT

*[Signature]*  
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)  
 DATE: 10-18-2017

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DEVELOPERS CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE THE BEGINNING OF THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT

*[Signature]*  
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)  
 DATE: 10/25/17

AS-BUILT LEGEND

- CHANNEL CENTERLINE
- - - - MAJOR CONTOUR
- · - · - MINOR CONTOUR
- [Box] RIPRAP OUTFALL PROTECTION (EXTENTS OUTLINED)

This development plan is approved for soil erosion and sediment control by the HOWARD COUNTY SOIL CONSERVATION DISTRICT

*[Signature]*  
 HOWARD SCD  
 DATE: 10/20/17

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 36617  
 EXPIRATION DATE: 08/03/2018

10-18-2017

AS BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

*[Signature]*  
 NAME: NAME DATE: 6-13-2018

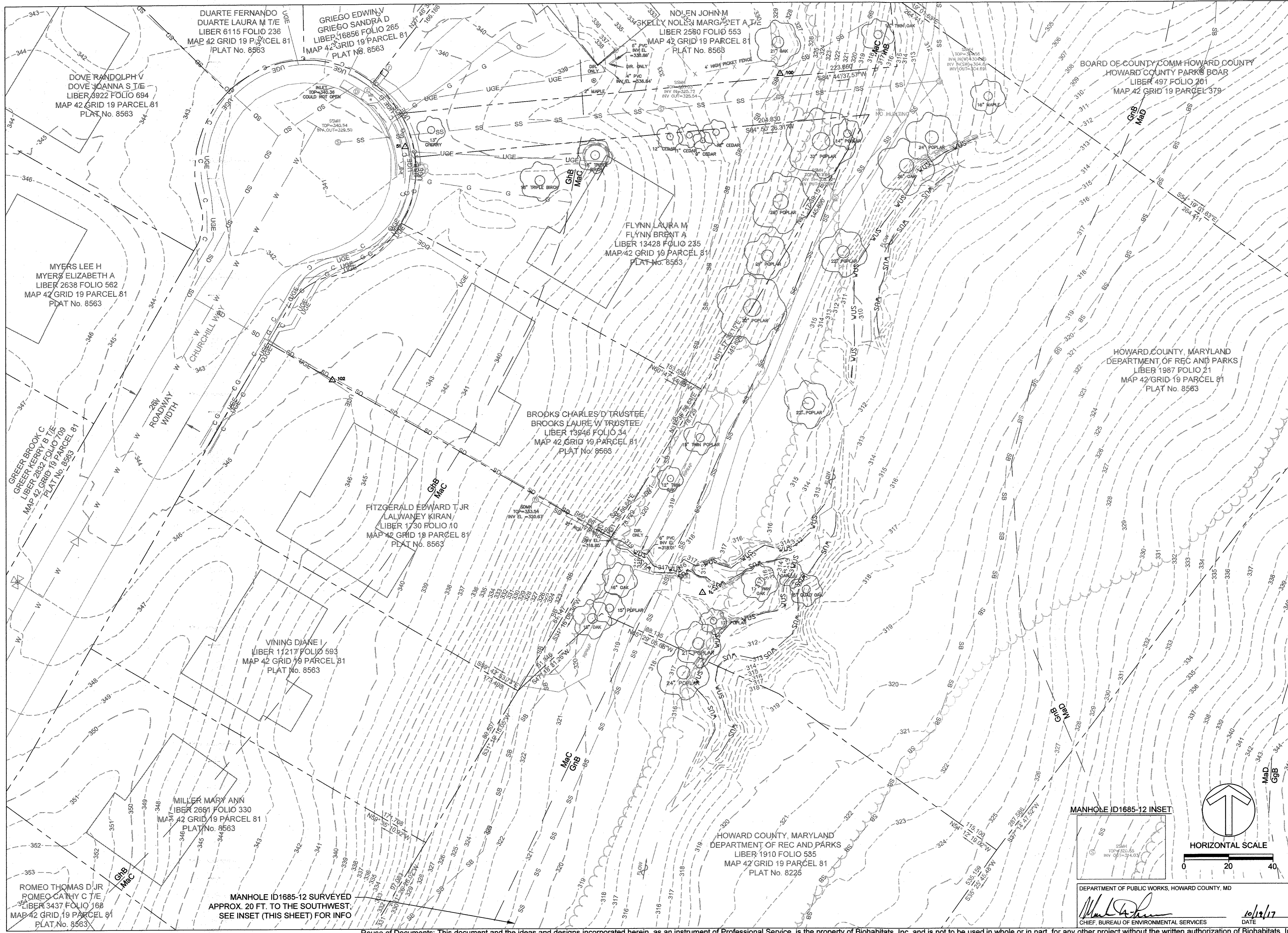
**Biohabitats**  
 The Stables Building 2081 Clipper Park Road  
 Baltimore, MD 21211 / ph: 410.554.0156  
 fx: 410.554.0168 / www.biohabitats.com  
 Restore the Earth & Inspire Ecological Stewardship

## CHURCHILL WAY OUTFALL STABILIZATION

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP/GRID/PARCEL: 04420019001  
 ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

TITLE SHEET

PROJECT NO.: 13005.47 SCALE: NTS  
 SEAL: BY: KT CHECK: MDT/EVL  
 DWG. NO.: 1 OF 9



CLIENT  
 HOWARD COUNTY  
 STORMWATER MANAGEMENT DIVISION  
 6751 GATEWAY DRIVE, SUITE 514  
 COLUMBIA, MD 21046  
 PHONE: (410) 313-6413

DATE ISSUES / REVISIONS

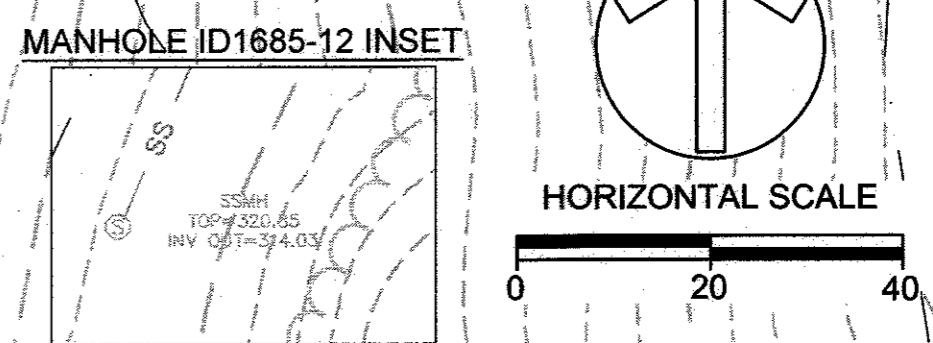
HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF REC AND PARKS  
 LIBER 1987 FOLIO 21  
 MAP 42 GRID 19 PARCEL 81  
 PLAT No. 8563

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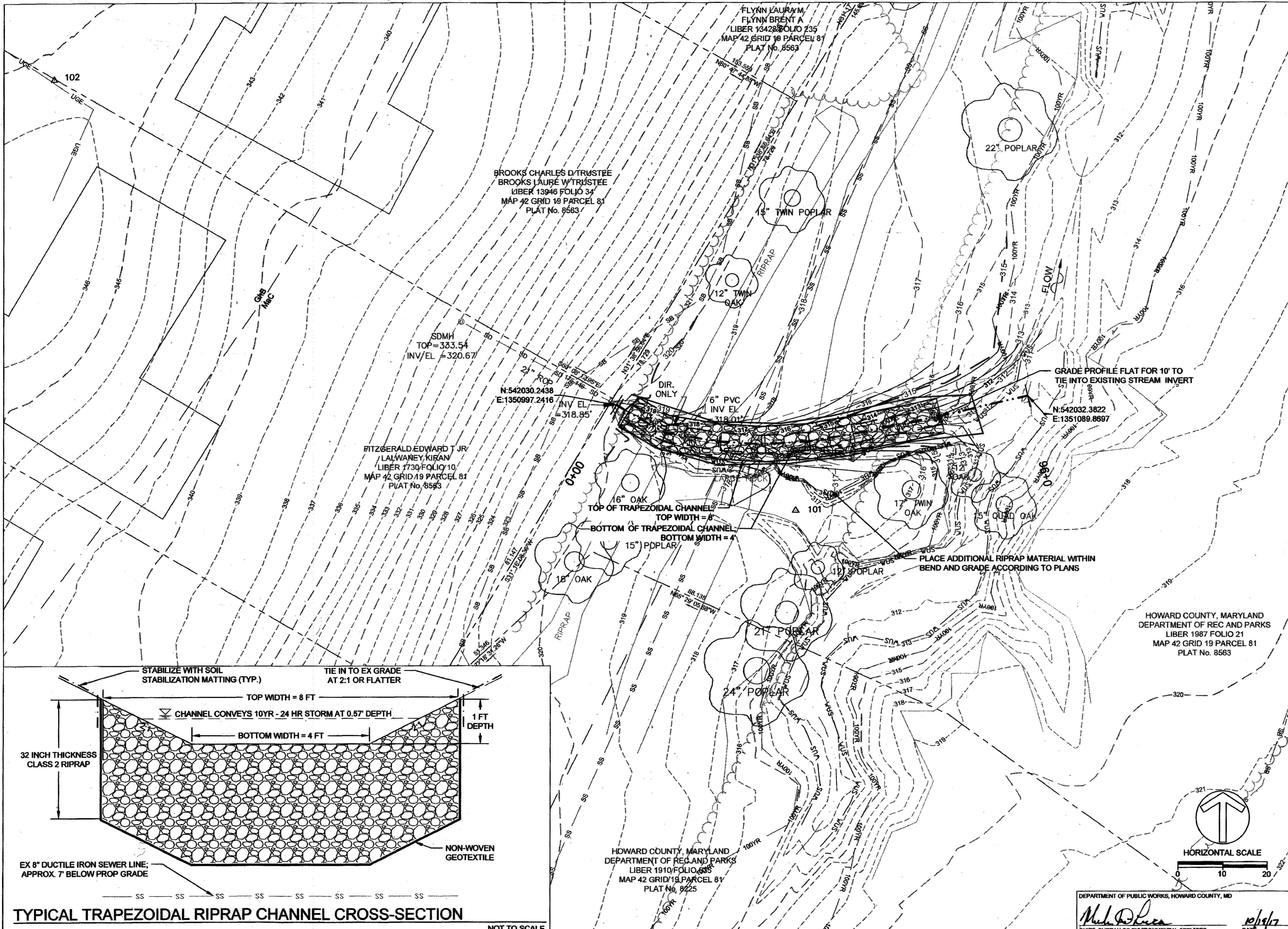
**CHURCHILL WAY  
 OUTFALL  
 STABILIZATION**  
 SITE ADDRESS: 10490 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP/GRID/PARCEL: 0042/0019/0061  
 ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

