

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

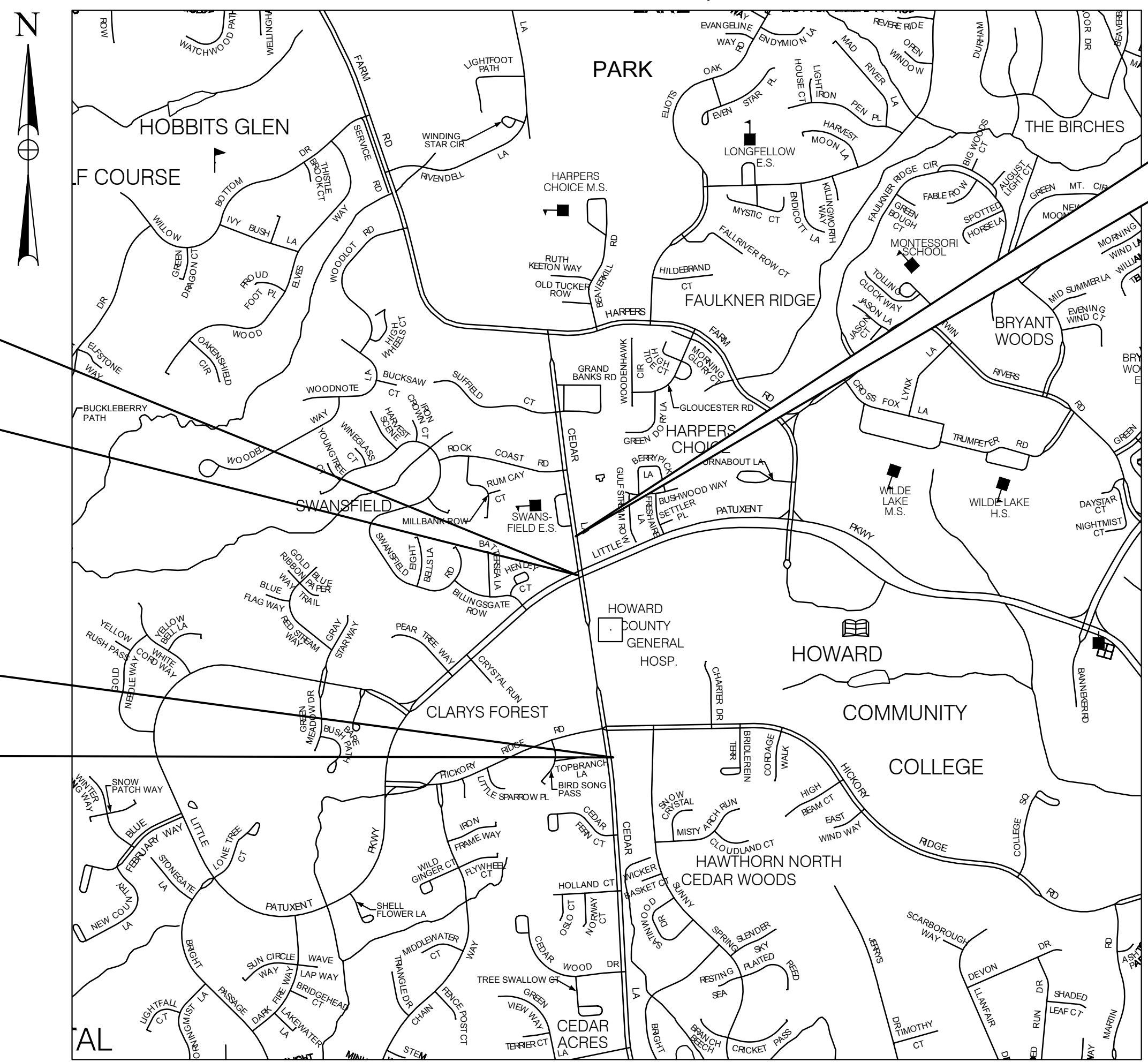
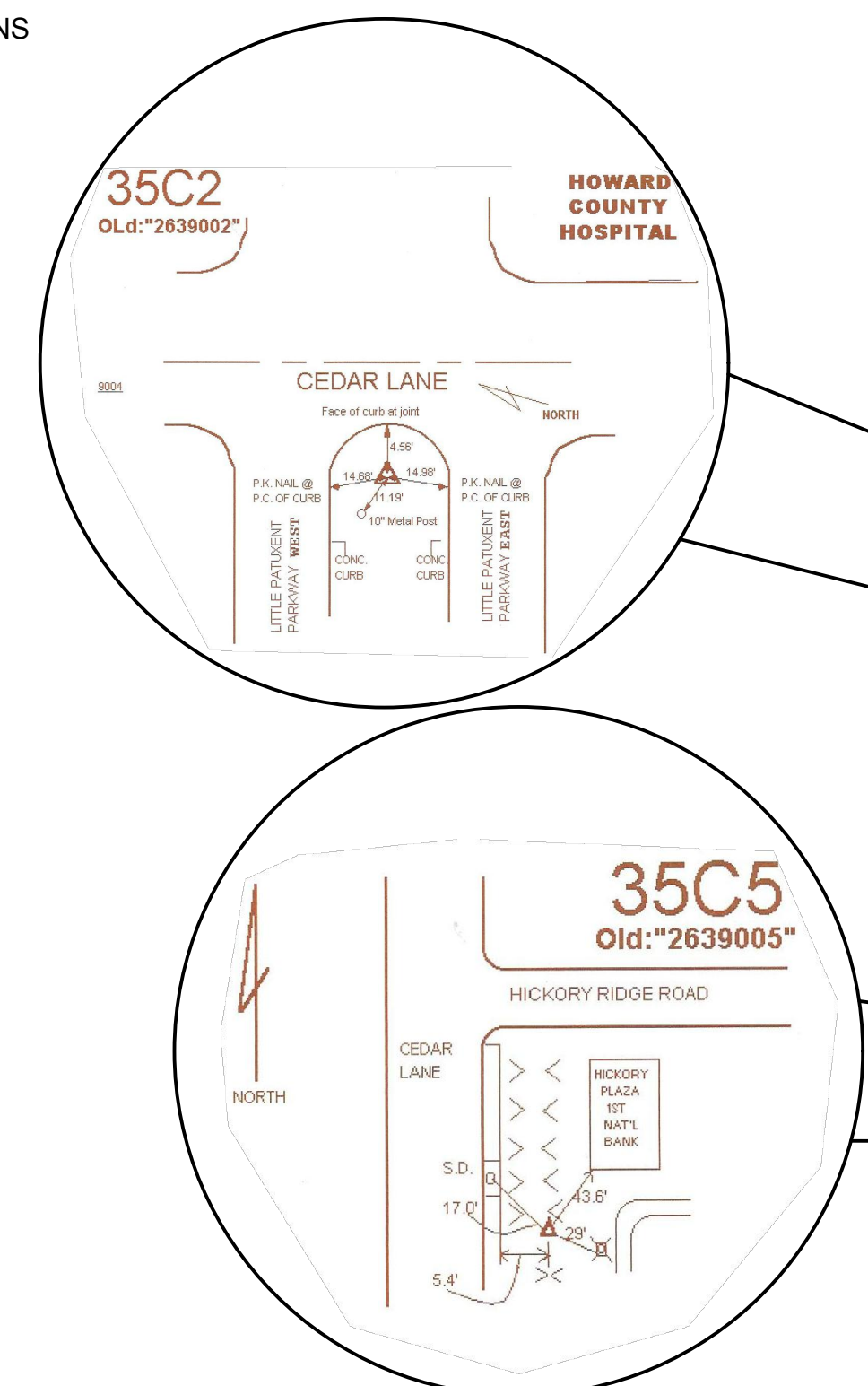
CAPITAL PROJECT K-5066 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AND MISS UTILITY AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK.
- COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83/2011 AS PROJECTED BY HOWARD COUNTY PROJECT CONTROL STATIONS 35C2 AND 35C5. VERTICAL DATUM IS NAVD88.
 - 35C2
N: 563,920.824
E: 1,344,204.185
ELEV. 463.41' (NAVD 88)
HOWARD COUNTY DISK
 - 35C5
N: 562,148.449
E: 1,344,554.499
ELEV. 451.54' (NAVD 88)
HOWARD COUNTY DISK
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, INCLUDING ADA REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE NATURAL RESOURCES CONSERVATION SERVICE.
- ADA STATEMENT: THIS PROJECT HAS INCORPORATED THE INTENT AND SPIRIT OF THE 2010 UPDATE OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND SECTION 405 OF THE REHABILITATION ACT OF 1973 TO THE FULLEST EXTENT POSSIBLE.
- TOPOGRAPHIC SURVEYS WERE PERFORMED BY AECOM IN JANUARY, 2016.
- THE PROPERTY LINES AND EASEMENT LINES ARE FINALIZED WITHIN THE LIMITS OF WORK..
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHOD, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- APPROXIMATE UTILITIES ARE SHOWN FROM AVAILABLE RECORDS AND/OR FIELD RECONNAISSANCE. THE EXISTING UTILITIES HAVE BEEN DESIGNATED AND SHOWN ON THE PLANS. TEST PITS HAVE BEEN PERFORMED AT VARIOUS LOCATIONS TO VERIFY THE LOCATION AND DEPTH OF UTILITIES IN THE AREA OF A POTENTIAL CONFLICT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- UTILITY CONTACTS:
 - BGE: (410)-597-7835 (ELECTRIC)
 - BGE: (410)-291-5101 (GAS)
 - VERIZON: (410)-224-9285
 - NCH: (912)-729-8016
 - XPEIUS: (703)-386-2340
 - ABOVENET: (443)-250-1873
 - COMCAST: (410)-513-3207
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.



SITE LOCATION
WEST SIDE OF CEDAR LANE -
LITTLE PATUXENT PARKWAY TO
HARPERS FARM ROAD

OWNERS/ DEVELOPER CERTIFICATION

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

OWNER'S/ DEVELOPER'S SIGNATURE _____ DATE _____

PRINTED NAME & TITLE _____

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

DESIGNER'S SIGNATURE _____ DATE _____

PRINTED NAME _____ MD REGISTRATION NO. _____ P.E., R.L.S., OR R.L.A. (CIRCLE ONE)

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018"

TRAVERSE POINTS AND BENCHMARK INFORMATION				
POINT NO.	NORTHING	EASTING	ELEVATION	MARKER TYPE
35C2	563,920.824	1,344,204.185	463.41'	HOWARD CO. DISK
35C5	562,148.449	1,344,554.499	451.54'	HOWARD CO. DISK
GPS10	566,246.561	1,343,980.739	478.98'	REBAR & CAP
GPS11	566,249.070	1,344,280.892	483.95'	REBAR & CAP
GPS12	566,361.770	1,343,473.778	475.40'	REBAR & CAP
URS1	562,983.468	1,344,344.757	457.35'	REBAR & CAP
URS2	564,565.498	1,344,174.814	460.29'	REBAR & CAP
URS3	565,003.913	1,344,052.304	463.83'	REBAR & CAP
URS4	565,483.961	1,344,050.586	459.34'	REBAR & CAP
URS5	565,897.249	1,343,936.424	472.73'	MAGNAIL SET

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES: RLL					
DRN: CDF					
CHK: DTM					
DATE: 11/2016	BY	NO.	REVISION	DATE	

TITLE SHEET

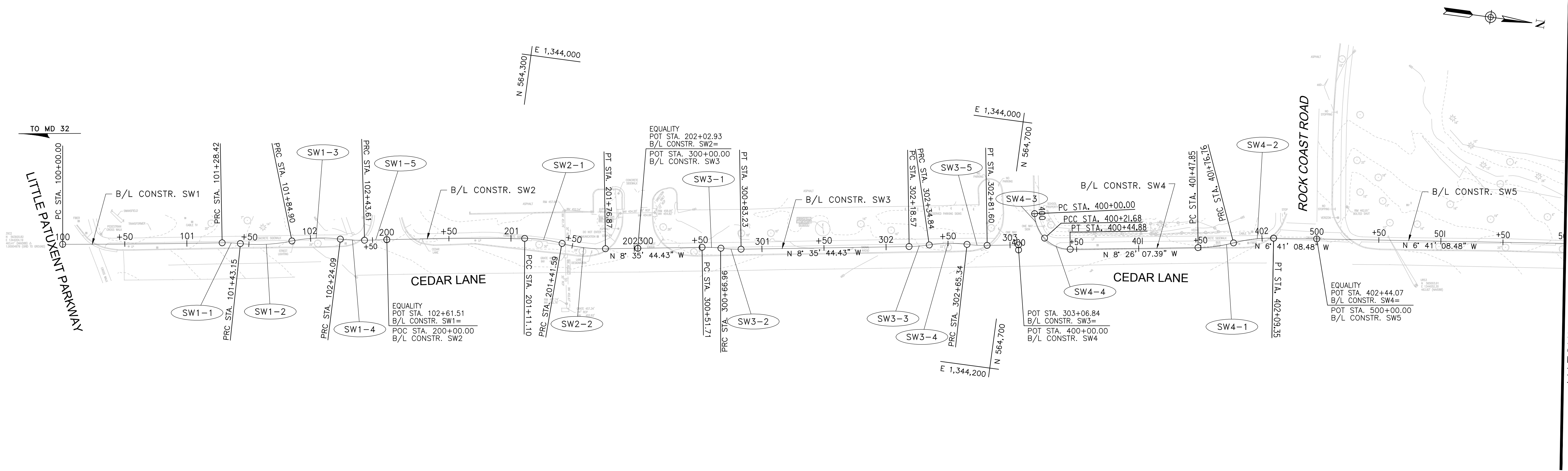
SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS

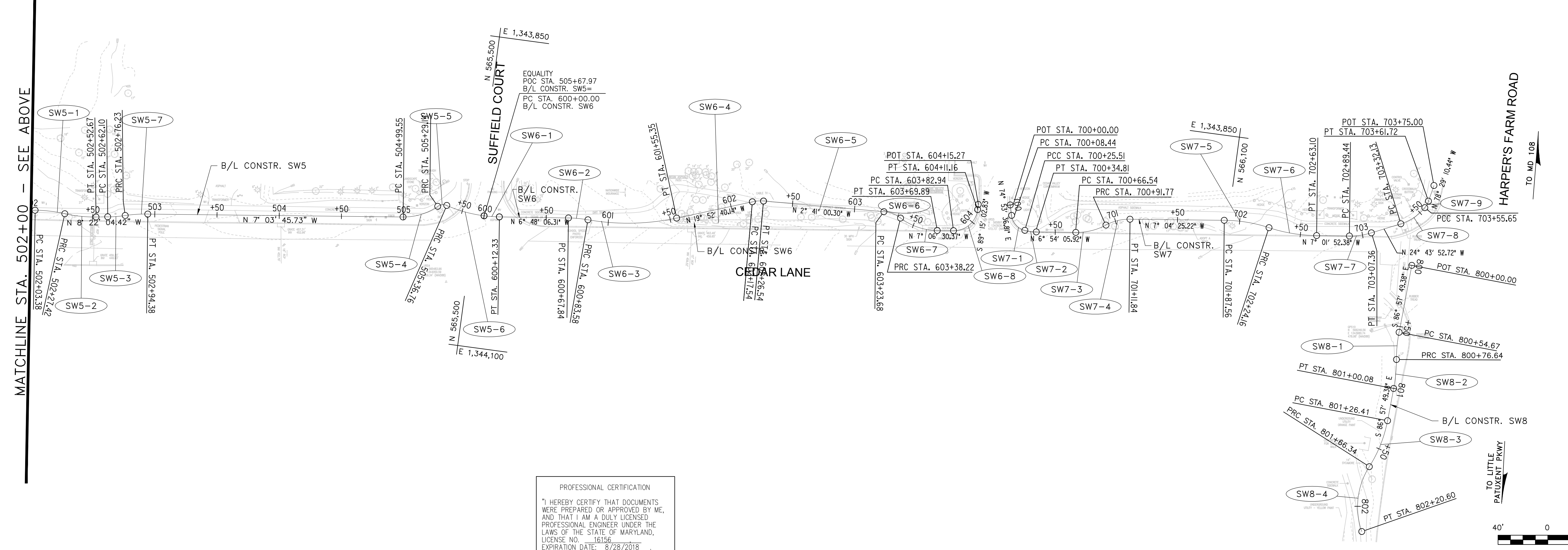
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
N/A

DWG NO.
T-01

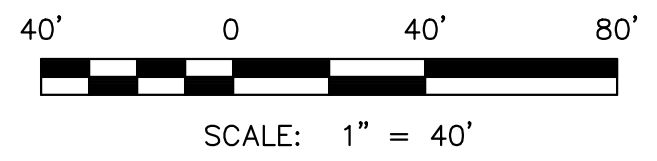


MATCHLINE STA. 502+00 - SEE BELOW

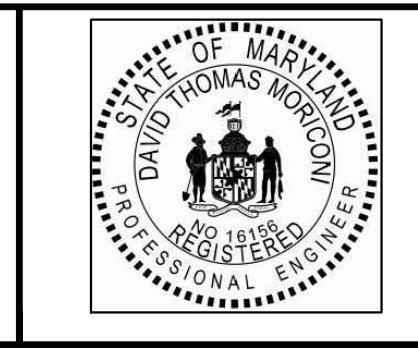


MATCHLINE STA. 502+00 - SEE ABOVE

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT 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. 16156
 EXPIRATION DATE: 8/28/2018



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND			
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION	DATE	CHIEF, BUREAU OF HIGHWAYS	DATE



DES:	TMG			
DRN:	CDF			
CHK:	DTM			
DATE:	11/2016	BY:	NO.	REVISION

GEOMETRY SHEET

CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
1" = 40'
DWG NO.
G-01

SW-1

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW1-1	PC	100+00.00	563,946.7277	1,344,201.4371	
	PI	100+64.21	564,010.3541	1,344,192.8013	
	PRC	101+28.42	564,073.8103	1,344,182.9924	
SW1-2	PRC	101+28.42	564,073.8103	1,344,182.9924	
	PI	101+35.79	564,081.1014	1,344,181.8654	
	PRC	101+43.15	564,088.4755	1,344,181.6400	
SW1-3	PRC	101+43.15	564,088.4755	1,344,181.6400	
	PI	101+64.19	564,109.5046	1,344,180.9971	
	PT	101+84.90	564,129.3566	1,344,174.0301	
SW1-4	PRC	101+84.90	564,129.3566	1,344,174.0301	
	PI	102+04.67	564,148.0115	1,344,167.4831	
	PRC	102+24.09	564,167.7808	1,344,167.2666	
SW1-5	PRC	102+24.09	564,167.7808	1,344,167.2666	
	PI	102+33.87	564,177.5594	1,344,167.1595	
	PRC	102+43.61	564,187.2082	1,344,165.5682	
SW1-6	PRC	102+43.61	564,187.2082	1,344,165.5682	
	PI	102+52.56	564,196.0413	1,344,164.1114	
	PT	102+61.51	564,204.8815	1,344,162.6976	

CURVE DATA

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
SW1-1	1°03'27.89" (LT)	0°49'25.28"	6956.00	64.21	126.42	0.30
SW1-2	7°02'10.18" (RT)	47°44'47.34"	120.00	7.38	14.74	0.23
SW1-3	17°35'15.85" (LT)	42°07'45.30"	136.00	21.04	41.75	1.62
SW1-4	18°42'40.62" (RT)	47°44'47.34"	120.00	19.77	39.19	1.62
SW1-5	8°44'16.07" (LT)	44°45'44.38"	128.00	9.78	19.52	0.37
SW1-6	0°16'44.12" (RT)	1°33'28.07"	3678.00	8.95	17.90	0.01

SW-2

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW2-1	PC	200+00.00	564,204.8815	1,344,162.6976	
	PI	200+55.56	564,259.7410	1,344,153.9240	
	PCC	201+11.10	564,314.8405	1,344,146.8114	
SW2-2	PCC	201+11.10	564,314.8405	1,344,146.8114	
	PI	201+26.43	564,330.0374	1,344,144.8497	
	PRC	201+41.59	564,345.2396	1,344,146.7897	
SW2-3	PRC	201+41.59	564,345.2396	1,344,146.7897	
	PI	201+59.34	564,362.8542	1,344,148.9943	
	PT	201+76.87	564,380.4092	1,344,146.3408	
POT	202+02.93	564,406.1757	1,344,142.4459		

CURVE DATA

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
SW2-1	1°43'50.84" (RT)	1°33'28.07"	3678.00	55.56	111.10	0.42
SW2-2	14°33'13.04" (RT)	47°44'47.34"	120.00	15.32	30.48	0.97
SW2-3	15°47'37.83" (LT)	44°45'44.38"	128.00	17.75	35.28	1.23

SW-3

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW3-1	POT	300+00.00	564,406.1757	1,344,142.4459	
	PC	300+51.71	564,457.3055	1,344,134.7172	
	PI	300+59.35	564,464.8551	1,344,133.5760	
SW3-2	PRC	300+66.96	564,472.4885	1,344,133.4009	
	PRC	300+66.96	564,472.4885	1,344,133.4009	
	PI	300+75.11	564,480.6309	1,344,133.2141	
SW3-3	PT	300+83.23	564,488.8838	1,344,131.9968	
	PC	302+18.57	564,622.5059	1,344,111.7885	
	PI	302+26.71	564,630.5589	1,344,110.5512	
SW3-4	PT	302+34.84	564,638.3926	1,344,108.3231	
	PRC	302+34.84	564,638.3926	1,344,108.3231	
	PI	302+50.17	564,653.1406	1,344,104.1284	
SW3-5	PRC	302+65.34	564,668.4695	1,344,223.7451	
	PRC	302+65.34	564,668.4695	1,344,223.7451	
	PI	302+73.48	564,676.6118	1,344,103.5899	
SW3-5	PT	302+81.60	564,684.6647	1,344,102.3726	
	POT	303+05.84	564,709.6120	1,344,098.6017	

CURVE DATA

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
SW3-1	7°16'53.29" (RT)	47°44'47.34"	120.00	7.64	15.25	0.24
SW3-2	7°16'53.29" (LT)	44°45'44.38"	128.00	8.14	16.27	0.26
SW3-3	7°16'53.29" (LT)	44°45'44.38"	128.00	8.14	16.27	0.26
SW3-4	14°33'46.59" (RT)	47°44'47.34"	120.00	15.33	30.50	0.98
SW3-5	7°16'53.29" (LT)	44°45'44.38"	128.00	8.14	16.27	0.26

SW-4

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW4-3	PC	400+00.00	564,719.1102	1,344,071.9604	
	PI	400+11.30	564,721.1041	1,344,083.0793	
	PCC	400+21.68	564,729.7342	1,344,090.3679	
SW4-4	PCC	400+21.68	564,729.7342	1,344,090.3679	
	PI	400+34.03	564,739.1670	1,344,098.3345	
	PT	400+44.88	564,751.3803	1,344,096.5233	
SW4-1	PC	401+47.85	564,853.2346	1,344,081.4185	
	PI	401+62.38	564,867.6073	1,344,079.2871	
	PRC	401+76.76	564,881.0560	1,344,073.7870	
SW4-2	PRC	401+76.76	564,881.0560	1,344,073.7870	
	PI	401+93.16	564,896.2287	1,344,067.5817	
	PT	402+09.35	564,912.5099	1,344,065.6732	
POT	402+44.07	564,946.9944	1,344,061.6310		

CURVE DATA

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
SW4-3	39°39'00.40" (LT)	182°51'31.93"	31.33	11.30	21.68	1.97
SW4-4	48°37'07.19" (LT)	209°37'07.34"	27.33	12.35	23.19	2.66
SW4-1	13°48'28.09" (RT)	47°44'47.34"	120.00	14.53	28.92	0.88
SW4-2	15°33'26.99" (RT)	47°44'47.34"	120.00	16.39	32.58	1.11

SW-5

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW5-1	POT	500+00.00	564,946.9944	1,344,061.6310	
	PC	502+03.38	565,148.9943	1,344,037.9526	
	PI	502+15.44	564,160.9690	1,344,036.5489	
SW5-2	PRC	502+27.42	565,172.9835	1,344,037.5555	
	PRC	502+27.42	565,172.9835	1,344,037.5555	
	PI	502+40.10	565,185.6247	1,344,038.6146	
SW5-3	PT	502+52.67	565,198.1752	1,344,036.7885	
	PC	502+62.10	565,207.4998	1,344,035.3968	
	PI	502+69.18	565,214.4997	1,344,034.3672	
SW5-7	PRC	502+76.23	565,221.3100	1,344,032.4493	
	PRC	502+76.23	565,221.3100	1,344,032.4493	
	PI	502+85.32	565,230.0615	1,344,029.9647	
SW5-4	PRC	502+94.38	565,239.0844	1,344,028.8668	
	PC	504+99.55	565,442.7008	1,344,003.6396	
	PI	505+14.83	565,457.8646	1,344,001.7609	
SW5-5	PRC	505+29.14	565,469.1520	1,343,991.4620	
	PRC	505+29.14	565,469.1520	1,343,991.4620	
	PI	505+33.32	565,472.2391	1,343,988.6452	
SW5-6	PRC	505+36.76	565,476.2589	1,343,989.7885	
	PRC	505+36.76	565,476.2589	1,343,989.7885	
	PI	505+52.47	565,491.3698	1,343,994.0662	
PT	505+67.97	565,507.0797	1,343,993.9821		

CURVE DATA

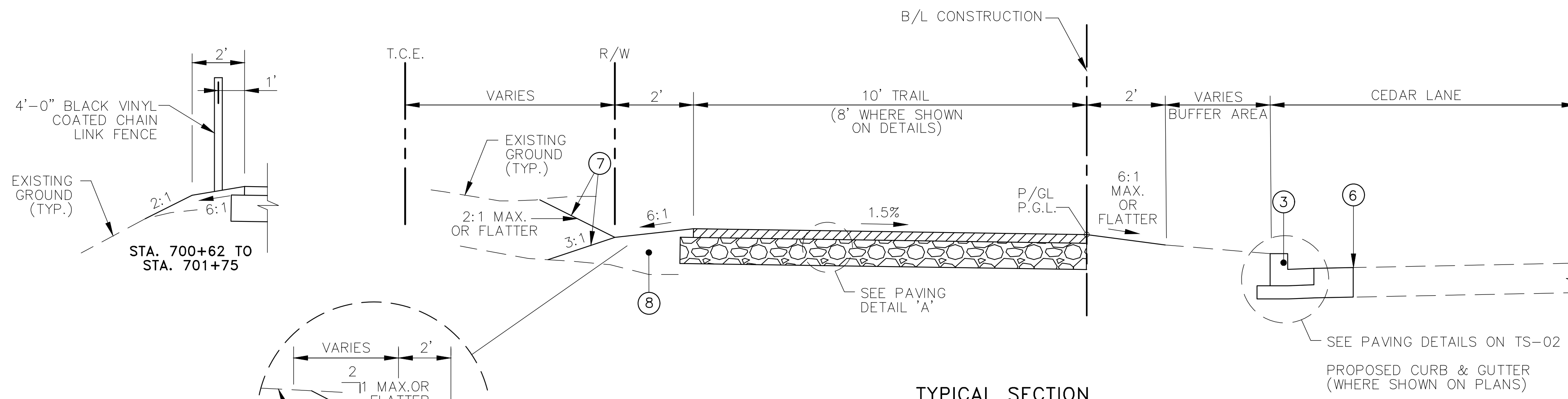
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
SW5-1	11°28'28.94" (RT)	47°44'47.34"	120.00	12.06	24.03	0.60
SW5-2	13°09'24.88" (LT)	52°05'13.46"	110.00	12.69	25.26	0.73
SW5-3	7°21'37.43" (LT)	52°05'13.46"	110.00	7.08	14.13	0.23
SW5-7	8°39'56.13" (RT)	47°44'47.34"	120.00	9.09	18.15	0.34
SW5-4	35°18'55.65" (LT)	119°21'58.35"	48.00	15.28	29.59	2.37
SW5-5	58°15'16.40" (RT)	763°58'37.42"	7.50	4.18	7.63	1.09
SW5-6	16°15'21.81" (LT)	52°05'13.46"	110.00	15.71	31.21	1.12

SW-6

BASELINE DATA					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SW6-1	PC	600+00.00	565,507.0797	1,343,989.9821	
	PI	600+06.17	565,513.2508	1,343,993.9412	
	PRC	600+12.33	565,519.3960	1,343,993.2103	
SW6-2	PRC	600+67.84	565,574.4984	1,343,986.6360	
	PI	600+74.24	565,580.8484	1,343,985.8786	
	PRC	600+80.61	565,587.2432	1,343,985.9362	
SW6-3	PC	600+80.61	565,587.2432	1,343,985.9362	
	PI	600+94.51	565,601.1415	1,343,986.0615	
	PRC	601+08.37	565,614.9350	1,343,984.3540	
SW6-4	PC	601+78.46	565,684.4970	1,343,975.7430	
	PI	602+00.16	565,706.0289	1,343,973.0775	
	PRC	602+21.70	565,726.5610	1,343,966.0663	
SW6-5	PC	602+21.70	565,726.5610	1,343,966.0663	
	PI	602+52.65	565,755.8501	1,343,956.0647	
	PRC	602+83.38	565,786.5642	1,343,952.2534	
SW6-6	PC	603+15.69	565,818.6163	1,343,948.2744	
	PI	603+27.66	565,830.5070	1,343,946.8005	
	PRC	603+38.95	565,841.2420	1,343,952.0925	
SW6-7	PC	603+38.95	565,841.2420	1,343,952.0925	
	PI	603+53.93	565,854.6755	1,343,958.7148	
	PRC	603+68.06	565,869.5375	1,343,956.8614	
SW6-8	PC	603+81.11	565,882.4659	1,343,955.2467	
	PI	603+98.40	565,899.6513	1,343,953.1061	
	PRC	604+09.33	565,899.4251	1,343,935.8092	
POT	604+13.44	565,899.3713	1,343,931.6987		

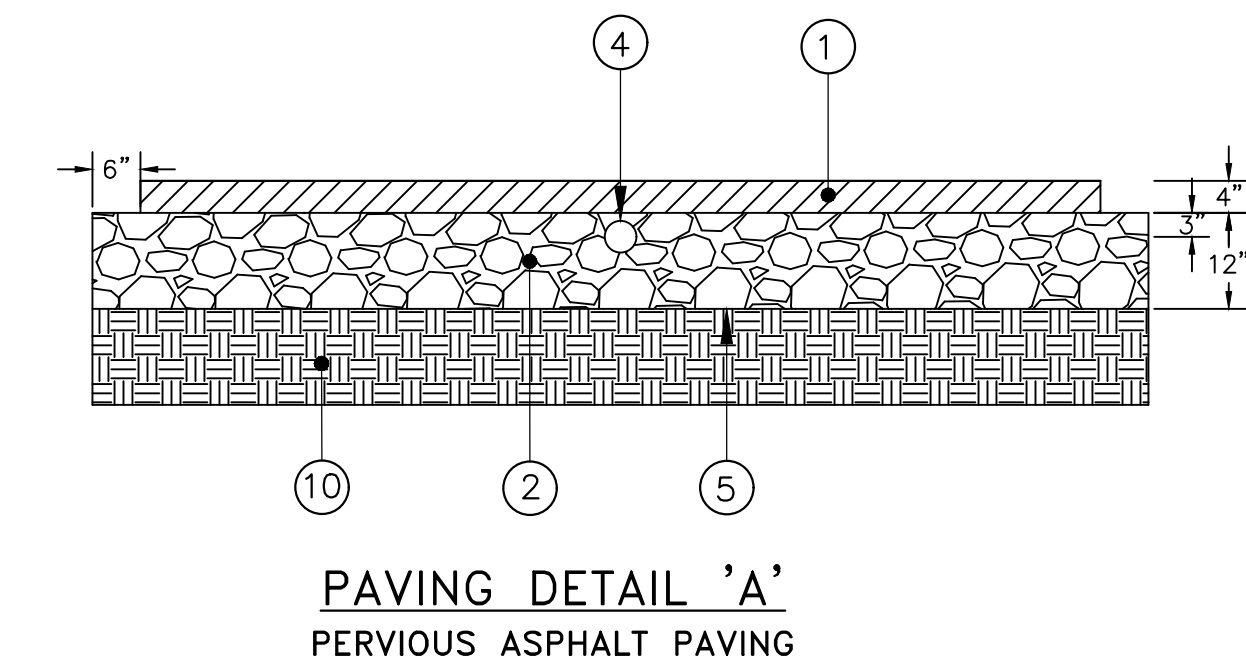
CURVE DATA

CURVE NO.	DELTA	DE
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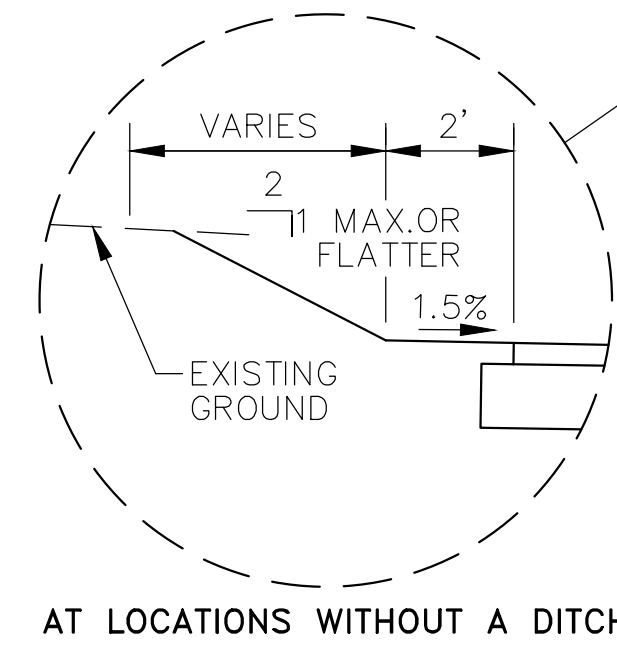


TYPICAL SECTION
 TRAIL 1 - STA. 100+15 TO STA. 102+48
 TRAIL 2 - STA. 200+14 TO STA. 201+86
 TRAIL 3 - STA. 300+15 TO STA. 302+91
 TRAIL 4 - STA. 400+16 TO STA. 402+15
 TRAIL 5 - STA. 500+17 TO STA. 505+50
 TRAIL 6 - STA. 600+19 TO STA. 604+01
 TRAIL 7 - STA. 700+12 TO STA. 703+64

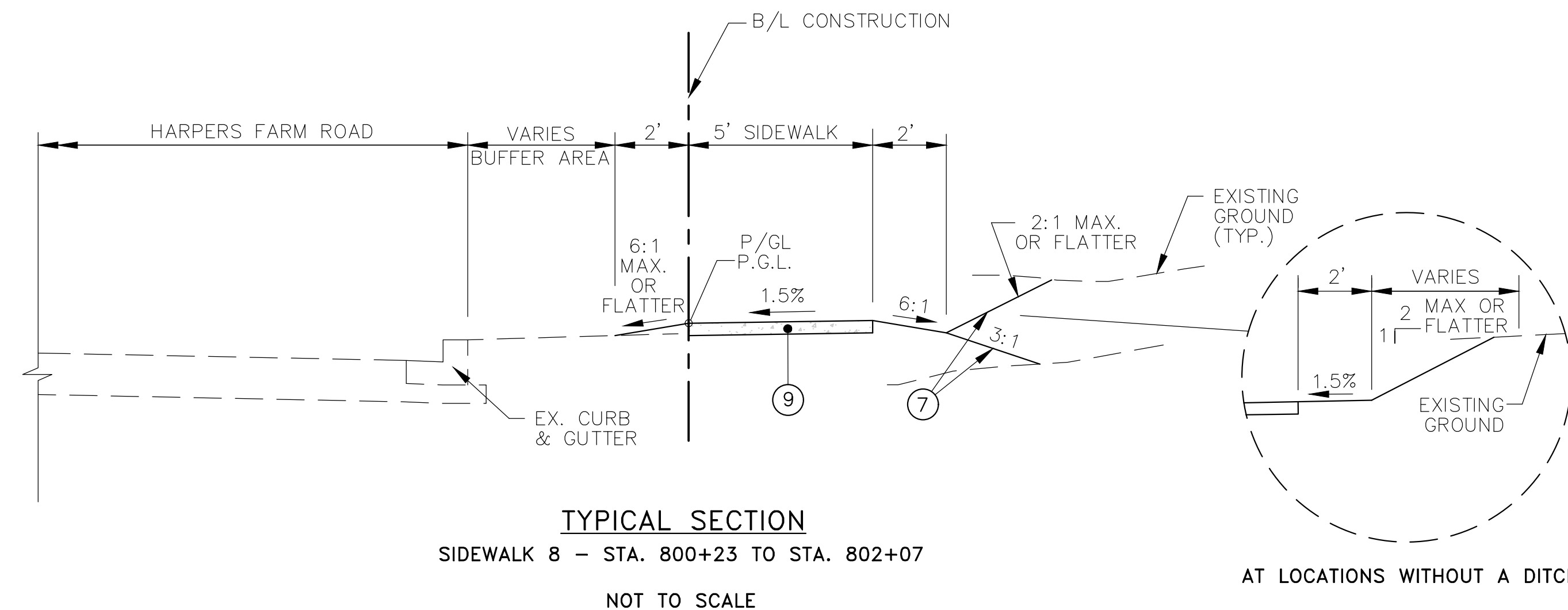
NOT TO SCALE



PAVING DETAIL 'A'
 PERVIOUS ASPHALT PAVING



AT LOCATIONS WITHOUT A DITCH



TYPICAL SECTION
 SIDEWALK 8 - STA. 800+23 TO STA. 802+07

NOT TO SCALE

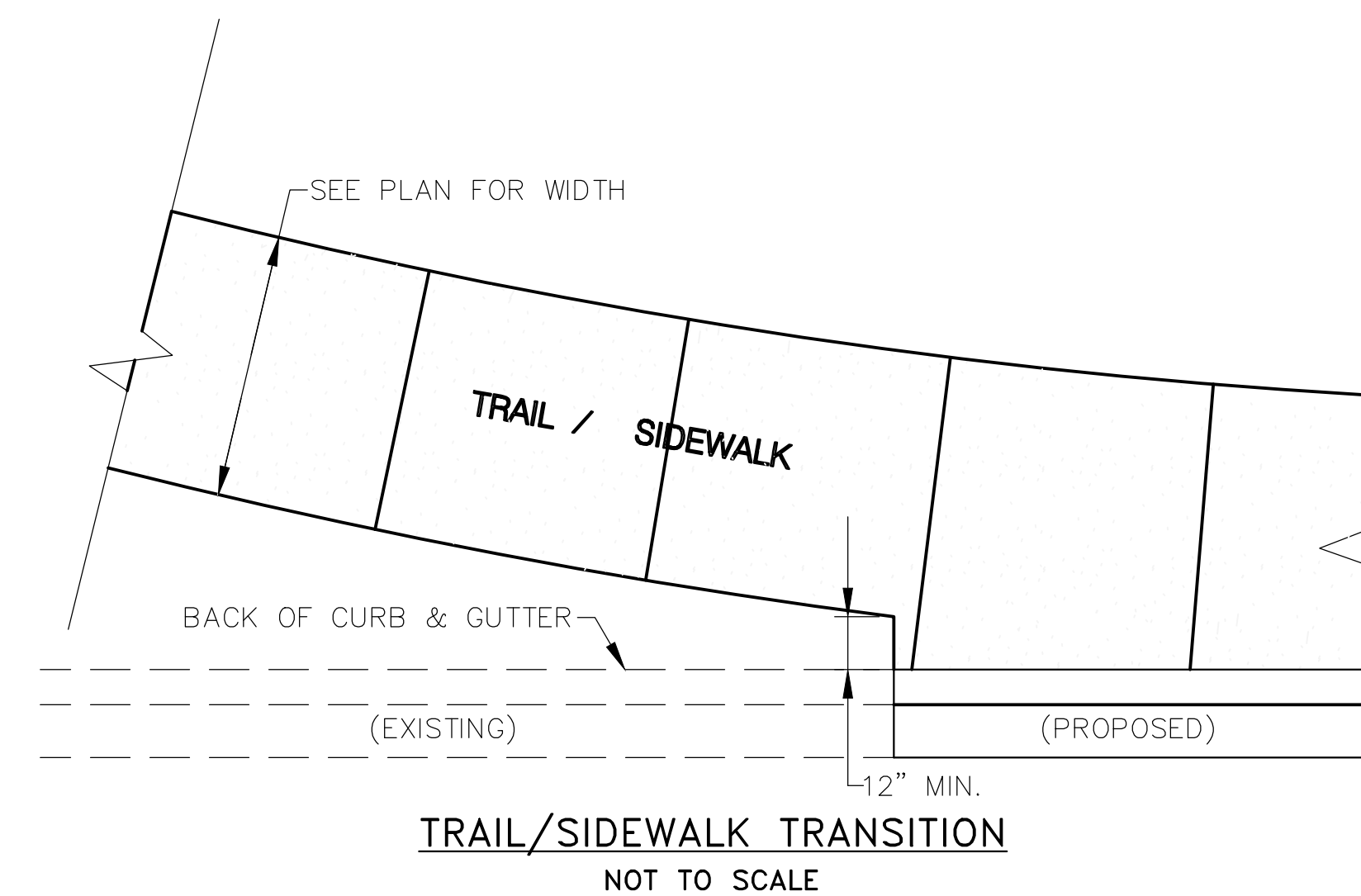
AT LOCATIONS WITHOUT A DITCH

PERVIOUS ASPHALT PAVEMENT OPERATION AND MAINTENANCE NOTES

1. THE COUNTY SHALL PERIODICALLY SWEEP (OR VACUUM PERVIOUS ASPHALT PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
2. THE COUNTY SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.
3. THE COUNTY SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.
4. THE COUNTY SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERVIOUS PAVEMENT.

