

Howard County, Maryland - Department of Public Works

CISSEL AVENUE DRAINAGE IMPROVEMENTS AND NORTH LAUREL ROAD SIDEWALK CONSTRUCTION

CAPITAL PROJECT NO. D-1118 & CAPITAL PROJECT NO. K-5033

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CISSEL AVENUE

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NORTH LAUREL ROAD

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NOTE:

EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED

GENERAL NOTES

1. ALL INFORMATION AND DETAILS ON THESE DRAWINGS SHALL BE AS DIRECTED BY THE HOWARD COUNTY ENGINEERING AND THE MSHA PERMIT DIRECTOR
2. ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY THE CONTRACTOR.

APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE HOWARD COUNTY ENGINEER BY THE CONTRACTOR AND AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

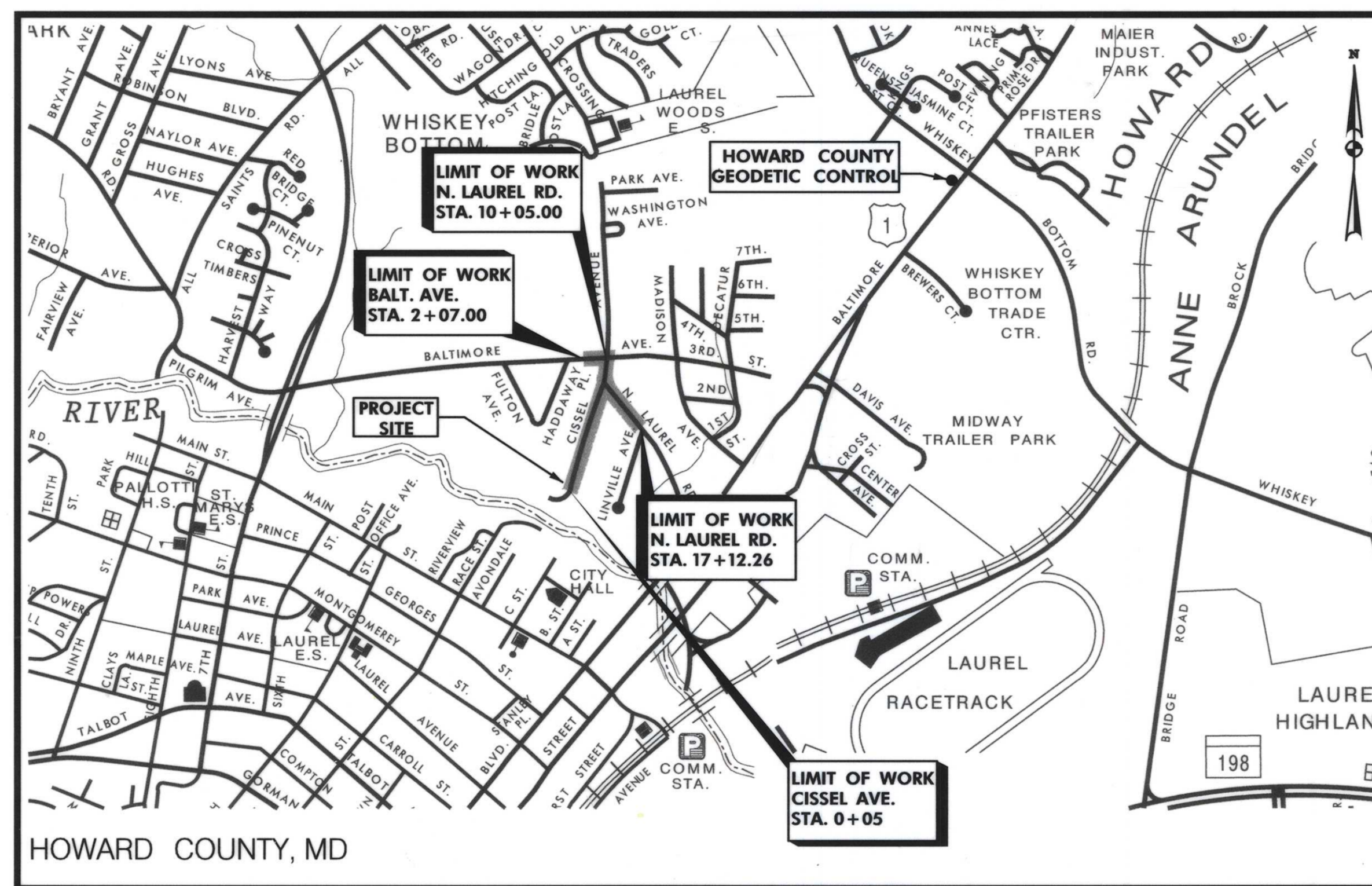
MISS UTILITY 1-800-257-7777
CONSTRUCTION INSPECTION DIVISION, HOWARD COUNTY 410-313-1880
STATE HIGHWAY ADMINISTRATION DISTRICT 7- 301-624-8100
BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC 410-855-6958
BALTIMORE GAS & ELECTRIC COMPANY - GAS ENGINEERING AND CONSTRUCTION 410-291-5834
DISTRIBUTION CUSTOMER SERVICE 685-0123
ENGINEERING DAMAGE CONTROL 234-5621
BELL ATLANTIC TELEPHONE 1-800-870-0000
AMERICAN TELEPHONE & TELEGRAPH CABLE LOCATION DIVISION 393-3553
COLONIAL PIPELINE COMPANY 781-4641
BUREAU OF UTILITIES, HOWARD COUNTY 410-313-4900
COMCAST CABLE 888-793-1800

THE CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION OF ENGINEERING FOR VERIFICATION AND/OR INFORMATION REGARDING:
A. EXISTING/PROPOSED RIGHT-OF-WAY
B. UTILITY RELOCATION
C. MAINTENANCE OF TRAFFIC DURING CONSTRUCTION
D. EROSION/SEDIMENT CONTROL CERTIFICATION AND PERMIT
E. HORIZONTAL/VERTICAL CONTROL
F. GRADING PERMIT

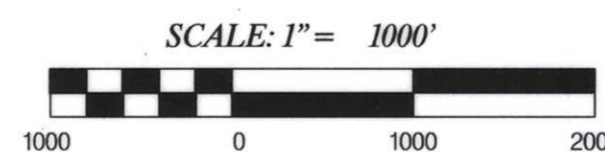
CONTRACTOR SHALL DO A PRECONSTRUCTION VIDEO OF THE YARDS AND ROADWAYS. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS OF THE CONSTRUCTION SCHEDULE 2 WEEKS PRIOR TO DRIVEWAY CONSTRUCTION

DURING TRASH PICKUP CONTRACTOR MAY HAVE TO TAKE TRASH TO THE END OF THE ROAD IF THE GARBAGE TRUCK IS UNABLE TO GET THROUGH THE CONSTRUCTION AREA

3. PLACE REGULATION "ROAD WORK" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS AT LIMIT OF WORK ALONG COUNTY ROADWAYS. COMPLY WITH HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS.
4. ALL GRADING SHALL BE LIMITED TO EXISTING R.O.W. AND EASEMENTS INCLUDING SIDE SLOPES AND STABILIZATION. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED IN ACCORDANCE WITH THE SEDIMENT CONTROL NOTES AND DETAILS.
5. FOR DETAILS NOT SHOWN ON THESE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, THE CONTRACTOR SHALL ABIDE BY THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, THE PROJECT INVITATION FOR BID BOOKLET, THE SPECIAL PROVISIONS AND THE MARYLAND STATE HIGHWAY ADMINISTRATION'S "BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES" AND "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS." IN THE EVENT OF ANY DISCREPANCY BETWEEN THESE SOURCES, THE SPECIAL PROVISIONS SHALL GOVERN.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MD SHA STANDARDS AND SPECIFICATIONS.
7. STAGING AND STOCKPILE AREA WILL BE DETERMINED BY CONTRACTOR, AND AS APPROVED BY THE RESIDENT ENGINEER.
8. COORDINATES SHOWN HEREON ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 0015, NO. 50BA AND NO. 50B5.
9. HORIZONTAL SITE CONTROL IS NAD83 (91). VERTICAL SITE CONTROL IS NGVD29. CONTROL STATION 50BA HAS BEEN SUBSEQUENTLY DESTROYED SINCE THE SURVEY WAS PERFORMED. THE CONTROL HAS BEEN REPLACED WITH 50BB. REFER TO THE SPECIFICATIONS FOR THE RECOVERY SKETCH AND LOCATION.
10. SITE SURVEY ON CISSEL AVE WAS PERFORMED BY URS ON FEBRUARY 2001. SITE SURVEY ON NORTH LAUREL ROAD AND BALTIMORE AVE WAS PERFORMED BY URS ON JANUARY 2005.



PROJECT LENGTH: 0.36 MILES



CONVENTIONAL SIGNS

PROPOSED MEDIAN BARRIER		PROPOSED CULVERT	
ELECTRICAL HAND BOX - SIGNALS		EXISTING CULVERT	
BURIED UTILITY LINES & NO. OF CABLES		EXISTING DROP INLET	
STATE, COUNTY OR CITY LINES		UTILITY POLE	
PROPOSED TRAFFIC BARRIER		MARSH	
EXISTING TRAFFIC BARRIER		HEDGE	
FENCE LINE		GROUND ELEVATION	
RIGHT OF WAY LINE		GRADE ELEVATION	
EXISTING ROADWAY			
RAILROAD			
BASE OR SURVEY LINE			
FIRE HYDRANT			



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve Shava 4/18/05
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

William F. M... 4-18-05
CHIEF, BUREAU OF HIGHWAYS

REVIEWED AND ACCEPTED FOR GENERAL COMPLIANCE WITH HOWARD COUNTY POLICIES AND STANDARDS:
[Signature] 3/30/05
URS CORPORATION

URS
HUNT VALLEY, MARYLAND

RJM
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

TEL: 410-730-1001 FAX: 410-730-5403

DES: RL					
DRN: ML					
CHK: ED					
DATE: 3/30/05	BY	NO.	REVISION	DATE	

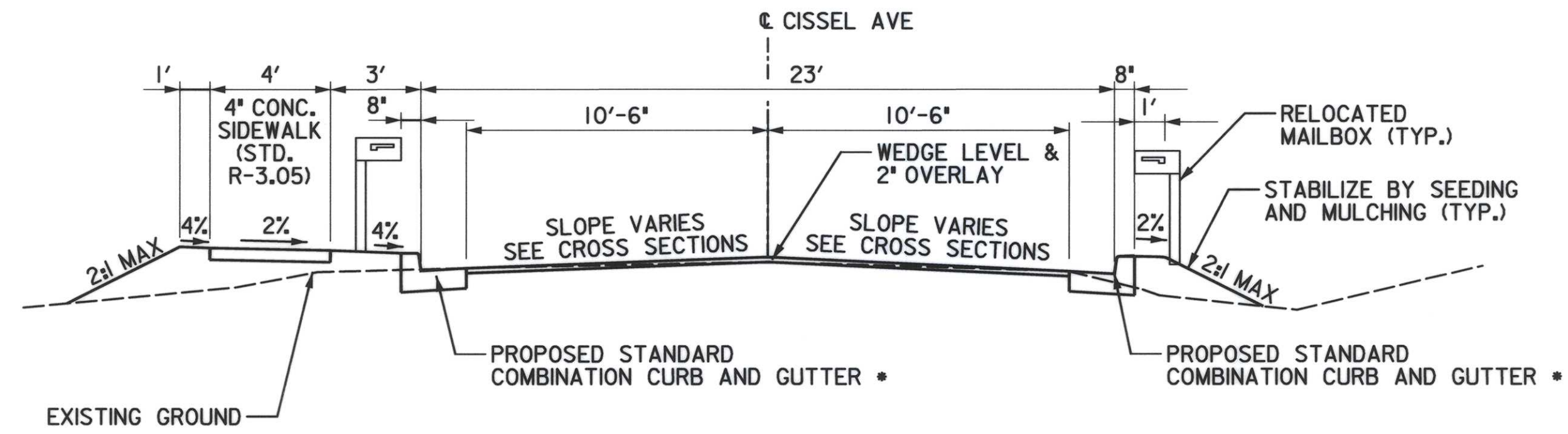
TITLE SHEET

NO.: _____ DATE: _____

CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST.

HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

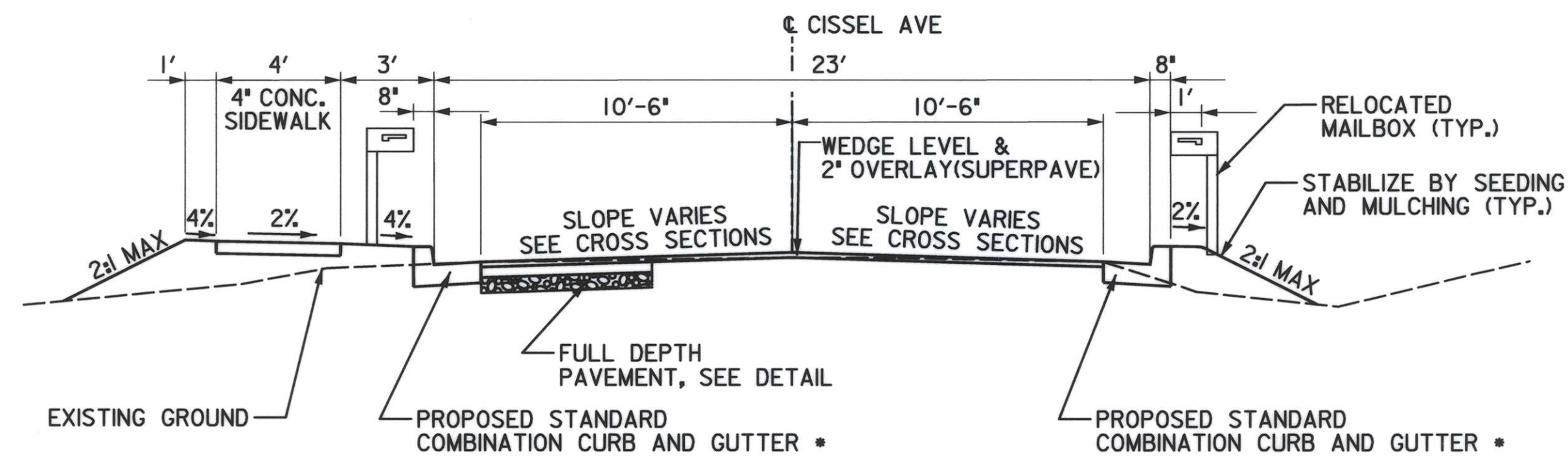
SCALE AS SHOWN
SHEET 1 OF 33



CISSEL AVE TYPICAL SECTION

STA. 0+05 TO STA. 3+30
SCALE: 1" = 5'

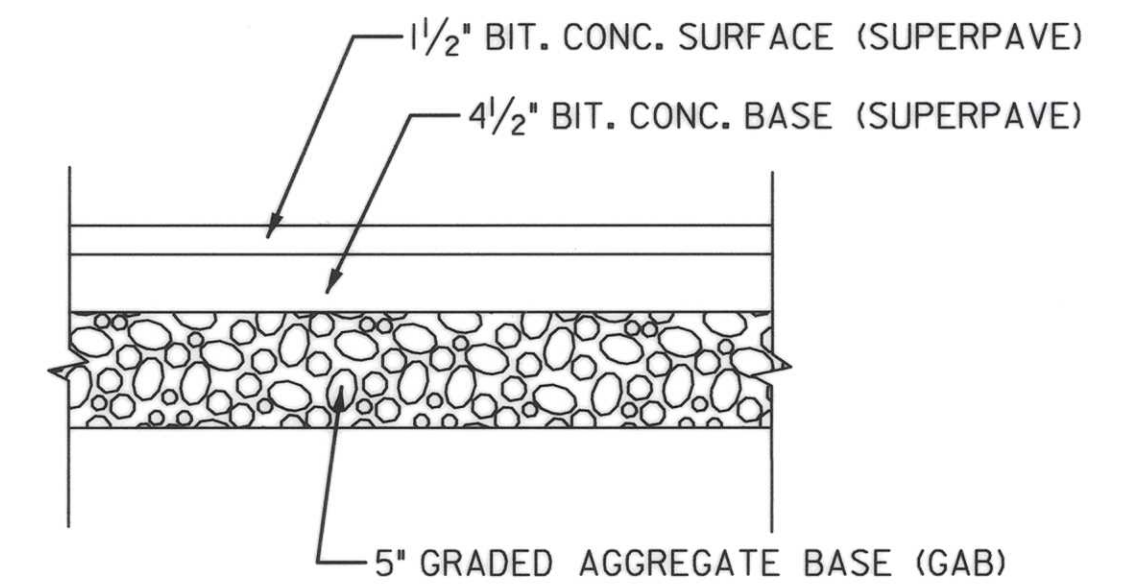
- NOTES:
1. FROM STA. 0+05 TO STA. 0+70 THE PAVEMENT WIDTH VARIES.
2. CONTRACTOR SHALL FOLLOW FILL LIMITS SHOWN ON PLAN SHEETS.



CISSEL AVENUE TYPICAL SECTION

STA. 3+30 TO STA. 8+90
SCALE: 1" = 5'

* - SEE PLAN SHEETS (SHEETS NO. 4 AND 5) FOR CURB AND GUTTER TYPE AND LOCATION.



FULL DEPTH PAVEMENT DETAIL - CISSEL AVENUE

NOT TO SCALE

NOTE:

1. EXISTING PAVEMENT SHALL BE SAWCUT ALONG NEW CURB AND GUTTER, AND ALONG FULL-DEPTH PAVEMENT AND OVERLAY SECTION



Jacob J. Jovan 3/30/05

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Steve Shavar</i> 4/18/05 <small>CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION</small>	<i>Paul J. Jovan</i> 4/18/05 <small>CHIEF, BUREAU OF ENGINEERING</small>	URS HUNT VALLEY, MARYLAND	 <small>RJM ENGINEERING, INC. CONSULTING ENGINEERS COLUMBIA, MARYLAND</small>	DES: RL			TYPICAL SECTION	CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST. HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1118 AND NO. K-5033	SCALE AS SHOWN
				DRN: ML					
				CHK: Ed					
				DATE: 3/30/05	BY	NO.	REVISION	DATE	



N 526,000
E 1,357,200

CURVE	P.C. COORDINATES		P.T. COORDINATES		Δ	R	T	L
	NORTH	EAST	NORTH	EAST				
A	526236.577	1356912.143	525954.018	1356988.143	42° 54' 28"	400.00	157.92'	299.553'
B	526272.305	1356941.124	526252.630	1356926.019	62° 13' 49"	24.00'	14.486'	26.067'
C	526235.240	1356924.070	526024.302	1356959.760	32° 00' 23"	388.00'	111.280'	216.743'
D	526247.220	1356848.246	526200.427	1356897.578	85° 40' 43"	50.00'	46.364'	74.769'
E	526185.905	1356898.510	526164.363	1356899.323	03° 01' 13"	409.00'	10.783'	21.60'
F	526151.307	1356899.472	526104.300	1356877.610	51° 11' 28"	60.00'	28.741'	53.607'
G	526066.540	1356887.331	526053.617	1356921.585	99° 24' 33"	24.00'	28.304'	41.640'
H	526053.619	1356921.584	525946.878	1356978.500	16° 53' 02"	412.00'	61.147'	121.408'
I	525693.104	1357166.340	525675.881	1357174.481	22° 25' 05"	49.00'	09.710'	19.172'
J	526243.136	1356889.345	526254.380	1356871.702	19° 06' 57"	63.00'	10.608'	21.012'
K	526259.825	1356892.890	526254.440	1356895.817	96° 28' 19"	3.00'	3.36'	5.051'
L	526244.978	1356894.330	526243.136	1356889.345	124° 40' 35"	3.00'	5.723'	6.528'
M	526254.384	1356871.693	526260.146	1356872.911	156° 58' 03"	3.00'	15.410'	8.271'

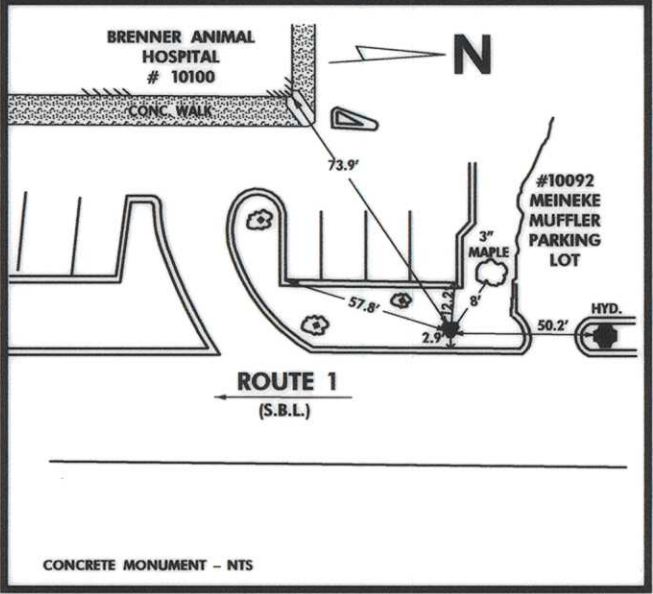
POINT	NORTH	EAST	REMARK
1	526290.469	1356918.187	STA. NLR 10+00
2	526285.50	1356917.63	STA. NLR 10+05 LIMIT OF WORK
3	526236.577	1356912.143	STA. NLR 10+54.23
4	525954.017	1356988.143	STA. 13+53.78 PT
5	525928.546	1357006.997	STA. 13+85.50
6	525953.362	1357253.617	STA. NLR 18+00
7	526109.27	1356918.30	STA. NLR 11+82.5/9+75.10 CISS
8	526061.65	1356867.64	STA. CISS 9+00.00
9	525207.08	1356585.35	STA. CISS 0+00 CISS
10	526272.305	1356941.124	PC CURB
11	526252.630	1356926.019	PT CURB
12	526235.240	1356924.068	PC CURB
13	526024.303	1356959.76	END CURB
14	526247.220	1356848.246	PC CURB
15	526200.427	1356897.578	PT CURB
16	526164.363	1356899.323	PT CURB
17	526104.30	1356877.61	END CURB
18	526066.540	1356887.330	END CURB
19	526053.616	1356921.584	PCC CURB
20	525946.878	1356978.50	PT CURB
21	525693.104	1357166.340	PC CURB
22	525675.881	1357174.481	PT CURB
23	525650.635	1357180.818	STA. 17+12.26 LIMIT OF WORK
24	526263.637	1356915.178	STA. 10+27 NLR/ 0+00 BALT AVE
25	526264.279	1356875.183	STA. 00+40 LOW(ROAD) BALT AVE
26	526249.77	1356270.156	END OF CURB
27	526266.960	1356708.205	STA. 2+07 LIMIT OF SIDEWALK

**LIMIT OF WORK
CONT. NO. K-5033
NORTH LAUREL ROAD
STA. 10+05.00**

**LIMIT OF WORK
CONT. NO. K-5033
NORTH LAUREL ROAD
STA. 17+12.26**

**LIMIT OF WORK
CONT. NO. D-1118
CISSEL AVENUE
STA. 0+05.00**

GEODETIC SURVEY CONTROL: 50B5
Elevation : 178.195 ft.
Northing : 524999.38 ft. Easting : 1357925.75 ft.



CISSEL AVENUE BASELINE (CENTERLINE) CONTROL COORDINATES		
CONTROL POINT	NORTH	EAST
POT STA. 0+00	525,207.08	1,356,585.35
PC STA. 3+09.95	525,501.14	1,356,683.34
PI STA. 3+39.87	525,529.52	1,356,692.80
PT STA. 3+69.78	525,557.95	1,356,702.08
PC STA. 8+38.60	526,003.65	1,356,847.50
PI STA. 8+69.30	526,032.80	1,356,857.12
PT STA. 9+00.00	526,061.65	1,356,867.64
PC STA. 9+17.09	526,078.19	1,356,873.67
PI STA. 9+42.57	526,101.64	1,356,882.22
PT STA. 9+63.19	526,106.81	1,356,906.64
POT STA. 9+75.10	526,109.27	1,356,918.30

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 4/18/05
Steve Sharan 4/18/05
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION



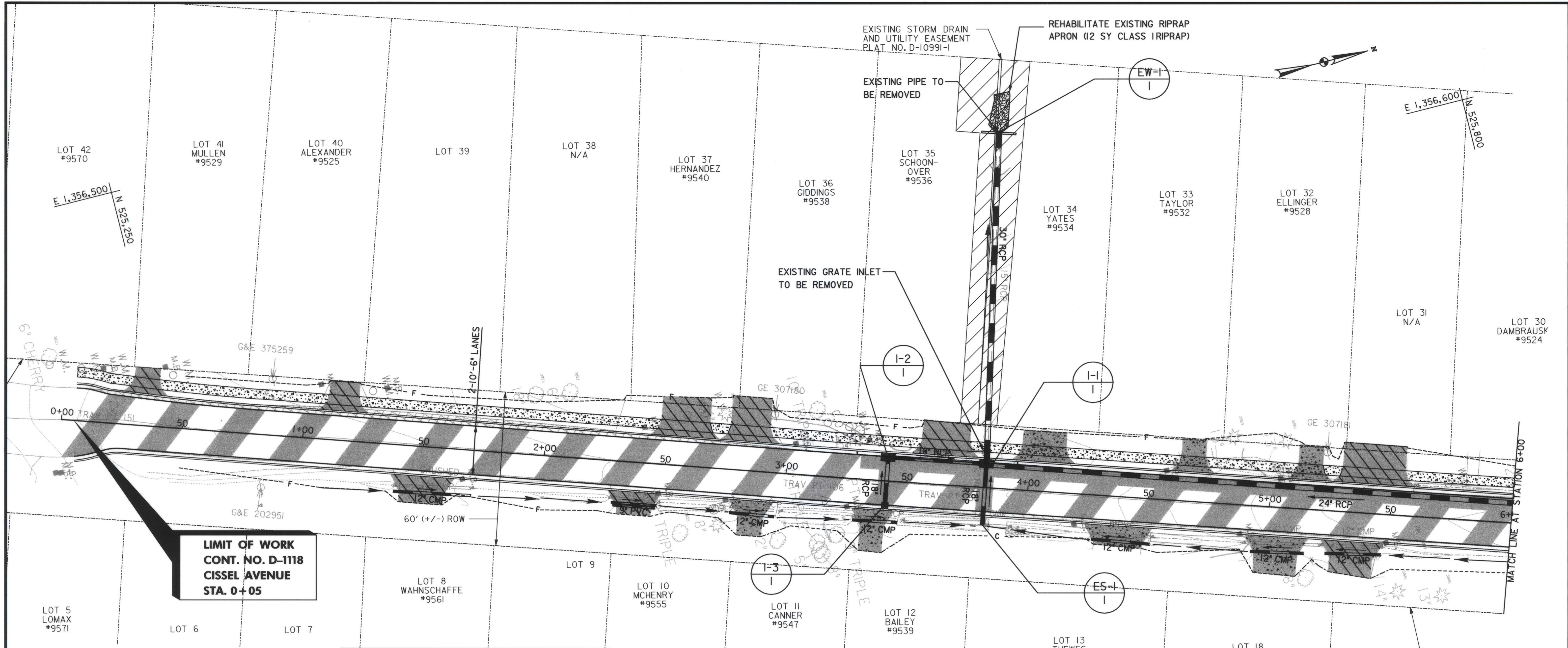
URS
HUNT VALLEY, MARYLAND
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

DES: RL					
DRN: ML					
CHK: ED					
DATE: 3/30/05	BY	NO.	REVISION	DATE	

GEOMETRIC LAYOUT

CISSEL AVE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST.
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

SCALE AS SHOWN
SHEET 3 OF 33



**LIMIT OF WORK
CONT. NO. D-1118
CISSEL AVENUE
STA. 0+05**

ADJUST UTILITY		
TYPE	STATION	OFFSET
WM	0+07	21.7' LT
WM	0+18	22.3' LT
WM	0+45	21.7' LT
WM	1+28	21.4' LT
WM	2+58	21.2' LT
WM	3+25	21.2' LT
WM	5+73	14.6' LT
FH	3+30	19.9' LT
CO	4+02	20.3' LT
CO	3+16	22.1' LT
WV	4+05	18.2' LT
MH	3+94	17.9' RT
MH	2+71	16.7' RT

TRAVERSE CONTROL POINT			
POINT NUMBER	NORTH	EAST	ELEVATION
151	525,229.3709	1,356,585.0492	173.5300
106	525,504.5404	1,356,694.8624	171.5900
150	525,566.6435	1,356,715.0764	171.8000

RELOCATE MAILBOX		DRIVEWAY MODIFICATIONS*	
STATION	OFFSET	STATION	STD. NO.
0+16	22.4' LT	0+34	LT R 6.01
0+41	24.8' LT	1+15	LT R 6.01
1+06	22.6' LT	1+51	RT R 6.05
1+33	22.8' LT	2+37	RT R 6.05
1+67	12.1' RT	2+49	LT R 6.01
2+40	14.8' RT	2+84	LT R 6.01
2+48	12.0' RT	2+86	RT R 6.05
2+76	12.5' RT	3+37	RT R 6.05
3+03	12.7' LT	3+65	LT R 6.01
3+26	11.7' RT	4+05	LT R 6.01
3+33	16.2' LT	4+38	RT R 6.05
4+20	12.8' RT	4+67	LT R 6.01
4+57	12.0' LT	5+03	RT R 6.05
4+88	12.1' RT	5+16	LT R 6.01
5+04	11.8' LT	5+34	RT R 6.05
5+49	11.7' RT	5+42	LT R 6.01

CONSTRUCT CURB & GUTTER *			
FROM STATION	TO STATION	QUANTITIES(LF)	
0+05	LT	0+25	LT 20
0+42	LT	1+06	LT 64
1+26	LT	1+60	LT 34
1+60	LT	1+80	LT 20**
1+80	LT	2+27	LT 47
2+27	LT	2+43	LT 15**
2+96	LT	3+29	LT 33
3+29	LT	3+95	LT 66
4+19	LT	4+59	LT 40
4+76	LT	5+07	LT 31
5+59	LT	6+00	LT 41
0+05	RT	1+37	RT 132
1+63	RT	2+27	RT 64
2+49	RT	2+77	RT 28
2+84	RT	3+30	RT 34
3+30	RT	3+53	RT 23
3+53	RT	4+24	RT 71
4+52	RT	4+91	RT 39
5+16	RT	5+22	RT 6
5+48	RT	6+00	RT 52

* USE STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01
 **USE MODIFIED COMBINATION CURB AND GUTTER STD. NO. R-3.01

NOTES:

- PROPERTY LINES AND RIGHT-OF-WAY LINES SHOWN ARE FOR ASSISTANCE IN INTERPRETING THE PLANS AND ARE NOT OFFICIAL. SEE APPROPRIATE PLATS FOR OFFICIAL INFORMATION.
- SEE STD. DETAIL G 4.01: METHOD OF CUTTING AND REPAIRING OPENINGS IN EXISTING ROADWAY PAVING FOR PIPE CULVERT INSTALLATION ROADWAY PATCHING.
- INTERSECTION AND DRAINAGE IMPROVEMENTS AT CISSEL AVE. AND NORTH LAUREL ROAD TO BE DONE IN CONJUNCTION WITH CAPITAL PROJECT NO. K-5033.
- DRIVEWAYS SHALL BE REPLACED IN KIND. FOR CONCRETE DRIVEWAYS, SEE HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION STANDARD DETAIL R 6.01 FOR RESIDENTIAL DRIVEWAY ENTRANCES WITH SIDEWALK. USE STD. PAVEMENT SECTION P-1 WITH A GRADED AGGREGATE BASE FOR ASPHALT DRIVEWAYS. SEE SHEET 16 FOR DRIVEWAY MODIFICATION DETAILS FOR EAST SIDE OF CISSEL AVE..
- TEST PIT RESULTS ARE INCLUDED IN THE INVITATION TO BID.

LEGEND	
	PAVEMENT REMOVAL
	PROPOSED FULL-DEPTH PAVEMENT
	WEDGE LEVEL AND 2" OVERLAY
	PROPOSED CONCRETE SIDEWALK
	ASPHALT DRIVEWAY
	CONCRETE DRIVEWAY
	EXIST. RIGHT-OF-WAY
	TEST PIT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve Shanan 4/18/05
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Willie Z. Mable 4-18-05
CHIEF, BUREAU OF HIGHWAYS

GRAPHIC SCALE
0 20 40
HOR. SCALE: 1"=20'-0"

URS
HUNT VALLEY, MARYLAND

RJM
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

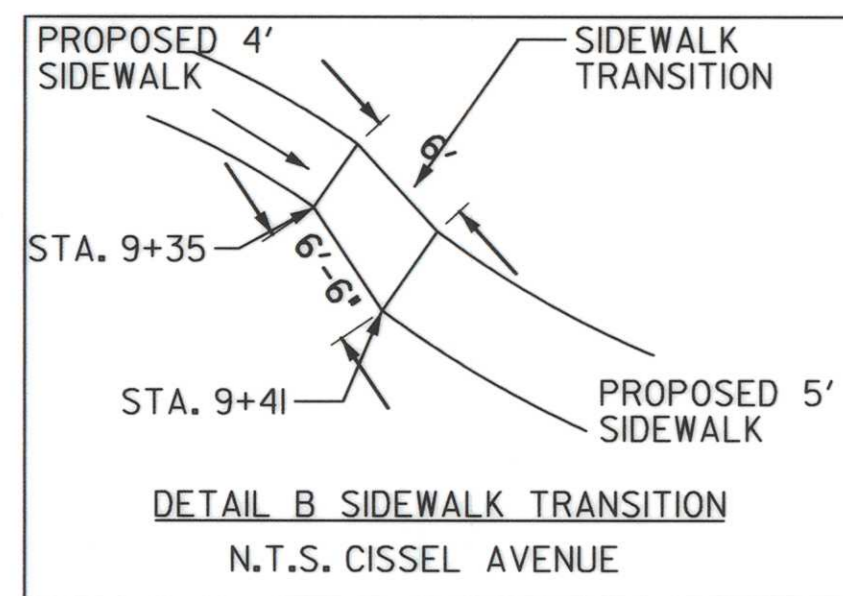
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**CISSEL AVENUE
PLAN SHEET 1**

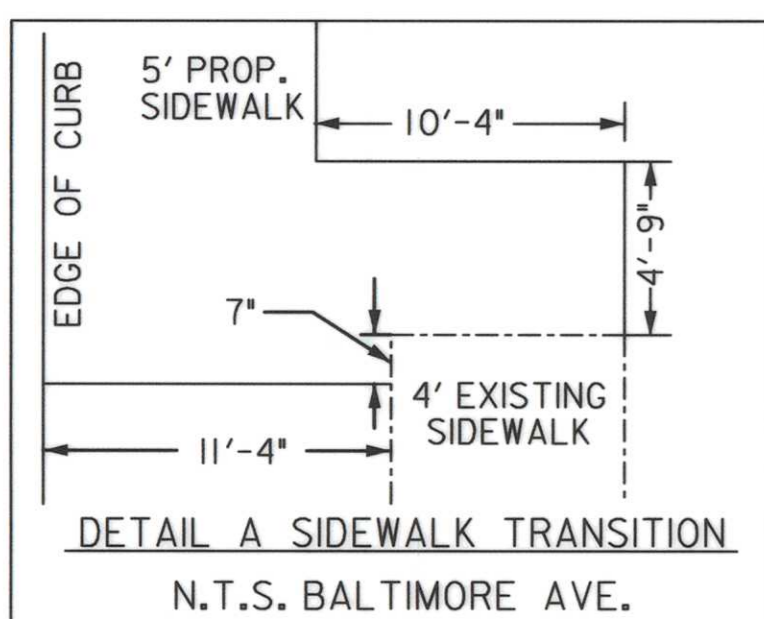
**CISSEL AVENUE DRAINAGE IMP.
& N. LAUREL RD. SIDEWALK CONST.**

HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

SCALE AS SHOWN
SHEET 4 OF 33



DETAIL B SIDEWALK TRANSITION
N.T.S. CISSEL AVENUE



DETAIL A SIDEWALK TRANSITION
N.T.S. BALTIMORE AVE.

CONSTRUCT 4' CONCRETE SIDEWALK		
FROM STATION	TO STATION	QUANTITY (SF)
6+00	6+77	315
6+89	7+40	208
7+53	8+29	303
8+41	8+75	135
8+93	9+19	104
9+37	9+46	39

ADJUST UTILITY		
TYPE	STATION	OFFSET
CO	6+12	12.1' LT
CO	8+42	12.1' LT
GV	8+92	23.6' LT
FH	9+00	19.2' LT
WV	9+04	26.2' LT
WV	9+13	43.6' RT
MH	8+99	17.7' RT
MH	6+47	16.7' RT

TRAVERSE CONTROL POINT			
POINT NUMBER	NORTHING	EASTING	ELEVATION
105	525,957.0780	1,356,842.1617	182.8600
107	526,138.5933	1,356,878.9040	188.8900

RELOCATE MAILBOX	
STATION	OFFSET
6+01	14.6' LT
6+71	12.8' LT
6+78	11.4' RT
7+40	12.8' LT
8+17	14.8' LT
8+71	17.8' LT
9+17	14.7' LT

CONSTRUCT CURB & GUTTER *			
FROM STATION	TO STATION	QUANTITIES(LF)	
6+00	6+74	LT	74
6+92	7+37	LT	45
7+56	8+25	LT	69
8+44	8+72	LT	28
8+97	9+15	LT	18
9+38	9+43	LT	5
6+00	6+57	RT	57
6+79	9+11	RT	232

DRIVEWAY MODIFICATIONS*	
STATION	STD.NO.
6+68	RT R 6.05
6+82	LT R 6.01
7+46	LT R 6.01
8+35	LT R 6.01
8+84	RT R 6.01
9+27	LT R 6.01

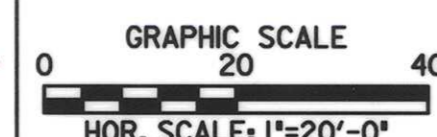
* USE STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01

* ALL EXISTING DRIVEWAY CULVERTS SHALL BE REMOVED.



