MISS UTILITY

THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR

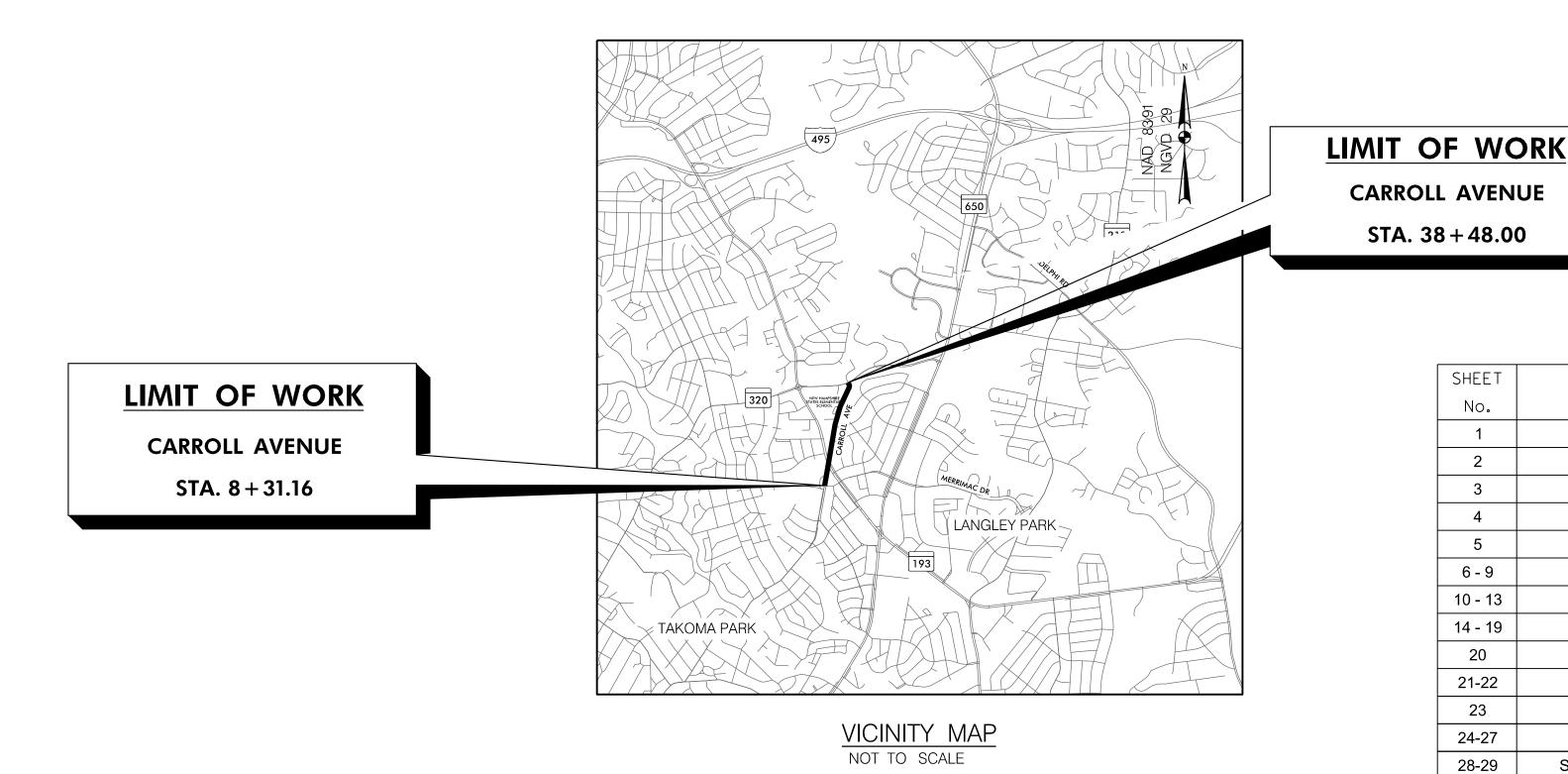
AND SHALL BE CONSIDERED APPROXIMATE. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

CARROLL AVENUE SEPARATED BIKELANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

PLAN No. MR2025004 C.I.P. CONTRACT No. 0502004 SHA TRACKING No. 23APMO023XX

DESIGN DESIGNATION				
ROADWAY	CARROLL	AVENUE		
ROADWAY LENGTH (MILES)	0	. 5		
CONTROLS YEARS	-	-		
AVERAGE DAILY TRAFFIC (A.D.T.)	-	-		
DESIGN HOURLY VOLUME (D.H.V.)	-	-		
DIRECTIONAL DISTRIBUTION	-	-		
% TRUCKS (A.D.T.)	-	-		
% TRUCKS (D.H.V.)	-	-		
FUNCTIONAL CLASSIFICATION	L00	CAL		
CONTROL OF ACCESS	NO	NE		
INTENSITY OF DEVELOPMENT	UR	BAN		
TERRAIN	ROL	LING		
DESIGN SPEED (M. P. H.)	25	MPH		
ANTICIPATED POSTED SPEED (M. P. H.)	25	MPH		
MCDOT CLASSIFICATION	NEIGHBORHOO	O CONNECTOR		



INDEX OF SHEETS

SHEET	DRAWING	CUEET NAME
No.	No.	SHEET NAME
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2	AB 01	GENERAL NOTES
3	TS 01	TYPICAL SECTIONS
4	GS 01	GEOMETRY SHEETS
5	DE 01	GENERAL DETAILS
6 - 9	PS 01- PS 04	ROADWAY PLANS
10 - 13	CS 01 - CS 04	CURB STAKEOUT
14 - 19	ID 01 - ID 06	INTERSECTION DETAILS
20	DD-01	DRAINAGE DETAILS
21-22	DP-01 - DP-02	DRAINAGE PROFILES
23	KEY-01	STORMWATER MANAGEMENT & EROSION AND SEDIMENT CONTROL KEY SHEET
24-27	SW-01 - SW-04	STORMWATER MANAGEMENT PLANS
28-29	SWD-01 - SWD-02	STORMWATER MANAGMENT DETAILS
30 - 34	UT 01 - UT 05	UTILITY PLANS, NOTES AND DETAILS
35 - 44	TC 01 - TC 10	TRAFFIC CONTROL
45 - 59	SC 01 - SC 15	EROSION AND SEDIMENT CONTROL
60 - 64	SN 01 - SN 2.4	PAVEMENT MARKING AND SIGNING
65 - 66	SG 01 - SG 02	TRAFFIC SIGNAL DESIGN
67 - 71	LT 01 - LT 04	LIGHTING PLANS
72 - 77	TP 01 - TP 06	TREE SAVE PLANS
78 - 97	XS 01 - XS 20	CROSS SECTIONS

RKSK 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 Engineers | Construction Managers | Planners | Scientists

65% DESIGN REVIEW **JULY 2025** NOT FOR CONSTRUCTION

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND RECOMMENDED FOR APPROVAL Chief, Transportation Planning and Design Section APPROVED Chief, Division of Transportation Engineering DRAWING No. DESIGNED BY OG DRAWN BY CEO CHECKED BY TMB

CARROLL AVENUE

STA. 38 + 48.00

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TITLE SHEET

SCALE AS SHOWN DATE JULY 2025

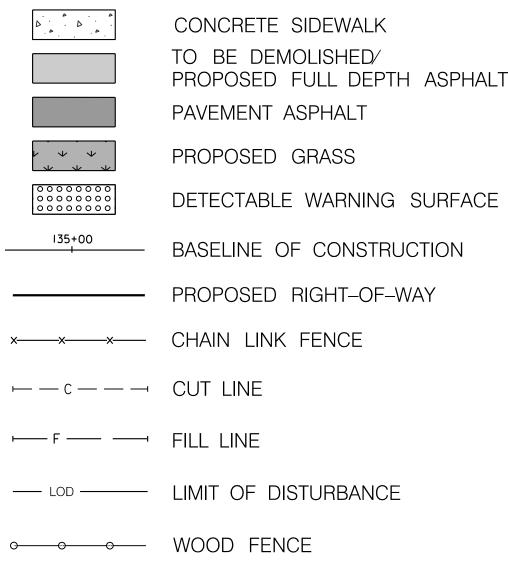
TI-01 OF

SHEET No. 1_ OF 97_

GENERAL NOTES

- RIGHT OF WAY LINES ARE SHOWN FOR ASSISTANCE IN INTERPRETING PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL RIGHT OF WAY AND EASEMENT INFORMATION, SEE THE APPROPRIATE RIGHT OF WAY PLAT.
- 2. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST HOLES BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN TWELVE (12) INCHES, THEN CONTACT THE MONTGOMERY COUNTY DOT PROJECT MANAGER AND THE APPROPRIATE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.
- 3. REPAIRS TO UTILITIES OR PROPERTY DAMAGED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
- 4. THE EXACT LOCATION AND TYPE OF SEDIMENT CONTROL DEVICES WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER, WHO RESERVES THE RIGHT TO ORDER ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES.
- 5. CONSTRUCTION EQUIPMENT SHALL HAVE TREADS /TIRES CLEANED PRIOR TO LEAVING THE LOD. ALL MATERIAL REMOVAL /LOAD OUT SHALL BE LIFTED FROM THE LOD. ALL SEDIMENT SPILLED, DROPPED OR TRACKED ONTO THE ROAD MUST BE REMOVED IMMEDIATELY BY VACUUMING, SCRAPING OR SWEEPING.
- 6. SAW CUTS WILL NOT BE MEASURED BUT WILL BE INCIDENTAL TO OTHER RELATED ITEMS AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 7. REFER TO THE CONTRACT DOCUMENTS FOR ROADWAY BORING, AND SOIL BORING DATA SHEETS.
- 8. ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST MDSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, REVISIONS THEREOF OR ADDITIONS THERETO, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, AND THE LATEST VERSION OF THE MARYLAND MUTCD.
- 9. PAVEMENT RESURFACING SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER GRINDING. PAVEMENT GRINDING OPERATIONS SHALL NOT BEGIN UNLESS THERE IS A SUFFICIENT TIME TO RESURFACE THE ROADWAY BEFORE COLD WEATHER.
- 10. EXISTING INFORMATION SHOWN IN THE PLANS IS BASED ON TOPOGRAPHIC SURVEY PERFORMED BY MERCADO CONSULTANTS, INC. ON OCTOBER 2022 WITH HORIZONTAL DATUM NAD 83/91 AND VERTICAL DATUM NGVD 29.
- 11. CONTRACTOR SHALL NOTIFY MCDOT, A WEEK IN ADVANCE BEFORE THE BUS SHELTER PAD INSTALLATION TO:
 WAYNE MILLER
 PROGRAM MANAGER, PASSENGER FACILITIES UNIT
 MCDOT DIVISION OF TRANSIT SERVICES
 OFFICE: (240) 777–5836

LEGEND



______STORM DRAIN

ES 1 DRAINAGE STRUCTURE IDENTIFICATION

*

LIGHT POLE

FIRE HYDRANT

W-1 **TH-01**

UTILITY TEST HOLE LOCATION

ROADWAY /SOIL BORING

EXISTING GAS MAIN

EXISTING RIGHT OF WAY LINE

EXISTING SEWER MAIN

EXISTING STORM DRAIN PIPE

EXISTING WATER MAIN

EXISTING FIBER OPTIC

EXISTING GAS MANHOLE

EXISTING INLET

EXISTING LIGHT

EXISTING SIGN

STORM DRAIN MANHOLE

SS SANITARY SEWER MANHOLE

TELEPHONE MANHOLE

WATER VALVE
WATER METER

UTILITY POLE

TREES

TREE LINE

ABBREVIATIONS

	American Association of State F Transportation Officials	,	O.C	Overhead Electric
ABAND			O.IVI	Optimum Moisture
ADT	Average Daily Traffic		PAV'T	Point of Curvature
	-Approximate			Point of Carvature Point of Compound Curvature
AUX				Point of Crown
B or B/L			P	
BK	Back /Book			-Utility Pedestal
BIT	-Bituminous		P/GE	-Profile Grade Elevation
	Bituminous Concrete / Bottom c	of Curb		-Profile Grade Line
	Bench Mark			-Profile Ground Line
BOT				Point of Rotation
	Center of Curve		P.I	Plasticity Index
	Utility Cabinet			Point of Intersection
	Cable Television			-Point On Curve
	California Bearing Ratio			Point On Tangent
<u>C</u>			PROP	
CL				Point of Reverse Curve
	Chainlink Fence Corrugated Metal Pipe		PT	Point of Tangency
	Corrugated Metal Pipe Arch			-Point of Fangency -Point of Vertical Curve
C.O				Polyvinyl Chloride
	Combination		PVI	Point of Vertical Intersection
CONC				-Point of Vertical Reverse Curve
	Construction			Point of Vertical Tangency
COR	_		R	
CORR			RELOC.	
	Degree of Curve			Rock Fragments
D.H.V	Design Hourly Volume		RT	
D.I	Drop Inlet		RW, R/W,	•
DIA			or R.O.W	Right of Way
	Double Opening			Reinforced Cement Pipe
	Department of Permitting Service	S		Reinforced Cement Concrete Pip
<u>E</u>				Rock Quality Desgnation
E			R.M	
	External Distance		S	
EA				-Sanitary Sewer
EB				Southbound
ELEV				Storm Drain Surface Drain Ditch
E.N.O.O.P	Elliptical Reinforced Cement			-Surface Drain Ditch -Super Elevation
FS	Concrete Pipe End Section		SF	Silt Fanca
EX., EXIST				-Square Feet
FT			SHLD	
F, FL			SHT	
	Flat Bottom Ditch			-Structural Plate Pipe
	Fire Hydrant			-Standard Penetration Testing
FWD				Stopping Sight Distance
G			SSF	Super Silt Fence
G. <u>V</u>			STD	
H.B			STA	
	High Density Polyetheylene Pipe			-Single Opening
HDWL				-Square Yards
H.E.R.C.P	Horizontal Ellipitical Reinforced			-Stormwater Management
ЦD	Concrete Pipe		T	
H.P			T	
IN LST	Inlet Sediment Trap			-Top of Cover/Top of Curb -Top of Grate
INV	·			-Traverse Line
	Junction Box			-Top of Manhole
K			TRAV	-Traverse
Ĺ				Temporary Swale
Ĺ.F			T.S	-Top of Slab
	-Liquid Limit		T.S	Topsoil
LOD	Limit of Disturbance		TYP	-Typical
L.P	Light Pole		U.D	- Under Drain
LT				-Underground
M-NCPPC	Maryland–National Capital Park		U.P	
N 4 A CO	and Planning Commission			-Vertical Clearance
MAC				-Vertical Curve Length
	Moisture Content		W	
MAX			W	
MOD	Maximum Dry Content			- Westbound - Wetland Buffer
MIN				-Welland Buller -Water Meter
N				-Water Meter -Wrapped Steel
	Northbound			-Washington Suburban
N.E			· · . O. O. O. · · · · ·	Sanitation Commission
	Non-Plastic		W.V	-Water Valve
				·Cross Slope
			:	MEDV
MONTOOME	RY COUNTY		MUNIGO	MERY COUNTY

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OWNER/ADDRESS:	
	
MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE	
GAITHERSBURG, MARYLAND	
CONTACT:	
DIVISION OF TRANSPORTATION	
ENGINEERING	
240-777-7220	
DESIGN SECTION	

240-777-7221

						,
				MONTGOMERY Department of tra Rockville, ma	ANSPORTATION	
				RECOMMENDED FOR APPROVAL		
				Chief, Transportation Planning and Design Section APPROVED	Date	GEN
				Chief, Division of Transportation Engineering	Date	
No.	REVISION	DATE	BY	DESIGNED BY OG DRAWN BY C	CEO CHECKED BY TMB	DRA

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

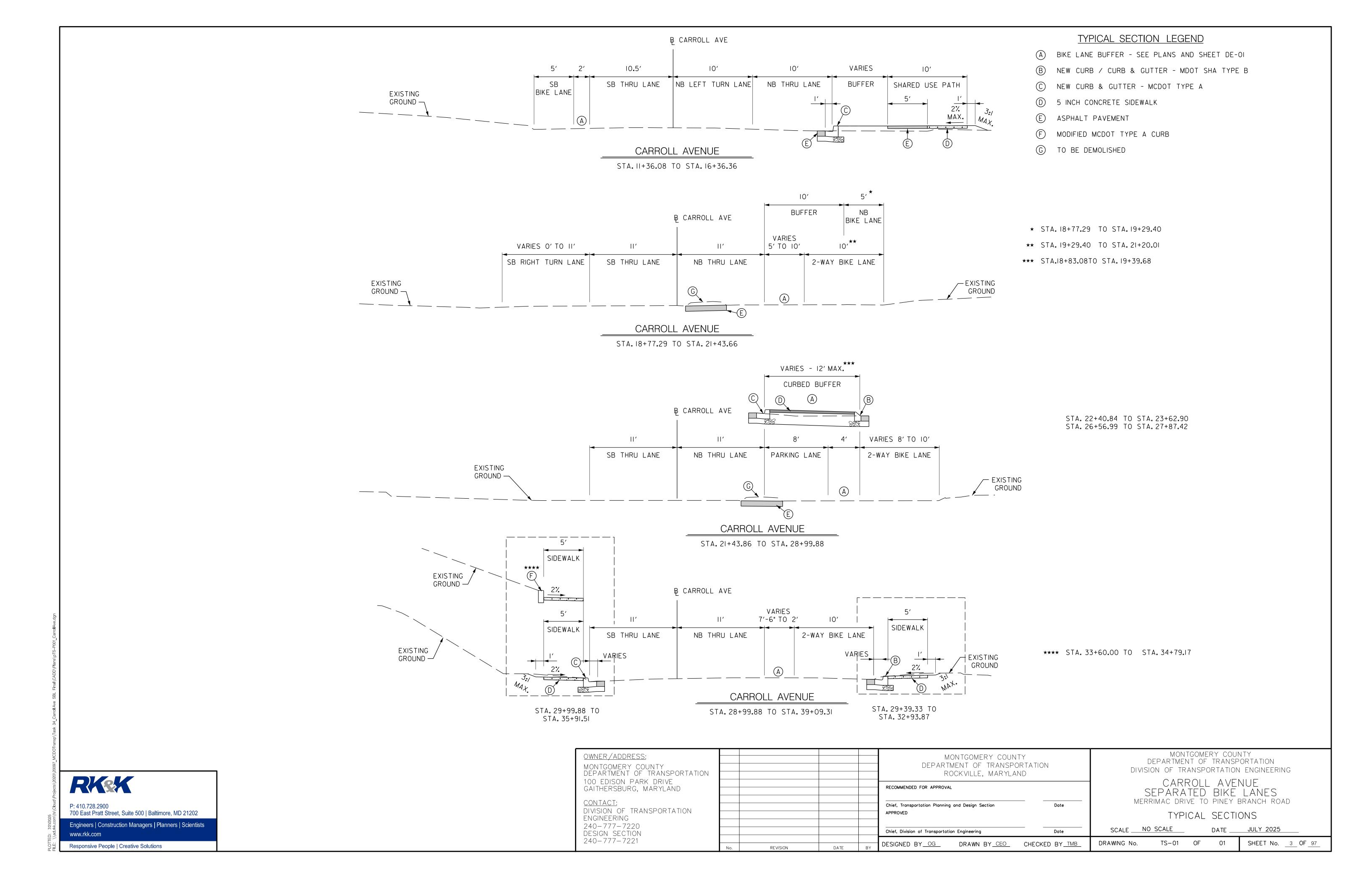
CARROLL AVENUE
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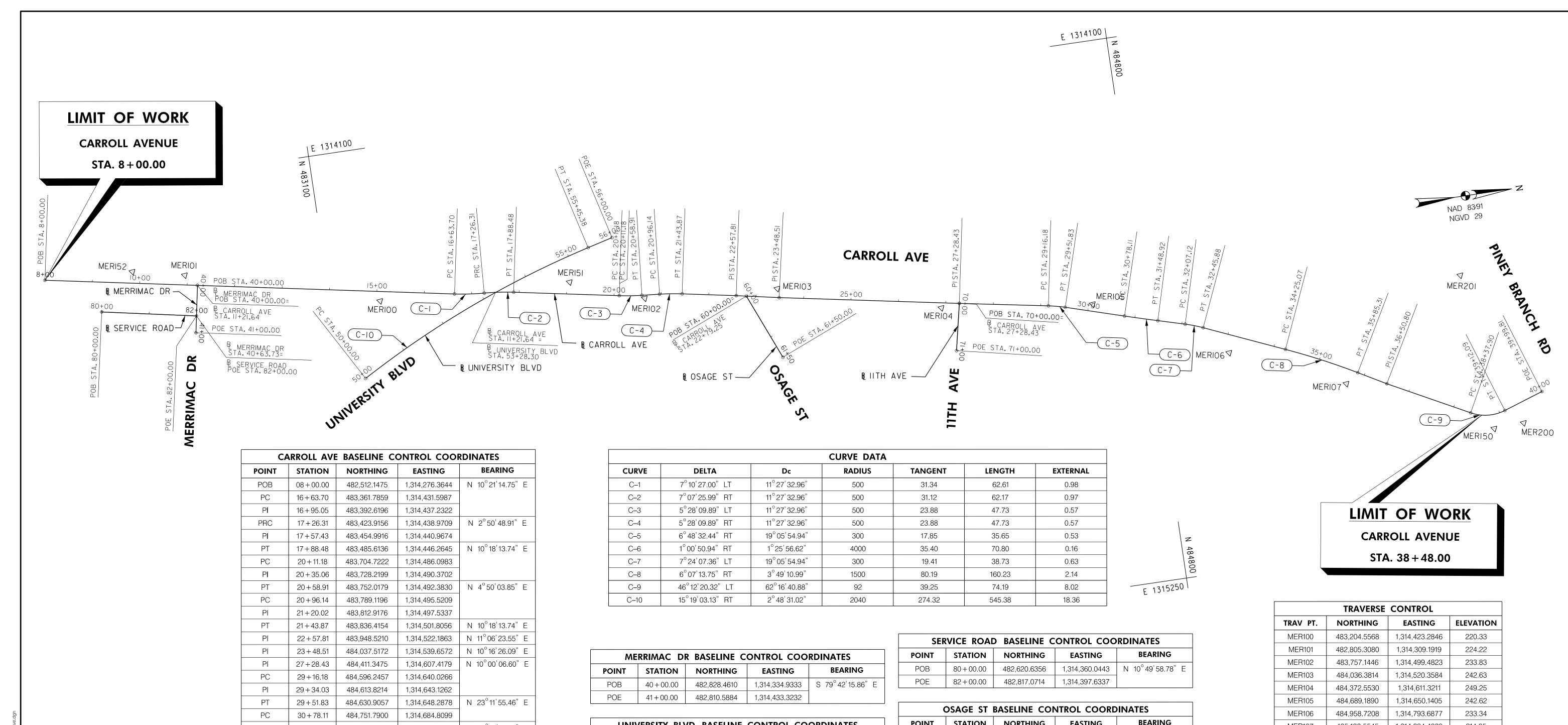
ENERAL NOTES, ABBREVIATIONS, AND LEGEND

SCALE NOTES, ABBREVIATIONS, AND LEGEN

SCALE NONE DATE JULY 2025

SAWING No. AB-01 OF 01 SHEET No. 2 OF 97





65% DESIGN NOT FOR **CONSTRUCTION**

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PC PC	20 + 11.18	483,704.7222	1,314,486.0983	
PI	20+35.06	483,728.2199	1,314,490.3702	
PT	20 + 58.91	483,752.0179	1,314,492.3830	N 4°50'03.85" E
PC	20 + 96.14	483,789.1196	1,314,495.5209	
PI	21 + 20.02	483,812.9176	1,314,497.5337	
PT	21 + 43.87	483,836.4154	1,314,501.8056	N 10°18'13.74" E
PI	22 + 57.81	483,948.5210	1,314,522.1863	N 11° 06' 23.55" E
PI	23 + 48.51	484,037.5172	1,314,539.6572	N 10°16'26.09" E
PI	27 + 28.43	484,411.3475	1,314,607.4179	N 10°00'06.60" E
PC	29+16.18	484,596.2457	1,314,640.0266	
PI	29 + 34.03	484,613.8214	1,314,643.1262	
PT	29 + 51.83	484,630.9057	1,314,648.2878	N 23°11'55.46" E
PC	30 + 78.11	484,751.7900	1,314,684.8099	
PI	31 + 13.52	484,785.6785	1,314,695.0484	N 29°19′09.21" E
PT	31 + 48.92	484,819.7429	1,314,704.6855	
PC	32+07.12	484,875.7475	1,314,720.5297	N 27°33′56.04" E
PI	32 + 26.52	484,894.4201	1,314,725.8124	
PT	32 + 45.88	484,912.2566	1,314,733.4567	
PC	34 + 25.07	485,076.9659	1,314,804.0469	N 18° 38' 24.29" W

485,150.6751

485,220.5960

485,277.7014

485,443.5561

485,478.3476

485515.5356

485598.6519

1,314,835.6368

1,314,874.9054

1,314,906.9766

1,314,993.5565

1,315,011.7184

1,314,999.1743

1,314,971.1378

35 + 05.27

35 + 85.31

36 + 50.80

38 + 37.90

38 + 77.14

39 + 12.09

40 + 00

PT

PC

PΙ

PΤ

POE

UNIVERSITY BLVD BASELINE CONTROL COORDINATES					
POINT	POINT STATION NORTHING EASTING				
POE/PC	50+00.00	483,150.4533	1,314,580.1260	N 29° 39' 16.92" W	
Pl	52 + 74.32	483,388.8473	1,314,444.3982		
PT	55 + 45.38	483,654.6276	1,314,376.4680	N 14° 20' 13.79" W	
POE	56+00.00	483,707.5498	1,314,362.9418		

240-777-7221

OSAGE ST BASELINE CONTROL COORDINATES					
POINT STATION NORTHING EASTING BEA					
POB	60+00.00	483,969.5358	1,314,526.4216	N 67°33'01.91" E	
POE	61 + 50.00	484,026.8161	1,314,665.0541		

11TH AVE BASELINE CONTROL COORDINATES				
POINT STATION NORTHING EASTING BEARING				
POB	70+00.00	484,411.4038	1,314,607.1501	S 78°07'08.72" E
POE	71 + 00.00	484,390.8160	1,314,705.0079	

DESIGNED BY OG DRAWN BY CEO CHECKED BY TMB

	TRAVERSE CONTROL							
TRAV PT.	NORTHING	EASTING	ELEVATION					
MER100	483,204.5568	1,314,423.2846	220.33					
MER101	482,805.3080	1,314,309.1919	224.22					
MER102	483,757.1446	1,314,499.4823	233.83					
MER103	484,036.3814	1,314,520.3584	242.63					
MER104	484,372.5530	1,314,611.3211	249.25					
MER105	484,689.1890	1,314,650.1405	242.62					
MER106	484,958.7208	1,314,793.6877	233.34					
MER107	485,193.5545	1,314,894.4339	214.05					
MER200	485,551.0043	1,315,031.0738	202.68					
MER201	485,464.3623	1,314,703.6813	210.26					
MER150	485,487.8553	1,315,033.6179	204.13					
MER151	483,605.4827	1,314,442.5072	229.50					
MER152	482,697.1616	1,314,285.6231	226.50					

SCALE: 1" = 100'

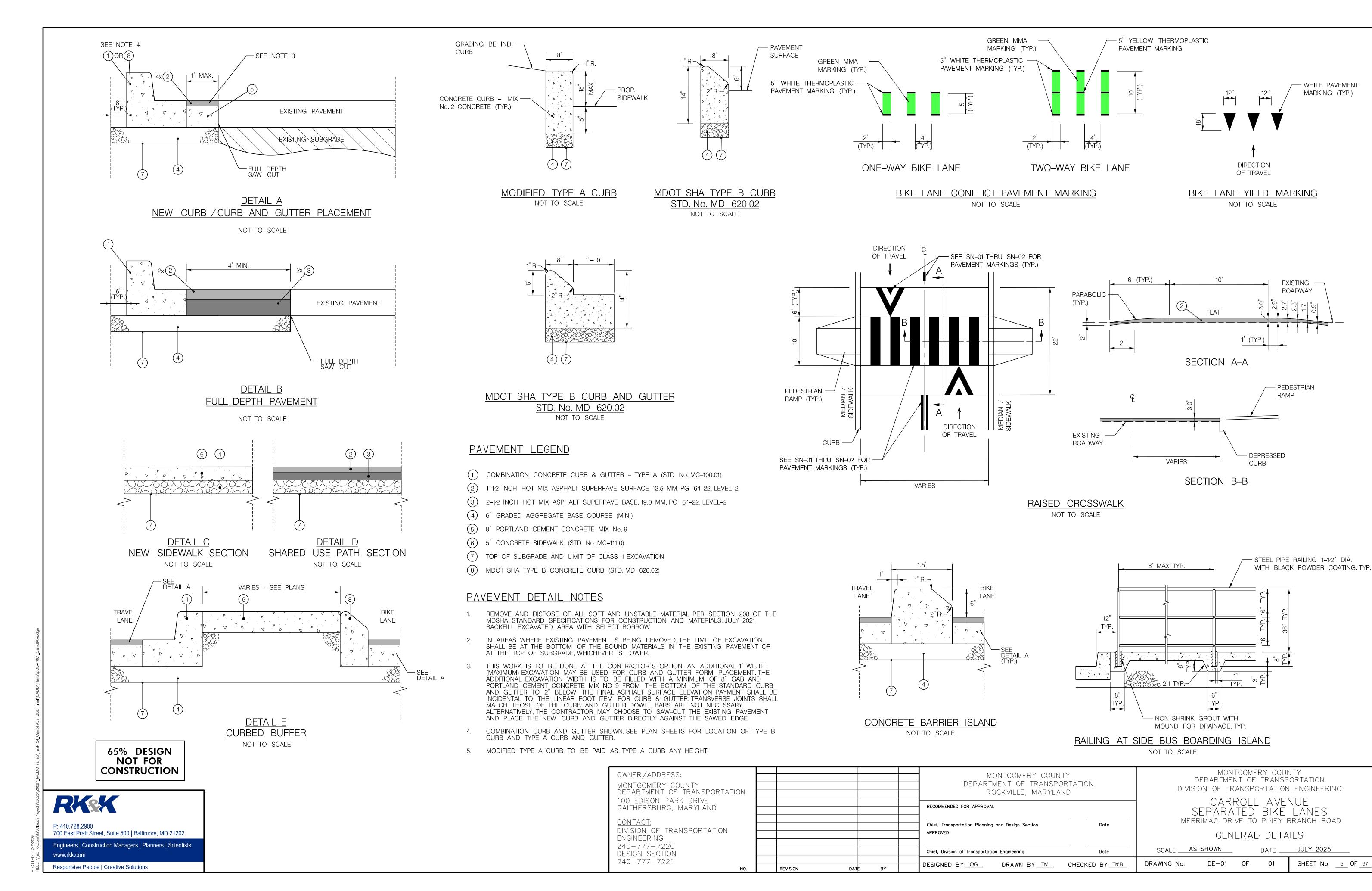
OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND RECOMMENDED FOR APPROVAL <u>CONTACT:</u> Chief, Transportation Planning and Design Section DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 Chief, Division of Transportation Engineering Date

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

GEOMETRY SHEET

SCALE ____1"=100' DATE JULY 2025 DRAWING No. GS-01 OF 01 SHEET No. 4 OF 97

DESIGN SECTION



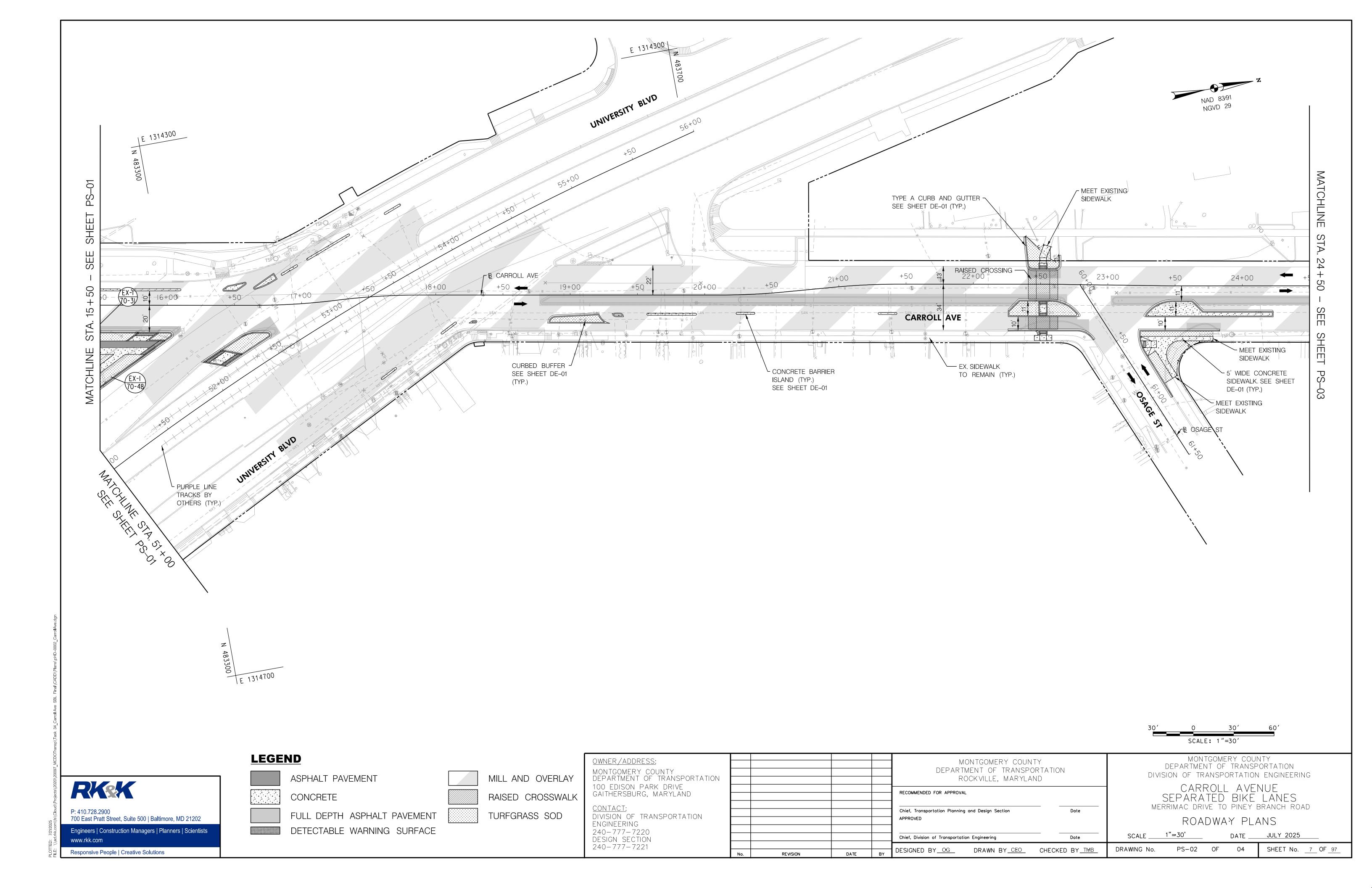
- WHITE PAVEMENT

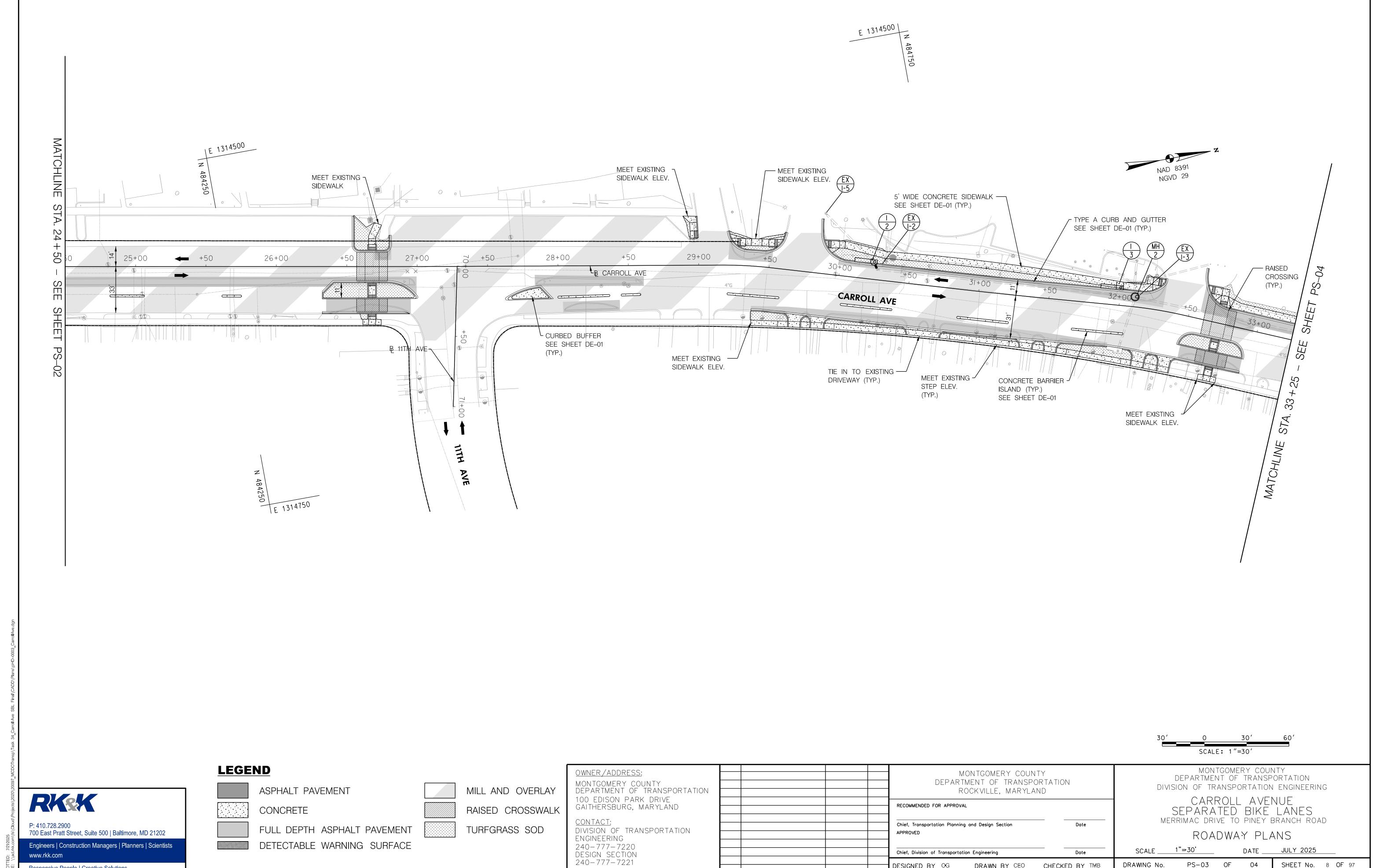
MARKING (TYP.)

SHEET No. 5 OF 97

NOTES:

1. CONTRACTOR SHALL NOTIFY MCDOT, A WEEK IN ADVANCE BEFORE THE BUS SHELTER PAD INSTALLATION TO: WAYNE MILLER PROGRAM MANAGER, PASSENGER FACILITIES UNIT MCDOT – DIVISION OF TRANSIT SERVICES OFFICE: (240) 777-5836 NGVD 29 IE 1314250 MATCHLINE - STORMWATER FACILITY CONCRETE BARRIER MBR-2 ISLAND (TYP.) SEE SHEET DE-01 STORMWATER FACILITY -- MEET EXISTING MEET EXISTING SIDEWALK MBR-3 SIDEWALK! _____ EX-MH) » — — — — — — 8+00 +50 9+00 +50 **CARROLL AVE** STORMWATER FACILITY _ MBR_1 _ MEET EXISTING -SIDEWALK 80+00 10' SHARED USE PATH TYPE A CURB AND GUTTER L TIE IN TO SEE SHEET DE-01 SEE SHEET DE-01 (TYP.) DRIVEWAY ELEV. MEET EXISTING TYPE A CURB AND GUTTER (TYP.) SIDEWALK B SERVICE ROAD-SEE SHEET DE-01 B MERRIMAC DR -- MEET EXISTING SIDEWALK MEET EXISTING SIDEWALK SCALE: 1"=30 **LEGEND** MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING ASPHALT PAVEMENT MILL AND OVERLAY ROCKVILLE, MARYLAND RKSK 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CARROLL AVENUE RECOMMENDED FOR APPROVAL CONCRETE RAISED CROSSWALK SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD <u>CONTACT:</u> Chief, Transportation Planning and Design Section P: 410.728.2900 FULL DEPTH ASPHALT PAVEMENT TURFGRASS SOD DIVISION OF TRANSPORTATION 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 ROADWAY PLANS APPROVED ENGINEERING DETECTABLE WARNING SURFACE 240-777-7220 DESIGN SECTION 240-777-7221 Engineers | Construction Managers | Planners | Scientists 1"⇒30' DATE JULY 2025 SCALE _ Date Chief, Division of Transportation Engineering SHEET No. 6 OF 97 PS-01 OF DRAWING No. DRAWN BY CEO CHECKED BY TMB DESIGNED BY OG Responsive People | Creative Solutions



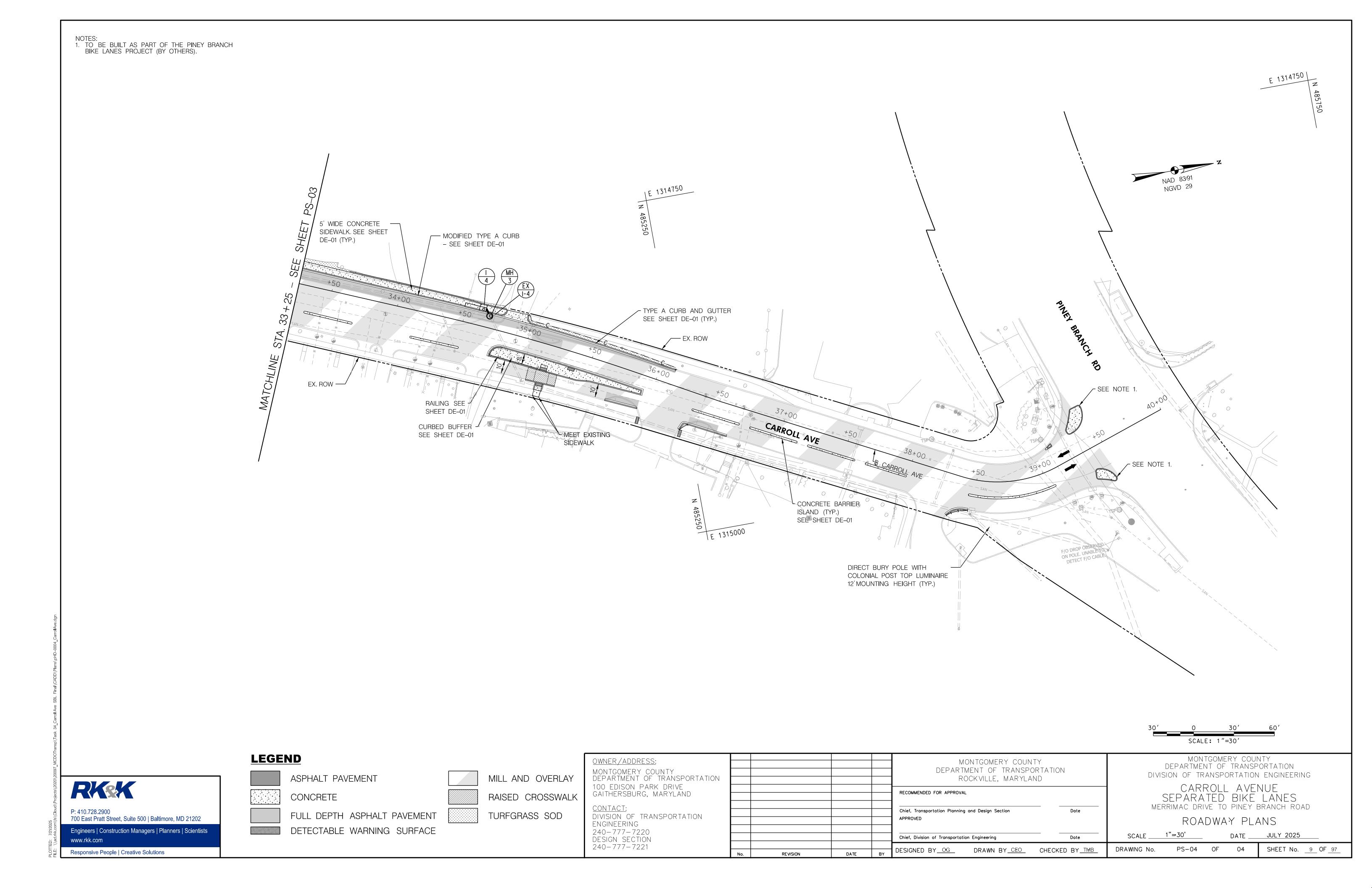


SHEET No. 8 OF 97

DRAWING No.

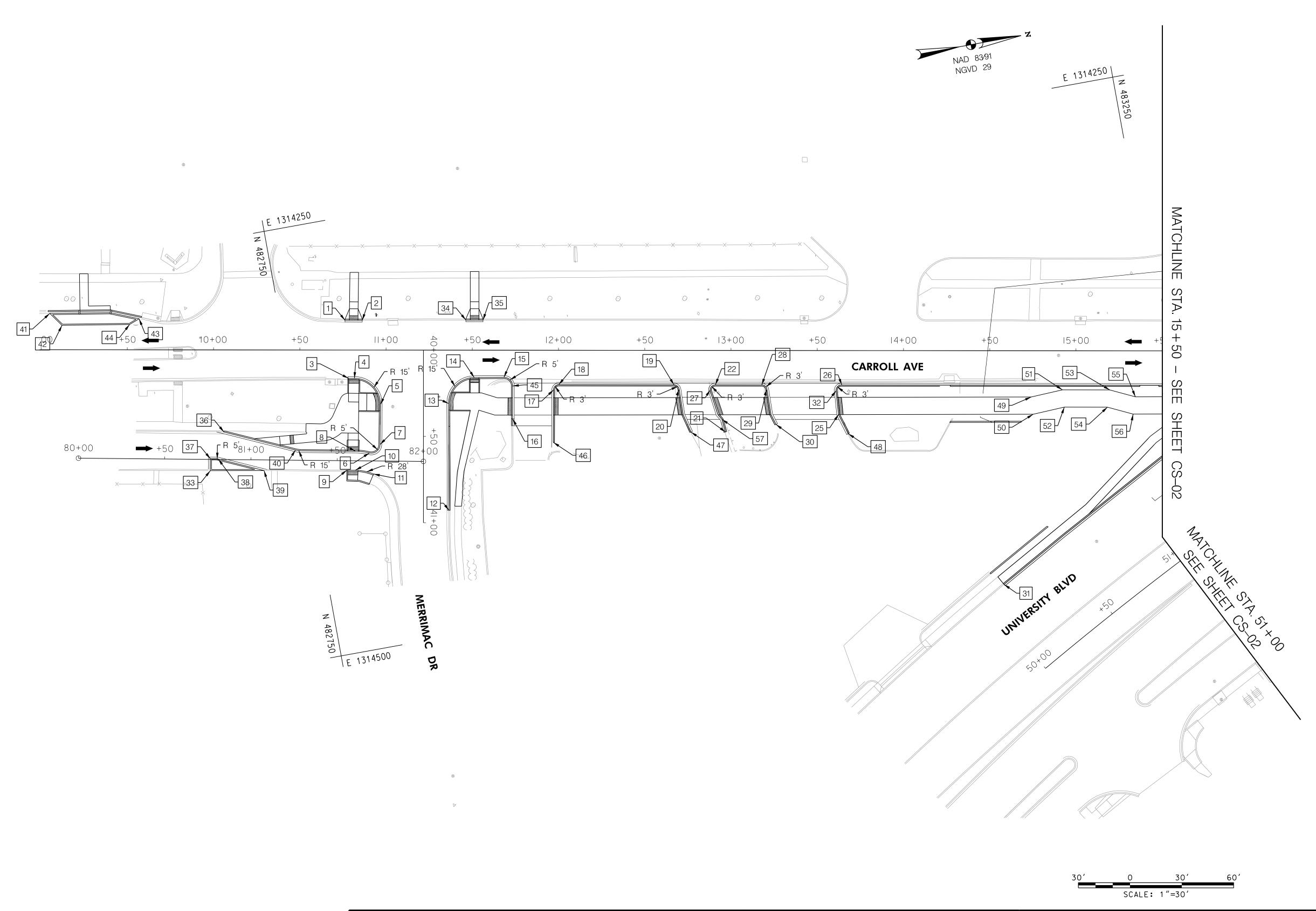
DESIGNED BY OG DRAWN BY CEO CHECKED BY TMB

PS-03 OF 04



	PROPOS	SED CURB DA	\TA	
POINT	STATION	OFFSET	LT/RT	BC ELEV.
1	10 + 76.17	18.00'	LT*	223.59
2	10 + 86.17	17.97	LT*	223.45
3	10 + 78.38	16.47	RT*	223.64
4	10 + 81.64	15.70'	RT	223.62
5	40 + 30.80	24.91	RT	222.79
6	81 + 68.69	4.64	LT	222.24
7	81 + 74.74	9.52	LT	222.25
8	81 + 60.54	5.50'	LT	222.44
9	81 + 55.63	5.50'	RT*	222.04
10	81 + 60.54	5.50'	RT	221.93
11	81 + 71.14	7.58	RT*	221.81
12	40 + 92.06	14.82'	LT*	220.77
13	11 + 36.29	30.25	RT	222.42
14	11 + 51.16	15.87	RT	222.54
15	11 + 68.35	15.73	RT	222.26
16	11 + 73.41	39.75	RT*	221.41
17	11 + 97.15	23.00	RT*	221.80
18	12+00.15	20.00	RT	221.86
19	12+66.96	20.00	RT	220.98
20	12+69.92	22.50	RT*	220.91
21	12+96.90	47.31	RT*	220.51
22	12 + 90.97	20.00	RT	220.85
25	13 + 62.37	37.12	RT*	220.06
26	13+63.93	20.00	RT	220.38
27	12 + 88.12	23.93	RT	220.78
28	13+17.86	20.00	RT*	220.67
29	13 + 20.82	22.50'	RT*	220.59
30	13 + 26.11	48.89	RT*	220.17
31	50 + 12.51	52.82'	LT*	31
32	13 + 60.95	23.31	RT	220.31
33	80 + 76.50	6.55	RT*	224.16
34	11 + 46.20	18.16	LT*	222.64
35	11 + 56.17	18.14	LT*	222.48
36	80 + 84.20	15.94	LT*	224.07
37	80 + 76.44	0.36	LT	223.85
38	80 + 81.04	0.24	LT	223.75
39	81 + 07.65	6.18	RT*	223.51
40	81 + 25.75	5.92'	LT	223.00
41	9+05.06	21.03	LT	227.99
42	9+12.15	14.13	LT	227.98
43	9+56.86	17.94	LT	226.58
44	9+51.32	14.65	LT	226.79
45	11 + 73.39	20.72	RT	222.01
46	11 + 97.06	53.38'	RT*	220.34
47	12 + 76.82	47.33	RT	220.35
48	13 + 68.04	48.20	RT	219.58
49	14 + 74.08	26.82	RT	219.59
50	14 + 75.23	36.82	RT	219.65
51	14 + 92.12	22.66	RT	220.46
52	8+99.88	22.89	RT	218.93
53	15 + 19.58	22.66	RT	220.37
54	15 + 18.26	32.66	RT	219.91
55	15 + 34.45	26.67	RT	219.87
56	15 + 33.14	36.67	RT	222.04
57	12 + 94.81	39.93	RT	220.72
L	<u> </u>	*\/FET EY	l Isting cure	<u>. </u>