TYPICAL SECTION NOTES

1. ALL SIDEWALK RAMPS AND OTHER LOCATIONS SPECIFIED IN THE PLANS SHALL BE STANDARD CONCRETE (IMPERVIOUS) SIDEWALK. SEE DETAIL R-3.05 FOR GENERAL NOTES AND DETAILS.
2. BASE COURSE USING GRADED AGGREGATE MATERIAL TO BE PLACED IN THIS AREA SHALL BE INCIDENTAL TO AND INCLUDED IN THE CURB AND GUTTER.
3. IT IS ANTICIPATED THAT PROPOSED PERVIOUS PAVEMENT AGGREGATE AND/OR CONCRETE SAND MAY CONFLICT WITH THE EXISTING UTILITY CONDUITS. CONTRACTOR MUST AVOID DAMAGE OR IMPACT TO ANY UTILITY LINES DURING CONSTRUCTION BY USE OF HAND EXCAVATION AND/OR OTHER METHODS APPROVED BY THE ENGINEER. IF DURING CONSTRUCTION THE UTILITY CONFLICTS CANNOT BE RESOLVED BY MOVING THE EXISTING UTILITY, STANDARD CONCRETE (IMPERVIOUS) SIDEWALK CAN BE USED IN THE VICINITY OF THE CONFLICT IN LIEU OF PERVIOUS PAVEMENT WITH THE APPROVAL OF THE COUNTY. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE OVERDRAIN OUTLET LOCATION DESIGN ACCORDINGLY. DAMAGE TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION OF THE SIDEWALK, CURB AND GUTTER, STORM DRAINAGE, OR OTHER INCIDENTAL CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. ALL RAMPS, SIDEWALKS, AND PERVIOUS CONCRETE TRAILS SHALL MEET REQUIREMENTS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION "ACCESSIBILITY POLICY AND GUIDELINES FOR PEDESTRIAN FACILITIES".
5. THE CONTRACTOR SHALL PROVIDE A FULL DEPTH SAWCUT AT ALL LOCATIONS WHERE PAVEMENT IS WIDENED OR CURB AND GUTTER IS REPLACED. SAWCUTS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCIDENTAL TO THE APPROPRIATE CLASS OF EXCAVATION.
6. FOR SLOPES 2:1 AND STEEPER, PLACE 2 INCH TOPSOIL AND TURFGRASS ESTABLISHMENT. FOR SLOPES FLATTER THAN 2:1, PLACE 4 INCH TOPSOIL AND TURFGRASS ESTABLISHMENT.



TRAIL/SIDEWALK TRANSITION
 NOT TO SCALE

LEGEND

- ① 4" PERVIOUS ASPHALT PAVEMENT
- ② 12" AASHTO NO. 2 STONE
- ③ 7" COMBINATION CURB AND GUTTER (R-3.01)
- ④ 4 INCH PERFORATED UNDERDRAIN PIPE
- ⑤ TOP OF SUB-GRADE AND LIMIT OF EXCAVATION
- ⑥ FULL DEPTH SAW CUT & MATCH EXISTING PAVEMENT ELEVATION
- ⑦ 4" TOPSOIL, SEED & MULCH
- ⑧ COMMON FILL
- ⑨ 4" CONCRETE SIDEWALK (R-3.05)
- ⑩ EXISTING SUBGRADE

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

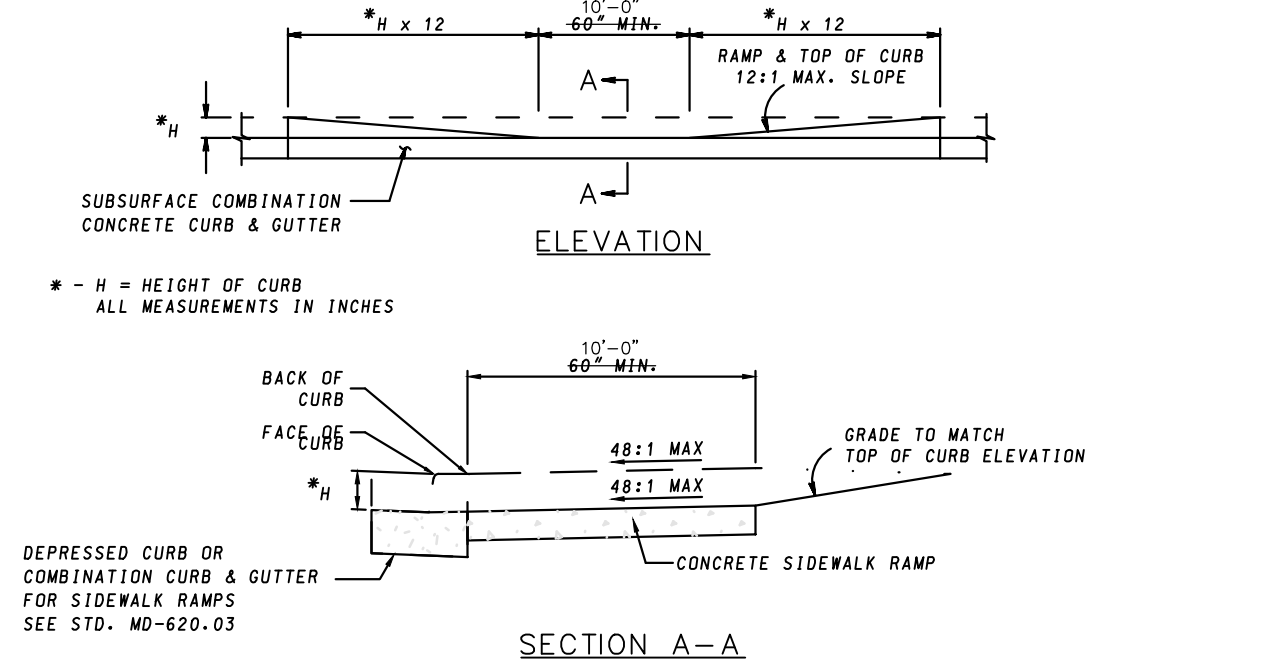
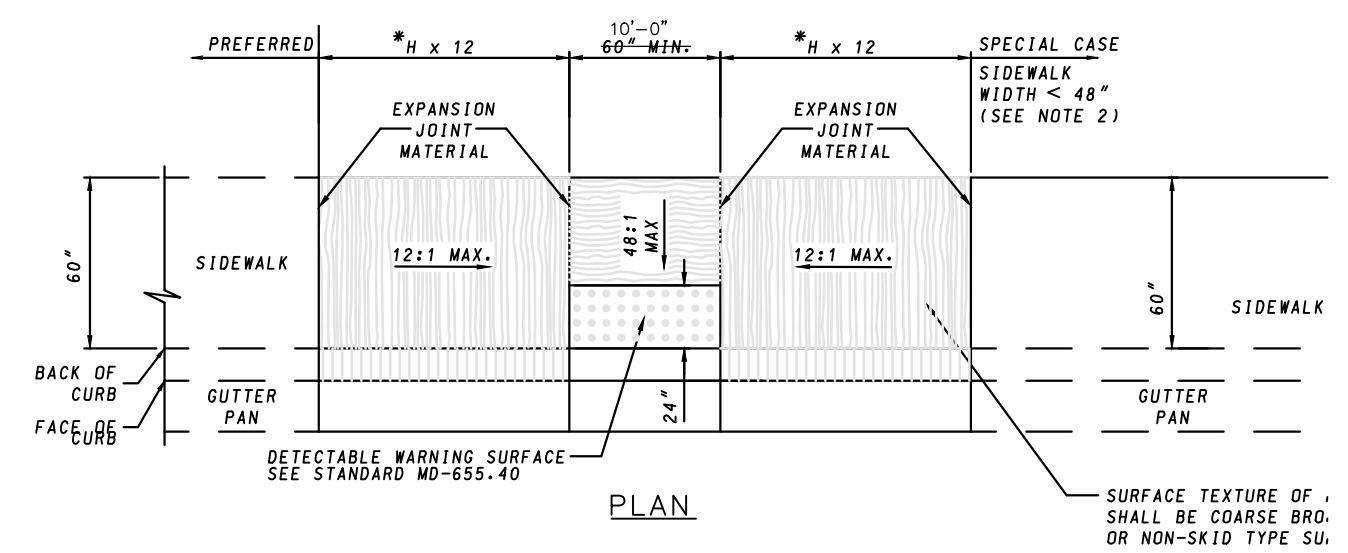
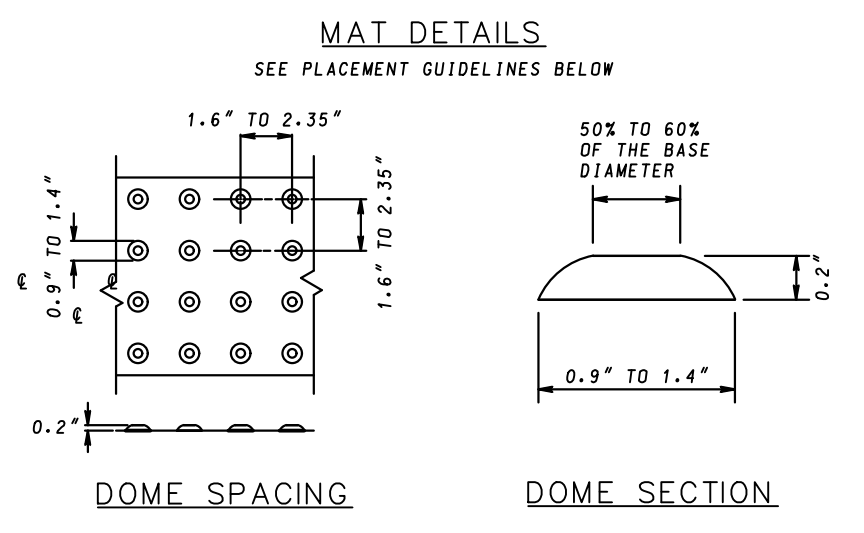
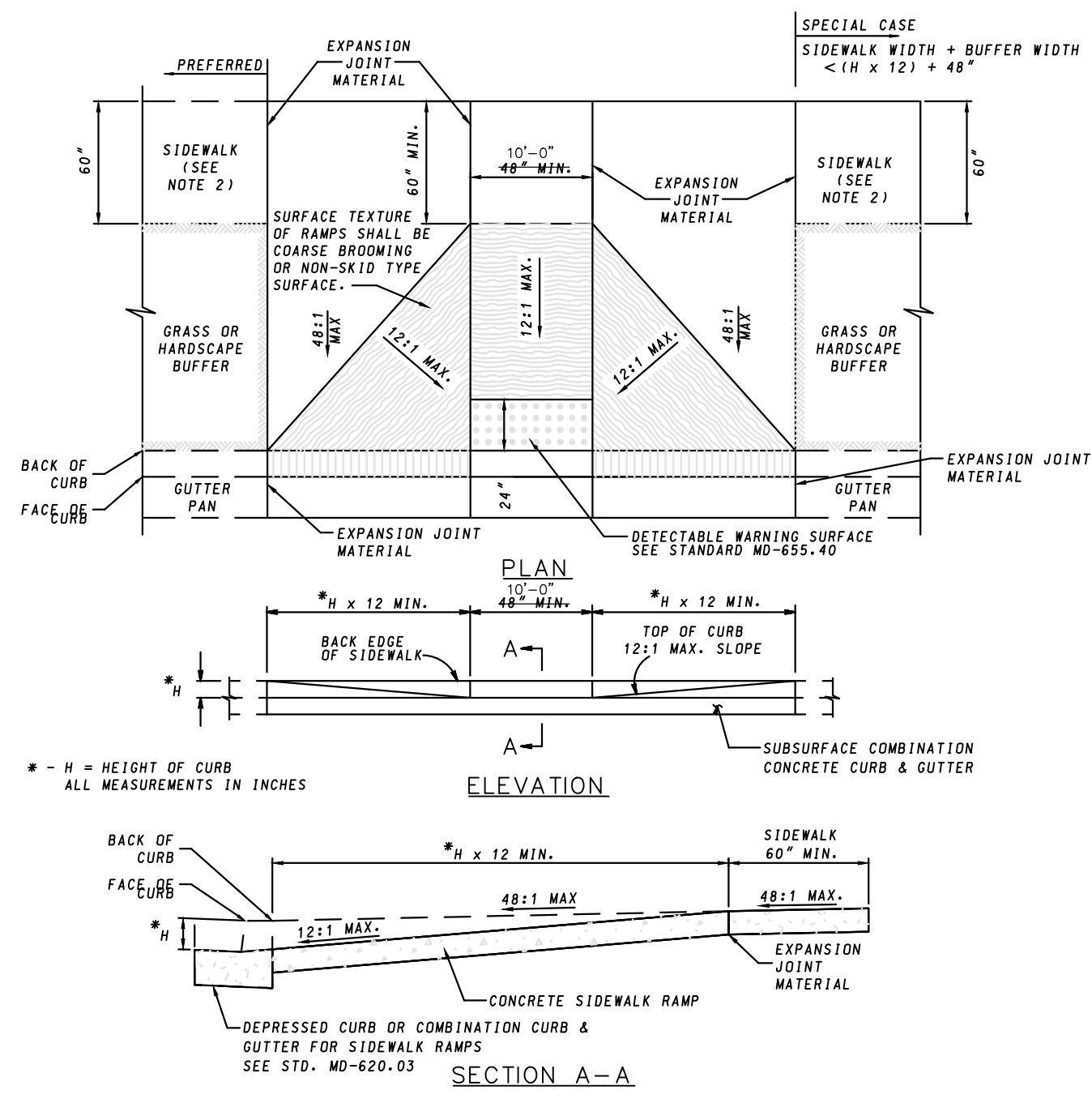
TYPICAL SECTIONS & DETAILS

SCALE MAP NO. _____ BLOCK NO. _____

**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 N/A
 DWG NO.
 TS-01



NOTES

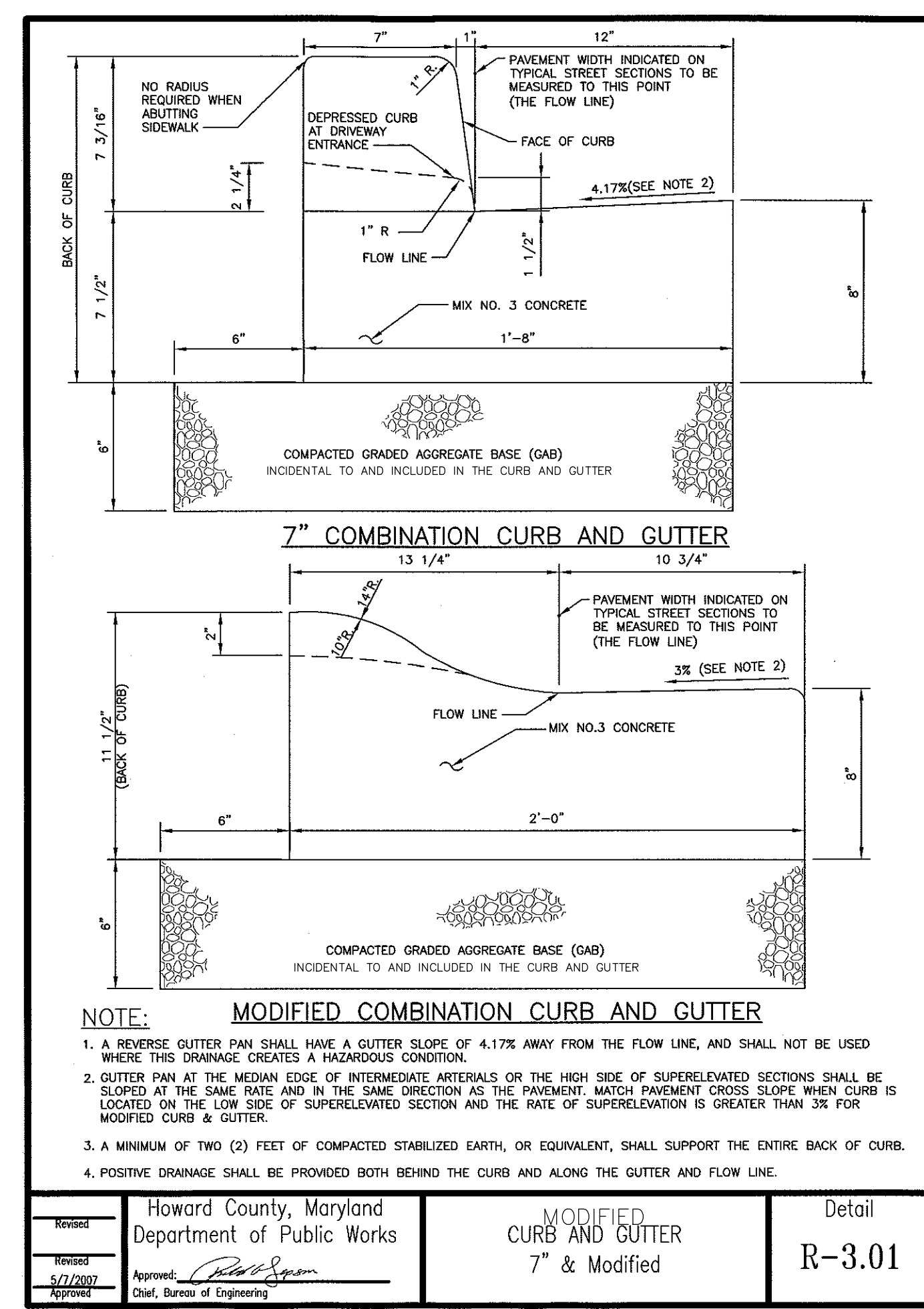
1. TO BE USED ON WIDE SIDEWALKS OR SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVELWAY OR OTHER SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMP TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.

NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5' AND NO MORE THAN 3.0' FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

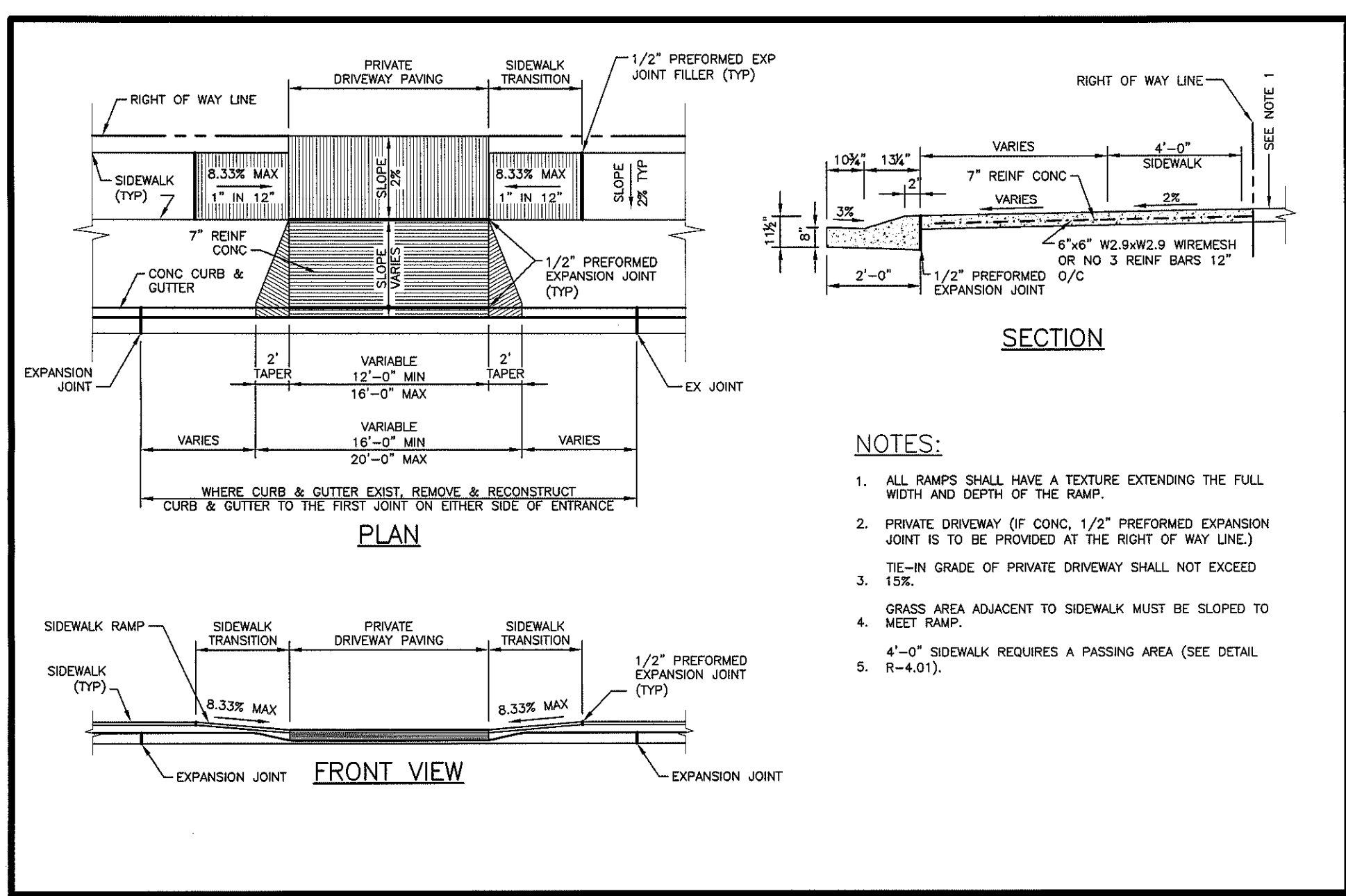
NOTES

1. TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCALITY.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVELWAY OR OTHER SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1.
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6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.



NOTE: MODIFIED COMBINATION CURB AND GUTTER

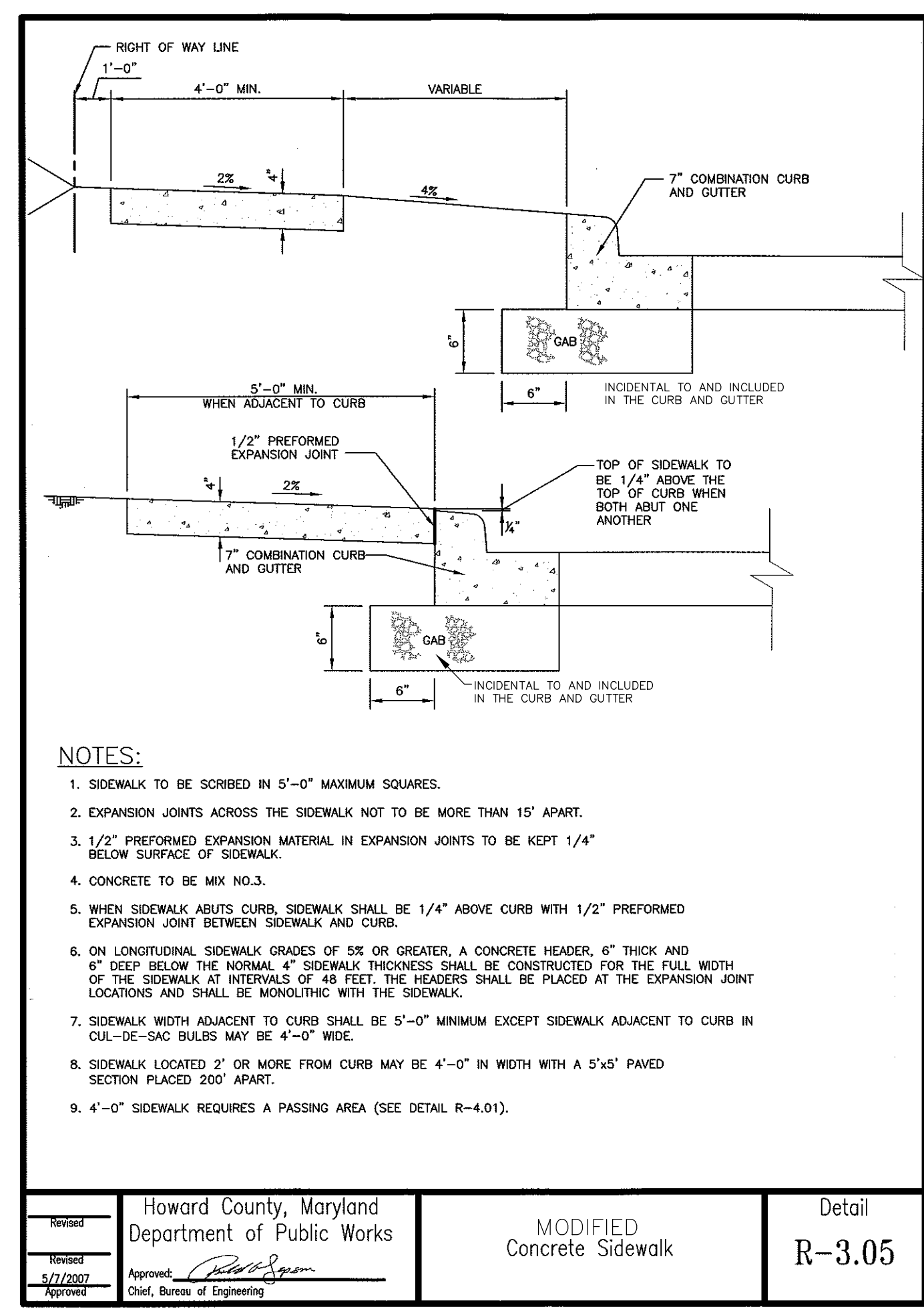
1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.
2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT MATCH CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.
3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.



Howard County, Maryland Department of Public Works
 Approved: [Signature] Chief, Bureau of Engineering

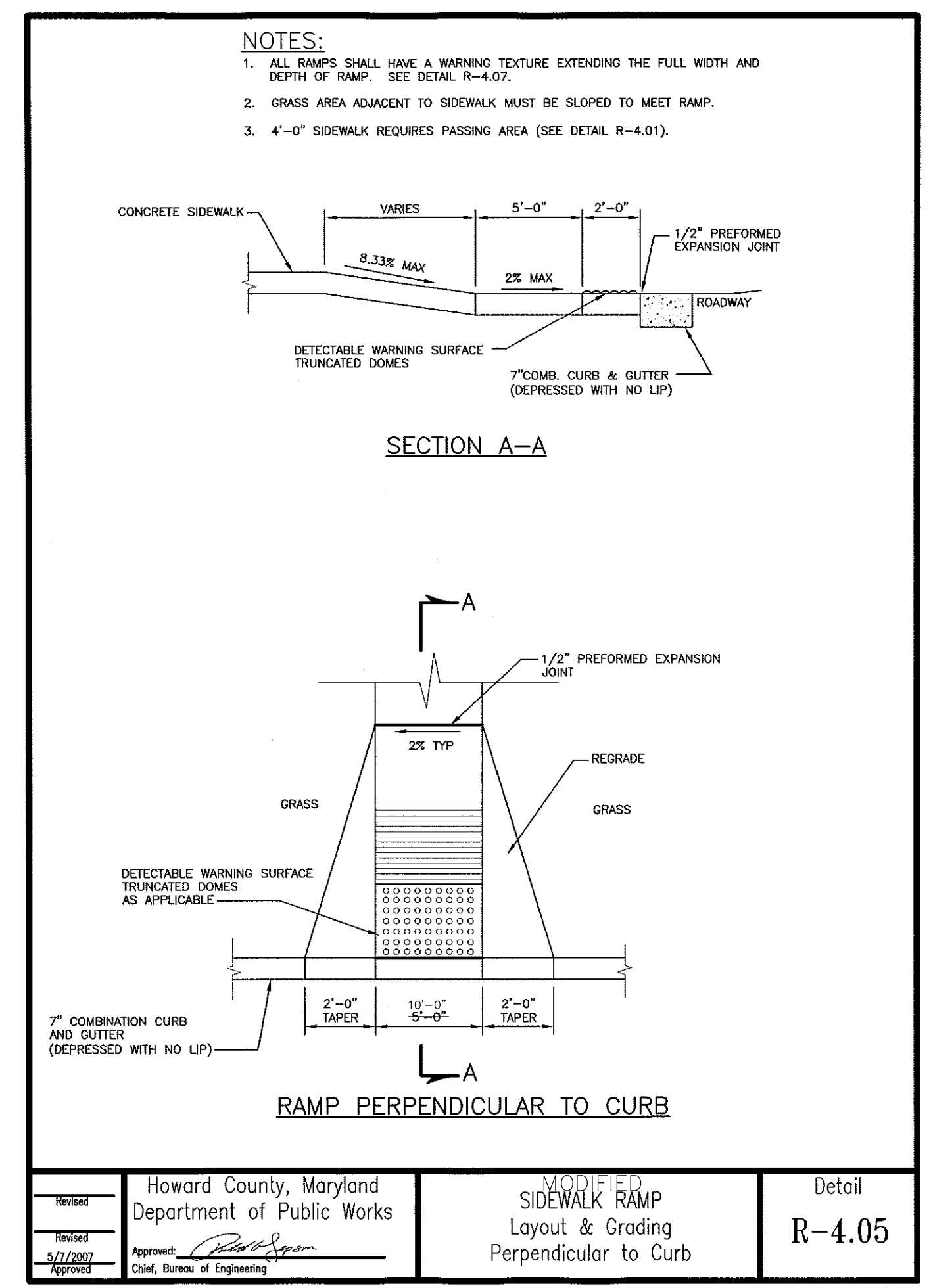
RESIDENTIAL DRIVEWAY ENTRANCE Modified Combination Curb and Gutter Sidewalk Setback from Curb
 Detail R-6.03

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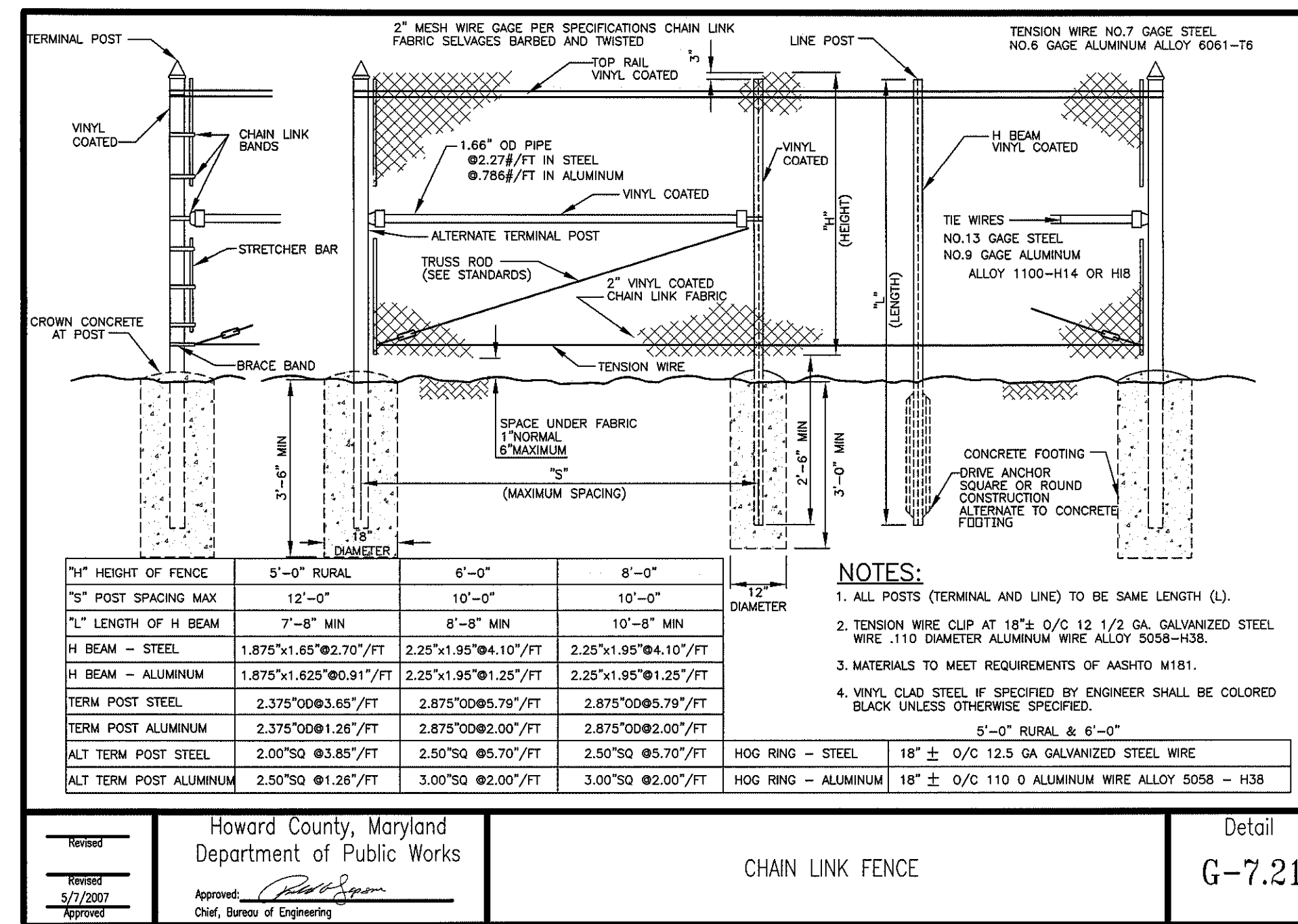
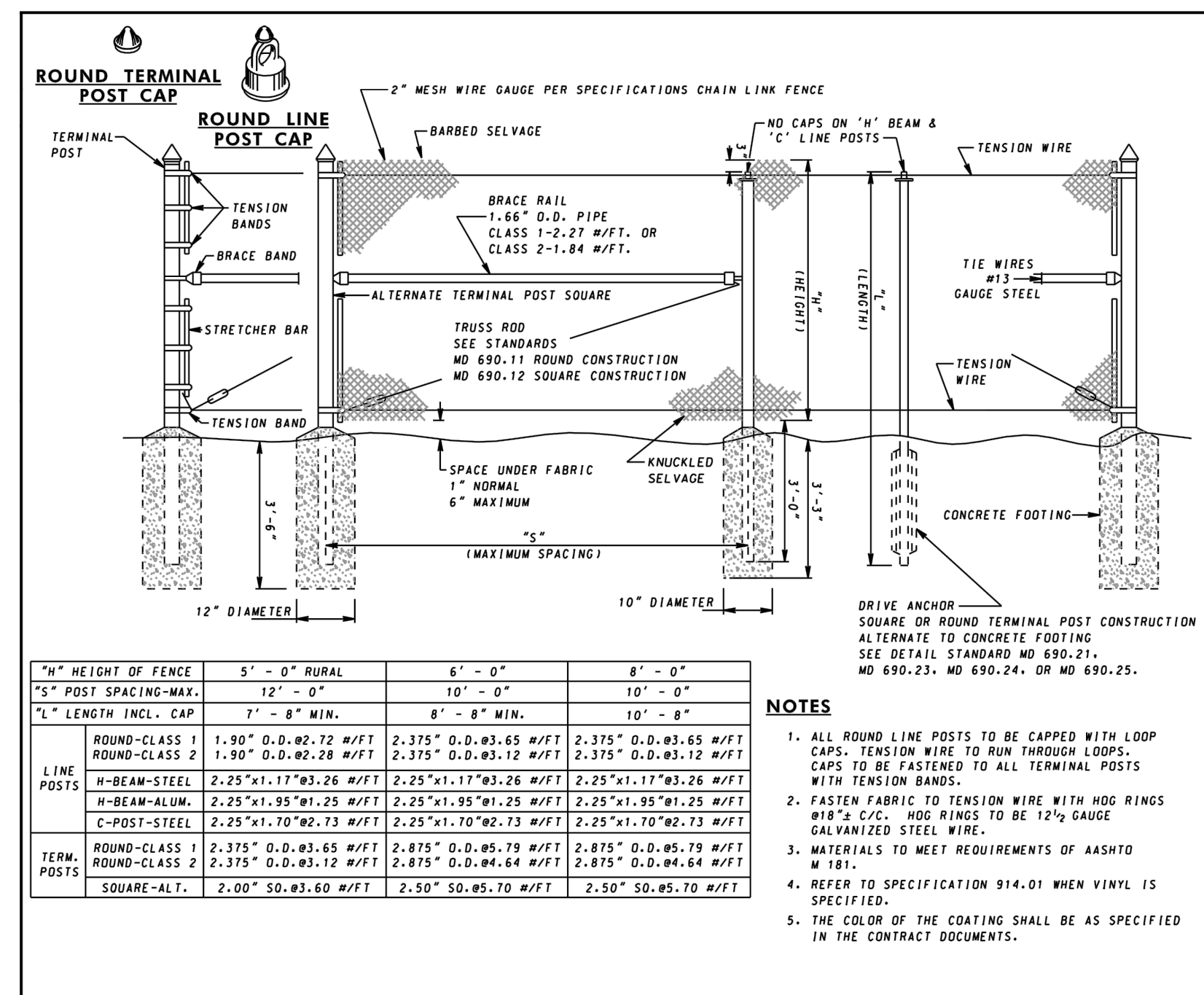
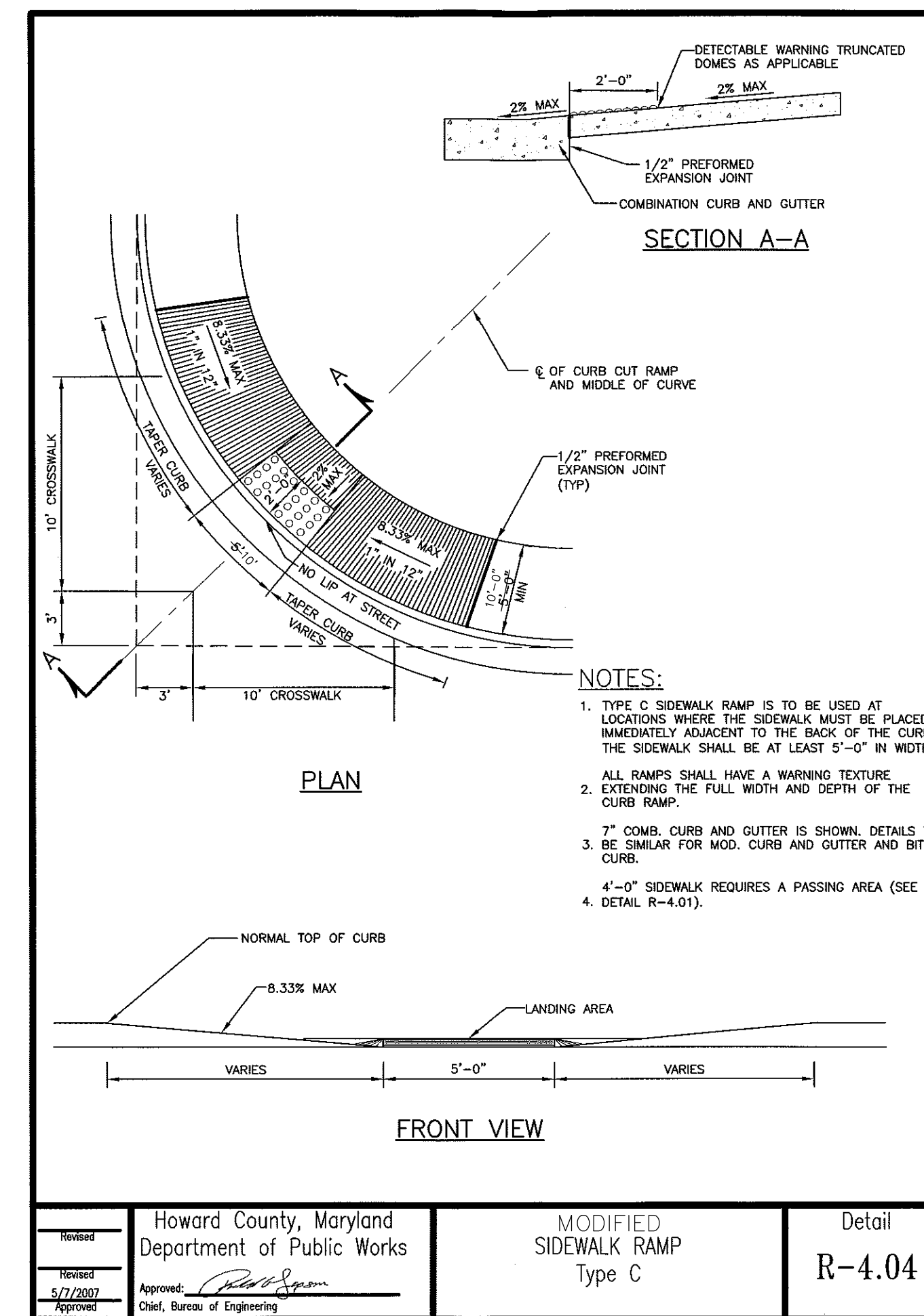
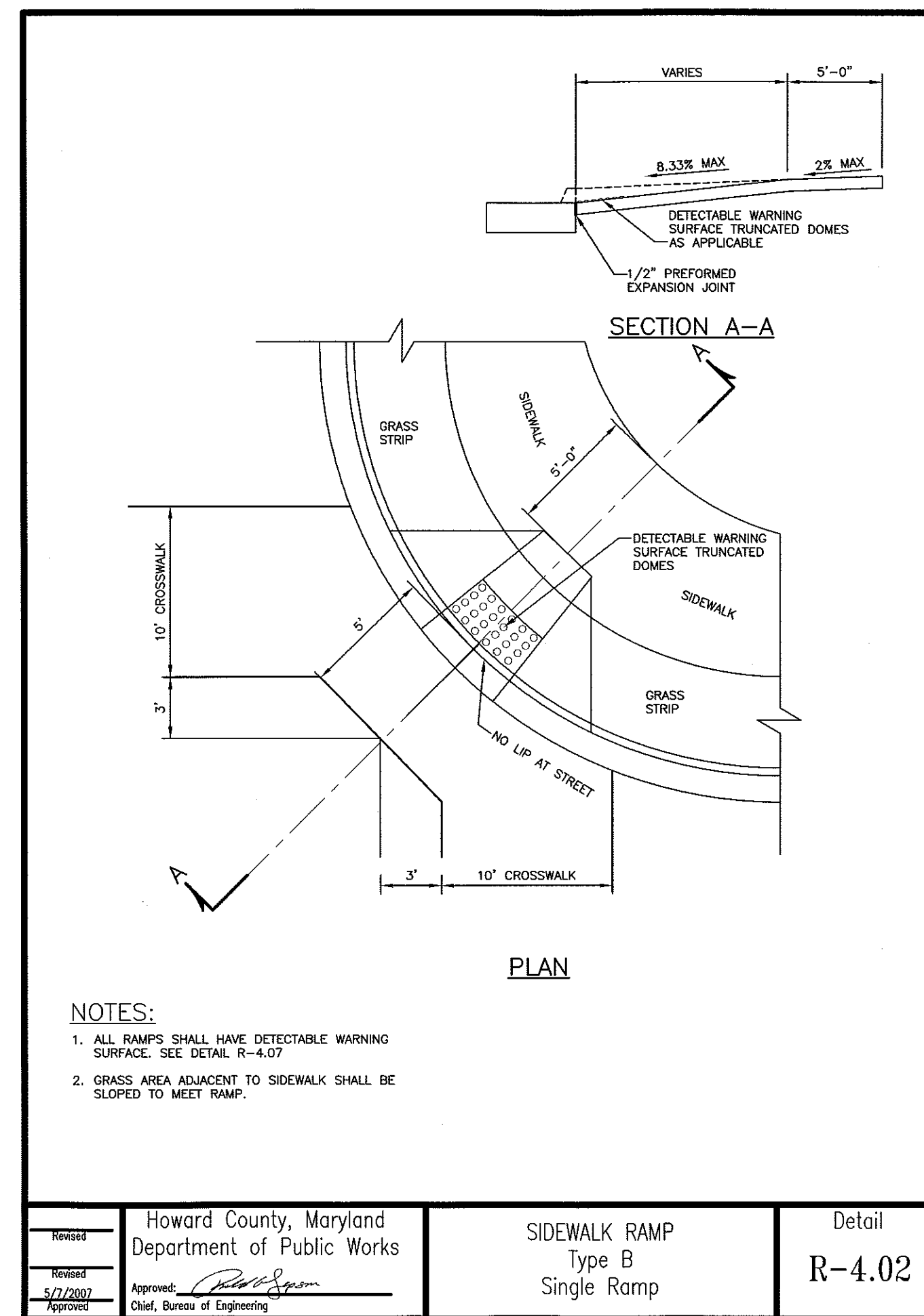
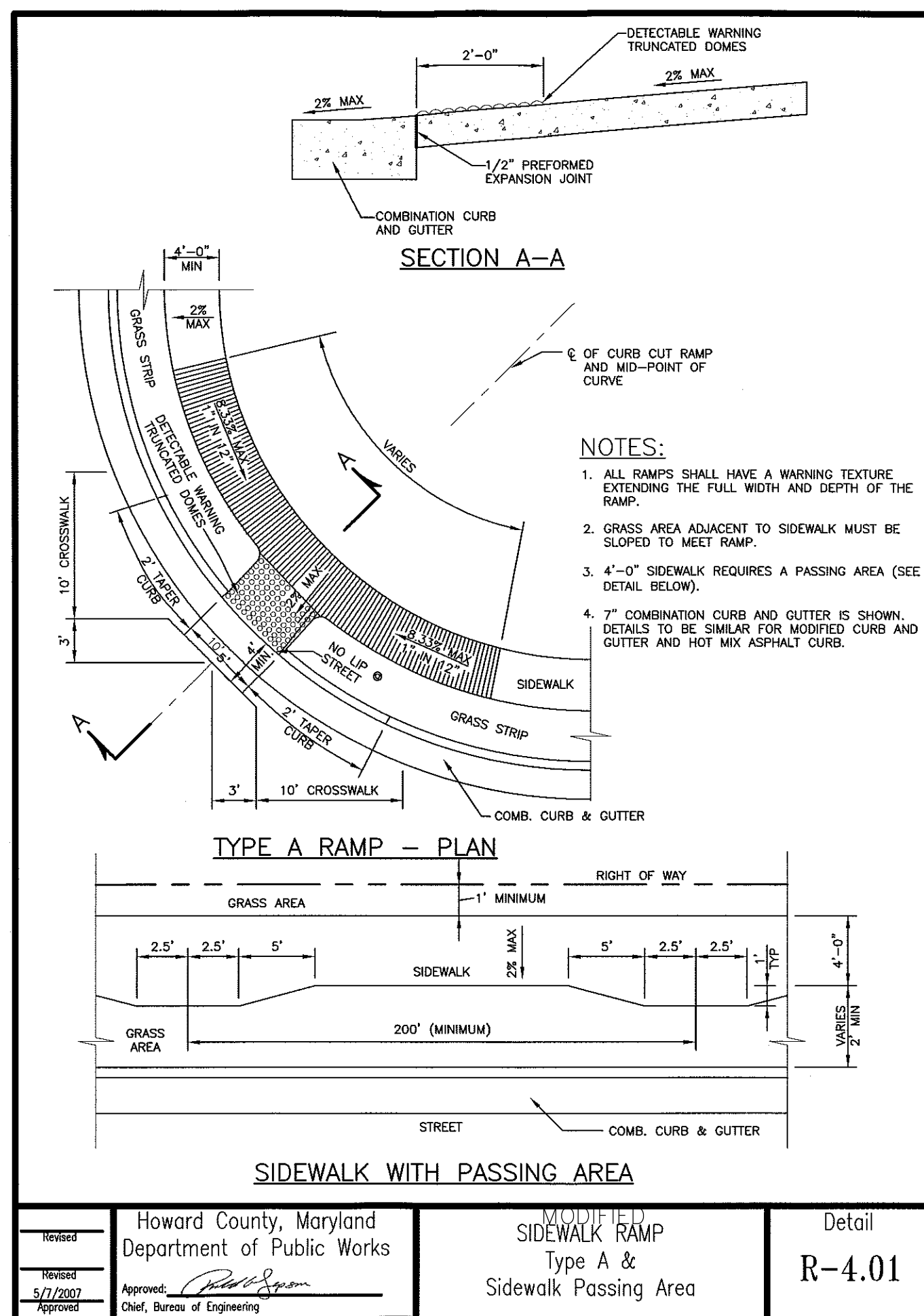
Howard County, Maryland Department of Public Works
 Approved: [Signature] Chief, Bureau of Engineering

