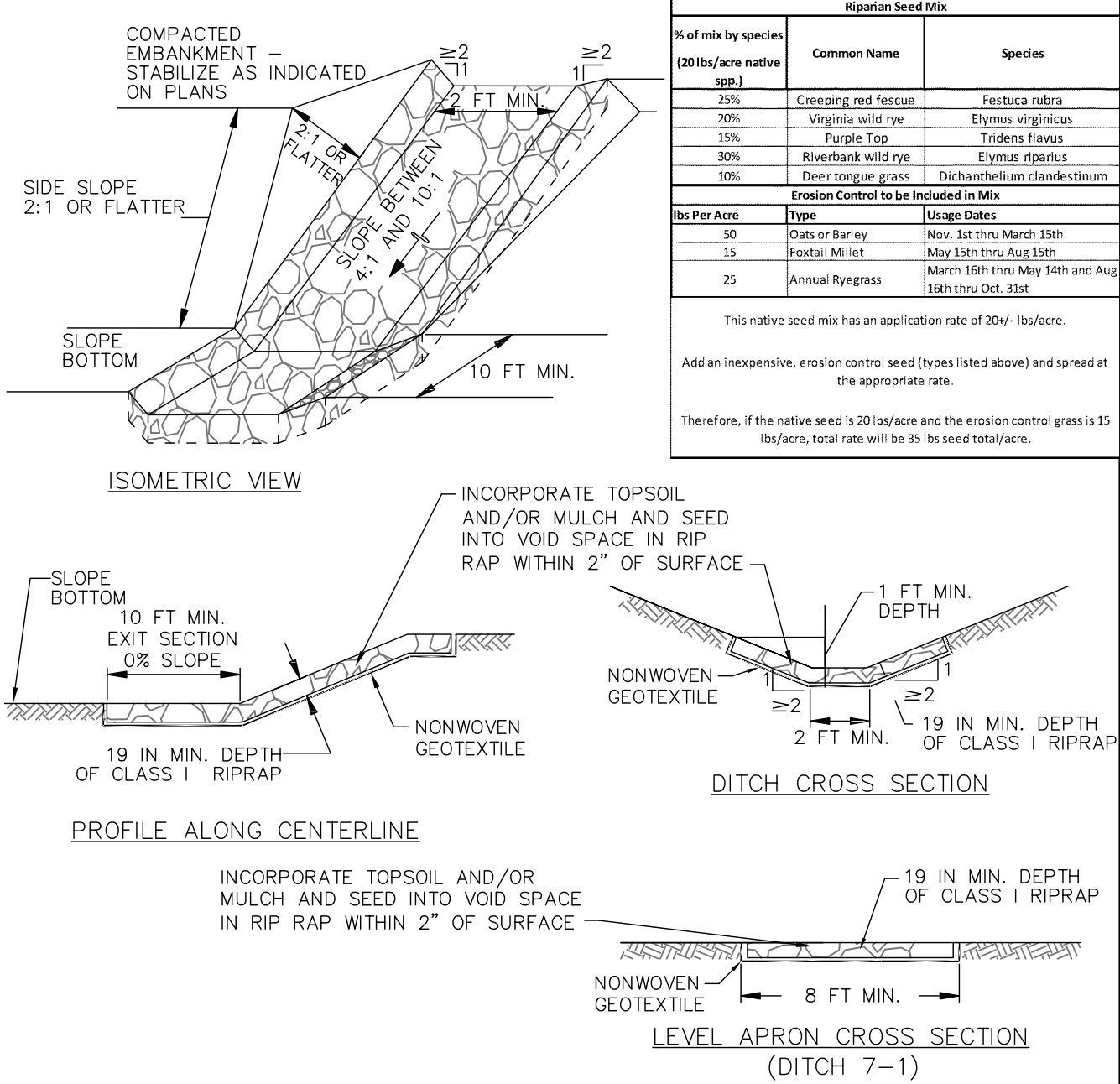
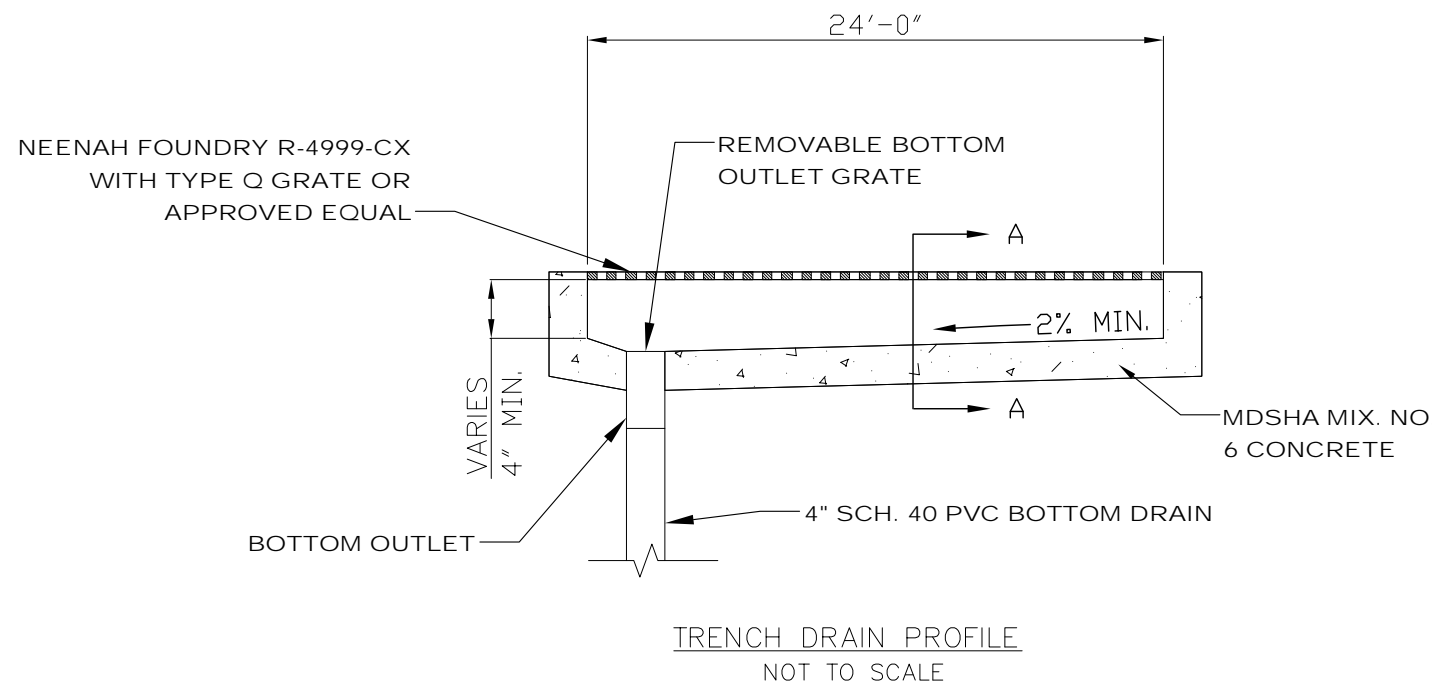


VEGETATED RIPRAP DITCH DETAIL



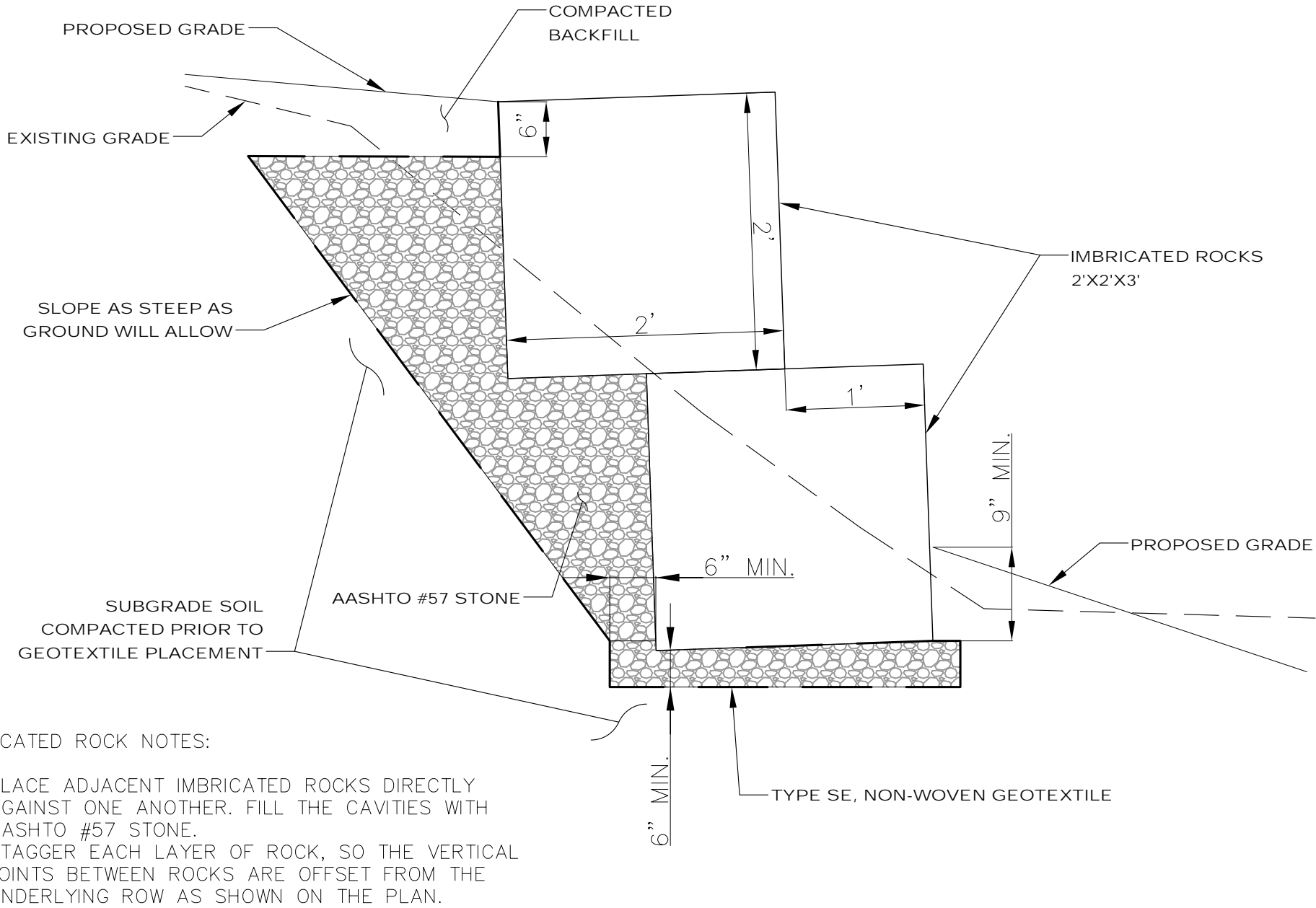
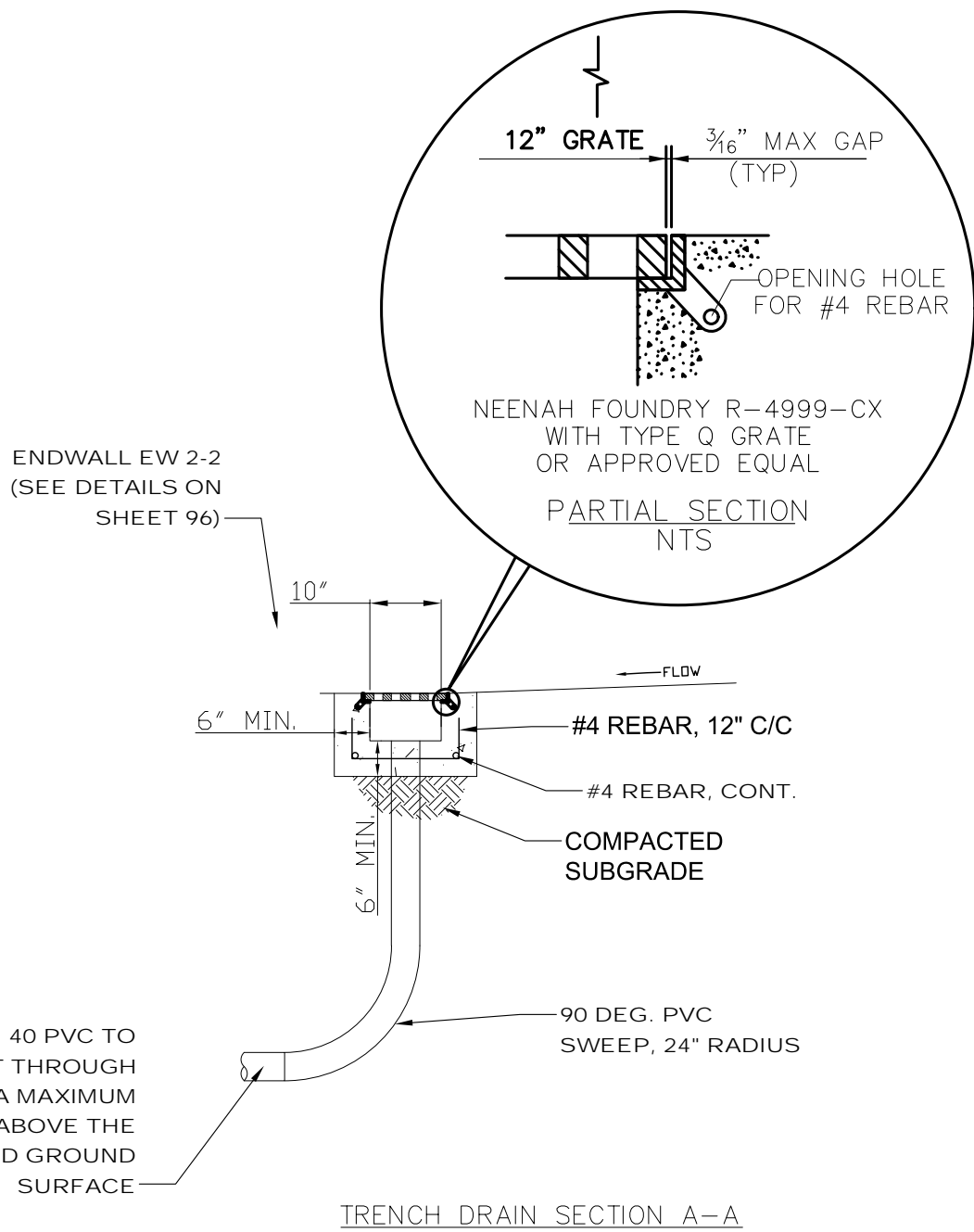
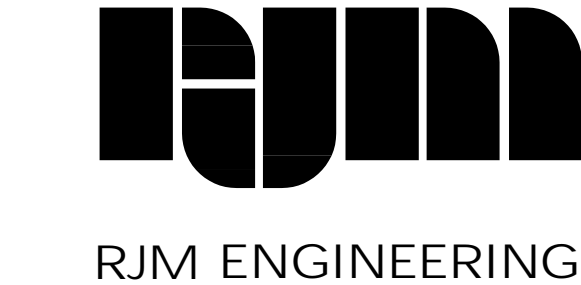
SEE DITCH SCHEDULE ON SHEET 25



TRENCH DRAIN NOTES:

1. RECOMPACT SUBGRADE SOILS FOLLOWING EXISTING PAVEMENT REMOVAL AND INSTALLATION OF DRAIN PIPE. ANY SUBGRADE SOILS THAT ARE SOFT, WET, OR WOULD PREVENT COMPACTION SHALL BE REMOVED AND REPLACED WITH GRANULAR BACKFILL MATERIAL. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGING ANY BURIED PIPES OR UTILITIES DURING COMPACTION.
2. INSTALL TRENCH DRAIN FRAME AND GRATE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. BOTTOM OUTLET SHALL HAVE A REMOVABLE OUTLET GRATE SECURED WITH SCREWS.
4. THE TRENCH DRAIN AND ALL MATERIALS, EXCAVATION, BACKFILL, CONCRETE, PVC DRAIN PIPE AND CONNECTION TO THE ENDWALL SHALL BE PAID FOR AS THE AS A LUMP SUM.

TRENCH DRAIN DETAILS (EW-2-2)



TWO LAYERS

SINGLE LAYER

IMBRICATED ROCK DETAILS (EW-2-2)

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

MANCPPC PERMIT NO. 2020-034

PARK J33

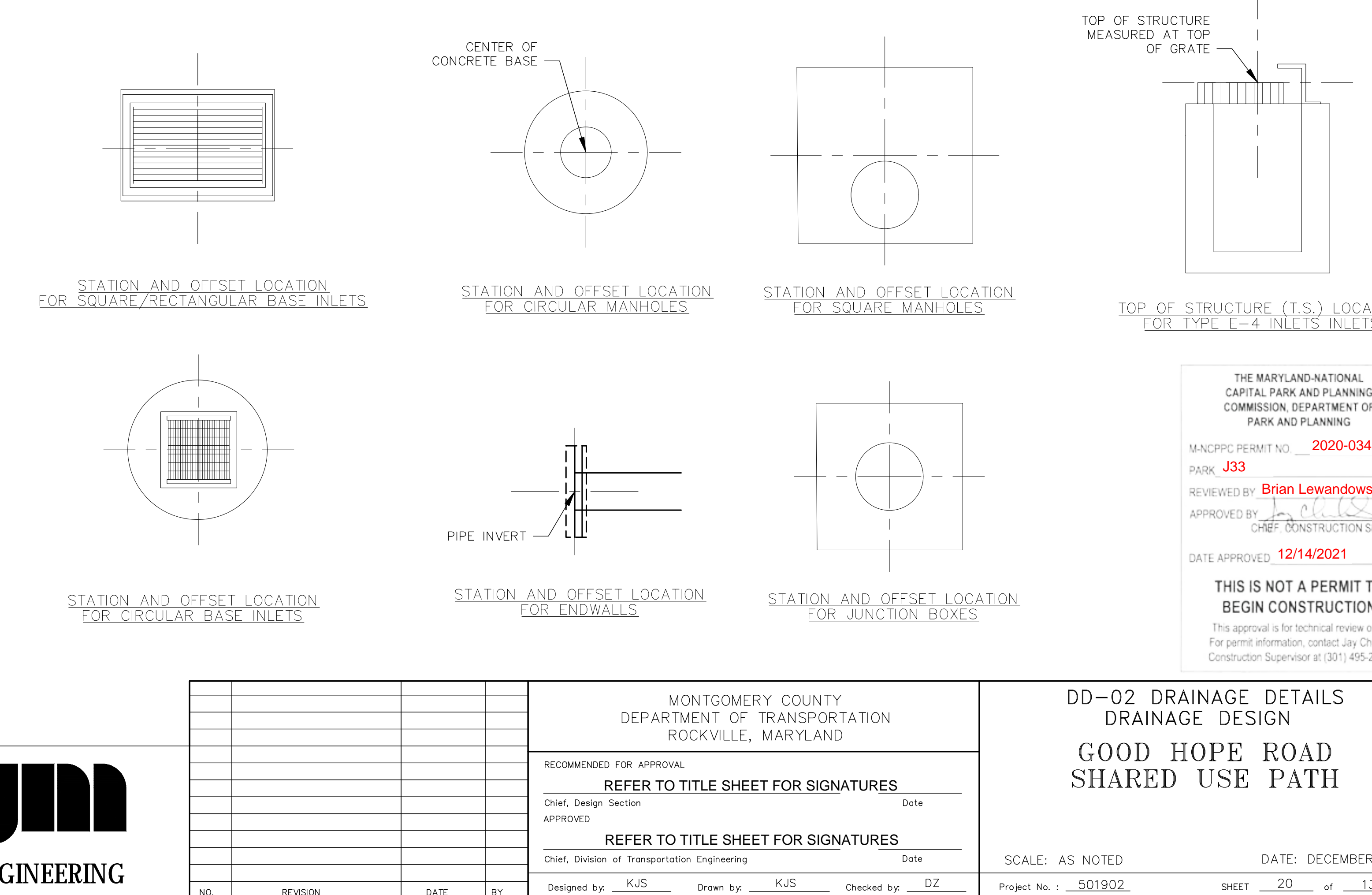
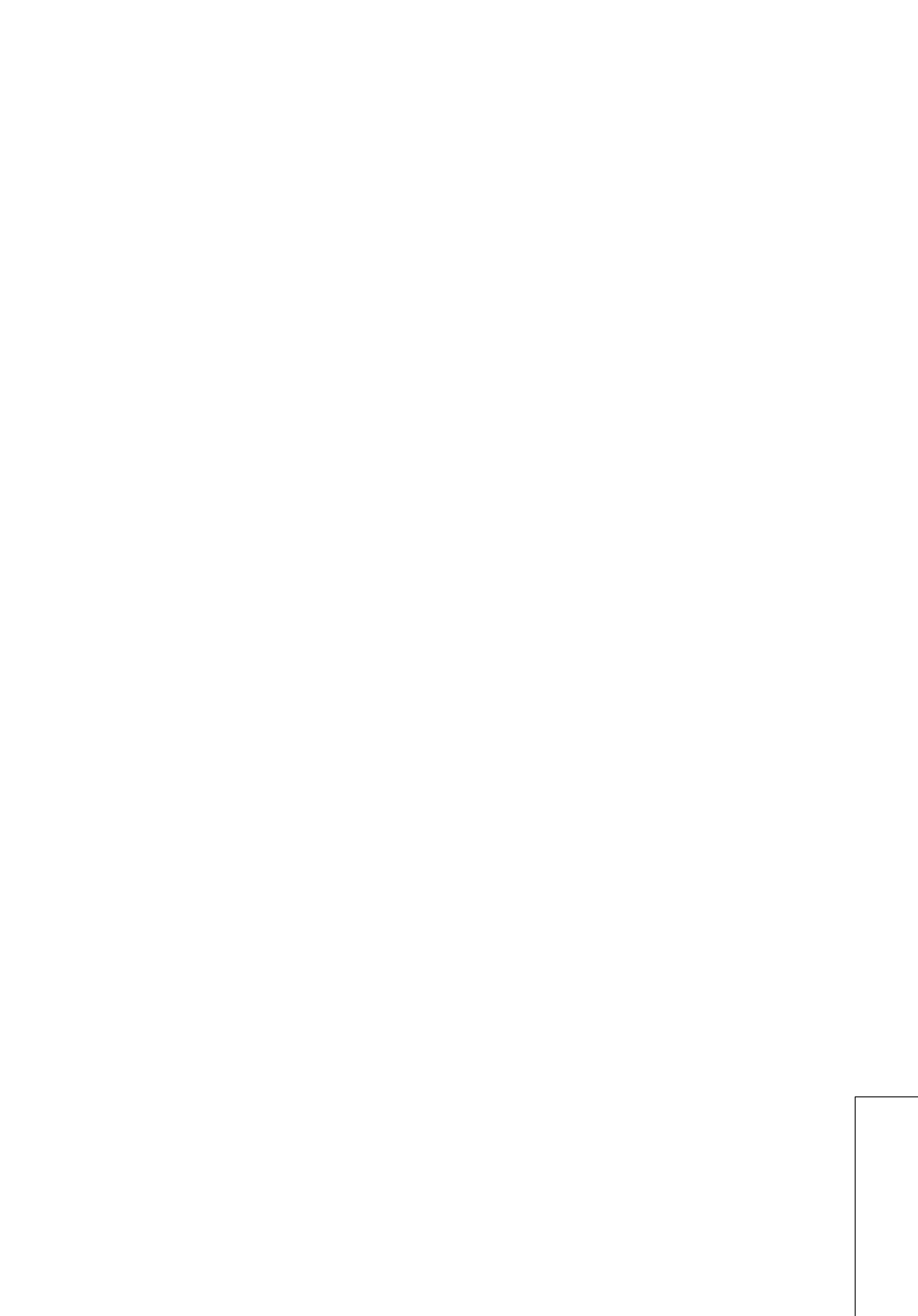
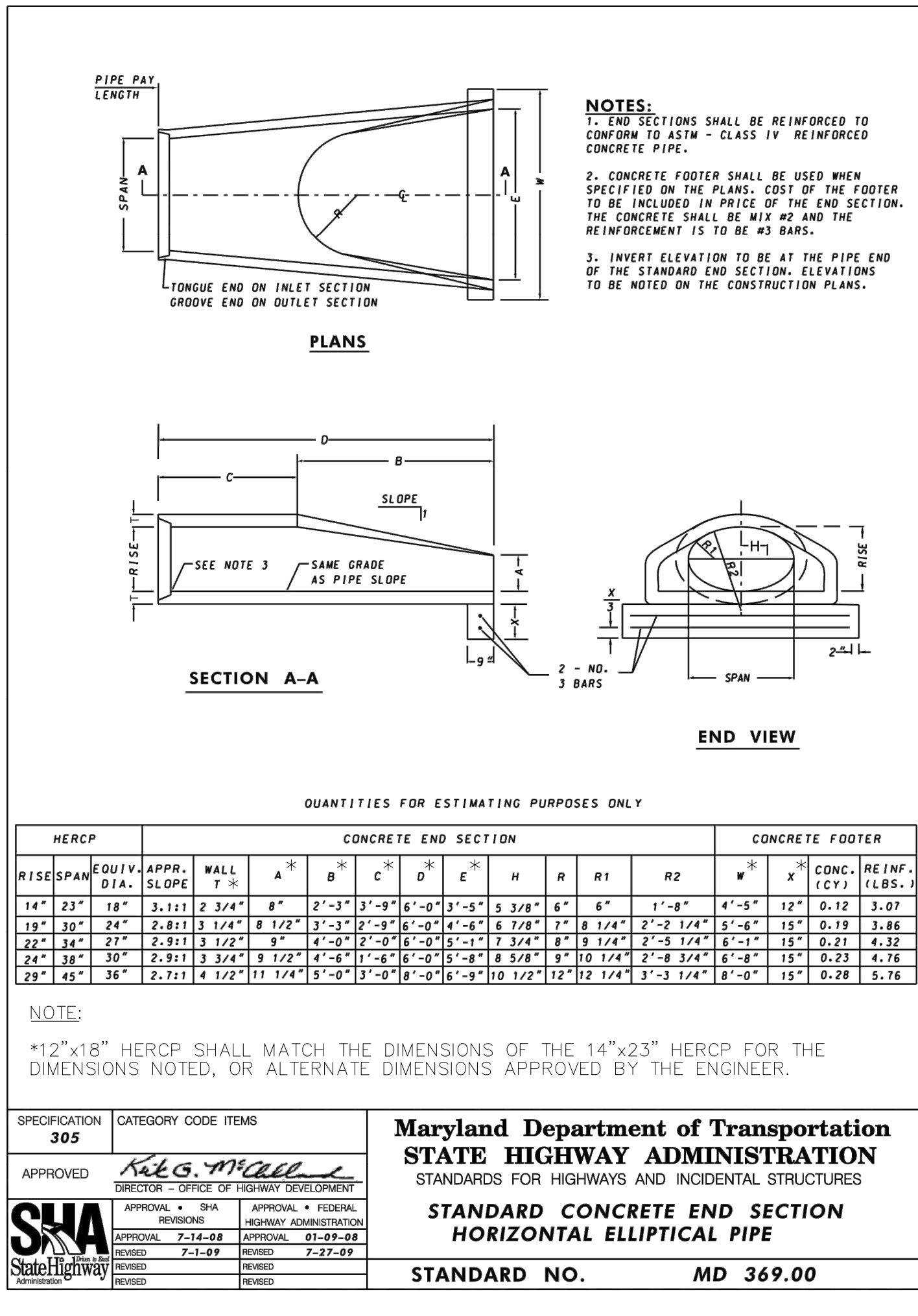
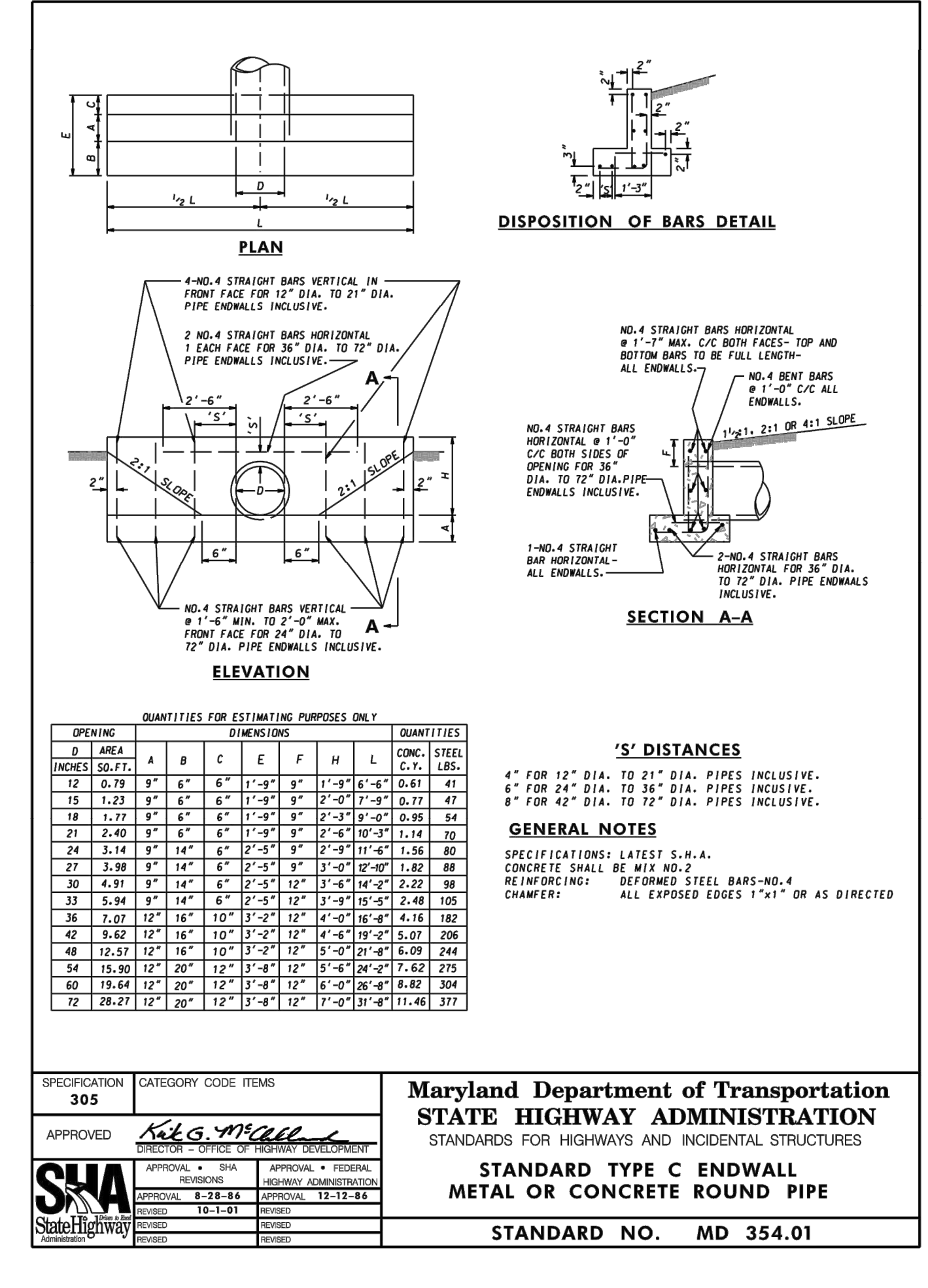
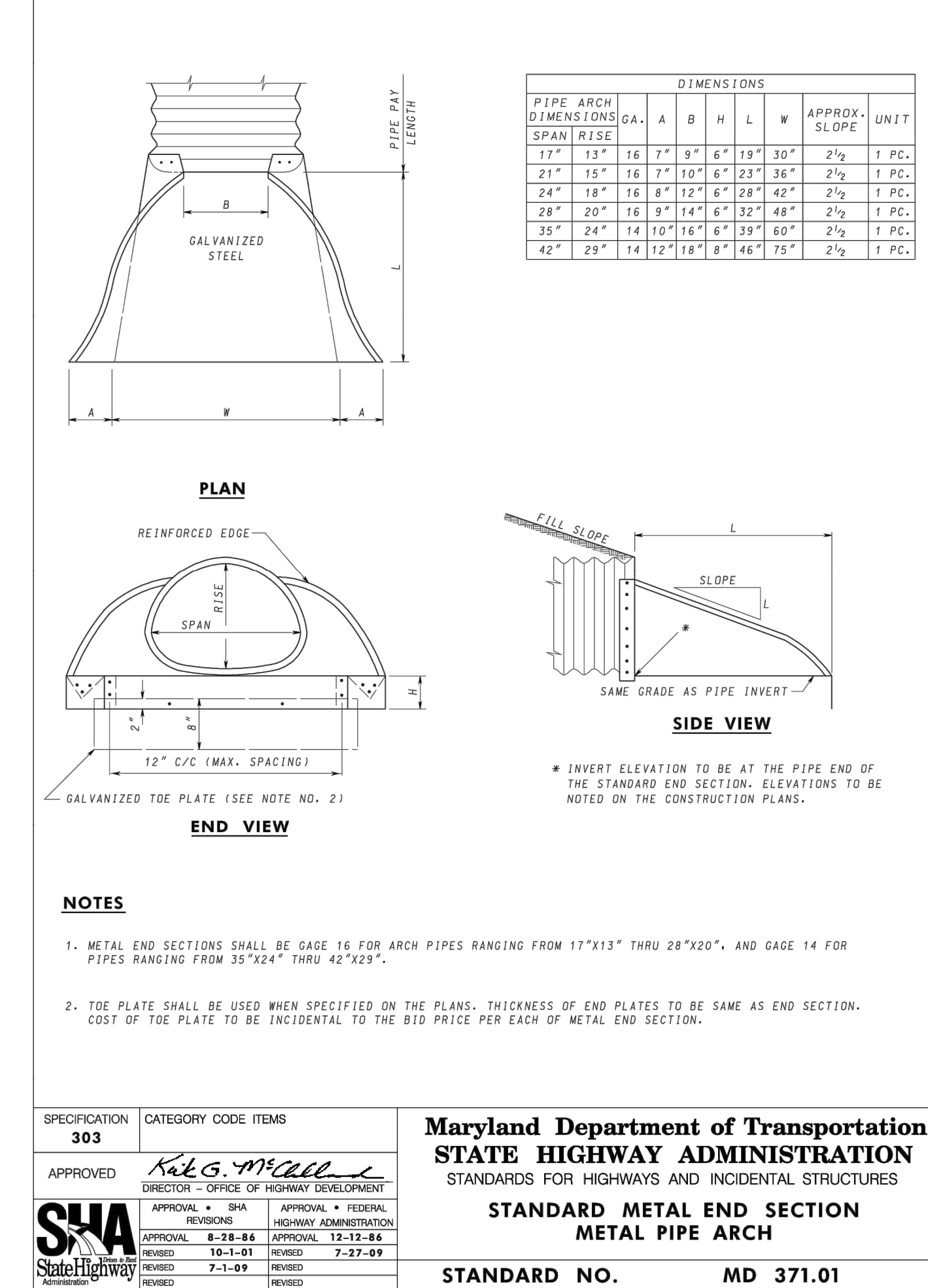
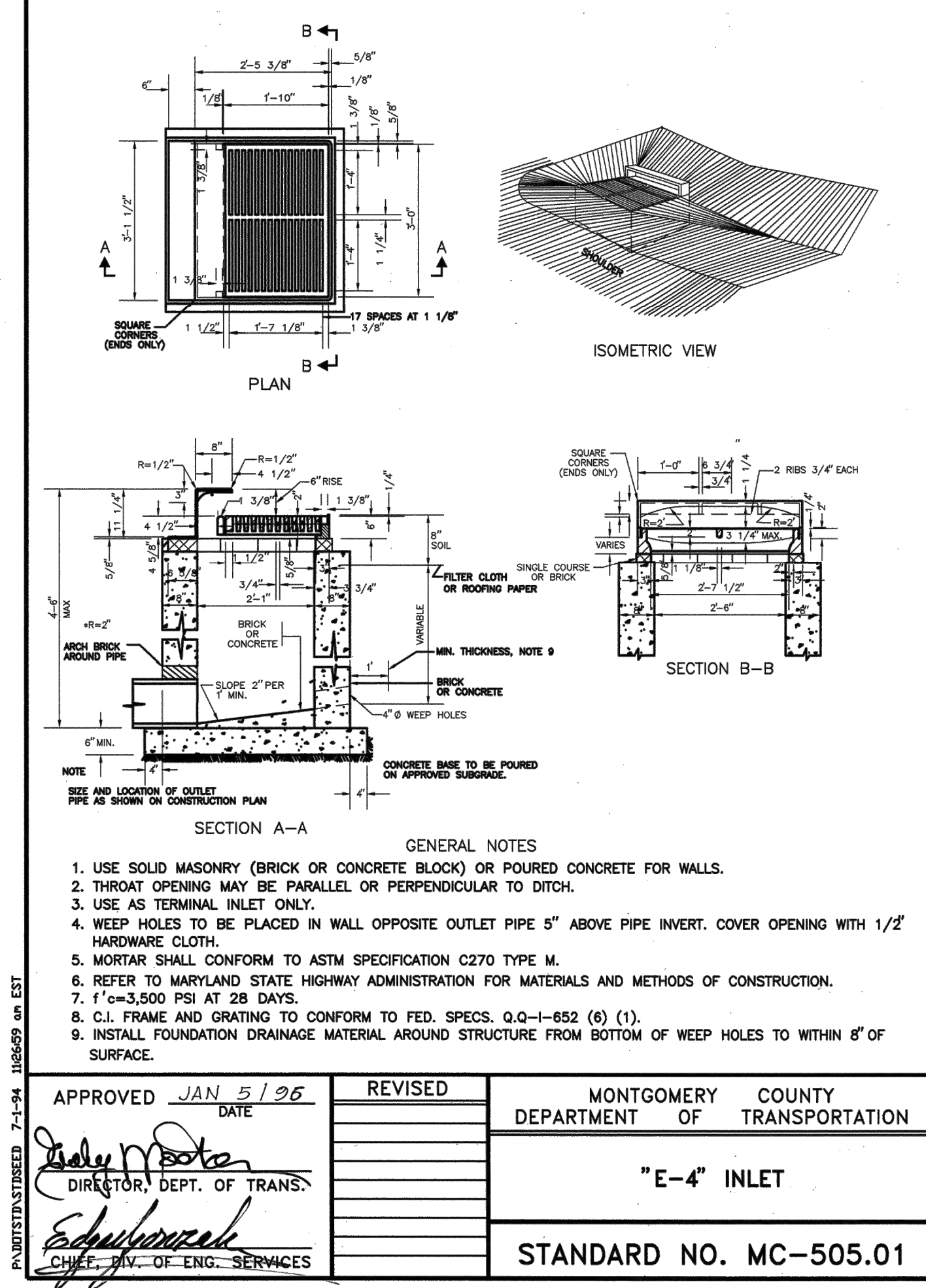
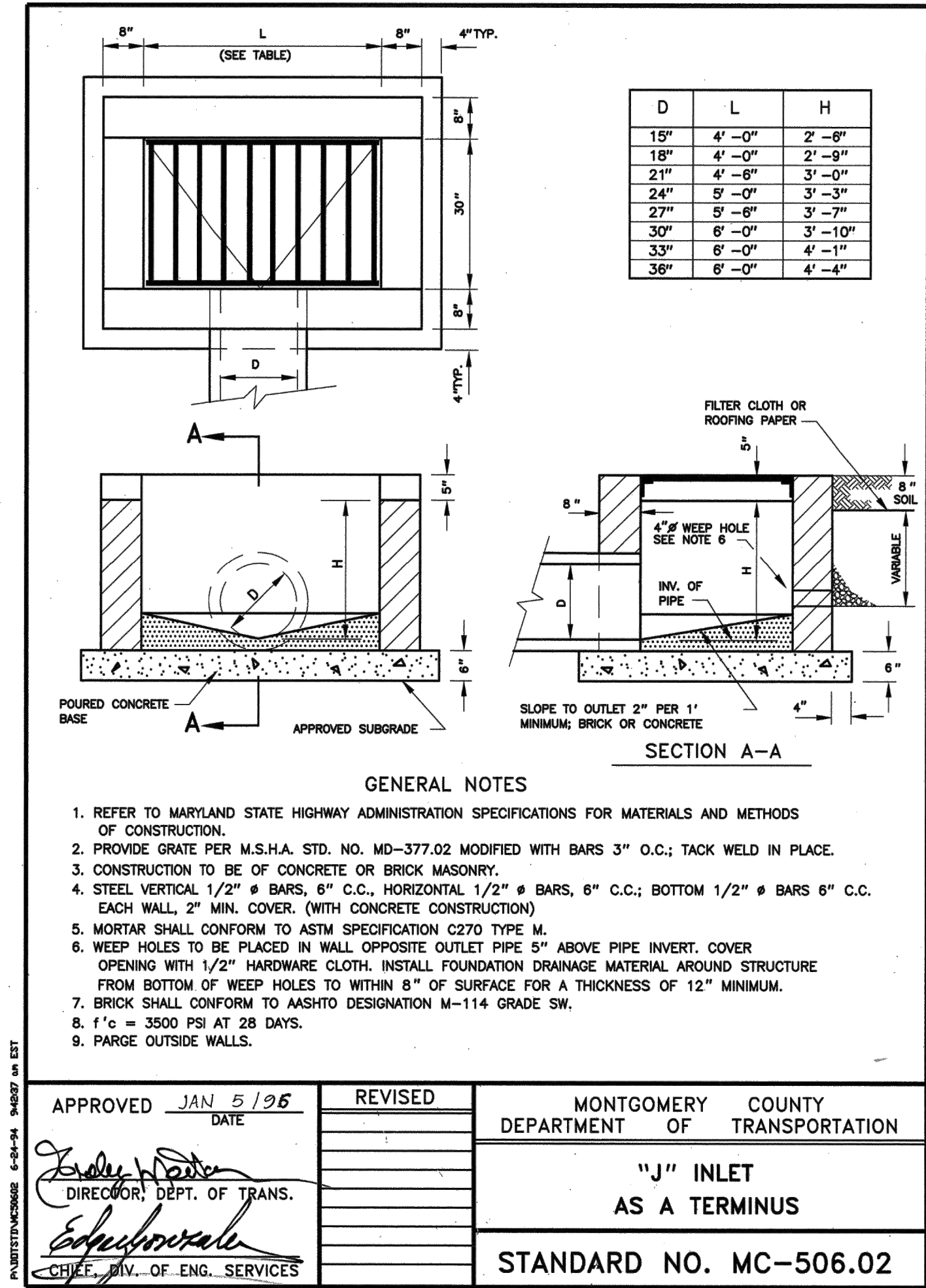
REVIEWED BY: Brian Lewandowski