James J. J. 3/30/05

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Steve Shanan 4/18/05
Steve Shanan 4/18/05
Steve Shanan 4/18/05



URS
HUNT VALLEY, MARYLAND

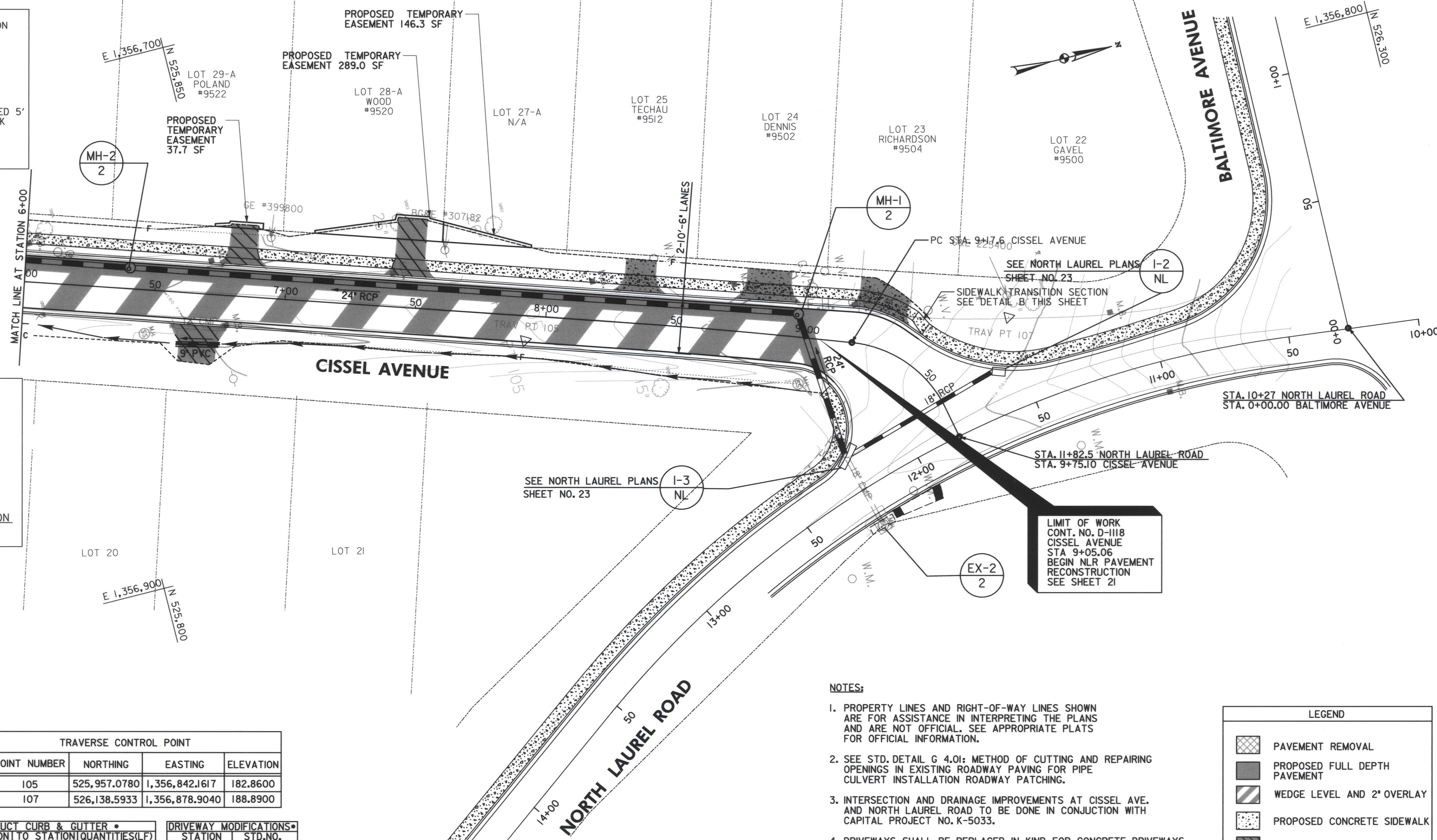
RJM
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND
TEL: 410/730-1001 FAX: 410/730-5403

DES: RL					
DRN: ML					
CHK: ED					
DATE: 3/30/05	BY	NO.	REVISION	DATE	

**CISSEL AVENUE
PLAN SHEET 2**

**CISSEL AVENUE DRAINAGE IMP.
& N. LAUREL RD. SIDEWALK CONST.**
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

SCALE AS SHOWN
SHEET 5 OF 33

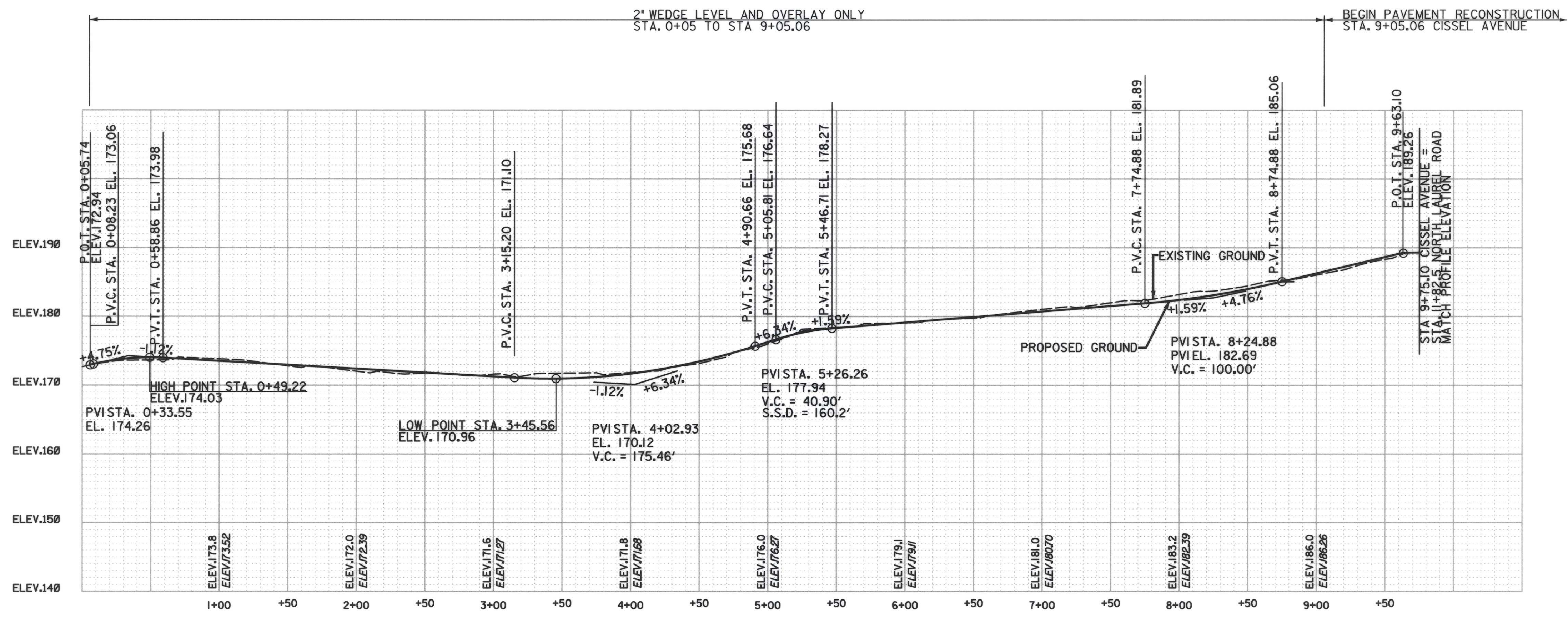


LIMIT OF WORK
CONT. NO. D-1118
CISSEL AVENUE
STA 9+05.06
BEGIN NLR PAVEMENT
RECONSTRUCTION
SEE SHEET 21

NOTES:

- PROPERTY LINES AND RIGHT-OF-WAY LINES SHOWN ARE FOR ASSISTANCE IN INTERPRETING THE PLANS AND ARE NOT OFFICIAL. SEE APPROPRIATE PLATS FOR OFFICIAL INFORMATION.
- SEE STD. DETAIL G 4.01: METHOD OF CUTTING AND REPAIRING OPENINGS IN EXISTING ROADWAY PAVING FOR PIPE CULVERT INSTALLATION ROADWAY PATCHING.
- INTERSECTION AND DRAINAGE IMPROVEMENTS AT CISSEL AVE. AND NORTH LAUREL ROAD TO BE DONE IN CONJUNCTION WITH CAPITAL PROJECT NO. K-5033.
- DRIVEWAYS SHALL BE REPLACED IN KIND. FOR CONCRETE DRIVEWAYS, SEE HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION STANDARD DETAIL R 6.01 FOR RESIDENTIAL DRIVEWAY ENTRANCES WITH SIDEWALK. USE STD. PAVEMENT SECTION P-1 WITH A GRANULAR BASE FOR ASPHALT DRIVEWAYS. SEE SHEET 15 FOR DRIVEWAY MODIFICATION DETAILS FOR EAST SIDE OF CISSEL AVE..
- CONTRACTOR SHALL TAKE PRECAUTION DURING CONSTRUCTION AND PROTECT ALL EXISTING UTILITIES NOT SHOWN AS TO BE RELOCATED. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S OWN COST.
- ALL TEST PIT RESULTS ARE INCLUDED IN THE INVITATION TO BID.

LEGEND	
	PAVEMENT REMOVAL
	PROPOSED FULL DEPTH PAVEMENT
	WEDGE LEVEL AND 2" OVERLAY
	PROPOSED CONCRETE SIDEWALK
	ASPHALT DRIVEWAY
	CONCRETE DRIVEWAY
	EXIST. RIGHT-OF-WAY
	TEST PIT



NOTE:
PROPOSED PROFILE SHOWN FOR GEOMETRICAL PURPOSES ONLY.
NO PROFILE ADJUSTMENTS BEYOND MILLING AND RESURFACING
ARE ANTICIPATED. USE ELEVATIONS NOTED ON CROSS SECTIONS
TO SET CURB AND CENTERLINE.

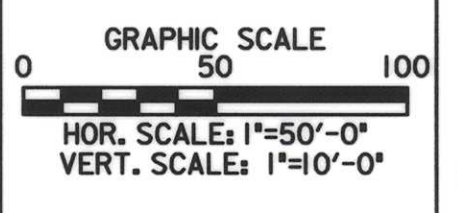


Janet *3/20/05*

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve Shanahan 4/18/05
CHIEF, TRANSPORTATION PROJECTS AND
WATERSHED MANAGEMENT DIVISION

William F. Huber 4-18-05
CHIEF, BUREAU OF HIGHWAYS



URS
HUNT VALLEY, MARYLAND

HJM
HJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

DES: PL					
DRN: NL					
CHK: ED					
DATE: 3/30/05	BY	NO.	REVISION	DATE	

**CISSSEL AVENUE
PROFILE SHEET**

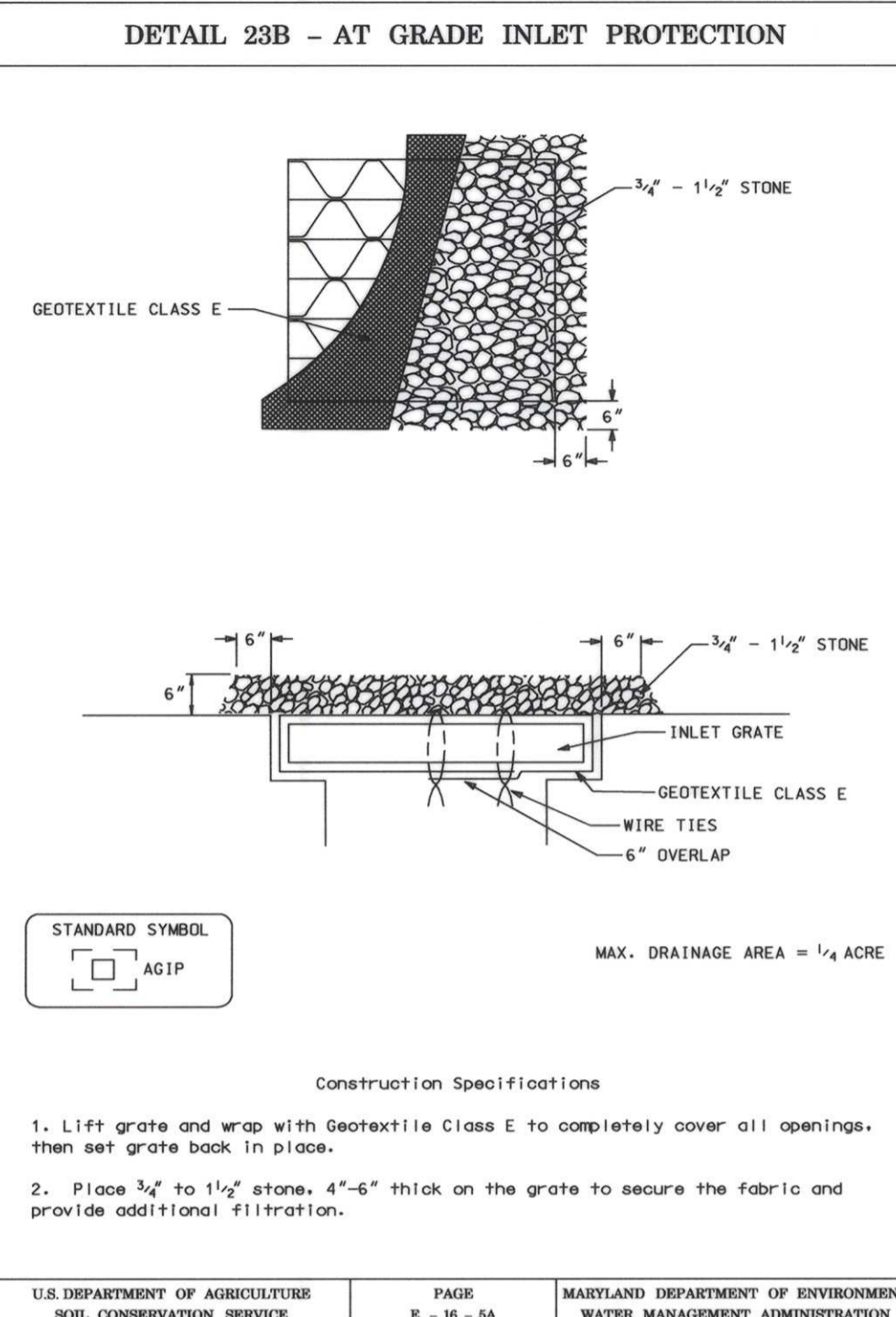
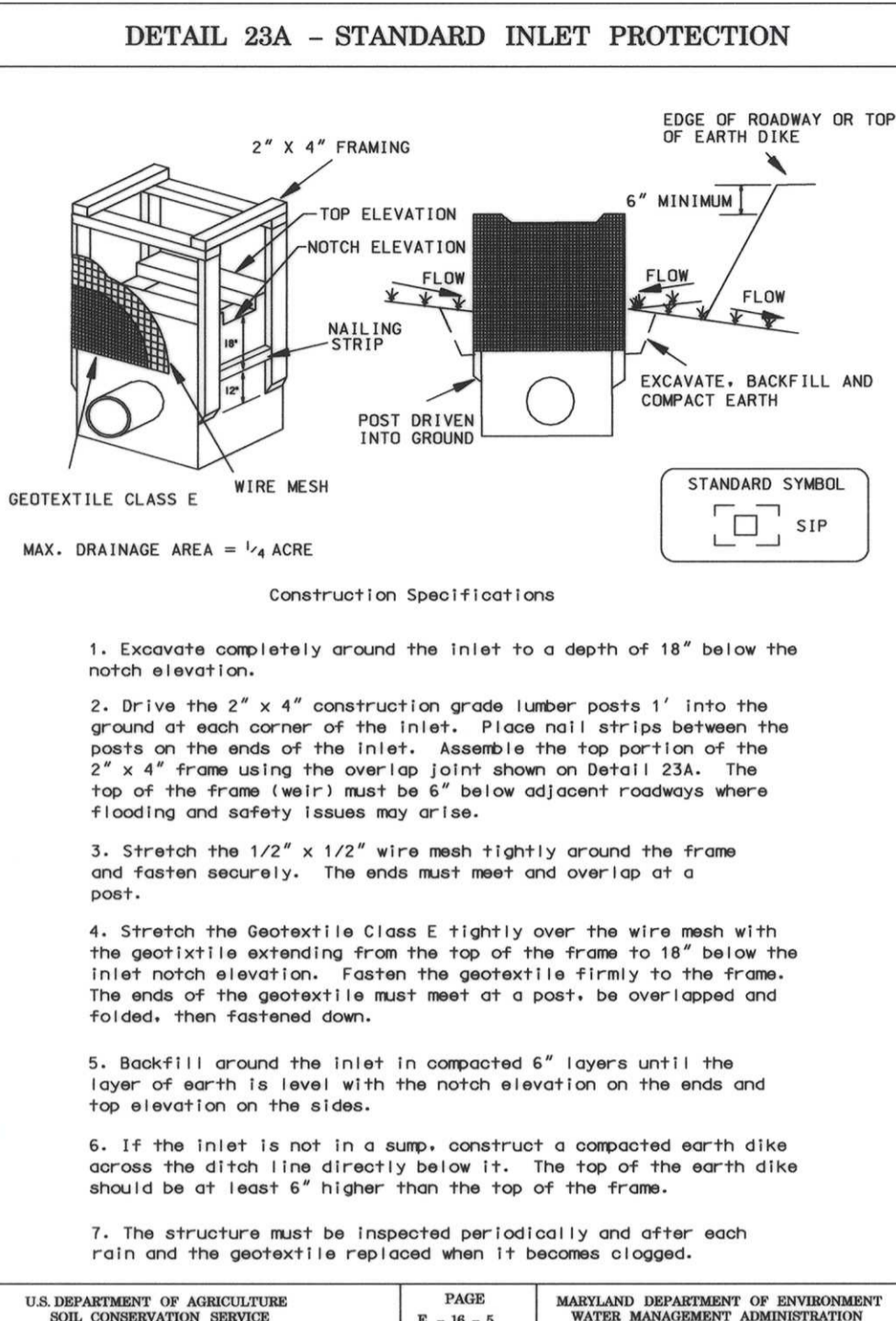
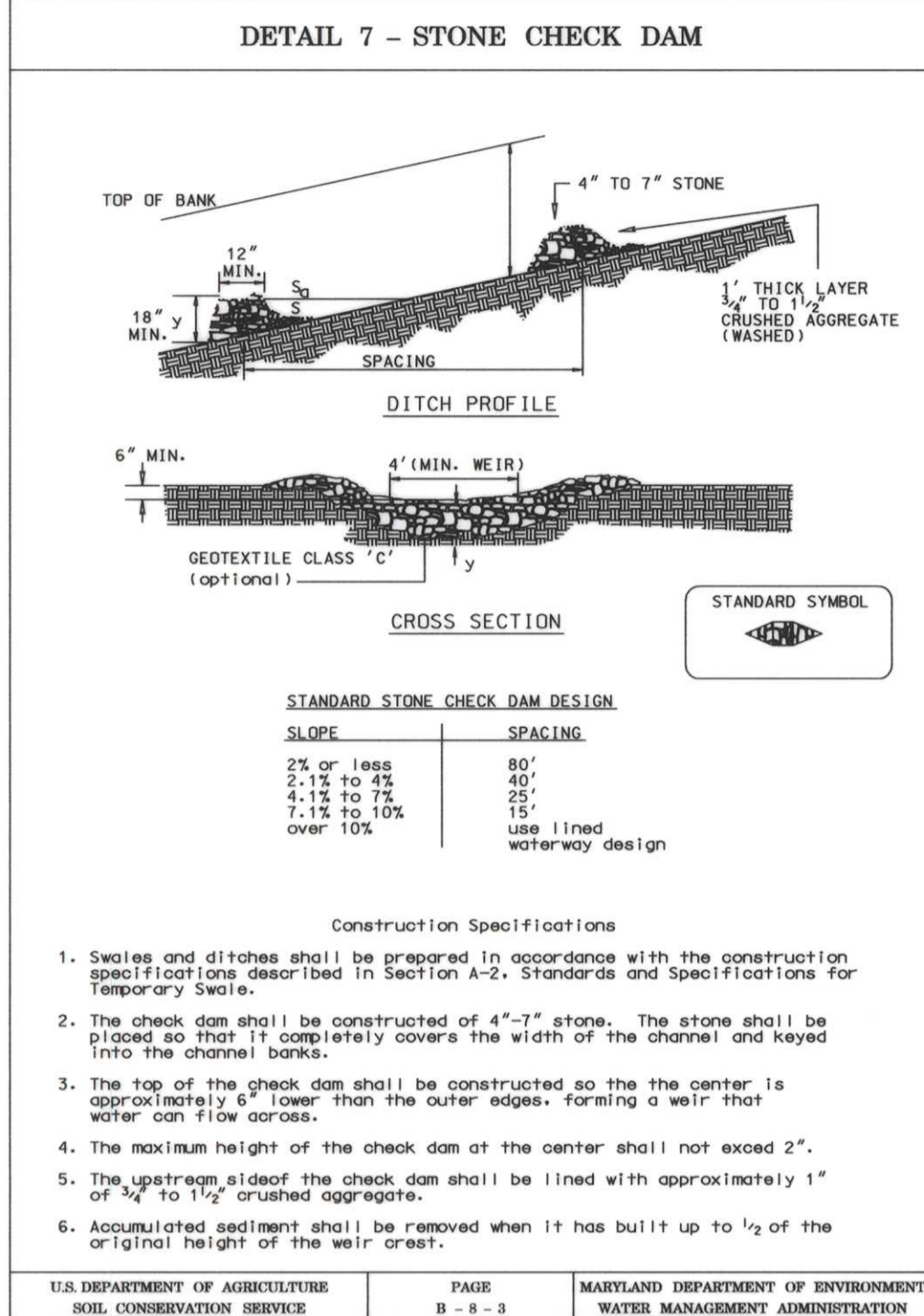
NO.: _____ DATE: _____

**CISSSEL AVENUE DRAINAGE IMP.
& N. LAUREL RD. SIDEWALK CONST.**

HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

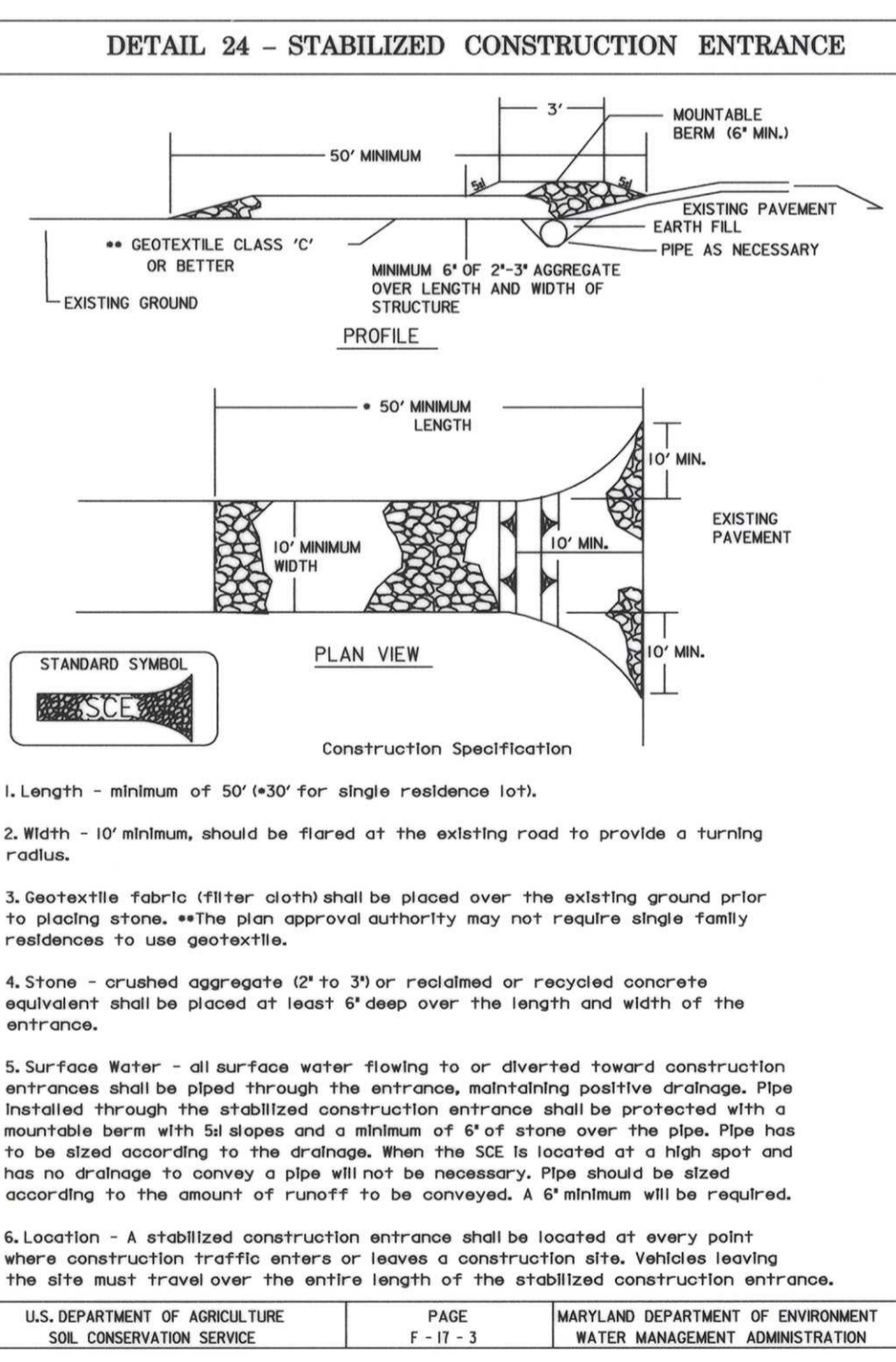
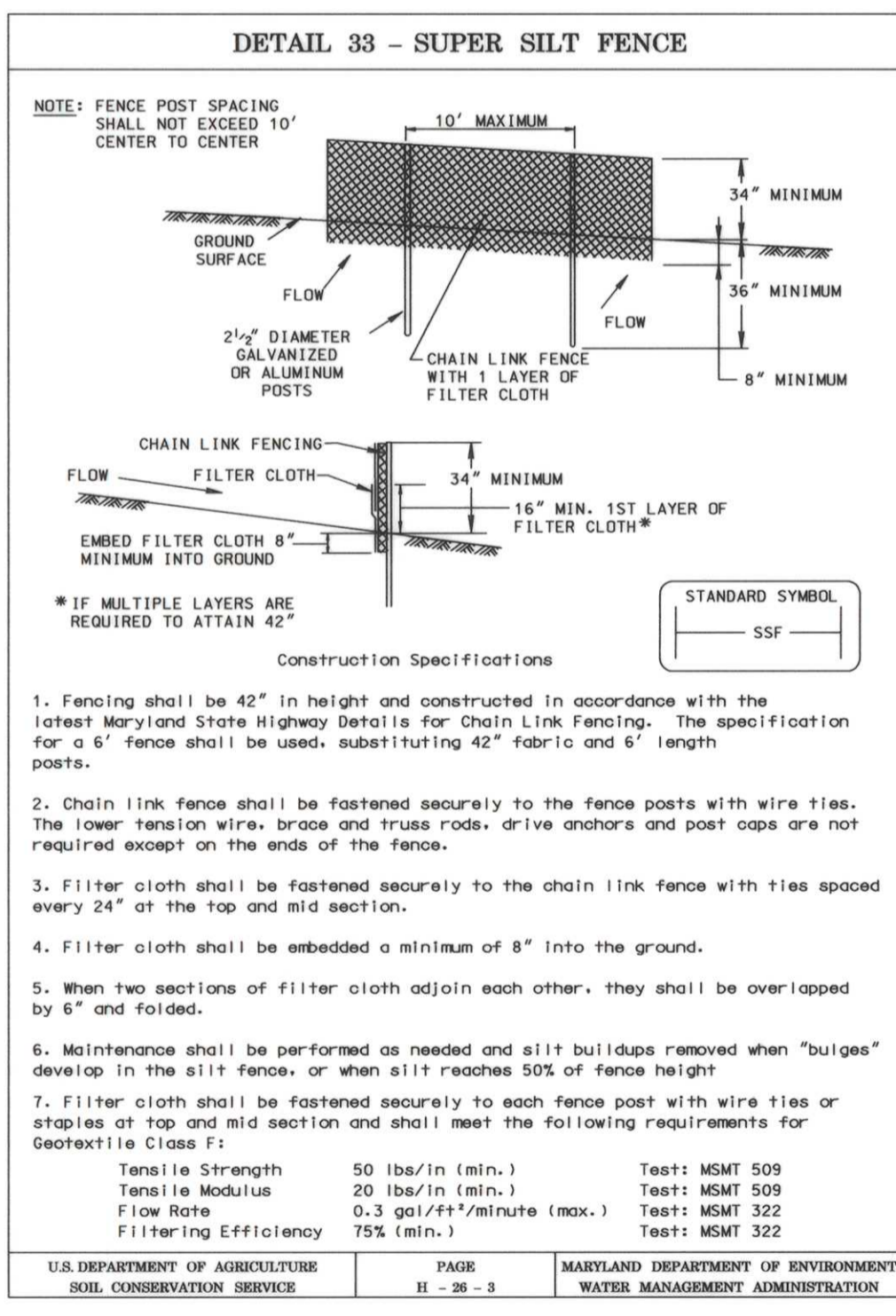
SCALE
AS
SHOWN

SHEET
6 OF 33



SEQUENCE OF CONSTRUCTION EROSION AND SEDIMENT CONTROL

DURATION (DAYS)	STEP	ACTION
--	1.	THE CONTRACTOR SHALL OBTAIN A GRADING PERMIT BEFORE ANY TYPE OF CONSTRUCTION IS TO START.
--	2.	THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AT LEAST SEVEN (7) DAYS PRIOR TO INITIATION OF THE PROJECT AND FIVE (5) DAYS AFTER WORK ENDS.
--	3.	UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. ALL UTILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE ROADWAY PLANS.
--	4.	MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 1994 STANDARDS AND COUNTY REGULATIONS UNTIL THE ENTIRE SITE IS STABILIZED.
--	5.	THE EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONING PRIOR TO THE CLEARING, CLEAR AND GRUB FOR EROSION AND SEDIMENT CONTROL MEASURES OR DEVICES ONLY.
15	6.	INSTALL PERIMETER CONTROLS AS REQUIRED FOR CONSTRUCTION.
30	7.	GRADE ALL DISTURBED SLOPES TO DRAIN AS INDICATED ON THE PLANS. CONSTRUCT STORM DRAINS AS SHOWN. INSTALL INLET PROTECTION AS REQUIRED.
35	8.	CONSTRUCT CURBS AND GUTTERS, PAVEMENT, SIDEWALKS AND DRIVEWAYS AS SHOWN. CONSTRUCT ONLY THOSE AREAS THAT CAN BE STABILIZED IN THE SAME WORKING DAY.
10	9.	PLACE TOPSOIL, SEED AND MULCH ON ALL UNPAVED AREAS CONSTRUCTED AS DIRECTED BY THE ENGINEER.
--	10.	SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED WITH GROWTH AND HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS APPROVES THEIR REMOVAL.
--	11.	REMOVE EROSION AND SEDIMENT CONTROL DEVICES. STABILIZE ALL REMAINING DISTURBED AREAS.



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. _____
DATE _____

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

BY THE ENGINEER:

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

ENGINEER _____ DATE _____

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim M... 4/20/05
NATURAL RESOURCES CONSERVATION SERVICE DATE

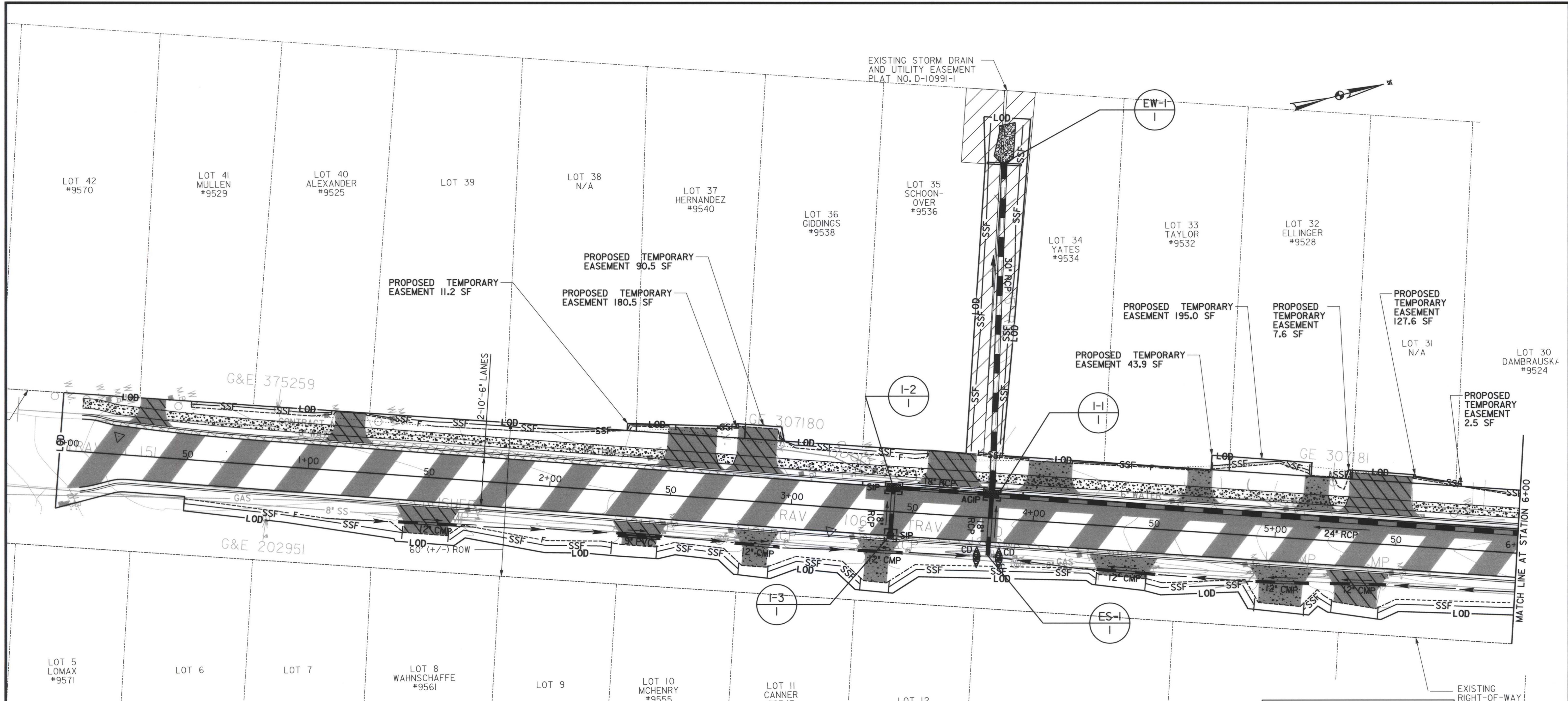
THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John L. Blanton 4/20/05
HOWARD SOIL CONSERVATION DISTRICT DATE



John Blanton 3/30/05

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Steve Shanan 4/18/05</i> CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION	URS HUNT VALLEY, MARYLAND	RJM RJM ENGINEERING, INC. CONSULTING ENGINEERS COLUMBIA, MARYLAND	DES: RL				CISEL AVENUE EROSION AND SEDIMENT CONTROL GENERAL NOTES 2	CISEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST. HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1118 AND NO. K-5033	SCALE AS SHOWN
			DRN: NL						SHEET 8 OF 33
			CHK: ED						
			DATE: 3/30/05	BY	NO.	REVISION	DATE	NO.:	DATE:



LOT 5
LOMAX
#9571

LOT 6

LOT 7

LOT 8
WAHNSCHAFFE
#9561

LOT 9

LOT 10
MCHENRY
#9555

LOT 11
CANNER
#9547

LOT 12
BAILEY
#9539

LOT 13
THEWES
#9535

LOT 18
STRAUSS
#9521

LOT 19

STONE CHECK DAM	
STATION	OFFSET
3+78	15.45' RT
3+87	15.45' RT

INLET PROTECTION			
	STATION	OFFSET(FT)	TYPE
I-1	3+82 LT	8.37	AGIP
I-2	3+42 LT	8.37	SIP
I-3	3+42 RT	9.10	SIP

SUPER SILT FENCE (SSF)		
FROM STATION	TO STATION	LINEAR FEET
0+50 LT	6+00 LT	408*
0+50 RT	6+00 RT	443*
3+70 LT	3+71 LT	136
3+84 LT	3+85 LT	138

* SUPER SILT FENCE BREAKS AT DRIVEWAYS

NOTES:

- RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE TAKEN FROM THE ELECTRONIC TAX MAP PROVIDED BY THE COUNTY.
- LOD SHOWN OUTSIDE RIGHT-OF-WAY OR EASEMENTS FOR DRAWING CLARITY ONLY. ALL DISTURBANCE SHALL REMAIN INSIDE RIGHT-OF-WAY OR PROPOSED EASEMENTS.



James M. Payne
3/30/05

LEGEND

- PAVEMENT REMOVAL
- PROPOSED FULL-DEPTH PAVEMENT
- WEDGE LEVEL AND 2" OVERLAY
- PROPOSED CONCRETE SIDEWALK
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY
- EXIST. RIGHT-OF-WAY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve Shanan 4/18/05
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

William F. Kubla 4-18-05
CHIEF, BUREAU OF HIGHWAYS

GRAPHIC SCALE
0 20 40
HOR. SCALE: 1"=20'-0"

URS
HUNT VALLEY, MARYLAND

RJM
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

DES: RL					
DRN: ML					
CHK: ED					
DATE: 3/30/05	BY	NO.	REVISION	DATE	

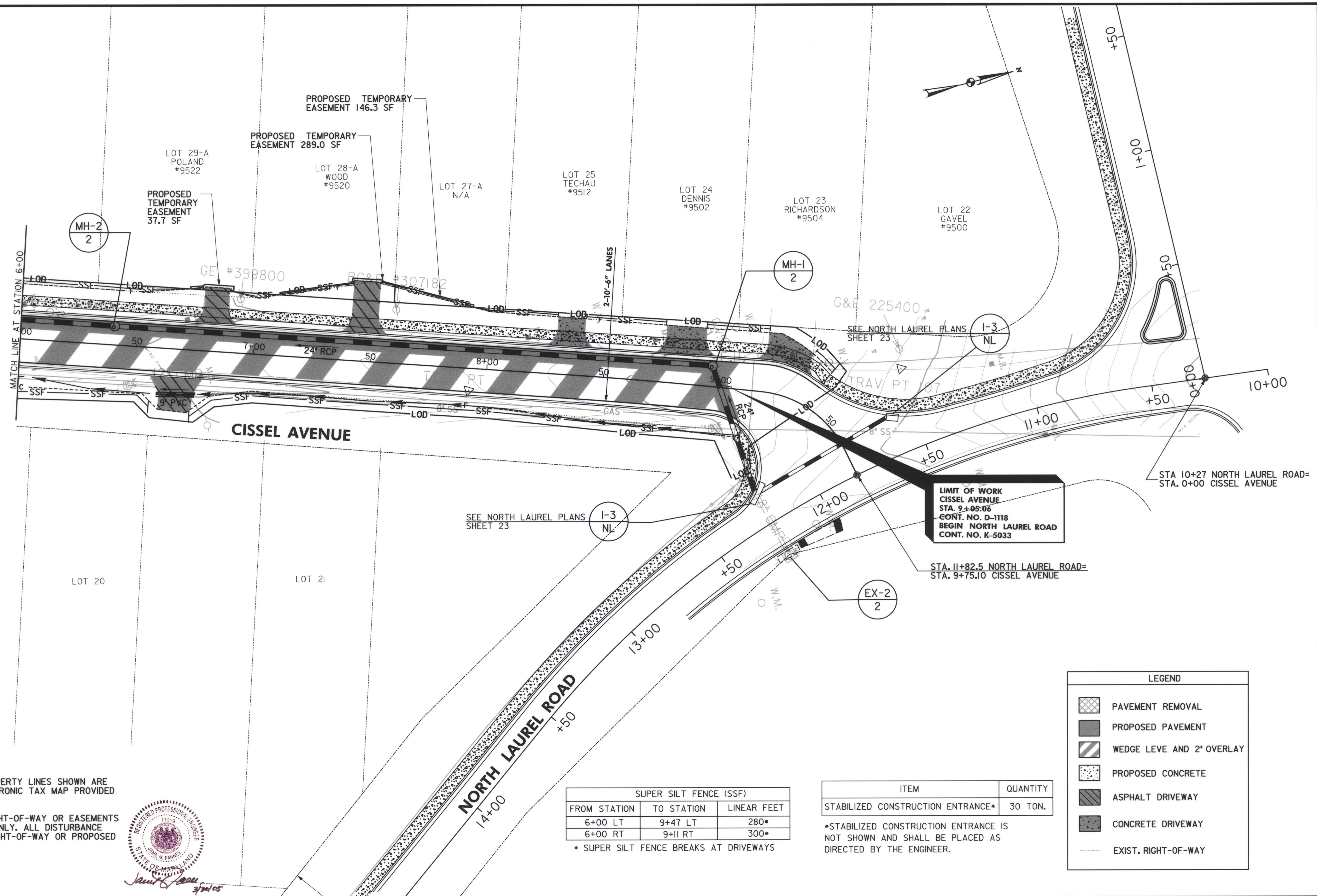
**CISSEL AVENUE
EROSION AND
SEDIMENT CONTROL
SHEET 1**

NO.: _____ DATE: _____

**CISSEL AVENUE DRAINAGE IMP.
& N. LAUREL RD. SIDEWALK CONST.**

HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. D-1118
AND NO. K-5033

SCALE AS SHOWN
SHEET 9 OF 33



LIMIT OF WORK
CISSEL AVENUE
 STA. 9+05.06
 CONT. NO. D-1118
BEGIN NORTH LAUREL ROAD
 CONT. NO. K-5033

STA. 11+82.5 NORTH LAUREL ROAD=
 STA. 9+75.10 CISSEL AVENUE

LEGEND

- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- WEDGE LEVE AND 2' OVERLAY
- PROPOSED CONCRETE
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY
- EXIST. RIGHT-OF-WAY

SUPER SILT FENCE (SSF)

FROM STATION	TO STATION	LINEAR FEET
6+00 LT	9+47 LT	280*
6+00 RT	9+11 RT	300*

* SUPER SILT FENCE BREAKS AT DRIVEWAYS

ITEM	QUANTITY
STABILIZED CONSTRUCTION ENTRANCE*	30 TON.