MODIFIED Concrete Sidewalk
 Detail R-3.05



Howard County, Maryland Department of Public Works
 Approved: [Signature] Chief, Bureau of Engineering

MODIFIED SIDEWALK RAMP Layout & Grading Perpendicular to Curb
 Detail R-4.05



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HOWARD COUNTY, MARYLAND

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DES: TMG
DRN: CDF
CHK: DTM
DATE: 11/2016 BY NO. REVISION DATE

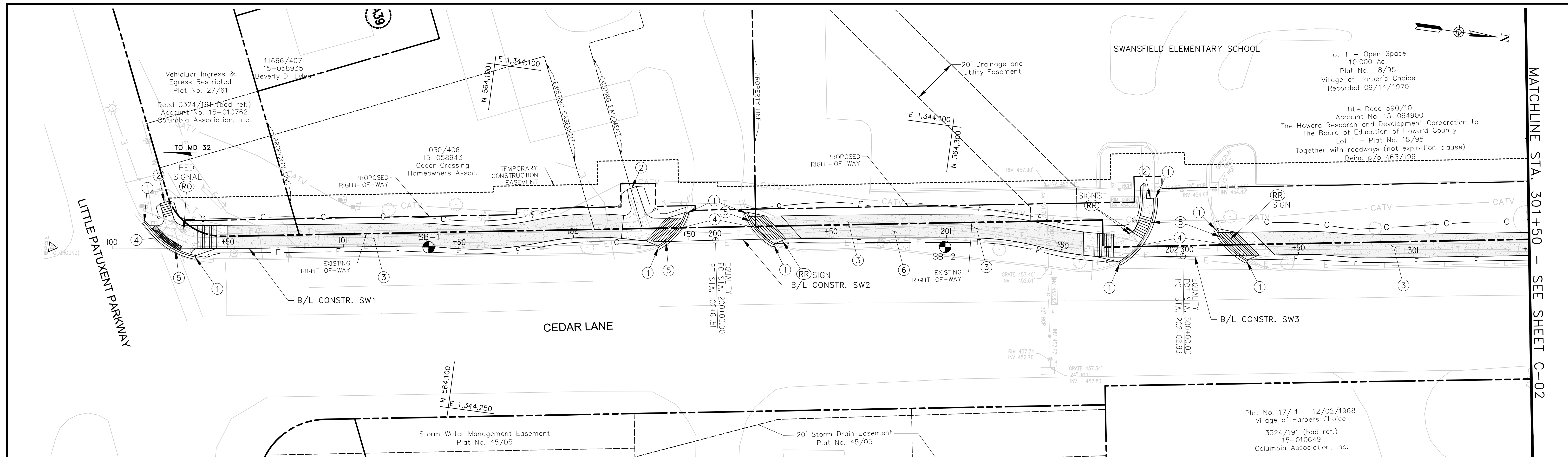
TYPICAL SECTIONS & DETAILS

SCALE: MAP NO. _____ BLOCK NO. _____

CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
N/A
DWG NO.
TS-03



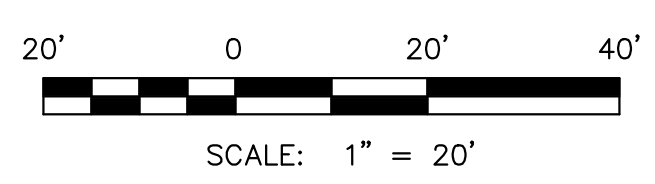
MATCHLINE STA. 301+50 - SEE SHEET C-02

GENERAL NOTES
 1. SEE GEOMETRY SHEETS FOR SHARED USE PATH LAYOUT.

- NEW CONSTRUCTION NOTES**
- ① TIE INTO EXISTING CURB
 - ② TIE INTO EXISTING SIDEWALK AT NEAREST JOINT
 - ③ 10' WIDE PERVIOUS ASPHALT SHARED USE PATH
 - ④ INSTALL DETECTABLE WARNING SURFACE
 - ⑤ INSTALL 7" COMBINATION CURB AND GUTTER PER R-3.01
 - ⑥ INSTALL 10' WIDE CONCRETE PAD FOR BUS WAITING AREA

- LEGEND**
- ✕ TREE REMOVAL
 - [Pattern] 4" CONCRETE SIDEWALK (IMPERVIOUS)
 - [Pattern] PERVIOUS ASPHALT SIDEWALK
 - [Pattern] DETECTABLE WARNING SURFACE
 - (R) REMOVE
 - (A) ADJUST
 - (RR) REMOVE AND RESET
 - (RO) RELOCATE BY OTHERS

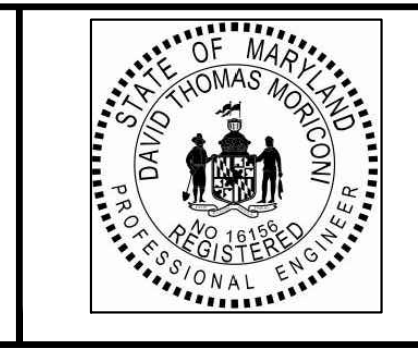
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 HOWARD COUNTY, MARYLAND

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DATE:	11/2016	BY	NO.	REVISION	DATE

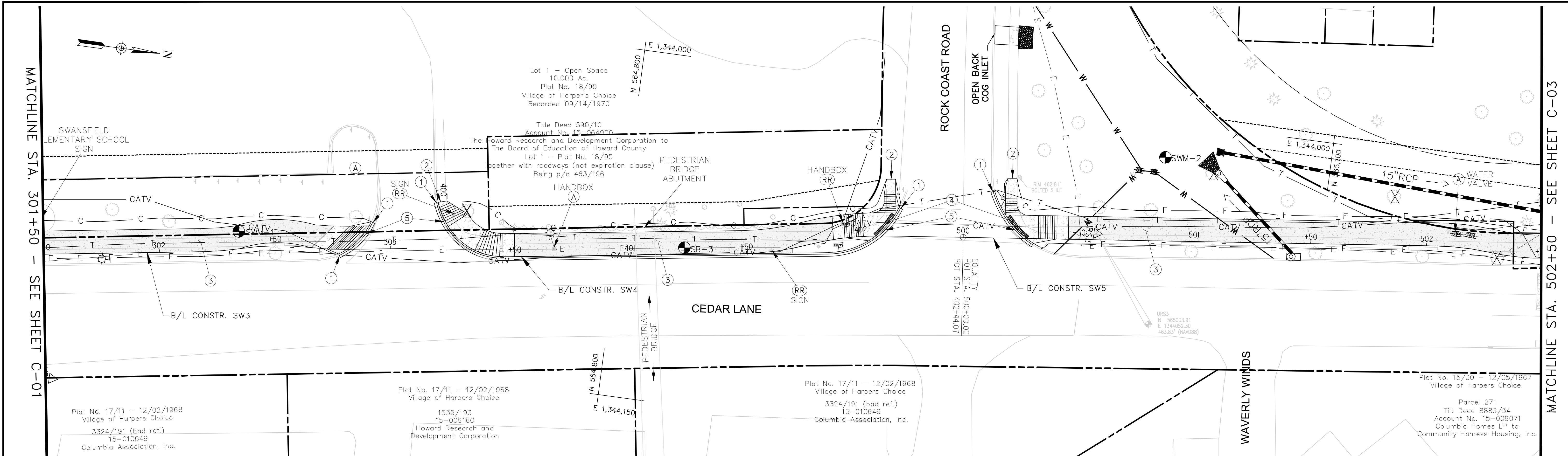
SHARED USE PATH PLAN

SCALE MAP NO. _____ BLOCK NO. _____

**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

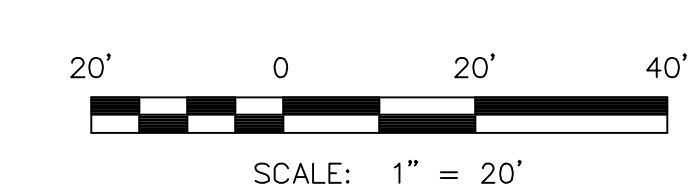
SCALE
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 DWG NO.
 C-01



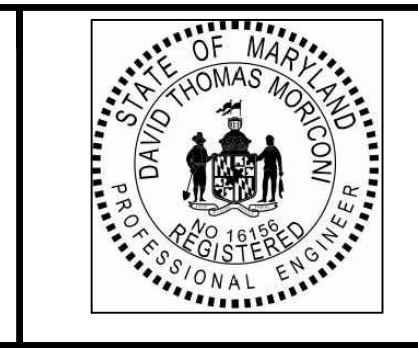
- NEW CONSTRUCTION NOTES**
- ① TIE INTO EXISTING CURB
 - ② TIE INTO EXISTING SIDEWALK AT NEAREST JOINT
 - ③ 10' WIDE PERVIOUS ASPHALT SHARED USE PATH
 - ④ INSTALL DETECTABLE WARNING SURFACE
 - ⑤ INSTALL 7" COMBINATION CURB AND GUTTER PER R-3.01

- LEGEND**
- TREE REMOVAL
 - 4" CONCRETE SIDEWALK (IMPERVIOUS)
 - PERVIOUS ASPHALT SIDEWALK
 - DETECTABLE WARNING SURFACE
 - REMOVE
 - ADJUST
 - REMOVE AND RESET
 - RELOCATE BY OTHERS

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DES:	RLI				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

SHARED USE PATH PLAN

SCALE MAP NO. _____ BLOCK NO. _____

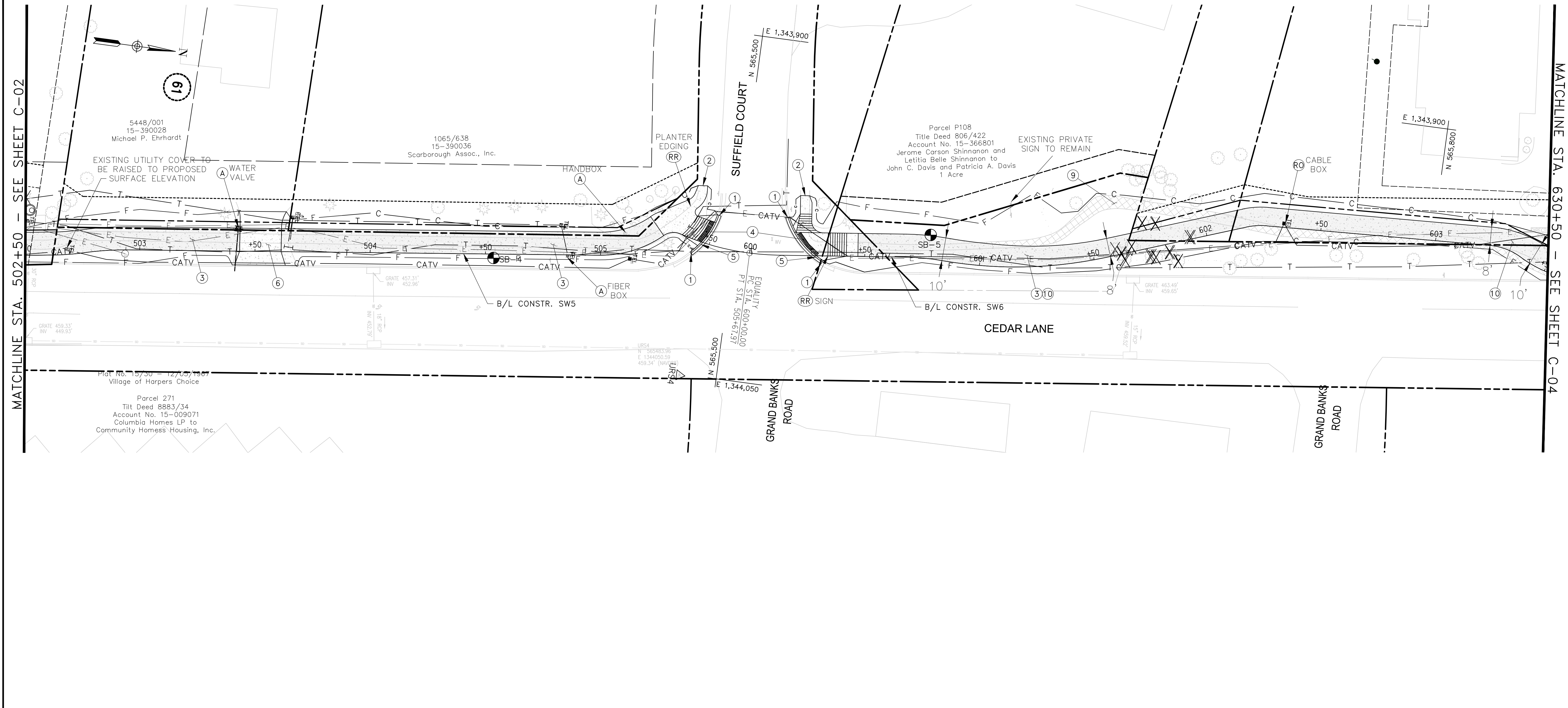
**CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
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DWG NO.
C-02

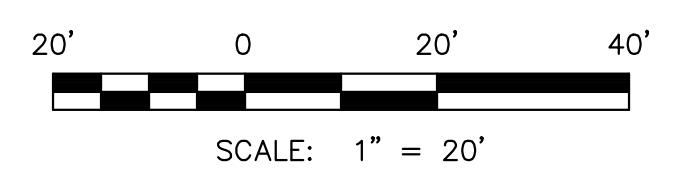
MATCHLINE STA. 502+50 - SEE SHEET C-02

MATCHLINE STA. 630+50 - SEE SHEET C-04



- NEW CONSTRUCTION NOTES**
- ① TIE INTO EXISTING CURB
 - ② TIE INTO EXISTING SIDEWALK AT NEAREST JOINT
 - ③ 10' WIDE PERVIOUS CONCRETE SHARED USE PATH
 - ④ INSTALL DETECTABLE WARNING SURFACE
 - ⑤ INSTALL 7" COMBINATION CURB AND GUTTER PER R-3.01
 - ⑥ INSTALL RESIDENTIAL DRIVEWAY ENTRANCE PER R-6.01
 - ⑦ INSTALL 5' WIDE CONCRETE SIDEWALK
 - ⑧ INSTALL 4' TALL BLACK VINYL COATED CHAIN LINK FENCE
 - ⑨ FILL DIRT PATH WITH COMMON BORROW FILL MATERIAL THEN WITH 4" TOPSOIL TURF ESTABLISHMENT
 - ⑩ TRANSITION ASPHALT PATH FROM 10' WIDE TO 8' WIDE (STA. 600+83 TO 601+55 AND STA. 603+23 TO 603+43)

- LEGEND**
- ✕ TREE REMOVAL
 - [Pattern] 4" CONCRETE SIDEWALK (IMPERVIOUS)
 - [Pattern] PERVIOUS ASPHALT SIDEWALK
 - [Pattern] DETECTABLE WARNING SURFACE
 - (R) REMOVE
 - (A) ADJUST
 - (RR) REMOVE AND RESET
 - (RO) RELOCATE BY OTHERS

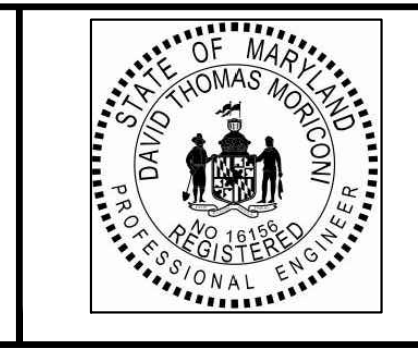


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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

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CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES:	RLI				
DRN:	CDP				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

SHARED USE PATH PLAN

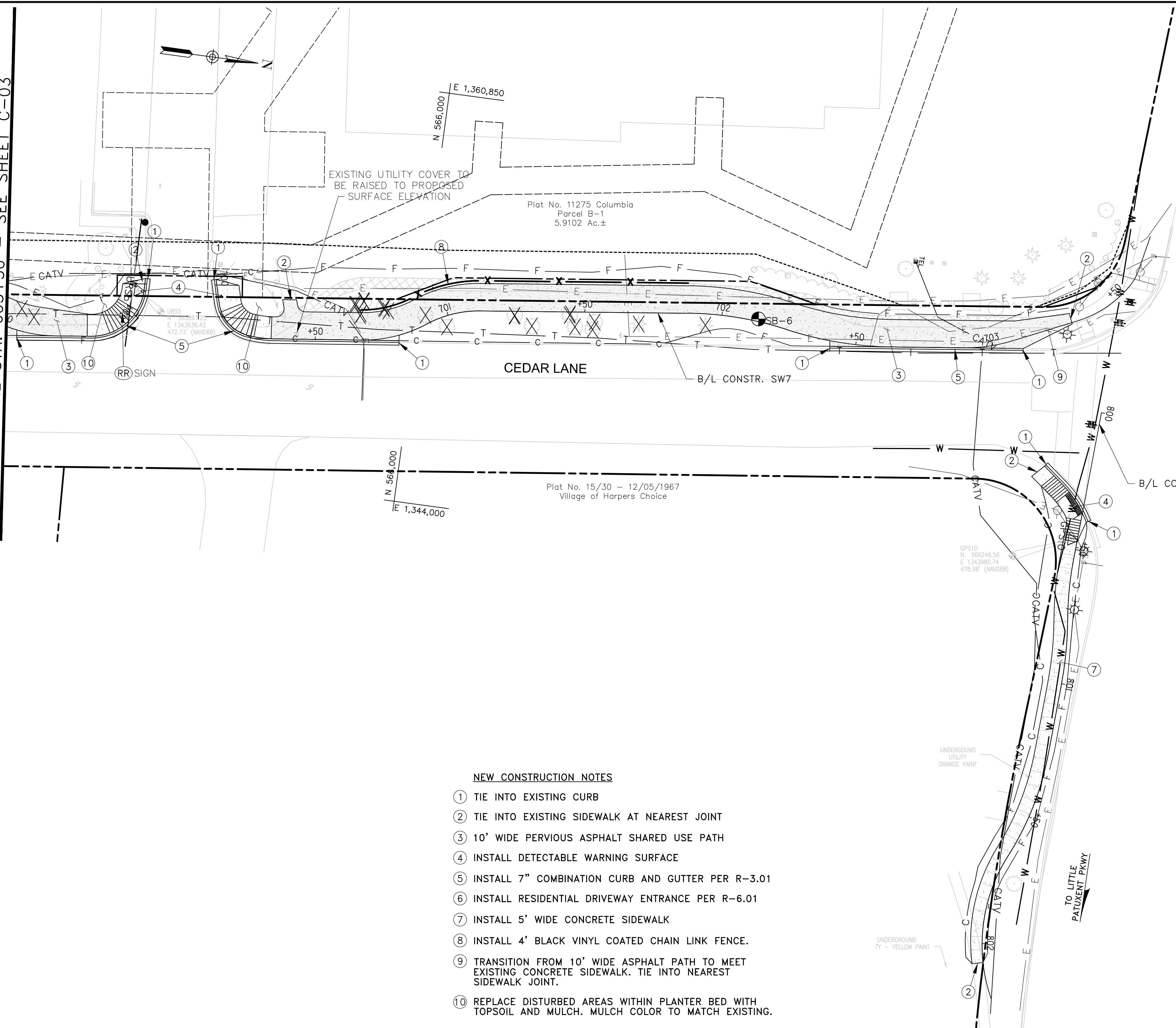
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**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

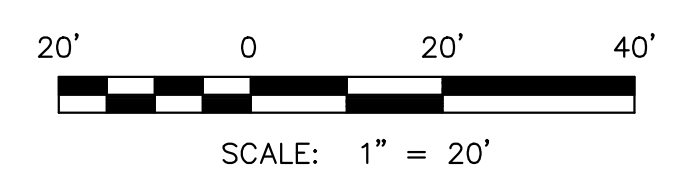
SCALE
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 DWG NO.
 C-03

MATCHLINE STA. 603+50 - SEE SHEET C-03



- NEW CONSTRUCTION NOTES**
- ① TIE INTO EXISTING CURB
 - ② TIE INTO EXISTING SIDEWALK AT NEAREST JOINT
 - ③ 10' WIDE PERVIOUS ASPHALT SHARED USE PATH
 - ④ INSTALL DETECTABLE WARNING SURFACE
 - ⑤ INSTALL 7" COMBINATION CURB AND GUTTER PER R-3.01
 - ⑥ INSTALL RESIDENTIAL DRIVEWAY ENTRANCE PER R-6.01
 - ⑦ INSTALL 5' WIDE CONCRETE SIDEWALK
 - ⑧ INSTALL 4' BLACK VINYL COATED CHAIN LINK FENCE.
 - ⑨ TRANSITION FROM 10' WIDE ASPHALT PATH TO MEET EXISTING CONCRETE SIDEWALK. TIE INTO NEAREST SIDEWALK JOINT.
 - ⑩ REPLACE DISTURBED AREAS WITHIN PLANTER BED WITH TOPSOIL AND MULCH. MULCH COLOR TO MATCH EXISTING.

- LEGEND**
- X TREE REMOVAL
 - [Pattern] 4" CONCRETE SIDEWALK (IMPERVIOUS)
 - [Pattern] PERVIOUS ASPHALT SIDEWALK
 - [Pattern] DETECTABLE WARNING SURFACE
 - (R) REMOVE
 - (A) ADJUST
 - (RR) REMOVE AND RESET
 - (RO) RELOCATE BY OTHERS

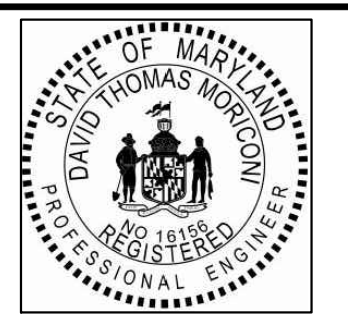


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 HOWARD COUNTY, MARYLAND

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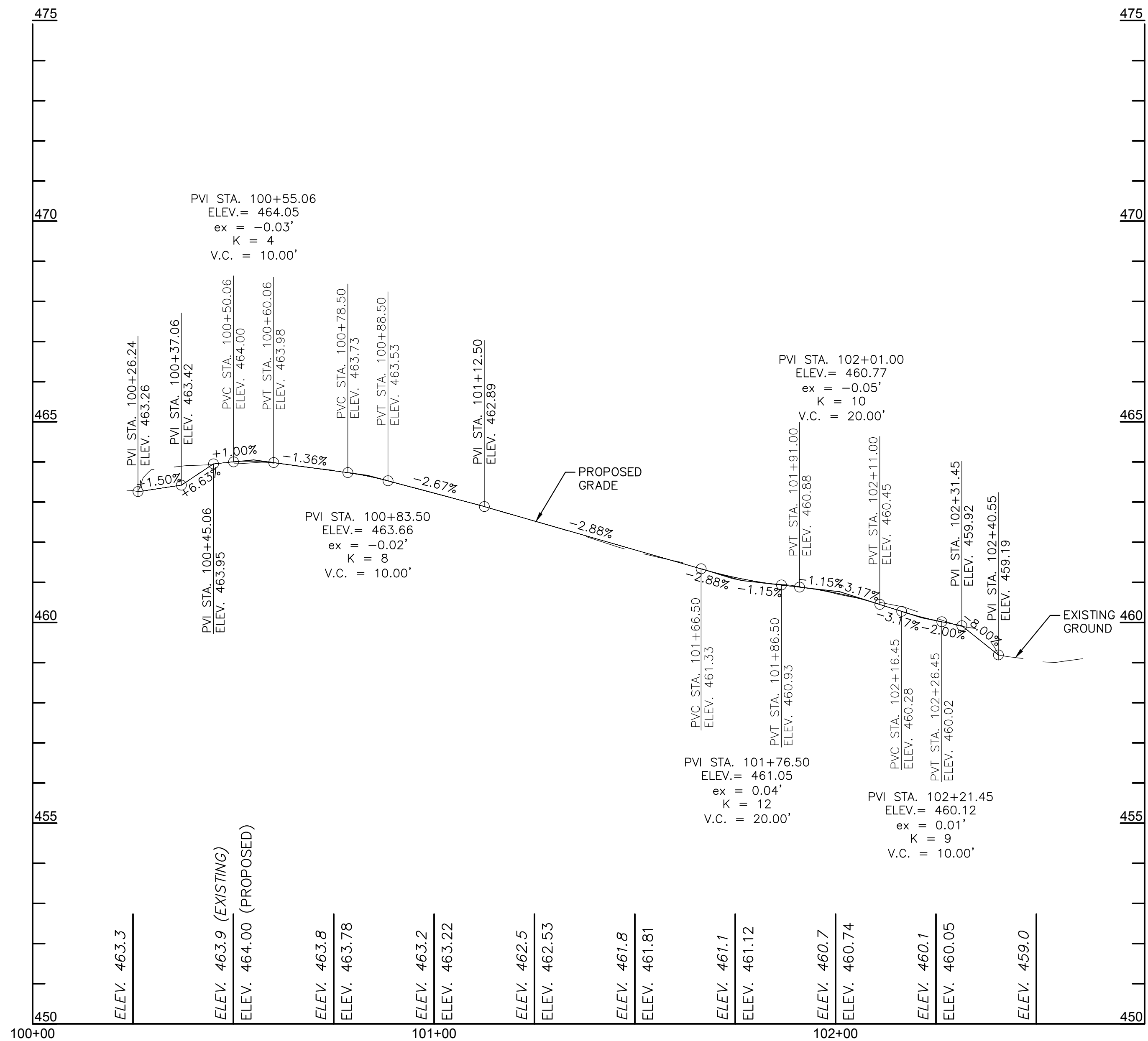
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SHARED USE PATH PLAN

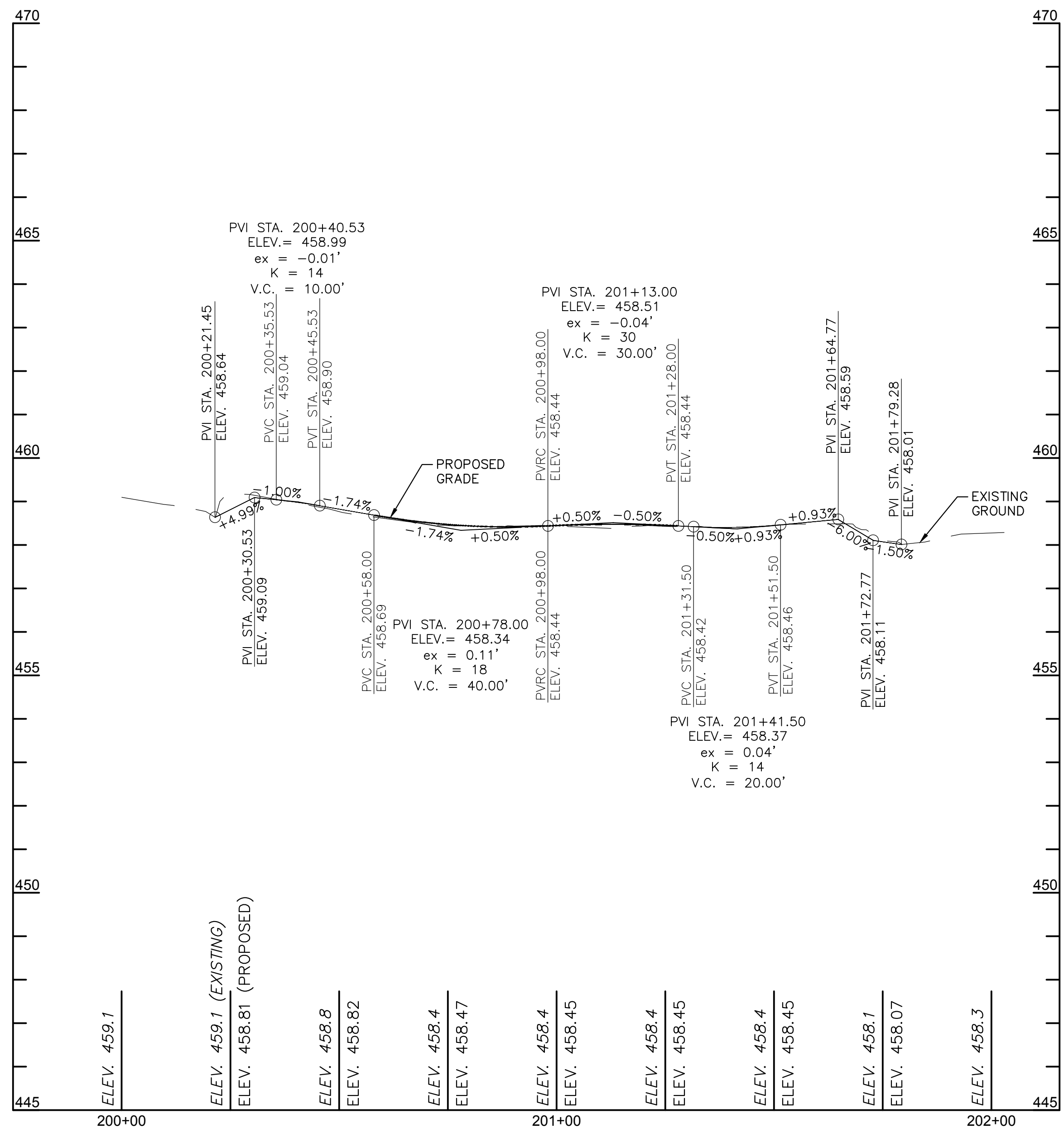
**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1" = 20'
 DWG NO.
 C-04

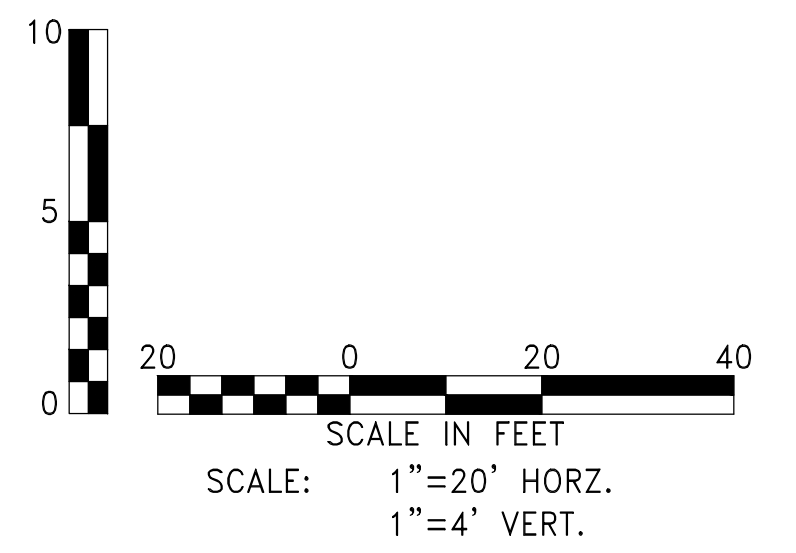


SW-1 PROFILE



SW-2 PROFILE

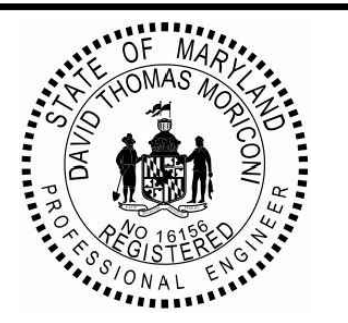
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CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____
 CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



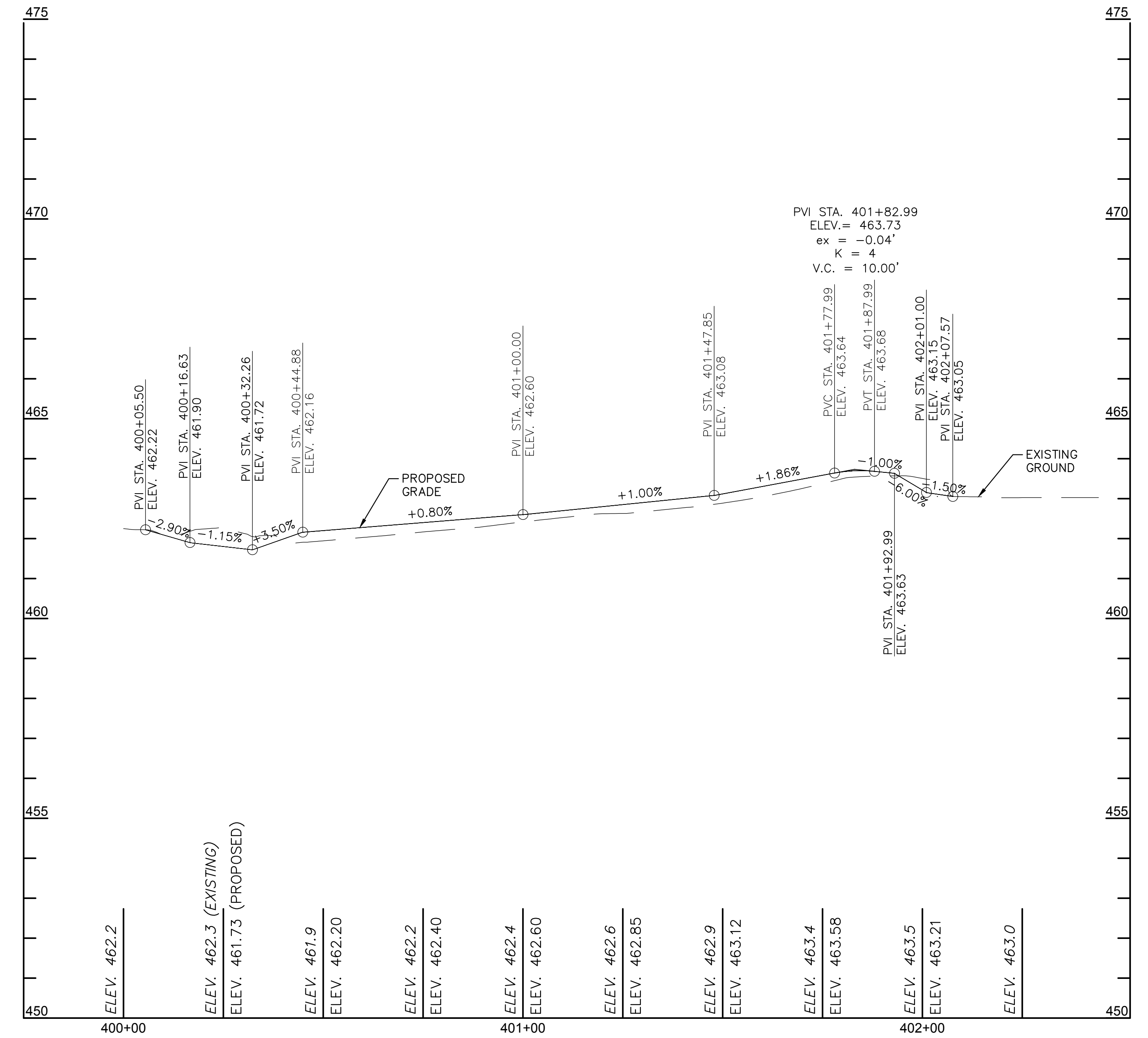
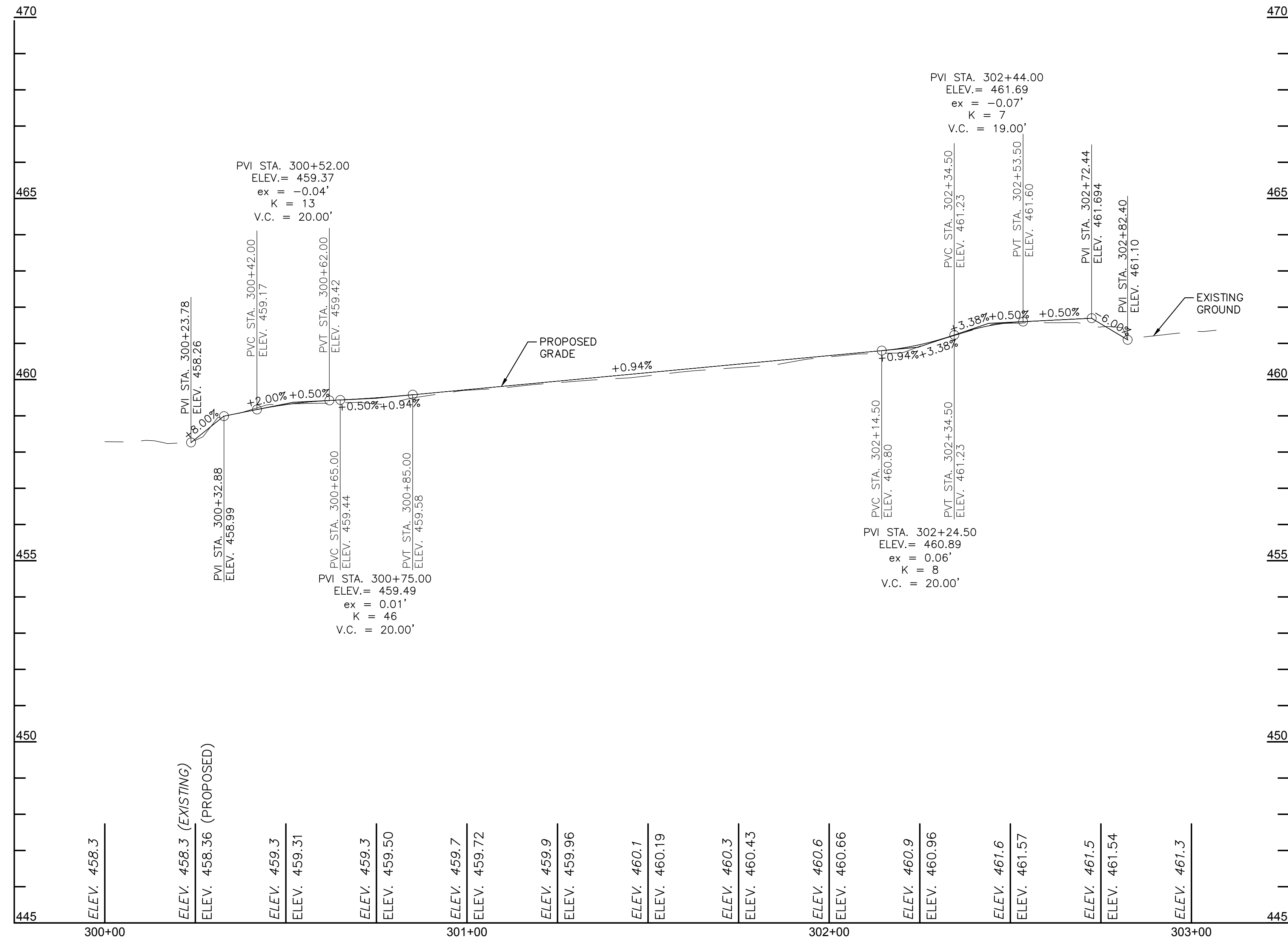
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DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