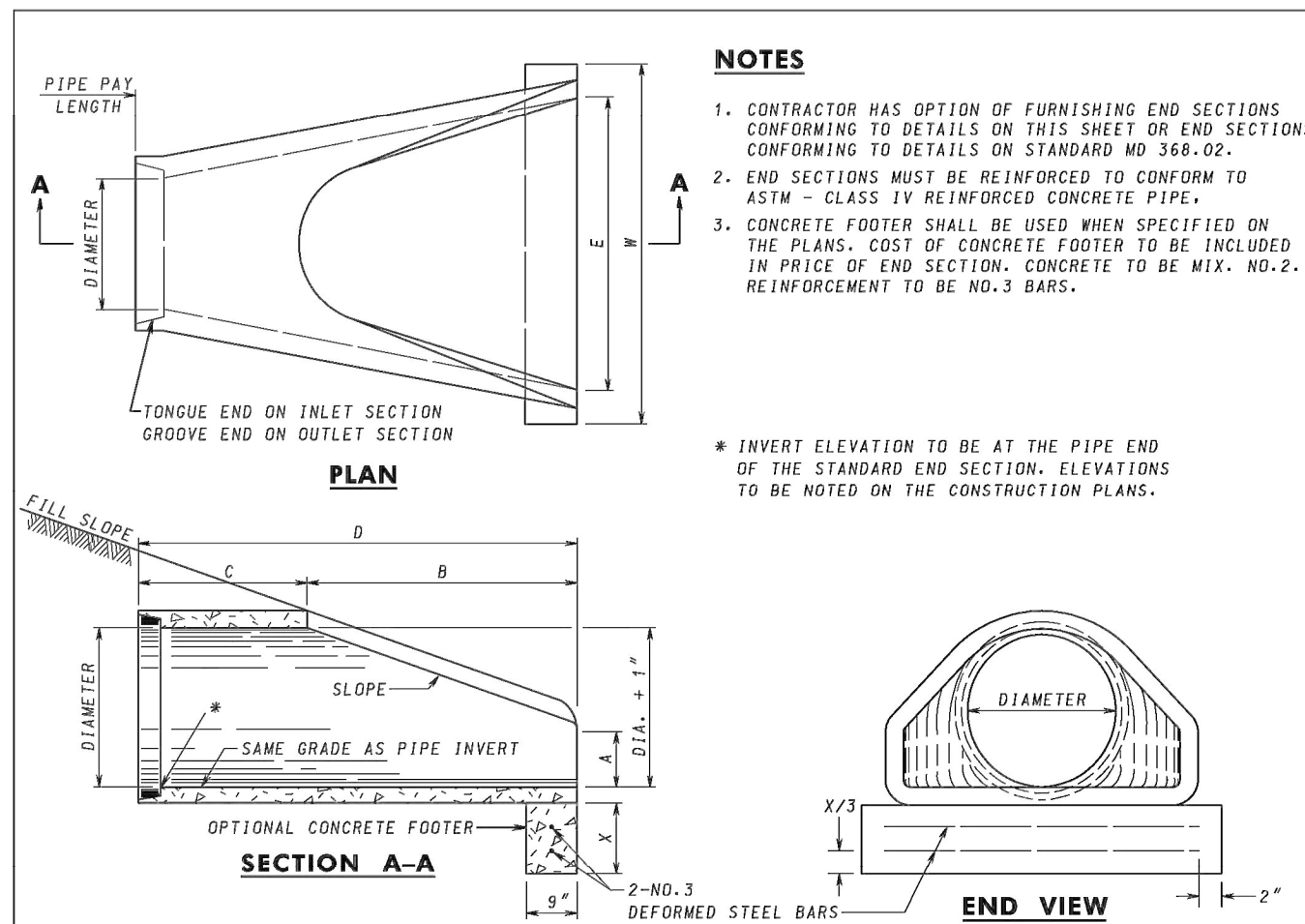
APPROVED BY: [Signature] CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

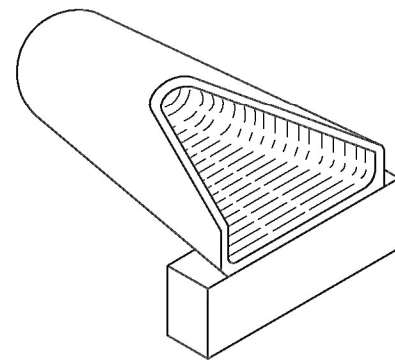
This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574






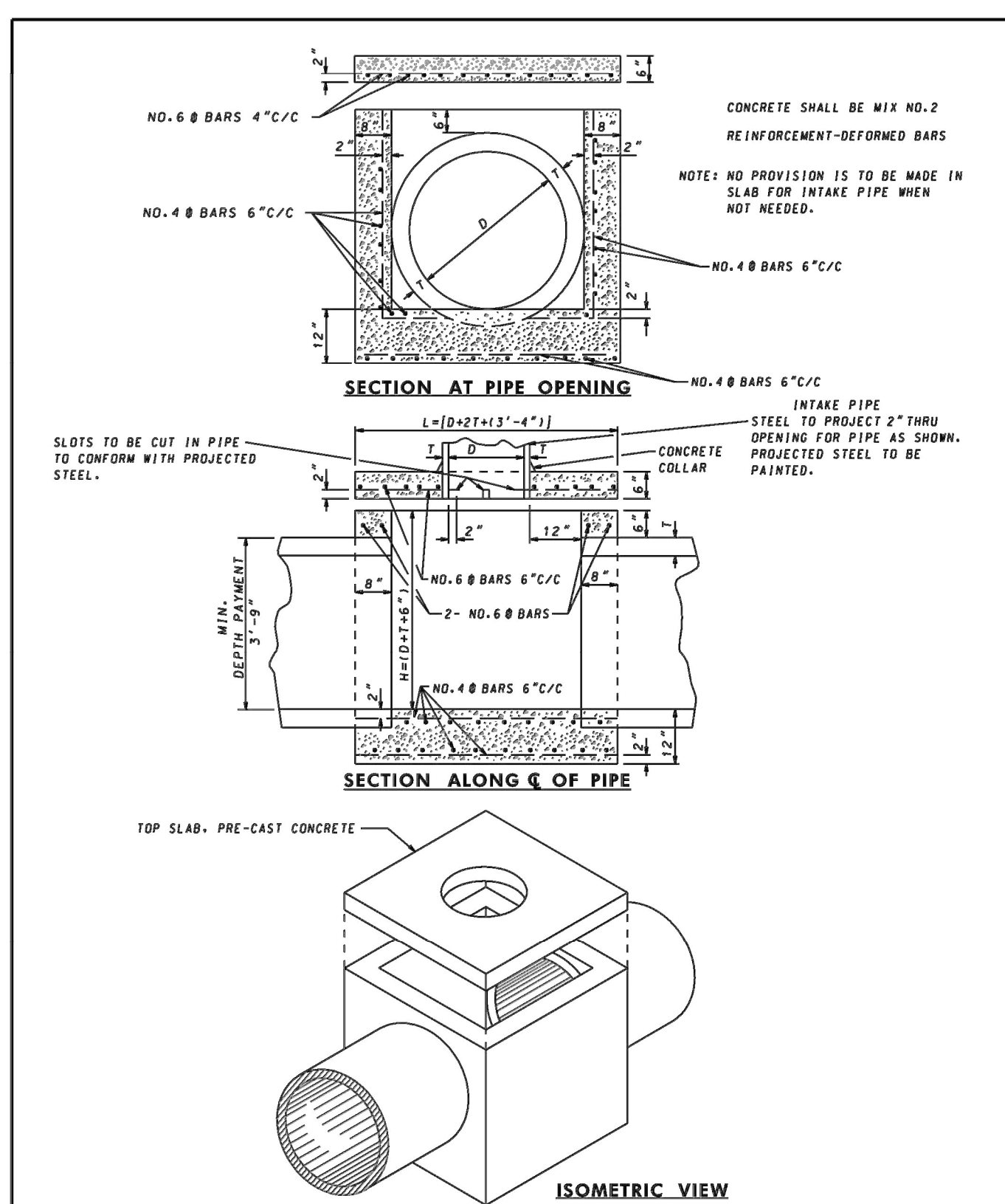
QUANTITIES FOR ESTIMATING PURPOSES ONLY											
DIMENSIONS										QUANTITIES	
CONCRETE END SECTION						CONCRETE FOOT					
DIA., SLOPE		A	B	C	D	E	W	X	CONG. L.	STEEL LBS.	
12"	3:1	4"	2'-0"	4'-0"	6'-0"	2'-0"	3'-0"	12"	0.08	0.01	
15"	3:1	6 1/2"	2'-4"	4'-10"	6'-2"	2'-6"	3'-6"	12"	0.10	2.38	
18"	3:1	10 1/4"	2'-8"	4'-0"	6'-2"	3'-0"	4'-0"	12"	0.11	2.76	
21"	3:1	9"	3'-2"	3'-1 1/2"	6'-1 1/2"	3'-6"	4'-6"	12"	0.13	3.13	
24"	3:1	3"	3'-7"	2'-8"	6'-3"	4'-0"	5'-0"	15"	0.17	3.51	
30"	3:1	10 5/8"	3'-10"	3'-10"	6'-5"	4'-5"	5'-5"	15"	0.21	4.26	
30"	3:1	1'-1"	4'-1"	1'-10"	6'-3"	5'-0"	6'-0"	15"	0.21	4.26	
33"	3:1	1'-2 1/2"	4'-7"	2'-4"	6'-5"	5'-6"	6'-6"	15"	0.23	4.60	
36"	3:1	1'-3"	4'-10"	3'-1"	8'-4"	6'-0"	7'-3"	15"	0.25	5.24	

SEE NOTE 3 ABOVE
FOR CONCRETE FOOTER




ISOMETRIC VIEW

SPECIFICATION 305	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE STANDARD NO. MD 368.01
APPROVED <i>Robert McCall</i>	DRAWN - OFFICE OF HIGHWAY DEVELOPMENT	
	APPROVAL - SHA REVISIONS APPROVAL - FEDERAL APPROVAL - HIGHWAY ADMINISTRATION REVISION 3-15-06 REVISION 7-1-09 REVISION 7-27-09	
	APPROVAL - FEDERAL APPROVAL - HIGHWAY ADMINISTRATION REVISION 4-05-06 REVISION 7-27-09	



SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED <i>Kate G. Murrell</i> <small>MANAGING OFFICE OF FEDERAL DEVELOPMENT</small>	



APPROVAL - SHA REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
APPROVED: 2-7-51	APPROVED: 2-23-54
DESIGNED: 10-1-01	DESIGNED:
DRAWN:	DRAWN:

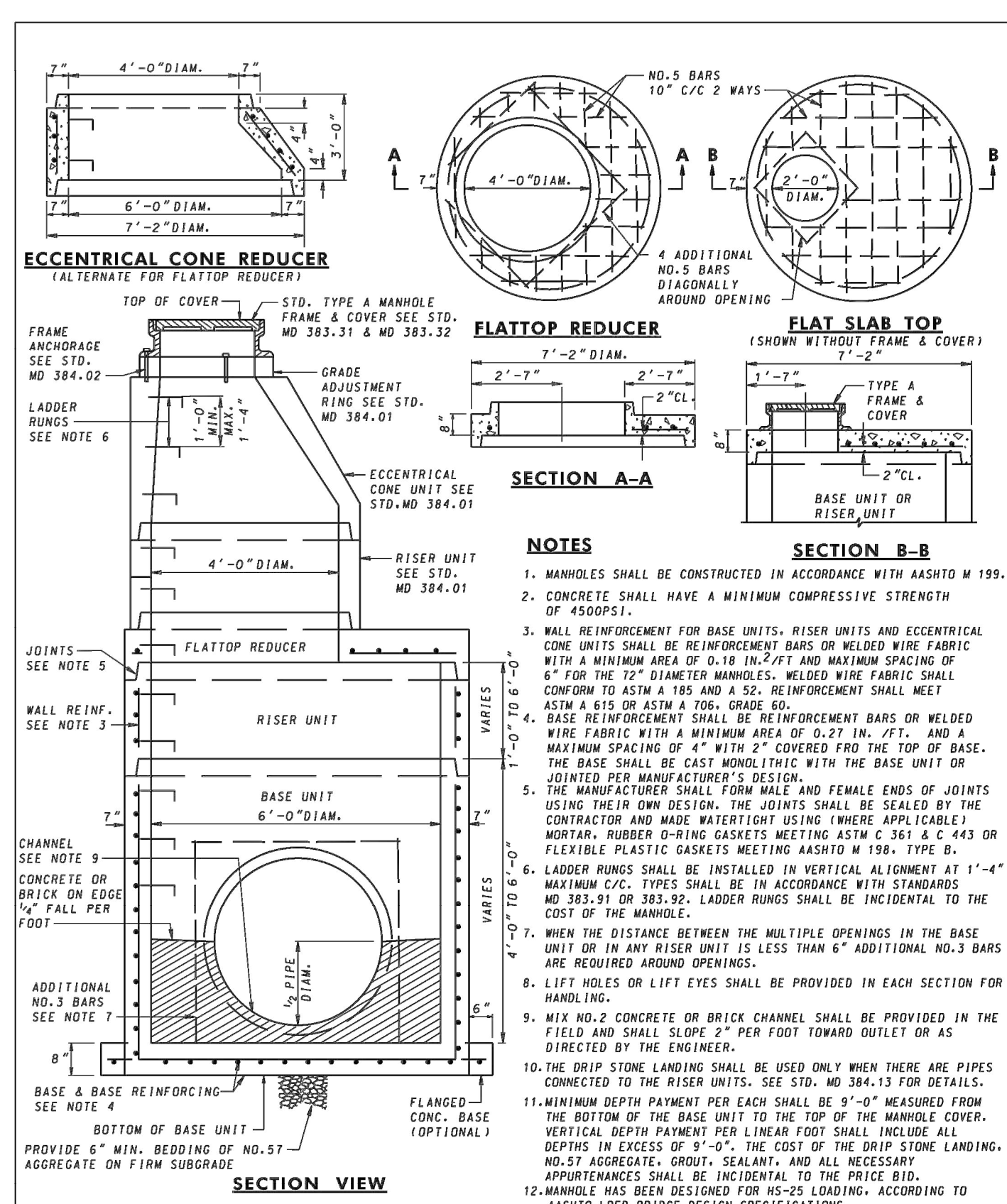
Maryland Department of Transportation

STATE HIGHWAY ADMINISTRATION

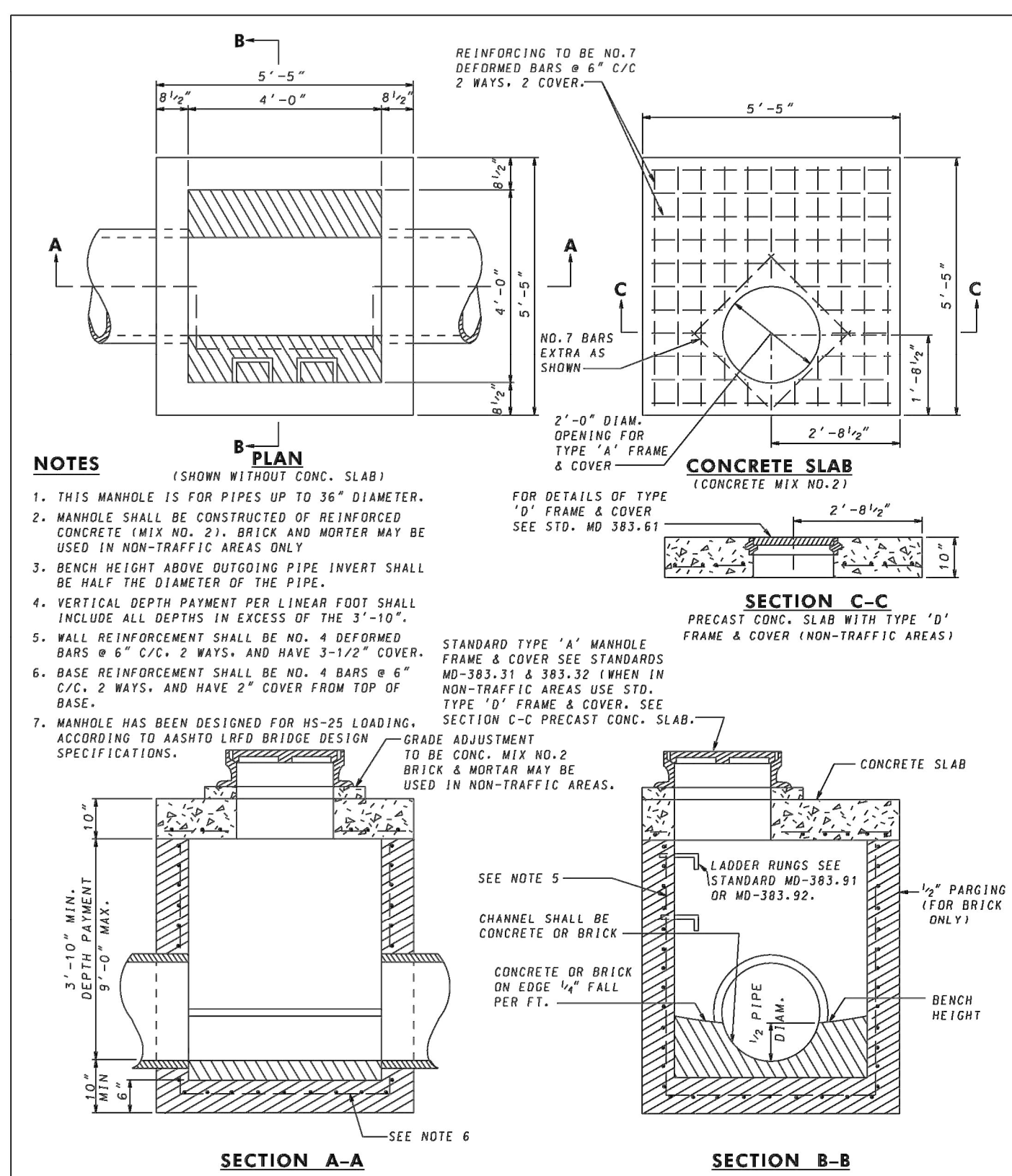
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES



STANDARD JUNCTION BOX

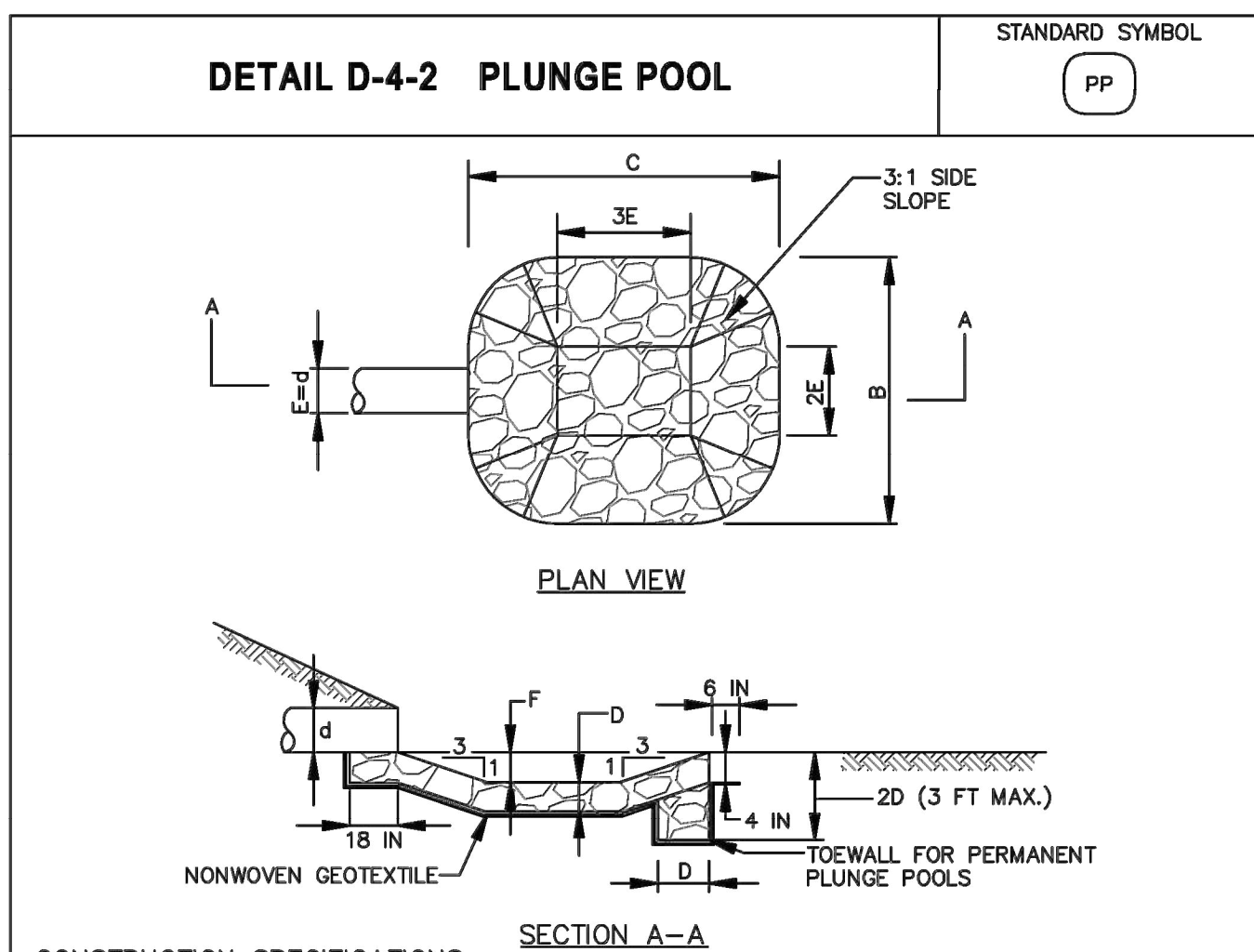
STANDARD NO. MD 386.11



SPECIFICATION 305	CATEGORY CODE: ITEMS	<div style="font-size: 1.2em; font-weight: bold;">Maryland Department of Transportation</div> <div style="font-size: 1.5em; font-weight: bold; margin-bottom: 10px;">STATE HIGHWAY ADMINISTRATION</div> <div style="font-weight: bold; margin-bottom: 10px;">STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES</div> <div style="font-size: 1.2em; font-weight: bold; margin-bottom: 10px;">72" DIAMETER PRECAST MANHOLE</div> <div style="font-size: 1.2em; font-weight: bold;">FOR 42" & 48" PIPES</div> <div style="margin-top: 20px;"> <div style="display: inline-block; width: 45%;">STANDARD NO.</div> <div style="display: inline-block; width: 45%; text-align: right;">MD 384.05</div> </div>
APPROVED	<div style="text-align: center; margin-bottom: 10px;"> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> APPROVAL - SHA PREVIOUS APPROVAL - 3-23-81 REUSED - 4-12-16 </div> <div style="width: 45%;"> APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVAL - 1-2-89 REUSED - 3-4-16 </div> </div>	
<div style="display: flex; align-items: center;"> <div> <div style="font-size: 1.5em; font-weight: bold; margin-bottom: 5px;">72" DIAMETER PRECAST MANHOLE</div> <div style="font-size: 1.5em; font-weight: bold;">FOR 42" & 48" PIPES</div> </div> </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">STANDARD NO.</div> <div style="width: 45%; text-align: right;">MD 384.05</div> </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">STANDARD NO.</div> <div style="width: 45%; text-align: right;">MD 384.05</div> </div>		



SPECIFICATION 305	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	 DIRECTOR - CHIEF OF HIGHWAY DEVELOPMENT	
	APPROVAL - BSA REFERENCE	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL - 10-3-61	APPROVAL - 3-1-63
	REVISD - 10-3-61	REVISD - 4-26-69
	REVISD - 10-7-74	REVISD - 5-29-74
	REVISD	REVISD



CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING, OR ABRASION. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. DELIVER AND PLACE THE STONE FOR THE PLUNGE POOL IN A MANNER THAT WILL ENSURE THAT IT IS HORIZONTAL WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION, KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTE:

1. SHA STD. NO. MD 386.11 STANDARD JUNCTION BOX SHALL BE CONSTRUCTED WITH INTERNAL DIMENSIONS OF 36" L X 36" W.
2. SHA STD. NO. MD 383. 61 STANDARD TYPE 'D' FRAME AND COVER SHALL PROVIDED.

NOTE:

1. SHA STD. NM MD 384.05 72" DIAMETER PRECAST MANHOLE (MH-2-5) SHALL BE CONSTRUCTED WITH A 30" DIAMETER OPENING IN THE FLAT TOP SLAB. NO ECCENTRIC CONE UNIT SHALL BE USED. 48" DIAMETER RISER UNITS SHALL BE USED FOR THE ENTIRE HEIGHT OF THE FLAT TOP PRECAST MANHOLE.
2. INSTALL FRAME AND COVER WITH A 30" DIAMETER OPENING. THE FRAME AND COVER SHALL BE RATED FOR HS-25 LOADING.

NOTE:

1. FOR MH-2-4, THE SHA STD. NO. MD 383.00 48" SQUARE STANDARD SHALLOW MANHOLE SHALL BE CONSTRUCTED WITH A 30" DIAMETER OPENING. THE FRAME AND COVER SHALL BE DESIGNED FOR HS-25 LOADING.

SHEET REFERENCES:

1. THE DRAINAGE SCHEDULES ARE LOCATED ON
DRAWING DP-04, SHEET 25.

PLUNGE POOL	DEPTH (F)	WIDTH (B)	LENGTH (C)	BOTTOM LENGTH (3E)	BOTTOM WIDTH (2E)	RIPRAP THICKNESS (D)	LINING
	FT	FT	FT	FT	FT	FT	
AT OUTFALL OF EW-2-2	MIN OF 1	12	19	VARIES, MIN OF 13	MIN OF 6	1.58	CLASS I RIPRAP
AT OUTFALL OF ES-7-1	0.63	6.25	8	3.75	2.5	1.58	CLASS I RIPRAP
AT OUTFALL OF ES-12-3 AND ES-12-1	0.75	VARIES, MIN OF 8.5	VARIES, MIN OF 8	VARIES, MIN OF 4.5	VARIES, MIN OF 4	1.58	CLASS I RIPRAP

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

CPPC PERMIT NO. 2020-034

K J33

REVIEWED BY Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION.

For permit information, contact Jay Childs
Construction Supervisor at (301) 495-257



RJM ENGINEERING

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DD-03 DRAINAGE DETAILS
DRAINAGE DESIGN