*STABILIZED CONSTRUCTION ENTRANCE IS NOT SHOWN AND SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

- NOTES:**
- RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE TAKEN FROM THE ELECTRONIC TAX MAP PROVIDED BY THE COUNTY.
 - LOD SHOWN OUTSIDE RIGHT-OF-WAY OR EASEMENTS FOR DRAWING CLARITY ONLY. ALL DISTURBANCE SHALL REMAIN INSIDE RIGHT-OF-WAY OR PROPOSED EASEMENTS.



<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Steve Shanahan</i> 4/18/05 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION</p>	<p>GRAPHIC SCALE HOR. SCALE: 1"=20'-0"</p>	<p>URS HUNT VALLEY, MARYLAND</p>	<p>RJM RJM ENGINEERING, INC. CONSULTING ENGINEERS COLUMBIA, MARYLAND</p>	<p>DES: RL DRN: ML CHK: ED DATE: 3/30/05</p>	<p>EROSION AND SEDIMENT CONTROL SHEET 2</p>	<p>CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST. HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1118 AND NO. K-5033</p>	<p>SCALE AS SHOWN SHEET 10 OF 33</p>
<p>BY NO. REVISION DATE</p>					<p>NO.: _____ DATE: _____</p>		

GENERAL NOTES

1. ALL STANDARD REGULATORY AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH LATEST APPROVED EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION (SHA) "STANDARD SIGN BOOK", AND THE HOWARD COUNTY "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION". THE MARYLAND STATE HIGHWAY ADMINISTRATION'S TEMPORARY TRAFFIC CONTROL REFERENCE MANUAL STANDARDS SHALL BE USED WHEN REFERENCED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROCURE AND UTILIZE THE LATEST EDITION AND SUPPLEMENTS OF EACH OF THE PUBLICATIONS.
2. ACCESS TO DRIVEWAYS ALONG CISSEL AVE. MUST BE MAINTAINED AT ALL TIMES.
3. ALL EXISTING SIGNS IN CONFLICT WITH THE PROPOSED MAINTENANCE OF TRAFFIC SCHEME SHALL BE COVERED. AFTER EACH STAGE OF WORK IS COMPLETE, THE CONTRACTOR SHALL UNCOVER EXISTING SIGNS AS SOON AS POSSIBLE OR AS DIRECTED BY THE ENGINEER TO IMPROVE OVERALL PROJECT SAFETY. NO SECTION OF ROADWAY SHALL BE OPEN TO TRAFFIC UNTIL ALL EXISTING SIGNS AND PERMANENT MARKINGS ARE RESTORED.
4. ALL EXISTING TRAFFIC SIGNAL SUPPORT STRUCTURES AND SIGNS SHALL BE MAINTAINED DURING CONSTRUCTION.
5. ALL PLASTIC DRUMS SHALL BE WEIGHTED WITH SAND BAGS OR OTHER APPROVED MATERIALS TO WITHSTAND WIND LOADS.
6. CONTRACTOR SHALL MONITOR ALL TRAFFIC CONTROL DEVICES (DRUMS, SIGNS, ETC.) 24 HOURS A DAY AND 7 DAYS A WEEK AND IMMEDIATELY CORRECT ANY DAMAGE DUE TO TRAFFIC OR WEATHER RELATED CONDITIONS.
7. FOR PHASE 1, CONTRACTOR SHALL CONSTRUCT DRIVEWAYS, SIDEWALK, CURB AND GUTTER, AND DRAINAGE STRUCTURES ON THE WEST SIDE OF CISSEL AVE. FLAGGING OPERATIONS WILL BE USED TO CLOSE ONE LANE IN ORDER TO CONSTRUCT THE DRAINAGE STRUCTURE BETWEEN STATION 3+04 AND 9+22 LEFT. CONTRACTOR SHALL ONLY CONSTRUCT PORTIONS OF DRAINAGE STRUCTURE THAT CAN BE COMPLETED BY THE END OF EACH WORKING DAY. TRENCH EXCAVATED FOR STORM DRAIN PIPE INSTALLATION SHALL BE BACKFILLED AND COVERED WITH STEEL PLATES. ROADWAY SHALL RETURN TO TWO LANE OPERATION AT THE END OF EACH WORKDAY.
8. FOR PHASE 2, CONTRACTOR SHALL CONSTRUCT DRIVEWAYS, CURB AND GUTTER, AND DRAINAGE STRUCTURES ON THE EAST SIDE OF CISSEL AVE. FLAGGING OPERATIONS WILL BE USED TO CLOSE ONE LANE IN ORDER TO CONSTRUCT THE DRAINAGE STRUCTURE BETWEEN STATION 2+92 AND 9+28 RIGHT. CONTRACTOR SHALL ONLY CONSTRUCT PORTIONS OF DRAINAGE STRUCTURE THAT CAN BE COMPLETED BY THE END OF EACH WORKING DAY. TRENCH EXCAVATED FOR STORM DRAIN PIPE INSTALLATION SHALL BE BACKFILLED AND COVERED WITH STEEL PLATES. ROADWAY SHALL RETURN TO TWO LANE OPERATION AT THE END OF EACH WORKDAY.
9. FOR PHASE 3, CONTRACTOR SHALL WEDGE LEVEL AND OVERLAY THE REMAINING PORTIONS OF CISSEL AVE. UNDER FLAGGING OPERATIONS.
10. ALL SIGNS SHALL BE PLACED 100' FROM INTERSECTIONS AS SHOWN UNLESS NOTED.



W20-7A
48" x 48"

SIGN TYPE A



W20-1
36" x 36"

CISSEL AVE

36" x 12"

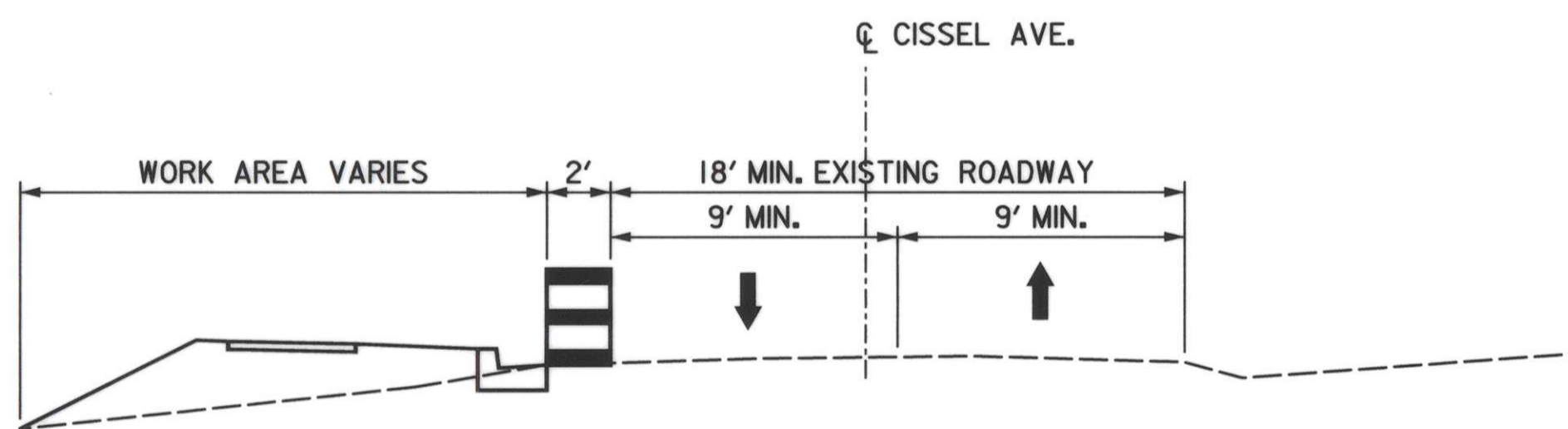
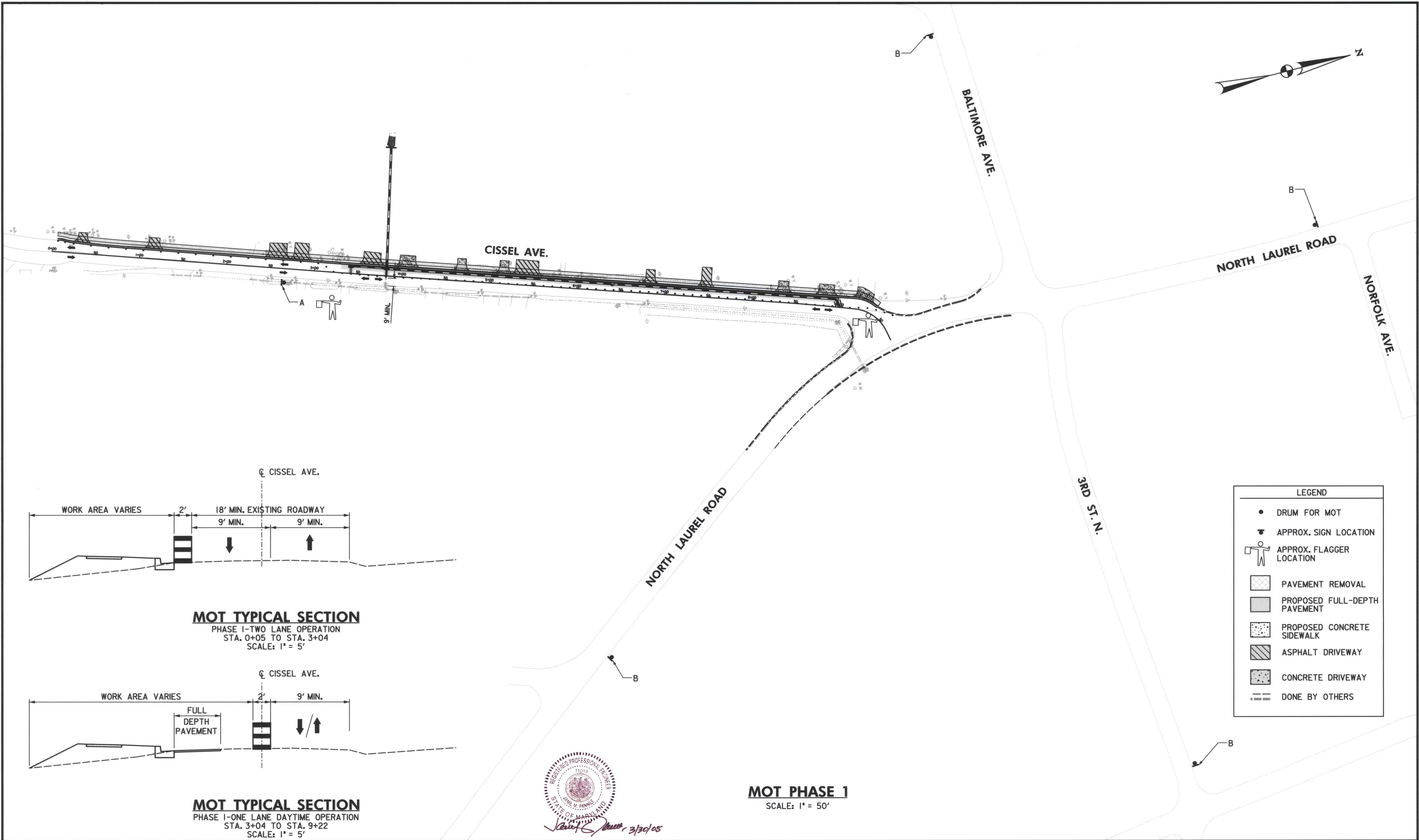
SIGN TYPE B

SIGN LEGEND
SCALE: NTS

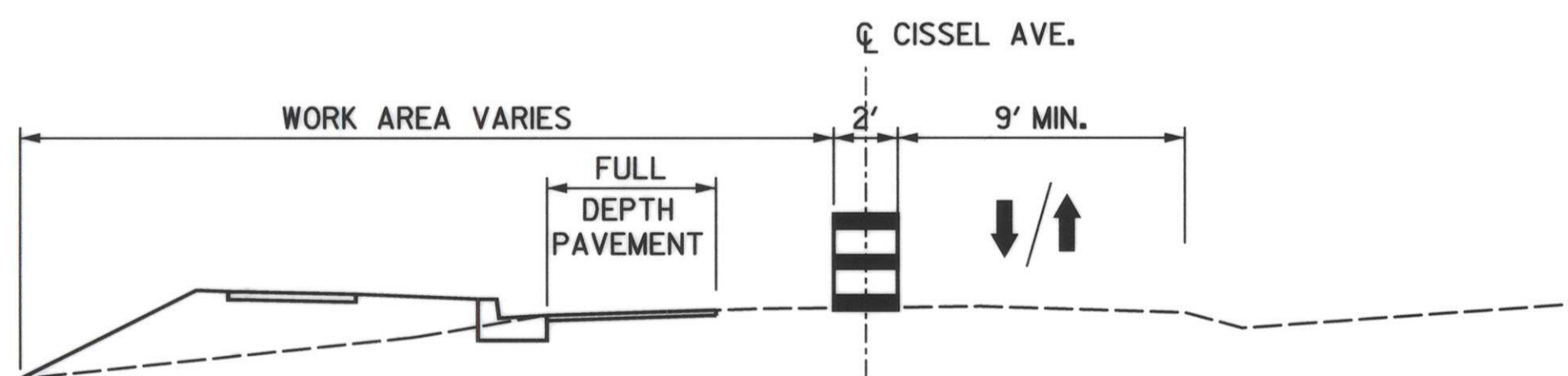


John R. Davis 3/18/05

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		HUNT VALLEY, MARYLAND	RJM ENGINEERING, INC. CONSULTING ENGINEERS COLUMBIA, MARYLAND	DES: RL				TRAFFIC CONTROL GENERAL NOTES AND SIGN LEGEND	CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST. HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1118 AND NO. K-5033	SCALE AS SHOWN SHEET 12 OF 33
<i>John R. Davis</i> 4/20/05 DEPARTMENT OF PUBLIC WORKS DATE	<i>Paul J. Szymanski</i> 4/18/05 CHIEF, BUREAU OF ENGINEERING DATE			DRN: ML						
<i>Steve Shaner</i> 4/18/05 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE	<i>William J. Mabe</i> 4-18-05 CHIEF, BUREAU OF HIGHWAYS DATE			CHK: ED						
				DATE: 3/18/05	BY	NO.	REVISION	DATE	NO.: _____ DATE: _____	



MOT TYPICAL SECTION
 PHASE I-TWO LANE OPERATION
 STA. 0+05 TO STA. 3+04
 SCALE: 1" = 5'



MOT TYPICAL SECTION
 PHASE I-ONE LANE DAYTIME OPERATION
 STA. 3+04 TO STA. 9+22
 SCALE: 1" = 5'

LEGEND	
●	DRUM FOR MOT
▼	APPROX. SIGN LOCATION
⏏	APPROX. FLAGGER LOCATION
▨	PAVEMENT REMOVAL
■	PROPOSED FULL-DEPTH PAVEMENT
▤	PROPOSED CONCRETE SIDEWALK
▩	ASPHALT DRIVEWAY
▧	CONCRETE DRIVEWAY
≡	DONE BY OTHERS



James M. Pannell, 3/30/05

MOT PHASE 1
 SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Steve Sharav 4/18/05
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

William J. Mahoney 4-18-05
 CHIEF, BUREAU OF HIGHWAYS

URS
 HUNT VALLEY, MARYLAND

RJM
 RJM ENGINEERING, INC.
 CONSULTING ENGINEERS
 COLUMBIA, MARYLAND

TELE: 410/730-1001 FAX: 410/730-5403

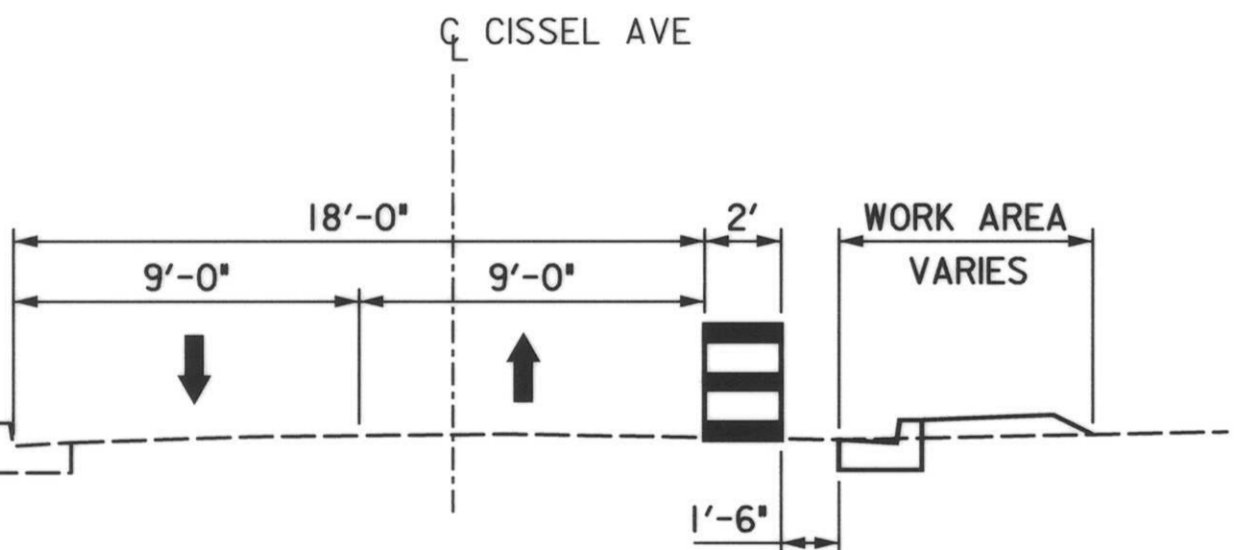
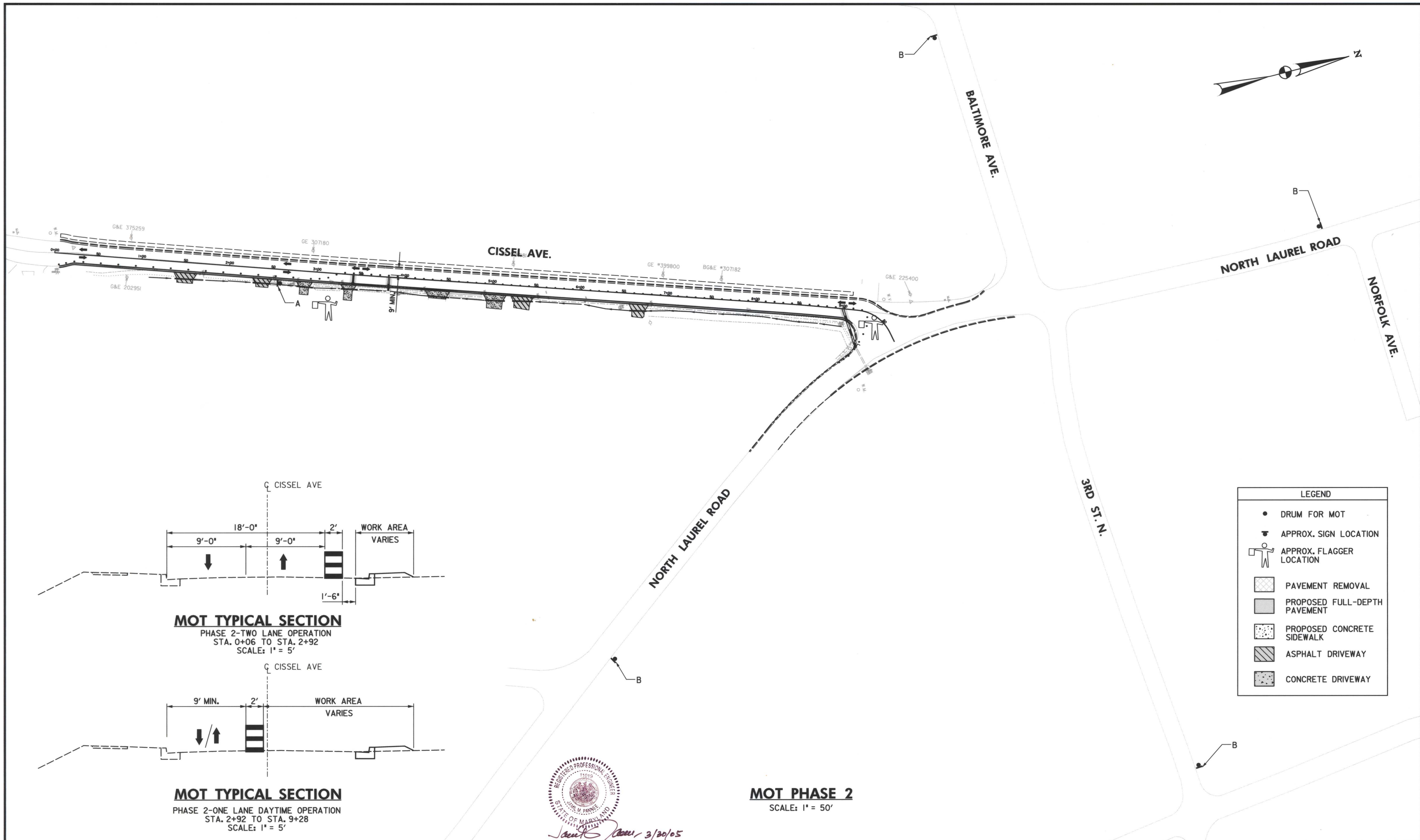
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DRN: ML				
CHK: ED				
DATE: 3/30/05	BY	NO.	REVISION	DATE

CISSEL AVENUE TRAFFIC CONTROL PLAN SHEET 1

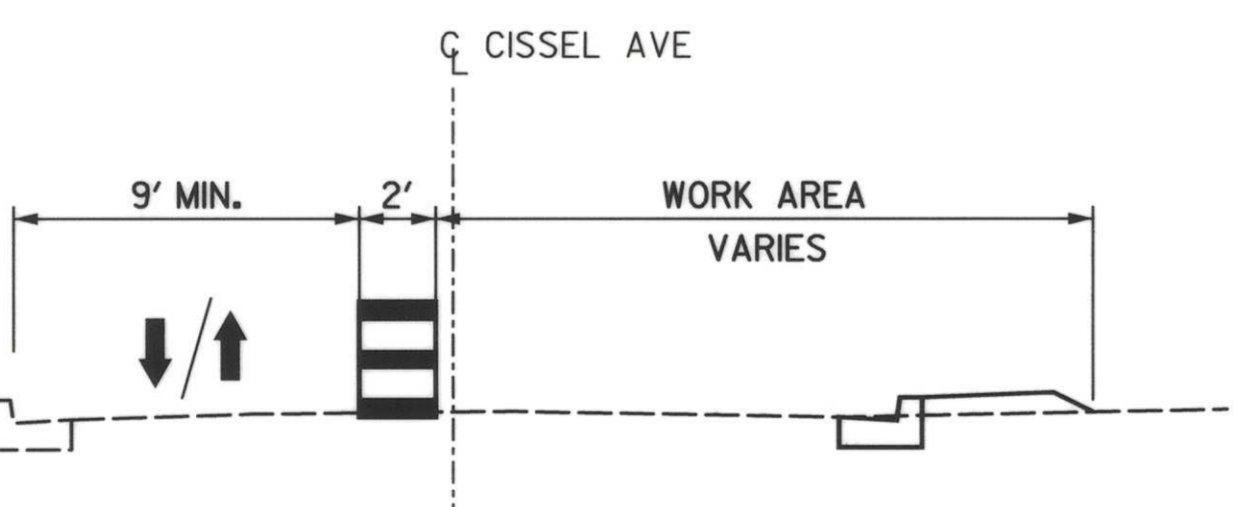
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CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST.
 HOWARD COUNTY, MARYLAND
 CAPITAL PROJECT NO. D-1118 AND NO. K-5033

SCALE AS SHOWN
 SHEET 13 OF 33



MOT TYPICAL SECTION
 PHASE 2-TWO LANE OPERATION
 STA. 0+06 TO STA. 2+92
 SCALE: 1" = 5'



MOT TYPICAL SECTION
 PHASE 2-ONE LANE DAYTIME OPERATION
 STA. 2+92 TO STA. 9+28
 SCALE: 1" = 5'

LEGEND	
●	DRUM FOR MOT
⌂	APPROX. SIGN LOCATION
⏏	APPROX. FLAGGER LOCATION
▨	PAVEMENT REMOVAL
■	PROPOSED FULL-DEPTH PAVEMENT
▤	PROPOSED CONCRETE SIDEWALK
▩	ASPHALT DRIVEWAY
▧	CONCRETE DRIVEWAY



MOT PHASE 2
 SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Steve Shanar 4/20/05
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Richard Pagan 4/18/05
 CHIEF, BUREAU OF ENGINEERING

William Zwick 4-18-05
 CHIEF, BUREAU OF HIGHWAYS

URS
 HUNT VALLEY, MARYLAND

RJM
 RJM ENGINEERING, INC.
 CONSULTING ENGINEERS
 COLUMBIA, MARYLAND

TELE: 410/730-1001 FAX: 410/730-5403

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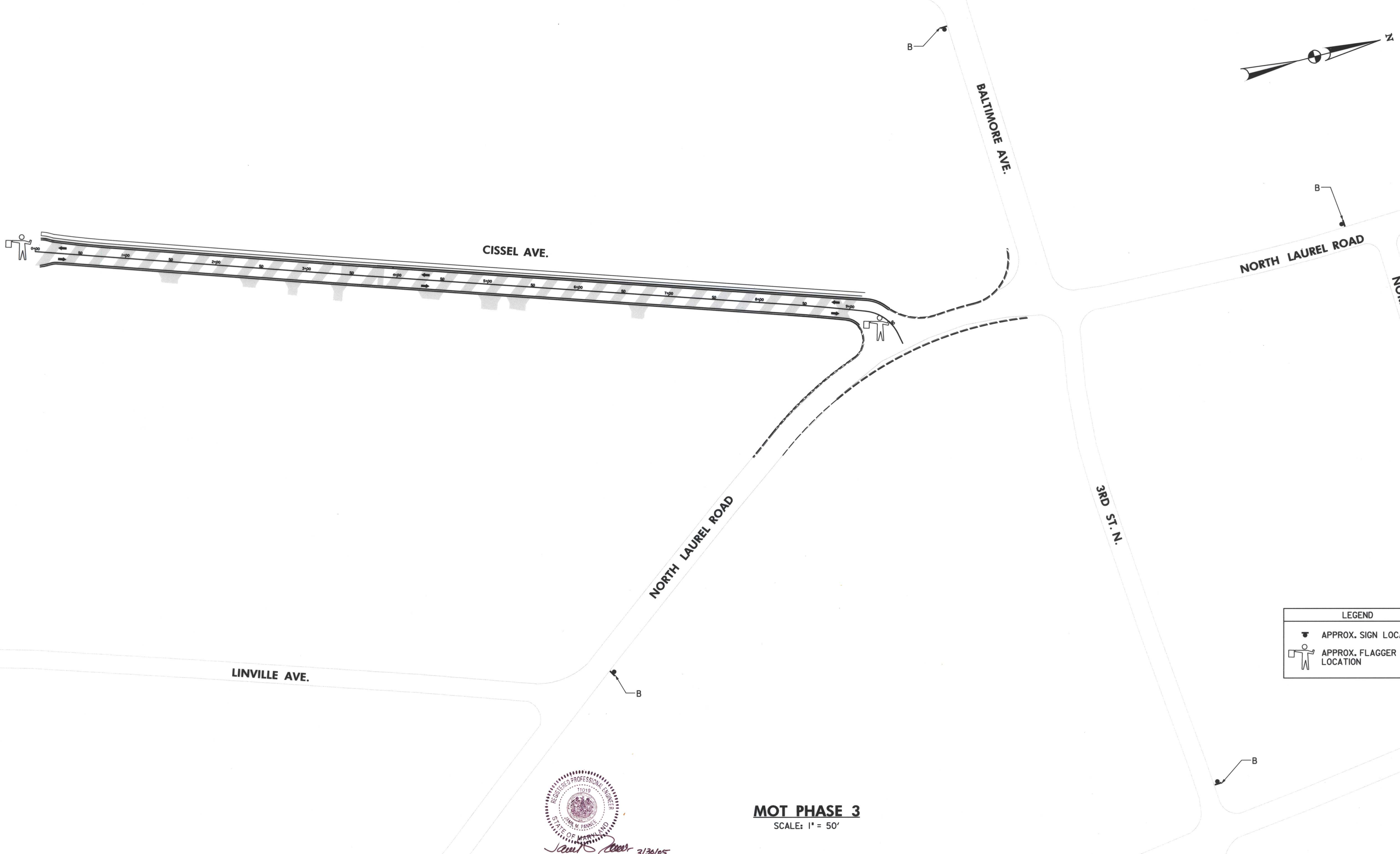
**CISSEL AVENUE
 TRAFFIC CONTROL
 PLAN SHEET 2**

NO.: _____ DATE: _____

**CISSEL AVENUE DRAINAGE IMP.
 & N. LAUREL RD. SIDEWALK CONST.**

HOWARD COUNTY, MARYLAND
 CAPITAL PROJECT NO. D-1118
 AND NO. K-5033

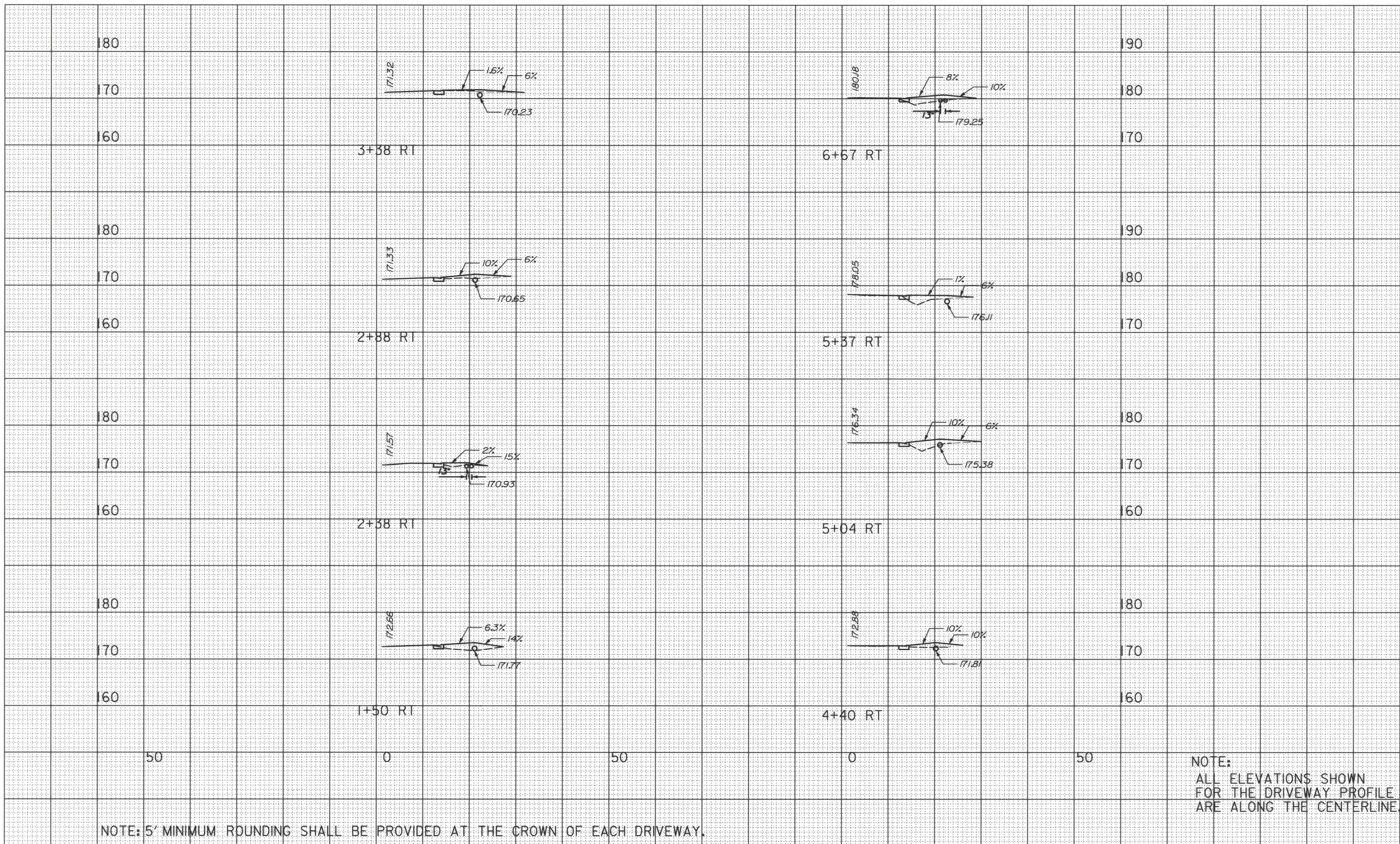
SCALE AS SHOWN
 SHEET 14 OF 33



REGISTERED PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 R. J. M. ENGINEERING, INC.
 CONSULTING ENGINEERS
 COLUMBIA, MARYLAND
 3/30/05

MOT PHASE 3
 SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Jan 7, 2005</i> 4/12/05 DEPARTMENT OF PUBLIC WORKS DATE <i>Steve Shanahan</i> 4/18/05 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE		URS HUNT VALLEY, MARYLAND		RJM R.J.M. ENGINEERING, INC. CONSULTING ENGINEERS COLUMBIA, MARYLAND TELE: 410/730-1001 FAX: 410/730-5403		DES: RL DRN: ML CHK: ED DATE: 3/30/05	BY: _____ NO.: _____ REVISION: _____ DATE: _____	CISSEL AVENUE TRAFFIC CONTROL PLAN SHEET 3 NO.: _____ DATE: _____	CISSEL AVENUE DRAINAGE IMP. & N. LAUREL RD. SIDEWALK CONST. HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1118 AND NO. K-5033	SCALE AS SHOWN SHEET 15 OF 33
--	--	-------------------------------------	--	--	--	--	--	---	--	----------------------------------



CROSS SECTION

SCALE: 1 IN. = 10 FT.

PROJECT

CISSEL AVENUE

CONTRACT NO.

D-1118

DESCRIPTION

DRIVEWAY SECTIONS AND RECONSTRUCTION DETAILS



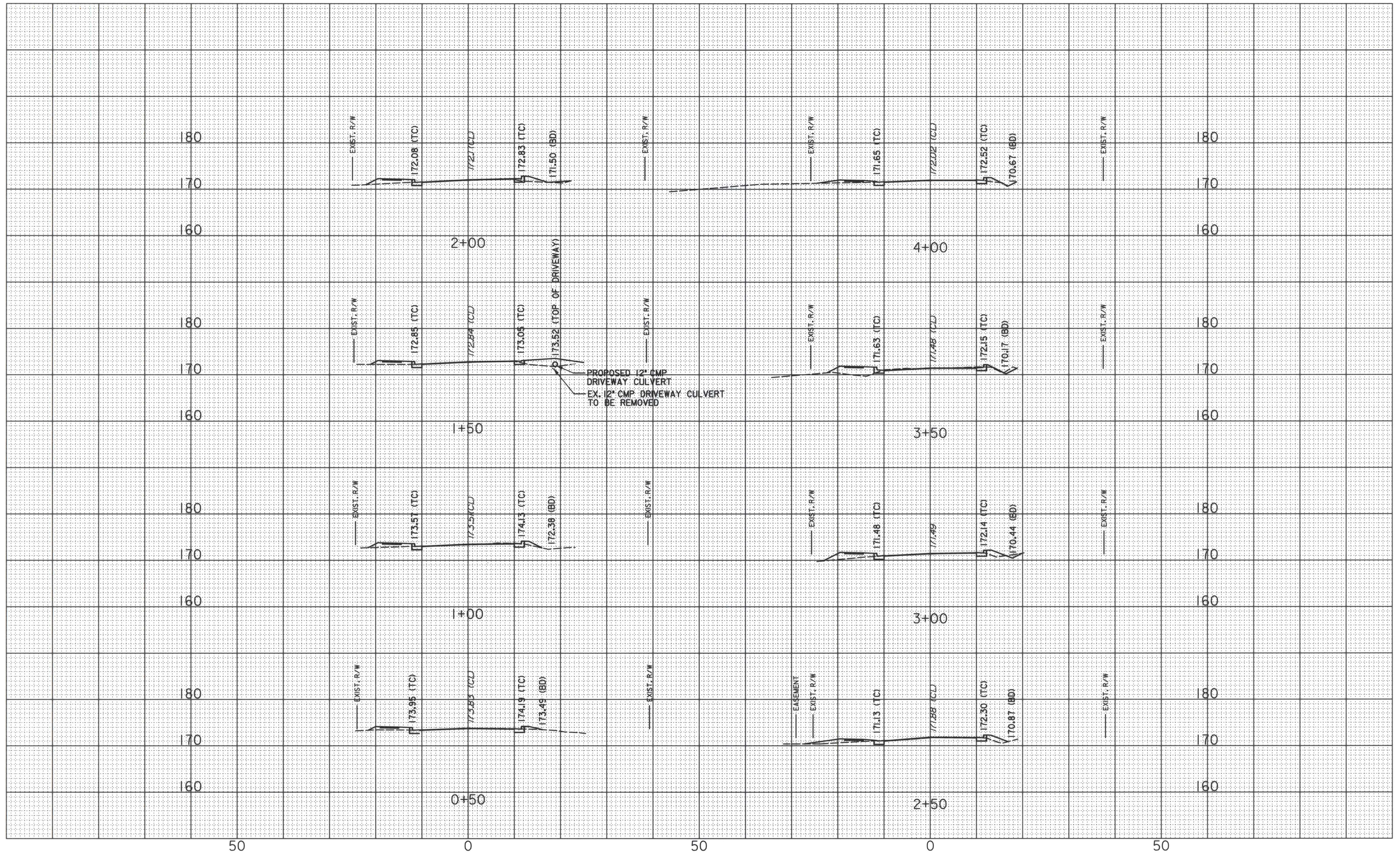
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

SHEET NO. 1 OF 1

STATION 1+50 TO STATION 6+67

HOWARD COUNTY, MARYLAND-DEPARTMENT OF PUBLIC WORKS

CONT. NO. _____ F.A.P. NO. SEE TITLE SHEET SHEET NO. 16 OF 33
PREL. TRAC. BY _____ FINAL TRAC. BY _____



CROSS SECTION

SCALE: 1 IN. = 10 FT.

PROJECT

CISSEL AVENUE

CONTRACT NO.