**EXISTING  
 CONDITIONS**

PROJECT NO.: 13005.47 SCALE: 1" = 20'  
 SEAL: BY: KT CHECK: MDT/BVL  
 DWG. NO.: **2 OF 9**  
  
 DATE: 10/19/17



DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE: 10/19/17



CLIENT  
 HOWARD COUNTY  
 STORMWATER MANAGEMENT DIVISION  
 6751 GATEWAY DRIVE, SUITE 514  
 COLUMBIA, MD 21046  
 PHONE: (410) 313-6413

DATE ISSUES / REVISIONS



AS BUILT CERTIFICATION  
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

*Bret Jony* 6-13-2018  
 NAME DATE

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 The Stables Building 2081 Clipper Park Road  
 Baltimore, MD 21211 / ph: 410.554.0156  
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 Restore the Earth & Inspire Ecological Stewardship

HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF REC AND PARKS  
 LIBER 1987 FOLIO 21  
 MAP 42 GRID 19 PARCEL 81  
 PLAT No. 8583

**CHURCHILL WAY  
 OUTFALL  
 STABILIZATION**

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP GRID/PARCEL: 024201010001  
 ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

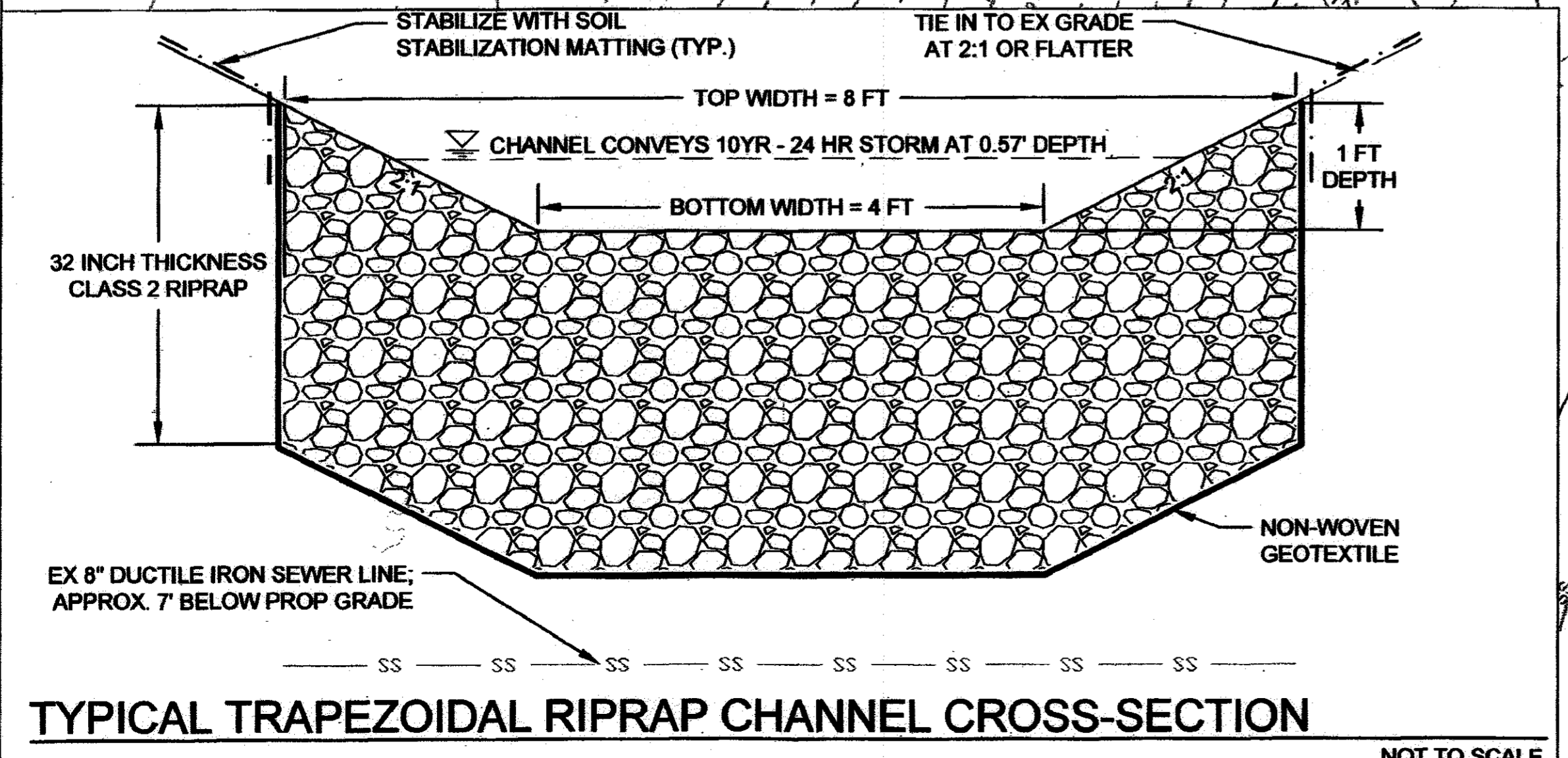
**PROPOSED  
 CONDITIONS**

PROJECT NO.: 13005.47 SCALE: 1" = 10'  
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 DWS. NO.:



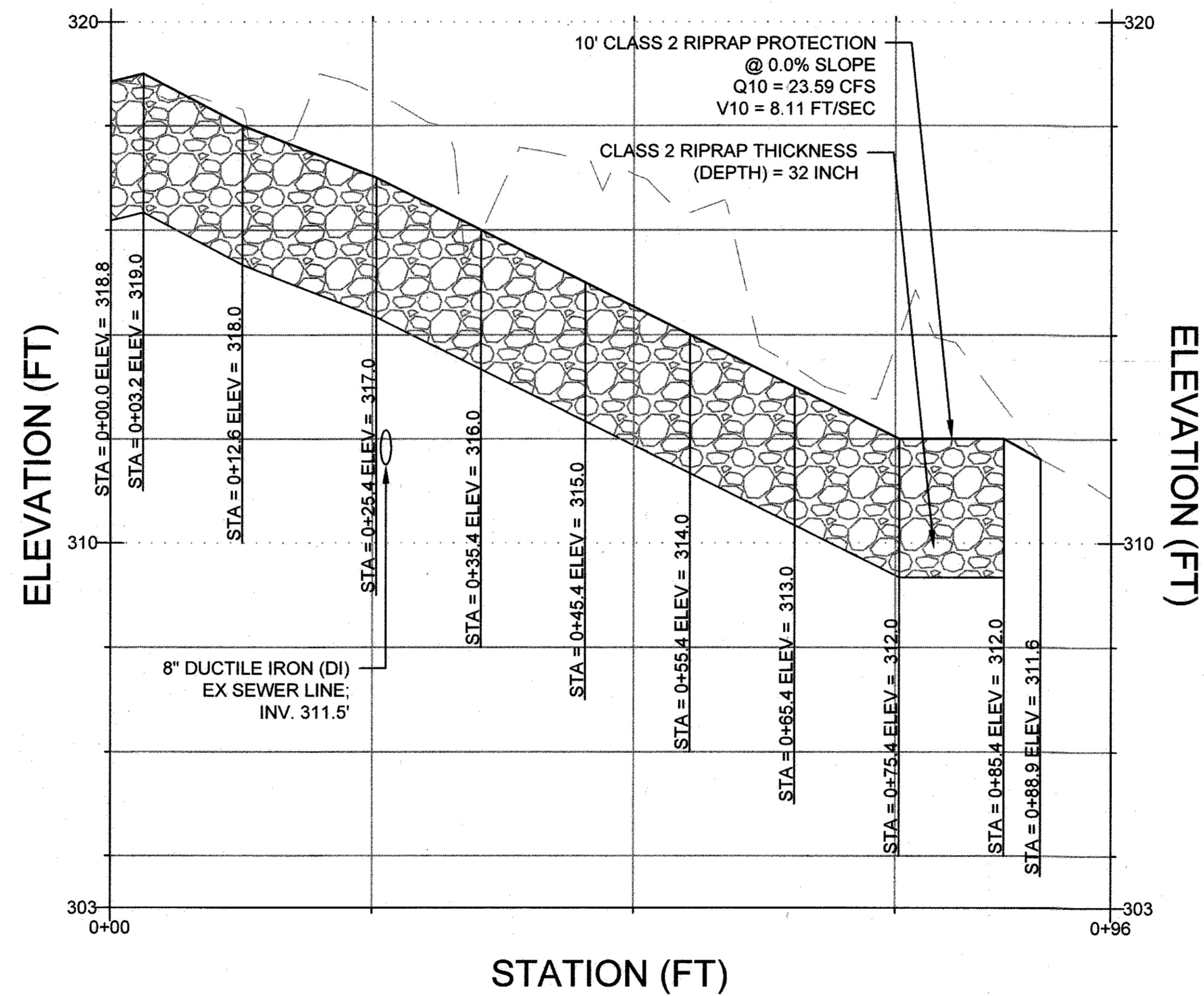
3 OF 9

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
*Michael DeLuca* 10/19/17  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE



CLIENT  
 HOWARD COUNTY  
 STORMWATER MANAGEMENT DIVISION  
 6751 GATEWAY DRIVE, SUITE 514  
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PROFILE VIEW OF RIPRAP TRAPEZOIDAL CHANNEL



DATE ISSUES / REVISIONS

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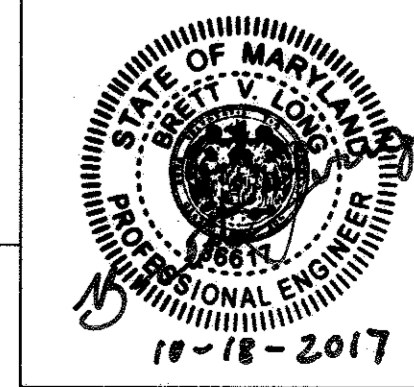
CHURCHILL WAY  
 OUTFALL  
 STABILIZATION