SHARED USE PATH
 PROFILES

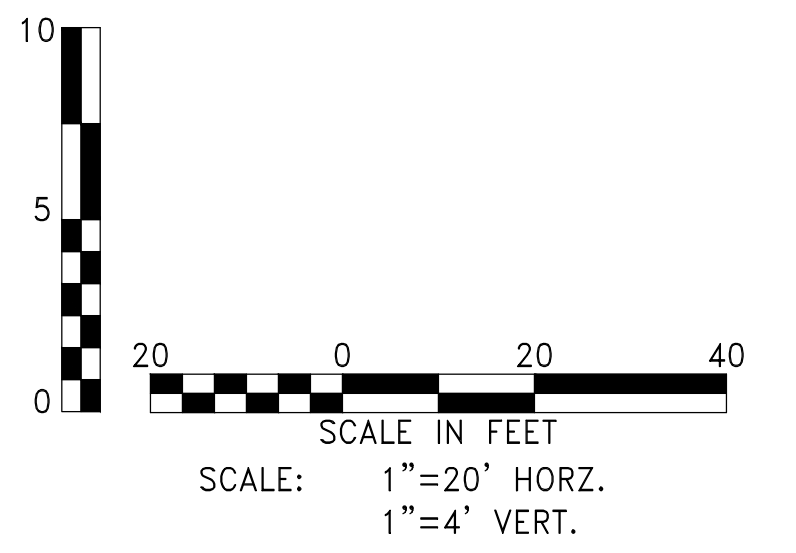
CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=20'
 DWG NO.
 PF-01



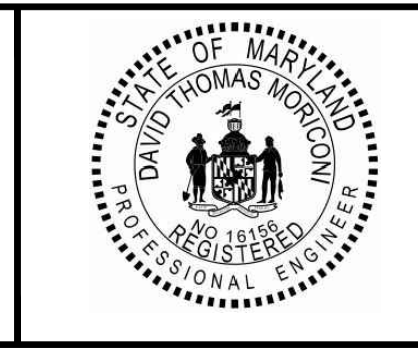
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16156, EXPIRATION DATE: 8/28/2018



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____
 CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____
 CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

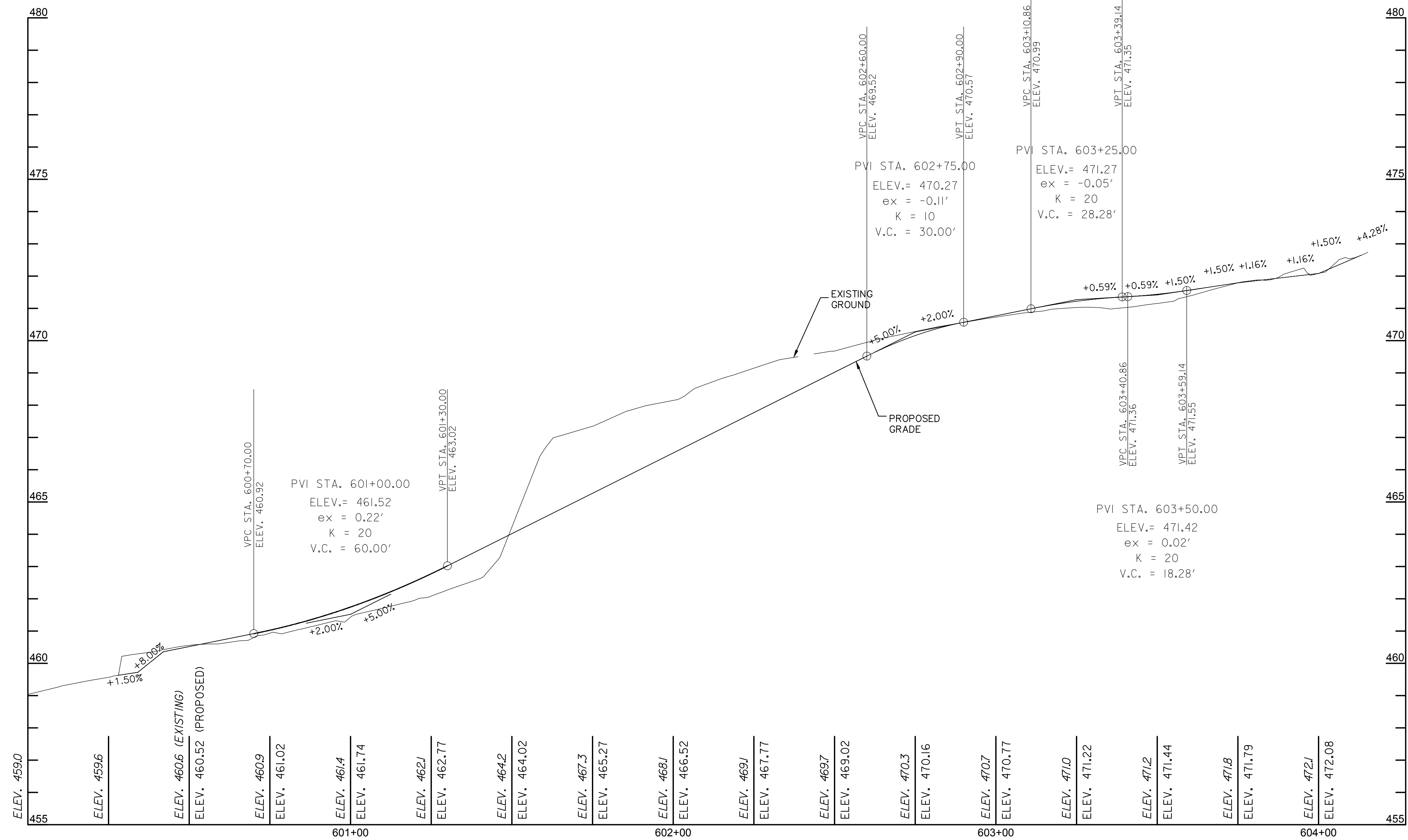
SHARED USE PATH PROFILES

SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

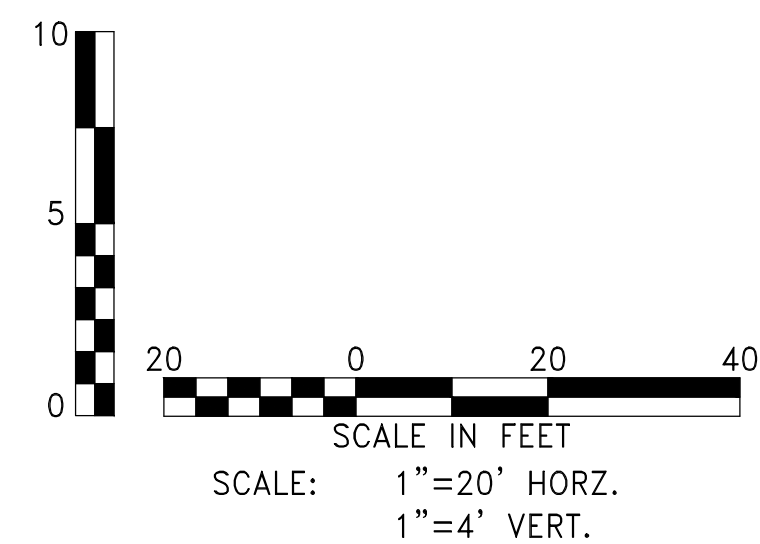
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1"=20'
 DWG NO. PF-02



SW-6 PROFILE

PROFESSIONAL CERTIFICATION
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 HOWARD COUNTY, MARYLAND

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DRN:	CDF			
CHK:	DTM			
DATE:	11/2016	BY	NO.	REVISION

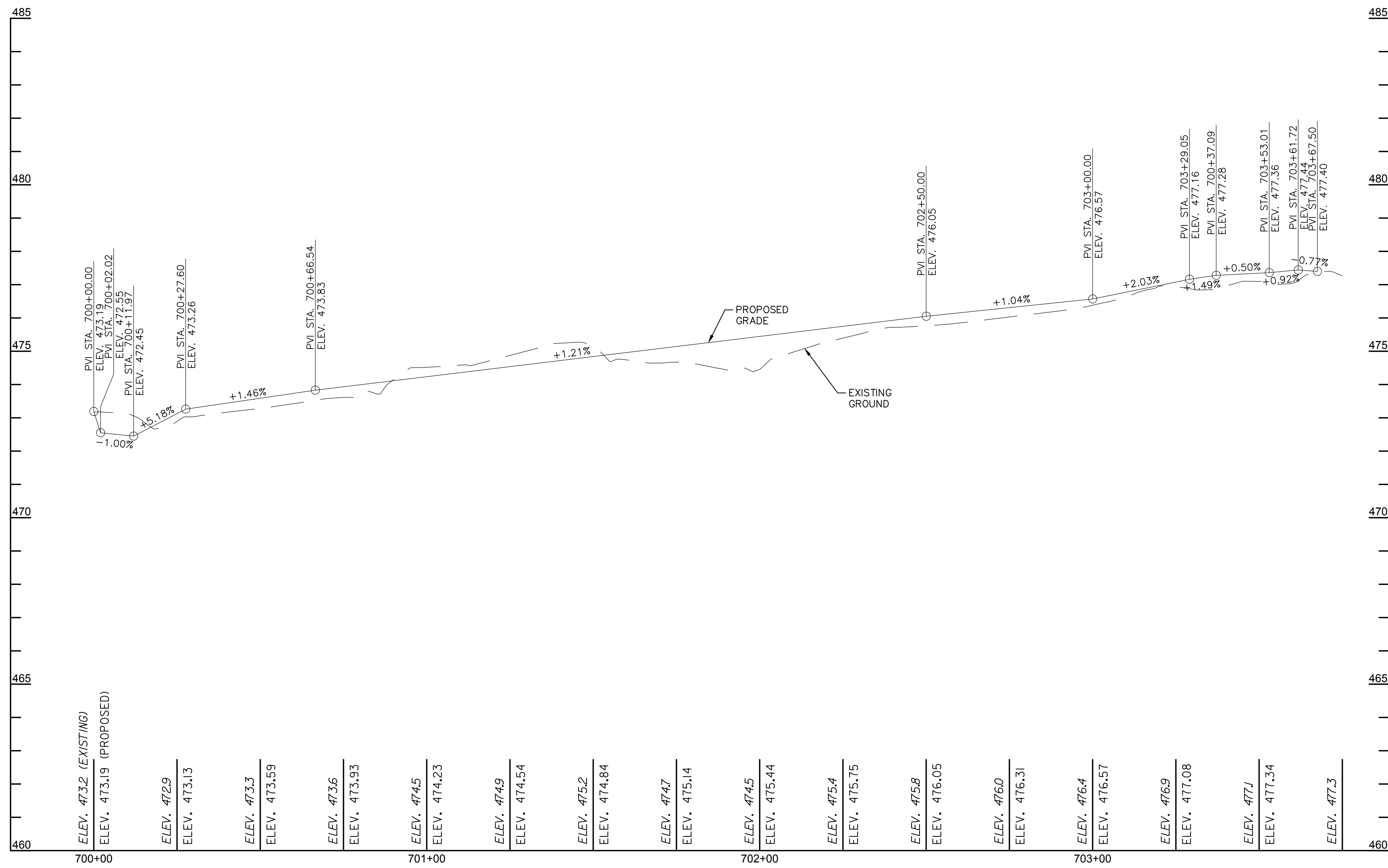
SHARED USE PATH
 PROFILES

SCALE MAP NO. _____ BLOCK NO. _____

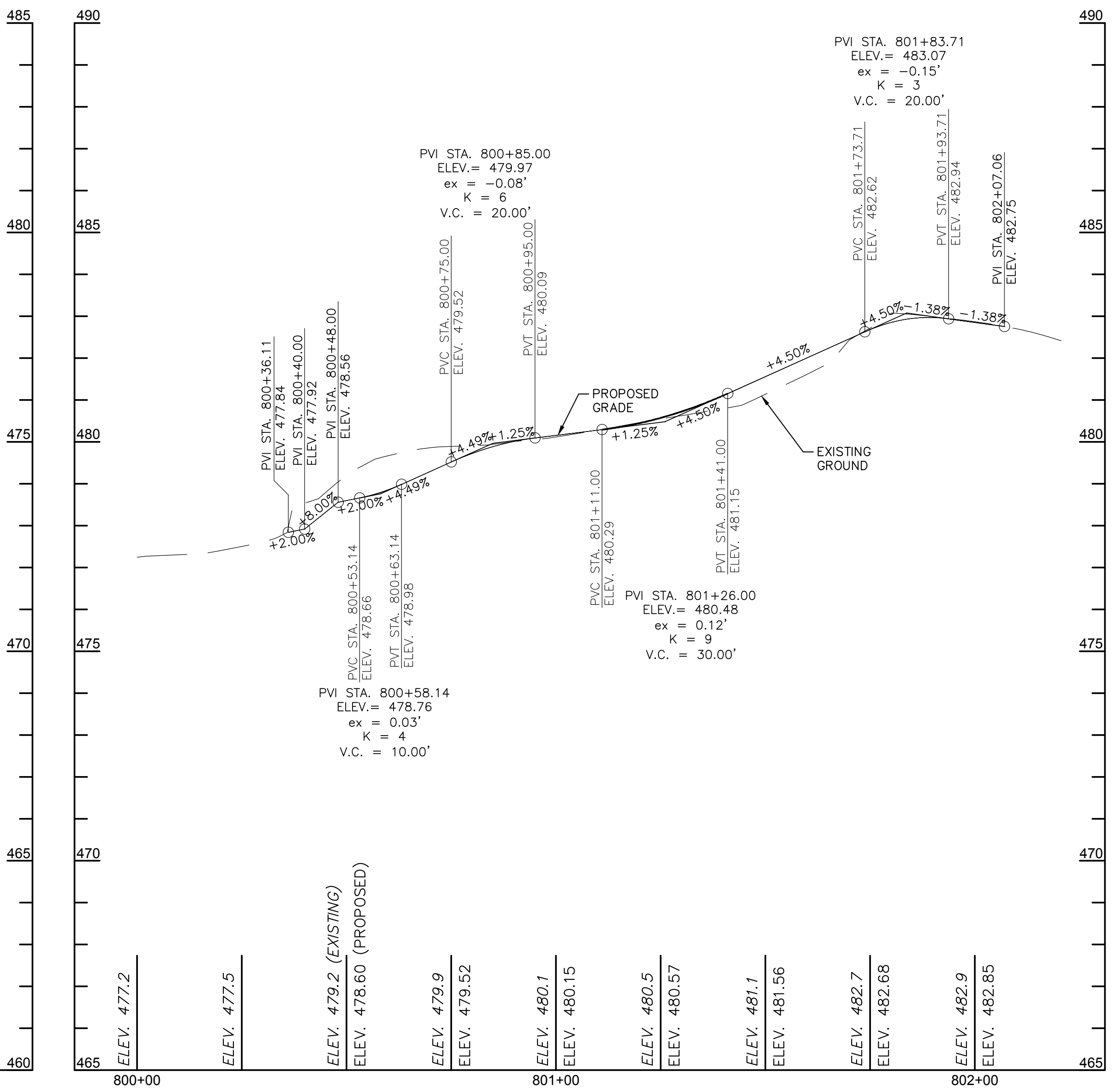
CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=20'
 DWG NO.
 PF-04

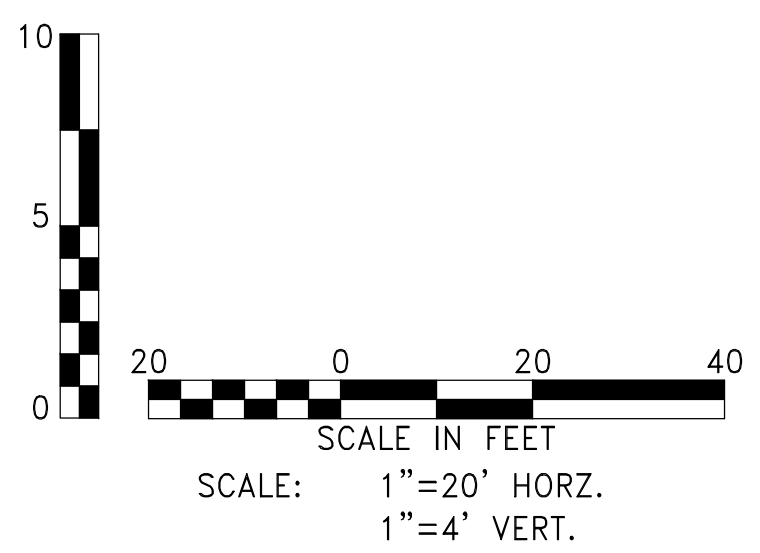


SW-7 PROFILE



SW-8 PROFILE

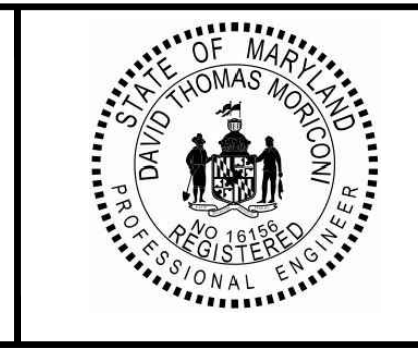
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY:	NO.	REVISION	DATE

SHARED USE PATH
 PROFILES

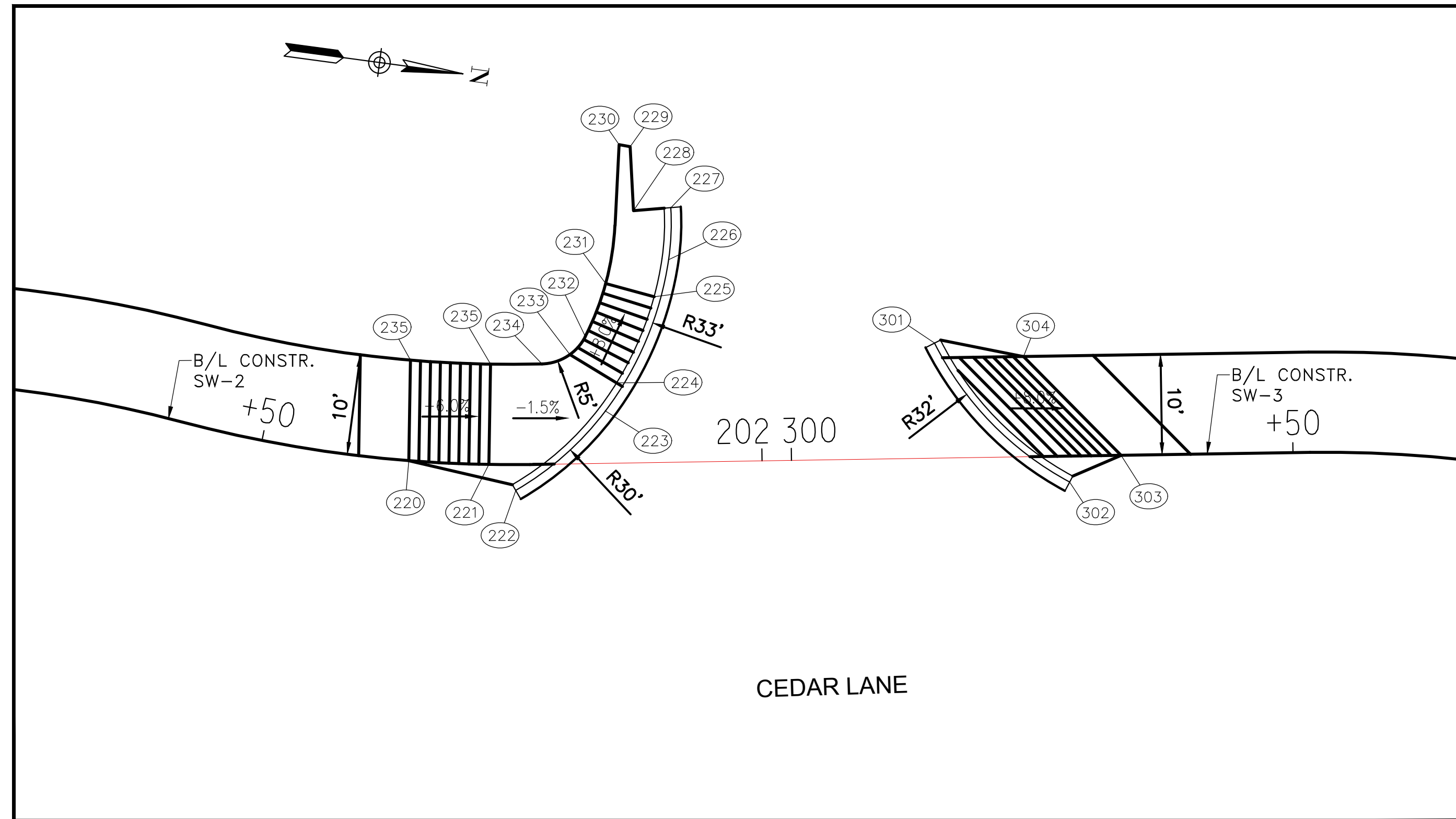
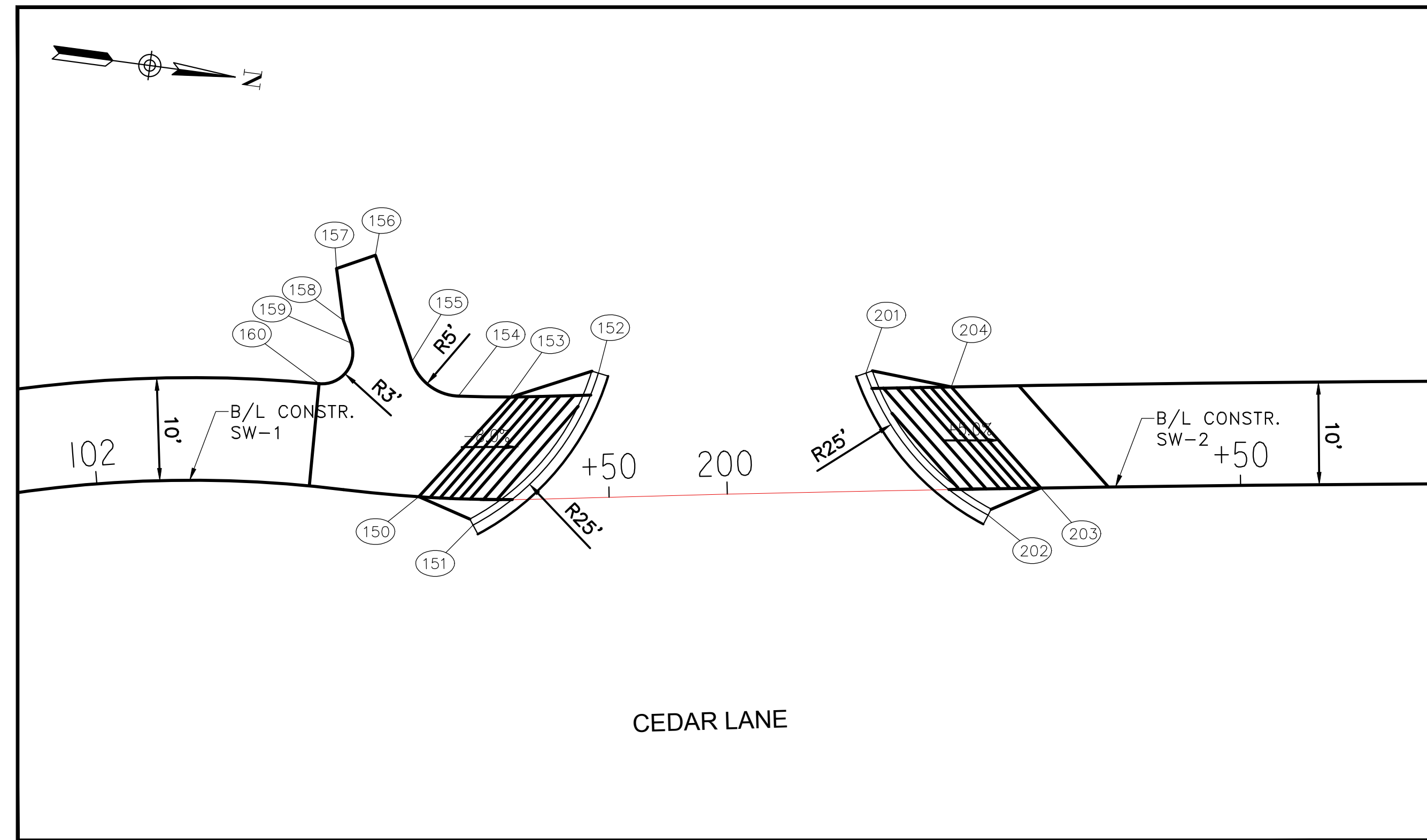
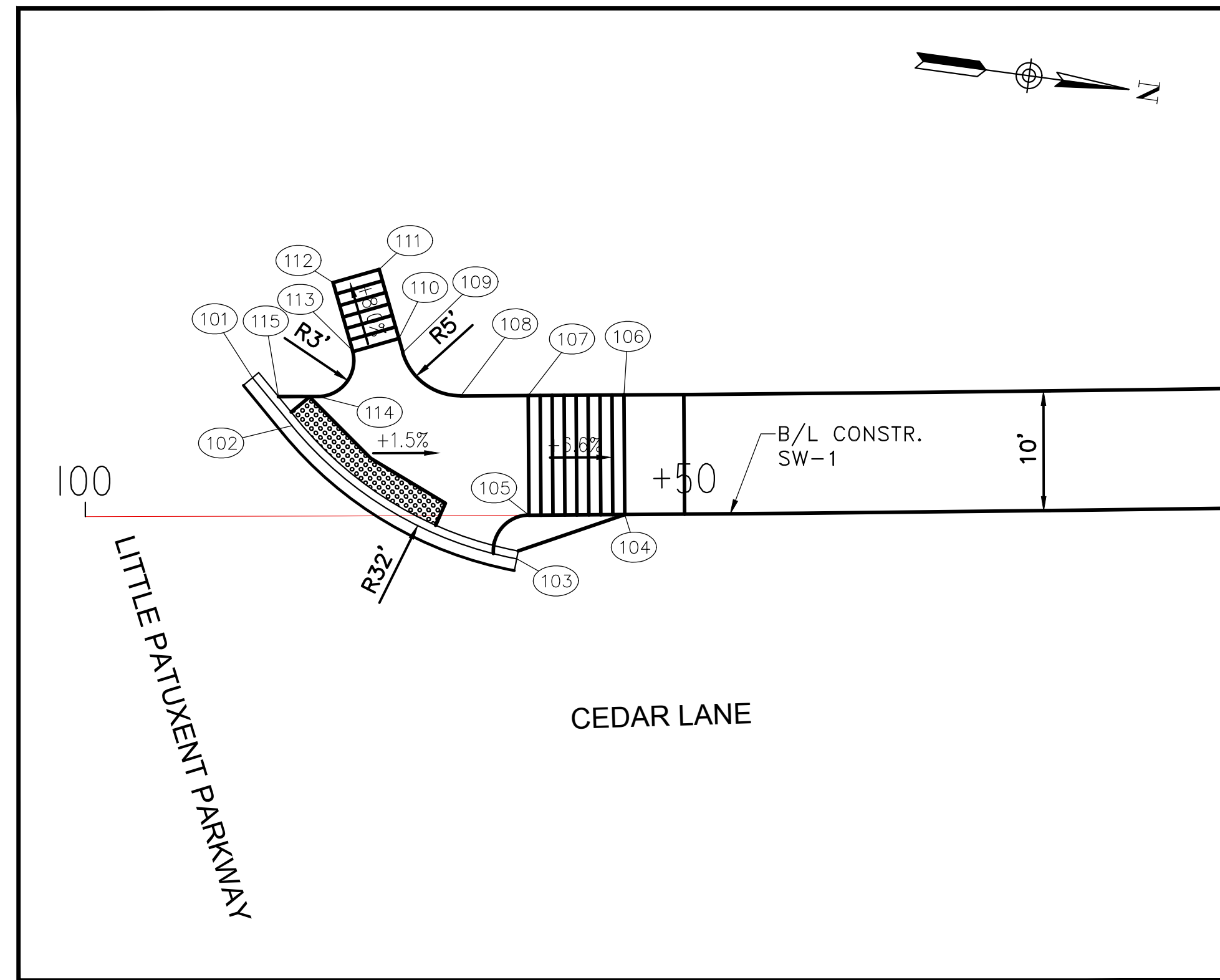
SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=20'

DWG NO.
 PF-05

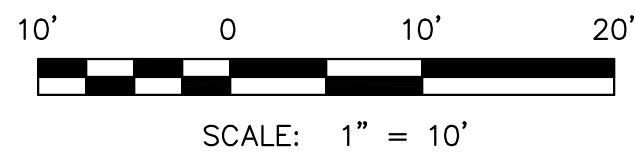


POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
101	SW-1	100+14.00	11.58' LT	563,959.0145	1,344,188.0714	MATCH EX
102	SW-1	100+17.28	7.57' LT	563,962.8143	1,344,191.5969	
103	SW-1	100+36.01	3.63' LT	563,982.9076	1,344,200.0952	MATCH EX
104	SW-1	100+45.06	B/L	563,991.3556	1,344,195.2373	
105	SW-1	100+37.06	B/L	563,983.4341	1,344,196.3555	
106	SW-1	100+45.07	10.00' LT	563,989.9572	1,344,185.3309	
107	SW-1	100+37.06	10.00' LT	563,982.0364	1,344,186.4536	
108	SW-1	100+31.41	10.00' LT	563,976.4527	1,344,187.2395	
109	SW-1	100+26.59	13.65' LT	563,971.1781	1,344,184.2945	
110	SW-1	100+26.25	14.82' LT	563,970.6878	1,344,183.1755	
111	SW-1	100+24.62	20.60' LT	563,968.2801	1,344,177.6798	MATCH EX
112	SW-1	100+20.76	19.51' LT	563,964.6163	1,344,179.2849	MATCH EX
113	SW-1	100+22.38	13.81' LT	563,966.9927	1,344,184.7090	
114	SW-1	100+19.48	10.00' LT	563,964.6566	1,344,188.8845	
115	SW-1	100+16.15	10.00' LT	563,961.3623	1,344,189.3402	
150	SW-1	102+31.45	B/L	564,175.1335	1,344,166.9745	
151	SW-1	102+36.80	2.52' RT	564,180.7431	1,344,169.0042	MATCH EX
152	SW-1	102+49.29	12.12' LT	564,190.8647	1,344,152.6861	MATCH EX
153	SW-1	102+40.33	10.00' LT	564,182.6015	1,344,156.1941	
154	SW-1	102+34.92	10.00' LT	564,177.6388	1,344,156.7358	
155	SW-1	102+29.72	13.08' LT	564,172.6939	1,344,154.0034	
156	SW-1	102+24.39	23.05' LT	564,167.7770	1,344,144.2174	MATCH EX
157	SW-1	102+21.25	21.33' LT	564,164.2028	1,344,146.0133	MATCH EX
158	SW-1	102+22.29	16.38' LT	564,165.5540	1,344,150.9300	
159	SW-1	102+23.17	14.27' LT	564,166.6007	1,344,153.0132	
160	SW-1	102+20.73	10.00' LT	564,164.0368	1,344,157.3578	

POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
201	SW-2	200+13.73	11.51' LT	564,216.6708	1,344,149.1835	MATCH EX
202	SW-2	200+25.36	2.56' RT	564,230.3236	1,344,161.3087	MATCH EX
203	SW-2	200+30.53	B/L	564,235.0499	1,344,158.0011	
204	SW-2	200+22.00	10.00' LT	564,225.0983	1,344,149.4041	
220	SW-2	201+64.77	B/L	564,368.3766	1,344,147.5815	
221	SW-2	201+72.77	B/L	564,376.3504	1,344,146.8880	
222	SW-2	201+75.44	2.58' RT	564,379.3536	1,344,149.0995	MATCH EX
223	SW-2	201+84.48	5.21' LT	564,387.1534	1,344,140.0552	
224	SW-2	201+85.62	8.00' LT	564,387.8686	1,344,137.1223	
225	SW-2	201+89.51	16.53' LT	564,390.4331	1,344,128.1032	
226	SW-2	201+91.01	20.20' LT	564,391.3712	1,344,124.2522	
227	SW-2	201+91.30	25.39' LT	564,390.8846	1,344,119.0775	MATCH EX
228	SW-2	201+87.56	25.15' LT	564,387.2253	1,344,119.8775	MATCH EX
229	SW-2	201+87.33	31.53' LT	564,386.0435	1,344,113.6033	MATCH EX
230	SW-2	201+86.24	31.74' LT	564,384.9276	1,344,113.5587	MATCH EX
231	SW-2	201+84.70	17.92' LT	564,385.4754	1,344,127.4547	
232	SW-2	201+82.58	12.66' LT	564,384.1625	1,344,132.9652	
233	SW-2	201+81.01	10.90' LT	564,382.8795	1,344,134.9423	
234	SW-2	201+78.22	10.00' LT	564,380.2488	1,344,136.2436	
235	SW-2	201+72.77	10.00' LT	564,375.1729	1,344,136.9576	
236	SW-2	201+64.09	10.00' LT	564,367.1966	1,344,137.6300	

POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
301	SW-3	300+14.45	11.48' LT	564,418.7501	1,344,128.9310	MATCH EX
302	SW-3	300+27.70	2.58' RT	564,433.9540	1,344,140.8587	MATCH EX
303	SW-3	300+32.88	B/L	564,438.6875	1,344,137.5315	
304	SW-3	300+23.30	10.00' LT	564,427.7208	1,344,129.0756	
320	SW-3	302+72.44	B/L	564,675.5657	1,344,103.4167	
321	SW-3	302+77.89	2.60' RT	564,681.2966	1,344,105.4560	MATCH EX
322	SW-3	302+92.44	11.48' LT	564,693.6635	1,344,089.4220	MATCH EX
323	SW-3	302+82.65	10.00' LT	564,684.2034	1,344,092.3288	

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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



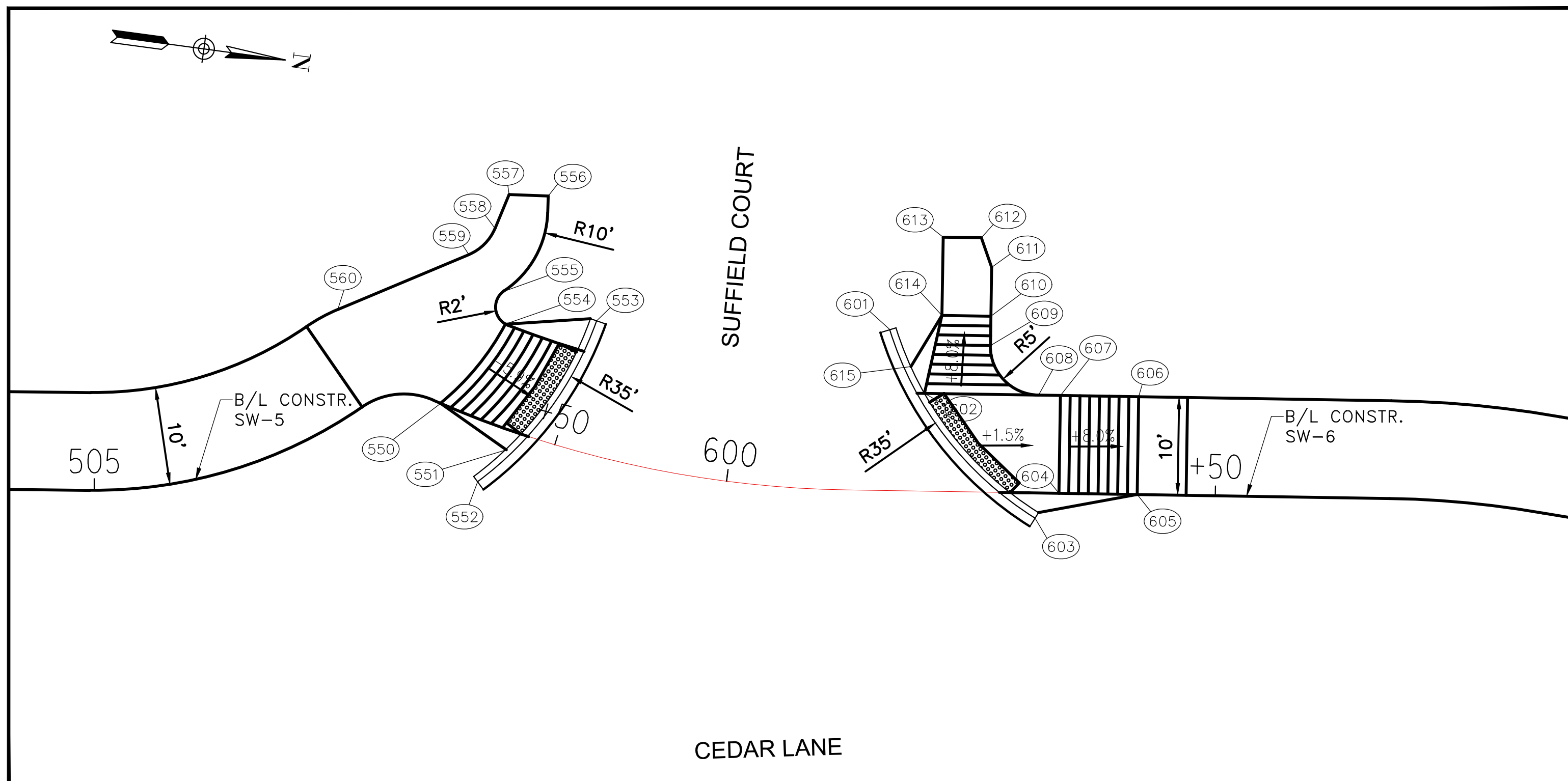
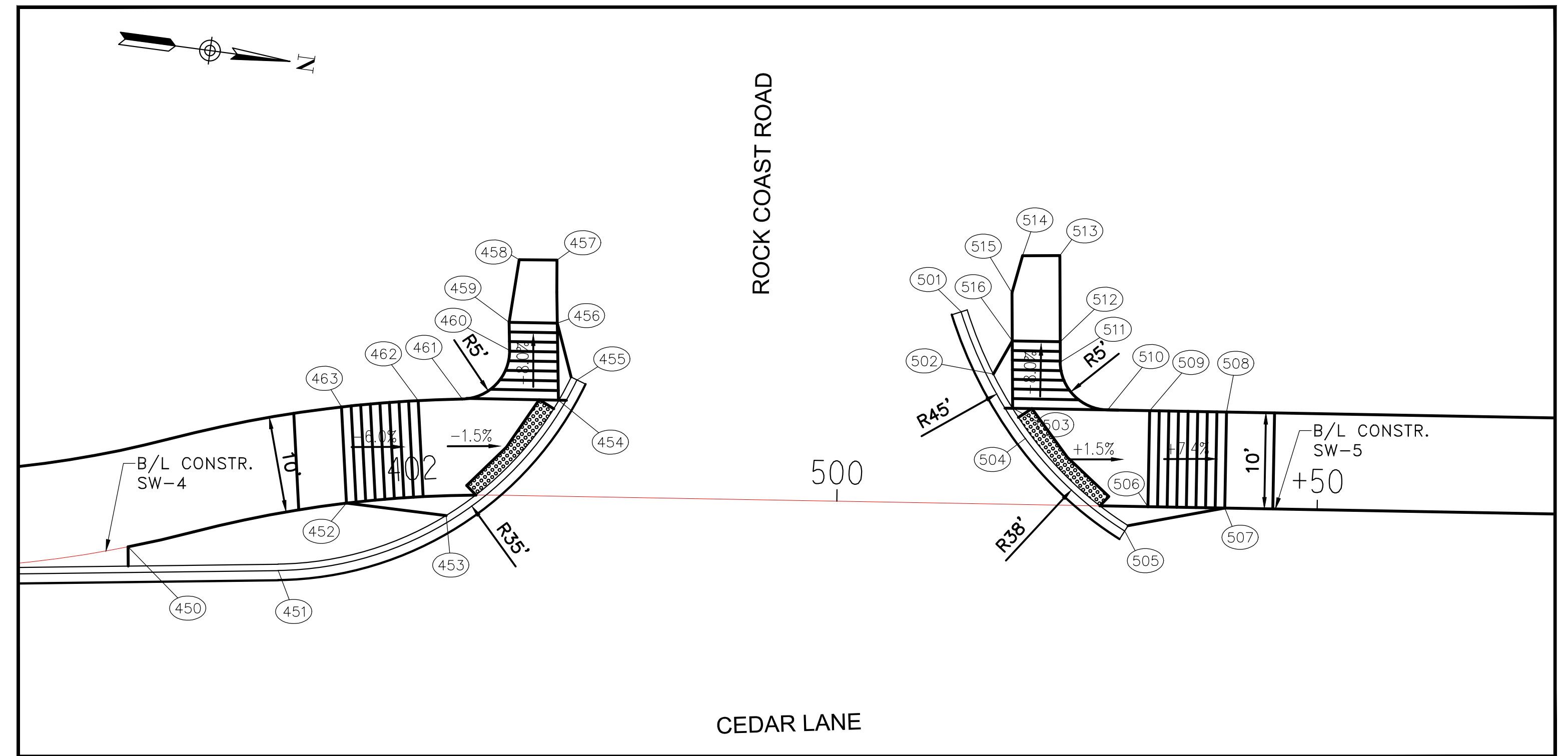
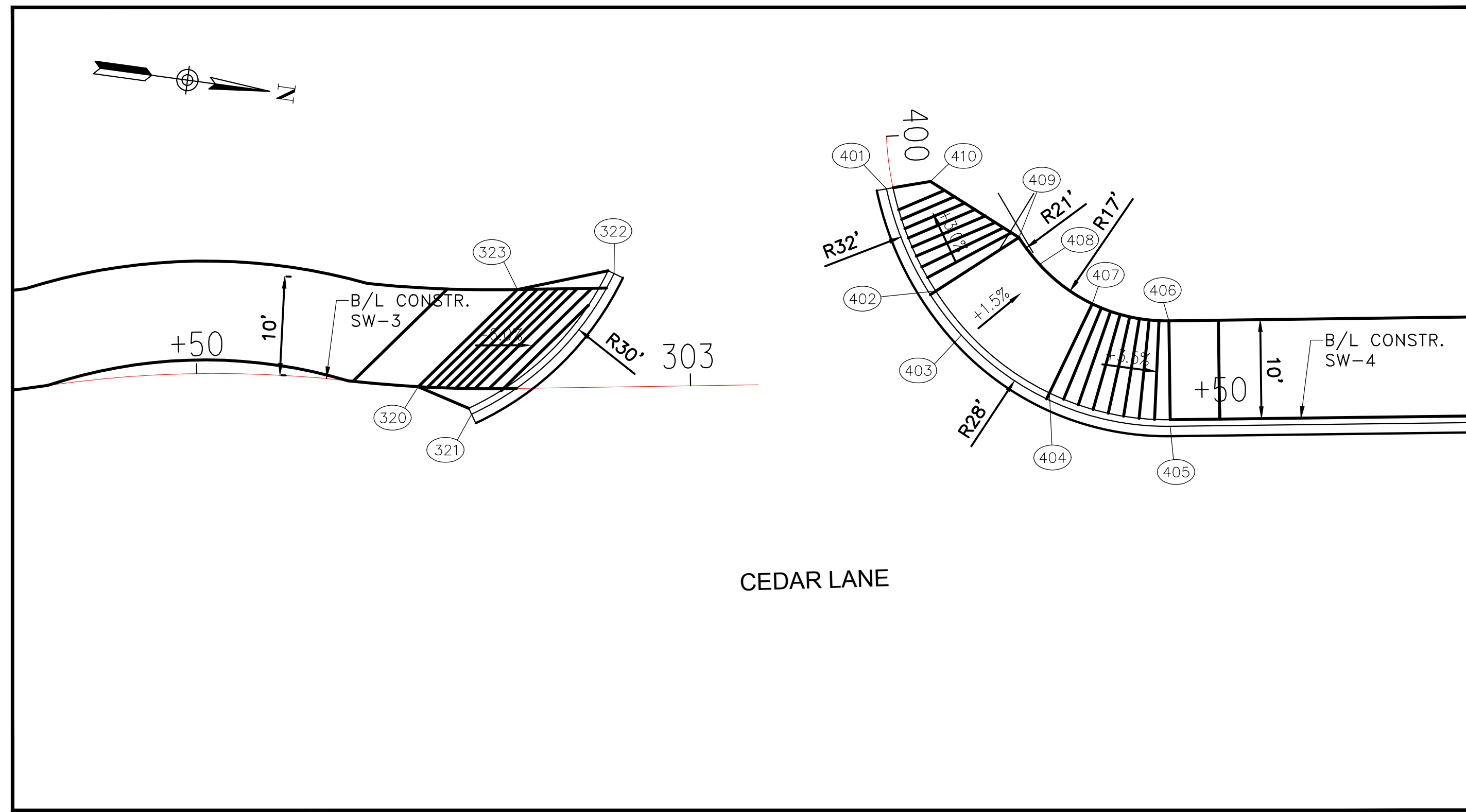
DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