D-1118

DESCRIPTION

TC = TOP OF CURB, BD = BOTTOM OF DITCH, CL = CENTERLINE



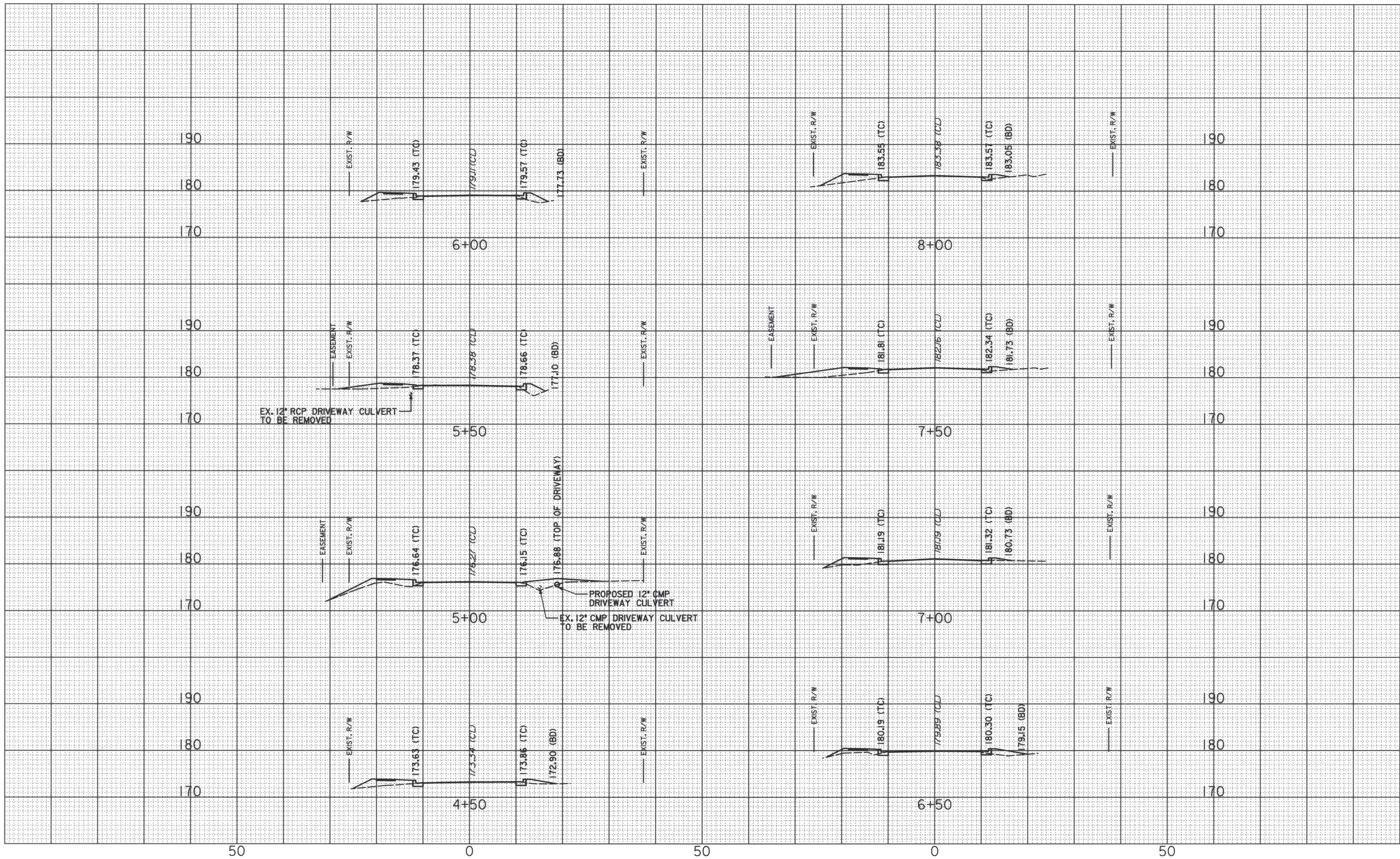
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

SHEET NO. 1 OF 3

STATION 0+50 TO STATION 4+00

HOWARD COUNTY, MARYLAND-DEPARTMENT OF PUBLIC WORKS

CONT. NO. _____ F.A.P. NO. SEE TITLE SHEET SHEET NO. 17 OF 33
PREL. TRAC. BY _____ FINAL TRAC. BY _____



CROSS SECTION

SCALE: 1 IN. = 10 FT.

PROJECT

CISSEL AVENUE

CONTRACT NO.

D-1118

DESCRIPTION

TC = TOP OF CURB, BD = BOTTOM OF DITCH, CL = CENTERLINE



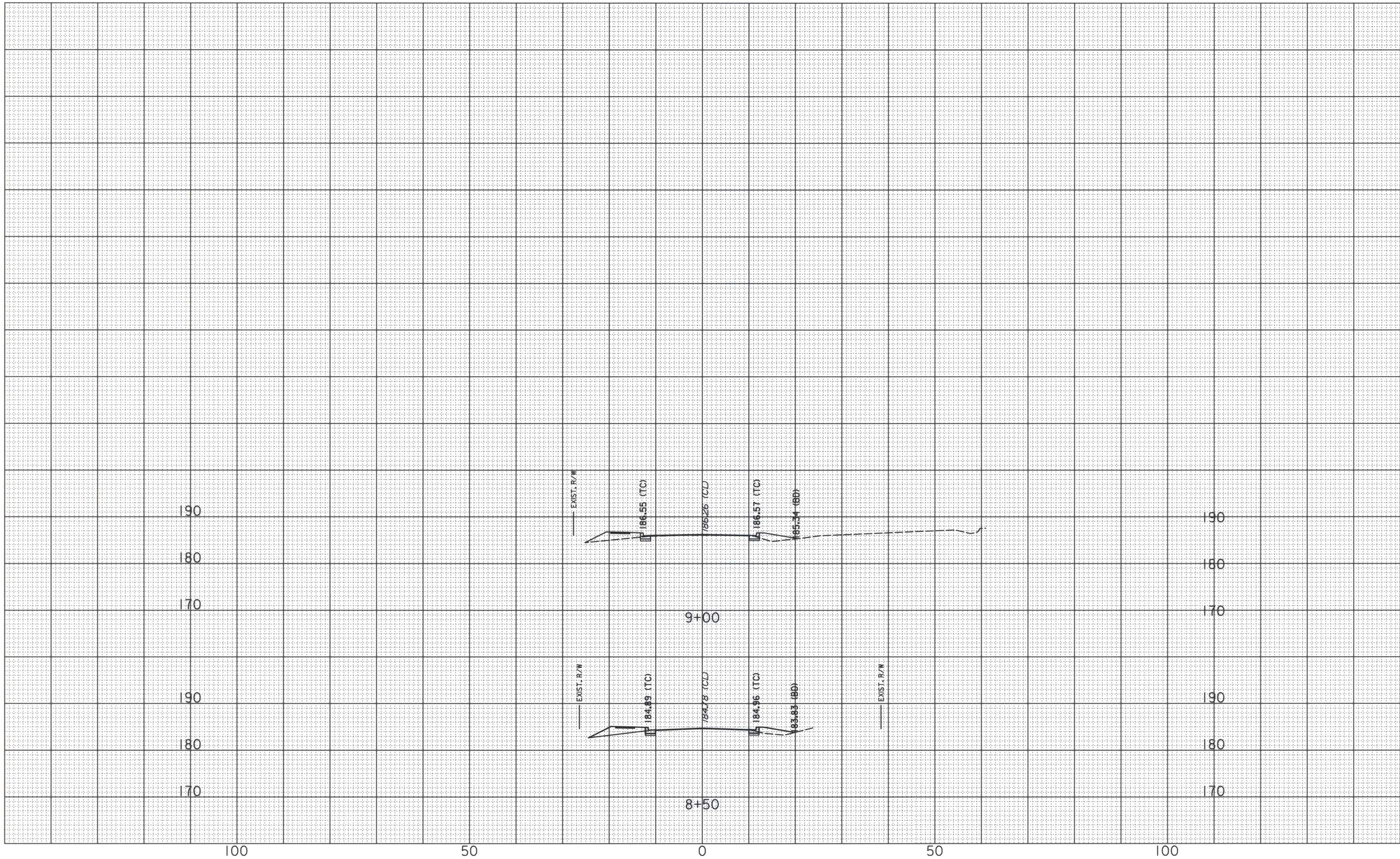
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

SHEET NO. 2 OF 3

STATION 4+50 TO STATION 8+00

HOWARD COUNTY, MARYLAND-DEPARTMENT OF PUBLIC WORKS

CONT. NO. _____ F.A.P. NO. SEE TITLE SHEET SHEET NO. 18 OF 33
PREL. TRAC. BY _____ FINAL TRAC. BY _____



CROSS SECTION

SCALE: 1 IN. = 10 FT.

PROJECT CISSEL AVENUE CONTRACT NO. D-1118

DESCRIPTION TC = TOP OF CURB, BD = BOTTOM OF DITCH, CL = CENTERLINE



SHEET NO. 3 OF 3
STATION 8+50 TO STATION 9+00
HOWARD COUNTY, MARYLAND-DEPARTMENT OF PUBLIC WORKS

CONT. NO. _____ F.A.P. NO. SEE TITLE SHEET SHEET NO. 19 OF 33
PREL. TRAC. BY _____ FINAL TRAC. BY _____

GENERAL NOTES

- ALL INFORMATION AND DETAILS ON THESE DRAWINGS SHALL BE AS DIRECTED BY THE HOWARD COUNTY ENGINEER, ~~AND THE MDSHA PERMIT DIRECTOR.~~
- ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY CONTRACTOR.
- STORM DRAINAGE SLOPES ARE TO BE AS DIRECTED BY HOWARD COUNTY ENGINEER UNLESS OTHERWISE SHOWN ON PLANS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

MISS UTILITY - 1-800-257-7777
 BALTIMORE GAS & ELECTRIC COMPANY-ELECTRIC DISTRIBUTION 410-291-3119
 ENGINEERING - 410-291-3096
~~GAS DISTRIBUTION - 410-291-4842 - GAS DISTRIBUTION~~
 BELL ATLANTIC - 410-224-9500
 COMCAST CABLE - 410-461-0444
 BUREAU OF UTILITIES
 HOWARD COUNTY D.P.W. - 410-313-4900

THE CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION OF ENGINEERING FOR VERIFICATION AND/OR INFORMATION REGARDING:

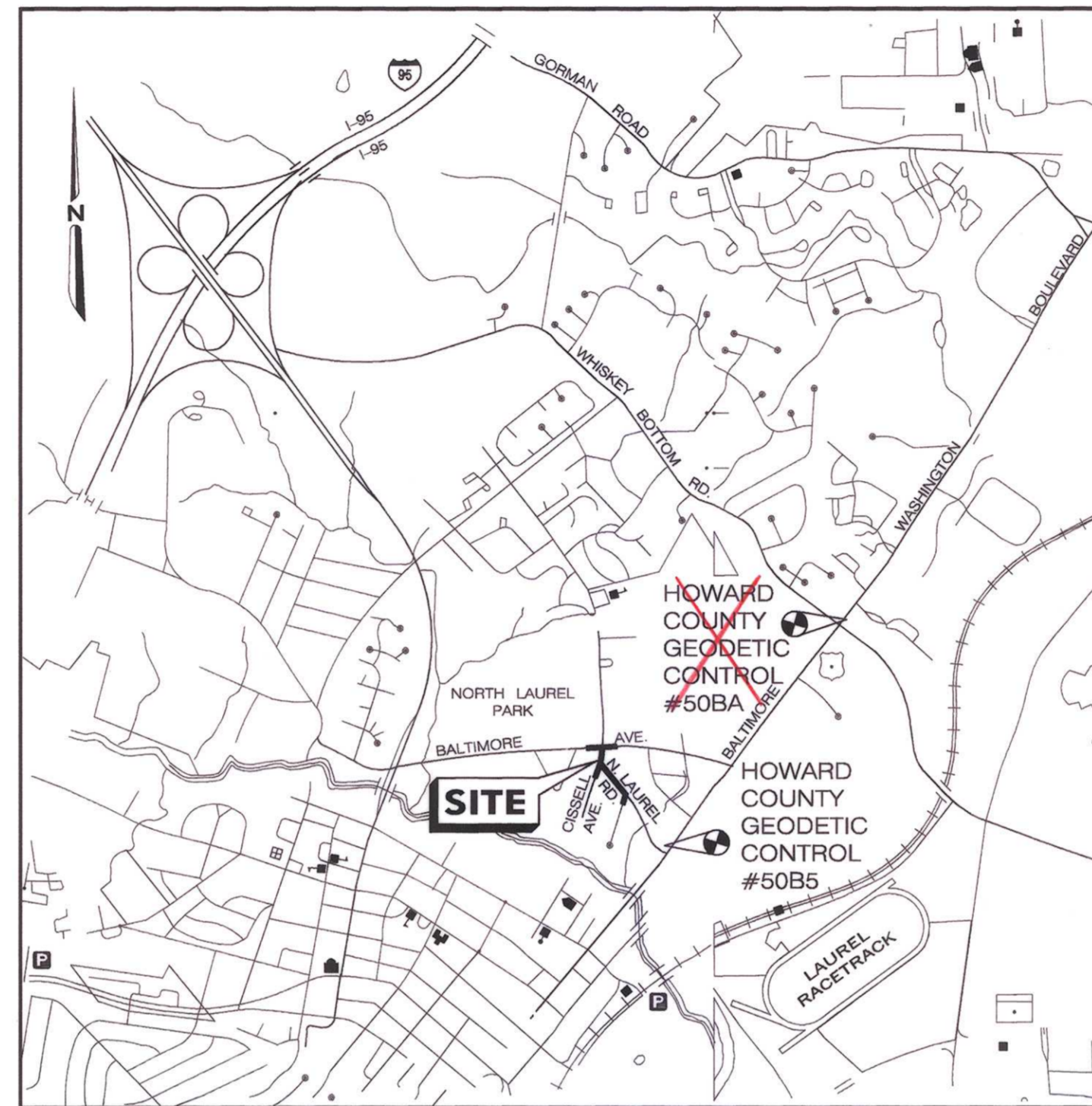
- A. PROPOSED / EXISTING RIGHT-OF-WAY.
- B. UTILITY RELOCATION.
- C. MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
- D. EROSION / SEDIMENT CONTROL CERTIFICATION AND PERMIT
- E. HORIZONTAL / VERTICAL SURVEY CONTROL.
- F. GRADING PERMIT

- SEE HOWARD COUNTY STANDARD DETAILS NO'S G-1.01 & G-1.02 FOR STANDARD SYMBOLS.
- COORDINATES BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.
- MAINTENANCE OF TRAFFIC ALONG ALL STREETS SHALL BE HANDLED BY SHA STANDARD MD-104.33-02 - WORK ZONE TRAFFIC CONTROL TYPICAL - SHOULDER WORK 1/2 LANE, 2 WAY. MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION FOR LANE CLOSURES SHALL BE HANDLED BY SHA STANDARD MD-104.31-02 - WORK ZONE TRAFFIC CONTROL TYPICAL, MD-104.32-01 - INTERSECTION FLAGGING OPERATION.
- A STAGING AND STOCKPILE AREA TO BE DETERMINED BY CONTRACTOR AND APPROVED BY HOWARD COUNTY ENGINEER.
- ~~TOPOGRAPHIC SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY THE HOWARD COUNTY, DATED JUNE, 2000.~~
- THE LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS.
- THE RIGHT-OF-WAY LINES AS SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE RIGHT-OF-WAY AND EASEMENT INFORMATION REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.
- ALL INFORMATION AND DETAILS ON THE FOLLOWING SHEETS SHALL BE AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- ALL DIMENSIONING IS TO BE FIELD VERIFIED BY CONTRACTOR.
- ~~REPLACE DRIVEWAYS "IN-KIND" BEHIND THE NEW SIDEWALK. (SEE WORK LIMITS ON SHEET 2)~~
- SURVEY INFORMATION UNAVAILABLE FOR SIDEWALK CONSTRUCTION NORTH OF STATION 10+00.

~~INDEX OF SHEETS~~

SHEET NO.	DESCRIPTION
20	1 TITLE SHEET
21	2 PLAN
22	3 SECTIONS AND DETAILS
23	4 SEDIMENT AND EROSION CONTROL PLAN
24-25	5-6 EROSION CONTROL NOTES AND DETAILS
26-27	7-8 TRAFFIC CONTROL PLAN
28	9 TRAFFIC CONTROL NOTES AND DETAILS
29	10 SIGNING AND MARKING PLAN
30	11 PROFILES, TABLES AND DETAILS
31	12 CROSS SECTIONS
32	13 STORM DRAIN PROFILES
33	14 GEOMETRY PLAN

REFER TO SHEET 1 OF 33 FOR INDEX OF SHEETS



LOCATION MAP
SCALE 1" = 2000'

CAPITAL PROJECT NO. K-5033
North Laurel Road Sidewalk Construction
(From Baltimore Avenue to Linville Avenue)
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

~~HOWARD COUNTY GEODETIC CONTROL~~

- ~~⊗ #50BA
 N 527561.678 E 1359772.604 ELEV. 249.44
 BRASS OR ALUMINUM DISC SET ON TOP OF CONCRETE CYLINDRIC BASE.
 USUALLY 1" OR 2" INCHES BELOW TERRAIN SURFACE.~~
- ~~⊗ #50B5
 N 524999.375 E 1357925.748 ELEV. 178.20
 BRASS OR ALUMINUM DISC SET ON TOP OF CONCRETE CYLINDRIC BASE.
 USUALLY 1" OR 2" INCHES BELOW TERRAIN SURFACE.~~

REFER TO SHEET 3 FOR HOWARD COUNTY GEODETIC CONTROL



PROJECT IS COMBINED WITH CAPITAL PROJECT D-1118

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT. DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Date 3/26/01
 U.S. Natural Resources Conservation Service
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Date 3/26/01
 Howard Soil Conservation District

ABOVE APPROVALS APPLY TO SHEETS 23, 24 & 25 OF 33

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE 3/15/01 DATE 3-15-01		AE GROUP, INC. ENGINEERS • PLANNERS 181 E. Main Street Westminster, Maryland 21158 AE Job No. 99-393-014		DES: F.A.C. URS 1 COMBINED PLANS WITH D-1118 3/05 DRN: A.M.T. CHK: F.A.C. DATE: 1/01		CAPITAL PROJECT NO. K-5033		TITLE SHEET North Laurel Road from Baltimore Avenue to Linville Avenue		SCALE AS SHOWN SHEET 20 OF 33	
CHIEF, BUREAU OF HIGHWAYS		CHIEF, BUREAU OF ENGINEERING		DATE 11/3/01		DATE:		DATE:		DATE:	



RESET EXISTING SIGNS
AS DIRECTED BY THE ENGINEER
SEE SHEET 10 29

STA. BA 1+00 LT.	0+88	1 EA.
STA. BA 12+75 RT.		1 EA.
STA. NLR 10+25 LT.	10+20	2 EA.
STA. CA 0+25 RT.		1 EA.

REMOVE EXISTING SIGNS
AS DIRECTED BY THE ENGINEER
SEE SHEET 10 29

STA. BA 0+50 LT.		1 EA.
STA. BA 1+50 LT.		1 EA.
STA. CA 0+40 LT.	9+12.6 RT.	1 EA.
STA. CA 0+50 LT.	9+12.47 RT.	1 EA.
STA. NLR 12+45 LT.	12+64.38 RT.	1 EA.
STA. BA 1+37.1 LT.		1 EA.

RESET EXISTING FENCE
AS DIRECTED BY THE ENGINEER

STA. NLR 12+25 TO 17+10 RT.	— CHAIN LINK	
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RELOCATE EXISTING MAILBOX
AS DIRECTED BY THE ENGINEER

STA. BA 1+10 LT.		1 EA.
STA. BA 1+40 LT.		1 EA.
STA. NLR 11+15 LT.	11+13 RT.	1 EA.
STA. CA 0+25 RT.	8+70.2 LT.	1 EA.
STA. CA 0+70 RT.	8+17.13 LT.	1 EA.
STA. NLR 12+85 LT.		1 EA.
STA. NLR 13+25 LT.		1 EA.
STA. NLR 14+10 RT.	14+91 RT.	2 EA.
STA. NLR 15+20 RT.		1 EA.
STA. NLR 16+50 RT.	16+25.5 RT.	1 EA.
NO MAILBOX WILL BE CAST INTO THE NEW SIDEWALK		
STA. NLR 10+99.54 LT.		1 EA.
STA. NLR 10+97.36 LT.		1 EA.
STA. CA 9+14.45 LT.		1 EA.

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 10+05.00

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 13+85.50

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+40.00

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+97.00

REFER TO SHEET 3 OF 33 FOR ISLAND LOCATION

REFER TO SHEET 5 FOR CONTINUATION OF ROADWAY CONSTRUCTION

RELOCATE FIRE HYDRANT
FH STA. 16+79 RT, OFFSET 17.5' NLR
ADJUST UTILITY
WM STA. 12+08, LT, OFFSET 8.5' NLR

RESET SANITARY MANHOLE FRAME AND COVER
STA. CA 0+75, 19' LT. 1 EA.
RAISE COVER TO FINAL GRADE AS DIRECTED BY THE COUNTY ENGINEER

RESET WATER VALVE COVER
STA. CA 0+60, 14' RT. 9+13.7 LT. 1 EA.
* STA. NLR 12+26, 19' RT. 12+28 RT. 1 EA.
* RAISE COVER TO FINAL GRADE AS DIRECTED BY THE COUNTY ENGINEER
* THE VALVE COVER WILL BE CAST INTO THE NEW SIDEWALK AS DIRECTED BY THE ENGINEER

RESIDENTIAL DRIVEWAY PER H.C.D.P.W. STD. R-6.05

STA. NLR 11+10 LT. ASPHALT	1 EA.
STA. NLR 12+90 LT. ASPHALT AND CONCRETE JOINT DRIVE	2 EA.
STA. CA 0+45 RT. CONCRETE	1 EA.
STA. CA 0+80 RT. CONCRETE	1 EA.

WORK LIMITS AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER

REPLACE EXISTING INLET AS DIRECTED BY THE ENGINEER

STA. NLR 12+24, 12' LT.	1 EA.
-------------------------	-------

REMOVE EXISTING TREES AS DIRECTED BY THE ENGINEER

STA. NLR 16+21, 17' RT.	1 EA.
STA. NLR 16+42, 17' RT.	1 EA.

INSTALL PROPOSED SIGNS AS DIRECTED BY THE ENGINEER SEE SHEET 10 29

STA. BA 0+25 LT.	1 EA.
STA. BA 2+00 LT.	1 EA.
STA. BA 3+00 LT.	1 EA.
STA. CA 0+35 LT. 9+09.5 RT.	1 EA.
STA. CA 0+55 LT. 9+31.5 RT.	1 EA.

INSTALL RESIDENTIAL DRIVEWAY PER H.C.D.P.W. STD. R-6.02

STA. BA 1+20± LT. JOINT GRAVEL	2 EA.
STA. NLR 13+95 RT. ASPHALT	1 EA.
STA. NLR 15+30 RT. CONCRETE	1 EA.
STA. NLR 16+60 RT. ASPHALT	1 EA.

WORK LIMITS AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER

INSTALL TYPE 'C' RESIDENTIAL SIDEWALK RAMP PER H.C.D.P.W. STD. R-4.03

STA. BA 0+25 41' LT.	1 EA.
STA. NLR 11+70 25' RT.	1 EA.
STA. NLR 12+18 22' RT.	1 EA.
STA. NLR 16+73 14' RT.	1 EA.

REMOVE AND DISPOSE OF EXISTING GUARDRAIL

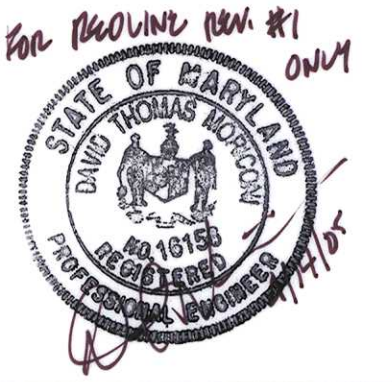
STA. NLR 12+10 TO 12+97.5 RT.	95 FT
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LEGEND

	PROPOSED FULL DEPTH PAVEMENT
	MILL AND OVERLAY
	PROPOSED SIDEWALK
	PROPOSED PAVEMENT REMOVAL
	LIMIT OF FILL
	TOP OF CUT
	LIMIT OF DRIVEWAY WORK
	TEST PIT

LIMIT OF SIDEWALK WORK AT CONSTRUCTION STA. 2+07.00 LEFT

PLAN SCALE: 1" = 30'



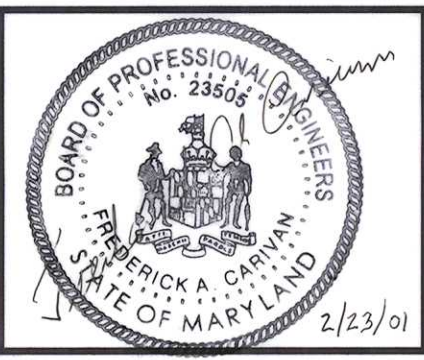
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

3/15/01
DATE

3/15/01
DATE

3/15/01
DATE

AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
AE Job No. 99-393-014



DES. F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN. A.M.T.				
CHK. F.A.C.				
DATE: 1/01	BY	NO.	REVISION	DATE

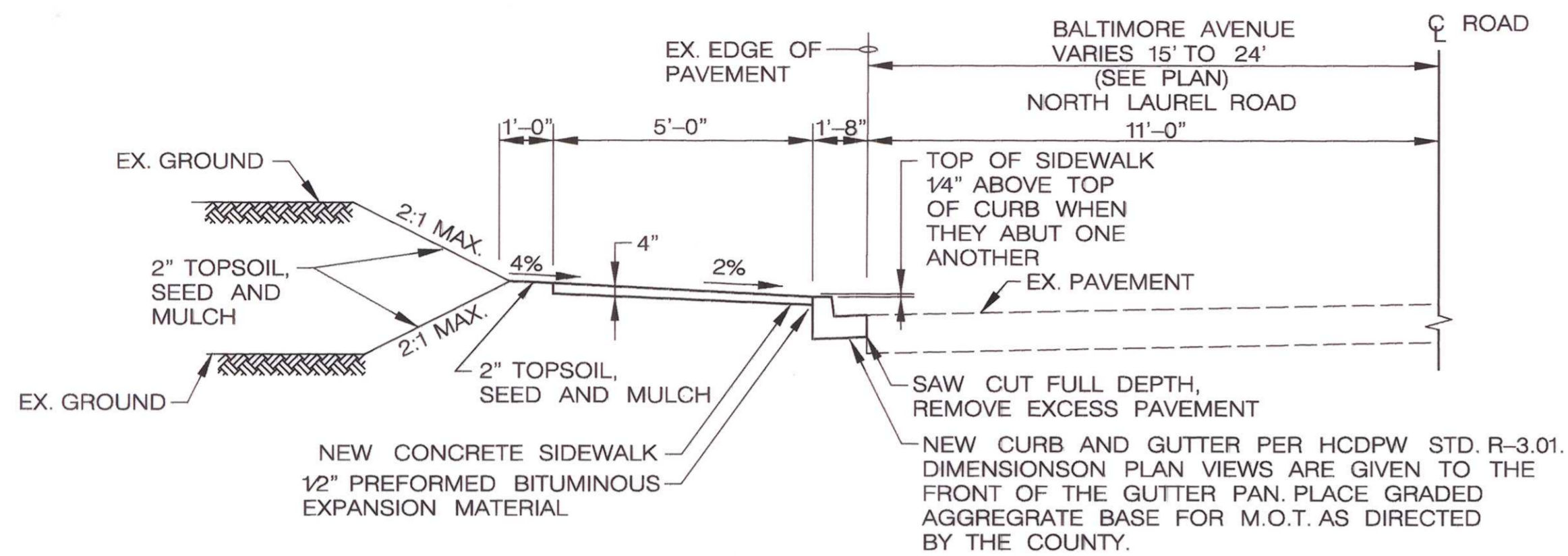
CAPITAL PROJECT NO.
K-5033

600' SCALE MAP NO. _____ DATE: _____

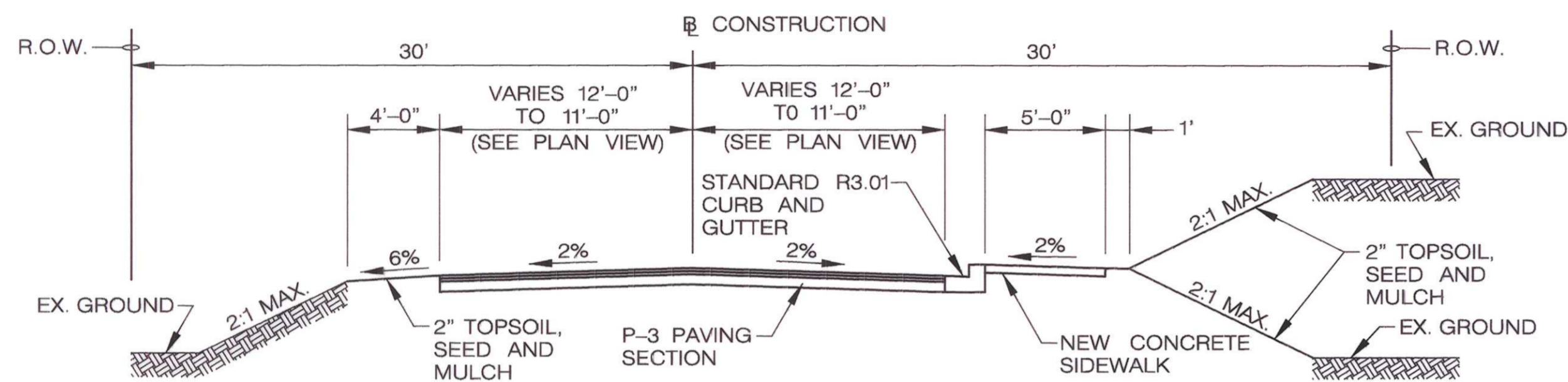
PLAN
North Laurel Road from Baltimore Avenue to Linville Avenue

SCALE AS SHOWN

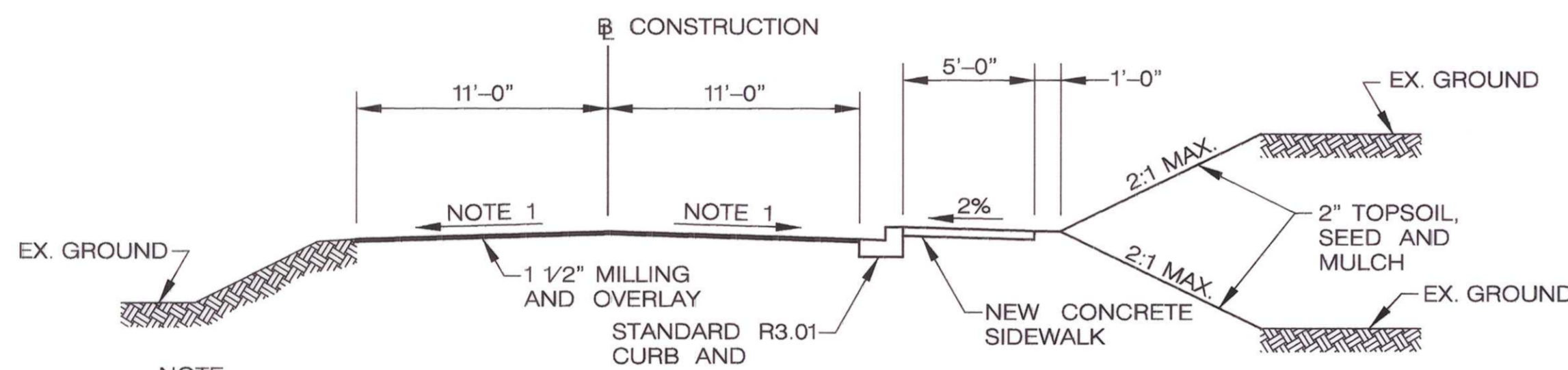
SHEET 21 OF 34



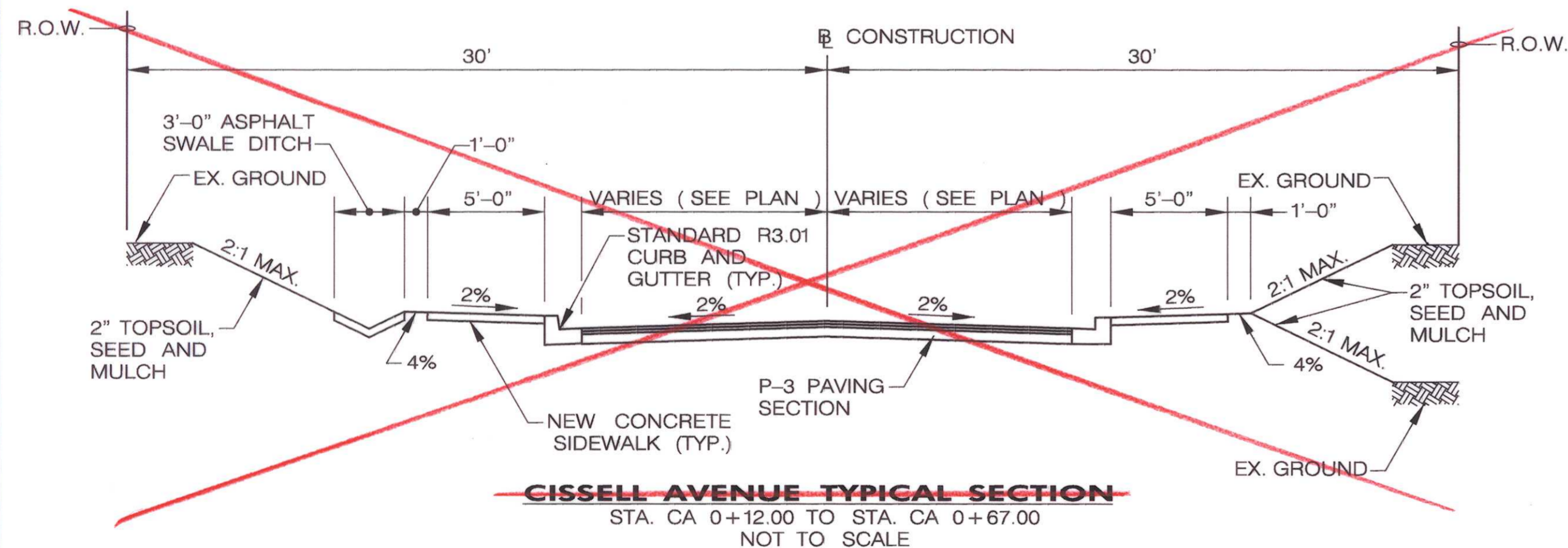
TYPICAL SIDEWALK AND CURB SECTION
 BALTIMORE AVENUE STA. B.S. 0+36.35 TO STA. B.S. 2+06.00 LEFT
 BALTIMORE AVENUE STA. N.L.R. 10+50± TO STA. N.L.R. 12+80± RIGHT
 NORTH LAUREL ROAD STA. N.L.R. 12+05.00 TO STA. N.L.R. 17+09.00 RIGHT



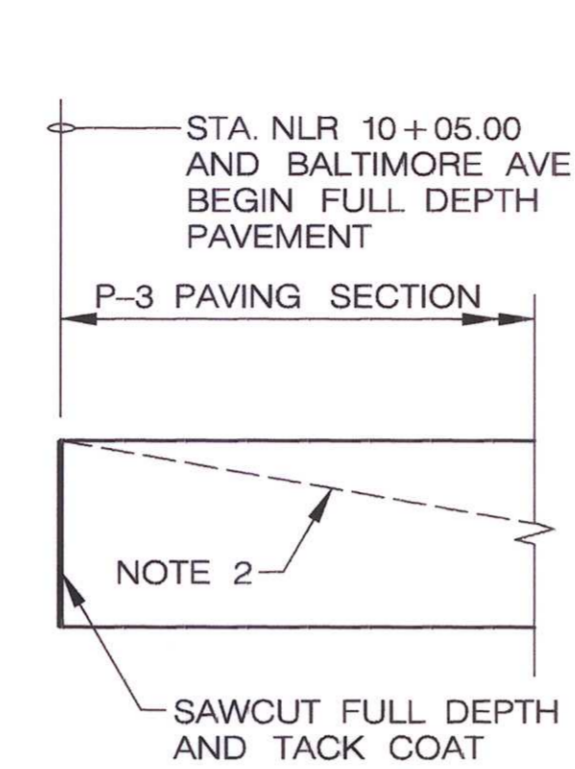
NORTH LAUREL ROAD TYPICAL SECTION
 STA. N.L.R. 10+05 TO STA. N.L.R. 13+65.00
 NOT TO SCALE



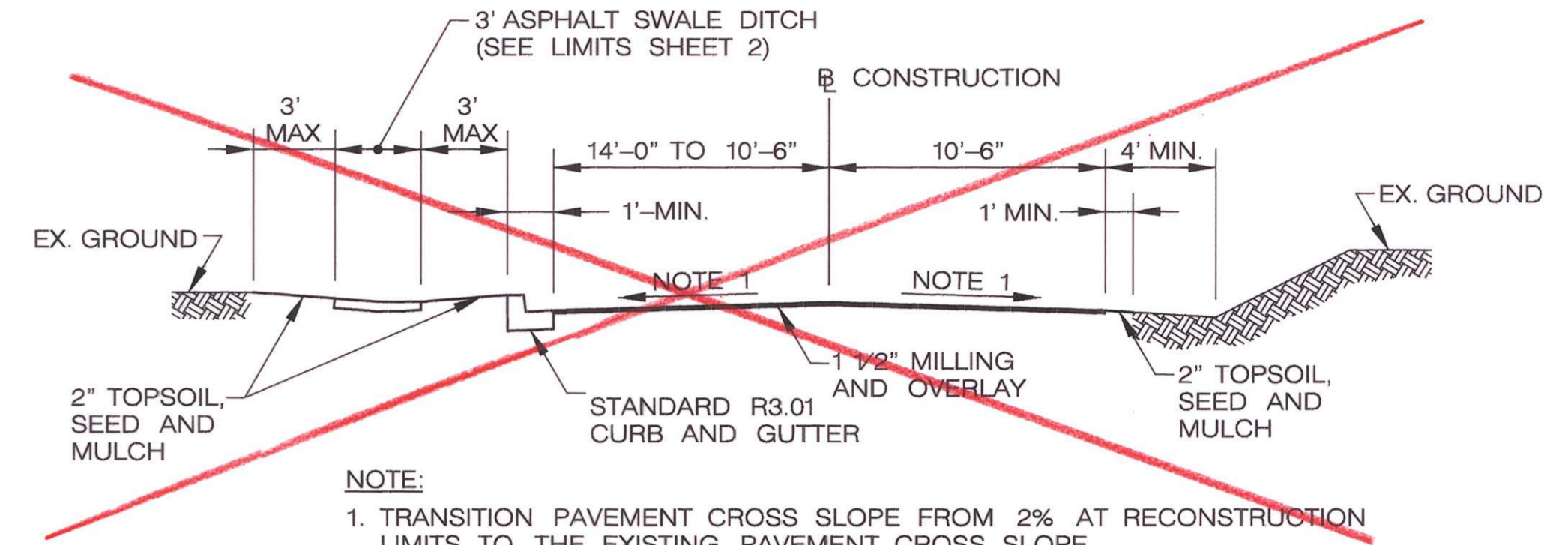
NORTH LAUREL ROAD TYPICAL MILLING AND OVERLAY SECTION
 STA. N.L.R. 13+65.00 TO STA. N.L.R. 13+85.50
 NOT TO SCALE