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP/GRID/PARCEL: 0042/0019/0081  
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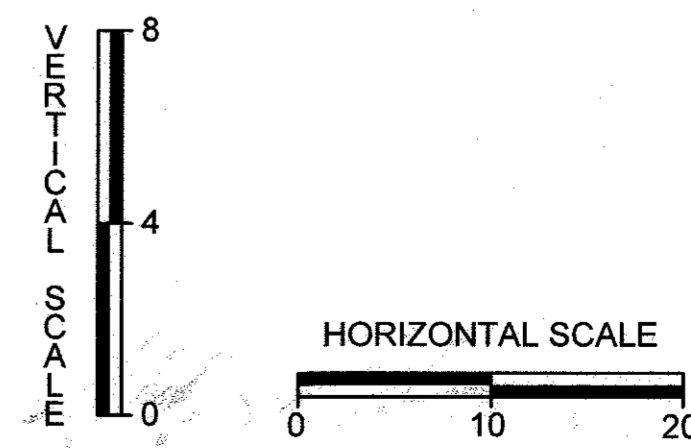
PROFILE

PROJECT NO.: 13005.47 SCALE: AS SHOWN

SEAL: BY: KT CHECK: MDT/BVL  
 DWG. NO.:



4 OF 9



DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 Chief, Bureau of Environmental Services  
 DATE: 10/13/17



**ESC LEGEND**

**EXISTING**

- 100YR — 100 YR FLOODPLAIN
- TREELINE
- STREAM CENTERLINE (GIS)
- WUS — STREAM EXTENTS
- SB — 75' STREAM BUFFER
- GbC — SOIL BOUNDARIES
- UaF
- HIGHLY ERODIBLE SOILS (15% - 19.99% OR Kw > 0.35 WITH SLOPE > 5%)
- STEEP SLOPES (20% OR GREATER SLOPES)
- TREE

**PROPOSED**

- 425 — MAJOR CONTOUR
- 424 — MINOR CONTOUR
- BOTTOM OF TRAPEZOIDAL CHANNEL
- TOP OF TRAPEZOIDAL CHANNEL
- STREAM CENTERLINE
- LOD — LIMIT OF DISTURBANCE
- SSF — SUPER SILT FENCE
- FL-18 — 18-INCH FILTER LOG
- TREE REMOVAL
- TREE PLANKING
- STAGING AND STOCKPILING AREA
- MULCH ACCESS ROAD
- HWM — HARDWOOD MATTING
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- ⊗ — FILTER BAG
- ⊙ — PUMP
- — INTAKE/DISCHARGE HOSE
- — SAND BAG DIKES

Map Unit Symbol	Map Unit Name	K Factor (White Soil)	Hydric Rating	Hydrologic Soil Group	Highly Erodible	Drainage Class
GgB	Glenelg loam, 3 to 8 percent slopes	0.20	Non-Hydric	B	NO	Well Drained
GnB	Glenelg-Urban land complex, 0 to 8 percent slopes	0.20	Non-Hydric	B	NO	Well Drained
GnB	Glenville-Belle silt loams, 0 to 8 percent slopes	0.37	Hydric	C	YES	Moderately Well Drained
MaC	Manor loam, 8 to 15 percent slopes	0.24	Non-Hydric	B	NO	Well Drained
MaD	Manor loam, 15 to 25 percent slopes	0.24	Non-Hydric	B	NO	Well Drained

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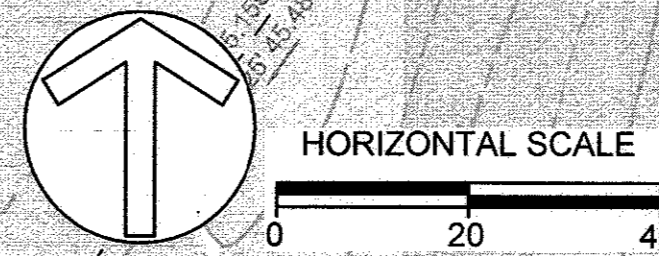
**CHURCHILL WAY  
 OUTFALL  
 STABILIZATION**  
 SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP GRID/PARCEL: 0042/0019/0081  
 ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

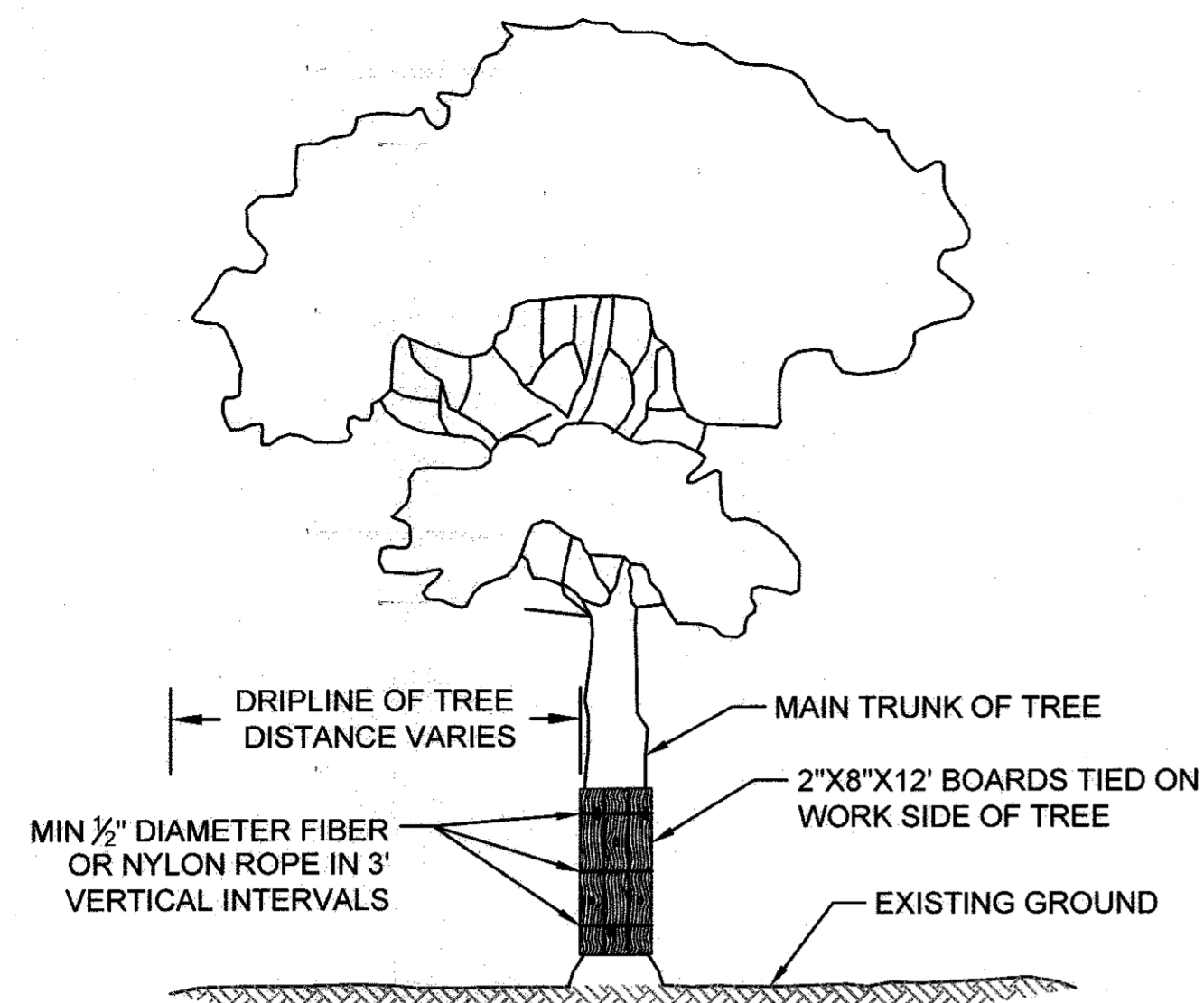
**EROSION AND  
 SEDIMENT  
 CONTROL**

PROJECT NO.: 13005.47 SCALE: 1" = 20'  
 SEAL: BY: KT CHECK: MDT/BVL  
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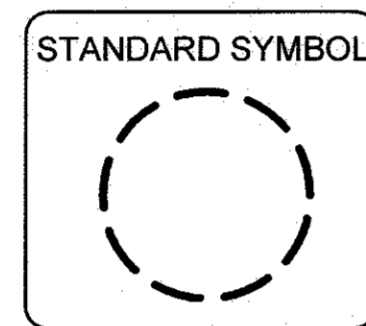
5 OF 9  
 STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 10-18-2017

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT  
 [Signature] 10/20/17  
 Howard SCD Date  
 DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 [Signature] 10/13/17  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE



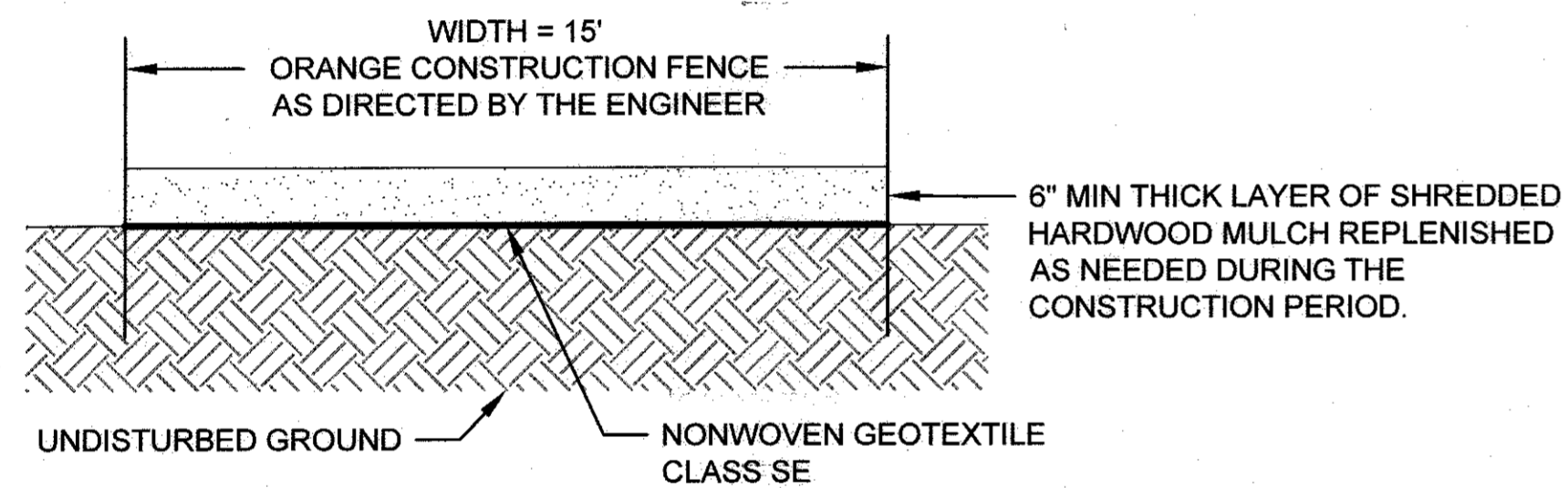


- NOTES:
1. TIE SUFFICIENT 2"x8"x12' BOARDS AROUND MAIN TRUNK OF TREE WITH 1/2" DIAMETER ROPE (FIBER OR NYLON) TO PROTECT ALL AREAS EXPOSED TO CONSTRUCTION.
  2. INSTALL WIRE EYE BOLTS WITH MINIMUM INNER DIAMETER OF 5/8" AND MINIMUM LENGTH OF 4" FIRMLY IN EACH PLANK WHERE FIBER OR NYLON ROPES CROSS OVER PLANKS.
  3. WHERE SIGNIFICANT TREE BRANCHES EXIST WHICH PREVENT PLANK INSTALLATION, PLANKING SHALL EXTEND TO THE ELEVATION OF THE LOWEST BRANCH.