INTERSECTION DETAILS

CEDAR LANE
 BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=10'
 DWG NO.
 ID-01



POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
401	SW-4	400+05.23	0.67 RT	564,719.8306	1,344,077.2337	MATCH EX
402	SW-4	400+16.63	B/L	564,726.1502	1,344,086.8080	
403	SW-4	400+21.68	0.67 RT	564,729.3041	1,344,090.8773	
404	SW-4	400+32.26	B/L	564,738.9185	1,344,095.4794	
405	SW-4	400+44.88	0.67 RT	564,751.4781	1,344,097.1828	
406	SW-4	400+44.88	10.00 LT	564,749.9134	1,344,086.6315	
407	SW-4	400+32.26	10.00 LT	564,742.0107	1,344,085.9695	
408	SW-4	400+21.68	10.00 LT	564,736.1866	1,344,082.7281	
409	SW-4	400+16.63	10.00 LT	564,733.7464	1,344,080.3043	
410	SW-4	400+05.46	3.82 LT	564,724.1240	1,344,075.9040	MATCH EX
450	SW-4	401+69.78	B/L	564,874.5226	1,344,076.2397	
451	SW-4	401+84.69	5.88 RT	564,890.3374	1,344,076.5902	
452	SW-4	401+92.99	B/L	564,896.4462	1,344,068.6766	
453	SW-4	402+03.34	2.08 RT	564,906.9053	1,344,068.5733	
454	SW-4	402+14.90	10.00 LT	564,916.8618	1,344,055.0946	
455	SW-4	402+16.80	12.14 LT	564,918.5004	1,344,052.7528	MATCH EX
456	SW-4	402+14.64	18.00 LT	564,915.6703	1,344,047.1795	
457	SW-4	402+14.50	24.56 LT	564,914.7654	1,344,040.6759	MATCH EX
458	SW-4	402+10.56	24.52 LT	564,910.8564	1,344,041.1764	MATCH EX
459	SW-4	402+09.64	18.00 LT	564,910.7016	1,344,047.7820	
460	SW-4	402+09.73	15.08 LT	564,911.1358	1,344,050.6462	
461	SW-4	402+05.25	10.00 LT	564,906.9430	1,344,056.3337	
462	SW-4	402+01.00	10.00 LT	564,902.4066	1,344,057.1057	
463	SW-4	401+93.61	10.00 LT	564,894.5905	1,344,058.8293	

POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
601	SW-6	600+16.48	16.48 LT	565,521.5464	1,343,976.3798	MATCH EX
602	SW-6	600+20.12	10.00 LT	565,525.9271	1,343,982.3584	
603	SW-6	600+31.62	2.57 RT	565,538.8336	1,343,993.4785	MATCH EX
604	SW-6	600+34.01	B/L	565,540.9074	1,343,990.6425	
605	SW-6	600+42.01	B/L	565,548.8511	1,343,989.6950	
606	SW-6	600+42.01	10.00 LT	565,547.6668	1,343,979.7654	
607	SW-6	600+34.01	10.00 LT	565,539.7231	1,343,980.7129	
608	SW-6	600+31.78	10.00 LT	565,537.5045	1,343,980.9775	
609	SW-6	600+26.78	15.00 LT	565,531.9482	1,343,976.6103	
610	SW-6	600+26.78	18.00 LT	565,531.5890	1,343,973.6263	
611	SW-6	600+26.78	23.00 LT	565,530.9913	1,343,968.6822	
612	SW-6	600+25.68	26.00 LT	565,529.5528	1,343,965.8125	MATCH EX
613	SW-6	600+21.76	26.00 LT	565,525.8679	1,343,966.2759	MATCH EX
614	SW-6	600+21.77	18.00 LT	565,526.6241	1,343,974.2185	
615	SW-6	600+18.68	12.71 LT	565,524.1818	1,343,979.8332	
650	SW-6	603+53.87	B/L	565,855.3976	1,343,956.6093	
651	SW-6	603+54.58	2.57 RT	565,855.7276	1,343,959.2555	MATCH EX
652	SW-6	603+81.10	0.67 RT	565,882.5684	1,343,955.9082	
653	SW-6	604+01.30	B/L	565,897.8842	1,343,943.6295	
654	SW-6	604+09.33	0.67 RT	565,900.0917	1,343,935.8005	
655	SW-6	604+11.43	B/L	565,899.3976	1,343,933.7100	
656	SW-6	604+13.44	0.67 RT	565,900.0379	1,343,931.6900	MATCH EX
657	SW-6	604+10.57	8.00 LT	565,891.4096	1,343,934.6713	
658	SW-6	604+01.30	8.00 LT	565,890.5225	1,343,940.4981	
659	SW-6	603+88.14	8.00 LT	565,885.4089	1,343,948.0715	
660	SW-6	603+79.60	8.00 LT	565,879.9929	1,343,947.3949	
661	SW-6	603+61.41	10.00 LT	565,862.9955	1,343,947.2442	

POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
501	SW-5	500+12.59	19.93 LT	564,957.1818	1,344,040.3654	MATCH EX
502	SW-5	500+16.05	13.52 LT	564,961.3652	1,344,046.3359	
503	SW-5	500+18.12	10.00 LT	564,963.8247	1,344,049.5897	
504	SW-5	500+19.51	6.87 LT	564,965.5688	1,344,052.5331	
505	SW-5	500+30.02	2.57 RT	564,977.1059	1,344,060.6890	MATCH EX
506	SW-5	500+32.39	B/L	564,979.1684	1,344,057.8595	
507	SW-5	500+40.39	B/L	564,987.1140	1,344,056.9282	
508	SW-5	500+40.39	10.00 LT	564,985.9498	1,344,046.9962	
509	SW-5	500+32.39	10.00 LT	564,978.0042	1,344,047.9275	
510	SW-5	500+28.01	10.00 LT	564,973.6466	1,344,048.4383	
511	SW-5	500+23.01	14.89 LT	564,968.1130	1,344,044.1670	
512	SW-5	500+22.96	17.00 LT	564,967.8192	1,344,042.0735	
513	SW-5	500+22.76	25.97 LT	564,966.5724	1,344,033.1860	MATCH EX
514	SW-5	500+18.88	25.88 LT	564,962.7338	1,344,033.7246	MATCH EX
515	SW-5	500+17.85	22.00 LT	564,962.1571	1,344,037.7030	
516	SW-5	500+17.96	17.00 LT	564,962.8520	1,344,042.6558	
550	SW-5	505+37.57	B/L	565,477.0332	1,343,990.0076	
551	SW-5	505+45.48	2.00 RT	565,484.3298	1,343,993.8155	
552	SW-5	505+43.86	6.08 RT	565,481.8616	1,343,997.4493	MATCH EX
553	SW-5	505+50.52	13.36 LT	565,491.7129	1,343,979.5064	MATCH EX
554	SW-5	505+40.78	10.00 LT	565,482.5303	1,343,981.0842	
555	SW-5	505+39.30	13.21 LT	565,482.0265	1,343,977.6649	
556	SW-5	505+39.84	23.81 LT	565,485.0969	1,343,967.5130	MATCH EX
557	SW-5	505+36.44	22.40 LT	565,481.1168	1,343,967.9117	MATCH EX
558	SW-5	505+36.41	18.65 LT	565,480.1522	1,343,971.5333	
559	SW-5	505+35.89	15.24 LT	565,477.8549	1,343,974.5567	
560	SW-5	505+30.70	10.00 LT	565,465.3372	1,343,981.9168	

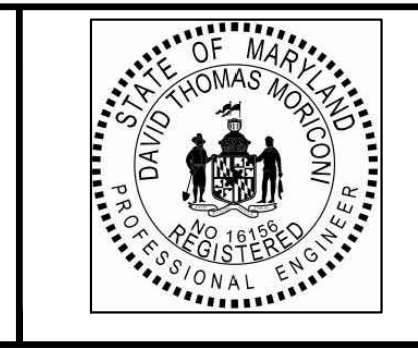
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

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DES: TMG
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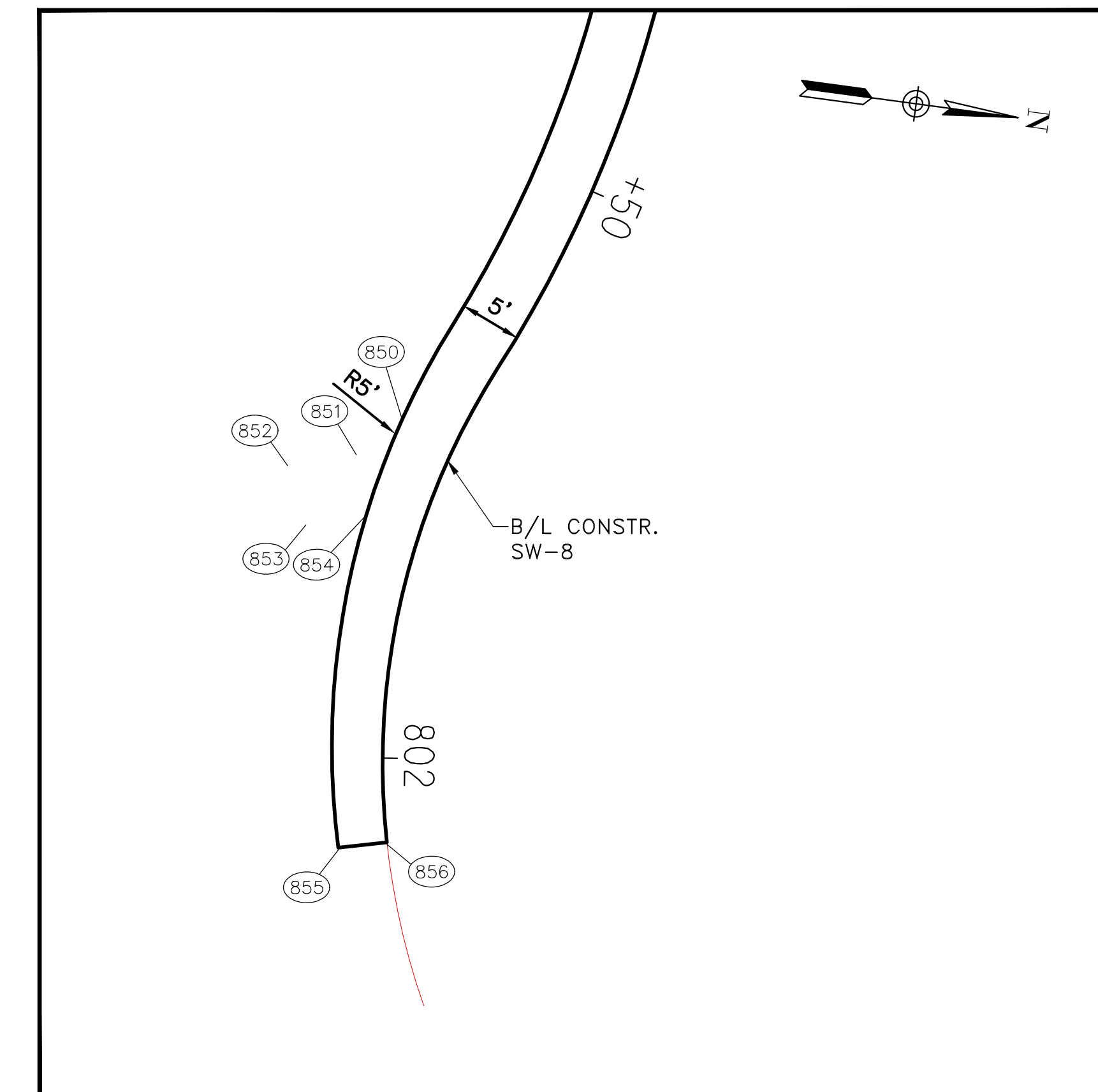
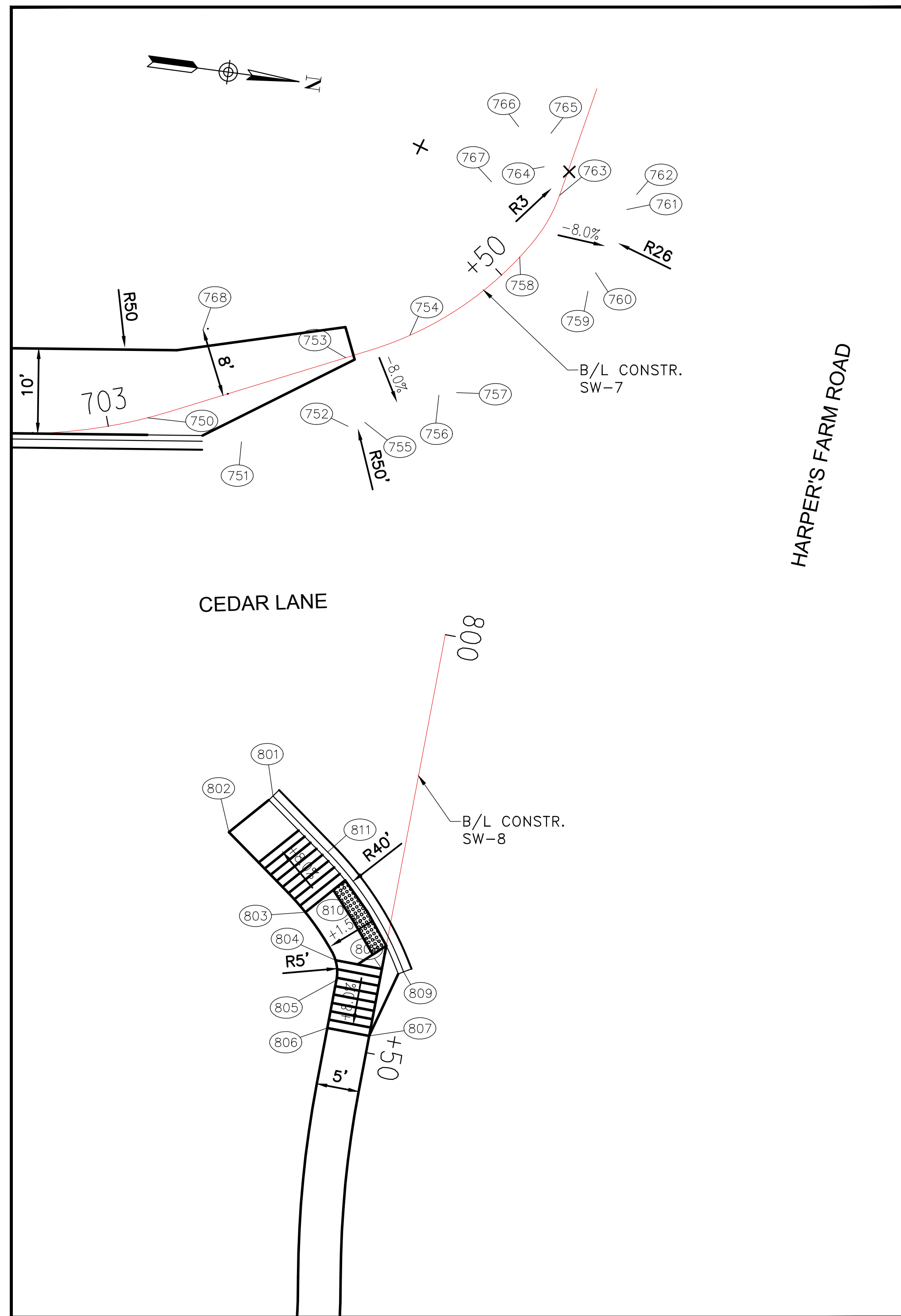
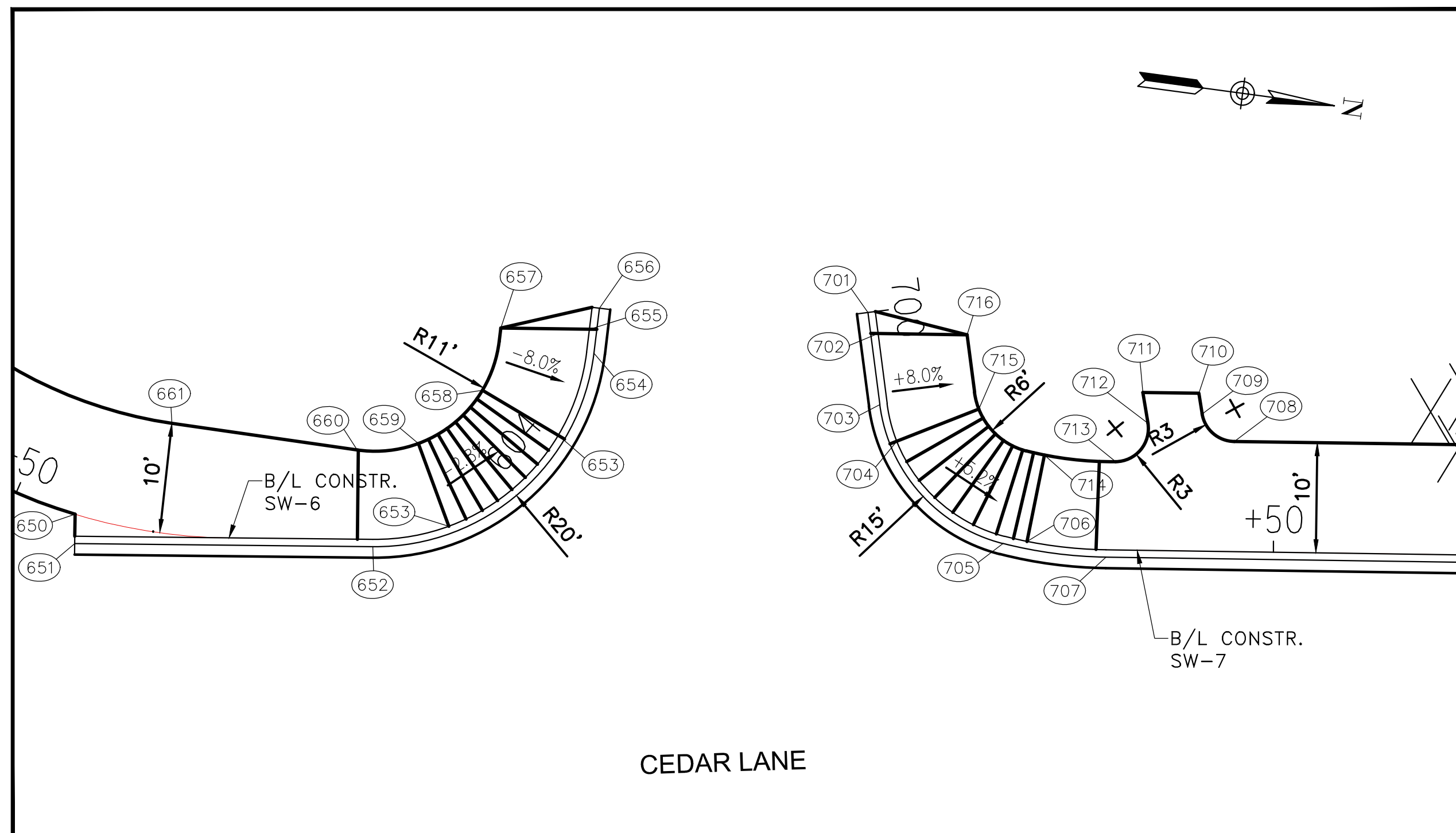
INTERSECTION DETAILS

SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=10'
 DWG NO.
 ID-02



POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
701	SW-7	700+00.00	0.67' RT	565,924.2336	1,343,928.8054	MATCH EX
702	SW-7	700+02.02	B/L	565,925.4032	1,343,930.5802	
703	SW-7	700+08.44	0.67' RT	565,926.4335	1,343,936.9553	
704	SW-7	700+11.96	B/L	565,928.4020	1,343,940.0364	
705	SW-7	700+25.51	0.67' RT	565,939.1794	1,343,947.9453	
706	SW-7	700+27.60	B/L	565,941.3323	1,343,947.4694	
707	SW-7	700+34.81	0.67' RT	565,948.6148	1,343,947.9242	
708	SW-7	700+46.32	10.00' LT	565,958.7572	1,343,935.9520	
709	SW-7	700+43.37	12.47' LT	565,955.5303	1,343,933.8589	
710	SW-7	700+43.03	14.33' LT	565,954.9703	1,343,932.0454	MATCH EX
711	SW-7	700+37.95	14.33' LT	565,949.9259	1,343,932.6560	MATCH EX
712	SW-7	700+38.46	11.54' LT	565,950.7626	1,343,935.3658	
713	SW-7	700+35.58	8.00' LT	565,948.3290	1,343,939.2195	
714	SW-7	700+27.60	8.00' LT	565,941.8359	1,343,939.4853	
715	SW-7	700+11.96	8.00' LT	565,935.3861	1,343,936.1348	
716	SW-7	700+03.18	8.00' LT	565,933.4288	1,343,929.6143	
750	SW-7	703+04.72	B/L	566,213.0121	1,343,912.9129	
751	SW-7	703+14.46	5.85' RT	566,224.3308	1,343,914.2037	
752	SW-7	703+26.97	7.78' RT	566,236.5000	1,343,910.7340	
753	SW-7	703+29.05	B/L	566,235.1374	1,343,902.7868	
754	SW-7	703+37.09	B/L	566,242.2937	1,343,899.1539	
755	SW-7	703+28.97	7.92' RT	566,238.3701	1,343,910.0165	
756	SW-7	703+37.25	7.80' RT	566,246.5753	1,343,905.6722	
757	SW-7	703+38.91	8.42' RT	566,248.5847	1,343,905.1024	MATCH EX
758	SW-7	703+53.01	B/L	566,253.8157	1,343,888.3212	
759	SW-7	703+55.09	8.66' RT	566,262.2957	1,343,891.2255	MATCH EX
760	SW-7	703+56.73	8.00' RT	566,262.8740	1,343,888.9342	
761	SW-7	703+62.74	8.00' RT	566,265.5130	1,343,881.0545	
762	SW-7	703+64.79	8.50' RT	566,266.4339	1,343,879.1859	MATCH EX
763	SW-7	703+61.72	B/L	566,257.4907	1,343,880.5003	
764	SW-7	703+64.30	2.82' LT	566,255.2462	1,343,877.4080	
765	SW-7	703+68.28	3.37' LT	566,255.4973	1,343,873.3990	MATCH EX
766	SW-7	703+67.75	7.19' LT	566,251.6466	1,343,873.1578	MATCH EX
767	SW-7	703+59.60	8.00' LT	566,249.3575	1,343,880.0012	
768	SW-7	703+13.94	8.00' LT	566,218.0640	1,343,901.8443	

POINT TABLE						
POINT	BASELINE	STATION	OFFSET	NORTHING	EASTING	REMARKS
801	SW-8	800+25.31	12.21' RT	566,237.5723	1,343,958.0936	MATCH EX
802	SW-8	800+30.41	16.56' RT	566,232.9587	1,343,962.9495	MATCH EX
803	SW-8	800+35.13	10.00' RT	566,239.1859	1,343,968.0099	
804	SW-8	800+40.00	5.55' RT	566,243.4427	1,343,973.1137	
805	SW-8	800+42.28	5.00' RT	566,243.8723	1,343,975.4220	
806	SW-8	800+48.00	5.00' RT	566,243.5695	1,343,981.1316	
807	SW-8	800+48.00	B/L	566,248.5625	1,343,981.3965	
808	SW-8	800+40.00	B/L	566,248.9862	1,343,973.4077	
809	SW-8	800+39.87	2.57' LT	566,251.5557	1,343,973.4076	MATCH EX
810	SW-8	800+30.57	6.18' RT	566,243.3186	1,343,963.6601	
811	SW-8	800+27.69	8.81' RT	566,240.8423	1,343,960.6467	
850	SW-8	801+73.54	4.80' RT	566,231.8195	1,344,103.4005	
851	SW-8	801+77.32	7.07' RT	566,228.4844	1,344,106.7588	
852	SW-8	801+79.77	12.00' RT	566,223.0616	1,344,108.4115	MATCH EX
853	SW-8	801+83.28	9.06' RT	566,225.1872	1,344,112.9908	MATCH EX
854	SW-8	801+81.28	4.59' RT	566,229.9604	1,344,111.5360	
855	SW-8	802+07.06	4.00' RT	566,231.3879	1,344,138.9183	MATCH EX
856	SW-8	802+07.06	B/L	566,235.2564	1,344,137.9498	MATCH EX

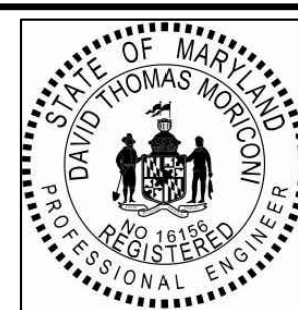
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16156, EXPIRATION DATE: 8/28/2018.



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



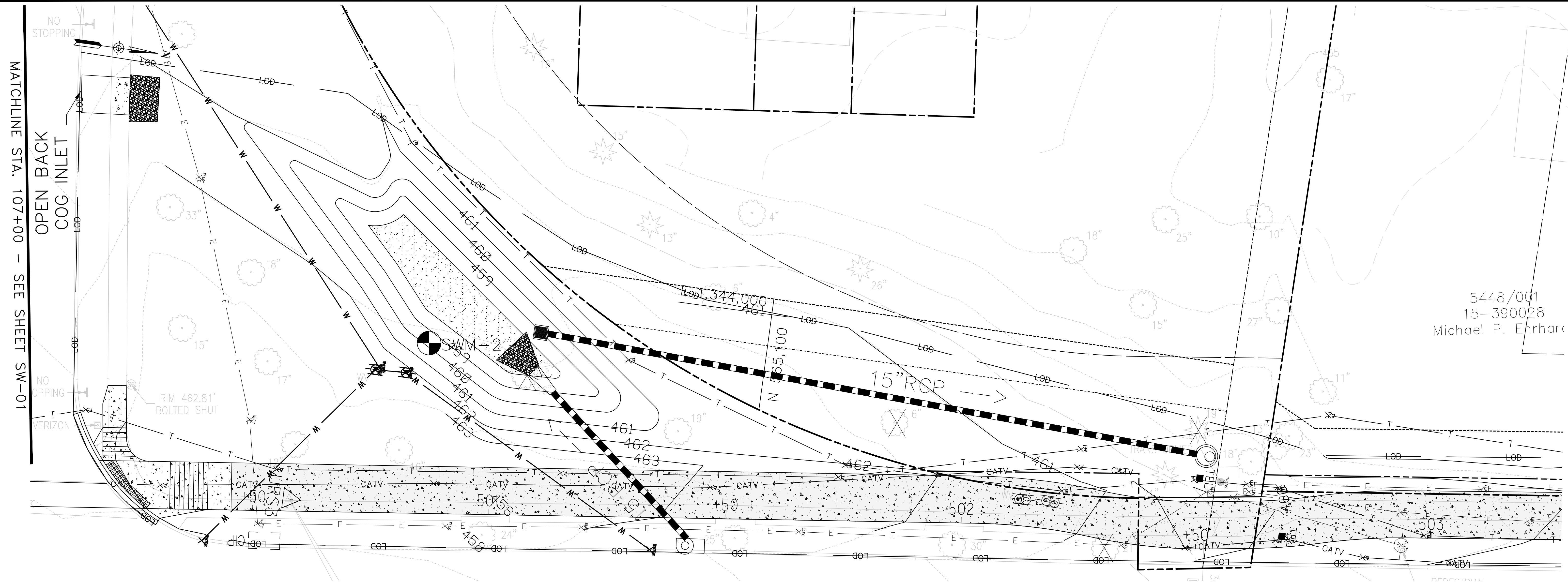
DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY:	NO.	REVISION	DATE

INTERSECTION DETAILS

CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS

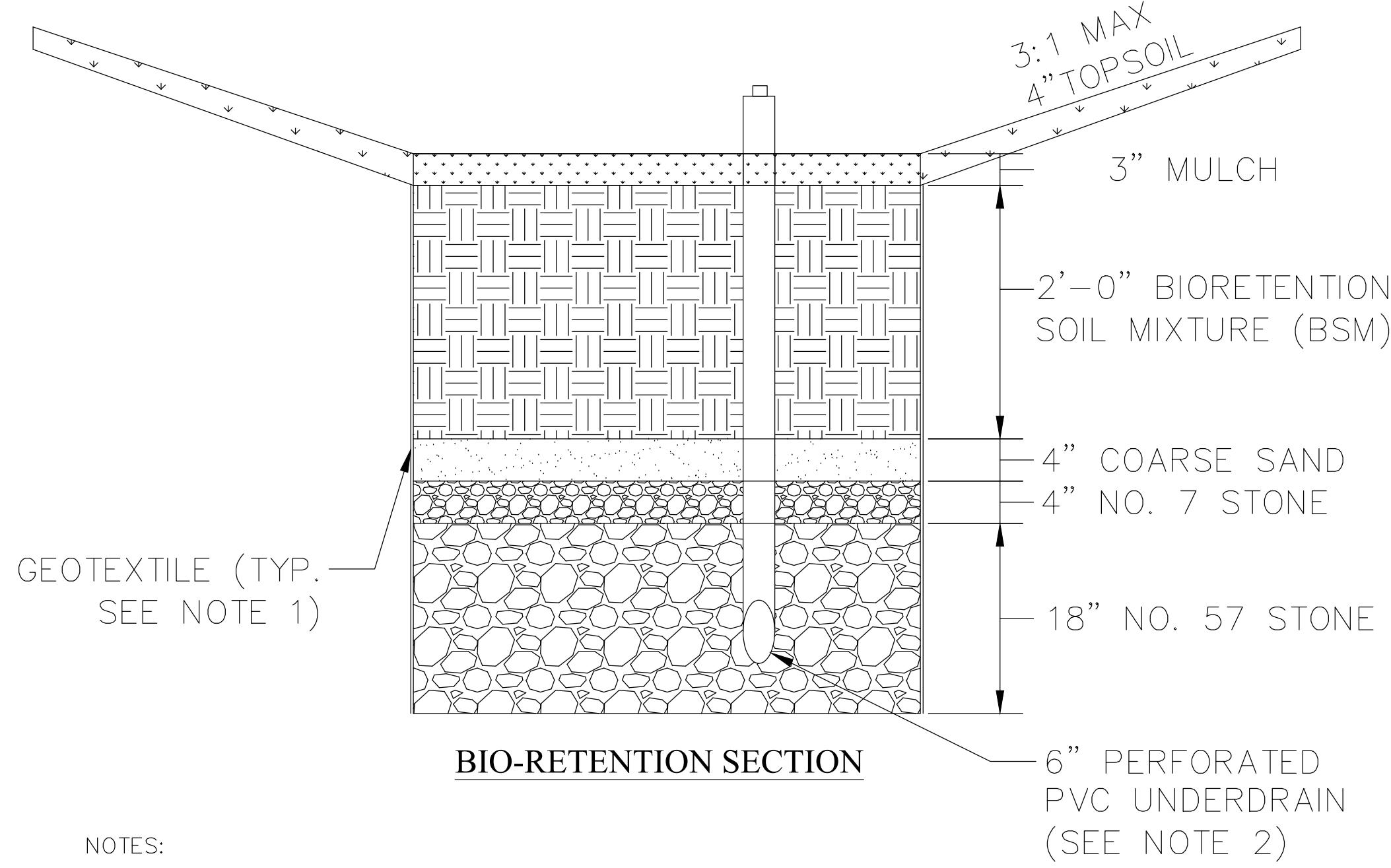
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1"=10"
 DWG NO.
 ID-03



5448/001
15-390028
Michael P. Ehrhard

MICRO-BIORETENTION FACILITY NO. 1



BIO-RETENTION SECTION

- NOTES:
1. GEOTEXTILE, CLASS PE TYPE III, NON-WOVEN, TO COMPLETELY ENVELOPE SIDES AND ENDS OF FILTER MEDIA. FILTER FABRIC IS NOT TO BE PLACED ON THE BOTTOM OR TOP OR THE FILTER MEDIA.
 2. GRADE PERFORATED PVC UNDERDRAIN AT MINIMUM SLOPE OF 0.50% TO THE OUTFALL FROM UPSTREAM INVERT.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018

CEDAR LANE: ESD FACILITY SUMMARY

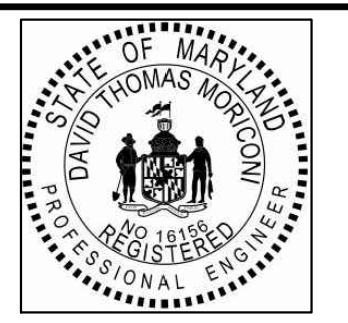
FACILITY TYPE	FACILITY NAME	ESDv REQUIRED	ESDv PROVIDED
MICRO-BIOTENTION	MB NO.1	1,219 CF	1,329 CF
PERMEABLE ASPHALT	--	0.196 CF OF ESDv PER SF OF PAVEMENT FOR B-SOILS	2,947 CF



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____
CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____
CHIEF, BUREAU OF HIGHWAYS _____ DATE _____



DES: TMG			
DRN: CDF			
CHK: DTM			
DATE: 11/2016	BY: NO.	REVISION	DATE

STORMWATER MANAGEMENT PLAN AND DETAILS

SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1"=10'
DWG NO. SW-01

B-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

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

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization

- a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
- b. Apply fertilizer and lime as prescribed on the plans.
- c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

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

B. Topsoiling

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, silty loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- 6. Topsoil Application
 - a. Erosion and sediment control practices must be maintained when applying topsoil.
 - b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading.

C. Soil Amendments (Fertilizer and Lime Specifications)

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

B-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications

- a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B-4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
- b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
- c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
- d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application

- a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
- b. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1¼ inch of soil covering. Seedbed must be firm after planting.
- c. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
- c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P₂O₅ (phosphorous), 200 pounds per acre; K₂O (potassium), 200 pounds per acre.
 - ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - iii. Mix seed and fertilizer on site and seed immediately and without interruption.
 - iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)

- a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. **Note: Use only sterile straw mulch in areas where one species of grass is desired.**
- b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
 - iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
 - v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

- a. Apply mulch to all seeded areas immediately after seeding.
- b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
- c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring

- a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
 - ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petrosol, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited.**
 - iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

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

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use

- a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
- b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
- c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
- d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures

- a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
- b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent. Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

Notes:

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland". Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures

- Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
- Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
- Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
- Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
- If soil moisture is deficient, supply new seedlings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6B				Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	
	TALL FESCUE	100	3/1-5/15	½-½ in	45 pounds per acre (1.0 lb/1000 sf)	90 lb/acre (2 lb/1000 sf)	2 tons/acre (90 lb/1000 sf)
			8/1-10/15	½-½ in			
				½-½ in			

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

1. General Specifications

- a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - b. Sod must be machine cut at a uniform soil thickness of ½ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
- 2. Sod Installation**
- a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Slagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
- 3. Sod Maintenance**
- a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - c. Do not mow until the sod is firmly rooted. No more than ½ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- 2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6B				Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	
	FOXTAIL MILLET	30	5/16 - 7/31	0.5 IN.			436 lb/acre (10 lb/1000 sf)
	PEARL MILLET	20	5/16 - 7/31	0.5 IN.			2 tons/acre (90 lb/1000 sf)

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

DESIGNER'S SIGNATURE DATE

PRINTED NAME MD REGISTRATION NO. P.E., R.L.S., OR R.L.A. (CIRCLE ONE)

OWNERS/ DEVELOPER CERTIFICATION

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC, ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

OWNER'S/ DEVELOPER'S SIGNATURE DATE

PRINTED NAME & TITLE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES: TMG

DRN: CDF

CHK: DTM

DATE: 11/2016

BY NO. REVISION DATE

EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 1

SCALE, MAP NO. BLOCK NO.

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE

N/A

DWG NO.

EN-01

SEQUENCE OF CONSTRUCTION - GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD SOIL CONSERVATION DISTRICT AT (410) 489-7987 AT LEAST SEVEN (7) DAYS PRIOR TO ANY EARTH DISTURBANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE INSPECTOR.
2. EXISTING UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND UTILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE UTILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
3. THE EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONING PRIOR TO CLEARING THE ENTIRE SITE. CLEAR AND GRUB FOR EROSION AND SEDIMENT CONTROL MEASURES OR DEVICES ONLY ON COMMENCEMENT OF CONSTRUCTION.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES, AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS PER THE EROSION AND SEDIMENT CONTROL PLANS. THE LOCATIONS FOR STABILIZED CONSTRUCTION ENTRANCES SHOWN ON THE PLANS ARE APPROXIMATE, AND EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD WITH APPROVAL FROM THE ENGINEER AND INSPECTOR.
5. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
6. CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILE AREA AND IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL E/S CONTROLS FOR STAGING AND STOCKPILE AREAS AS REQUIRED BY THE INSPECTOR.
7. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE OF CONSTRUCTION SPECIFIED ON THIS SHEET. STORM DRAIN SYSTEMS SHALL ALWAYS BE CONSTRUCTED FROM THE DOWNSTREAM ENDS. INLET PROTECTIONS SHALL BE INSTALLED AT INLETS BEFORE ANY DISTURBANCE IN THE WORK AREA. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUN OFF IS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE. CONTRACTOR SHALL USE PORTABLE SEDIMENT TANK TO DEWATER THE WORKING AREA DURING CONSTRUCTION.
8. CONSTRUCTION SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:

SEQUENCE OF CONSTRUCTION

1. CONTACT THE HOWARD COUNTY DEPARTMENT OF CONSTRUCTION INSPECTION AT (410) 313-1880 AT LEAST 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
2. ACCESS TO DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
3. CLEAR AND GRUB THE SITE TO PLACE PERIMETER CONTROLS. CONTRACTOR MUST COORDINATE WITH OWNER/RESIDENTS OF 4217 CLUB COURT, 4218 CLUB COURT, 4219 CLUB COURT, AND 4210 CLUB COURT PRIOR TO ANY DISTURBANCE AND SHALL MINIMIZE ACCESS LIMITATIONS TO THE RESPECTIVE RESIDENTS.
4. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE (SCE), TEMPORARY 24" HDPE CONNECTED TO THE EXISTING 24" CMP AT STATION 1+87.68 LT, STANDARD INLET PROTECTION (SIP) AT THE EXISTING INLET AT STATION 1+31.83 RT, SUPER SILT FENCE (SSF) AND SILT FENCE (SF) AS INDICATED.
5. WORKING DOWNSTREAM TO UPSTREAM, GRADE THE OUTFALL AT ES-1, INSTALL THE RIPRAP OUTFALL AND STABILIZE WITH TOPSOIL AND SOD.
6. WORKING DOWNSTREAM TO UPSTREAM, INSTALL STORM DRAIN SYSTEM FROM ES-1 TO I-2, UP TO THE EXISTING INLET AT STATION 1+31.83 RT. I-2 AND THE REMAINING PORTION OF THE DOWNSTREAM STORM DRAIN SHALL BE INSTALLED IMMEDIATELY AFTER THE EXISTING INLET AND DOWNSTREAM STORM DRAIN ARE REMOVED. INSTALL SIP AT I-2, ONLY CONSTRUCT THAT PORTION OF THE STORM DRAIN THAT MAY BE EXCAVATED, INSTALLED, AND STABILIZED THE SAME DAY. ALL DISTURBED AREAS MUST BE STABILIZED WITH TEMPORARY SEED AND MULCH AT THE END OF THE WORK DAY. DISTURBED PAVEMENT AREAS SHALL BE STEEL PLATED AT THE END OF EACH WORK DAY.
7. REMOVE EXISTING STORM DRAIN AT STATION 1+08.05 AND IMMEDIATELY INSTALL STORM DRAIN SYSTEM FROM MH-1 TO I-3, INSTALL SIP AT I-3. ONLY CONSTRUCT THAT PORTION OF THE STORM DRAIN THAT MAY BE EXCAVATED, INSTALLED, AND STABILIZED THE SAME DAY. ALL DISTURBED AREAS MUST BE STABILIZED WITH TEMPORARY SEED AND MULCH AT THE END OF THE WORK DAY. DISTURBED PAVEMENT AREAS SHALL BE STEEL PLATED AT THE END OF EACH WORK DAY.
8. INSTALL STORM DRAIN SYSTEM FROM MH-1 TO I-4, INSTALL SIP AT I-4 AND COMBINATION INLET PROTECTION (COIP) AT I-1, ONLY CONSTRUCT THAT PORTION OF THE STORM DRAIN THAT MAY BE EXCAVATED, INSTALLED, AND STABILIZED THE SAME DAY. ALL DISTURBED AREAS MUST BE STABILIZED WITH TEMPORARY SEED AND MULCH AT THE END OF THE WORK DAY. DISTURBED PAVEMENT AREAS SHALL BE STEEL PLATED AT THE END OF EACH WORK DAY.
9. CONSTRUCT CURB AND GUTTER AT THE LIMITS SHOWN. CONSTRUCT ASPHALT DRIVEWAY APRONS, DRIVEWAY TIE-INS, AND MILL/OVERLAY CLUB COURT AS INDICATED ON THE PLANS.
10. UPON APPROVAL FROM THE HOWARD COUNTY INSPECTOR, REMOVE ALL REMAINING PERIMETER CONTROLS AND IMMEDIATELY STABILIZE ANY DISTURBED AREAS.