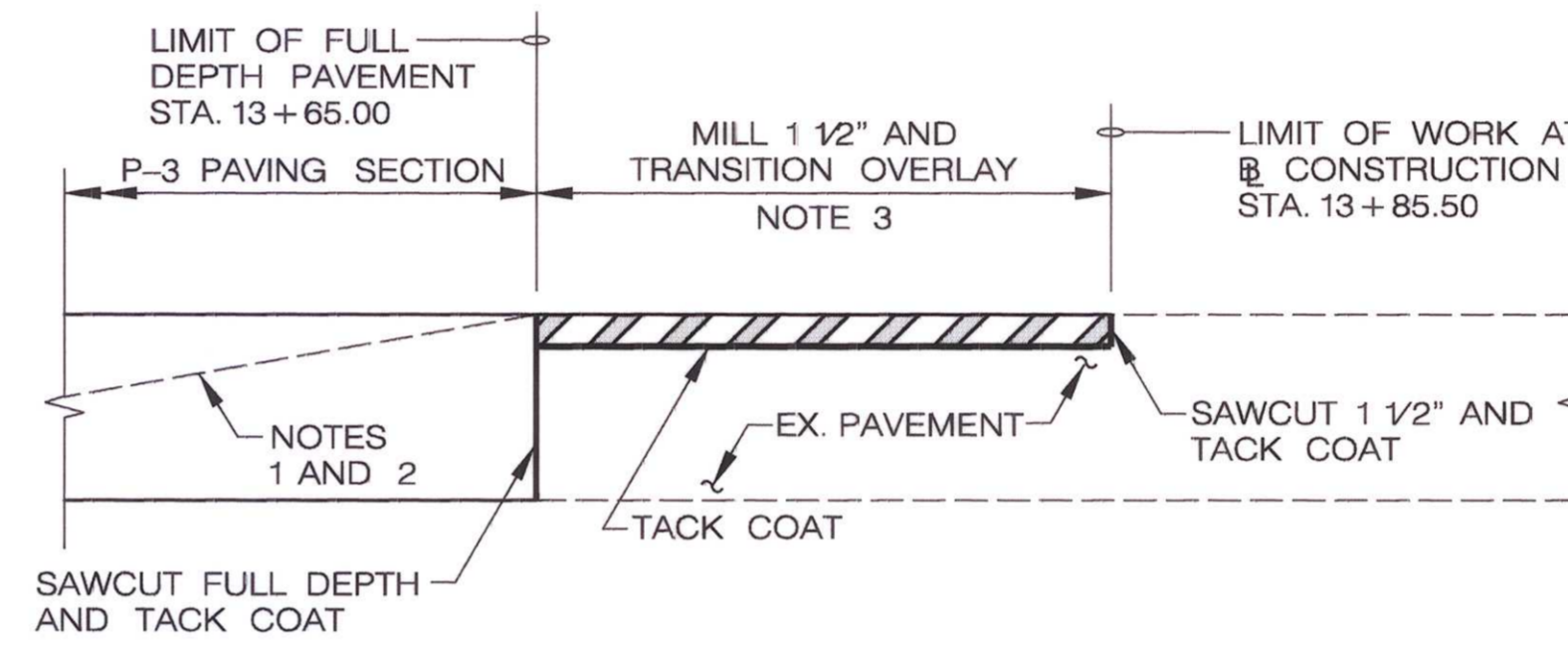
CISSELL AVENUE TYPICAL SECTION
 STA. CA. 0+12.00 TO STA. CA. 0+67.00
 NOT TO SCALE



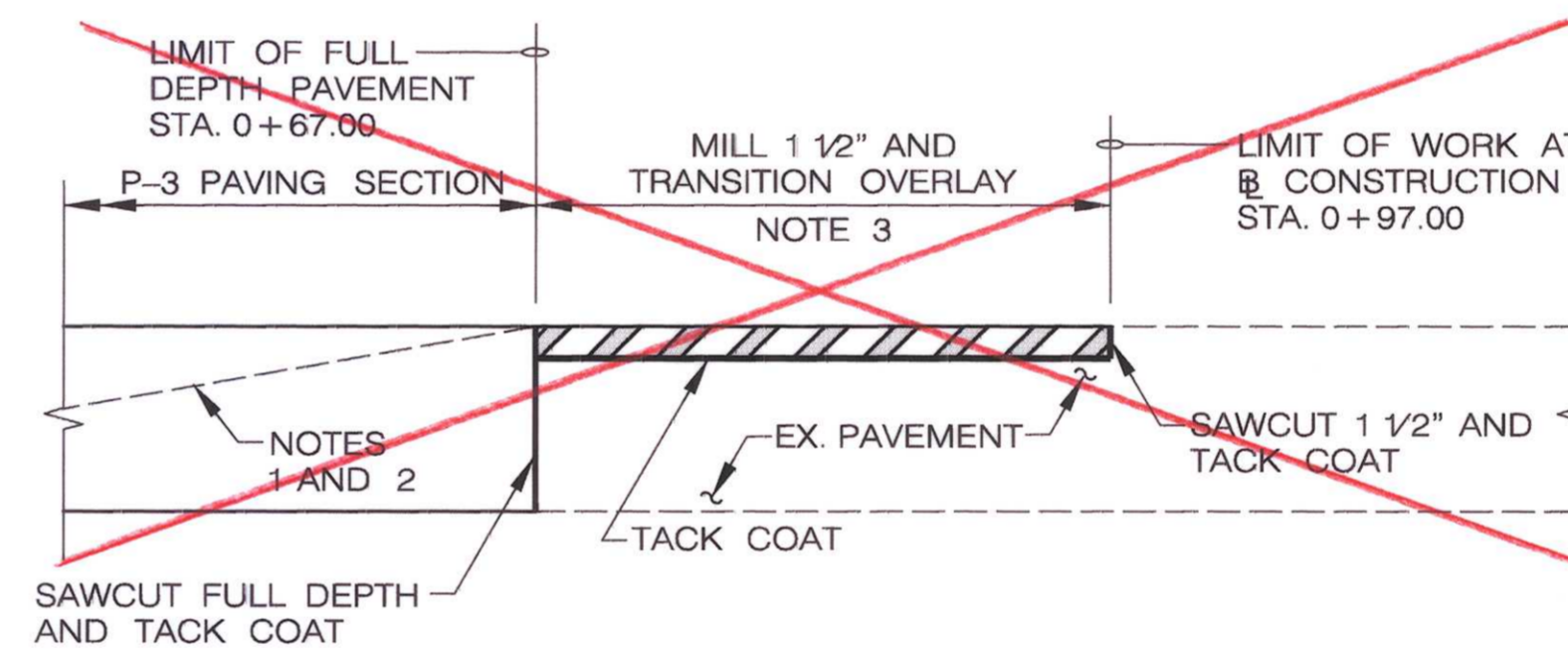
INTERSECTION JOINT
 NOT TO SCALE



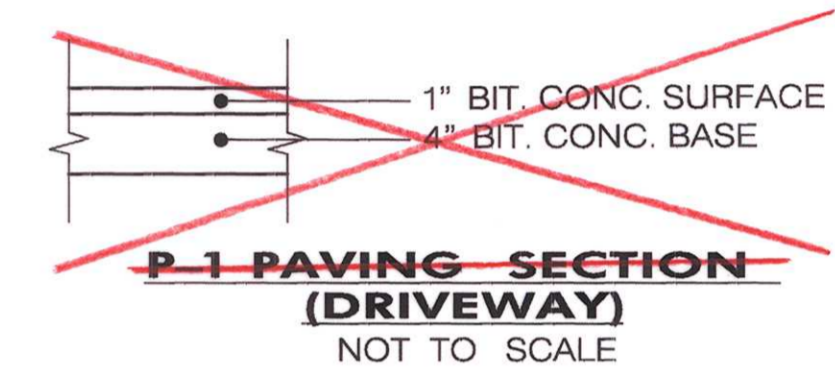
CISSELL AVENUE TYPICAL MILLING AND OVERLAY SECTION
 STA. CA. 0+67.00 TO STA. CA. 0+97.00
 NOT TO SCALE



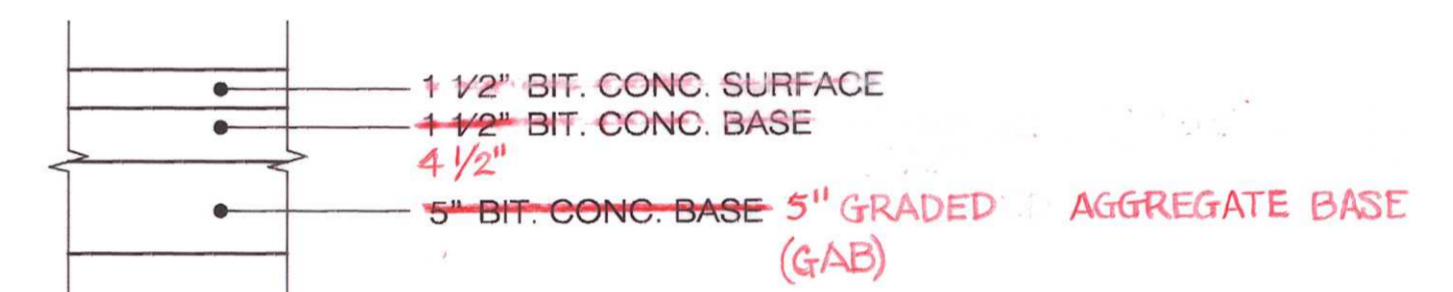
NORTH LAUREL ROAD
 NOT TO SCALE



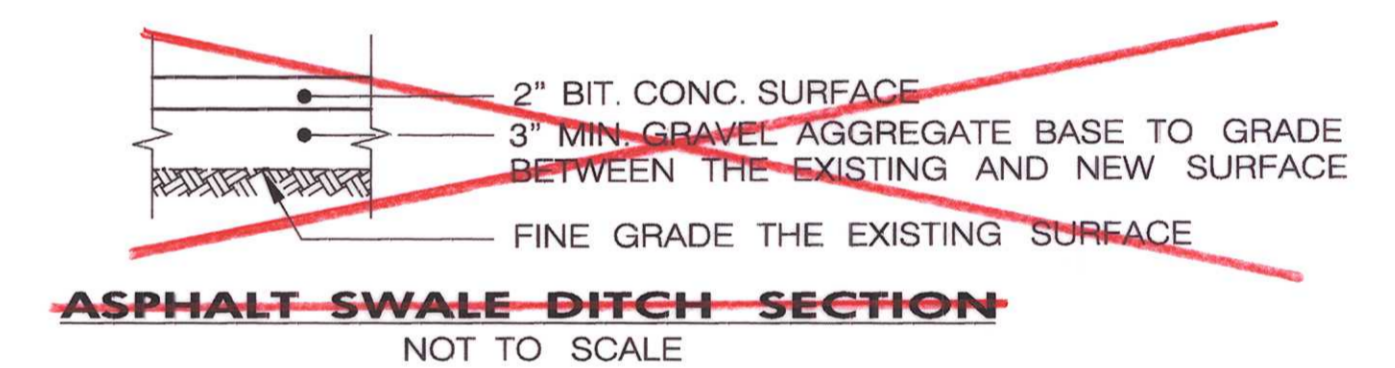
CISSELL AVENUE
 NOT TO SCALE



P-1 PAVING SECTION (DRIVEWAY)
 NOT TO SCALE



P-3 PAVING SECTION
 NOT TO SCALE



ASPHALT SWALE DITCH SECTION
 NOT TO SCALE

PAVEMENT JOINT NOTES:

- DURING ALL REMOVAL AND PAVING OPERATIONS AT THE END OF EACH WORK DAY CREATE OR MAINTAIN A 1:20 MIN. TRANSITION BETWEEN THE EXISTING PAVEMENT AND NEW PAVEMENT.
- ON THE DAY THE BITUMINOUS CONCRETE SURFACE COURSE IS PLACED, THE CONTRACTOR SHALL MILL ACROSS THE TRANSITIONS AND GRADE THE NEW SURFACE COURSE BETWEEN THE EXISTING PAVEMENT AND THE P-3 PAVEMENT.
- MILL AND GRADE WITH BITUMINOUS CONCRETE SURFACE COURSE ON THE DAY THE SURFACE COURSE IS PLACED.

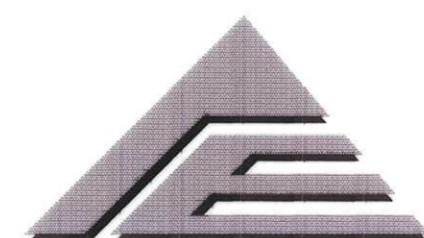
PAVEMENT JOINT DETAILS
 NOT TO SCALE



DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

[Signature] 3/16/01
 DEPARTMENT OF PUBLIC WORKS
 [Signature] 3/15/01
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION
 [Signature] 3-15-01
 CHIEF, BUREAU OF HIGHWAYS



AE GROUP, INC.

ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 AE Job No. 99-393-014



DES. F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN. A.M.T.				
CHK. F.A.C.				
DATE: 101				
BY	NO.	REVISION	DATE	600' SCALE MAP NO.

CAPITAL PROJECT NO.

K-5033

SECTION AND DETAILS

**North Laurel Road
 from Baltimore Avenue
 to Linville Avenue**

SCALE AS SHOWN

SHEET 8 OF 14
 22 33

OWNER'S CERTIFICATE

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

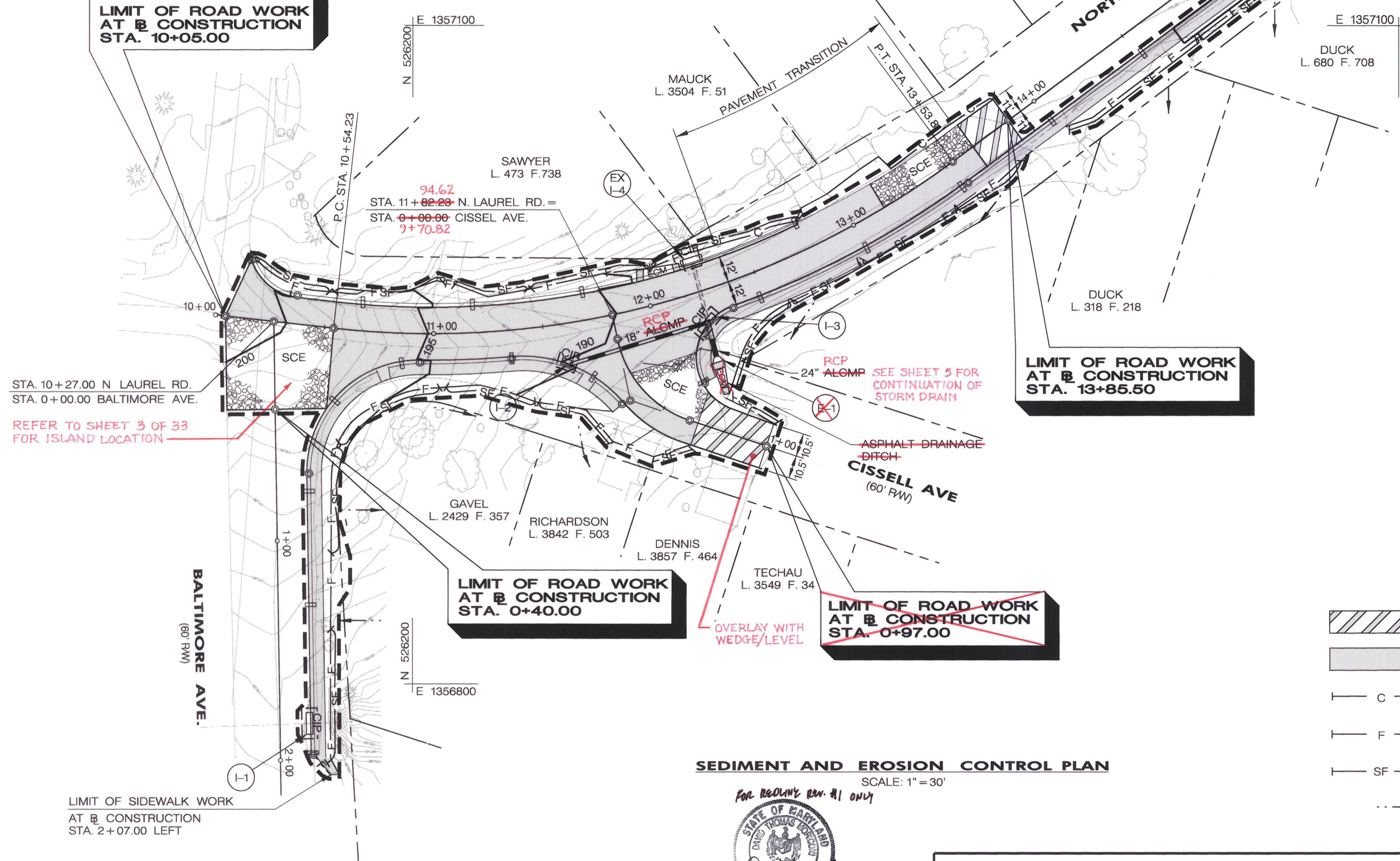
Paul J. Spon 3/20/01
 SIGNATURE OF OWNER DATE
 PRINT NAME BELOW SIGNATURE

ENGINEER'S CERTIFICATE

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

Frederick A. Carivan 1/9/01
 FREDERICK A. CARIVAN, P.E. DATE

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 10+05.00



STA. 10+27.00 N LAUREL RD.
 STA. 0+00.00 BALTIMORE AVE.
 REFER TO SHEET 3 OF 33 FOR ISLAND LOCATION

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+40.00

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+97.00

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 13+85.50

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPSBASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
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 HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

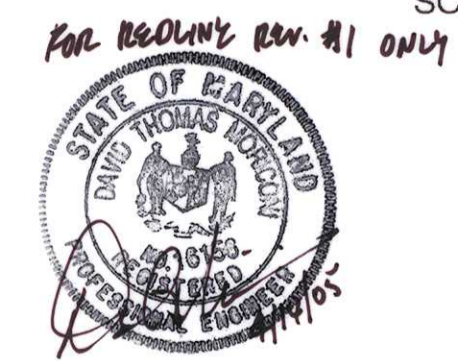
TOTAL AREA OF SITE	NA
AREA DISTURBED	0.62 ACRES
AREA TO BE ROOFED OR PAVED	.044 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.18 ACRES
TOTAL CUT	290 CU. YDS.
TOTAL FILL	410 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	TO BE DETERMINED BY CONTRACTOR (SITE WITH A CURRENT ACTIVE GRADING PERMIT)
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

LEGEND

- [Hatched Box] - MILL AND OVERLAY
- [Solid Grey Box] - PROPOSED CONSTRUCTION
- [Line with 'C'] - TOP OF CUT
- [Line with 'F'] - LIMIT OF FILL
- [Line with 'SF'] - SILT FENCE
- [Arrow] - CLEAN OFF-SITE STORMWATER
- [Box with 'SCE'] - STABILIZED CONSTRUCTION ENTRANCE
- [Dashed Line] - LIMIT OF DISTURBANCE
- [Box with 'CIP'] - CURB INLET PROTECTION
- [Box with 'ECM'] - EROSION CONTROL MATTING
- [Wavy Line] - EXISTING CONTOURS
- [Dotted Line] - PROPOSED CONTOURS
- [Box with 'X'] - STRAW BALE DIKE

SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1" = 30'



FOR SEDIMENT & EROSION CONTROL ONLY

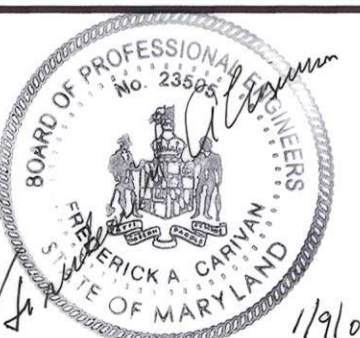
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Spon 3/16/01
 DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF ENGINEERING DATE

Elizabeth Calvo 3/15/01
 CHIEF, BUREAU OF ENGINEERING DATE

William J. Mulla 3-15-01
 CHIEF, BUREAU OF HIGHWAYS DATE

AE GROUP, INC.
 ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 A/E Job No. 99-393-014



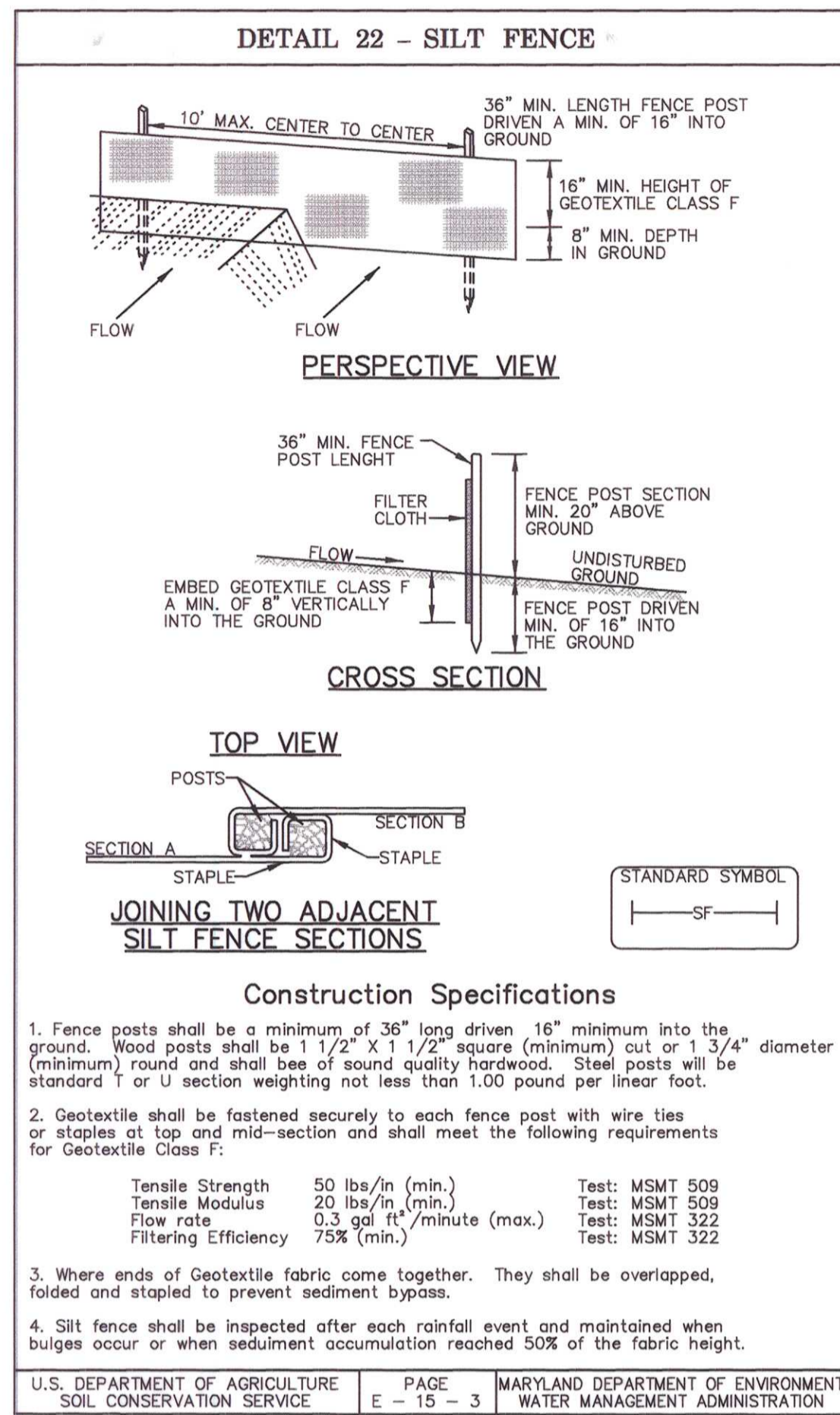
DES: F.A.C.	URS 1	COMBINED PLANS WITH D-1118	3/05
DRN: S.F.N.			
CHK: F.A.C.			
DATE: 101			

CAPITAL PROJECT NO.
K-5033

600' SCALE MAP NO. _____ DATE: _____

SEDIMENT AND EROSION CONTROL PLAN
North Laurel Road from Baltimore Avenue to Linville Avenue

SCALE AS SHOWN
 SHEET 23 OF 33



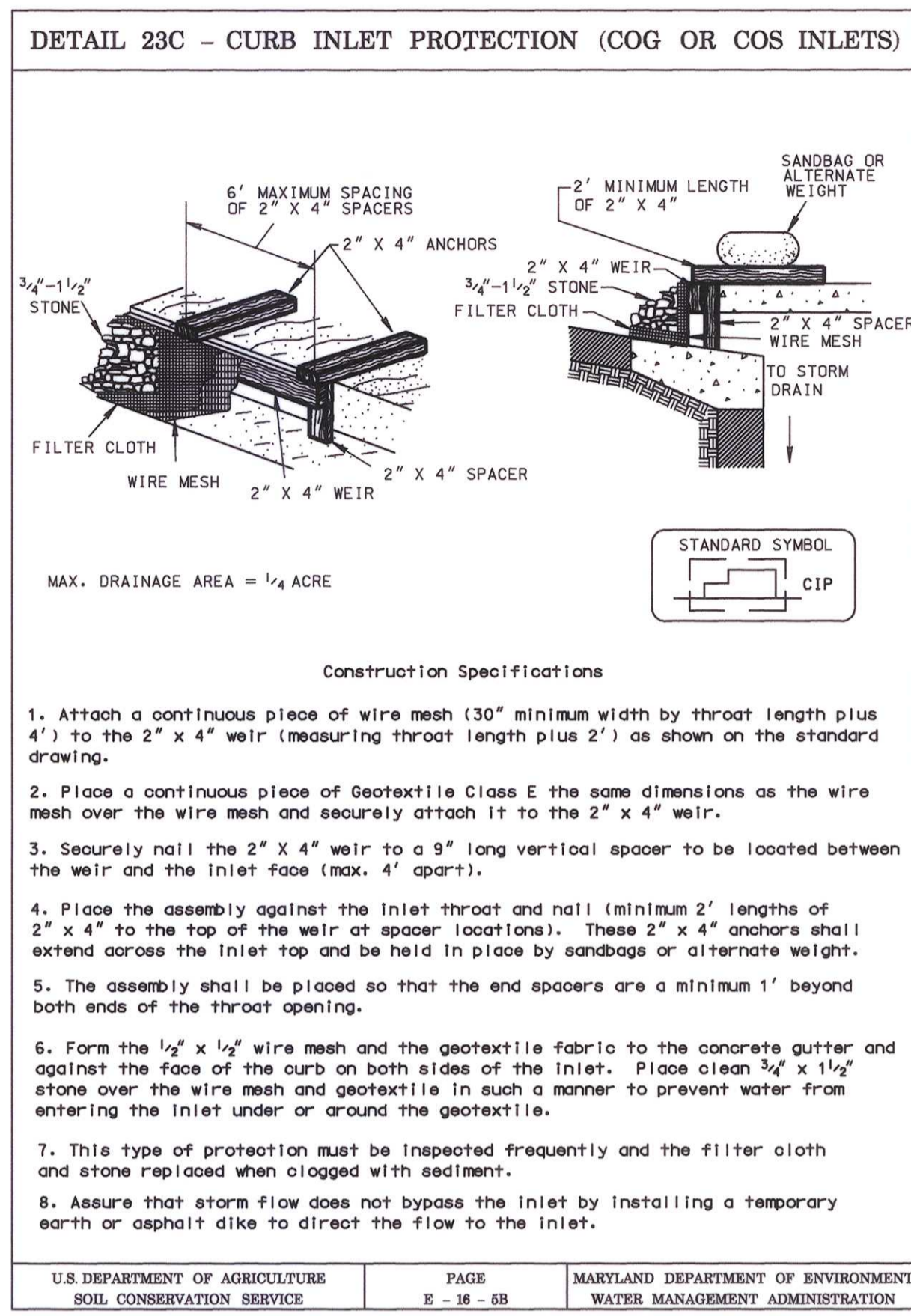
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 15 - 8A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition and Purpose

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

To provide a suitable soil medium for vegetative growth. Soils of concern have a low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have that appropriate stabilization shown on the plans.

Construction and Material Specifications

- Topsoil salvaged from existing site may be used provided that 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-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsoils and shall contain less than 5% by volume of cinders, stone, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

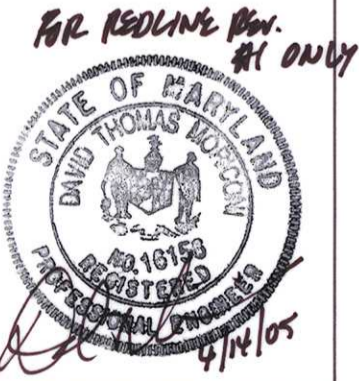
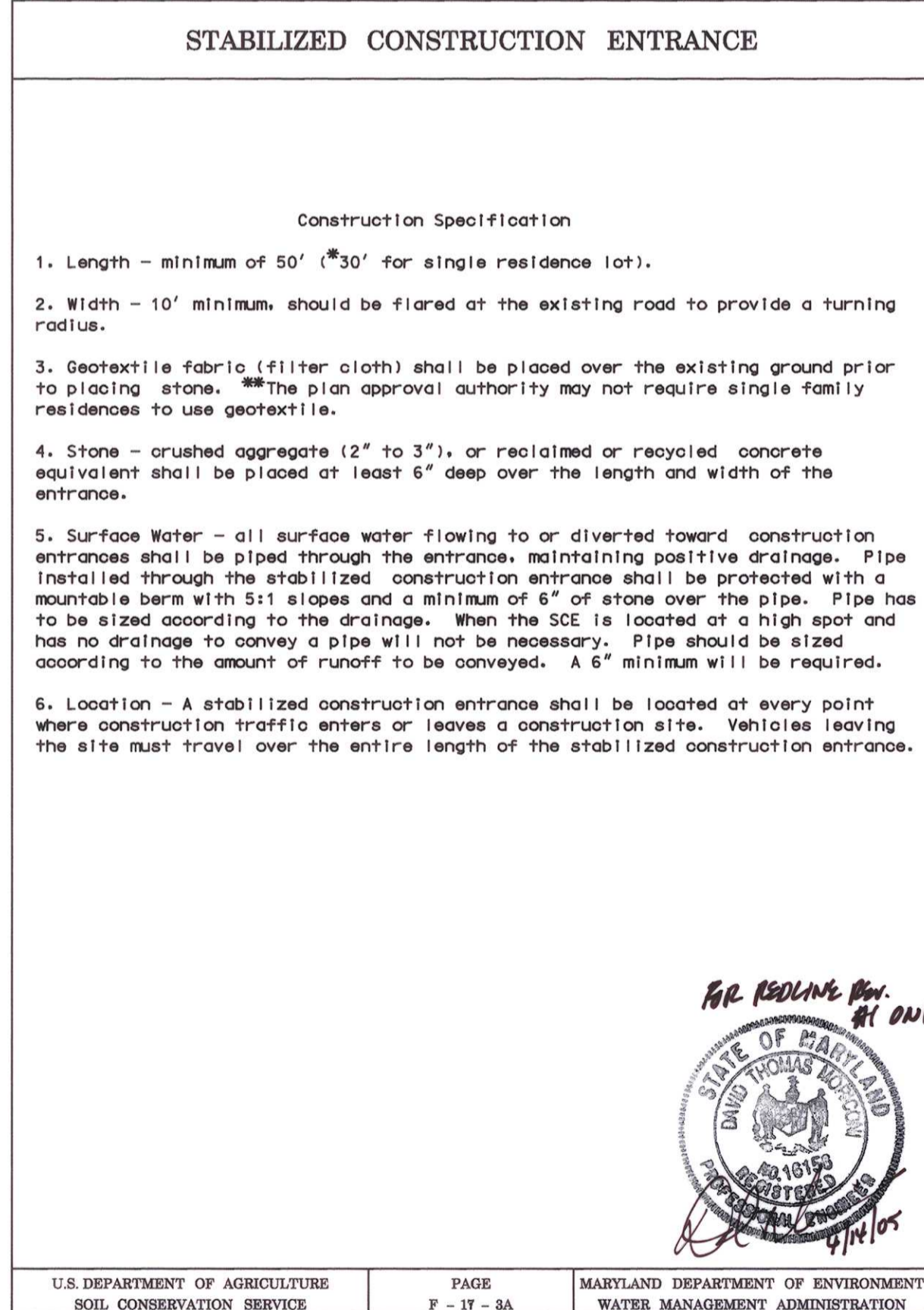
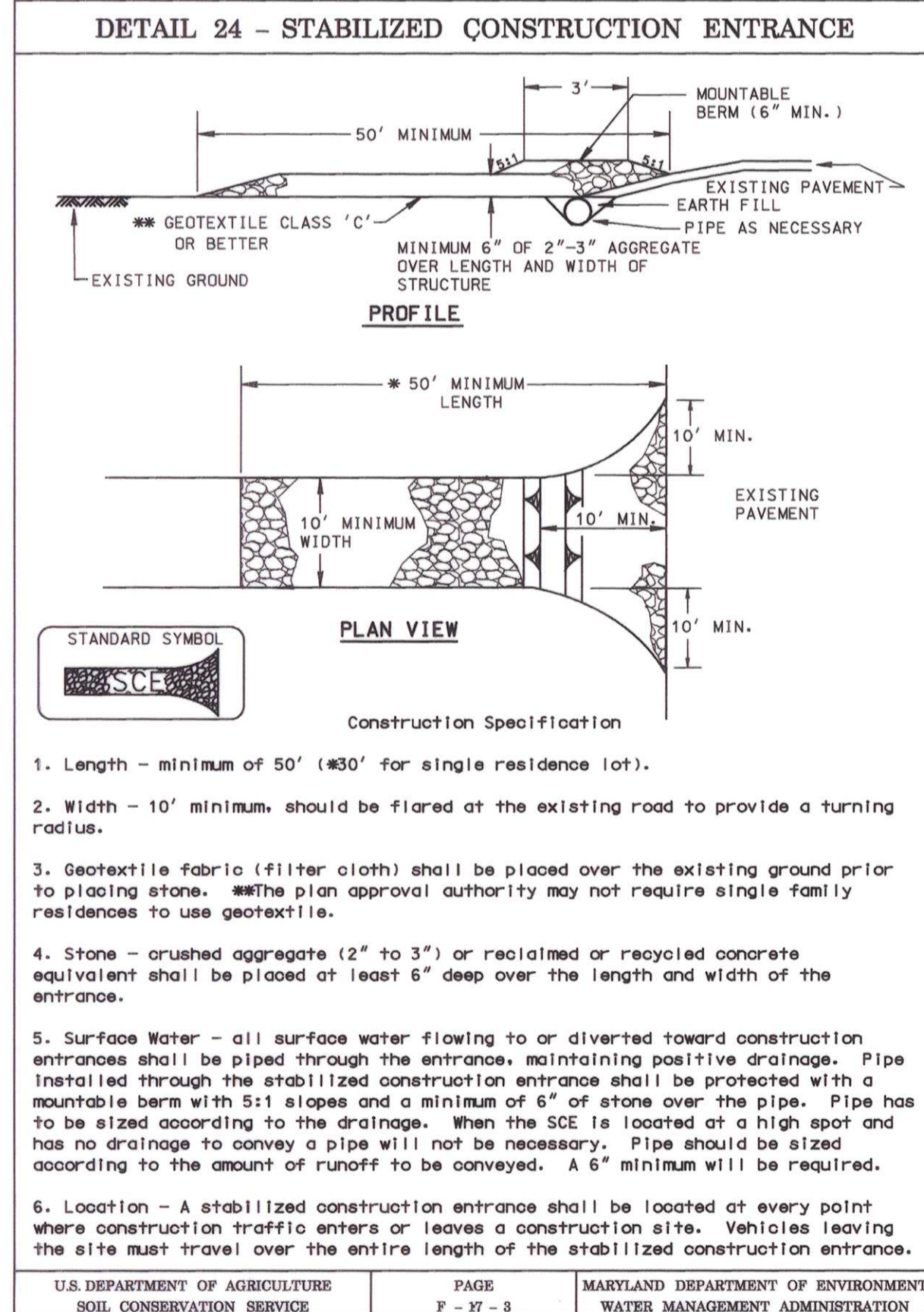
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.
- Topsoil shall be uniformly disturbed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall 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 shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

NOTES:

- CONTRACTOR WILL PROVIDE STONE CONSTRUCTION ENTRANCES IN THE WORK ZONES DURING ALL PHASES OF CONSTRUCTION. SEE DETAIL NO. 24 ON SHEET 5 OF 14, 24 OF 33.
- PROVIDE E.C.M. DITCH LINING FOR ALL SWALES WHERE RIP-RAP LINING IS NOT INDICATED.