GOOD HOPE ROAD
SHARED USE PATH

SCALE: AS NOTED

DATE: DECEMBER 2021

Project No. : 501902

SHEET 21 of 135

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

MANPCPC PERMIT NO. 2020-034

PARK J33

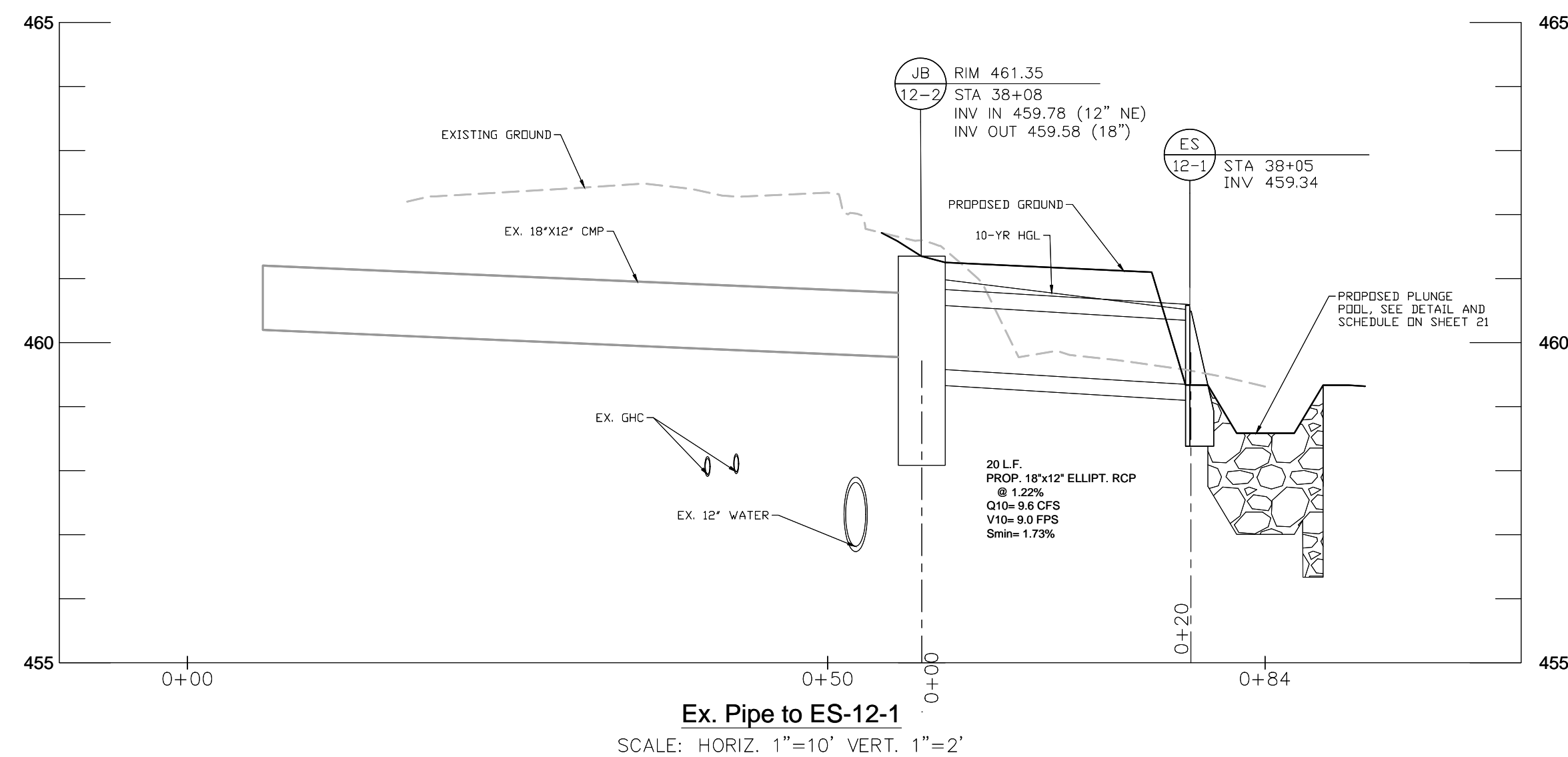
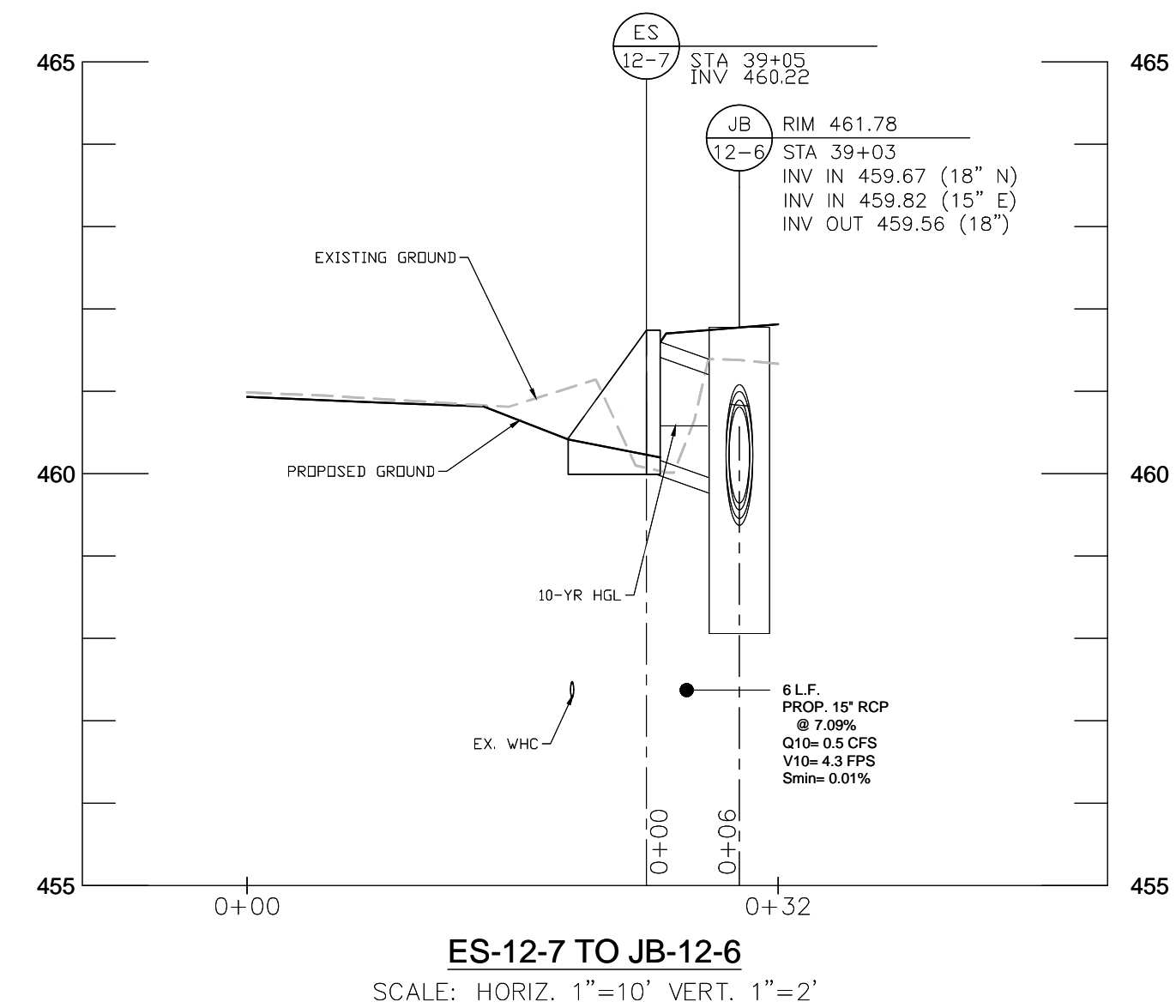
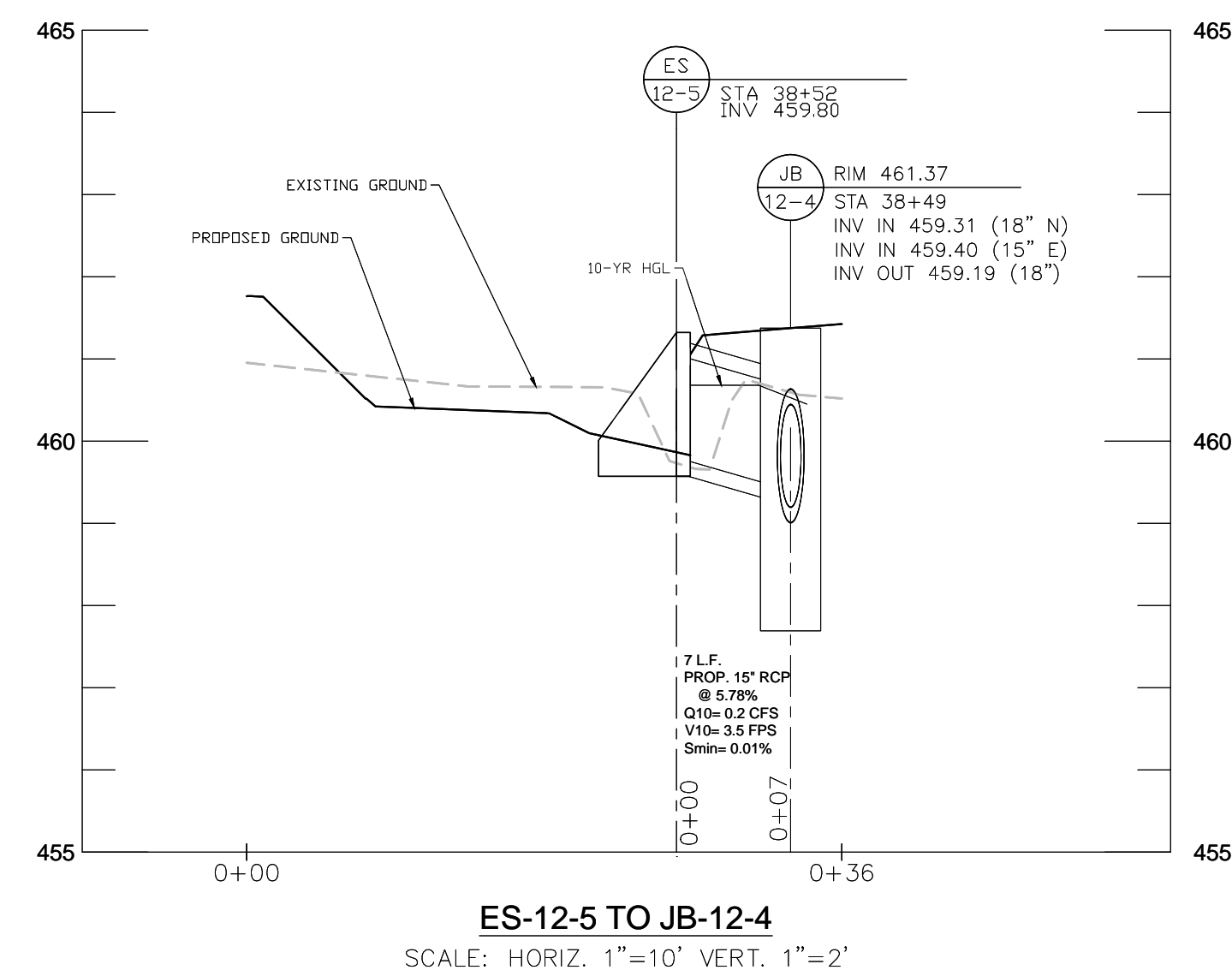
REVIEWED BY Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

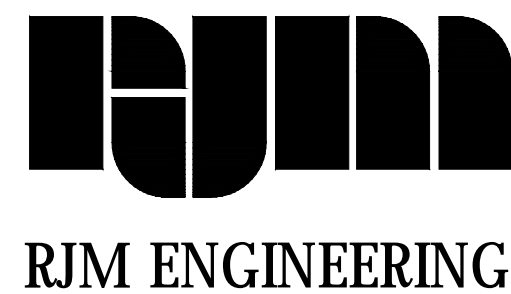
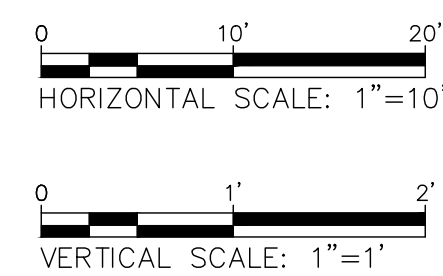
DATE APPROVED 12/14/2021

**THIS IS NOT A PERMIT TO
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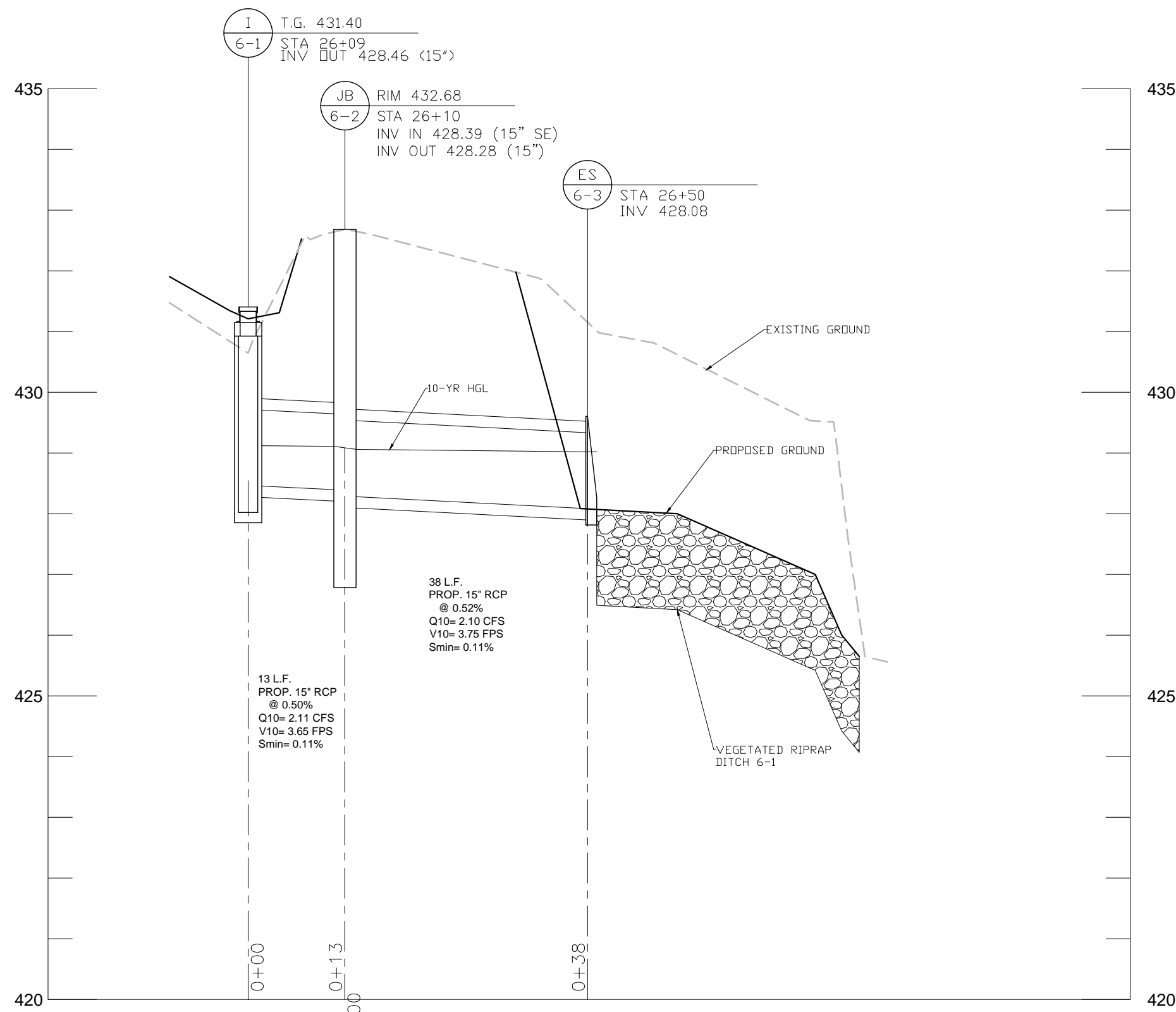
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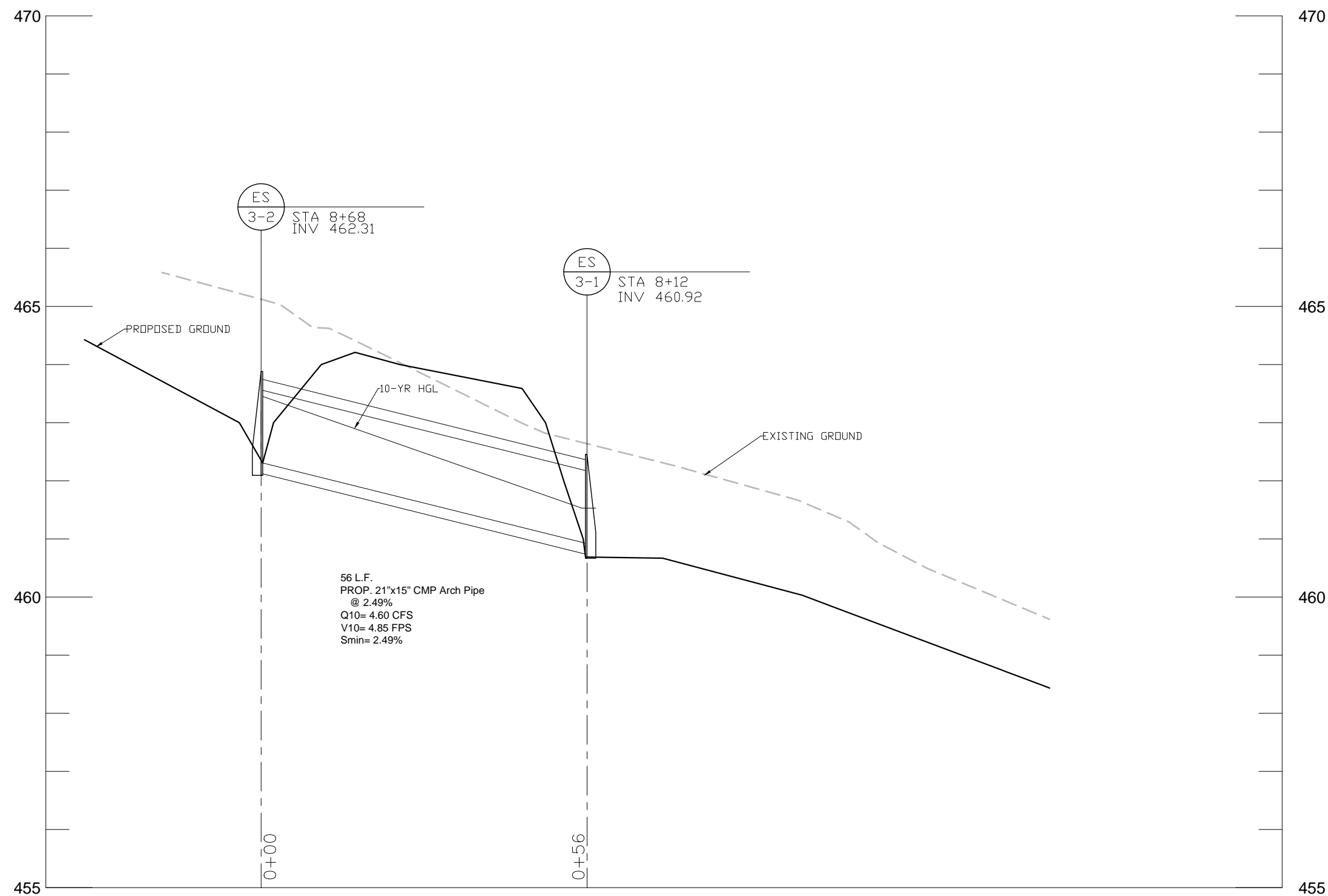
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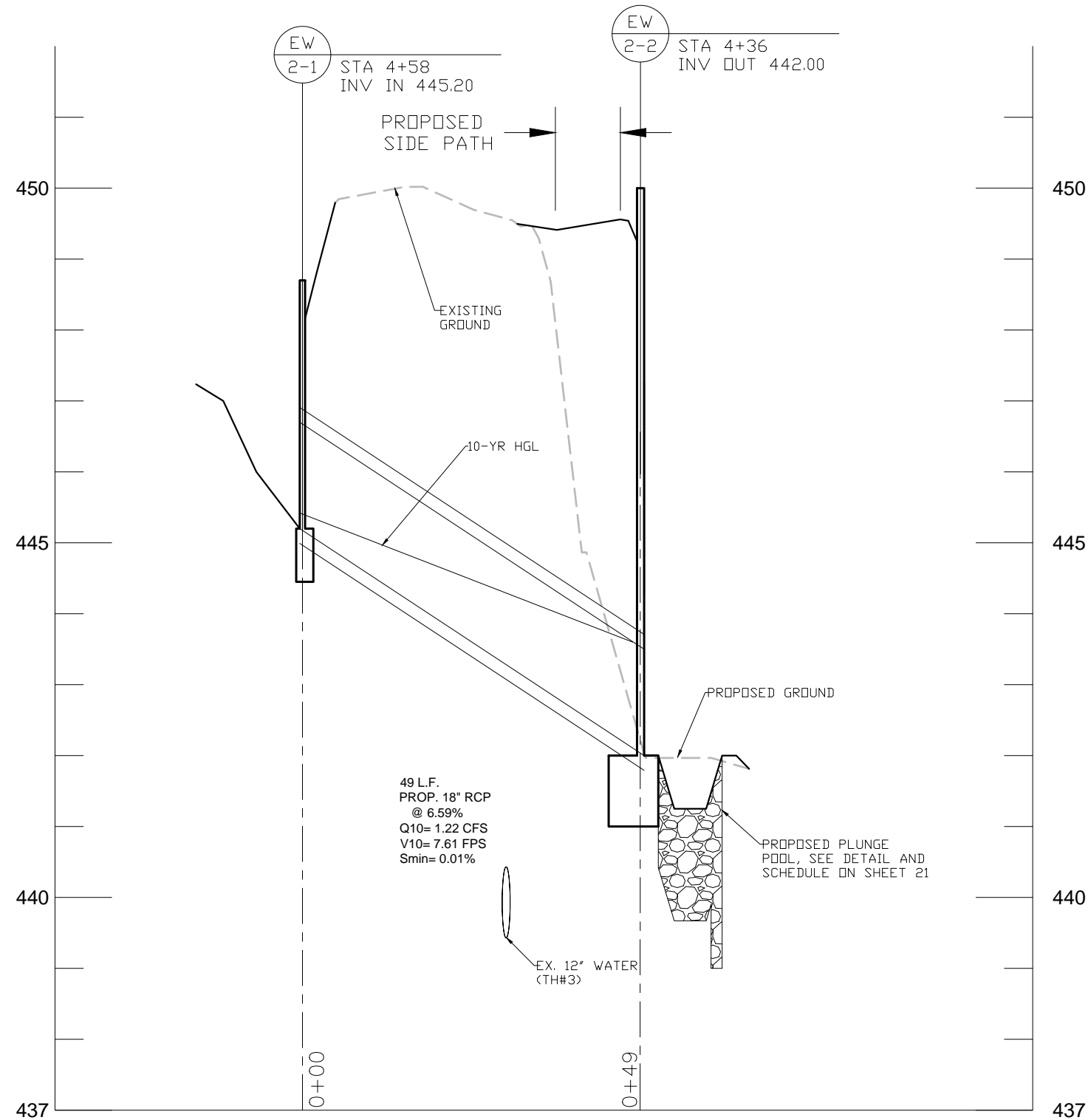
				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND		DP-01 DRAINAGE PROFILES	
				RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES		GOOD HOPE ROAD SHARED USE PATH	
				Chief, Design Section APPROVED			
				REFER TO TITLE SHEET FOR SIGNATURES			
				Chief, Division of Transportation Engineering		SCALE: AS NOTED	
				Designed by: <u>KJS</u> Drawn by: <u>KJS</u> Checked by: <u>DZ</u>		DATE: DECEMBER 2021	
				NO. REVISION DATE BY		Project No. : <u>501902</u>	
						SHEET <u>22</u> of <u>135</u>	



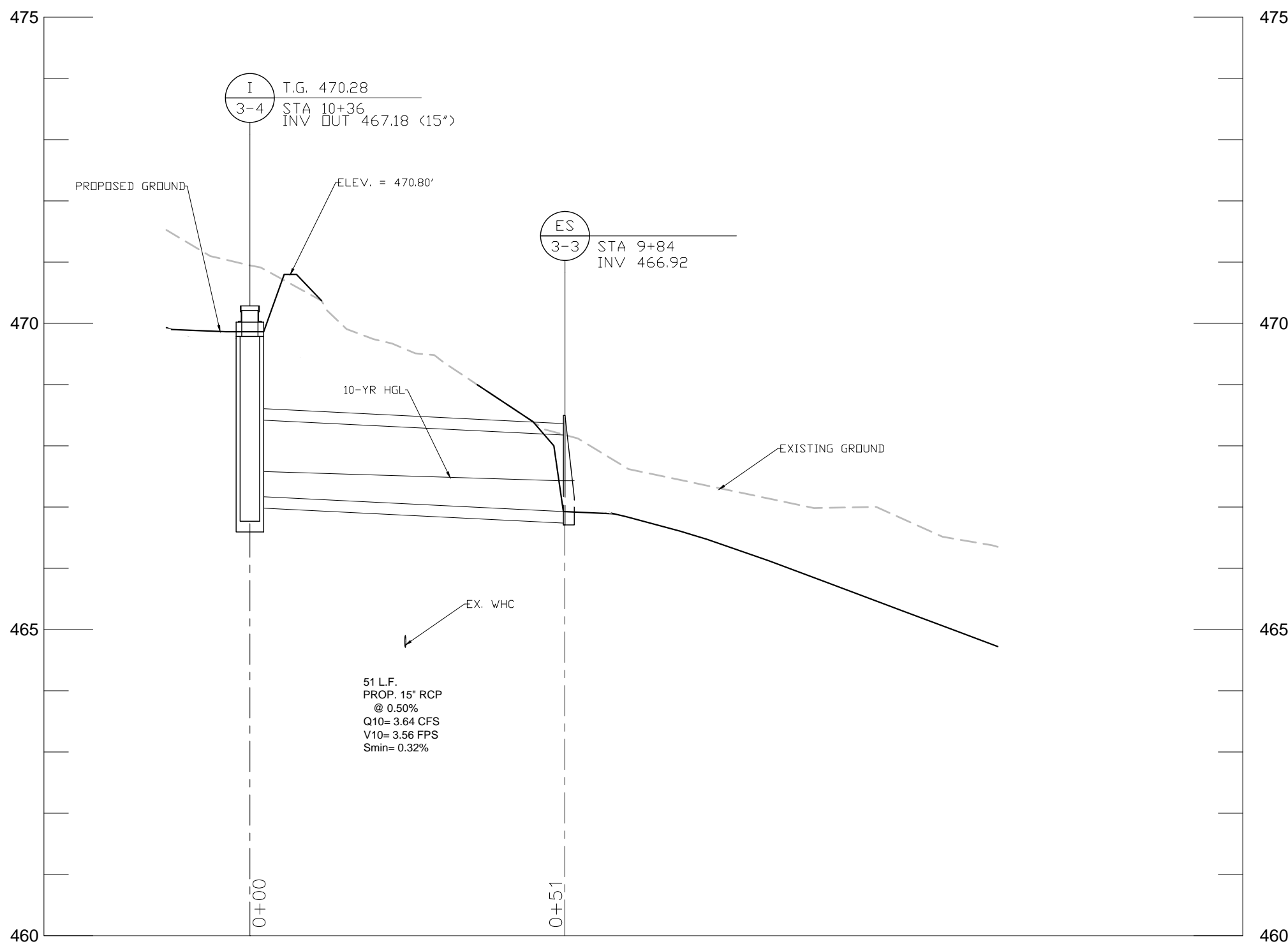
I-6-1 to ES-6-3 Profile
SCALE: HORIZ. 1"=20' VERT. 1"=2'



ES-3-2 to ES-3-1 Profile
SCALE: HORIZ. 1"=20' VERT. 1"=2'



EW-2-2 To EW-2-1 Profile
SCALE: HORIZ. 1"=20' VERT. 1"=2'



I-3-4 to ES-3-3 Profile
SCALE: HORIZ. 1"=20' VERT. 1"=2'

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034

PARK J33

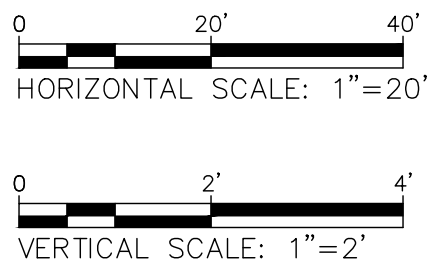
REVIEWED BY Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

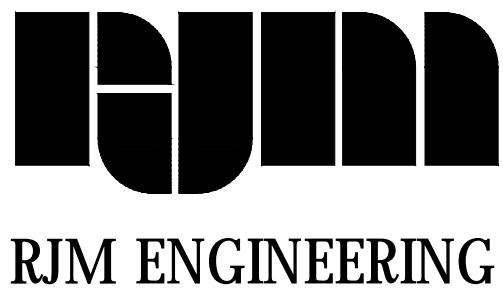
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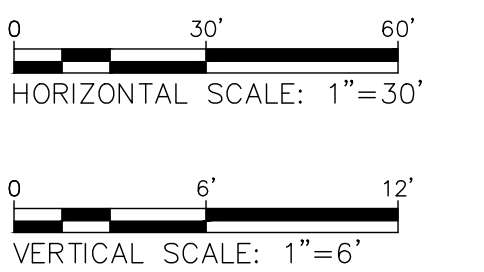


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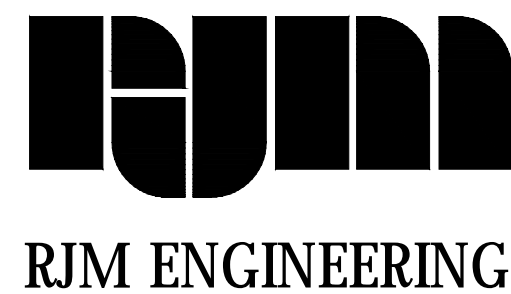


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- SWM-10 PROFILE (JFF 2-3).



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STRUCTURE SCHEDULE												
STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES
ES-12-1	525132.8	1318084.0	38+04.6	34.3 LT	GOOD HOPE RD	460.58	MD 368.01	END SECTION	1	459.34'		STANDARD CONCRETE END SECTION
ES-12-3	525139.0	1318082.9	38+10.4	36.5 LT	GOOD HOPE RD	460.32	MD 368.01	END SECTION	1	459.00'		STANDARD CONCRETE END SECTION
ES-12-5	525176.7	1318105.4	38+51.7	21.5 LT	GOOD HOPE RD	461.32	MD 368.01	END SECTION	1		459.80'	STANDARD CONCRETE END SECTION
ES-12-7	525229.2	1318114.5	39+04.9	22.4 LT	GOOD HOPE RD	461.74	MD 368.01	END SECTION	1		460.22'	STANDARD CONCRETE END SECTION
I-12-9	525377.1	1318146.9	40+56.5	17.0 LT	GOOD HOPE RD	462.84	MC-505.01	TYPE E-4	2	460.68'	460.57'	TYPE E-4 INLET
I-12-10	525420.3	1318154.6	41+00.4	17.0 LT	GOOD HOPE RD	463.79	MC-505.01	TYPE E-4	2	461.16'	460.96'	TYPE E-4 INLET
I-12-12	525536.9	1318175.4	42+18.9	17.0 LT	GOOD HOPE RD	468.94	MC-505.01	TYPE E-4	2	465.39'	465.20'	TYPE E-4 INLET
I-12-13	525621.1	1318190.4	43+04.4	17.0 LT	GOOD HOPE RD	472.28	MC-505.01	TYPE E-4	2	468.93'	468.73'	TYPE E-4 INLET
I-12-14	525714.3	1318205.1	44+00.0	17.1 LT	GOOD HOPE RD	476.86	MC-505.01	TYPE E-4	1		471.86'	TYPE E-4 INLET
JB-12-2	525132.6	1318104.9	38+08.3	13.7 LT	GOOD HOPE RD	461.35	MD 386.11	JUNCTION BOX	2	459.78'	459.58'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)
JB-12-4	525175.6	1318098.5	38+49.4	28.0 LT	GOOD HOPE RD	461.37	MD 386.11	JUNCTION BOX	3	459.31' 459.40'	459.19'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)
JB-12-6	525228.1	1318108.9	39+02.8	27.7 LT	GOOD HOPE RD	461.78	MD 386.11	JUNCTION BOX	3	459.67' 459.82'	459.56'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)
JB-12-8	525346.5	1318128.7	40+23.2	29.6 LT	GOOD HOPE RD	463.60	MD 386.11	JUNCTION BOX	2	460.37'	460.25'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)
JB-12-11	525537.2	1318165.1	42+17.4	27.2 LT	GOOD HOPE RD	470.80	MD 386.11	JUNCTION BOX	2	464.90'	464.70'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)

STRUCTURE SCHEDULE – STA. 26+00 TO STA. 33+50												
STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES
ES-6-3	524021.6	1317802.2	26+50.2	39.6 LT	GOOD HOPE RD	429.60	MD 368.01	END SECTION	1	428.08'		STANDARD CONCRETE END SECTION
ES-7-1	524168.1	1317858.6	28+10.7	33.8 LT	GOOD HOPE RD	430.28	MD 368.01	END SECTION	1	429.04'		STANDARD CONCRETE END SECTION
I-6-1	523977.6	1317803.1	26+09.4	23.0 LT	GOOD HOPE RD	431.40	MC-506.02	TYPE J	1		428.46'	TYPE J INLET AS TERMINUS
I-7-3	524427.2	1317941.8	30+82.7	19.5 LT	GOOD HOPE RD	438.15	MC-505.01	TYPE E-4	2	433.70'	432.49'	TYPE E-4 INLET
I-7-4	524549.5	1317974.7	32+09.4	19.0 LT	GOOD HOPE RD	443.80	MC-505.01	TYPE E-4	2	439.08'	437.87'	TYPE E-4 INLET
I-7-5	524650.0	1317998.4	33+12.6	21.8 LT	GOOD HOPE RD	447.81	MC-506.02	TYPE J	1		443.94'	TYPE J INLET AS TERMINUS
JB-6-2	523984.1	1317788.5	26+10.3	39.0 LT	GOOD HOPE RD	432.68	MD 386.11	JUNCTION BOX	2	428.39'	428.28'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)
JB-7-2	524197.0	1317879.6	28+44.3	20.9 LT	GOOD HOPE RD	431.70	MD 386.11	JUNCTION BOX	2	429.34'	429.21'	INTERIOR DIMS: 36" L X 36" W (SEE DETAIL ON SHEET 21)

STRUCTURE SCHEDULE – STA. 2+50 TO STA. 10+50													
STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES	
ES-3-1	522279.3	1317228.9	8+12.2	31.4 RT	GOOD HOPE RD	462.46	MD 371.01	END SECTION	1	460.92'		METAL PIPE ARCH END SECTION	
ES-3-2	522326.5	1317259.0	8+68.3	31.5 RT	GOOD HOPE RD	463.88	MD 371.01	END SECTION	1		462.31'	METAL PIPE ARCH END SECTION	
ES-3-3	522424.3	1317321.5	9+84.3	31.6 RT	GOOD HOPE RD	468.50	MD 368.01	END SECTION	1	466.92'		STANDARD CONCRETE END SECTION	
EW-2-1	522005.7	1316998.8	4+57.9	15.5 LT	GOOD HOPE RD	447.92	MD 354.01	TYPE C	1		445.20'	STANDARD TYPE C ENDWALL	
EW-2-2	521964.1	1317023.9	4+36.3	28.0 RT	GOOD HOPE RD	445.05	N/A	N/A	2	442.00'		CUSTOM ENDWALL (SEE SHEET 96)	
I-2-6	521925.5	1317008.2	3+95.3	35.5 RT	GOOD HOPE RD	446.25	MC-505.01	TYPE E-4	1		443.09'	TYPE E-4 INLET	
I-3-4	522468.2	1317348.3	10+35.7	30.5 RT	GOOD HOPE RD	470.12	MC-506.02	TYPE J	1		467.18'	TYPE J INLET AS TERMINUS	
JFF-2-3	521965.1	1317013.9	4+31.8	19.1 RT	GOOD HOPE RD	448.97	N/A	N/A	2	442.74'	442.74'	48" DIAMETER JELLYFISH FILTER, 36" OPENING	
MH-2-4	521933.3	1316996.2	3+95.5	21.2 RT	GOOD HOPE RD	449.57	MD 383.00	MANHOLE	3	442.92' 443.02'	442.92'	48" SQUARE STANDARD SHALLOW MANHOLE, 30" OPENING	
MH-2-5	521846.5	1316939.3	2+91.6	19.8 RT	GOOD HOPE RD	457.13	MD 384.05	MANHOLE	1		442.92'	STANDARD 72 INCH DIA. PRECAST MANHOLE, 30" OPENING, SEE SHEET 21	

PIPE SCHEDULE							
FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
ES-12-5	JB-12-4	459.80	459.40	7'	5.78%	15"	REINFORCED CONCRETE PIPE, CLASS IV
ES-12-7	JB-12-6	460.22	459.82	6'	7.09%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-12-9	JB-12-8	460.57	460.37	33'	0.60%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
I-12-10	I-12-9	460.96	460.68	41'	0.68%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-12-12	JB-12-11	465.20	464.90	8'	3.85%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-12-13	I-12-12	468.73	465.39	83'	4.05%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-12-14	I-12-13	471.86	468.93	92'	3.19%	15"	REINFORCED CONCRETE PIPE, CLASS IV
JB-12-2	ES-12-1	459.58	459.34	20'	1.22%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
JB-12-4	ES-12-3	459.19	459.00	38'	0.50%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
JB-12-6	JB-12-4	459.56	459.31	50'	0.50%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
JB-12-8	JB-12-6	460.25	459.67	117'	0.50%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
JB-12-11	I-12-10	464.70	461.16	114'	3.10%	15"	REINFORCED CONCRETE PIPE, CLASS IV

PIPE SCHEDULE							
FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
I-6-1	JB-6-2	428.46	428.39	13'	0.50%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-7-3	JB-7-2	432.49	429.34	236'	1.34%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV
I-7-4	I-7-3	437.87	433.70	124'	3.36%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-7-5	I-7-4	443.94	439.08	100'	4.84%	15"	REINFORCED CONCRETE PIPE, CLASS IV
JB-6-2	ES-6-3	428.28	428.08	38'	0.52%	15"	REINFORCED CONCRETE PIPE, CLASS IV
JB-7-2	ES-7-1	429.21	429.04	35'	0.50%	18"x12"	18"x12" CONCRETE ELLIPTICAL PIPE, CLASS IV

PIPE SCHEDULE - STA. 2+50 TO STA. 10+50							
FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
ES-3-2	ES-3-1	462.31	460.92	56'	2.49%	21"x15"	21"x15" CMP ARCH PIPE
EW-2-1	EW-2-2	445.20	442.00	49'	6.59%	18"	REINFORCED CONCRETE PIPE, CLASS IV
I-2-6	MH-2-4	443.09	443.02	14'	0.50%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-3-4	ES-3-3	467.18	466.92	51'	0.50%	15"	REINFORCED CONCRETE PIPE, CLASS IV
JFF-2-3	EW-2-2	442.74	442.00	9'	8.33%	15"	REINFORCED CONCRETE PIPE, CLASS IV
MH-2-4	JFF-2-3	442.92	442.74	36'	0.50%	15"	REINFORCED CONCRETE PIPE, CLASS IV
MH-2-5	MH-2-4	442.92	442.92	104'	0.00%	48"	REINFORCED CONCRETE PIPE, CLASS IV

VEGETATED RIPRAP DITCH SCHEDULE							
DITCH #	STATION (FT)	LT/RT	BOTTOM WIDTH (FT)	RIGHT SIDE SLOPE (z:1)	LEFT SIDE SLOPE (z:1)	LINING	NOTES
Ditch 2-1	3+99.9 to 4+27.5	RT	3	3	3	VEGETATED CLASS I RIPRAP	At outfall of weir for I-2-6
Ditch 3-1	5+31.9 to 4+37.8	RT	3	3	3	VEGETATED CLASS I RIPRAP	
Ditch 6-1	26+50.1 to 26+94.2	LT	2	3	3	VEGETATED CLASS I RIPRAP	At outfall of ES-6-3
Ditch 7-1	27+25.4 to 27+89.8	LT	2	3	3	VEGETATED CLASS I RIPRAP	

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION DIVISION OF
PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034

PARK J33


REVIEWED BY Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

**THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION**

This approval is for technical review only.
For permit information, contact Jay Childs,
Construction Supervisor at (301) 495-2574



RJM ENGINEERING

							MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	DP-04 DRAINAGE SCHEDULES						
							RECOMMENDED FOR APPROVAL							
							REFER TO TITLE SHEET FOR SIGNATURES _____							
							Chief, Design Section _____ Date _____							
							APPROVED							
							REFER TO TITLE SHEET FOR SIGNATURES _____							
							Chief, Division of Transportation Engineering _____ Date _____							
							Designed by: KJS Drawn by: KJS Checked by: DZ	SCALE: NONE DATE: DECEMBER 2021						
NO.	REVISION	DATE	BY					Project No.: 501902 SHEET 25 of 135						

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

STANDARD EROSION AND SEDIMENT CONTROL NOTES

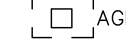
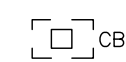

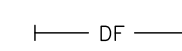

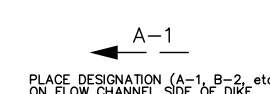
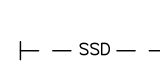

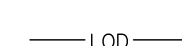
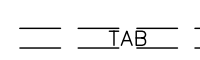

3. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours prior to commencing any land disturbing activity, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.
2. The permittee must obtain inspection and approval by DPS at the following points:
 - A. At the required pre-construction meeting.
 - B. Following installation of sediment control measures and prior to any other land disturbing activity.
 - C. 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.
 - D. Prior to removal or modification of any sediment control structure(s).
 - E. Prior to final acceptance.
3. 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 disturbances, 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.
4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until 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.
6. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
 - a) 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
 - b) 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.
7. The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping 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.
8. 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.
9. 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.
10. Surface drainage flows over unstabilized 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.
11. 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.

*Note: Stabilization with turfgrass sod or Type A soil stabilization matting shall be provided for all swales unless otherwise noted.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.
18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
21. 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-III) or when required by the sediment control inspector.
22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.
23. 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.
24. 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.
25. Off-site spoil or borrow areas must have prior approval by DPS.
26. 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:
 - A. 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
 - B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or
 - C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric), or approved equivalent, located in an undisturbed buffer area.