SEDIMENT CONTROL GENERAL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1885 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - a. PRIOR TO THE START OF EARTH DISTURBANCE.
 - b. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - c. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - d. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
2. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
3. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
4. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTFALL. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MULCH (SEC. B-4-6).
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

SITE ANALYSIS:

TOTAL AREA OF SITE: 1.4 ACRES
 AREA DISTURBED: 1.4 ACRES
 AREA TO BE ROOFED OR PAVED: 0.5 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 0.9 ACRES
 TOTAL CUT: 800 CU. YDS.
 TOTAL FILL: 800 CU. YDS.
 OFFSITE WASTE/BORROW AREA LOCATION: HOWARD COUNTY LANDFILL / APPROVED SITE WITH ACTIVE GRADING PERMIT

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

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

OWNERS/ DEVELOPER CERTIFICATION

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

OWNER'S/ DEVELOPER'S SIGNATURE DATE

PRINTED NAME & TITLE

DESIGN CERTIFICATION

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DESIGNER'S SIGNATURE DATE

PRINTED NAME MD REGISTRATION NO. P.E., R.L.S., OR R.L.A. (CIRCLE ONE)

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156 EXPIRATION DATE: 8/28/2018"

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

EROSION & SEDIMENT CONTROL DETAILS AND NOTES - 2

SCALE MAP NO. BLOCK NO.

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE N/A
 DWG NO. EN-02

B-4.8 STANDARDS AND SPECIFICATIONS

FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

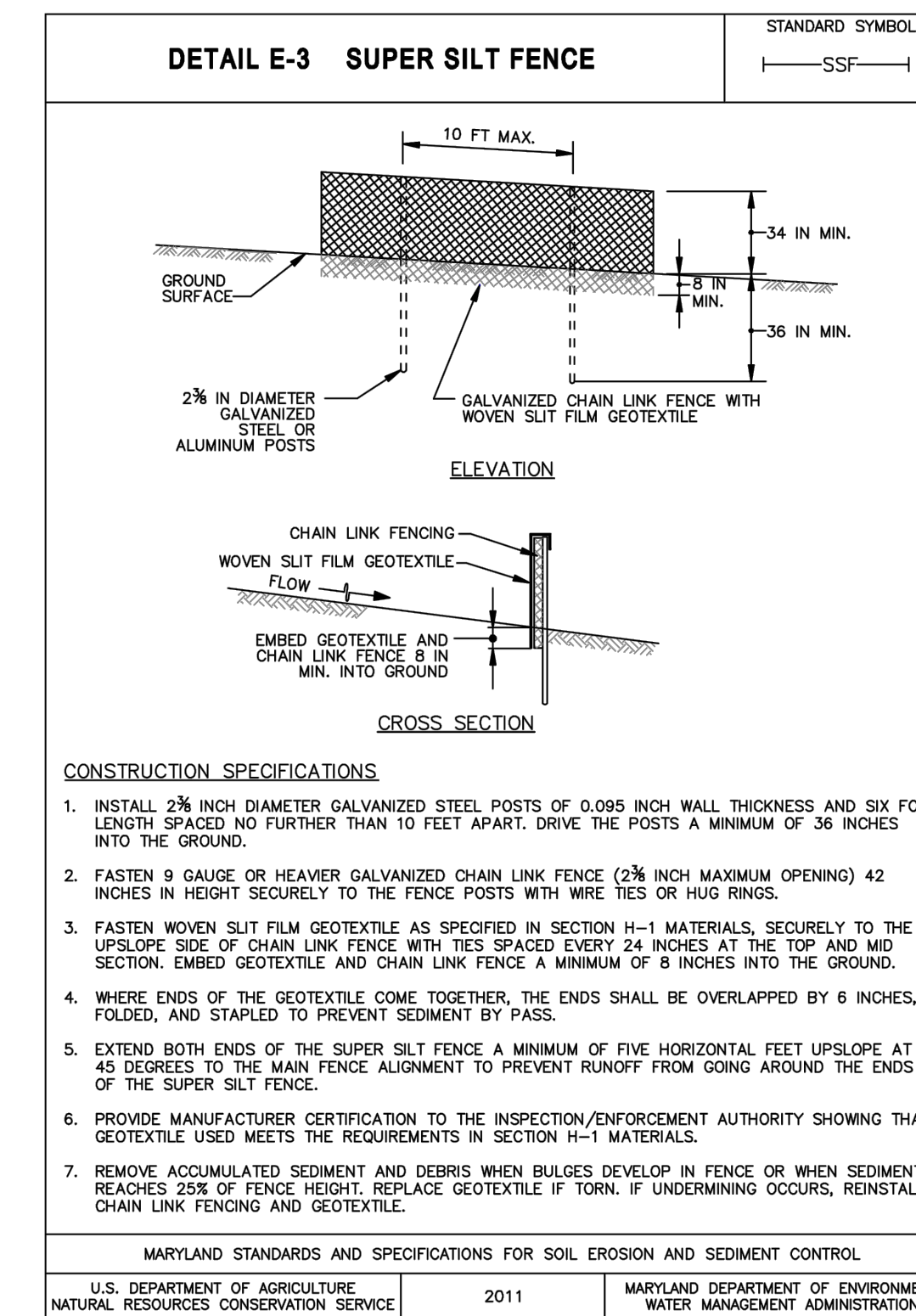
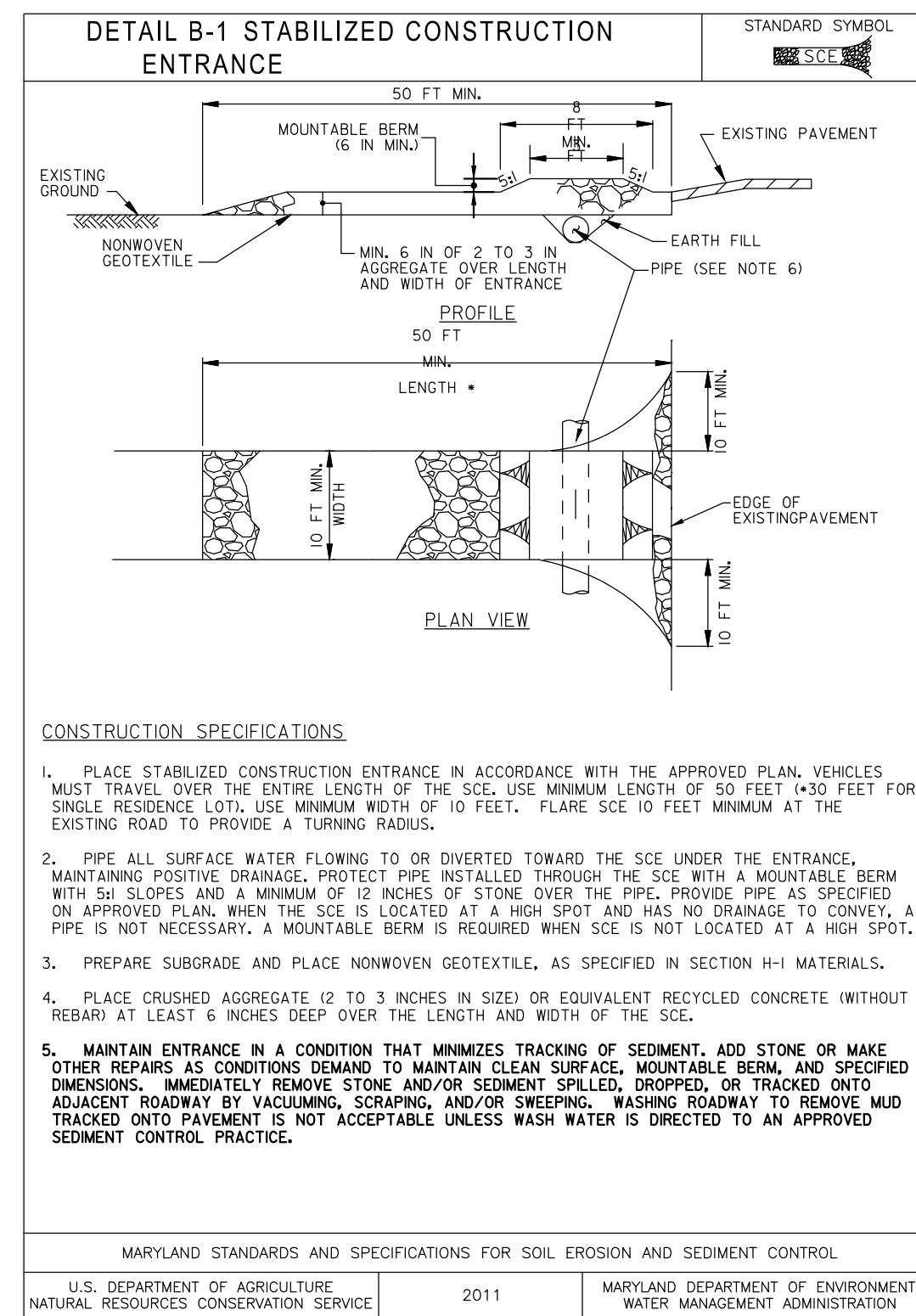
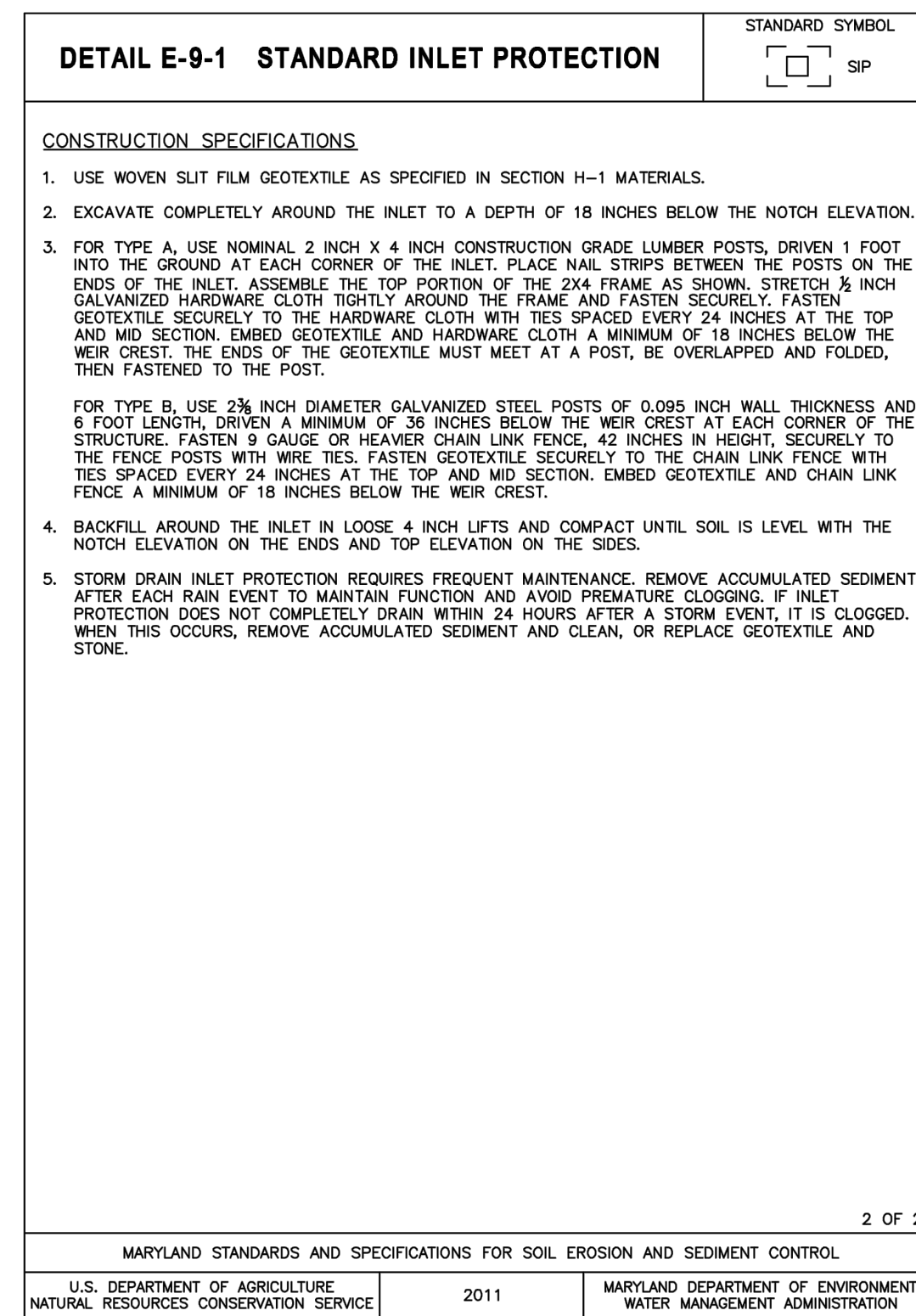
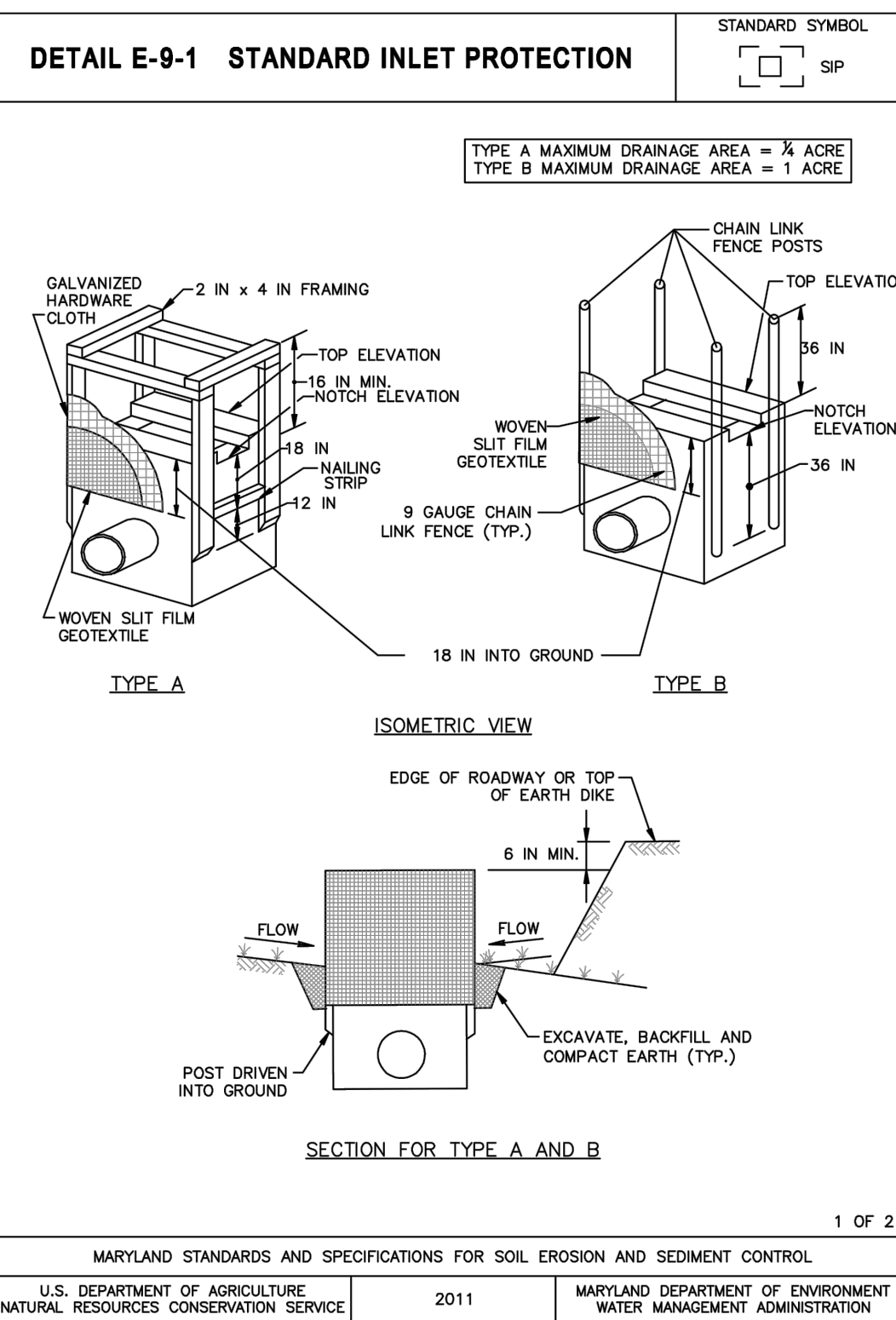
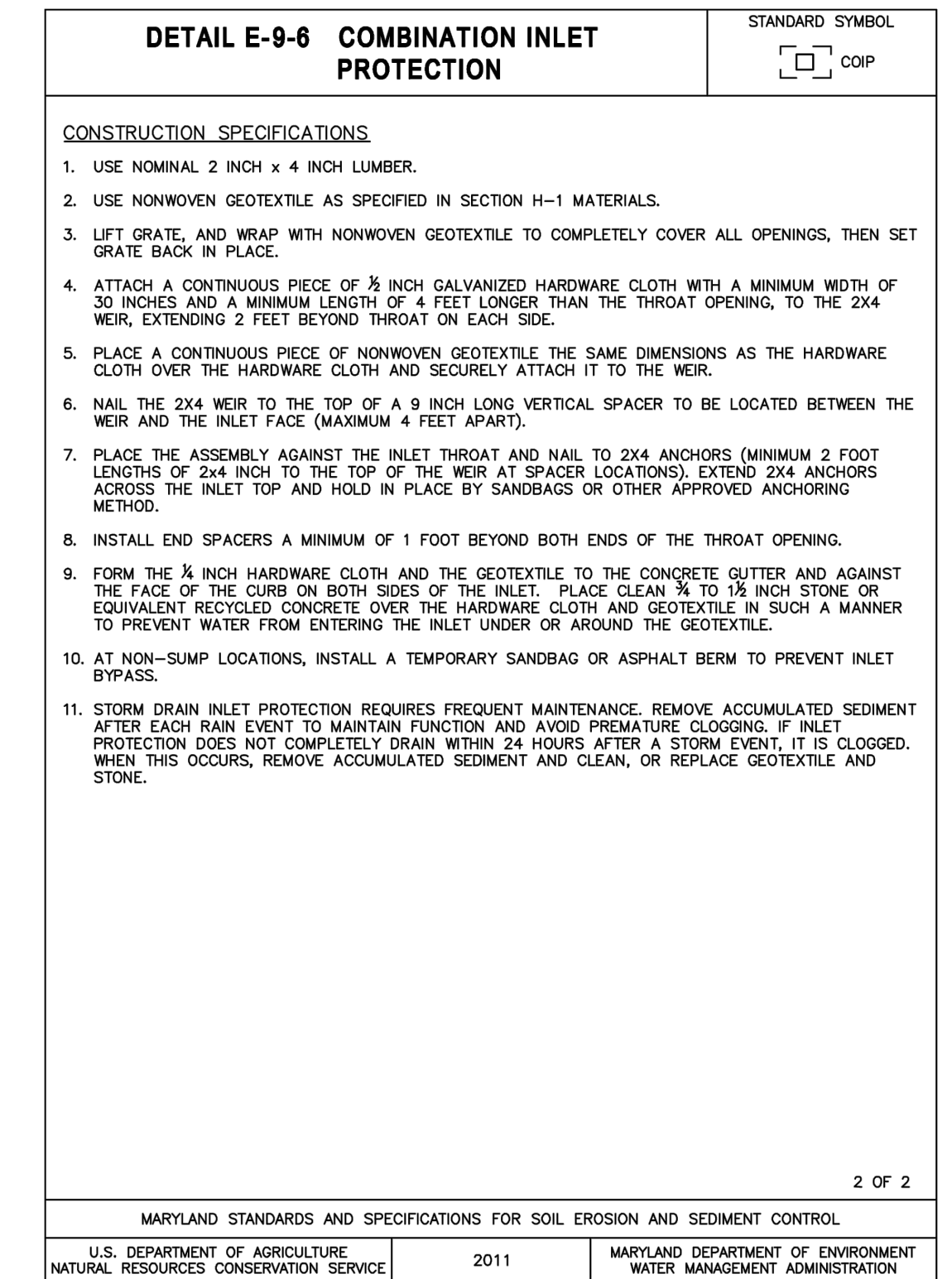
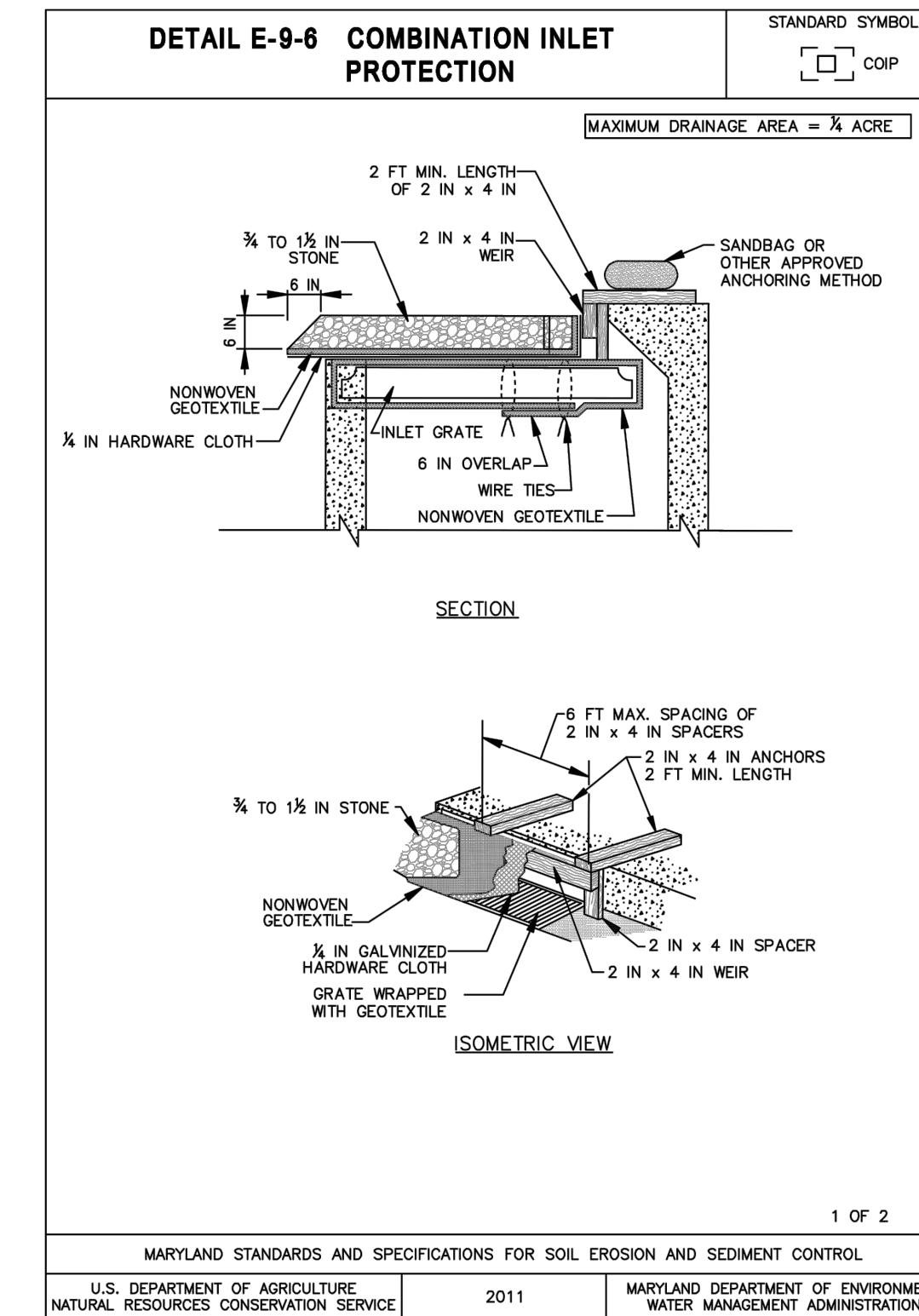
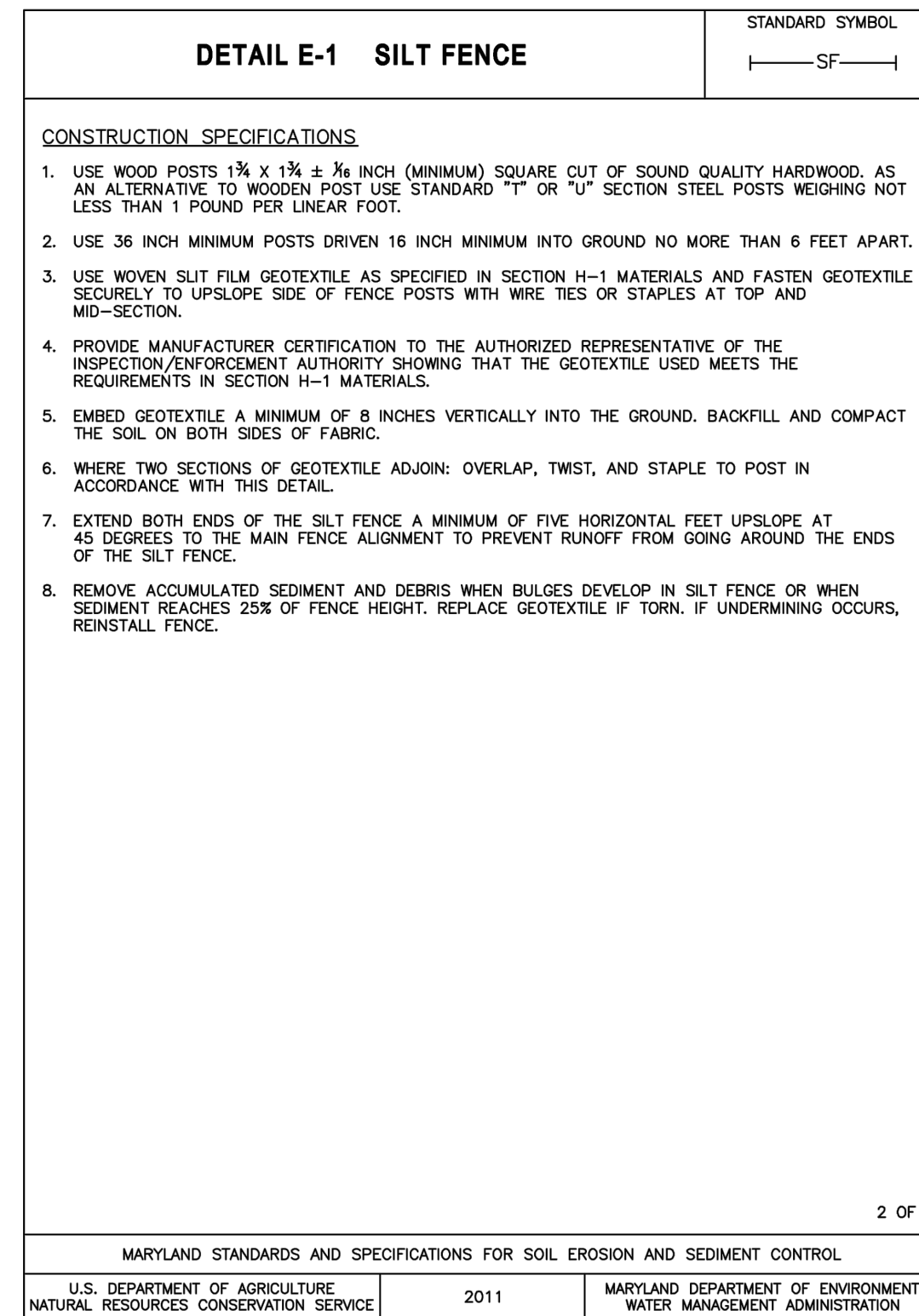
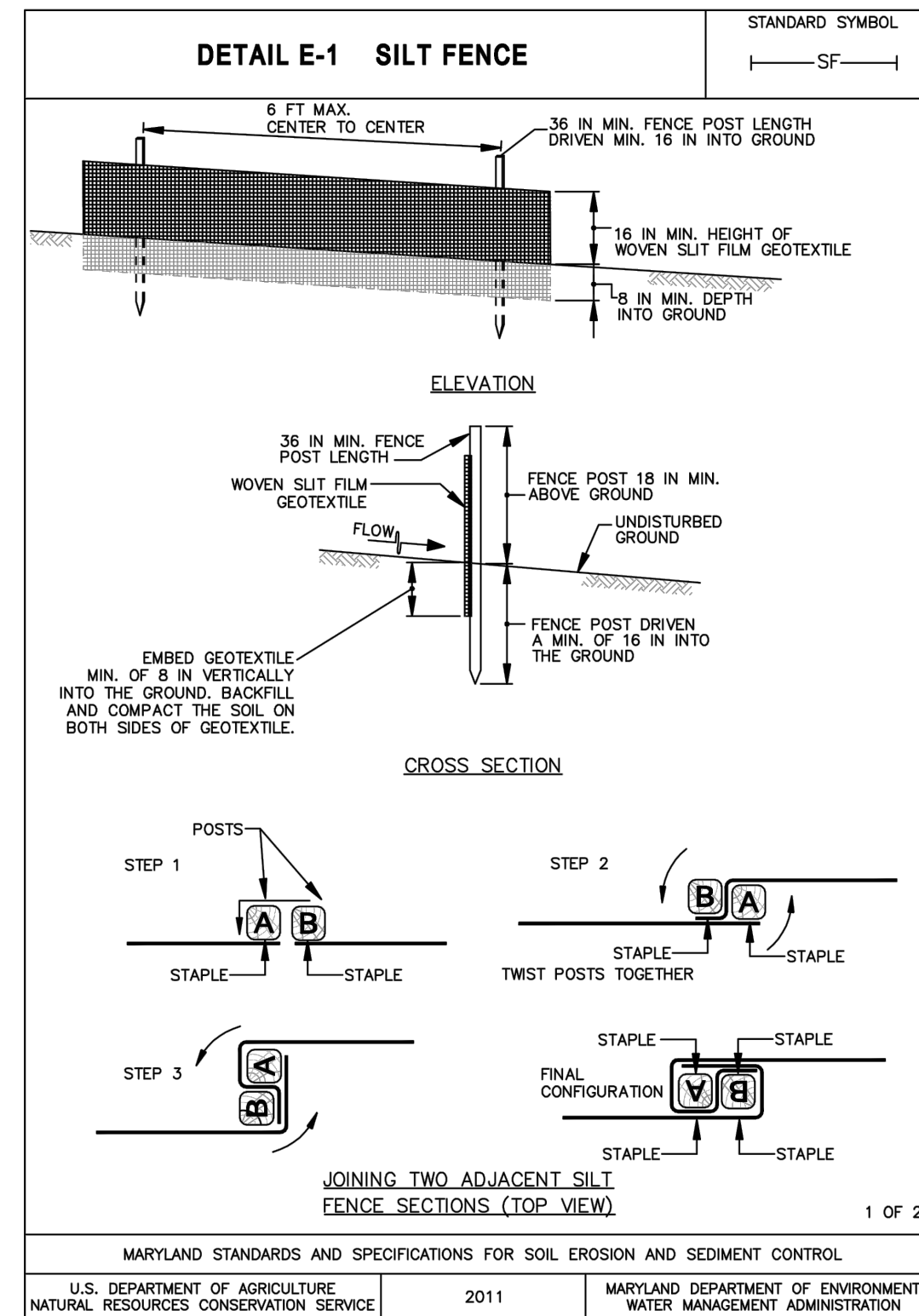
Criteria

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4.1 Incremental Stabilization and Standard B-4.4 Temporary Stabilization.
- If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

B.43



OWNERS' DEVELOPER CERTIFICATION

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OWNER'S/ DEVELOPER'S SIGNATURE _____ DATE _____

PRINTED NAME & TITLE _____

DESIGN CERTIFICATION

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DESIGNER'S SIGNATURE _____ DATE _____

PRINTED NAME _____ MD REGISTRATION NO. _____ P.E., R.L.S., OR R.L.A. (CIRCLE ONE)

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

PROFESSIONAL CERTIFICATION

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____

AECOM

STATE OF MARYLAND
DAVID THOMAS HOWARD
REGISTERED PROFESSIONAL ENGINEER

DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

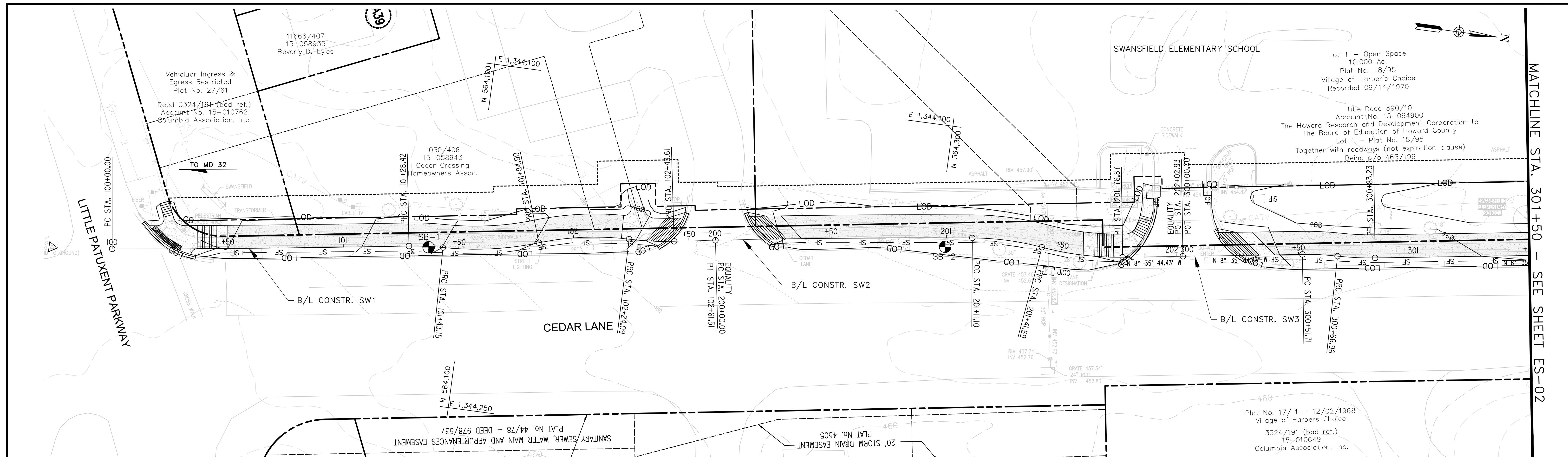
EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 3

SCALE MAP NO. _____ BLOCK NO. _____

CEARD LANE
BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE N/A
DWG NO. EN-03



THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

DESIGNER'S SIGNATURE DATE

PRINTED NAME MD REGISTRATION NO. P.E., R.L.S., OR R.L.A. (CIRCLE ONE)

OWNERS/ DEVELOPER CERTIFICATION

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

OWNERS/ DEVELOPER'S SIGNATURE DATE

PRINTED NAME & TITLE

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN:

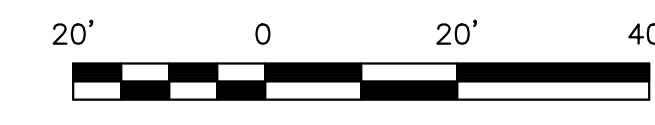
- A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1).
- B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018"

LEGEND

- LOD — LIMIT OF DISTURBANCE (LOD)
- SF — SILT-FENCE (SF)
- [Hatched Box] STABILIZED CONSTRUCTION ENTRANCE (SCE)
- [Box with 'COIP'] COMBINATION INLET PROTECTION
- [Box with 'SIF'] STANDARD INLET PROTECTION



SCALE: 1" = 20'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

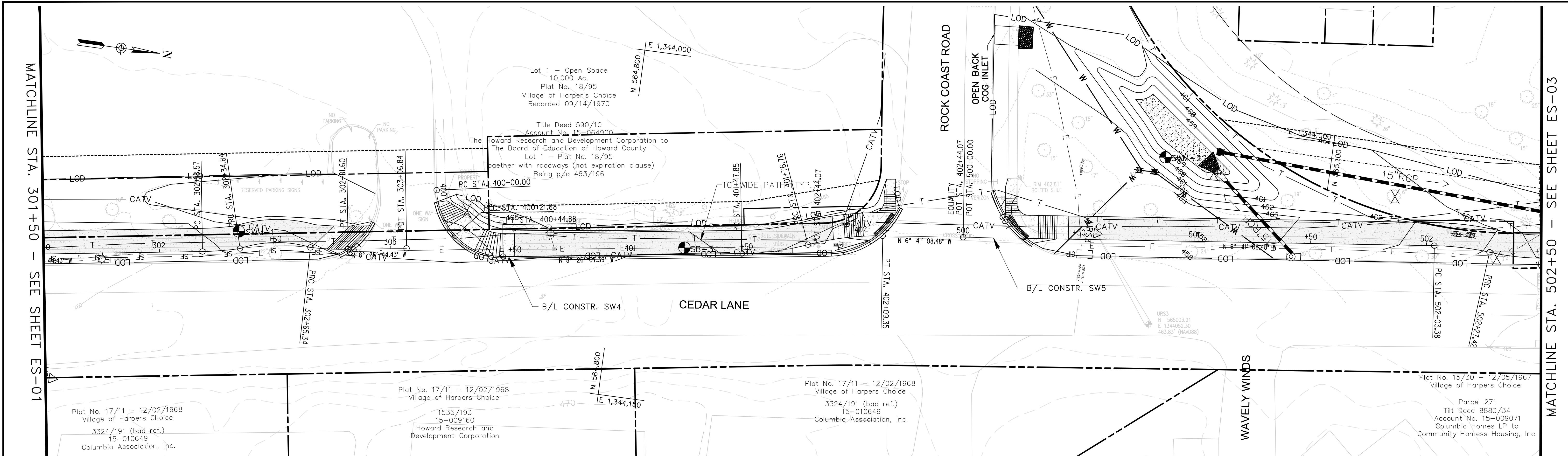
GRADING/EROSION & SEDIMENT CONTROL PLAN

SCALE MAP NO. BLOCK NO.

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1"=20'
DWG NO. ES-01



THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

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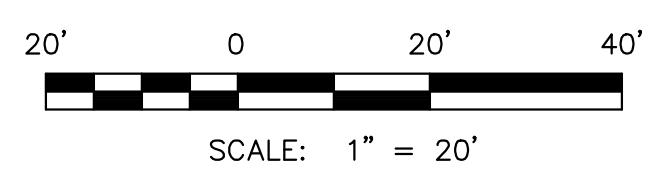
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES: TMG					
DRN: CDF					
CHK: DTM					
DATE: 11/2016	BY	NO.	REVISION	DATE	

GRADING/EROSION & SEDIMENT CONTROL PLAN

SCALE MAP NO. BLOCK NO.