SEQUENCE OF CONSTRUCTION

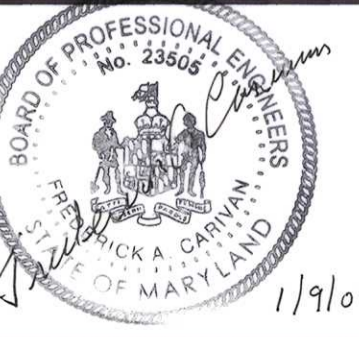
- OBTAIN GRADING PERMIT AND SUBMIT NOTIFICATION TO THE COUNTY AS NOTED IN THE SPECIFICATION. OBTAIN PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR PRIOR TO ANY CONSTRUCTION. (1 DAY)
- INSTALL PERIMETER SEDIMENT CONTROL MEASURES. (1 DAY)
- INSTALL THE PROPOSED STORM DRAINAGE STRUCTURES AND PIPES AS INDICATED ON THE PLAN. INSTALL CURB INLET PROTECTION IMMEDIATELY UPON CONSTRUCTION. (5 DAYS)
- REMOVE EXISTING PAVEMENT AND REGRADE BOTH INTERSECTIONS. INSTALL NEW PAVEMENT ON REGRADED SURFACE. (15 DAYS)
- GRADE THE WORK AREA TO LINE AND GRADE OF SIDEWALK FORM AND PLACE CONCRETE SIDEWALK SLABS, IN LENGTHS NO MORE THAN 15 FEET LONG, AND CONCRETE CURB AND GUTTER SETTING JOINT MATERIAL BETWEEN POURS. THE CONTRACTOR SHALL NOT EXPOSE MORE THAN 500 FEET OF THE WORK ZONE AT ANY ONE TIME. AS EACH 500 FOOT SECTION OF THE SIDEWALK IS PROPERLY SET, THE CONTRACTOR SHALL FINE-GRADE EACH SIDE OF THE NEW SIDEWALK, APPLY TOPSOIL, SEED AND MULCH. (15 DAYS)
- REMOVE SEDIMENT CONTROL DEVICES WITH APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. (1 DAY)

FOR SEDIMENT & EROSION CONTROL ONLY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 3/16/05
DATE: 3/15/05

AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393-014



DES: F.A.C.	URS	1	COMBINED PLANS WITH P-1118	3/05
DRN: A.M.T.				
CHK: F.A.C.				
DATE: 1/01	BY:	NO.	REVISION	DATE:

CAPITAL PROJECT NO.
K-5033

EROSION CONTROL NOTES AND DETAILS
North Laurel Road from Baltimore Avenue to Linville Avenue

SCALE AS SHOWN
SHEET 5 OF 14
24 OF 33

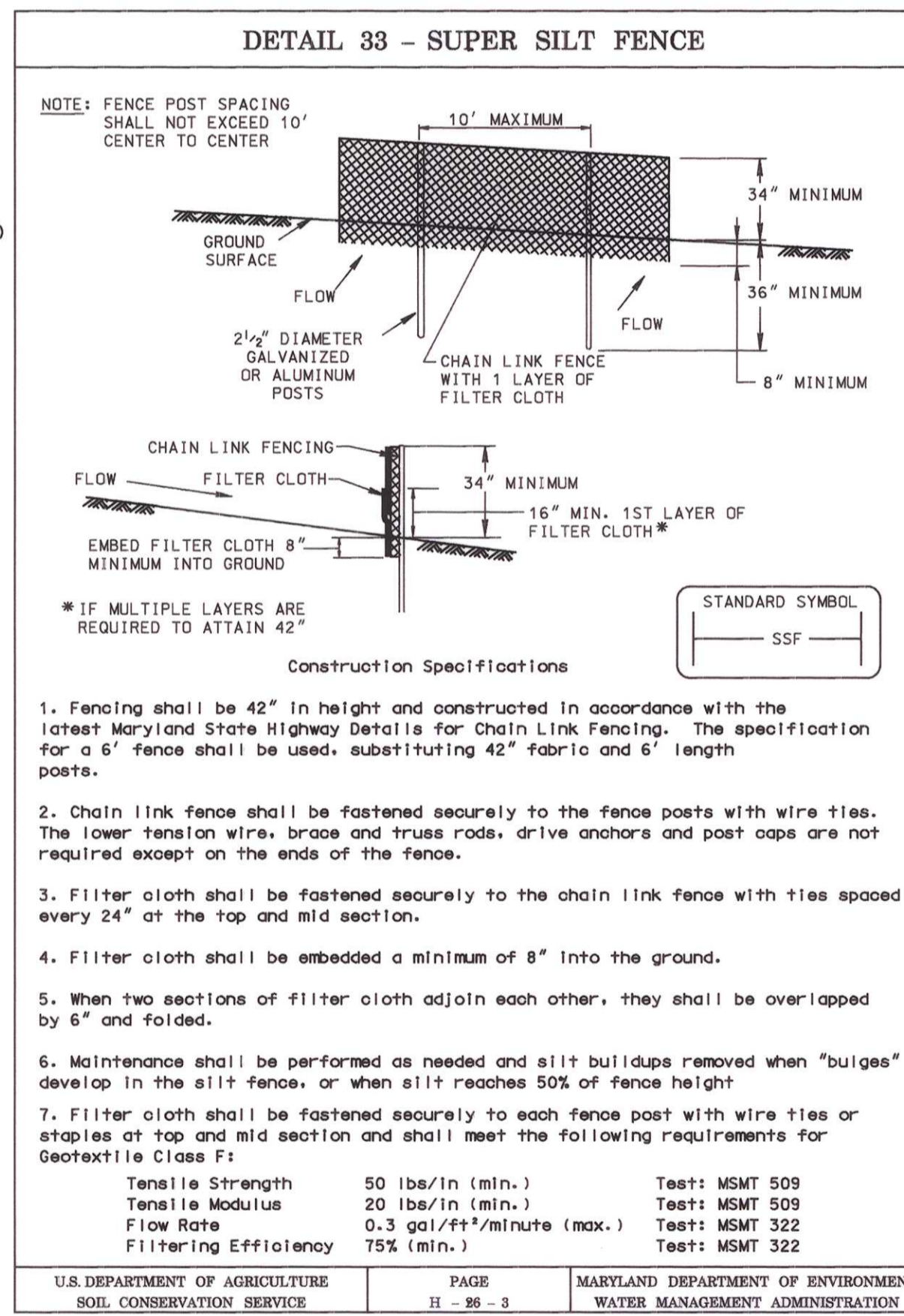
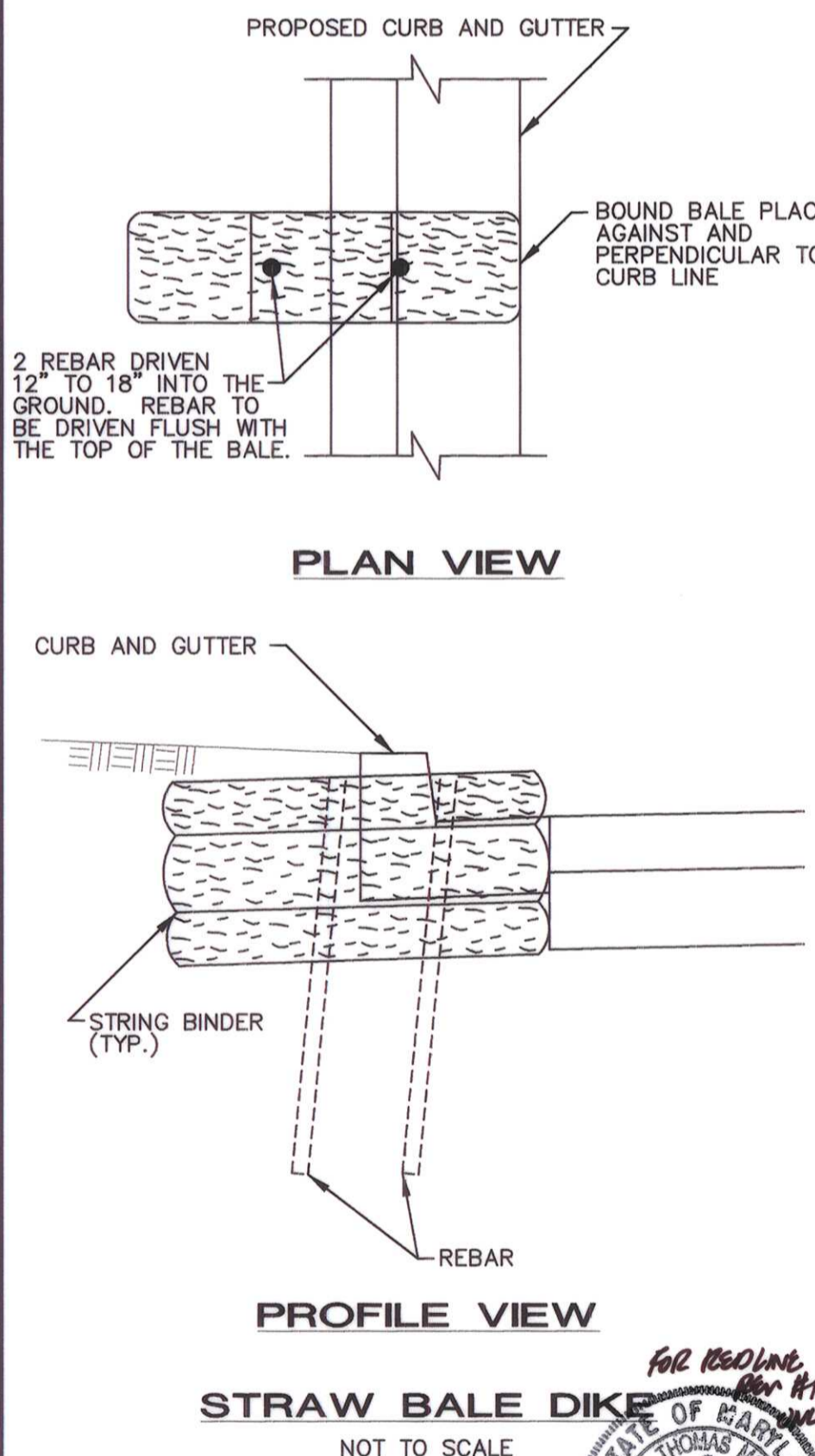
Section I - Vegetative Stabilization Methods and Materials

- A. Site Preparation
- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for site having disturbed area over 5 acres.
- B. Soil Amendments (Fertilizer and Lime Specifications)
- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- C. Seedbed Preparation
- Temporary Seeding
 - Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" 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 should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.
 - Permanent Seeding
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or sericea lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.

- Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface.

Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.
- Seed Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job. Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
 - Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculant shall not be used later than the date indicated on the container. Add fresh inoculant as directed on 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 75-80 F. can weaken bacteria and make the inoculant less effective.
- Methods of Seeding
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen: maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac.
 - 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.
 - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Mulch Specifications (In order of preference)
 - Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - Wood Cellulose Fiber Mulch (WCFM).
 - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM shall 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.

- WCFM, including dy, shall contain no germination or growth inhibiting factors.
 - WCFM materials shall 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 shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
 - WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum. Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
- G. Mulching Seeded Areas
- Mulch shall be applied to all seeded areas immediately after seeding.
 - If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
 - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- H. Securing Straw Mulch (Mulch Anchoring):
- Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
- A mulch anchoring tool is a tractor drawing implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. The 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 be used on the contour if possible.
 - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should appear to be uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70, Petrosat, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

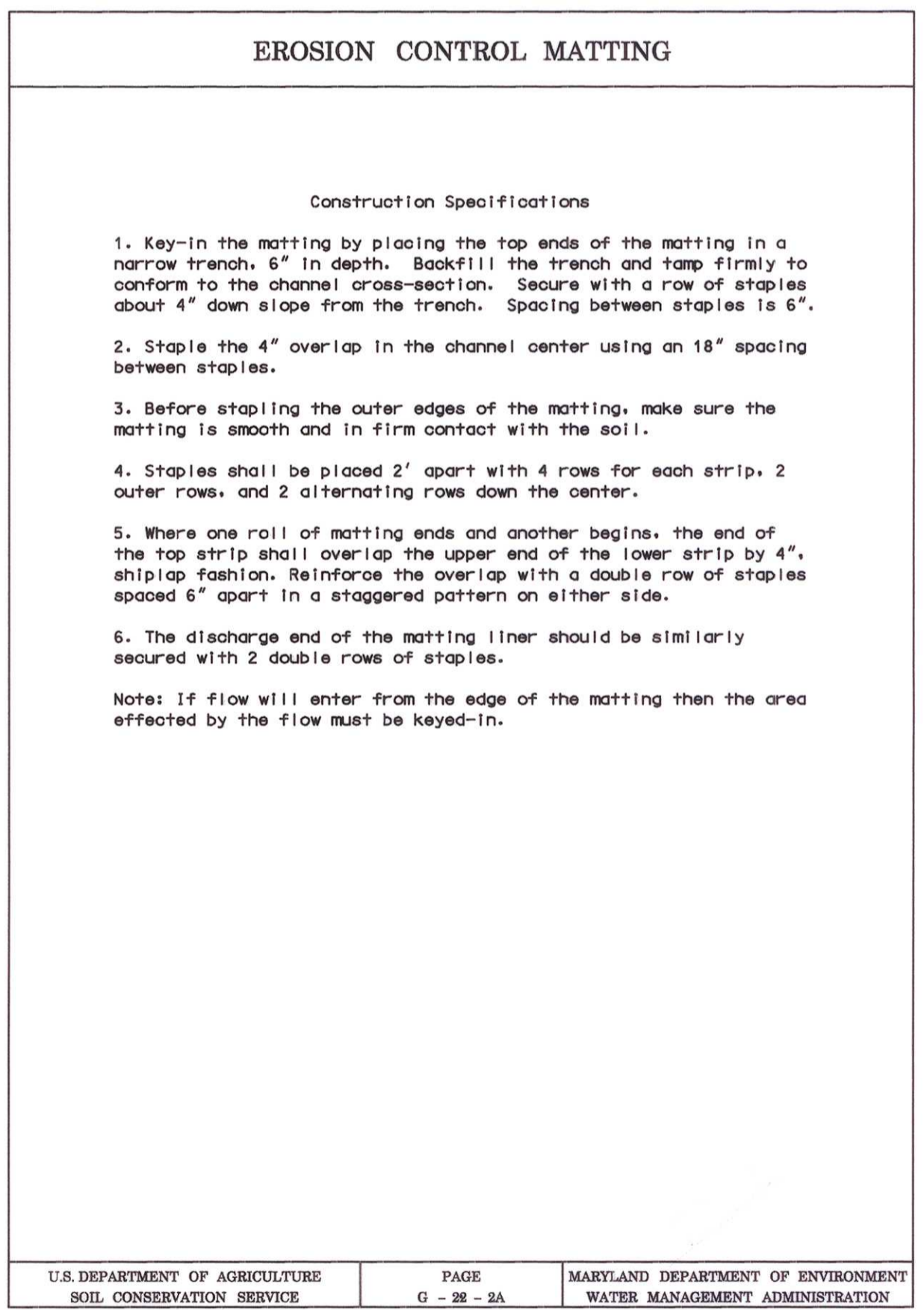
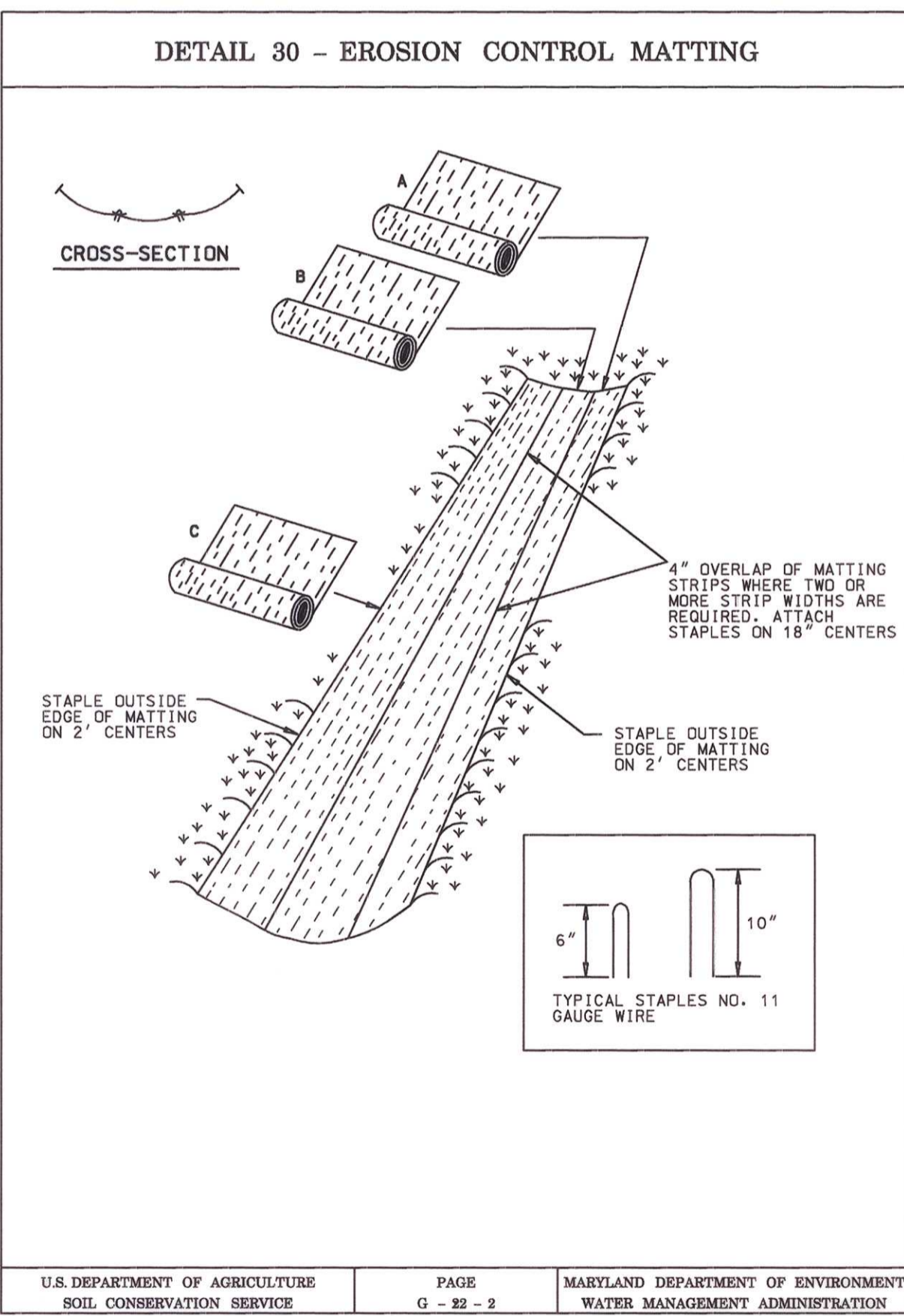


SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H - 26 - 3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



FOR SEDIMENT & EROSION CONTROL ONLY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

3/16/01 DATE
3/15/01 DATE

3/15/01 DATE
3-15-01 DATE

AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
AE Job No. 99-393-014

1/9/01

DES: F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN: A.M.T.				
CHK: F.A.C.				
DATE: 1/01	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
K-5033

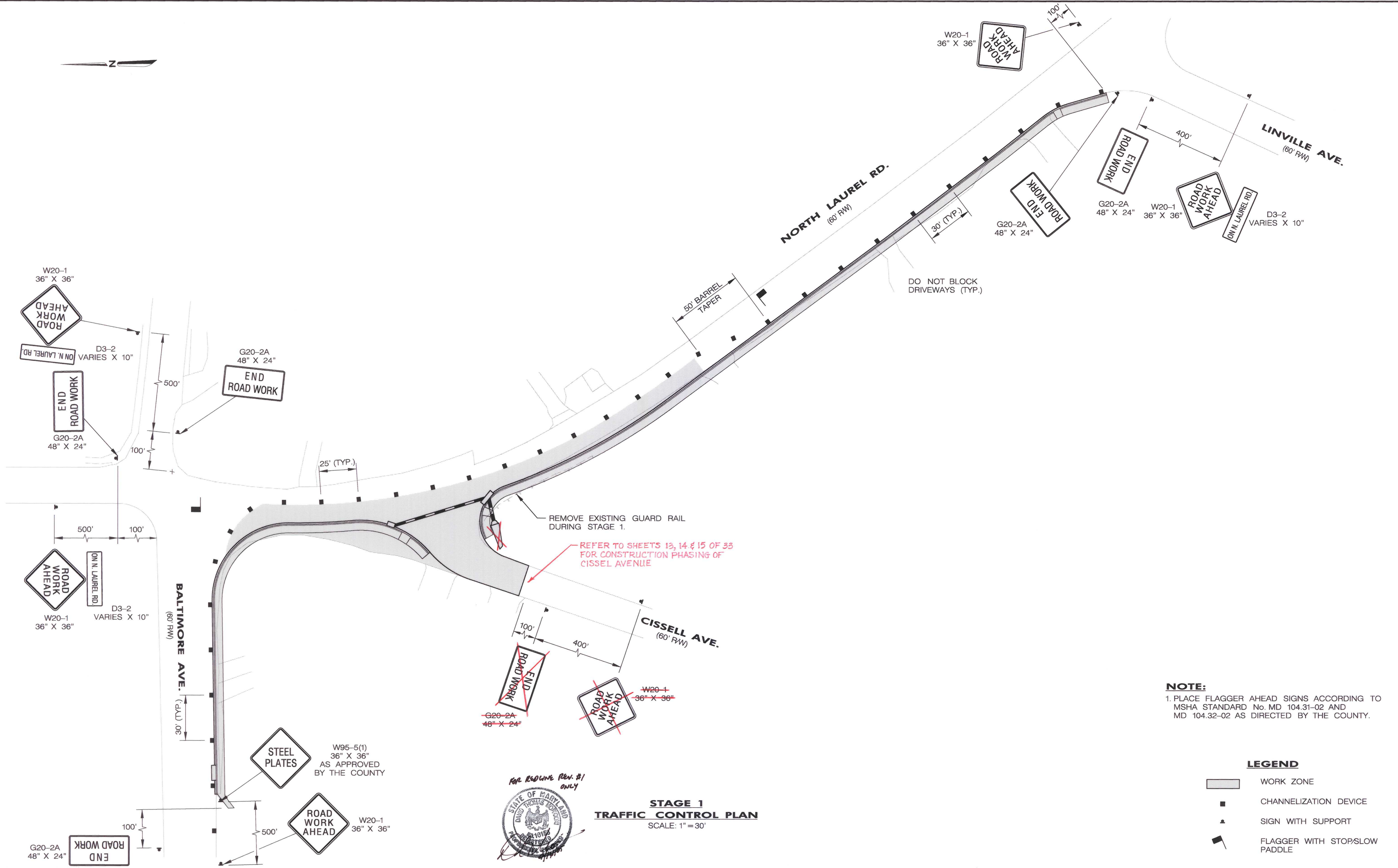
600' SCALE MAP NO. _____ DATE: _____

EROSION CONTROL NOTES AND DETAILS

North Laurel Road
from Baltimore Avenue
to Linville Avenue

SCALE AS SHOWN

SHEET 6 OF 14
25 33

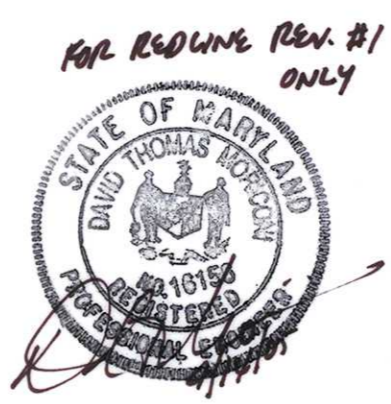


NOTE:
 1. PLACE FLAGGER AHEAD SIGNS ACCORDING TO MSHA STANDARD No. MD 104.31-02 AND MD 104.32-02 AS DIRECTED BY THE COUNTY.

LEGEND

- WORK ZONE
- CHANNELIZATION DEVICE
- SIGN WITH SUPPORT
- FLAGGER WITH STOP/SLOW PADDLE

STAGE 1 TRAFFIC CONTROL PLAN
 SCALE: 1" = 30'



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 3/16/01
 DEPARTMENT OF PUBLIC WORKS DATE
[Signature] 3/15/01
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE

[Signature] 3/15/01
 CHIEF, BUREAU OF ENGINEERING DATE
[Signature] 3-15-01
 CHIEF, BUREAU OF HIGHWAYS DATE

AE GROUP, INC.
 ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 AE Job No. 99-393-014

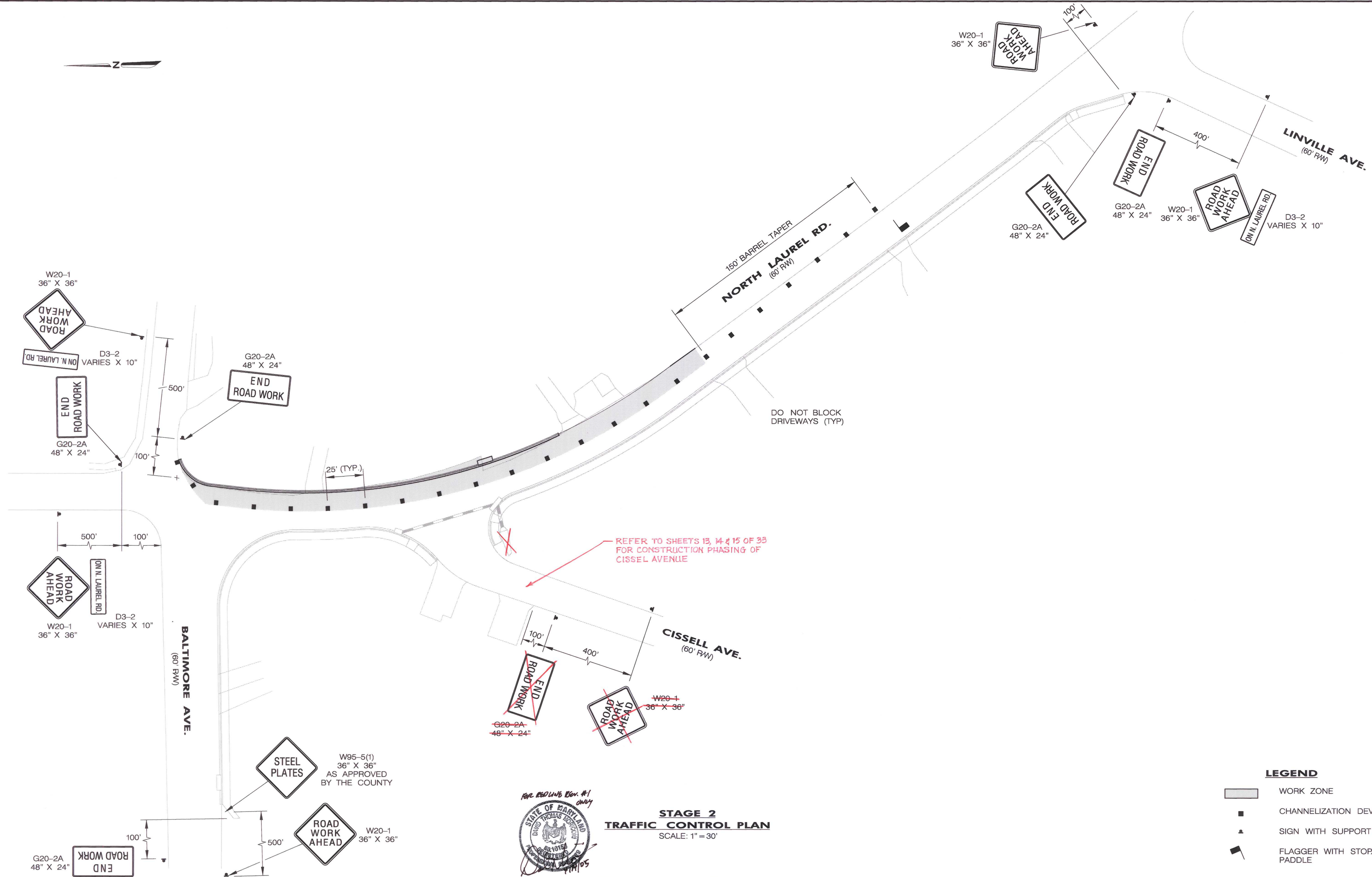
DES: F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN: S.R.K.				
CHK: F.A.C.				
DATE: 1/01	BY:	NO.	REVISION	DATE

CAPITAL PROJECT NO.
K-5033

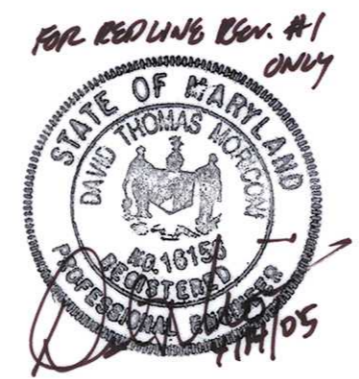
600' SCALE MAP NO. _____ DATE: _____

TRAFFIC CONTROL PLAN
North Laurel Road from Baltimore Avenue to Linville Avenue

SCALE AS SHOWN
 SHEET 26 OF 33



**STAGE 2
TRAFFIC CONTROL PLAN**
SCALE: 1" = 30'



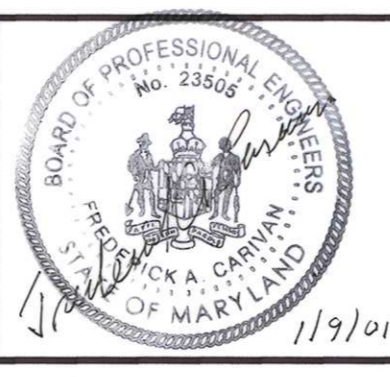
- LEGEND**
- WORK ZONE
 - CHANNELIZATION DEVICE
 - SIGN WITH SUPPORT
 - FLAGGER WITH STOP/SLOW PADDLE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 3/16/01
 CHIEF, BUREAU OF ENGINEERING

[Signature] 3/15/01
 CHIEF, BUREAU OF HIGHWAYS

AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
AE Job No. 99-393-014



DES: F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN: S.R.K.				
CHK: F.A.C.				
DATE: 1/01	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
K-5033

600' SCALE MAP NO. _____ DATE: _____

TRAFFIC CONTROL PLAN
**North Laurel Road
from Baltimore Avenue
to Linville Avenue**

SCALE
AS
SHOWN

SHEET
27 OF 33

FILE: n:\99-393-014\station\ps06nir.dgn
DATE: 09-Jan-01 12:50

NOTES

TRAFFIC CONTROL NOTES



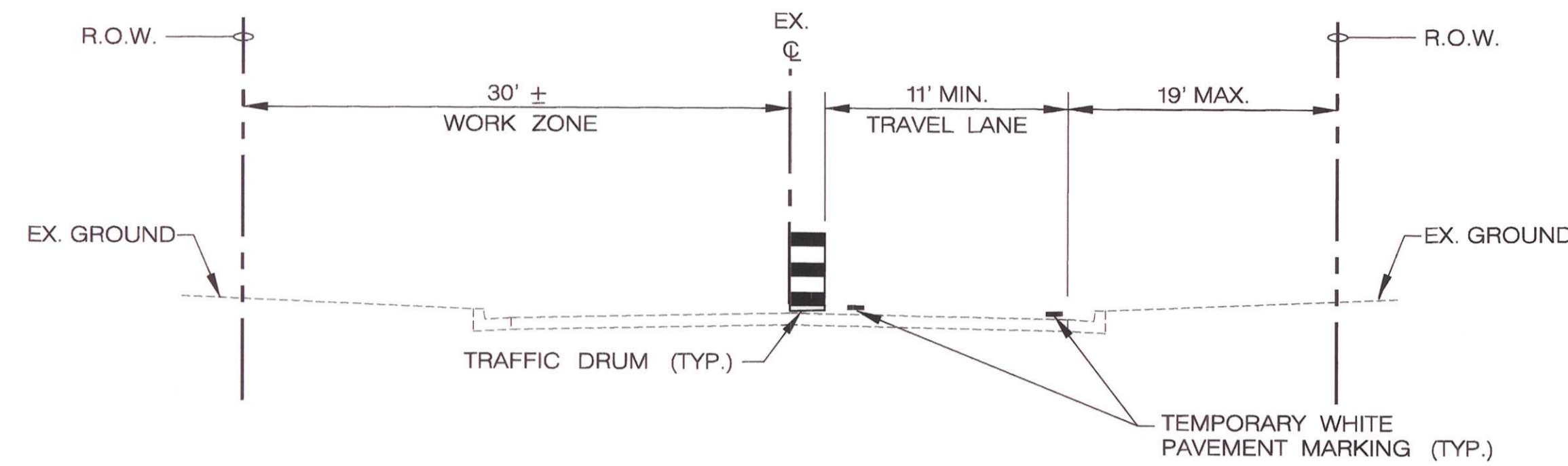
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W8-8

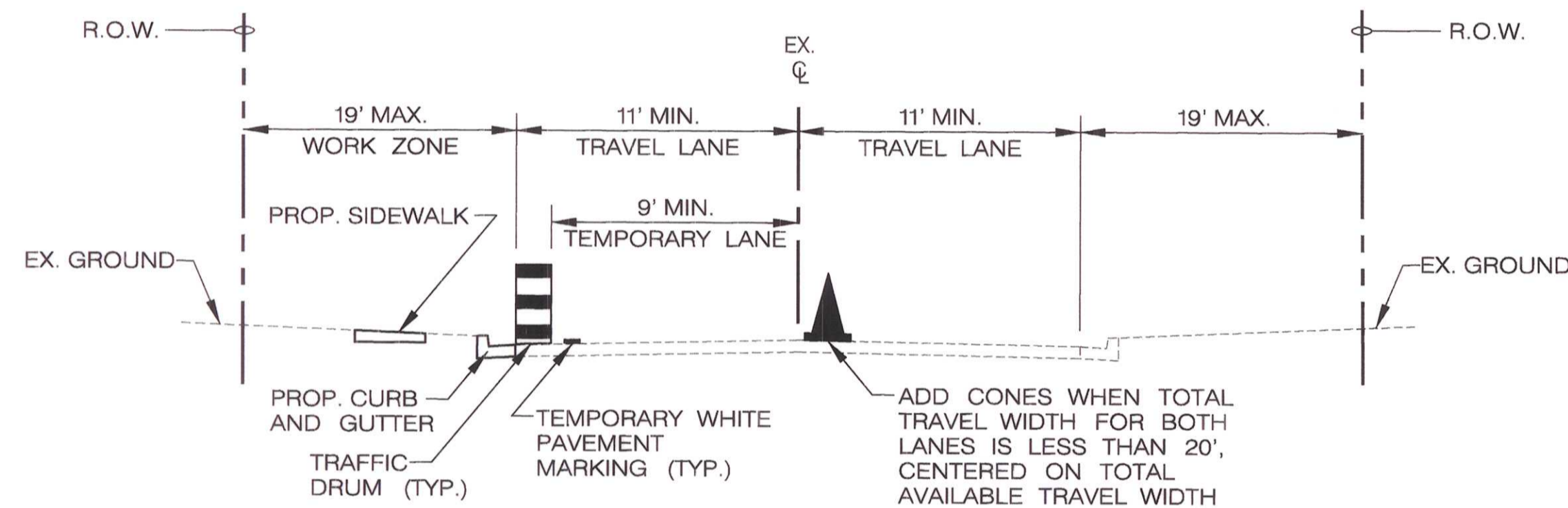
1. THE HOWARD COUNTY ENGINEER HAS THE OPTION OF PLACING ONE OR BOTH OF THESE SIGNS ON NORTH LAUREL ROAD, CISSELL AVENUE OR BALTIMORE AVENUE WHILE THE PUBLIC IS TRAVELING ON THE GRAVEL AGGREGATE SURFACE AS A SUPPLEMENT TO MDSHA STANDARD MD 104.32-02.
2. THE CONTRACTOR SHALL SCHEDULE THE WORK OPERATIONS TO MINIMIZE THE TIME WHEN THE PUBLIC IS TRAVELING ON THE GRAVEL AGGREGATE SURFACE. IN NO CASE SHOULD TRAVEL ON THE GRAVEL SURFACE OCCUR OVER A HOLIDAY WEEKEND.
3. AT THE DIRECTION OF THE HOWARD COUNTY ENGINEER, THE CONTRACTOR MAY RETURN AT ANYTIME TO REAPPLY CALCIUM CHLORIDE AND/OR WATER TO THE GRAVEL AGGREGATE SURFACE IF IN THE OPINION OF THE ENGINEER TOO MUCH DUST IS BEING RAISED BY MOVING VEHICLES.
4. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SEQUENCES NOTED ON THIS SHEET WITH THAT ON SHEET 12.

1. THE CONTRACTOR SHALL USE MDSHA STANDARD NO. MD 104.31-02, STANDARD NO. MD 104.32-02, ~~AND~~ STANDARD NO. MD 104.33-02, ~~AS~~ **AND STD. MD 104.84** AS APPROVED BY THE HOWARD COUNTY ENGINEER.
 2. THE CONTRACTOR SHALL CONTACT THE LOCAL SCHOOL TO DETERMINE THE HOURS WHEN BUSES ARE TRAVELING TO AND FROM THE NEIGHBORING BUILDINGS. THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE A TRAVEL LANE DURING SCHOOL TRAVEL HOURS.
 3. DURING ALL PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN AT THE END OF EACH WORK DAY, A CLEAR ACCESS TO ALL LOCAL RESIDENCES.
 4. THE CONTRACTOR SHALL INFORM SCHOOL OFFICIALS AT THE END OF EACH WEEK AS TO THE CONTRACTOR'S PROGRESS AND THE ANTICIPATED AREA OF CONSTRUCTION FOR THE FOLLOWING WEEK.
- CONSTRUCTION PHASING
5. THE CONTRACTOR SHALL PERFORM THE WORK IN A MINIMUM OF TWO (2) PHASES. THE PHASES ARE AS FOLLOWS:
 PHASE A. CONSTRUCT NEW DRAINAGE AND RECONSTRUCT NORTH LAUREL RD., BALTIMORE AVE. AND CISSEL AVE ROAD BED.
 PHASE B. PLACE CURB AND SIDEWALK.
- THE CONTRACTOR MAY BEGIN AT THE NORTH OR SOUTH END OF THE PROJECT. ONCE BEGUN, THE CONTRACTOR WILL CONTINUE IN THE SAME DIRECTION UNTIL THE WORK IS COMPLETE. ALL PHASES SHOULD BE CONDUCTED AS FOLLOWS:
- 5.1 SET UP SIGNING AND CHANNELIZING DEVICES AS SHOWN ON SHEETS 7 AND 8 ON THE PLANS.
 - 5.2 CLEAR AND GRUB THE WORK AREA FINE-GRADE THE AREA FOR THE NEW ROADGRADE REMOVE EXISTING PAVEMENT, SAW CUT AND TRIM THE EXISTING PAVEMENT EDGE TO CONSTRUCT THE NEW CONCRETE CURB AND GUTTER. REMOVE AND STORE EXISTING STREET SIGNS.
 - 5.3 PLACE THE EROSION CONTROL MATERIALS THROUGHOUT THE WORK AREA AS SHOWN ON THE PLANS OR AS DIRECTED BY THE COUNTY.
 - 5.4 PERFORM ANY DRAINAGE WORK AS SHOWN ON THE PLANS OR AS DIRECTED BY THE COUNTY.
 - 5.5 PLACE ALL THE PAVEMENT COURSES AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
 - 5.6 PLACE ALL THE CURB AND GUTTER, SIDEWALK AND SIDEWALK RAMPS.
 - 5.7 REPLACE EXISTING SIGNS AND ADD NEW SIGNS AND PAVEMENT STRIPING.
 - 5.8 PLACE TOPSOIL SEEDING OVER AREAS NOT COVERED BY SIDEWALK, OR CURB AND GUTTER.
 - 5.9 REMOVE TEMPORARY EROSION CONTROL MATERIALS AS DIRECTED BY THE COUNTY.
6. DURING DRAINAGE CONSTRUCTION WORK, THE CONTRACTOR MAY, WITH THE APPROVAL OF THE COUNTY, LEAVE SMALL AREAS OF EXCAVATION OPEN BETWEEN WORKDAYS. IF SO, THE AREAS SHALL BE COVERED BY STABILIZED STEEL PLATES. THIS OPTION SHALL NOT BE ALLOWED OVER WEEKENDS OR HOLIDAYS. ALL TRENCHES SHALL BE BACKFILLED AND COMPACTED.
 7. WHEN NOT IN EFFECT, W95-5(1) SIGNS SHALL BE REMOVED FROM THE SITE OR COVERED WITH AN (OPAQUE) MATERIAL AS APPROVED BY THE COUNTY.
 8. PLACE VMS (PORTABLE) BEFORE CONSTRUCTION ZONE TO NOTIFY RESIDENTS OF ACTIVITY. SEE STD. MD 104.84.
 9. "NO PARKING" SIGNS SHOULD BE POSTED TEMPORARILY DURING CONSTRUCTION. NO MORE THAN 2 DRIVEWAYS SHALL BE UNDER CONSTRUCTION AT A TIME.