Remember: Dewatering operation and method must have prior approval by the DPS inspector.
27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

STANDARD SYMBOLS

ALT-GRADE INLET PROTECTION		REMOVABLE PUMPING STATION	
BAFFLE BOARDS		RIPRAP INFLOW PROTECTION	
BENCHING		RIPRAP OUTLET SEDIMENT TRAP ST III	
CATCH BASIN INSERT		ROCK OUTLET PROTECTION 1	
CLEAR WATER DIVERSION PIPE		ROCK OUTLET PROTECTION II	
CLEAR WATER PIPE		ROCK OUTLET PROTECTION III	
COMBINATION INLET PROTECTION		SILT FENCE	
CONCRETE WASHOUT STRUCTURE		SILT FENCE ON PAVEMENT	
CURB INLET PROTECTION		SOD	
DIVERSION FENCE		STABILIZED CONSTRUCTION ENTRANCE	
EARTH DIKE		STANDARD INLET PROTECTION	
EMERGENCY SPILLWAY		STOCKPILE AREA	
FILTER BAG		STONE CHECK DAM	
FILTER BERM		STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	
FILTER LOG		SUBSURFACE DRAINS	
GABION INFLOW PROTECTION		SUMP PIT	
GABION INLET PROTECTION		SUPER SILT FENCE	
HORIZONTAL DRAW-DOWN DEVICE		TEMPORARY ACCESS BRIDGE	
LIMIT OF DISTURBANCE		TEMPORARY ACCESS CULVERT	
MEDIAN INLET PROTECTION		TEMPORARY ASPHALT BERM	
MEDIAN SUMP INLET PROTECTION		TEMPORARY BARRIER DIVERSION	
MOUNTABLE BERM		TEMPORARY GABION OUTLET STRUCTURE	
PERIMETER DIKE/SWALE		TEMP. SOIL STABILIZATION MATTING (SSM) -TYPE A	
PERM. SOIL STABILIZATION MATTING (SSM) - TYPE B (CURLEX ENFORCER TRM OR APPROVED ALTERNATE)		TEMP. SOIL STABILIZATION MATTING (SSM) -TYPE E	
PERM. SOIL STABILIZATION MATTING (SSM) -TYPE C		TEMP. SOIL STABILIZATION MATTING (SSM) -TYPE D	
PIPE OUTLET SEDIMENT TRAP ST I		TEMPORARY STONE OUTLET STRUCTURE	
PIPE SLOPE DRAIN		TEMPORARY SWALE	
PLUNGE POOL		WASH RACK OPTION	
PORTABLE SEDIMENT TANK		CHESAPEAKE BAY CRITICAL AREA	
DRAINAGE BOUNDARY		TREE PROTECTION FENCE	
EXISTING CONTOURS		WETLAND	
PROPOSED CONTOURS		WETLAND BUFFER	
		100-YEAR FLOODPLAIN	

STANDARD NOTES

1. The contractor will immediately inform the county of any discrepancies found between the project plans and contract specifications.
2. For construction, all horizontal control shall be NAD 83/91 and vertical control NAVD 88.
3. Types of storm drain structures refer to the Design Standards of Montgomery County Department of Transportation, unless otherwise noted.
4. Information concerning underground utilities was obtained from available records. The contractor must determine the exact location and elevations of the lines by digging test pits by hand at all utility crossings well in advance of the proposed excavation. Clearances are less than shown on this plan or six inches, whichever is less, the contractor shall contact the utility.
5. Repairs to utilities or property damaged as a result of the contractor's negligence or method of operation must be made at the contractor's expense before proceeding with construction.
6. Call "Miss Utility" at 1-800-257-7777 forty-eight (48) hours prior to beginning excavation to determine the exact location of existing utilities.
7. Clearing to be limited to the "limit of disturbance" as shown on the plans.
8. All grading shall be done in such a manner as to provide positive drainage.
9. Disturbed areas adjacent to established lawns shall be sodded. Other disturbed areas shall be seeded and mulched.
10. The contractor shall obtain a roadside tree permit for any maintenance, treatment, planting, removal or root cutting on trees within the public right-of-way before starting a job. Permit requirements may be obtained from the Department of Natural Resources - Maryland Forest, Park and Wildlife service whose telephone number is (301) 854-6969.
11. Contact the Washington Suburban Sanitary Commission system maintenance engineer before excavating beneath or in the vicinity of existing water or sewer lines. Backfill to be done under the supervision of W.S.S.C. call (301) 699-4420.
12. Contact Washington gas dispatch officer at (703) 750-4831 before excavating beneath or in the vicinity of existing gas main and service laterals.
13. Prior to vegetative stabilization, all disturbed areas must be topsoiled per the Montgomery County "Standards and Specifications for topsoil".

STANDARD SEQUENCE OF CONSTRUCTION NOTES

1. Prior to clearing trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on-site with the Montgomery County Department of Permitting Services (MCDPS) sediment control inspector (240) 777-0311 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement inspector (301) 495-4650 (48 hours notice), the Owners representative, and the site Engineer.
 2. The limits of disturbance shall be field marked prior to clearing of trees, installation of sediment control measures, construction, or other land disturbing activities.
 3. The permittee must obtain written approval from the MNCPPC inspector, certifying that the limits of disturbance and tree protection measures are correctly marked and installed prior to commencing any clearing.
 4. Clear and grade for installation of sediment control devices.
 5. Install sediment control devices.
 6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading.
 7. The detailed sequence of construction by phase is presented on Sheets SC-06 thru SC-20.
- NOTE 1: The permittee shall obtain written approval from MCDPS inspector, prior to the removal of any sediment control devices.
8. Upon completion of the work, As-Built Plans must be submitted to MCDPS for review and approval along with copies of all the material tickets, testing reports, and field logs.

OFFSITE GRADING NOTE:
Offsite grading requires documentation of permission from owner (letter of permission on plan or recorded grading easement document submitted). Written approval for grading outside of the Right-of-Way shall be provided to the Inspector before construction is authorized to proceed.

DRAINAGE PERMISSION NOTE:
The proposed project will result in a minor increase in stormwater peak discharge rates for the 10-year storm affecting the properties located at 15400, 15410, 15416, and 15418 Good Hope Road. A notification letter has been sent to each affected property. The Montgomery County Property Acquisition Section will obtain a signed Acknowledgement of Receipt and Consent from each property owner. No construction may commence until the signed Acknowledgement of Receipt and Consent has been obtained from all properties listed above.

FLOODPLAIN NOTE:
The proposed project will result in a minor increase in the 100-year floodplain elevation upstream of the proposed pedestrian bridge. The increased 100-year floodplain elevation will impact the property at 1500 Good Hope Road. The Montgomery County Property Acquisition Section will obtain the affected property. A Consent Form must be obtained prior to beginning construction.

STOCKPILE NOTE:
The Contractor shall establish staging and stockpile areas at locations approved by the Engineer. These areas shall be established such that environmentally sensitive areas are not impacted. Erosion sediment control measures such as silt fence shall be installed downgrade of the staging and stockpile areas and as directed by the Engineer, and diversions such as sandbags shall be placed upstream to prevent stormwater run-on from contacting the stockpile.

PHASED GRADING NOTE:
The contractor shall phase clearing and grading to minimize the area disturbed at a given time during connection. All areas not draining to an approved sediment control measure shall receive same-day stabilization.

SITE INFORMATION		
DISTURBED AREA (LOD)	CUT (CY)	FILL (CY)
3.91 ac	2,895	1,521

P.E. 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 NO. 43192 , EXPIRATION DATE: 12-19-22

 12-8-2021
KEVIN SCHIEFER, P.E. DATE



RJM ENGINEERING

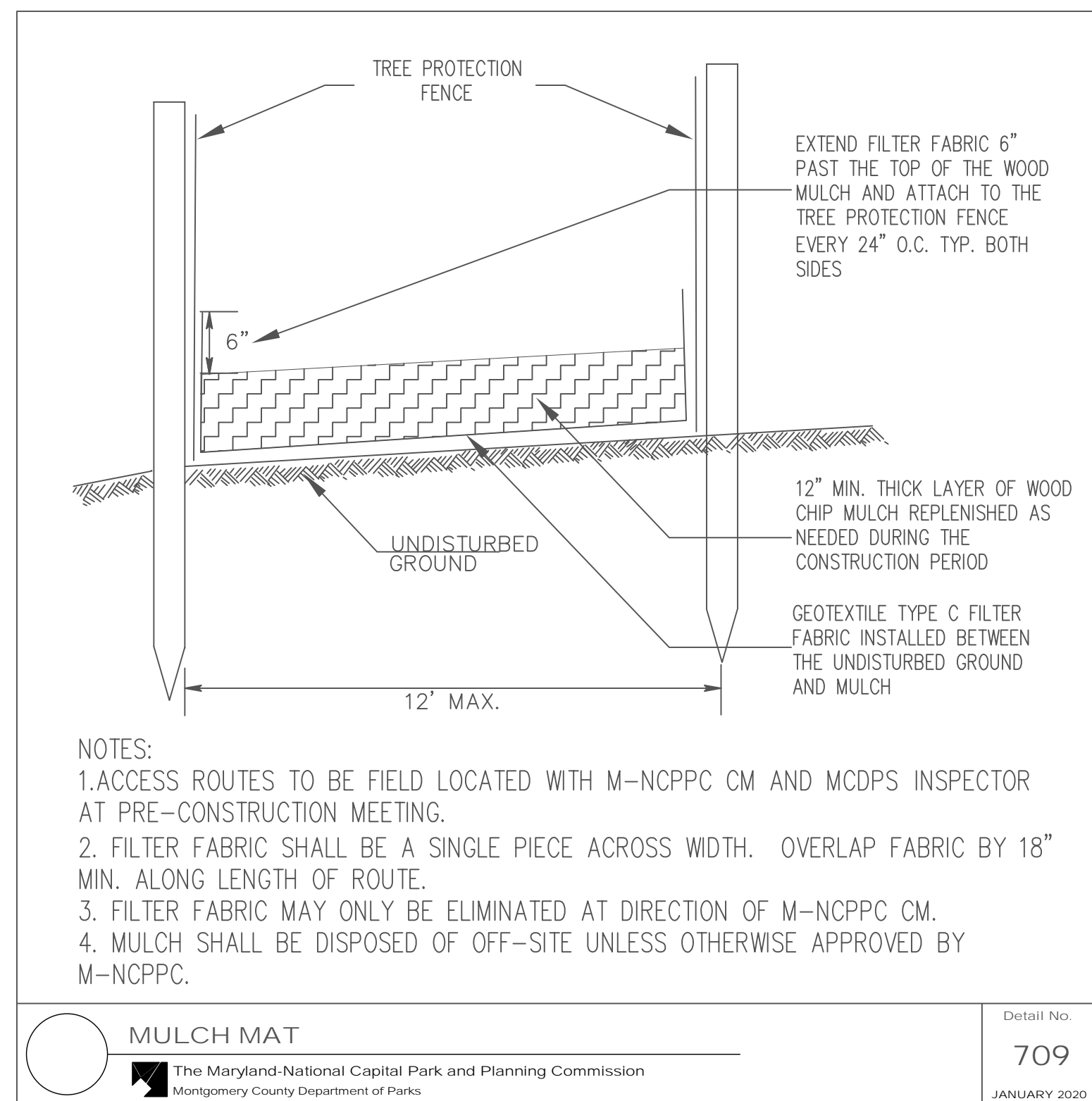
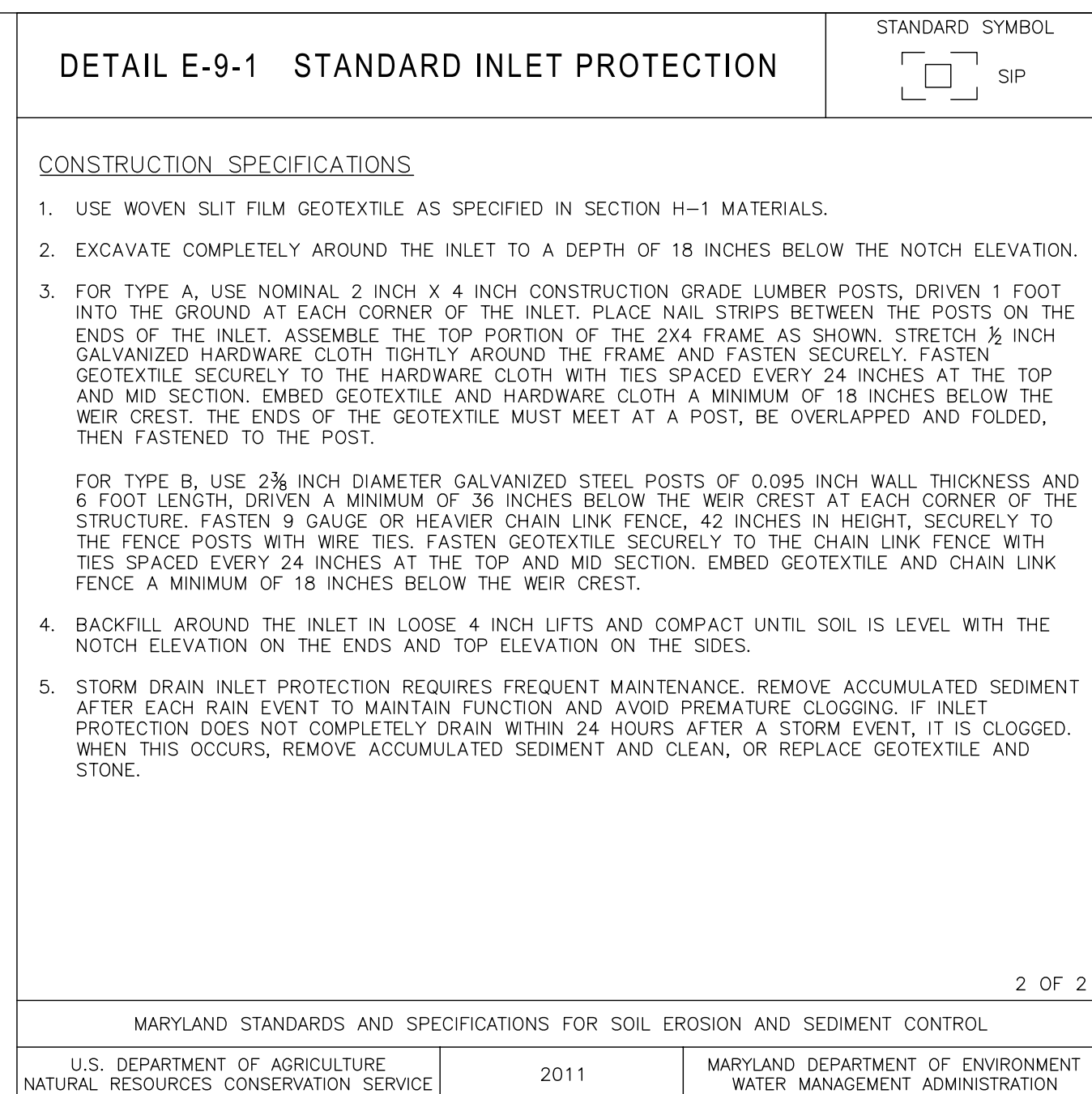
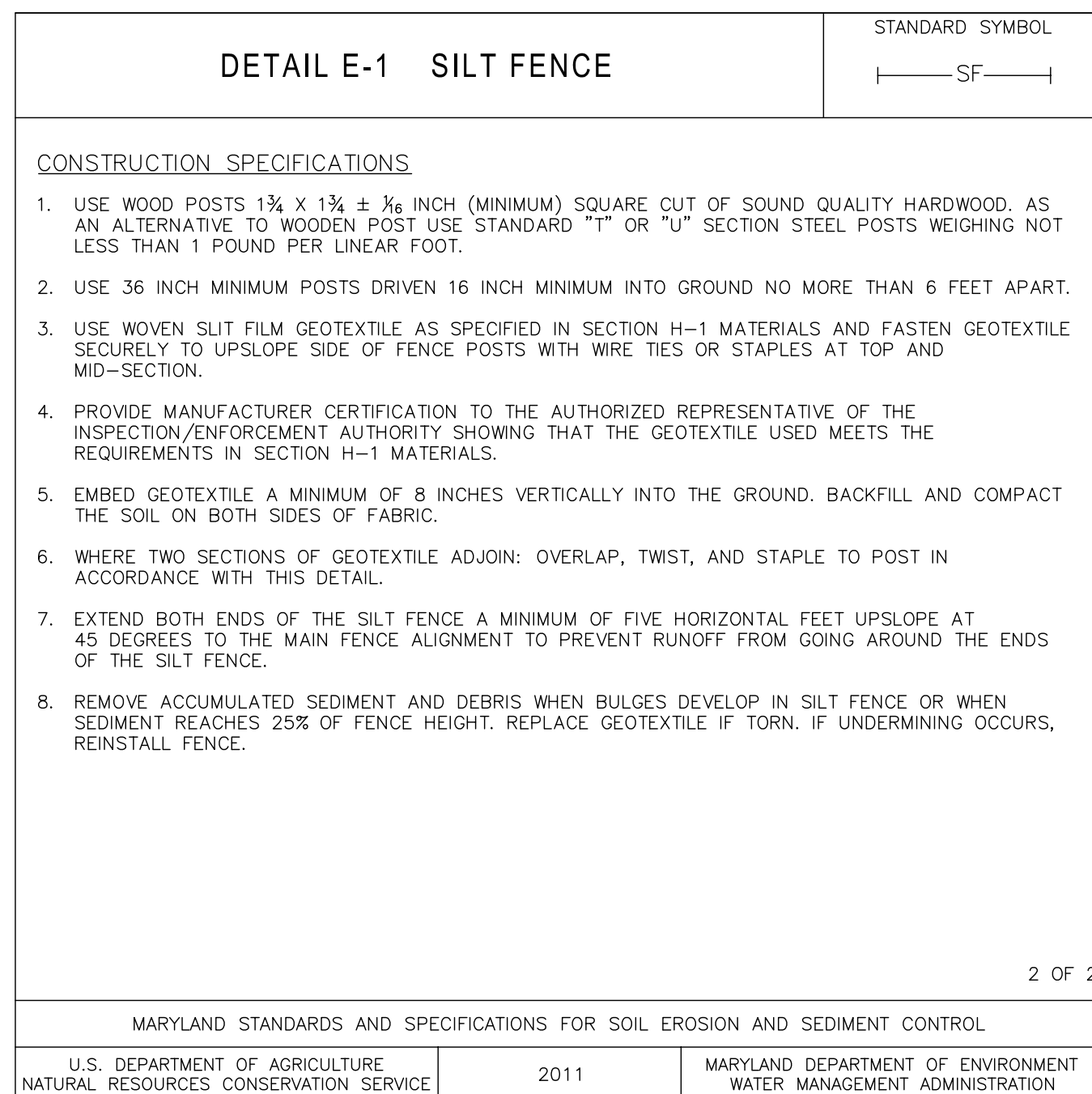
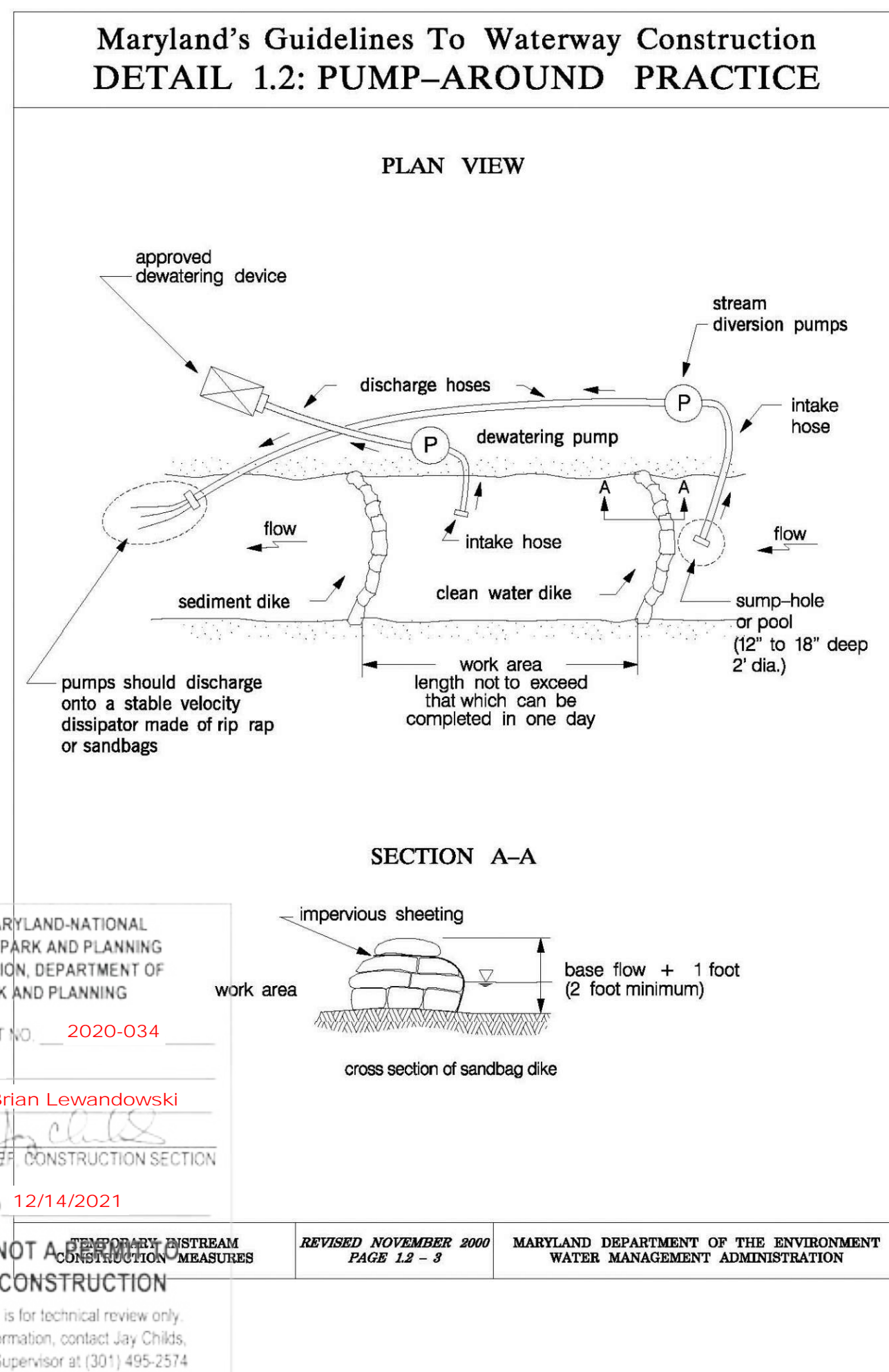
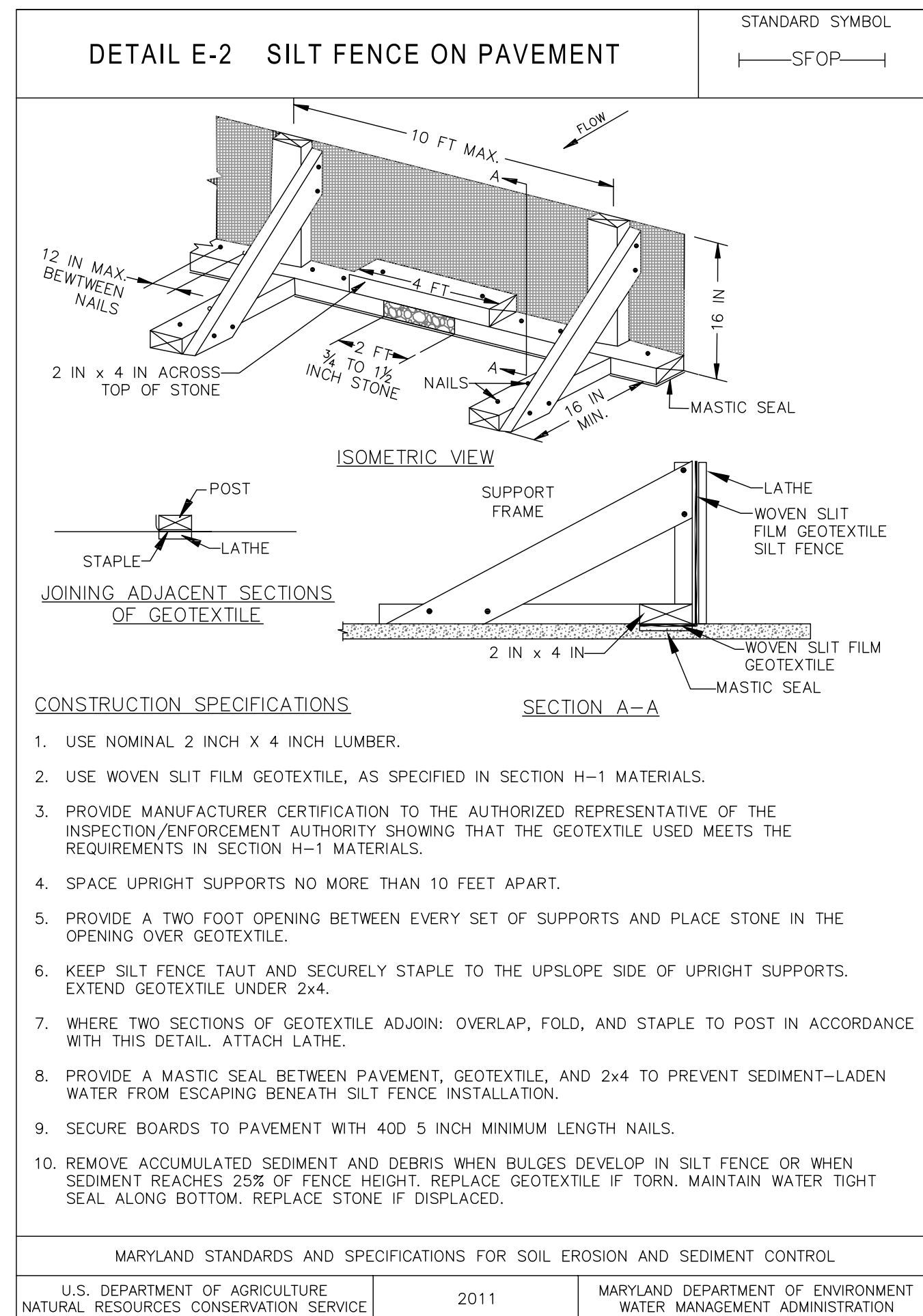
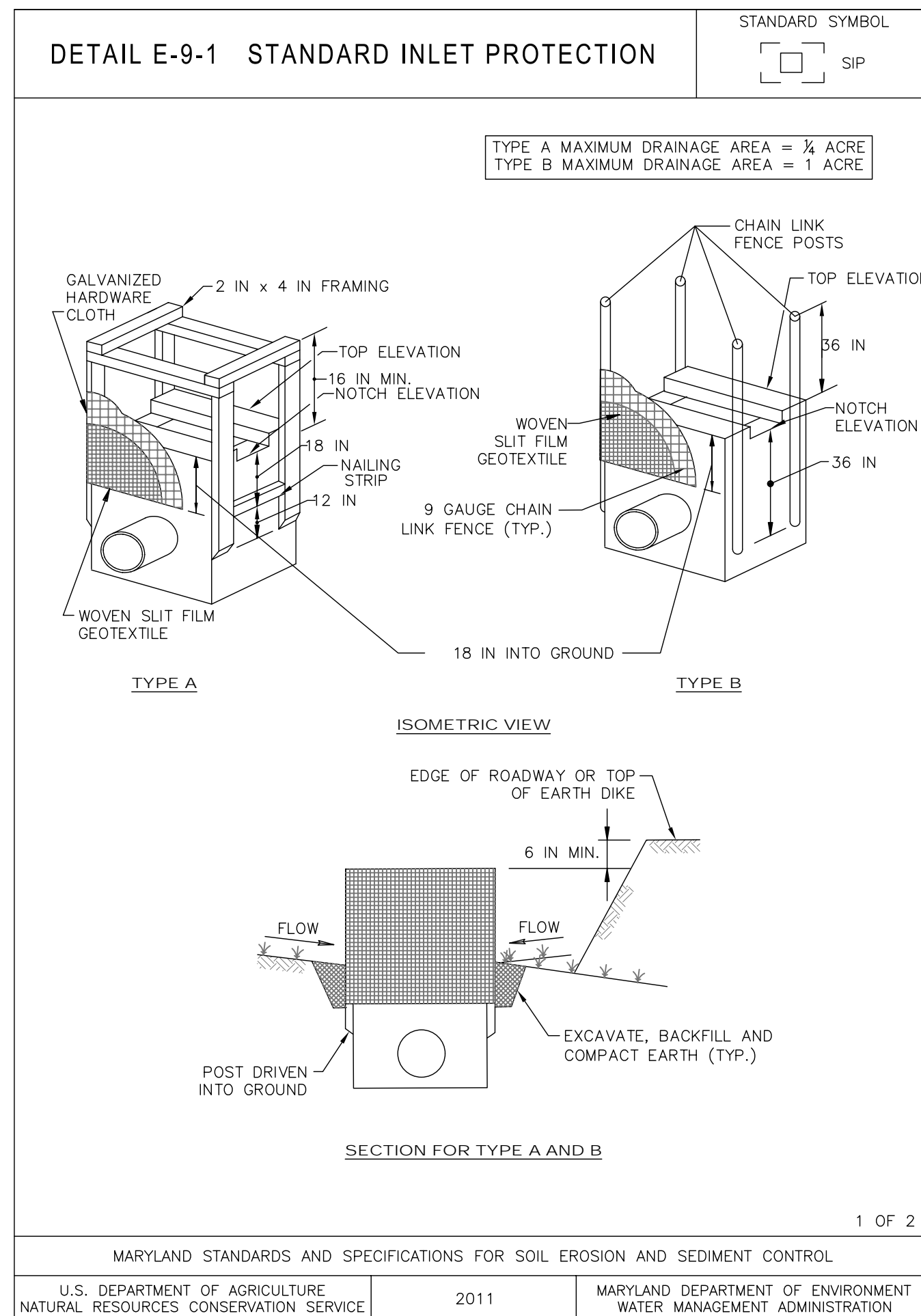
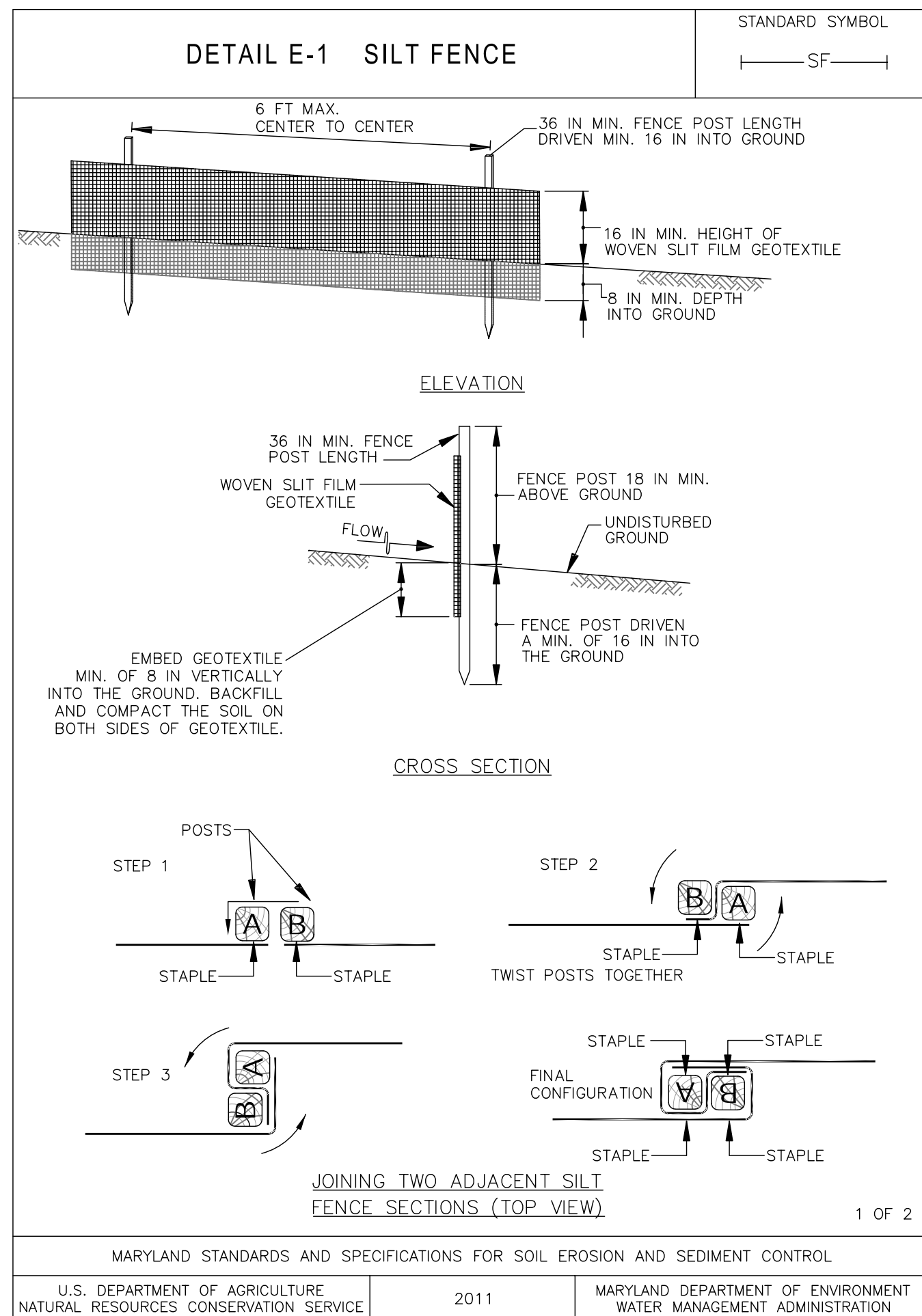
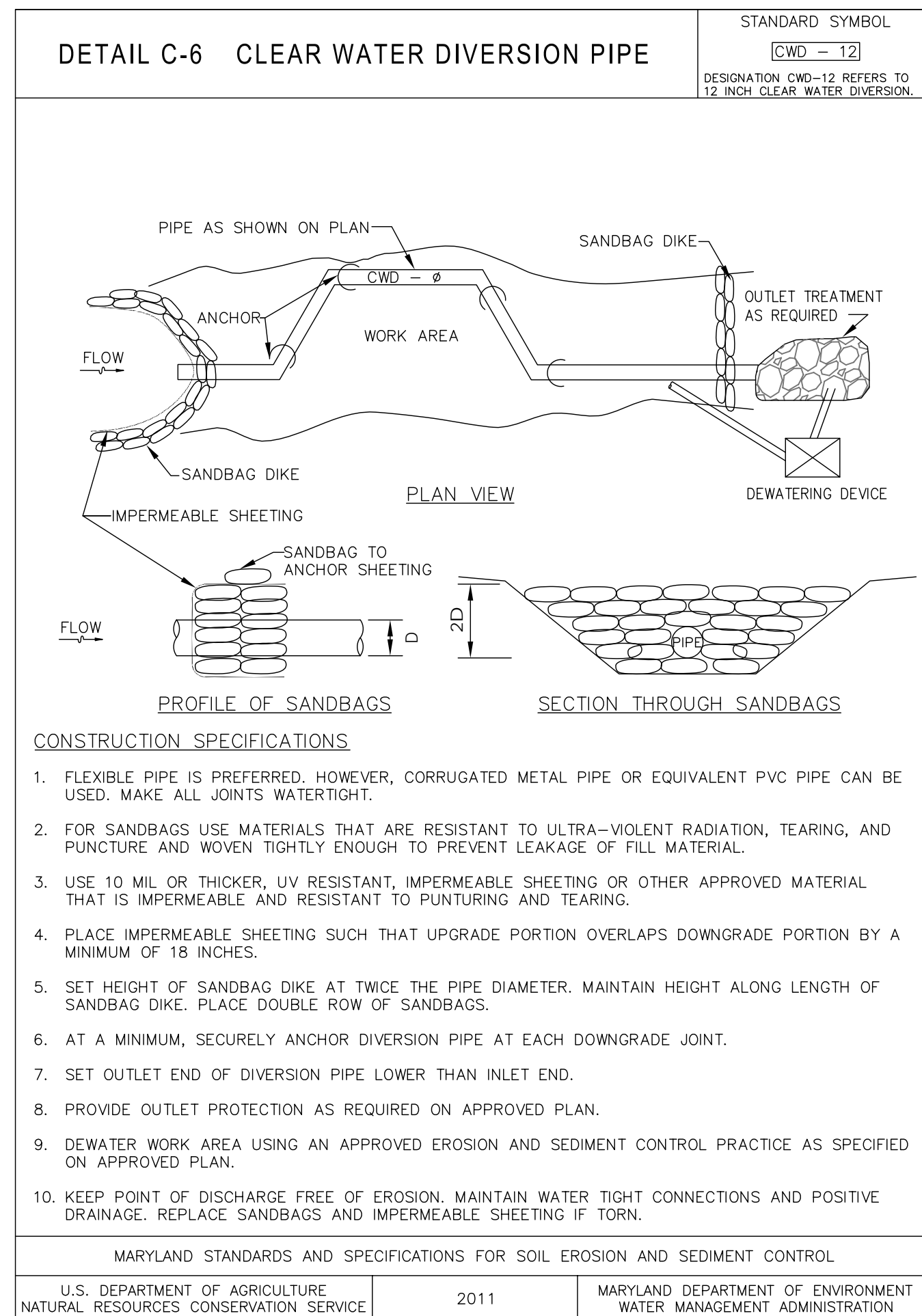
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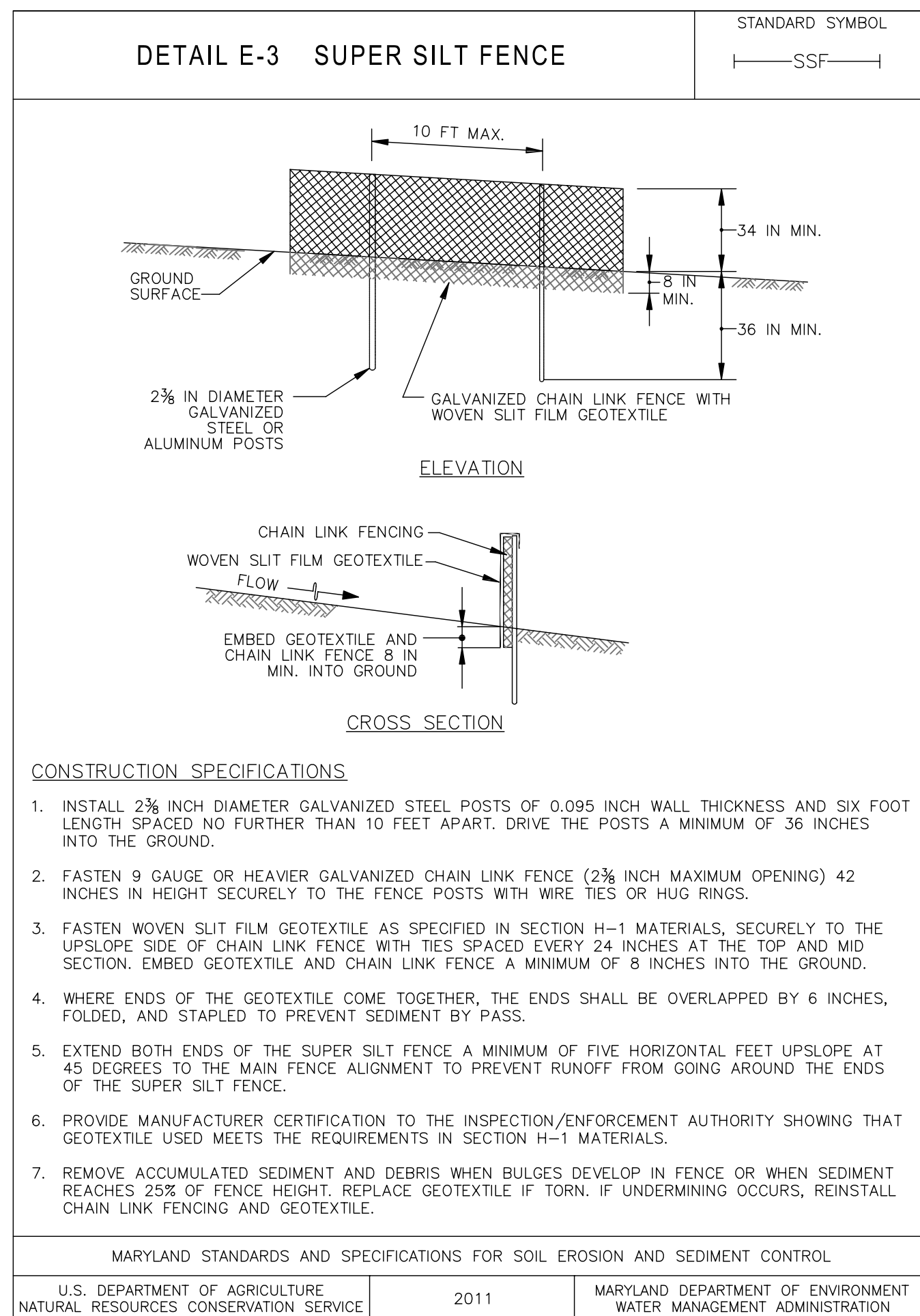
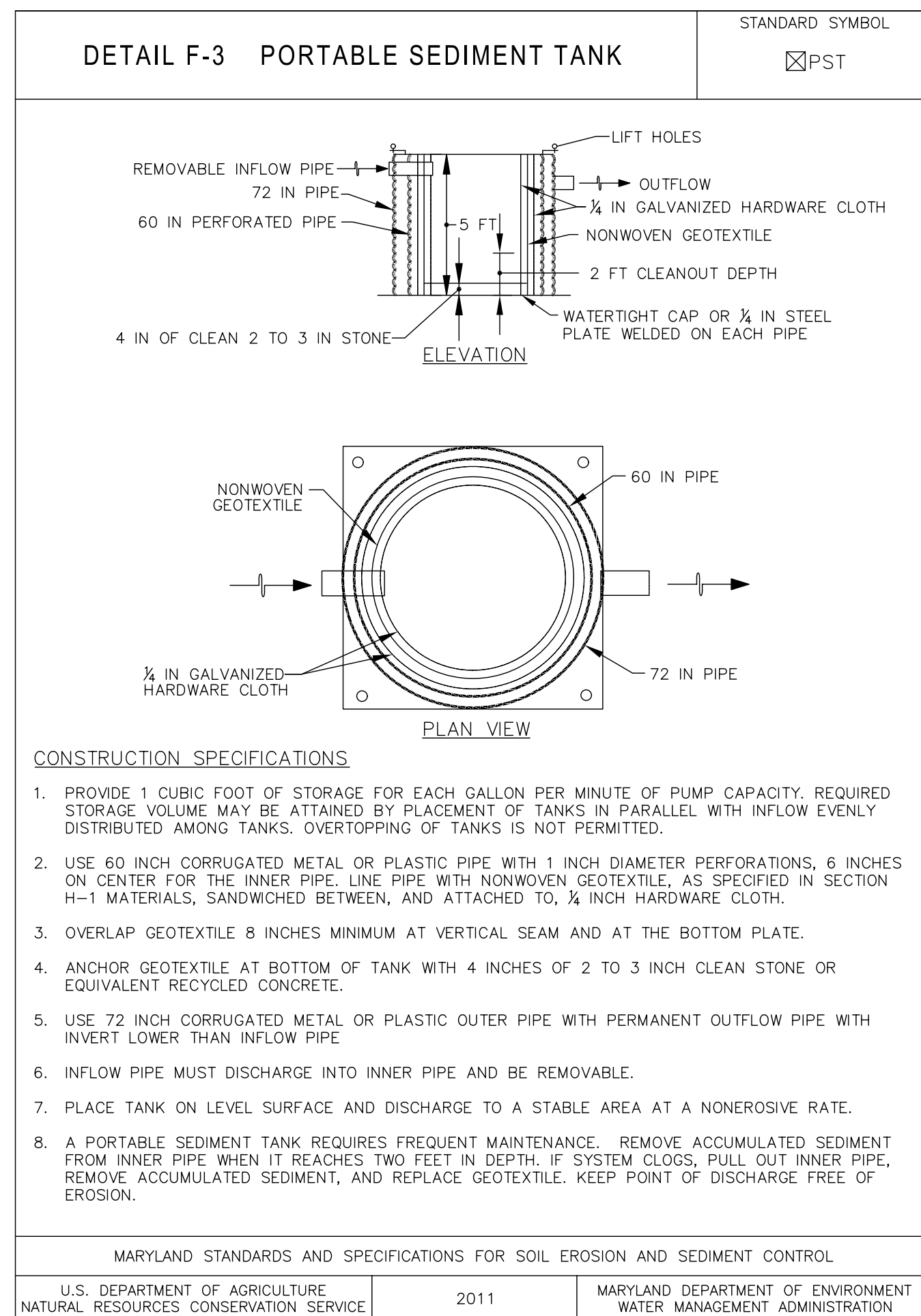
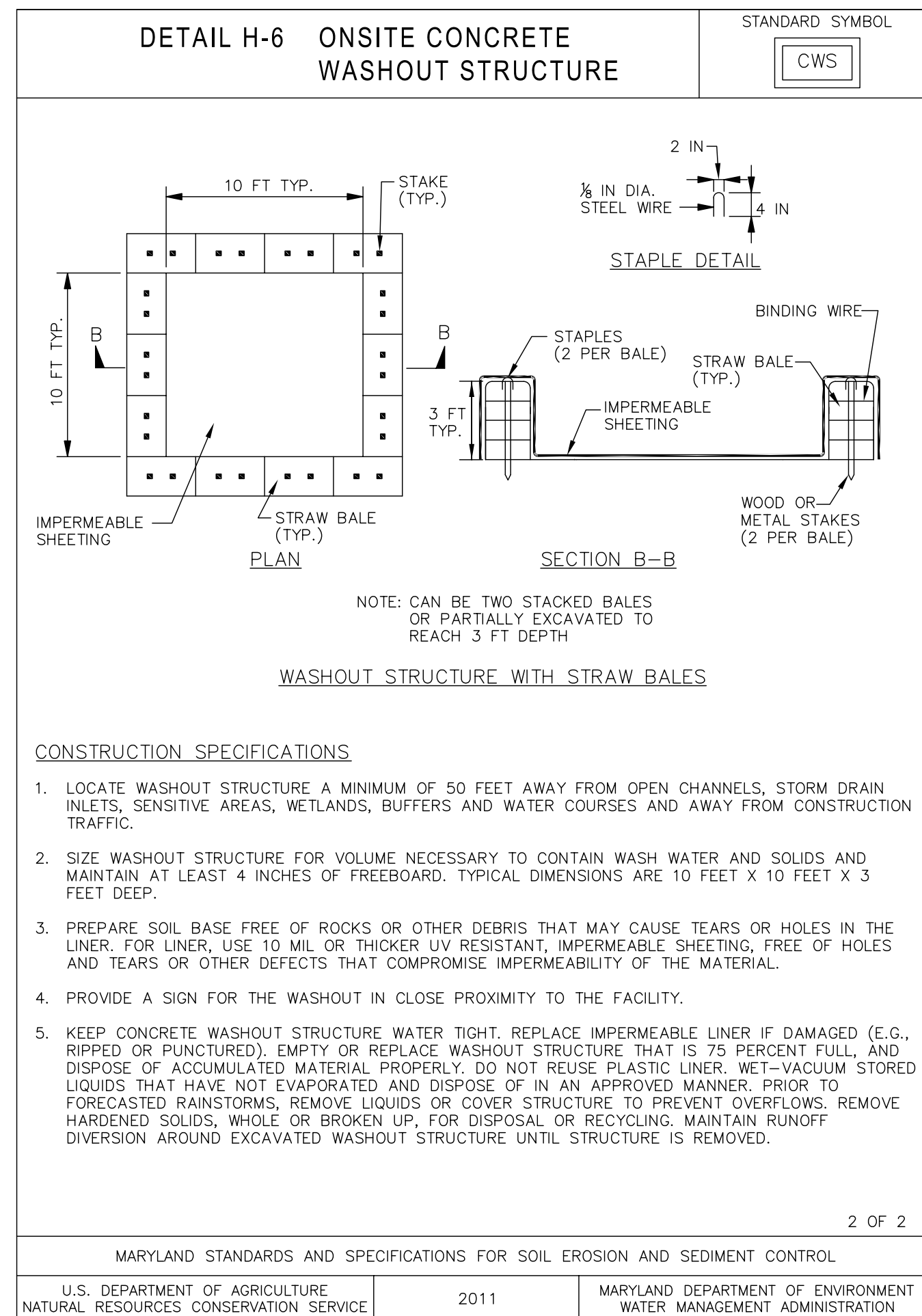
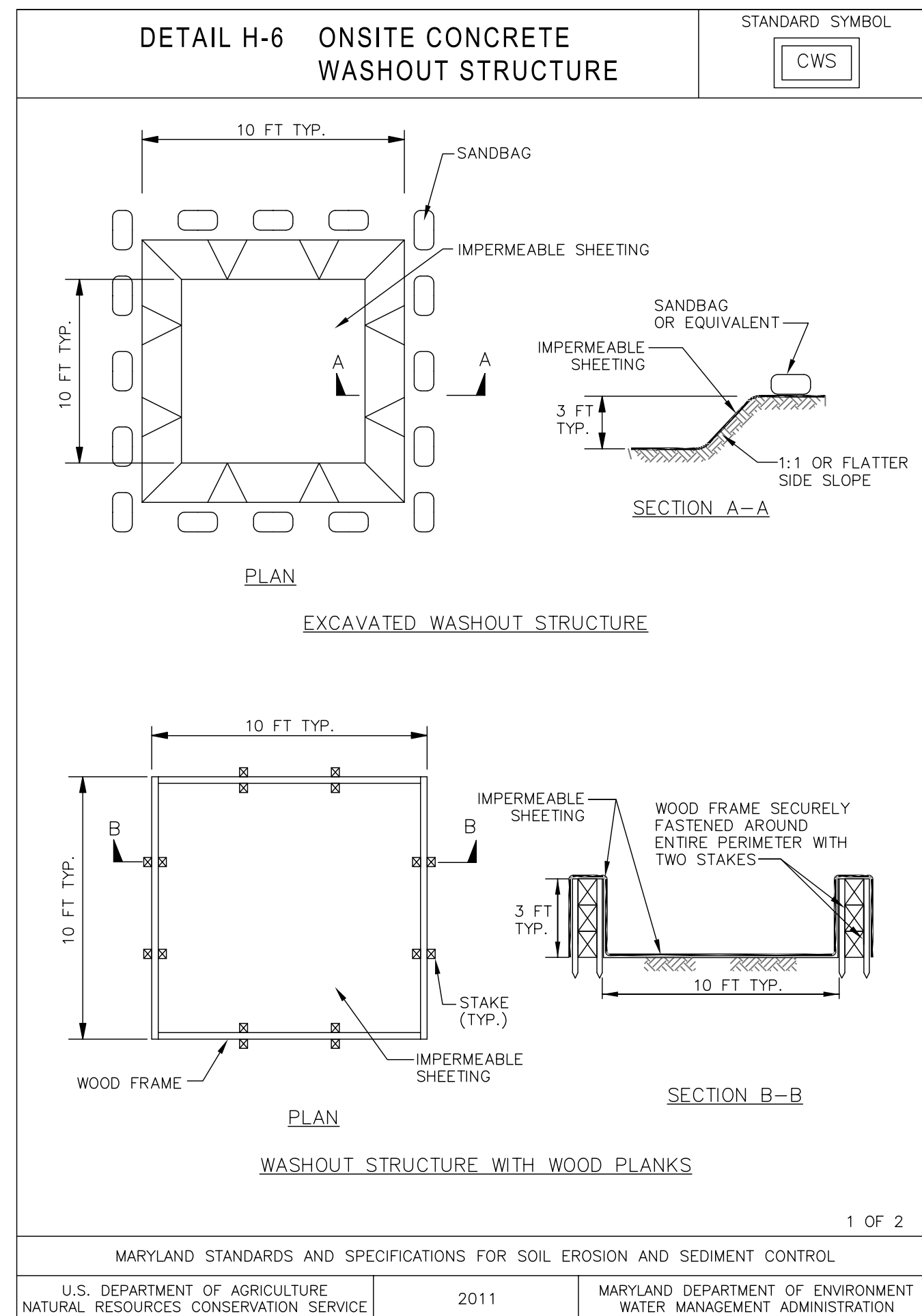
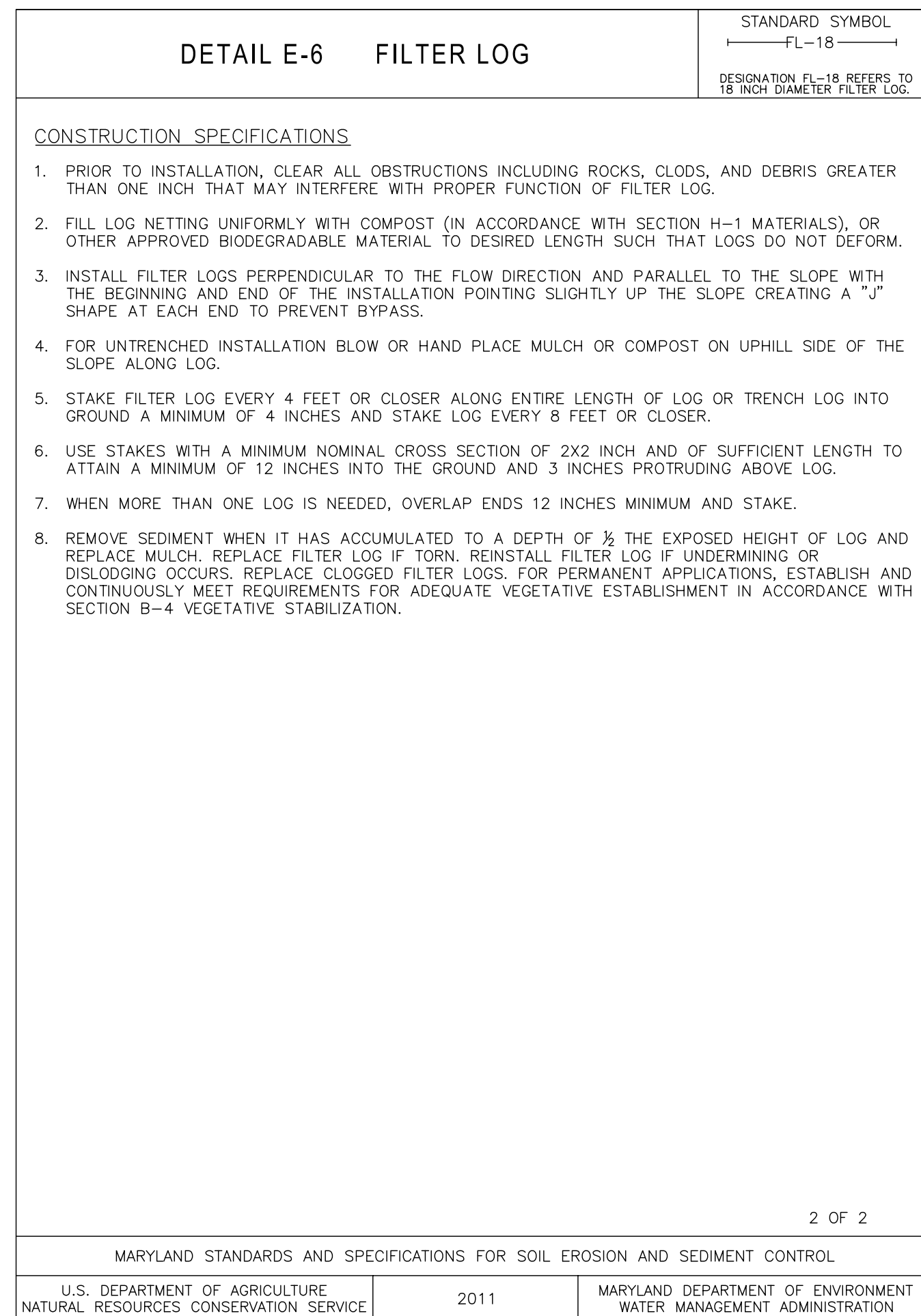
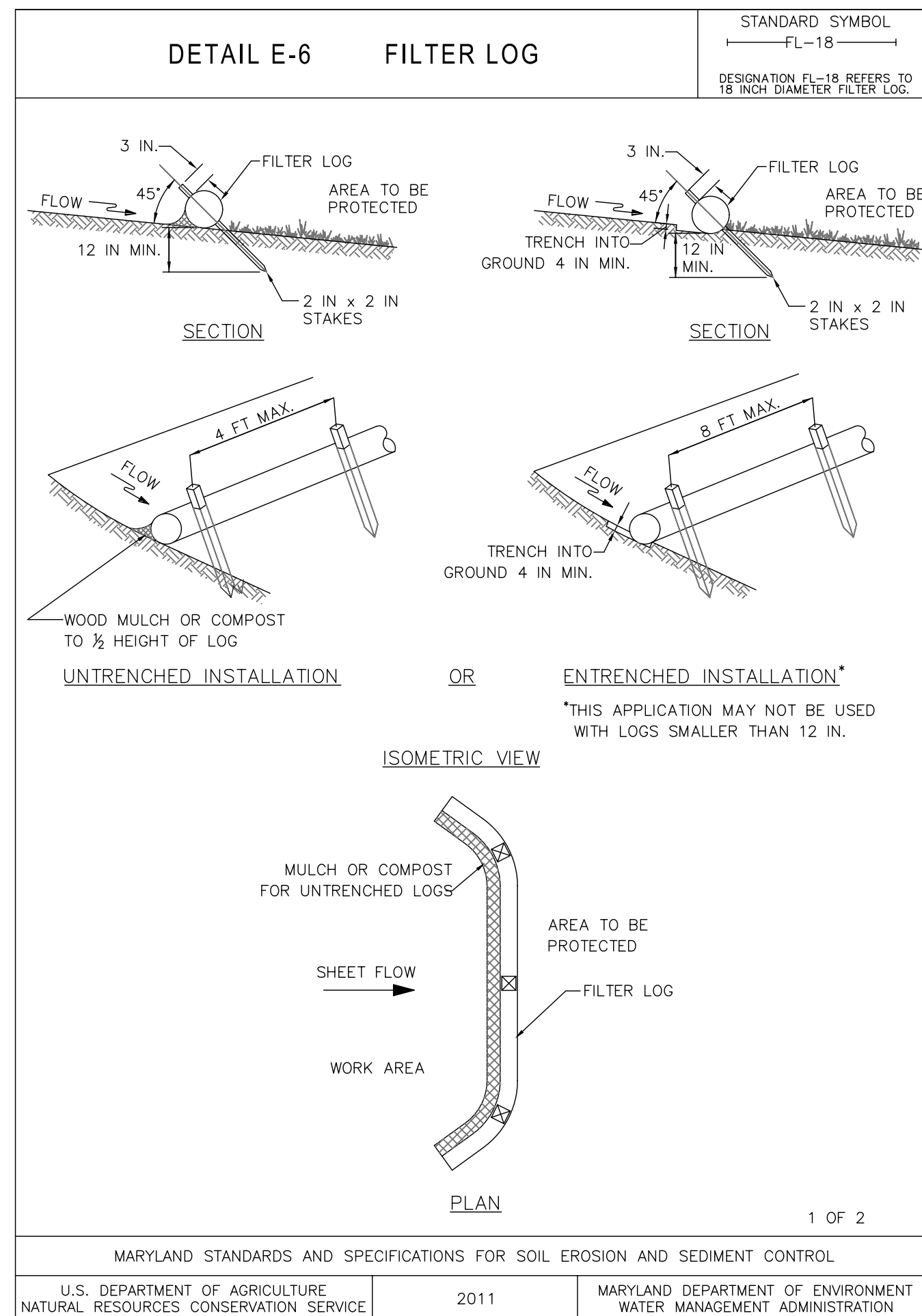
<p>MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND</p>	
<p>RECOMMENDED FOR APPROVAL</p>	
<p><u>REFER TO TITLE SHEET FOR SIGNATURES</u></p>	
Chief, Design Section	Date
<p>APPROVED</p>	
<p><u>REFER TO TITLE SHEET FOR SIGNATURES</u></p>	
Chief, Division of Transportation Engineering	Date
Designed by: <u>KJS</u>	Drawn by: <u>JB</u> Checked by: <u>DZ</u>