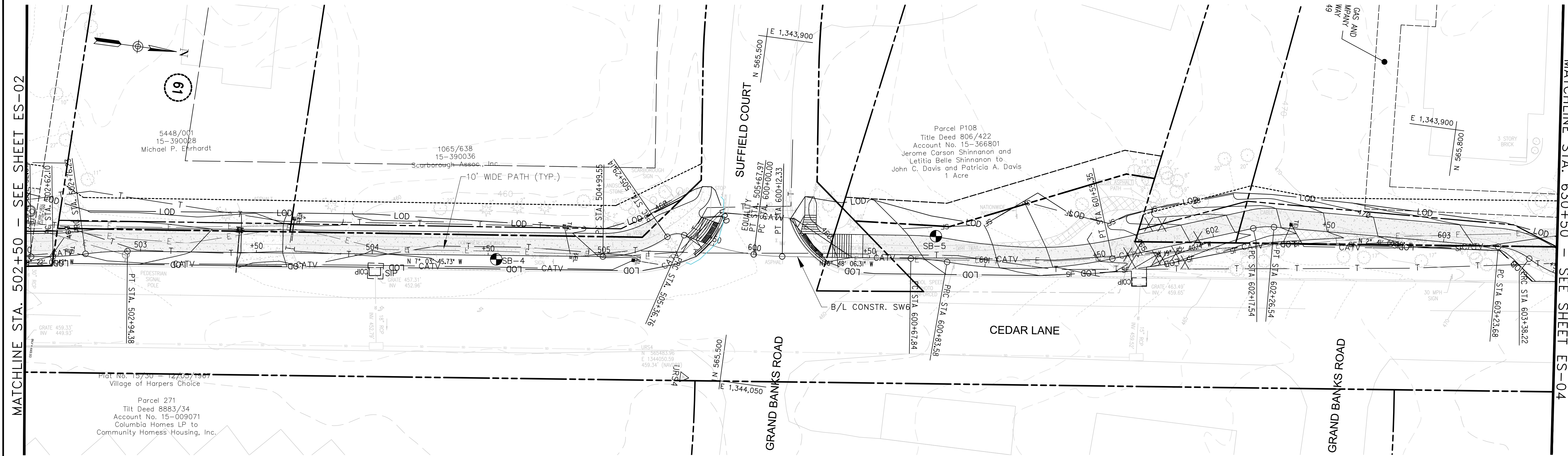
CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1" = 20'
 DWG NO. ES-02

MATCHLINE STA. 502+50 - SEE SHEET ES-02

MATCHLINE STA. 630+50 - SEE SHEET ES-04



THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY:	NO.	REVISION	DATE

GRADING/EROSION & SEDIMENT CONTROL PLAN

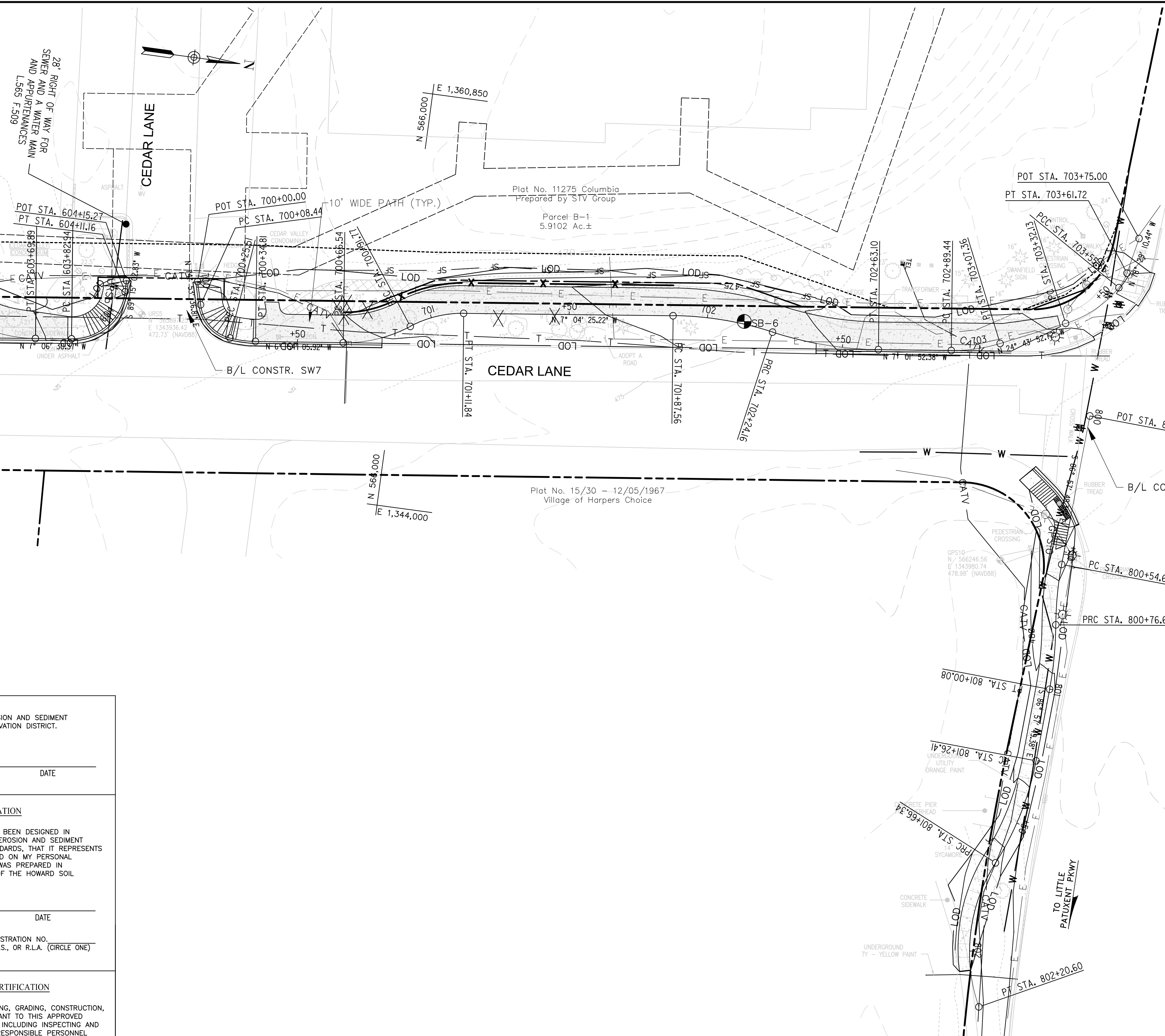
SCALE MAP NO. BLOCK NO.

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

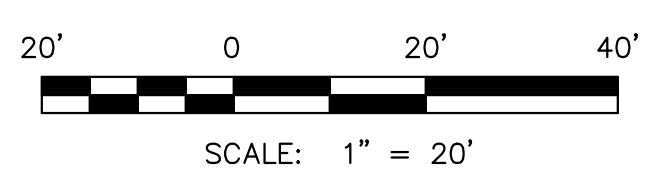
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1"=20'
 DWG NO. ES-03

MATCHLINE STA. 603+50 - SEE SHEET ES-03



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HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND			
DIRECTOR OF PUBLIC WORKS _____ DATE _____	CHIEF, BUREAU OF ENGINEERING _____ DATE _____		
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____	CHIEF, BUREAU OF HIGHWAYS _____ DATE _____		



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DRN: CDF				
CHK: DTM				
DATE: 11/2016	BY _____	NO. _____	REVISION _____	DATE _____

GRADING/EROSION & SEDIMENT CONTROL PLAN

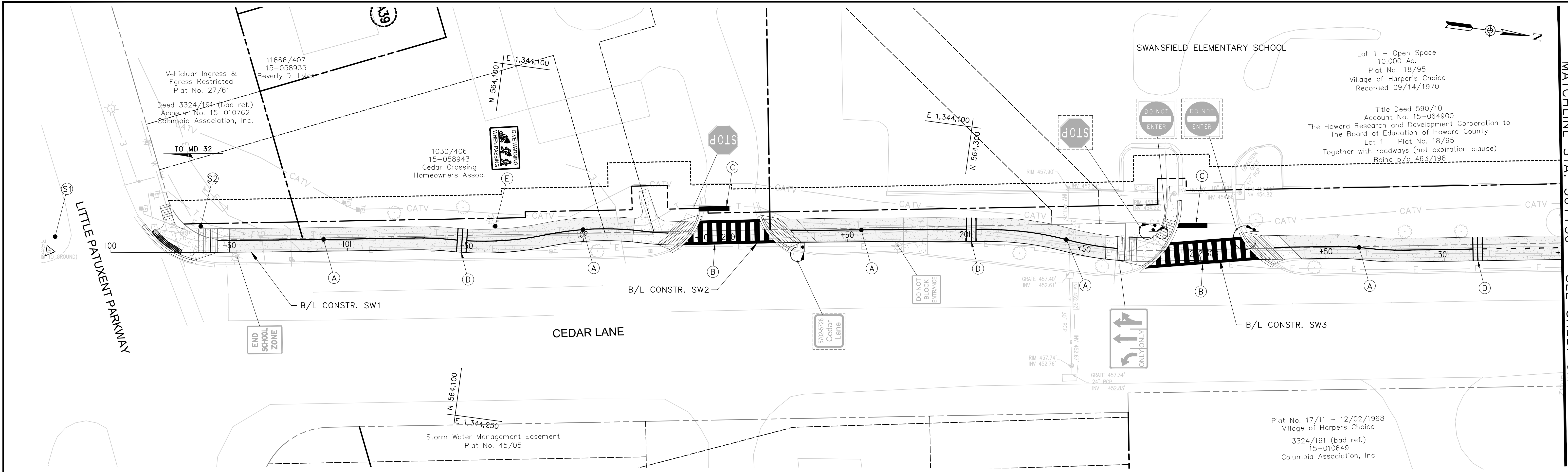
SCALE MAP NO. _____ BLOCK NO. _____

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1" = 20'
 DWG NO. ES-04

MATCHLINE STA. 301+50 - SEE SHEET SM-02



SIGN SET

- Ⓢ1 LPP/CEDAR
- Ⓢ2 LPP/CEDAR
- Ⓢ3 CEDAR/HARPER'S FARM

NOTE:
1. ALL SIGNS SHOWN ARE EXISTING AND ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

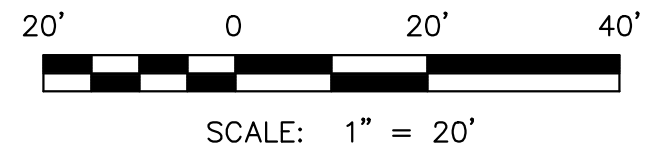
SIGN LEGEND

- SIGN AND SUPPORT
- Ⓢ EXISTING SIGN TO REMAIN
- Ⓢ EXISTING SIGN TO BE RELOCATED

PAVEMENT MARKING LEGEND

- (A) XING ROAD
- (B) CROSSWALK
- (C) STOP BAR
- (D) RUMBLE STRIPS
- (E) GIVE WARNING WHEN PASSING SIGN

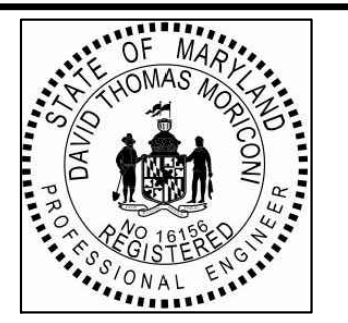
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

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SIGNING & MARKING PLANS

SCALE MAP NO. _____ BLOCK NO. _____

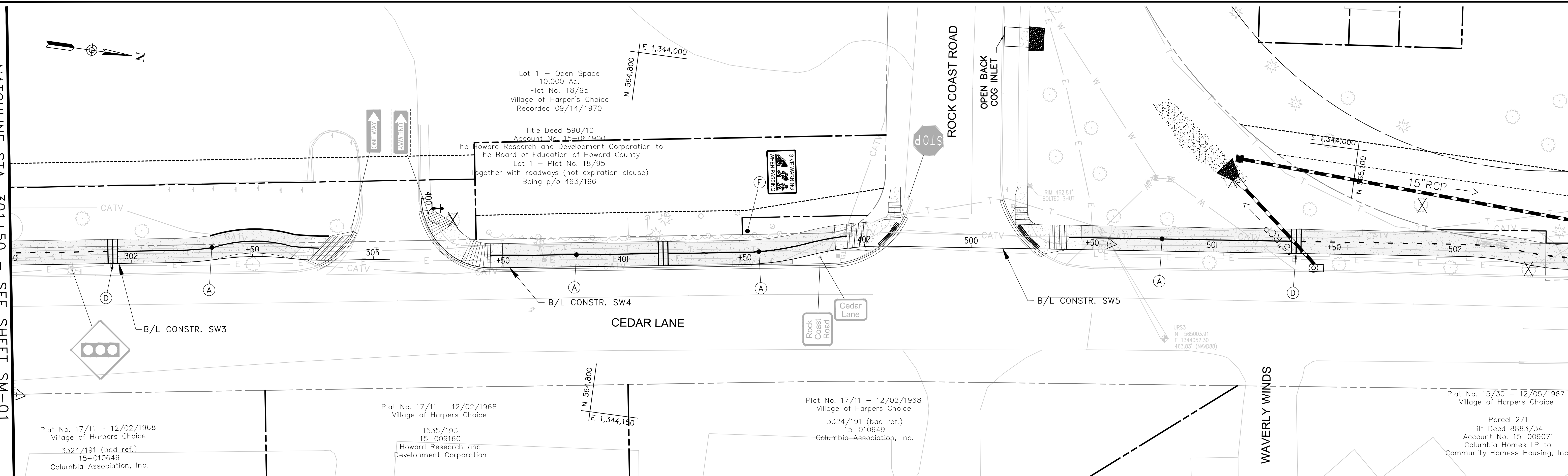
**CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
1" = 20'
DWG NO.
SM-01

MATCHLINE STA. 301+50 - SEE SHEET SM-01

MATCHLINE STA. 502+50 - SEE SHEET SM-03



NOTE:
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- SIGN LEGEND**
- SIGN AND SUPPORT
 - EXISTING SIGN TO REMAIN
 - EXISTING SIGN TO BE RELOCATED

- PAVEMENT MARKING LEGEND**
- (A) XING ROAD
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

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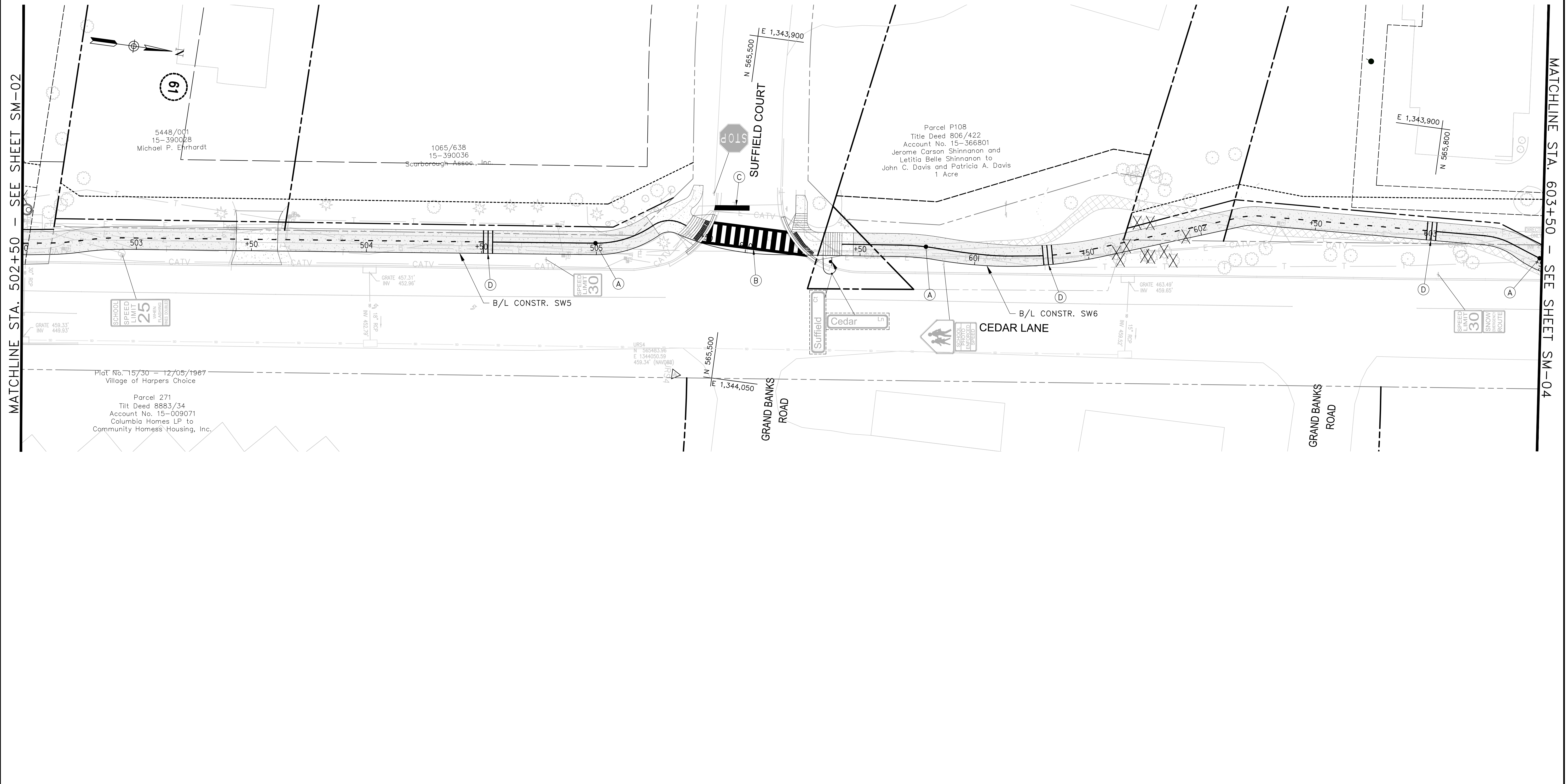
**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
 1" = 20'
 DWG NO.
 SM-02

MATCHLINE STA. 502+50 - SEE SHEET SM-02

MATCHLINE STA. 603+50 - SEE SHEET SM-04



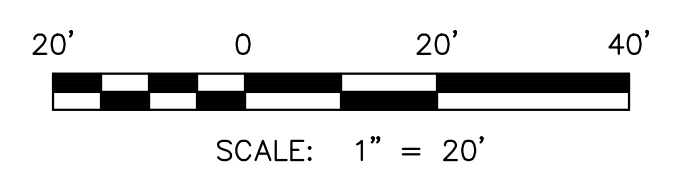
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PAVEMENT MARKING LEGEND

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DEPARTMENT OF PUBLIC WORKS
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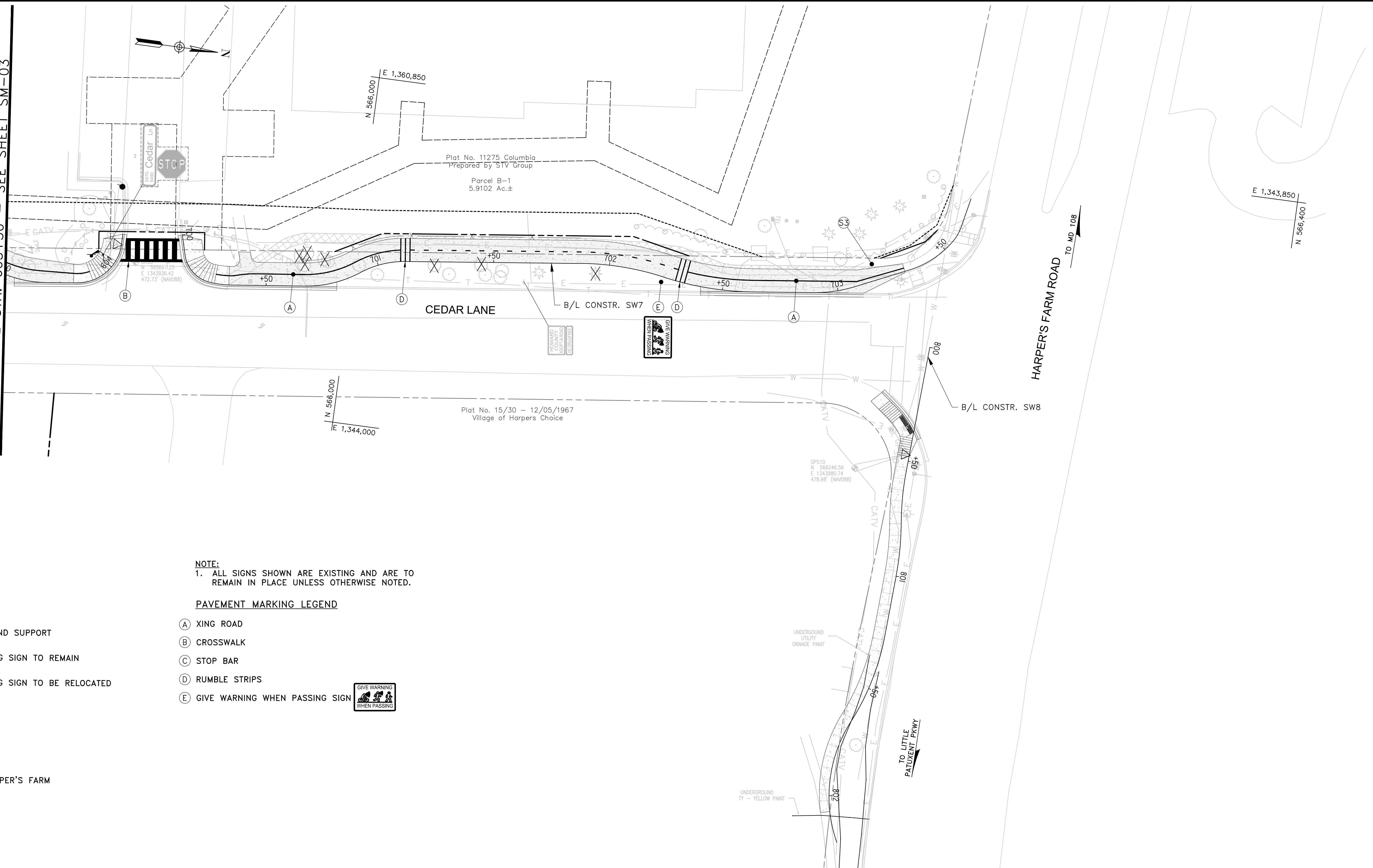
SCALE MAP NO. _____ BLOCK NO. _____

**CEDAR LANE
 BICYCLE AND PEDESTRIAN
 IMPROVEMENTS**

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
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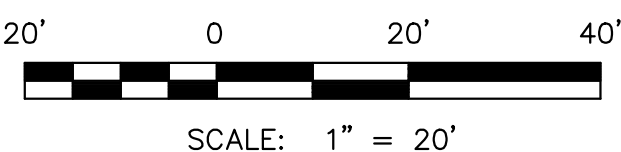
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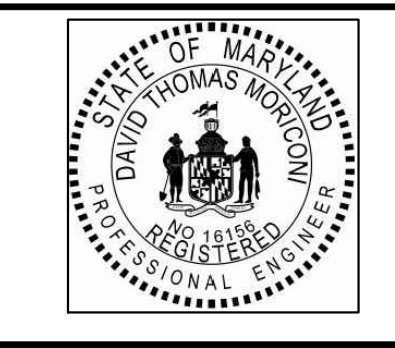
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DIRECTOR OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
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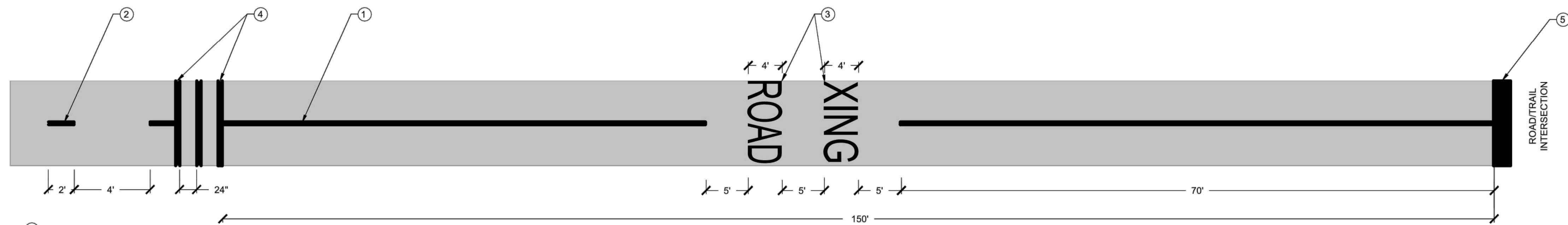
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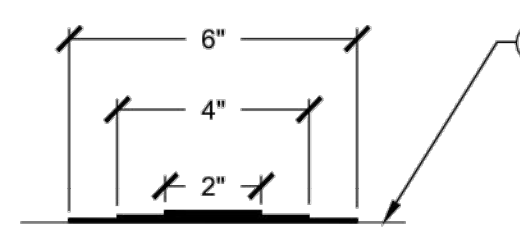
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
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DWG NO.
SM-04



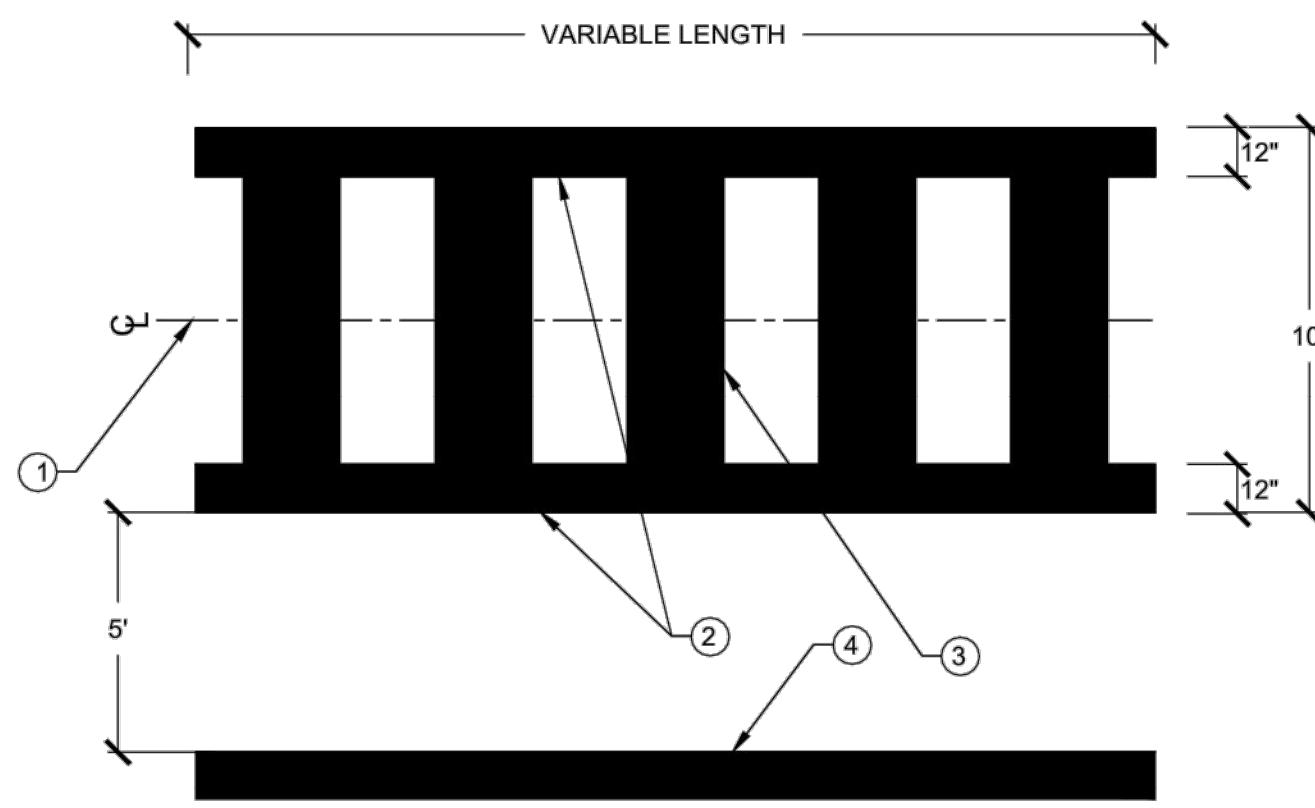
- ① PAINTED STRIPING (SOLID)
- ② PAINTED STRIPING (DASHED)
- ③ PAINTED "ROAD XING" PAVEMENT MARKING
- ④ (3) RUMBLE STRIPS 30" ON CENTER
- ⑤ 12" STOP BAR (INC. "STOP" MARKING DEPENDING ON TRAFFIC CONTROL)

1 TRAIL PAVEMENT MARKING SYMBOL PLACEMENT
NTS



① WHITE THERMOPLASTIC PAVEMENT MARKING (EACH MARKING LAYER SHALL BE 80 TO 95 MILS EACH IN ORDER TO ACHIEVE AN OVERALL RUMBLE STRIP THICKNESS OF APPROXIMATELY 1/4". REFER TO PLAN FOR SPACING LAYOUT AND LOCATION.)

2 RUMBLE STRIP DETAIL
1"=1"



3 CROSSWALK DETAIL
1/2"=1"

- ① CENTERLINE OF CROSSWALK TO BE AT CENTERLINE OF PEDESTRIAN RAMP UNLESS OTHERWISE NOTED
- ② 12" SOLID WHITE THERMOPLASTIC MARKING
- ③ 24" SOLID WHITE THERMOPLASTIC MARKING
- ④ 24" SOLID WHITE THERMOPLASTIC STOP BAR [MOTOR VEHICLE]

NOTES:
 1. PEDESTRIAN CROSSWALK - TEN FEET WIDE, UNLESS OTHERWISE NOTED.
 A. MAKE STRIPES PARALLEL TO CURB LINE OF STREET.
 B. ALL HANDICAP RAMP MUST BE LOCATED WITHIN A CROSSWALK, INCLUDING SIDE FLARES OF RAMP. ONE SIDE FLARE MUST ALIGN WITH BACK EDGE OF CROSSWALK IF CROSSWALK WIDTH IS GREATER THAN FIFTEEN FEET.
 C. CROSSWALK MARKINGS SHALL BE INSTALLED WITH PREFORMED HEAT APPLIED THERMOPLASTIC OR LIQUID THERMOPLASTIC.

PAVEMENT MARKINGS SPECIFICATIONS

MATERIALS: ALL THERMOPLASTIC MARKING MATERIALS SHALL CONFORM TO THE SHA MANUAL OF TECHNICAL DESIGN STANDARDS

APPLICATION METHOD: ALL PAVEMENT MARKING APPLICATION METHODS SHALL BE APPROVED BY PROJECT DESIGNER PRIOR TO START OF WORK.

1. PAINTED STRIPING FOR PATH
 MATERIAL SPECIFICATIONS: SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
 STRIPE WIDTH / COLOR: 4" / TRAFFIC YELLOW
 STRIPE POSITION: CENTER OF PATHWAY
 STRIPE CHARACTER: SMOOTH EDGE WITH CONSTANT ARC IN CURVES (NO WAVERING OR SERPENTINE APPEARANCE WILL BE ACCEPTED)
 SOLID LINE: BEGINNING 150 FEET (OR PER MARKING PLANS) ON EACH SIDE OF A BRIDGE OR INTERSECTION THERE SHALL BE A SOLID LINE PATTERN IMPLEMENTED IN PLACE OF THE DASHED PATTERN. 3' STRIPE / 9' BREAK. DASHED LINE SHALL END ONE FOOT BEFORE RUMBLE STRIPS, CROSSWALKS OR OTHER PAVEMENT MARKINGS.
 DASHED:
2. THERMOPLASTIC RUMBLE STRIPS:
 MATERIAL SPECIFICATIONS: 90 MILS BEADED
 STRIPE WIDTH / COLOR: 2", 4", AND 6" WIDE / WHITE
 PATTERN: THREE SEPARATE LINES BEGINNING AT 150' FROM THE CROSSING FOR THE FIRST LINE, THE NEXT TWO LINES SHALL BE PLACED 30" ON CENTER HEADING TOWARD THE INTERSECTION. EACH STRIP SHALL EXTEND THE ENTIRE WIDTH OF THE TRAIL.
3. PAINTED ADVANCE MARKINGS FOR PATH
 MATERIAL SPECIFICATIONS: SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
 SIZE / COLOR: 4" HEIGHT / WHITE
 LETTER WIDTH / SPACING: 2" / 5" SPACING
 LOCATION: MINIMUM 70' FROM CONCRETE THRESHOLD OR STOP SIGN
 EXAMPLE: ROAD X-ING
4. PAINTED STOP BAR FOR PATH
 MATERIAL SPECIFICATIONS: SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
 LENGTH / COLOR: WIDTH OF PATHWAY / WHITE
 LOCATION: EVEN WITH THE STOP SIGN, NO MORE THAN 5' FROM THE ROAD THRESHOLD. AT INTERSECTIONS WITH PEDESTRIAN SIGNALS, A THERMOPLASTIC STOP BAR SHALL BE PLACED AT THE EDGE OF THE PAVEMENT WITHOUT THE WORD "STOP"
5. PAINTED STOP LETTERING FOR PATH
 MATERIAL SPECIFICATIONS: SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
 SIZE / COLOR: 4" / WHITE
 LETTER WIDTH: 2"
 LOCATION: PATH SIDE OF STOP BAR (SEE INTERSECTION LAYOUT FOR PLACEMENT)
6. THERMOPLASTIC CROSSWALK
 MATERIAL SPECIFICATIONS: 90 MILS BEADED THERMOPLASTIC, HEAT APPLIED.
 SIZE / COLOR: 12" WHITE EDGE/ 24" WHITE CROSS BARS
 STRIPE CHARACTER: SMOOTH EDGE WITH CONSTANT ARC IN CURVES (NO WAVING, OR SERPENTINE APPEARANCE WILL BE ACCEPTED)
 LOCATION: CENTERLINE OF CROSSWALK TO BE AT CENTERLINE OF PEDESTRIAN RAMP UNLESS OTHERWISE NOTED

SIGN NOTES

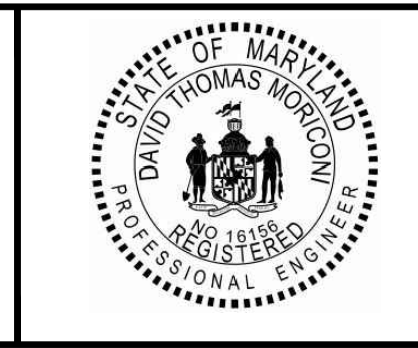
1. APPLICABLE SPECIFICATIONS AND STANDARDS: MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL (MDMUTCD), AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
2. PREPARATION:
 - A. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
 - B. DIMENSIONS FOR LEGEND SIZE AND ALL RELATED DIMENSIONS FOR SIGN LAYOUT, PANEL SIZES, POST SIZES, MOUNTING DIMENSIONS ARE AS SPECIFIED IN THE PLANS.
 - C. ALL GRAPHIC FORMATS, USE OF TYPOGRAPHY, COLOR, DIRECTIONAL ARROW GRAPHICS, AND PICTOGRAMS ARE AS SPECIFIED IN THE PLANS. SHOP DRAWINGS OF PROPOSED SIGN LAYOUTS SHALL BE SUBMITTED AND APPROVED PRIOR TO SIGN PANEL FABRICATION.
 - D. ALL STRUCTURES SHALL BE ENGINEERED TO MEET A VARIETY OF SITE CONDITIONS. SIGNS SHALL BE ENGINEERED FOR WIND LOADS, SOIL CONDITIONS, FROST DEPTH, AND STRUCTURAL INTEGRITY. SPECIAL CONDITIONS THAT ARE OUTSIDE THESE PARAMETERS ARE TO BE ENGINEERED ON A SITE-SPECIFIC BASIS. THE DESIGN OF THE STRUCTURAL REQUIREMENTS OF SPECIAL ONE-OF-A-KIND SIGNS SHALL CONFORM TO THE BASIC ASSEMBLY SPECIFICATIONS FOR SIMILAR SIGN TYPES. THE MODIFIED ASSEMBLY SHALL FULFILL THE REQUIREMENTS OF LOCAL CRITERIA FOR WIND PRESSURE, SOIL, AND FROST DEPTH. ALL SIGN ENGINEERING AND STRUCTURAL INTEGRITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
 - E. ALL FINISHED SIGN PANELS SHALL BE PROVIDED WITH A 1-1/4" X 2-1/2" WEATHER RESISTANT IDENTIFICATION PLACED ON THE BACK OF THE SIGN INDICATING SIGN PLAN ID NUMBER, MANUFACTURER, DATE OF FABRICATION, AND INSTALLATION DATE.
3. FABRICATION:
 - A. PROVIDE SHOP AND FABRICATION DRAWINGS FOR REVIEW AND APPROVAL DETAILING THE PROPOSED FABRICATION OF ALL SIGNS AND STRUCTURES INDICATED IN PLAN DOCUMENTS.
 - B. THE CONTRACTOR SHALL PREPARE, FOR REVIEW BY THE OWNER'S REPRESENTATION'S FABRICATION SHOP DRAWINGS. UPON REVIEW OF THE SHOP DRAWINGS THE CONTRACTOR SHALL MAKE ALL CORRECTIONS AND ADJUSTMENTS, AS INDICATED AND RESUBMIT FOR REVIEW AND APPROVAL. REVISIONS TO SHOP DRAWINGS SHALL INCLUDE A REVISION DATE. FABRICATION SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - C. ALUMINUM PANEL, TUBULAR STEEL POSTS, MOUNTING HARDWARE AND MATERIAL FINISHES SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS HEREIN OR BY REFERENCE. ALL MATERIALS SHALL COMPLY WITH THIS SPECIFICATION OR APPROVED EQUAL.
 - D. ALL SIGN USED FOR TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POSTS (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL SQUARE TUBE SLEEVE (3' LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL.
4. INSTALLATION:
 - A. ALL TRAFFIC CONTROL SIGNS LOCATED WITHIN COUNTY RIGHTS-OF-WAY ARE TO BE ARE TO BE STAKED AND BE FIELD APPROVED PRIOR TO INSTALLATION BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430).
 - B. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' (MDMUTCD)
 - C. SIGN LOCATIONS SHALL BE MARKED WITH A STAKE AND SHALL HAVE THE SIGN TYPE CODE, AND LOCATION CODE, AND CORRESPOND TO THE SIGN LOCATION IN THE PLAN DRAWINGS.
 - D. UNFORESEEN OBSTRUCTIONS MAY LIMIT THE DEPTH OF A STANDARD FOOTING OR REQUIRE SPECIAL MITIGATION TO PREVENT DAMAGE TO EXISTING TREE ROOTS. WHERE POSSIBLE, MOVE THE SIGN AS NEEDED TO ALLOW UNCONSTRAINED SUBSURFACE INSTALLATION. ADJUST SIGN INSTALLATION LOCATIONS TO KEEP THEM BEYOND THE DRIP LINE OF TREES WHEREVER POSSIBLE. NOTIFY THE PROJECT DESIGNER OF ANY PROPOSED SIGN LOCATIONS WITHIN THE DRIP LINE OF THE TREES. THE DRIP LINE SHALL BE DEFINED AS THE AREA BELOW THE FARTHEST-SPREADING BRANCHES OF A TREE. IF A SIGN PLACEMENT LOCATION MUST BE MOVED, THE CONTRACTOR SHALL GET APPROVAL OF THE PROJECT DESIGNER AND/OR COUNTY REPRESENTATIVE. IF THE SIGN CAN BE LOGICALLY MOVED, VERIFY SIGHT-LINES OF ADJUSTED LOCATIONS TO AFFIRM THAT SIGN IS STILL VISIBLE FROM THE DESIGNATED APPROACH.

SIGN NOTES

1. TRAFFIC CONTROL SIGNS SHOULD BE INSTALLED AT A MINIMUM 7' HEIGHT WHEN ADJACENT TO TRAIL.
2. SIGN POSTS: 2-PUNCH SQUARE TUBULAR POSTS.