*MEET EXISTING CURB



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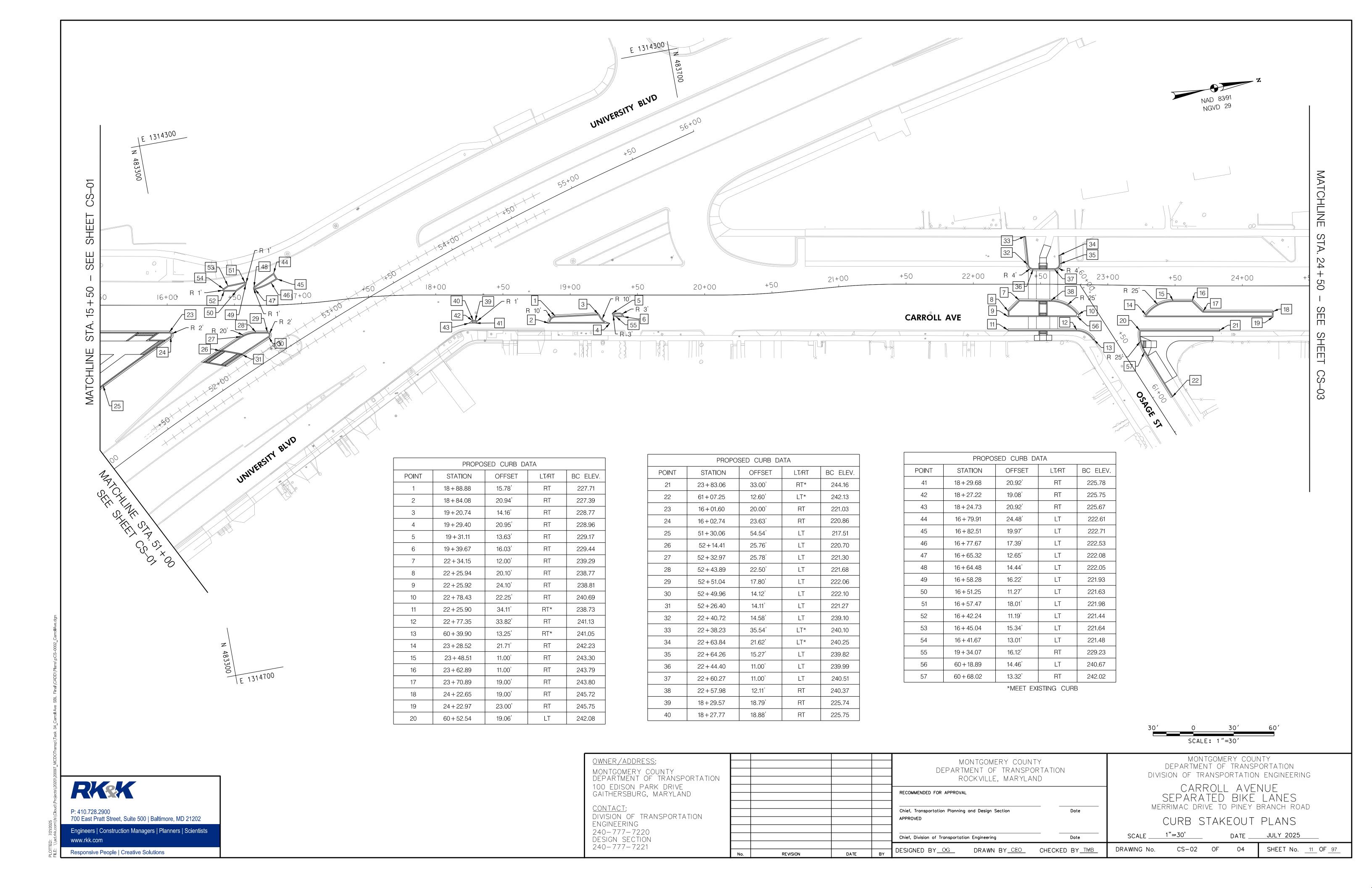
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MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE	
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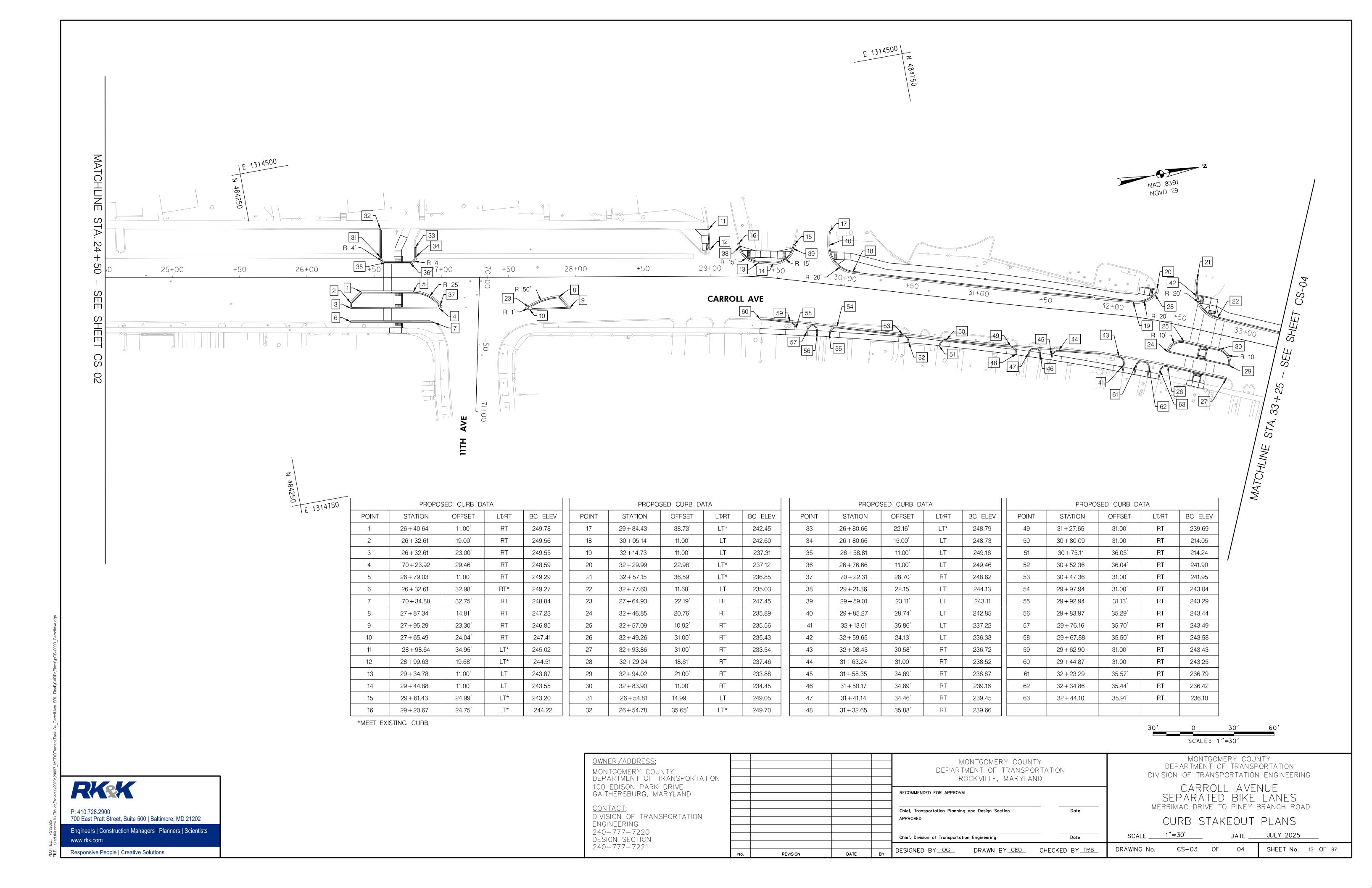
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				Chief, Transportation Planning and Design Section APPROVED	Date	
				Chief, Division of Transportation Engineering	 Date	
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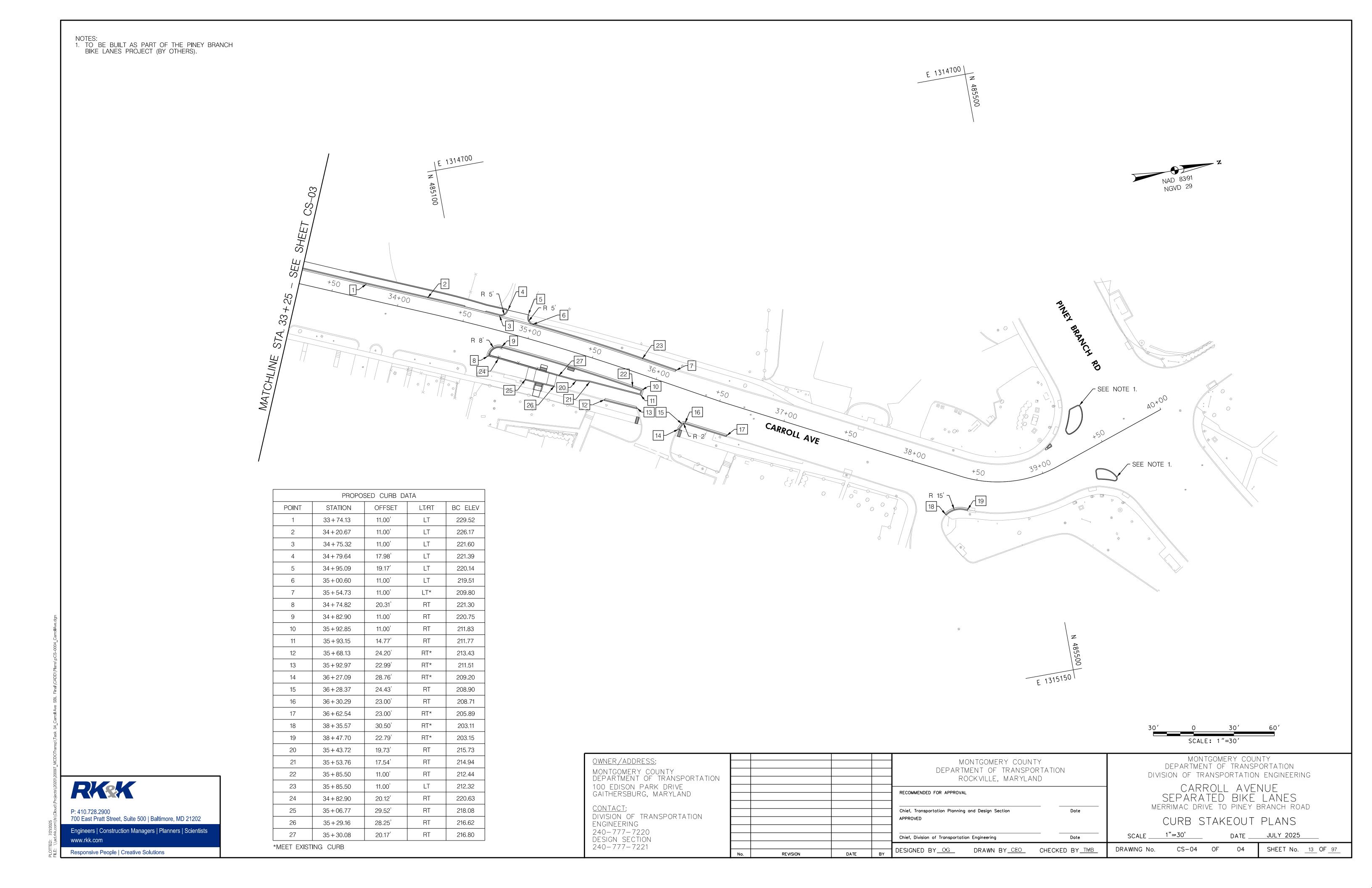
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

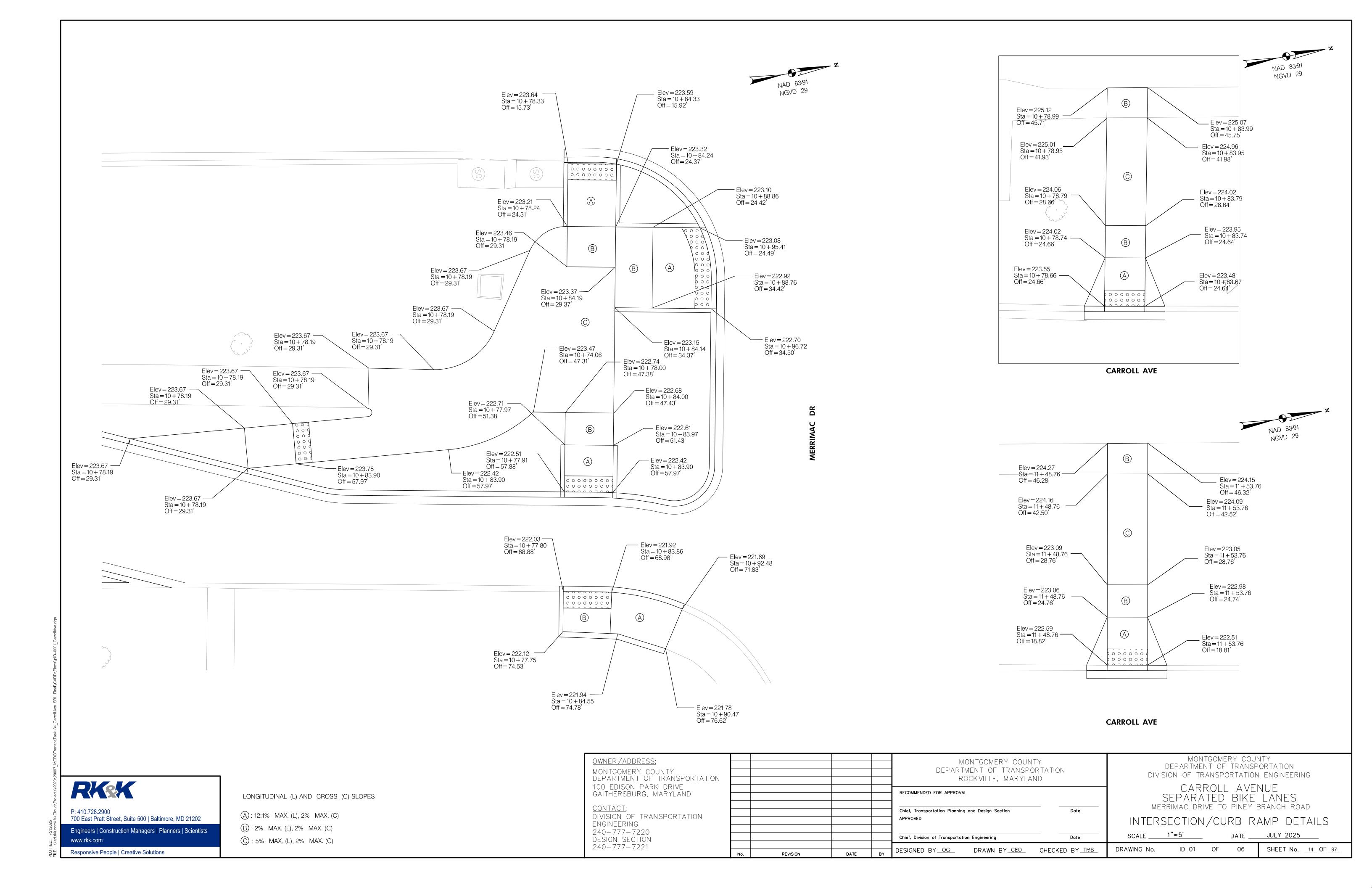
CURB STAKEOUT PLANS

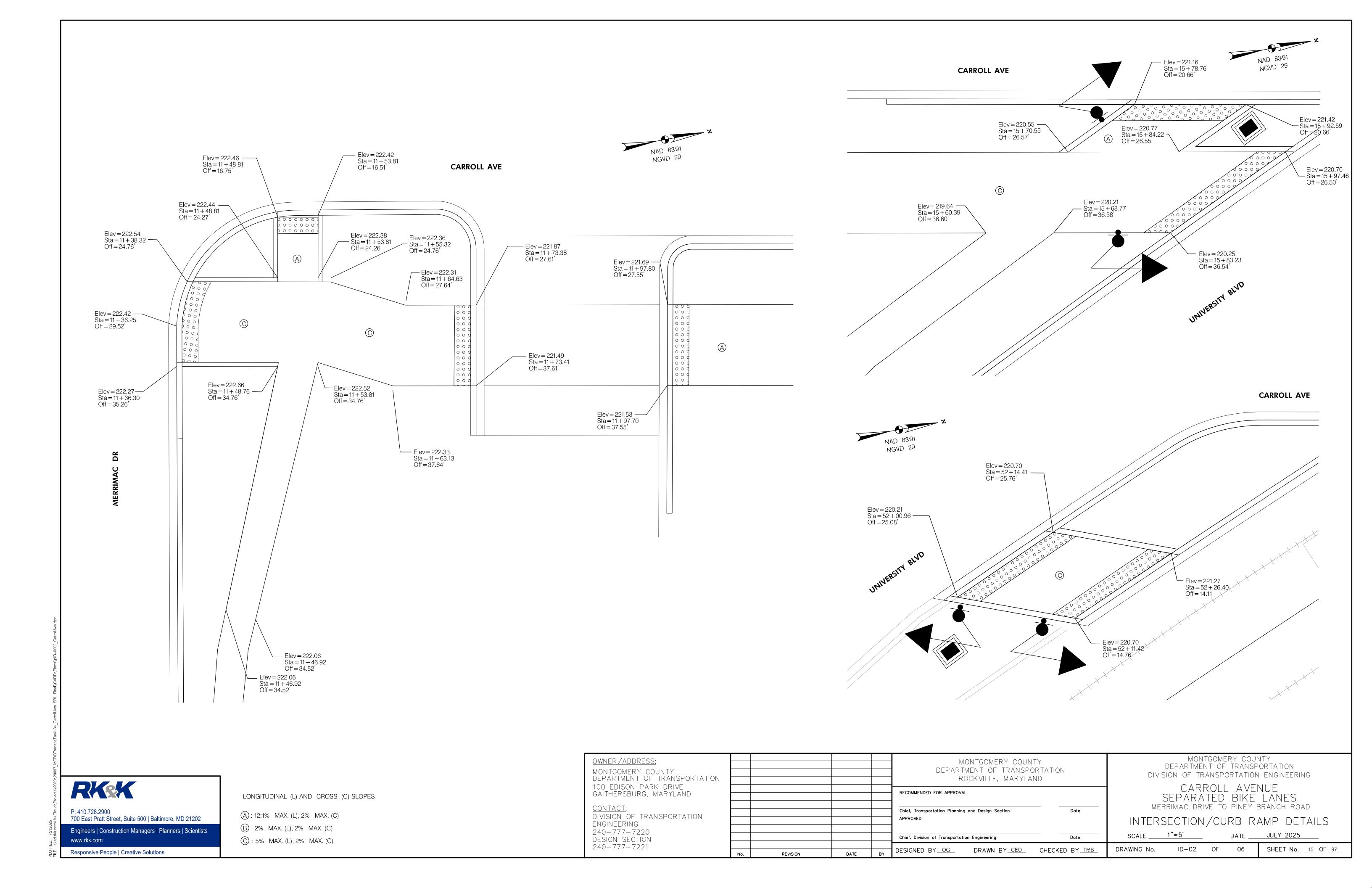
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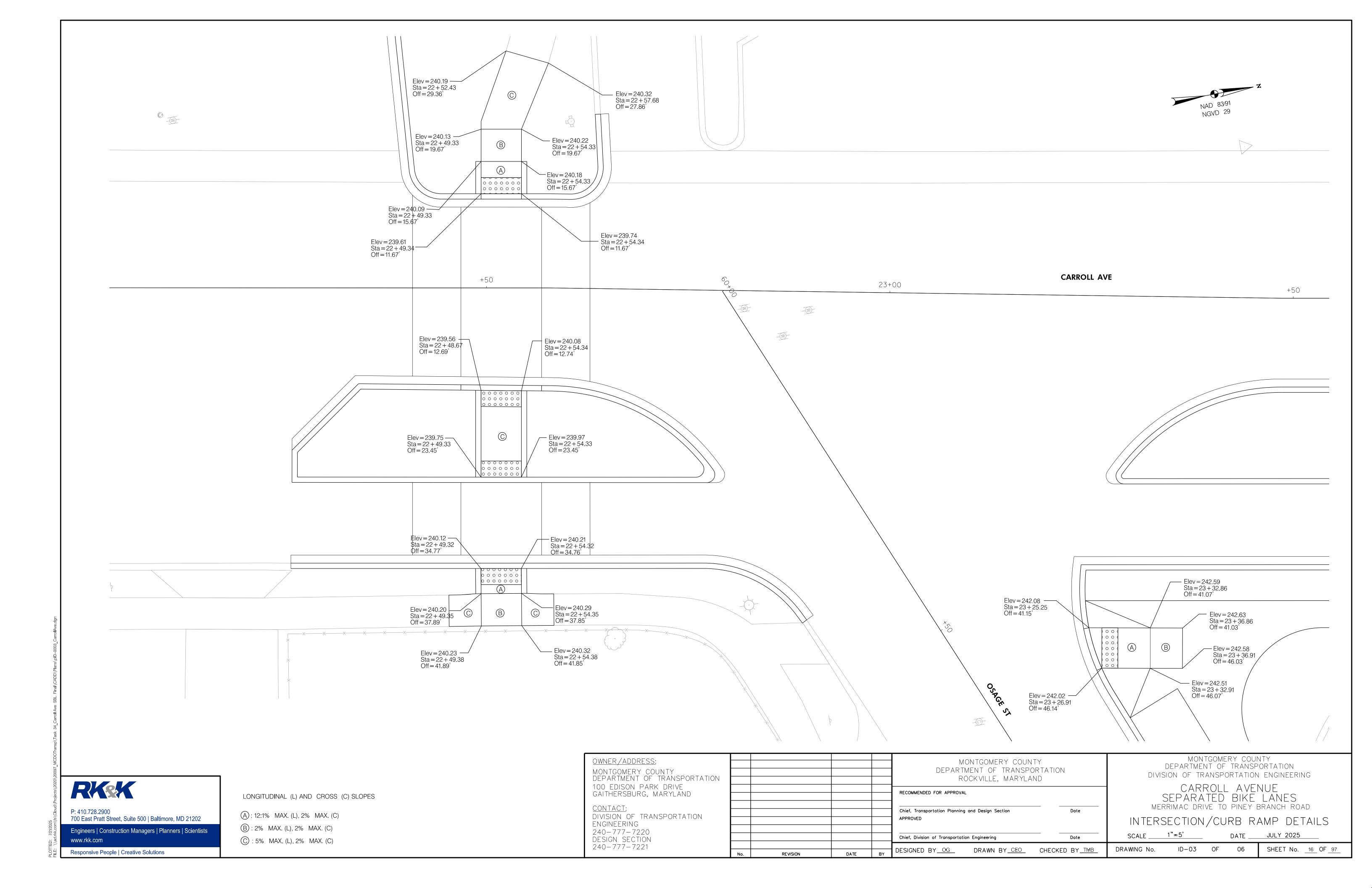






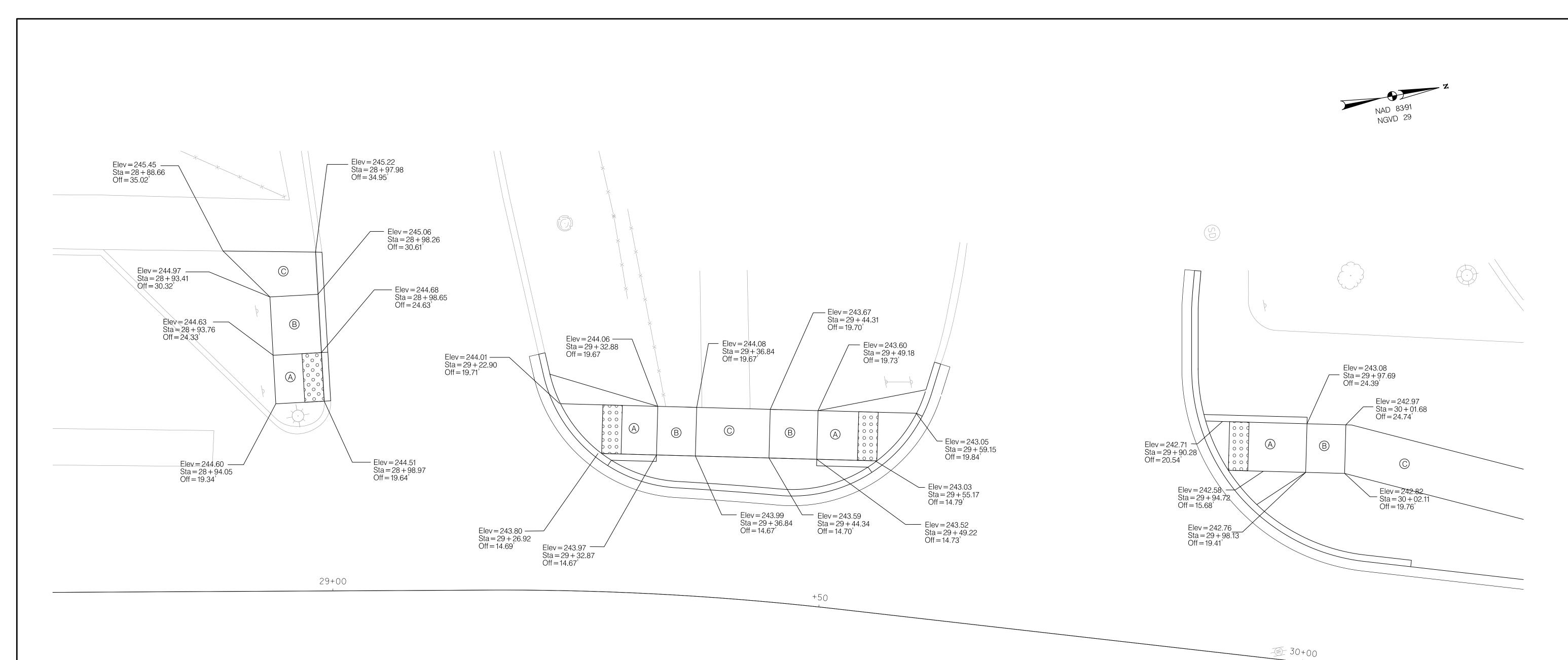






NAD 83/91 NGVD 29 Elev = 249.55Sta = 26 + 74.75Off = 29.40'Elev = 249.65 ____ Sta = 26 + 69.59Off = 31.29'Elev = 249.50 — Sta = 26 + 65.50 Off = 19.67- Elev = 249.49 $Elev = 249.46 \longrightarrow$ Sta = 26 + 70.50 Off = 15.67' Sta = 26 + 65.50 Off = 15.67 $^{\otimes}$ - Elev = 249.35Elev = 249.32 — Sta = 26 + 70.50 Off = 11.67' \bigcirc 0 0 0 0 0 0 000000 000000 +50 27+00 **CAROLL AVE** 000000 Elev = 249.12 — Sta = 26 + 65.47 Off = 11.68 Elev = 249.44 Sta = 26 + 70.47 Off = 11.69'Elev = 249.13 Sta = 26 + 65.45 Off = 22.24 Elev = 249.06 Sta = 26 + 70.45 Off = 22.23' 0000000 **,**0000000√ 0000000 000000 Elev = 249.28 — Sta = 26 + 65.43 Off = 33.66 - Elev = 249.21 Sta = 26 + 70.43 Off = 33.66' \bigcirc Elev = 249.16 Sta = 26 + 65.43 Off = 37.41 ev = 249.09 $^{\otimes}$ Sta = 26 + 70.43 Off = 37.48' - Elev = 249.13 Elev = 249.21 —— Sta = 26 + 65.43 Off = 41.41' Sta = 26 + 70.43 Off = 41.48MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING ROCKVILLE, MARYLAND RKSK 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CARROLL AVENUE RECOMMENDED FOR APPROVAL SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD LONGITUDINAL (L) AND CROSS (C) SLOPES <u>CONTACT:</u> Date P: 410.728.2900 Chief, Transportation Planning and Design Section (A): 12:1% MAX. (L), 2% MAX. (C) DIVISION OF TRANSPORTATION 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 INTERSECTION/CURB RAMP DETAILS APPROVED ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221 B: 2% MAX. (L), 2% MAX. (C) Engineers | Construction Managers | Planners | Scientists 1"=5' DATE ____JULY 2025 Date Chief, Division of Transportation Engineering ©: 5% MAX. (L), 2% MAX. (C) ID-04 OF SHEET No. <u>17</u> OF <u>97</u> DRAWING No. DESIGNED BY OG DRAWN BY CEO CHECKED BY TMB Responsive People | Creative Solutions

PLOTTED: 7/21/2025 FILE: \\ad.rkk.com\fs\Cloud\Proje



CARROLL AVE

RKSK P: 410.728.2900 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 Engineers | Construction Managers | Planners | Scientists

LONGITUDINAL (L) AND CROSS (C) SLOPES

(A): 12:1% MAX. (L), 2% MAX. (C)

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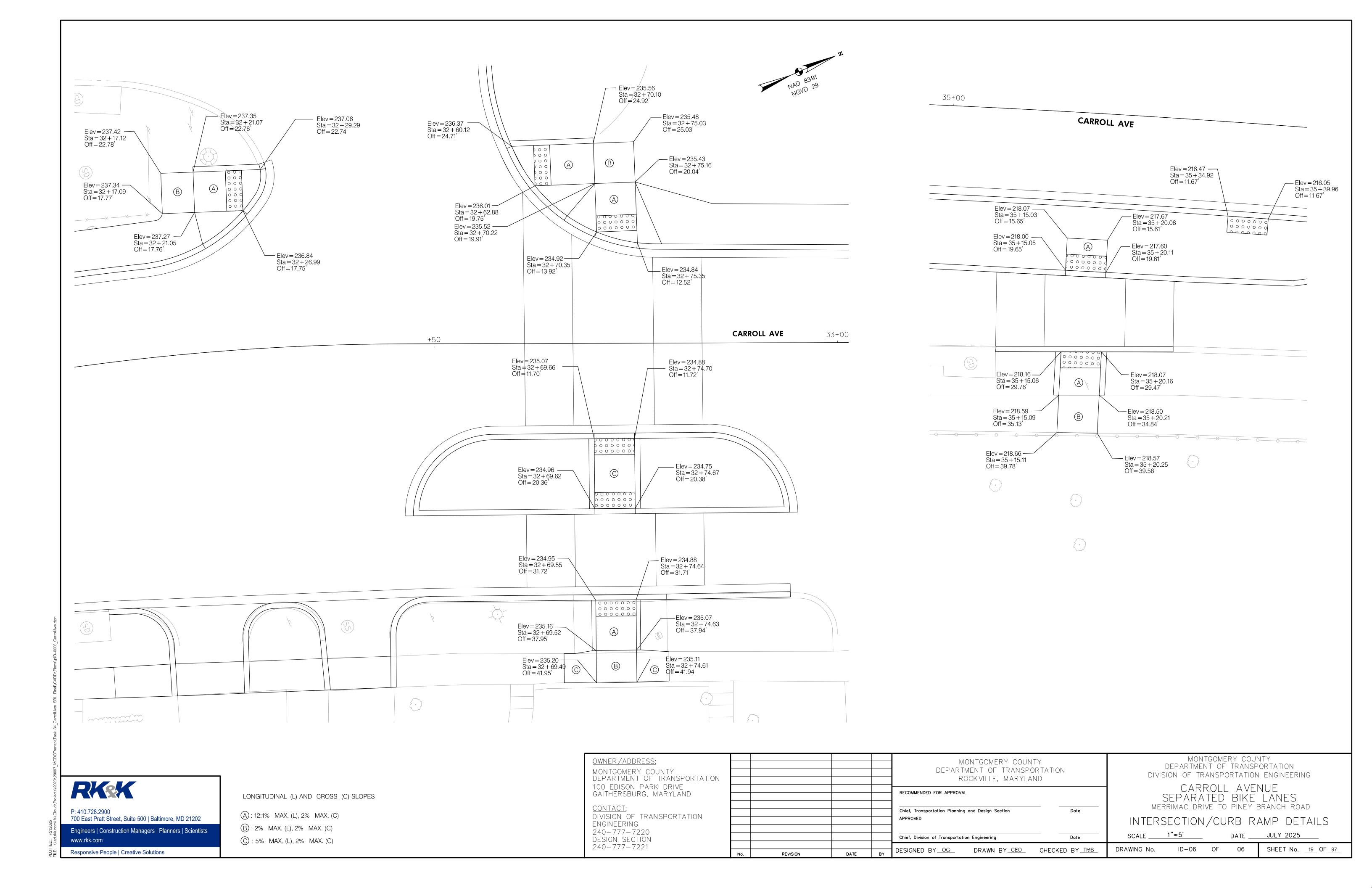
©: 5% MAX. (L), 2% MAX. (C)

OWNER/ADDRESS:					MONTGOMERY COUNTY	
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION					DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	DEF DIVISION
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND					RECOMMENDED FOR APPROVAL	- SE
<u>CONTACT:</u> Division of transportation					Chief, Transportation Planning and Design Section Date	MERRIN
ENGINEERING 240-777-7220					APPROVED	INTERSE(
DESIGN SECTION 240-777-7221					Chief, Division of Transportation Engineering Date	SCALE1"=
1	No.	REVISION	DATE	BY	DESIGNED BY OG DRAWN BY CEO CHECKED BY TMB	DRAWING No.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

INTERSECTION/CURB RAMP DETAILS

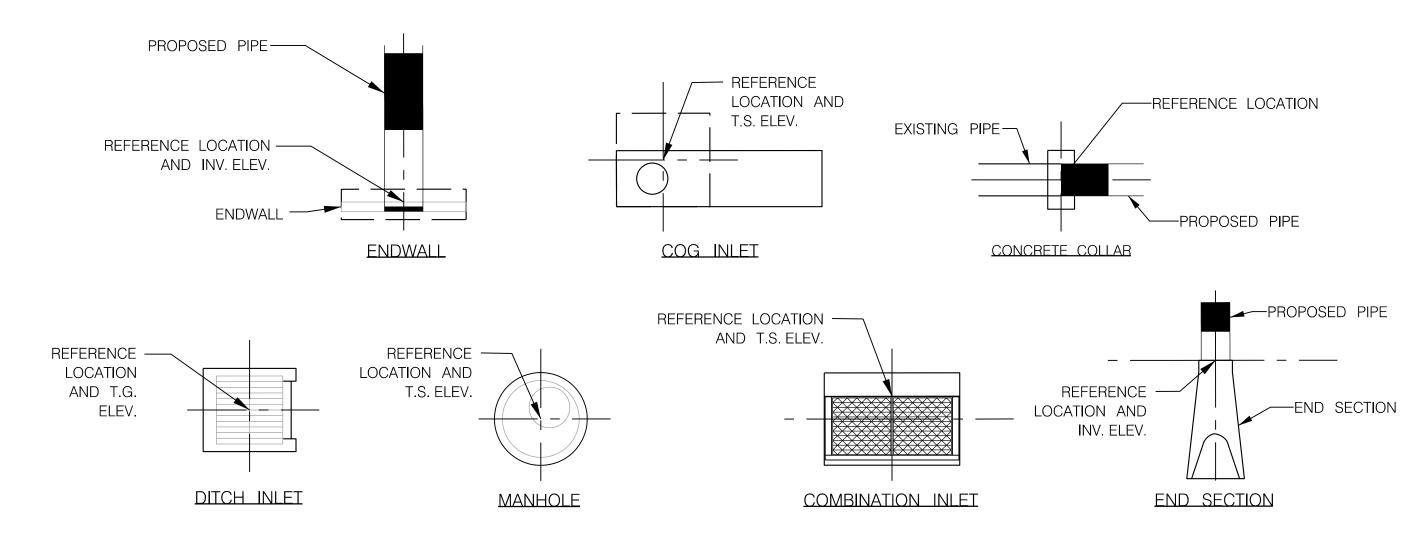
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	PIPE SCHEDULE										
FROM	ТО	SIZE(IN.)	MATERIAL	LENGTH(L.F.)	INV. IN	INV. OUT	REMARKS				
I 8	MH 4	15	R.C.P CLASS IV	74	222.33	221.96					
MH 4	EX I4	15	R.C.P CLASS IV	9	221.86	221.79					
l 7	MH 7	15	R.C.P CLASS IV	9	215.42	215.37					
MH 7	MH 6	24	R.C.P CLASS IV	269	215.27	213.64					
I–6	MH 6	18	R.C.P CLASS IV	31	214.18	214.00					
MH 6	MH 5	24	R.C.P CLASS IV	88	213.54	213.10					
MH 5	I 5	24	R.C.P CLASS IV	6	213.00	212.95					
I 5	EX-MH 70-03	24	R.C.P CLASS IV	70	212.85	212.50					
I 2	EX-I 7	15	R.C.P CLASS IV	3	235.30	235.20	·				
13	MH 2	15	R.C.P CLASS IV	8	233.89	233.17	·				
I 4	MH 3	12	R.C.P CLASS IV	4	218.69	218.65					

BULKHEAD AND ABANDON EXISTING PIPES SCHEDULE								
FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	SIZE & TYPE	LENGTH (FT)			
14 + 29	16 RT	14+73	25 RT	18" RCP	45			

	BU	JLKHEAD AND	ABANDON EXISTING STRUCTURE SC	HEDULE
STR. NO.	STATION	OFFSET	DESCRIPTION	REMARKS
EX-I 70-24	14 + 74	23 RT	5 FT CIRCULAR COG INLET	



DRAINAGE STRUCTURE LOCATION REFERENCES

P: 410.728.2900
700 East Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
www.rkk.com

OWNER/ADDRESS:	H
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND	
CONTACT: DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221	

				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND
				RECOMMENDED FOR APPROVAL Chief, Transportation Planning and Design Section Date APPROVED
NO.	REVISION	DATE	BY	Chief, Division of Transportation Engineering Date DESIGNED BY YDM DRAWN BY YDM CHECKED BY JAC

PLAN NO.MR2025004	DD-Ø1
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING	
CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD	

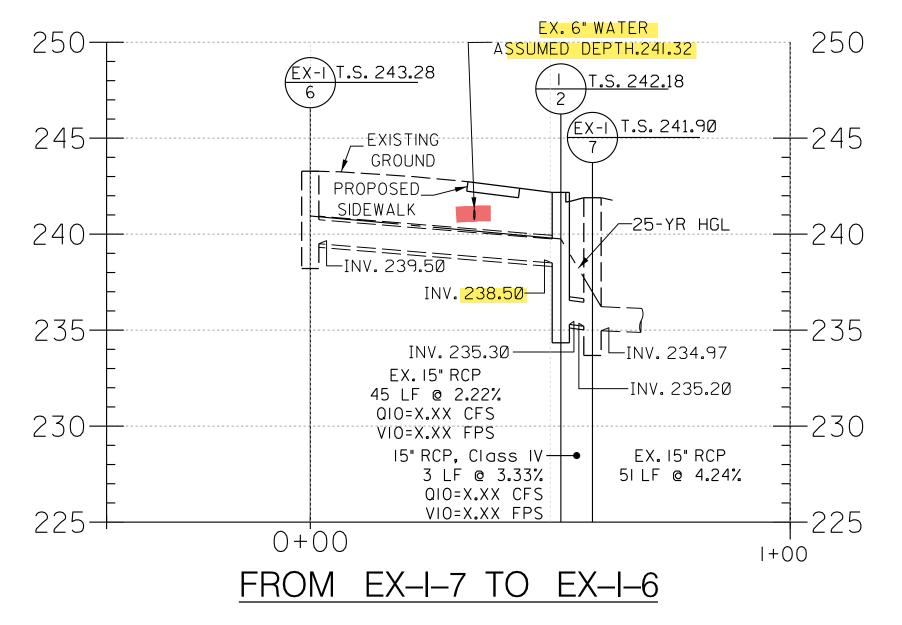
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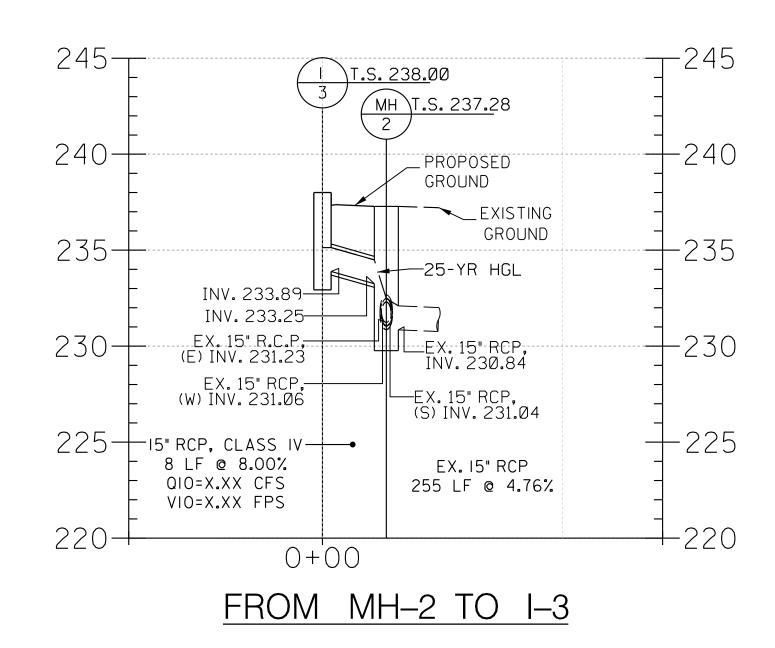
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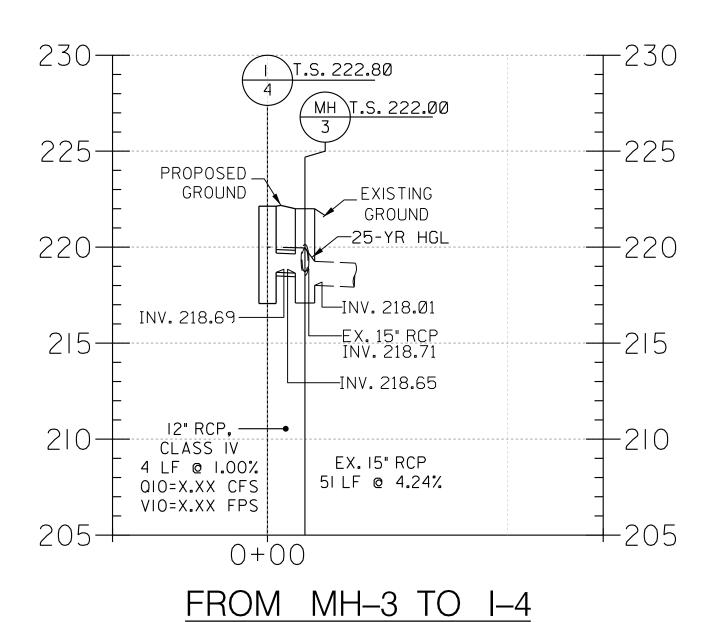
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HORIZONTAL: 20' 0 20' 40'

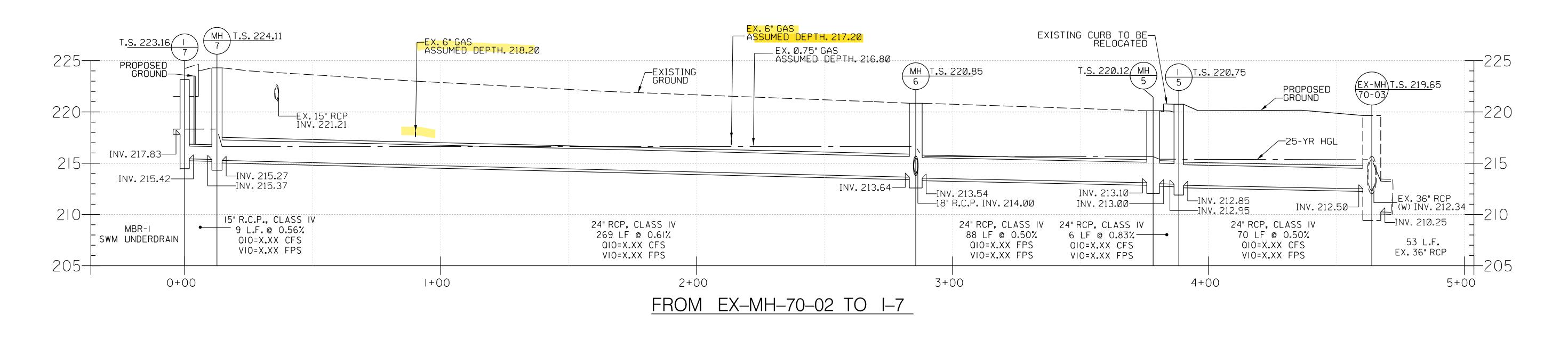
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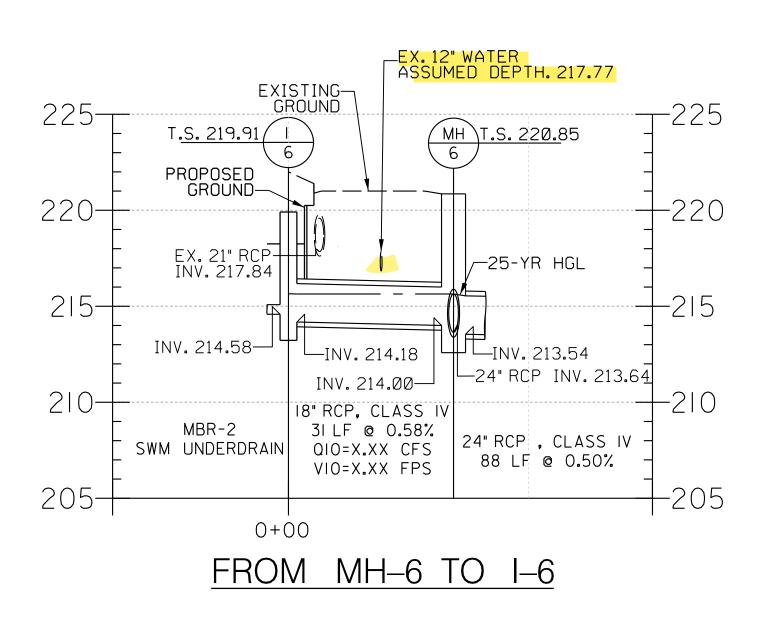
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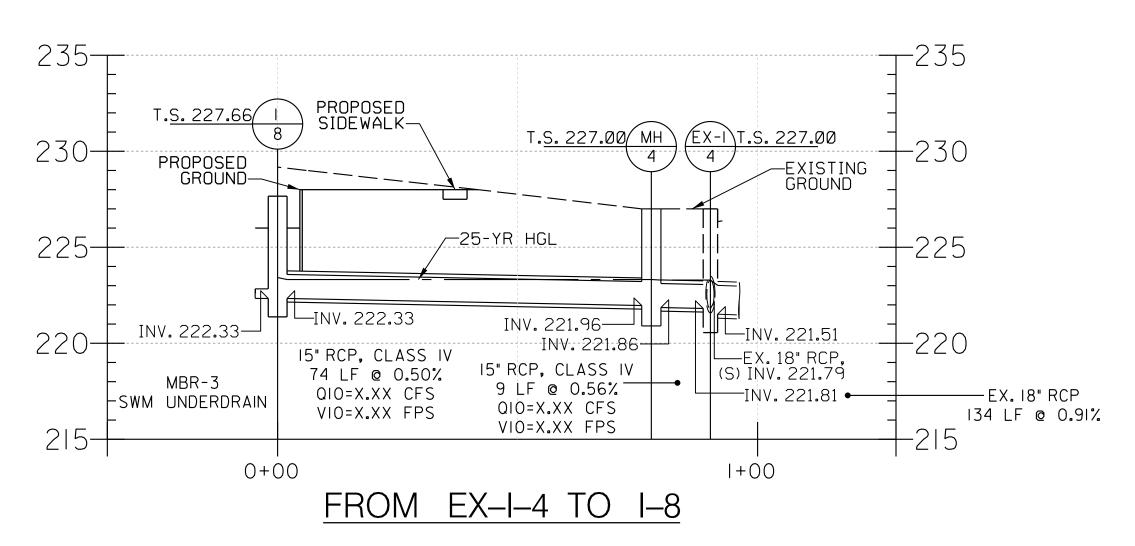
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PLAN NO.MR2025004 DP-01 MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD DRAINAGE: PROFILES SCALE ___AS SHOWN DATE JULY 2025 SHEET NO. <u>21</u> OF <u>97</u> DP-01 OF 2 AWING NO.

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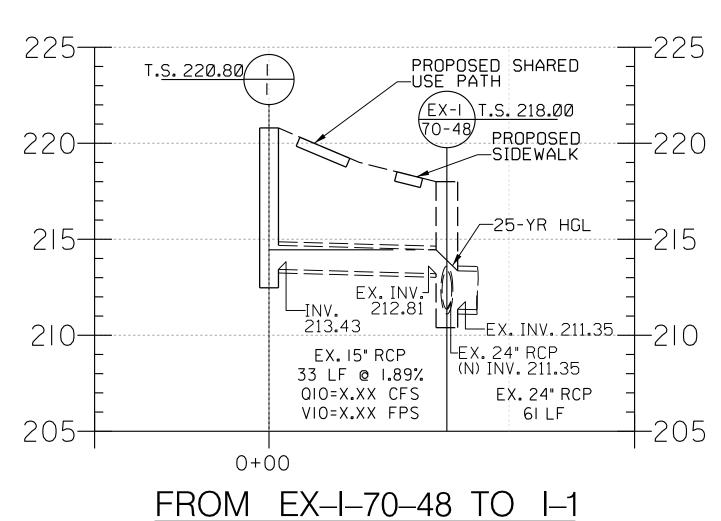




ENGINEERING

240-777-7220 DESIGN SECTION

240-777-7221



Date

DRAWN BY YDM CHECKED BY JAC

DRAWING NO.

HORIZONTAL: 20' 0 20' 40' VERTICAL: 4' 0 4' 8'

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND RECOMMENDED FOR APPROVAL CONTACT: Chief, Transportation Planning and Design Section Date DIVISION OF TRANSPORTATION

REVISION

APPROVED

Chief, Division of Transportation Engineering

DESIGNED BY YDM

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD DRAINAGE: PROFILES

PLAN NO.MR2025004 DP-02

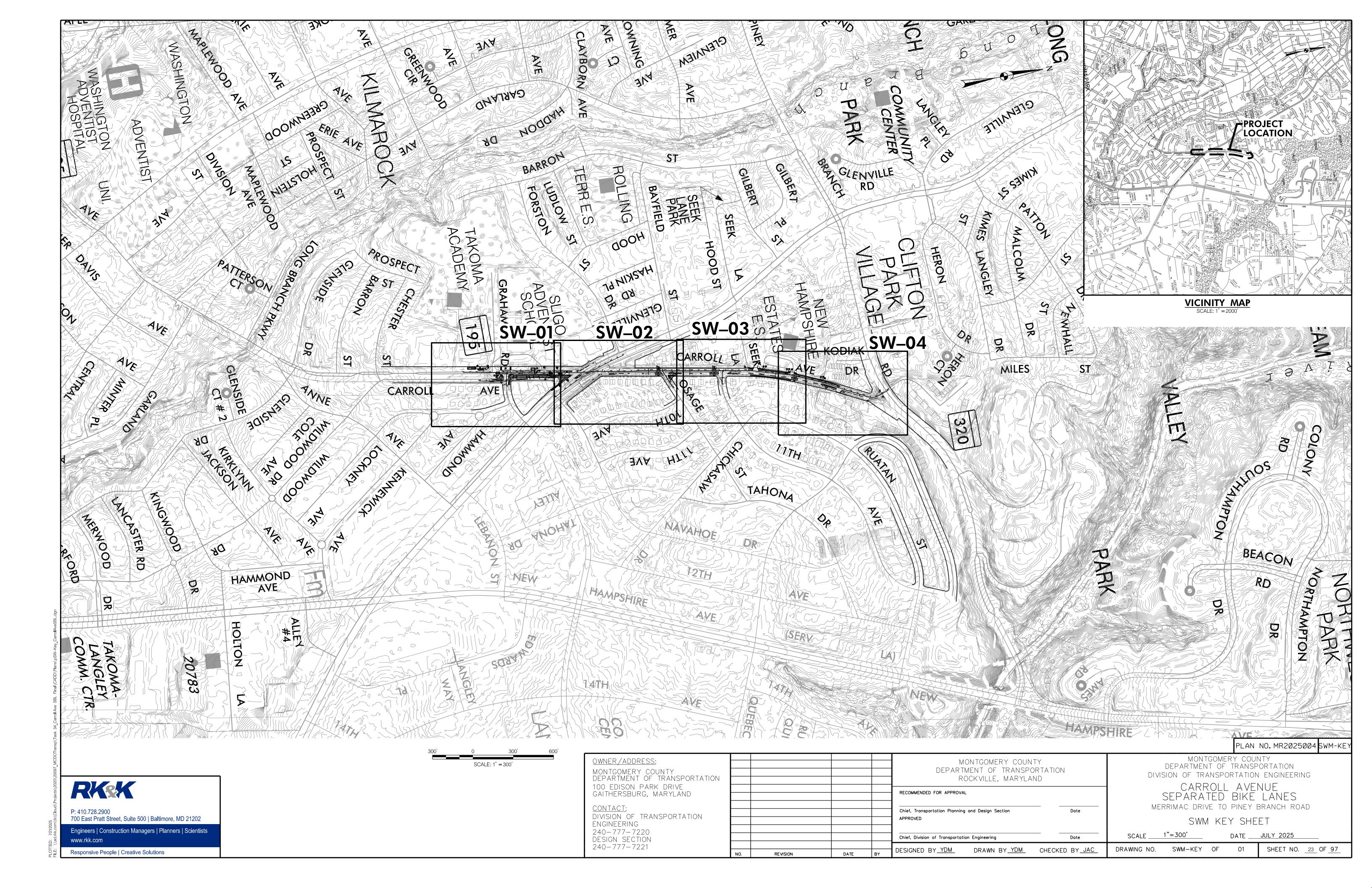
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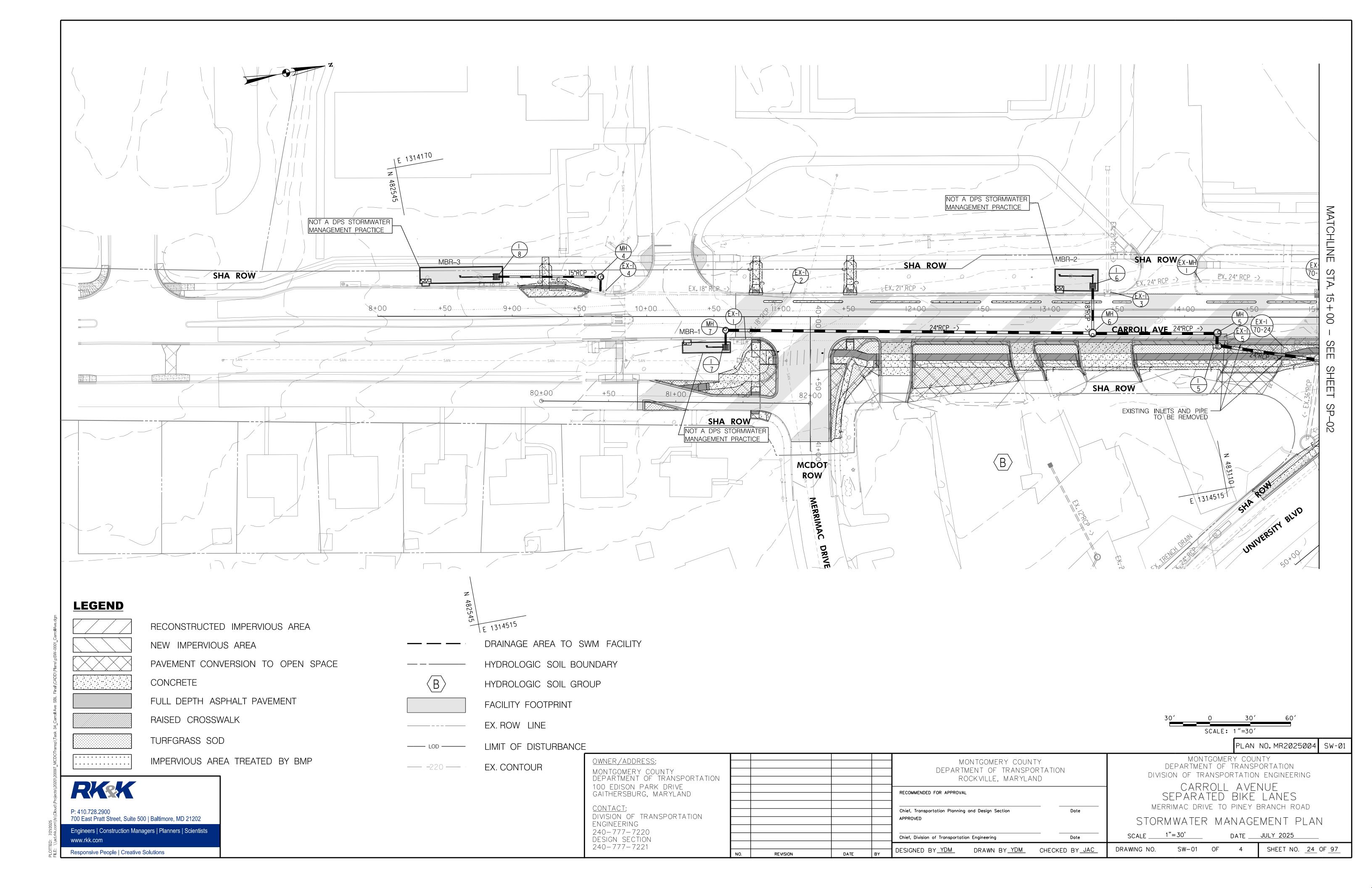
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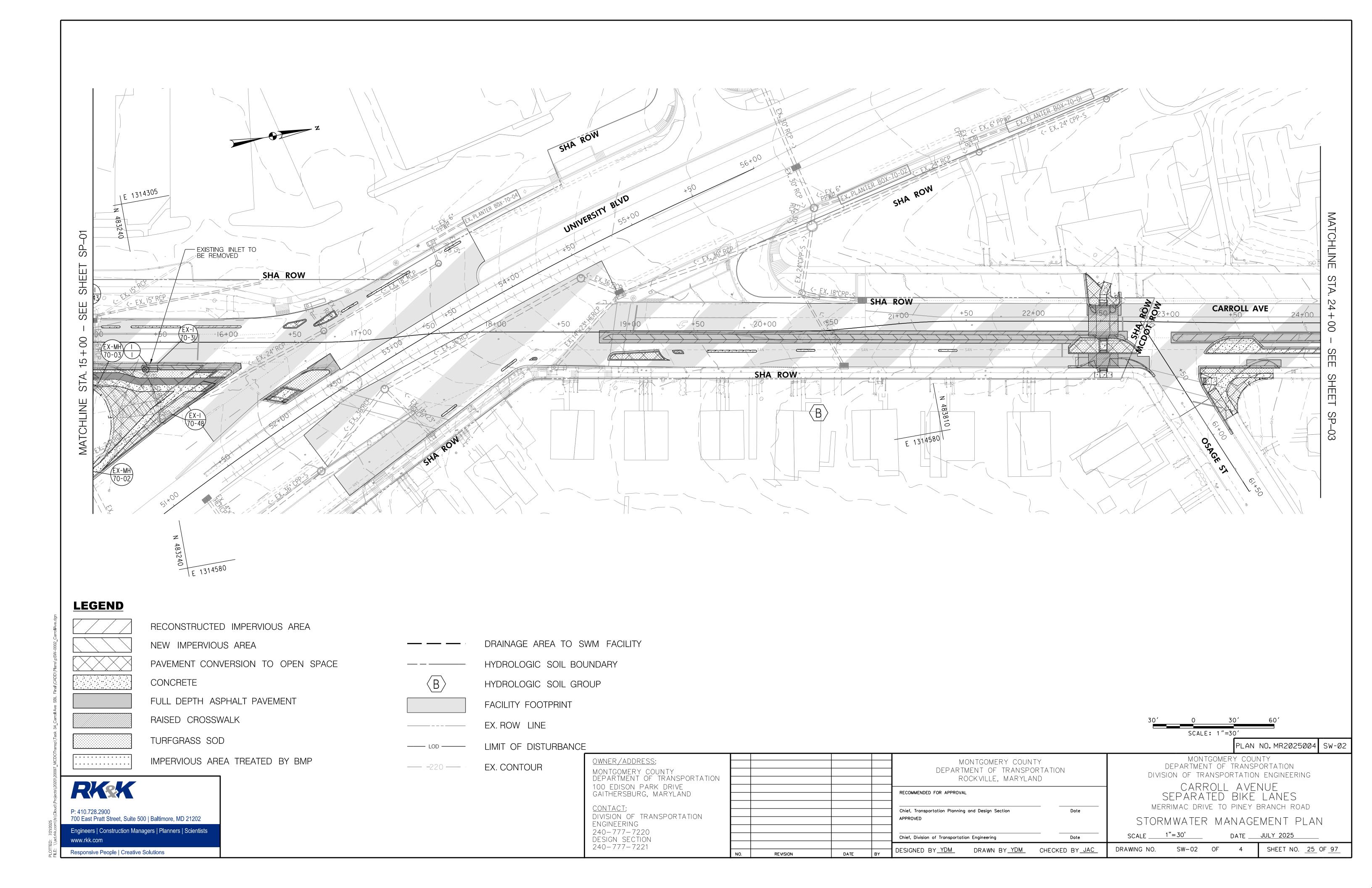
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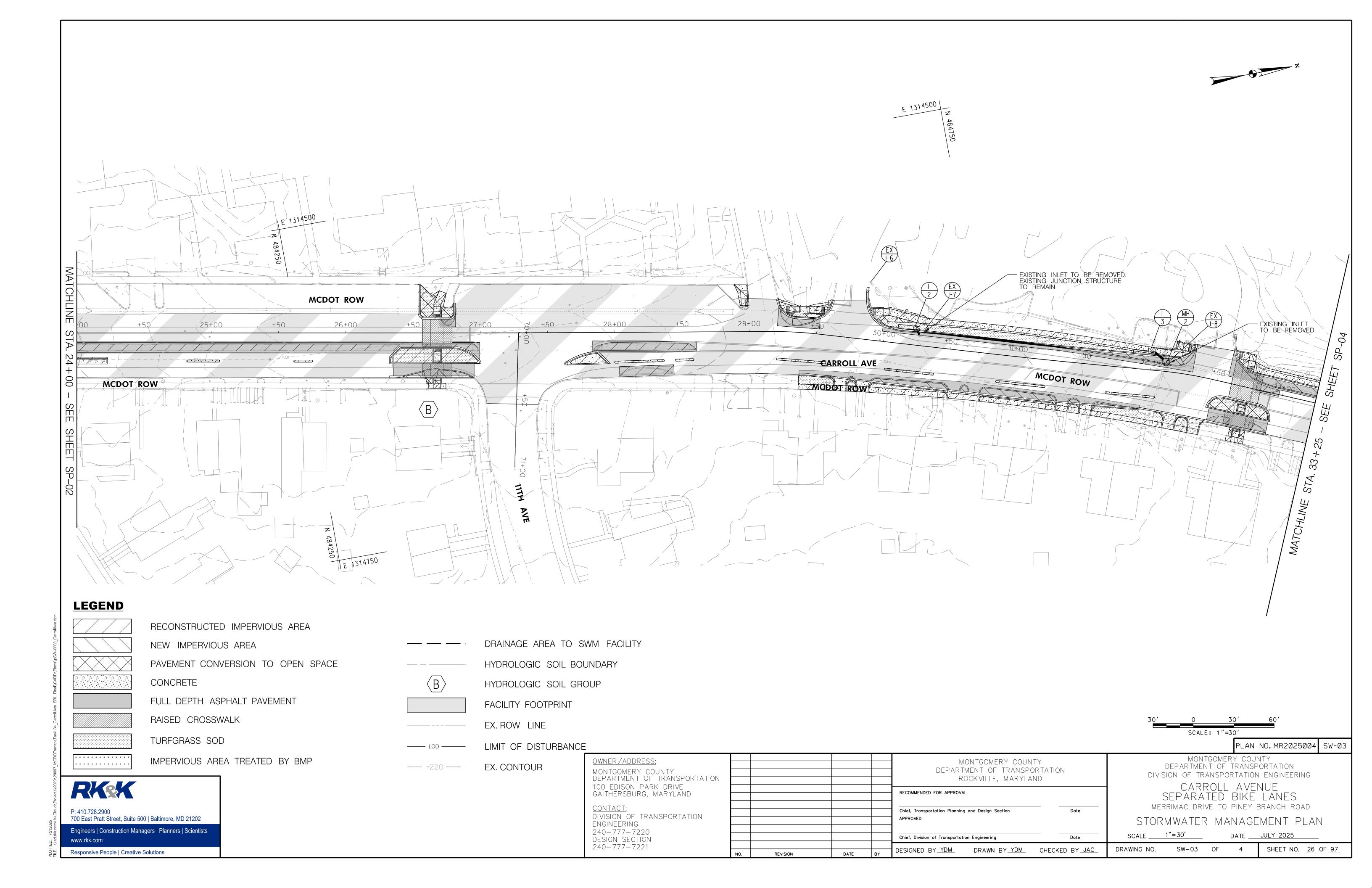
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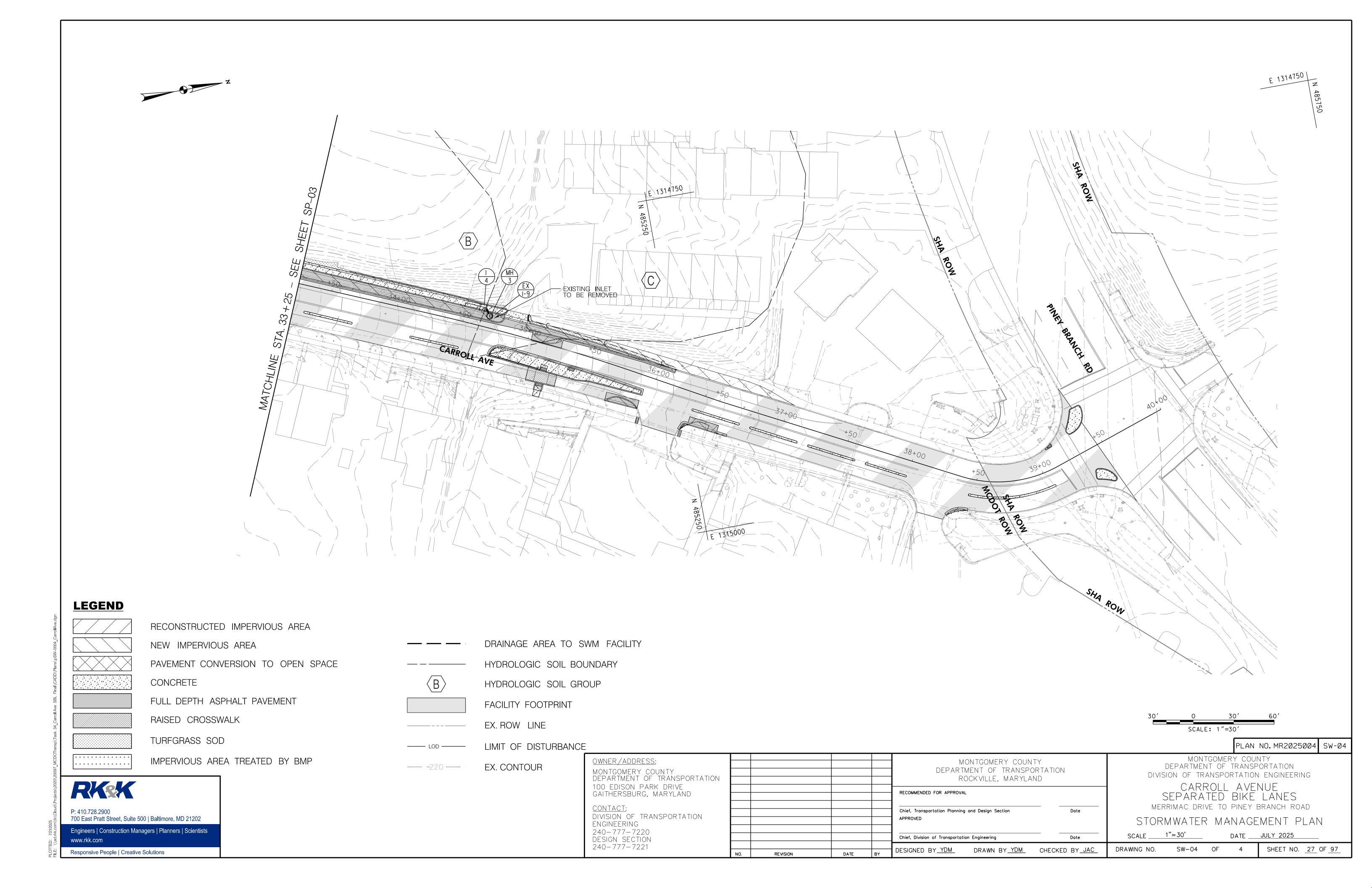
RKSK P: 410.728.2900 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 Engineers | Construction Managers | Planners | Scientists Responsive People | Creative Solutions