NOT TO SCALE

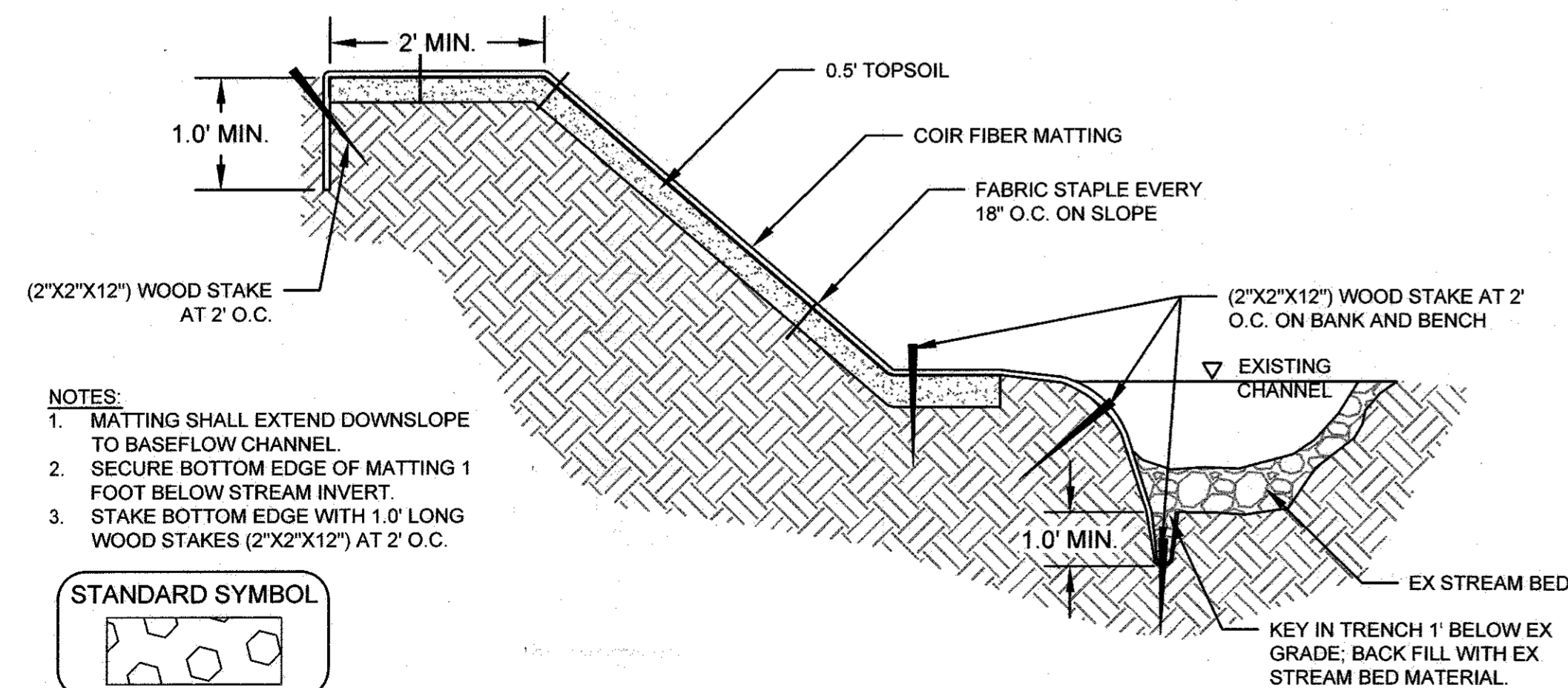
### TREE PLANKING



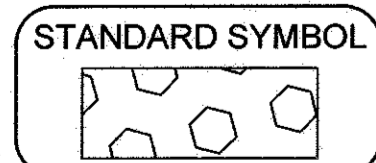
- NOTES:
1. ACCESS ROUTES TO BE VERIFIED BY ENGINEER AT EROSION AND SEDIMENT CONTROL MEETING. REVISIONS TO THE ALIGNMENT THAT MINIMIZE TREE DISTURBANCE ARE ENCOURAGED AND REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.
  2. CONTRACTOR SHALL MAINTAIN MULCH ACCESS PATH THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF PROJECT, ALL MULCH ACCESS ROADS SHALL BE REMOVED AND RESTORED TO PRE-EXISTING CONDITIONS.
  3. SCARIFICATION OF COMPACTED MULCH TO OCCUR UPON REMOVAL OF ACCESS ROAD, AT THE DIRECTION OF THE ENGINEER.
  4. FILTER LOGS TO PLACED ALONG MULCH ACCESS ROAD AS SHOWN ON EROSION AND SEDIMENT CONTROL PLANS.

### MULCH ACCESS ROAD

NOT TO SCALE



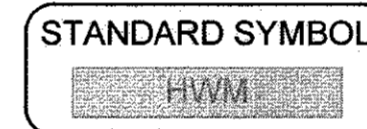
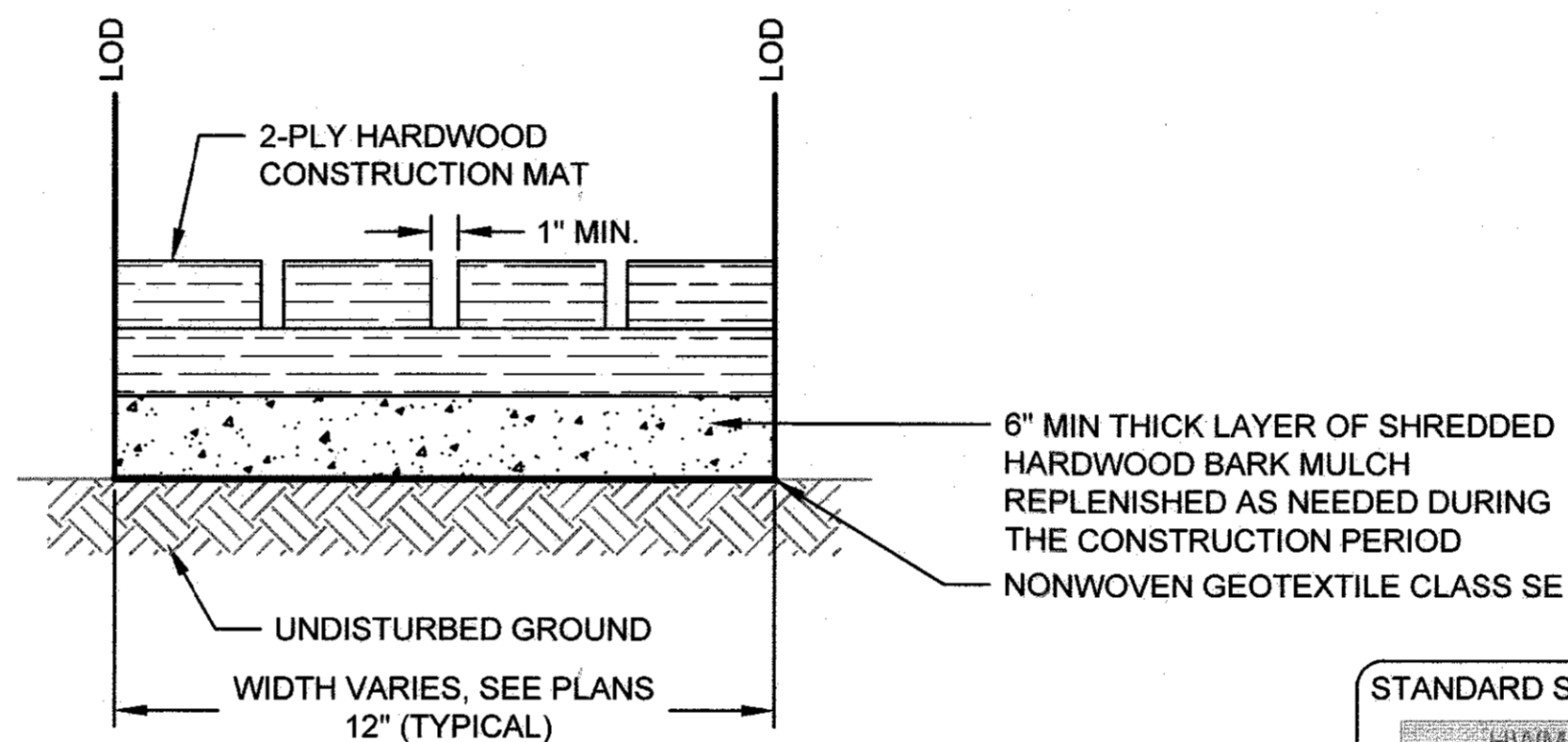
- NOTES:
1. MATTING SHALL EXTEND DOWNSLOPE TO BASEFLOW CHANNEL.
  2. SECURE BOTTOM EDGE OF MATTING 1 FOOT BELOW STREAM INVERT.
  3. STAKE BOTTOM EDGE WITH 1.0' LONG WOOD STAKES (2"x2"x12") AT 2' O.C.