SC-01 NOTES SHEET
EROSION AND SEDIMENT CONTROL
GOOD HOPE ROAD
SHARED USE PATH

SCALE: NOT TO SCALE DATE: DECEMBER 2021

Project No. : 501902 SHEET 26 of 135





TREE PRESERVATION NOTES

COORDINATE ALL TREE PRESERVATION ACTIVITIES WITH EROSION & SEDIMENT CONTROL ACTIVITIES AND THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR.

1.

PLACE TREE PROTECTION FENCE AS INDICATED ON THE PLANS AND AS PER THE DIRECTION OF THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR PRIOR TO CONSTRUCTION ACTIVITIES.

2.

FOR UNDERGROUND UTILITY CONSTRUCTION, ALL TREE PROTECTION MEASURES AND EXCAVATION OPERATIONS SHALL HAVE ADDITIONAL SUPERVISION PROVIDED BY THE COUNTY ARBORIST. UTILITY WORK SHALL BE CONDUCTED SO AS TO AVOID INJURY TO THE TREE TRUNKS, BRANCHES, AND ROOTS.

3.

MAINTAIN WELL-DEFINED AND MARKED PEDESTRIAN WALKWAYS DURING CONSTRUCTION AND DO NOT ALLOW PEDESTRIAN TRAFFIC OVER TREE ROOTS.

4.

NONE OF THE FOLLOWING SHALL OCCUR WITHIN THE CRITICAL ROOT ZONE OF A STREET TREE WITHOUT THE COUNTY ARBORIST'S PERMISSION: ALTERATION OR DISTURBANCE TO EXISTING GRADE, STAGING/STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, OR DEBRIS; DISPOSAL OF ANY LIQUIDS E.G. CONCRETE, GAS, OIL, PAINT; AND BLACKTOP, AND TRENCHING.

5.

NO HEAVY EQUIPMENT SHALL BE USED TO REMOVE EXISTING HARDSCAPE WITHIN THE DRIPLINE OF AN EXISTING STREET TREE. EXCAVATIONS WITHIN THE DRIP LINE SHALL PROCEED WITH CARE BY USE OF HAND TOOLS OR EQUIPMENT THAT WILL NOT CAUSE INJURY TO TREE TRUNKS, BRANCHES, AND ROOTS.

6.

NO ROOTS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE CUT WITHOUT THE PERMISSION OF THE COUNTY ARBORIST.

7.

PERFORM AERATION OPERATIONS AROUND TREE ROOTS AND GRASS PANEL AREAS TO IMPROVE DRAINAGE IN COMPACTED SOILS.

MATERIALS PLACED IN CLOSE PROXIMITY TO TREE ROOTS SHOULD BE AS SELF-CONTAINED AS POSSIBLE TO PREVENT FUTURE LEACHING OF MATERIALS AND CHEMICALS INTO SOILS.

10.

MINIMIZE EXPOSURE OF ROOTS DURING CONSTRUCTION WHEN WORK IS PERFORMED IN COLD OR HOT WEATHER.

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

MANPCPC PERMIT NO. 2020-034

PARK J33

REVIEWED BY Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

**THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION**

This approval is for technical review only.
For permit information, contact Jay Childs,
Construction Supervisor at (301) 495-2574

[illegible]

This approval is for technical review only.
For permit information, contact Jay Childs,
Construction Supervisor at (301) 495-2574.



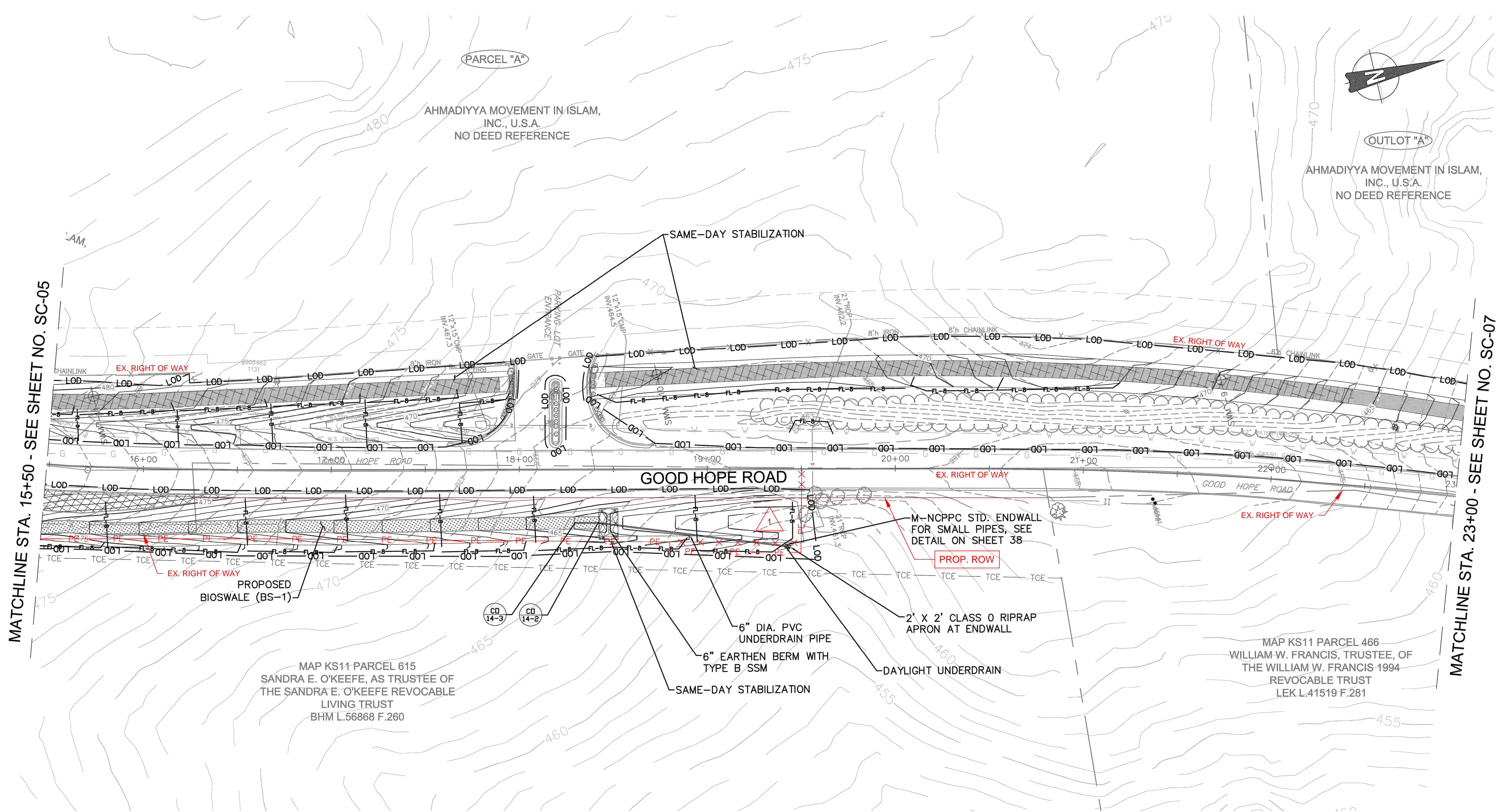
STRUCTURAL SOIL BORING

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. REMOVE AND RESET FILTER LOGS AS NEEDED TO FACILITATE CONSTRUCTION. ALL TEMPORARILY REMOVED FILTER LOGS SHALL BE REINSTALLED AT THE END OF EACH WORK DAY UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE MCDPS INSPECTOR.
4. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
5. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
6. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
7. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

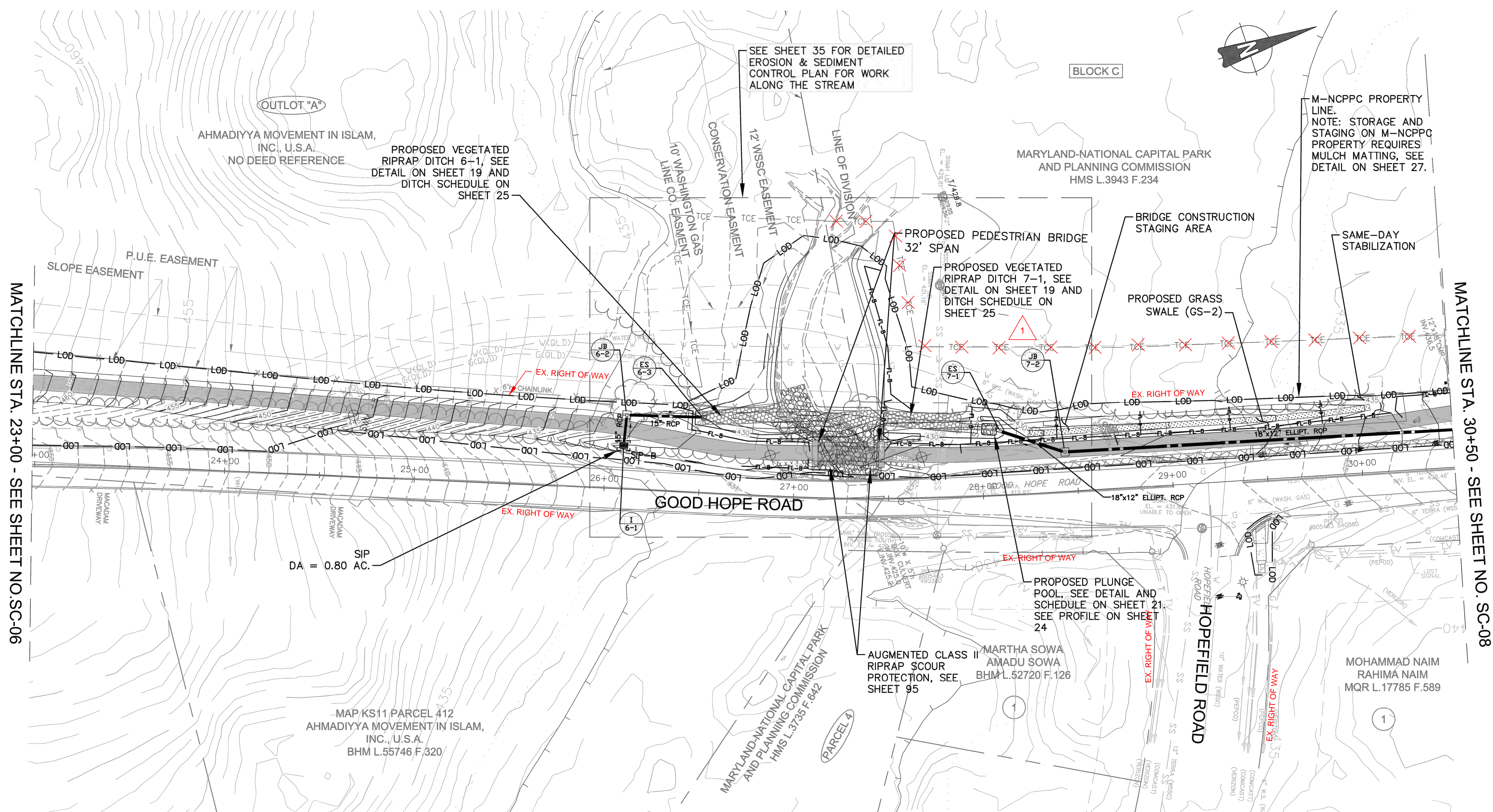
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Chief, Division of Transportation Engineering

Project No. : 501902 SHEET 30 of 135



	REVISED ROW/EASEMENT LINES	5/10/2022	KJS		MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	SC-06 PLAN SHEET EROSION AND SEDIMENT CONTROL
					RECOMMENDED FOR APPROVAL	GOOD HOPE ROAD SHARED USE PATH
					REFER TO TITLE SHEET FOR SIGNATURES	
					Chief, Design Section _____ Date _____	
					APPROVED	
					REFER TO TITLE SHEET FOR SIGNATURES	
					Chief, Division of Transportation Engineering _____ Date _____	 DATUM: NAD 83(2011) HORIZ NAVD 88 VERT SCALE: 1"= 30' DATE: DECEMBER 2021
NO.	REVISION	DATE	BY		Designed by: <u>KJS</u> Drawn by: <u>KJS</u> Checked by: <u>DZ</u>	Project No.: <u>501902</u> SHEET <u>31</u> of <u>135</u>



LIMIT OF DISTURBANCE	—— LOD —— LOD ——
PERPETUAL EASEMENT	—— PE —— PE ——
TEMPORARY CONSTRUCTION EASEMENT	—— TCE —— TCE ——
EX. MAJOR CONTOUR	- - - - -
EX. MINOR CONTOUR	- - - - -
PROP. MAJOR CONTOUR	—————
PROP. MINOR CONTOUR	—————

PAVEMENT REMOVAL 

PROPOSED ASPHALT

PROPOSED PERMEABLE PAVEMENT

VEGETATED RIPRAP

RIPRAP

SWM FACILITY BOTTOM

STORMWATER MANAGEMENT
SOIL BORING

STRUCTURAL SOIL BORING

100-YR FLOODPLAIN

25-FT BUFFER

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
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7. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SAME-DAY STABILIZATION IS REQUIRED FOR ALL AREAS NOT DRAINING TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.