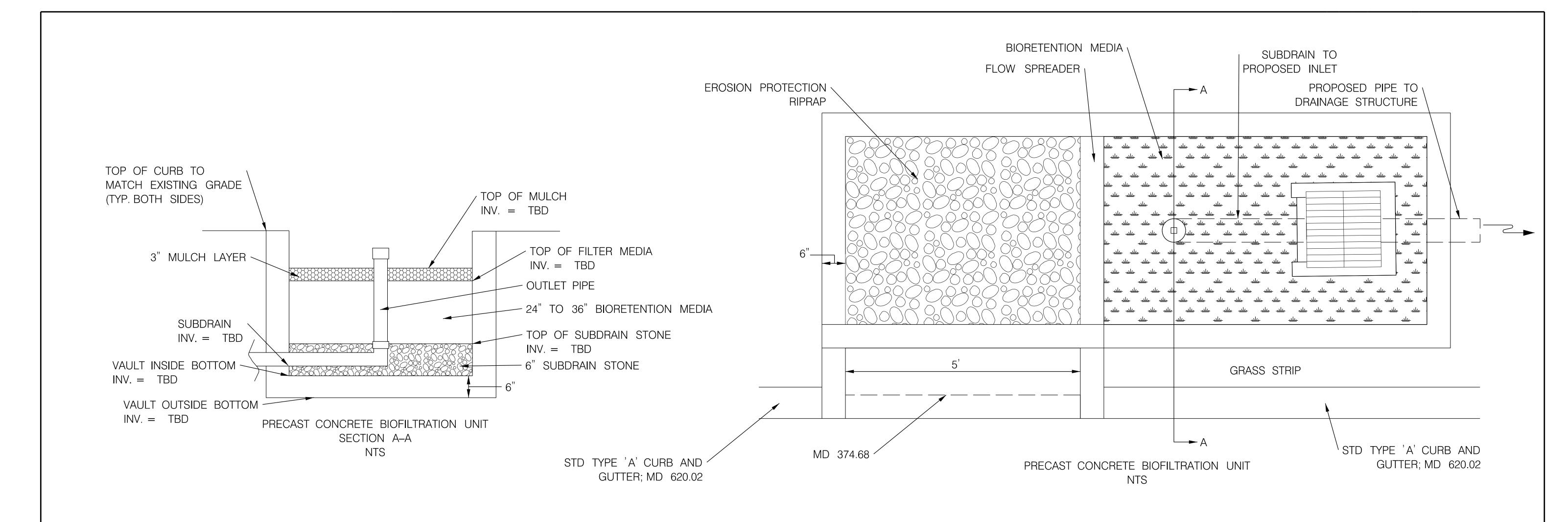












MICRO-BIORETENTION DIMENSIONS									
BMP NO.	FROM	ТО	LENGTH (FT.)	BOTTOM WIDTH (FT.)	10–YR. DEPTH (FT.)	Q10 (CF/S)	V10 (F/S)		
MBR 1 (BMP XXXXXX)	STA. 10 + 27 RT	STA 10+62 RT	35.1	7.4	222.71	0.90	3.01		
MBR 2 (BMP XXXXXX)	STA. 13 + 04 LT	STA. 13 + 35 LT	31.5	15.5	219.51	1.30	3.33		
MBR 3 (BMP XXXXXX)	STA. 8 + 32 LT	STA. 8 + 93 LT	61	11.5	227.31	1.70	3.45		

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TED: 7/21/2025 \\ad.rkk.com\fs\Cloud\Projects\2020\2C	RKSK
	P: 410.728.2900 700 East Pratt Street, Suite 500 Baltimore, MD 21202
	Engineers Construction Managers Planners Scientists www.rkk.com
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	OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION					MONTGOMERY COUN DEPARTMENT OF TRANSPO ROCKVILLE, MARYLA	ORTATION	DIV
	100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND					RECOMMENDED FOR APPROVAL		
	CONTACT:					Chief, Transportation Planning and Design Section		М
	DIVISION OF TRANSPORTATION ENGINEERING					APPROVED		STORI
İ	240-777-7220 DESIGN SECTION					Chief, Division of Transportation Engineering	Date	SCALE
	240-777-7221	NO.	REVISION	DATE	BY	DESIGNED BY YDM DRAWN BY YDM	CHECKED BY JAC	DRAWING NO.

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

CARROLL AVENUE
SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

RMWATER MANAGEMENT DETAILS

STORMWATER MANAGEMENT DETAILS

SCALE ___NTS ___DATE __JULY 2025_____

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 DATE
 JULY 2025

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1. Sizing

The facility shall be sized to capture and store 100% of the target treatment volume. A minimum of 6" and maximum of 12" of surface ponding must be provided above the filter media. The surface area (A_f) of a Micro-Bioretention practice shall be at least 2% of the contributing drainage area. Planting media shall be between 24 and 48 inches deep. The total storage provided in the facility shall be computed as the storage provided in the temporary ponding area and the storage provided in the planting media and sand layers. Computations shall account for the porosity (n = 0.40) of the planting media and sand. Storage provided in excess of that required to treat the runoff for the 1 year, 24-hour design storm shall not be counted towards the total ESDv

See "Enhanced Filter" design guidelines if additional storage is proposed below the underdrain pipe.

To the extent possible, facilities should have irregular outlines to blend naturally into the environment. Rectangular is not natural.

2. Inflow Design Criteria

Runoff shall enter the Micro-Bioretention facility in a non-erosive manner (less than 2 fps). Inflow may be through depressed curbs with wheel stops, curb cuts, level spreaders, bubblers, or conveyed directly using downspouts, covered drains, catch basins, over grass, or other acceptable conveyance methods. Particular care must be taken to prevent erosion of the surface mulch layer.

3. Overflow Design Criteria

If an internal overflow device is needed, a yard inlet or dome cap inlet may be used. Dome inlet caps may be stacked on top of clean-outs to serve as the overflow devices. When this method is used, the overflow invert of the domed cap must be set at the design storage level. Overflow devices cannot feed into perforated pipe sections.

A safe non-erosive outlet below the outfall must be provided. Safe conveyance of the developed 10-year storm through the facility must be demonstrated.

4. Underdrain Pipe

The underdrain pipe consists of 6-inch diameter schedule 40 or stronger perforated PVC pipe at 0.00% slope. The underdrain pipe will be placed within the gravel layer. A minimum of three inches of gravel must be placed under the pipe, with a minimum of 6 inches of gravel over the pipe. Perforations must be 3/8 inch in diameter and must be located 4 inches on center, every 90 degrees around the pipe. Perforated pipe must begin at least 12" inside the filter media. If this cannot be achieved, then sides of the filter media must be lined with filter fabric. Filter fabric must not be wrapped around the underdrain pipe. An acceptable alternative to perforated pipe is 6" diameter schedule 40 slotted PVC pipe with 0.125 inch slots. Slots shall be 0.125 inches wide and a minimum of 1.9 inches in length, with a minimum of 4 slots per row and 4 rows per linear foot of

Access for cleaning all underdrain piping is needed. Watertight clean-outs for each pipe shall be level with the top of the mulch. All cleanouts shall have a removable waterproof cap. Cleanouts must be capped immediately after the filter medium is in place.

The required number of perforated underdrain pipes is proportional to the surface area of the Micro-Bioretention facility. The length of perforated pipe shall be 0.05 times the surface area of the facility, rounded to the nearest foot. In no case shall less than 2 ft. of perforated pipe be provided.

5. Gravel Bed

The gravel layer surrounding the underdrain pipe(s) must meet MSHA size #7 (Table 901A), and must provide a minimum of 6 inches cover over the pipe(s), and minimum 3 inches under the pipe. No geotextile or filter fabric is allowed to be placed horizontally anywhere within the filter media. The gravel must be clean and must be stored and installed in such a manner that it does not become contaminated with sediment before or after installation.

6. Sand Bed

A minimum 6-inch fine aggregate sand layer shall be provided below the planting medium. ASTM C33 or AASHTO M6 Fine Aggregate Concrete Sand is required per Montgomery County sand specifications.

7. Planting Medium

The planting medium shall be 24"-48" thick and shall consist of 1/3 perlite or Solite, 1/3 compost and 1/3 topsoil. The perlite shall be coarse grade horticultural perlite. The compost shall be high grade compost free of stones and partially composted woody material. The topsoil component shall meet the following criteria: contain no more than 10% clay, 10-25% silt and 60-75% sand and be free of stones, stumps, roots or other similar objects larger than 2 inches.

The first layer of the planting medium shall be lightly tilled to mix it into the 6-inch sand layer, so as not to create a definitive boundary. The planting bed shall be flooded after placement. Any settlement that occurs shall be filled back to the design elevation.

8. Mulch

The mulch layer is an important part of the Micro-Bioretention device. Much of the pollutant removal capacity of the Micro-Bioretention system is within the mulch layer. The surface mulch layer will consist of standard double shredded aged hardwood mulch. The mulch should be applied uniformly to a depth of 3 inches. Yearly replenishing may be necessary. Pine bark is not acceptable.

9. Plant Materials

Plants, through their pollutant uptake and evapo-transpiration of stormwater runoff, play a key role in the overall effectiveness of the Micro-Bioretention device. Both the number and type of tree and shrub plantings for the system may vary, especially where aesthetics or other considerations are critical to site development. While native plants are encouraged, they are not always appropriate in all situations. While no hard planting rule exists, the plants should be a mix of trees, shrubs and herbaceous materials. However, there should be 2 to 3 shrubs planted per tree and herbaceous plantings shall make up 40% of the total number of plants. Trees shall be a minimum of 1 ½ in. caliper, shrubs shall be minimum 2 gal. size and herbaceous plants shall be a minimum 1 gal size. Mature plant canopy should cover 85% of the Micro-Bioretention device. Alternative planting schemes, including use of grasses, may be considered in some situations, so long as the planting plan is designed by a Registered Landscape Architect registered in the State of Maryland, however lawn grasses are not appropriate for these facilities. All plantings shall be in accordance with the Montgomery County landscape guidelines. All landscape plans must be sealed by a registered landscape architect. Since the plants are an integral part of the Micro-Bioretention system, no changes to the approved landscape plan will be allowed unless an alternate plant list, prepared by a registered landscape architect, has been approved by DPS prior to installation. Since plant availability can change, DPS suggests including an alternate plant list on the landscaping plans.

SAND SPECIFICATIONS:

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

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

CONSTRUCTION INSPECTION

CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE		COUNTY INSPECTOR	OWNER/ DEVELOPER
required at required to telephone 2 the owner/d arrangemen completed v and reconst Stormwate Record Dra		INITIALS/DATE	INITIALS/DATE
1.	Excavation for Micro Bioretention facility conforms to approved plans		
2.	Placement of stone backfill and underdrain system conforms to approved plans		
3.	Placement of filter media conforms to approved plans		
4.	Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5.	Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICR	O BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED	CONSTRUCTED

PLAN NO.MR2025004 SW-D2 MONTGOMERY COUNTY

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

STORMWATER MANAGEMENT DETAILS

DATE ____JULY 2025

RKSK 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 Engineers | Construction Managers | Planners | Scientists www.rkk.com Responsive People | Creative Solutions

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CONTACT: DIVISION OF TRANSPORTATION ENGINEERING

240-777-7220

DESIGN SECTION

240-777-7221

Chief, Division of Transportation Engineering

APPROVED

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section

DESIGNED BY YDM DRAWN BY YDM CHECKED BY JAC

MONTGOMERY COUNTY

DEPARTMENT OF TRANSPORTATION

ROCKVILLE, MARYLAND

Date

SW-D2 OF DRAWING NO.

SHEET NO. 29 OF 97

UTILITY LEGEND **EXISTING PROPOSED** CABLE TV — — CATV — — — — CATV — — COMMUNICATION _ _ T _ _ _ _ ELECTRIC — — E — — — FIBER OPTIC — — FO — — -GAS — — G — — — SANITARY SEWER - — SAN — — — WATER — — W — — — STORM DRAIN LINE _ _ <> _ _ _ SUE QUALITY LEVEL 'D' WATER VALVE FIRE HYDRANT GAS VALVE SEWER MANHOLE STORM DRAIN MANHOLE E (E) ELECTRIC MANHOLE ----UTILITY POLE $- \neq \mathsf{E} - \neq -$ ABANDONED # — CATV # — TO BE ABANDONED REMOVED ## — CATV ## — TO BE REMOVED TEST HOLE TH-XX

ROADWAY LEGEND

FULL DEPTH ASPHALT FOR ROADWAY OR SIDEPATH

CONCRETE SIDEWALK

CONCRETE PAVEMENT OR MEDIAN

PROPOSED GRASS

CONCRETE PAVEMENT OR MEDIAN

DETECTABLE WARNING SURFACE

OVERHEAD	UTILITY	LEGEND
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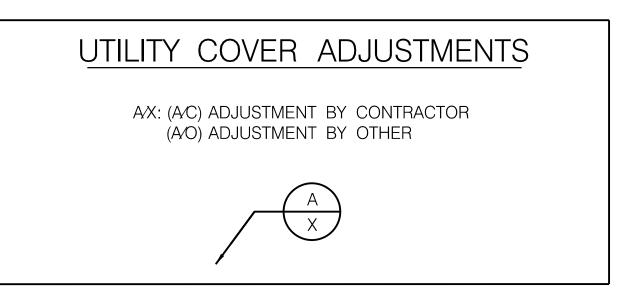
<u>EXISTING</u>		<u>PROPOSED</u>
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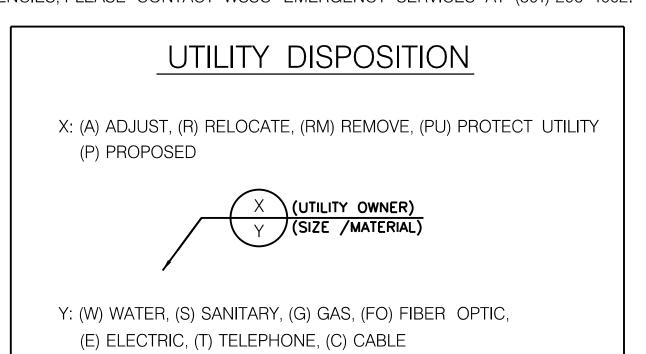
UTILITY GENERAL NOTES

- 1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED FROM FIELD SURVEY PERFORMED BY MERCADO CONSULTANTS AND QL(A)/QL(B) UTILITY DESIGNATION PERFORMED BY ACCURATE INFRASTRUCTURE DATA, INC. IN 2023. THESE UTILITY PLANS ARE A COMBINATION OF FIELD SURVEYS, VISIBLE FILED EVIDENCE AND AVAILABLE RECORDS, AND NOT THE EXACT LOCATIOINS BUT ONLY A GENERAL LOCATION. ALTHOUGH THESE PLANS HAVE ATTEMPTED TO SHOW ALL EXISTING UTILITIES, THE CONTRACTOR SHALL NOT ASSUME ALL EXISTING UTILITIES HAVE BEEN SHOWN. THEREFORE IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SEE THAT ALL EXISTING UTILITIES WITHIN CONSTRUCTION AREAS ARE CLEARLY MARKED IN THE FIELD PRIOR TO ANY CONSTRUCTION IN THE AREA.
- 2. NOTIFY MISS UTILITY AND MAKE SURE THEY COMPLETE THE MARKING OF UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AT LEAST 48 HOURS PRIOR TO INSTALLING SEDIMENT CONTROL MEASURES. THE CONTRACTOR SHALL ALSO INCLUDE IN THEIR CONSTRUCTION BID A PRICE FOR LOCATING AND MARKING UTILITIES THAT MIGHT NOT BE MARKED BY MISS UTILITITY. THE CONTRACTOR SHOULD EITHER MARK THESE UTILITIES THEMSELVES OR BY SUBCONTRACTING WITH A PRIVATE SUBSURFACE UTILITY ENGINEERING (SUE) COMPANY.
- 3. HORIZONTAL CONTROL: THIS PROJECT IS ORIENTED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 83/2011.
- 4. VERTICAL CONTROL: VERTICAL DATUM IS BASED ON THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88). UNLESS OTHERWISE NOTED FOR WSSC SPECIFIC CONSTRUCTION.
- 5. FOR UTILITIES MARKED AS TO BE ABANDONED OR REMOVED, THESE FACILITIES ARE TO BE ABANDONED IN PLACE IN ACCORDANCE WITH UTILITY COMPANY STANDARDS OR REMOVED AS NEEDED FOR PROJECT CONSTRUCTION.
- 6. UTILITY RELOCATIONS TRENCH PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

ON MONTGOMERY COUNTY ROADWAYS, MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION UTILITY PATCH DETAILS MC-801.01. MC-801.02 AND MC-801.03 (LAST REVISION 01/05/1996 AS OF 08/23/2024) SHALL BE USED AS FOUND IN THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES "SPECIFICATIONS FOR UTILITY CONSTRUCTION PERMIT" DOCUMENT. ON STATE HIGHWAY ADMINISTRATION ROADWAYS, UTILITY TRENCH PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH MD SHA STANDARD DETAIL NO. MD 578.01, 578.03, OR 578.03-01 (LAST REVISION 01/01/2025 AS OF 05/28/2025).

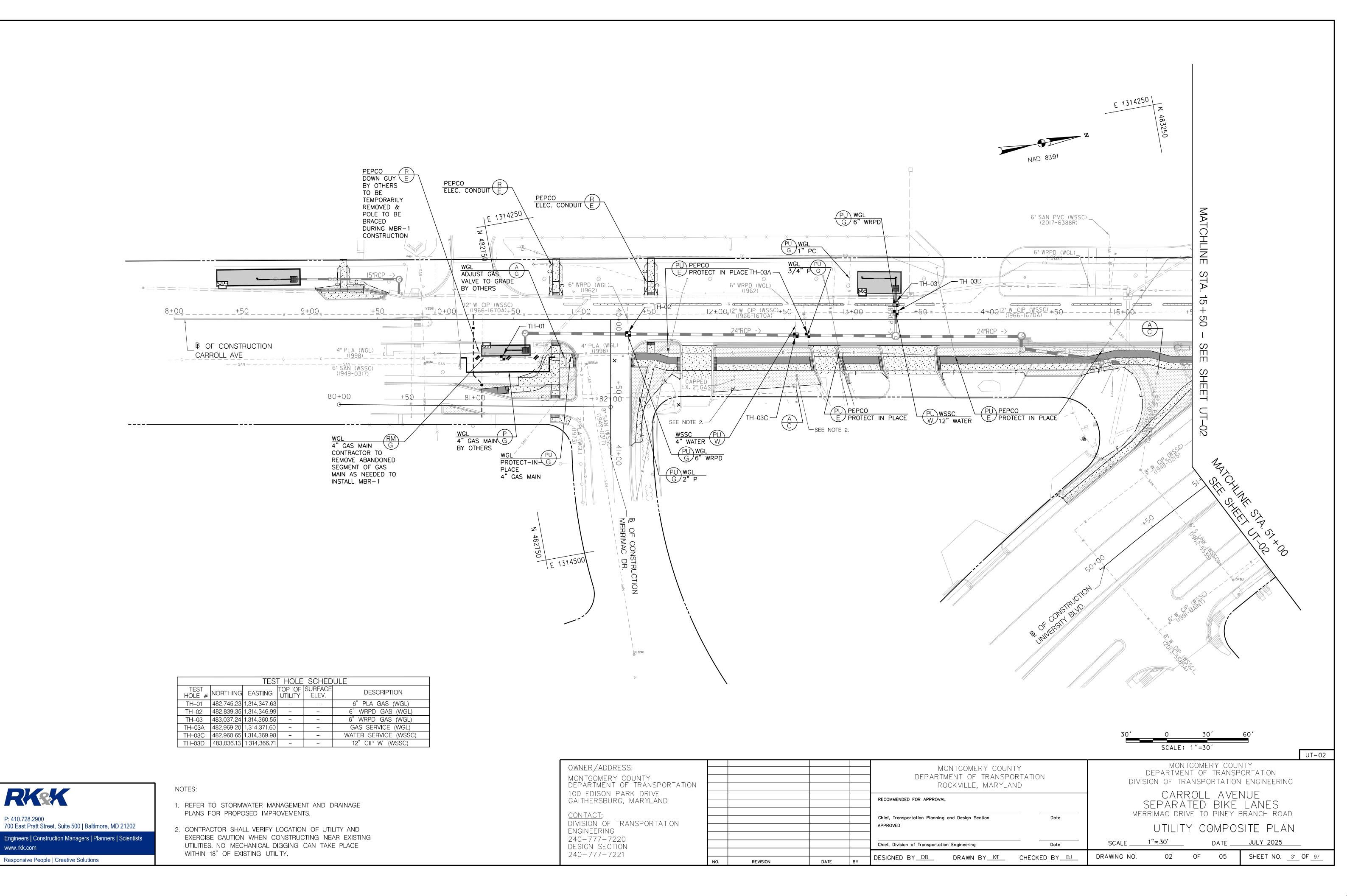
- 7. ALL PROPOSED RELOCATIONS DESIGNATED AS "BY OTHERS" SHALL BE PERFORMED BY THE UTILITY OWNER AND COORDINATED BY THE CONTRACTOR.
- 8. EXISTING MANHOLES TO BE ABANDONED SHALL BE BACKFILLED OR REMOVED ACCORDING TO UTILITY OWNERS SPECIFICATIONS AS REFERENCED OR FOUND WITHIN THE MASTER SPECIFICATIONS BOOK FOR THE PROJECT.
- 9. CONTRACTOR SHALL CONTACT MONTGOMERY COUNTY AT LEAST 7 DAYS PRIOR TO THE START OF WORK.
- 10. WHERE PROPOSED IMPROVEMENTS CROSS EXISTING UTILITIES (PIPES, LINES, STRUCTURES, OR APPURTENANCES) AND WHERE PROPOSED UTILITIES ARE DESIGNED TO CONNECT TO EXISTING UTILITIES, THE CONTRACTOR SHALL PERFORM TEST PITS PRIOR TO EXCAVATION IF THE CONTRACTOR DETERMINES THAT SUFFICIENT TEST HOLE DATA IS NOT PRESENTLY AVAILABLE ON THE PLANS. THE CONTRACTOR SHALL FIELD VERIFY PROPOSED UTILITY INSTALLATION FOR CONFLICTS WITH EXISTING UTILITIES THAT MIGHT IMPAIR CONSTRUCTION ACTIVITIES. ANY UTILITY CONFLICTS OR INCONSISTENCIES FOUND IN THE FIELD SHALL BE REPORTED TO THE ENGINEER.
- 11. CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHETHER BRACING POLES ARE REQUIRED AND SHALL COORDINATE AND SCHEDULE BRACING WITH UTILITY COMPANIES.
- 12. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE AND IN SERVICE THROUGHOUT CONSTRUCTION UNLESS OTHERWISE NOTED ON THE PLANS. OWNER AUTHORIZATION IS REQUIRED PRIOR TO INTERRUPTING UTILITY SERVICES.
- 13. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THERE IS DAMAGE TO AN EXISTING UTILITY DURING CONSTRUCTION.
- 14. THE CONTRACTOR IS TO ENSURE THE WORK AREA IS ACCESSIBLE AND KEPT CLEAN AT THE END OF EACH WORKDAY. CONTRACTOR TO CONTACT KEVIN LETHBRIDGE, WSSC PIPELINE CONSTRUCT AT (202) 304-8703. FOR EMERGENCIES, PLEASE CONTACT WSSC EMERGENCY SERVICES AT (301) 206-4002.

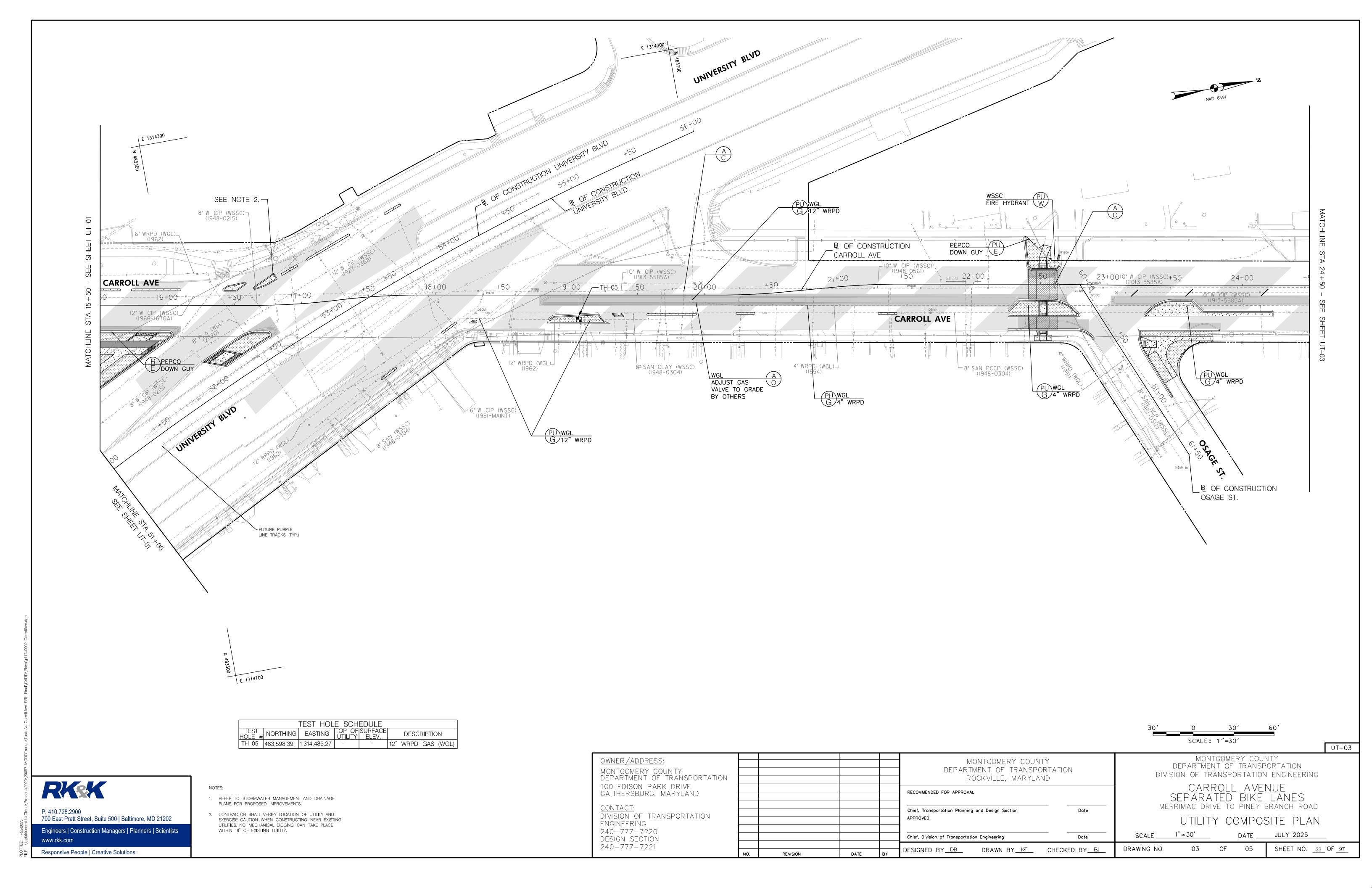


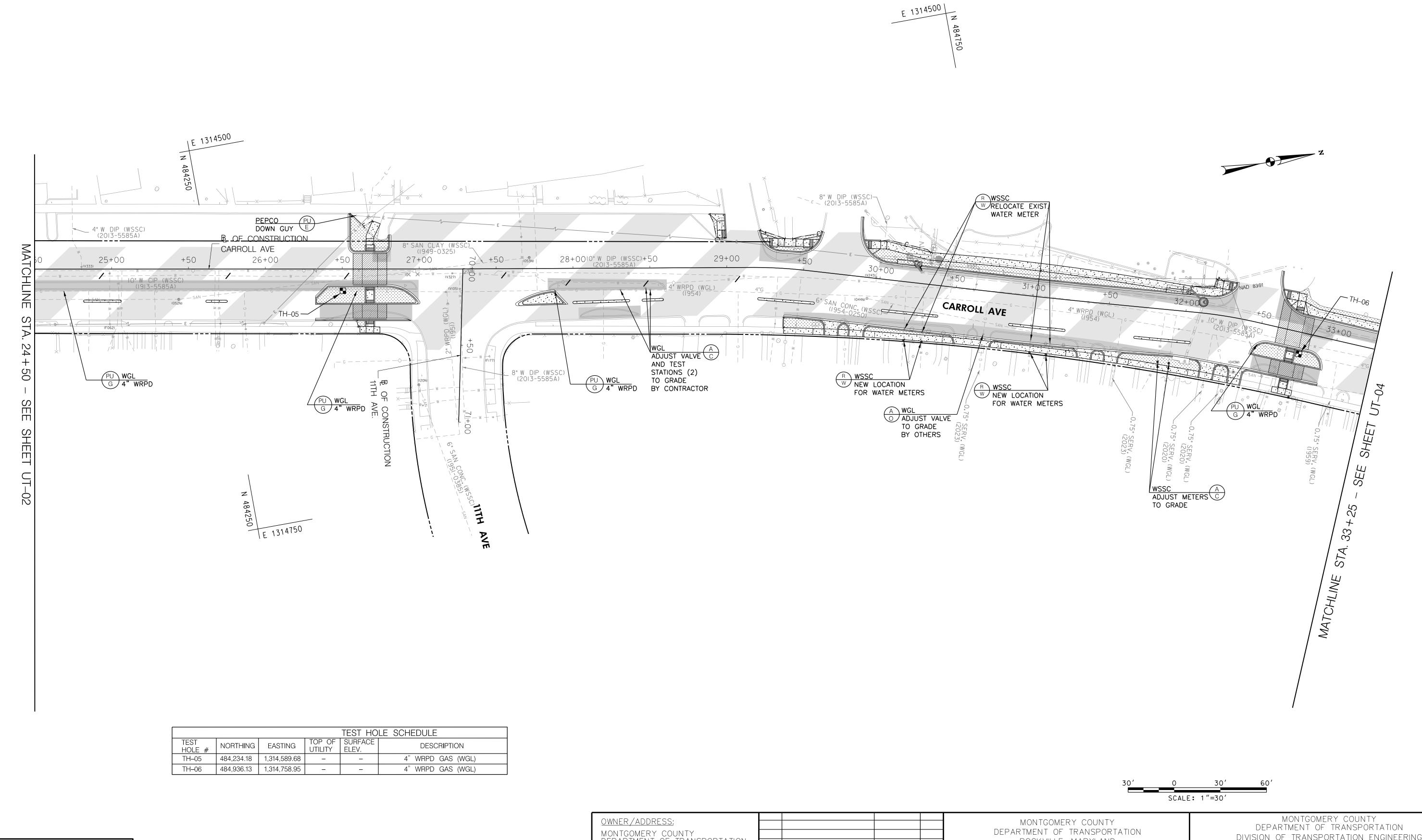




MONTGOMERY COUNTY OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DIVISION OF TRANSPORTATION ENGINEERING DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND 100 EDISON PARK DRIVE CARROLL AVENUE RECOMMENDED FOR APPROVAL GAITHERSBURG, MARYLAND SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD Chief, Transportation Planning and Design Section Date UTILITY COMPOSITE PLAN DIVISION OF TRANSPORTATION APPROVED ENGINEERING LEGEND AND GENERAL NOTES 240-777-7220 DATE JULY 2025 N.T.S Chief, Division of Transportation Engineering Date DESIGN SECTION 240-777-7221 SHEET NO. 30 OF 97 01 **OF** DESIGNED BY DB DRAWN BY KT CHECKED BY EJ DRAWING NO. REVISION









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NOTES:

1. REFER TO STORMWATER MANAGEMENT AND DRAINAGE PLANS FOR PROPOSED IMPROVEMENTS.

2. CONTRACTOR SHALL VERIFY LOCATION OF UTILITY AND EXERCISE CAUTION WHEN CONSTRUCTING NEAR EXISTING UTILITIES. NO MECHANICAL DIGGING CAN TAKE PLACE WITHIN 18" OF EXISTING UTILITY.

OWNER/ADDRESS:
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND
CONTACT

<u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

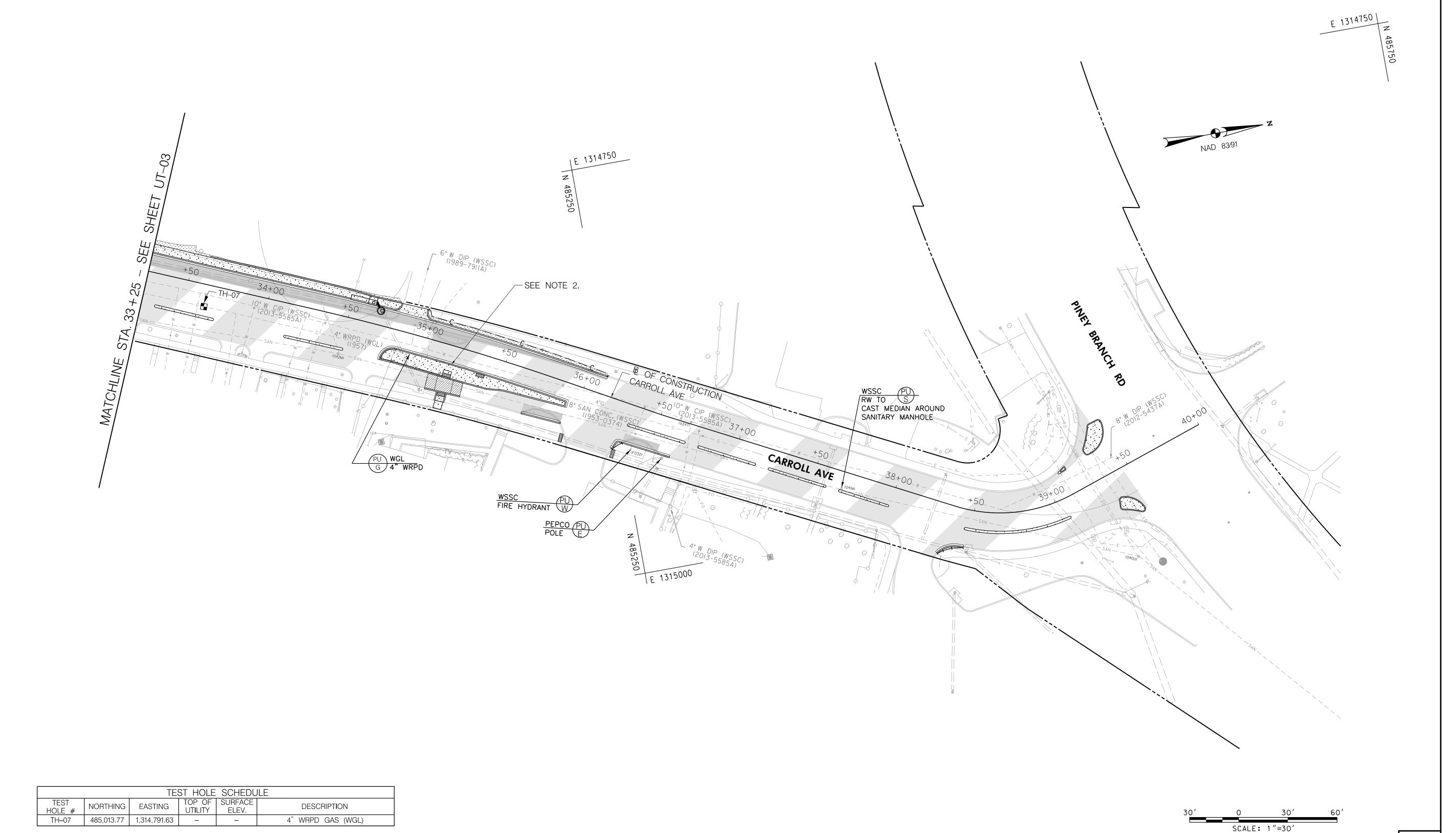
N					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
					RECOMMENDED FOR APPROVAL	
					Chief, Transportation Planning and Design Section Date APPROVED	
					Chief, Division of Transportation Engineering Date	SC
	NO.	REVISION	DATE	BY	DESIGNED BY DB DRAWN BY KT CHECKED BY EJ	DRAW

UT-04 DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

UTILITY COMPOSITE PLAN

DATE _____JULY 2025 OF 05

SHEET NO. 33 OF 97





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NOTES:

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OWNER/ADDRESS:
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND
CONTACT:

				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
				RECOMMENDED FOR APPROVAL	
				Chief, Transportation Planning and Design Section Date APPROVED	
				Chief, Division of Transportation Engineering Date	Ç
NO.	REVISION	DATE	BY	DESIGNED BY DB DRAWN BY KT CHECKED BY EJ	DRA

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

CARROLL AVENUE
SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

UTILITY COMPOSITE PLAN

SCALE _____1"=30' DATE ____JULY 2025

NO. 05 OF 05 SHEET NO. 34 OF 97

I. TRAFFIC CONTROL PLAN GENERAL REQUIREMENTS

- A. TWO (2) WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ALONG CARROLL AVENUE, IN AN ORDERLY, EXPEDITIOUS AND SAFE MANNER UNLESS OTHERWISE NOTED IN THE PLANS. FLAGGER CONTROL CAN BE UTILIZED AS A METHOD OF MAINTAINING TWO WAY TRAFFIC. THE WIDTH OF ANY LANE SHALL REMAIN AT LEAST A MINIMUM OF TEN (10) FEET WIDE DURING ALL PHASES OF CONSTRUCTION.
- B. UNLESS OTHERWISE APPROVED BY THE TRAFFIC ENGINEERING AND OPERATIONS SECTION. THE NUMBER OF LANES OF TRAFFIC ON CARROLL AVENUE SHOWN ON THE T.C.P. SHALL BE MAINTAINED AT ALL TIMES.
- C. THE PROJECT IS TO BE CONSTRUCTED UNDER THREE (3) MAJOR PHASES. THE SEQUENCE OF OPERATIONS FOR EACH OF THE VARIOUS CONSTRUCTION PHASES THEREUNDER REFERS SPECIFICALLY TO THE CRITICAL ITEMS OF WORK WHICH MUST BE COMPLETED DURING THAT CONSTRUCTION PHASE BEFORE THE NEXT SEQUENCE OF THE PHASE OF WORK MAY BE COMMENCED. THE LISTED ITEMS UNDER EACH PHASE ARE A SUGGESTED SEQUENCE OF WORK TO BE FOLLOWED TO PROVIDE FOR ORDERLY COMPLETION OF WORK. THE MANY OTHER ITEMS OF WORK WHICH ARE NOT LISTED AND WHICH MAY BE PERFORMED DURING ANY OF THE PHASES WITHOUT INTERRUPTING TRAFFIC OR AFFECTING THE CONSTRUCTION SCHEDULING AND DO NOT CONTROL THE OVERALL SCHEDULE FOR COMPLETING THE PROJECT ARE NOT LISTED.
- D. A ROAD CLOSURE OF ANY DURATION SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS WITH THE JUSTIFICATION AS TO WHY WORK ACTIVITY CANNOT OCCUR WHILE TRAFFIC IS BEING MAINTAINED. ANY ROAD CLOSURES SHALL REQUIRE ADDITIONAL TRAFFIC CONTROLS INCLUDING ADVANCE NOTIFICATION APPROACH, AND DETOUR SIGNAGE, AS APPROVED BY THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS.
- E. ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS. ANY SIDEWALK CLOSURE GREATER THAN TWO (2) WEEKS SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS AND MAY REQUIRE ADDITIONAL TRAFFIC CONTROLS SIDEWALK CLOSURES SHALL BE LIMITED TO OCCUR ONLY DURING THE ACTUAL WORK ACTIVITY. DURING CLOSURE, SIDEWALKS SHALL BE BARRICADED TO PHYSICALLY PREVENT PEDESTRIAN PASSAGE AND APPROPRIATE DETOURS SHALL BE POSTED. DURING ALL OTHER TIMES, PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK AREA, VIA A TEMPORARY WALKWAY SHALL BE PROVIDED.
- F. ANY WORK WITHIN THE TRAVELED PORTION OF THE ROADWAY WILL BE RESTRICTED TO THE HOURS OF 9:00 A.M. TO 3:30 P.M., MONDAY THRU FRIDAY. NO WORK ON HOLIDAYS OR WEEKENDS UNLESS WRITTEN EXCEPTION IS GRANTED IN WRITING BY THE COUNTY'S DPS INSPECTOR.
- G. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THAN THOSE DELINEATED WITHIN THE WORK ZONE.
- H. EXCLUSIVE OF EMERGENCY WORK, THE CONTRACTOR SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND INFORM THEM OF THE SCOPE AND THE TIMING OF CONSTRUCTION. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE REQUIRED PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY ON THE SITE.
- I. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY OWNERMANAGER. HOWEVER. ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
- J. PAVEMENT EXCAVATION SHALL BE LIMITED TO A MAXIMUM OF ONE TRAVEL LANE AT ANY TIME UNLESS OTHERWISE SPECIFIED ON THE TCP
- K. IF ANY TRAFFIC CONTROL SIGNS ARE TO BE PLACED ALONG A MDOT SHA ROADWAY, OR WITHIN THE LIMITS OF AN INCORPORATED AREAS, THE PERMITTEE SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.
- L. NO HAZARDOUS MATERIALS SHALL BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACE OR SIDEWALK DURING NON-WORK PERIODS. ALL STORED MATERIALS AND EQUIPMENT SHALL BE SET BACK AT LEAST SIX (6) FEET BEHIND THE CURB ALONG A CLOSED SECTION ROADWAY AND AT LEAST TWELVE (12) FEET FROM EDGE OF OPEN SECTION ROADWAY.
- M. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORK DAY." STEEL PLATES AHEAD" (W21-9) SIGNS SHALL BE PLACED APPROXIMATELY 250 FEET IN ADVANCE OF ANY STEEL PLATE. ANY EXCAVATIONS IN THE SIDEWALK SHALL BE BACKFILLED OR PLATED PRIOR TO THE END OF EACH WORKDAY AND SIDEWALK REOPENED TO ITS FULL CROSS SECTION.

- N. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN (10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TTC DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE SLOPE. REFER TO MCDOT STD NO. TCP-108.01 FOR DETAILS.
- O. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO (2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN TWO (2) INCHES BUT NO MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT 3:1 OR FLATTER SLOPE, PROVIDED WITH AN ABUTTING WEDGE OF BITUMINOUS MATERIAL AT 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC DRUMS.
- P. IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO (2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:
- 1. WHERE LONGITUDINAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS SHALL BE POSTED INDICATING "UNEVEN PAVEMENT" (W8-II MOD.). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.
- 2. WHERE LATERAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A *BUMP* (W8-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.
- 3. WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC, A *ROUGH ROAD (W8-8) OR *GROOVED PAVEMENT* (W8-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA.
- Q. TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE FLUORESCENT ORANGE HIGH PERFORMANCE WIDE ANGLE RETROREFLECTIVE SHEETING. PLACEMENT OF ALL SIGNS SHALL NOT INTERFERE WITH TRAVELED WAYS OR SIGHT DISTANCES OF ANY ROADWAY, STREET OR DRIVEWAY AS PER AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, LATEST EDITION.
- R. ALL EXISTING TRAFFIC CONTROL DEVICES THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE CONTRACTOR.
- S. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- T. THE IMPLEMENTATION DATE AND CONTINUANCE OF THIS PROJECT MAY BE ALTERED AT THE DISCRETION OF THE COUNTY'S INSPECTOR IN THE EVENT OF CONFLICTS WITH PREVIOUSLY APPROVED OR EMERGENCY ACTIVITIES
- U. AT THE COMPLETION OF THE PERMITTED WORK ACTIVITY, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THOSE WHICH EXISTED PRIOR TO THE WORK ACTIVITY.
- V. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY TRAFFIC CONTROL DEVICES AT THE SITE
- W. ANY CHANGES TO TEMPORARY TRAFFIC CONTROL PLANS SHALL BE MADE IN WRITING AND APPROVED BY THE MONTGOMERY COUNTY TRAFFIC ENGINEERING AND OPERATIONS DIVISION.
- X. ALL TTC DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.
- II. SPECIFIC TRAFFIC CONTROL REQUIREMENTS
- A. MAINTENANCE OF TRAFFIC
- 1. FLAGGERS SHALL BE USED AT THE DIRECTION OF THE COUNTY INSPECTOR.
- 2. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.
- 3. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR AATSA APPROVED FLAGGERS.
- 4. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE COUNTY INSPECTOR OR UNDER THE FOLLOWING CONDITIONS:
- a. IF THE FLAGGERS CANNOT SEE EACH OTHER.
- b. IF THE LANE CLOSURE EXCEEDS 200 FEET.
- 5. AT LEAST ONE 10 FOOT TRAVEL LANE SHALL BE AVAILABLE FOR TRAFFIC AT ALL TIMES.
- 6. PROVISION SHALL BE MADE FOR SAFE MAINTENANCE OF PEDESTRIAN AND BICYCLE TRAFFIC, SUBJECT TO THE APPROVAL OF THE COUNTY'S DPS INSPECTOR.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND

CONTACT: DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220

HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MUTCD.

3. ALL WARNING SIGNS, UNLESS OTHERWISE SPECIFIED, SHALL BE A MINIMUM OF 48 " X 48", BLACK SYMBOL OR LEGEND ON ORANGE BACKGROUND AND DIAMOND SHAPED. PLACEMENT OF ALL SIGNS SHALL NOT INTERFERE WITH TRAVELED WAYS OR SIGHT DISTANCES OF ANY ROADWAY, STREET OR DRIVEWAY AS PER AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, LATEST EDITION. ALL WARNING SIGNS NOT APPLICABLE TO THE ACTUAL SITUATION SHALL BE REMOVED OR COVERED DURING NON-APPLICABLE PERIODS.

1. SIGNAGE, TRAFFIC DRUMS, TRAFFIC CONES, AND ARROW PANELS SHALL BE

PLACED IN ACCORDANCE WITH THE APPROPRIATE TYPICAL SPACING CHART

2. ALL SIGNS, TRAFFIC DRUMS AND CONES SHALL BE FULLY REFLECTORIZED WITH

B. INSTALLATION OF TRAFFIC CONTROL DEVICES

AND AS LISTED ON THE TRAFFIC CONTROL PLANS.

- 4. FLASHING ARROW PANELS SHALL BE USED AT THE BEGINNING OF ANY LANE CLOSURE ON A MULTI-LANE ROADWAY. VARIABLE MESSAGE SIGNS (IF REQUIRED) SHALL BE PROVIDED TWO WEEKS BEFORE/AFTER AND DURING CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY ENGINEER.
- 5. WORK AREA AHEAD (W20-1 MODIFIED) SIGNS MUST BE INSTALLED AT THE END OF EACH WORK DAY WHEN TEMPORARY AGGREGATE RAMPING IS IMPLEMENTED.
- 6. DURING NIGHTTIME OPERATIONS, REFLECTORIZED TRAFFIC DRUMS SHOULD BE USED. HOWEVER, FOR EMERGENCY WORK ACTIVITIES, WHERE TRAFFIC DRUMS ARE NOT READILY AVAILABLE, REFLECTORIZED TRAFFIC CONES THAT ARE A MINIMUM OF TWENTY EIGHT (28) INCHES IN HEIGHT AND HAVING SIX (6) INCH AND FOUR (4) INCH REFLECTIVE COLLARS WITHIN THE TOP SIXTEEN (16) INCHES OF THE CONE MAY BE USED. ALL WORK AREAS LEFT UNATTENDED AT NIGHT SHALL BE DELINEATED WITH REFLECTORIZED TRAFFIC DRUMS.
- 7. CONTRACTOR SHALL EXCAVATE ONLY AS MUCH AS IS TO BE WORKED IN A DAY. IN CASE ANY EXCAVATED AREA IS LEFT OVERNIGHT, TEMPORARY CONCRETE BARRIERS SHALL BE PLACED SURROUNDING THAT AREA.
- 8. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF ONE (I) FOOT ABOVE THE LEVEL OF THE ROADWAY, WITH HIGHER MOUNTING HEIGHTS DESIRABLE.
- 9. WHEN PAVEMENT MARKINGS HAVE BEEN OBLITERATED BY THE WORK ACTIVITY, THE PERMITTEE SHALL INSTALL ANY CRITICAL INTERIM PAVEMENT MARKINGS PRIOR TO THE END OF THE WORK DAY AS SPECIFIED BY THE COUNTY'S DPS INSPECTOR AND/OR THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS.
- a. ON ROAD SECTIONS THAT ARE NOT SCHEDULED TO BE OVERLAID, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE (REMOVABLE) DETOUR GRADE MARKING TAPE. ANY CONFLICTING MARKINGS WHICH NEED TO BE TEMPORARILY REMOVED ARE TO BE MASKED USING "3M REMOVABLE BLACK LANE MASK" OR AN APPROVED EQUAL.
- b. ON ROAD SECTIONS THAT ARE TO BE OVERLAID, TEMPORARY MARKINGS CAN BE EITHER TAPE OR PAINT. ANY CONFLICTING MARKINGS SHOULD BE REMOVED WITH A PAVEMENT GRINDER.