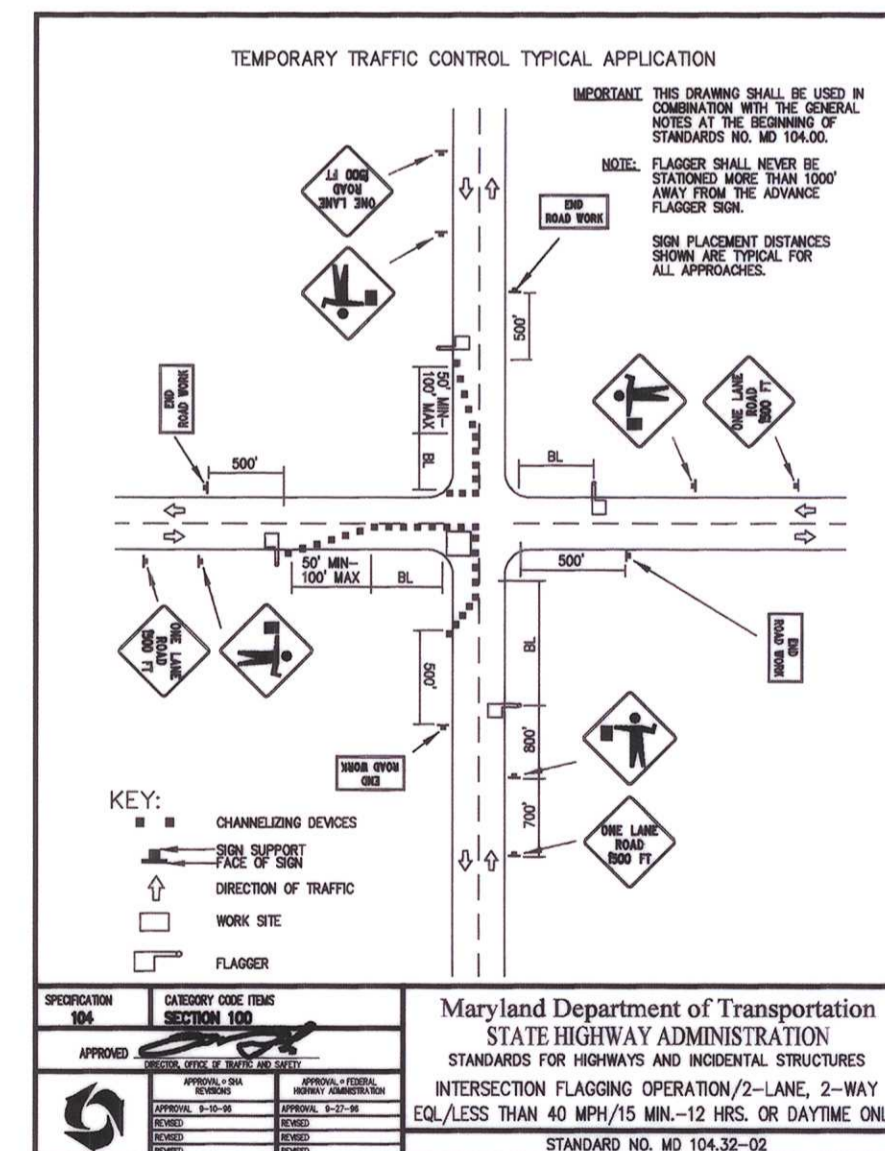
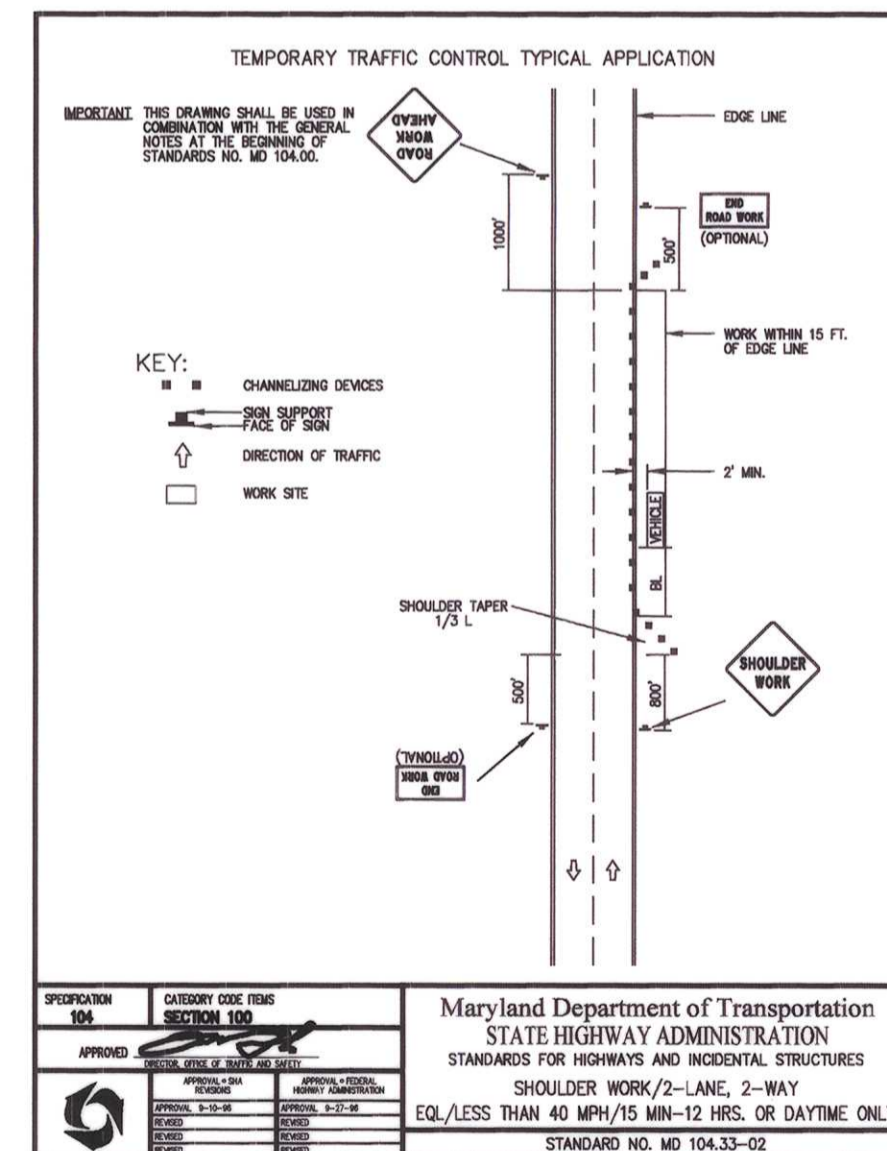
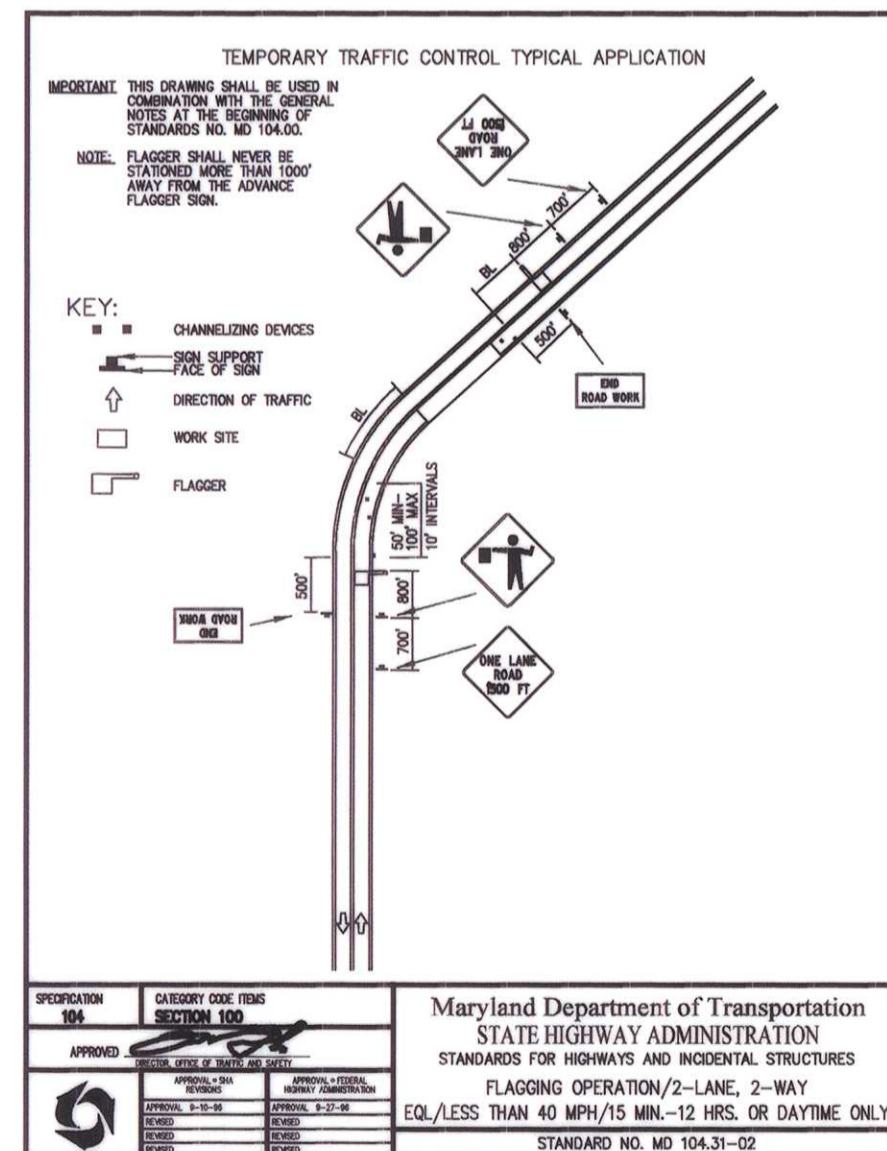
TYPICAL ROAD WORK TRAFFIC CONTROL SECTION

NOT TO SCALE
NORTH LAUREL ROAD
CISSELL AVENUE
BALTIMORE AVENUE



TYPICAL SIDE WALK WORK TRAFFIC CONTROL SECTION

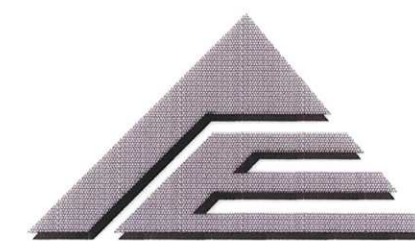
NOT TO SCALE
BALTIMORE AVENUE LEFT
NORTH LAUREL ROAD RIGHT



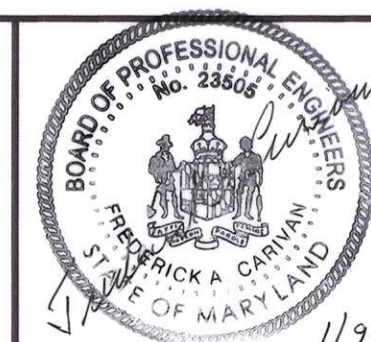
DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS DATE: 3/15/01
 CHIEF, BUREAU OF ENGINEERING acting DATE: 3/15/01
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE: 3/15/01
 CHIEF, BUREAU OF HIGHWAYS DATE: 3/15/01



AE GROUP, INC.
 ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 AE Job No. 99-393-014



DES:	F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN:	A.M.T.				
CHK:	F.A.C.				
DATE:	101				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	DATE:

CAPITAL PROJECT NO.
K-5033

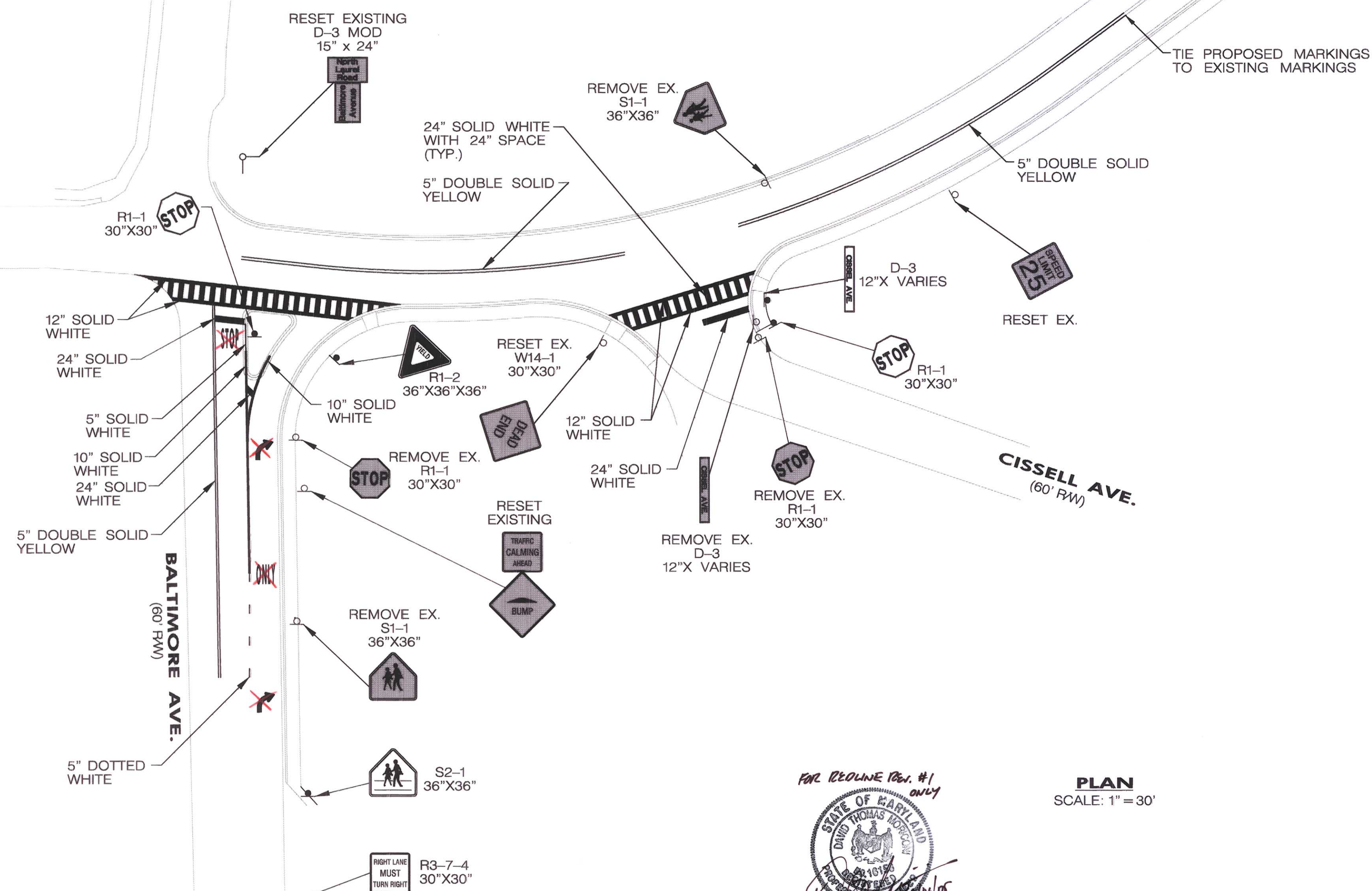
TRAFFIC CONTROL NOTES AND DETAILS
**North Laurel Road
from Baltimore Avenue
to Linville Avenue**

SCALE AS SHOWN
SHEET 8 OF 14
28 OF 33



LINVILLE AVE.
(60' RW)

NORTH LAUREL RD.
(60' RW)



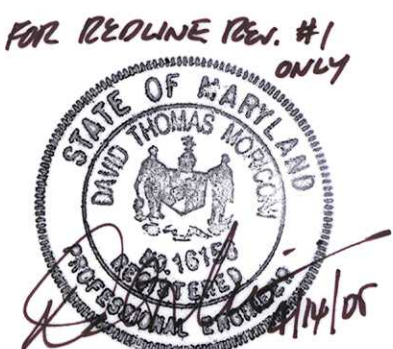
NOTES:

1. ALL CROSSWALK AND STOP BAR STRIPING SHALL BE THERMOPLASTIC.

NOTES:

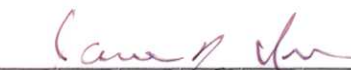
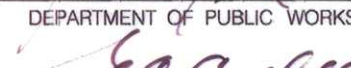
- 1. ~~ALL LETTERS AND SYMBOLS SHALL BE WHITE PERMANENT WATERBORNE TRAFFIC PAINT.~~
- 2. ALL STRIPING SHOULD BE PAID PER LINEAR FOOT FOR EACH COLOR AND WIDTH.
- 3. ALL SIGNS SHALL BE PLACED ACCORDING TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND AS DIRECTED BY THE ENGINEER.
- 4. THE SCHOOL CROSSING SIGN BE SHALL BE BLACK ON CHARTREUSE.
- 5. THE CONTRACTOR AND THE ENGINEER SHALL FIELD VERIFY THE STRIPING PRIOR TO APPLICATION.


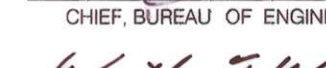
PLAN
SCALE: 1" = 30'

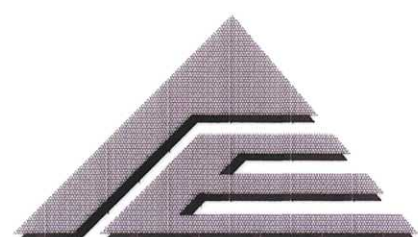


DEPARTMENT OF PUBLIC WORKS

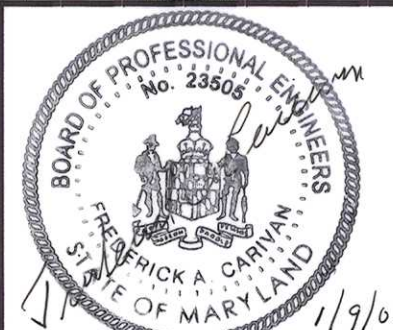
HOWARD COUNTY, MARYLAND

 3/15/01
 DEPARTMENT OF PUBLIC WORKS DATE
 3/15/01
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE

 3/15/01
 CHIEF, BUREAU OF ENGINEERING DATE
 3-15-01
 CHIEF, BUREAU OF HIGHWAYS DATE



AE GROUP, INC.
 ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 AE Job No. 99-393-014



DES. F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN. S.F.N.				
CHK. F.A.C.				
DATE: 101	BY	NO.	REVISION	DATE

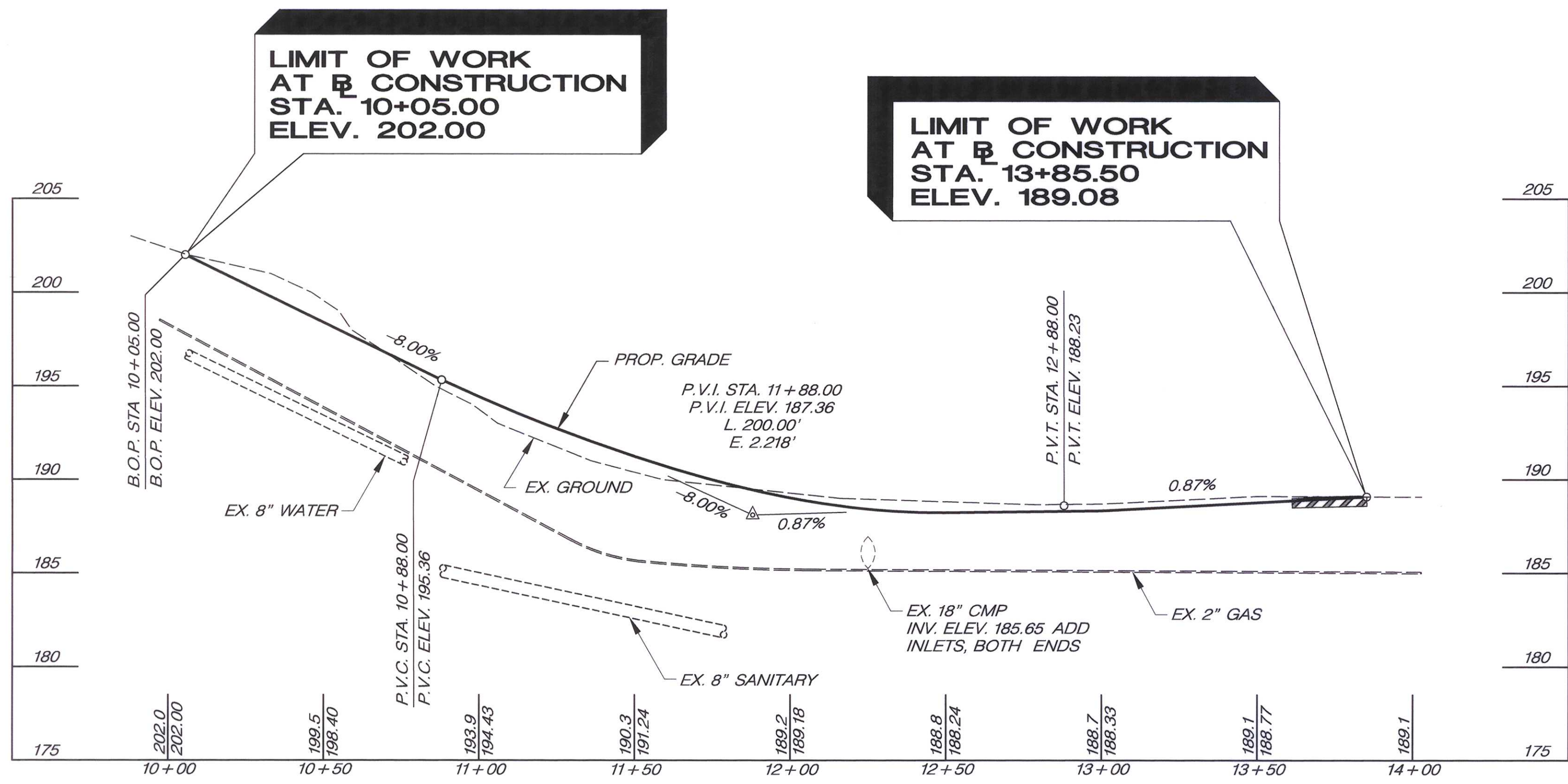
CAPITAL PROJECT NO.

K-5033

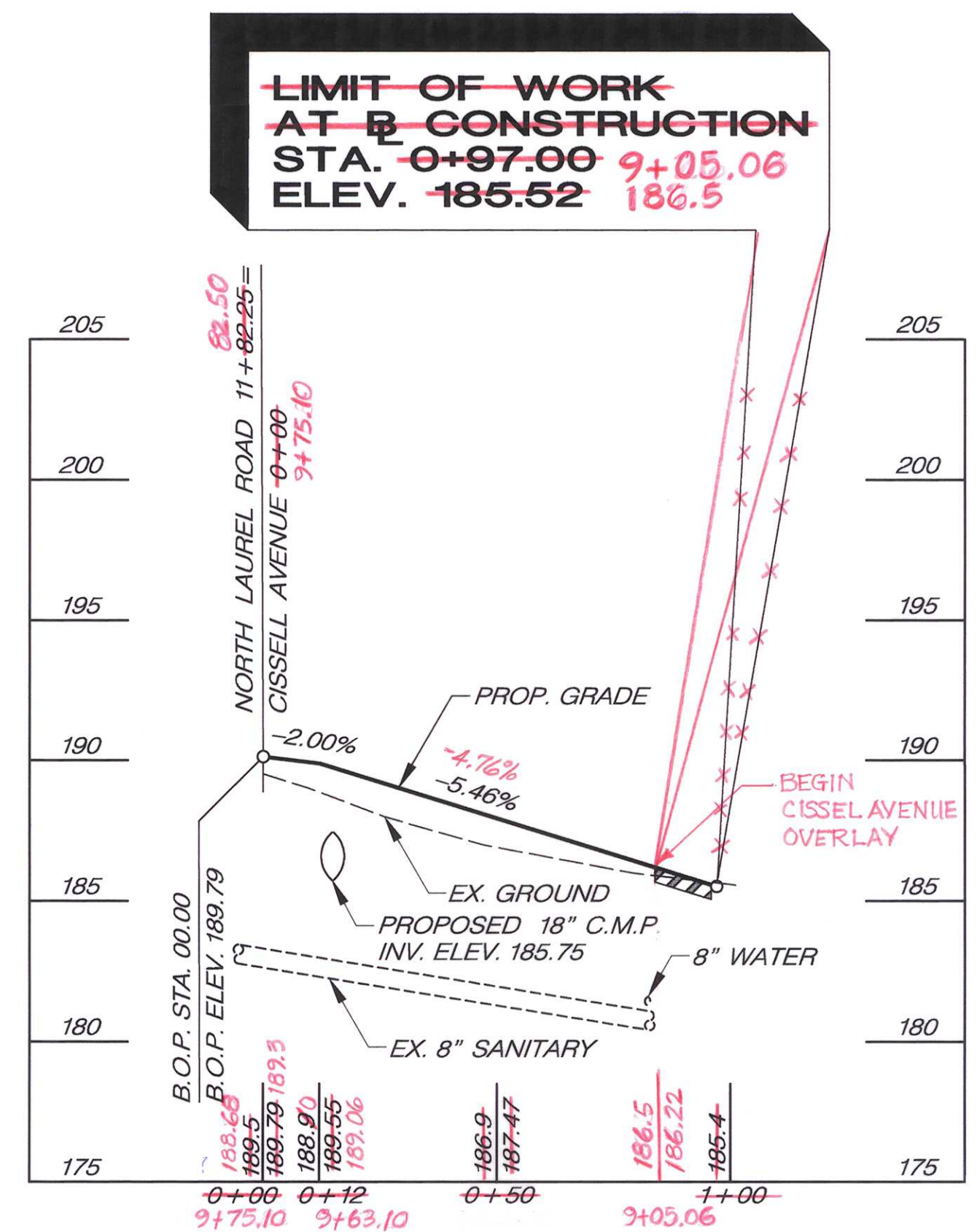
SIGNING AND MARKING PLAN

North Laurel Road
from Baltimore Avenue
to Linville Avenue

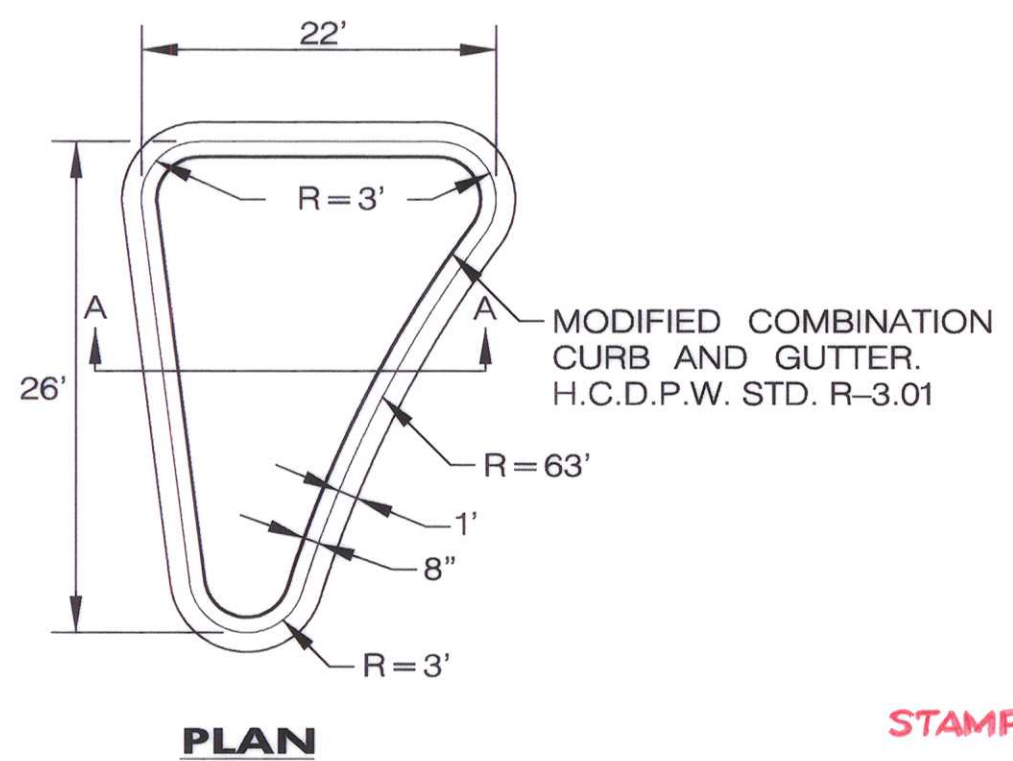
SCALE AS SHOWN
 SHEET 10 OF 14
 29 33



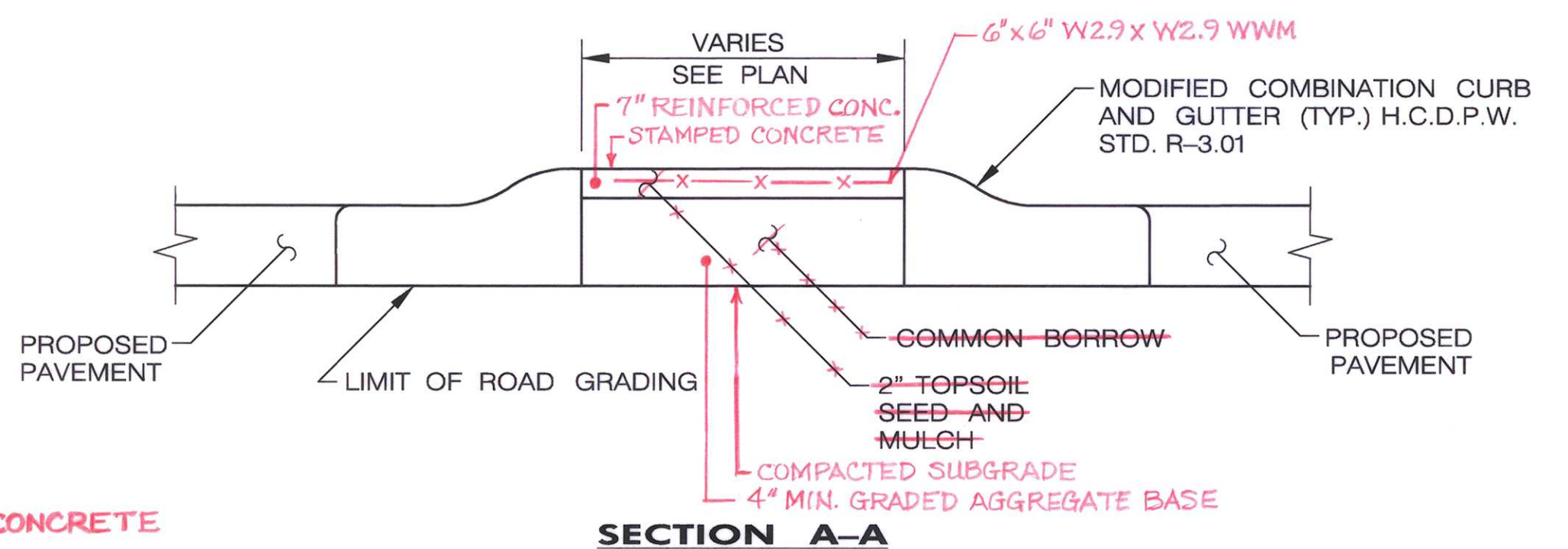
NORTH LAUREL ROAD PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'



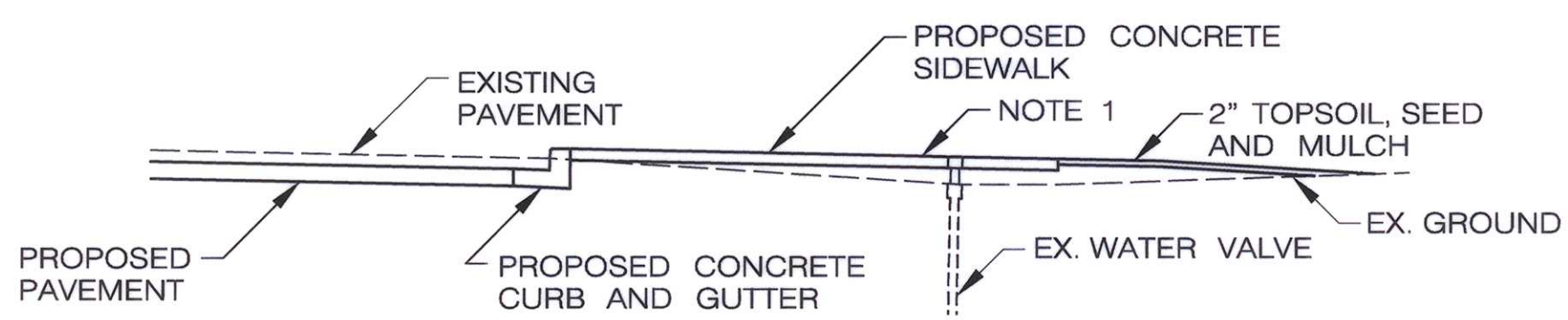
CISSELL AVENUE PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'



PLAN



SECTION A-A
STAMPED CONCRETE
GRASS ISLAND DETAILS
NOT TO SCALE



WATER VALVE ADJUSTMENT DETAIL

NOTE 1
SET WATER VALVE FLUSH TO NEW SIDEWALK GRADE. SURROUND COVER EDGE WITH JOINT MATERIAL PRIOR TO CASTING THE CONCRETE SIDEWALK. THE VALVE COVER GRADE CHANGE IS APPROXIMATELY 12". FOLLOW H.C.D.P.W. STD. DETAIL W-3.65

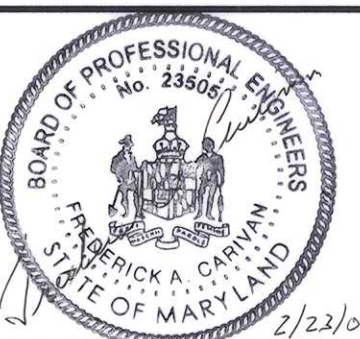
PIPE SCHEDULE									
FROM	TO	TYPE	SIZE	LENGTH	SLOPE	INV. FROM	INV. TO	Q (cfs)	V (fps)
I-2	I-3	A.L.C.M.P.	18"	62 LF.	1.00%	186.00	185.38	10.2	6.8
I-3	E-1	A.L.C.M.P.	24"	14 LF.	1.43%	185.35	185.15	27.0	9.0

STRUCTURE SCHEDULE					
STRUCTURE NO.	TYPE	STANDARD	STATION/OFFSET	TOP ELEV.	WORK DESCRIPTION
I-1	A-10 INLET	HO. CO. SD-4.02	BA 1+84 11' LT.	188.92	BUILD INLET AROUND EX. 38" CMP, THEN CUT OUT CMP INSIDE INLET
I-2	A-5 INLET	HO. CO. SD-4.02	NLR 11+60 18' RT.	190.00	NEW INLET
I-3	A-10 INLET	HO. CO. SD-4.02	NLR 12+22 16' RT.	188.00	NEW INLET AROUND EX. 18" PIPE
EX. I-4	A-10 INLET	HO. CO. SD-4.02	NLR 12+24 12' LT.	188.90	REMOVE EX. YARD INLET AND CONSTRUCT A-10 INLET
E-1	CMP END SECTION	HO. CO. SD 5.61	NLR 12+30 27' RT.	INV. EL. 185.20	AT END OF PROPOSED 24" A.L.C.M.P.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 3/15/01
DATE: 3/15/01

AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393-014

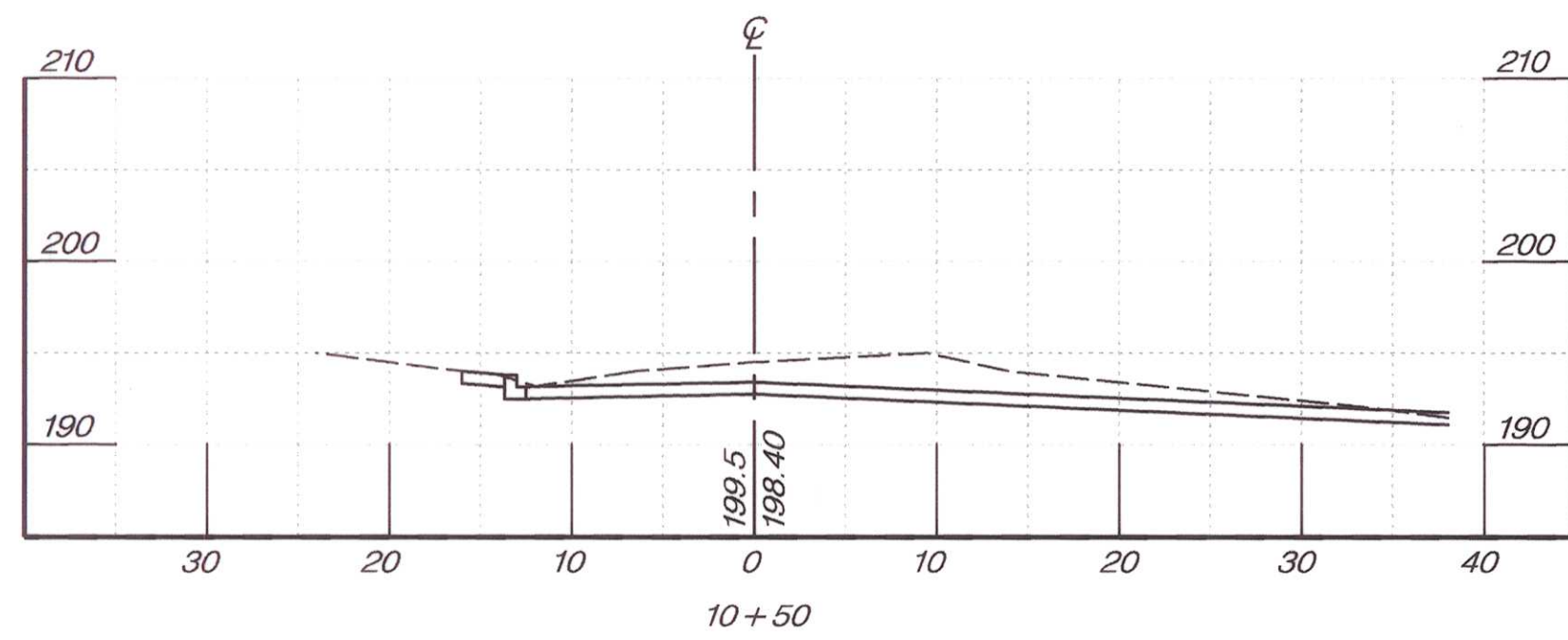


DES: F.A.C. URS | COMBINED PLANS WITH D-1178 | 3/05
DRN: S.F.N.
CHK: F.A.C.
DATE: 1/01

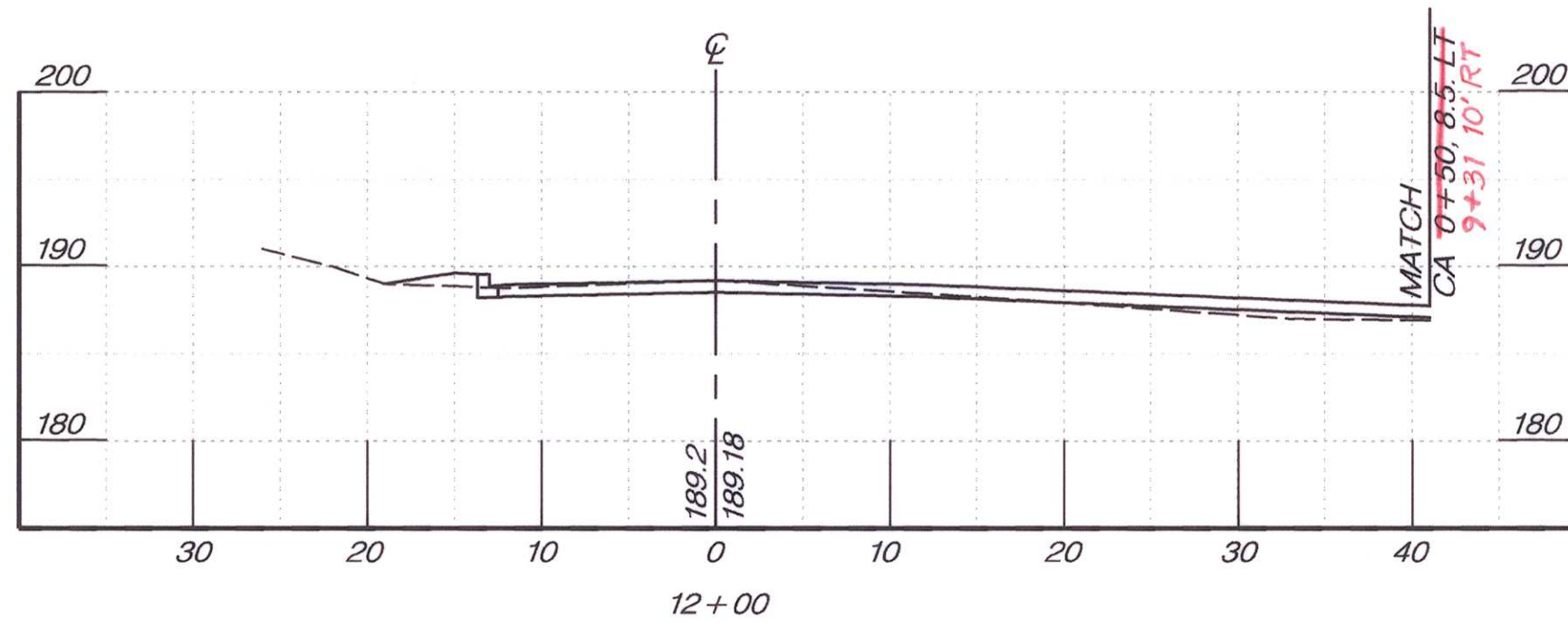
CAPITAL PROJECT NO.
K-5033

PROFILES TABLES AND DETAILS
**North Laurel Road
from Baltimore Avenue
to Linville Avenue**