NOTE: COIR FIBER MATTING SHALL BE ROLLED LENGTH WISE ALONG EACH STREAM BANK EXTENDING FROM TOE OF SLOPE TO A MINIMUM OF TWO FEET PAST THE TOP OF SLOPE UPON COMPLETION OF GRADING AND APPLICATION OF HERBACEOUS PERMANENT SEEDING. IF MORE THAN ONE ROLL IS REQUIRED, MID-BANK OVERLAP SHOULD BE A MINIMUM OF ONE FOOT AND SECURELY FASTENED WITH STAPLES. MATTING CAN BE INSTALLED INCREMENTALLY AS CONSTRUCTION PROGRESSES, PER THE SEQUENCE OF CONSTRUCTION.

### COIR FIBER MATTING - TYPICAL SLOPE CROSS SECTION

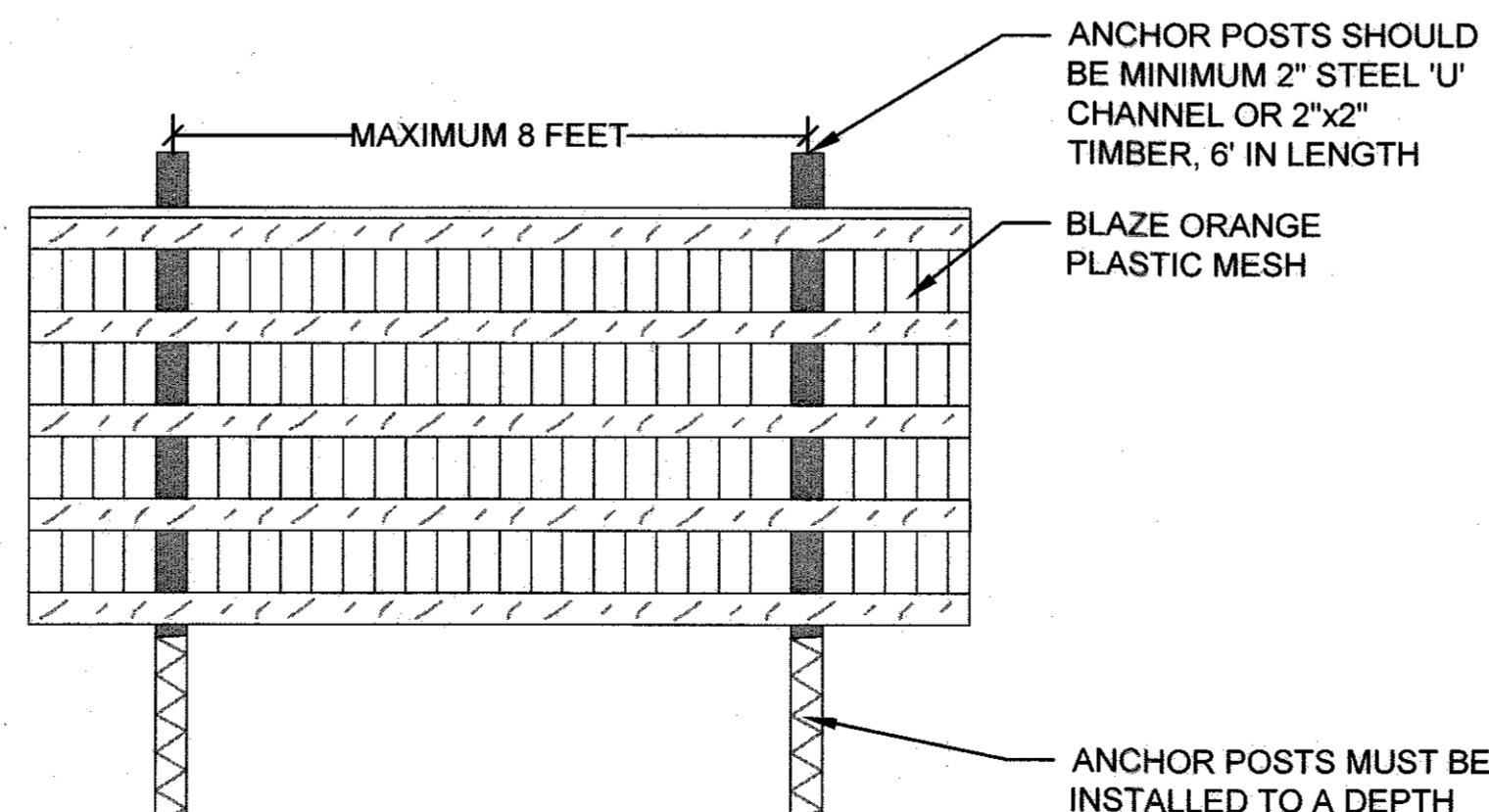
NOT TO SCALE



- NOTES:
1. HARDWOOD MATS TO BE INSTALLED AS SHOWN ON THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER.
  2. ACCESS ROUTES TO BE VERIFIED BY THE ENGINEER AT THE EROSION AND SEDIMENT CONTROL MEETING. REVISIONS TO THE ALIGNMENT THAT MINIMIZE TREE DISTURBANCE ARE ENCOURAGED, AND REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.
  3. THE CONTRACTOR SHALL ENSURE THAT EQUIPMENT IS KEPT ON MATS AT ALL TIMES WHERE MATS ARE PRESENT.
  4. THE CONTRACTOR SHALL MAINTAIN MULCH ACCESS ROADS THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF PROJECT, ALL MULCH ACCESS ROADS SHALL BE REMOVED AND RESTORED TO PRE-EXISTING CONDITIONS.

### HARDWOOD MAT DETAIL CROSS SECTION

NOT TO SCALE



- NOTES:
1. PROTECTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
  2. BOUNDARIES OF PROTECTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICES.
  3. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

### BLAZE ORANGE PLASTIC FENCE

NOT TO SCALE

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STORMWATER MANAGEMENT DIVISION  
6751 GATEWAY DRIVE, SUITE 514  
COLUMBIA, MD 21046  
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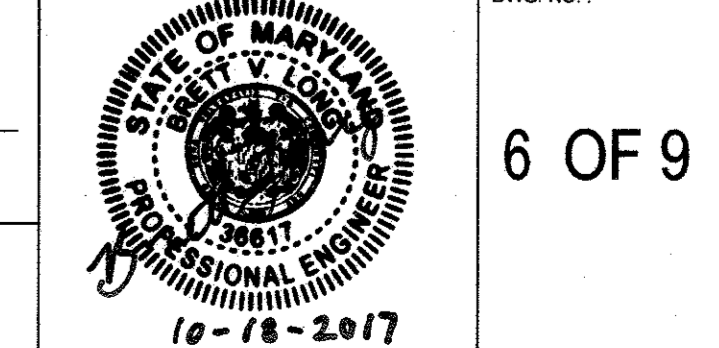
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### CHURCHILL WAY OUTFALL STABILIZATION

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
ZONING: R-20 TAX MAP/GRID/PARCEL: 0042/0019/0081  
ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

### EROSION AND SEDIMENT CONTROL DETAILS

PROJECT NO.: 13005.47 SCALE: NTS  
SEAL: BY: KT CHECK: MDT/BVL  
DWG. NO.:



6 OF 9

This development plan is approved for soil erosion and sediment control by the  
HOWARD SOIL CONSERVATION DISTRICT  
*[Signature]* 10/29/17  
Howard SCD Date  
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
*[Signature]* 10/19/17  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

**MGWC 1.2: PUMP-AROUND PRACTICE**

*Temporary measure for dewatering in channel construction sites*

**DESCRIPTION**

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

**IMPLEMENTATION SEQUENCE**

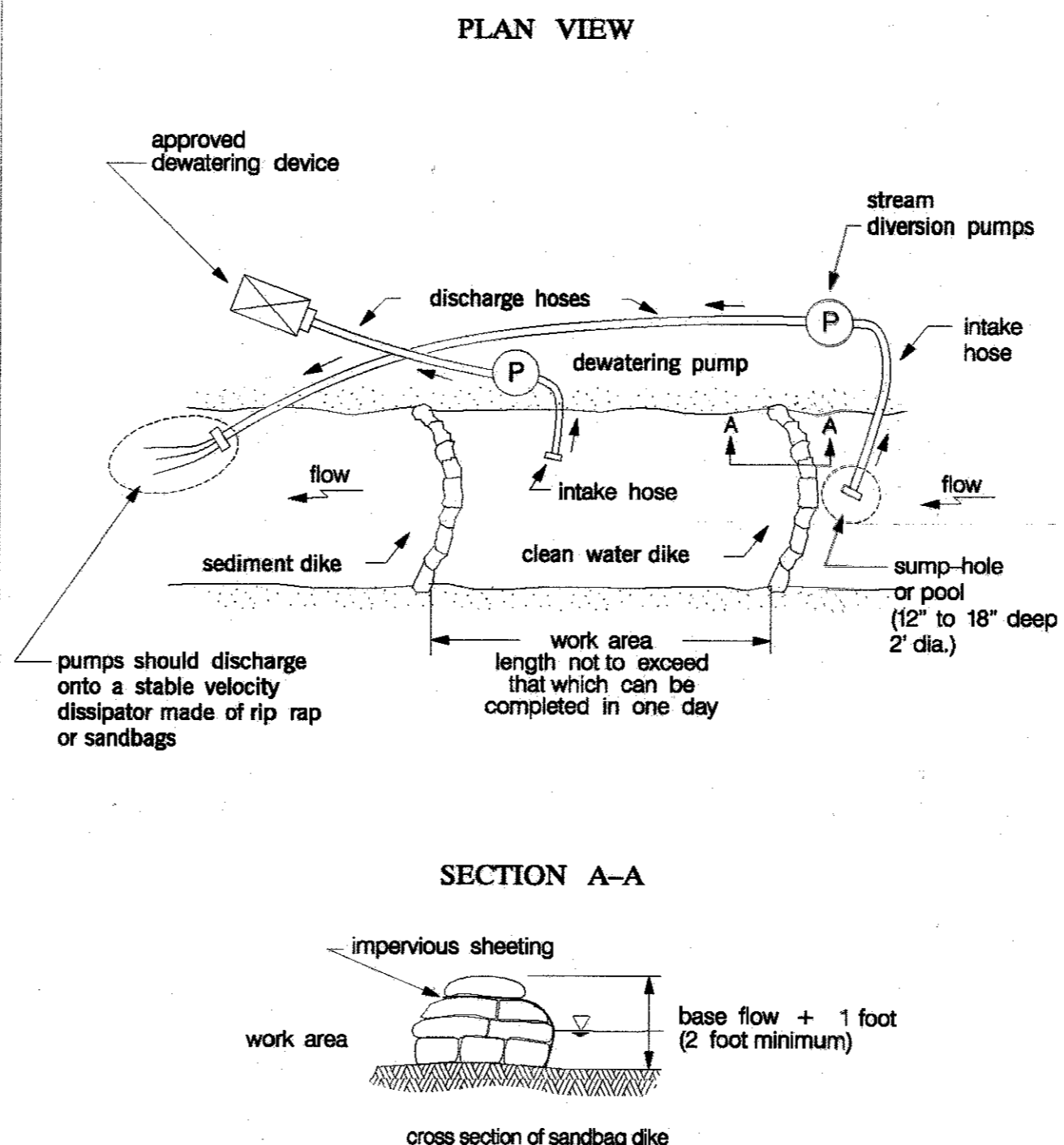
Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary assessments and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