[illegible]

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

REFER TO TITLE SHEET FOR SIGNATURES

Chief, Design Section

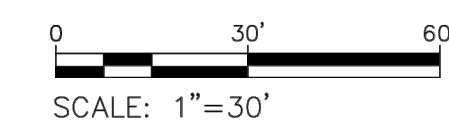
APPROVED

REFER TO TITLE SHEET FOR SIGNATURES

Designed by: KJS Drawn by: KJS Checked by: _____

SC-07 PLAN SHEET
EROSION AND SEDIMENT CONTROL

GOOD HOPE ROAD
SHARED USE PATH



DATUM: NAD 83(2011) HORIZ
NAVD 88 VERT
DATE: DECEMBER 2021

Project No. : 501902 SHEET 32 of 135



1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
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LIMIT OF DISTURBANCE ——— LOD ——— LOD ———

PERPETUAL EASEMENT ——— PE ——— PE ———

TEMPORARY CONSTRUCTION
EASEMENT ——— TCE ——— TCE ———



EX. MAJOR CONTOUR ——— ——— ——— ——— ———

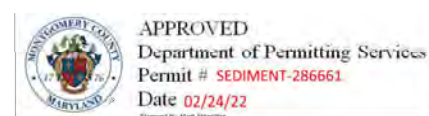
EX. MINOR CONTOUR - - - - -

PROP. MAJOR CONTOUR ——— ——— ——— ——— ———

PROP. MINOR CONTOUR - - - - -

STRUCTURAL SOIL BORING ϕ STRC -6

<div></div> REVISED ROW/EASEMENT LINES				5/10/2022	KJS	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND				SC-08 PLAN SHEET EROSION AND SEDIMENT CONTROL GOOD HOPE ROAD SHARED USE PATH			
						RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES				030'60'  DATUM: NAD 83(2011) HORIZ NAVD 88 VERT SCALE: 1"=30' DATE: DECEMBER 2021			
						Chief, Design Section _____ Date _____ APPROVED							
						REFER TO TITLE SHEET FOR SIGNATURES							
						Chief, Division of Transportation Engineering _____ Date _____							
NO.	REVISION	DATE	BY	Designed by: <u>KJS</u> Drawn by: <u>KJS</u> Checked by: <u>DZ</u>				Project No. : <u>501902</u> SHEET <u>33</u> of <u>135</u>					

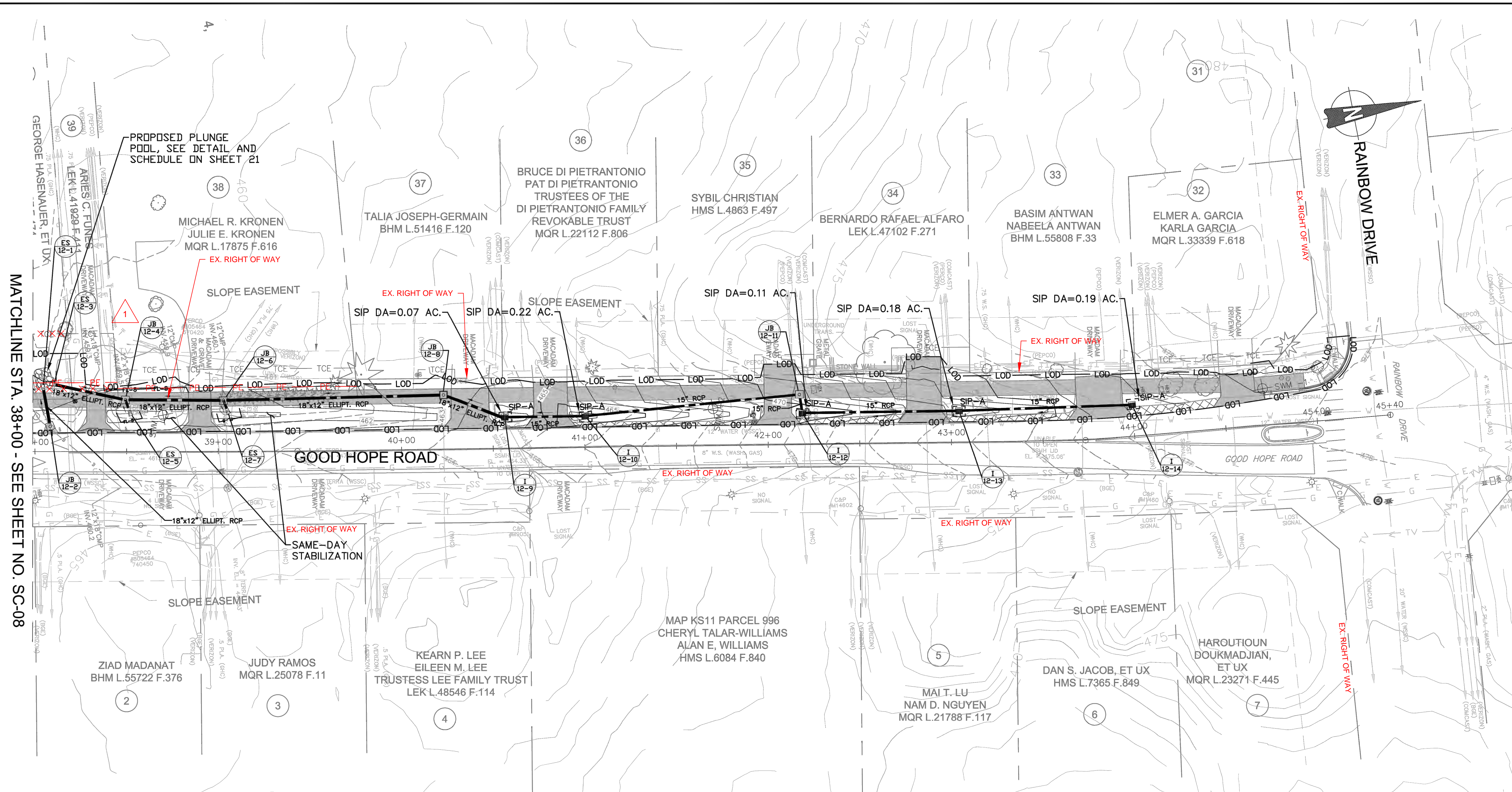


THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

MANCORE PERMIT NO. 2020-034
PARK J33
REVIEWED BY Brian Lewandowski
APPROVED BY B. Lewandowski
CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/14/2021

**THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION**

*This approval is for technical review only.
For permit inspection, contact Jay Chiles,
Construction Inspection at (800) 459-2574*



LEGEND

LIMIT OF DISTURBANCE — LOD — LOD —

PERPETUAL EASEMENT — PE — PE —

TEMPORARY CONSTRUCTION EASEMENT ——— TCE ——— TCE ———

EX. MAJOR CONTOUR — — — — —

EX. MINOR CONTOUR -----

PROP. MAJOR CONTOUR _____

PROP. MINOR CONTOUR _____

STANDARD INLET PROTECTION SIPPAVEMENT REMOVAL PROPOSED ASPHALT PROPOSED PERMEABLE PAVEMENT 

VEGETATED RIPRAP 

RIPRAP

SWM FACILITY BOTTOM STORMWATER MANAGEMENT  SWM -1

SOIL BORING | STRC -6

STRUCTURAL SOIL BORING STRC -6



GENERAL NOTES:

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RJM ENGINEERING

				REVISD ROW/EASEMENT LINES				5/10/2022				KJS				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND												SC-09 PLAN SHEET EROSION AND SEDIMENT CONTROL											
																RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES												GOOD HOPE ROAD SHARED USE PATH											
																Chief, Design Section _____ Date _____ APPROVED												 DATUM: NAD 83(2011) HORIZ NAVD 88 VERT											
																REFER TO TITLE SHEET FOR SIGNATURES												SCALE: 1"=30'											
																Chief, Division of Transportation Engineering _____ Date _____												DATE: DECEMBER 2021											
NO.				REVISION				DATE				BY				Designed by: <u>KJS</u> Drawn by: <u>KJS</u> Checked by: <u>DZ</u>												Project No.: <u>501902</u>											
																SHEET <u>34</u> of <u>135</u>																							

GENERAL NOTES:

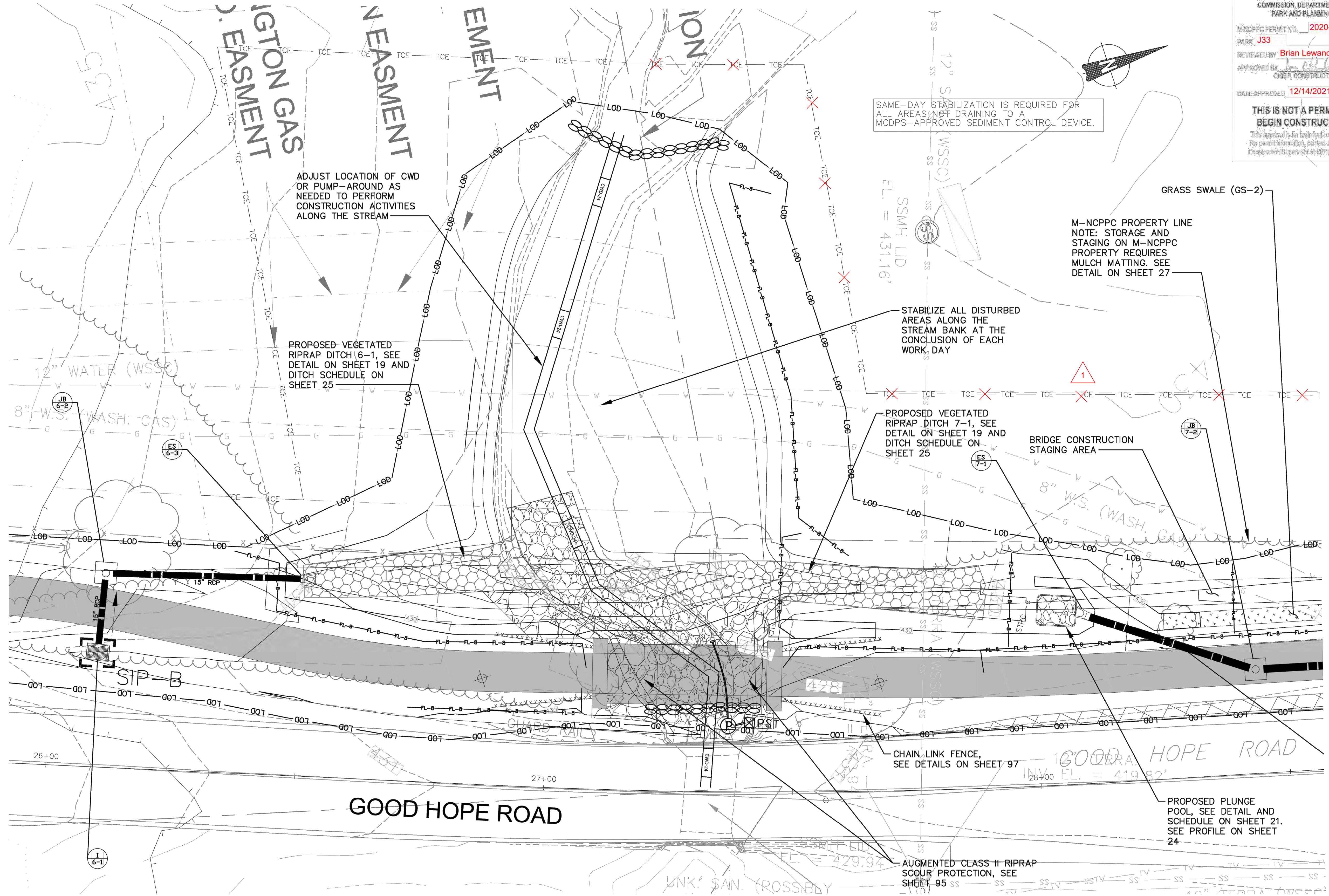
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SEQUENCE OF CONSTRUCTION:

1. INSTALL MAINTENANCE OF STREAMFLOW MEASURES. A PUMP-AROUND PRACTICE MAY BE USED IN LIEU OF A GRAVITY CLEARWATER DIVERSION (CWD) PIPE.
2. PERFORM PROPOSED GRADING ALONG THE STREAM BANKS, STABILIZING THE DISTURBED AREA AT THE CONCLUSION OF EACH WORK DAY.
3. CONSTRUCT RIPRAP-LINED DRAINAGE DITCHES FROM DOWNSLOPE TO UPSLOPE. STABILIZE WITH RIPRAP AT THE END OF EACH WORK DAY.
4. DURING A 3-DAY, DRY-WEATHER FORECAST, COMPLETE THE EXCAVATION FOR THE ABUTMENT FOUNDATIONS. DEWATERING OF THE EXCAVATION SHALL BE PERFORMED BY PUMPING THROUGH A PORTABLE SEDIMENT TANK (PST) OR MCDPS-APPROVED FILTERING PRACTICE. CONSTRUCT THE ABUTMENT AND STABILIZE THE SURROUNDING AREA WITH RIPRAP AS INDICATED ON THE PLANS.
5. INSTALL THE RIFFLE GRADE CONTROL AS INDICATED ON THE STREAM RESTORATION PLANS, SEE SHEET 98. ADJUST THE LOCATION OF THE CWD PIPING OR PUMP-AROUND PIPING AS NEEDED TO COMPLETE THE IN-STREAM WORK.

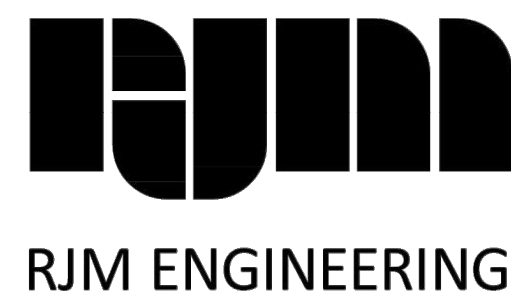
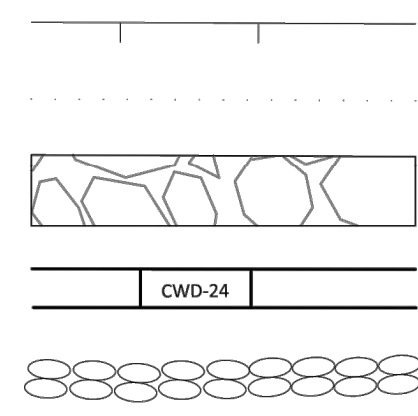
LEGEND

LIMIT OF DISTURBANCE	— LOD — LOD —
PERPETUAL EASEMENT	— PE — PE —
TEMPORARY CONSTRUCTION EASEMENT	— TCE — TCE —
EX. MAJOR CONTOUR	— — — — —
EX. MINOR CONTOUR	— · — · — · —
PROP. MAJOR CONTOUR	— — — — —
PROP. MINOR CONTOUR	— · — · — · —
STANDARD INLET PROTECTION	□ SIP
PAVEMENT REMOVAL	▨
PROPOSED ASPHALT	■
PROPOSED PERMEABLE PAVEMENT	▩
VEGETATED RIPRAP	▨
RIPRAP	▨
SWM FACILITY BOTTOM	▨
STORMWATER MANAGEMENT SOIL BORING	⊕ SWM -1
STRUCTURAL SOIL BORING	⊕ STRC -6



STREAM RESTORATION – EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 10'

100-YR FLOODPLAIN
25-FT BUFFER
VEGETATED RIPRAP
CLEARWATER DIVERSION PIPE
SANDBAG BARRIER



NO.	REVISION	DATE	BY
1	REVISED ROW/EASEMENT LINES	5/10/2022	KJS

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	DATE
APPROVED	
Chief, Division of Transportation Engineering	DATE
Designed by: KJS	Drawn by: KJS
Checked by: DZ	

SC-10 STREAMBANK ESC EROSION AND SEDIMENT CONTROL	
GOOD HOPE ROAD SHARED USE PATH	
0 10' 20'	
SCALE: 1"=10'	
DATUM: NAD 83(2011) HORIZ NAVD 88 VERT	
DATE: DECEMBER 2021	
Project No. : 501902	SHEET 35 of 135

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

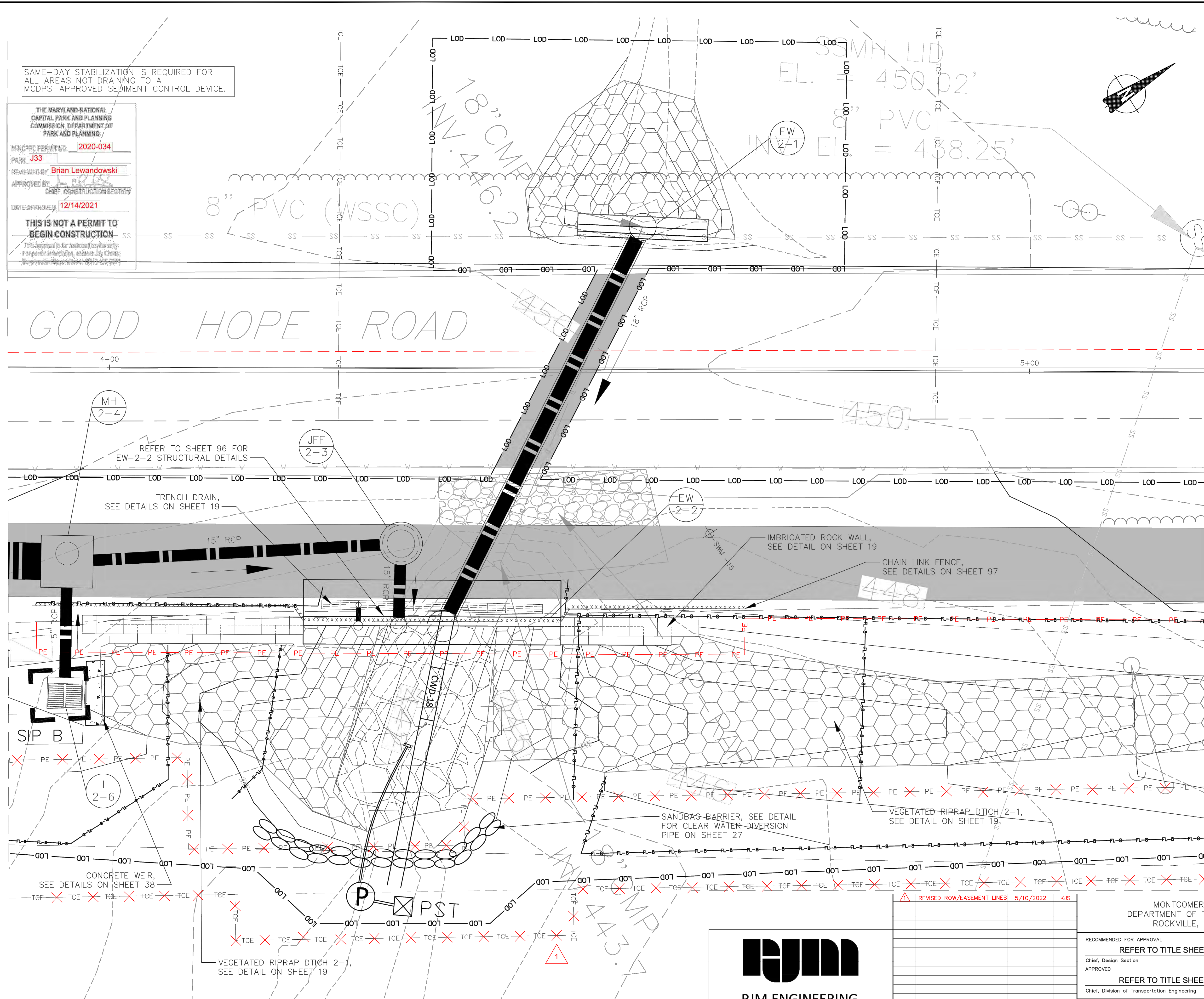
MANHATTAN PERMIT NO. 2020-034
PARK J33

REVIEWED BY Brian Lewandowski
APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION

This approval is for technical review only.
For permit information, contact City Clerk,
Construction Supervisor at (301) 495-2574















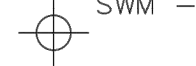
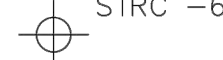



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 8. SAME DAY STABILIZATION TO BE STRICTLY ENFORCED IN THIS AREA.

SEQUENCE OF CONSTRUCTION:

1. DURING A 3-DAY DRY-WEATHER FORECAST, REPLACE EXISTING CULVERT UNDER GOOD HOPE ROAD.
2. INSTALL DIVERSION MEASURES. A PUMP-AROUND PRACTICE MAY BE USED IN LIEU OF A GRAVITY CLEARWATER DIVERSION (CWD) PIPE. ENSURE THE DIVERSION PIPING DISCHARGES TO A STABLE LOCATION IN A NON-EROSIVE MANNER.
3. INSTALL ENDWALLS EW-2-1 AND EW-2-2. PROVIDE SAME-DAY STABILIZATION OF THE AREA SURROUNDING EW-2-1 TO ENSURE SEDIMENT-LADEN RUNOFF IS NOT BYPASSED THROUGH THE CWD PIPE OR PUMP-AROUND PRACTICE. INSTALL PIPE FROM THE JELLYFISH FILTER JF-2-3 TO EW-2-2 AND CONNECTED DRAINAGE STRUCTURES AND PIPES. TAKE MEASURES SUCH AS TEMPORARILY PLUGGING PIPES AND INLETS TO ENSURE SEDIMENT-LADEN RUNOFF DOES NOT ENTER THE STORM DRAINS.
4. CONSTRUCT PLUNGE POOL AND STABILIZE WITH RIPRAP AT THE EW-2-2 OUTFALL.
5. CONSTRUCT THE VEGETATED RIPRAP DRAINAGE DITCHES FROM DOWNSLOPE TO UPSLOPE. STABILIZE WITH RIPRAP AT THE END OF EACH WORK DAY.
6. DEWATERING OF ALL EXCAVATIONS SHALL BE PERFORMED BY PUMPING THROUGH A PORTABLE SEDIMENT TANK (PST) OR MCDPS-APPROVED FILTERING PRACTICE.

LEGEND

LIMIT OF DISURBANCE 
 PERPETUAL EASEMENT 
 TEMPORARY CONSTRUCTION EASEMENT 
 EX. MAJOR CONTOUR 
 EX. MINOR CONTOUR 
 PROP. MAJOR CONTOUR 
 PROP. MINOR CONTOUR 
 STANDARD INLET PROTECTION 
 PAVEMENT REMOVAL 
 PROPOSED ASPHALT 
 PROPOSED PERMEABLE PAVEMENT 
 VEGETATED RIPRAP 
 RIPRAP 
 SWM FACILITY BOTTOM 
 STORMWATER MANAGEMENT SOIL BORING 
 STRUCTURAL SOIL BORING 

	REVISED ROW/EASEMENT LINES	5/10/2022	KJS	<p>MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND</p> <p>RECOMMENDED FOR APPROVAL</p> <p>REFER TO TITLE SHEET FOR SIGNATURES</p> <p>Chief, Design Section _____ Date _____</p> <p>APPROVED</p> <p>REFER TO TITLE SHEET FOR SIGNATURES</p> <p>Chief, Division of Transportation Engineering _____ Date _____</p> <p>Designed by: KJS Drawn by: KJS Checked by: DZ</p>	<p>SC-11 ENDWALL ESC EROSION AND SEDIMENT CONTROL</p> <p>GOOD HOPE ROAD SHARED USE PATH</p> <p>0 5' 10'</p> <p>DATUM: NAD 83(2011) HORIZ NAVD 88 VERT</p> <p>SCALE: 1"=5' DATE: DECEMBER 2021</p>
NO.	REVISION	DATE	RY	Project No.: 501902	SHEET 36 of 135



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Mitra Pedecore
Director

February 25, 2021

Mr. Kevin Schiefer, P.E.
RJM Engineering, Inc.
6031 University Blvd., Suite 290
Ellicott City, Maryland 21043

Re: **REVISED COMBINED PRELIMINARY AND FINAL WATER QUALITY PLAN/SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN** for
Good Hope Roadside Path
Preliminary Plan #: N/A
SM File #: 285258
Tract Size/Zone: 3.04 acres/RE-1 (Roadway)
Total Concept Area: 3.04 acres
Lots/Block: N/A
Parcel(s): N/A
Watershed: Upper Paint Branch SPA

Dear Mr. Schiefer:

Based on a review by the Department of Permitting Services Review Staff, the revised Preliminary and Final Water Quality Plan for the above-mentioned site is **acceptable**. The revised Preliminary and Final Water Quality Plan proposes to meet required stormwater management goals via bioswales, permeable pavement, a grass swale, and a structural filtering device. This approval is for elements of the Water Quality Plan of which DPS has lead agency responsibility and does not include limits on imperviousness or buffer encroachments.

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

- All structural filtering devices and underground storage pipes must meet the DPS access requirements as detailed in Water Resources Technical Policy #4 (WRTP-4).
- All the previously required conditions of approval as noted in the Preliminary and Final Water Quality Plan approval letter dated January 28, 2020 still apply.
- All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.

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 Water Quality Plan approval is based on all stormwater management structures being



2425 Reedie Drive, 7th Floor, Wheaton, Maryland 20902 | 240-777-0311
www.montgomerycountymd.gov/permitting-services

Mr. Kevin Schiefer, P.E.
February 25, 2021
Page 2 of 2

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.

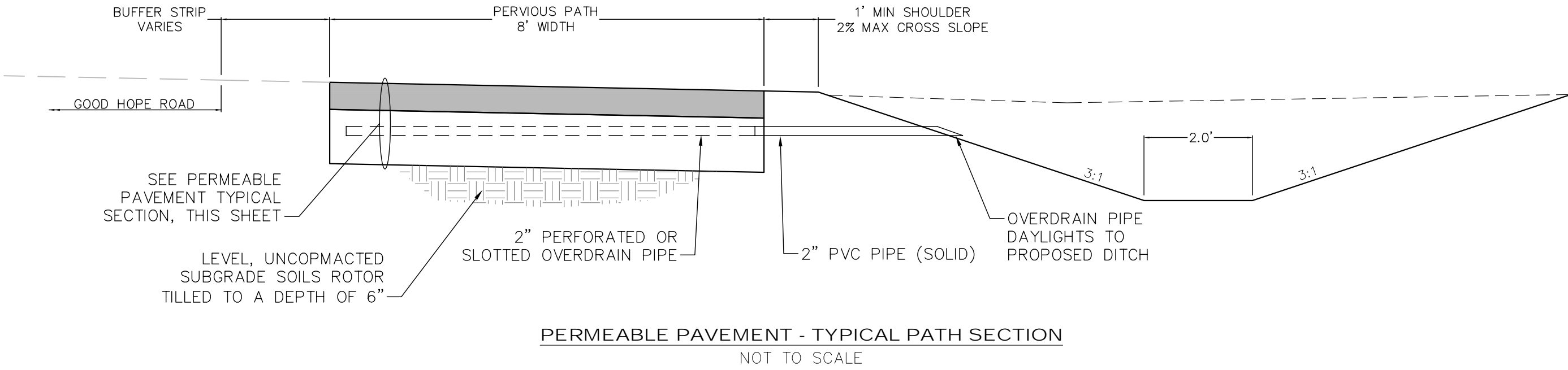
If you have any questions regarding these actions, please feel free to contact Leo Galanko at 240-777-6242.

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

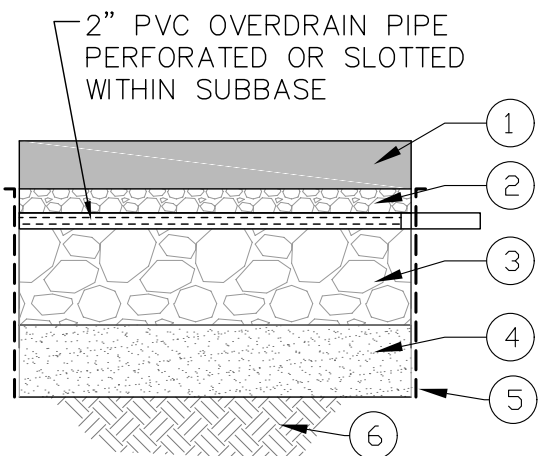
MCE:img

cc: N. Braunstein
SM File # 285258

ESD: Required/Provided 7,278 cf / 6,042 cf
PE: Target/Achieved: 1.97/1.8
STRUCTURAL: 1,468 cf
WAIVED: 0 ac.

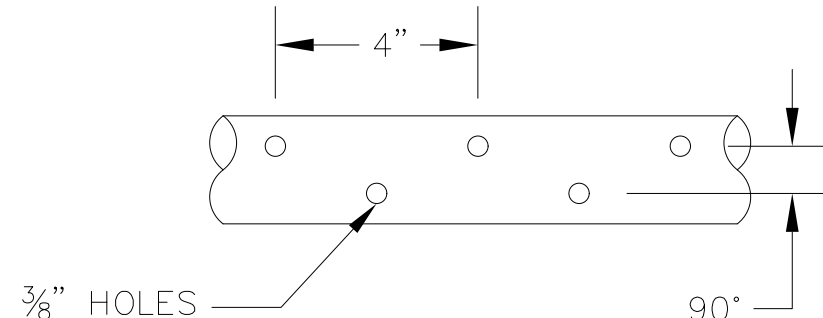


PERMEABLE PAVEMENT - TYPICAL PATH SECTION
NOT TO SCALE



- 4" POROUS CONCRETE
- 2" AGGREGATE CHOKER COURSE CONSISTING OF WASHED AASHTO NO. 57 STONE
- VARIABLE DEPTH WASHED AASHTO NO. 7 STONE.
- 6" SAND, WASHED ASTM C-33 FINE AGGREGATE CONCRETE SAND
- GEOTEXTILE CLASS PE (TYPE III) SIDES ONLY. MIRAFI 140 N OR MCDPS APPROVED EQUIVALENT
- UNCOMPACTED SUBGRADE ROTOR TILLED TO A DEPTH OF 6"

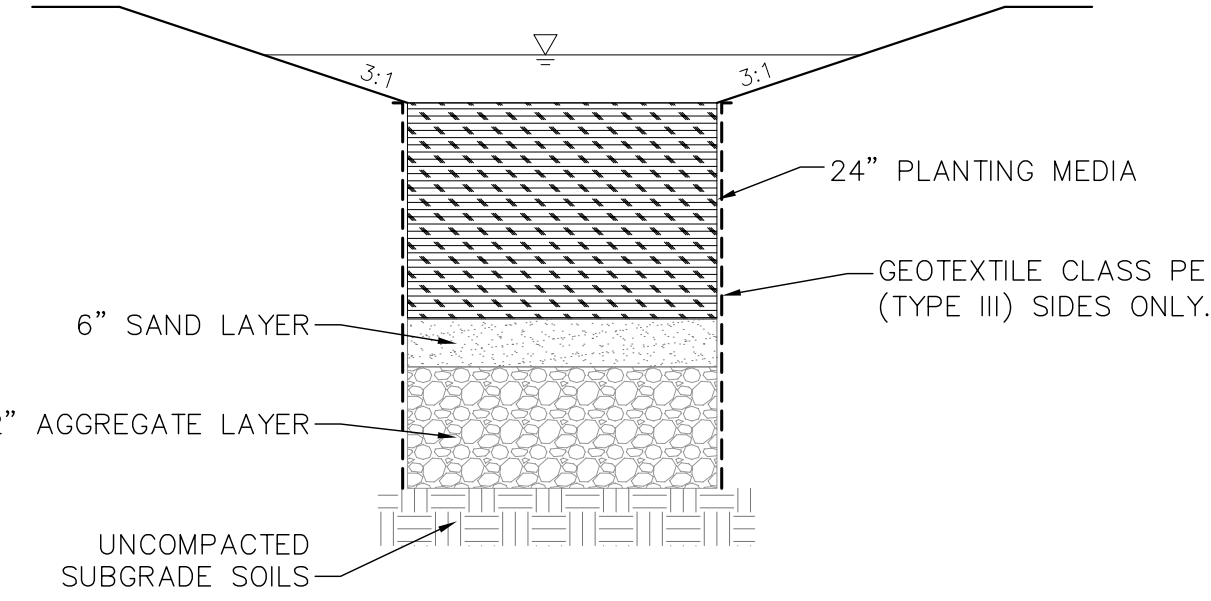
PERMEABLE PAVEMENT - TYPICAL PAVEMENT SECTION
NOT TO SCALE



NOTES:

- SCHEDULE 40 PVC PIPE.
- IF SLOTTED PIPE IS USED IN LIEU OF PERFORATED PIPE, SLOTS SHALL HAVE 0.075" MINIMUM WIDTH, SPACED NO MORE THAN 1/2".

PERFORATED OVERDRAIN PIPE DETAIL
NOT TO SCALE



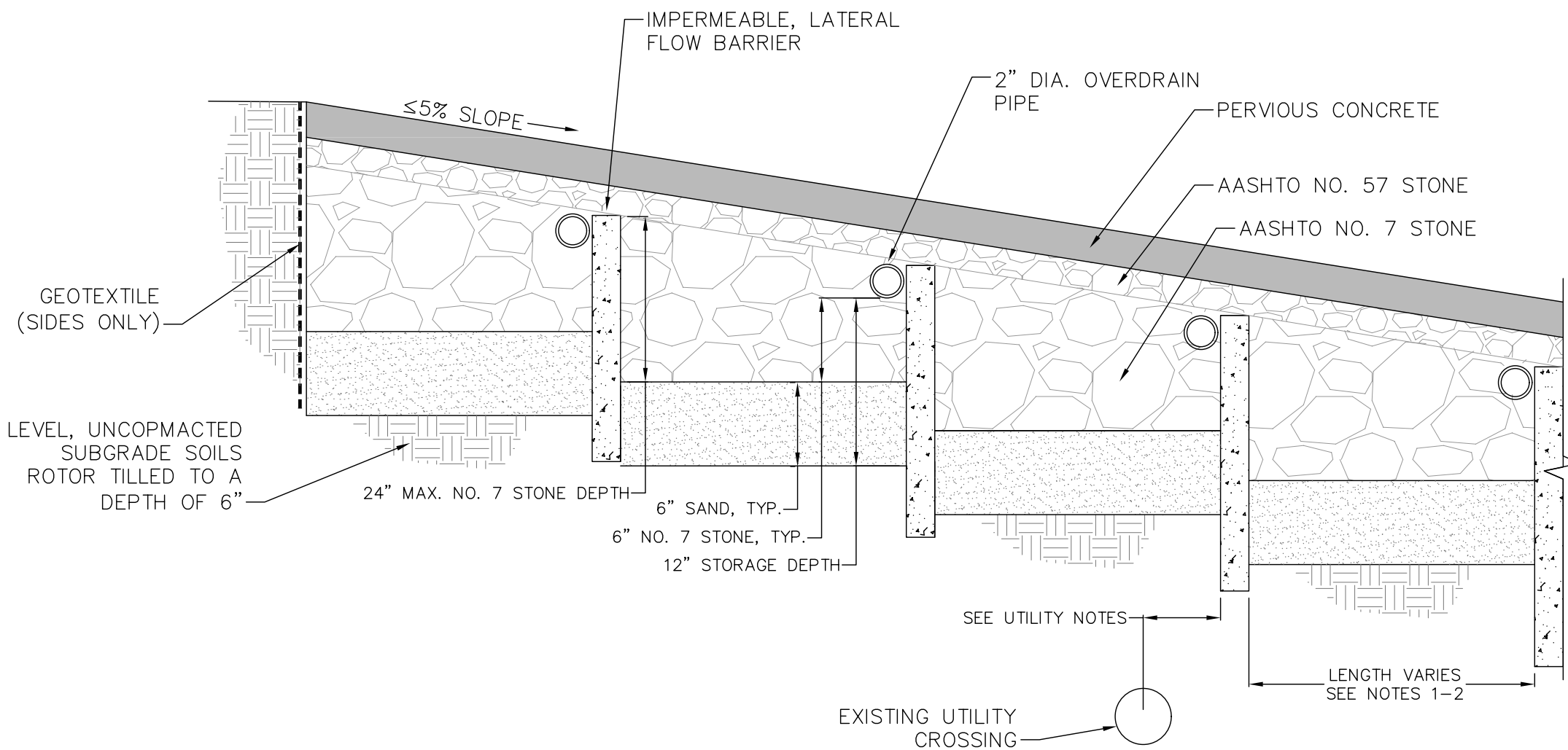
BIOSWALE - TYPICAL SECTION
NOT TO SCALE

FROM STA. 14+24 TO STA. 17+90

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR PERMEABLE PAVEMENTS		
STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS Inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS Inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		
1. Excavation to subgrade conforms to approved plans		
2. Placement and backfill of any drainage or distribution systems conforms to approved plans		
3. Placement of crushed stone subbase conforms to approved plans		
4. Placement of surface material conforms to approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

FROM STA. 18+46 TO STA. 22+40

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR PERMEABLE PAVEMENTS		
STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS Inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS Inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		
1. Excavation to subgrade conforms to approved plans		
2. Placement and backfill of any drainage or distribution systems conforms to approved plans		
3. Placement of crushed stone subbase conforms to approved plans		
4. Placement of surface material conforms to approved plans		
5. Final grading and permanent stabilization conforms to approved plans		



UTILITY NOTES:

- PRIOR TO PATH CONSTRUCTION, VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITY CROSSINGS.
- SPACE IMPERMEABLE FLOW BARRIERS, SO THE DEPTH OF NO. 7 STONE IS MINIMIZED, THUS MAXIMIZING THE VERTICAL CLEARANCE BETWEEN THE EXISTING UTILITY AND THE BOTTOM OF THE PERMEABLE PAVEMENT SECTION.

NOTES:

- DISTANCE BETWEEN LATERAL BARRIERS AND OVERDRAIN PIPES VARIES BASED ON SLOPE. MAXIMUM DEPTH FROM TOP OF LATERAL FLOW BARRIER TOP OF SAND LAYER SHALL NOT EXCEED 24" MAX.
- LENGTH SHALL NOT EXCEED 150'.