III. CONTACT INFORMATION

- A. CONTACT THE MCDOT TRANSPORTATION MANAGEMENT CENTER 240-777-2100 BETWEEN 5:00 AM AND 11:00 PM TO INFORM THEM OF TEMPORARY LANE CLOSURES IN THE VICINITY OF ANY TRAFFIC SIGNALS.
- B. CONTACT TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION AT 240-777-2190 (A MINIMUM OF ONE WEEK PRIOR) TO COORDINATE ANY MINOR TRAFFIC SIGNAL RELOCATIONS TO FACILITATE THIS WORK ACTIVITY. MAJOR SIGNAL RELOCATIONS SHALL BE COORDINATED A MINIMUM OF THIRTY (30) DAYS IN ADVANCE OF THE PROJECT. THE PERMITTEE SHALL CONTACT THE MONTGOMERY COUNTY TECHNICAL CENTER AT 301-279-1291 A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK TO HAVE TRAFFIC SIGNAL EQUIPMENT MARKED.
- C. CONTACT TRAFFIC ENGINEERING STUDIES SECTION AT 240-777-2190 AT LEAST TEN (10) WORKING DAYS IN ADVANCE OF THE FINAL PAVING OPERATION TO SCHEDULE THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS AND SIGNS.
- D. CONTACT MS. STELLA O. IGBINEDION AT 240-777-2190 TO REQUEST ANY FIELD ASSISTANCE BY THE MCDOT DIVISION OF TRAFFIC ENGINEERING AND OPERATION.

PHASE 1 SEQUENCE OF CONSTRUCTION

DURING PHASE 1, TRAFFIC ON SOUTHBOUND CARROLL AVENUE SHALL BE SHIFTED TO THE LEFT. THE CONSTRUCTION EFFORT SHALL BE DIRECTED TO CONSTRUCTING RAMPS, SIDEWALKS, ISLANDS, AND STORMWATER MANAGEMENT FACILITY WITHIN THE CONSTRUCTION LIMITS AND AS SHOWN IN THE PLANS.

PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS AS TO THE DURATION OF THE PROPOSED WORK AS SPECIFIED IN THE SPECIAL PROVISIONS. THE CONTRACTOR CAN ALSO INFORM THE OWNER OF ANY EQUIPMENT THAT NEEDS TO BE RELOCATED.

2. SEQUENCE OF CONSTRUCTION

- A. INSTALL ALL TEMPORARY SIGNING AND MARKING REQUIRED FOR THE INITIAL CONSTRUCTION WORK TO BE PERFORMED UNDER PHASE 1. IF NECESSARY, COVER TEMPORARY SIGNS UNTIL SUCH TIME THAT THEIR MESSAGE ARE APPLICABLE.
- B. PRIOR TO COMMENCING ANY WORK AT ANY GIVEN LOCATION, THE INSTALLATION OF ALL NECESSARY SEDIMENT CONTROL FACILITIES REQUIRED FOR PHASE I CONSTRUCTION MUST BE COMPLETED AND HAVE THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
- C. CONSTRUCT RAMPS, SIDEWALKS, ISLANDS AND STORMWATER MANAGEMENT FACILITY (MBR-3) ON SOUTHBOUND CARROLL AVENUE AS SHOWN ON THE TCP PLANS. ALL CONSTRUCTION ACTIVITY THAT IMPACTS SCHOOL PROPERTY MUST BE COORDINATED WITH THE SCHOOL ADMINISTRATION PRIOR TO THE START OF WORK, AND DONE IN ACCORDANCE WITH DIRECTIVES INCLUDED ELSEWHERE IN THE CONTRACT DOCUMENTS, FOR LOCATIONS WHERE TWO 10' LANES CANNOT BE MAINTAINED, CONSTRUCT PROPOSED WORK USING FLAGGING OPERATION DURING OFF PEAK HOURS. REFER TO MCDOT TCP 102.02, 105.01 AND 105.02.
- D. PROCEED TO PHASE 2.

PHASE 2 SEQUENCE OF CONSTRUCTION

1. GENERAL

DURING PHASE 2, TRAFFIC SHALL BE SHIFTED TO THE RIGHT OF NORTHBOUND AND SOUTHBOUND CARROLL AVENUE. THE CONSTRUCTION EFFORT SHALL BE DIRECTED TO THE REMOVAL OF THE ISLANDS AS SHOWN IN THE PLANS.

PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS AS TO THE DURATION OF THE PROPOSED WORK. THE CONTRACTOR CAN ALSO INFORM THE OWNER OF ANY EQUIPMENT THAT NEEDS TO BE RELOCATED.

2. SEQUENCE OF CONSTRUCTION

- A. INSTALL ALL TEMPORARY SIGNING AND MARKING REQUIRED FOR THE INITIAL CONSTRUCTION WORK TO BE PERFORMED UNDER PHASE 2. IF NECESSARY, COVER TEMPORARY SIGNS UNTIL SUCH TIME THAT THEIR MESSAGE ARE APPLICABLE.
- B. PRIOR TO COMMENCING ANY WORK AT ANY GIVEN LOCATION, THE INSTALLATION OF ALL NECESSARY SEDIMENT CONTROL FACILITIES REQUIRED FOR PHASE I CONSTRUCTION MUST BE COMPLETED AND HAVE THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
- C. REMOVE EXISTING ISLANDS WITHIN THE PROJECT LIMITS AS SHOWN IN THE PLANS.

D. PROCEED TO PHASE 3.

PHASE 3 SEQUENCE OF CONSTRUCTION

DURING PHASE 3, TRAFFIC SHALL BE SHIFTED TO THE LEFT OF CARROLL AVENUE. THE CONSTRUCTION EFFORT SHALL BE DIRECTED TO THE CONSTRUCTION OF RAMPS, SIDEWALKS, ISLANDS, DRIVEWAYS, BARRIER, STORM DRAIN, STORMWATER MANAGEMENT FACILITIES AND RAISED CROSSWALKS AS SHOWN IN THE PLANS.

PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS AS TO THE DURATION OF THE PROPOSED WORK. THE CONTRACTOR CAN ALSO INFORM THE OWNER OF ANY EQUIPMENT THAT NEEDS TO BE RELOCATED.

2. SEQUENCE OF CONSTRUCTION

- A. INSTALL ALL TEMPORARY SIGNING AND MARKING REQUIRED FOR THE INITIAL CONSTRUCTION WORK TO BE PERFORMED UNDER PHASE 2. IF NECESSARY, COVER TEMPORARY SIGNS UNTIL SUCH TIME THAT THEIR MESSAGE ARE APPLICABLE.
- B. PRIOR TO COMMENCING ANY WORK AT ANY GIVEN LOCATION, THE INSTALLATION OF ALL NECESSARY SEDIMENT CONTROL FACILITIES REQUIRED FOR PHASE I CONSTRUCTION MUST BE COMPLETED AND HAVE THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
- C. CONSTRUCT RAMPS, SIDEWALKS, BARRIER, DRIVEWAYS, STORM DRAIN AND STORMWATER FACILTIES (MBR-1 AND MBR-2) ALONG NORTHBOUND AND SOUTHBOUND CARROLL AVENUE. FOR LOCATIONS WHERE TWO 10' LANES CANNOT BE MAINTAINED. CONSTRUCT PROPOSED WORK USING FLAGGING OPERATION DURING OFF PEAK HOURS, REFER TO MCDOT TCP 102.02, 105.01 AND 105.02.
- D. CONSTRUCT ISLANDS AND BARRIERS AT SOUTHBOUND CARROL AVENUE (STA. 16 + 50) USING FLAGGING OPERATION DURING OFF-PEAK HOURS. REFER TO MCDOT TCP 102.02, 105.01 AND 105.02.
- E. UPON COMPLETING THE PROPOSED RAMPS, SIDEWALKS, STORMWATER FACILITIES AND ISLANDS, COMPLETE THE FOLLOWING AS A LAST ORDER OF WORK:

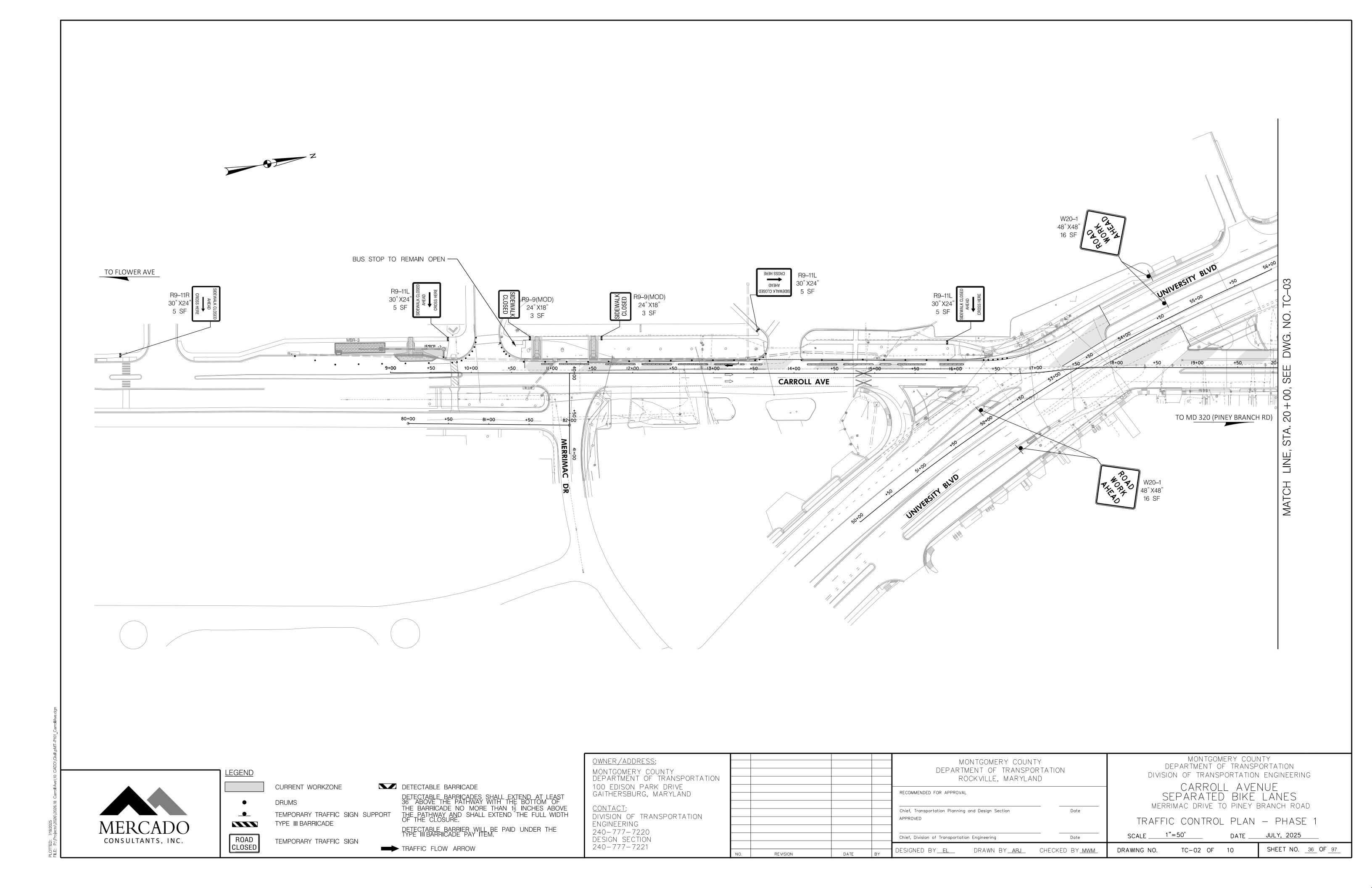
CONSTRUCT RAISED CROSSWALK USING FLAGGING OPERATION DURING OFF-PEAK HOURS. REFER TO MCDOT TCP 102.02, 105.01 AND 105.02.

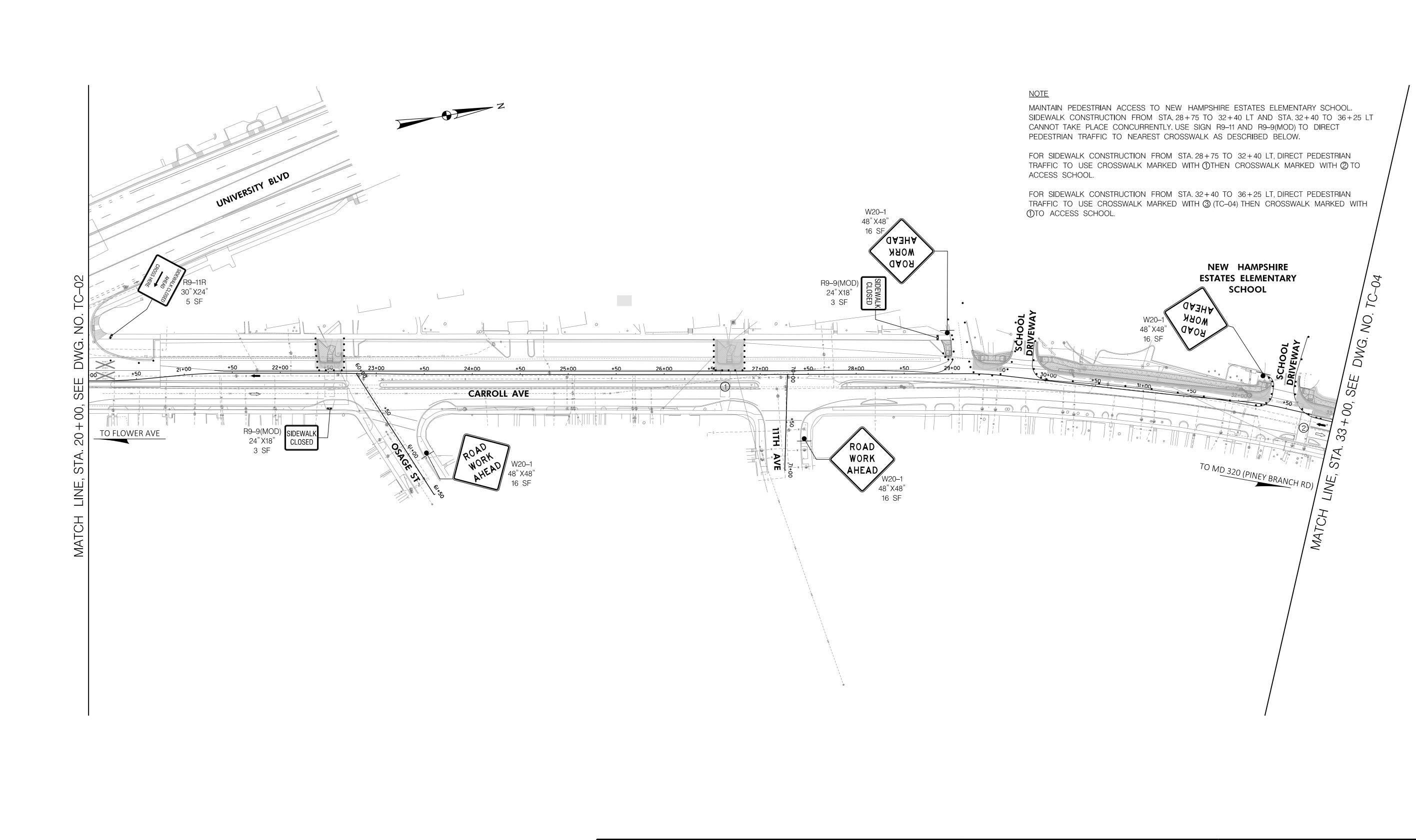
COMPLETE THE FINAL PAVEMENT MARKING AND REMAINING PERMANENT SIGNING. MAINTAIN TRAFFIC DURING THE FINAL PAVING OPERATION USING MCDOT STD. TCP-102.02 AND TCP-105.01-07. MAINTAIN TRAFFIC DURING THE FINAL PAVEMENT

OPERATION USING MCDOT STD. TCP-102.06.

MONTGOMERY COUNTY OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING ROCKVILLE, MARYLAND CARROLL AVENUE RECOMMENDED FOR APPROVAL SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD Chief, Transportation Planning and Design Section Date APPROVED TRAFFIC CONTROL PLAN DATE _____JULY, 2025 SCALE _ Chief, Division of Transportation Engineering DESIGN SECTION 240-777-7221 SHEET NO. 35 OF 97 DRAWING NO. TC-01 OF 10 DESIGNED BY<u>el</u> DRAWN BY<u>arj</u> Checked by <u>mwm</u>









ROAD CLOSED

CURRENT WORKZONE

TEMPORARY TRAFFIC SIGN SUPPORT TYPE III BARRICADE

TEMPORARY TRAFFIC SIGN

DETECTABLE BARRICADE

DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.

100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND
CONTACT: DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

OWNER/ADDRESS:

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND
RECOMMENDED FOR APPROVAL

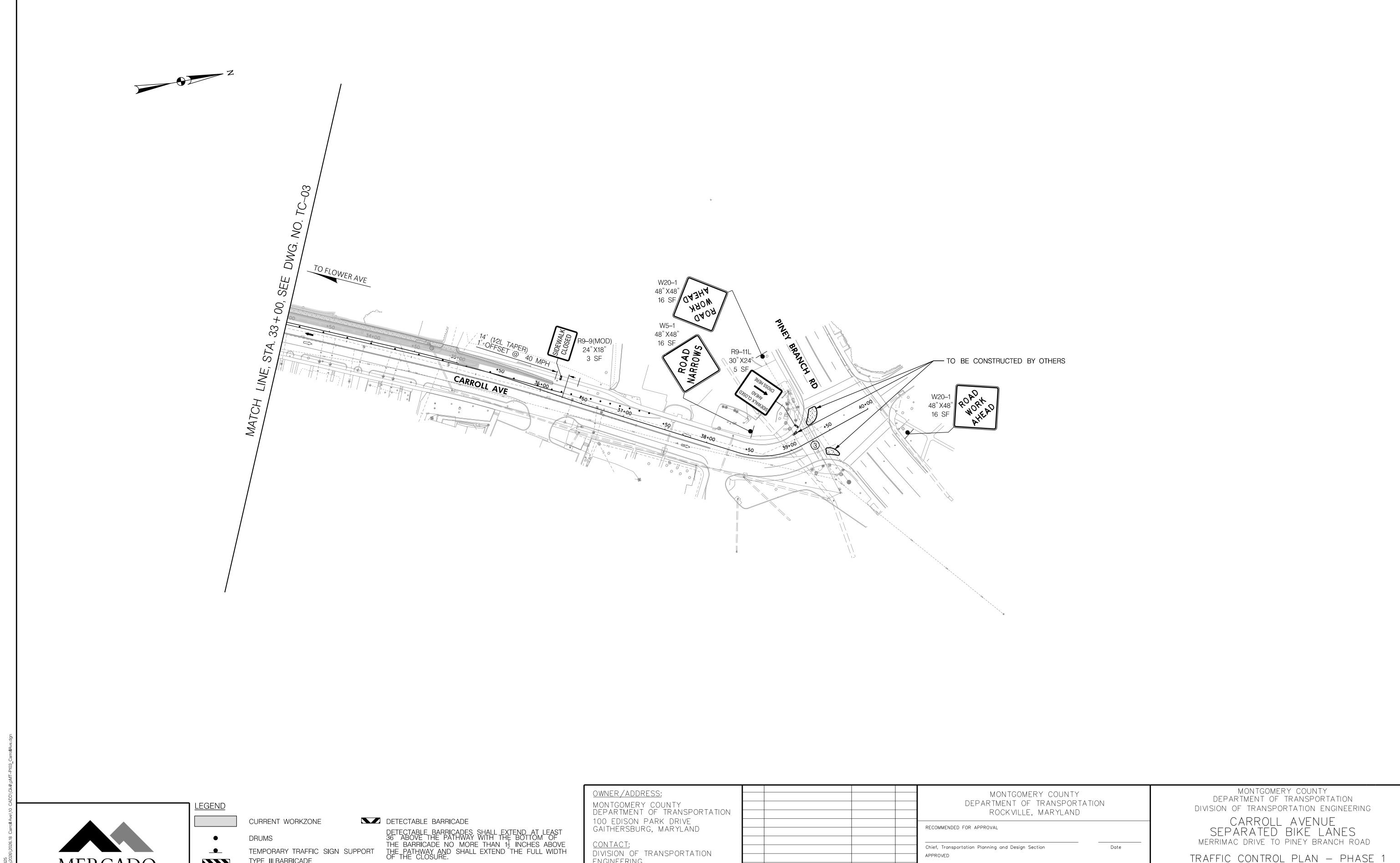
Chief, Transportation Planning and Design Section APPROVED Date Chief, Division of Transportation Engineering

DESIGNED BY <u>el</u> DRAWN BY <u>arj</u> CHECKED BY <u>mwm</u>

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TRAFFIC	CONTROL	PLAN	_	PHASE 1

1"=50' DATE JULY, 2025 SCALE __ SHEET NO. 37 OF 97 DRAWING NO. TC-03 OF 10



<u>CONTACT:</u>

DETECTABLE BARRIER WILL BE PAID UNDER THE TYPE III BARRICADE PAY ITEM.

TRAFFIC FLOW ARROW

ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

DIVISION OF TRANSPORTATION

MERRIMAC DRIVE TO PINEY BRANCH ROAD

SCALE _____1"=50'

DRAWING NO. TC-04 OF 10

TRAFFIC CONTROL PLAN - PHASE 1

DATE _____JULY, 2025

SHEET NO. 38 OF 97

Chief, Transportation Planning and Design Section

DESIGNED BY <u>EL</u> DRAWN BY <u>ARJ</u> CHECKED BY <u>MWM</u>

Chief, Division of Transportation Engineering

Date

APPROVED

MERCADO

CONSULTANTS, INC.

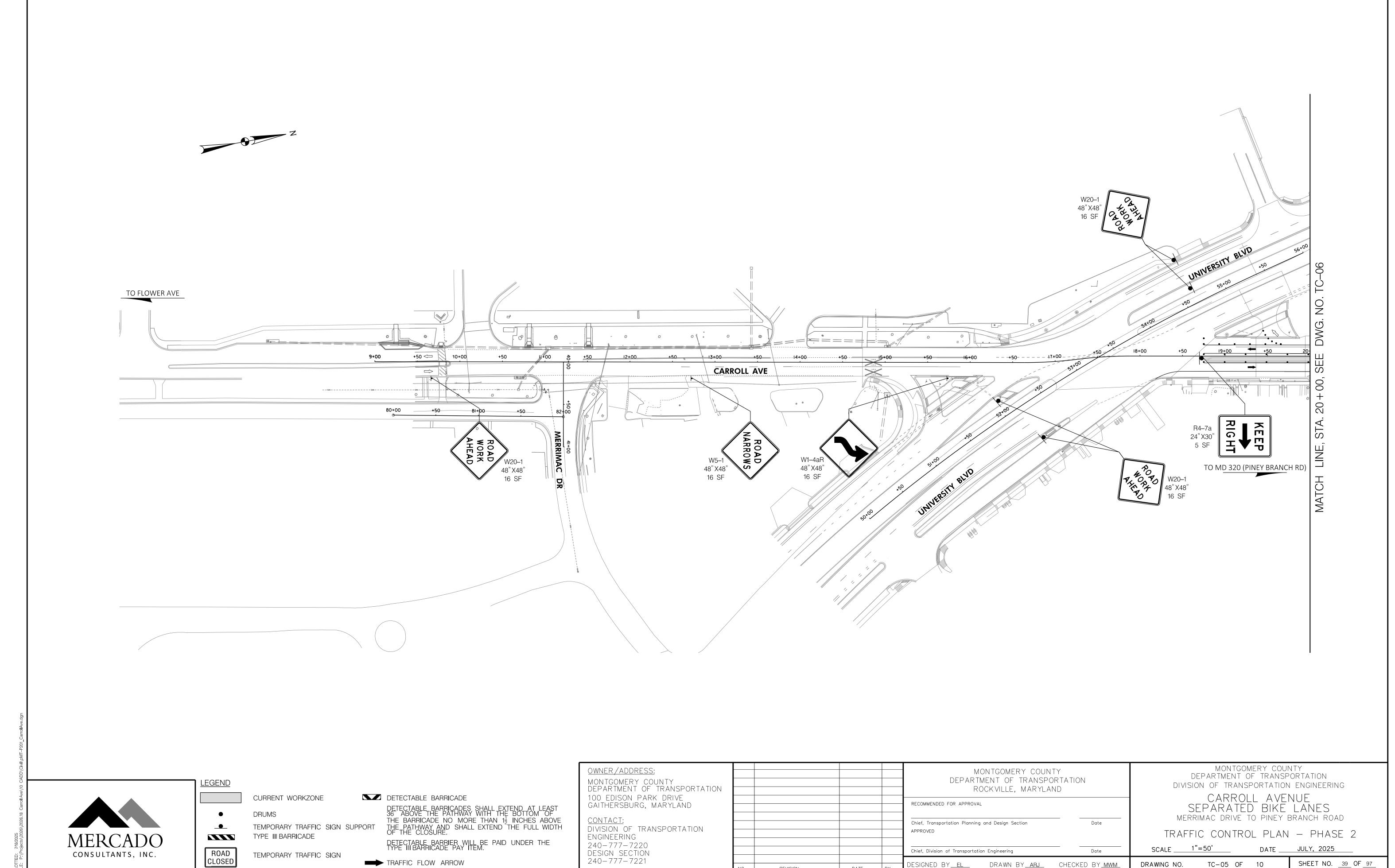
DRUMS

TYPE III BARRICADE

TEMPORARY TRAFFIC SIGN

ROAD CLOSED

TEMPORARY TRAFFIC SIGN SUPPORT



SHEET NO. 39 OF 97

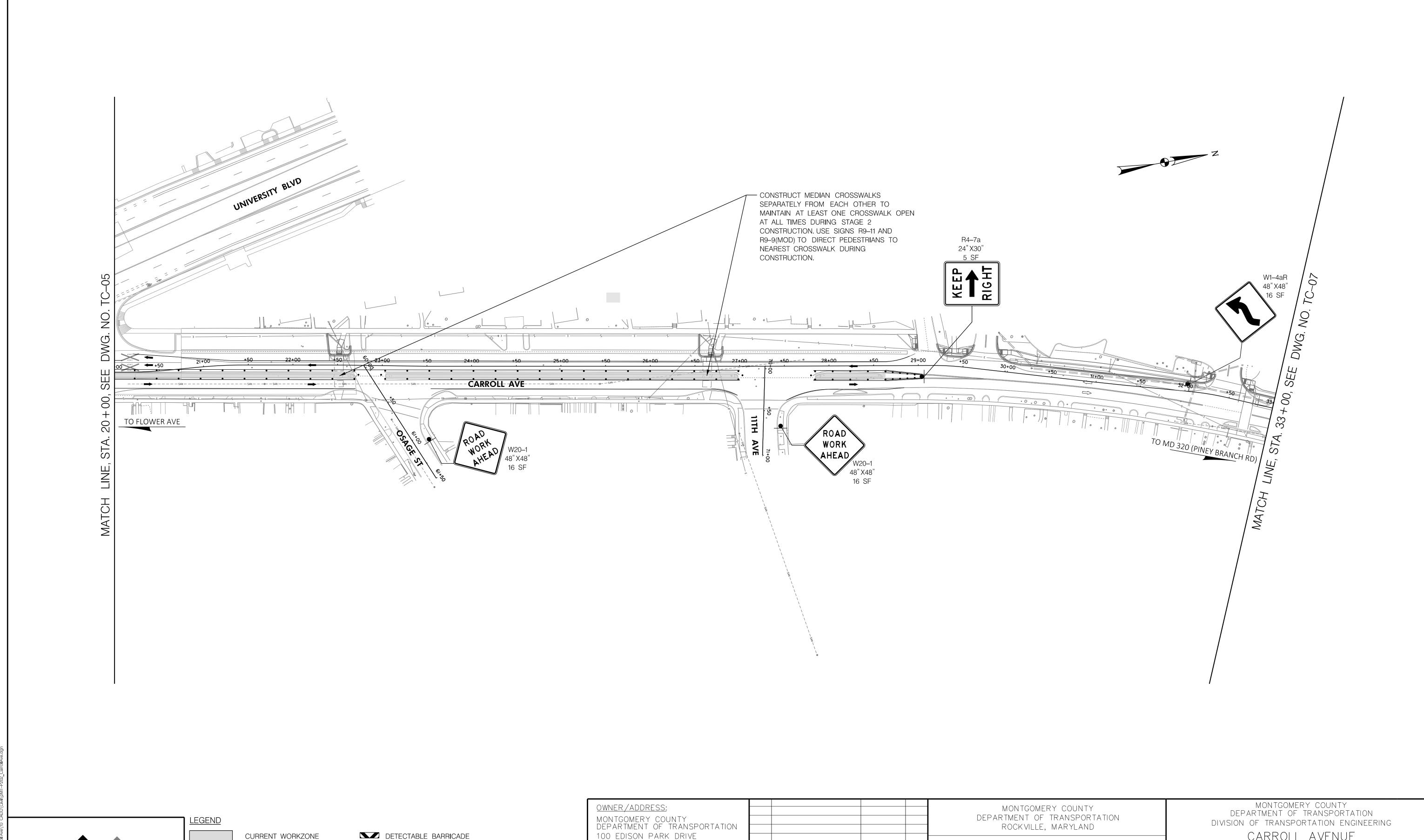
DESIGNED BY EL DRAWN BY ARJ CHECKED BY MWM

DRAWING NO.

TC-05 OF 10

CONSULTANTS, INC.

TEMPORARY TRAFFIC SIGN



MERCADO CONSULTANTS, INC.

ROAD CLOSED

CURRENT WORKZONE

DRUMS

TEMPORARY TRAFFIC SIGN SUPPORT TYPE III BARRICADE

DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.

DETECTABLE BARRIER WILL BE PAID UNDER THE TYPE III BARRICADE PAY ITEM.

100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND <u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

RECOMMENDED FOR APPROVAL Chief, Transportation Planning and Design Section APPROVED Date Chief, Division of Transportation Engineering DESIGNED BY <u>el</u> DRAWN BY <u>arj</u> CHECKED BY <u>mwm</u>

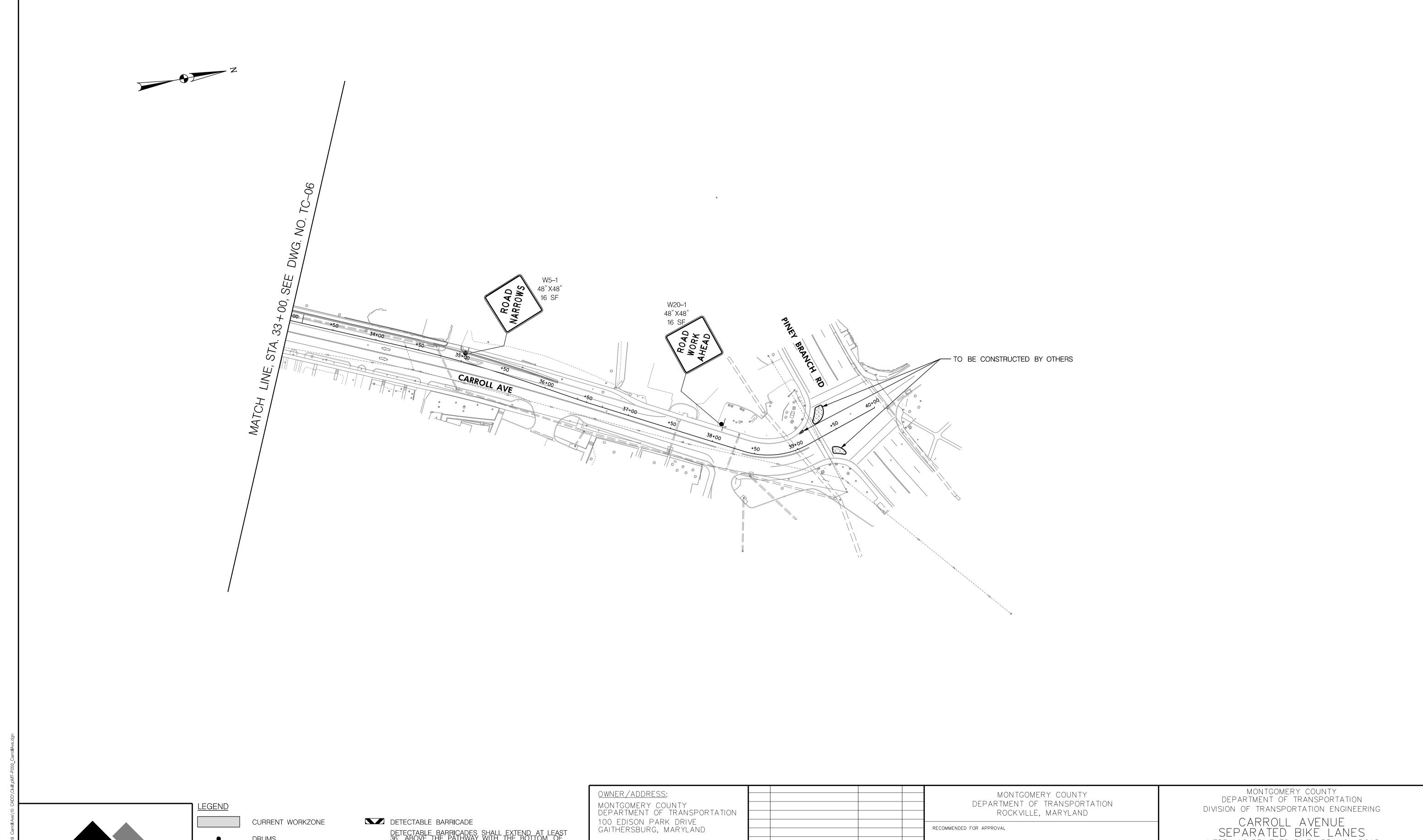
CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TRAFFIC CONTROL PLAN - PHASE 2

SCALE _____1"=50' DATE JULY, 2025

SHEET NO. 40 OF 97 DRAWING NO. TC-06 OF 10

TEMPORARY TRAFFIC SIGN



MERRIMAC DRIVE TO PINEY BRANCH ROAD

DATE _____JULY, 2025

SHEET NO. 41 OF 97

TRAFFIC CONTROL PLAN - PHASE 2

SCALE _____1"=50'

DRAWING NO. TC-07 OF 10

Chief, Transportation Planning and Design Section

DESIGNED BY <u>EL</u> DRAWN BY <u>ARJ</u> CHECKED BY <u>MWM</u>

Chief, Division of Transportation Engineering

Date

APPROVED

DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.

DETECTABLE BARRIER WILL BE PAID UNDER THE TYPE III BARRICADE PAY ITEM.

TRAFFIC FLOW ARROW

<u>CONTACT:</u>

ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

DIVISION OF TRANSPORTATION

DRUMS

TYPE III BARRICADE

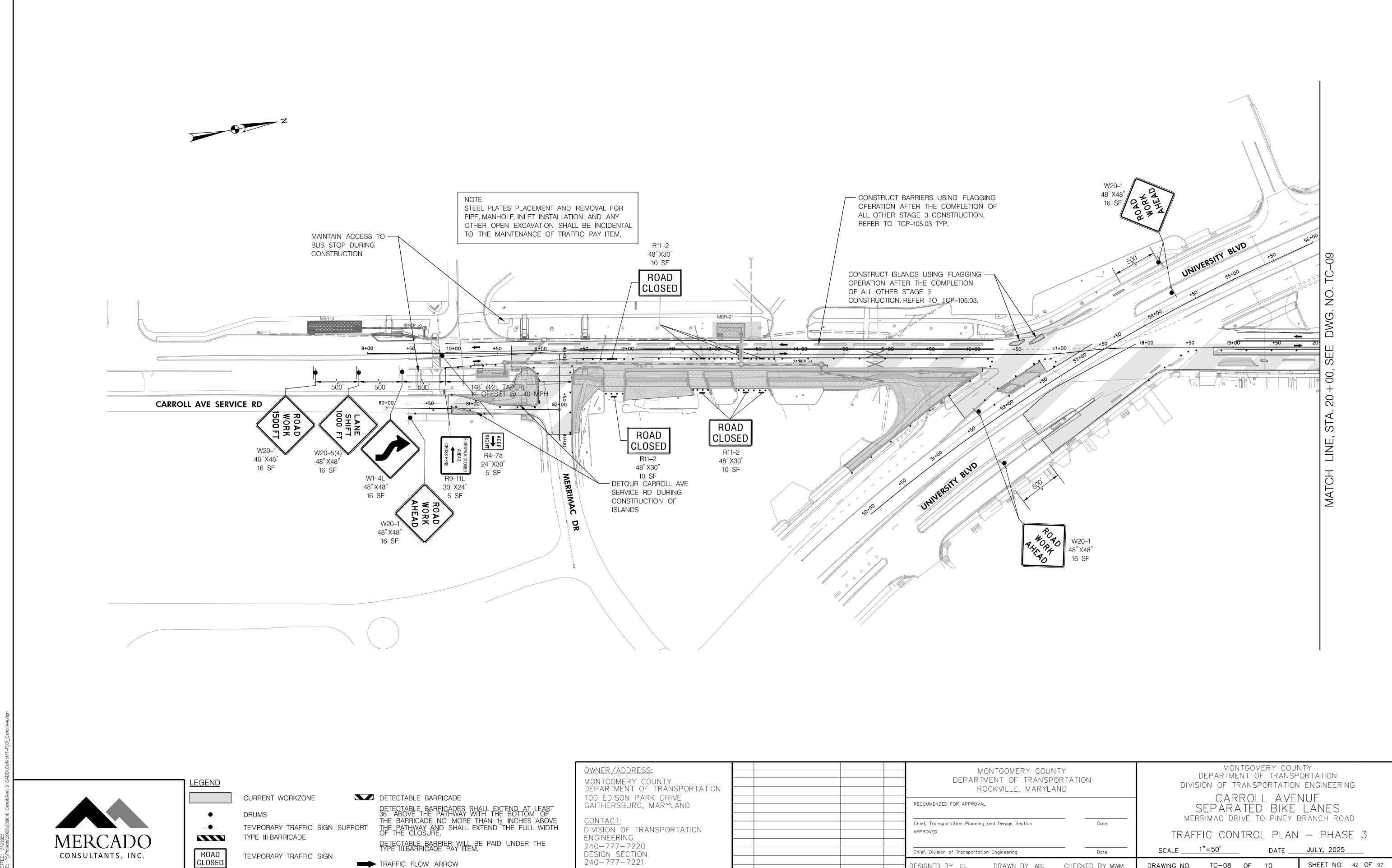
TEMPORARY TRAFFIC SIGN

ROAD CLOSED

TEMPORARY TRAFFIC SIGN SUPPORT

MERCADO

CONSULTANTS, INC.



1"=50'

DRAWING NO. TC-08 OF 10

Date

DRAWN BY<u>arj</u> Checked by<u>mwm</u>

Chief, Division of Transportation Engineering

DESIGNED BY<u>el</u>

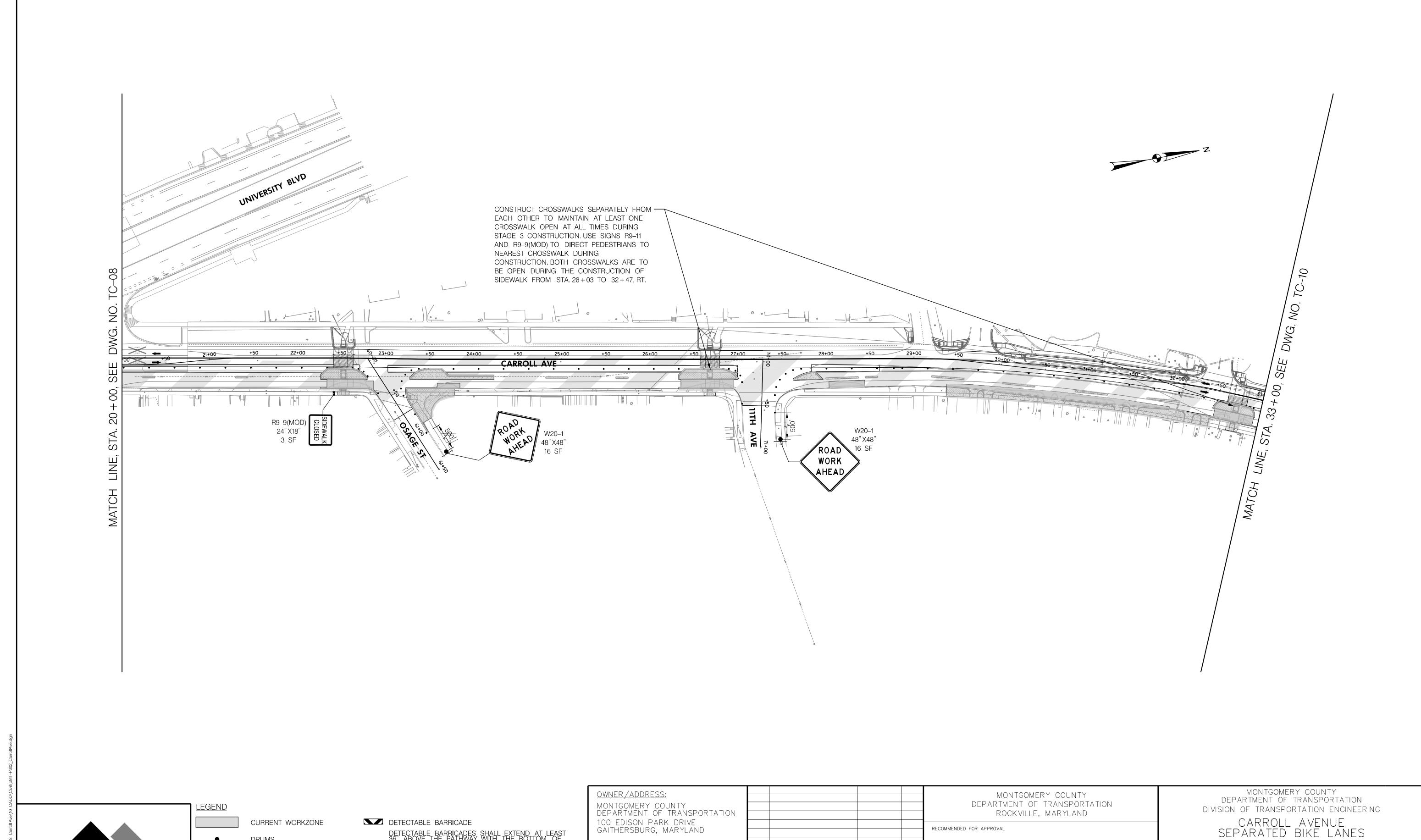
DATE JULY, 2025

SHEET NO. 42 OF 97

CONSULTANTS, INC.

ROAD CLOSED

TEMPORARY TRAFFIC SIGN



MERCADO CONSULTANTS, INC.

ROAD CLOSED

DRUMS TEMPORARY TRAFFIC SIGN SUPPORT

TEMPORARY TRAFFIC SIGN

TYPE III BARRICADE

DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.

DETECTABLE BARRIER WILL BE PAID UNDER THE TYPE III BARRICADE PAY ITEM.

CONTACT: DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

			ROCKVILLE, MARYLAND
			RECOMMENDED FOR APPROVAL
			Chief, Transportation Planning and Design Section Date APPROVED
			Chief, Division of Transportation Engineering Date
REVISION	DATE	BY	DESIGNED BY <u>el</u> DRAWN BY <u>arj</u> CHECKED BY <u>mwm</u>

MERRIMAC DRIVE TO PINEY BRANCH ROAD

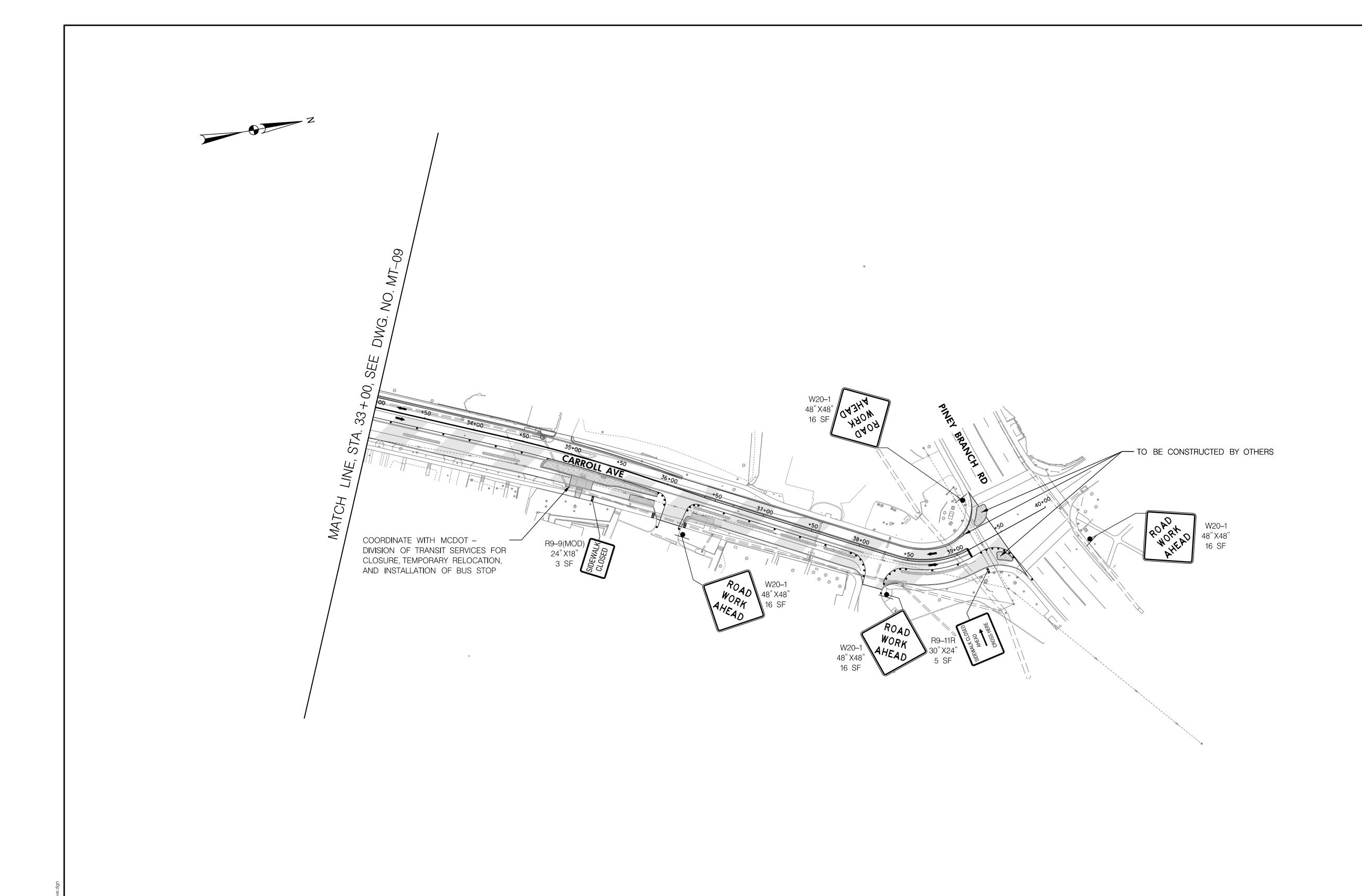
TRAFFIC CONTROL PLAN - PHASE 3

SCALE _____1"=50'

DRAWING NO. TC-09 OF 10

DATE JULY, 2025

SHEET NO. <u>43</u> OF <u>97</u>



MERCADO CONSULTANTS, INC.

CURRENT WORKZONE

DRUMS TEMPORARY TRAFFIC SIGN SUPPORT TYPE III BARRICADE

ROAD CLOSED TEMPORARY TRAFFIC SIGN DETECTABLE BARRICADE

DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.

DETECTABLE BARRIER WILL BE PAID UNDER THE TYPE III BARRICADE PAY ITEM.

100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND	
CONTACT: DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221	

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION		MONTGOMERY COUNTY DEPARTMENT OF TRANSPORT ROCKVILLE, MARYLAND	
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND		RECOMMENDED FOR APPROVAL	
CONTACT: DIVISION OF TRANSPORTATION ENGINEERING		Chief, Transportation Planning and Design Section APPROVED	Date
240-777-7220 DESIGN SECTION		Chief, Division of Transportation Engineering	Date

DESIGNED BY <u>el</u> DRAWN BY <u>arj</u> CHECKED BY <u>mwm</u>

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TRAFFIC CONTROL PLAN - PHASE 3

SCALE _____1"=50' DATE ____JULY, 2025 SHEET NO. 44 OF 97 DRAWING NO. TC-10 OF 10

EROSION AND SEDIMENT CONTROL - GENERAL NOTES





Standard Erosion and Sediment Control Notes

March 2024

1. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer, and an authorized representative of the Department.

- 2. The permittee must obtain inspection and approval by DPS at the following points:
 - A. At the required pre-construction meeting.
 - B. Following installation of sediment control measures and prior to any other land disturbing
 - C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
 - D. Prior to removal or modification of any sediment control structure(s).
 - Prior to final acceptance.
- 3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the
- 4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- 5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
- 6. * Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must
 - a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under

All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.

- The permittee shall apply *sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
- Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following
- The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
- Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed, and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where
- Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with *sod or seed with an approved erosion control matting or by other approved
- Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- 13. * No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with
- 14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.

- 15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the
- 16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- 17. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.
- 18. The sediment control inspector has the option of requiring additional sediment control measures,
- 19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed
- *Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
- 21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-III) or when required by the sediment control inspector.
- 22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not
- 23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14-gauge wire. Safety fence must be maintained in good condition at all times.
- 24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work.
- 25. Off-site spoil or borrow areas must have prior approval by DPS.
- 26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for <u>each</u> application. The following methods
 - A. Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
 - the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or
 - C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric),
- **Remember:** Dewatering operation and method <u>must</u> have prior approval by the DPS inspector.

- 27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
- 28. * Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".
- * Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and the Sediment Control Inspector.

CONSULTANTS, INC.

PROFESSIONAL CERTIFICATION:

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

LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025

DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CONTACT:

DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

OWNER/ADDRESS:

MONTGOMERY COUNTY

				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTAT ROCKVILLE, MARYLAND	ION	
				RECOMMENDED FOR APPROVAL		
				Chief, Transportation Planning and Design Section APPROVED	Date	
				Chief, Division of Transportation Engineering	 Date	S
NO.	REVISION	DATE	BY	DESIGNED BY <u>arj</u> bg drawn by <u>arj</u> bg che	CKED BY <u>MWM</u>	DRAW

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

SC0001

EROSION AND SEDIMENT CONTROL NOTES

DATE JULY, 2025 SCALE <u>N/A</u> SHEET NO. 45 OF 97 DRAWING NO. ES-01 OF 15

CONTRACTOR CANNOT BEGIN CONSTRUCTION UNTIL CLEAR LEGAL ACCESS HAS BEEN GRANTED TO ENTIRE LOD. TEMPORARY CONSTRUCTION EASEMENTS MUST BE SUBMITTED TO SEDIMENT CONTROL INSPECTOR PRIOR TO PRECONSTRUCTION MEETING.

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION:

- I. PRIOR TO CLEARING TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRECONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE WITH THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (MCDPS) SEDIMENT CONTROL INSPECTOR (240) 777-0311 (48 HOURS NOTICE) AND THE MNCPPC, PLANNING DEPARTMENT, PLANS ENFORCEMENT INSPECTOR (301) 495-4550 (48 HOURS NOTICE), THE OWNERS REPRESENTATIVE. AND THE SITE ENGINEER. IN ORDER FOR THE MEETING TO OCCUR. THE APPLICANT MUST PROVIDE ONE PAPER SET OF APPROVED SEDIMENT CONTROL PLANS TO MCDPS SEDIMENT CONTROL INSPECTOR AT THE PRECONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.
- 2. THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.
- 3. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MNCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.
- 4. CLEAR AND GRADE FOR INSTALLATION OF SEDIMENT CONTROL DEVICES.
- 5. INSTALL SEDIMENT CONTROL DEVICES. TRAPS AND BASINS SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY EARTH DIKES THAT CONVEY DRAINAGE TO A TRAP AND/OR BASIN.
- 6. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING. GRUBBING OR GRADING.

PHASE L:

- I. INSTALL ALL SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING OR GRADING.
- 2. CONSTRUCT SIDEWALK, RAMPS, CURB AND GUTTER, PAVEMENT, AND STORMWATER FACILITY (MBR-3) ON SOUTHBOUND CARROLL AVENUE AS SHOWN ON THE PLANS. AREAS OF SAME DAY STABILIZATION (SDS) MUST BE STABILIZED AT THE END OF EACH WORK DAY.
- 3. DURING A MINIMUM 3-DAY CLEAR WEATHER FORECAST (NO PRECIPITATION) FROM THE NATIONAL WEATHER SERVICE AND PERMISSION FROM THE INSPECTOR. REMOVE EXISTING INLETS EX-12. EX-13 AND EX-14. CONSTRUCT PIPES AND DRAINAGE STRUCTURES I-2, I-3, I-4, MH-I AND MH-2. CONSTRUCT PROPOSED PAVEMENT AND SIDEWALK AROUND THE DRAINAGE STRUCTURES SHOWN ON THE PLANS.
- 4. UPON COMPLETION, STABILIZE ALL DISTURBED AREAS WITHIN THE WORK AREA AND REMOVE EROSION AND SEDIMENT CONTROLS.
- 5. ONCE ALL AREAS ARE STABILIZED, AND WITH WRITTEN APPROVAL FROM MCDPS INSPECTOR. REMOVE PERIMETER CONTROLS AND STABILIZE ANY AREAS RESULTING FROM THIS WORK.

PHASE 2:

I. USING SAME DAY STABILIZATION (SDS), REMOVE EXISTING ISLANDS FROM STA. 18+76 TO 28+60 AND CONSTRUCT PROPOSED PAVEMENT. CONTRACTOR SHALL EXCAVATE ONLY AS MUCH AS IS TO BE WORKED IN A DAY. AREAS OF SDS MUST BE STABILIZED AT THE END OF EACH WORK DAY.

PHASE 3:

- I. INSTALL ALL SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING OR GRADING.
- 2. DURING A MINIMUM 3-DAY CLEAR WEATHER FORECAST (NO PRECIPITATION) FROM THE NATIONAL WEATHER SERVICE AND PERMISSION FROM THE INSPECTOR, CONSTRUCT STORMWATER FACILTIES (MBR-1 AND MBR-2), AND INSTALL PROPOSED PIPES AND DRAINAGE STRUCTURES I-5, MH-5, I-6, MH-6, I-7, AND MH-7, AS SHOWN IN THE PLANS. CONSTRUCT PROPOSED PAVEMENT AND SIDEWALK AROUND THE DRAINAGE STRUCTURES SHOWN ON THE PLANS.
- 3. USING SAME DAY STABILIZATION (SDS), REMOVE EXISTING CURB AND GUTTER AND ISLANDS, AND CONSTRUCT RAMPS AND SIDEWALKS, CURB AND GUTTER, PROPOSED PAVEMENT, AND INSTALL ISLANDS AS SHOWN ON THE PLANS. CONTRACTOR SHALL EXCAVATE ONLY AS MUCH AS IS TO BE WORKED IN A DAY. AREAS OF SDS MUST BE STABILIZED AT THE END OF EACH WORK DAY.
- 4. STABILIZE ALL DISTURBED AREAS.
- 5. PROVIDE AS-BUILT PLANS FOR REVIEW AND APPROVAL TO MCDPS PRIOR TO FINAL INSPECTION AND CLOSE OUT OF PERMIT.

SAME DAY STABILIZATION (SDS) NOTE:

AREAS REQUIRING SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS:

PLACEMENT OF STONE BASE COURSE FOR END OF DAY STABILIZATION: PLACEMENT OF SILT FENCE DURING NON-WORKING HOURS AROUND THE PERIMETER OF THE EXCAVATION: TEMPORARY COVERING OF OPEN EXCAVATION WITH STEEL PLATES (PAYMENT SHALL BE INCIDENTAL TO MAINTENANCE OF TRAFFIC LUMP SUM PAY ITEM) DURING NON-WORKING HOURS; AND TEMPORARY COVERING OF EXPOSED SOIL USING IMPERVIOUS SHEETING (TARPS. POLYETHYLENE, ETC) SUFFICIENTLY HELD DOWN USING SANDBAGS TO PREVENT BILLOWING OF THE FABRIC.

CONSULTANTS, INC.

PROFESSIONAL CERTIFICATION:

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

LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CONTACT: DIVISION OF TRANSPORTATION

ENGINEERING

240-777-7220

DESIGN SECTION

240-777-7221

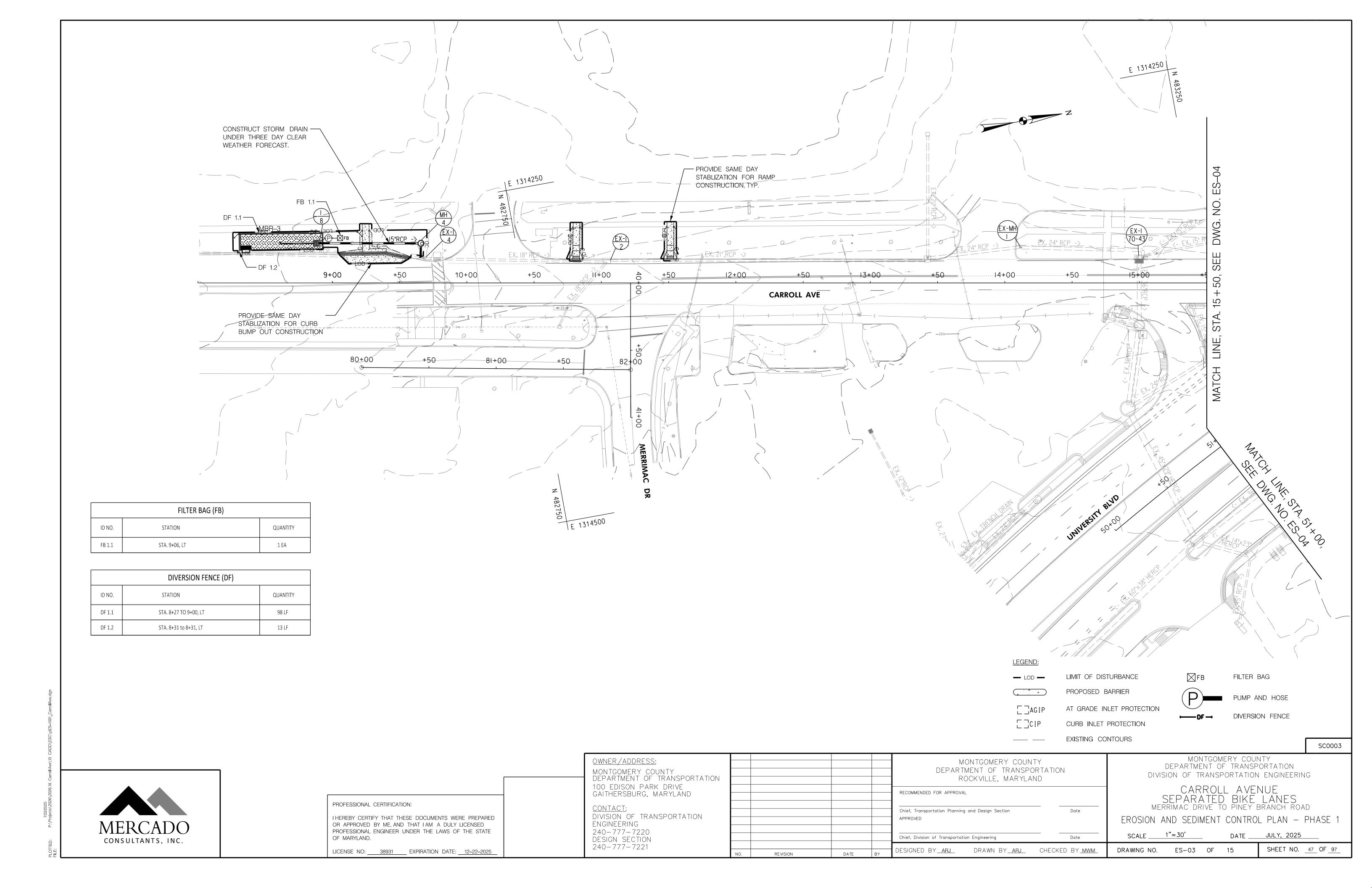
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND RECOMMENDED FOR APPROVAL Chief, Transportation Planning and Design Section APPROVED Chief, Division of Transportation Engineering Date DRAWN BY<u>arj</u> CHECKED BY<u>mwm</u> DESIGNED BY<u>ARJ</u>

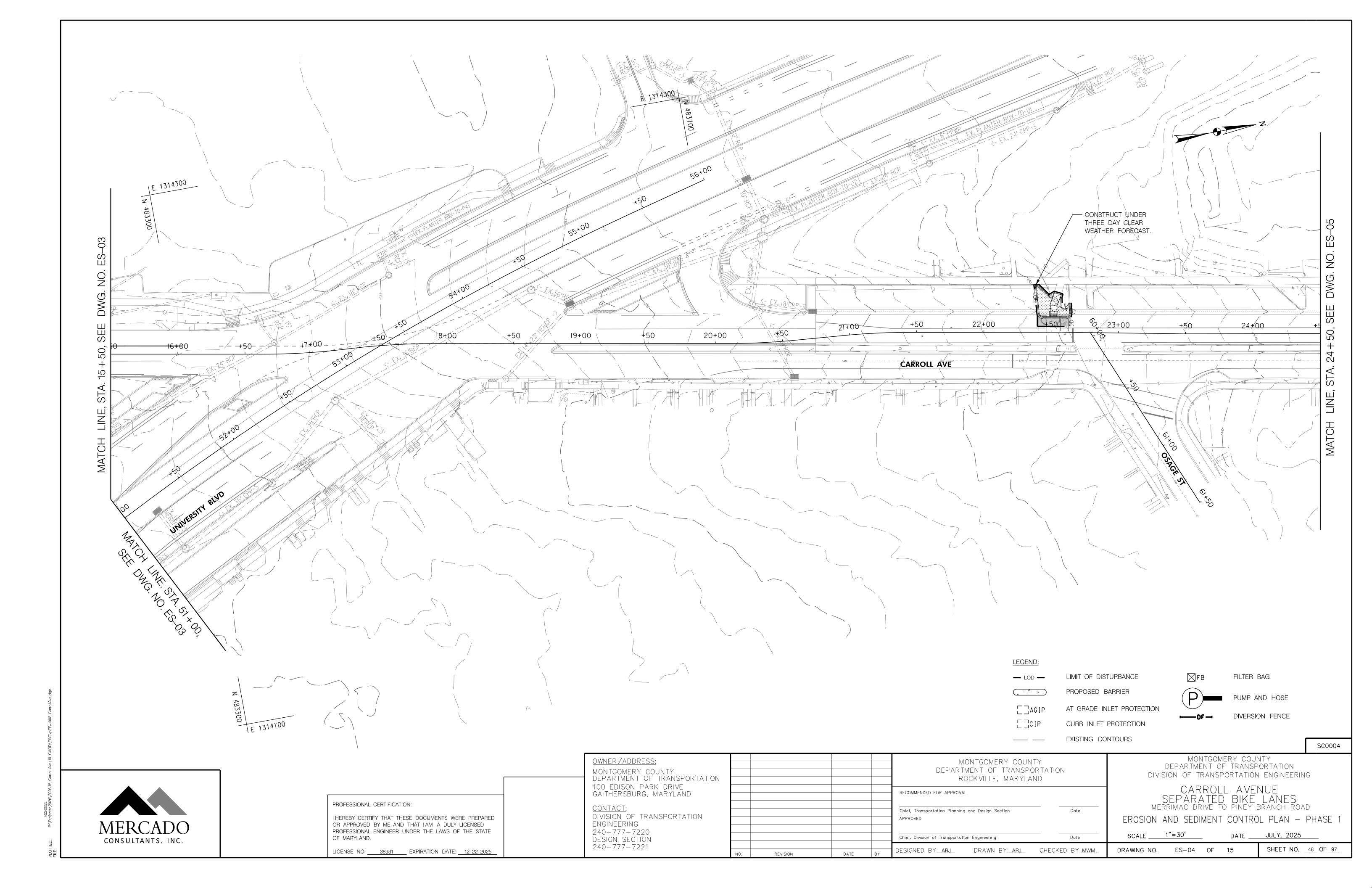
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD EROSION AND SEDIMENT

SEQUENCE OF CONSTRUCTION DATE _____JULY, 2025 SCALE

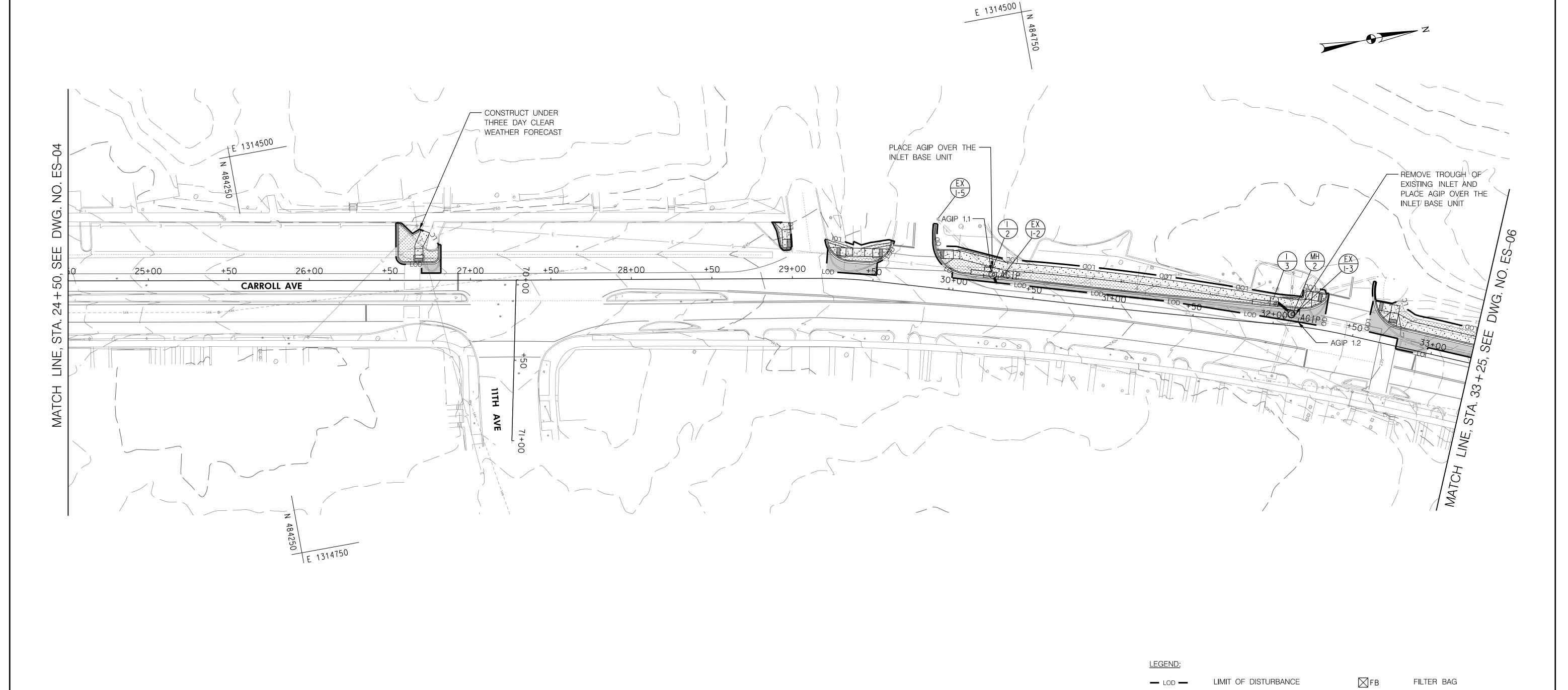
DRAWING NO. ES-02 OF 15 SHEET NO. 46 OF 97

SC0002





INLET PROTECTION (IP)							
ID NO.	STATION	QUANTITY	DRAINAGE AREA (AC)				
AGIP 1.1	STA. 30+26, LT	1 EA	0.59				
AGIP 1.2	STA. 32+10, LT	1 EA	0.15				





MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATIO
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

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

PROFESSIONAL CERTIFICATION:

OWNIED /ADDDECC.	
OWNER/ADDRESS:	
MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE	
GAITHERSBURG, MARYLAND	
CONTACT:	
DIVISION OF TRANSPORTATION Engineering	
LINGINEERING	

			MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTAT ROCKVILLE, MARYLAND	TON	
			RECOMMENDED FOR APPROVAL		
			Chief, Transportation Planning and Design Section APPROVED	Date	
			 Chief, Division of Transportation Engineering	 Date	
REVISION	DATE	BY	DESIGNED BY <u>arj</u> DRAWN BY <u>arj</u> CHE	CKED BY <u>MWM</u>	DF

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

PUMP AND HOSE

DIVERSION FENCE

SC0005

CARROLL AVENUE
SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

PROPOSED BARRIER

AT GRADE INLET PROTECTION

CURB INLET PROTECTION

EXISTING CONTOURS

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

 SCALE
 1"=30'
 DATE
 JULY, 2025

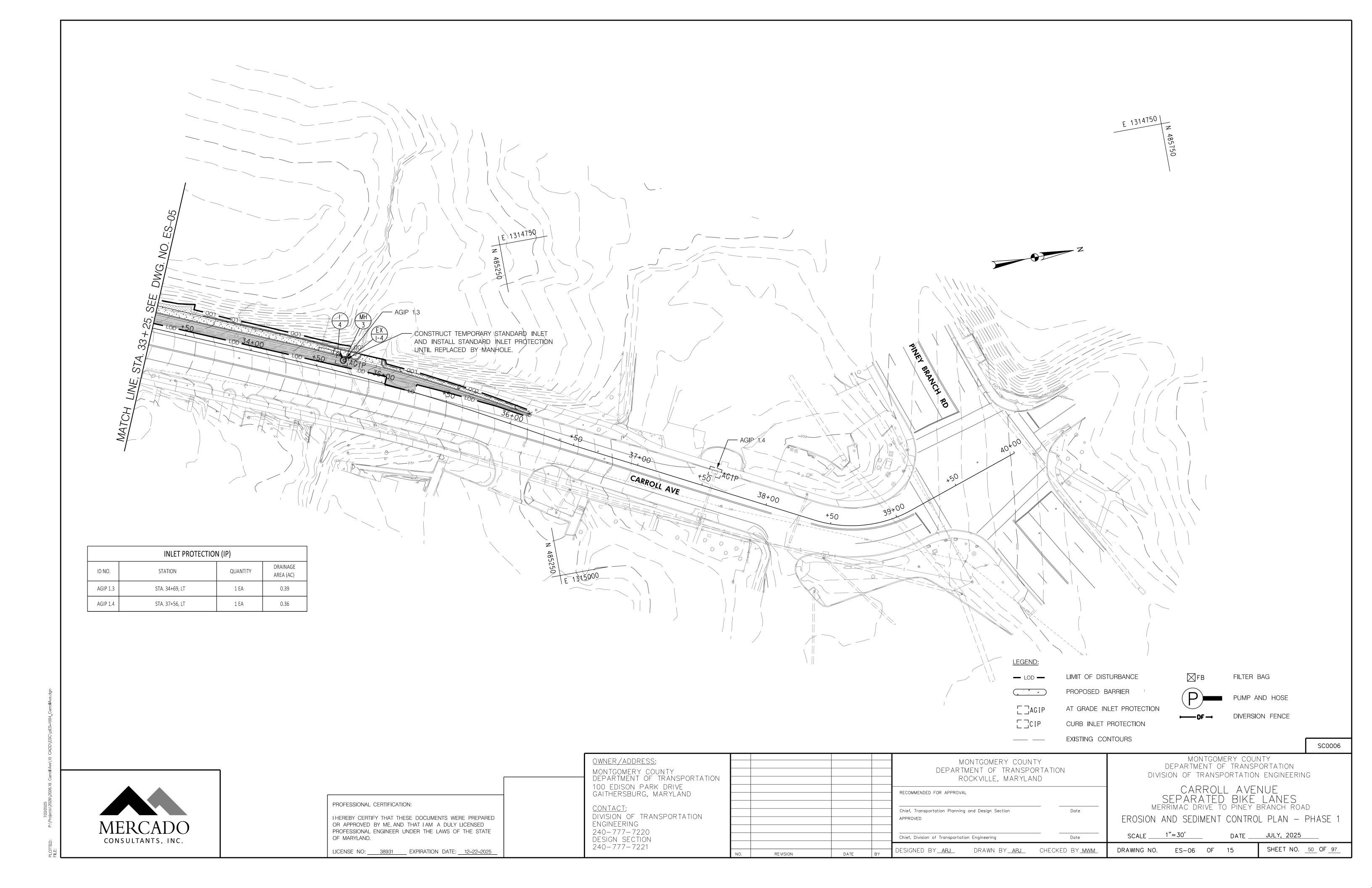
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 ES-05
 OF
 15
 SHEET NO.
 49
 OF
 97

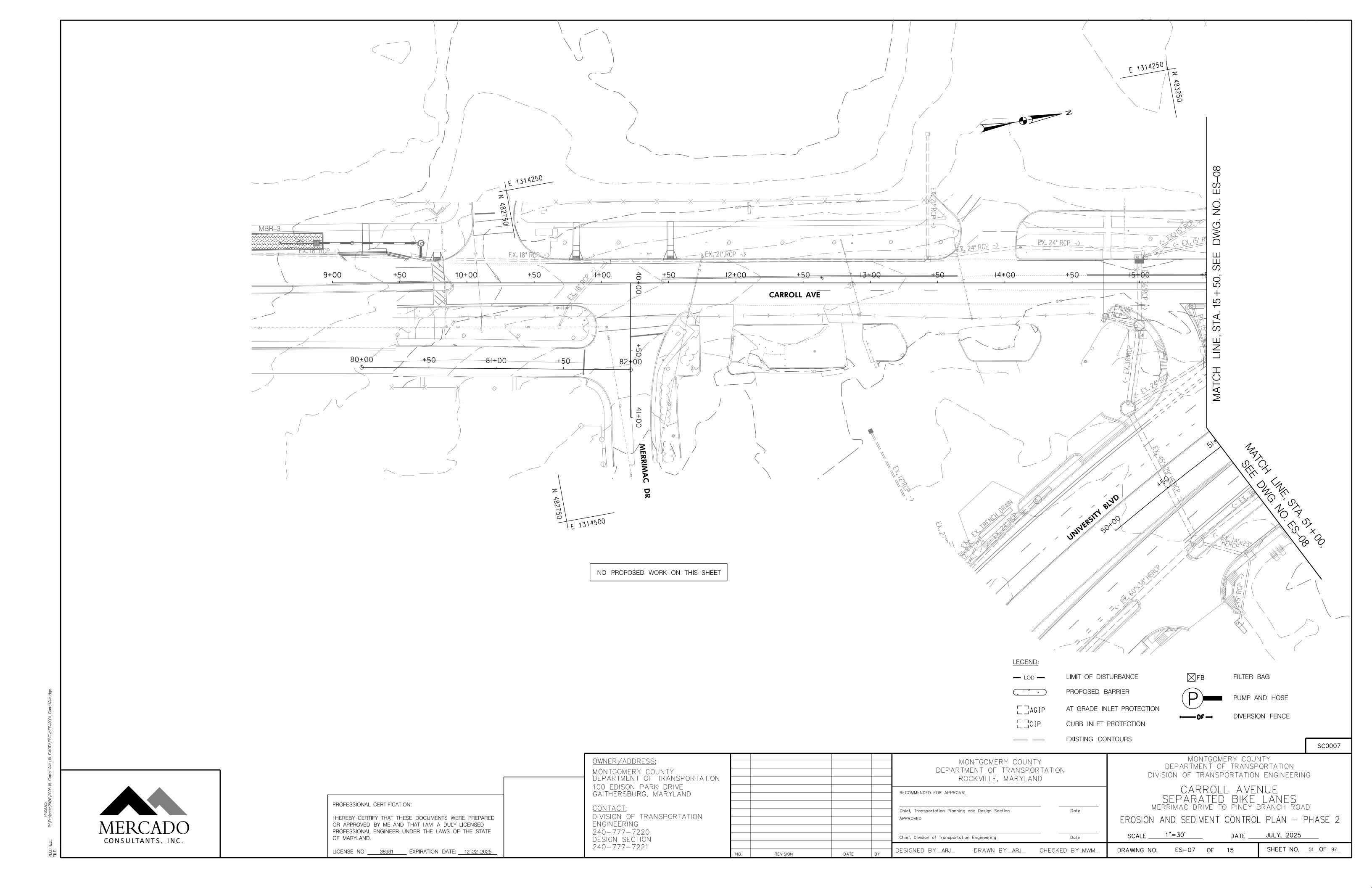
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND.

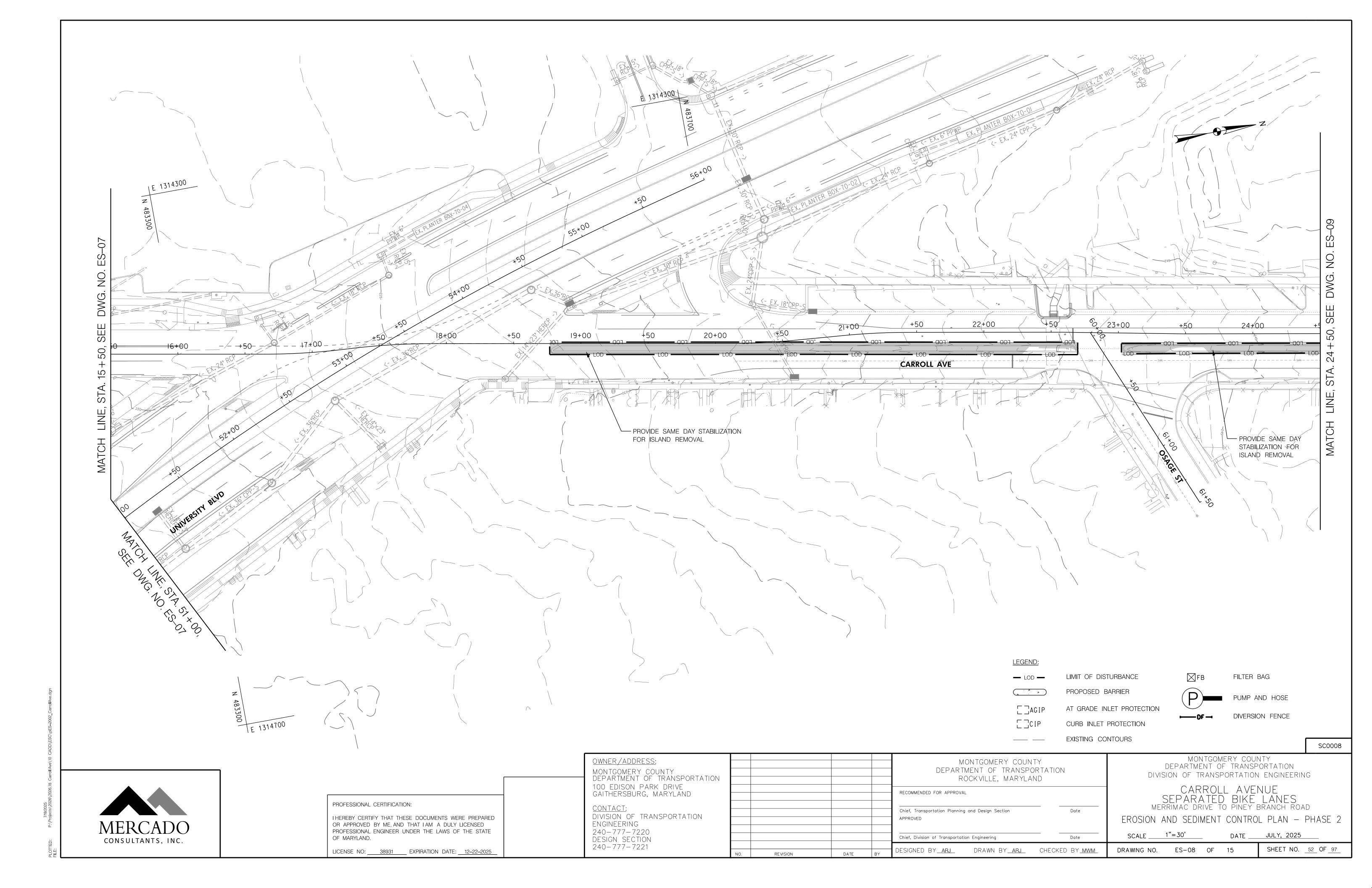
LICENSE NO: 38931 EXPIRATION DATE: 12–22–2025

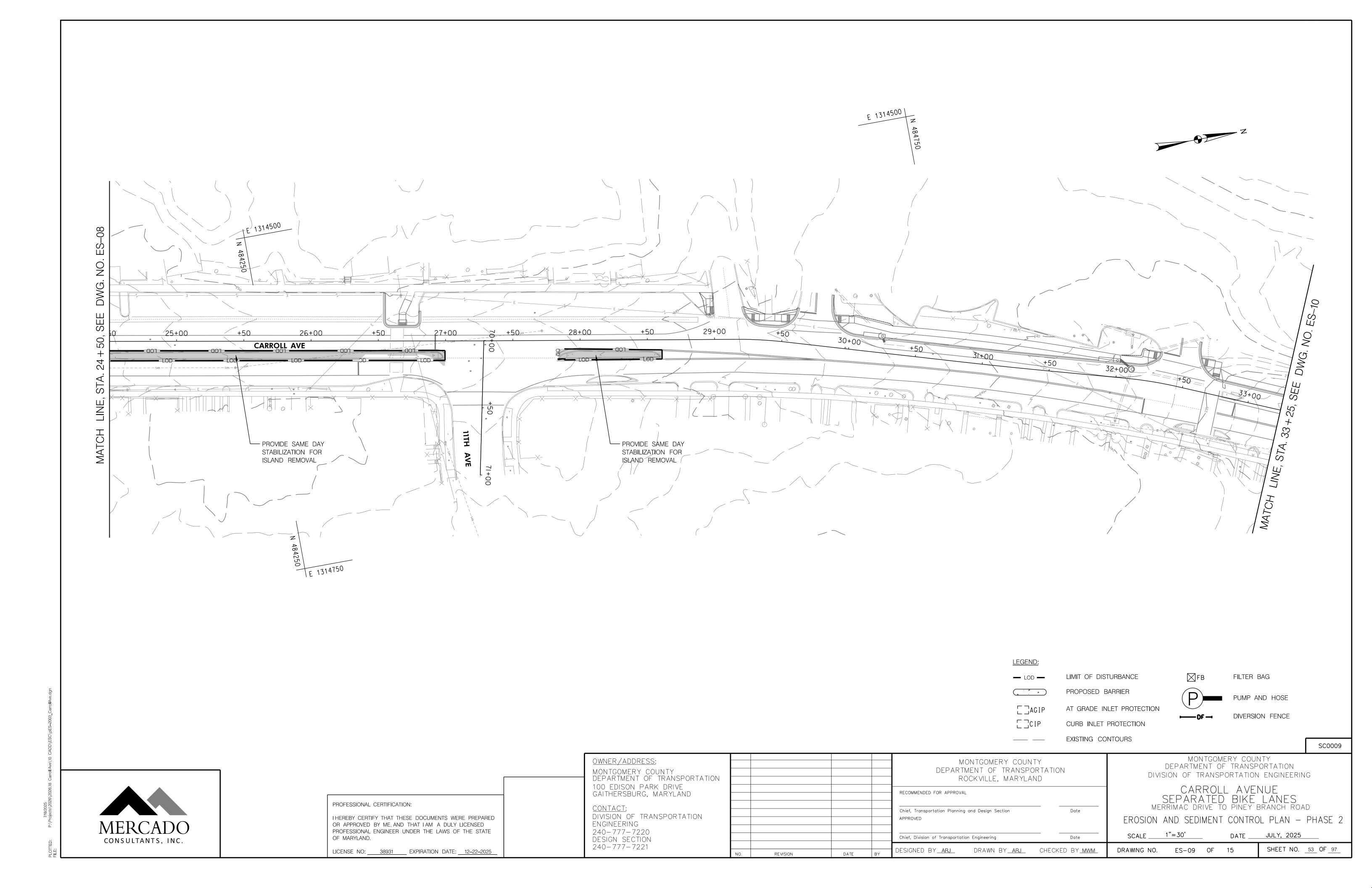
DESIGN SECTION
240–777–7220

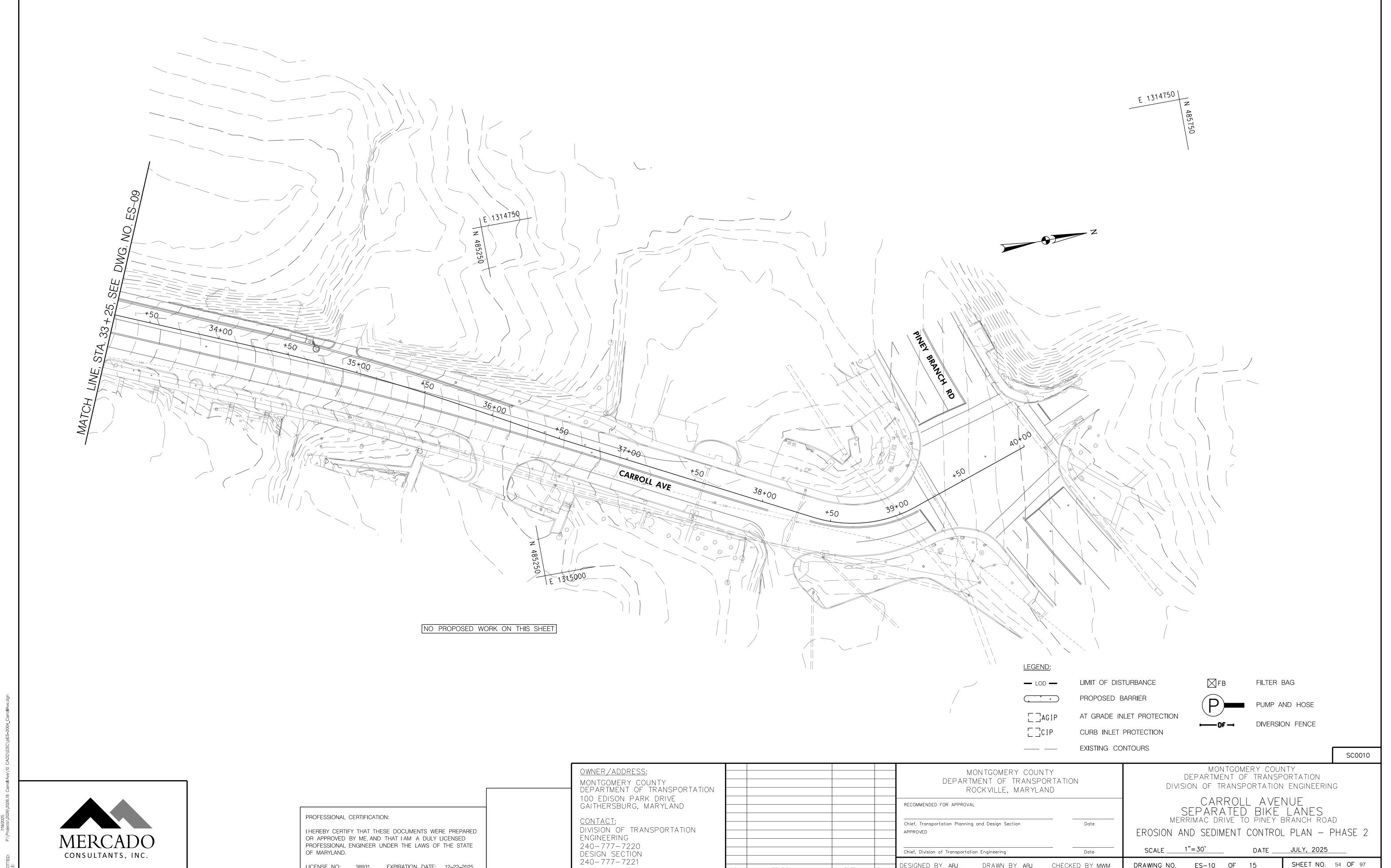
No. REVISION DATE BY DESIGNED BY ARJ DRAWN BY ARJ CHECKED BY MWM. DRAWN BY ARJ CHECKED BY MWM. DRAWN
7/2/2025









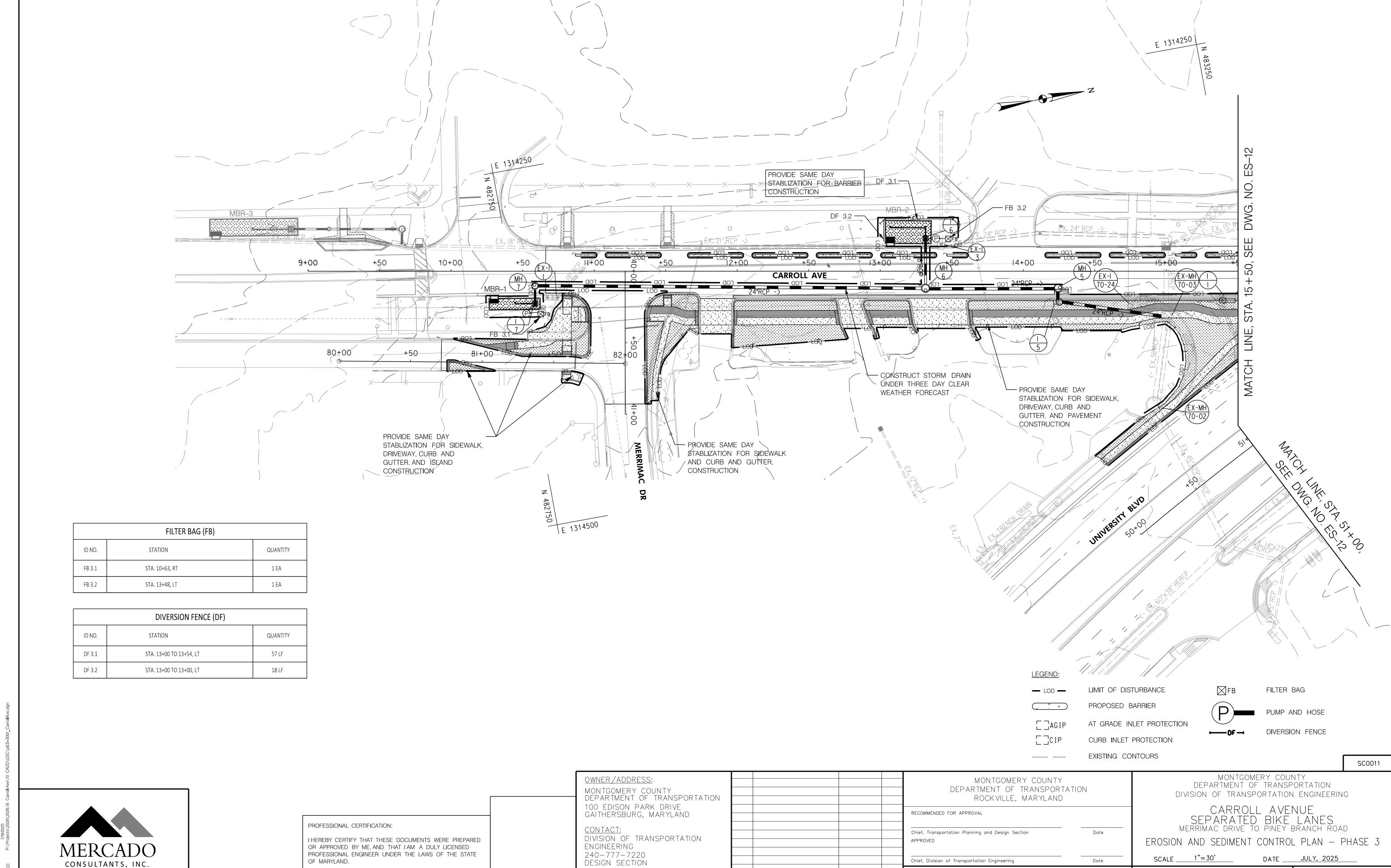


LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025

SHEET NO. <u>54</u> OF <u>97</u>

DRAWING NO. ES-10 OF 15

DESIGNED BY ARJ DRAWN BY ARJ CHECKED BY MWM



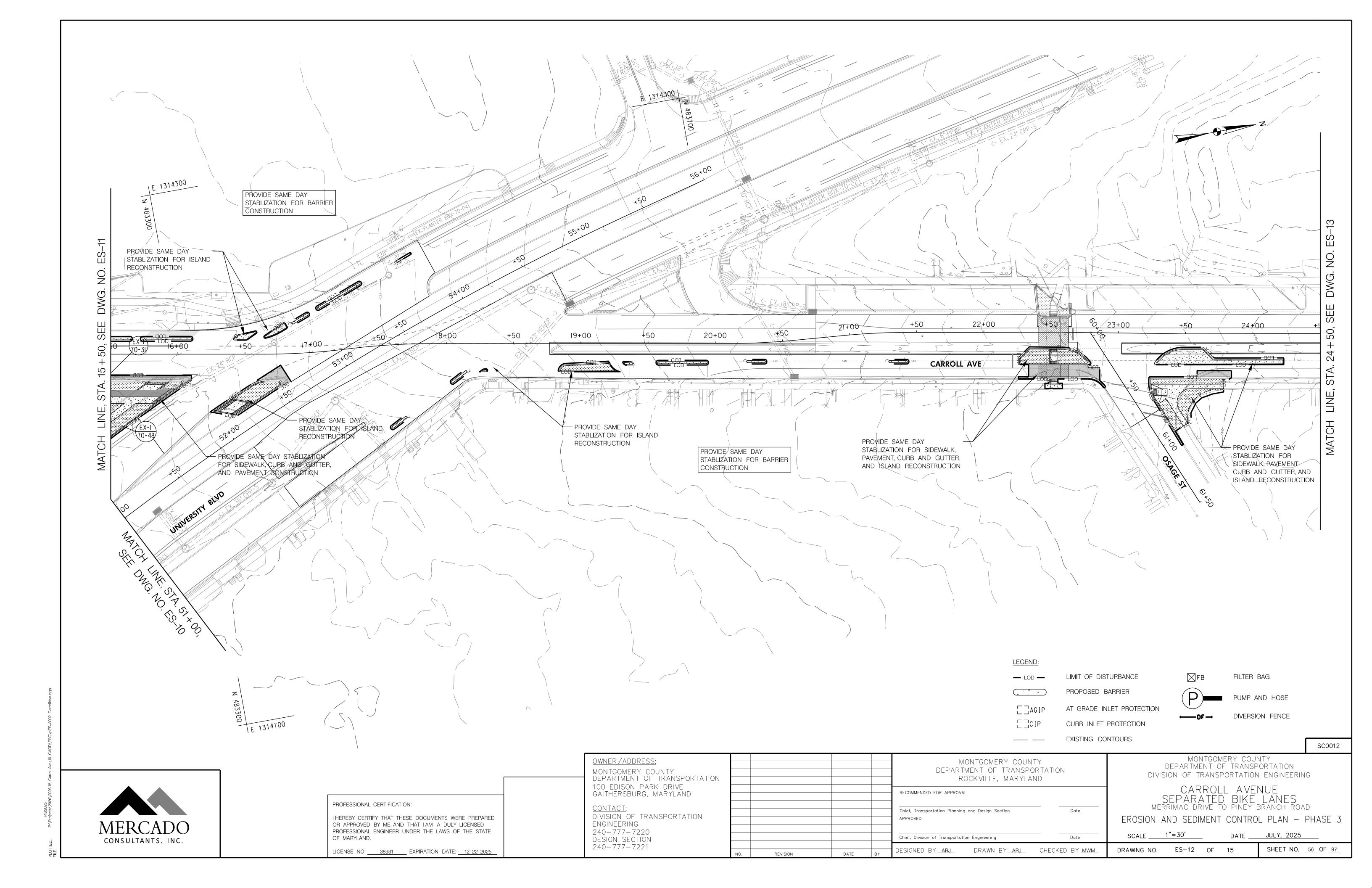
240-777-7221

LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025

SHEET NO. 55 OF 97

DRAWING NO. ES-11 OF 15

DESIGNED BY <u>ARJ</u> DRAWN BY <u>ARJ</u> CHECKED BY <u>MWM</u>



ID NO. STATION QUANTITY DRAINAGE AREA (AC) CIP 3.1 STA. 32+01, RT 1 EA 0.46	E 1314500 N 484750	2
25-00 +50 26+00 +50 27-00 00 00 00 00 00 00 00 00 00 00 00 00	PHOV DE SAME DAY. STABILIZATION STABILIZATION PHOVING SAME DAY. STABILIZATION	OTECTION UNTIL
		RANSPORTATION

MERCADO CONSULTANTS, INC.

PROFESSIONAL CERTIFICATION:

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<u>CONTACT:</u>

DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION 240-777-7221

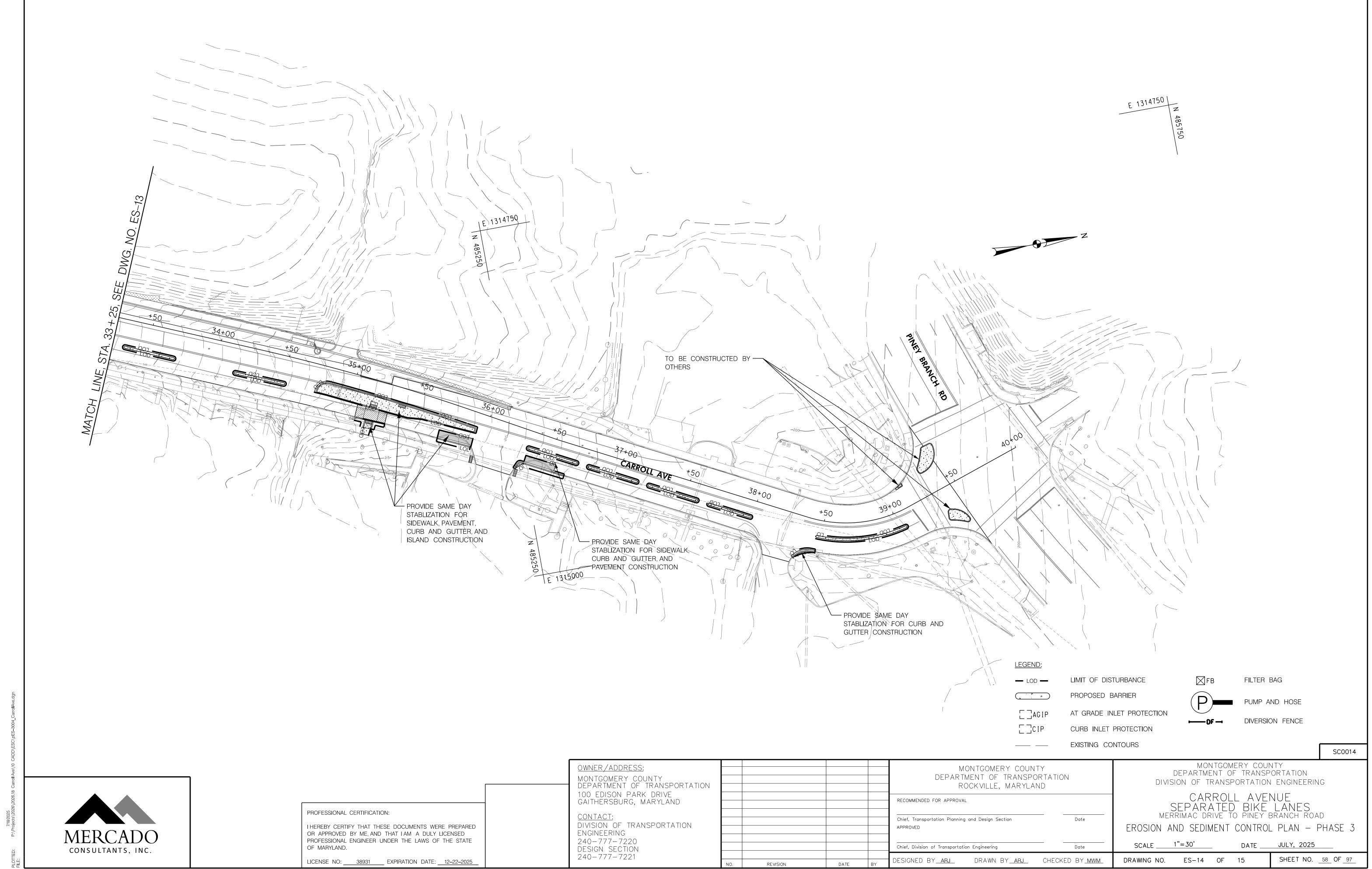
			MONIGOMERY COUNT DEPARTMENT OF TRANSPO ROCKVILLE, MARYLAN	RTATION	DEPARTMENT OF TRANSPORTA	Α
			RECOMMENDED FOR APPROVAL		CARROLL A SEPARATED BI	
			Chief, Transportation Planning and Design Section APPROVED	Date	merrimac drive to pin EROSION AND SEDIMENT COI	
			Chief, Division of Transportation Engineering	Date	SCALE1"=30' DA	ГЕ
REVISION	DATE	BY	DESIGNED BY <u>arj</u> DRAWN BY <u>arj</u>	CHECKED BY <u>MWM</u>	DRAWING NO. ES-13 OF 15	

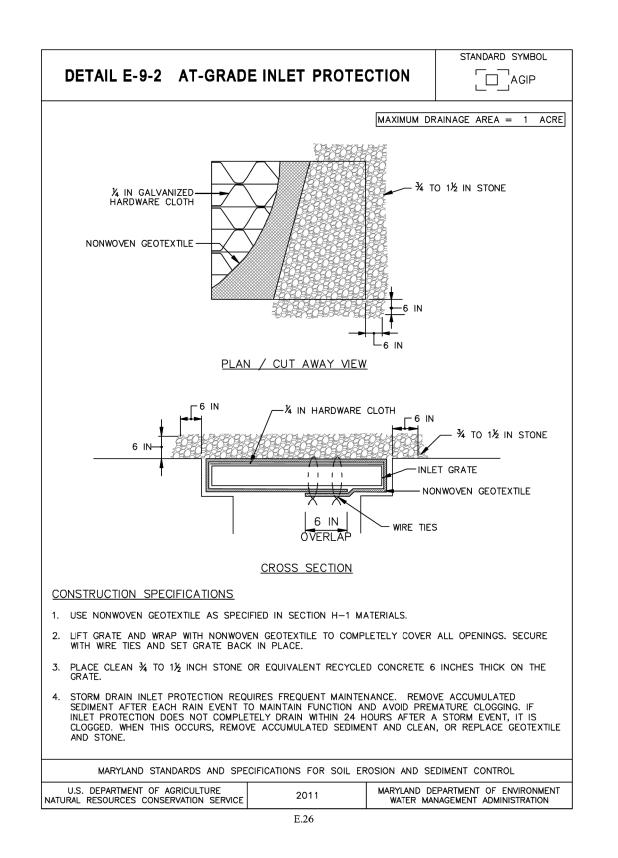
SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

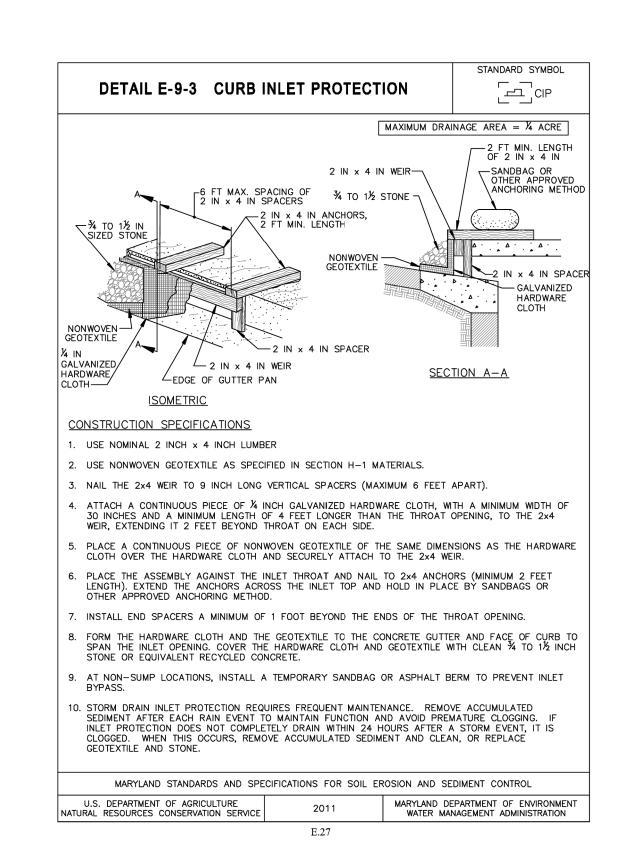
EROSION AND SEDIMENT CONTROL PLAN - PHASE 3

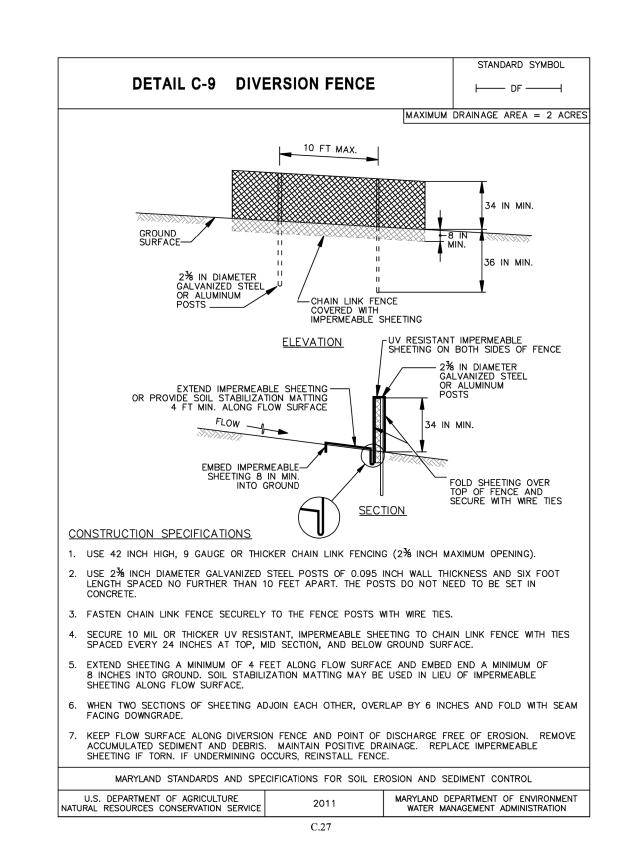
SCALE _____1"=30' DATE JULY, 2025 SHEET NO. 57 OF 97

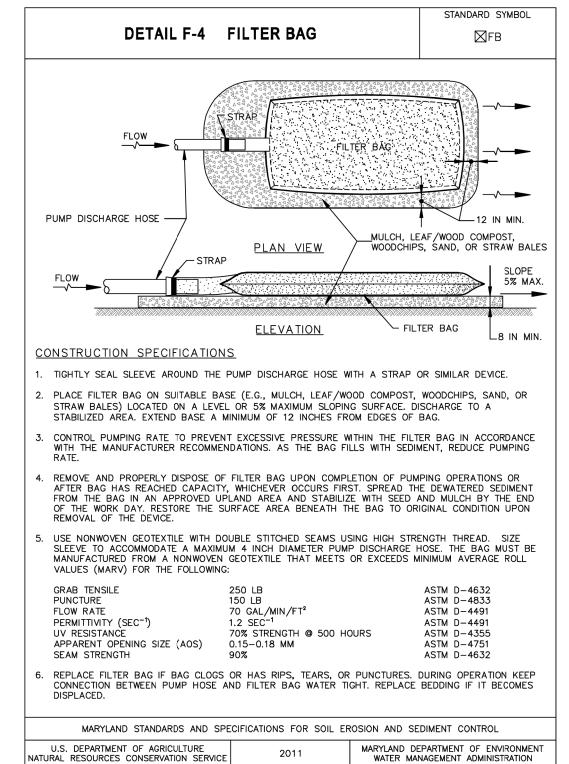
LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025











F.9

MERCADO CONSULTANTS, INC.

PROFESSIONAL CERTIFICATION:

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

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND <u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING

RECOMMENDED FOR APPROVAL APPROVED

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND Chief, Transportation Planning and Design Section SCALE _ Date

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE

SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

DATE JULY, 2025

OF MARYLAND. LICENSE NO: 38931 EXPIRATION DATE: 12-22-2025

Chief, Division of Transportation Engineering DESIGNED BY<u>arj</u> DRAWN BY<u>arj</u> CHECKED BY<u>mwm</u>

DRAWING NO. ES-15 OF 15

SHEET NO. _59_ OF _97_

SC0015

240-777-7220 DESIGN SECTION 240-777-7221

THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT:

DESIGN

MDOT SHA - "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2011 EDITION AND SUBSEQUENT REVISIONS. (MDMUTCD)

A A S H T O - "HIGHWAY SAFETY DESIGN AND OPERATIONS GUIDE" -1997

A A S H T O - "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS", 2001 EDITION (CATEGORY II FOR ALL OVERHEAD AND CANTILEVER SIGN STRUCTURES).

MATERIALS AND CONSTRUCTION

MDOT SHA - "STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS", MOST CURRENT EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.

MDOT SHA - "BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES", MOST CURRENT EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.

DESIGN WIND

100 MPH - WOOD SUPPORTS IO YEAR RECURRENCE INTERVAL 100 MPH - GROUND MOUNT SIGN STEEL SUPPORTS ALL DISTRICTS IO YEAR RECURRENCE INTERVAL 100 MPH - OVERHEAD AND CANTILEVER STRUCTURES 50 YEAR RECURRENCE INTERVAL

DESIGN STRESS

SOIL BEARING PRESSURE - S = 3,000 P.S.F. (ASSUMED) SEE MATERIAL & CONSTRUCTION ABOVE AND SPECIAL PROVISIONS FOR DESIGN STRESSES FOR STRUCTURAL STEEL, ALUMINUM, REINFORCING STEEL AND CONCRETE.

CHAMFER

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" X 3/4" CHAMFER.

CLASSIFICATION OF SIGNS

SIGNS ARE DIVIDED INTO TWO (2) GENERAL CATEGORIES. B) PANELS

I. GUIDE SIGNS A) STRUCTURAL TYPES OH - OVERHEAD

C - CANTILEVER GM - GROUND MOUNT, BREAKAWAY OR NON-BREAKWAY BM - BRIDGE MOUNTED

B) PANELS

2. STANDARD SIGNS (REGULATORY, WARNING, ETC.) A) STRUCTURAL TYPES WOOD SUPPORTS SQUARE TUBE

MATERIAL - SHEET ALUMINUM COPY - DIRECT APPLIED

MATERIAL - EXTRUDED ALUMINUM

I) HIGH INTENSITY (NEW SIGNS AND

REVISIONS TO EXISTING SIGNS)

COPY - DIRECT APPLIED

IDENTIFICATION OF SIGNS AND PANELS

EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM-I. GM-2. GM-3. ETC)

SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LETTER, (OH-IA, OH-IB, OH-IC OR OH-Ia, OH-Ib, OH-Ic)

STANDARD SIGNS

STANDARD SIGNS ARE IDENTIFIED BY PANEL NUMBERS AND ARE CLASSIFIED AS FOLLOWS

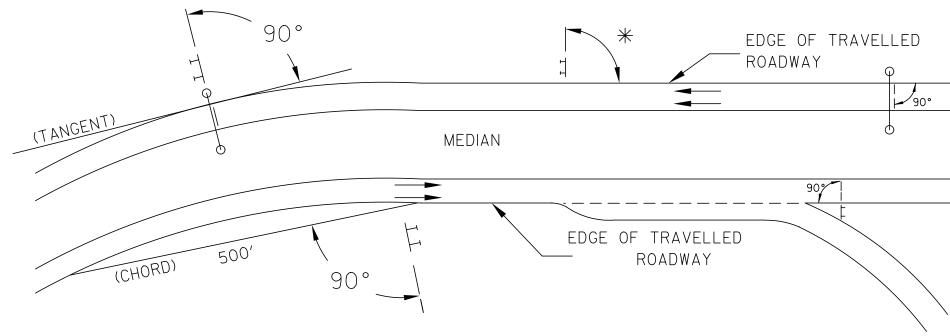
- R REGULATORY W - WARNING
- M ROUTE MARKERS AND ACCESSORIES
- D DESTINATION AND MILEAGE PANELS
- S SCHOOL

PANELS SHALL BE DESIGNATED TO AGREE WITH MARYLAND STANDARD SIGN BOOK. EACH STANDARD SIGN IS IDENTIFIED FIRST BY THE SHEET NUMBER. THEN BY THE NUMERICAL ORDER OF THE SIGN AS IT APPEARS ON THE PLAN. FOR EXAMPLE SHEET SN 2.1-101,102,103, ETC. SHEET SN 2.2-201,202,203,ETC.

PANEL LAYOUT AND ALPHABETS

I. GUIDE SIGN PANEL LAYOUTS ARE BASED ON THE A.A.S.H.T.O. MANUALS NOTED ABOVE. 2. STANDARD SIGN PANEL LAYOUTS ARE BASED ON THE MDMUTCD WITH SPECIFICATIONS DETAILED IN THE MARYLAND STATE HIGHWAY ADMINISTRATION PUBLICATION. "STANDARD SIGN BOOK", AVAILABLE ONLINE AT http://apps.roads.maryland.gov/businesswithsha/ bizstdsspecs/desmanualstdpub/publicationsonline/oots/internet_signbook.asp

ORIENTATION OF SIGN FACES



* UNDER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 93° AWAY FROM THE ROAD TO AVOID SPECULAR REFLECTION AS INDICATED IN 813.03 OF THE MARYLAND STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.

OVER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 90°

REFLECTORIZATION

BACKGROUNDS, BORDERS, TEXTS AND ALL OTHER ELEMENTS OF SIGN PANELS SHALL BE REFLECTORIZED EXCEPT WHERE NOTED. REFER TO PROJECT REQUIREMENTS FOR MORE DETAIL.

SIGN LOCATIONS

I. GUIDE SIGNS ARE LOCATED ON THE PLANS BY DIMENSION TO SURVEY STATIONS. OR WHEN NECESSARY, TO IDENTIFIABLE PHYSICAL FEATURES.

2. ALL CHANGES IN THE LOCATIONS OF SIGNS AS SHOWN ON THE PLAN SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

EXISTING UTILITIES

THE ENGINEER DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF UTILITY INFORMATION SHOWN ON THE PLAN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING FACILITIES WHICH MIGHT BE AFFECTED BY THIS WORK OR HIS OPERATION.

ROADSIDE SIGNS

I. VERTICAL ALIGNMENT

POSITION PANEL SO FACE IS PLUMB.

2. HORIZONTAL ALIGNMENT (SEE DIAGRAM ABOVE)

A) ON STRAIGHT ROADWAY SECTIONS, ANGLE OF SIGN FACE TO ROADWAY VARIES WITH DISTANCE FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - SEE DIAGRAM. B) ON THE INSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL MAKES AN ANGLE OF 90° WITH A CHORD BETWEEN A POINT ON NEAR EDGE OF PAVEMENT AT SIGN LOCATION AND A POINT ON EDGE OF PAVEMENT 500' IN ADVANCE OF SIGN.

C) ON THE OUTSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT THE SIGN LOCATION. D) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.

OVERHEAD SIGNS

I. VERTICAL ALIGNMENT

POSITION PANELS FOR ALL OVERHEAD STRUCTURES SO THAT PANEL FACE IS PLUMB.

2. OVERHEAD SIGN STRUCTURES SHALL NOT BE ERECTED WITHOUT ATTACHING LUMINAIRES. SUPPORTS. AND/OR SIGNS.

3. HORIZONTAL ALIGNMENT

A) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE NORMAL EDGE OF ROADWAY, IF ON A STRAIGHT ROADWAY SECTION.

B) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT SIGN LOCATION, IF ON A HORIZONTAL CURVE.

C) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL

EDGE OF THE MAINLINE ROADWAY.

4. VERTICAL CLEARANCE A) OVERHEAD SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 17'-9" FROM TOP OF ROADWAY TO TO THE BOTTOM OF SIGN LUMINAIRE. ALL SIGN LUMINAIRES ARE TO BE AT THE SAME ELEVATION.

B) IF THE CONTRACTOR CANNOT OBTAIN 17'-9" (SEE 3A) CLEARANCE, THEY SHALL CEASE WORK AND CONTACT THE PROJECT ENGINEER FOR FURTHER INSTRUCTIONS. THE PROJECT ENGINEER MAY CONTACT THE TRAFFIC ENGINEERING DESIGN DIVISION FOR ASSISTANCE.

C) ON ALL OVERHEAD SIGNS, THE MINIMUM CLEARANCE TO BOTTOM OF DESIGN SIGN: 20'-9".

PROJECT REQUIREMENTS

ALL NEW SIGNS ON THIS PROJECT SHALL BE FABRICATED FROM SHEETING WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER:

I. SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MDOT SHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, MOST CURRENT EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.

2. LISTED ON MDOT SHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL).

3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED FOR THE SPECIFIED SIGN CLASSIFICATIONS:

GENERAL NOTE: ALL COLORS SHALL BE RETROREFLECTIVE EXCEPT BLACK. BLACK TEXT, BORDERS, SYMBOLS OR ANY BLACK ELEMENTS OF ANY SIGN SHALL BE NON-REFLECTIVE. THIS APPLIES TO ALL MDOT SHA SIGNS AS SHOWN BELOW.

A) GUIDE, EXIT GORE, GENERAL INFORMATION, AND SERVICE SIGNS - ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II).

B) WARNING SIGNS - RETROREFLECTIVE SHEETING FOR WARNING SIGNS (FLUORESCENT YELLOW AND FLUORESCENT ORANGE) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II). REGULATORY MESSAGES WITHIN WARNING SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.

C) SCHOOL SIGNS - RETROREFLECTIVE SHEETING FOR SCHOOL SIGNS (FLUORESCENT YELLOW AND FLUORESCENT YELLOW-GREEN) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II). REGULATORY MESSAGES WITHIN SCHOOL SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.

D) REGULATORY SIGNS - FALL INTO THREE SUBCATEGORIES:

(I). "RED" REGULATORY SIGNS; (SPECIFICALLY - STOP, YIELD, DO NOT ENTER AND WRONG WAY). ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II).

(II). ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY, ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET THE REQUIREMENTS FOR ASTM TYPE IV (4).

(III). ALL OTHER REGULATORY SIGNS - ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET ASTM TYPE IV (4) INCLUDING RED ELEMENTS. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE REQUIREMENTS FOR WARNING SIGNS.

E) ROUTE MARKERS (INDEPENDENT USE AND GUIDE SIGN USE)

INDEPENDENT USE: ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET BUT NOT TO EXCEED THE REQUIREMENTS FOR ASTM TYPE IV (4).

GUIDE SIGN USE: WHEN INCORPORATED IN THE BODY OF A GUIDE SIGN, ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET THE SHEETING REQUIREMENTS OF THE GUIDE SIGNS FOR WHICH THEY ARE TO BE APPLIED; ASTM TYPE XI(II).

F) LOGOS AND / OR GRAPHICS - WITHIN SIGNS SHALL FOLLOW THE REQUIREMENTS FOR THE RESPECTIVE SIGN CLASSIFICATION UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.

G) SPECIFIC SERVICE (LOGO) SIGNING - ALL COPY, DIVIDER BORDERS, LOGOS AND ARROWS SHALL BE DEMOUNTABLE ALUMINUM OVERLAYS, .032 MINIMUM TO .063 MAXIMUM. ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II). DISTANCES ON DIRECTIONAL ARROWS WHEN SPECIFIED SHALL BE BLACK. THE OVERLAYS ARE TO BE APPLIED WITH .125 ALUMINUM POP RIVETS TO THE BODY OF THE MAIN SIGN.

H) CIVIL DEFENSE SIGNS AND OTHER SIGNS - NOT SPECIFICALLY FALLING INTO ONE OF THE CATEGORIES ABOVE, SHALL FOLLOW THE GUIDELINES FOR THE SIGN CLASSIFICATION THAT MOST CLOSELY MATCHES THE COLOR(S) OF THE PROPOSED SIGN.

4. THE FOLLOWING MINIMUM THICKNESS SHALL BE USED FOR THE APPROPRIATE WIDTH OF SHEET ALUMINUM BLANKS:

LONGEST DIMENSION MINIMUM THICKNESS

UP TO 12"	0.040"
GREATER THAN 12" TO 24"	0.063"
GREATER THAN 24" TO 36"	0.080"
GREATER THAN 36" TO 48"	0.100"
OVER 48"	0.125"

RKSK P: 410.728.2900 700 East Pratt Street, Suite 500 | Baltimore, MD 21202 Engineers | Construction Managers | Planners | Scientists

DRAWINGS SN-2.01 THRU SN-2.02 ARE TO BE APPROVED BY MDOT SHA OOTS FOR TRAFFIC CONTROL DEVICES WITHIN MD 195 AND MD 193 RIGHT OF WAY.

OOTS APPROVALS OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND TEAM LEADER 100 EDISON PARK DRIVE RECOMMENDED FOR APPROVAL GAITHERSBURG, MARYLAND ASST. DIV. CHIEF CONTACT: Chief, Transportation Planning and Design Section Date DIVISION OF TRANSPORTATION APPROVED ENGINEERING DIVISION CHIEF 240-777-7220 Chief, Division of Transportation Engineering Date DESIGN SECTION OFFICE DIRECTOR 240-777-7221 DESIGNED BY BMW DRAWN BY_BMW_ CHECKED BY_NJM_ REVISION

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES

MERRIMAC DRIVE TO PINEY BRANCH ROAD

SHEET No. 60 OF 97

SIGNING AND PAVEMENT MARKING GENERAL NOTES

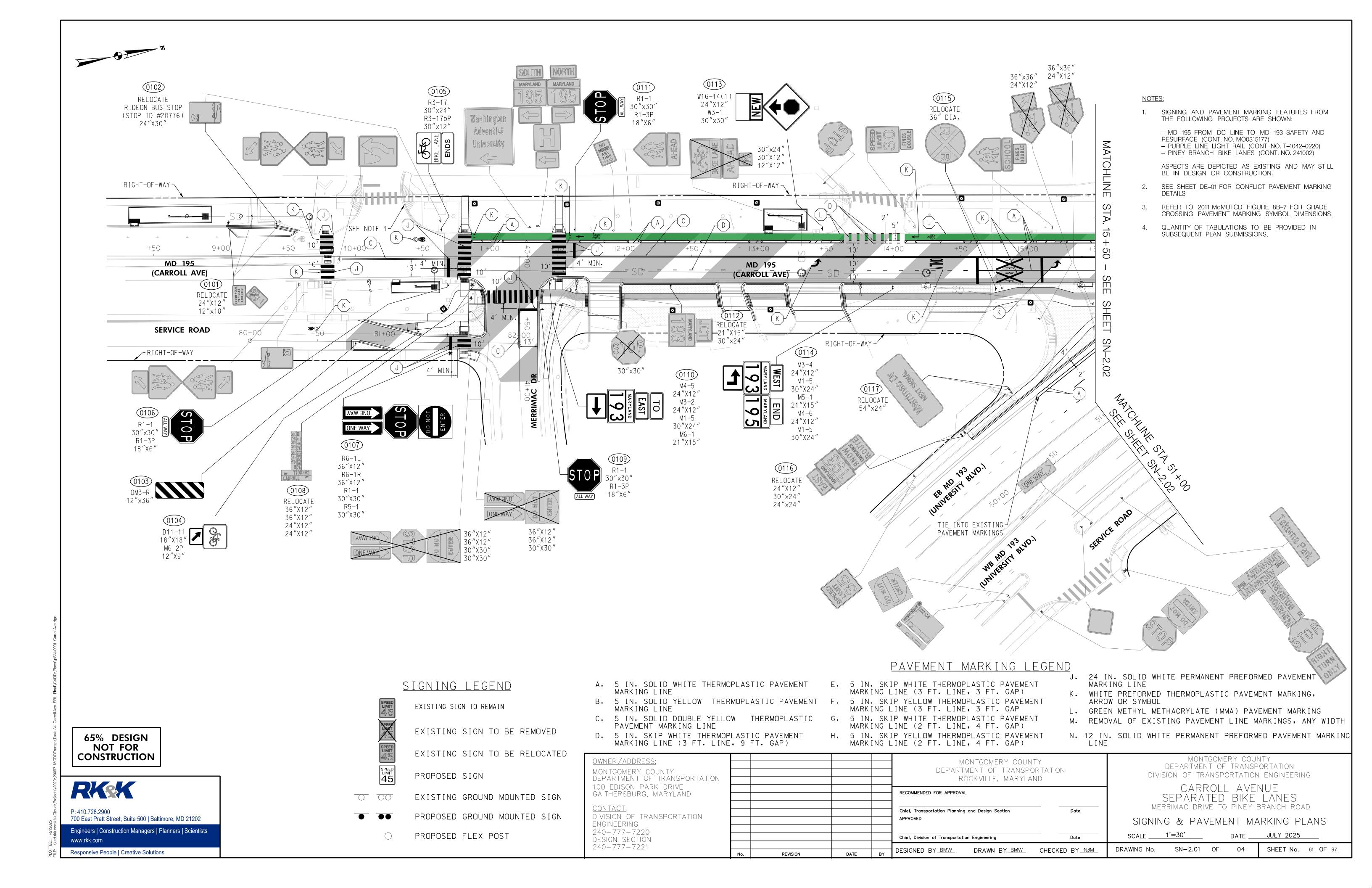
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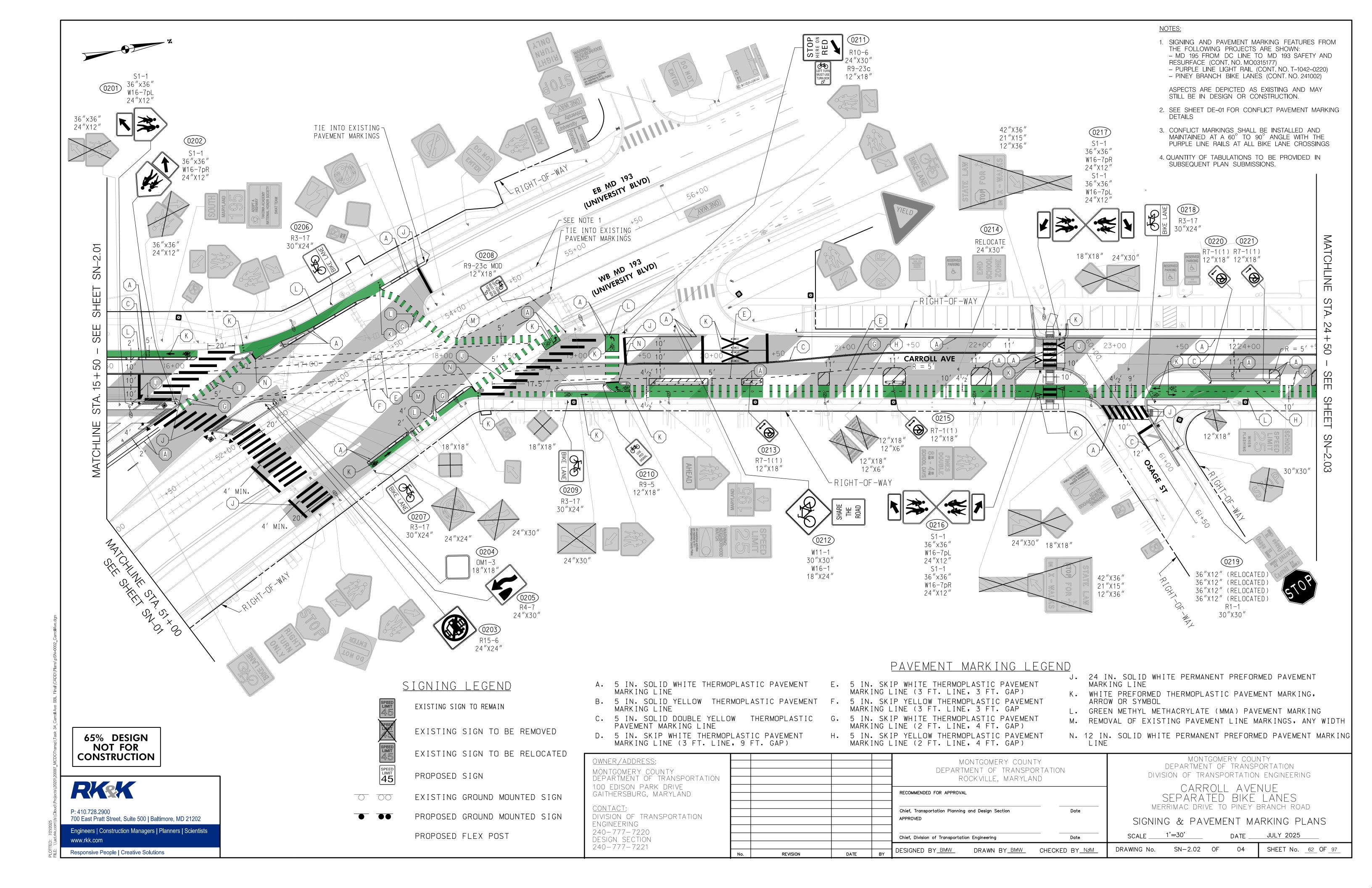
SN-1 OF

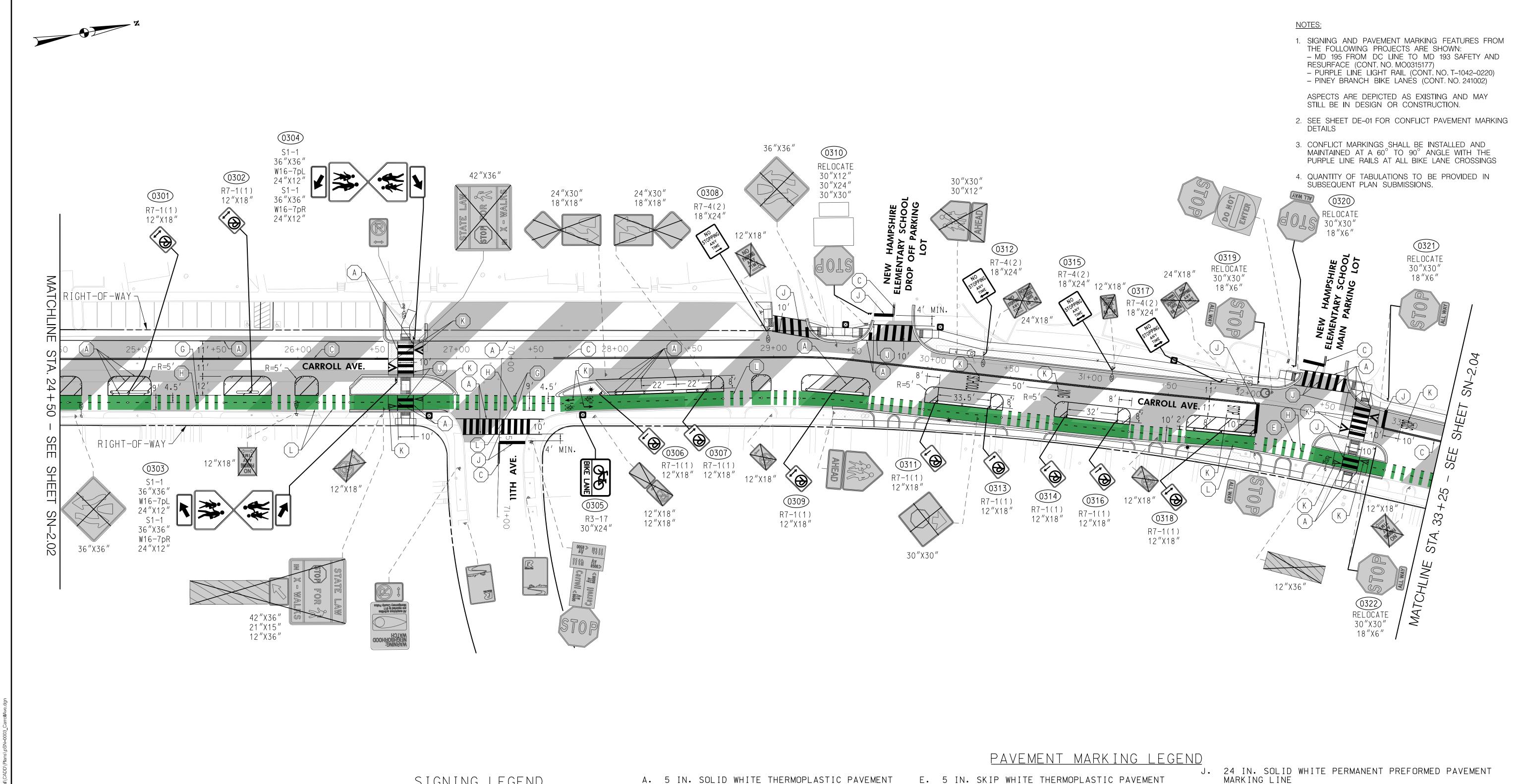
DRAWING No.

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SIGNING LEGEND

EXISTING SIGN TO REMAIN

EXISTING SIGN TO BE REMOVED

EXISTING SIGN TO BE RELOCATED

PROPOSED SIGN

EXISTING GROUND MOUNTED SIGN

PROPOSED GROUND MOUNTED SIGN

PROPOSED FLEX POST

OWNER/AD MONTGOME DEPARTME 100 EDISON GAITHERSE

PAVEMENT MARKING LINE

MARKING LINE

MARKING LINE

C. 5 IN. SOLID DOUBLE YELLOW THERMOPLASTIC

D. 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT

MARKING LINE (3 FT. LINE, 9 FT. GAP)

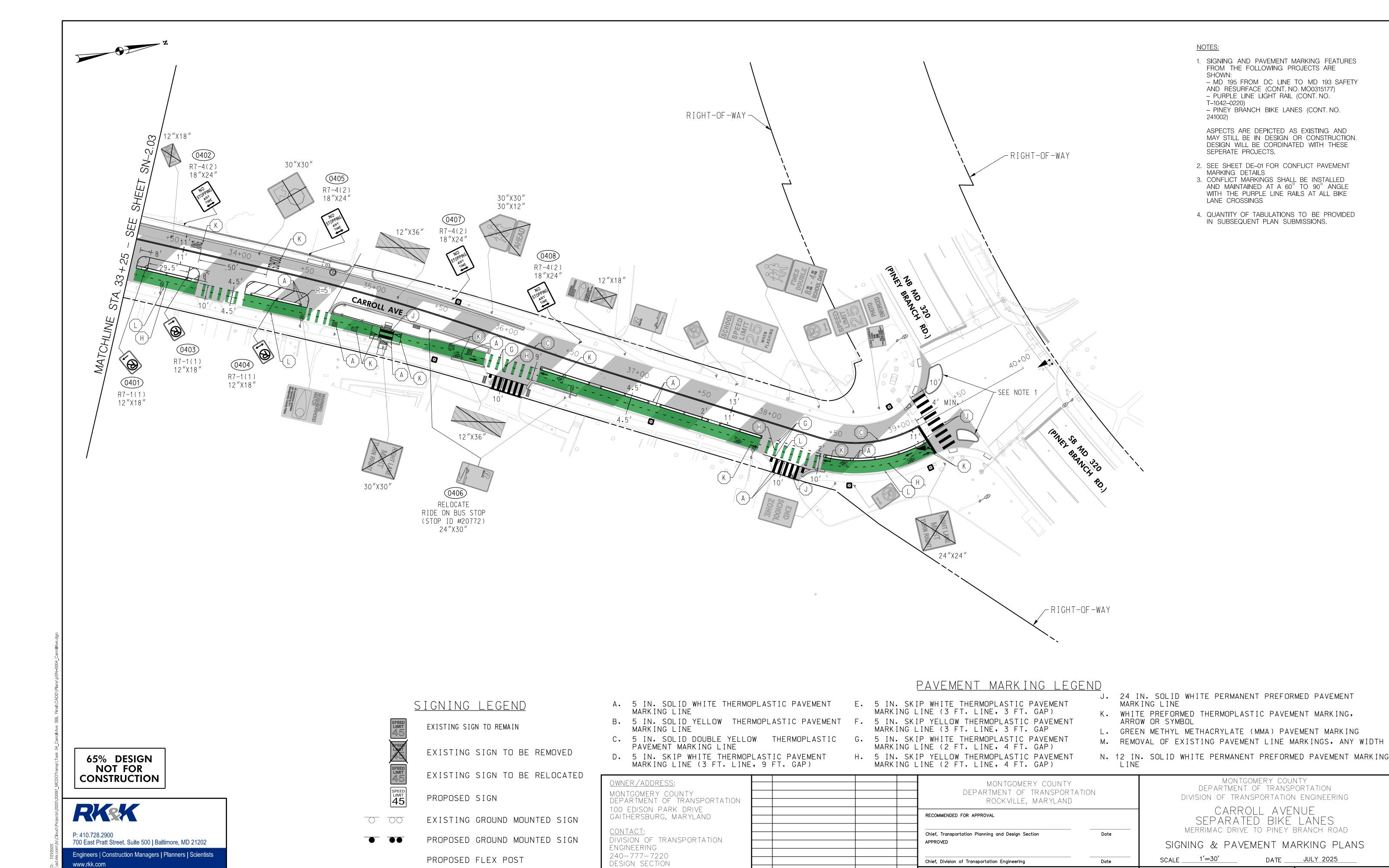
<u>CONTACT:</u> DIVISION (ENGINEERIN 240-777-DESIGN SEC 240-777-7221

5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT

- MARKING LINE (3 FT. LINE, 3 FT. GAP) B. 5 IN. SOLID YELLOW THERMOPLASTIC PAVEMENT F. 5 IN. SKIP YELLOW THERMOPLASTIC PAVEMENT
 - MARKING LINE (3 FT. LINE, 3 FT. GAP 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT
 - MARKING LINE (2 FT. LINE, 4 FT. GAP) H. 5 IN. SKIP YELLOW THERMOPLASTIC PAVEMENT MARKING LINE (2 FT. LINE, 4 FT. GAP)
- MARKING LINE
- K. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING, ARROW OR SYMBOL
- L. GREEN METHYL METHACRYLATE (MMA) PAVEMENT MARKING
- M. REMOVAL OF EXISTING PAVEMENT LINE MARKINGS, ANY WIDTH

N. 12 IN. SOLID WHITE PERMANENT PREFORMED PAVEMENT MARKING LINE

7-7221	No.	REVISION	DATE	BY	DESIGNED BY BMW DRAWN BY BMW CH	IECKED BY <u>NJM</u>	DRAWING No. SN-2.03 OF 04 SHEET No. $\underline{63}$ OF $\underline{97}$
SECTION					Chief, Division of Transportation Engineering	Date	SCALE 1'=30' DATE JULY 2025
RING 7-7220					APPROVED		SIGNING & PAVEMENT MARKING PLANS
<u>T:</u> of transportation					Chief, Transportation Planning and Design Section	 Date	MERRIMAC DRIVE TO PINEY BRANCH ROAD
SON PARK DRIVE SBURG, MARYLAND					RECOMMENDED FOR APPROVAL		CARROLL AVENUE SEPARATED BIKE LANES
<u>address:</u> Mery county Ment of transportation					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTA ROCKVILLE, MARYLAND	ATION	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING



240-777-7221

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SHEET No. 64 OF 97

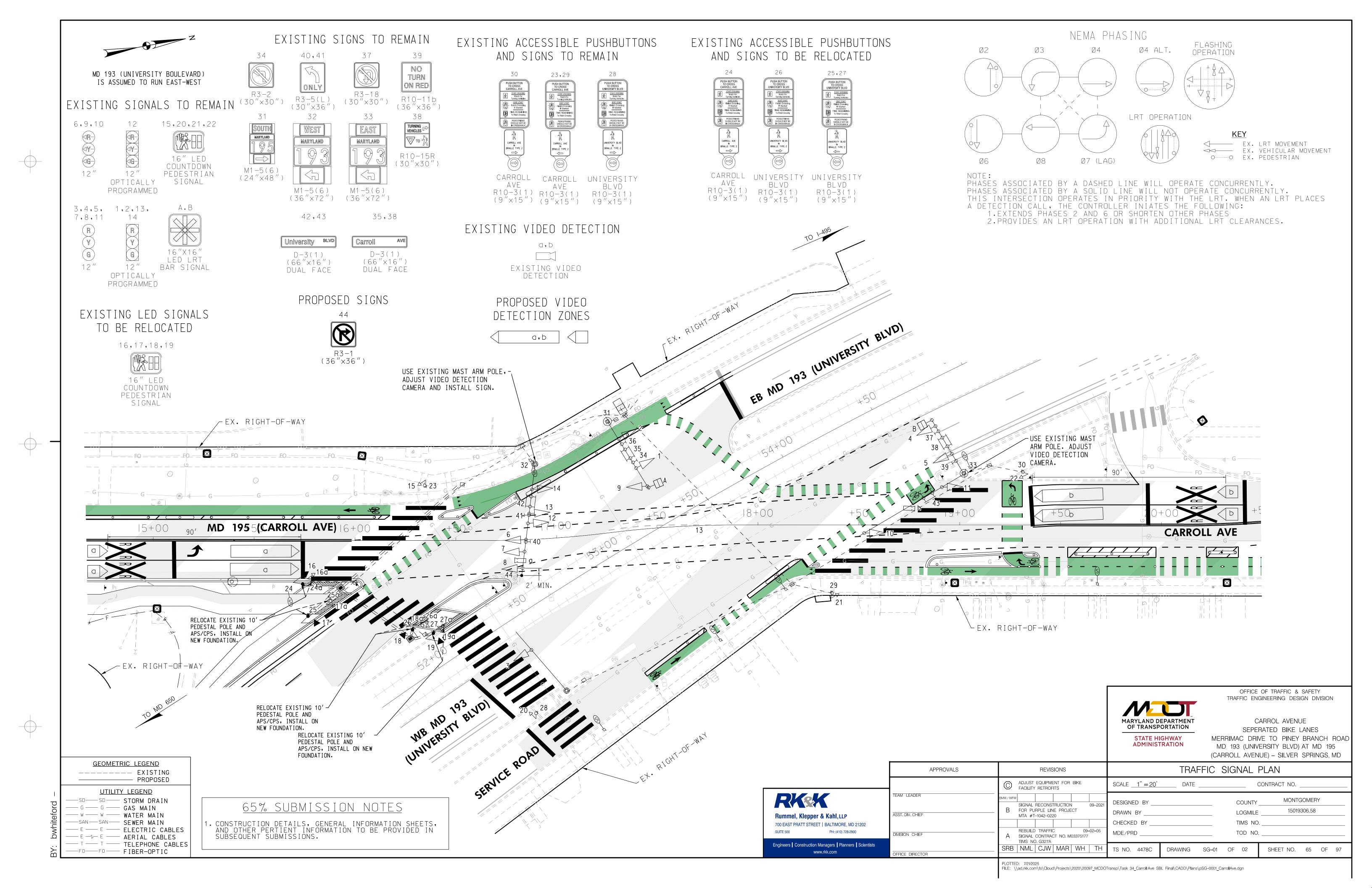
SN-2.04 OF

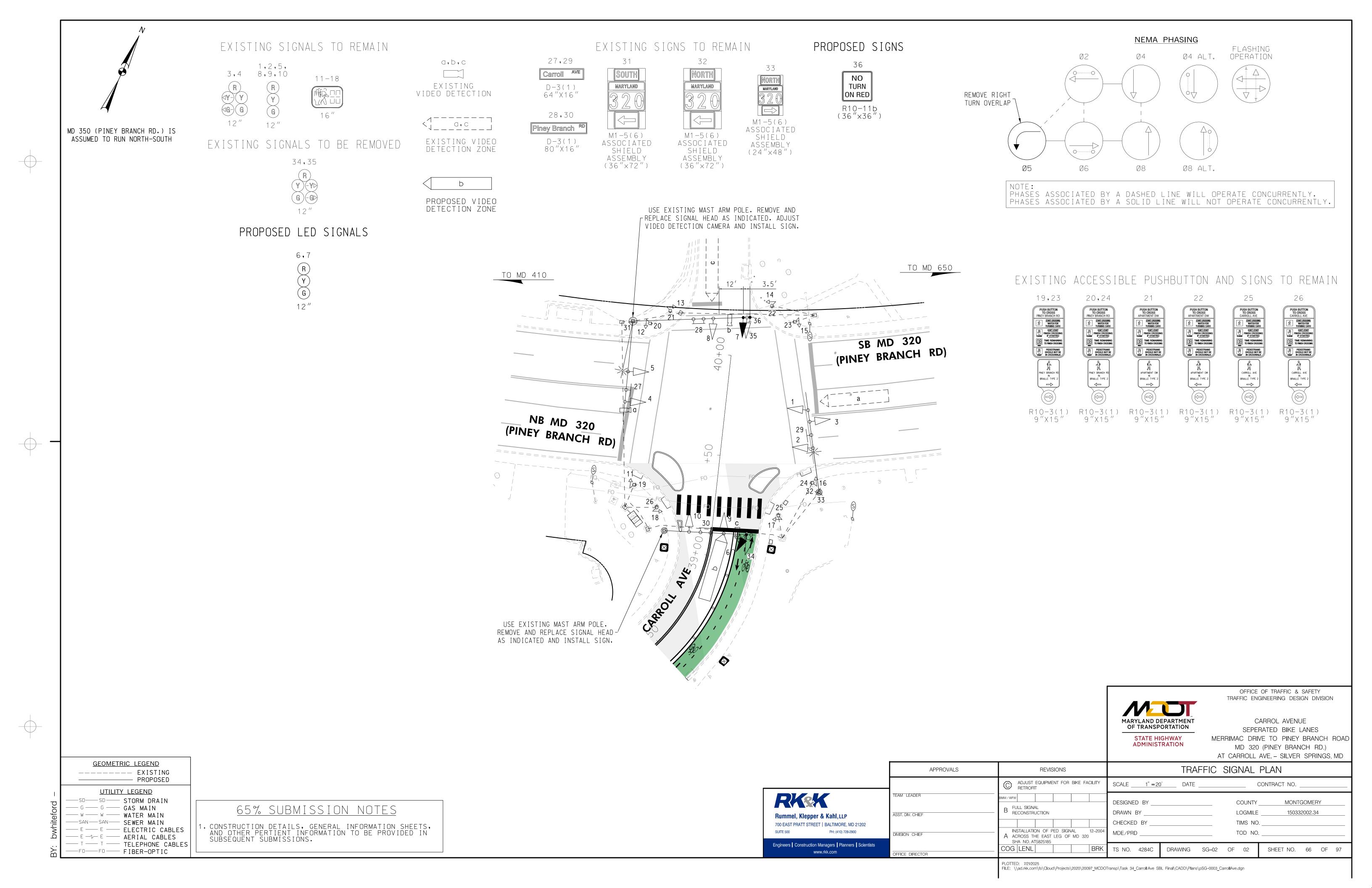
DRAWING No.

DRAWN BY BMW CHECKED BY NJM

DESIGNED BY BMW

04

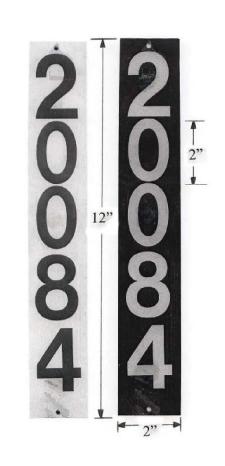




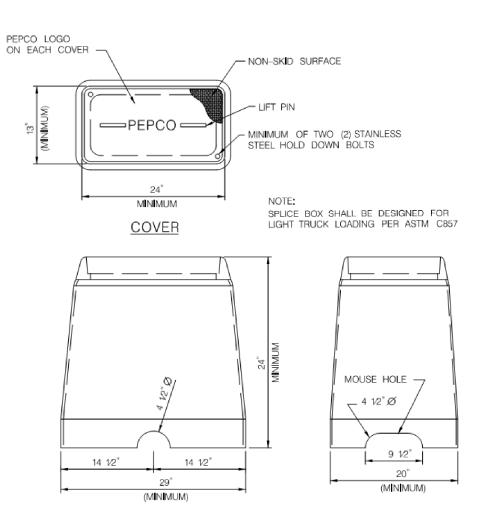
LIGHTING GENERAL NOTES

- THE PROPOSED ROADWAY LIGHTING SHALL BE SINGLE PHASE 120/240V WITH AN OPERATING VOLTAGE OF 240V.
- ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THIS PLAN ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE PROPOSED EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- 3. THE CONTRACTOR SHALL ARRANGE A MEETING WITH PEPCO, THE PROJECT ENGINEER, AND THE MCDOT TO ENSURE THAT POWER IS AVAILABLE WHEN REQUIRED.
- 4. THE PROPOSED LIGHT FIXTURES SHALL BE COLONIAL POST TOP 33-WATT LED LUMINAIRES WITH TYPE III DISTRIBUTION, ALL LED FIXTURE CHOICES MUST BE APPROVED BY MCDOI AND PEPCO.
- THE CONTRACTOR SHALL INSTALL THREE RUNS OF NO. 10 AWG CABLE BETWEEN THE POST-TOP LUMINAIRE AND THE ADJACENT PEPCO SPLICE BOX. ONE RUN SHALL INCLUDE GREEN INSULATION AND SHALL BE CONNECTED TO THE GROUNDING LUG OR GROUND ROD TO PROVIDE FOR GROUNDING OF THE LUMINAIRE, 3 FT OF EACH CABLE SHALL BE COILED IN THE SPLICE BOX FOR CONNECTION BY PEPCO.
- 6. ALL PROPOSED CABLE ENERGIZING PROPOSED LIGHTING STRUCTURES SHALL BE NEW.
- 7. THE LIGHT POLES ALONG MD 195 WILL BE WIRED, ENERGIZED, AND MAINTAINED BY PEPCO FOR MCDOT.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN CASE OF DAMAGE TO AN EXISTING FACILITY.
- LIGHTING STRUCTURES SHALL HAVE A MINIMUM LATERAL OFFSET OF 2 FEET FROM THE FACE OF CURB OR EDGE OF CYCLE TRACK.
- 10. ALL CONNECTIONS BETWEEN GROUND RODS AND GROUND CABLE SHALL BE BY EXOTHERMIC WELD.
- 11. ALL PROPOSED LIGHT STRUCTURE LOCATIONS SHALL BE MARKED IN THE FIELD AND TEST PITS COMPLETED PRIOR TO INSTALLATION. THE CONTRACTOR MUST VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND FINAL GRADE ELEVATIONS PRIOR TO INSTALLATION OF THE LIGHTING EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THE STAKE OUT OF THE LIGHT POLE WITH PEPCO AND MCDOT. THE CONTRACTOR SHALL MAINTAIN APPROPRIATE CLEARANCES FROM ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES.
- 12. ALL HANDBOXES, CONDUITS UNDER PAVEMENT AND LIGHTING STRUCTURES SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORMED.
- 13. THE CONTRACTOR SHALL CAP AND ABANDON ALL EXISTING CONDUITS AND REMOVE ALL EXISTING CABLES THAT ARE NO LONGER IN USE.
- 14. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF LIGHT POLES, SPLICE BOXES AND CONDUITS WITH THE INSTALLATION OF PROPOSED DRAINAGE STRUCTURES AND STORM WATER MANAGEMENT FACILITIES. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- 15. RIGHT OF WAY SHOWN ON THE PLANS IS APPROXIMATE AND BASED ON THE BEST AVAILABLE INFORMATION.
- 16. CLEARING AND GRUBBING REQUIRED FOR INSTALLATION OF LIGHTING STRUCTURES, SPLICE BOXES CONDUITS, ETC. WILL NOT BE MEASURED AND THE COST WILL BE TO THE PERTINENT BID ITEM.
- 17. ALL TRENCHING MUST BE BACKFILLED AND RESTORED TO ITS ORIGINAL CONDITION ON THE SAME WORKING DAY ON WHICH IT WAS OPENED. AREAS WHICH ARE NOT RESEEDED, MULCHED OR SODDED MUST BE COVERED TO PREVENT EROSION.
- 18. ALL SOIL REMOVED FOR HANDBOXES, LIGHT POLES, ETC. MUST BE COVERED TO PREVENT EROSION. SOIL NOT USED FOR BACKFILL MUST BE DISPOSED OF TO THE ENGINEER'S SATISFACTION ON THE SAME WORKING DAY THE BACKFILL IS COMPLETED.
- 19. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR POLES, CONDUITS, ETC. BY HAND, HAND DIGGING FOR INSTALLATION OR REMOVAL OF EQUIPMENT SHALL BE INCIDENTAL TO THE PERTINENT ITEMS IN THE EQUIPMENT LIST. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR HAND DIGGING.
- 20. ALL LIGHTING EQUIPMENT AND MATERIALS SHALL BE SUBMITTED TO MCDOT FOR APPROVAL PRIOR TO BEING INSTALLED. SEE SPECIAL PROVISIONS FOR LIGHT SPECIFICATIONS.
- 21. ALL POLES SHALL BE INSTALLED WITH POLE ID TAGS, AS DETAILED ON THIS SHEET.
- 22. PEPCO SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL CABLES (EXCEPT PER GENERAL NOTE 5), SPLICE BOXES, AND GROUND RODS. EMPTY CONDUITS WITH PULL STRINGS SHALL BE INSTALLED BY THE CONTRACTOR FOR USE BY PEPCO.
- 23. THE CONTRACTOR SHALL COORDINATE THE WIRING AND ENERGIZING OF THE PROPOSED LIGHTING SYSTEM WITH PEPCO. UTILITY COORDINATION SHALL BE INCIDENTAL TO INSTALLATION OF THE LIGHT POLES AND LUMINAIRES.
- 24. CONTACT MR. GEORGE DOWNIE (301-549-4347 OR GFDOWNIE@PEPCO.COM) TO OBTAIN WRITTEN APPROVAL OF THE LIGHTING FACILITIES PRIOR TO THE INSTALLATION.

- 25. FINAL LIGHT POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER, ALL EFFORTS SHALL BE MADE TO AVOID CONFLICTS WITH OVERHEAD TREE BRANCHES. NO MAJOR TREE BRANCHES SHALL BE REMOVED WITHOUT THE ENGINEER'S APPROVAL.
- 26. SPLICE BOXES SHALL BE PLACED SUCH THAT THE LONG EDGE IS PARALLEL TO THE SHARED USE PATH.
- 27. ALL SWEEP BENDS ARE TO BE A MINIMUM OF 2 FT. IN RADIUS.
- 28. 1/4 IN. NYLON PULL- LINE IS TO BE INSTALLED IN EACH CONDUIT DUCT.
- 29. CONTRACTOR SHALL INSTALL TRACEABLE MARKING TAPE 12 IN. ABOVE EACH CONDUIT RUN.
- 30. MAXIMUM BENDS PER CONDUIT RUN SHALL BE 180 DEGREES.
- 31. INSTALLATION OF ALL UNDERGROUND LIGHTING FACILITIES ARE ALSO SUBJECT TO PEPCO INSPECTION AND WRITTEN APPROVAL BEFORE CONCEALMENT, FAILURE TO OBTAIN SUCH INSPECTION WILL RESULT IN THE COVERING OF FACILITIES AT THE CONTRACTOR'S EXPENSE, CALL 301-670-8808 OR 301-670-8828 BETWEEN 7:00 AM AND 9:00 AM OR 3:00 PM AND 4:00 PM, TWO (2) WORKING DAYS IN ADVANCE TO ARRANGE INSPECTION.
- 32. THE CONTRACTOR SHALL CONTACT PEPCO SIX (6) WEEKS PRIOR TO STARTING LIGHTING WORK TO COORDINATE POWER SOURCE LOCATIONS. THE CONTRACTOR SHALL COORDINATE WITH MCDOT TO ENSURE SERVICE APPLICATIONS ARE SUBMITTED IN A TIMELY MANNER. MCDOT WILL BE RESPONSIBLE FOR PREPARING AND SUBMITTING LIGHTING SERVICE APPLICATIONS TO PEPCO AND WILL PROVIDE THE CONTRACTOR WITH THE WORK ORDER NUMBER(S) FOR REFERENCE IN COORDINATING WITH PEPCO.
- 33. LIGHT POLES INSTALLED ON SLOPES MUST HAVE A MINIMUM 4' EMBEDMENT TO THE LOW SIDE OF THE SLOPE.



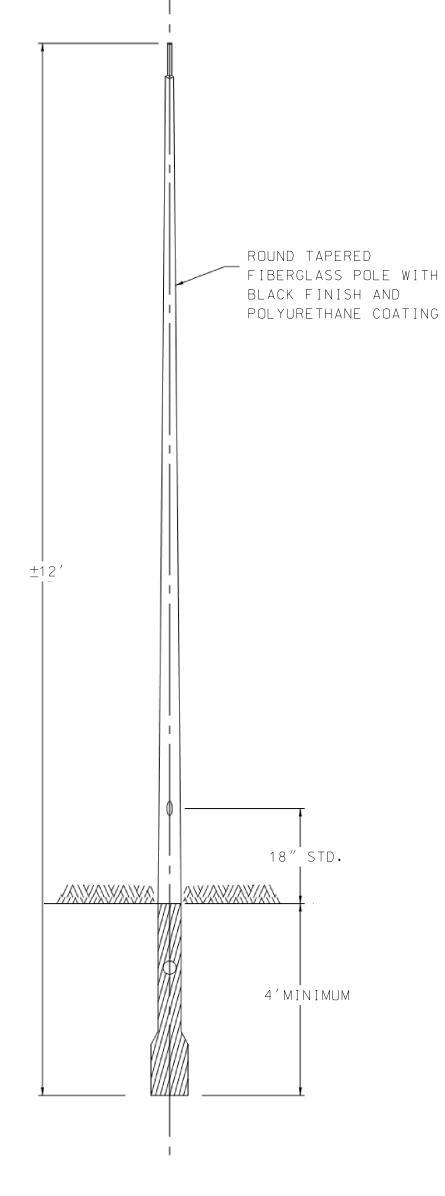
POLE TAG DETAIL



PEPCO SPLICE BOX DETAIL

LIGHTING ITEM LIST

CATEGORY CODE	DESCRIPTION	UNIT	LT-01	LT-02	LT-03	LT-04	QUANTITY
800000	FURNISH AND INSTALL 33W COLONIAL POST TOP LUMINAIRE AND DIRECT BURY FIBERGLASS POLE	EA	10	8	5	6	29
800000	REPLACE EXISTING UTILITY POLE-MOUNTED LUMINAIRE WITH 90W COBRAHEAD LUMINAIRE	EA	3	11	7	7	28

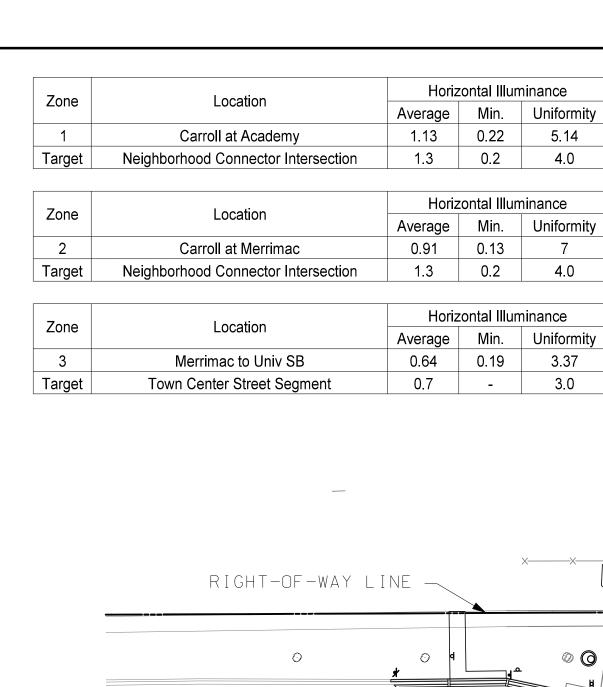


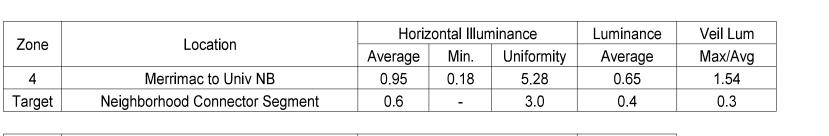
DIRECT BURIAL FIBERGLASS POLE

RKSK
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Engineers Construction Managers Planners Scientists www.rkk.com

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OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORT ROCKVILLE, MARYLAND	TATION	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING					
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND CONTACT:					RECOMMENDED FOR APPROVAL		CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD					
DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220					Chief, Transportation Planning and Design Section APPROVED	Date	LIGHTING GENERAL NOTES					
DESIGN SECTION					Chief, Division of Transportation Engineering	Date	SCALE NONE DATE JULY 2025					
240-777-7221	No.	REVISION	DATE	BY	DESIGNED BY NJM DRAWN BY NJM C	CHECKED BY_WFW_	DRAWING No. LT-00 OF 01 SHEET No. 67 OF 97					





Zone	Location	Horiz	Luminance		
	Location	Average	Min.	Uniformity	Average
5	Merrimac to Univ SB Bike	0.59	0.24	2.46	0.39
Target	Town Center Street Segment	0.7	-	3.0	0.6

Zone	Horizontal Illuminance Vertical Illuminance	luminance	Luminance				
Zone	Location	Average	Min.	Uniformity	NB Avg	SB Avg	Average
6	Merrimac to Univ SB SW	0.94	0.12	7.83	0.96	0.83	1.11
Target	Town Center Street Active Zone	0.9	0.2	3.0	1.0	1.0	2.0

NOTES:

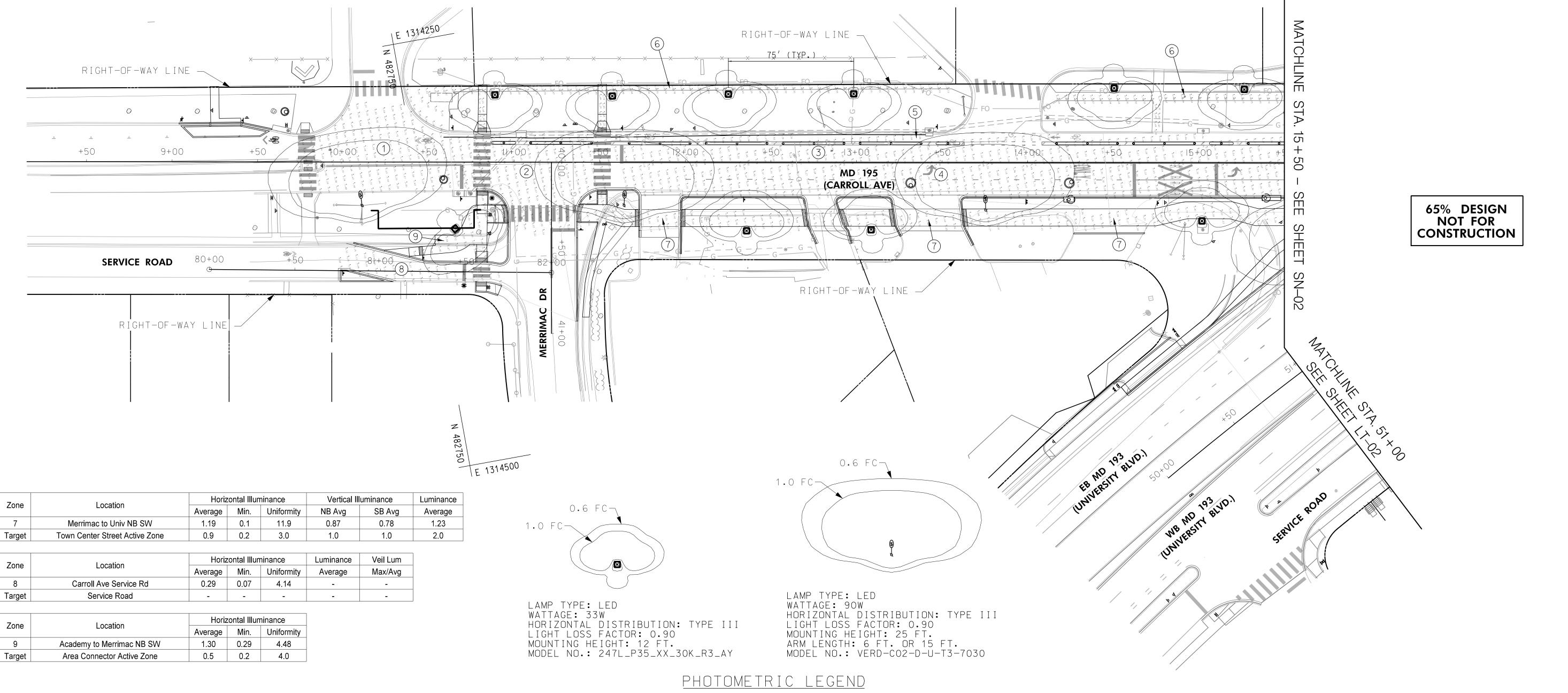
E 1314250 |

NGVD 29

- 1. HORIZONTAL ILLUMINANCE AND VERTICAL ILLUMINANCE ARE MEASURED IN FOOTCANDLES (FC).
- 2. LUMINANCE IS MEASURED IN CANDELA PER SQUARE METER (CD/M²).
- 3. TO SATISFY THE THE TARGET CRITERIA:

THE AVERAGE ILLUMINANCE AND AVERAGE LUMINANCE SHALL MEET OR EXCEED THE TARGET CRITERIA

THE UNIFORMITY AND VEILING LUMINANCE SHALL BE LESS THAN THE TARGET CRITERIA



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LEGEND

12' DIRECT BURIAL FIBERGLASS POLE WITH 33W LED COLONIAL POST TOP LUMINAIRE

Veil Lum

Max/Avg

0.47

0.3

Luminance

Average

0.43

0.6

© EXISTING UTILITY POLE-MOUNTED LUMINAIRE TO BE REPLACED WITH 90W LUMINAIRE (ARM LENGTH VARIES)

OWNER/ADDRESS:	
MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE	
GAITHERSBURG, MARYLAND	
CONTACT	
<u>CONTACT:</u>	
DIVISION OF TRANSPORTATION	
ENGINEERING	\vdash

240-777-7220

DESIGN SECTION

240-777-7221

				MONTGOMERY COUNT DEPARTMENT OF TRANSPO ROCKVILLE, MARYLAN	RTATION	DIVIS
				RECOMMENDED FOR APPROVAL		
				Chief, Transportation Planning and Design Section APPROVED	Date	MEF
				Chief, Division of Transportation Engineering		SCALE
No.	REVISION	DATE	RY	DESIGNED BY NJM DRAWN BY NJM	CHECKED BY_WFW_	DRAWING No.

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

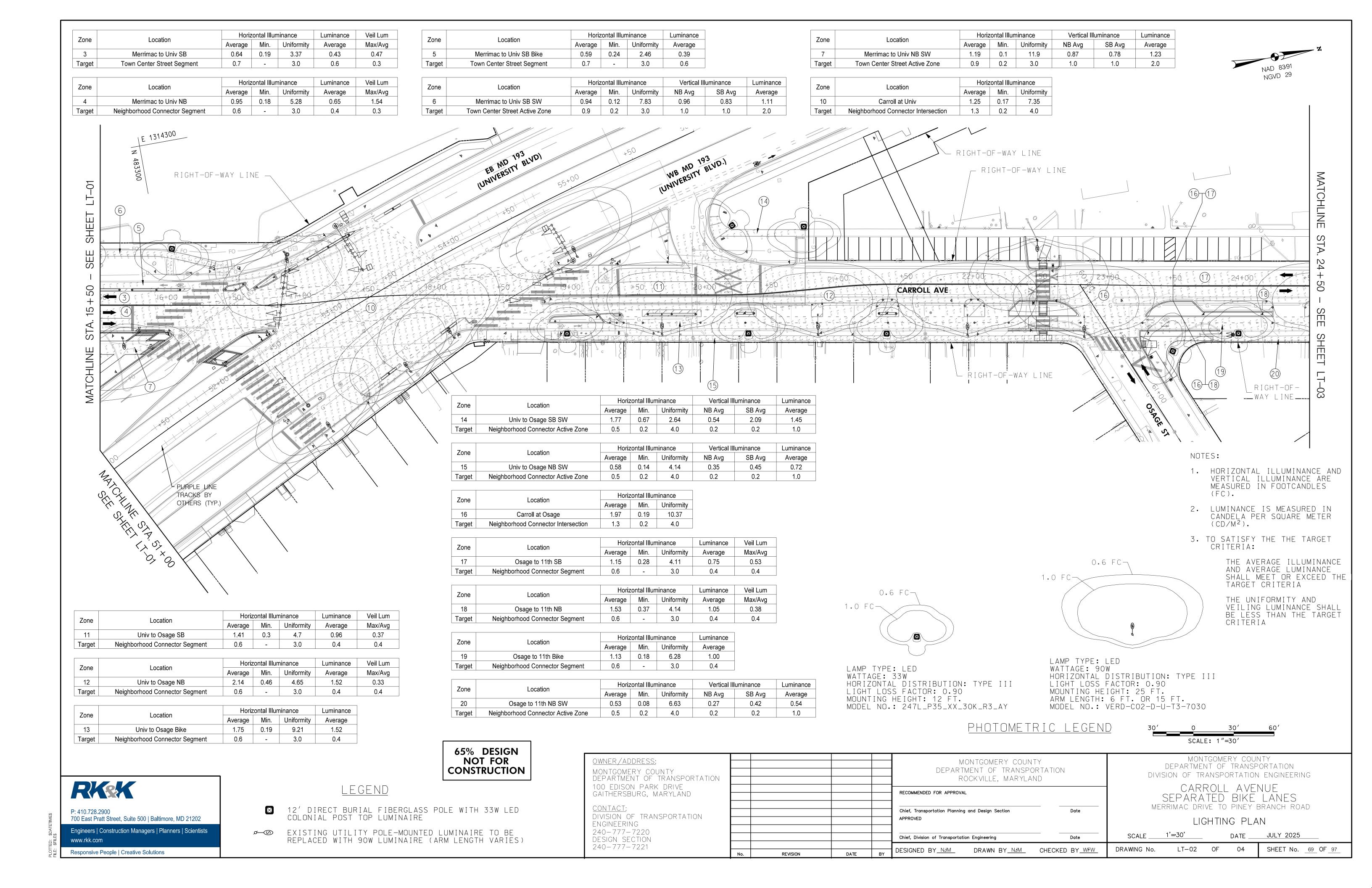
CARROLL AVENUE
SEPARATED BIKE LANES

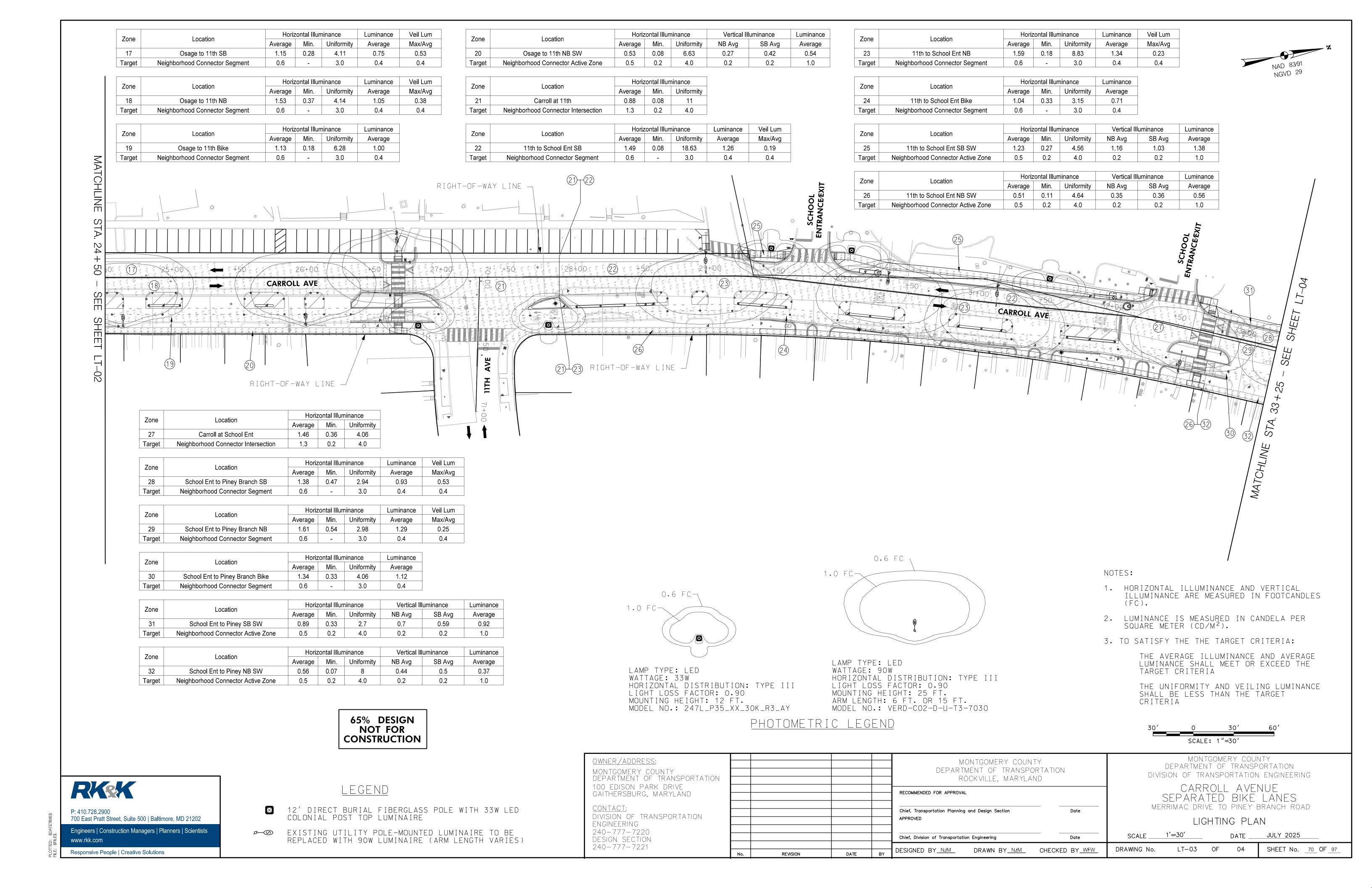
SEPARATED BIKE LANES
MERRIMAC DRIVE TO PINEY BRANCH ROAD

LIGHTING PLAN

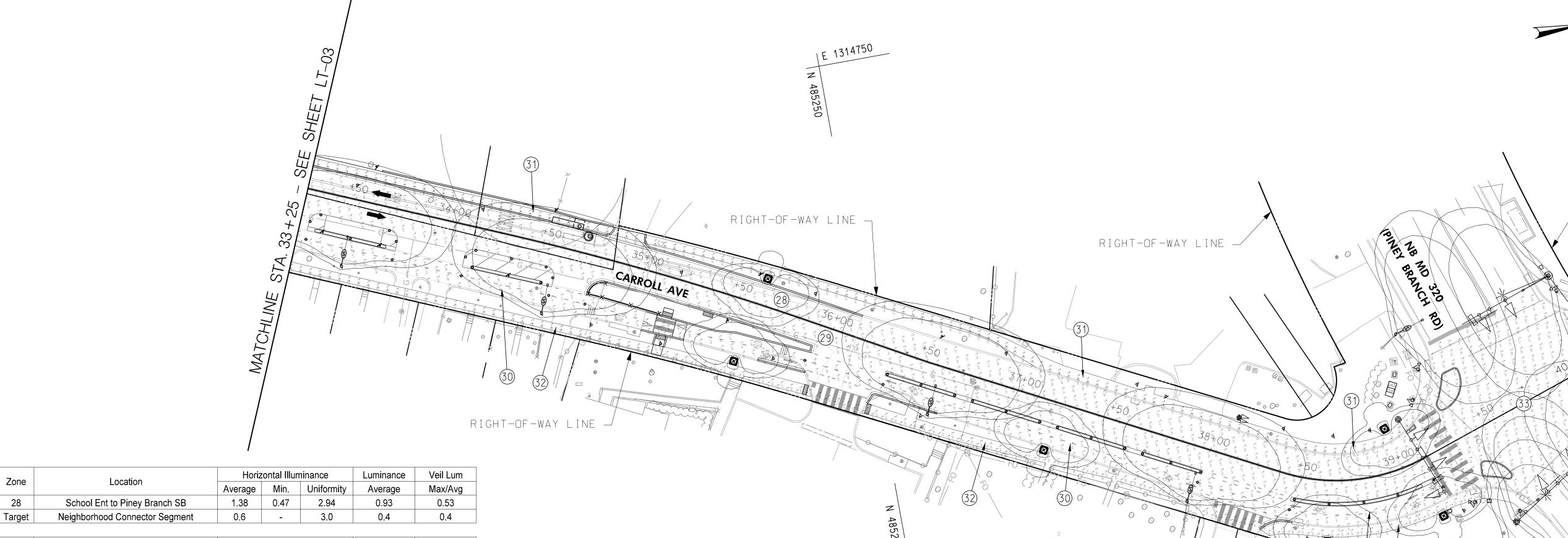
SCALE ____1'=30' DATE ____JULY 2025

AWING No. LT-01 OF 04 SHEET No. 68 OF 97









Zone	Location	Horiz	ontal Illun	ninance	Luminance	Veil Lum
	Location	Average	Min.	Uniformity	Average	Max/Avg
29	School Ent to Piney Branch NB	1.61	0.54	2.98	1.29	0.25
Target	Neighborhood Connector Segment	0.6	-	3.0	0.4	0.4

Zoi	Zono	Location	Horiz	Luminance		
	Zune	Location	Average	Min.	Uniformity	Average
	30	School Ent to Piney Branch Bike	1.34	0.33	4.06	1.12
7	Target	Neighborhood Connector Segment	0.6	-	3.0	0.4

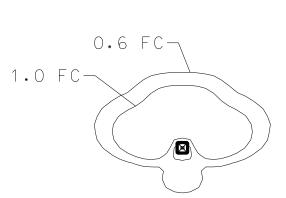
Location

School Ent to Piney Branch SB

	Zana	Location	Horizontal Illuminance			Vertical II	Luminance	
	Zone	Location	Average	Min.	Uniformity	NB Avg	SB Avg	Average
	31	School Ent to Piney SB SW		0.33	2.7	0.7	0.59	0.92
	Target	Neighborhood Connector Active Zone	0.5	0.2	4.0	0.2	0.2	1.0

Zone	Location	Horiz	ontal Illun	ninance	Vertical III	Luminance	
		Average	Min.	Uniformity	NB Avg	SB Avg	Average
32	School Ent to Piney NB SW	0.56	0.07	8	0.44	0.5	0.37
Target	Neighborhood Connector Active Zone	0.5	0.2	4.0	0.2	0.2	1.0

Zono	e Location	Horizontal Illuminance			
Zone	Location	Average	Min.	Uniformity	
33	Carroll at Piney Branch	2.22	0.1	22.2	
Target	Boulevard Intersection	1.3	0.1	3.0	



LAMP TYPE: LED WATTAGE: 33W HORIZONTAL DISTRIBUTION: TYPE III LIGHT LOSS FACTOR: 0.90 MOUNTING HEIGHT: 12 FT. MODEL NO.: 247L_P35_XX_30K_R3_AY

LAMP TYPE: LED WATTAGE: 90W HORIZONTAL DISTRIBUTION: TYPE III LIGHT LOSS FACTOR: 0.90
MOUNTING HEIGHT: 25 FT.
ARM LENGTH: 6 FT. OR 15 FT. MODEL NO.: VERD-C02-D-U-T3-7030

0.6 FC-

1.0 FC—

PHOTOMETRIC LEGEND



NOTES:

RIGHT-OF-WAY LINE

2. LUMINANCE IS MEASURED IN CANDELA PER SQUARE METER (CD/M²).

3. TO SATISFY THE THE TARGET CRITERIA:

THE AVERAGE ILLUMINANCE AND AVERAGE LUMINANCE SHALL MEET OR EXCEED THE TARGET CRITERIA

THE UNIFORMITY AND VEILING LUMINANCE SHALL BE LESS THAN THE TARGET CRITERIA

SCALE: 1"=30'

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Zone

28

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LEGEND

12' DIRECT BURIAL FIBERGLASS POLE WITH 33W LED COLONIAL POST TOP LUMINAIRE

EXISTING UTILITY POLE-MOUNTED LUMINAIRE TO BE REPLACED WITH 90W LUMINAIRE (ARM LENGTH VARIES)

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND		
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND					RECOMMENDED FOR APPROVAL		
CONTACT: DIVISION OF TRANSPORTATION ENGINEERING					Chief, Transportation Planning and Design Section Date APPROVED		
240-777-7220 DESIGN SECTION					Chief, Division of Transportation Engineering Date		
240-777-7221	No	PEVISION	DATE	BV	DESIGNED BY NJM DRAWN BY NJM CHECKED BY WFW	DR	

SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

CARROLL AVENUE

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING

LIGHTING PLAN SCALE ____1'⇒30'

DATE _____JULY 2025 SHEET No. 71 OF 97 LT-04 OF DRAWING No.





- 1. SEE TP-05 AND TP-06 FOR TREE INVENTORY TABLE, ROW TREE IMPACT TABLE, PLANTING SCHEDULE, DETAILS, AND FOREST CONSERVATION SEQUENCE OF
- 2. TREE PROTECTION FENCE IS SHOWN OUTSIDE OF THE LOD FOR GRAPHICAL PURPOSES ONLY.
- 3. WHERE LOD INTERFERES WITH CRZ, ROOT PRUNE ALONG LOD OR EDGE OF EXCAVATION AS DIRECTED BY MARYLAND LICENSED TREE EXPERT.

35% DESIGN NOT FOR **CONSTRUCTION**



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LEGEND

T-103 🕥 SIGNIFICANT TREE (24–29" DBH) WITH CRITICAL ROOT ZONE SPECIMEN TREE (>30" DBH) WITH

⊢ — c — · LIMIT OF CUT ⊢ — F — ¬ LIMIT OF FILL

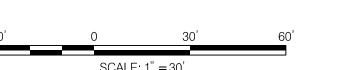
TREE CANOPY / HEDGEROW BOUNDARY

CONCRETE SIDEWALK TO BE DEMOLISHED PAVEMENT ASPHALT

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND

240-777-7221

<u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION



DRAWN BY DEA CHECKED BY MH

Date

RECOMMENDED FOR APPROVAL

DESIGNED BY SJF

APPROVED

Chief, Transportation Planning and Design Section

Chief, Division of Transportation Engineering

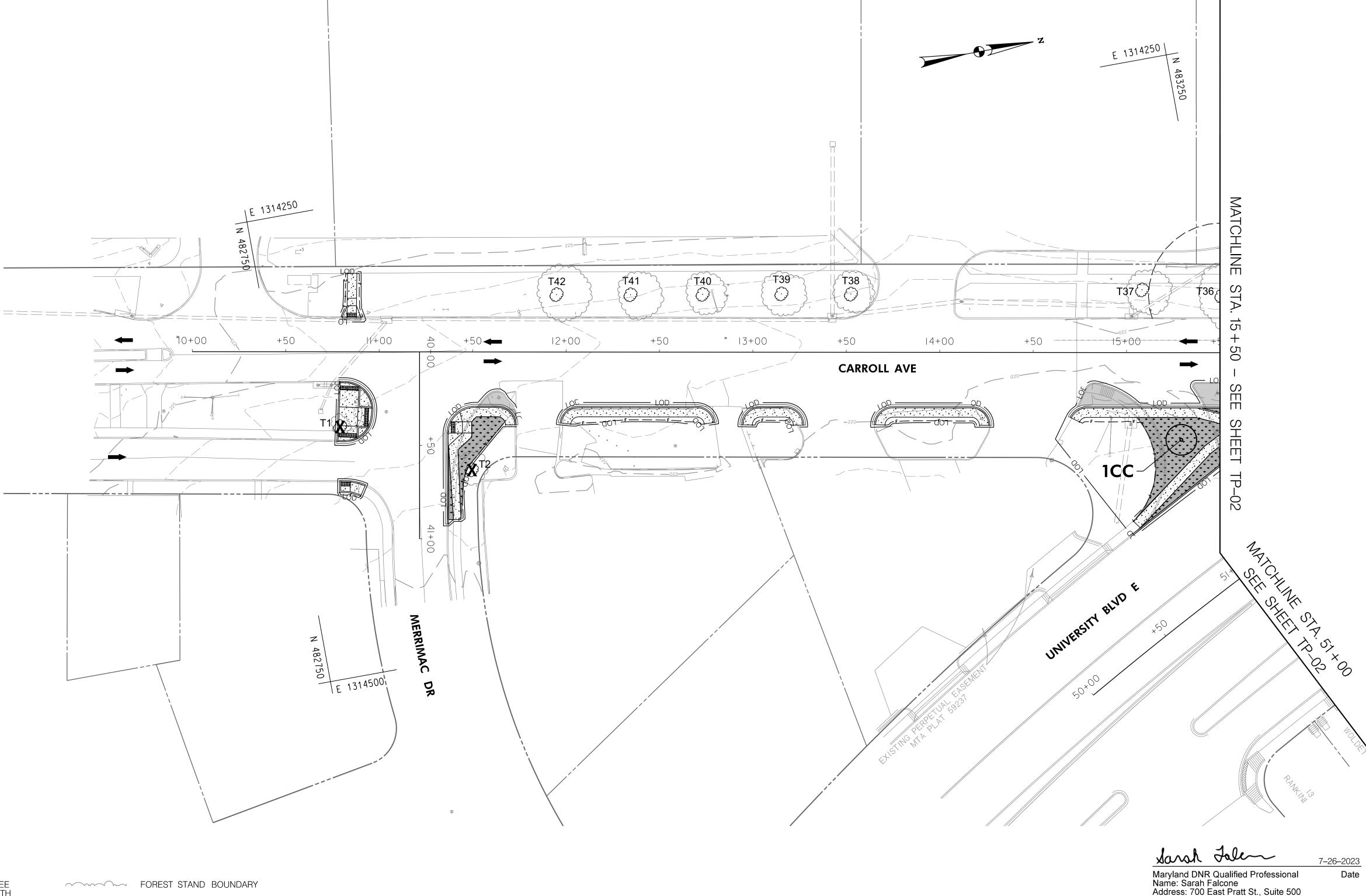
Maryland DNR Qualified Professional Name: Sarah Falcone Address: 700 East Pratt St., Suite 500 Baltimore, MD 21202 Phone: 410-462-9483 sfalcone@rkk.com

MONTGOMERY COUNTY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING ROCKVILLE, MARYLAND

CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TREE SAVE PLAN

1"=30' DATE ____ JULY 2025 SCALE _ SHEET No. 72 OF 97 TP-01 OF DRAWING NO.



T-244 💮

TREE TO BE REMOVED PROPOSED TREE

INDIVIDUAL TREES

(6–23" DBH)

CRITICAL ROOT ZONE

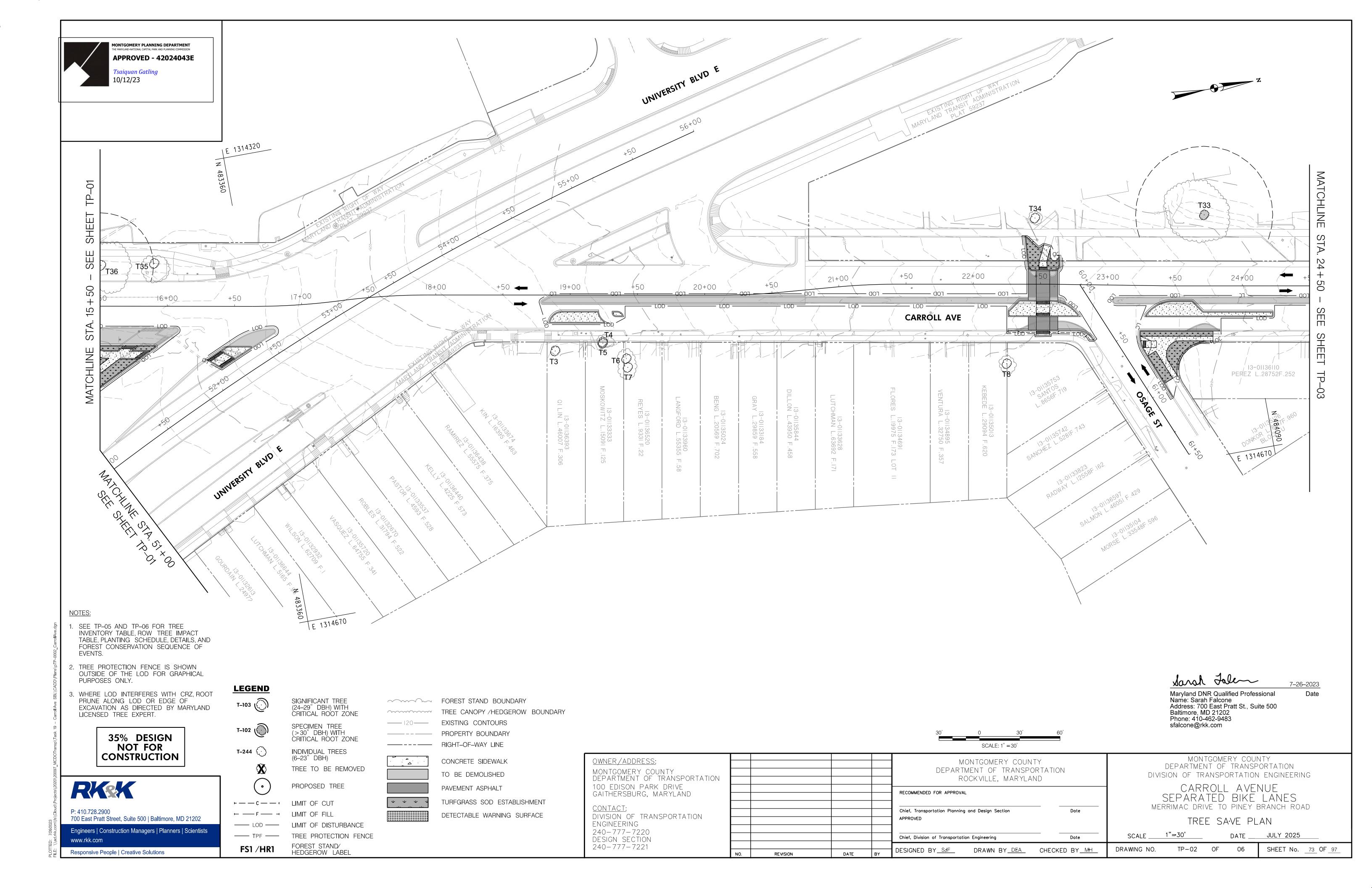
—— 120—— EXISTING CONTOURS ----- PROPERTY BOUNDARY ---- RIGHT-OF-WAY LINE

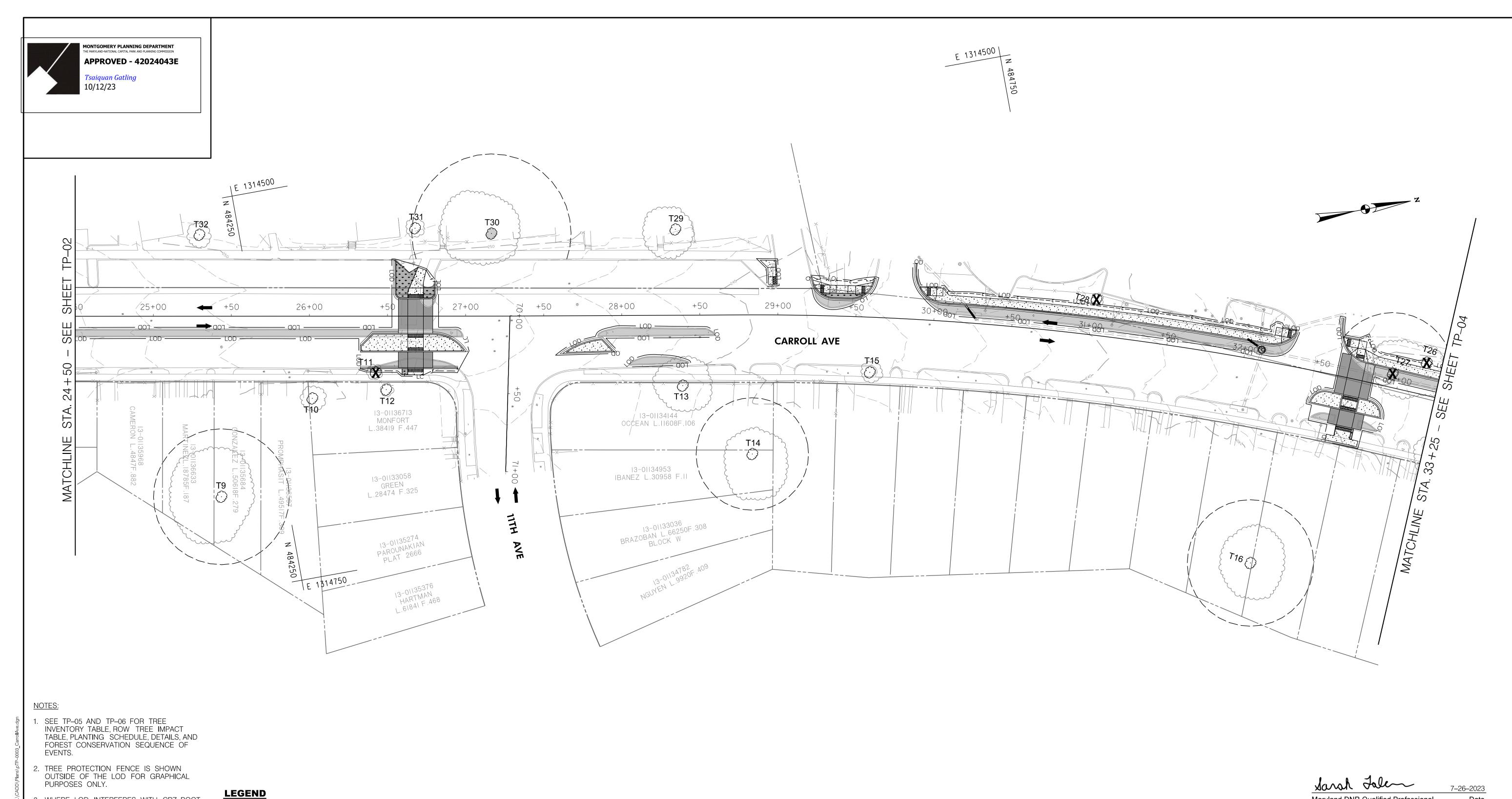
> TURFGRASS SOD ESTABLISHMENT DETECTABLE WARNING SURFACE

FOREST STAND/ HEDGEROW LABEL

—— LOD —— LIMIT OF DISTURBANCE ---- TPF ---- TREE PROTECTION FENCE

FS1 /HR1





3. WHERE LOD INTERFERES WITH CRZ, ROOT PRUNE ALONG LOD OR EDGE OF EXCAVATION AS DIRECTED BY MARYLAND LICENSED TREE EXPERT.

> 35% DESIGN NOT FOR **CONSTRUCTION**



P: 410.728.2900

700 East Pratt Street, Suite 500 | Baltimore, MD 21202

T-103 🕥

SIGNIFICANT TREE (24–29" DBH) WITH CRITICAL ROOT ZONE SPECIMEN TREE (>30" DBH) WITH CRITICAL ROOT ZONE

> INDIVIDUAL TREES (6–23" DBH) TREE TO BE REMOVED



⊢ — c — · LIMIT OF CUT ⊢ — F — → LIMIT OF FILL ---- LOD ---- LIMIT OF DISTURBANCE ---- TPF ---- TREE PROTECTION FENCE

----- EXISTING CONTOURS

TO BE DEMOLISHED PAVEMENT ASPHALT TURFGRASS SOD ESTABLISHMENT

FOREST STAND BOUNDARY TREE CANOPY / HEDGEROW BOUNDARY

DETECTABLE WARNING SURFACE

------ PROPERTY BOUNDARY ---- RIGHT-OF-WAY LINE CONCRETE SIDEWALK

> GAITHER CONTACT DIVISION ENGINEER 240-777

> > 240-777-7221

SCALE: 1'' = 30'

DESIGNED BY SJF DRAWN BY DEA CHECKED BY MH

Maryland DNR Qualified Professional Name: Sarah Falcone Address: 700 East Pratt St., Suite 500 Baltimore, MD 21202 Phone: 410-462-9483 sfalcone@rkk.com

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE		MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND
GAITHERSBURG, MARYLAND		RECOMMENDED FOR APPROVAL
<u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING		Chief, Transportation Planning and Design Section Date APPROVED
240-777-7220 DESIGN SECTION		Chief, Division of Transportation Engineering Date

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING
CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

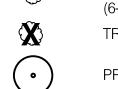
TREE S	SA·VE	PLAN
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SCALE	1"=30'		DATE	JULY 2025	
DRAWING NO.	TP-03	OF	06	SHEET No.	

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T-244 💮

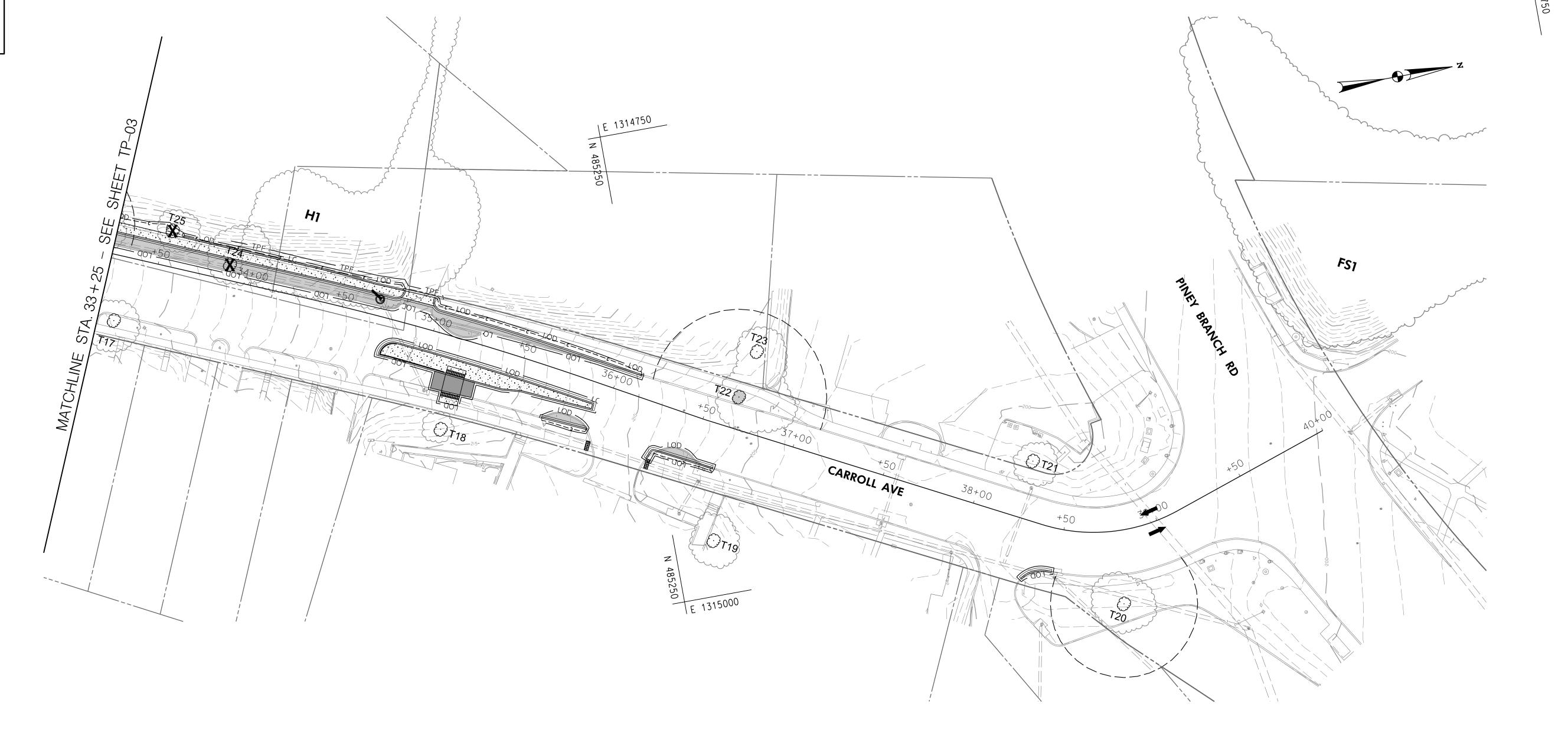


PROPOSED TREE

FS1 /HR1

FOREST STAND/ HEDGEROW LABEL





- 1. SEE TP-05 AND TP-06 FOR TREE INVENTORY TABLE, ROW TREE IMPACT TABLE, PLANTING SCHEDULE, DETAILS, AND FOREST CONSERVATION SEQUENCE OF
- 2. TREE PROTECTION FENCE IS SHOWN OUTSIDE OF THE LOD FOR GRAPHICAL PURPOSES ONLY.
- 3. WHERE LOD INTERFERES WITH CRZ, ROOT PRUNE ALONG LOD OR EDGE OF EXCAVATION AS DIRECTED BY MARYLAND LICENSED TREE EXPERT.

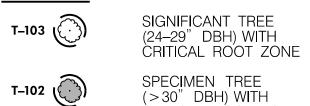
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LEGEND



CRITICAL ROOT ZONE T-244 💮 INDIVIDUAL TREES (6–23" DBH)



PROPOSED TREE ⊢ — c — · LIMIT OF CUT

⊢ — F — ¬ LIMIT OF FILL

FS1 /HR1

---- LOD ---- LIMIT OF DISTURBANCE ---- TPF ---- TREE PROTECTION FENCE FOREST STAND/ HEDGEROW LABEL

TREE TO BE REMOVED

FOREST STAND BOUNDARY TREE CANOPY / HEDGEROW BOUNDARY ----- EXISTING CONTOURS ----- PROPERTY BOUNDARY

> CONCRETE SIDEWALK TO BE DEMOLISHED PAVEMENT ASPHALT

---- RIGHT-OF-WAY LINE

TURFGRASS SOD ESTABLISHMENT DETECTABLE WARNING SURFACE

Maryland DNR Qualified Professional Name: Sarah Falcone Address: 700 East Pratt St., Suite 500 Baltimore, MD 21202 Phone: 410-462-9483 sfalcone@rkk.com

7-26-2023

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	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
	RECOMMENDED FOR APPROVAL	
	Chief, Transportation Planning and Design Section APPROVED	Date
4	Chief, Division of Transportation Engineering	Date

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TREE SAVE PLAN

1"=30' DATE ____ JULY 2025 SHEET No. _ 75 OF _ 97 06

OWNER/ADDRESS: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND

<u>CONTACT:</u> DIVISION OF TRANSPORTATION ENGINEERING 240-777-7220 DESIGN SECTION

Responsive People | Creative Solutions

SCALE _ 240-777-7221 DESIGNED BY SJF DRAWN BY DEA CHECKED BY MH TP-04 OF DRAWING NO.



RIGHT-OF-WAY PLANTING SCHEDULE						
Key	Scientific Name/Common Name	Quantity	Size	Placement		
CC	Cercis canadensis/Eastern redbud	1	1" caliper, #15 container	As shown		

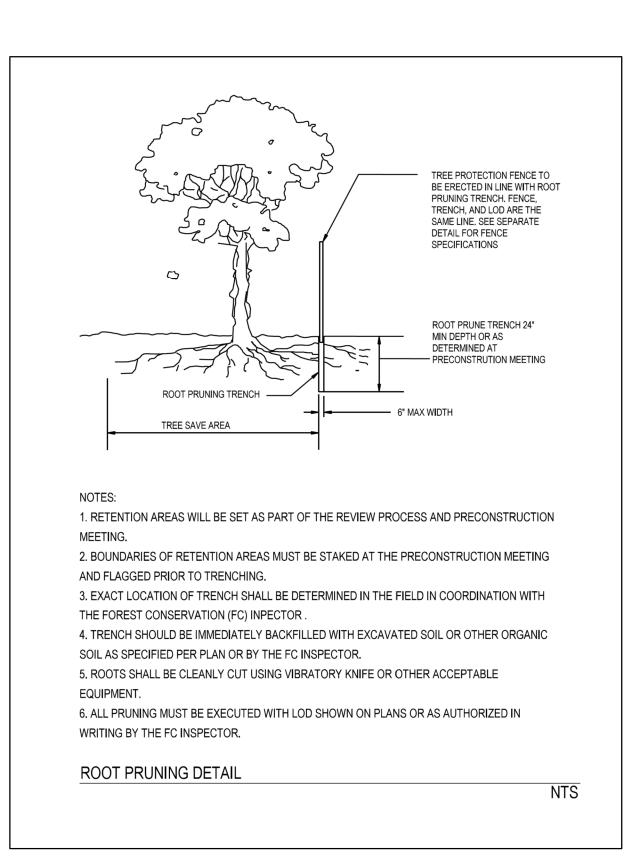
SEEDING SCHEDULE					
Туре	Quantity (SY)				
Turfgrass Sod Establishment	344				

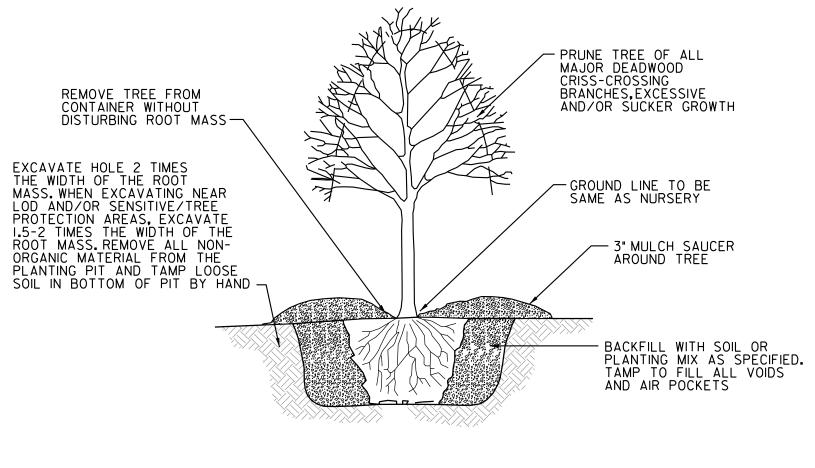
RIGHT-OF-WAY TREE IMPACTS AND MITIGATION REQUIREMENTS						
Location	Number of Trees Removed	Mitigation Ratio	Required Planting*			
County ROW	3	3:1 for trees greater than or equal to 6" DBH	9			

^{*}To meet the Montgomery County Roadside Tree Law 3:1 replacement requirement, one tree is being proposed within the existing right-of-way. To meet the remaining replacement requirement (eight trees), \$250 per replacement tree will be paid into the Street Tree Fund prior to construction for a total of \$2,000.

TREE INVENTORY TABLE								
TREE ID	SCIENTIFIC NAME	COMMON NAME	DBH	CONDITION	COMMENTS	REMOVAL	IN ROW	
T1	Acer rubrum	Red maple	7	Good/Fair	Minor trunk wound, minor dead branches, minor pruning	Χ	Х	
T2	Platanus occidentalis	American sycamore	13	Good		Х	Х	
T3	Lagerstroemia indica	Crape myrtle	6	Good/Fair	Multistem, fused leaders			
T4	Ulmus americana	American elm	8	Fair	Twin (8, 7), exposed roots, water sprouts		Х	
T5	Ulmus americana	American elm	7	Fair	Minor lean, one-sided canopy			
T6	Quercus phellos	Willow oak	10	Fair	Heavy vines, minor lean, minor dead branches, one-sided canopy			
T7	Morus alba	White mulberry	10	Fair/Poor	Twisted trunk, heavy vines, growing into power lines, pruned, sparse canopy, water sprouts			
T8	Quercus phellos	Willow oak	14	Fair/Poor	Major vines into canopy, growing on driveway			
T9*	Quercus phellos	Willow oak	29	Good				
T10	Prunus serotina	Black cherry	10	Poor	Multistem (10, 6, 6), main stem split, pruned, poor growth form			
T11	Acer saccharum	Sugar maple	9	Poor	Trunk decay, dying canopy, sapsucker damage	Х	Х	
T12	Fraxinus pennsylvanica	Green ash	6	Good				
T13	Pinus strobus	White pine	17	Good/Fair	Slight lean, sparse canopy			
T14*	Quercus falcata	Southern red oak	24	Fair/Poor	Slight lean, one-sided and sparse canopy, dead branches, vines on trunk			
T15	Morus alba	White mulberry	12	Fair/Poor	Twin (12, 8), damaged roots, heavy lean, pruned canopy, included bark		Х	
T16*	Acer saccharinum	Silver maple	27	Good	Minor broken branches			
T17	Acer rubrum	Red maple	17	Fair/Poor	Damaged roots, pruned, trunk wounds, dying crown, slight lean		Х	
T18	Acer rubrum	Red maple	8	 Good/Fair	Slight lean			
T19	Gleditsia triacanthos	Honey locust	19	·	Pruned, water sprouts, dead branches, one-sided canopy, exposed roots			
T20*	Quercus palustris	Pin oak	26	Good/Fair	Pruned, exposed roots		Х	
T21	Morus alba	White mulberry	8	Fair	Multistem (6-8), heavily pruned, interfering branches			
T22**	Quercus palustris	Pin oak	31	Fair	Trunk cavity with decay near base, exposed roots, pruned		Х	
T23	Prunus sp.	Cherry sp.	8	Fair/Poor	Heavily pruned, one-sided canopy, dead branches, exposed roots			
T24	Quercus palustris	Pin oak	22	Fair	Twin (22, 18), one-sided canopy, dead branches	X		
T25	Acer rubrum	Red maple	12	Poor	Vines into canopy, dead leader	Х		
T26	Acer rubrum	Red maple	7	Good/Fair	Dead branches	X		
T27*	Quercus palustris	Pin oak	26	Good	Exposed roots	X		
T28	Acer rubrum	Red maple	6	Fair/Poor	Significant dead branches, water sprouts	X		
T29	Pinus strobus	White pine	19	 Fair	Lean, one-sided branches, pruned			
T30**	Quercus nigra	Water oak	34	Fair	Exposed roots, heavily pruned, one-sided canopy, leader wound and decay			
T31	Prunus serotina	Black cherry	9	Good/Fair	Splits above DBH, lean, one-sided canopy			
T32	Prunus sp.	Cherry sp.	10	 Good/Fair	Lean, heavily pruned			
T33**	Quercus nigra	Water oak	34	Fair/Poor	Fungus on trunk, exposed roots, heavily pruned, dead branches, water sprouts, broken leader			
T34	Prunus sp.	Cherry sp.	8	Fair/Poor	Dead branches, lean, pruned			
T35	Acer saccharum	Sugar maple	14	Good/Fair	Unusual growth form		Х	
T36*	Acer rubrum	Red maple	26	Good/Fair	Minor vines, healed trunk wound at base		Х	
T37	Acer saccharum	Sugar maple	15	Good/Fair	Girdling roots		X	
T38	Acer saccharum	Sugar maple	14	Good			X	
T39	Acer rubrum	Red maple	12	Good			X	
T40	Acer rubrum	Red maple	10	Fair	Dead branches, sparse canopy		X	
T41	Acer rubrum	Red maple	12	Good/Fair	Girdling roots		X	
-	1	1 1 1	·-				· · · ·	

^{*}Significant tree





TREE/SHRUB PLANTING - CONTAINER GROWN

TREE CONDITION ASSESSMENT GUIDELINES

- > Excellent healthy tree with exceptional growth form; no visible defects, well-formed crown, few minor dead branches acceptable, this tree condition is rare
- > Good healthy tree; very minor defects/decay acceptable with callous forming/complete; well-formed crown; minor lean and/or few minor/major dead branches acceptable; vines may be growing along trunk but not present within crown
- Fair health questionable/stress evident; structurally sound tree; defects present that do not affect structural integrity, moderate lean, minor/major dead branches may be present, crown not broken out but not necessarily well formed or even; vines may be growing along trunk and within crown

Ex. Fair tree could be experiencing insect damage, or exhibit a growth form that makes it very susceptible to wind damage in an open setting.

> **Poor** - significant health problems; may be structurally unsound; may be dead or dying; may contain significant decay; may have broken or missing top/crown; may have heavy lean; vines may be significantly affecting tree health.

Note: These guidelines were developed by RK&K based on the professional

These tree species may commonly exhibit dead branches and/or ratty growth form/structure, which should be taken into account when assessing tree

- Mulberry (Morus spp.)
- Pin Oak *(Quercus palustris)* • Silver Maple (Acer saccharinum)
- Virginia Pine (Pinus virginiana)
- Scarlet Oak (Quercus coccinea) • Black Locust (Robinia pseudoacacia)
- Osage Orange (Maclura pomitera)Willow Oak (Quercus phellos)

Black Willow (Salix nigra)

Maryland DNR Qualified Professional Name: Sarah Falcone Address: 700 East Pratt St., Suite 500 Baltimore, MD 21202

Phone: 410-462-9483 sfalcone@rkk.com

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<u>OWNER/ADDRESS:</u>	
MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE	
GAITHERSBURG, MARYLAND	
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GAITHERSBURG, MARYLAND
CONTACT:
DIVISION OF TRANSPORTATION
ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

				MONTGOMERY COUND DEPARTMENT OF TRANSPO ROCKVILLE, MARYLAI	MONTGOME DEPARTMENT OF DIVISION OF TRANSPO CARROLL SEPARATED MERRIMAC DRIVE TO		
				RECOMMENDED FOR APPROVAL Chief, Transportation Planning and Design Section			
				APPROVED		TREE SAVE PLAN N	
				Chief, Division of Transportation Engineering	Date	SCALE N/A	
NO.	REVISION	DATE	BY	DESIGNED BY SJF DRAWN BY DEA	CHECKED BY MH	DRAWING NO. TP-05 OF	

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING CARROLL AVENUE SEPARATED BIKE LANES MERRIMAC DRIVE TO PINEY BRANCH ROAD

TREE SAVE PLAN NOTES AND CHARTS

DATE ____ JULY 2025

06

SHEET No. __76_ OF _97_

7-26-2023

^{**}Specimen tree

Sequence of Events for Properties Required to Comply With Forest Conservation Plans, Exemptions from Submitting Forest Conservation Plans, and Tree Save Plans

The property owner is responsible for ensuring all tree protection measures are performed in accordance with the approved final forest conservation plan or tree save plan, and as modified in the field by a Planning Department Forest Conservation Inspector. The measures must meet or exceed the most recent standards published by the American National Standards Institute (ANSI

Pre-Construction

- 1. An on-site pre-construction meeting is required after the limits of disturbance have been staked and flagged and before any land disturbance.
- 2. The property owner must arrange for the meeting and following people should must participate at the pre-construction meeting: the property owner or their representative, construction superintendent, International Society of Arboriculture (ISA) certified arborist/Maryland Licensed Tree Expert (representing owner) that will implement the tree protection measures, The Planning Department Forest Conservation Inspector, and Montgomery County Department of Permitting Services (DPS) Sediment Control Inspector. The purpose of this meeting is verify the limits of disturbance and discuss specific tree protection and tree care measures shown on the approved plan. No land disturbance shall begin before tree protection and stress-reduction measures have been implemented and approved by the Planning Department's Forest Conservation Inspector.
 - a. Typical tree protection devices include: Chain link fence (four feet high)
 - ii. Super silt fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging.
 - iii. 14 gauge, 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.
 - b. Typical stress reduction measures may include, but are not limited to: i. Root pruning with a root cutter or vibratory plow designed for that purpose. Trenchers are not allowed, unless approved by the Forest
 - Conservation Inspector ii. Crown Reduction or pruning
 - iii. Watering
 - iv. Fertilizing v. Vertical mulching
 - vi. Root aeration systems
- Measures not specified on the Forest Conservation Plan may be required as determined by the Forest Conservation Inspector in coordination with the property owner's arborist.
- 3. A Maryland Licensed Tree expert must perform, or directly supervise, the implementation of all stress reduction measures. Documentation of the process (including

Page 1 of 3 February 2017

- photographs) may be required by the Forest Conservation Inspector, and will be determined at the pre-construction meeting.
- 4. Temporary tree protection devices must be installed per the approved Forest Conservation Plan, Exemption Plan, or Tree Save Plan and prior to any land disturbance. The Forest Conservation Inspector, in coordination with the DPS Sediment Control Inspector, may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan.
- 5. Tree protection fencing must be installed and maintained by the property owner for the duration of construction project and must not be altered without prior approval from the Forest Conservation Inspector. All construction activity within protected tree and forest areas is prohibited. This includes the following activities:
- a. Parking or driving of equipment, machinery or vehicles of any type.
- b. Storage of any construction materials, equipment, stockpiling, fill, debris, etc. c. Dumping of any chemicals (i.e., paint thinner), mortar or concrete remainder,
- trash, garbage, or debris of any kind. d. Felling of trees into a protected area.
- e. Trenching or grading for utilities, irrigation, drainage, etc.
- 6. Forest and tree protection signs must be installed as required by the Forest Conservation Inspector. The signs must be waterproof and wording provided in both English and

During Construction

- 7. Periodic inspections will be made by the Forest Conservation Inspector. Corrections and repairs to tree protection devices must be completed within the timeframe given by the
- 8. The property owner must immediately notify the Forest Conservation Inspector of any damage to trees, forests, understory, ground cover, and any other undisturbed areas shown on the approved plan. Remedial actions, and the relative timeframes to restore these areas, will be determined by the Forest Conservation Inspector.

Post-Construction

- 9. After construction is completed, but before tree protection devices have been removed, the property owner must request a final inspection with the Forest Conservation Inspector. At the final inspection, the Forest Conservation Inspector may require
- additional corrective measures, which may include: a. Removal, and possible replacement, of dead, dying, or hazardous trees
- b. Pruning of dead or declining limbs
- c. Soil aeration
- d. Fertilization e. Watering

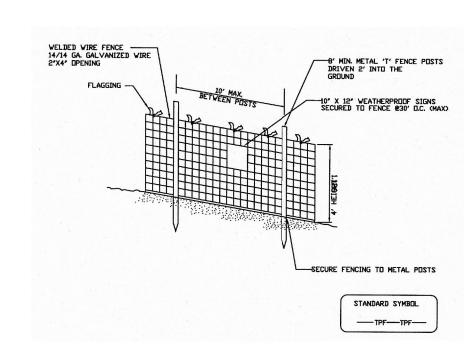
f. Wound repair Page 2 of 3

February 2017 Page 3 of 3

g. Clean up of retention areas, including trash removal

- 10. After the final inspection and completion of all corrective measures the Forest Conservation Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and sediment control must be coordinated with both DPS and the Forest Conservation Inspector and cannot be removed without permission of the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.
- 11. Long-term protection measures, including permanent signage, must be installed per the approved plan. Installation will occur at the appropriate time during the construction project. Refer to the approved plan drawing for the long-term protection measures to be

Tree Protection Fence Detail



- 1. Practice may be combined with sediment control
- 2. Location and limits of fencing should be
- coordinated in field with arborist. 3. Boundaries of protection area should be staked
- prior to installing protective device. Root damage should be avoided.
- Protection signage is required.
- Fencing shall be maintained throughout construction.

Montgomery County Planning Department • Market Mr. McPPC MontgomeryPlanning.org

7-26-2023 Maryland DNR Qualified Professional Name: Sarah Falcone Address: 700 East Pratt St., Suite 500 Baltimore, MD 21202 Phone: 410-462-9483 sfalcone@rkk.com

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OWNER/ADDRESS:	r
MONTGOMERY COUNTY	
DEPARTMENT OF TRANSPORTATION	
100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND	L
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<u>CONTACT:</u>	L
DIVISION OF TRANSPORTATION	H

ENGINEERING

240-777-7220 DESIGN SECTION

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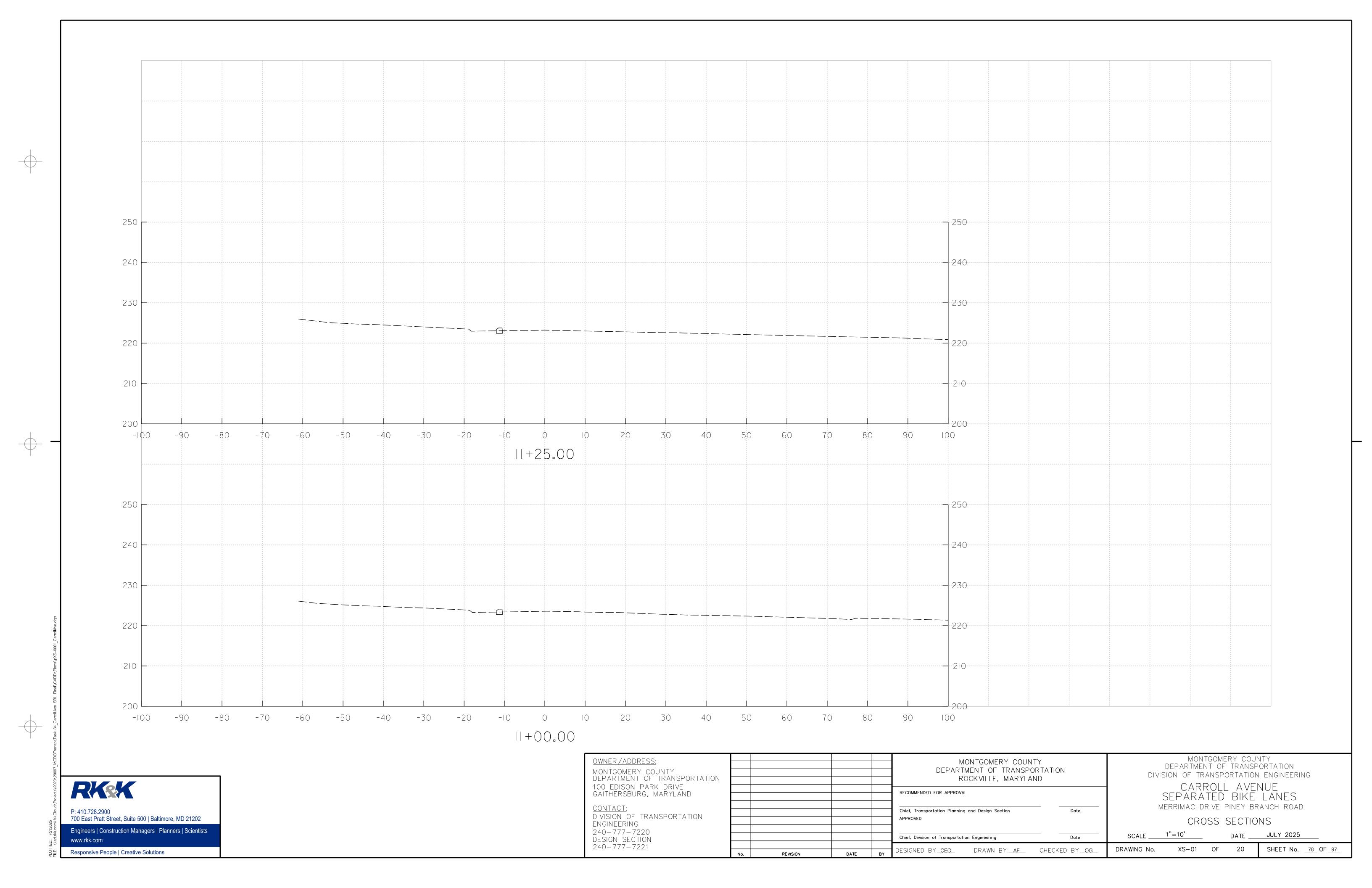
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				Chief, Transportation Planning and Design Section Date APPROVED			
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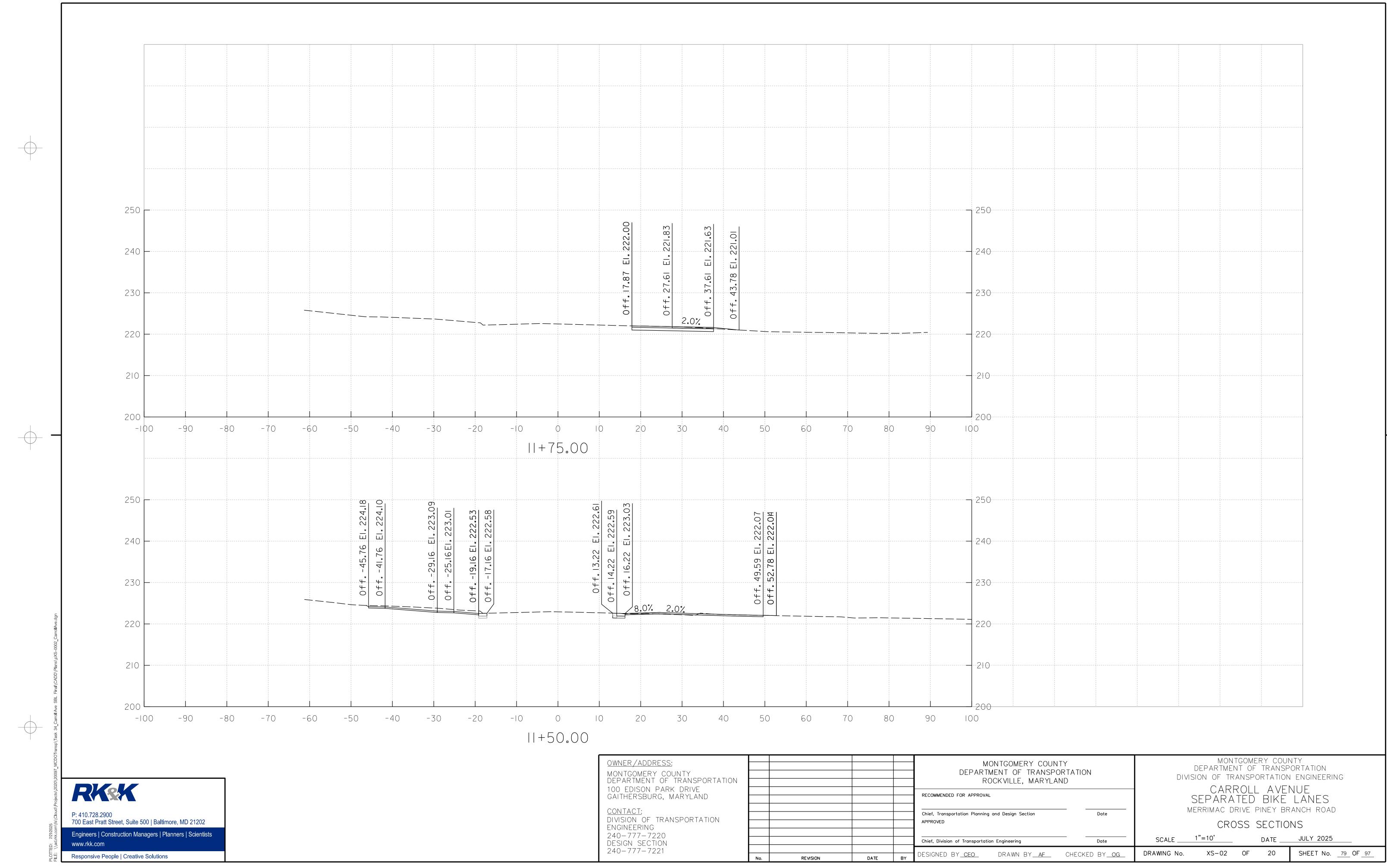
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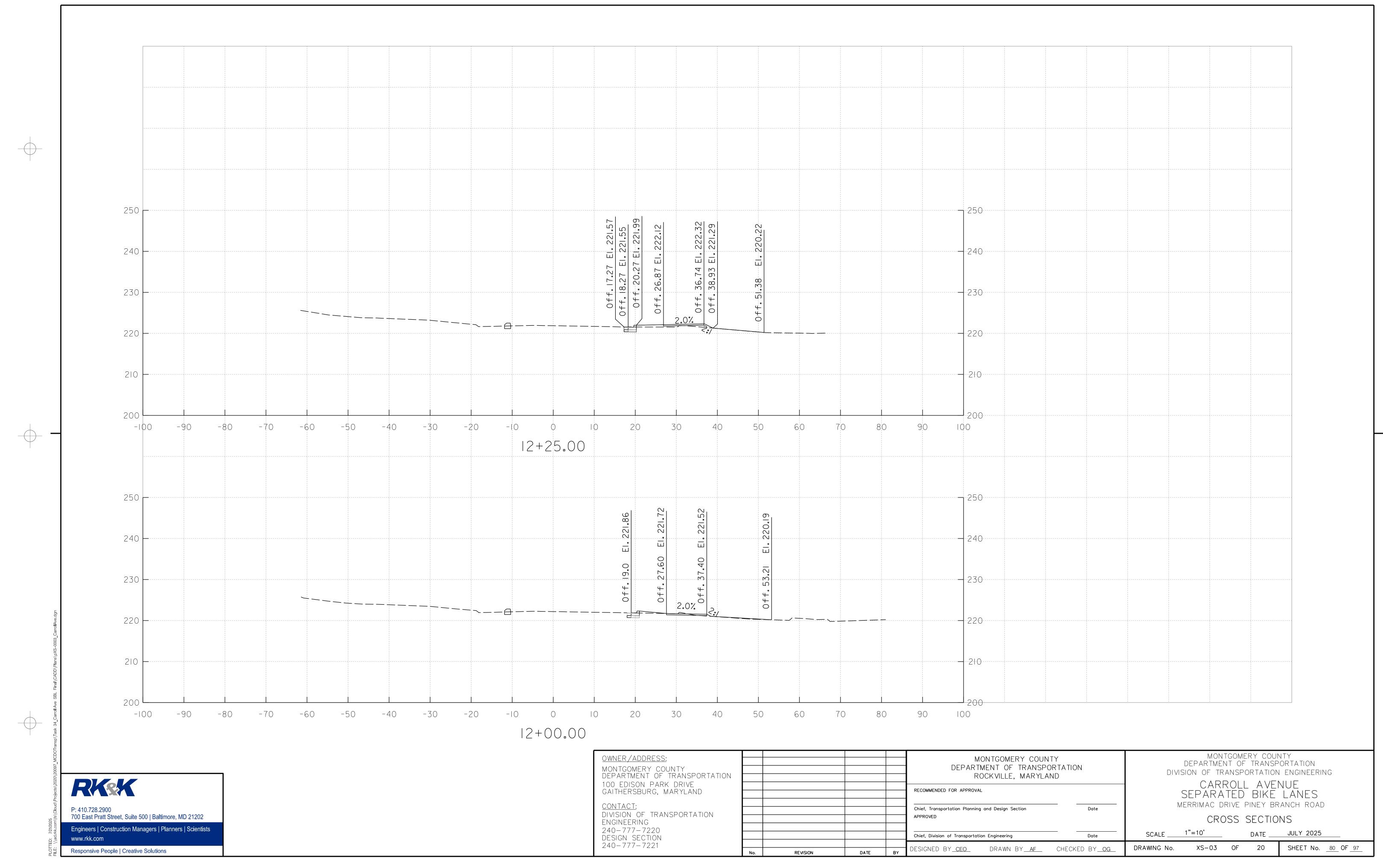
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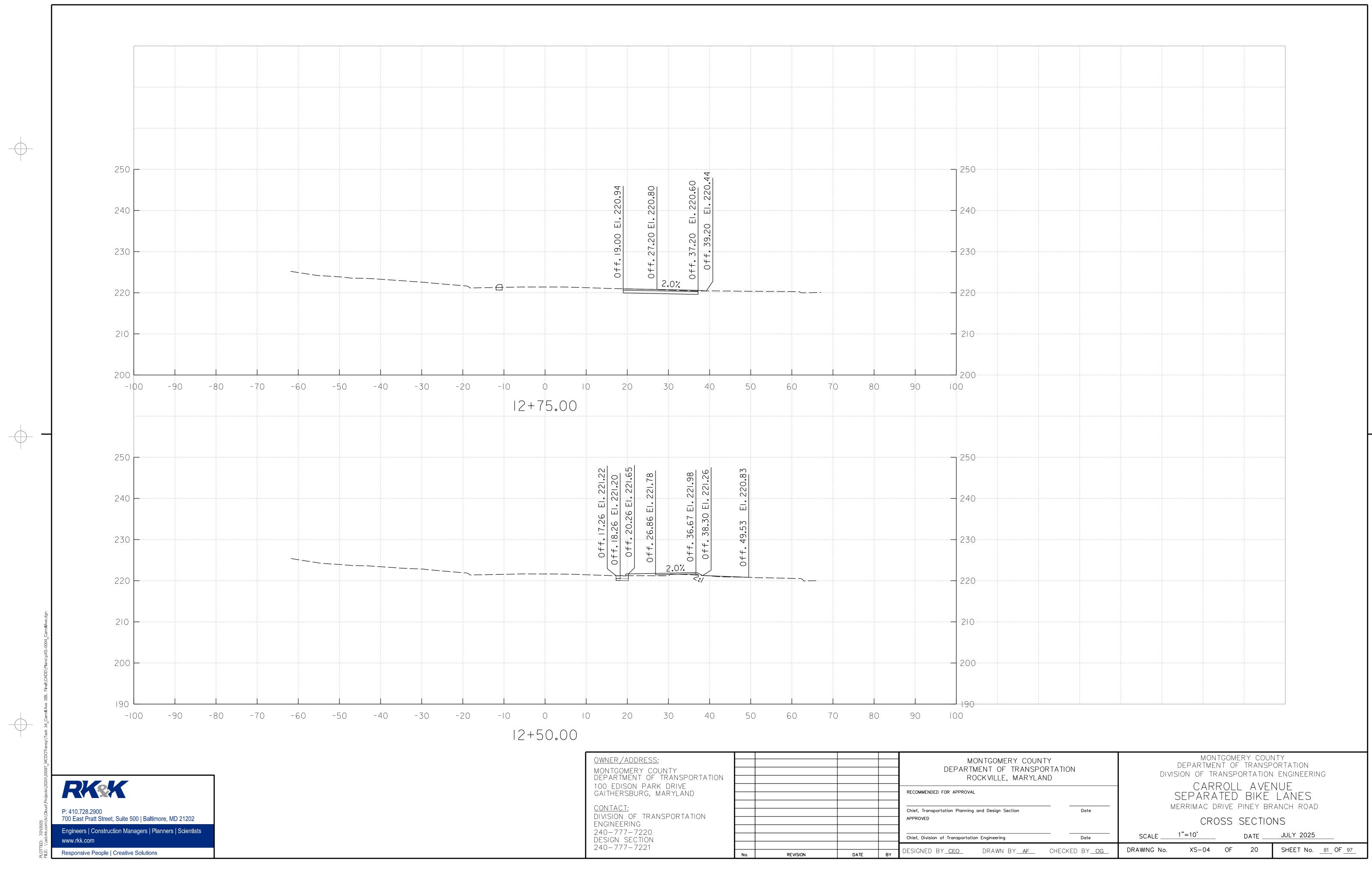
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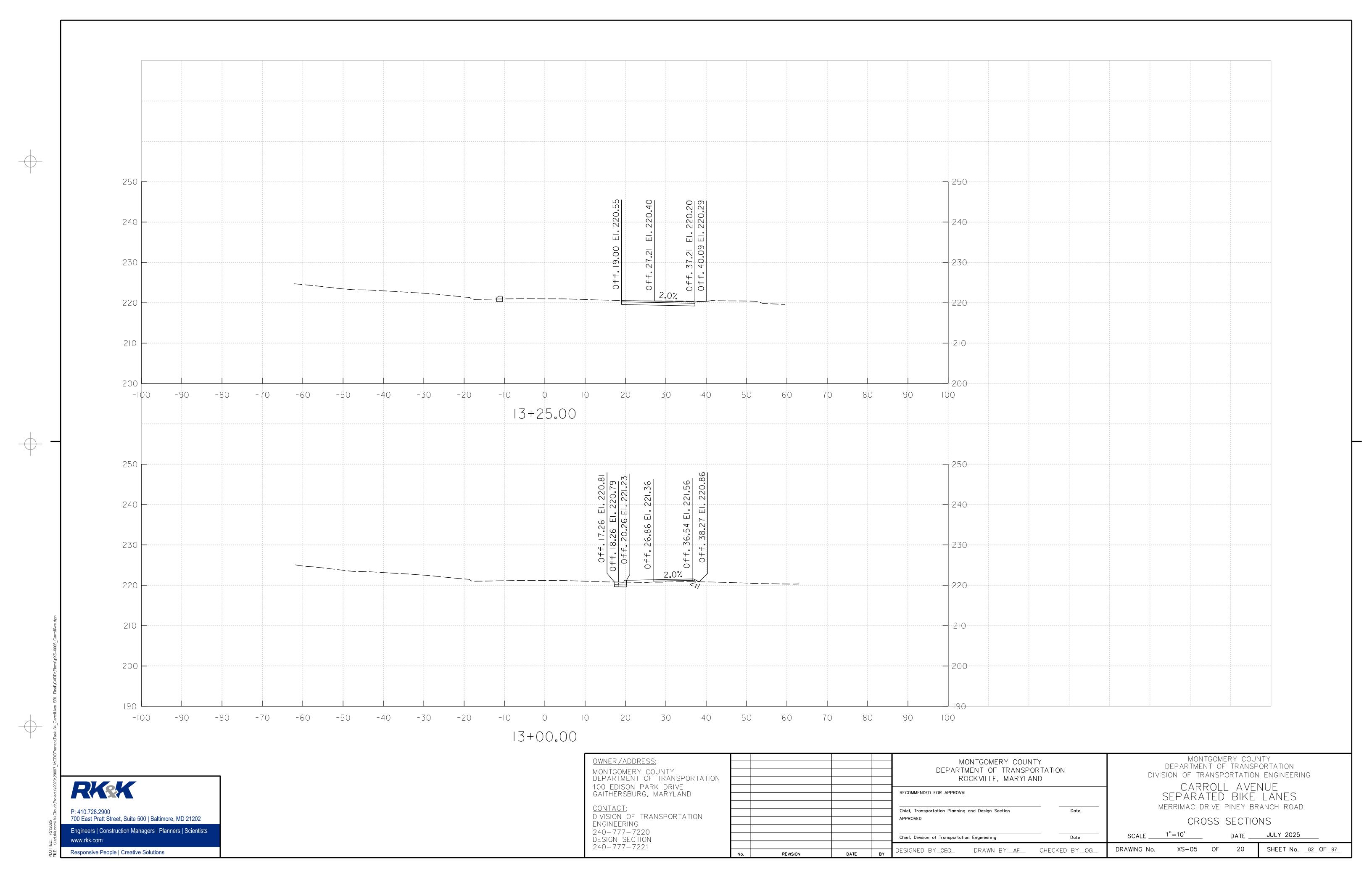
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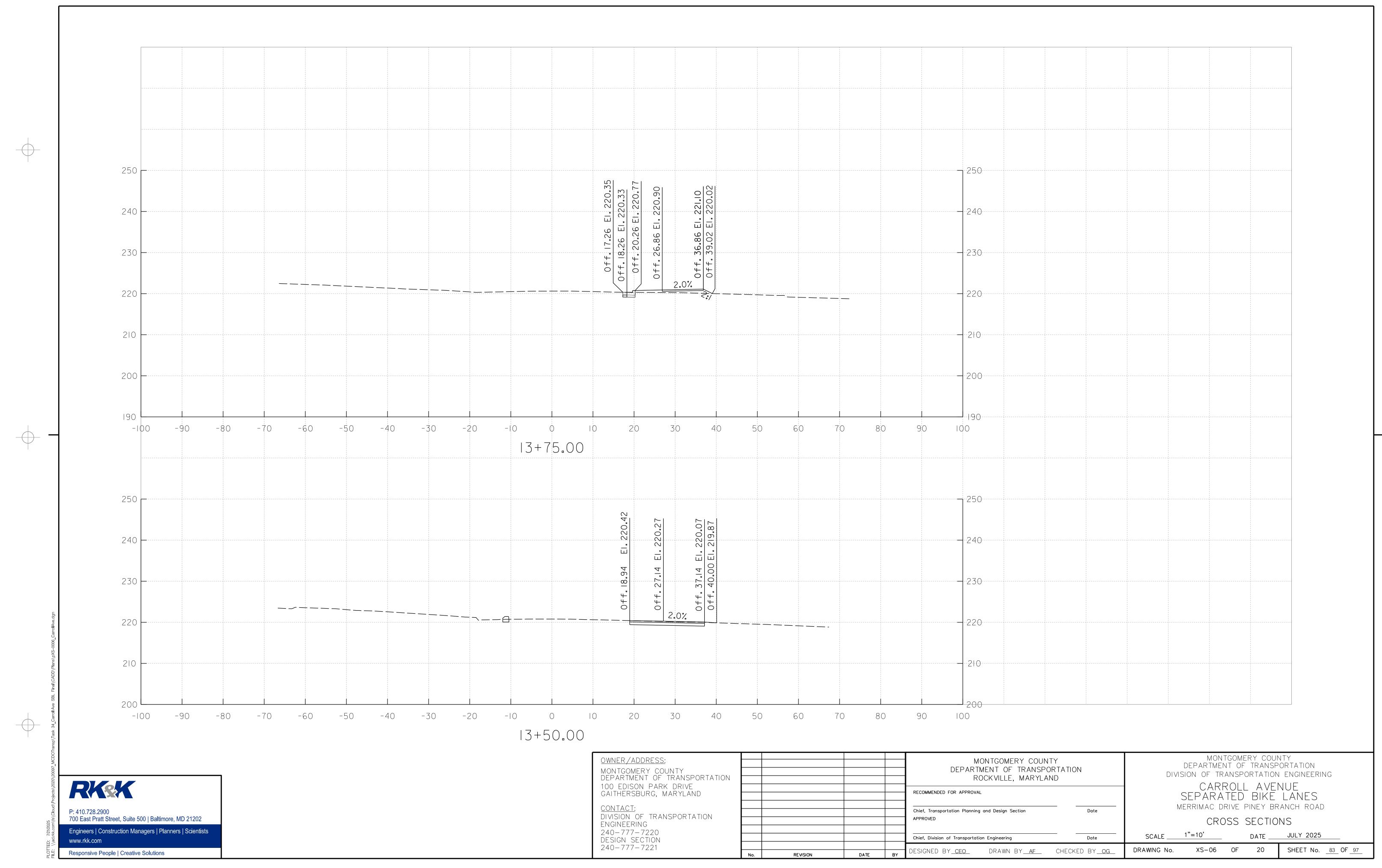




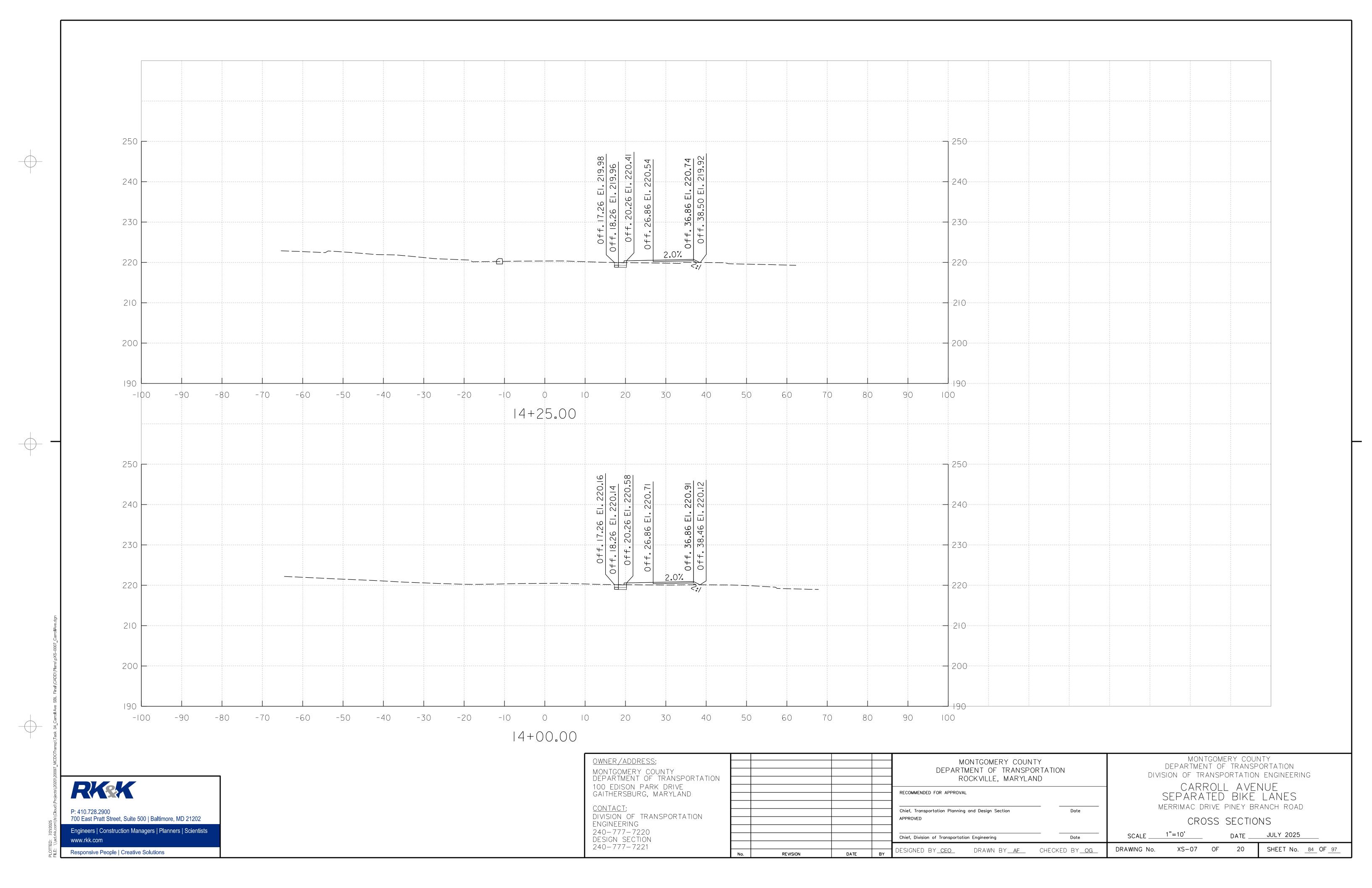


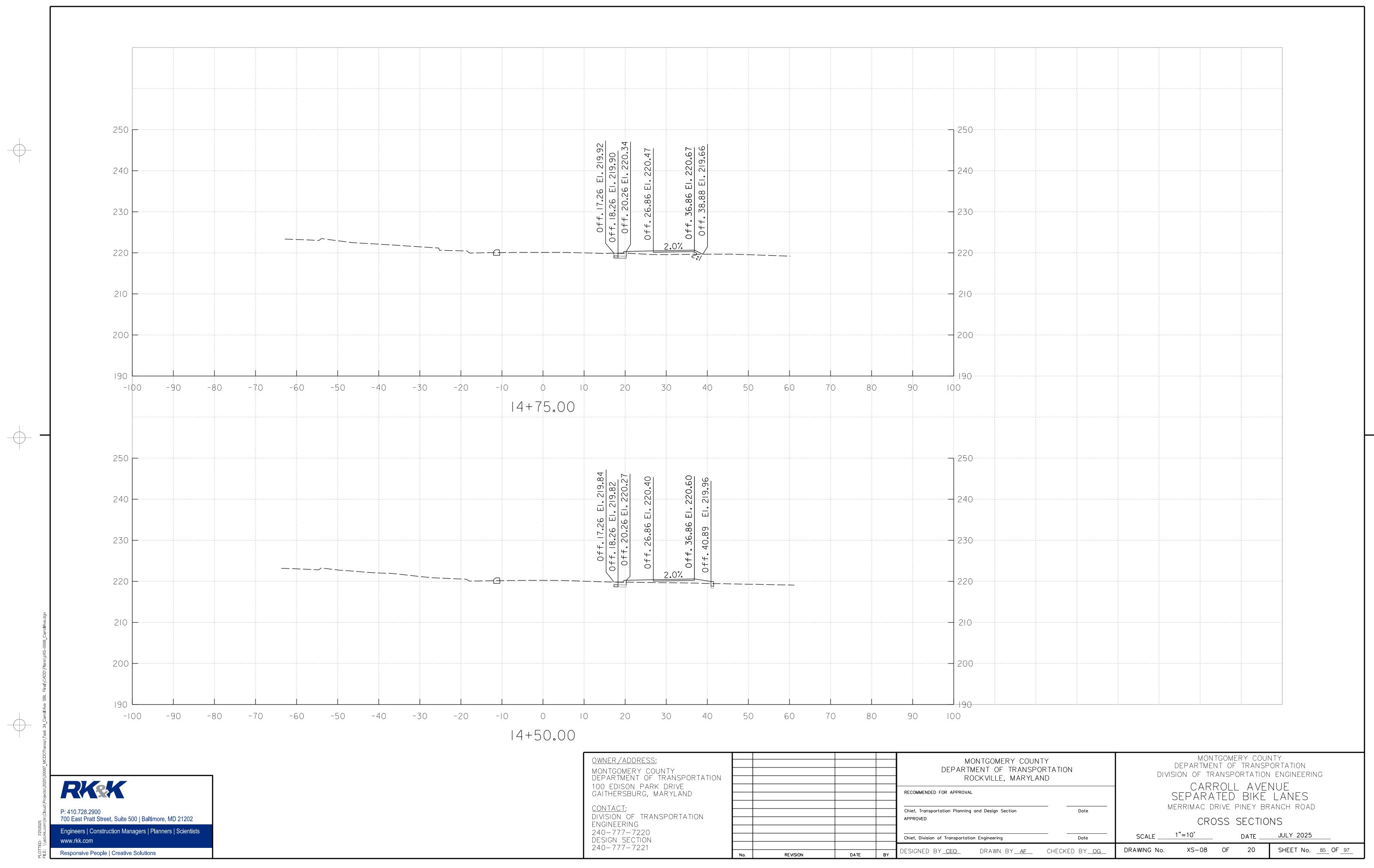


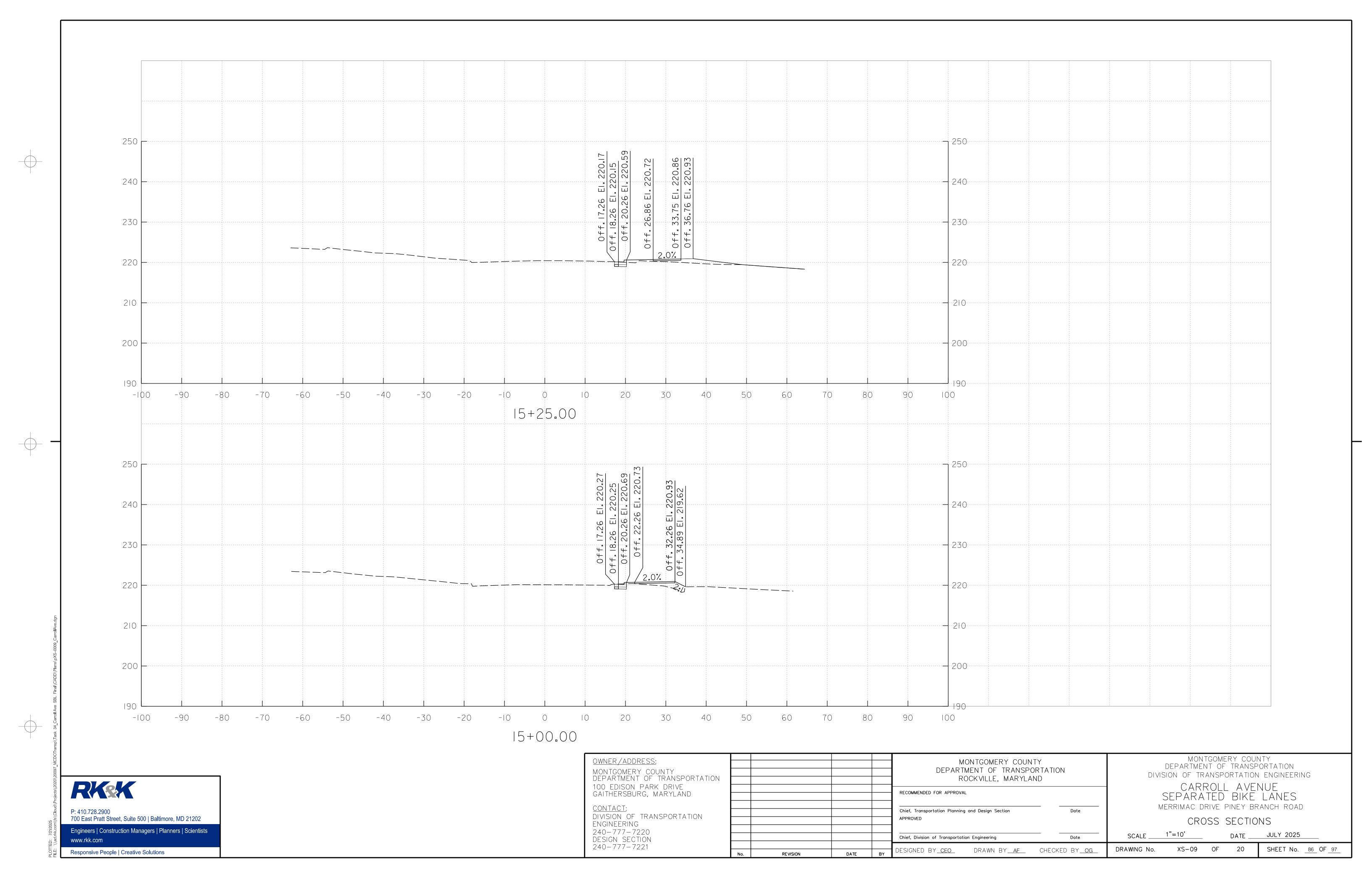


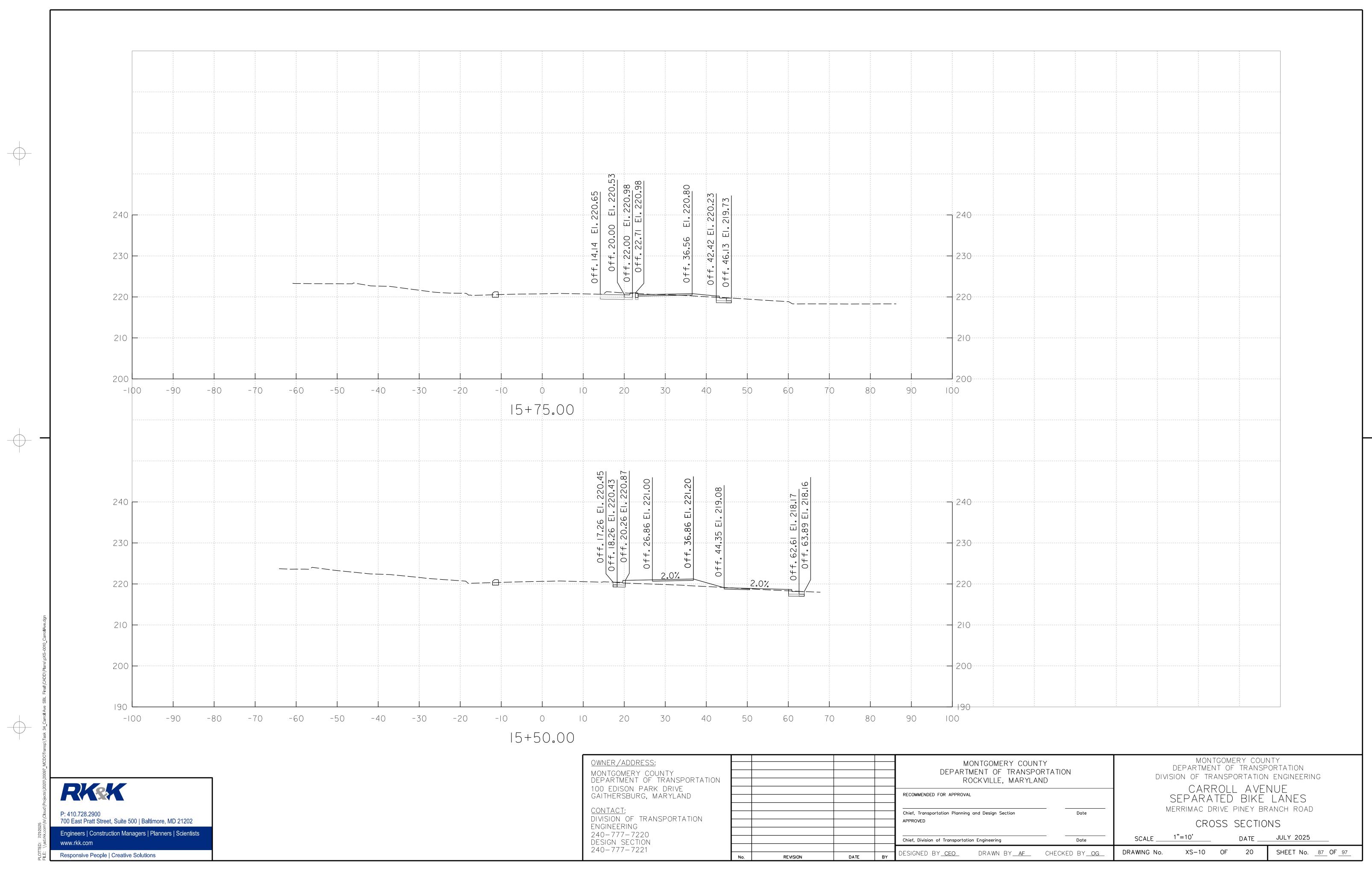


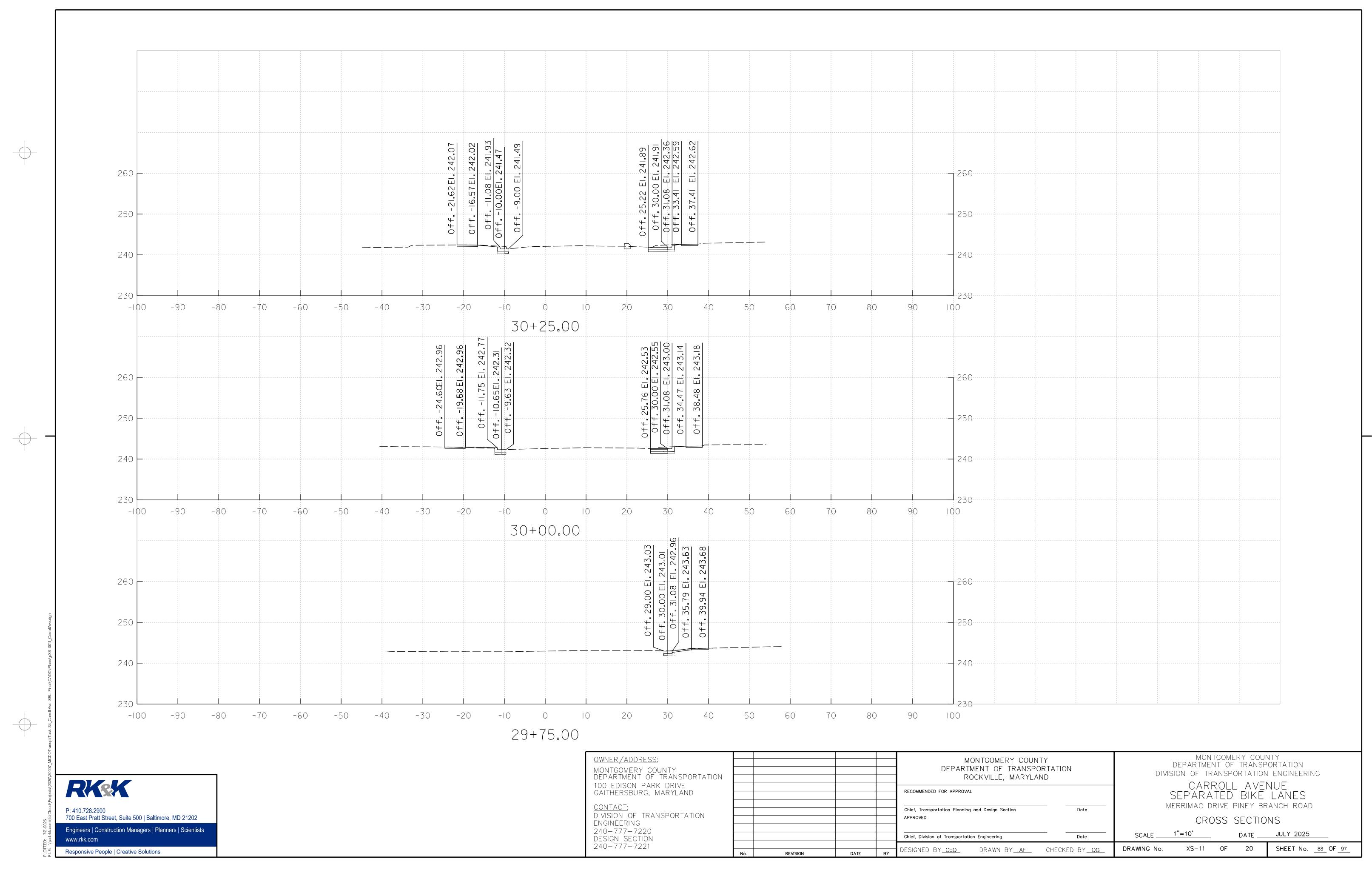
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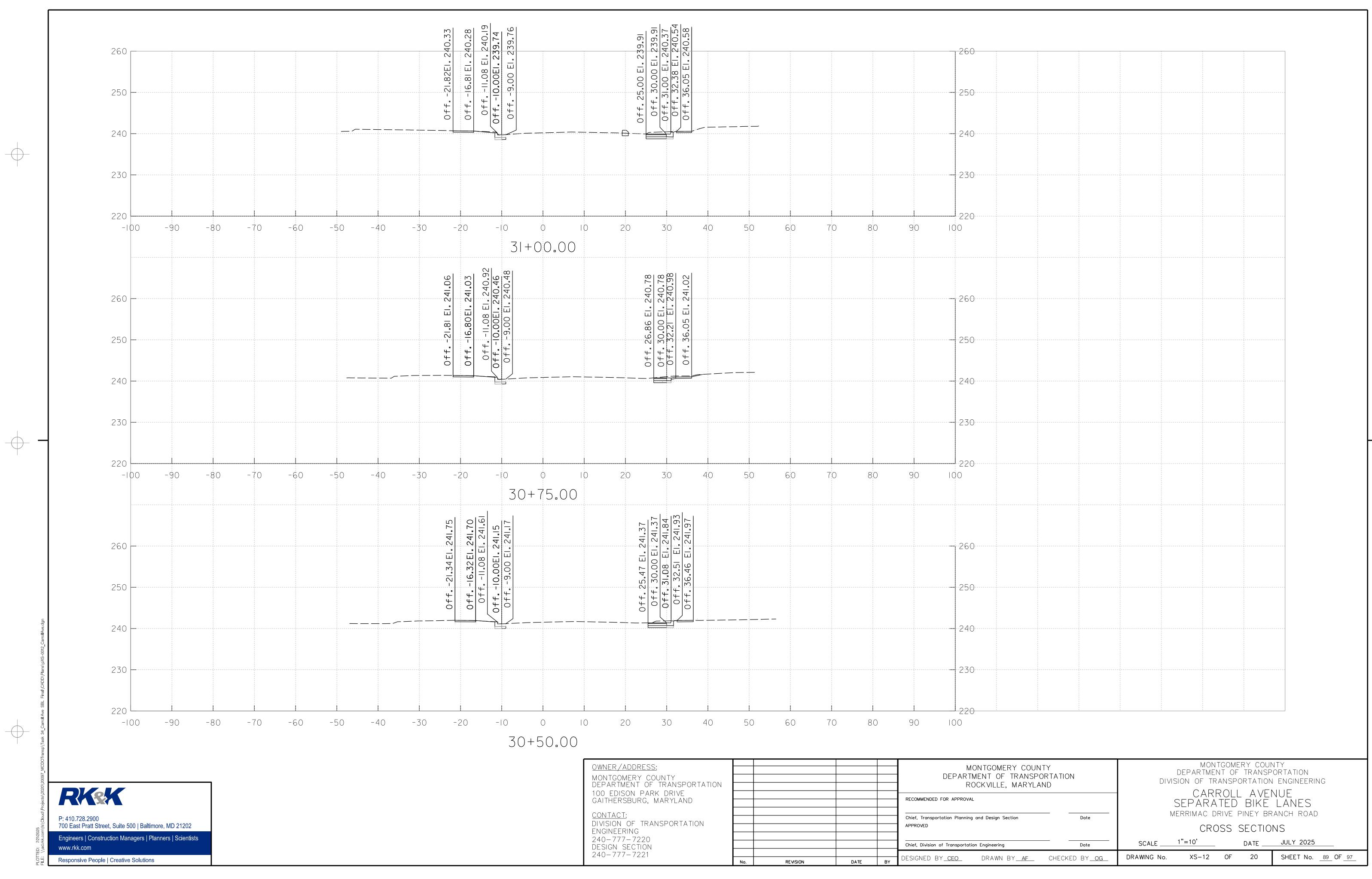


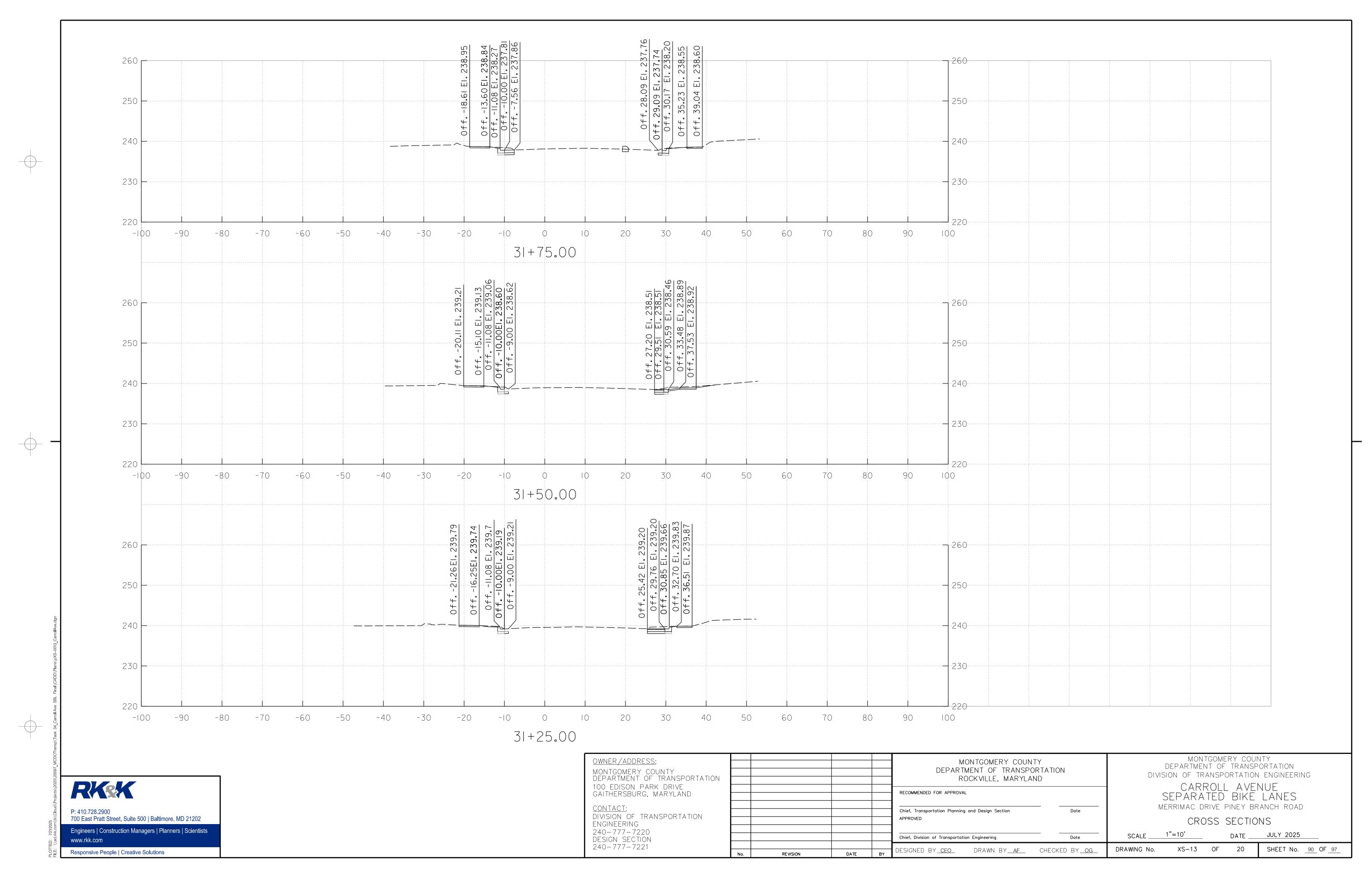


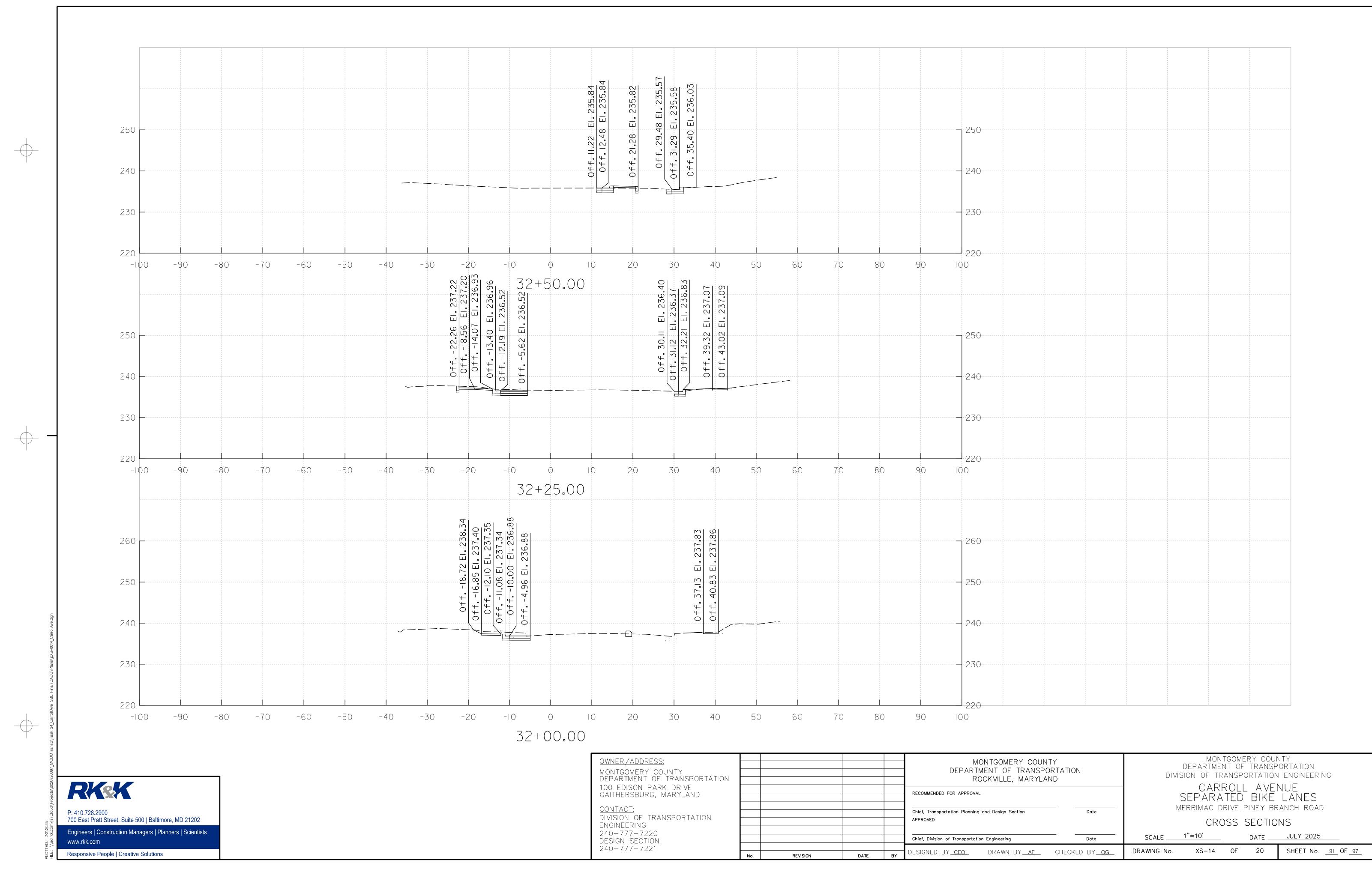


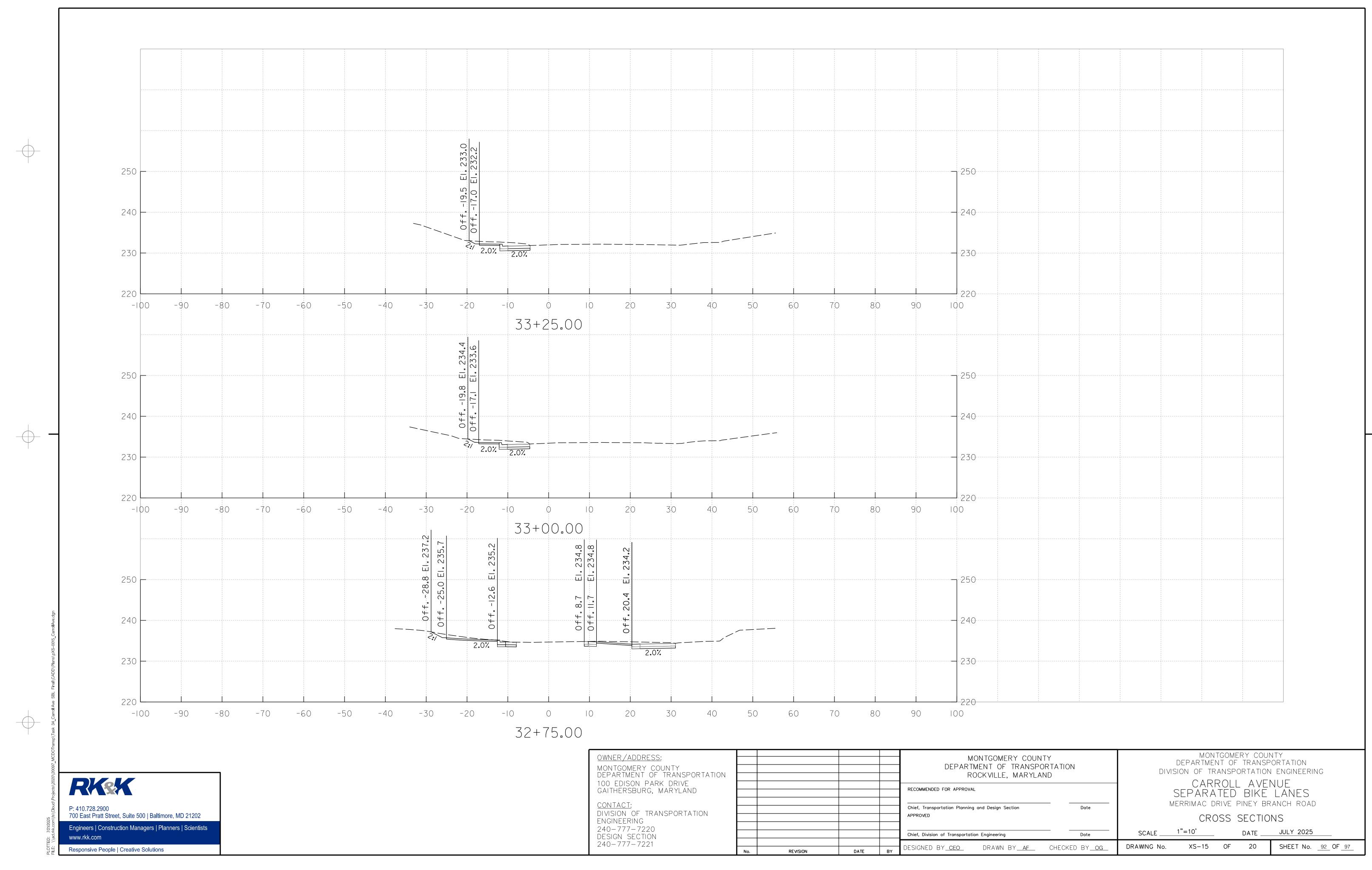


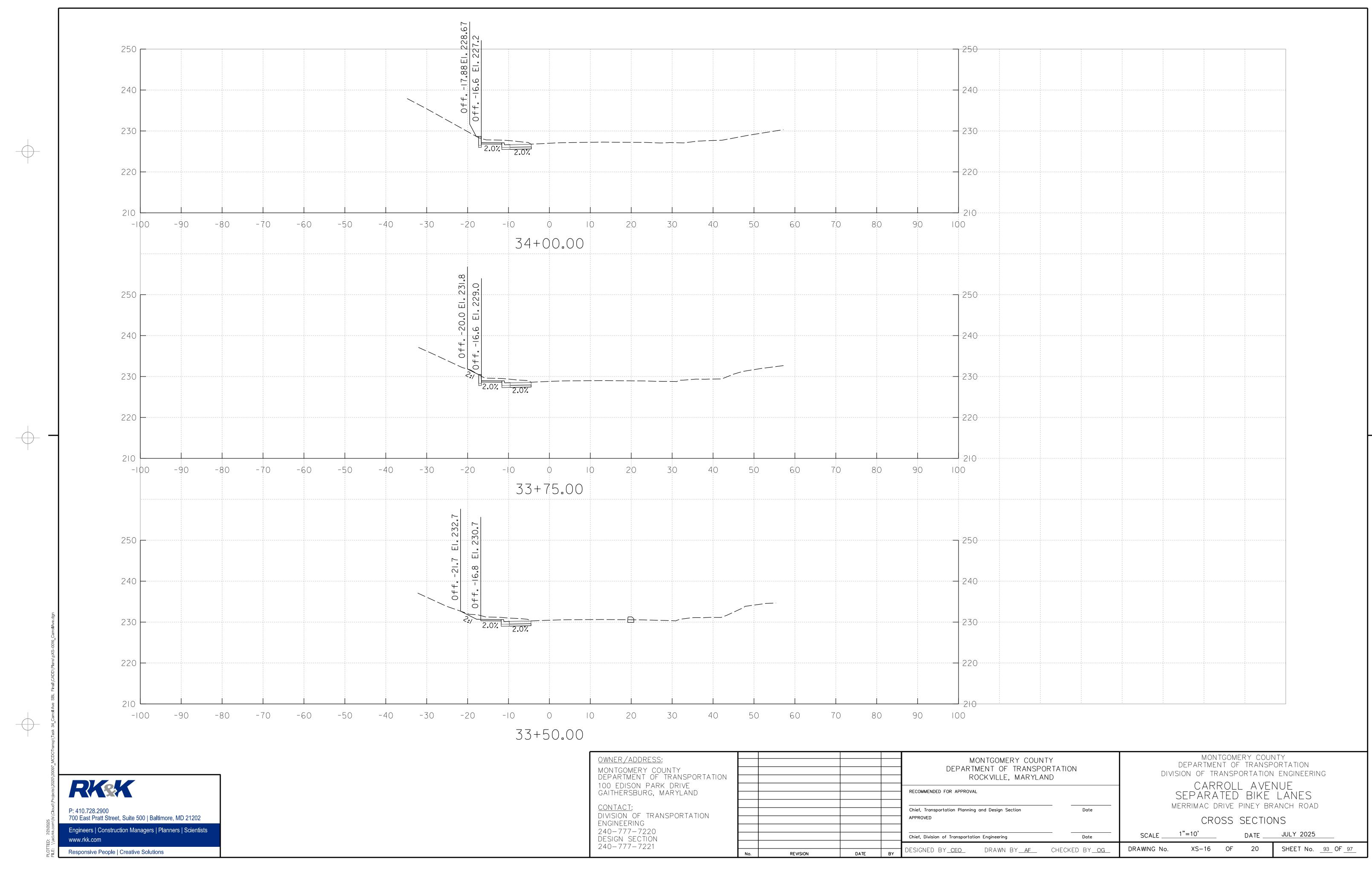


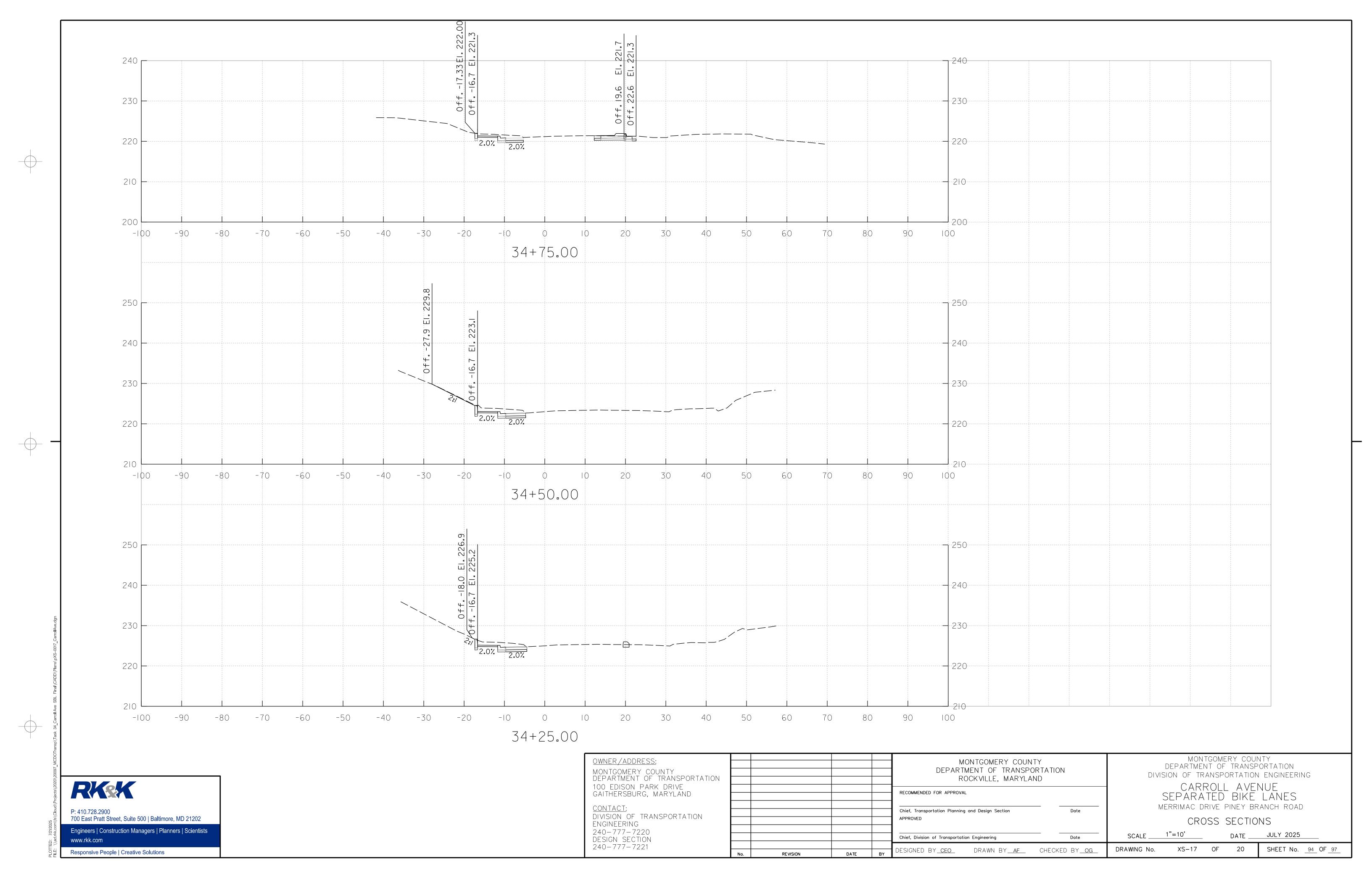












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