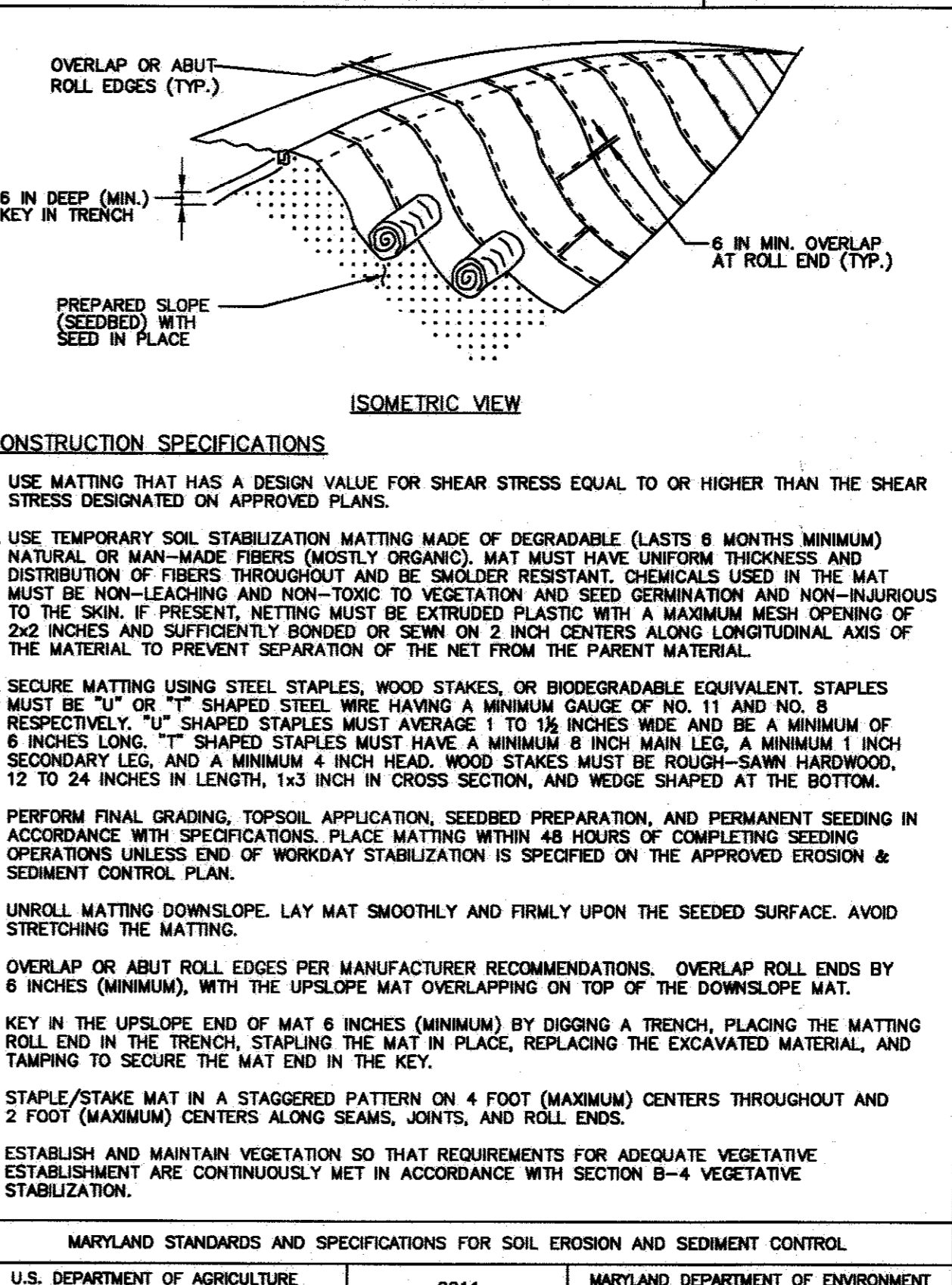
**MGWC 1.2: PUMP-AROUND PRACTICE**

7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump-around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

**Maryland's Guidelines To Waterway Construction  
DETAIL 1.2: PUMP-AROUND PRACTICE**



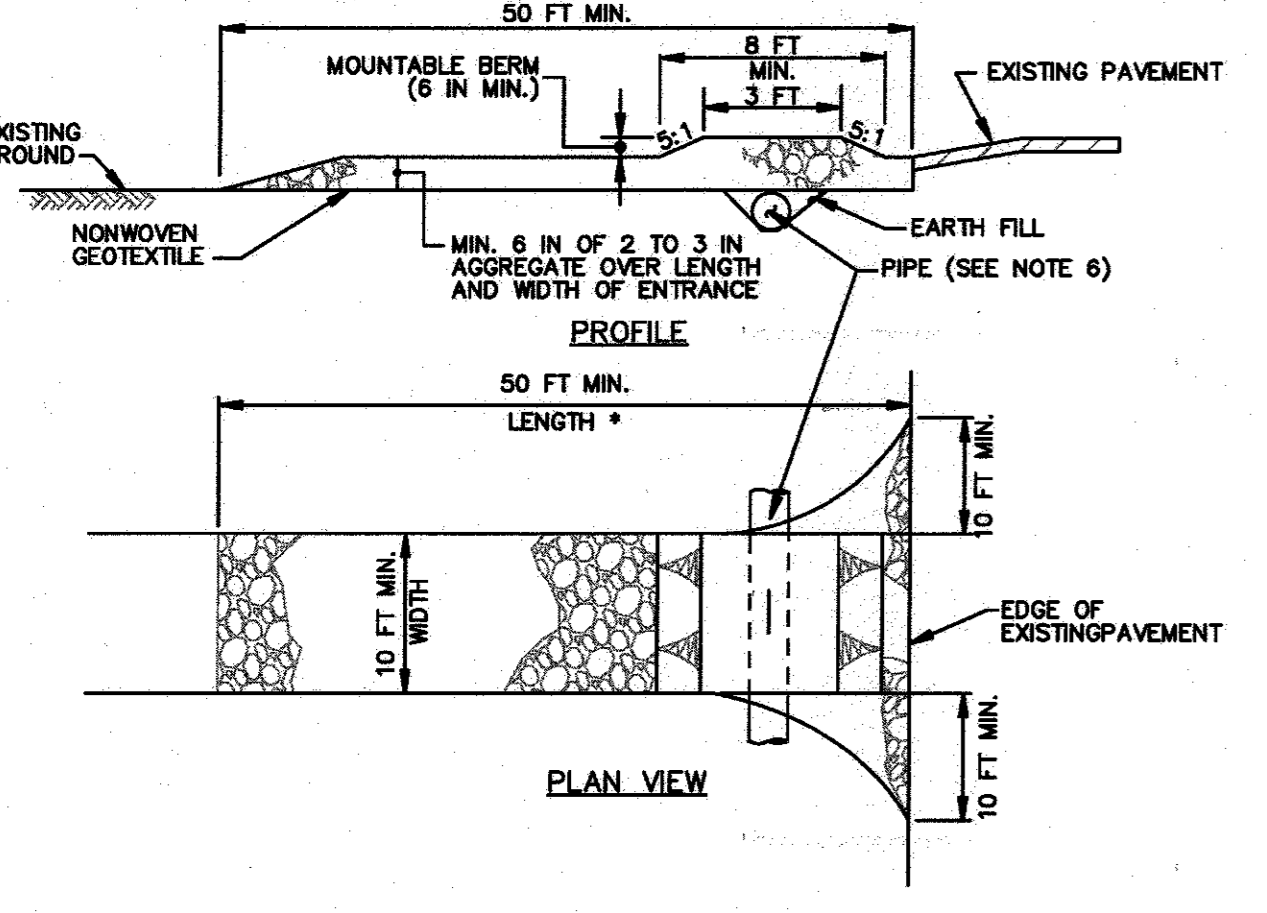
**DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION**