PERMEABLE PAVEMENT - STEPPED BASE TYPICAL SECTION
NOT TO SCALE

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034

PARK J33

REVIEWED BY: Brian Lewandowski

APPROVED BY: [Signature] CHIEF, CONSTRUCTION SECTION

DATE APPROVED: 12/14/2021

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

RJM
RJM ENGINEERING

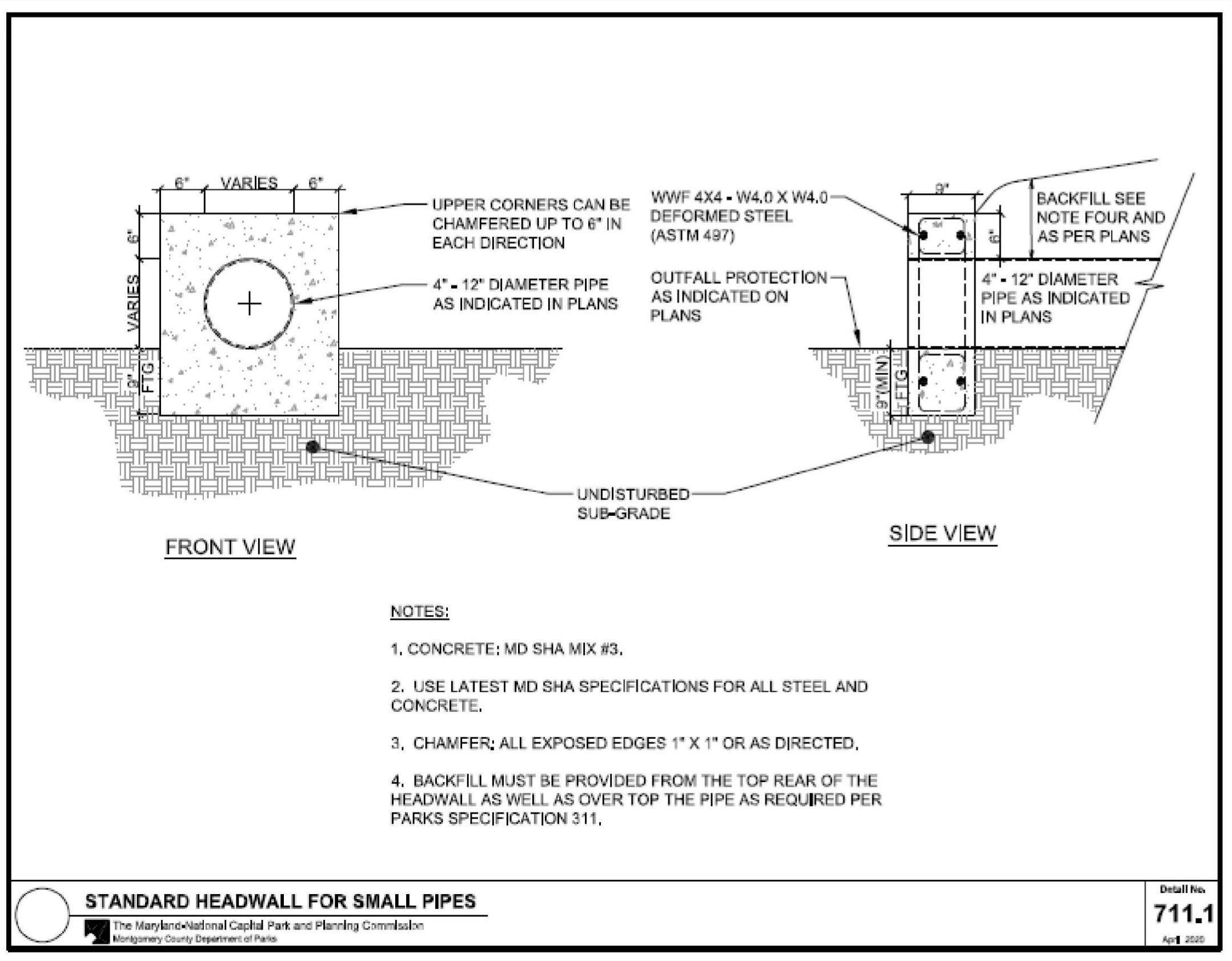
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND				RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES Chief, Design Section Date APPROVED		REFER TO TITLE SHEET FOR SIGNATURES Chief, Division of Transportation Engineering Date		Designed by: KJS Drawn by: JB Checked by: DZ			
NO.	REVISION	DATE	BY	Project No.: 501902		SHEET 37 of 135		SCALE: NOT TO SCALE		DATE: DECEMBER 2021	

SWM-01 DETAIL SHEET
STORMWATER MANAGEMENT
GOOD HOPE ROAD
SHARED USE PATH

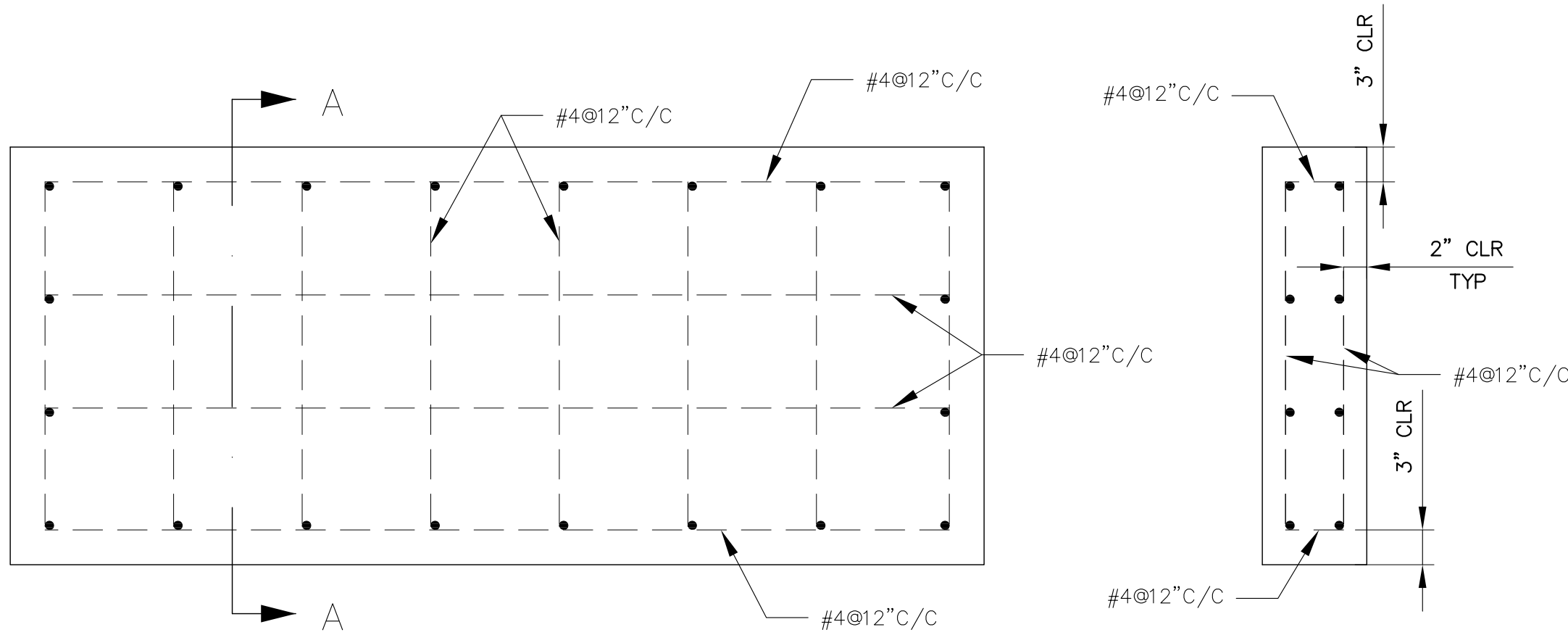
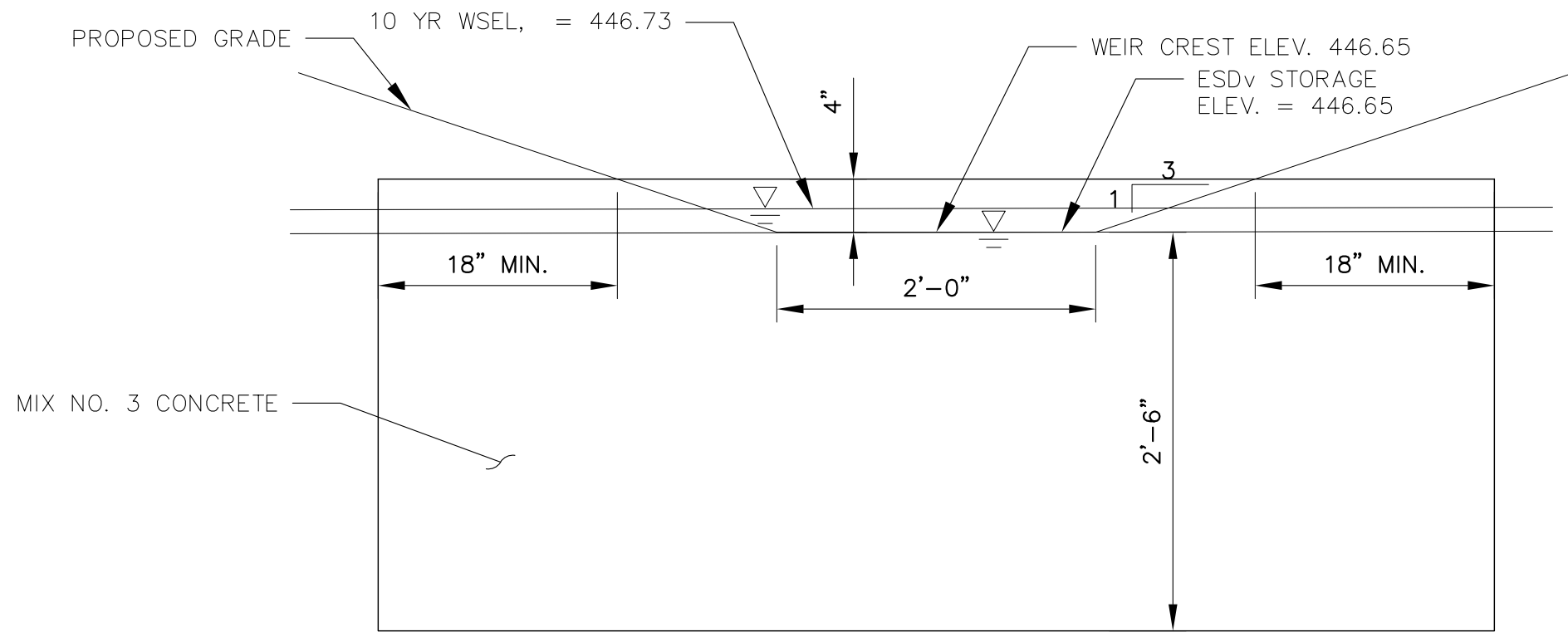
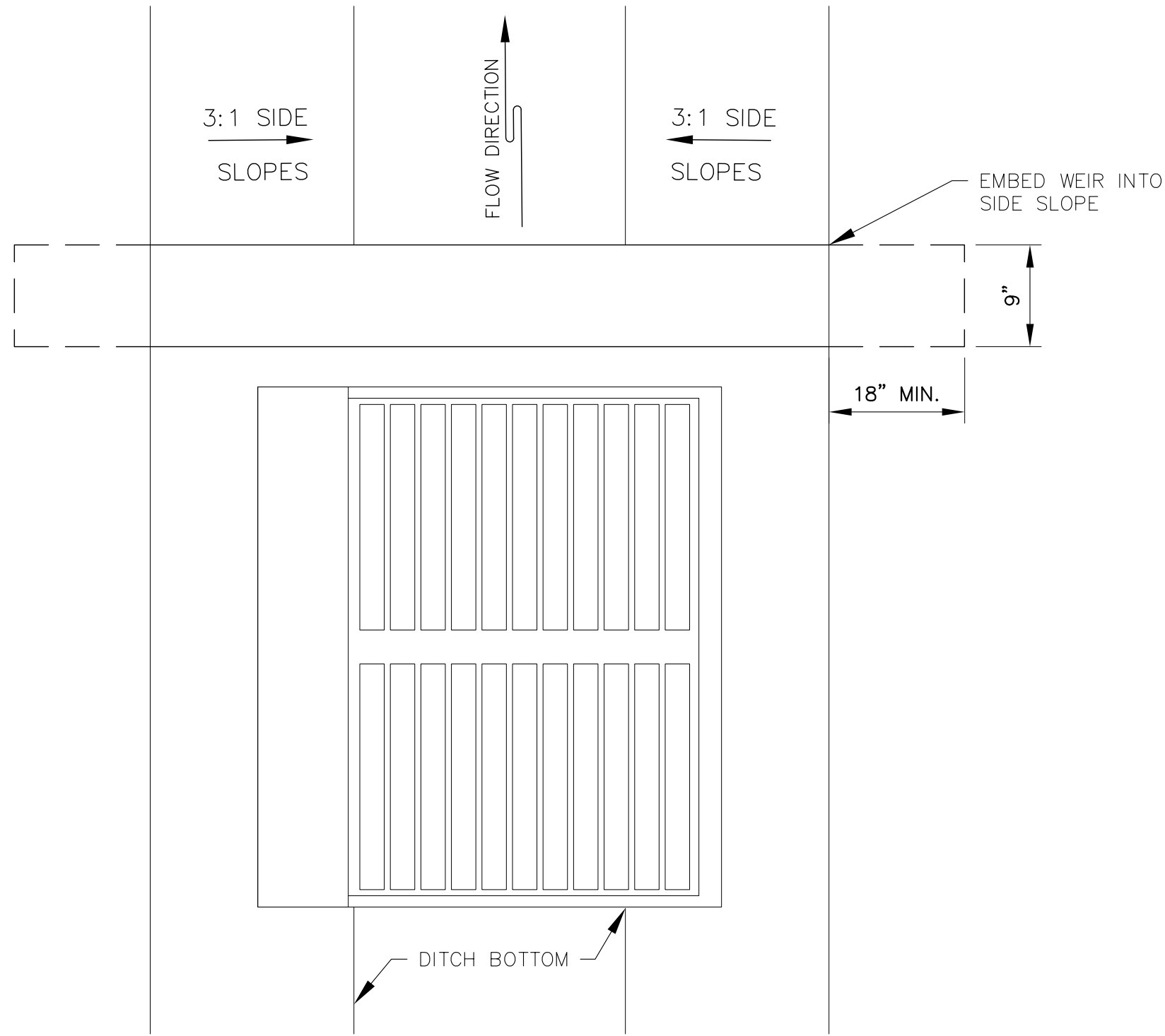
THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034
PARK J33
REVIEWED BY Brian Lewandowski
APPROVED BY
CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/14/2021

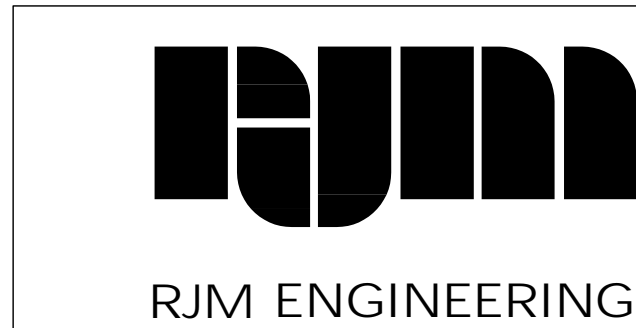
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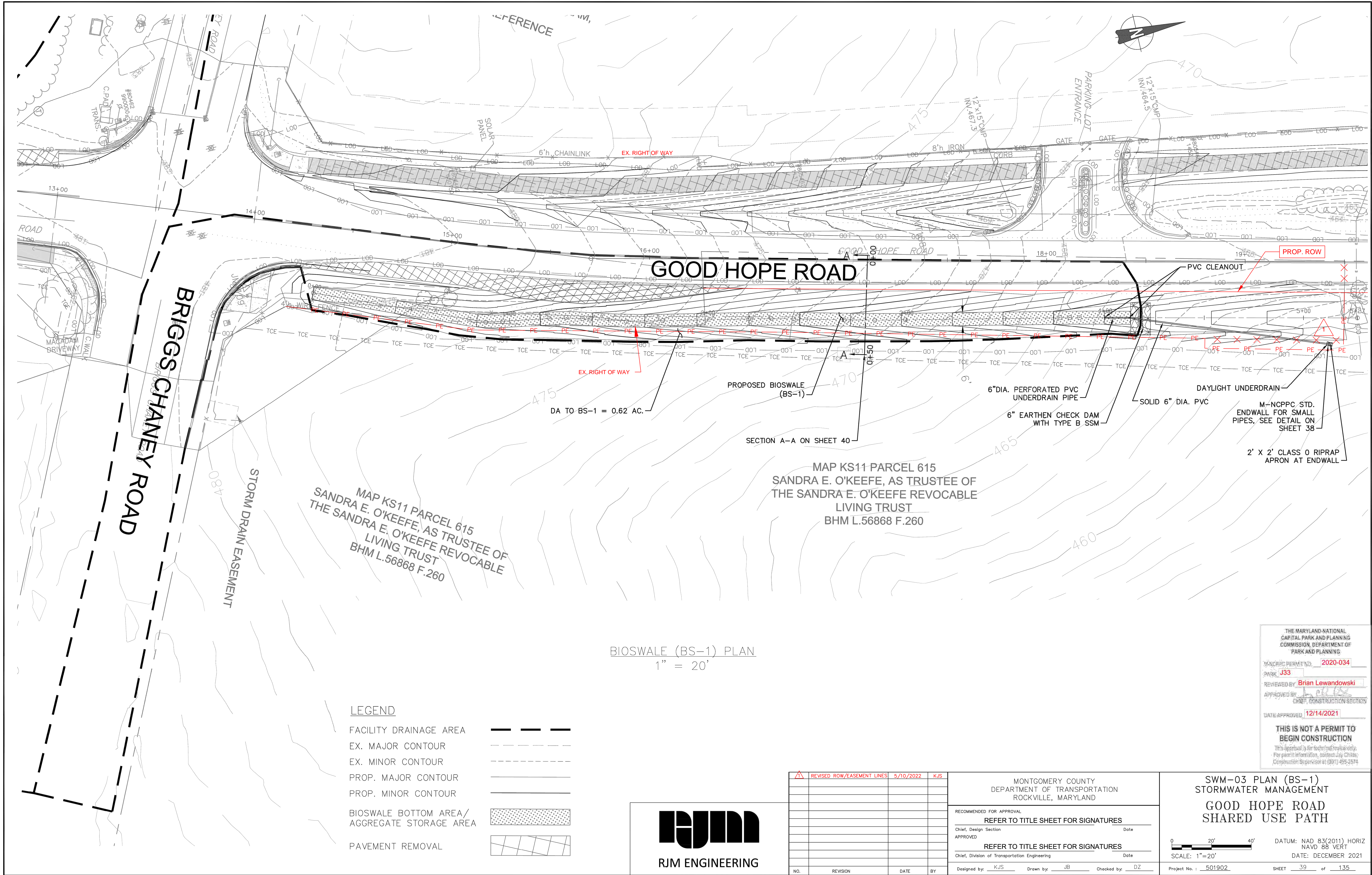
NOTE:
STANDARD HEADWALL DETAIL FOR BIOSWALE UNDERDRAIN PIPES. SEE BIOSWALE PLANS ON SHEETS 39 AND 43.

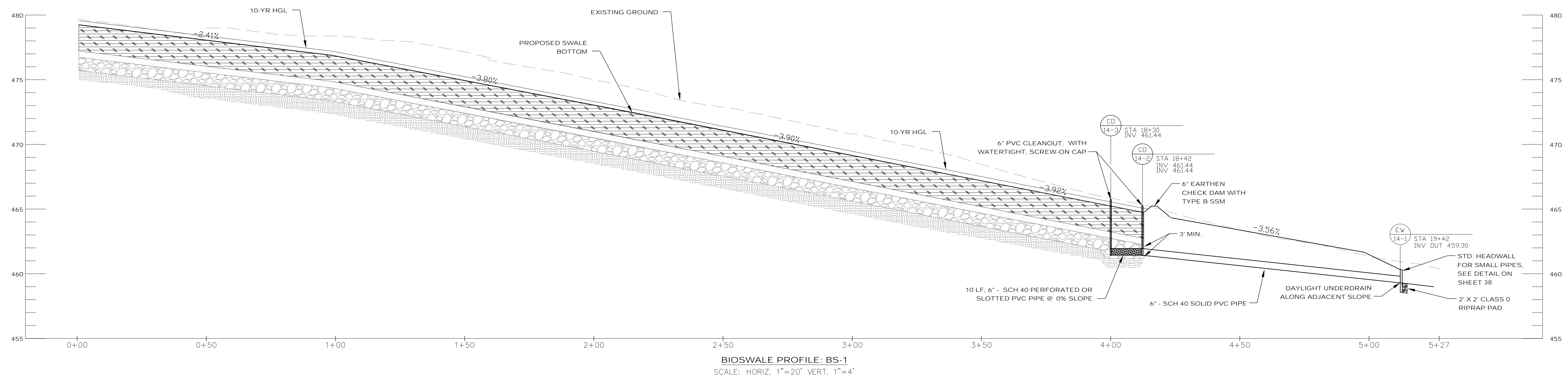


CONCRETE WEIR AT INLET 1-2-6 REINFORCING DETAIL
SCALE: 1" = 1'



				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND		SWM-02 DETAIL SHEET STORMWATER MANAGEMENT GOOD HOPE ROAD SHARED USE PATH	
				RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES			
				Chief, Design Section APPROVED		Date	
				REFER TO TITLE SHEET FOR SIGNATURES			
				Chief, Division of Transportation Engineering		Date	
				Designed by: KJS		Drawn by: JB	
						Checked by: DZ	
NO.	REVISION	DATE	BY			Project No. : 501902	
						SHEET 38 of 135	





NOTES:

1. GRAVEL LAYER: THE GRAVEL LAYER MUST MEET MSHA SIZE #7 (TABLE 901A), AND SHALL BE 12-INCHES IN DEPTH. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN FILTER MEDIA, EXCEPT AT DRIVEWAY CROSSINGS, AS SHOWN IN THE TYPICAL SECTION. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.
2. PLANTING MEDIA: THE PLANTING MEDIA SHALL BE 24 INCHES THICK AND CONFORM TO MONTGOMERY COUNTY MICRO-BIORETENTION FACILITY PLANTING MEDIA SPECIFICATIONS:
1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL.
THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA:
CONTAIN NO MORE THAN 10% CLAY, 10-25% SILT AND 60-75% SAND AND BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.

THE FIRST LAYER OF THE PLANTING MEDIUM SHALL BE LIGHTLY TILLED TO MIX IT INTO THE 6-INCH SAND LAYER, SO AS NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

3. SAND BED: A MINIMUM 6-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE PLANTING MEDIA. ASTM C33 OR AASHTO M6 FINE AGGREGATE CONCRETE SAND IS REQUIRED PER MONTGOMERY COUNTY SAND SPECIFICATIONS.
4. PERFORATED PIPE MUST HAVE PERFORATIONS $\frac{3}{8}$ INCH IN DIAMETER AND LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BE AT LEAST 12 INCHES INSIDE THE FILTER MEDIA. IF THIS CANNOT BE ACHIEVED, THEN SIDES OF THE FILTER MEDIA MUST BE LINED WITH FILTER FABRIC. FILTER FABRIC MUST NOT BE WRAPPED AROUND PERFORATED PIPE. AN ACCEPTABLE ALTERNATIVE TO PERFORATED PIPE IS 4 INCH DIAMETER SCHEDULE 40 SLOTTED 1/2" CG PIPE WITH 0.25 INCH SLOTS. SLOTS SHALL BE 0.125 INCHES WIDE AND A MINIMUM OF 1.9 INCHES IN LENGTH, WITH A MINIMUM OF 4 SLOTS PER ROW AND 4 ROWS PER LINEAR FOOT OF PIPE.

BS-1

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR SWALES		
STAGE	MCDPs INSPECTOR	OWNER/ DEVELOPER
<p>MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS Inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS Inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. The permittee must maintain a "record set" of approved SC/SM plans on-site at all times. Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the items listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.</p> <ol style="list-style-type: none"> 1. Placement of backfill of underdrains and installation of diaphragms, forebays, check dams, or weirs conforms to approved plans 2. Final grading and establishment of permanent stabilization conforms to approved plans 	INITIALS/DATE	INITIALS/DATE

SAND SPECIFICATIONS:

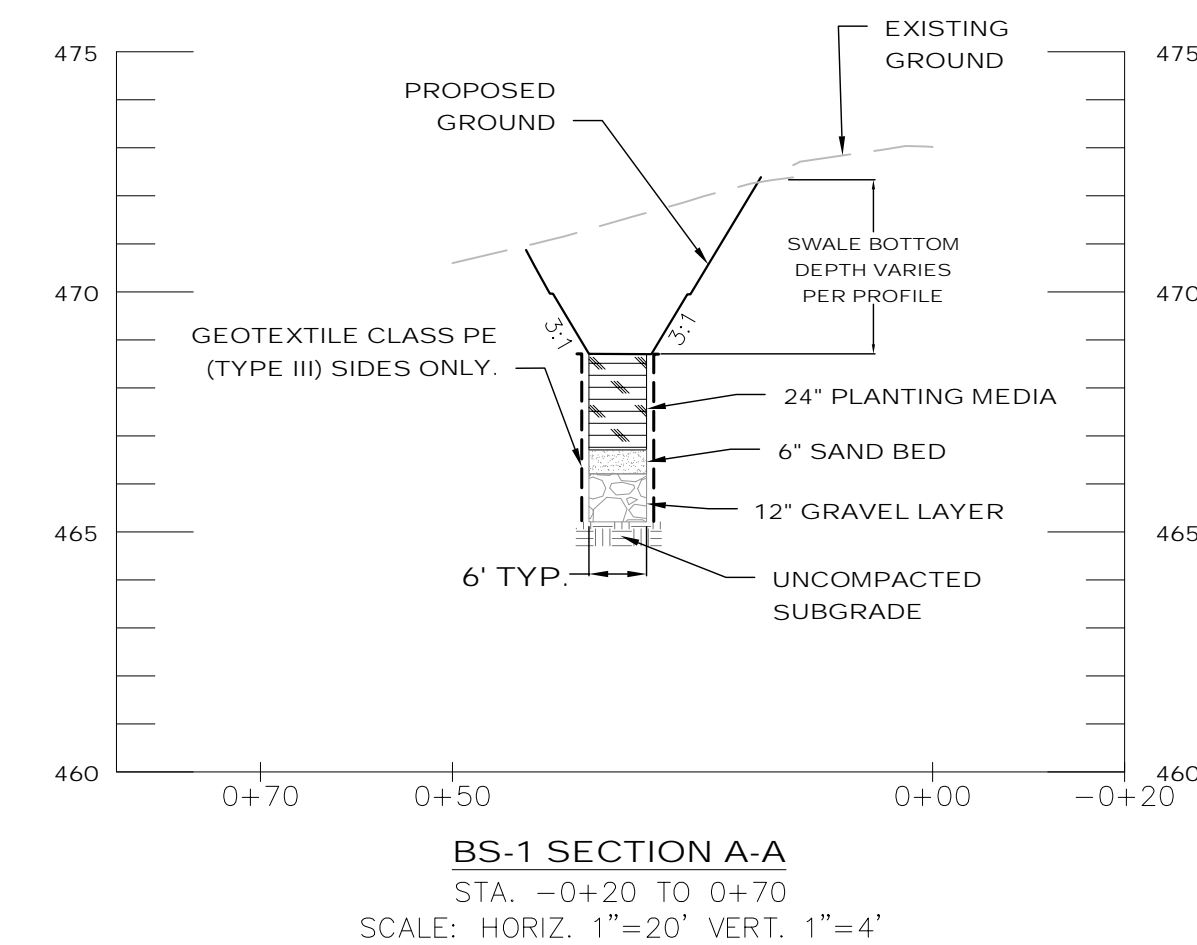
Washed ASTM C33 Fine Aggregate Concrete Sand is utilized for stormwater management applications in Montgomery County. In addition to the ASTM C33 specification, sand must meet ALL of the following conditions:

1. Sand must meet gradation requirements for ASTM C-33 Fine Aggregate Concrete Sand. MSHTO M-6 gradation is also acceptable.
2. Sand must be silica based ... no limestone based products may be used. If the material is white or gray in color, it is probably not acceptable.
3. Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that has become contaminated by improper storage or installation practices will be rejected.
4. Manufactured sand or stone dust is not acceptable under any circumstance.



RJM ENGINEERING

					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	SWM-04 PROFILE (BS-1) STORMWATER MANAGEMENT
					RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES _____ Chief, Design Section Date APPROVED	GOOD HOPE ROAD SHARED USE PATH
					REFER TO TITLE SHEET FOR SIGNATURES _____ Chief, Division of Transportation Engineering Date	DATUM: NAD 83(2011) HORIZ NAVD 88 VERT DATE: DECEMBER 2021
NO.	REVISION	DATE	BY		Designed by: KJS Drawn by: JB Checked by: DZ	SCALE: AS NOTED Project No.: 501902 SHEET 40 of 135



THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034

PARK J33

REVIEWED BY Brian Lewandowski
10/09

CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION

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Construction Supervisor at (301) 495-2574

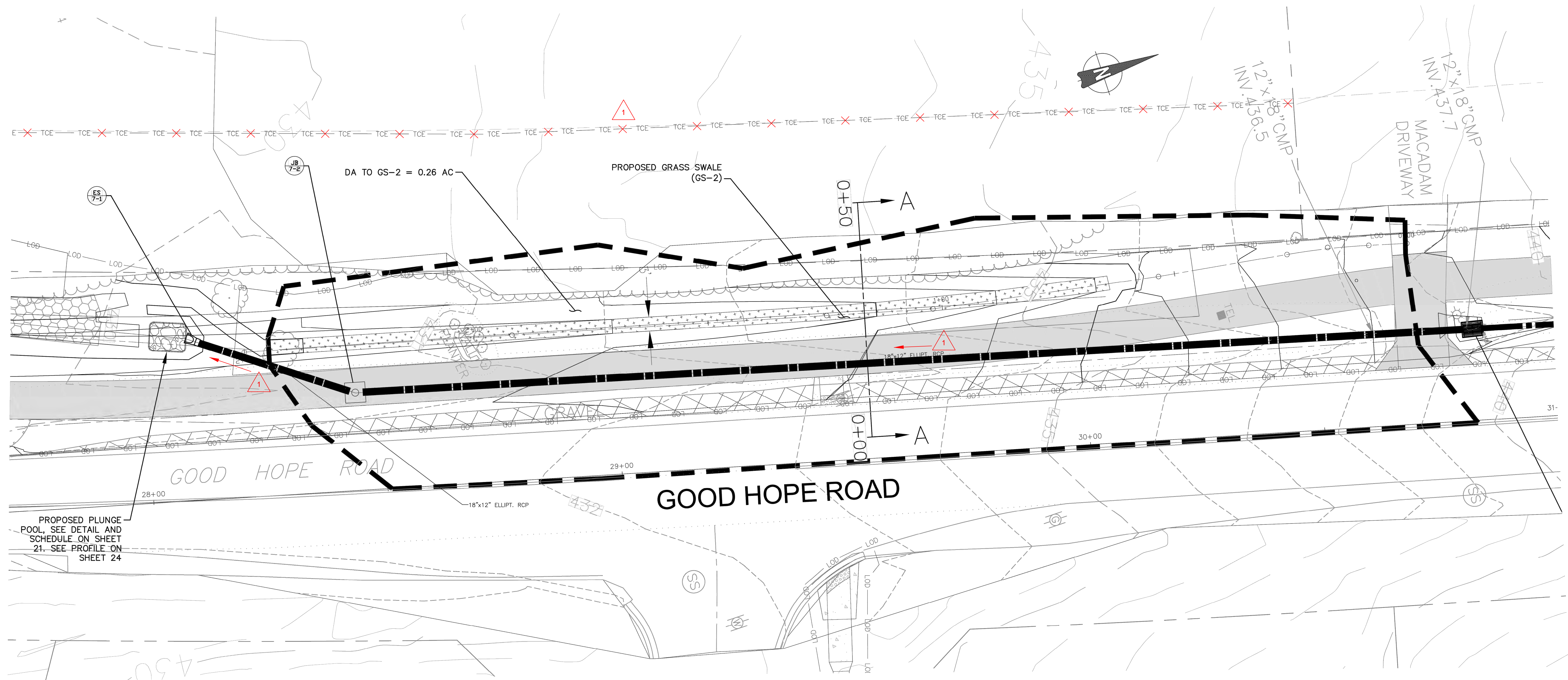
SWM-04 PROFILE (BS-1)
STORMWATER MANAGEMENT

GOOD HOPE ROAD
SHARED USE PATH

DATUM: NAD 83(2011) HORIZ
NAVD 88 VERT







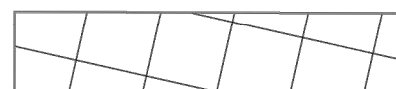
SCALE: AS NOTED DATE: DECEMBER 2021

Project No. : 501902 SHEET 40 of 135



GRASS SWALE (GS-2) PLAN
1" = 10'

LEGEND

LIMIT OF DISTURBANCE	— LOD — LOD —
PERPETUAL EASEMENT	— PE — PE —
TEMPORARY CONSTRUCTION EASEMENT	— TCE — TCE —
FACILITY DRAINAGE AREA	
EX. MAJOR CONTOUR	
EX. MINOR CONTOUR	
PROP. MAJOR CONTOUR	
PROP. MINOR CONTOUR	
BIOSWALE BOTTOM AREA/ AGGREGATE STORAGE AREA	
PAVEMENT REMOVAL	



RJM ENGINEERING

		FLOW DIRECTION ARROWS	3/11/2022	KJS
		REVISED ROW/EASEMENT LINES	5/10/2022	KJS
NO.		REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

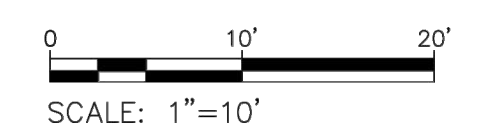
RECOMMENDED FOR APPROVAL

REFER TO TITLE SHEET FOR SIGNATURES

REFER TO TITLE SHEET FOR SIGNATURES

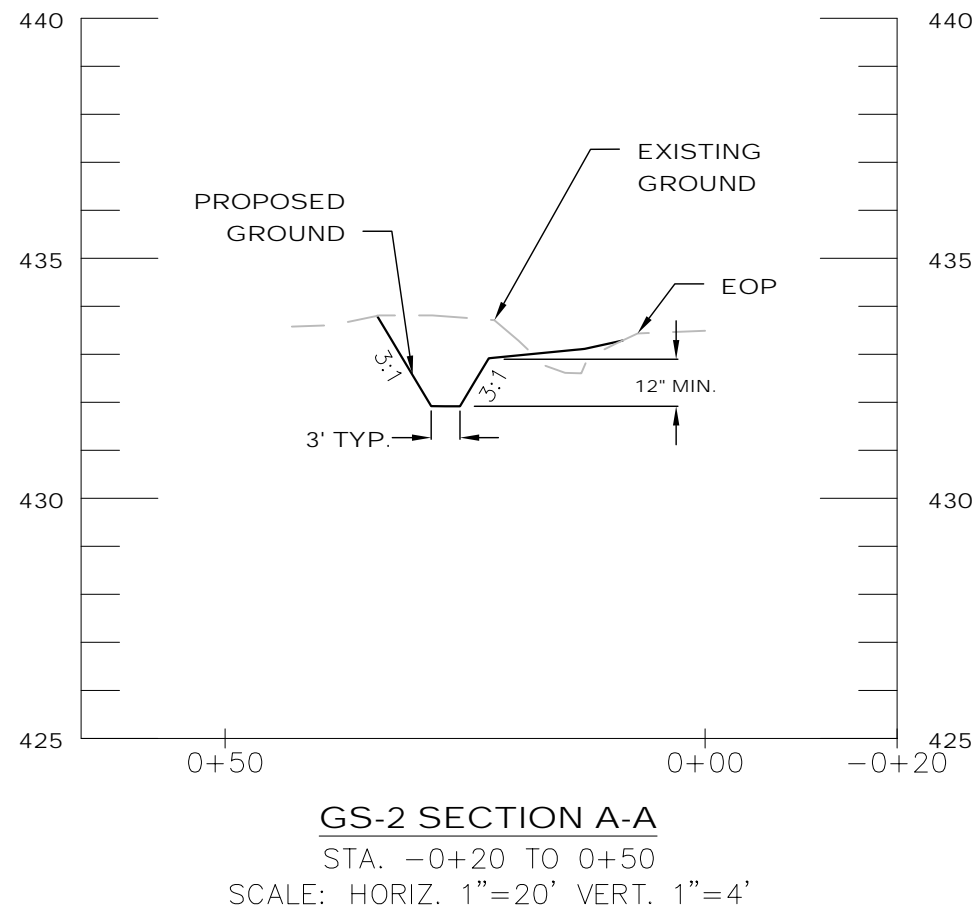
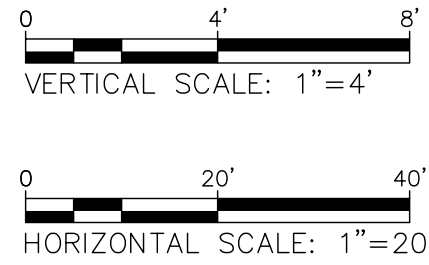
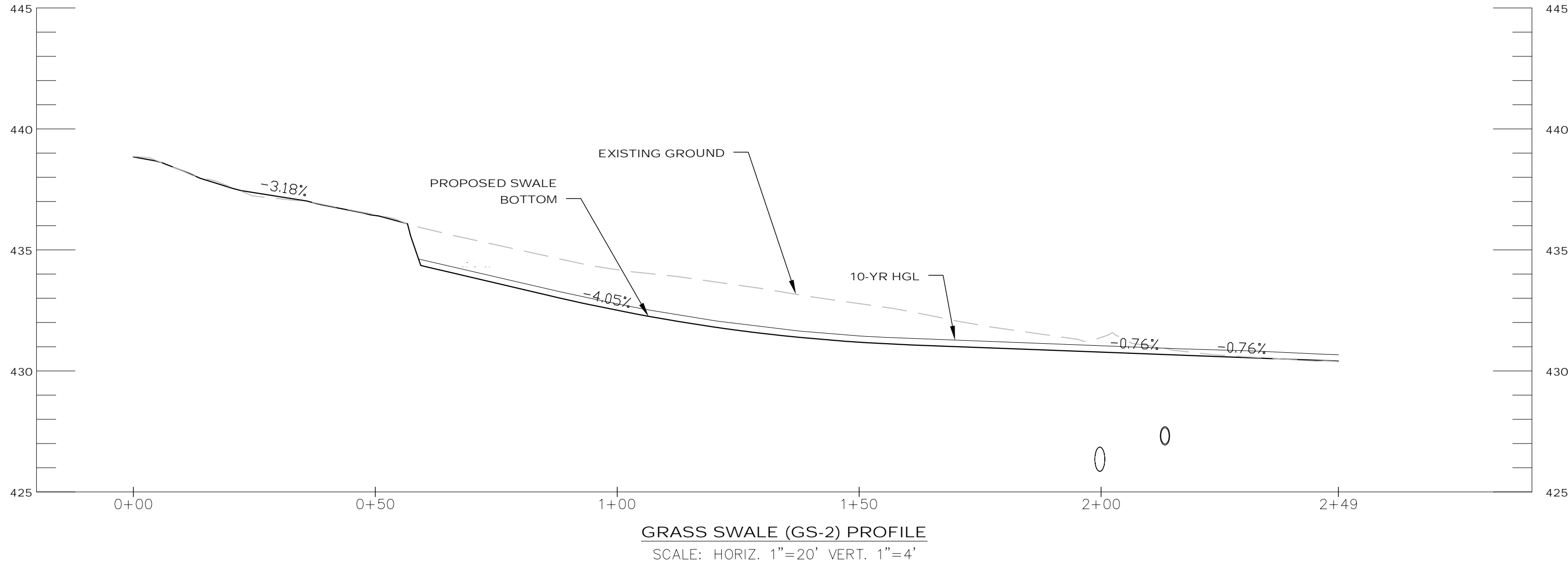
SWM-05 PLAN (GS-2)
STORMWATER MANAGEMENT