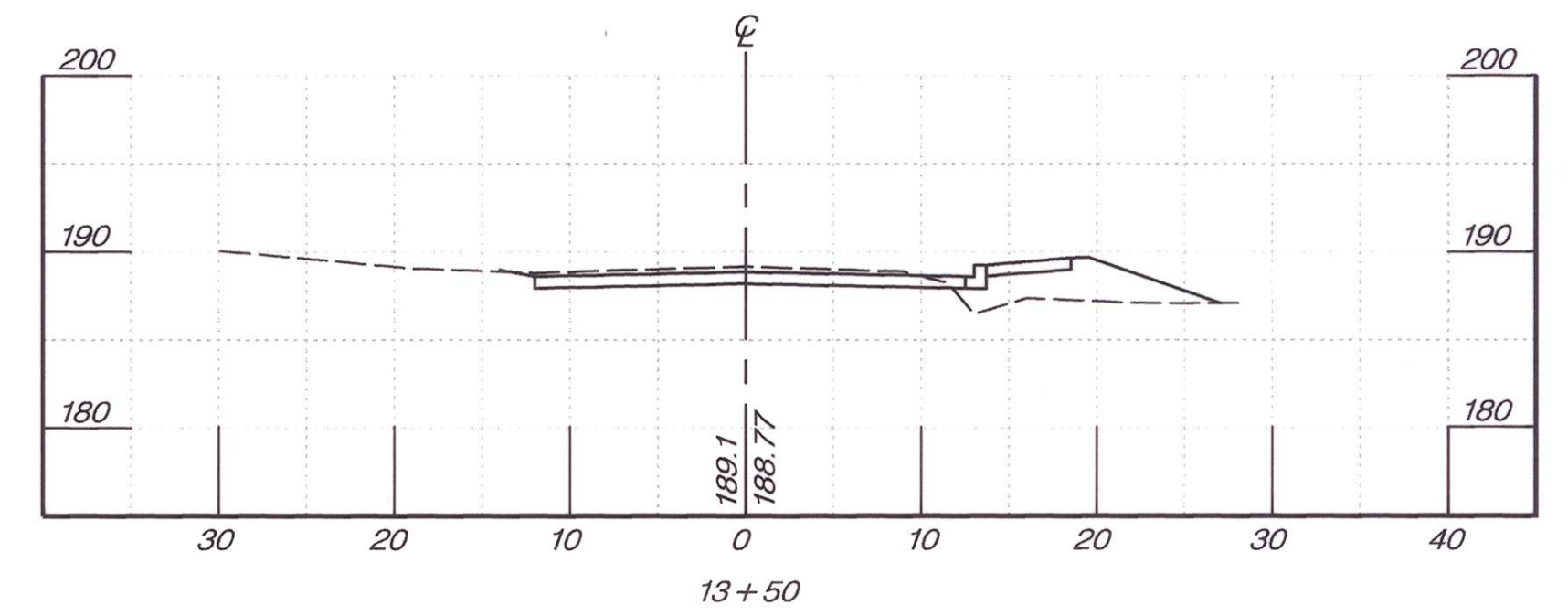
SCALE AS SHOWN
SHEET 11 OF 14
30 33



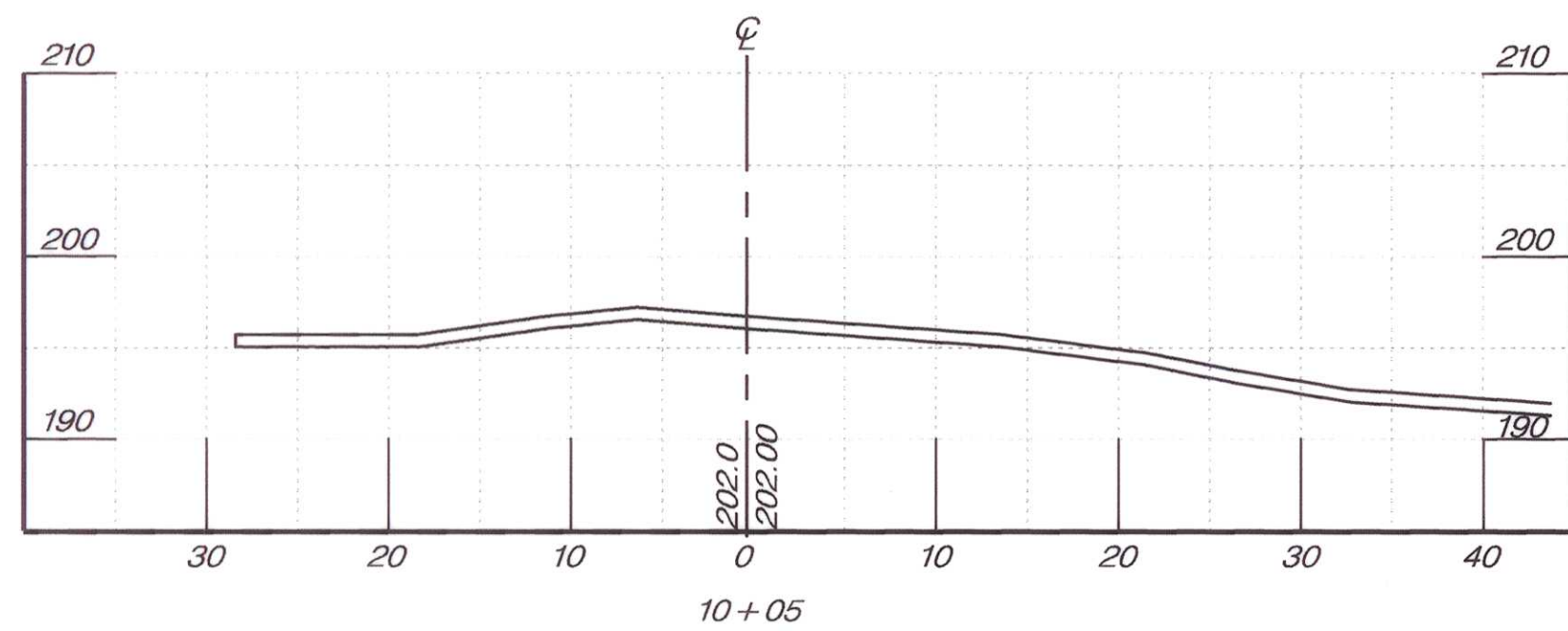
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



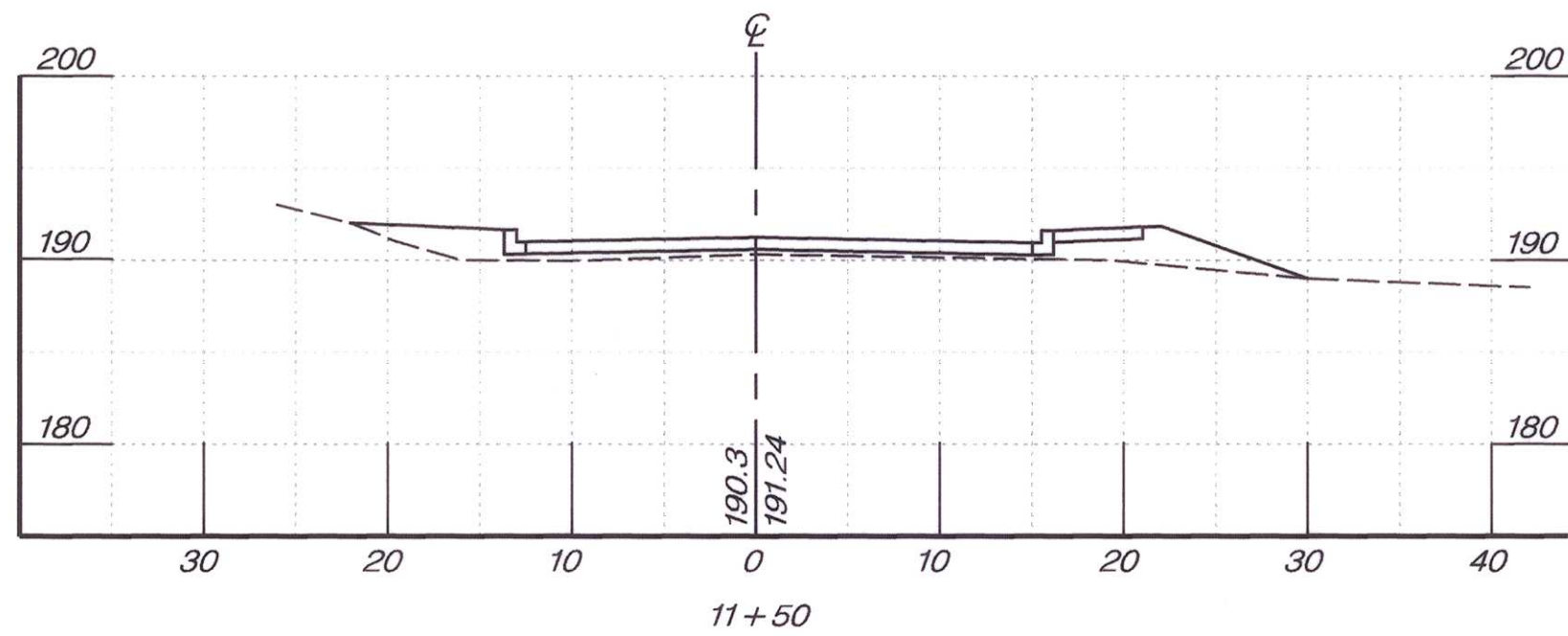
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



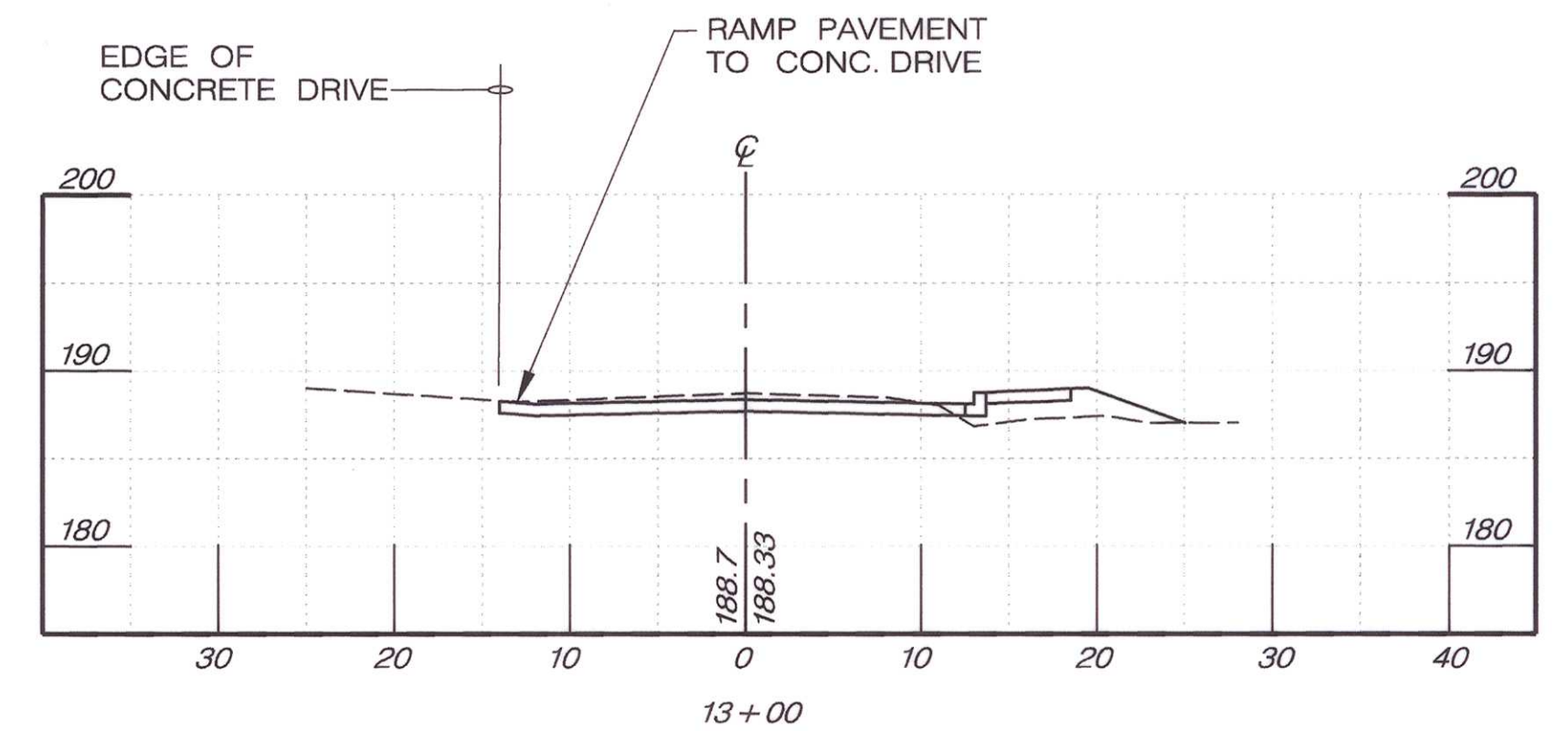
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



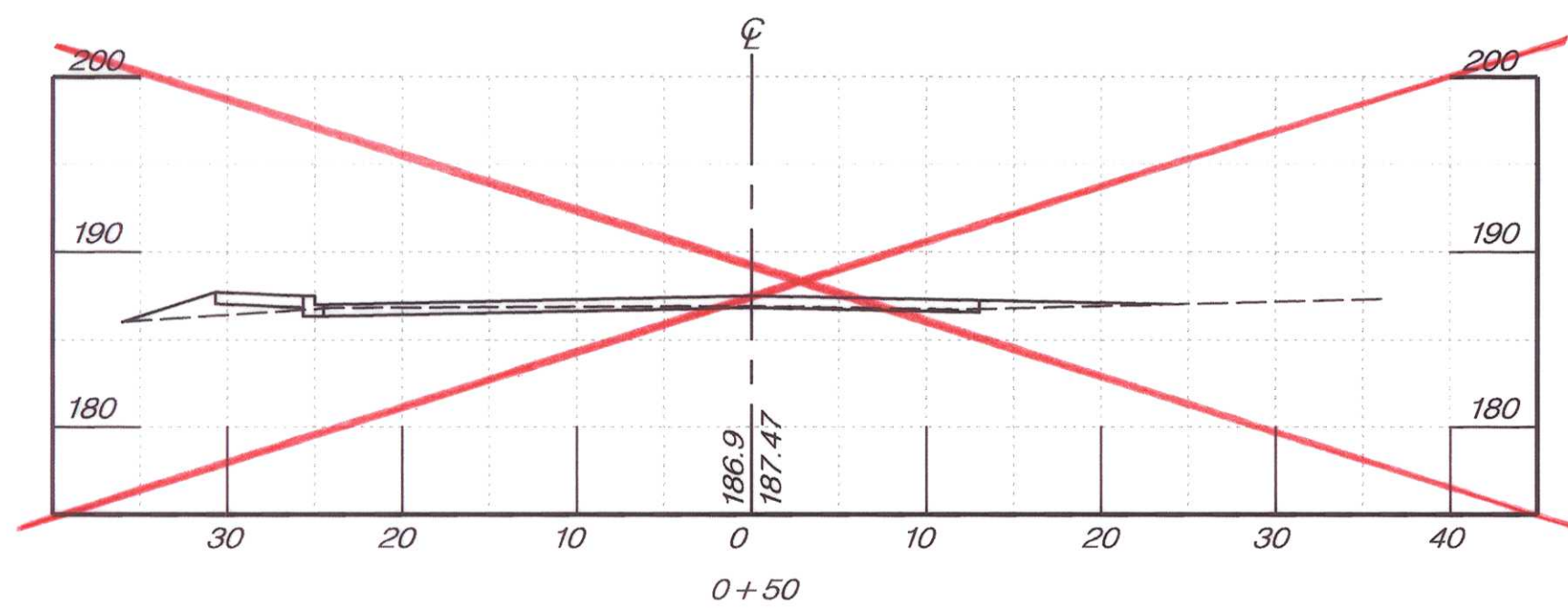
NOTE:
LEFT SIDE OF SECTION SKEWED, SEE PLAN
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



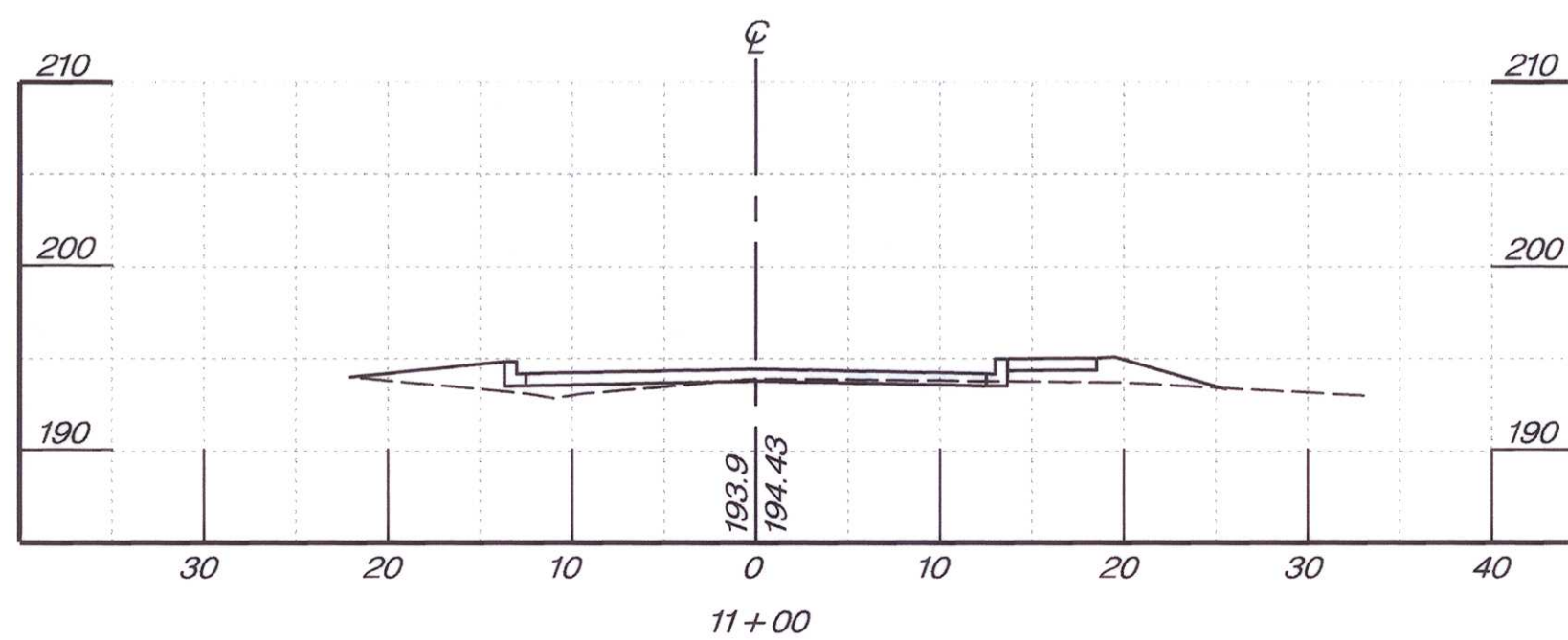
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



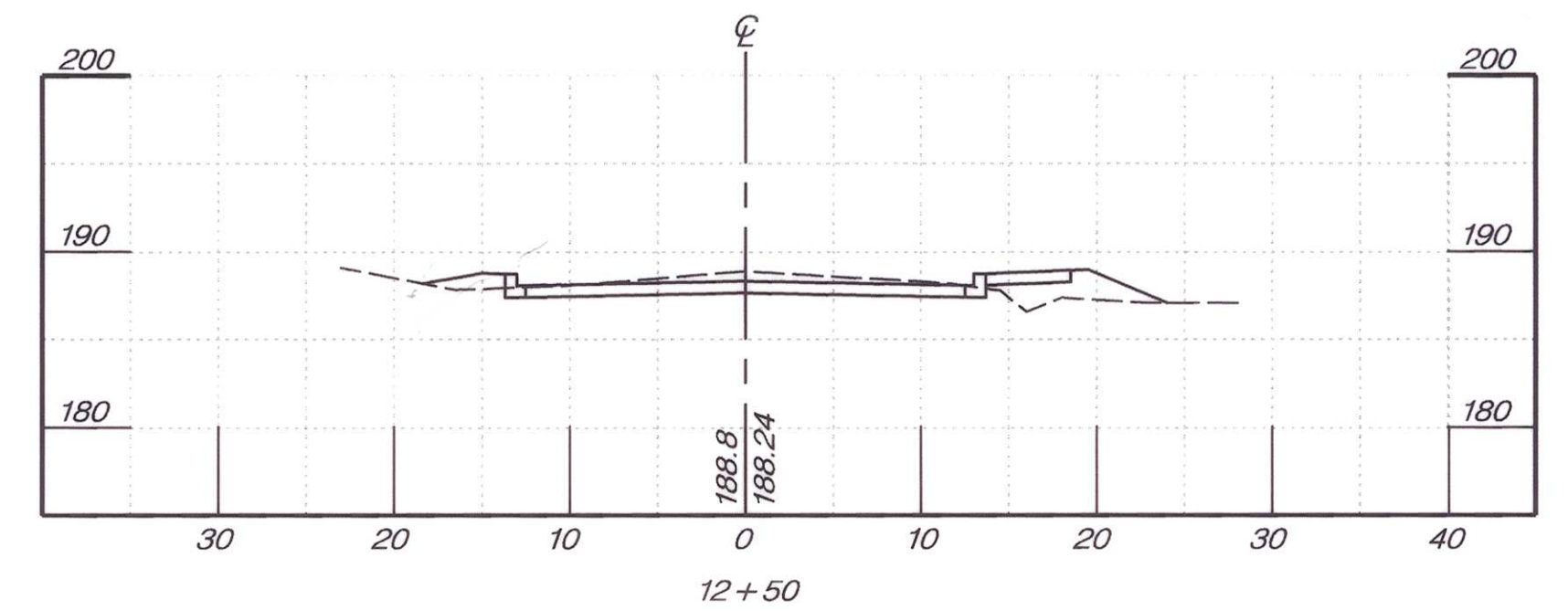
NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



~~**CISSEL AVENUE**~~
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'



NORTH LAUREL ROAD
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'

Mr. [Name] Rev. H/ only

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
 [Signature] DATE 3/15/01
 [Signature] DATE 3/15/01
 [Signature] DATE 3-15-01

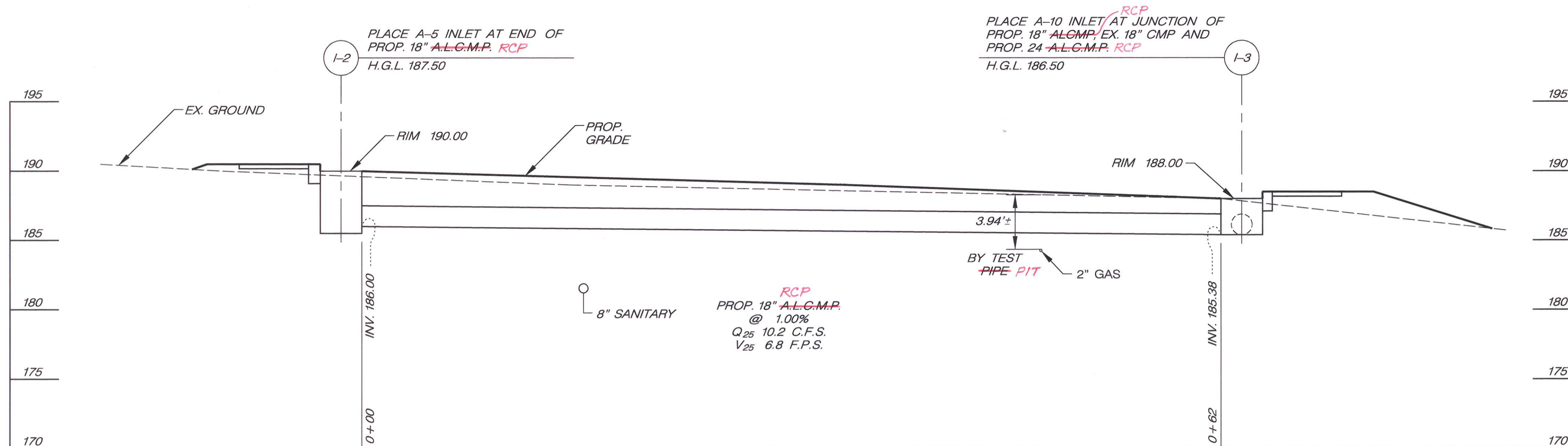
AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
AE Job No. 99-393-014

DES: F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN: S.F.N.				
CHK: F.A.C.				
DATE: 101	BY:	NO.	REVISION	DATE:

CAPITAL PROJECT NO.
K-5033
600' SCALE MAP NO. _____ DATE: _____

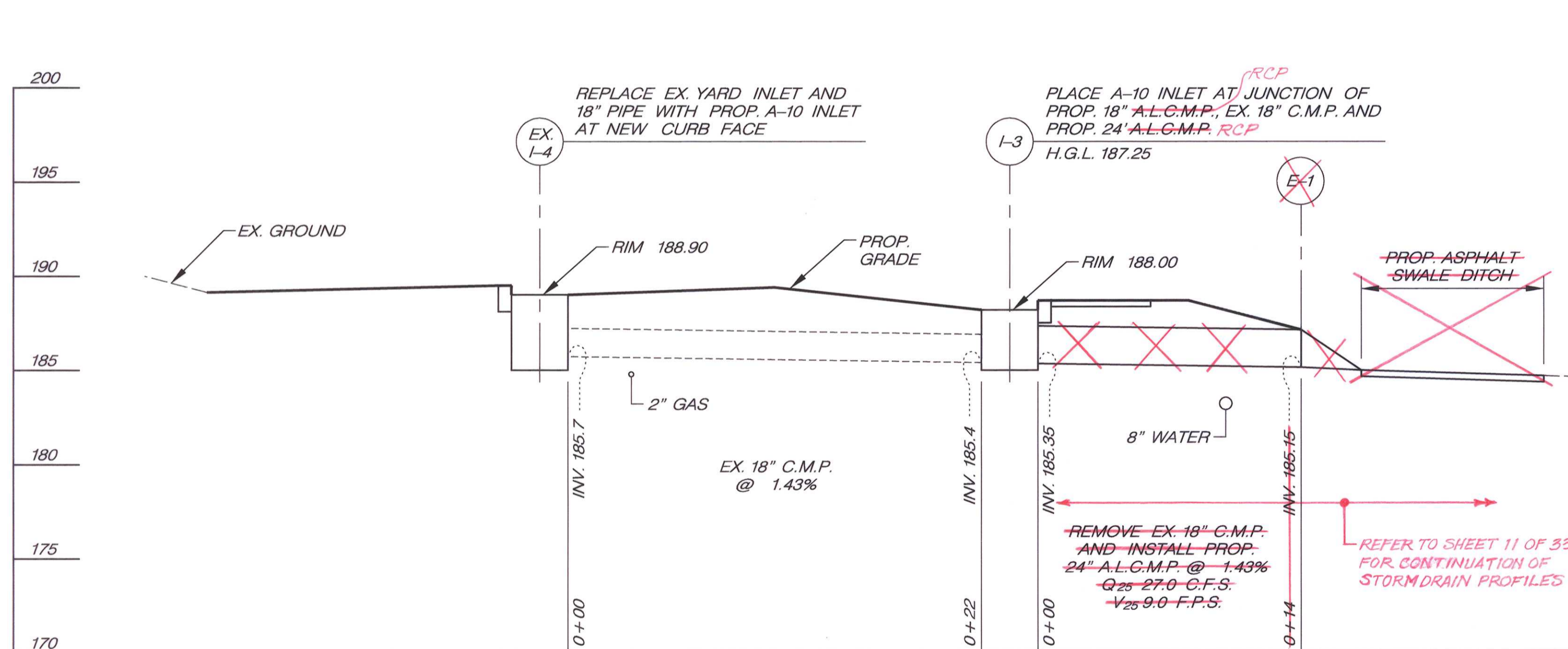
CROSS SECTIONS
North Laurel Road
from **Baltimore Avenue**
to **Linville Avenue**

SCALE AS SHOWN
SHEET 12 OF 14
31 33



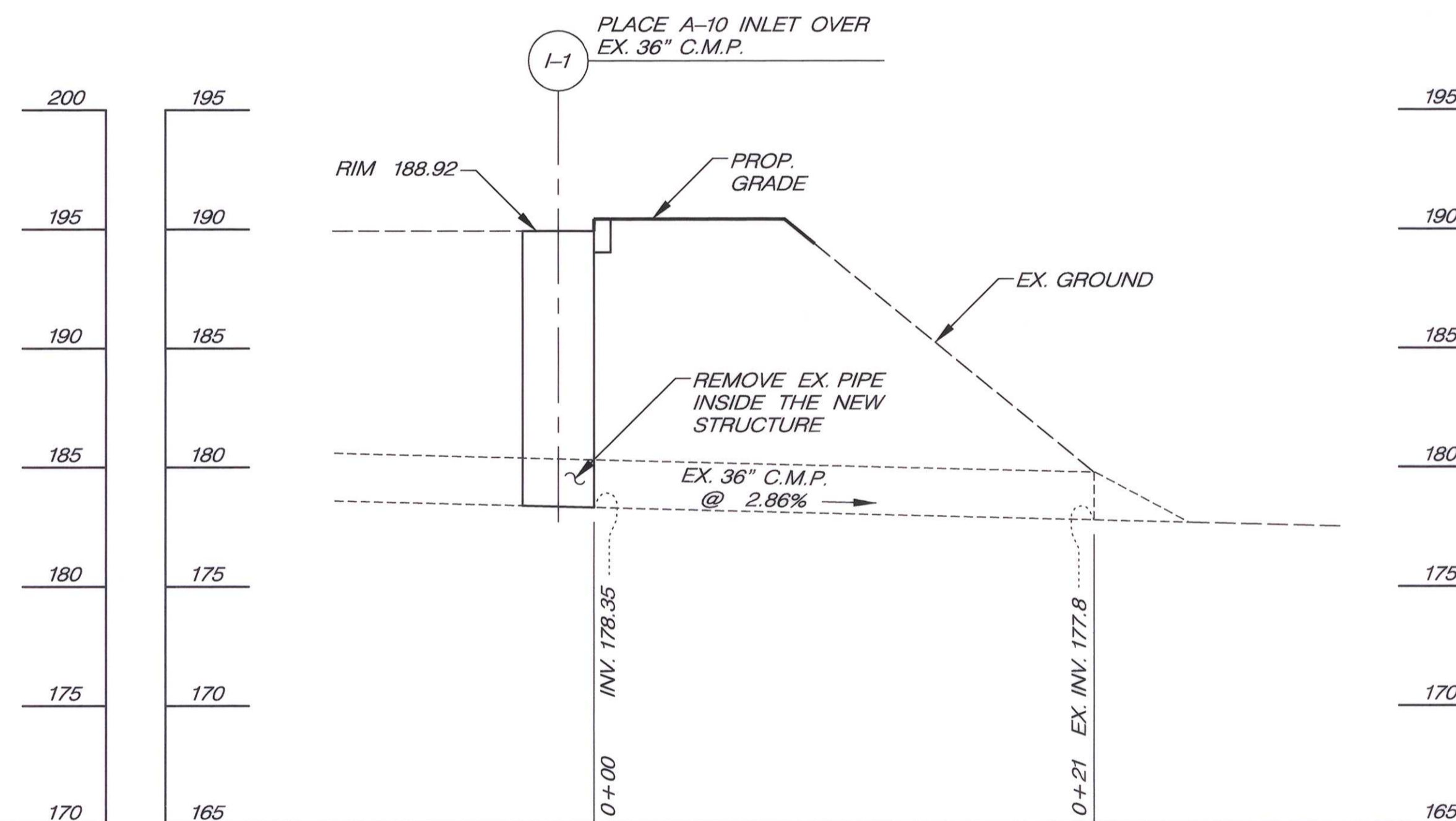
STORM DRAIN PROFILE

SCALE: HORIZ.: 1" = 5'
VERT.: 1" = 5'



STORM DRAIN PROFILE

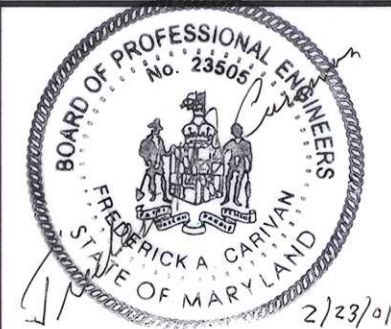
SCALE: HORIZ.: 1" = 5'
VERT.: 1" = 5'



STORM DRAIN PROFILE

SCALE: HORIZ.: 1" = 5'
VERT.: 1" = 5'

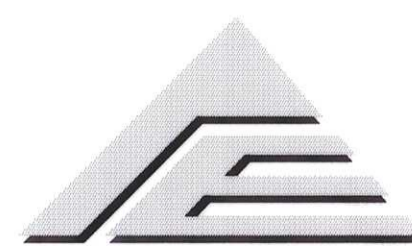
FOR REVIEW #1 ONLY



DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
DATE: 3/15/01
CHIEF, BUREAU OF ENGINEERING, acting DATE: 3/15/01
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE: 3-15-01
CHIEF, BUREAU OF HIGHWAYS DATE:



AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393-014

DES. F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN. S.R.K.				
CHK. F.A.C.				
DATE: 1/01	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.

K-5033

600' SCALE MAP NO. DATE:

STORM DRAIN PROFILES

**North Laurel Road
from Baltimore Avenue
to Linville Avenue**

SCALE AS SHOWN

SHEET 13 OF 14
32 33



CURVE NO.	P.C. COORDINATES		P.T. COORDINATES		Δ	R	T	L
	NORTH	EAST	NORTH	EAST				
1	526236.12	1356912.09	525953.50	1356988.11	42° 54' 28"	400.00'	157.22'	299.61'
2	526106.45	1356907.21	526073.43	1356870.15	59° 30' 50"	50.00'	28.59'	51.94'
3	526272.65	1356943.69	526252.53	1356927.01	62° 13' 50"	24.00'	14.36'	27.62'
4	566234.66	1356925.00	526024.62	1356960.42	34° 10' 05"	392.00'	120.49'	233.79'
5	526247.30	1356845.83	526196.68	1356896.63	89° 59' 57"	50.00'	50.03'	78.57'
6	526196.68	1356896.63	526154.83	1356898.23	05° 52' 07"	409.00'	20.97'	41.90'
7	526154.83	1356898.23	526104.30	1356877.61	54° 35' 01"	60.00'	30.70'	56.68'
8	526066.55	1356887.33	526053.55	1356921.38	09° 00' 01"	24.00'	21.94'	37.59'
9	526053.54	1356921.37	525946.36	1356978.46	16° 28' 46"	412.00'	59.08'	118.51'
10	525696.63	1357166.34	525679.70	1357175.07	22° 25' 05"	49.00'	9.71'	19.17'
11	526254.40	1356871.71	526242.91	1356889.16	19° 18' 08"	63.00'	10.59'	19.98'

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 10+05.00

STA. 10+27.00 N. LAUREL RD. = STA. 0+00.00 BALTIMORE AVE.

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+40.00

BALTIMORE AVE.
(60' RW)

LIMIT OF SIDEWALK WORK AT CONSTRUCTION STA. 2+07.00 LEFT

E 1357100
N 5262000

STA. 11+82.23 N. LAUREL RD. = STA. 0+00.00 CISSELL AVE.

E 1356800
N 5262000

CISSELL AVE.
(60' RW)

LIMIT OF ROAD WORK AT CONSTRUCTION STA. 0+97.00

NORTH LAUREL RD.
(60' RW)

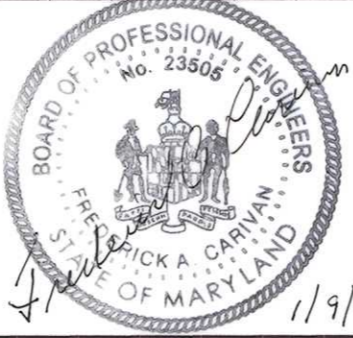
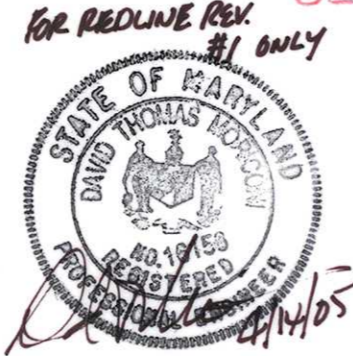
LIMIT OF SIDEWALK WORK AT CONSTRUCTION STA. 17+08.00 RT.

LINVILLE AVE.
(60' RW)

CONSTRUCTION & GEOMETRY			
POINT NO.	NORTH	EAST	REMARK
A	526285.50	1356917.63	STA. NLR 10+05.00 LIMIT OF WORK
B	526263.41	1356915.15	STA. NLR 10+27.00 = STA. BA 0+00.00
C	526236.12	1356912.09	STA. BA 0+40.00 LIMIT OF WORK
D	526108.77	1356918.23	STA. NLR 11+82.23 = STA. CA 0+00.00
E	526079.86	1356894.55	P.I. CURVE NO. 1
F	525953.50	1356988.11	STA. NLR 13+53.81 P.T. CURVE NO. 1
G	525928.20	1357006.83	STA. NLR 13+85.50 LIMIT OF WORK
H	526696.63	1357166.34	CURB POINT
I	525679.70	1357175.07	CURB POINT
J	525654.69	1357182.28	STA. NLR 17+08.00 LIMIT OF WORK
K	526100.54	1356879.24	P.I. CURVE NO. 2
L	526073.43	1356870.15	STA. CA 66+13.00 P.T. CURVE NO. 2
M	526038.48	1356858.41	STA. CA 0+97.00 LIMIT OF WORK
N	526272.64	1356943.68	CURB POINT
O	526252.52	1356927.01	CURB POINT
P	526024.62	1356960.42	CURB POINT
Q	526245.23	1356717.73	CURB POINT
R	526247.29	1356845.82	CURB POINT
S	526196.67	1356896.53	CURB POINT
T	526154.82	1356898.22	CURB POINT
U	526106.45	1356907.21	CURB POINT
V	526104.29	1356887.60	CURB POINT
W	526066.54	1356887.33	CURB POINT
X	526053.54	1356921.37	CURB POINT
Y	525946.36	1356978.46	CURB POINT
Z	526257.12	1356895.57	CURB POINT GRASSED ISLAND
AA	526244.76	1356894.19	CURB POINT GRASSED ISLAND
BB	526242.91	1356889.16	CURB POINT GRASSED ISLAND
CC	526254.40	1356871.71	CURB POINT GRASSED ISLAND
DD	526260.14	1356872.87	CURB POINT GRASSED ISLAND
EE	526261.46	1356892.53	CURB POINT GRASSED ISLAND

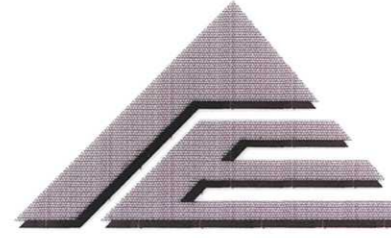
SEE SHEET 3 FOR GEOMETRIC LAYOUT

GEOMETRY PLAN
SCALE: 1" = 30'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 3/15/01
 DEPARTMENT OF PUBLIC WORKS DATE
 [Signature] 3/15/01
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE



AE GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393-014

DES: F.A.C.	URS	1	COMBINED PLANS WITH D-1118	3/05
DRN: A.M.T.				
CHK: F.A.C.				
DATE: 1/01	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.

K-5033

600' SCALE MAP NO. _____ DATE: _____

GEOMETRY PLAN

North Laurel Road from Baltimore Avenue to Linville Avenue

SCALE AS SHOWN
SHEET 14 OF 14
33 33