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6751 GATEWAY DRIVE, SUITE 514  
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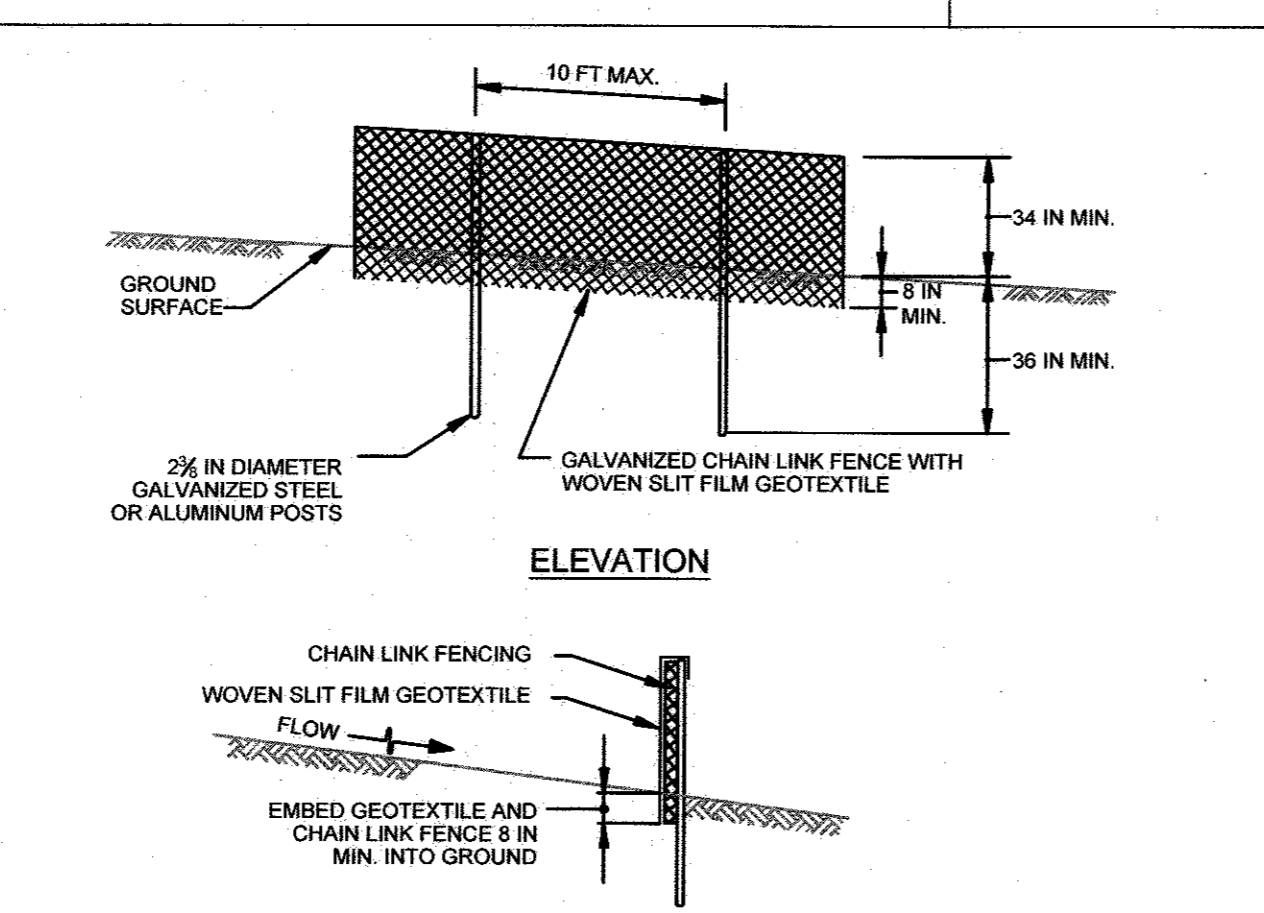
DATE	ISSUES / REVISIONS
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**DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE**



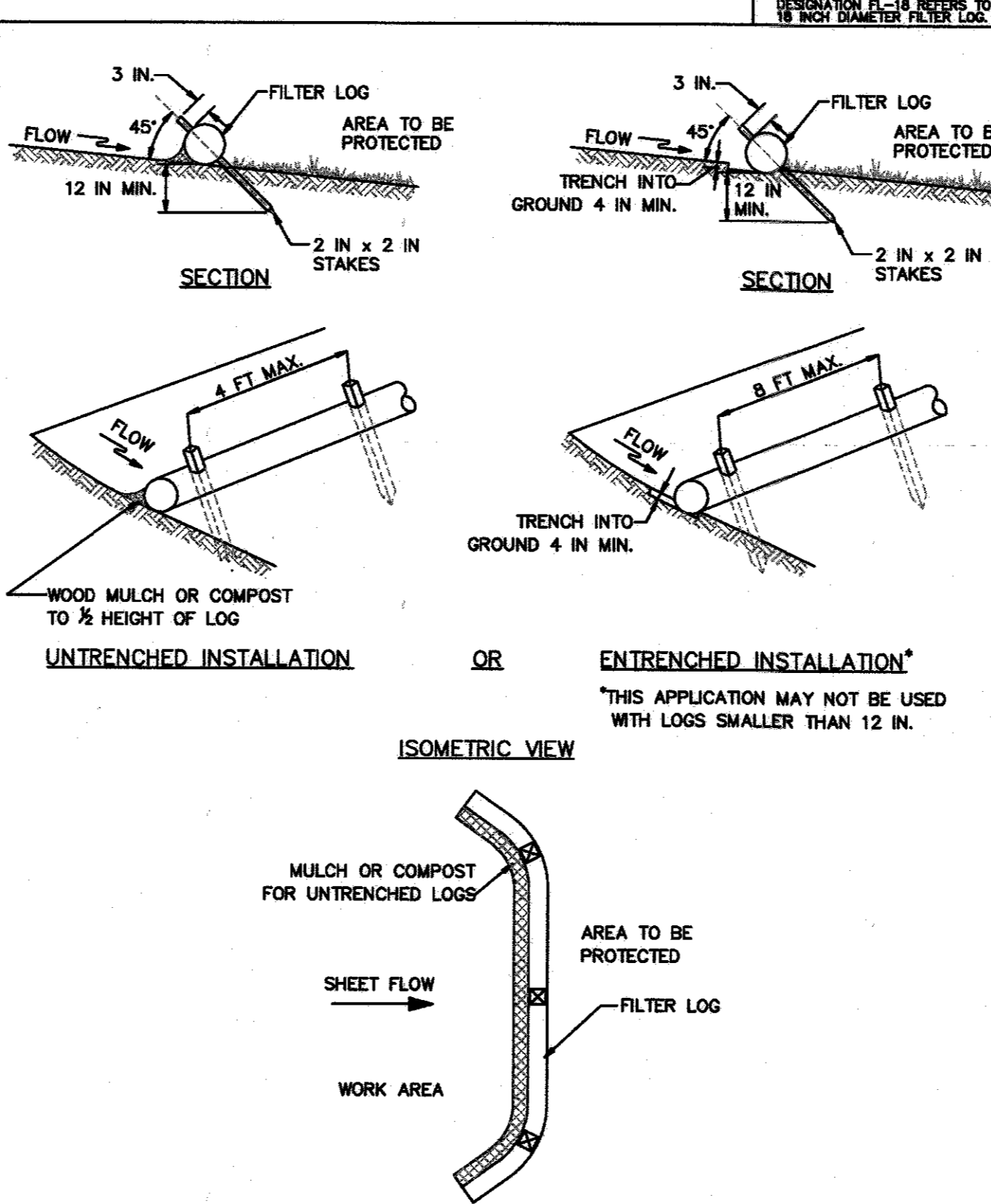
- CONSTRUCTION SPECIFICATIONS**
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
  2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
  3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
  4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
  5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

**DETAIL E-3 SUPER SILT FENCE**



- CONSTRUCTION SPECIFICATIONS**
1. INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
  2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
  3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
  4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
  5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
  6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
  7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

**DETAIL E-6 FILTER LOG**



**DETAIL E-6 FILTER LOG**

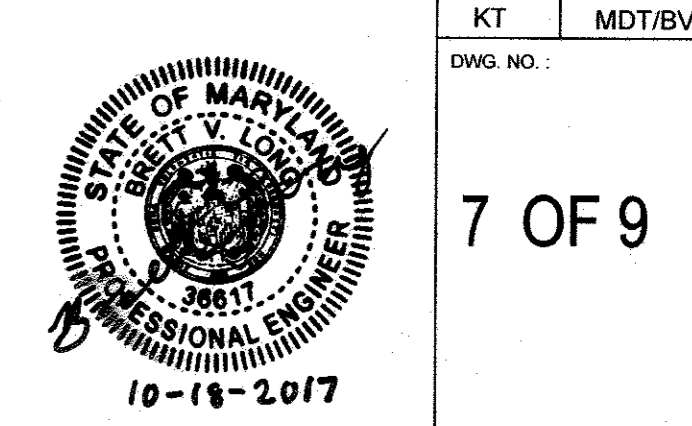
- CONSTRUCTION SPECIFICATIONS**
1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
  2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
  3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
  4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
  5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
  6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
  7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
  8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF 1/2 THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH, REPLACE FILTER LOG IF TORN, REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS FOR PERMANENT APPLICATIONS. ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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**CHURCHILL WAY  
OUTFALL  
STABILIZATION**

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
ZONING: R-20 TAX MAP GRID/PARCEL: 004200190091  
ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

TITLE: **EROSION AND SEDIMENT CONTROL DETAILS**  
PROJECT NO.: 13005.47 SCALE: NTS  
SEAL: BY: KT CHECK: MDT/BVL  
DWG. NO.: 7 OF 9



This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT  
*Gail S. Selig* 10/29/12  
Howard SCD Date  
*Mark D. Luman* 10/18/17  
DATE  
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

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
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone...
b. Additional planting specifications for exceptional sites...
c. For sites having disturbed area over 5 acres...
d. For areas receiving low maintenance, apply urea form fertilizer...
2. Turfgrass Mixtures
a. Areas where turfgrass may be desired include lawns, parks, playgrounds...
b. Select one or more of the species or mixtures listed below based on the site conditions...
i. Kentucky Bluegrass: Full Sun Mixture...
ii. Kentucky Bluegrass/Perennial Ryegrass: Full Sun Mixture...
iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture...
iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture...

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

- c. 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)

- d. 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...
e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth...

Permanent Seeding Summary

Table with columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20), Lime Rate. Includes rows for DEERTONGUE, CREEPING RED FESCUE, VIRGINIA WILD RYE.

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

1. General Specifications

- a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch...
c. Standard size sections of sod must be strong enough to support their own weight...
d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

B-4.2 STANDARDS AND SPECIFICATIONS

FOR

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
1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
b. Apply fertilizer and lime as prescribed on the plans.
c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material...
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.
b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
c. Graded areas must be maintained in a true and even grade as specified on the approved plan...
d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means...

- B. Topsoiling
1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation...
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications...
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants...
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand...
b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quick grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
c. 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.
6. Topsoil Application
a. Erosion and sediment control practices must be maintained when applying topsoil.
b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches...
c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition...

and seedbed preparation.

- C. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more...
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment...
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding)...
4. 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.
5. 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.

B-4 STANDARDS AND SPECIFICATIONS

FOR

VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall...

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseeding within the planting season.

- 1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

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PHONE: (410) 313-6413

DATE ISSUES / REVISIONS

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CHURCHILL WAY OUTFALL STABILIZATION

SITE ADDRESS: 10430 CHURCHILL WAY LAUREL, MD
ZONING: R-20 TAX MAP/GRID/PARCEL: 00420019/0081
ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

EROSION AND SEDIMENT CONTROL DETAILS

PROJECT NO.: 13005.47 SCALE: NTS
SEAL: BY: KT CHECK: MDT/BVL
DWG. NO.: 8 OF 9

Professional Engineer seal for Howard County, Maryland, dated 10-18-2017.

Approval signatures and dates: Howard SCD dated 10/30/17, Chief, Bureau of Environmental Services dated 10/19/17.