GOOD HOPE ROAD
SHARED USE PATH



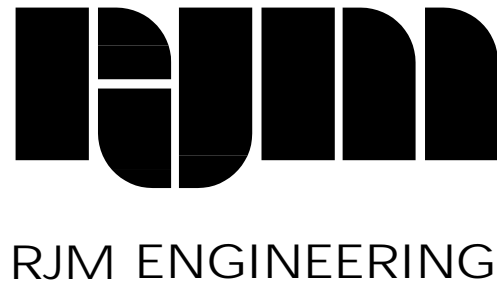
DATUM: NAD 83(2011) HORIZ
NAVD 88 VERT
DATE: DECEMBER 2021

Project No. : 501902 SHEET 41 of 135



GS-2

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR SWALES		
STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/ DEVELOPER INITIALS/DATE
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1. Placement of backfill of underdrains and installation of diaphragms, forebays, check dams, or weirs conforms to approved plans		
2. Final grading and establishment of permanent stabilization conforms to approved plans		



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THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

M-NCPPC PERMIT NO. 2020-034

PARK J33

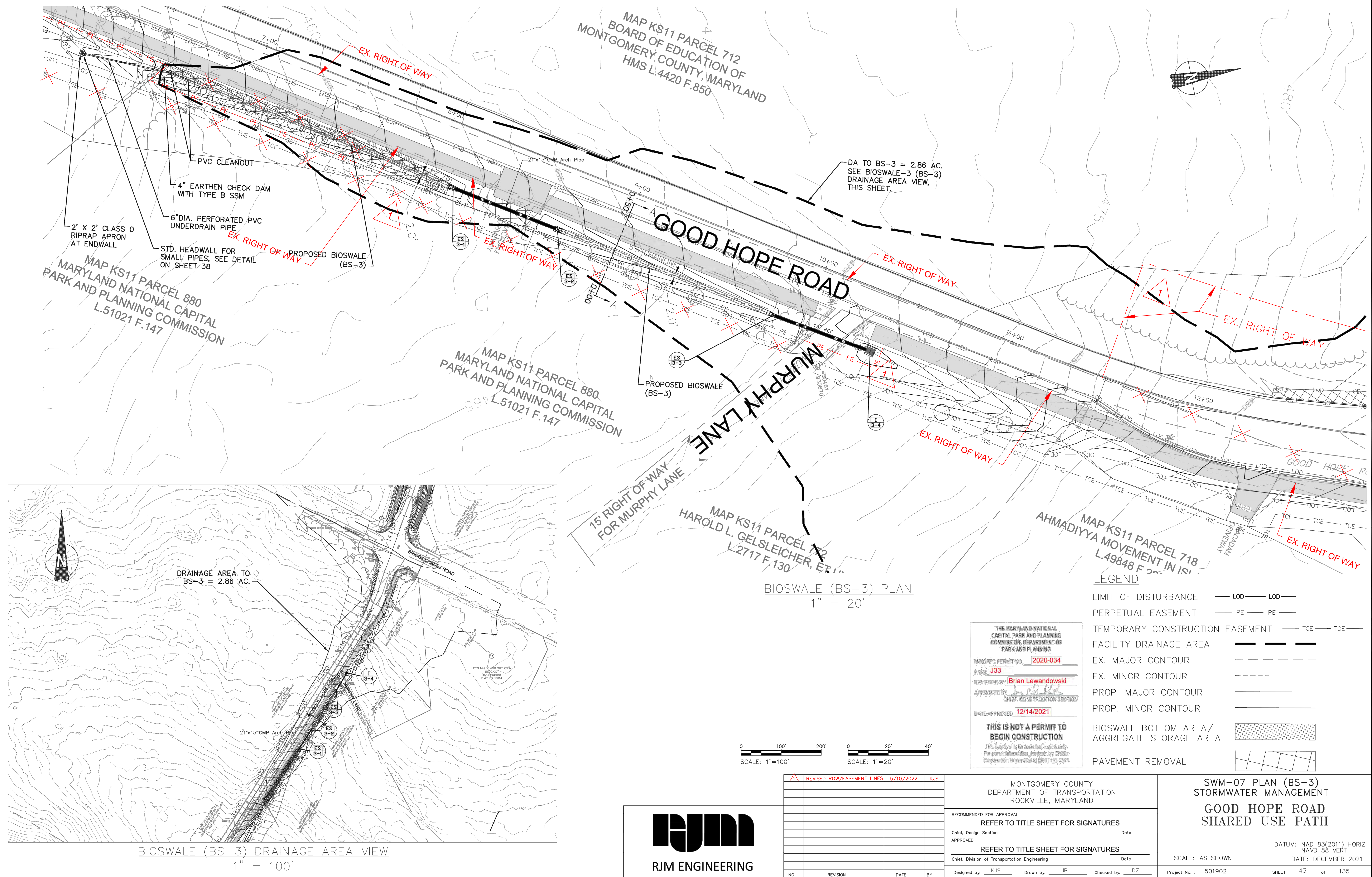
REVIEWED BY: Brian Lewandowski

APPROVED BY: [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED: 12/14/2021

**THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION**

This approval is for technical review only.
For permit information, contact Jay Childs,
Construction Supervisor at (301) 495-2574



MCDPS SC/SWM SHEET 23 OF 39

JFF 2-3

As-Built Inspection Tabulations/Checklist

Accepted by: _____ Authority: _____

Name _____ Date _____

JELLYFISH FILTER TABULATIONS

ACTIVITY	DESIGN D	AS-BUILT	DIFFERENC E	INSPECTO R INITIALS	ACCEPTANCE DATE
As-Built Survey	N/A				
Manhole Size Ø	48"				
Number of Cartridges (High-Flo/Draindown)	3 (2/1)				
Cartridge Depth	40"				
Inlet Pipe 1 Invert Elevation	442.74'				
Inlet Pipe 1 Diameter/Material	15" RCP				
Inlet Pipe 2 Invert Elevation	N/A				
Inlet Pipe 2 Diameter/Material	N/A				
Outlet Pipe Invert Elevation	442.74'				
Outlet Pipe Diameter/Material	15" RCP				
Anti-Flotation Ballast Width/Height	N/A				
Rim Elevation	448.97'				

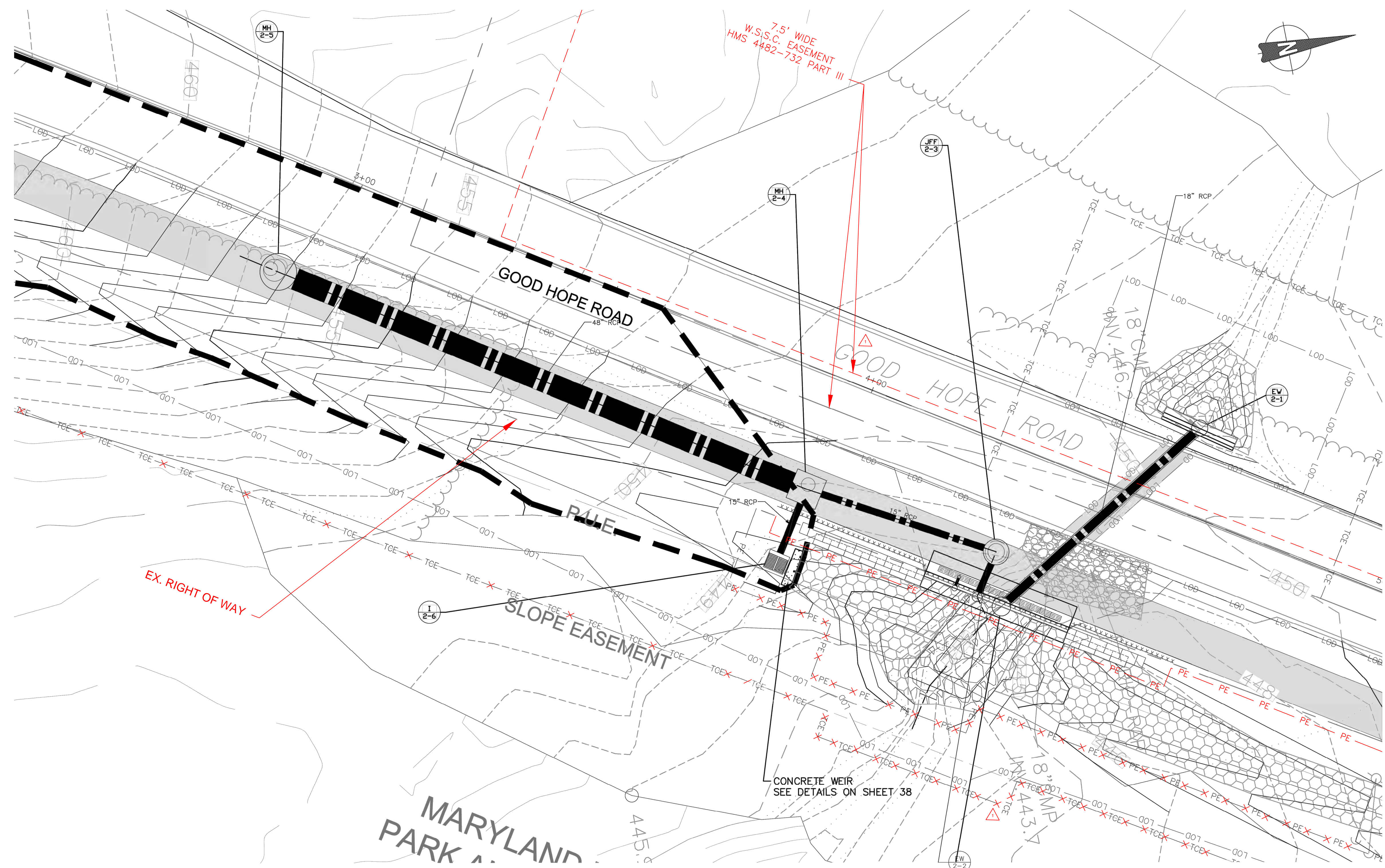
As-Built Inspection Tabulations/Checklist

Accepted by: _____ Agency: _____








Name _____ Date _____

JELLYFISH FILTER CONSTRUCTION CHECKLIST

ACTIVITY	ON SITE INSPECTION DATE	INSPECTOR INITIALS	ACCEPTANCE DATE
Excavated to proper size and location			
Subbase compacted to required percentage			
Base section elevation on each precast section			
Watertight seals on each precast section			
Outlet pipe invert elevation and inlet pipe(s) invert elevations are as shown in plan.			
Internal Components pre-installed according to plan. Maintenance access wall and steps installed according to approved shop drawing.			
Manhole top finish grade even with surrounding finish grade and approved top drawing elevations.			
Outlet and inlet pipes installed with water tight connection in accordance with plans and specifications.			
Backfill material and placement performed in accordance with construction plans and specifications.			
Site stabilized (post-construction) and unit shall be confirmed fully clean prior to installation of earthdams and filter activation			



LEGEND

LIMIT OF DISTURBANCE	— LOD —
PERPETUAL EASEMENT	— PE — PE —
TEMPORARY CONSTRUCTION EASEMENT	— TCE — TCE —
FACILITY DRAINAGE AREA	
EX. MAJOR CONTOUR	
EX. MINOR CONTOUR	
PROP. MAJOR CONTOUR	
PROP. MINOR CONTOUR	
VEGETATED RIPRAP	
PAVEMENT REMOVAL	

NOTE:
ALL PIPES SHALL BE GASKETED
PER THE SPECIFICATIONS.

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING

MAJOR PERMIT NO. 2020-034
J33

REVIEWED BY Brian Lewandowski
Brian Lewandowski

APPROVED BY [Signature]
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/14/2021

**THIS IS NOT A PERMIT TO
BEGIN CONSTRUCTION**

THIS APPROVAL IS FOR TECHNICAL REVIEW ONLY.
For permit information, contact: J. Chiles,
Construction Supervisor at (301) 495-2574

JELLYFISH FILTER PLAN VIEW
SCALE: 1" = 10'

[illegible]

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

REFER TO TITLE SHEET FOR SIGNATURES

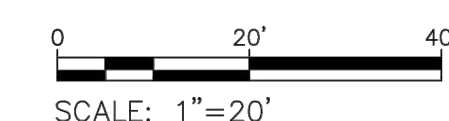
Chief, Design Section
APPROVED

Chief, Division of Transportation Engineering

Designed by: KJS Drawn by: JB Checked by: _____

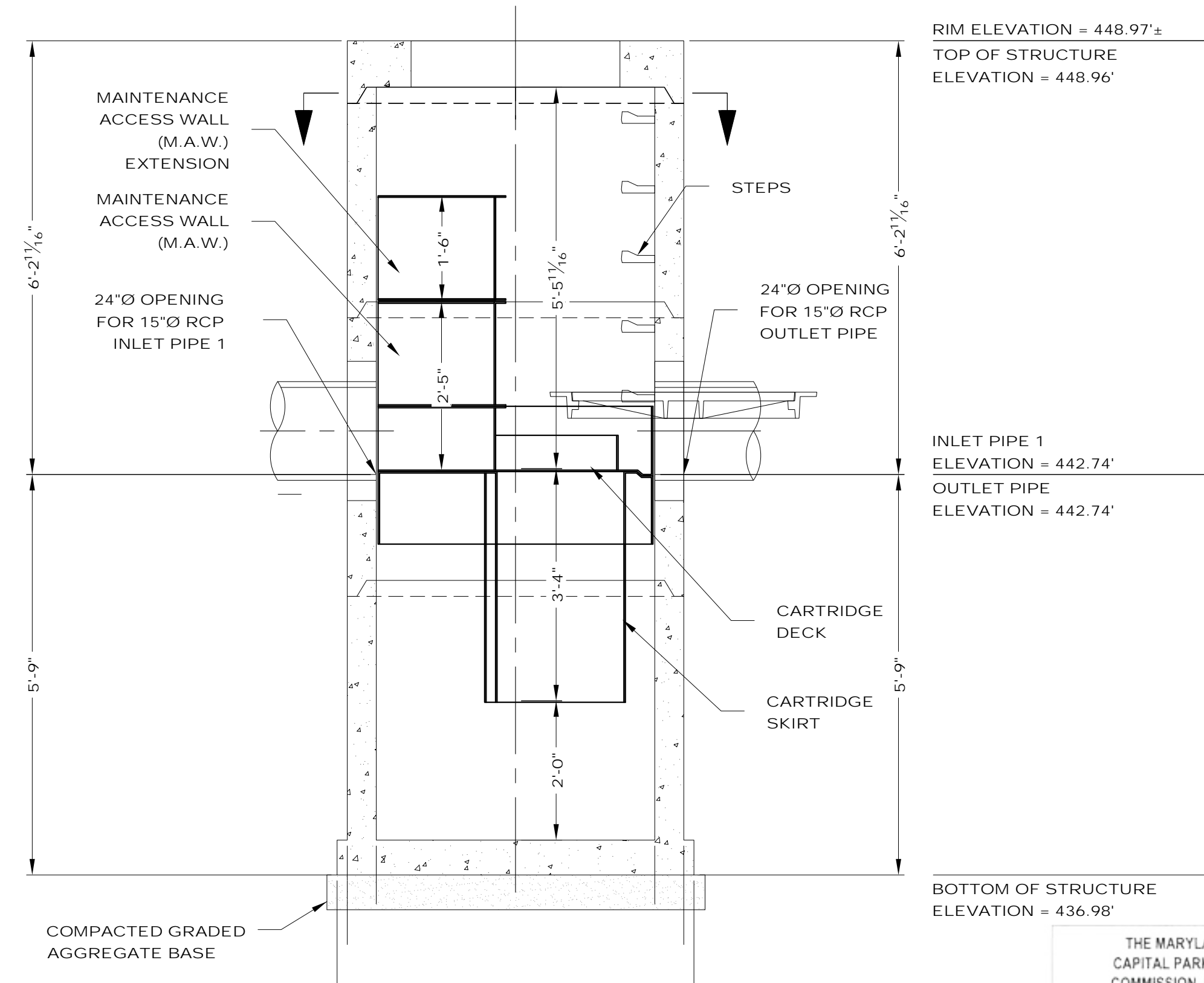
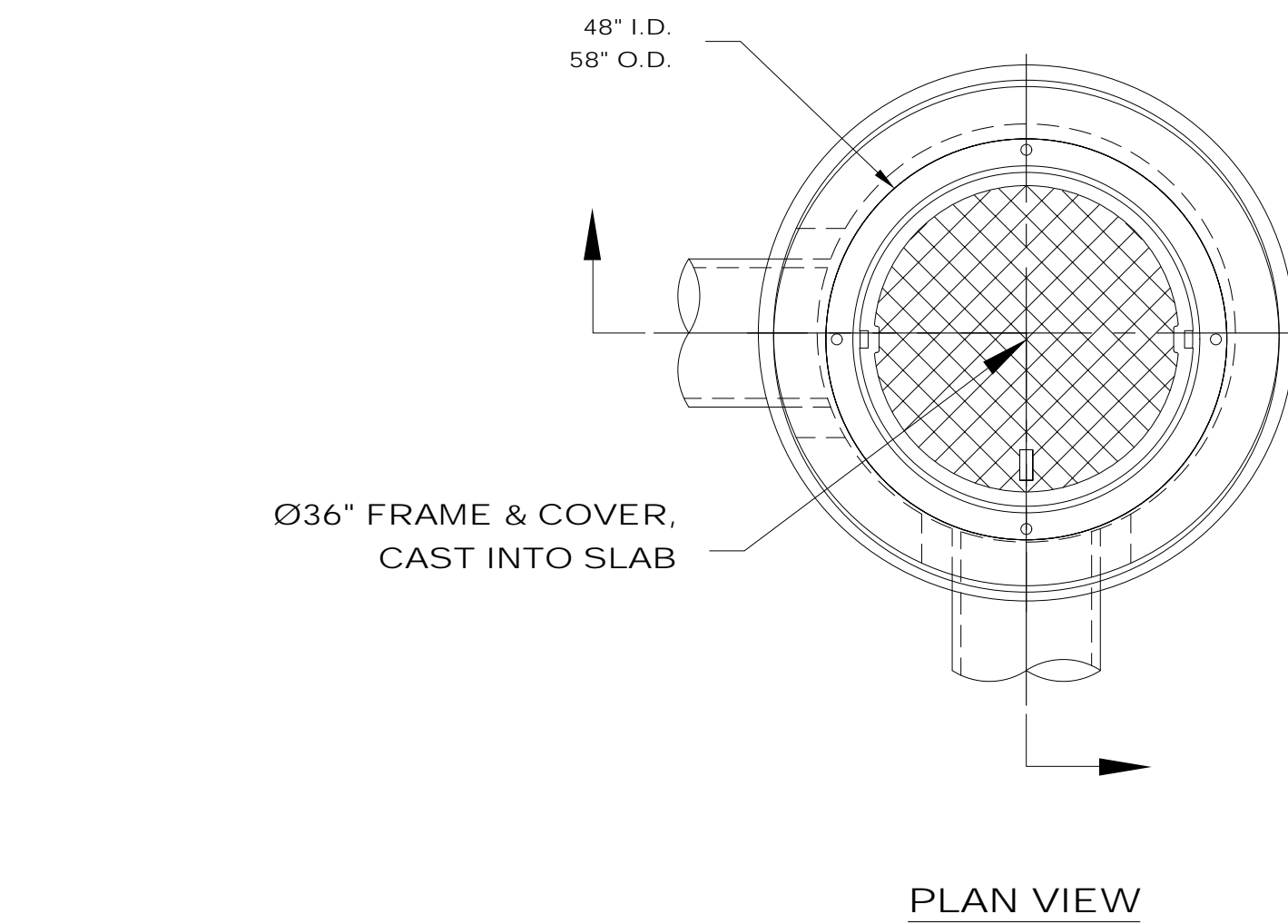
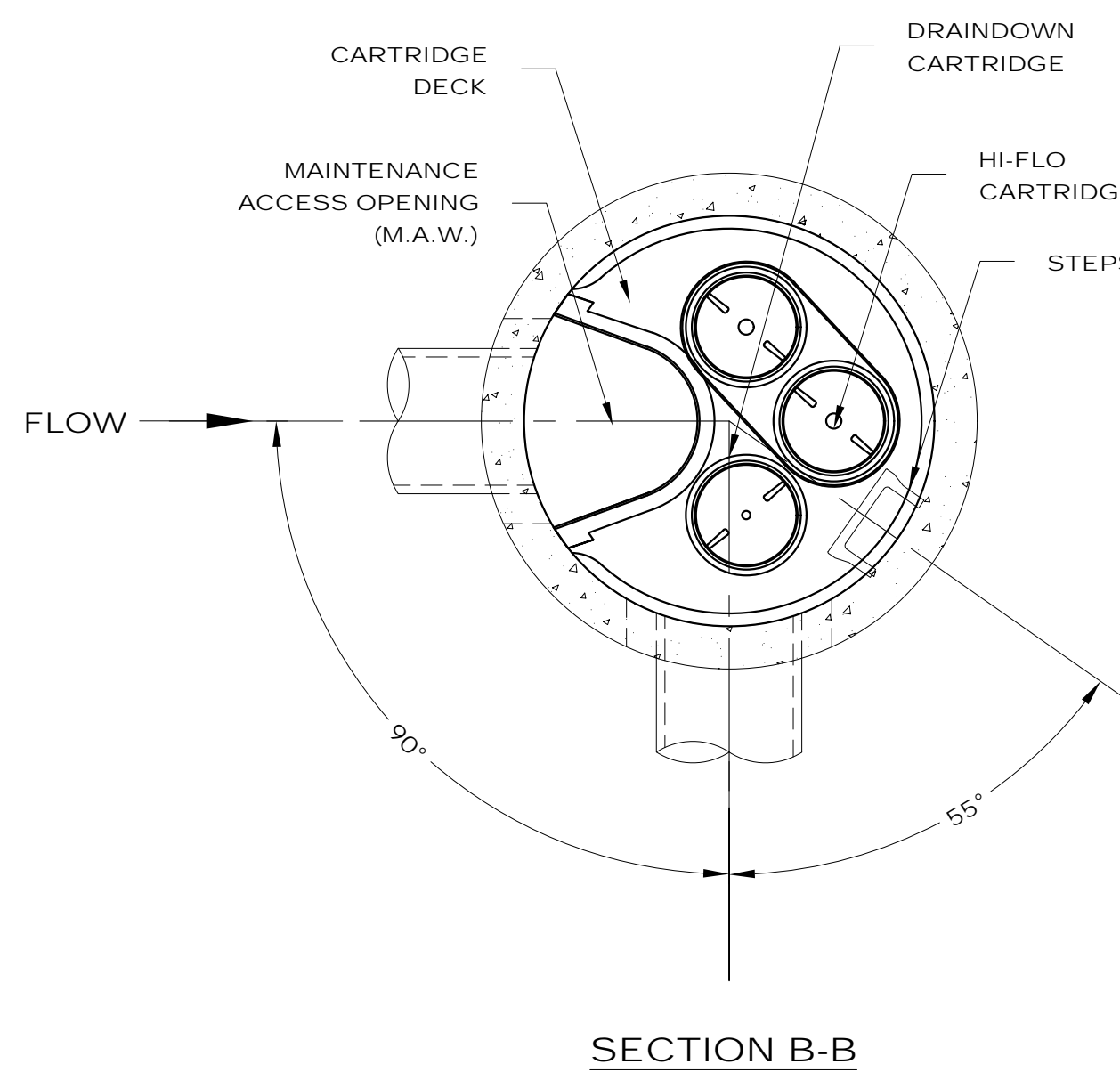
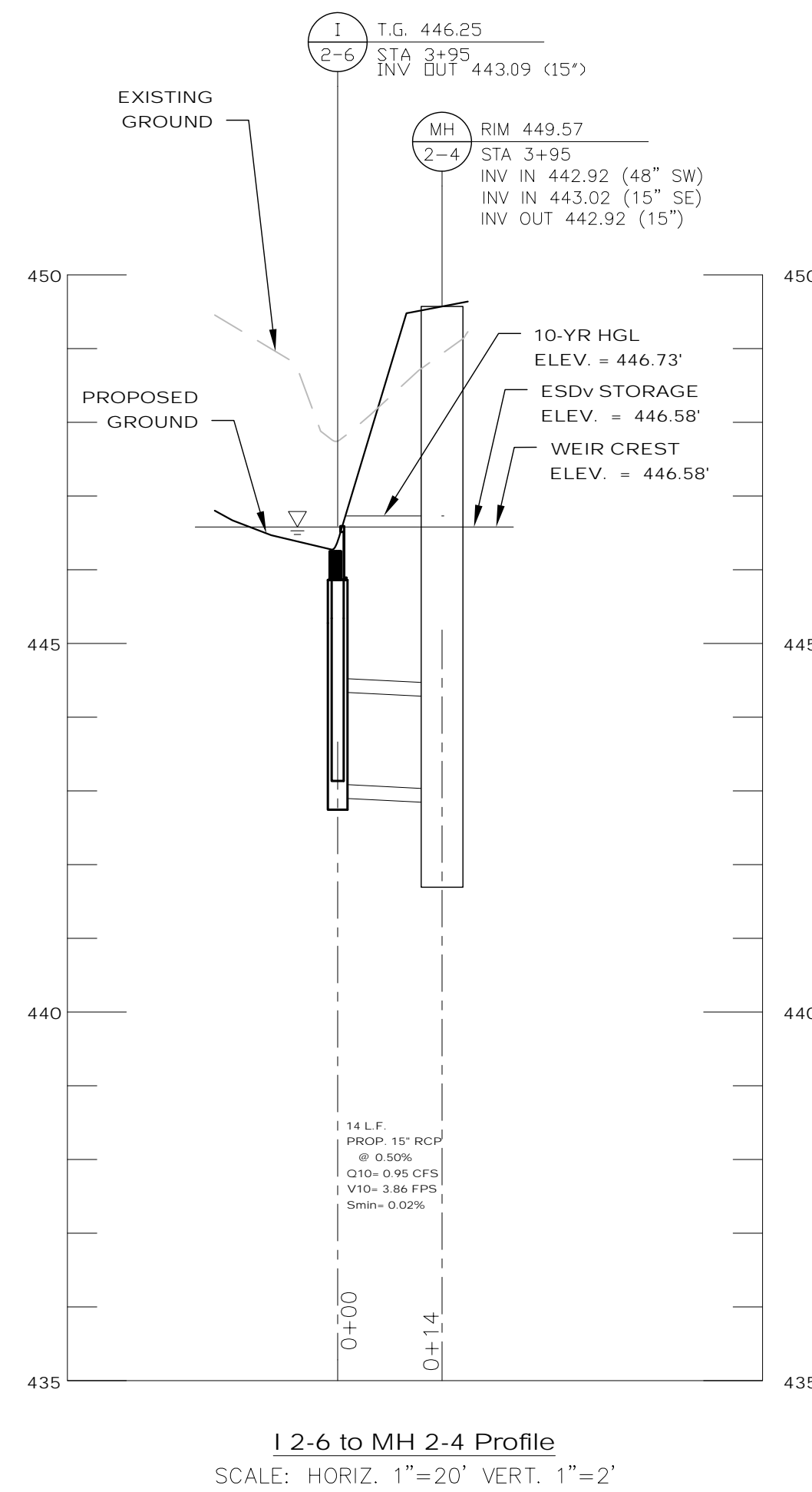
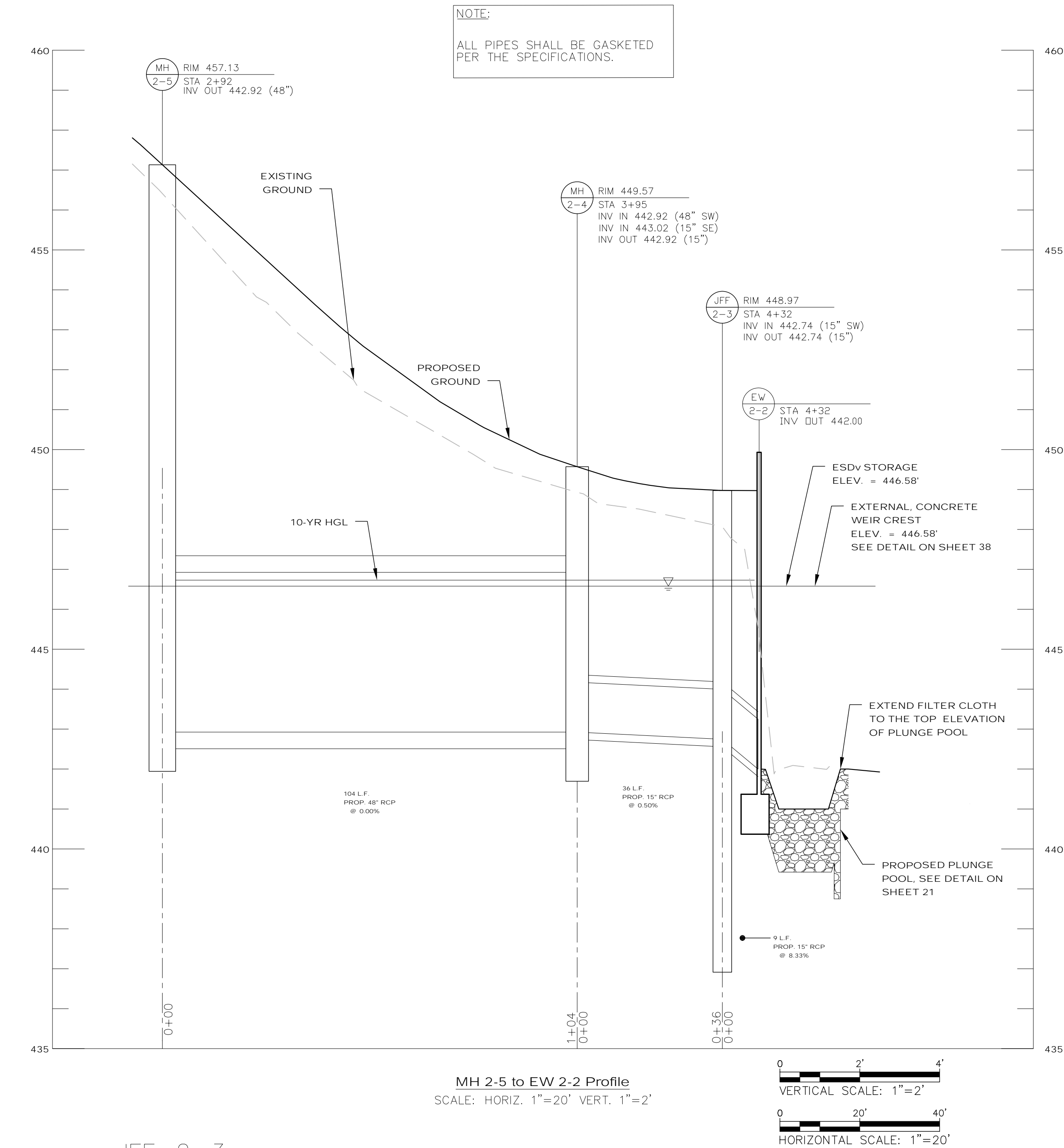
SWM-09 PLAN (JFF 2-3)
STORMWATER MANAGEMENT

GOOD HOPE ROAD
SHARED USE PATH



DATUM: NAD 83(2011) HORIZ
NAVD 88 VERT
DATE: DECEMBER 2021

Project No. : 501902 SHEET 45 of 135



JELLYFISH DESIGN NOTES	
CARTRIDGE SELECTION	
CARTRIDGE DEPTH	40"
OUTLET INVERT TO STRUCTURE INVERT (IN)	5'-3"
FLOW RATE HIGH FLOW / DRAINDOWN (cfs) (per cart)	0.13 / 0.045
MAX. CARTS HIGH FLOW / DRAINDOWN	2 / 1
TOTAL FLOW CAPACITY (cfs)	0.325

JELLYFISH FILTER DETAILS
NOT TO SCALE

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR SM UNDERGROUND STRUCTURE				
STAGE	DESIGN ENGINEER (DE)	GEOTECHNICAL ENGINEER (GEO)	COUNTY INSPECTOR	MNCP&PC & OTHER
* MANDATORY NOTIFICATION: Inspection and approval by the parties 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 240-777-0311). The DPS inspector may waive an inspection, provided the design engineer and/or geotechnical engineer makes 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 SC/SM plans on-site.	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE
1. Pre-construction meeting.	*	*	*	*
2. Sediment control installation.		*	*	*
3. Excavation for stormwater management structure (GEO)		*	*	*
4. Install stormwater management control structure/storage structure and associated storm drainage;		*	*	*
a. Footing subgrade, prior to pouring (GEO)		*	*	*
b. Forms set and rebar placed for walls/slabs prior to pouring (DE)	*	*	*	*
c. Pipe assembled in place (DE) on acceptable subgrade (GEO)	*	*	*	*
d. Any required storm drain pipe installed to structure and temporarily plugged shut (DE)	*	*	*	*
e. Internal components installed, if any (DE)	*	*	*	*
5. Backfilling of drainage structure (GEO)		*	*	*
6. Installation of storm drain inlet protection or blocking on all inlets draining to structure which may receive silt-laden runoff		*	*	*
7. Installation of final compacted cover and grade - Lifts, compaction, soil material (GEO) - Location, dimensions (DE)		*	*	*
8. Stabilize drainage area to stormwater management structure		*	*	*
9. Removal of sediment and construction debris from structure	*	*	*	*
10. Remove temporary blocking (DE) and (GEO)	*	*	*	*
11. Submit record drawing and documentation (DE)	*	*	*	*
12. Final Inspection.	*	*	*	*
NOTES: 1. Permittee to supply Design Engineer with delivery tickets for all materials used in SM structure construction. 2. See construction specifications for detailed requirements. 3. A copy of this completed checklist must be submitted as part of the stormwater management as-built package.				

DPS Inspection Telephone: (240) 777-0311

RJM
RJM ENGINEERING

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND				SWM-10 PROFILE (JFF 2-3) STORMWATER MANAGEMENT GOOD HOPE ROAD SHARED USE PATH	
RECOMMENDED FOR APPROVAL REFER TO TITLE SHEET FOR SIGNATURES Chief, Design Section APPROVED Chief, Division of Transportation Engineering				DATE: 12/14/2021 SCALE: AS NOTED Project No.: 501902 SHEET 46 of 135	
Designed by: KJS Drawn by: JJB Checked by: DZ				DATE: 12/14/2021 SCALE: AS NOTED Project No.: 501902 SHEET 46 of 135	

- INSTALLATION NOTES
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE
 - CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
 - WHEN ACTIVATED PRIOR TO SITE STABILIZATION, CONTRACTOR TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF
 - CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ACCORDING TO THE PROVISIONS IN THE ACTIVATION CHECKLIST AND THE QUOTED SCOPE OF WORK. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION AT (866) 740-3318.

- GENERAL NOTES
- SHOP DRAWINGS MUST BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER FOR CONFORMANCE TO THE APPROVED SWM PLANS AND MONT. CO. STANDARDS (INCLUDING ACI-308 CONCRETE) PRIOR TO SUBMITTAL TO DPS FOR ACCEPTANCE.