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND			
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION	DATE	CHIEF, BUREAU OF HIGHWAYS	DATE

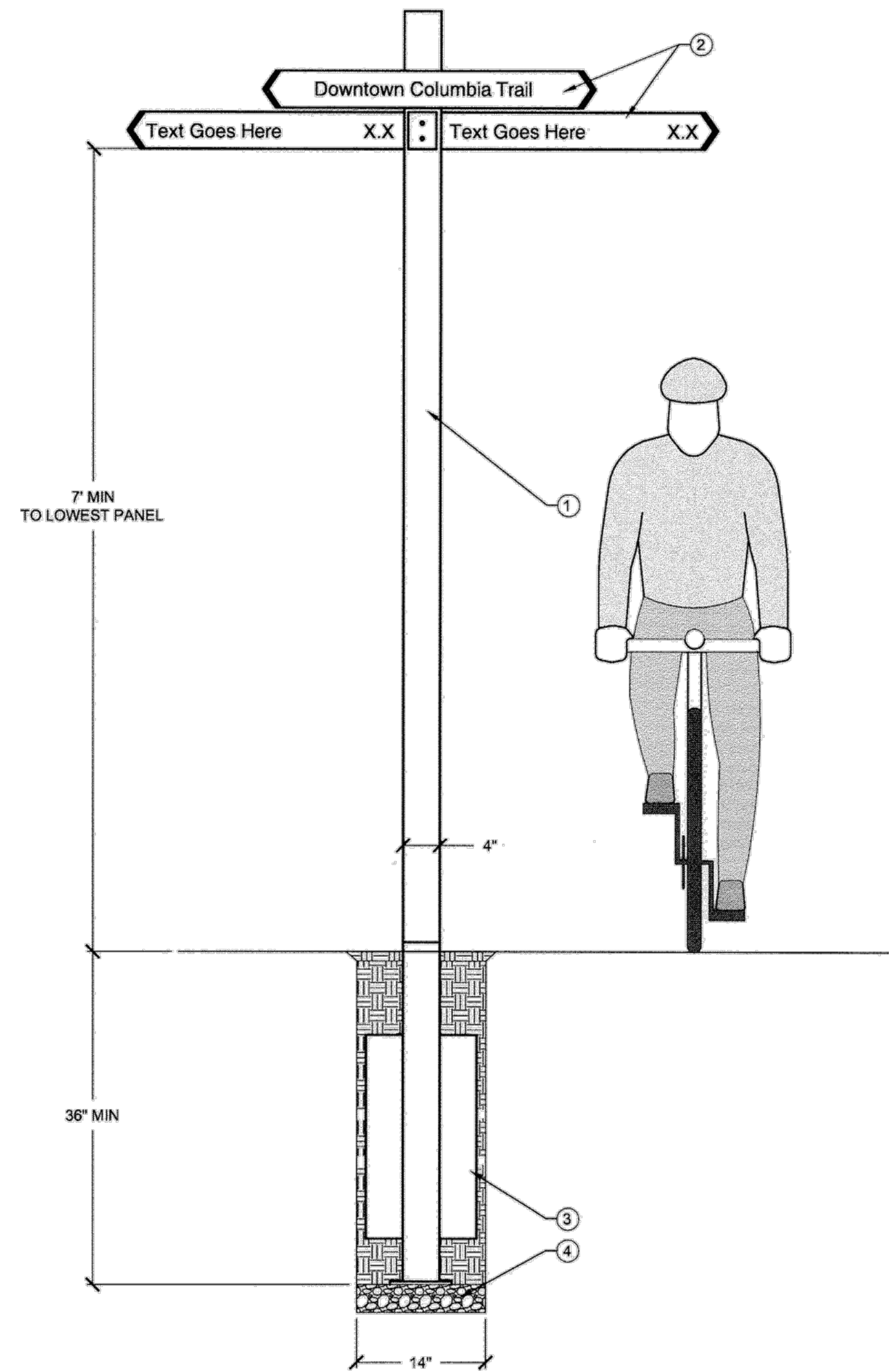


DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

SIGNING & MARKING DETAILS

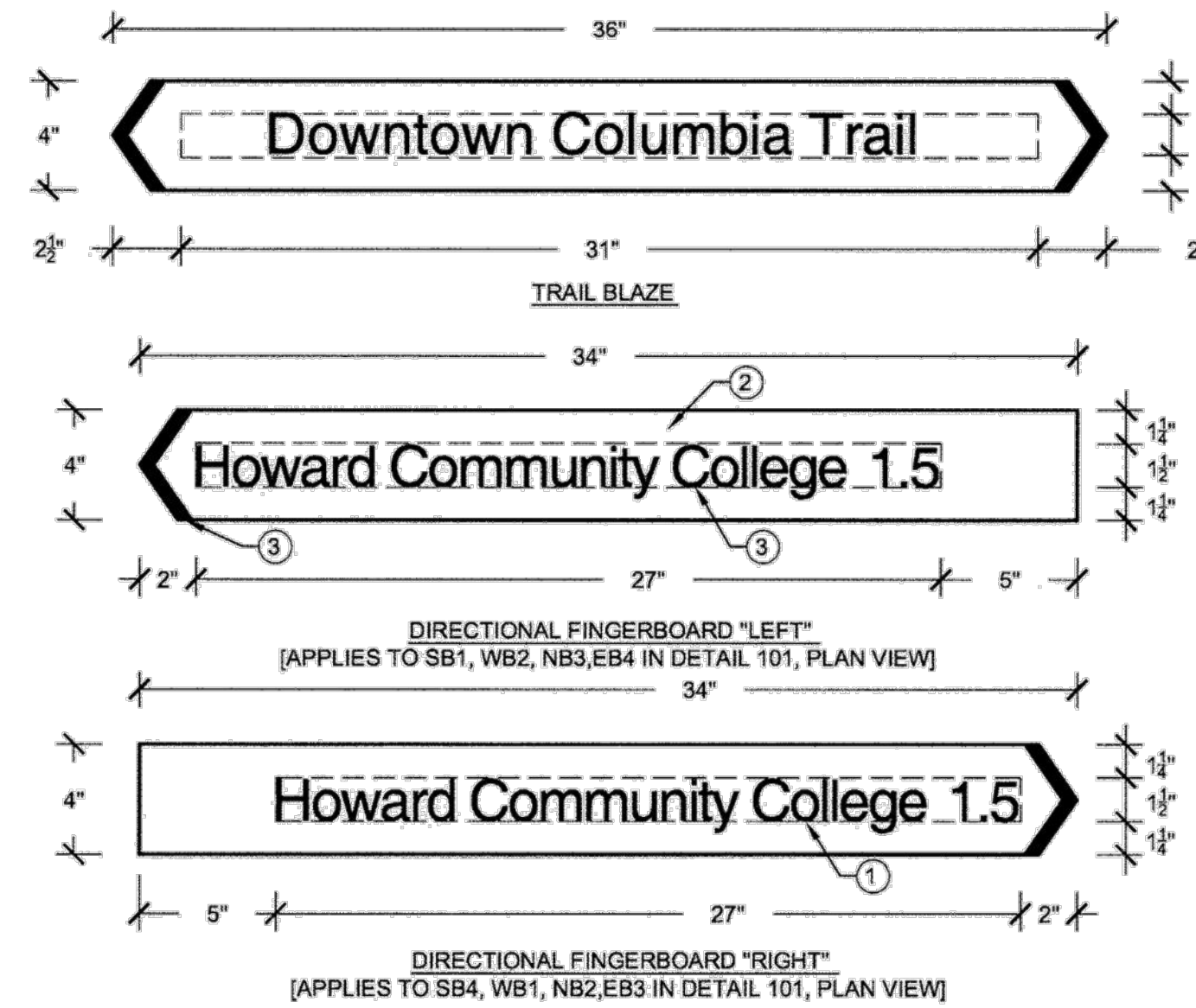
CEDAR LANE
 BICYCLE AND PEDESTRIAN IMPROVEMENTS
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG NO. SM-05



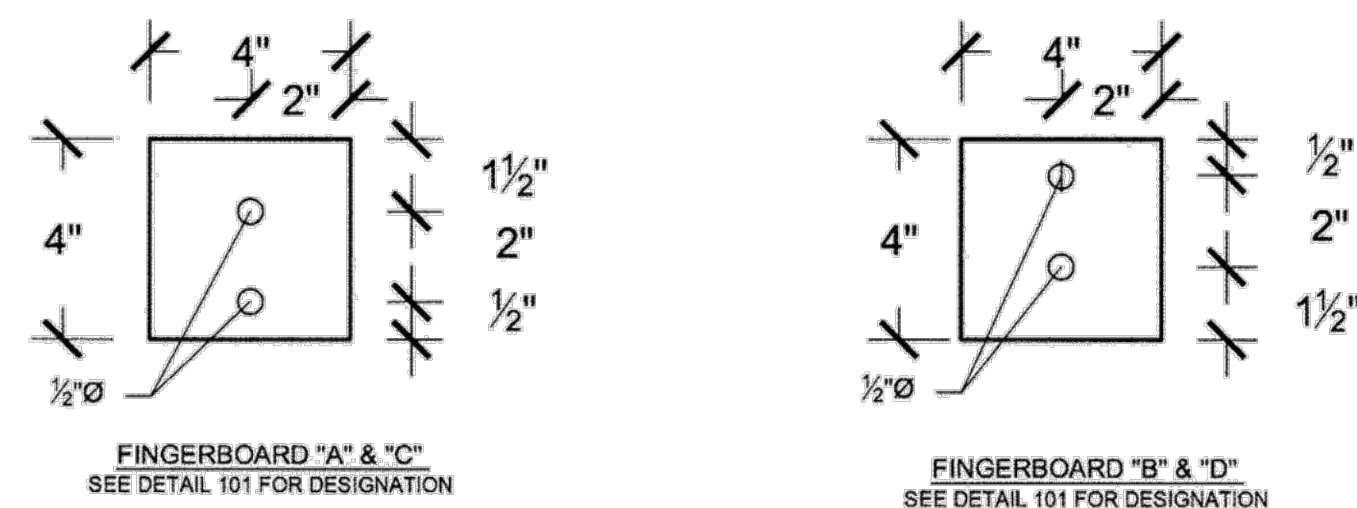
- ① 4" x 4" PRESSURE TREATED WOOD POST
- ② ALUMINUM FINGERBOARD, 0.125" THICK REFER TO FINGERBOARD DETAIL
- ③ POST FOOTING DIRECT BURIAL 36" MIN, 14" DIA POST HOLE WITH 12" STEEL STABILIZER FIN BOLTED TO POST WITH POST SAVER OR EQUIVALENT UP TO 2" ABOVE GRADE
- ④ 3" GRAVEL LAYER

99 TRAIL WAYFINDING SIGN ASSEMBLY ELEVATION
1"=1'



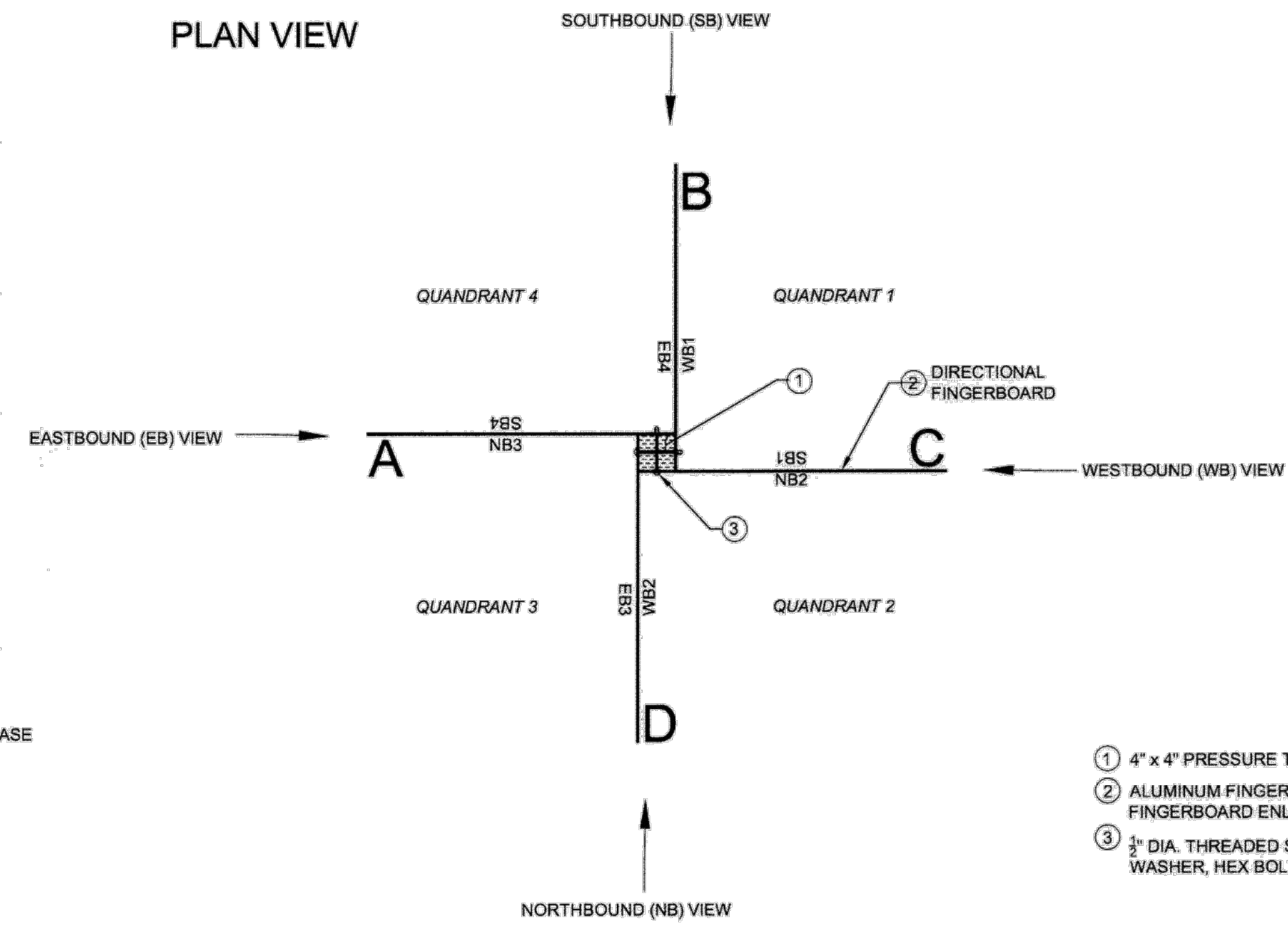
- ① TEXT: HELVETICA FONT (1.5" HEIGHT)
 - ② FINGERBOARD SIGN PANEL COLOR: NPS-BROWN (PMS1615)
 - ③ FINGERBOARD SIGN PANEL TEXT COLOR: WHITE
- TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 1.00
-LETTER WIDTH FACTOR: 1.00

100 TYPICAL FINGERBOARD PANEL ENLARGEMENT
1/2"=1'

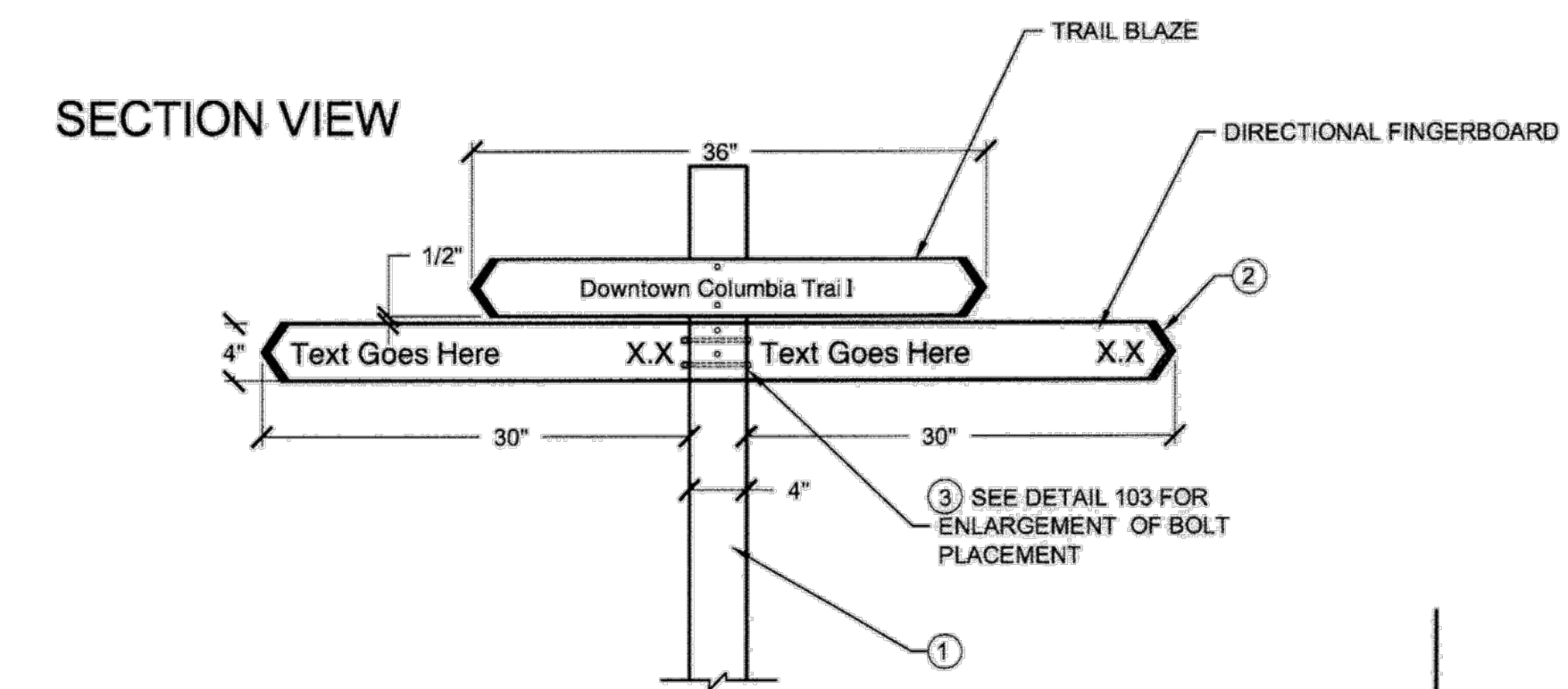


102 TYPICAL BOLT INSTALLATION ENLARGEMENT-1
NTS

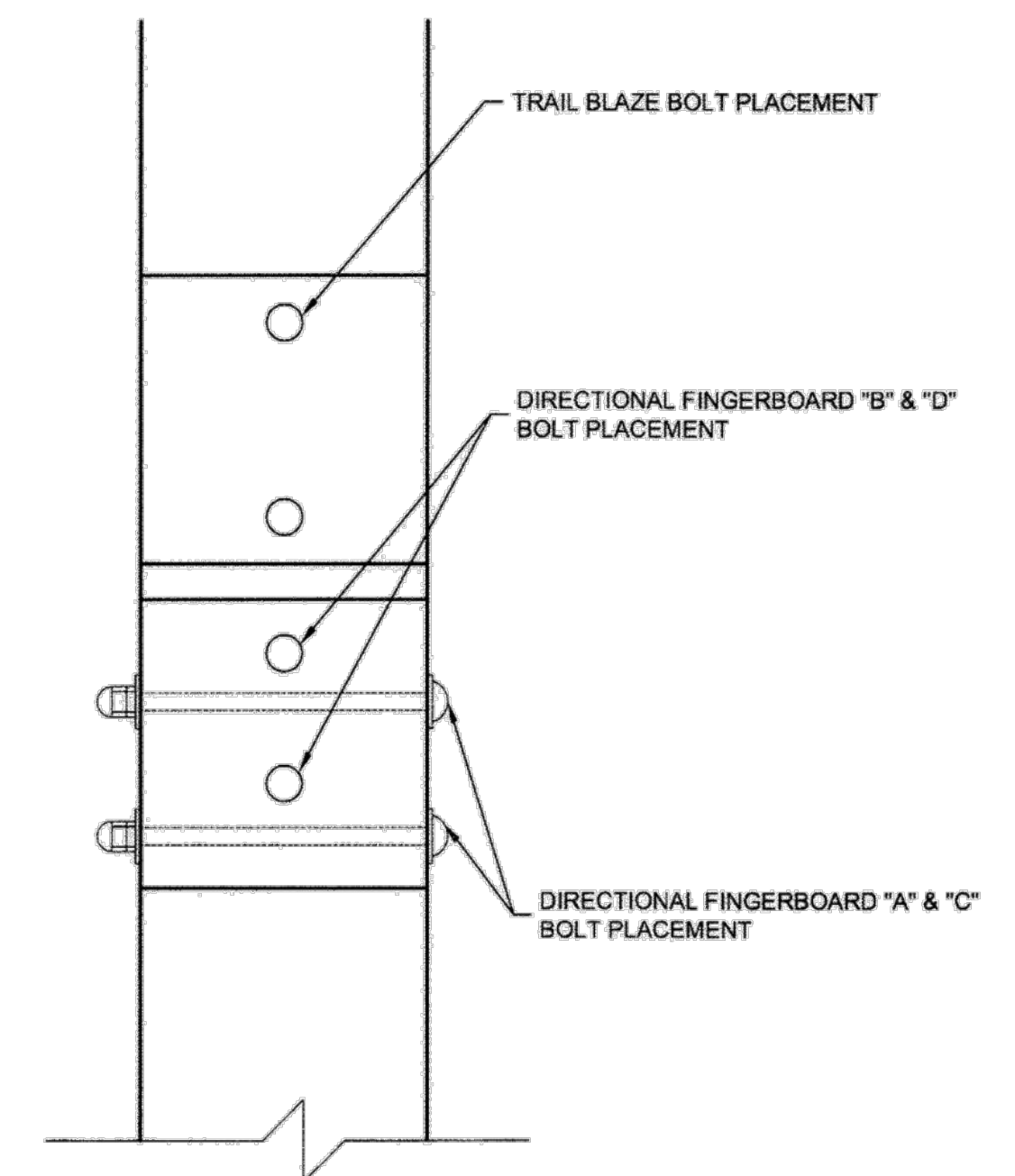
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16156, EXPIRATION DATE: 8/28/2018



- ① 4" x 4" PRESSURE TREATED WOOD POST
- ② ALUMINUM FINGERBOARD, 0.125" THICK REFER TO FINGERBOARD ENLARGEMENT FOR TEXT LAYOUT
- ③ 3/4" DIA. THREADED STAINLESS STEEL WOOD BOLT WITH WASHER, HEX BOLT, AND ACORN NUT TO MATCH



101 POST/FINGERBOARD AND SECTION ORIENTATION
1"=1'



103 TYPICAL BOLT INSTALLATION ENLARGEMENT-2
NTS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION _____ DATE _____ CHIEF, BUREAU OF HIGHWAYS _____ DATE _____

AECOM



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

WAYFINDING SIGN DETAILS

SCALE: MAP NO. _____ BLOCK NO. _____

CEDAR LANE
BICYCLE AND PEDESTRIAN
IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG NO. SM-06

WAYFINDING SIGN SPECIFICATIONS

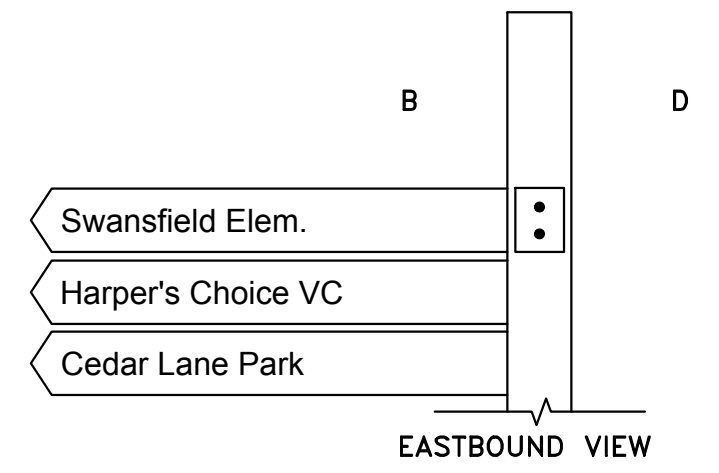
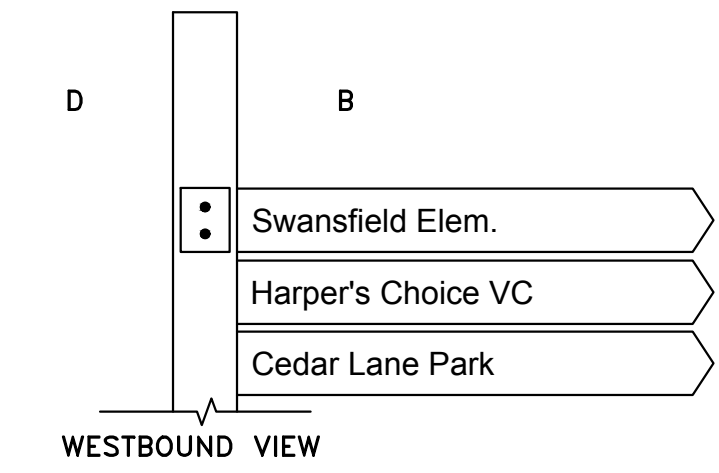
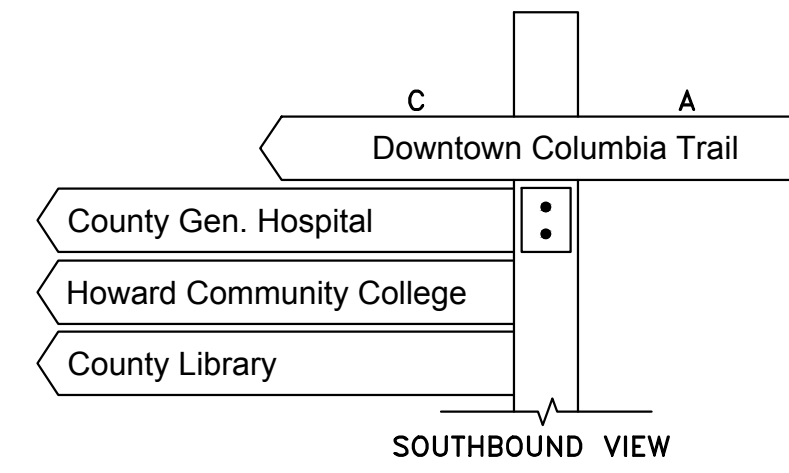
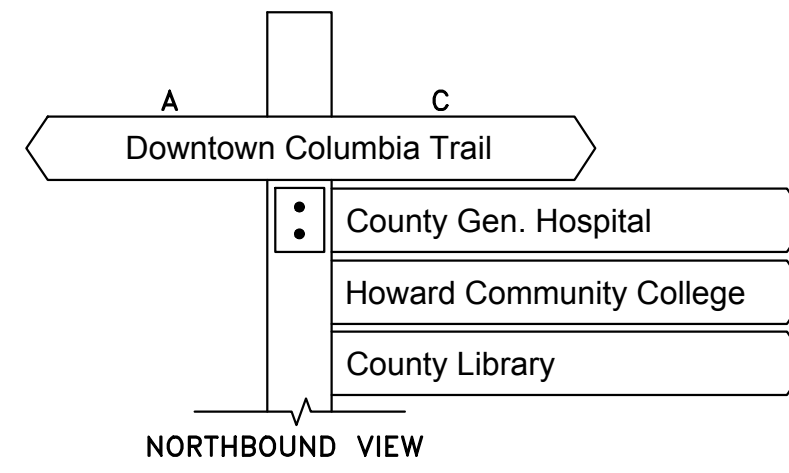
1. QUALITY ASSURANCE:
 A. JOB REFERENCES FROM PROJECTS OF A SIMILAR SIZE AND COMPLEXITY. PROVIDE OWNER/CLIENT/GENERAL CONTRACTOR NAMES, POSTAL ADDRESS, PHONE, FAX, AND EMAIL ADDRESS.
 B. APPLICABLE SPECIFICATIONS AND STANDARDS: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 C. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION

2. PREPARATION:
 GENERAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, LOADING/UNLOADING AND TRANSPORTATION SERVICES REQUIRED TO PERFORM AND COMPLETE THE WORK ACCORDING TO THE SPECIFICATIONS AND CONTRACT DOCUMENTS. ALL WORK SHALL BE DONE WITH NO DAMAGE TO MOUNTING SITE OR SIGN.
 A. DIMENSIONS FOR LEGEND SIZE AND ALL RELATED DIMENSIONS FOR SIGN LAYOUT, PANEL SIZES, POST SIZES, MOUNTING DIMENSIONS ARE AS SPECIFIED IN THE PLANS.
 B. ALL GRAPHIC FORMATS, USE OF TYPOGRAPHY, COLOR, DIRECTIONAL ARROW GRAPHICS, AND PICTOGRAMS ARE AS SPECIFIED IN THE PLANS. SHOP DRAWINGS OF PROPOSED SIGN LAYOUTS SHALL BE SUBMITTED AND APPROVED PRIOR TO SIGN PANEL FABRICATION.
 C. ALL STRUCTURES SHALL BE ENGINEERED TO MEET A VARIETY OF SITE CONDITIONS. SIGNS SHALL BE ENGINEERED FOR WIND LOADS, SOIL CONDITIONS, FROST DEPTH, AND STRUCTURAL INTEGRITY. SPECIAL CONDITIONS THAT ARE OUTSIDE THESE PARAMETERS ARE TO BE ENGINEERED ON A SITE-SPECIFIC BASIS. THE DESIGN OF THE STRUCTURAL REQUIREMENTS OF SPECIAL ONE-OF-A-KIND SIGNS SHALL CONFORM TO THE BASIC ASSEMBLY SPECIFICATIONS FOR SIMILAR SIGN TYPES. THE MODIFIED ASSEMBLY SHALL FULFILL THE REQUIREMENTS OF LOCAL CRITERIA FOR WIND PRESSURE, SOIL, AND FROST DEPTH. ALL SIGN ENGINEERING AND STRUCTURAL INTEGRITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
 D. ALL FINISHED SIGN PANELS SHALL BE PROVIDED WITH A 1-1/4" X 2-1/2" WEATHER RESISTANT IDENTIFICATION PLACED ON THE BACK OF THE SIGN INDICATING SIGN PLAN ID NUMBER, MANUFACTURER, DATE OF FABRICATION, AND INSTALLATION DATE.

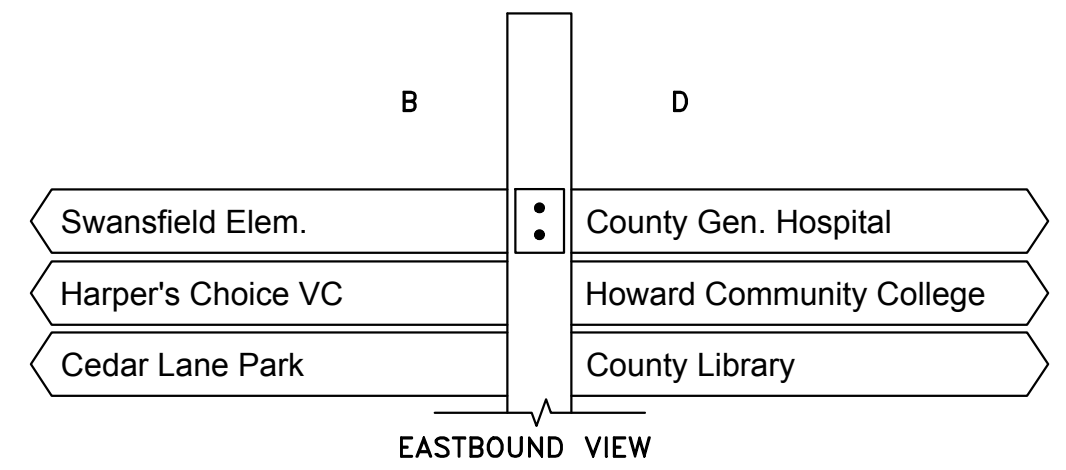
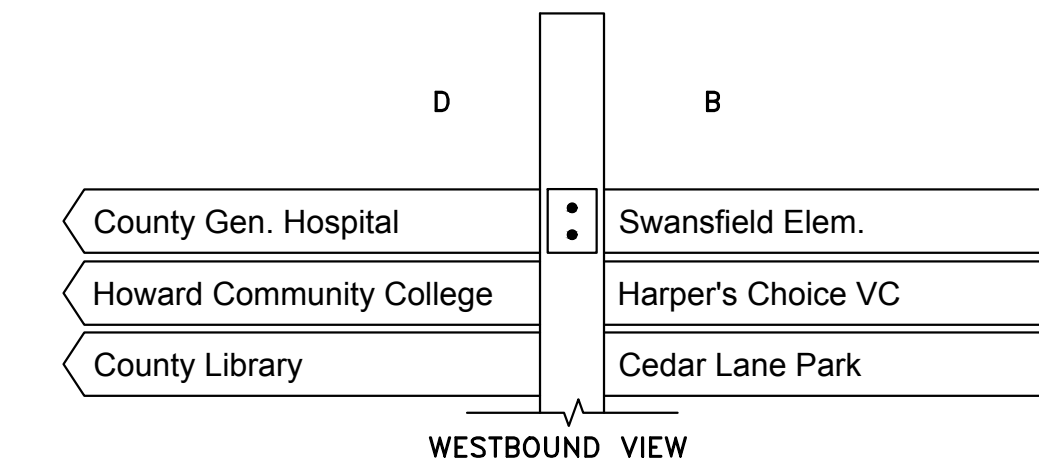
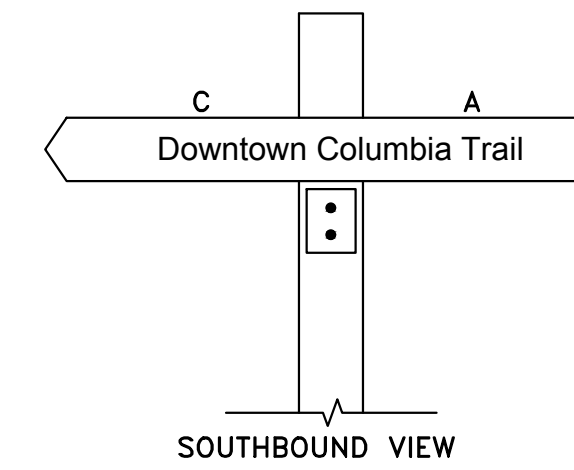
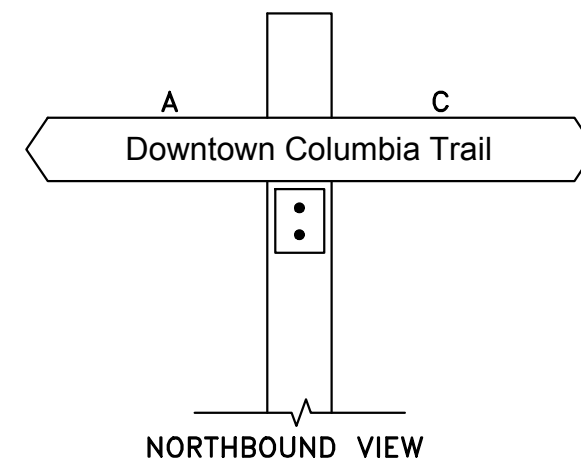
3. FABRICATION:
 A. PROVIDE SHOP AND FABRICATION DRAWINGS FOR REVIEW AND APPROVAL DETAILING THE PROPOSED FABRICATION OF ALL SIGNS AND STRUCTURES INDICATED IN PLAN DOCUMENTS.
 B. THE CONTRACTOR SHALL PREPARE, FOR REVIEW BY THE OWNER'S REPRESENTATION'S FABRICATION SHOP DRAWINGS. UPON REVIEW OF THE SHOP DRAWINGS THE CONTRACTOR SHALL MAKE ALL CORRECTIONS AND ADJUSTMENTS. AS INDICATED AND RESUBMIT FOR REVIEW AND APPROVAL. REVISIONS TO SHOP DRAWINGS SHALL INCLUDE A REVISION DATE. FABRICATION SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 C. PLAN, ELEVATIONS, AND SECTION VIEW DRAWINGS-THE CONTRACTOR SHALL PREPARE ALL SHOP DRAWINGS INDICATING FINAL DIMENSIONS AND LAYOUTS, TYPOGRAPHY, SYMBOLS, VINYL AND PAINT COLOR FINISHED, FABRICATION MATERIALS, HARDWARE, PANEL SPLICE LINES, THRU-BOLT LOCATIONS, AND MOUNTING DETAILS.
 D. MATERIALS, FINISHED, COLORS, AND HARDWARE-THE CONTRACTOR SHALL INCLUDE MANUFACTURER'S NAME AND ASSOCIATED COLOR, FINISH, OR PRODUCT IDENTIFICATION NUMBER FOR ALL STANDARD MATERIALS INCLUDING RETRO-REFLECTIVE VINYL, PAINT, STEEL AND ALUMINUM STRUCTURAL COMPONENTS, AND MOUNTING HARDWARE.
 E. SIGNAGE ELEMENTS IN DRAWINGS IDENTIFIED AND NUMBERED - FABRICATION SHOP DRAWINGS SHALL USE THE PLAN SIGN REFERENCE NUMBERING SYSTEM.
 F. FONTS INCLUDING HELVETICA SHALL BE USED TO VIEW, EDIT, PRODUCE, AND PRINT ALL GRAPHIC SIGN LAYOUTS PRODUCED. WHEN NO OTHER FONT SPECIFICATION IS PROVIDED, OPENTYPE FONTS ARE THE PREFERRED FORMAT. TYPE 1 FONTS ARE ACCEPTABLE. THE USE OF TRUETYPE FONTS OR ANY OTHER FONT TECHNOLOGY IS NOT ACCEPTABLE UNLESS APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL SOFTWARE LICENSING REQUIREMENTS OF THE FONT COPYRIGHT OWNER.
 G. ALUMINUM PANEL, CEDAR WOOD POSTS, TUBULAR STEEL POSTS, MOUNTING HARDWARE AND MATERIAL FINISHES SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS HEREIN OR BY REFERENCE. ALL MATERIALS SHALL COMPLY WITH THIS SPECIFICATION OR APPROVED EQUAL.

4. INSTALLATION:
 A. ALL SIGNS ARE TO BE MOUNTED AT LOCATIONS AS IDENTIFIED IN THE SIGN PLAN AND APPROVED BY THE PROJECT DESIGNER AND/OR COUNTY REPRESENTATIVE. ALL PROPOSED SIGNS WITHIN COUNTY RIGHTS-OF-WAY ARE MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION(410-313-2430) PRIOR TO THE INSTALLATION.
 B. SIGN LOCATIONS WILL BE MARKED WITH A STAKE AND SHALL HAVE THE SIGN TYPE CODE, AND LOCATION CODE, AND CORRESPOND TO THE SIGN LOCATION IN THE PLAN DRAWINGS. DOUBLE POST SIGNS WILL BE STAKED AT THE LOCATION OF THE LEFT LEG WHEN FACING THE SIGN. DOUBLE-FACED SIGNS AND ANGLED INSTALLATIONS WILL BE STAKED WITH BOTH LEG LOCATIONS NOTED. THE STAKES SHALL BE INSPECTED PRIOR TO POST AND SIGN INSTALLATION. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO INSTALLATION. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT DESIGNER FOR RESOLUTION. THE CONTRACTOR SHALL INSTALL ALL SIGNS LEVEL AND PLUMB AT THE SPECIFIED HEIGHTS AND ALIGNMENTS WITH ALL SPECIFIED FOOTINGS, BACKFILL, OR ATTACHMENT HARDWARE. THE CONTRACTOR SHALL REMOVE ALL PACKING, SIGN BOXES, AND CONSTRUCTION MATERIALS FROM THE PROJECT AREA UPON COMPLETION OF INSTALLATION.
 C. UNFORESEEN OBSTRUCTIONS MAY LIMIT THE DEPTH OF A STANDARD FOOTING OR REQUIRE SPECIAL MITIGATION TO PREVENT DAMAGE TO EXISTING TREE ROOTS. WHERE POSSIBLE, MOVE THE SIGN AS NEEDED TO ALLOW UNCONSTRAINED SUBSURFACE INSTALLATION. ADJUST SIGN INSTALLATION LOCATIONS TO KEEP THEM BEYOND THE DRIP LINE OF TREES WHEREVER POSSIBLE. NOTIFY THE PROJECT DESIGNER OF ANY PROPOSED SIGN LOCATIONS WITHIN THE DRIP LINE OF THE TREES. THE DRIP LINE SHALL BE DEFINED AS THE AREA BELOW THE FARTHEST-SPREADING BRANCHES OF A TREE. IF A SIGN PLACEMENT LOCATION MUST BE MOVED, THE CONTRACTOR SHALL GET APPROVAL OF THE PROJECT DESIGNER. IF THE SIGN CAN BE LOGICALLY MOVED, VERIFY SIGHT-LINES OF ADJUSTED LOCATIONS TO AFFIRM THAT SIGN IS STILL VISIBLE FROM THE DESIGNATED APPROACH. THE CONTRACTOR IS ALSO CAUTIONED TO EXCAVATE CAREFULLY WHERE TREE ROOTS MIGHT BE ENCOUNTERED. PRIOR TO BEGINNING EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT DESIGNER AND UTILITY COMPANIES OF PROPOSED SIGN LOCATIONS AND TIMES FOR EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PREVENTING DAMAGE TO KNOWN UTILITIES. IF DAMAGE OCCURS, THE CONTRACTOR SHALL REPAIR THE UTILITY AT NO ADDITIONAL EXPENSE.
 D. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES, UTILITIES, SURFACES, VEGETATION AND PLANT MATERIALS FROM DAMAGE DURING INSTALLATION. THE CONTRACTOR WILL NOTIFY THE PROJECT DESIGNER IMMEDIATELY OF ANY OCCURRENCE OF DAMAGE. ANY DAMAGE TO THE ITEMS DESCRIBED ABOVE MUST BE RESTORED TO ORIGINAL CONDITION AND APPEARANCE, OR REPLACED.

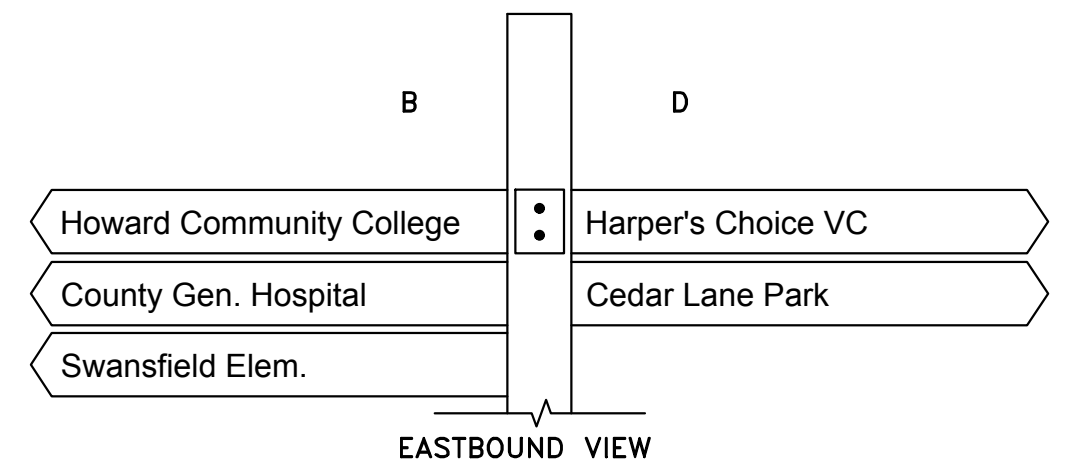
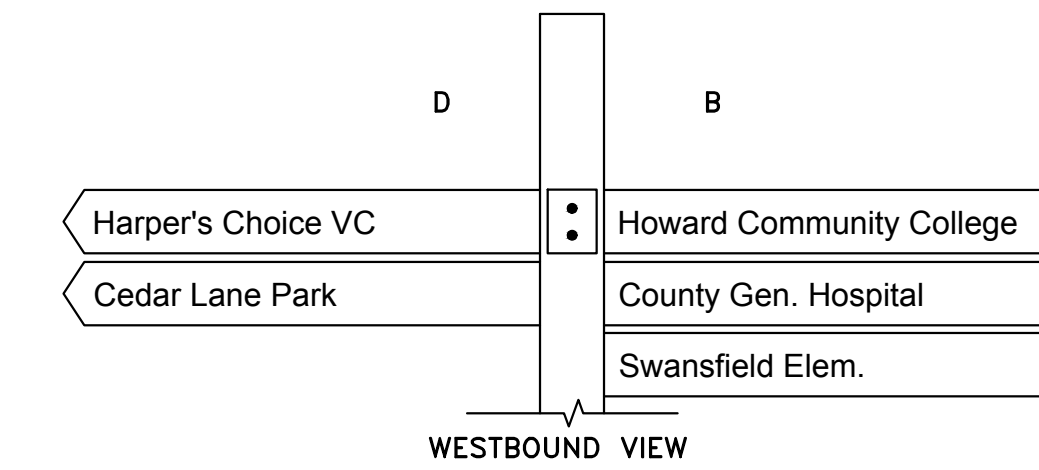
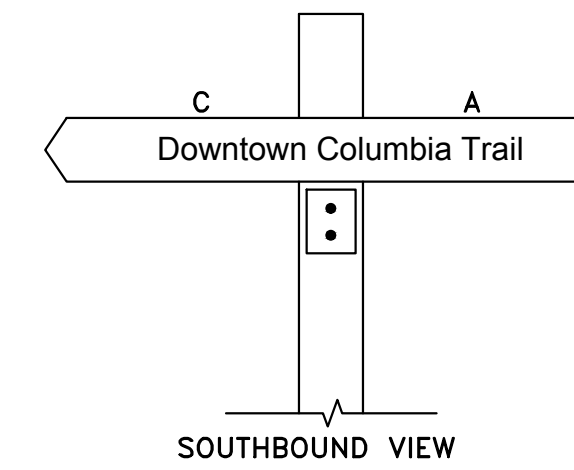
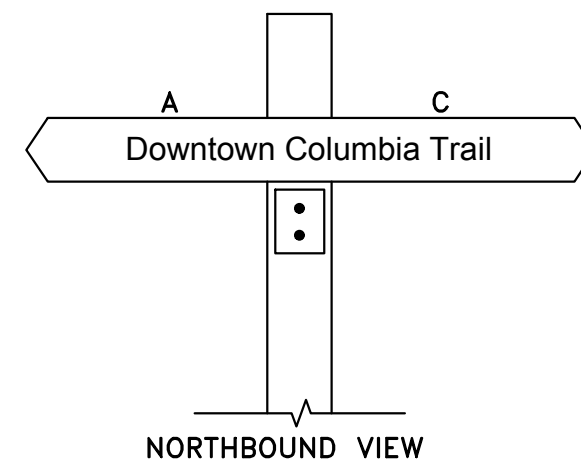
GENERAL NOTES:
 FONT: HELVETICA FONT (1.5" HEIGHT)
 -TEXT STYLE: UPPER/LOWER CASE
 -LETTER TRACKING: 1.00
 -LETTER WIDTH FACTOR: 1.00
 * FONT: HELVETICA FONT (1.5" HEIGHT)
 -TEXT STYLE: UPPER/LOWER CASE
 -LETTER TRACKING: 0.90
 -LETTER WIDTH FACTOR: 1.00



S1 WAYFINDING LOCATION #S1
1"=1'



S2 WAYFINDING LOCATION #S2
1"=1'



S3 WAYFINDING LOCATION #S3
1"=1'

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT 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. 16156, EXPIRATION DATE: 8/28/2018

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE CHIEF, BUREAU OF HIGHWAYS DATE



DES:	TMG				
DRN:	CDF				
CHK:	DTM				
DATE:	11/2016	BY	NO.	REVISION	DATE

WAYFINDING SIGN SPECIFICATIONS

CEDAR LANE BICYCLE AND PEDESTRIAN IMPROVEMENTS

5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 DWG NO. SM-07