**SEQUENCE OF CONSTRUCTION**

**EROSION AND SEDIMENT CONTROL SETUP - 1 WEEK**

1. THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF DISTURBANCE AS SHOWN ON THE GRADING PLAN. STREAM CHANNEL MUST NOT BE DISTURBED DURING CLOSURE PERIOD FROM MARCH 1 TO MAY 31. (1 DAY) THIS PROJECT IS SUBJECT TO THE FOLLOWING APPROVALS:
  - 1.1. U.S. ARMY CORPS OF ENGINEERS NONTIDAL WETLANDS AND WATERWAYS PERMIT CENAB-OP-RMN (HO SVM/CHURCHILL CHANNEL STABILIZATION) 2017-61366
  - 1.2. MDE NONTIDAL WETLANDS AND WATERWAYS PERMIT AUTHORIZATION #201761366/17-NT-3225
  - 1.3. OBTAIN GRADING PERMIT FROM DILP
2. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING ONSITE WITH SEDIMENT CONTROL INSPECTOR AND THE ENGINEER TO REVIEW THE LIMITS OF DISTURBANCE, EROSION AND SEDIMENT CONTROL REQUIREMENTS, AND THE SEQUENCE OF CONSTRUCTION. THE PARTICIPANTS WILL ALSO VERIFY THE LOCATION OF THE TEMPORARY STOCKPILE AREA AND ANY NECESSARY STAGING AREA, AND FLAG ANY TREES WITHIN THE LIMITS OF DISTURBANCE WHICH WILL BE REMOVED FOR CONSTRUCTION ACCESS AND GRADING. (1 DAY)
3. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE GRADING PLANS OR AS DIRECTED BY THE ENGINEER. (1 DAY)
4. CLEAR CORRIDOR ALONG THE STREAM AND OUTFALL CHANNEL AS REQUIRED TO INSTALL THE MULCH ACCESS ROAD IN THE LOCATION DEPICTED ON THE PLANS. CARE SHOULD BE TAKEN TO MINIMIZE ANY UNNECESSARY DISTURBANCE TO EXISTING VEGETATION AND ROOT ZONES. INSTALL MULCH ACCESS ROAD AND STABILIZE DISTURBED AREAS WITH SEED AND MULCH OR SOIL STABILIZATION MATTING (SSM) AS WORK PROGRESSES. (1 DAY)
5. THE CONTRACTOR SHALL ESTABLISH THE TEMPORARY STOCKPILE AREA IN THE LOCATION INDICATED ON THE GRADING PLAN (NOTE: INSTALL SUPER SILT FENCE AROUND THE PERIMETER OF THE STOCKPILE AREA AS SHOWN). (1 DAY)
6. INSTALL REMAINING PERIMETER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS, INCLUDING BLAZE ORANGE FENCE AND TREE PLANKING. (1 DAY)

**OUTFALL STABILIZATION (2 WEEKS)**

7. INSTALL PUMP AROUND DIVERSION AS NECESSARY. PUMP AROUND SHALL DIVERT FLOW AROUND THE ACTIVE WORK AREA AND RUN CONTINUOUSLY DURING ALL WORK HOURS UNTIL SITE IS STABILIZED. SITE SHALL BE STABILIZED DAILY. (1 DAY)
8. ONCE PERMISSION FROM THE CID HAS BEEN RECEIVED TO PROCEED, CLEAR LIMITS OF DISTURBANCE AS REQUIRED TO BEGIN EXCAVATION. WORK SHALL BE DONE IN A DIRECTION BEST FOR THE CONTRACTOR. GRADING SHALL BE LIMITED TO THE AREA THAT CAN BE STABILIZED IN A SINGLE WORK DAY. INSTALL RIPRAP CHANNEL AS SHOWN ON GRADING PLANS. (1 WEEK)
9. STABILIZE WITH SOIL STABILIZATION MATTING (SSM) AND/OR SEED AND MULCH REMAINDER OF WORK AREA. (1 DAY)
10. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL TAKE CARE TO REMOVE ALL EXCESS CONSTRUCTION DEBRIS AND TRASH GENERATED FROM CONSTRUCTION ACTIVITIES FROM THE SITE. (1 DAY)

**NOTES:**

11. A THREE DAY DRY WEATHER PERIOD PER THE NOAA FORECAST IS REQUIRED PRIOR TO INITIATING STREAM WORK.

**HOWARD SOIL CONSERVATION DISTRICT STANDARD (HSCD)**

**SEDIMENT CONTROL NOTES**

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
  - a. PRIOR TO THE START OF EARTH DISTURBANCE,
  - b. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
  - c. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
  - d. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
  3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, 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 AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
  4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6). ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
- |                                     |                                                                 |
|-------------------------------------|-----------------------------------------------------------------|
| SITE ANALYSIS:                      |                                                                 |
| TOTAL AREA OF SITE:                 | 0.3 ACRES                                                       |
| AREA DISTURBED:                     | 0.3 ACRES                                                       |
| AREA TO BE ROOFED OR PAVED:         | 0.0 ACRES                                                       |
| AREA TO BE VEGETATIVELY STABILIZED: | 0.3 ACRES                                                       |
| TOTAL CUT:                          | 91 CU. YDS.                                                     |
| TOTAL FILL:                         | 16 CU. YDS.                                                     |
| OFFSITE WASTE/BORROW AREA LOCATION: | TBD AS APPROVED BY CID; SITE MUST HAVE AN ACTIVE GRADING PERMIT |

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
  - INSPECTION DATE
  - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
  - NAME AND TITLE OF INSPECTOR
  - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
  - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
  - EVIDENCE OF SEDIMENT DISCHARGES
  - IDENTIFICATION OF PLAN DEFICIENCIES
  - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
  - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
  - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
  - PHOTOGRAPHS
  - MONITORING/SAMPLING
  - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
  - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
  - USE I AND IP MARCH 1 - JUNE 15
  - USE III AND IIP OCTOBER 1 - APRIL 30
  - USE IV MARCH 1 - MAY 31
16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

**SEDIMENT CONTROL NOTES**

1. THE CONTRACTOR SHALL NOTIFY "MISS-UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
2. CONSTRUCTION ACTIVITIES INCLUDING THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT BEGIN UNTIL ALL REQUIRED EASEMENTS AND RIGHT-OF-WAYS HAVE BEEN OBTAINED.
3. CONSTRUCTION SHALL NOT BEGIN UNTIL ALL SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER AND THE SEDIMENT CONTROL INSPECTOR.
4. THE CONTRACTOR SHALL STAY WITHIN THE LIMIT OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORKING AREA WHEREVER POSSIBLE.
5. NO TREES SHALL BE REMOVED WITHIN THE LIMIT OF DISTURBANCE WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONSTRUCTION SEQUENCE MUST BE FOLLOWED UNLESS THE CONTRACTOR GETS WRITTEN APPROVAL FROM THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THE SEDIMENT CONTROL INSPECTOR.
7. DO NOT CLEAR AND GRUB THE ENTIRE PROJECT AREA. CLEAR AND GRUB ONLY AS DIRECTED BY THE ENGINEER AND ONLY WHERE CONSTRUCTION ACCESS IS NEEDED.
8. FOR ALL ASPECTS OF CONSTRUCTION FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
  - 8.1. 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
  - 8.2. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
9. ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
10. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.

**2011 MD STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL - B-4-8 STOCKPILE AREA**

DEFINITION - A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE - TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS. CONDITIONS WHERE PRACTICE APPLIES - STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

**CRITERIA:**

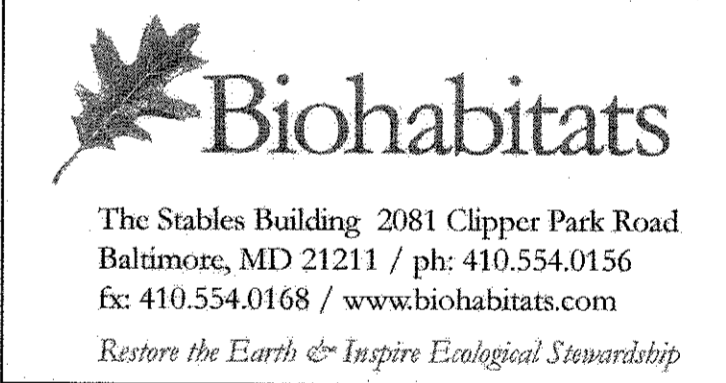
1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

**MAINTENANCE:**

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

CLIENT  
 HOWARD COUNTY  
 STORMWATER MANAGEMENT DIVISION  
 6751 GATEWAY DRIVE, SUITE 514  
 COLUMBIA, MD 21046  
 PHONE: (410) 313-6413

DATE ISSUES / REVISIONS

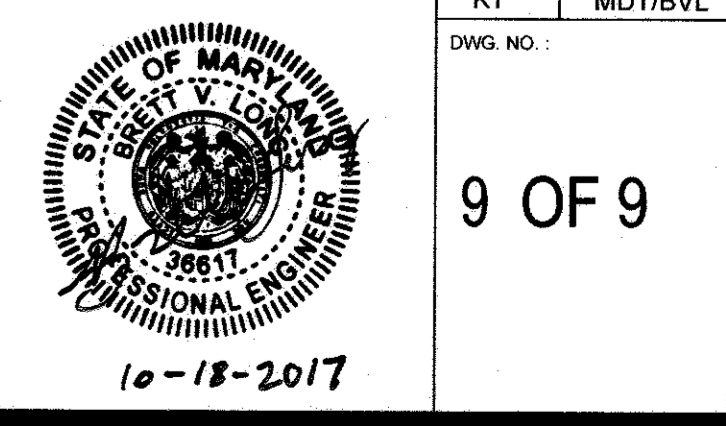


**CHURCHILL WAY  
 OUTFALL  
 STABILIZATION**

SITE ADDRESS: 10430 CHURCHILL WAY, LAUREL, MD  
 ZONING: R-20 TAX MAP/GREY PARCEL: 0042700190091  
 ELECTION DISTRICT: 06 HOWARD COUNTY OPEN SPACE

**EROSION AND  
 SEDIMENT  
 CONTROL NOTES**

PROJECT NO.: 13005.47 SCALE: NTS  
 SEAL: BY: KT CHECK: MDT/BVL  
 DWG. NO.:



9 OF 9

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

*[Signature]* 10/30/17  
 Howard SCD Date

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

*[Signature]* 10/19/17  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE