August 2023

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

OBERLIN AVENUE TO
DISTRICT OF COLUMBIA

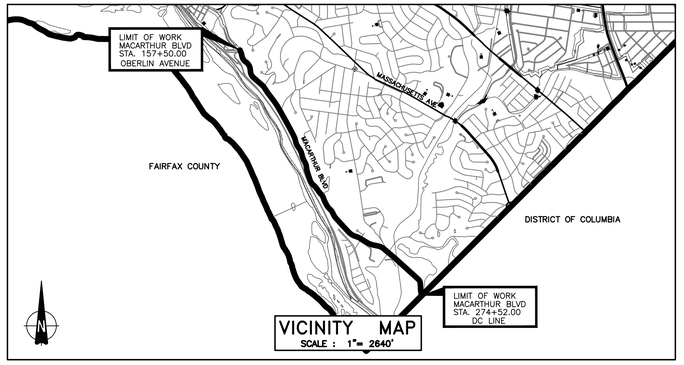
C. I. P. PROJECT NO. 500718

95% DESIGN SUBMISSION

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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MAINTENANCE CERTIFICATION

I HEREBY CERTIFY THAT THE DEPARTMENT OF TRANSPORTATION WILL ASSUME MAINTENANCE RESPONSIBILITIES FOR ALL STORMWATER MANAGEMENT FACILITIES AS LISTED AND SHOWN, HEREON, IN ACCORDANCE WITH THE MEMORANDUM OF UNDERSTANDING BETWEEN THIS DEPARTMENT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED SEPTEMBER 1, 1986. IF, FOR ANY REASON, FUTURE IMPROVEMENTS TO THE ROADWAY ARE PLANNED THAT WOULD IMPACT ANY OF THE STORMWATER MANAGEMENT FACILITIES INCLUDED HEREIN, THIS DEPARTMENT WILL NOTIFY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DURING THE PLANNING OR EARLY DESIGN STAGE FOR SHOWN IMPROVEMENTS.

DATE

JOSE THOMMANA
ACTING CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DATE

JOSE THOMMANA
ACTING CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL," MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN CRITERIA" DATED AUGUST, 1988.

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 11,384 CUBIC YARDS OF EXCAVATION, 714 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 438,339 SQUARE FEET OR 10.06 ACRES.

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

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. 18589 EXPIRATION DATE 02/10/2026

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

IT IS THE RESPONSIBILITY OF THE PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE SEDIMENT CONTROL PERMIT

TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		X			
WATERWAYS/WETLAND(S):					
a. Corps of Engineers	X				
b. MDE	X				
c. MDE Water Quality Certification		X			
MDE Dam Safety		X			
MSCD Small Pond Approval		X			
* DPS Roadside Trees Protection Plan	X			Approval Date	
**N.P.D.E.S. NOTICE OF INTENT	X				
FEMA LOMR (Required Post Construction)		X			
OTHERS (Please List):					
USACE Overweight Vehicle	X				

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes ☐ No ☒ If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
473,940 square feet	438,339 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
165	0
Fee in Lieu (Trees Required – Trees Planted) x $250	$ 41,250

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance FROM	TO	Number of Shade Trees Required
1	6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:

(Number of Square Feet in Limits of Disturbance ÷ 40,000) × 15

EXEMPTION CATEGORIES:

☐ 55-5(a) any activity that is subject to Article II of Chapter 22A;
☐ 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;
☐ 55-5(f) any activity conducted by the County Parks Department;
☐ 55-5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the maintenance has obtained all required permits;
☐ 55-5(h) any stream restoration project if the person performing the work has obtained all necessary permits;
☐ 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
☐ OTHER: Specify per Section 55-5 of the Code.

OWNER/ADDRESS:
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE, 4TH FLOOR
GAITHERSBURG, MD 20878

CONTACT:
ANGEL CHENG, PE
PROJECT MANAGER
DESIGN SECTION
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7274

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

GN-01
TITLE SHEET

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

SCALE: NOT TO SCALE DATE: JUNE 2024

CIP No. : 500718 SHEET 1 of 285

(RText (RText)

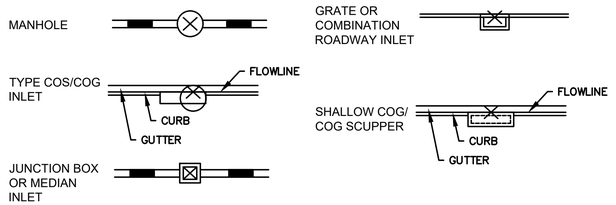
ABBREVIATIONS

A.A.S.H.T.O.	American Association of State Highway Transportation Officials	LP	Low Point	SSD	Stopping Sight Distance
		LT	Left	SSF	Super Silt Fence
APPROX.	Approximate	MAX.	Maximum	STD.	Standard
B or B/L	Baseline	MOD.	Modified	SO.	Single Opening
C.C.	Center of Curve	MIN.	Minimum	S.Y.	Square Yards
C or C/L	Centerline	N	North	SWM	Stormwater Management
C.I.P.	Cast Iron Pipe	NB	Northbound	SW	Sidewalk
C.M.P.	Corrugated Metal Pipe	NE	Northeast	T	Tangent
C.O.	Cleanout	N.T.S.	Not To Scale	T	Telephone
COMB.	Combination	O.C.	On Center	T.C.P.	Terra Cotta Pipe
CONC.	Concrete	P.C.	Point of Curvature	TYP.	Typical
CONSTR.	Construction	P.C.C.	Point of Compound Curve	U.P.	Utility Pole
C.P.P.	Corrugated Polyethylene Pipe	P/C	Point of Grown	VAR.	Varies
D.B.H.	Diameter Breast Height	PGA	Point of Grade Application	V.C.L.	Vertical Curve Length
DC	Degree of Curve	P/GE	Profile Grade Elevation	W	Water
D.H.V.	Design Hour Volume	P.G.E.	Profile Ground Elevation	W	West
D.I.	Drop Inlet	P.G.L.	Profile Grade Line	WB	Westbound
DIA.	Diameter	P/GL	Profile Ground Line		
D.O.	Double Opening	P/R	Point of Rotation		
E	East	P.I.	Point of Intersection		
E	Electric	P.O.C.	Point on Curve		
E	External Distance	P.O.T.	Point on Tangent		
EA.	Each	PROP.	Proposed		
E.B.	Eastbound	PT.	Point		
ELEV.	Elevation	P.T.	Point of Tangency		
E.R.C.C.P.	Elliptical Reinforced Cement Concrete Pipe	P.V.C.	Point of Vertical Curve		
ES	End Section	PVC	Polyvinyl Chloride		
EX. or EXIST.	Existing	PVI	Point of Intersection		
FT	Feet	R	Radius		
F or FL	Flowline	RET. WALL	Retaining Wall		
FWD	Forward	RT	Right		
G	Gas	RW or R/W	Right of Way		
H.D.P.E.	High-Density Polyethylene	R.C.P.	Reinforced Cement Pipe		
H.E.R.C.P.	Horizontal Elliptical Reinforced Concrete Pipe	R.C.C.P.	Reinforced Cement Concrete Pipe		
HP	High Point	S	South		
HMA	Hot Mix Asphalt	SAN.	Sanitary Sewer		
HT	Height	SB	Southbound		
IN	Inch	S.D.	Storm Drain		
INV	Invert	S.E.	Superelevation		
L	Length	SF	Silt Fence		
LANDSC.	Landscaped	S.F.	Square Feet		
L.F.	Linear Feet				

LEGEND

	SIGN		HEDGE/BUSHES
MB	MAIL BOX	434.0	SPOT ELEVATION
FP	FLAG POLE	II	WOOD FENCE
LL	LANDSCAPE LIGHTING		WIRE FENCE / CHAIN LINK FENCE
	LIGHT POST		STREAM
	UTILITY POLE		INDEX CONTOUR
	GUY WIRE ANCHOR	430	INTERVAL CONTOUR
	GUY POLE	OHW	OVERHEAD WIRES
GV	GAS VALVE		ABANDONED GAS LINE
	WATER VALVE	G	EXISTING GAS LINE
W	WATER METER		PROPERTY LINE
	FIRE HYDRANT		EXISTING RIGHT OF WAY
SS	SANITARY MANHOLE	F	TOE OF FILL
D	STORM DRAIN MANHOLE	C	TOP OF CUT
	DECIDUOUS TREE		EX. GUARDRAIL
		LOD	LIMIT OF DISTURBANCE
	CONIFER TREE	TCE	TEMPORARY CONSTRUCTION EASEMENT
	BUSH	RSE	REVERTIBLE SLOPE EASEMENT
		PE	PERPETUAL EASEMENT
			EXISTING 8FT CHAINLINK FENCE

DRAINAGE STRUCTURE STAKEOUT LOCATIONS



DRAINAGE BUBBLES

INLET ---------- I 1

MANHOLE ---------- MH 1

JUNCTION BOX ---------- JB 1

FIELD CONNECTION ---------- C 1

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

GN-02
ABBREVIATIONS AND SYMBOLS

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718

SHEET 2 of 285

(RText (RText)

GENERAL NOTES

1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS DATED JULY 2023 OR LATEST EDITION. ALL ERRATA AND ADDENDA THERETO, THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, WASHINGTON SUBURBAN SANITARY COMMISSION (W.S.S.C.) STANDARDS, MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS, AND SOIL CONSERVATION SERVICE POND CONSTRUCTION SPECIFICATIONS FOR MARYLAND.
2. FOR CONSTRUCTION, ALL HORIZONTAL SHALL BE BASED ON NAD 83/91, NAVD 88 DATUM.
3. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
4. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
5. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
6. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
7. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
8. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
9. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
10. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
11. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
12. DISTURBED AREAS ADJACENT TO ESTABLISHED LAWNS SHALL BE SODDED. OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
13. THE CONTRACTOR SHALL MAINTAIN THE APPROVED ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060
14. THE LOCATION OF RIGHT-OF-WAY AND EASEMENT LINES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. PLEASE REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.
15. ALL UTILITY POLES AND GUY WIRES NOTED FOR RELOCATION SHALL BE PERFORMED BY OTHERS.
16. CONTACT THE WASHINGTON SUBURBAN SANITARY COMMISSION SYSTEM MAINTENANCE ENGINEER BEFORE EXCAVATING BENEATH OR IN THE VICINITY OF EXISTING WATER OR SEWER LINES. BACKFILL TO BE DONE UNDER SUPERVISION OF W.S.S.C. CALL 301-699-4420
17. THE CONTRACTOR SHALL INSTALL PEDESTRIAN DETECTABLE WARNING SURFACES AT ALL SIDEWALK & PEDESTRIAN CROSSINGS. LOCATIONS AS DIRECTED BY THE ENGINEER. THE WARNING SURFACES SHALL BE IN CONFORMANCE WITH ADA REQUIREMENTS AND THE PROJECT SPECIAL PROVISION.
18. THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD UTILITY WIRES EXIST WITHIN THE PROJECT SITE. LOCATIONS OF WIRES SHOULD BE NOTED IN FIELD WITH SIGNAGE TO AVOID CONFLICTS DURING CONSTRUCTION.

USACE NOTES

1. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.
2. THE CONTRACTOR SHALL COORDINATE WITH USACE-WA PRIOR TO COMMENCEMENT OF ANY FIELD WORK. (USACE-WA) POINT OF CONTACT (POC) AT 202-345-2734.
3. CONTRACTOR SHALL HAND DIG AND VERIFY EXISTING AQUEDUCT HORIZONTAL AND VERTICAL LOCATION PRIOR TO EXCAVATION FOR ALL WORK TO BE DONE OR STRUCTURES TO BE INSTALLED WITHIN FIVE FEET OF THE EXISTING AQUEDUCTS (I.E. STORM DRAIN CULVERTS, GUARDRAIL POSTS, RETAINING WALLS, ECT.)
4. THERE IS A SIX TON GROSS VEHICLE WEIGHT LIMIT ON MACARTHUR BOULEVARD. USE OF VEHICLES OVER SIX TONS WILL REQUIRE A PERMIT FROM USACE-WA. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A LIST OF EQUIPMENT TO BE USED DURING CONSTRUCTION, INCLUDING THE TYPE OF VEHICLE, GROSS WEIGHT, AND REGISTRATION INFORMATION FOR EACH VEHICLE AS PART OF THE PERMIT APPLICATION. UNDER NO CIRCUMSTANCES WILL VEHICLES OVER 15 TONS BE PERMITTED.
5. ALL EQUIPMENT SHALL OPERATE IN THE NON-VIBRATORY MODE WHEN IN IN CLOSE PROXIMITY TO THE EXISTING AQUEDUCTS.
6. USACE HAS CONSTRUCTED UNDERGROUND BRIDGES DESIGNED FOR H-20 LOADING CALLED HEAVY DUTY CROSSINGS THAT ALLOW OVERWEIGHT VEHICLES TO CROSS MACARTHUR BOULEVARD. THERE IS ONE OF THESE CROSSINGS WITHIN THE PROJECT LIMITS NEAR MARYLAND AVENUE, WHICH IS CLEARLY INDICATED ON THE PLANS.
7. IF ANY SIGNIFICANT GROUND DISTURBANCE OCCURS AS A RESULT OF THE PROJECT WORK, NOTIFY THE U.S. ARMY CORPS OF WASHINGTON AQUEDUCT (USACE-WA) POINT OF CONTACT (POC) AT 202-345-2734 IMMEDIATELY TO FACILITATE OBSERVATION OF THE AREA PRIOR TO RESTORATION OF FINAL GRADES.
8. IF ANY FIELD ASSESSMENT DISCOVERS ADDITIONAL MANHOLES OR DISCREPANCIES IN MANHOLE LOCATIONS, NOTIFY THE US ARMY CORPS OF ENGINEERS WASHINGTON AQUEDUCT (USACE-WA) POINT OF CONTACT (POC) AT 202-345-2734 IMMEDIATELY.
9. THE ENTIRE LIMITS OF WORK FOR THIS PROJECT IS SUBJECT TO A 6-TON WEIGHT LIMIT. THE WEIGHT RESTRICTION APPLY TO BOTH THE OLD CONDUIT (TYPICALLY UNDER MACARTHUR BLVD.) AND THE NEW CONDUIT (TYPICALLY UNDER THE SHARED USED PATH) AS WELL AS THE AREAS BETWEEN THE CONDUITS AND 20 FEET TO EITHER SIDE OF EACH CONDUIT. SEE UT-SERIES FOR CONDUIT EXTENTS. THE ALLOWABLE WEIGHT LIMIT IS 6-TONS FOR ANY VEHICLE OR MACHINE UNLESS AN OVERWEIGHT VEHICLE PERMIT IS ACQUIRED FROM THE WASHINGTON AQUEDUCT. AN OVERWEIGHT VEHICLE PERMIT IS REQUIRED FOR VEHICLES THAT ARE OVER 6 TONS AND UNDER 15 TONS. VEHICLES AND MACHINES OVER 15 TONS ARE NOT PERMITTED AND WILL NOT BE CONSIDERED FOR A PERMIT. TO APPLY FOR A PERMIT, CONTACT WAOVERWEIGHTPERMITS@USACE.ARMY.MIL AT LEAST 5 DAYS IN ADVANCE.
10. US ARMY CORPS OF ENGINEERS MUST BE CONTACTED AT LEAST 1 WEEK IN ADVANCE OF WORK TO SCHEDULE OVERSIGHT. WASHINGTON AQUEDUCT TO INSPECT CONSTRUCTION WORK FOR THIS WO. NOTIFY WA AT LEAST 1 WEEK IN ADVANCE BEFORE STARTING WORK AT ROBIN.A.WHITE@USACE.ARMY.MIL AND DERECK.SMITH@USACE.ARMY.MIL.
11. THE FOLLOWING REQUIREMENTS APPLY FOR ALL WORK ON THIS PROJECT:
    a. HAND DIGGING OR AIR-VACUUM EXCAVATION IS REQUIRED FOR ALL EXCAVATIONS WITHIN 5 HORIZONTAL FEET OF THE EDGE OF THE CONDUITS AND ALL AREAS BETWEEN THE CONDUITS.
    b. OPERATING EQUIPMENT IN VIBRATORY MODE IS NOT PERMITTED WITHIN THE LIMITS OF WORK FOR THIS PROJECT.
    c. NO BLASTING IS PERMITTED WITHIN 150 FEET OF CONDUITS.
    d. SIGNIFICANT GROUND DISTURBANCE IS NOT ALLOWED WITHIN 20 FEET OF EITHER SIDE OF EACH CONDUIT. ANY INSTANCES OF GROUND DISTURBANCE WILL REQUIRE FURTHER DISCUSSION AND REVIEW.
12. REMOVAL OF EXISTING GUARDRAIL POSTS SHALL BE DONE BY HAND-DIGGING OR AIR EXCAVATION TO MINIMIZE DISTURBANCE.

THE FOLLOWING MONTGOMERY COUNTY STANDARDS ARE REQUIRED FOR THIS PROJECT:

MC-100.01 - COMBINATION CONCRETE CURB AND GUTTER - TYPE A
MC-110.01 - RESIDENTIAL SIDEWALK
MC-301.01 - RESIDENTIAL DRIVEWAY
MC-301.03 - RESIDENTIAL DRIVEWAY OPEN SECTION ROAD
MC-500.01 - DRIVEWAY ENDWALL OPEN SECTION ROAD

THE MOST CURRENT VERSION OF THESE STANDARDS CAN BE ACCESSED AT:
https://www.montgomerycountymd.gov/dot-dte/common/standards.html

THE FOLLOWING MARYLAND STATE HIGHWAY DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT:

MD-354.01 - STANDARD TYPE C ENDWALL METAL OR CONCRETE ROUND PIPE
MD-368.02 - STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE
MD-374.62 - PRECAST OR CAST IN PLACE CIRCULAR COG INLETS
MD-374.63 - PRECAST OR CAST IN PLACE CIRCULAR COS INLETS
MD-374.65 - DEPRESSED CONCRETE GUTTER PAN FOR COT AND COS INLETS
MD-374.68 - PRECAST OR CAST IN PLACE COG/COS OPENING FOR 8" CURB
MD-605.12 - TRAFFIC BARRIER TWO-SIDED
MD-605.22 - TRAFFIC BARRIER W-BEAM SINGLE FACE
MD-605.28 - TRAFFIC BARRIER W-BEAM DOUBLE FACED MEDIAN BARRIER
MD-655.40 - DETECTABLE WARNING SURFACES
MD-690.01 - CHAINLINK FENCE

FOR ALL SHA STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:
http://apps.roads.maryland.gov/businesswithsha/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/index.asp

THE FOLLOWING MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL ARE REQUIRED FOR THIS PROJECT:

DETAIL D-4-1-A - ROCK OUTLET PROTECTION I
DETAIL D-4-1-B - ROCK OUTLET PROTECTION II
DETAIL D-4-1-C - ROCK OUTLET PROTECTION III

THE MOST CURRENT VERSION OF THESE STANDARDS CAN BE ACCESSED AT:
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
https://mde.maryland.gov/programs/water/stormwatermanagementprogram/pages/2011_esc_details.aspx

EARTHWORK SUMMARY

PROPOSAL QUANTITY

CLASS I EXCAVATION

CUT (FROM CROSS SECTIONS)	7,038	CY
PAVEMENT REMOVAL	2,905	CY
TOPSOIL UNDER FILL	0	CY
ROOT MAT UNDER FILL	0	CY
PLUS CUT (FROM SWM AREA)	0	CY
TOTAL CLASS I EXCAVATION	9,943	CY

9,943 CY

CLASS IA EXCAVATION (ESTIMATED)

MUCK REMOVAL (IF ANY)	0	CY
UNDERCUTTING	0	CY
TOTAL CLASS IA EXCAVATION	0	CY

0 CY

CLASS 2 EXCAVATION

CUT (FROM CROSS SECTIONS)	1,441	CY
TOTAL CLASS 2 EXCAVATION	0	CY

1,441 CY

EXCAVATION AVAILABLE FOR EMBANKMENT

TOTAL CLASS I EXCAVATION + CLASS 2 EXCAVATION	11,384	CY
MINUS:		
TOPSOIL (REMOVED IN CUT)	0	CY
TOPSOIL (REMOVED UNDER FILL)	0	CY
ROOT MAT (REMOVED IN CUT)	0	CY
ROOT MAT (REMOVED IN FILL)	0	CY
PAVEMENT REMOVAL	(2,905)	CY
CUT ADJUSTED	8,479	CY
CUT DENSIFIED (x 0.83)	7,037	CY
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	7,037	CY

EMBANKMENT REQUIRED

FILL (FROM CROSS SECTIONS)	714	CY
REFILL FOR TOPSOIL UNDER FILL	0	CY
REFILL FOR ROOT MAT UNDER FILL	0	CY
FILL (FROM SWM AREA)	0	CY
TOTAL	714	CY
MINUS EXCAVATION AVAILABLE FOR EMBANKMENT	7,037	CY
ADJUSTED TOTAL	(6,323)	CY
PLUS DENSIFICATION FACTOR (x 1.20)	(7,587)	CY
MINUS SELECT BORROW	0	CY
COMMON BORROW	0	CY
SELECT BORROW	0	CY

0 CY

0 CY

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

GN-03
NOTES & EARTHWORK SUMMARY
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

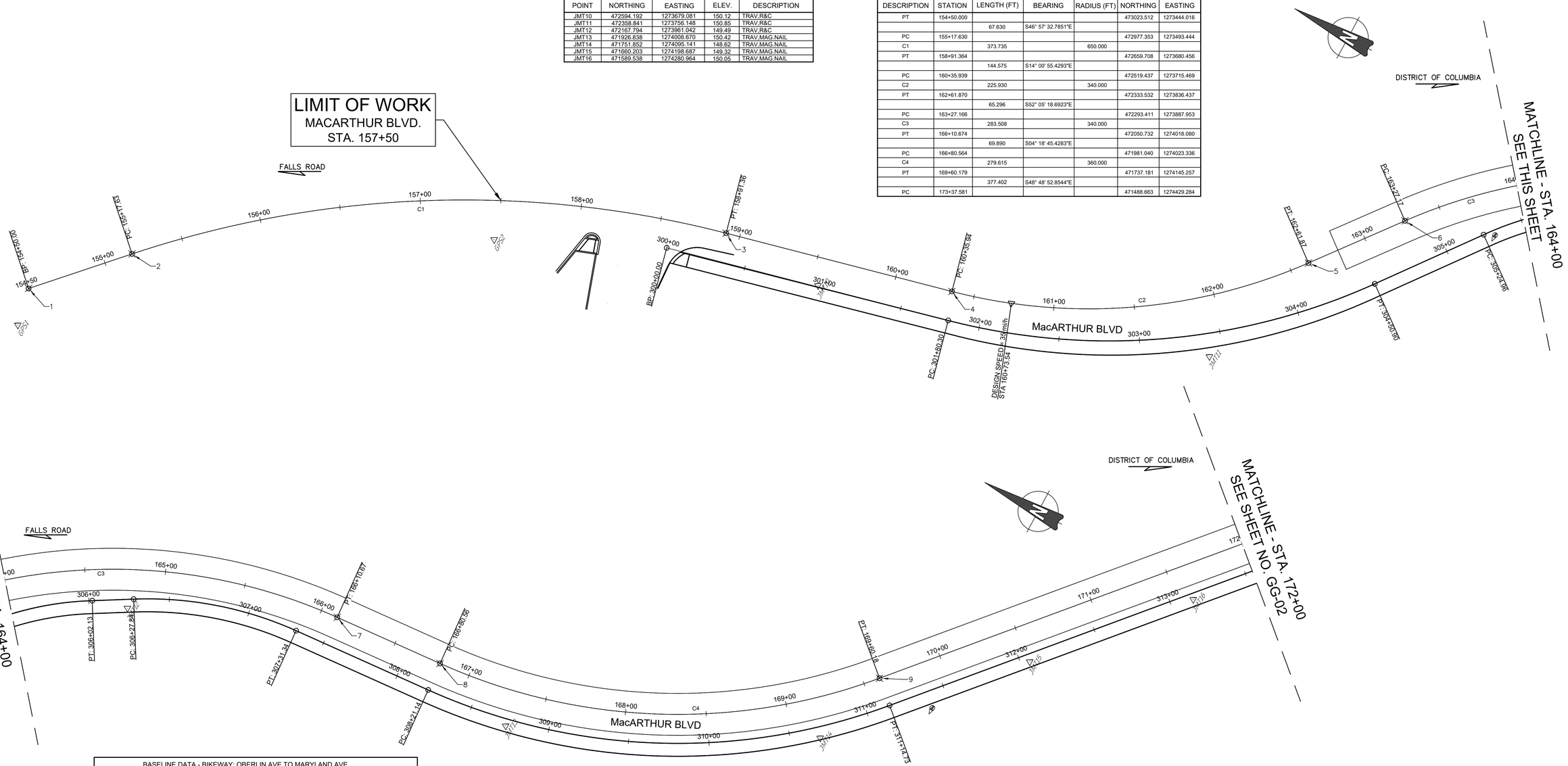
CIP No. : 500718 SHEET 3 of 285

(RText (RText)

JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT10	472594.192	1273679.081	150.12	TRAV,R&C
JMT11	472358.841	1273756.148	150.85	TRAV,R&C
JMT12	472167.794	1273961.042	149.49	TRAV,R&C
JMT13	471926.838	1274008.670	150.42	TRAV,MAG.NAIL
JMT14	471751.852	1274095.141	148.62	TRAV,MAG.NAIL
JMT15	471660.203	1274198.687	149.32	TRAV,MAG.NAIL
JMT16	471589.538	1274280.964	150.05	TRAV,MAG.NAIL

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	154+50.000				473023.512	1273444.016
		67.630	S46° 57' 32.7851"E			
PC	155+17.630				472977.353	1273493.444
C1		373.735		650.000		
PT	158+91.364				472659.708	1273680.456
		144.575	S14° 00' 55.4293"E			
PC	160+35.939				472519.437	1273715.469
C2		225.930		340.000		
PT	162+61.870				472333.532	1273836.437
		65.296	S52° 05' 18.6923"E			
PC	163+27.166				472293.411	1273887.953
C3		283.508		340.000		
PT	166+10.674				472050.732	1274018.080
		69.890	S04° 18' 45.4283"E			
PC	166+80.564				471981.040	1274023.336
C4		279.615		360.000		
PT	169+60.179				471737.181	1274145.257
		377.402	S48° 48' 52.8544"E			
PC	173+37.581				471488.663	1274429.284

BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	300+00.000				472687.802	1273654.891
		180.301	S14° 00' 55.4293"E			
PC	301+80.301				472512.868	1273698.557
		270.599		400.000		
PT	304+50.900				472291.231	1273844.675
		74.063	S52° 46' 33.1660"E			
PC	305+24.963				472246.428	1273903.649
		77.170		200.000		
PT	306+02.133				472189.186	1273954.690
		25.706	S30° 40' 05.7559"E			
PC	306+27.839				472167.076	1273967.801
		103.498		225.000		
PT	307+31.337				472069.231	1273998.634
		89.799	S04° 18' 45.4283"E			
PC	308+21.136				471979.686	1274005.387
		293.595		378.000		
PT	311+14.731				471723.635	1274133.405
		380.303	S48° 48' 52.8544"E			
PC	314+95.034				471473.206	1274419.614



DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 157+50 TO STA. 172+00

GG-01
GRADES AND GEOMETRICS
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

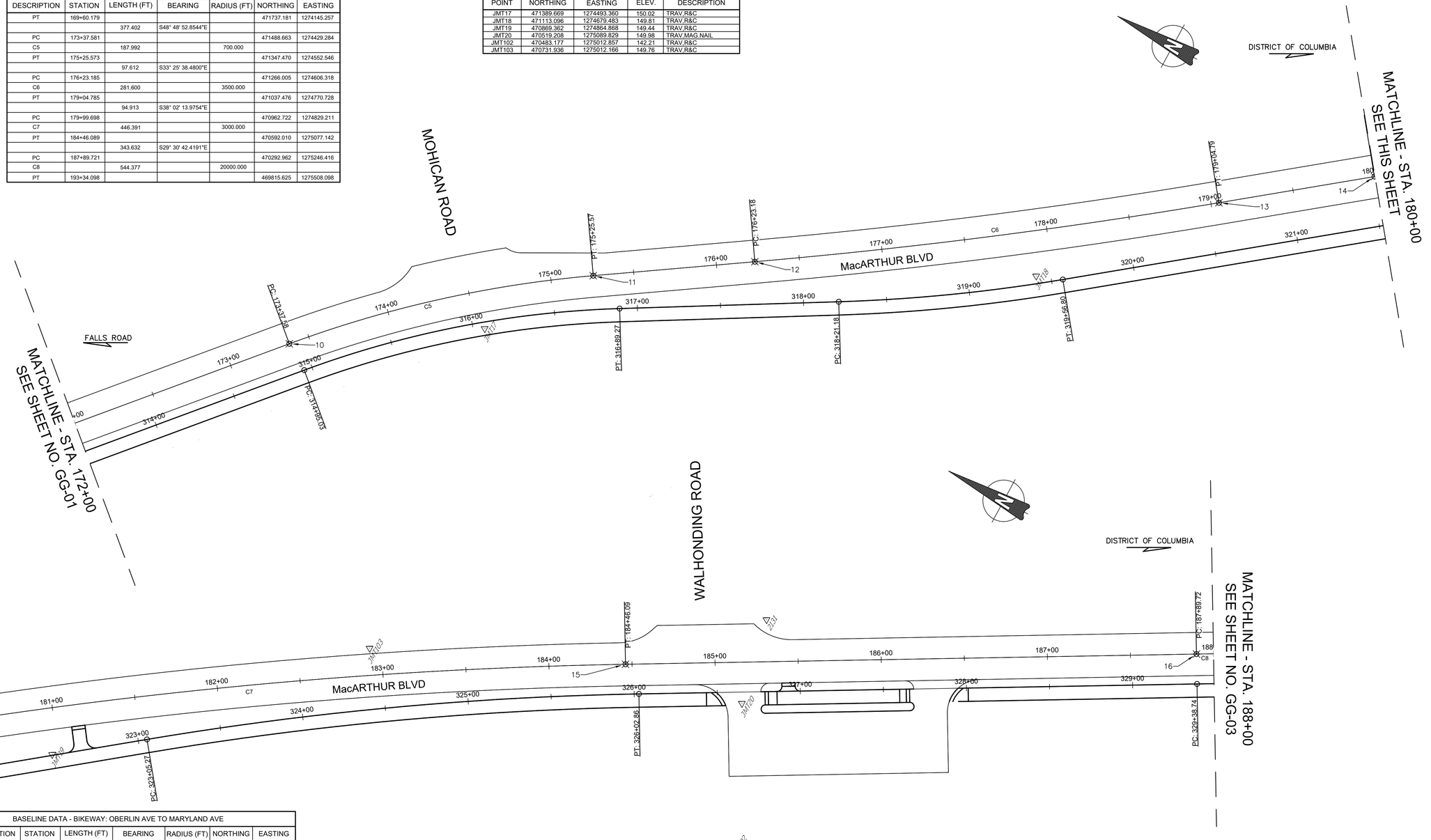
CIP No. : 500718

SHEET 4 of 285

RText (RText)

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	169+60.179				471737.181	1274145.257
		377.402	S48° 48' 52.8544"E			
PC	173+37.581				471488.663	1274429.284
C5		187.992		700.000		
PT	175+25.573				471347.470	1274552.546
		97.612	S33° 25' 38.4800"E			
PC	176+23.185				471266.005	1274606.318
C6		281.600		3500.000		
PT	179+04.785				471037.476	1274770.728
		94.913	S38° 02' 13.9754"E			
PC	179+99.698				470962.722	1274829.211
C7		446.391		3000.000		
PT	184+46.089				470592.010	1275077.142
		343.632	S29° 30' 42.4191"E			
PC	187+89.721				470292.962	1275246.416
C8		544.377		20000.000		
PT	193+34.098				469815.625	1275508.098

JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT17	471389.669	1274493.360	150.02	TRAV,R&C
JMT18	471113.096	1274679.483	149.81	TRAV,R&C
JMT19	470869.362	1274864.868	149.44	TRAV,R&C
JMT20	470519.208	1275089.829	149.98	TRAV,MAG NAIL
JMT102	470483.177	1275012.857	142.21	TRAV,R&C
JMT103	470731.936	1275012.166	149.76	TRAV,R&C



BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	311+14.731				471723.635	1274133.405
		380.303	S48° 48' 52.8544"E			
PC	314+95.034				471473.206	1274419.614
		194.235		600.000		
PT	316+89.269				471324.071	1274542.730
		131.913	S30° 15' 59.7708"E			
PC	318+21.182				471210.139	1274609.217
		135.623		1000.000		
PT	319+56.805				471097.990	1274685.296
		348.461	S38° 02' 13.9754"E			
PC	323+05.266				470823.539	1274900.008
		297.594		2000.000		
PT	326+02.859				470576.398	1275065.296
		335.881	S29° 30' 42.4191"E			
PC	329+38.741				470284.095	1275230.752
		543.887		19982.000		
PT	334+82.628				469807.188	1275492.198

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 172+00 TO STA. 188+00

GG-02
GRADES AND GEOMETRICS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

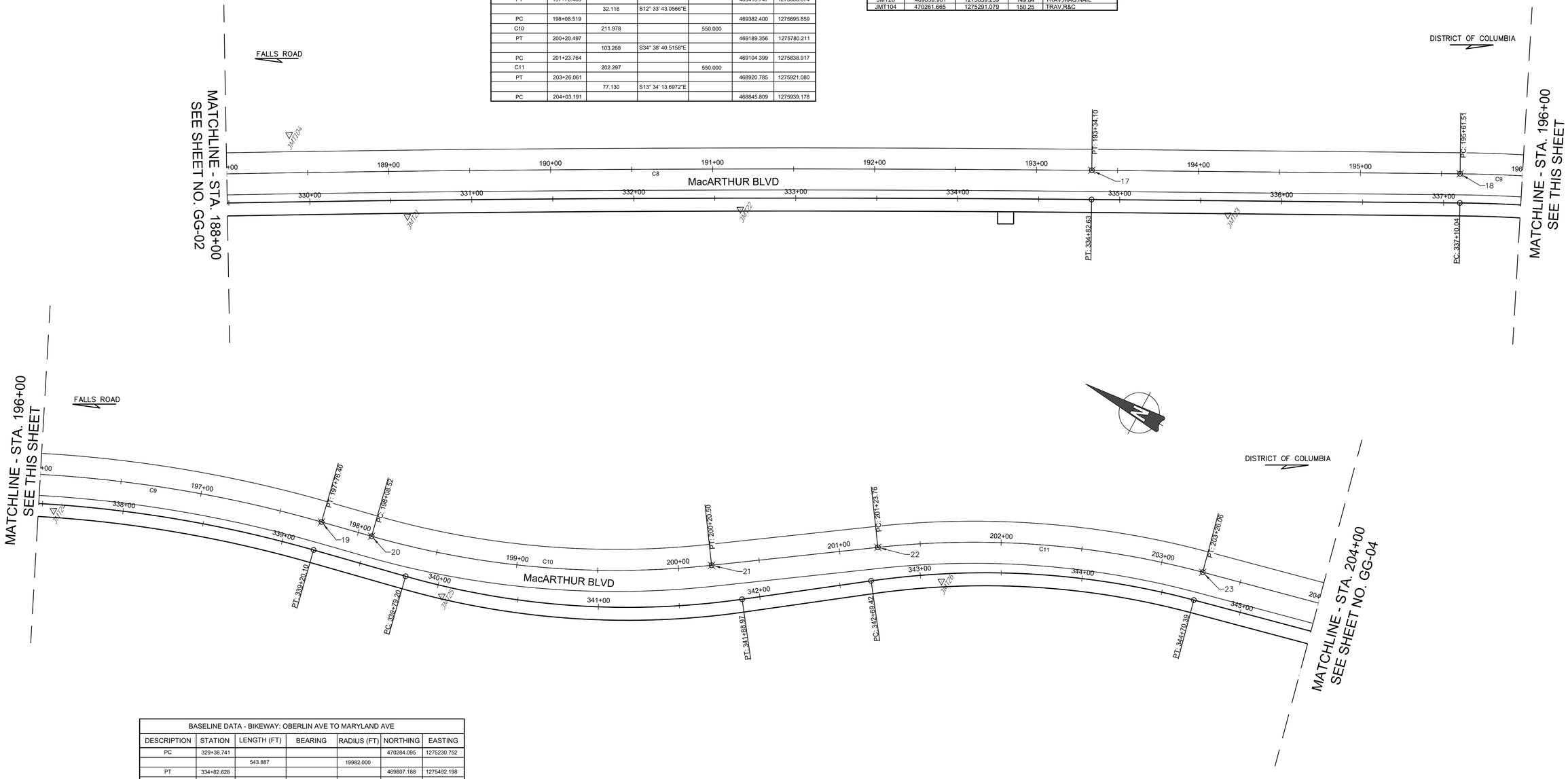
SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 5 of 285

RText (RText)

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	187+89.721				470292.962	1275246.416
C8		544.377		20000.000		
PT	193+34.098				469815.625	1275508.098
		227.416	S27° 57' 08.1302"E			
PC	195+61.514				469614.740	1275614.696
C9		214.889		800.000		
PT	197+76.403				469413.747	1275688.874
		32.116	S12° 33' 43.0566"E			
PC	198+08.519				469382.400	1275695.859
C10		211.978		550.000		
PT	200+20.497				469189.356	1275780.211
		103.268	S34° 38' 40.5158"E			
PC	201+23.764				469104.399	1275838.917
C11		202.297		550.000		
PT	203+26.061				468920.785	1275921.080
		77.130	S13° 34' 13.6972"E			
PC	204+03.191				468845.809	1275939.178

JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT21	470173.438	1275281.526	149.18	TRAV
JMT22	469994.908	1275383.515	149.84	TRAV,MAG.NAIL
JMT23	469728.657	1275523.942	149.47	TRAV,MAG.NAIL
JMT24	469562.591	1275616.151	149.37	TRAV,MAG.NAIL
JMT25	469326.648	1275684.082	149.27	TRAV,MAG.NAIL
JMT26	469059.961	1275839.259	149.84	TRAV,MAG.NAIL
JMT104	470261.665	1275291.079	150.25	TRAV,R&C



BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	329+38.741				470284.095	1275230.752
		543.887		19982.000		
PT	334+82.628				469807.188	1275492.198
		227.416	S27° 57' 08.1302"E			
PC	337+10.043				469606.302	1275598.795
		210.054		782.000		
PT	339+20.098				469409.832	1275671.305
		59.099	S12° 33' 43.0566"E			
PC	339+79.196				469352.148	1275684.159
		209.769		500.000		
PT	341+88.966				469162.785	1275770.779
		80.456	S36° 35' 59.0550"E			
PC	342+69.421				469098.194	1275818.749
		200.968		500.000		
PT	344+70.390				468917.404	1275903.379
		77.996	S13° 34' 13.6972"E			
PC	345+48.386				468841.585	1275921.681

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 188+00 TO STA. 204+00

GG-03
GRADES AND GEOMETRICS

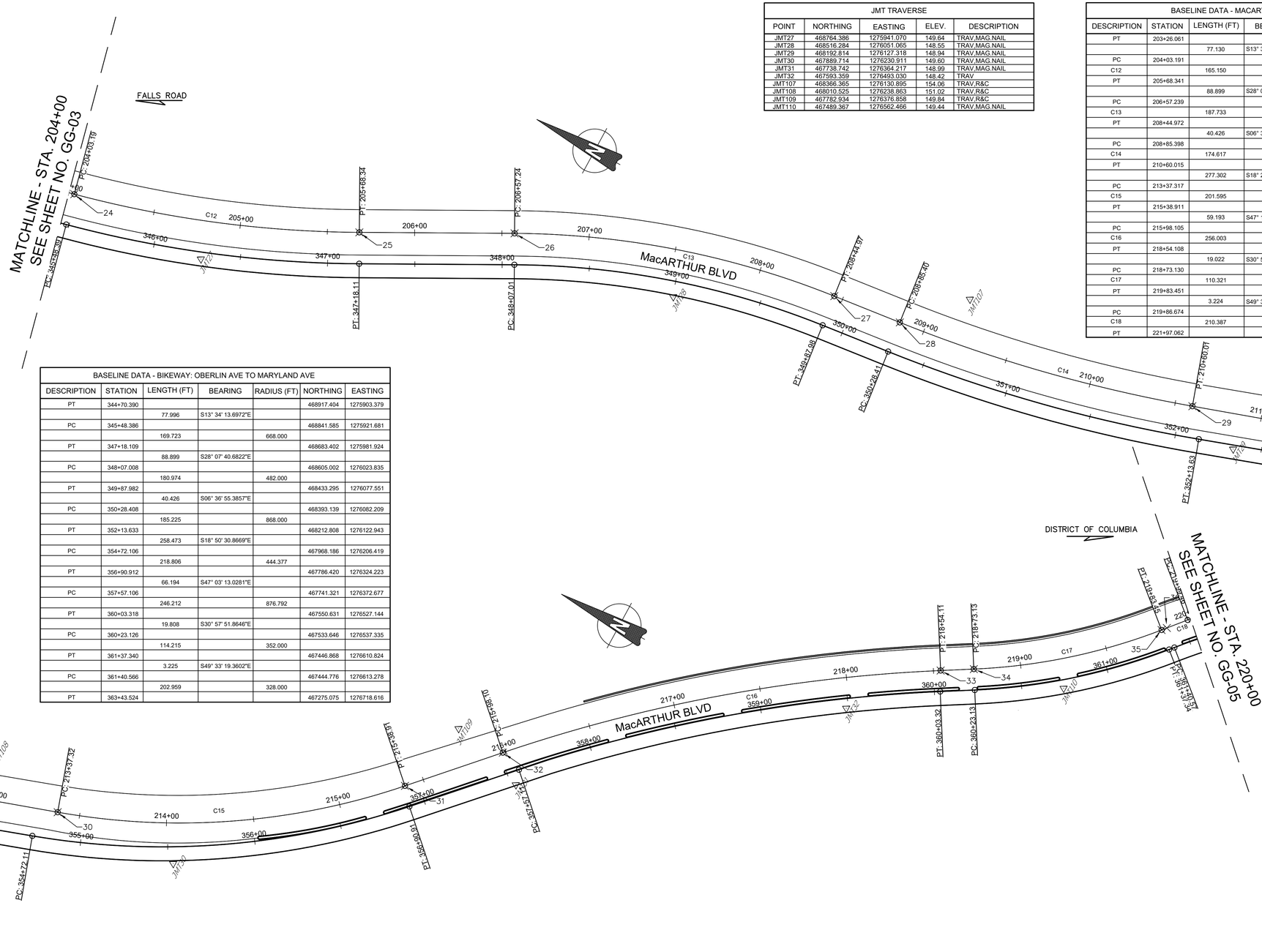
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 6 of 285

RText (RText)



JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT27	468764.386	1275941.070	149.64	TRAV,MAG,NAIL
JMT28	468516.284	1276051.065	148.55	TRAV,MAG,NAIL
JMT29	468192.814	1276127.318	148.94	TRAV,MAG,NAIL
JMT30	467889.714	1276230.911	149.60	TRAV,MAG,NAIL
JMT31	467738.742	1276364.217	148.99	TRAV,MAG,NAIL
JMT32	467593.359	1276493.030	148.42	TRAV
JMT107	468366.365	1276130.895	154.06	TRAV,R&C
JMT108	468010.525	1276238.863	151.02	TRAV,R&C
JMT109	467782.934	1276376.858	149.84	TRAV,R&C
JMT110	467489.367	1276562.466	149.44	TRAV,MAG,NAIL

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	203+26.061				468920.785	1275921.080
		77.130	S13° 34' 13.6972"E			
PC	204+03.191				468845.809	1275939.178
C12		165.150		650.000		
PT	205+68.341				468691.888	1275997.798
		88.899	S28° 07' 40.6822"E			
PC	206+57.239				468613.488	1276039.709
C13		187.733		500.000		
PT	208+44.972				468435.369	1276095.432
		40.426	S06° 36' 55.3857"E			
PC	208+85.398				468395.212	1276100.089
C14		174.617		850.000		
PT	210+60.015				468225.035	1276137.818
		277.302	S18° 23' 08.6369"E			
PC	213+37.317				467961.888	1276225.283
C15		201.595		400.000		
PT	215+38.911				467794.267	1276333.406
		59.193	S47° 15' 43.3773"E			
PC	215+98.105				467754.095	1276376.881
C16		256.003		900.000		
PT	218+54.108				467556.131	1276537.838
		19.022	S30° 57' 51.8646"E			
PC	218+73.130				467539.820	1276547.625
C17		110.321		340.000		
PT	219+83.451				467456.001	1276618.608
		3.224	S49° 33' 19.3602"E			
PC	219+86.674				467453.910	1276621.062
C18		210.387		340.000		
PT	221+97.062				467277.996	1276730.254

BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	344+70.390				468917.404	1275903.379
		77.996	S13° 34' 13.6972"E			
PC	345+48.386				468841.585	1275921.681
		169.723		668.000		
PT	347+18.109				468683.402	1275981.924
		88.899	S28° 07' 40.6822"E			
PC	348+07.008				468605.002	1276023.835
		180.974		482.000		
PT	349+87.982				468433.295	1276077.551
		40.426	S06° 36' 55.3857"E			
PC	350+28.408				468393.139	1276082.209
		185.225		868.000		
PT	352+13.633				468212.808	1276122.943
		258.473	S18° 50' 30.8669"E			
PC	354+72.106				467968.186	1276206.419
		218.806		444.377		
PT	356+90.912				467786.420	1276324.223
		66.194	S47° 03' 13.0281"E			
PC	357+57.106				467741.321	1276372.677
		246.212		876.792		
PT	360+03.318				467550.631	1276527.144
		19.808	S30° 57' 51.8646"E			
PC	360+23.126				467533.646	1276537.335
		114.215		352.000		
PT	361+37.340				467446.868	1276610.824
		3.225	S49° 33' 19.3602"E			
PC	361+40.566				467444.776	1276613.278
		202.959		328.000		
PT	363+43.524				467275.075	1276718.616

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 204+00 TO STA. 220+00

GG-04
GRADES AND GEOMETRICS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

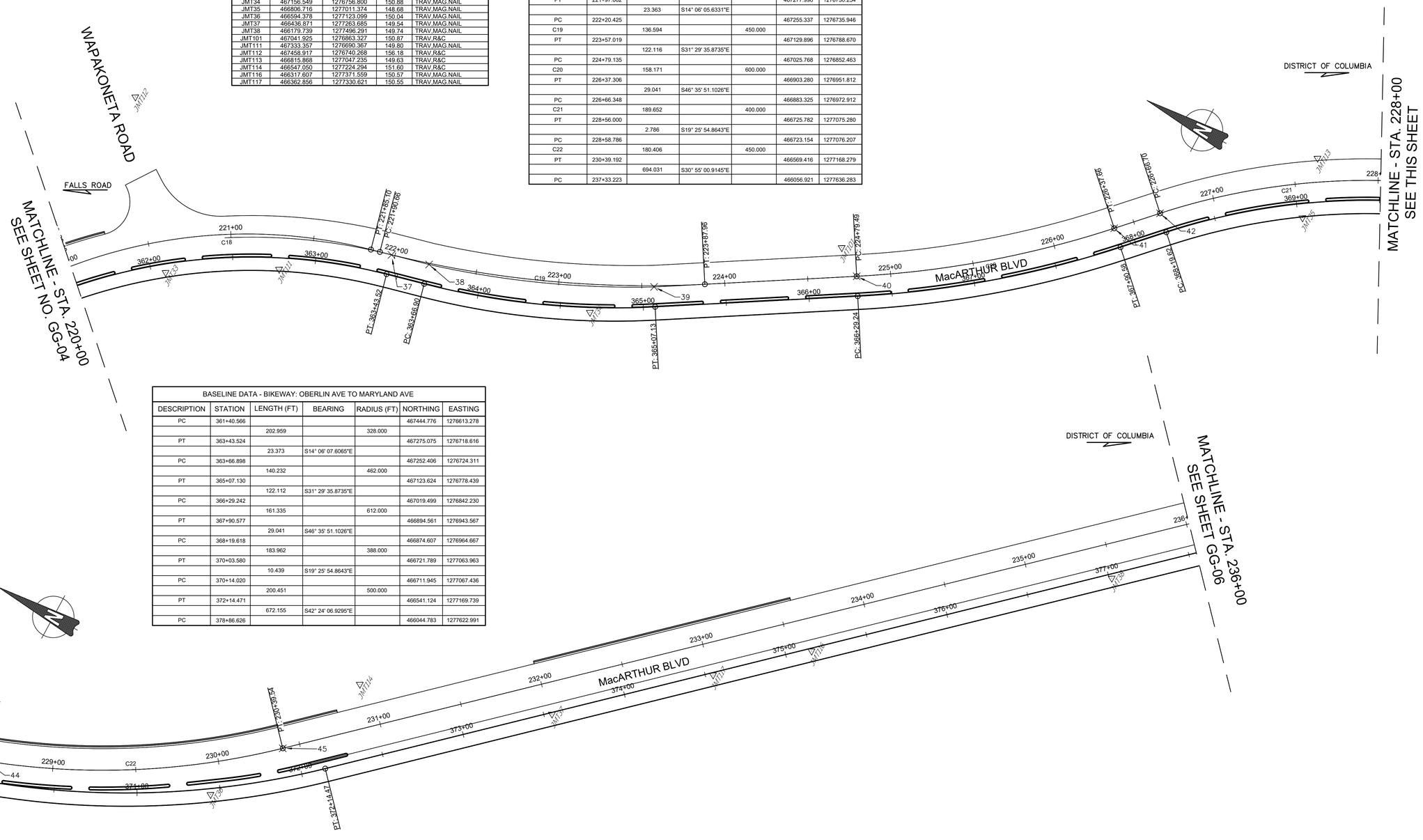
CIP No. : 500718 SHEET 7 of 285

RText (RText)

JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT33	467392.453	1276656.078	149.45	TRAV,MAG,NAIL
JMT34	467156.549	1276756.800	150.88	TRAV,MAG,NAIL
JMT35	466806.716	1277011.374	148.68	TRAV,MAG,NAIL
JMT36	466594.378	1277123.099	150.04	TRAV,MAG,NAIL
JMT37	466436.871	1277263.685	149.54	TRAV,MAG,NAIL
JMT38	466179.739	1277496.291	149.74	TRAV,MAG,NAIL
JMT101	467041.925	1276863.327	150.87	TRAV,R&C
JMT111	467333.357	1276690.367	149.80	TRAV,MAG,NAIL
JMT112	467458.917	1276740.268	156.18	TRAV,R&C
JMT113	466815.868	1277047.235	149.63	TRAV,R&C
JMT114	466547.050	1277224.294	151.60	TRAV,R&C
JMT116	466317.607	1277371.559	150.57	TRAV,MAG,NAIL
JMT117	466362.856	1277330.621	150.55	TRAV,MAG,NAIL

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	219+86.674				467453.910	1276621.062
C18		210.387		340.000		
PT	221+97.062				467277.996	1276730.254
		23.363	S14° 06' 05.6331"E			
PC	222+20.425				467255.337	1276735.946
C19		136.594		450.000		
PT	223+57.019				467129.896	1276788.670
		122.116	S31° 29' 35.8735"E			
PC	224+79.135				467025.768	1276852.463
C20		158.171		600.000		
PT	226+37.306				466903.280	1276951.812
		29.041	S46° 35' 51.1026"E			
PC	226+66.348				466883.325	1276972.912
C21		189.652		400.000		
PT	228+56.000				466725.782	1277075.280
		2.786	S19° 25' 54.8643"E			
PC	228+58.786				466723.154	1277076.207
C22		180.406		450.000		
PT	230+39.192				466569.416	1277168.279
		694.031	S30° 55' 00.9145"E			
PC	237+33.223				466056.921	1277636.283

BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	361+40.566				467444.776	1276613.278
		202.959		328.000		
PT	363+43.524				467275.075	1276718.616
		23.373	S14° 06' 07.6065"E			
PC	363+66.898				467252.406	1276724.311
		140.232		462.000		
PT	365+07.130				467123.624	1276778.439
		122.112	S31° 29' 35.8735"E			
PC	366+29.242				467019.499	1276842.230
		161.335		612.000		
PT	367+90.577				466894.561	1276943.567
		29.041	S46° 35' 51.1026"E			
PC	368+19.618				466874.607	1276964.667
		183.962		388.000		
PT	370+03.580				466721.789	1277063.963
		10.439	S19° 25' 54.8643"E			
PC	370+14.020				466711.945	1277067.436
		200.451		500.000		
PT	372+14.471				466541.124	1277169.739
		672.155	S42° 24' 06.9295"E			
PC	378+86.626				466044.783	1277622.991



DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 220+00 TO STA. 236+00

GG-05
GRADES AND GEOMETRICS

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

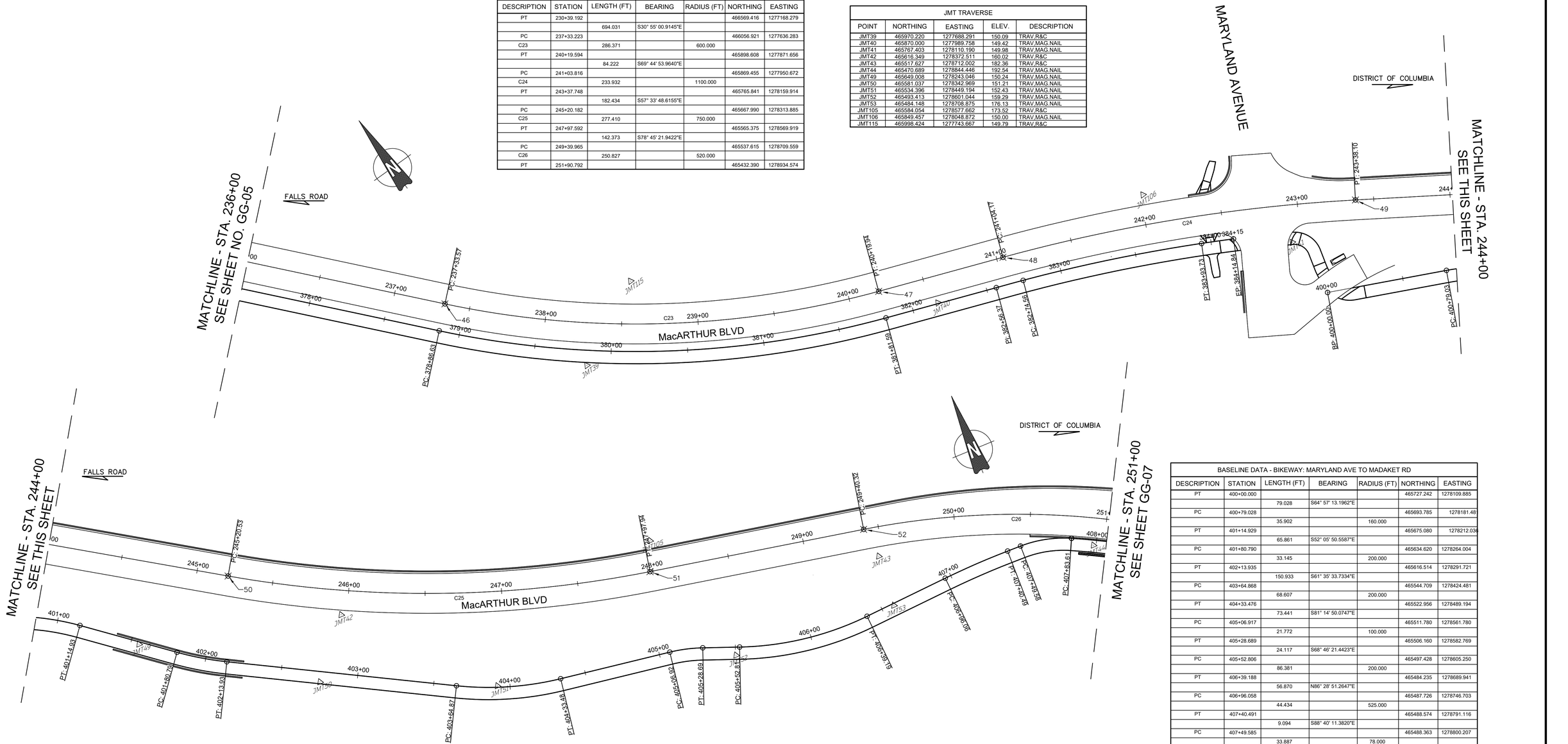
SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 8 of 285

RText (RText)

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	230+39.192				466569.416	1277168.279
		694.031	S30° 55' 00.9145"E			
PC	237+33.223				466056.921	1277636.283
C23		286.371		600.000		
PT	240+19.594				465898.608	1277871.656
		84.222	S69° 44' 53.9640"E			
PC	241+03.816				465869.455	1277950.672
C24		233.932		1100.000		
PT	243+37.748				465765.841	1278159.914
		182.434	S57° 33' 48.6155"E			
PC	245+20.182				465667.990	1278313.885
C25		277.410		750.000		
PT	247+97.592				465565.375	1278569.919
		142.373	S78° 45' 21.9422"E			
PC	249+39.965				465537.615	1278709.559
C26		250.827		520.000		
PT	251+90.792				465432.390	1278934.574

JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT39	465970.220	1277688.291	150.09	TRAV.R&C
JMT40	465870.000	1277989.758	149.42	TRAV.MAG.NAIL
JMT41	465767.403	1278110.190	149.98	TRAV.MAG.NAIL
JMT42	465616.349	1278372.511	160.02	TRAV.R&C
JMT43	465517.627	1278712.002	182.36	TRAV.R&C
JMT44	465470.689	1278844.446	192.54	TRAV.MAG.NAIL
JMT49	465649.008	1278243.046	150.24	TRAV.MAG.NAIL
JMT50	465581.037	1278342.969	151.21	TRAV.MAG.NAIL
JMT51	465534.396	1278449.194	152.43	TRAV.MAG.NAIL
JMT52	465493.413	1278601.044	159.29	TRAV.MAG.NAIL
JMT53	465484.148	1278708.875	176.13	TRAV.MAG.NAIL
JMT105	465584.054	1278577.662	173.52	TRAV.R&C
JMT106	465849.457	1278048.872	150.00	TRAV.MAG.NAIL
JMT115	465998.424	1277743.667	149.79	TRAV.R&C



BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	372+14.471				466541.124	1277169.739
		672.155	S42° 24' 06.9295"E			
PC	378+86.626				466044.783	1277622.991
		294.962		618.000		
PT	381+81.588				465881.721	1277865.426
		74.779	S69° 44' 53.9933"E			
PT	382+56.368				465855.837	1277935.582
		18.189	S69° 30' 47.0648"E			
PC	382+74.557				465849.471	1277952.621
		119.175		1000.000		
PT	383+93.731				465801.215	1278061.511
		21.107	S62° 41' 05.5389"E			
PT	384+14.838				465791.529	1278080.265

BASELINE DATA - BIKEWAY: MARYLAND AVE TO MADAKET RD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	400+00.000				466727.242	1278109.885
		79.028	S64° 57' 13.1962"E			
PC	400+79.028				465693.785	1278181.48
		35.902		160.000		
PT	401+14.929				465675.080	1278212.036
		65.861	S52° 05' 50.5587"E			
PC	401+80.790				465634.620	1278264.004
		33.145		200.000		
PT	402+13.935				465616.514	1278291.721
		150.933	S61° 35' 33.7334"E			
PC	403+64.868				465544.709	1278424.481
		68.607		200.000		
PT	404+33.476				465522.956	1278489.194
		73.441	S81° 14' 50.0747"E			
PC	405+06.917				465511.780	1278561.780
		21.772		100.000		
PT	405+28.689				465506.160	1278582.769
		24.117	S68° 46' 21.4423"E			
PC	405+52.806				465497.428	1278605.250
		86.381		200.000		
PT	406+39.188				465484.235	1278689.941
		56.870	N86° 28' 51.2647"E			
PC	406+96.058				465487.726	1278746.703
		44.434		525.000		
PT	407+40.491				465488.574	1278791.116
		9.094	S88° 40' 11.3820"E			
PC	407+49.585				465488.363	1278800.207
		33.887		78.000		
PT	407+83.472				465480.357	1278832.861
		0.138	S63° 46' 40.5232"E			
PC	407+83.610				465480.296	1278832.984
		107.300		485.650		
PT	408+90.910				465422.680	1278923.244

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 236+00 TO STA. 251+00

GG-06
GRADES AND GEOMETRICS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

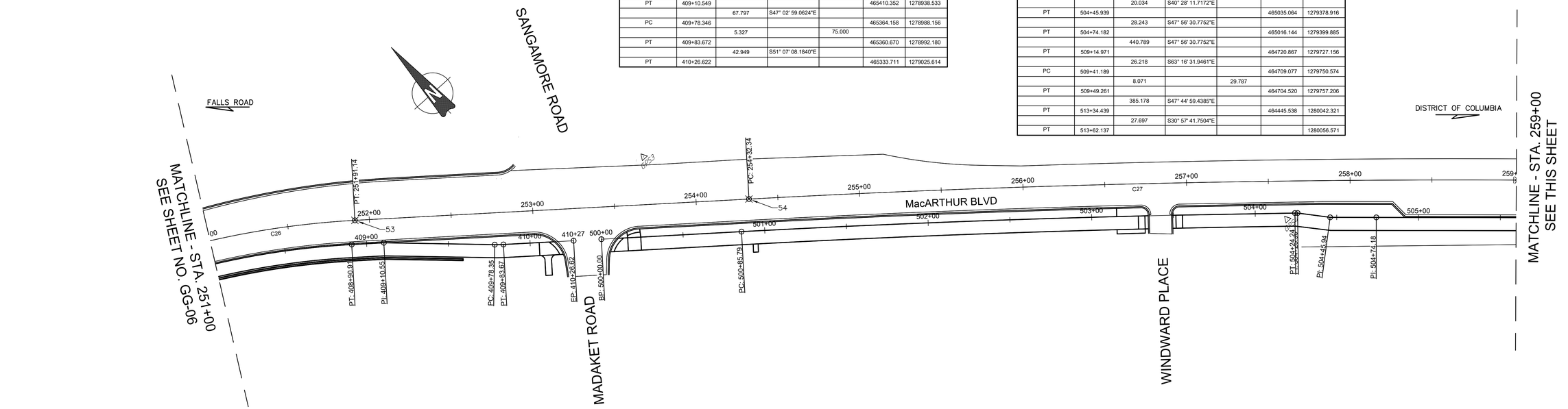
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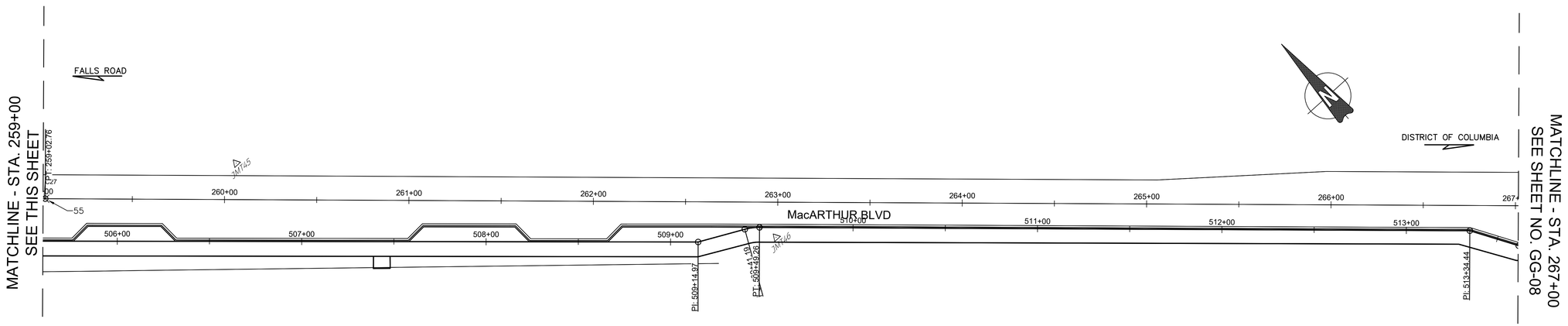
CIP No. : 500718 SHEET 9 of 285

RText (RText)

BASELINE DATA - BIKEWAY: MARYLAND AVE TO MADAKET RD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	407+83.610				465480.296	1278832.984
		107.300		485.650		
PT	408+90.910				465422.680	1278923.244
		19.640	S51° 07' 08.1840"E			
PT	409+10.549				465410.352	1278938.533
		67.797	S47° 02' 59.0624"E			
PC	409+78.346				465364.158	1278988.156
		5.327		75.000		
PT	409+83.672				465360.670	1278992.180
		42.949	S51° 07' 08.1840"E			
PT	410+26.622				465333.711	1279025.614

BASELINE DATA - BIKEWAY: MADAKET RD TO PARKING LOT						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	500+00.000				465323.044	1279038.842
		85.785	S51° 07' 08.1840"E			
PC	500+85.785				465269.196	1279105.622
		338.454		8249.475		
PT	504+24.239				465051.403	1279364.660
		1.666	S48° 46' 05.6874"E			
PT	504+25.905				465050.305	1279365.913
		20.034	S40° 28' 11.7172"E			
PT	504+45.939				465035.064	1279378.916
		28.243	S47° 56' 30.7752"E			
PT	504+74.182				465016.144	1279399.885
		440.789	S47° 56' 30.7752"E			
PT	509+14.971				464720.867	1279727.156
		26.218	S63° 16' 31.9461"E			
PC	509+41.189				464709.077	1279750.574
		8.071		29.787		
PT	509+49.261				464704.520	1279757.206
		385.178	S47° 44' 59.4385"E			
PT	513+34.439				464445.538	1280042.321
		27.697	S30° 57' 41.7504"E			
PT	513+62.137					1280056.571





JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT45	464920.174	1279569.485	214.16	TRAV,R&C
JMT46	464694.512	1279760.316	216.57	TRAV,R&C

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PC	249+39.965				465537.615	1278709.559
C26		250.827		520.000		
PT	251+90.792				465432.390	1278934.574
		241.202	S51° 07' 08.1840"E			
PC	254+31.994				465280.986	1279122.337
C27		470.415		8000.000		
PT	259+02.408				464975.111	1279479.642
		996.575	S47° 44' 59.4385"E			
PC	268+98.983				464305.045	1280217.323

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 251+00 TO STA. 267+00

GG-07
GRADES AND GEOMETRICS

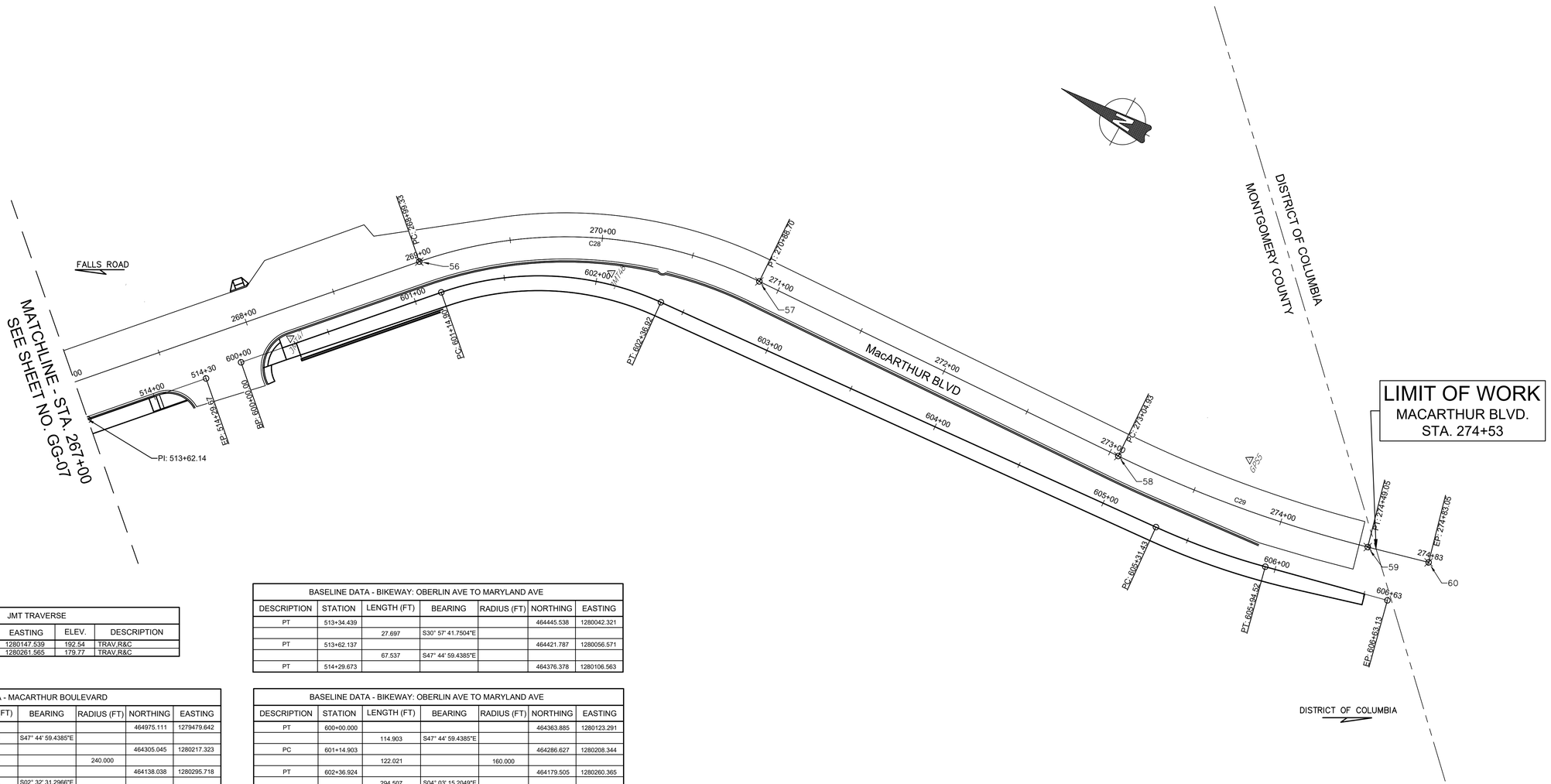
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 10 of 285

RText (RText)



JMT TRAVERSE				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT47	464346.705	1280147.539	192.54	TRAV,R&C
JMT48	464210.661	1280261.565	179.77	TRAV,R&C

BASELINE DATA - MACARTHUR BOULEVARD						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	259+02.408				464975.111	1279479.642
		996.575	S47° 44' 59.4385"E			
PC	268+98.983				464305.045	1280217.323
C28		189.366		240.000		
PT	270+88.349				464138.038	1280295.718
		216.234	S02° 32' 31.2966"E			
PC	273+04.583				463922.016	1280305.309
C29		144.116		700.000		
PT	274+48.699				463779.713	1280326.424
		34.002	S14° 20' 17.0010"E			
PT	274+82.700				463746.770	1280334.844

BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	513+34.439				464445.538	1280042.321
		27.697	S30° 57' 41.7504"E			
PT	513+62.137				464421.787	1280056.571
		67.537	S47° 44' 59.4385"E			
PT	514+29.673				464376.378	1280106.563

BASELINE DATA - BIKEWAY: OBERLIN AVE TO MARYLAND AVE						
DESCRIPTION	STATION	LENGTH (FT)	BEARING	RADIUS (FT)	NORTHING	EASTING
PT	600+00.000				464363.885	1280123.291
		114.903	S47° 44' 59.4385"E			
PC	601+14.903				464286.627	1280208.344
		122.021		160.000		
PT	602+36.924				464179.505	1280260.365
		294.507	S04° 03' 15.2049"E			
PC	605+31.431				463885.735	1280281.186
		63.091		400.000		
PT	605+94.522				463823.414	1280290.581
		68.610	S13° 05' 28.8856"E			
PT	606+63.132				463756.587	1280306.122

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

STA. 267+00 TO STA. 274+52

GG-08
GRADES AND GEOMETRICS

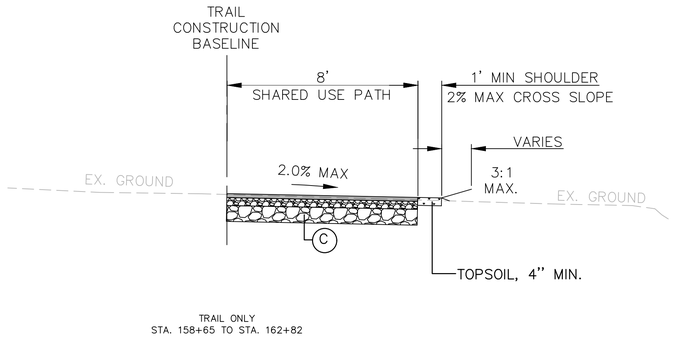
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

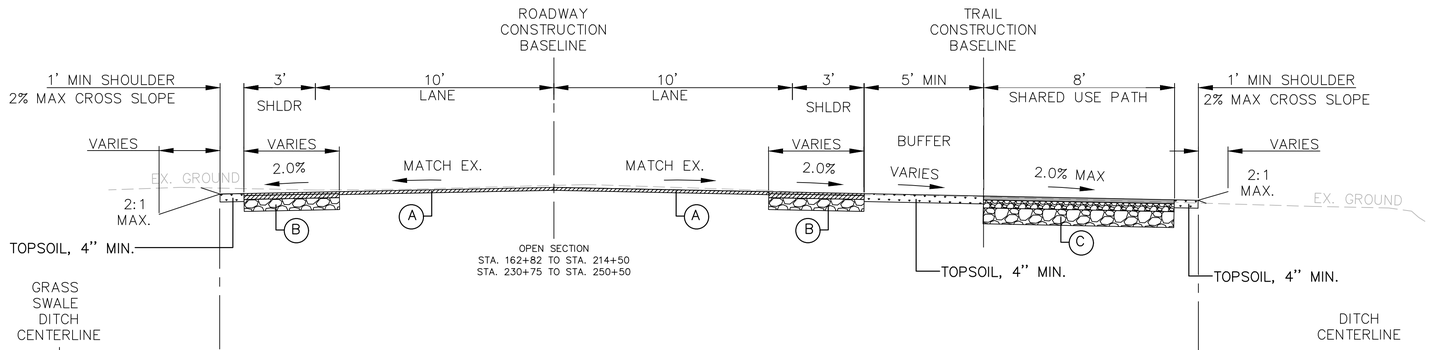
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CIP No. : 500718 SHEET 11 of 285

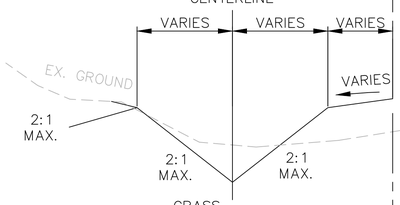
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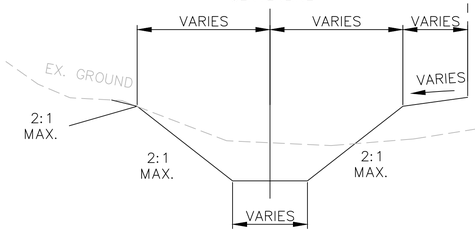
TRAIL ONLY
STA. 158+65 TO STA. 162+82



OPEN SECTION
STA. 162+82 TO STA. 214+50
STA. 230+75 TO STA. 250+50

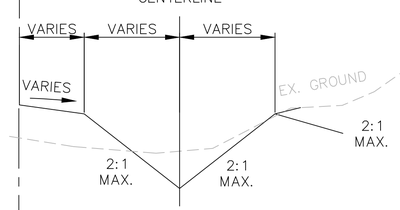


STA. 168+00 TO STA. 171+43
STA. 201+30 TO STA. 214+50
STA. 222+10 TO STA. 227+00
STA. 234+00 TO STA. 235+50
STA. 237+52 TO STA. 241+97
STA. 248+35 TO STA. 250+50

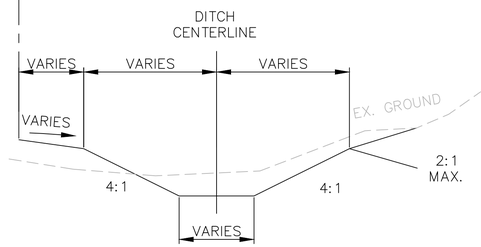


STA. 196+17 TO STA. 201+30

STA. 248+42 TO STA. 249+00



STA. 237+46 TO STA. 242+00

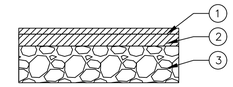




(1) MILL EXISTING HOT MIX ASPHALT PAVEMENT, 2 INCHES

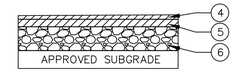
2" HMA SUPERPAVE 9.5MM FOR SURFACE, PG64-22, LEVEL 2

(A) MILL/OVERLAY DETAIL
NTS



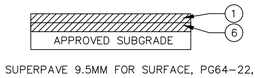
(1) 3" HMA SUPERPAVE 9.5MM FOR SURFACE, PG64-22, LEVEL-2
(2) 5" HMA SUPERPAVE 19.0MM FOR BASE, PG64-22, LEVEL-2
(3) 12" GRADED AGGREGATE BASE COURSE

(B) FULL DEPTH PAVEMENT DETAIL
NTS



(4) 1.5" HMA SUPERPAVE 9.5MM FOR SURFACE, PG64S-22, LEVEL-2
(5) 2.5" HMA SUPERPAVE 19.0MM FOR BASE, PG64S-22, LEVEL-2
(6) 4" CR-6 GRADED AGGREGATE BASE COURSE

(C) SHARED USE PATH DETAIL
NTS



(1) 3" HMA SUPERPAVE 9.5MM FOR SURFACE, PG64-22, LEVEL 2
(6) 3" HMA SUPERPAVE 19.0MM FOR BASE, PG64-22, LEVEL 2

IMPERVIOUS PAVEMENT DETAIL - DRIVEWAYS
NTS

NOTES:
1. A WASHINGTON AQUEDUCT PERMIT IS REQUIRED TO USE THE HEAVY DUTY CROSSING. TO APPLY FOR A PERMIT, CONTACT WAOVERWEIGHTPERMITS@USACE.ARMY.MIL AT LEAST 5 DAYS IN ADVANCE. ADDITIONALLY, THE EXISTING HEAVY DUTY AQUEDUCT DECK STRUCTURE CROSSING IS NOT TO BE DISTURBED DURING MILLING AND OVERLAY OPERATION.
2. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
3. EXISTING ROAD VARIES IN WIDTH FROM 22 FT. TO 27 FT., INCLUDING THE SHOULDER WHERE PRESENT.
4. ALL GRADED SLOPES FLATTER THAN 2:1 SHALL BE STABILIZED WITH 4" OF TOPSOIL, SEED, AND MULCH.
5. ALL GRADED SLOPES 2:1 AND STEEPER SHALL BE STABILIZED WITH 2" TOPSOIL, SEED, AND MULCH.
6. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

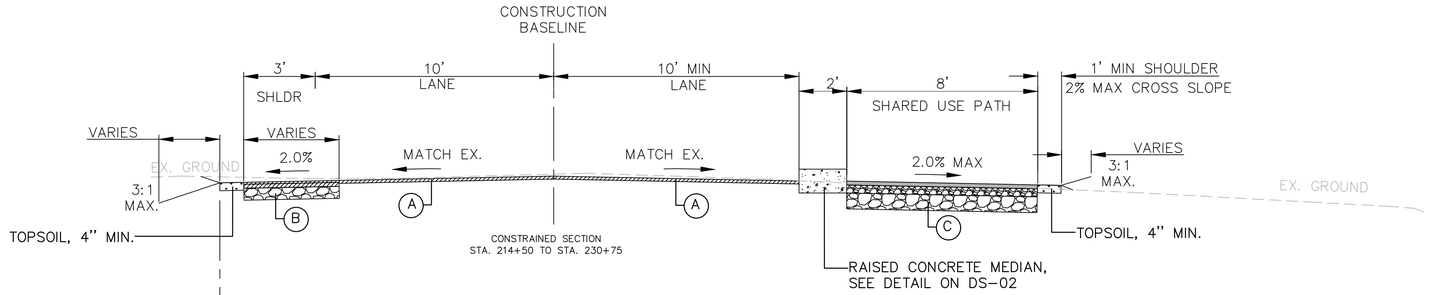
TS-01
TYPICAL SECTION

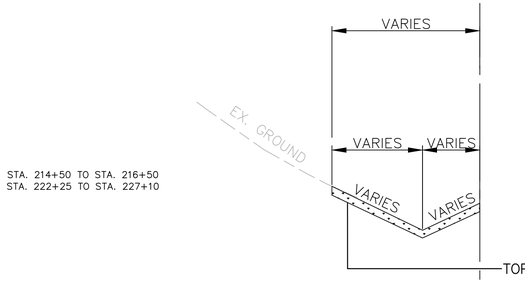
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

NOT TO SCALE DATE: JUNE 2024

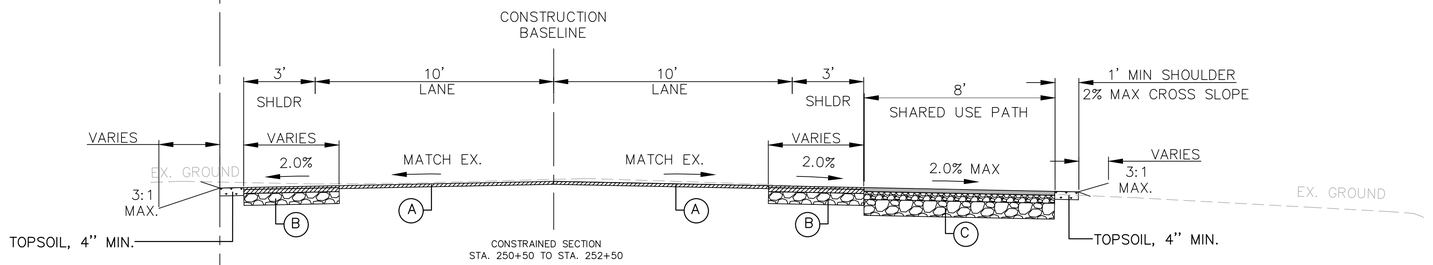
CIP No.: 500718 SHEET 12 of 285

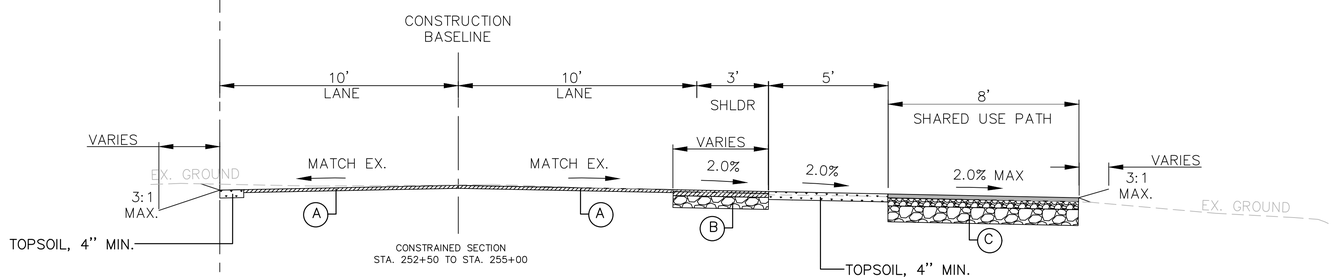
RText (RText)





STA. 214+50 TO STA. 216+50
STA. 222+25 TO STA. 227+10





NOTES:
1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. EXISTING ROAD VARIES IN WIDTH FROM 22 FT. TO 27 FT., INCLUDING THE SHOULDER WHERE PRESENT.
3. ALL GRADED SLOPES FLATTER THAN 2:1 SHALL BE STABILIZED WITH 4" OF TOPSOIL, SEED, AND MULCH.
4. ALL GRADED SLOPES 2:1 AND STEEPER SHALL BE STABILIZED WITH 2" TOPSOIL, SEED, AND MULCH.
5. SEE DITCH SCHEDULE ON SHEET 45 – DS-01 FOR DITCH DESIGNS.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

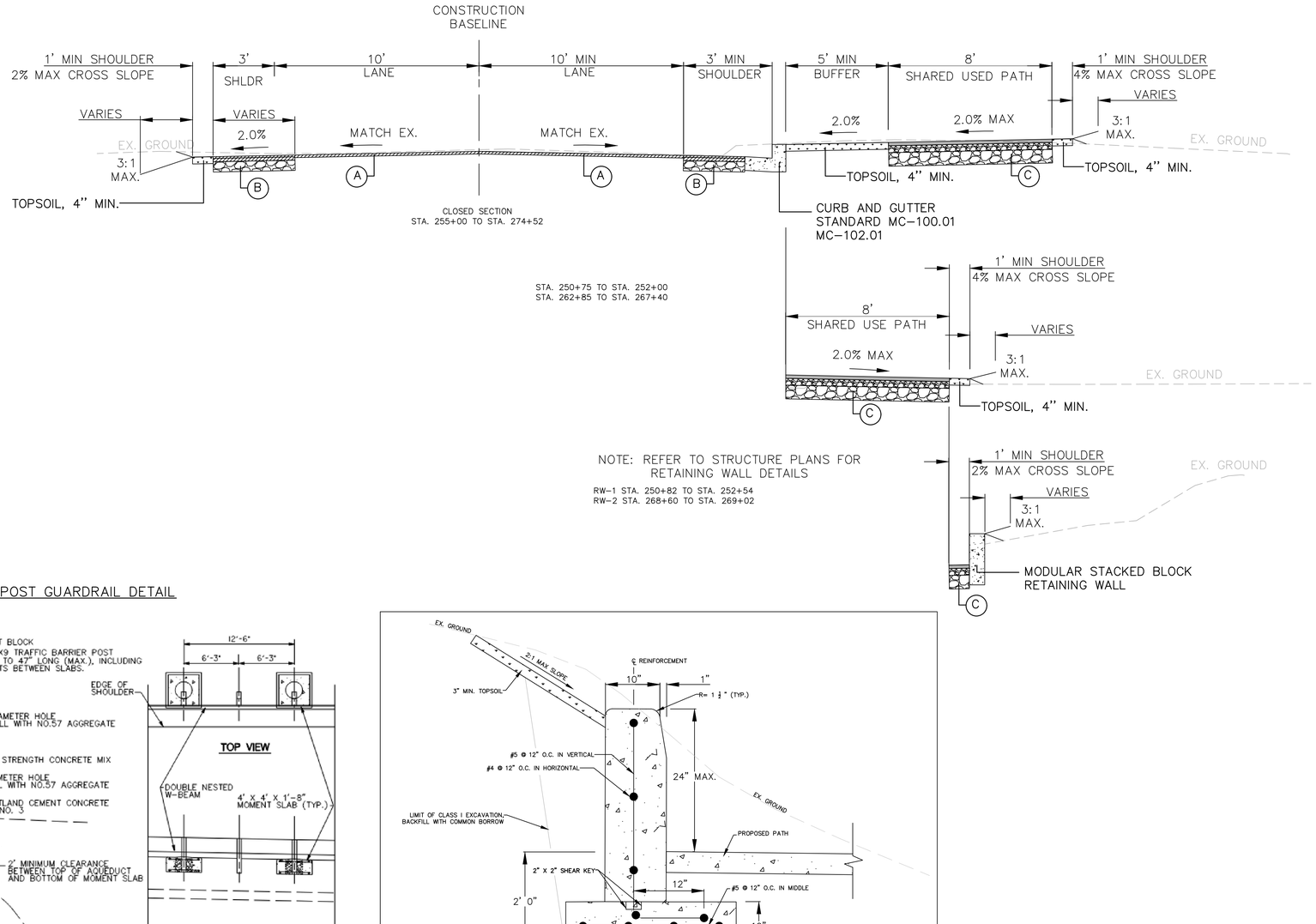
Designed by: ADH Drawn by: ADH Checked by: JJR

TS-02
TYPICAL SECTION
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

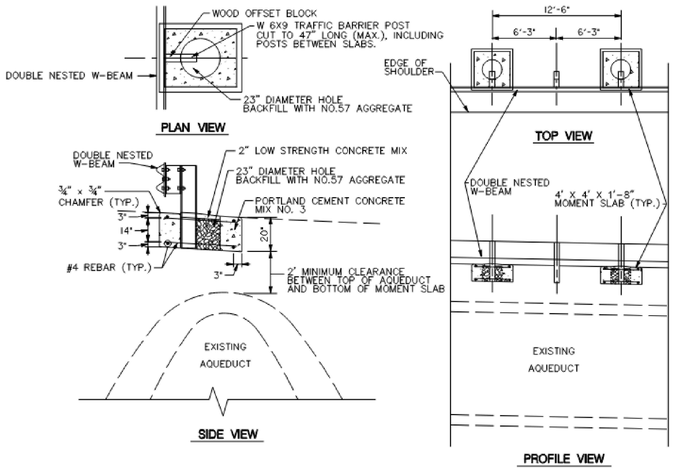
NOT TO SCALE DATE: JUNE 2024

CIP No.: 500718 SHEET 13 of 285

RText (RText)



SHALLOW POST GUARDRAIL DETAIL



SHALLOW POST GUARDRAIL NOTES:

1. BEFORE INSTALLING ANY GUARDRAIL POST, CONTRACTOR SHALL TEST PIT AT TWO POINTS ALONG EACH GUARDRAIL INSTANCE TO VERIFY THE EXISTING OLD CONDUIT OR NEW CONDUIT ELEVATION AND ALIGNMENT. NOTIFY MCDOT AND WASHINGTON AQUEDUCT OF ANY DISCREPANCIES OR CONFLICTS WITH THE DESIGN.
2. DRIVING POST IS NOT PERMITTED.

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. EXISTING ROAD VARIES IN WIDTH FROM 22 FT. TO 27 FT., INCLUDING THE SHOULDER WHERE PRESENT.
3. ALL GRADED SLOPES FLATTER THAN 2:1 SHALL BE STABILIZED WITH 4" OF TOPSOIL, SEED, AND MULCH.
4. ALL GRADED SLOPES 2:1 AND STEEPER SHALL BE STABILIZED WITH 2" TOPSOIL, SEED, AND MULCH.
5. SEE DITCH SCHEDULE ON SHEET 45 – DS-01 FOR DITCH DESIGNS.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

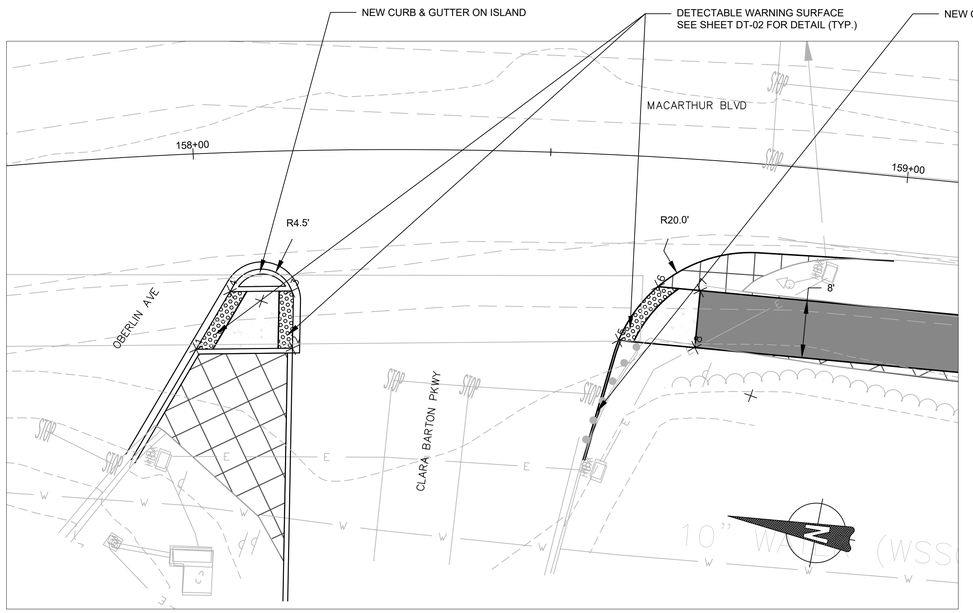
Designed by: ADH Drawn by: TBC Checked by: JJR

TS-02A
TYPICAL SECTION
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

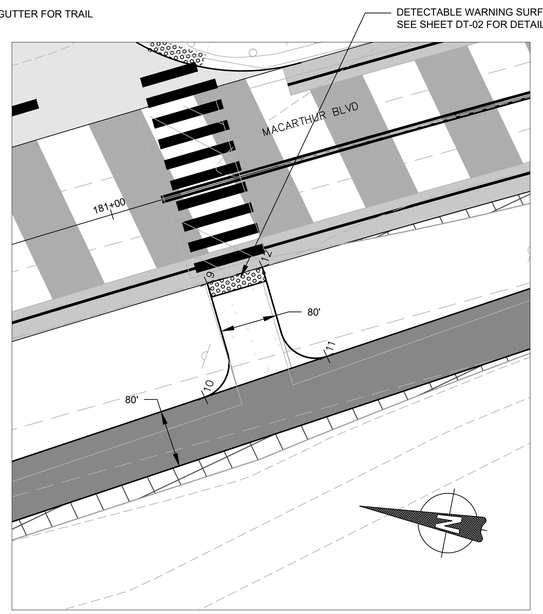
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CIP No. : 500718 SHEET 13A of 285

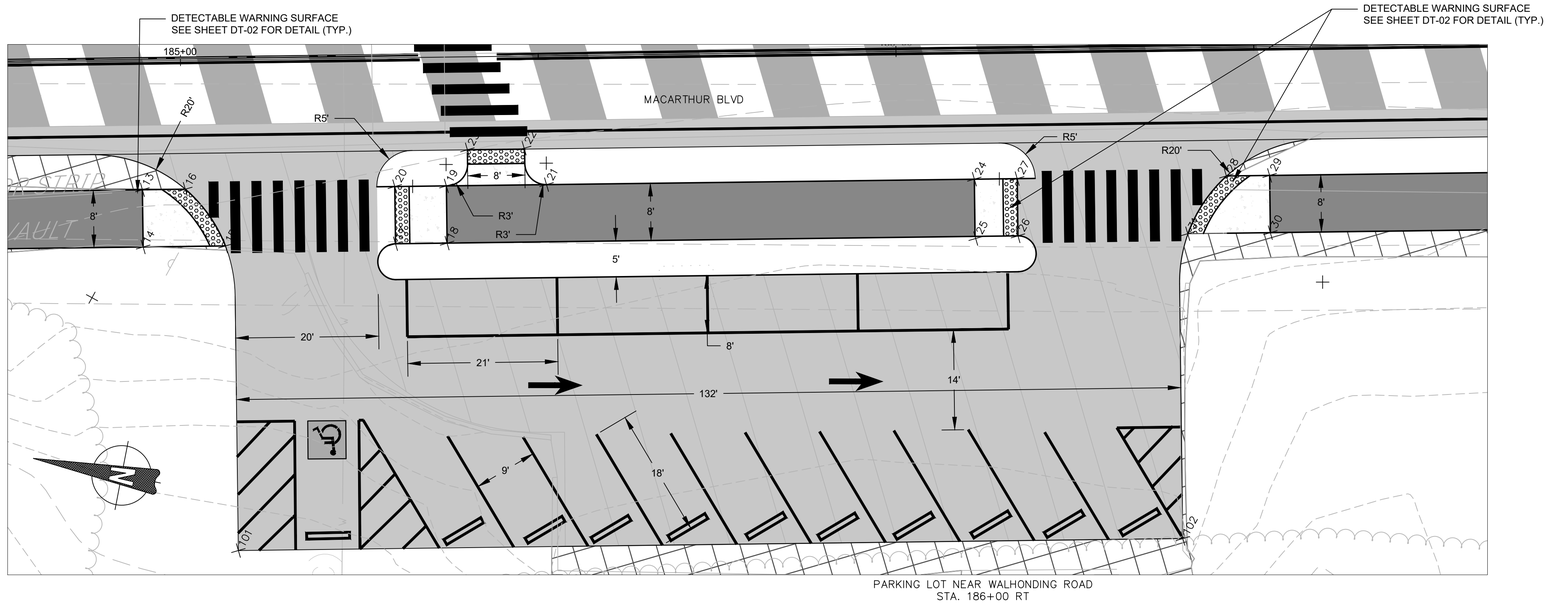
RText (RText)



OBERLIN AVENUE AND RAMP TO CLARA BARTON PARKWAY
STA. 158+50 RT



ENTRANCE TO MOHICAN SWIM CLUB
STA. 181+00 RT



PARKING LOT NEAR WALHONDING ROAD
STA. 186+00 RT

NOTE:
1. FOR RAMPS WITHOUT DEFINED BACKS, ENSURE A 2% OR 12:1 SLOPE MAXIMUM

Point Table				
Point #	Elevation	Northing	Easting	Description
1	149.45	472736.96	1273626.61	ROADWAY FLOWLINE
2	149.39	472724.33	1273631.26	ROADWAY FLOWLINE
3	149.84	472727.11	1273638.76	ROADWAY FLOWLINE
4	149.87	472735.20	1273635.78	ROADWAY FLOWLINE
5	149.14	472681.75	1273647.55	DWS
6	149.61	472679.08	1273656.48	DWS
7	149.53	472673.34	1273657.93	BACK OF RAMP
8	149.35	472671.37	1273650.18	BACK OF RAMP
9	150.28	470866.94	1274885.07	DWS
10	149.45	470861.96	1274869.95	BACK OF RAMP
11	149.51	470847.77	1274881.05	BACK OF RAMP
12	150.25	470860.44	1274889.77	DWS
13	150.07	470541.05	1275085.30	BACK OF RAMP
14	149.88	470537.11	1275078.34	BACK OF RAMP
15	149.86	470527.10	1275084.01	DWS
16	150.07	470535.84	1275088.26	DWS
17	149.68	470506.42	1275095.72	DWS
18	149.74	470500.14	1275099.27	BACK OF RAMP
19	149.90	470504.08	1275106.23	BACK OF RAMP
20	149.95	470510.36	1275102.68	ROADWAY FLOWLINE
21	149.83	470491.90	1275113.13	BACK OF RAMP
22	150.07	470497.10	1275116.08	ROADWAY FLOWLINE
23	150.11	470503.93	1275112.06	ROADWAY FLOWLINE
24	149.58	470439.87	1275142.58	BACK OF RAMP
25	149.40	470435.71	1275135.40	BACK OF RAMP
26	149.22	470430.71	1275138.57	ROADWAY FLOWLINE
27	149.54	470434.65	1275145.53	ROADWAY FLOWLINE
28	149.35	470409.22	1275159.93	ROADWAY FLOWLINE
29	149.56	470403.96	1275162.91	BACK OF RAMP
30	149.30	470400.01	1275155.94	BACK OF RAMP
31	149.10	470410.07	1275150.25	ROADWAY FLOWLINE
101	145.67	470505.02	1275047.57	PARKING LOT
102	147.72	470390.15	1275112.59	PARKING LOT

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

DT-01
RAMP DETAILS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 10' 20'

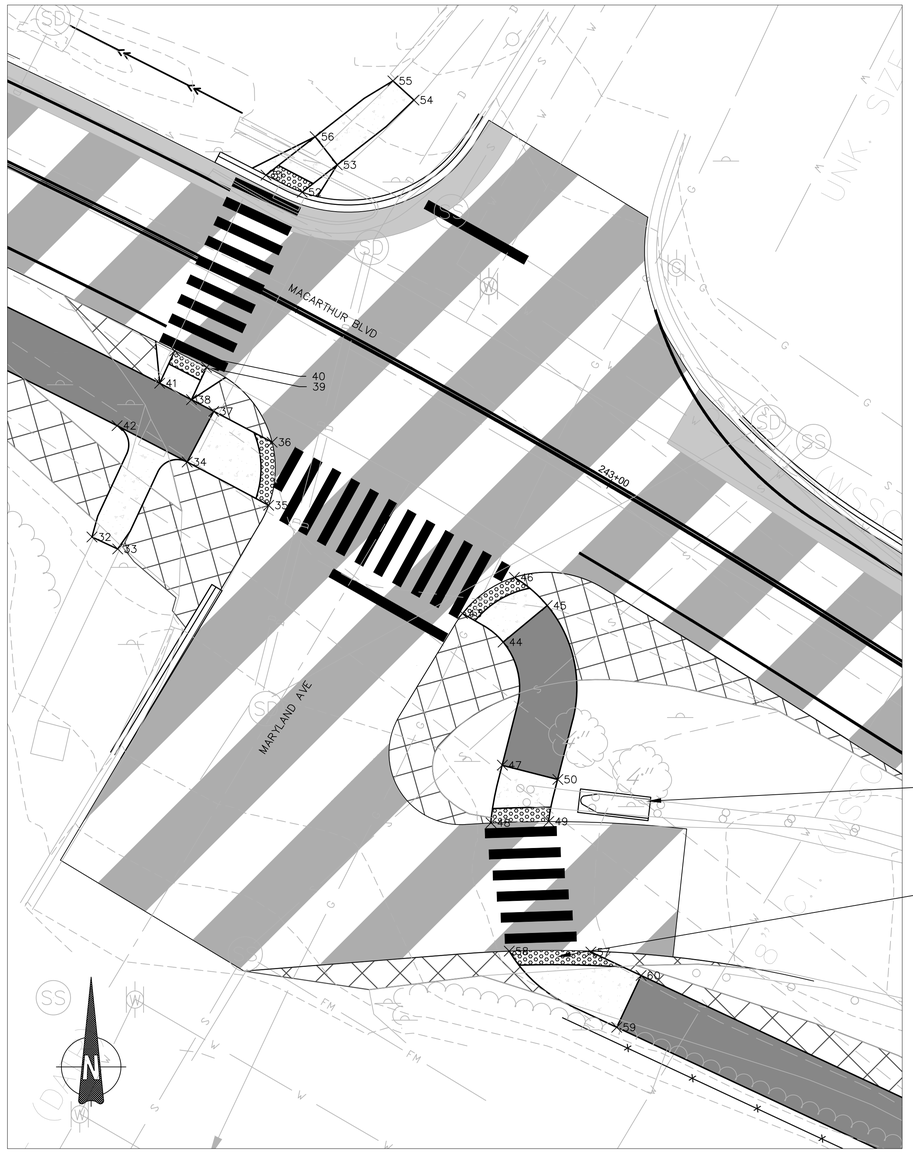
SCALE: 1"=10'

DATE: JUNE 2024

CIP No. : 500718

SHEET 14 of 285

RText (RText)



MARYLAND AVENUE
STA. 243+75

Point Table				
Point #	Elevation	Northing	Easting	Description
32	MATCH EXISTING	465778.28	1278055.09	SIDEWALK
33	MATCH EXISTING	465776.60	1278058.69	SIDEWALK
34	149.86	465788.75	1278068.40	BACK OF RAMP
35	149.93	465782.70	1278079.79	DWS
36	150.09	465791.53	1278080.26	DWS
37	149.96	465795.84	1278072.11	BACK OF RAMP
38	149.94	465797.47	1278069.00	BACK OF RAMP
39	150.33	465801.99	1278071.11	DWS
40	150.29	465804.29	1278066.66	DWS
41	149.93	465799.77	1278064.56	BACK OF RAMP
42	149.50	465793.83	1278058.60	SIDEWALK
43	149.84	465767.58	1278106.88	DWS
44	149.83	465763.58	1278112.55	BACK OF RAMP
45	149.99	465768.69	1278118.71	BACK OF RAMP
46	150.01	465772.63	1278114.12	DWS
47	149.77	465746.39	1278112.45	BACK OF RAMP
48	149.75	465738.33	1278110.86	DWS
49	149.91	465738.52	1278118.93	DWS
50	149.93	465744.39	1278120.20	BACK OF RAMP
51	149.99	465828.86	1278079.41	ROADWAY FLOWLINE
52	149.92	465826.46	1278084.47	ROADWAY FLOWLINE
53	150.35	465830.29	1278089.36	BACK OF RAMP
54	MATCH EXISTING	465839.34	1278100.08	SIDEWALK
55	MATCH EXISTING	465842.03	1278097.15	SIDEWALK
56	150.32	465834.23	1278086.29	BACK OF RAMP
57	149.86	465720.27	1278124.81	DWS
58	149.71	465720.39	1278113.41	DWS
59	149.74	465709.75	1278128.43	BACK OF RAMP
60	149.90	465716.99	1278131.83	BACK OF RAMP

NOTE:
1. FOR RAMPS WITHOUT DEFINED BACKS, ENSURE A 2% OR 12:1 SLOPE MAXIMUM

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

DT-02
RAMP DETAILS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 10' 20'

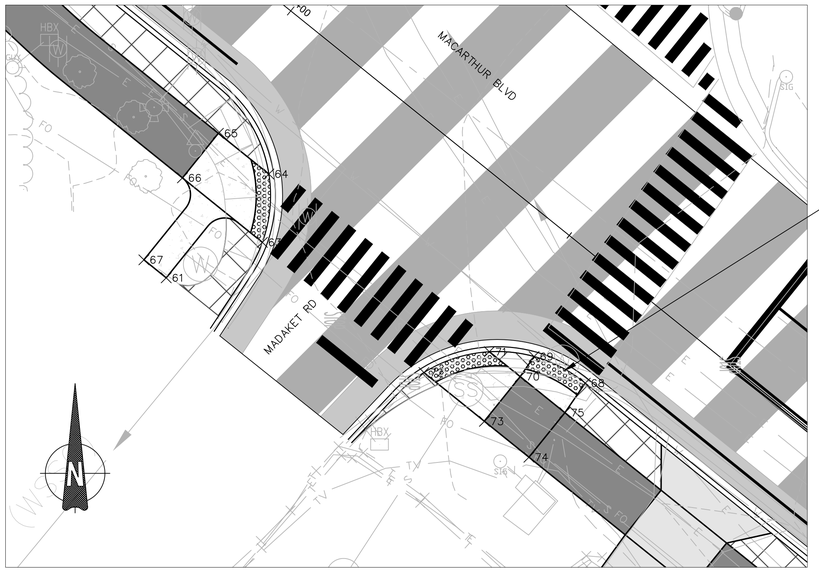
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DATE: JUNE 2024

CIP No. : 500718

SHEET 15 of 285

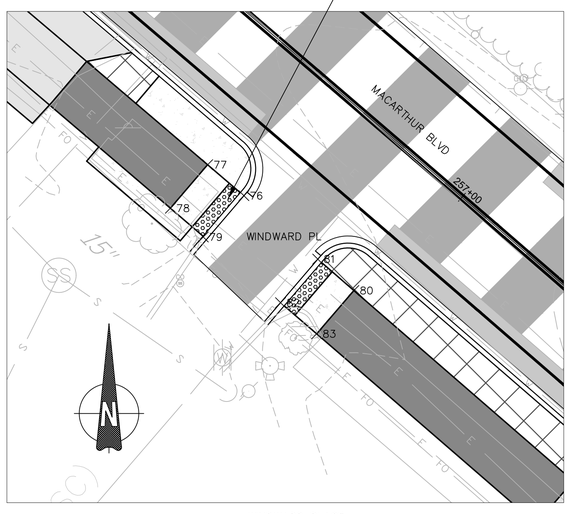
RText (RText)



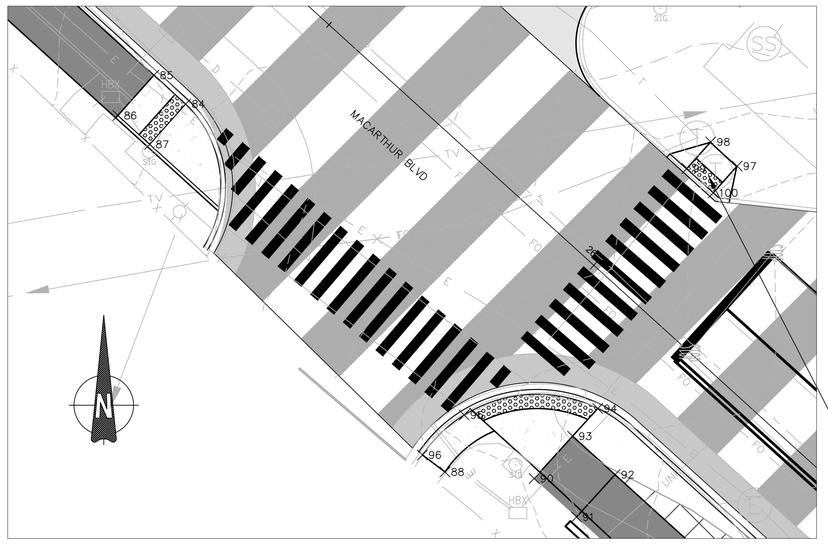
MADAKET ROAD
STA. 253+25 RT

DETECTABLE WARNING SURFACE
SEE SHEET DT-02 FOR DETAIL (TYP.)

DETECTABLE WARNING SURFACE
SEE SHEET DT-02 FOR DETAIL (TYP.)



WINDWARD PLACE
STA. 256+75 RT



GOVERNMENT FACILITY ENTRANCE
STA. 267+50 RT

DETECTABLE WARNING SURFACE
SEE SHEET DT-02 FOR DETAIL (TYP.)

Point Table				
Point #	Elevation	Northing	Easting	Description
61	MATCH EXISTING	465326.75	1279001.91	BACK OF RAMP
63	202.76	465331.71	1279015.35	SIDEWALK
64	202.84	465341.26	1279016.25	ROADWAY FLOWLINE
65	202.99	465346.95	1279009.20	BACK OF RAMP
66	202.87	465340.72	1279004.18	BACK OF RAMP
67	MATCH EXISTING	465329.26	1278998.79	SIDEWALK
68	205.28	465312.03	1279060.47	ROADWAY FLOWLINE
69	204.30	465315.75	1279053.31	ROADWAY FLOWLINE
70	204.70	465312.94	1279051.38	LANDING
71	203.98	465316.42	1279047.06	ROADWAY FLOWLINE
72	203.65	465313.51	1279037.92	ROADWAY FLOWLINE
73	204.55	465306.69	1279046.38	LANDING
74	204.70	465301.67	1279052.60	LANDING
75	204.86	465307.90	1279057.62	LANDING
76	208.47	465109.74	1279297.38	ROADWAY FLOWLINE
77	208.62	465114.07	1279292.31	BACK OF RAMP
78	208.46	465108.00	1279287.11	BACK OF RAMP
79	208.28	465103.97	1279291.70	ROADWAY FLOWLINE
80	208.87	465096.49	1279312.74	BACK OF RAMP
81	208.59	465100.88	1279307.69	ROADWAY FLOWLINE
82	208.24	465094.79	1279302.50	ROADWAY FLOWLINE
83	208.71	465090.44	1279307.55	BACK OF RAMP
84	197.50	464394.37	1280086.76	ROADWAY FLOWLINE
85	198.00	464398.40	1280082.32	ROADWAY FLOWLINE
86	197.84	464392.77	1280077.29	BACK OF RAMP
87	197.40	464388.74	1280081.73	BOTTOM OF LANDING
88	MATCH EXISTING	464342.95	1280122.99	TOP OF RAMP
90	193.30	464342.03	1280135.46	LANDING
91	192.31	464336.65	1280141.38	BACK OF RAMP
92	192.47	464342.57	1280146.76	BACK OF RAMP
93	193.00	464347.95	1280140.84	LANDING
94	192.40	464351.81	1280144.35	ROADWAY FLOWLINE
95	193.47	464350.91	1280125.68	ROADWAY FLOWLINE
96	MATCH EXISTING	464345.33	1280119.85	SIDEWALK
97	MATCH EXISTING	464385.70	1280163.82	BACK OF RAMP
98	MATCH EXISTING	464389.08	1280160.14	BACK OF RAMP
99	193.11	464385.36	1280156.81	ROADWAY FLOWLINE
100	0.00	464381.96	1280160.48	ROADWAY FLOWLINE

NOTE:
1. FOR RAMPS WITHOUT DEFINED BACKS, ENSURE A 2% OR 12:1 SLOPE MAXIMUM

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

DT-03
RAMP DETAILS

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

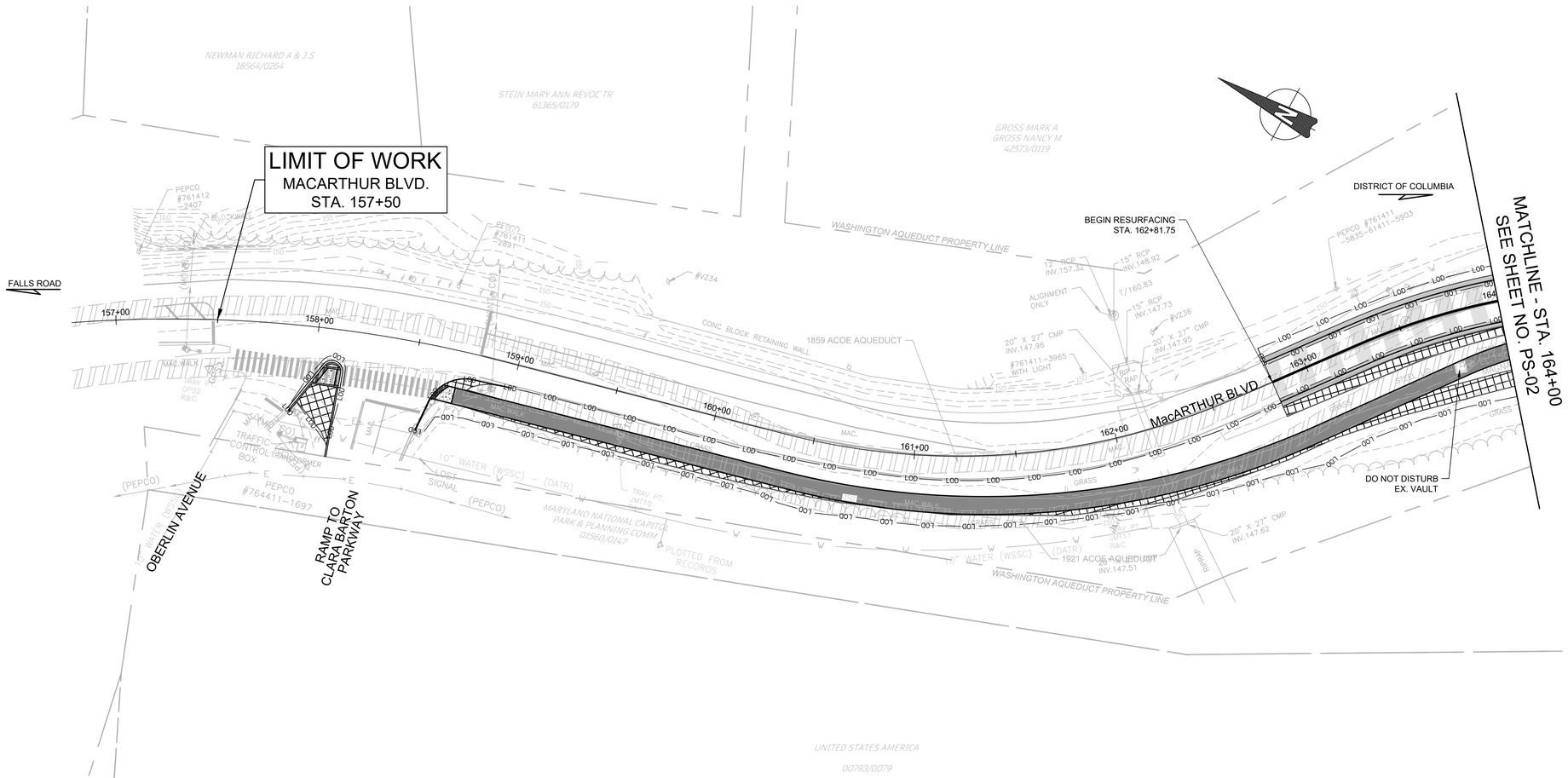
0 10' 20'
SCALE: 1"=10'

DATE: JUNE 2024

CIP No. : 500718

SHEET 16 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
4,487 SF	158+70 RT	164+00 RT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
74 SF	158+04 RT	158+14 RT
50 SF	158+63 RT	158+73 RT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
19 SF	158+05 RT	10.0'
16 SF	158+10 RT	8.0'
19 SF	158+76 LT	15.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
302 SF	157+92 RT	158+12 RT
74 SF	158+66 RT	158+92 RT
395 SF	158+78 RT	160+88 RT
934 SF	161+07 RT	164+00 RT
639 SF	162+82 RT	164+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
2,128 SF	162+82	164+00

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.1		
QUANTITY	STATION	TO
605 LF	157+88 RT	158+15 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
3. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
4. PAVEMENT RESURFACING WILL NOT COVER EXISTING AQUEDUCT MANHOLES.
5. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.
6. SAW CUTTING WITHIN AREAS TO BE EXCAVATED IS INCIDENTAL TO THE CLASS 2 EXCAVATION.
7. FOR TREES WITHIN THE LIMITS OF WORK, REMOVE ANY IDENTIFIED HAZARD TREE WITHOUT RESULTING IN ROOT BALL THROW OR MAJOR GROUND DISTURBANCE. IF ANY SIGNIFICANT ROOT BALL THROW OR GROUND DISTURBANCE OCCURS FOR TREES DIRECTLY ADJACENT TO MACARTHUR BLVD NOTIFY THE U.S. ARMY CORPS OF ENGINEERS WASHINGTON AQUEDUCT (USACE-WA) POINT OF CONTACT (POC) 202-345-2734 IMMEDIATELY TO FACILITATE OBSERVATION OF THE AREA PRIOR TO RESTORATION OF FINAL GRADES.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 154+50 TO STA. 164+00

PS-01
ROADWAY PLAN

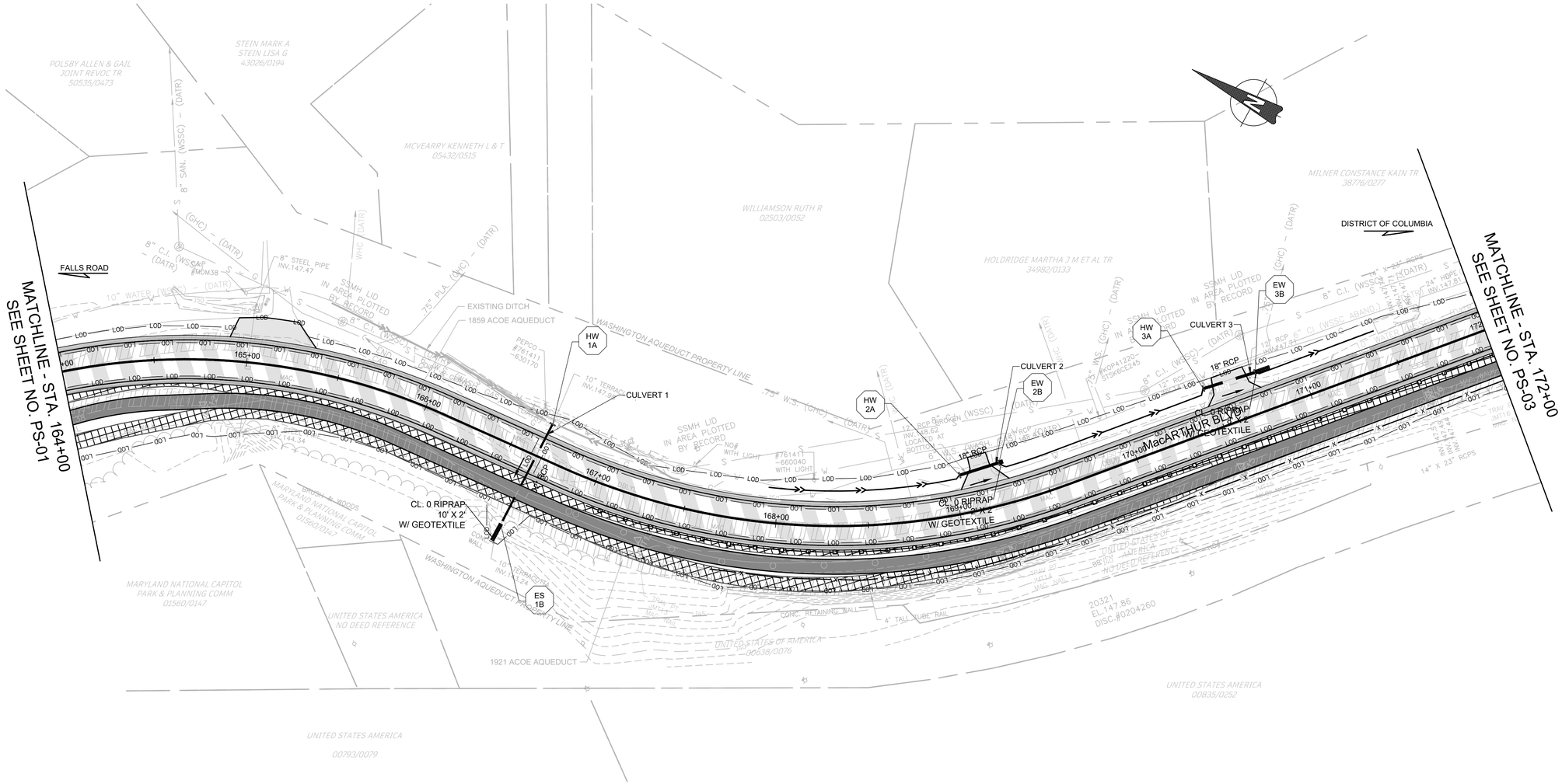
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 17 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,413 SF	164+00 RT	172+00 RT

RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
51 SY	165+09 LT	32.0'
28 SY	169+16 LT	11.0'
33 SY	170+61 LT	16.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
3,548 SF	164+00 RT	171+06 RT
2,868 SF	164+00 RT	172+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
14,400 SF	164+00	172+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,193 SF	164+00 LT	172+00 LT
3,207 SF	164+00 RT	172+00 RT

DOUBLE FACED GUARDRAIL MD - 605.28		
QUANTITY	FROM	TO
511 LF	167+00 RT	172+00 RT

FENCE MD - 690.01		
QUANTITY	FROM	TO
446 LF	167+70 RT	172+00 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

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2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
3. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
4. PAVEMENT RESURFACING WILL NOT COVER EXISTING AQUEDUCT MANHOLES.
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 164+00 TO STA. 172+00

PS-02
ROADWAY PLAN

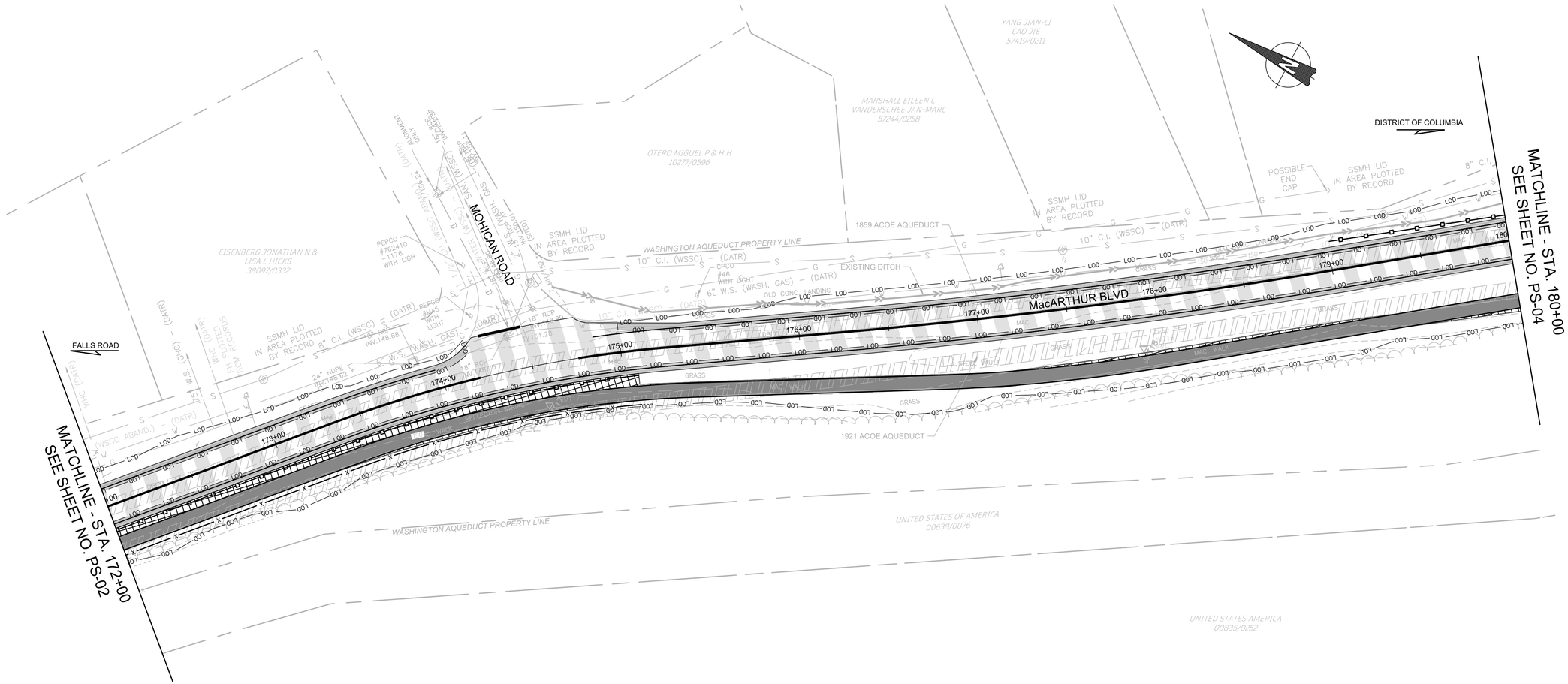
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 18 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,377 SF	172+00 RT	180+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
1,705 SF	172+00 RT	177+01 RT
8.5 SF	176+96 RT	177+21 RT
288 SF	177+14 RT	179+31 RT
163 SF	179+34 RT	180+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
15,576 SF	172+00	180+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
872 SF	172+00 LT	174+16 LT
2,000 SF	175+00 LT	180+00 LT
3,192 SF	172+00 RT	180+00 RT

DOUBLE FACED GUARDRAIL MD - 605.28		
QUANTITY	FROM	TO
305 LF	172+00 RT	175+09 RT

FENCE MD - 690.01		
QUANTITY	FROM	TO
302 LF	172+00 RT	175+09 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
100 LF	179+00 LT	180+00 LT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 172+00 TO STA. 180+00

PS-03
ROADWAY PLAN

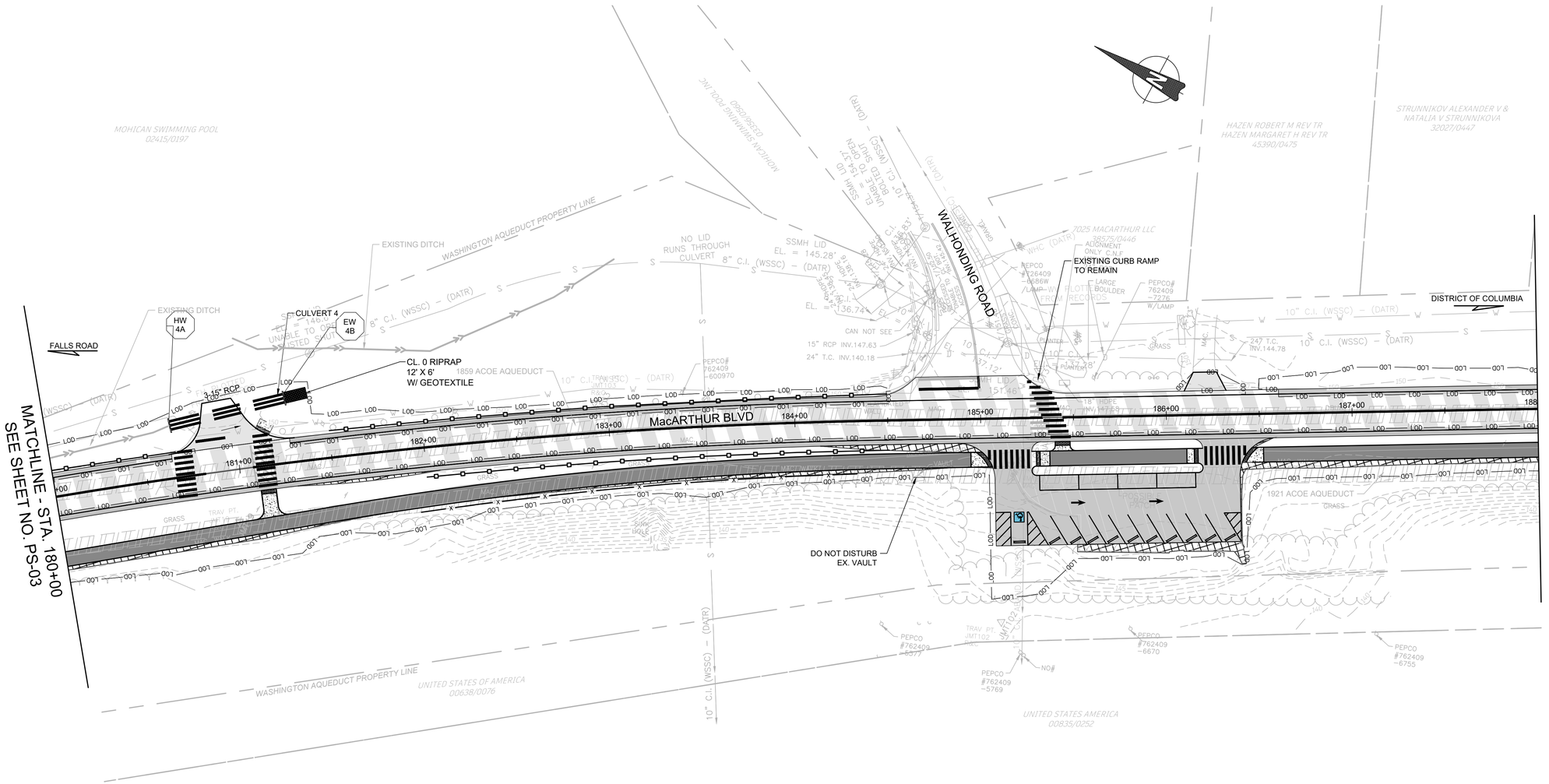
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 19 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
3,925 SF	180+00 RT	184+94 RT
590 SF	185+37 RT	186+11 RT
1,184 SF	186+52 RT	188+00 RT

RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
52 SY	180+95 LT	26.0'
20 SY	186+21 LT	13.0'

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
16 SF	181+14 RT	8.0'
16 SF	181+15 LT	8.0'
20 SF	185+02 RT	11.0'
16 SF	185+32 LT	8.0'
16 SF	185+44 RT	8.0'
16 SF	186+15 LT	8.0'
20 SF	186+45 LT	11.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
323 SF	180+00 RT	181+71 RT
93 SF	181+30 RT	182+07 RT
333 SF	182+35 RT	185+06 RT
257 SF	184+13 RT	185+01 RT
978 SF	185+51 RT	188+00 RT
10 SF	186+46 RT	186+58 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
21,610 SF	180+00	188+00

WHEEL STOPS MD - 634.04		
QUANTITY	FROM	TO
11	185+00 RT	186+50 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
260 SF	180+00 LT	180+65 LT
1,296 SF	181+29 LT	184+51 LT
558 SF	186+60 LT	188+00 LT
1,942 SF	180+00 RT	184+87 RT
1,371 SF	185+06 RT	185+53 RT
563 SF	186+59 RT	188+00 RT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
114 SF	181+05 RT	181+24 RT
32 SF	181+12 LT	181+21 LT
54 SF	184+95 RT	185+06 RT
42 SF	185+31 RT	185+37 RT
28 SF	185+40 RT	185+48 RT
32 SF	186+10 RT	186+15 RT
54 SF	186+43 RT	186+52 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
68	180+00 LT	180+68 LT
300	181+50 LT	184+50 LT

DOUBLE FACED GUARDRAIL MD - 605.28		
QUANTITY	FROM	TO
250	182+00 RT	184+50 RT

FENCE MD - 690.01		
QUANTITY	FROM	TO
236	181+95 RT	184+33 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 180+00 TO STA. 188+00

PS-04
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 20 of 285

RText (RText)

SHARED USE PATH		
QUANTITY	FROM	TO
6,387 SF	188+00 RT	196+00 RT

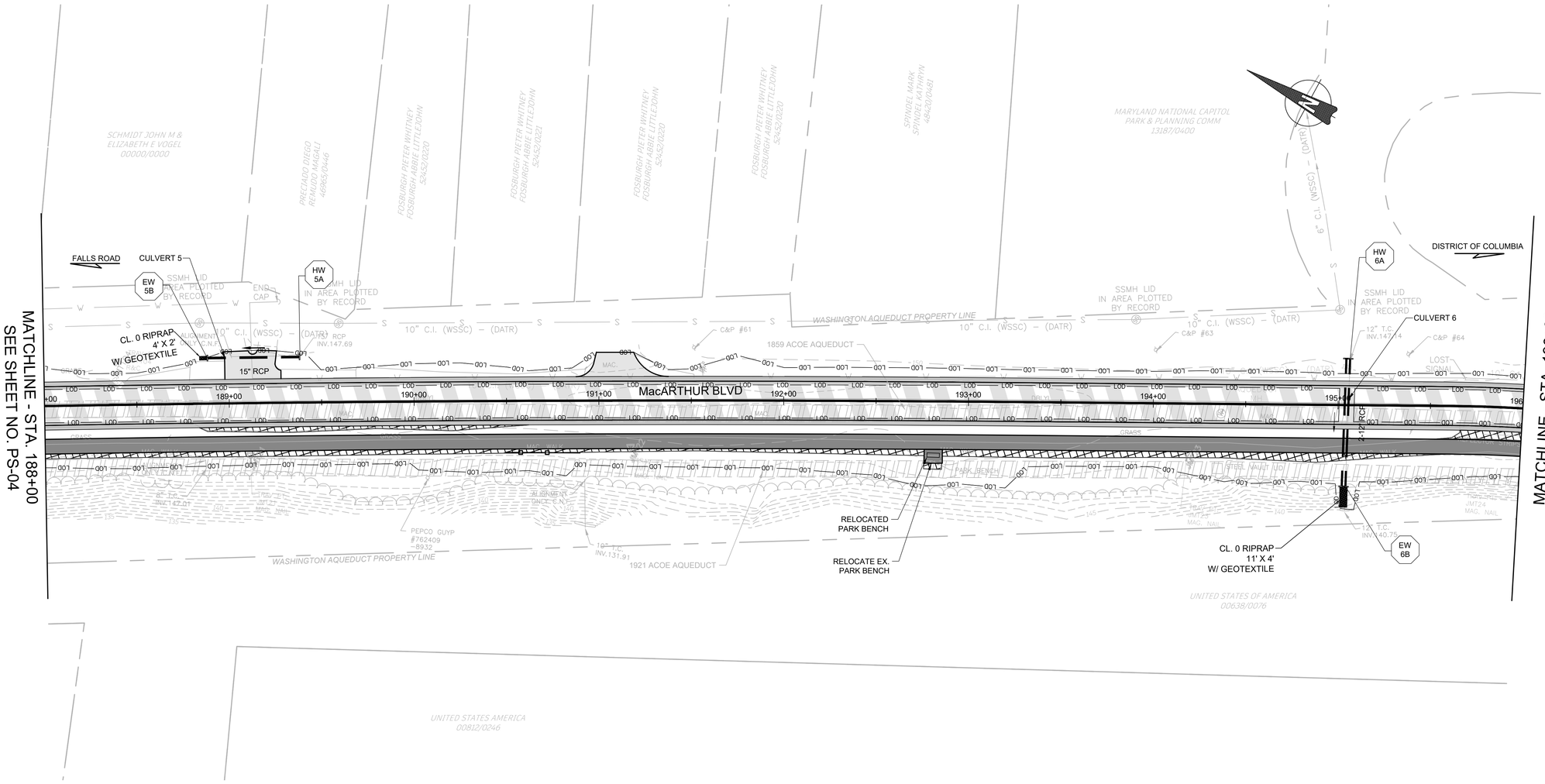
RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
48 SY	189+12 LT	30.0'
41 SY	191+09 LT	20.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
1,189 SF	188+00 RT	192+86 RT
382 SF	188+84 RT	190+62 RT
940 SF	192+86 RT	195+59 RT
165 SF	195+52 RT	196+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
14,400 SF	188+00	196+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,203 SF	188+00 LT	196+00 LT
3,197 SF	188+00 RT	196+00 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
40 LF	190+50 RT	190+90 RT



LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 188+00 TO STA. 196+00

PS-05
ROADWAY PLAN

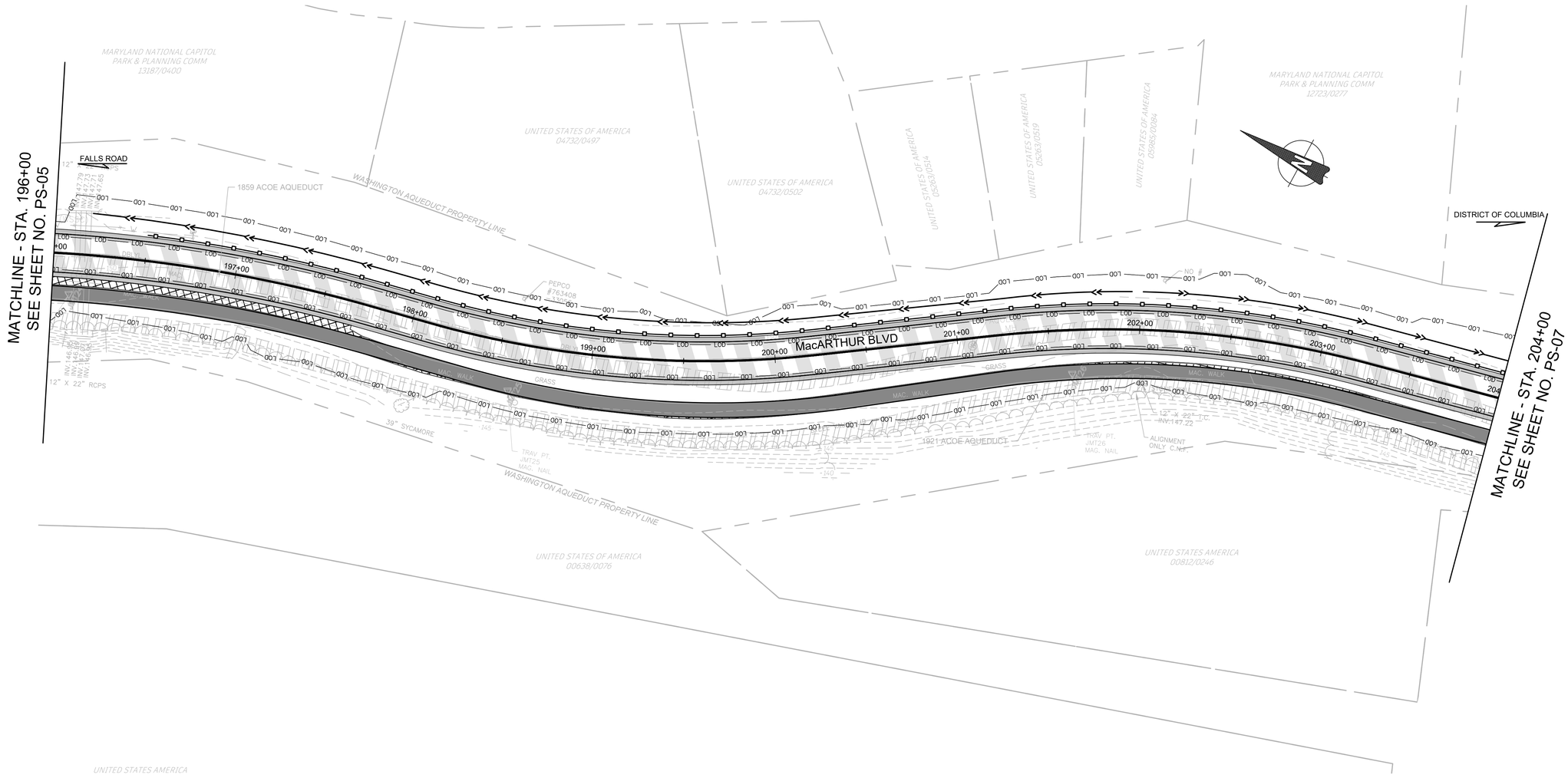
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 21 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,374 SF	196+00 RT	204+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
751 SF	196+00 RT	197+91 RT
344 SF	199+95 RT	203+82 RT
12 SF	203+64 RT	204+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
14,440 SF	196+00	204+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,209 SF	196+00 LT	204+00 LT
3,191 SF	196+00 RT	204+00 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
750 LF	196+50 LT	204+00 LT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
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- GUARD RAIL
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 196+00 TO STA. 204+00

PS-06
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

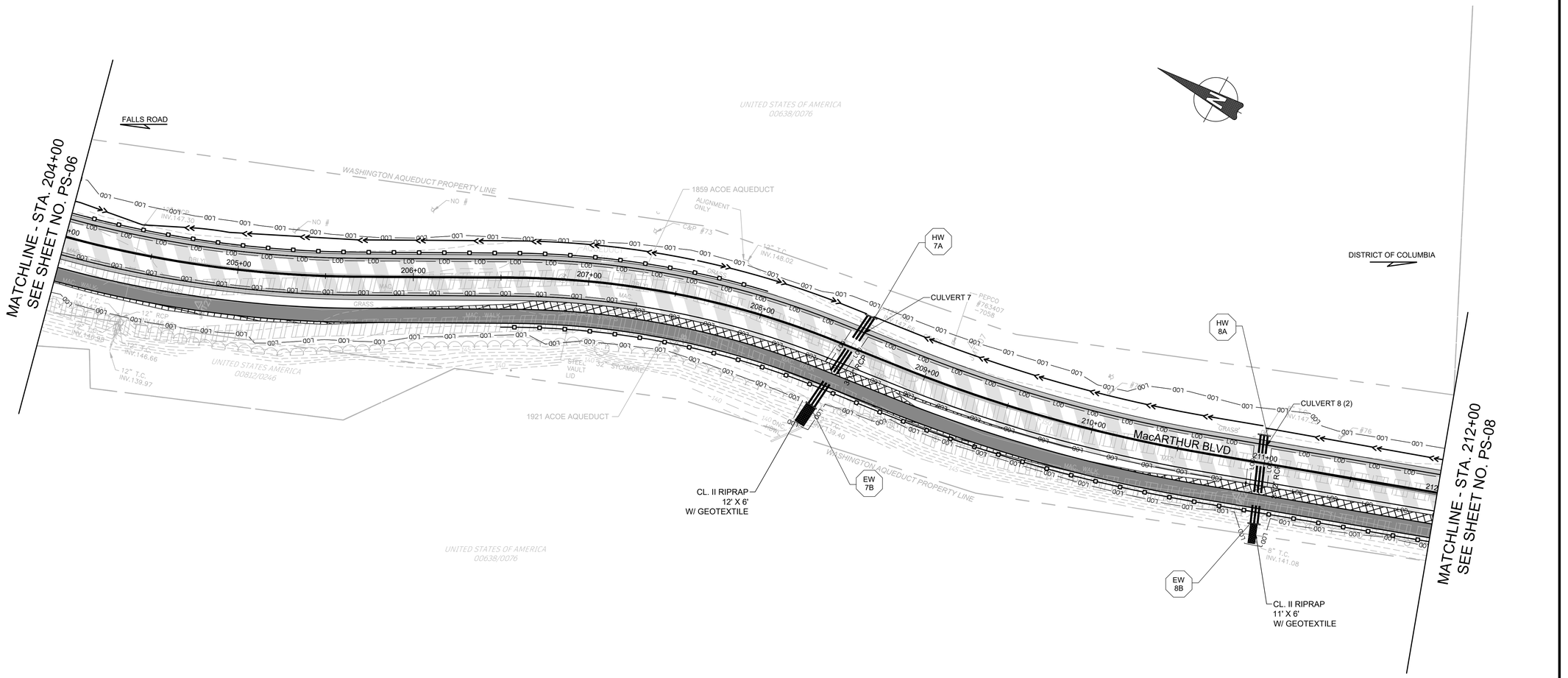
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 22 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,416 SF	204+00 RT	212+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
300 SF	204+00 RT	205+83 RT
1,339 SF	205+75 RT	209+97 RT
175 SF	208+17 RT	210+00 RT
743 SF	210+02 RT	212+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
16,283 SF	204+00	212+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,196 SF	204+00 LT	212+00 LT
1,321 SF	204+00 RT	207+29 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
400 LF	204+00 LT	208+00 LT

SINGLE FACE GUARDRAIL MD - 605.22 (SHALLOW POST)		
QUANTITY	FROM	TO
550 LF	206+50 RT	212+00 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 204+00 TO STA. 212+00

PS-07
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

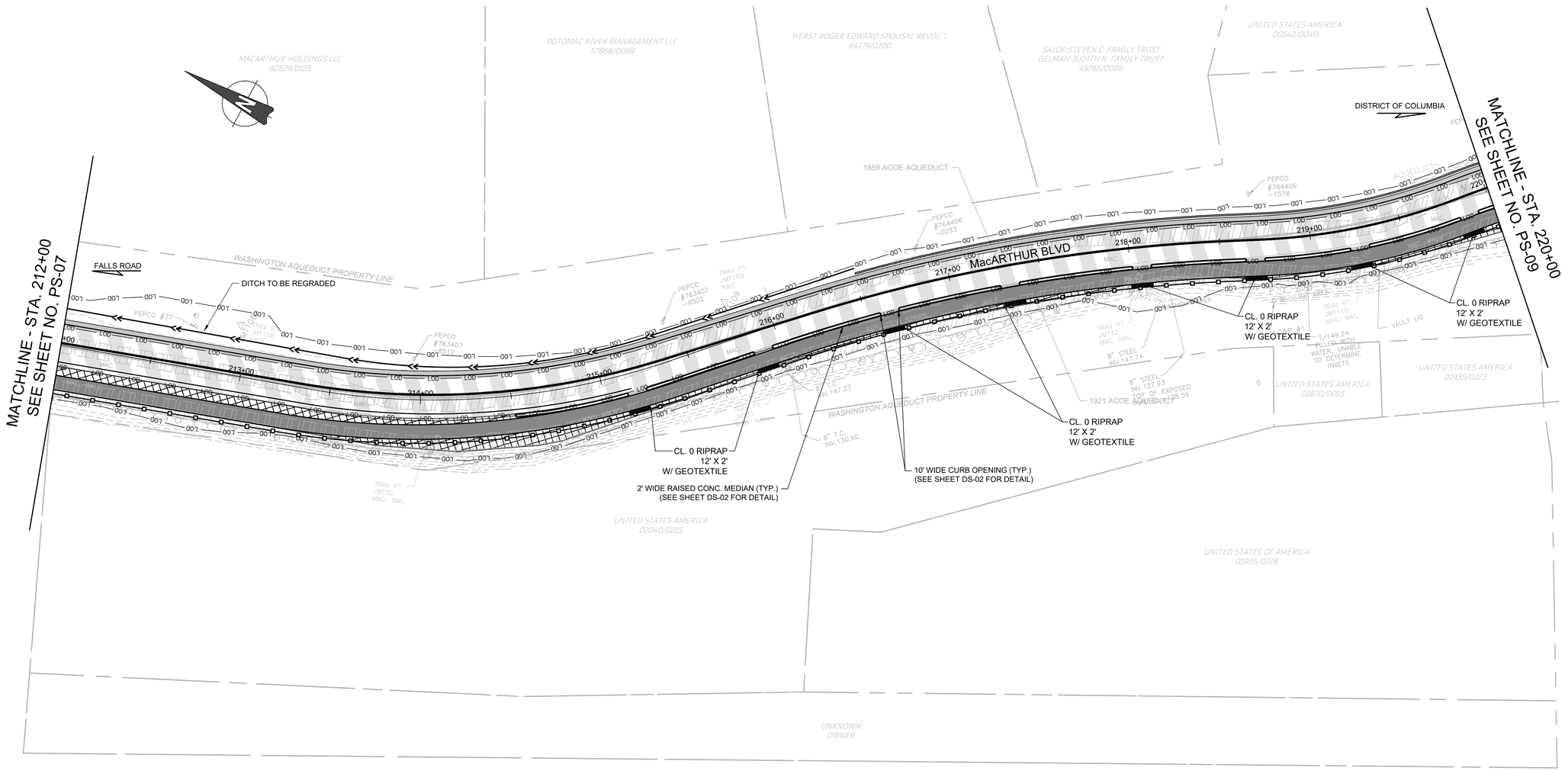
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 23 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,502 SF	212+00 RT	220+00 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
594 LF	214+06 LT	220+00 LT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
1,134 SF	212+00 RT	214+85 RT
1,615 SF	213+13 RT	217+96 RT
287 SF	218+50 RT	220+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
16,054 SF	212+00	220+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,192 SF	212+00 LT	220+00 LT

RAISED CONCRETE MEDIAN		
QUANTITY	FROM	TO
125 SF	214+51 RT	215+13 RT
119 SF	215+23 RT	215+85 RT
129 SF	215+95 RT	216+59 RT
115 SF	216+68 RT	217+27 RT
126 SF	217+37 RT	218+02 RT
105 SF	218+11 RT	218+65 RT
95 SF	218+74 RT	219+21 RT
15 SF	219+92 RT	220+00 RT

SINGLE FACE GUARDRAIL MD - 605.22 (SHALLOW POST)		
QUANTITY	FROM	TO
800 LF	212+00 RT	220+00 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 212+00 TO STA. 220+00

PS-08
ROADWAY PLAN

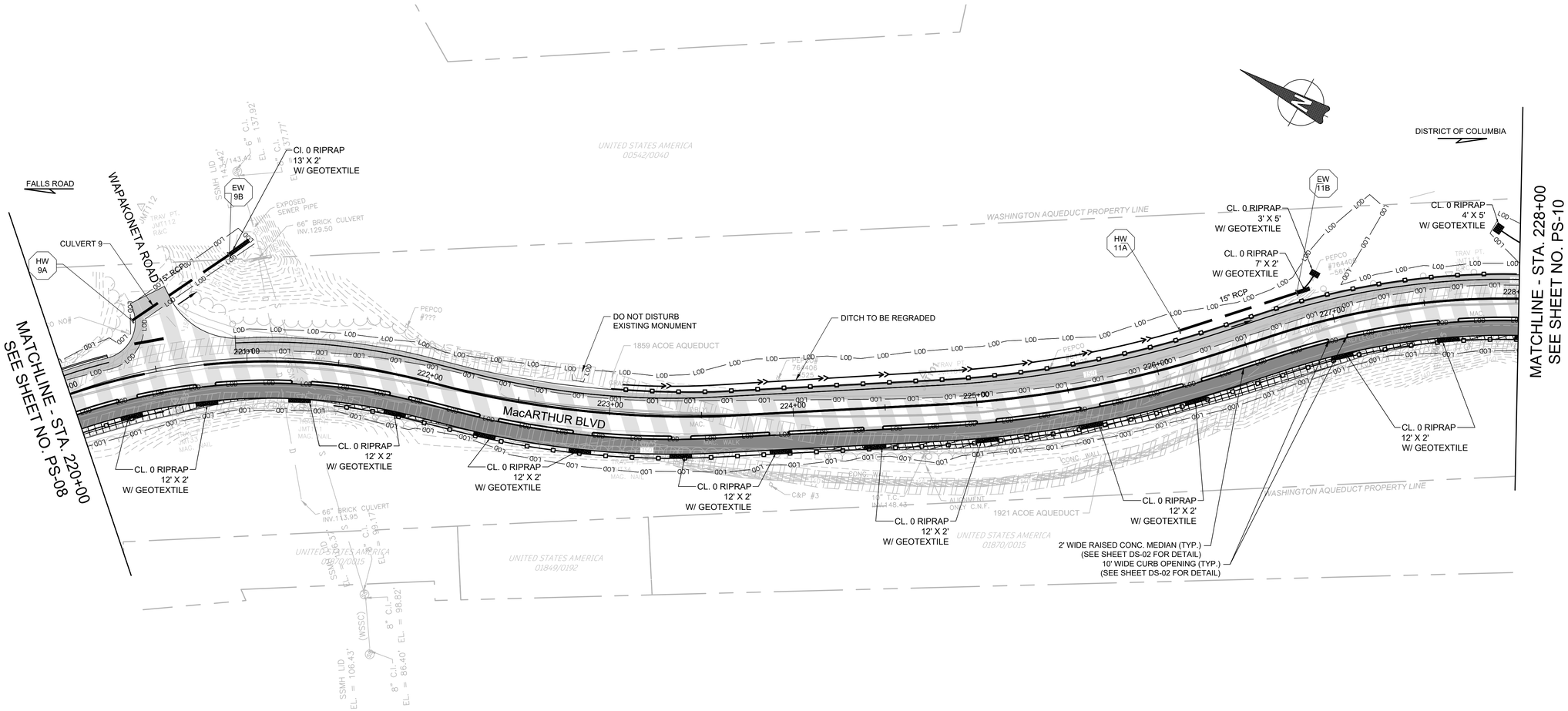
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 24 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
13,581 SF	220+00 RT	228+00 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
7 LF	220+00 LT	220+06 LT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
515 SF	220+00 RT	222+30 RT
1,582 SF	224+00 RT	228+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
13,876 SF	220+00	228+00

RAISED CONCRETE MEDIAN		
QUANTITY	FROM	TO
50 SF	220+00 RT	220+26 RT
66 SF	220+36 RT	220+71 RT
84 SF	220+81 RT	221+25 RT
87 SF	221+35 RT	221+81 RT
80 SF	221+90 RT	222+31 RT
83 SF	222+40 RT	222+81 RT
86 SF	223+34 RT	223+87 RT
82 SF	223+96 RT	224+38 RT
103 SF	224+47 RT	224+99 RT
93 SF	225+09 RT	225+55 RT
94 SF	225+64 RT	226+11 RT
145 SF	226+21 RT	226+95 RT
102 SF	227+04 RT	227+57 RT
65 SF	227+67 RT	228+00 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
371 SF	220+00 LT	220+47 LT
5,071 SF	220+92 LT	228+00 LT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
50 LF	220+00 RT	220+50 RT
650 LF	221+50 RT	228+00 RT
500 LF	223+00 LT	227+50 RT

SINGLE FACE GUARDRAIL MD - 605.22 (SHALLOW POST)		
QUANTITY	FROM	TO
50 LF	227+50 RT	228+00 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
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6. SAW CUTTING WITHIN AREAS TO BE EXCAVATED IS INCIDENTAL TO THE CLASS 2 EXCAVATION.
7. FOR TREES WITHIN THE LIMITS OF WORK, REMOVE ANY IDENTIFIED HAZARD TREE WITHOUT RESULTING IN ROOT BALL THROW OR MAJOR GROUND DISTURBANCE. IF ANY SIGNIFICANT ROOT BALL THROW OR GROUND DISTURBANCE OCCURS FOR TREES DIRECTLY ADJACENT TO MACARTHUR BLVD NOTIFY THE U.S. ARMY CORPS OF ENGINEERS WASHINGTON AQUEDUCT (USACE-WA) POINT OF CONTACT (POC) 202-345-2734 IMMEDIATELY TO FACILITATE OBSERVATION OF THE AREA PRIOR TO RESTORATION OF FINAL GRADES.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 220+00 TO STA. 228+00

PS-09
ROADWAY PLAN

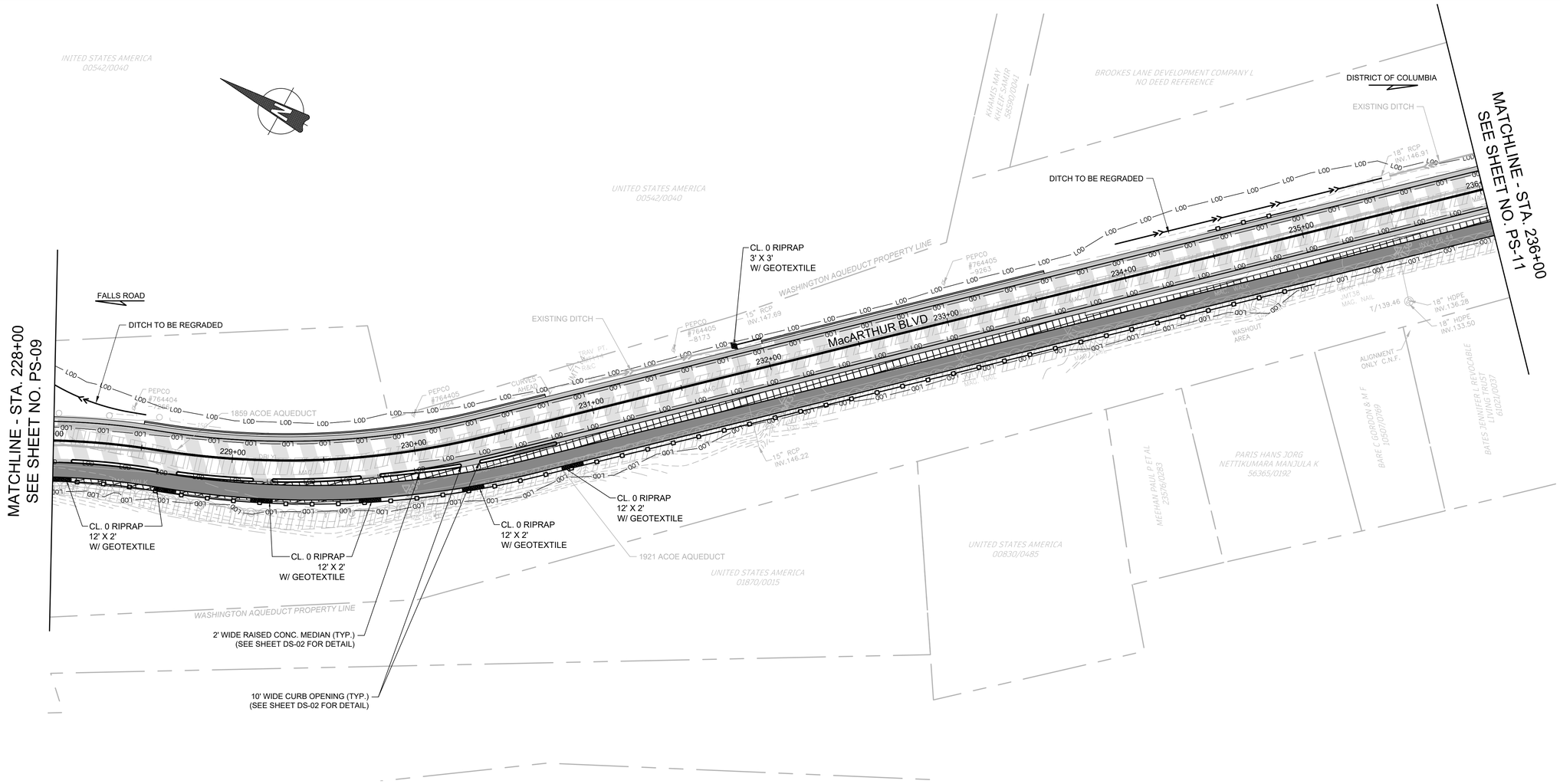
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 25 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
6,442 SF	228+00 RT	236+00 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
225 LF	228+49 LT	230+76 LT
160 LF	231+98 LT	233+58 LT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
308 SF	228+00 RT	229+77 RT
2,672 SF	228+59 RT	236+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
14,423 SF	228+00	236+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,304 SF	228+00 LT	236+00 LT
2,395 SF	230+00 RT	236+00 RT

RAISED CONCRETE MEDIAN		
QUANTITY	FROM	TO
95 SF	228+11 RT	228+61 RT
84 SF	228+70 RT	229+12 RT
97 SF	229+21 RT	229+70 RT
89 SF	229+79 RT	230+23 RT
87 SF	230+33 RT	230+77 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
250 LF	228+00 RT	230+50 RT
50 LF	234+50 LT	235+00 LT

SINGLE FACE GUARDRAIL MD - 605.22 (SHALLOW POST)		
QUANTITY	FROM	TO
450 LF	230+50 RT	235+00 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
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8. EXISTING HEAVY DUTY AQUEDUCT DECK STRUCTURE CROSSING NOT TO BE DISTURBED DURING MILLING AND OVERLAY OPERATION.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 228+00 TO STA. 236+00

PS-10
ROADWAY PLAN

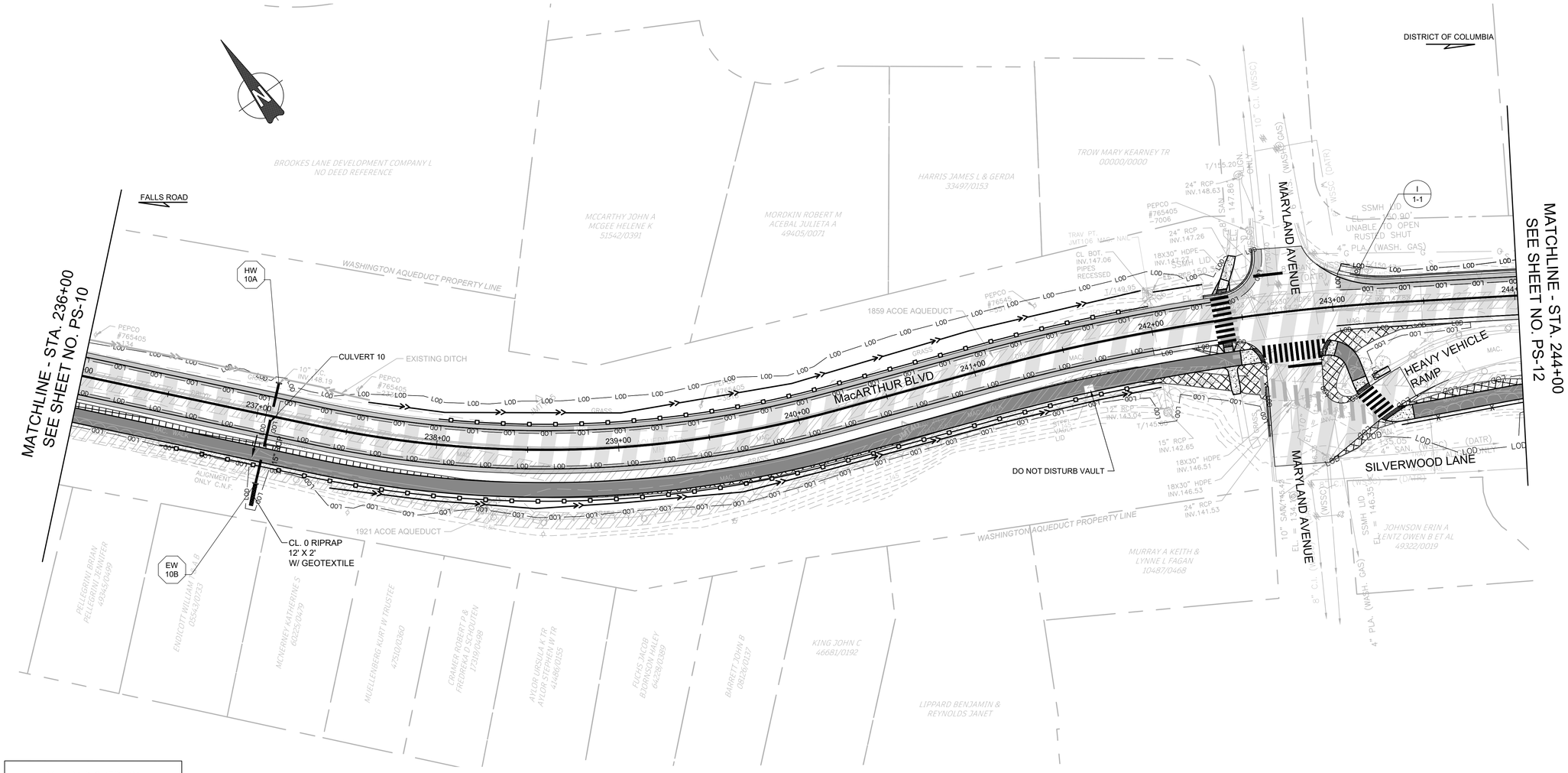
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 26 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
5,229 SF	236+00 RT	242+46 RT
175 SF	242+90 RT	243+15 RT
509 SF	243+41 RT	244+00 RT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
110 SF	242+34 RT	242+46 RT
107 SF	242+35 LT	242+45 LT
74 SF	242+46 RT	242+57 RT
74 SF	242+46 RT	242+57 RT
38 SF	242+93 RT	243+01 RT
41 SF	243+07 RT	243+16 RT
85 SF	243+24 RT	243+41 RT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
11 SF	242+40 LT	5.0'
11 SF	242+39 RT	5.0'
18 SF	242+53 RT	9.0'
37 SF	243+28 RT	9.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
565 SF	236+00 RT	238+32 RT
223 SF	238+38 RT	240+77 RT
70 SF	240+70 RT	241+90 RT
275 SF	241+88 RT	242+38 RT
54 SF	242+19 RT	242+38 RT
284 SF	242+43 RT	242+59 RT
120 SF	242+90 RT	243+32 RT
542 SF	242+91 RT	243+69 RT
250 SF	243+32 RT	244+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
19,640 SF	236+00	244+00

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
650 LF	236+50 RT	242+00 RT
400 LF	238+00 LT	242+00 LT

FENCE MD - 690.01		
QUANTITY	FROM	TO
70 SF	243+34	244+00 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
2,690 SF	236+00 LT	242+63 LT
526 SF	243+02 LT	244+00 LT
2,407 SF	236+00 RT	241+97 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
44 LF	242+29 LT	242+60 LT
90 LF	243+09 LT	244+00 LT

TRAFFIC BARRIER END TREATMENT		
STD. NO.	STATION	NOTE
MD-605.12	243+25 RT	TYPE D

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOC — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
3. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
4. PAVEMENT RESURFACING WILL NOT COVER EXISTING AQUEDUCT MANHOLES.
5. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.
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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 236+00 TO STA. 244+00

PS-11
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 27 of 285

RText (RText)

SHARED USE PATH		
QUANTITY	FROM	TO
5,739 SF	244+00 RT	251+00 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
700 LF	244+00 LT	251+00 LT
50 LF	250+50 RT	251+00 RT

RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
10 SY	245+36 LT	12.0'
14 SY	245+74 LT	21.0'
15 SY	246+63 LT	22.0'
16 SY	247+28 LT	25.0'

MILL AND OVERLAY		
QUANTITY	FROM	TO
15,118 SF	244+00	251+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,265 SF	244+00 LT	251+00 LT
270 SF	250+31 RT	251+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
42 SF	244+00 RT	244+50 RT
29 SF	244+38 RT	245+10 RT
455 SF	245+65 RT	248+86 RT
493 SF	246+83 RT	250+28 RT
20 SF	248+84 RT	249+21 RT
22 SF	249+14 RT	249+92 RT
132 SF	249+76 RT	250+55 RT
42 SF	250+42 RT	250+75 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
100 LF	250+00 LT	251+00 LT

FENCE MD - 690.01		
QUANTITY	FROM	TO
51 SF	244+00 RT	244+54 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
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- GUARD RAIL
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 244+00 TO STA. 251+00

PS-12
ROADWAY PLAN

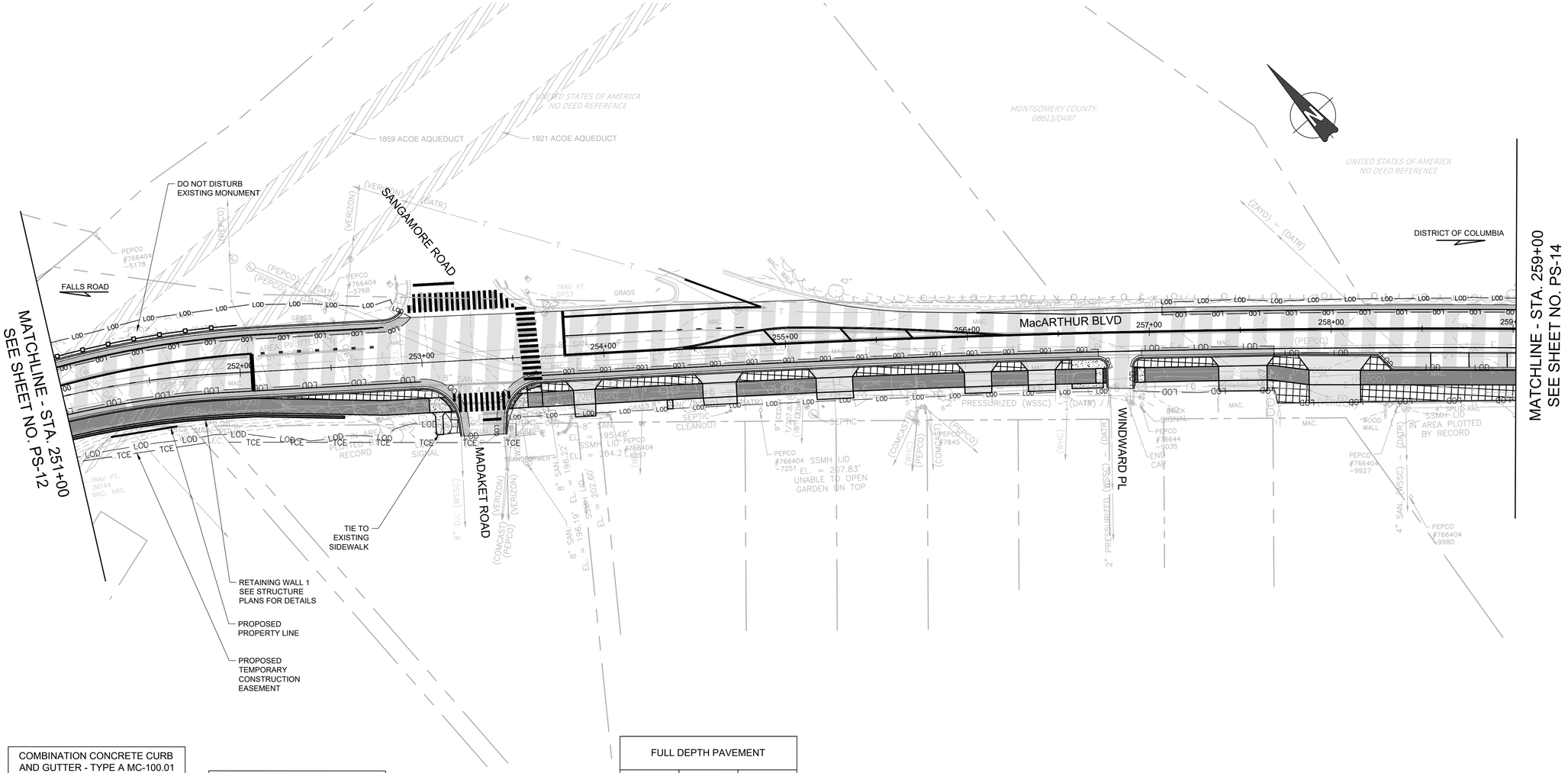
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 28 of 285



SHARED USE PATH		
QUANTITY	FROM	TO
1,595 SF	251+00 RT	259+00 RT
1,858 SF	253+56 RT	256+70 RT
1,182 SF	256+96 RT	259+00 RT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
127 SF	253+02 RT	253+15 RT
69 SF	253+48 RT	253+65 RT
15 SF	254+33 RT	254+36 RT
200 SF	256+56 RT	256+75 RT
64 SF	256+93 RT	256+97 RT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
20 SF	253+11 RT	10.0'
20 SF	253+49 RT	10.0'
16 SF	253+59 RT	8.0'
16 SF	256+72 RT	8.0'
16 SF	256+92 RT	8.0'
17 SF	257+84 LT	8.0'

RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
28 SY	253+87 RT	12.0'
37 SY	254+61 RT	19.0'
40 SY	255+25 RT	20.0'
30 SY	256+04 RT	15.0'
30 SY	256+39 RT	15.0'
56 SY	257+50 RT	27.0'

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
512 LF	251+00 LT	253+18 LT
225 LF	251+00 RT	253+19 RT
365 LF	253+43 RT	256+75 RT
227 LF	256+89 RT	259+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
380 SF	252+07 RT	253+19 RT
980 SF	253+45 RT	256+56 RT
1,379 SF	256+51 RT	259+00 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
25,230 SF	251+00	259+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
913 SF	251+00 LT	252+94 LT
779 SF	257+06 LT	259+00 LT
957 SF	251+00 RT	253+23 RT
1,402 SF	253+37 RT	256+70 RT
292 SF	256+94 RT	257+67 RT

SINGLE FACE GUARDRAIL MD - 605.22		
QUANTITY	FROM	TO
100 SF	251+00 LT	252+00 LT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 251+00 TO STA. 259+00

PS-13
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 29 of 285

RText (RText)

SHARED USE PATH		
QUANTITY	FROM	TO
5,626 SF	259+00 RT	267+00 RT

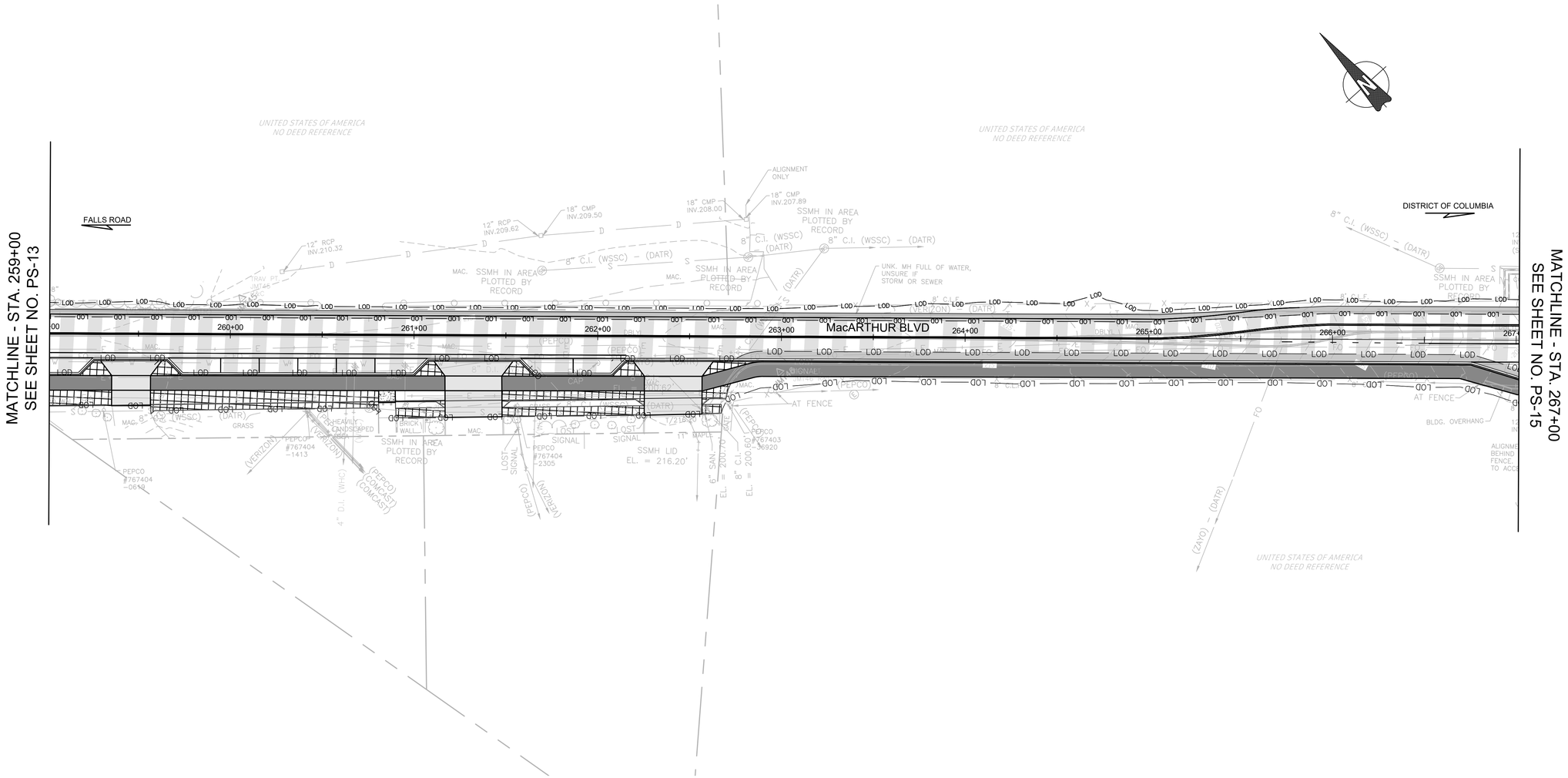
COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
818 LF	259+00 RT	267+00 RT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
59 LF	260+80 RT	260+90 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
3,166 SF	259+00 RT	262+90 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
24,669 SF	259+00	267+00

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
3,201 SF	259+00 LT	267+00 LT
1,795 SF	262+62 RT	267+00 RT



LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 259+00 TO STA. 267+00

PS-14
ROADWAY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

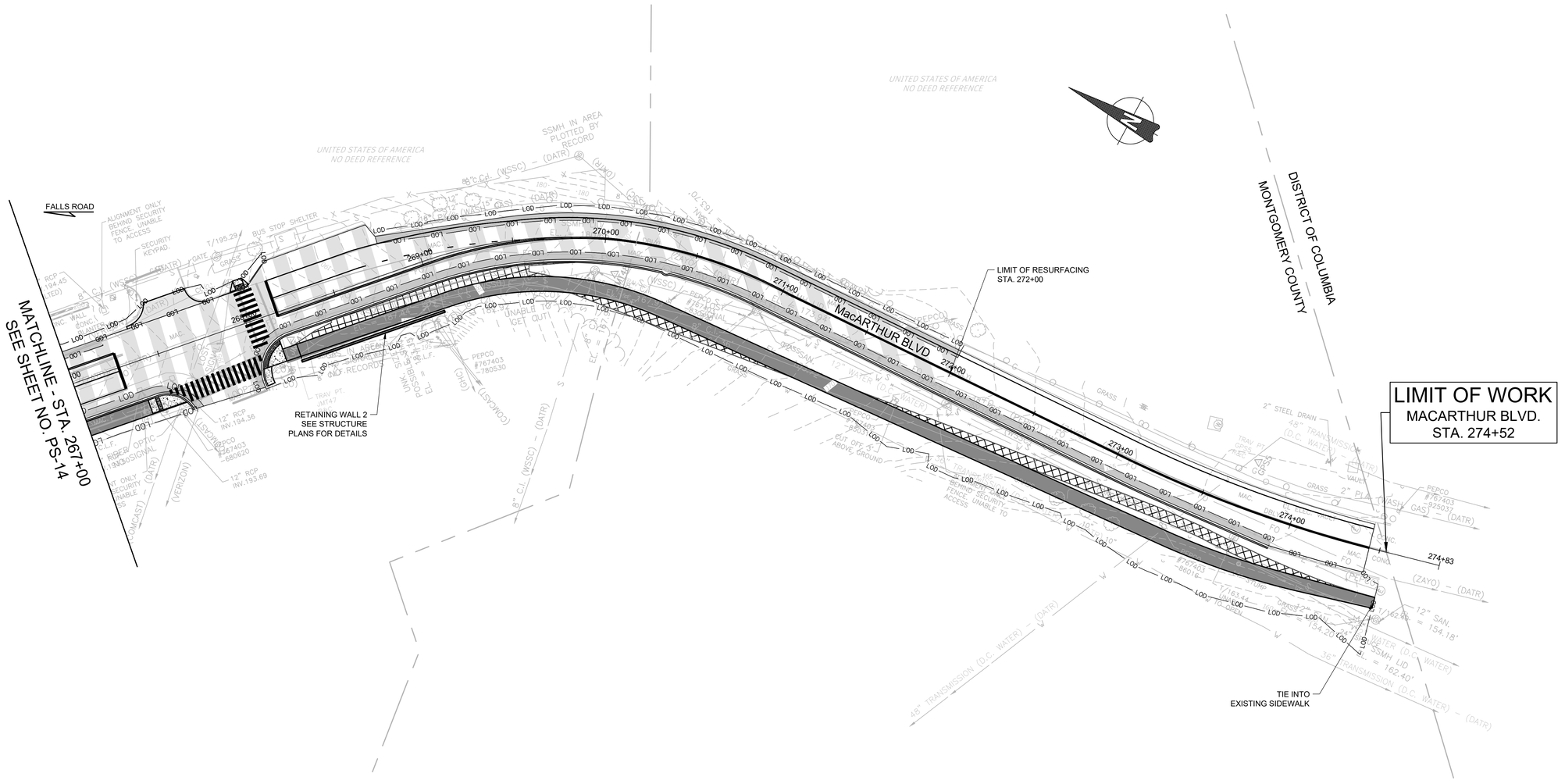
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 30 of 285

RText (RText)



SHARED USE PATH		
QUANTITY	FROM	TO
291 SF	267+00 LT	267+36 LT
4,945 SF	268+13 LT	274+53 LT

RESIDENTIAL SIDEWALK MC-111.01		
QUANTITY	FROM	TO
99 SF	267+36 RT	267+56 RT
101 SF	267+97 LT	268+08 LT
29 SF	267+99 RT	268+14 RT

COMBINATION CONCRETE CURB AND GUTTER - TYPE A MC-100.01		
QUANTITY	FROM	TO
64 LF	267+00 RT	267+57 RT
599 LF	267+98 RT	273+93 RT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
33 SF	267+45 RT	15.0'
19 SF	268+03 RT	10.0'

RESIDENTIAL DRIVEWAY MC - 301.01		
QUANTITY	STATION	WIDTH
34 SY	267+61 LT	23.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
758 SF	268+19 RT	269+84 RT
390 SF	269+81 RT	271+25 RT
1,207 SF	271+58 RT	274+53 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
18,330 SF	267+00	274+43

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
87 SF	267+00 LT	267+22 LT
917 SF	268+79 LT	270+99 LT
270 SF	267+00 RT	267+62 RT
2,425 SF	267+93 RT	273+92 RT

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL
- FENCE
- PROPOSED DITCH

NOTES:

1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. SEE DITCH SCHEDULE ON SHEET 45 - DS-01 FOR DITCH DESIGNS.
3. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
4. PAVEMENT RESURFACING WILL NOT COVER EXISTING AQUEDUCT MANHOLES.
5. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.
6. SAW CUTTING WITHIN AREAS TO BE EXCAVATED IS INCIDENTAL TO THE CLASS 2 EXCAVATION.
7. FOR TREES WITHIN THE LIMITS OF WORK, REMOVE ANY IDENTIFIED HAZARD TREE WITHOUT RESULTING IN ROOT BALL THROW OR MAJOR GROUND DISTURBANCE. IF ANY SIGNIFICANT ROOT BALL THROW OR GROUND DISTURBANCE OCCURS FOR TREES DIRECTLY ADJACENT TO MACARTHUR BLVD NOTIFY THE U.S. ARMY CORPS OF ENGINEERS WASHINGTON AQUEDUCT (USACE-WA) POINT OF CONTACT (POC) 202-345-2734 IMMEDIATELY TO FACILITATE OBSERVATION OF THE AREA PRIOR TO RESTORATION OF FINAL GRADES.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TBC Checked by: JJR

STA. 267+00 TO STA. 274+52

PS-15
ROADWAY PLAN

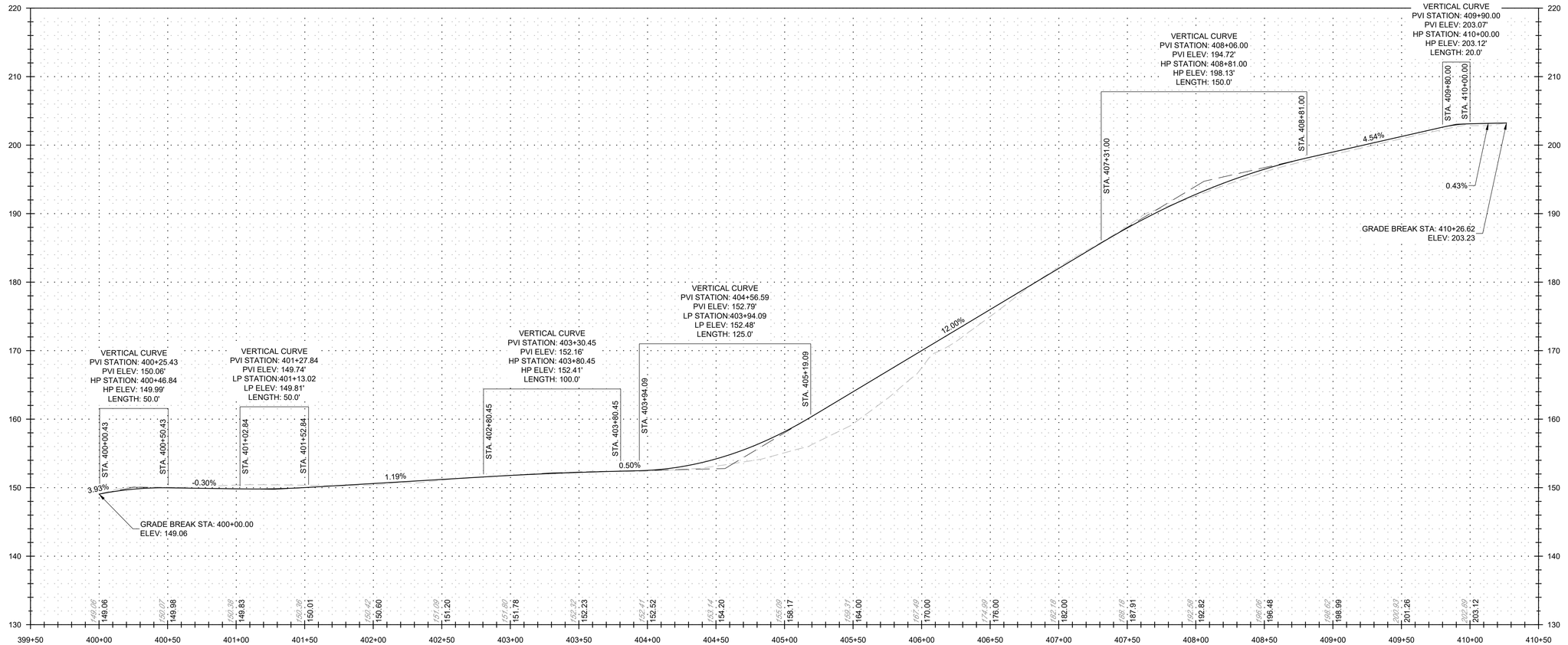
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 31 of 285

RText (RText)



TRAIL_400

HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 5'

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: SLS Checked by: JJR

PS-16
BIKEWAY PROFILE

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

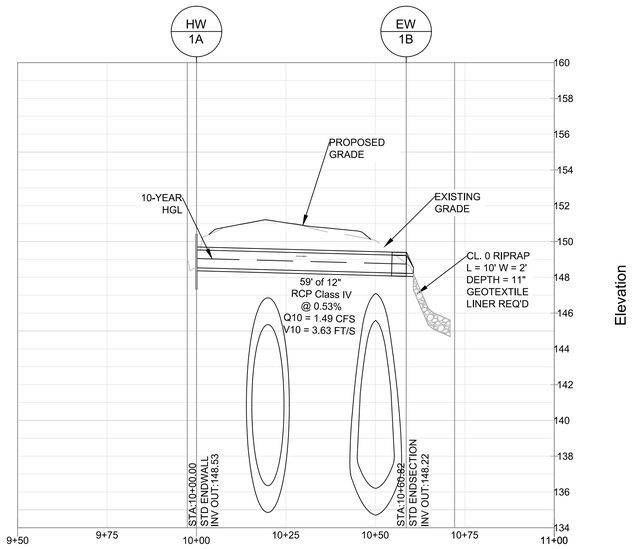
0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

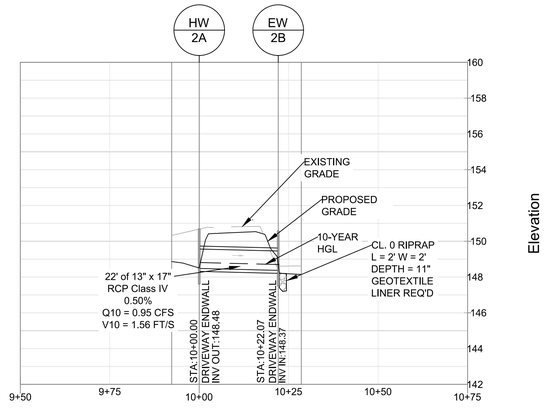
CIP No. : 500718 SHEET 32 of 285

RText (RText)

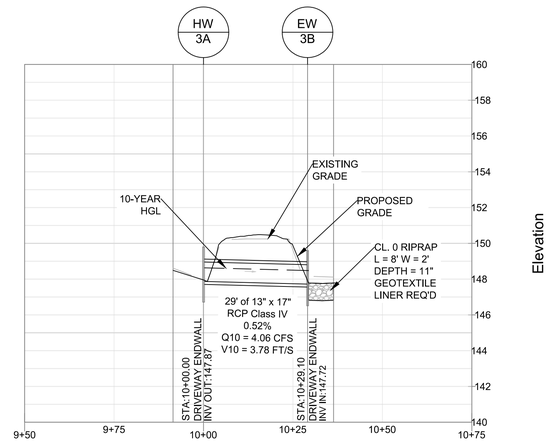
CULVERT 1 AT STA 166+50



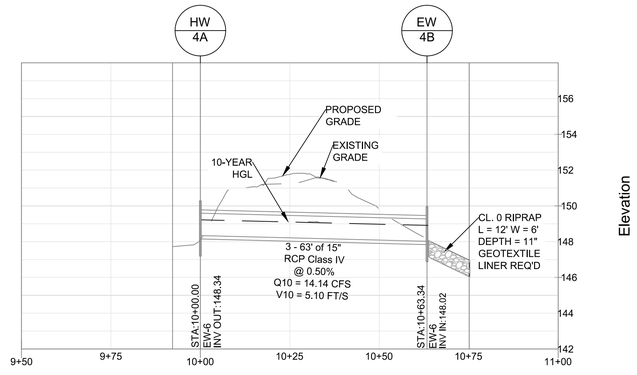
CULVERT 2 AT STA 169+00



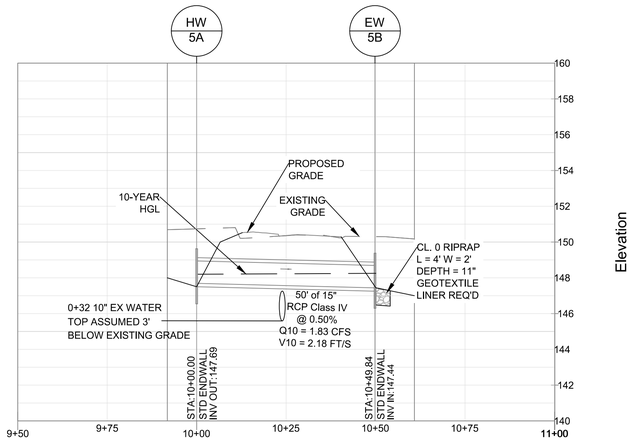
CULVERT 3 AT STA 170+50



CULVERT 4 AT STA 181+00

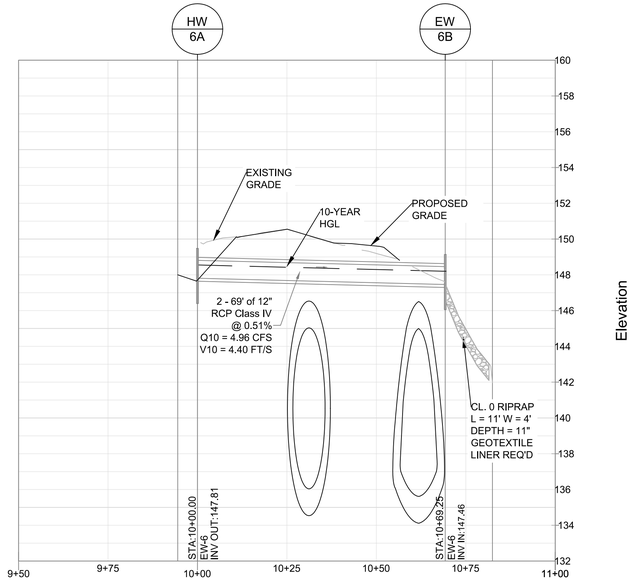


CULVERT 5 AT STA 189+00



NOTE: ACTUAL INVERT ELEVATIONS MAY VARY. CONTRACTOR SHALL PLACE PROPOSED CULVERT AT THE SAME GRADE AND ELEVATION OF EXISTING CULVERT. CONTRACTOR WILL SUBMIT DRAWINGS TO THE ENGINEER OF RECORD.

CULVERT 6 AT STA 195+00



SCALE: HORIZONTAL: 1"=20', VERTICAL: 1"=5'

NOTES:
1. AQUEDUCT ELEVATIONS ARE BASED UPON AS-BUILT DOCUMENTS PRIOR TO UNIVERSALLY ACCEPTED VERTICAL DATUMS. ACTUAL ELEVATIONS MAY VARY.
2. CULVERT AND PIPE EXCAVATION AND INSTALLATION WHEN IN THE VICINITY OF AN AQUEDUCT, MUST BE CONSTRUCTED BY HAND.
3. TITLE STATIONING REFERS TO ROADWAY CENTERLINE.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

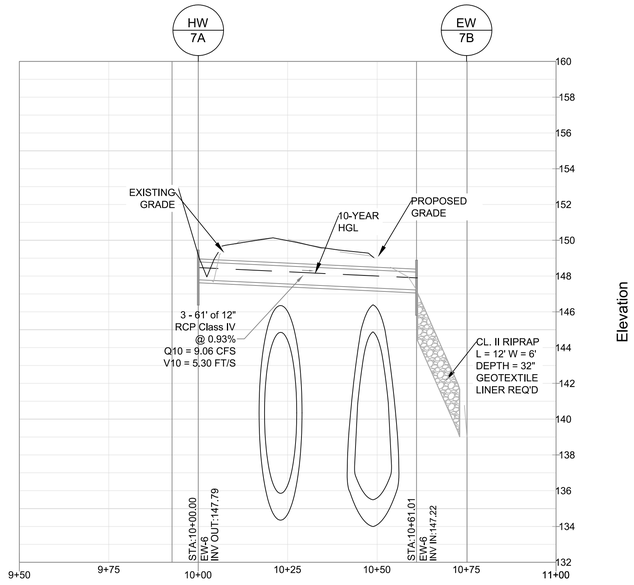
DP-01
DRAINAGE PROFILES
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

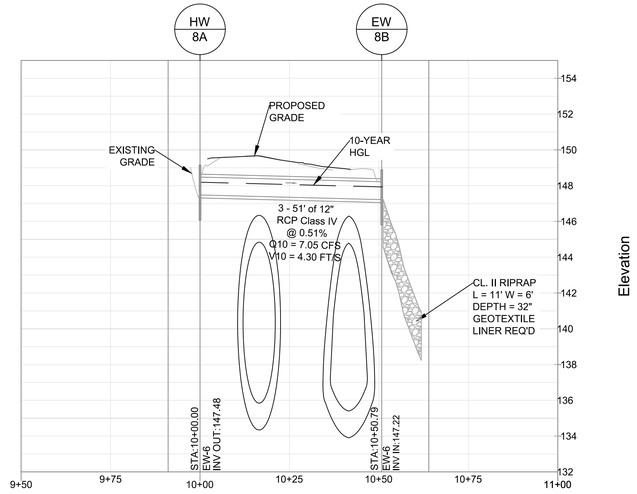
CIP No. : 500718 SHEET 33 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDP-0001_MacArthur.dwg LAYOUT NAME: DP-01 PLOTTED: Thursday, June 27, 2024 - 3:50pm USER: ABayagich

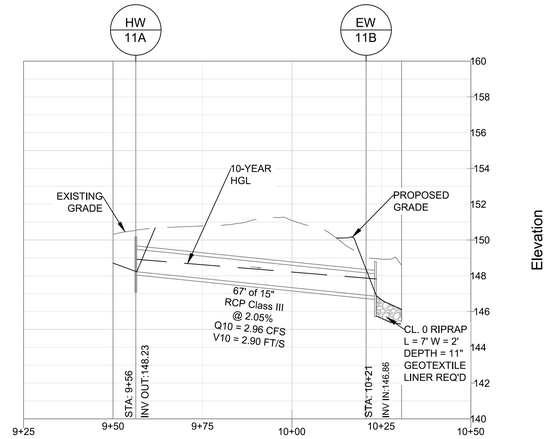
CULVERT 7 AT STA 208+50



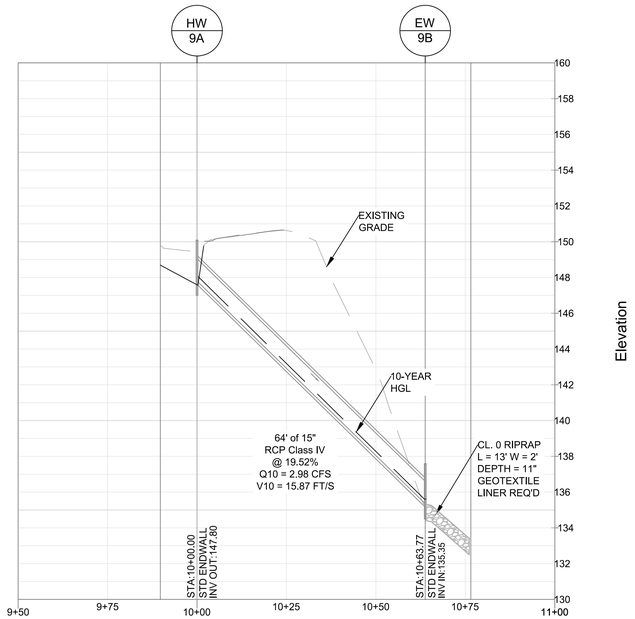
CULVERT 8 AT STA 211+00



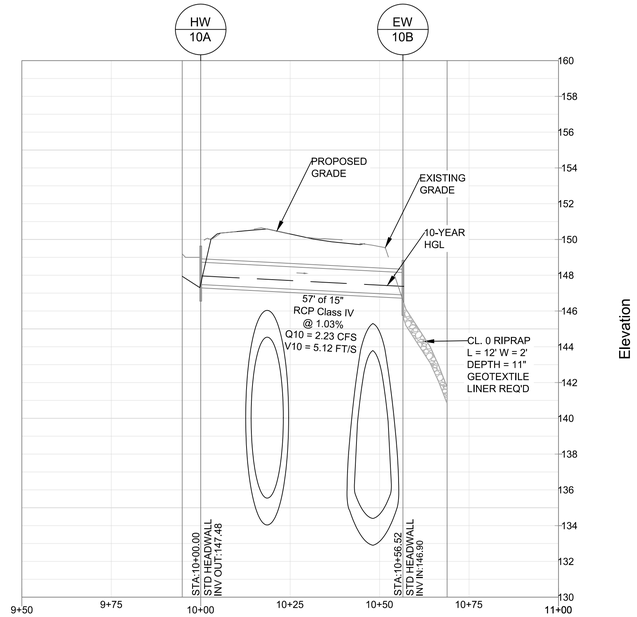
CULVERT 11 AT STA 226+12



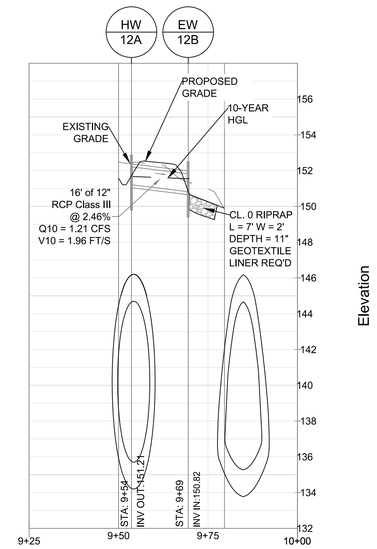
CULVERT 9 AT STA 220+50



CULVERT 10 AT STA 237+00



CULVERT 12 AT STA 247+08



SCALE: HORIZONTAL: 1"=20', VERTICAL: 1"=5'

NOTES:
1. AQUEDUCT ELEVATIONS ARE BASED UPON AS-BUILT DOCUMENTS PRIOR TO UNIVERSALLY ACCEPTED VERTICAL DATUMS. ACTUAL ELEVATIONS MAY VARY.
2. CULVERT AND PIPE EXCAVATION AND INSTALLATION WHEN IN THE VICINITY OF AN AQUEDUCT, MUST BE CONSTRUCTED BY HAND.
3. TITLE STATIONING REFERS TO ROADWAY CENTERLINE.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

DP-02
DRAINAGE PROFILES

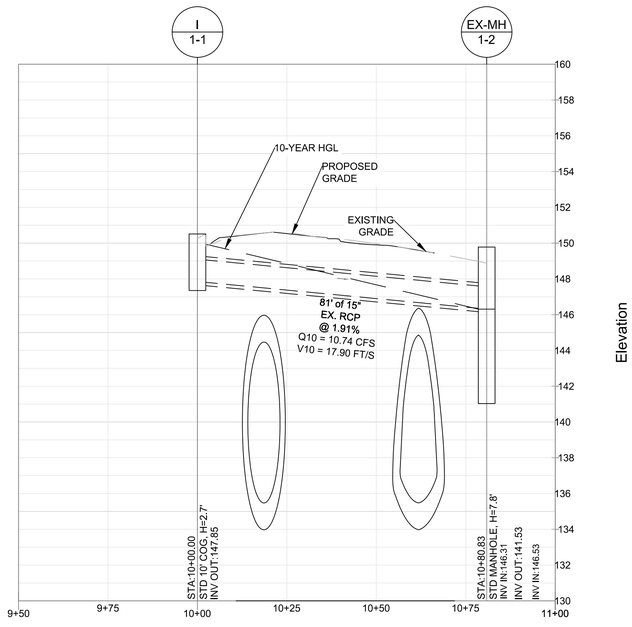
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

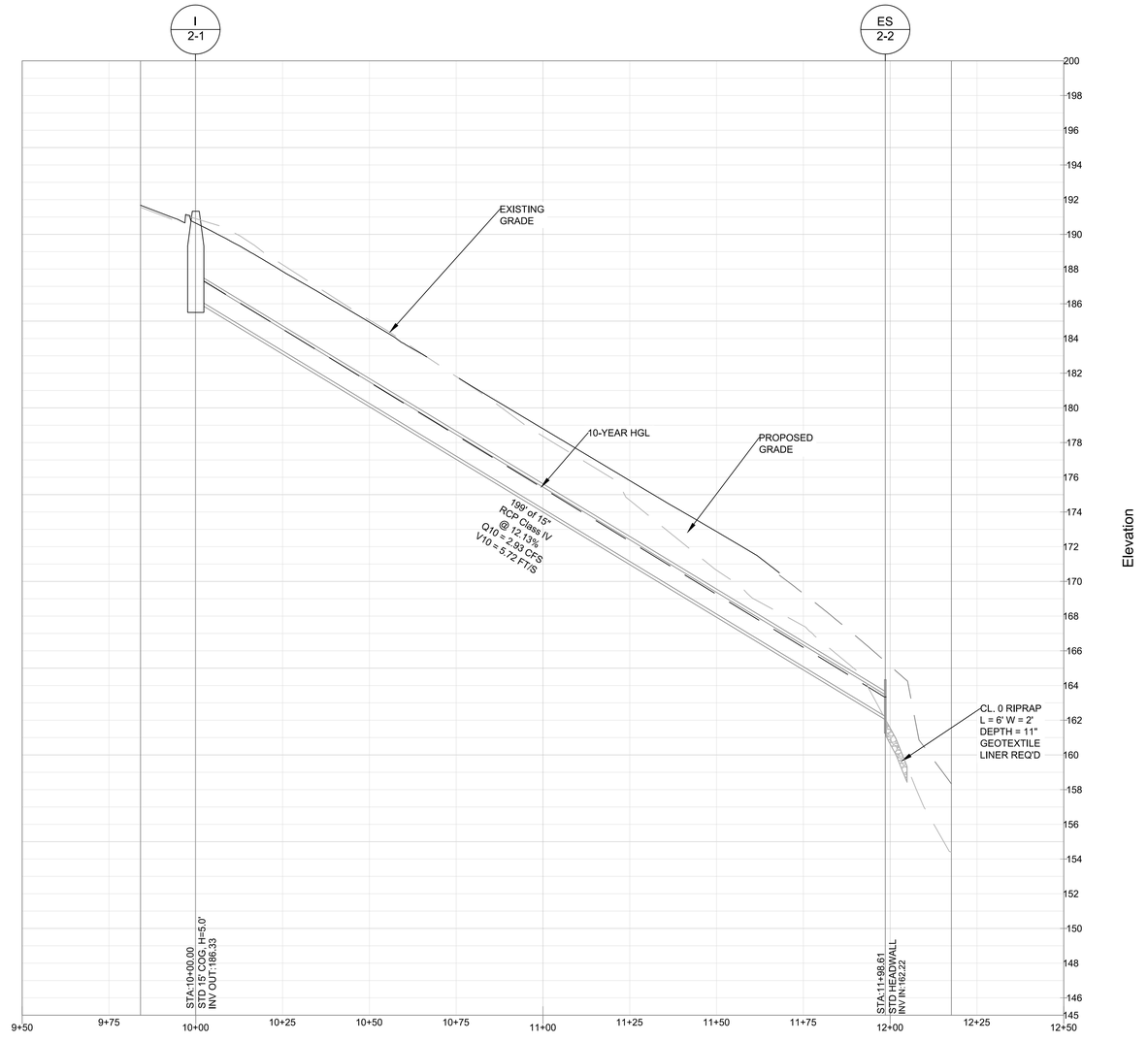
CIP No. : 500718

FILE NAME: C:\pwworking\jmt\d0320788\pDP-0001_MacArthur.dwg LAYOUT NAME: DP-02 PLOTTED: Thursday, June 27, 2024 - 3:52pm USER: ABayagich

Storm Drainage System Maryland Ave



Storm Drainage System 2



SCALE: HORIZONTAL: 1"=20', VERTICAL: 1"=5'

NOTES:
1. AQUEDUCT ELEVATIONS ARE BASED UPON AS-BUILT DOCUMENTS PRIOR TO UNIVERSALLY ACCEPTED VERTICAL DATUMS. ACTUAL ELEVATIONS MAY VARY.
2. CULVERT AND PIPE EXCAVATION AND INSTALLATION WHEN IN THE VICINITY OF AN AQUEDUCT, MUST BE CONSTRUCTED BY HAND.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

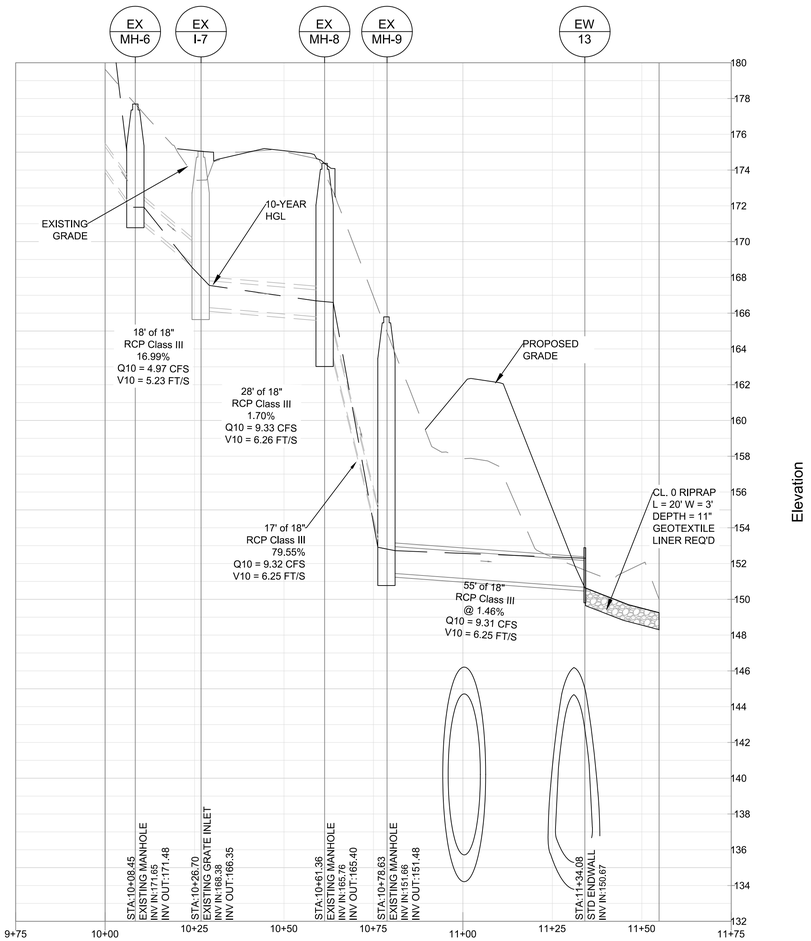
DP-03
DRAINAGE PROFILES
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718

FILE NAME: C:\pwworking\jmt\d0320788\pDP-0001_MacArthur.dwg LAYOUT NAME: DP-03 PLOTTED: Thursday, June 27, 2024 - 3:52pm USER: ABayagich

EX STORM 248+50



SCALE: HORIZONTAL: 1"=20', VERTICAL: 1"=5'

NOTES:
1. AQUEDUCT ELEVATIONS ARE BASED UPON AS-BUILT DOCUMENTS PRIOR TO UNIVERSALLY ACCEPTED VERTICAL DATUMS. ACTUAL ELEVATIONS MAY VARY.
2. CULVERT AND PIPE EXCAVATION AND INSTALLATION WHEN IN THE VICINITY OF AN AQUEDUCT, MUST BE CONSTRUCTED BY HAND.
3. TITLE STATIONING REFERS TO ROADWAY CENTERLINE.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

DP-04
DRAINAGE PROFILES
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718

FILE NAME: C:\pwworking\jmt\d0320788\pDP-0001_MacArthur.dwg LAYOUT NAME: DP-04 PLOTTED: Thursday, June 27, 2024 - 3:53pm USER: ABayagich



LEGEND

- DITCH DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AGB Drawn by: AGB Checked by: WRB

DA-01
DITCH DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'
SCALE: 1"=200'

DATE: JUNE 2024

CIP No. : 500718

SHEET 37 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-01 PLOTTED: Wednesday, June 26, 2024 – 2:53pm USER: mkane-seitz

MATCHLINE - STA. 182+00
SEE SHEET NO. DA-01

MATCHLINE - STA. 212+00
SEE SHEET NO. DA-03

DITCH: 196+16 LT
A = 20.56 AC
C = 0.46
Tc = 13.5 MIN

DITCH: 203+00 LT
A = 5.56 AC
C = 0.30
Tc = 17.2 MIN

DITCH: 208+00 LT
A = 2.75 AC
C = 0.35
Tc = 16.9 MIN

CULVERT 5

CULVERT 6

CULVERT 7

CULVERT 8

HW 5A

EW 5B

EW 6B

HW 7A

EW 7B

HW 8A

EW 8B

DITCH: 189+17 LT
A = 0.41 AC
C = 0.28
Tc = 10 MIN

DITCH: 190+00 LT
A = 0.71 AC
C = 0.36
Tc = 10 MIN

DITCH: 192+00 LT
A = 1.13 AC
C = 0.32
Tc = 15 MIN

DITCH: 193+00 LT
A = 0.61 AC
C = 0.36
Tc = 15 MIN

DITCH: 194+00 LT
A = 0.52 AC
C = 0.32
Tc = 15 MIN

DITCH: 195+05 LT
A = 0.72 AC
C = 0.33
Tc = 15 MIN

DITCH: 196+17 LT
A = 0.66 AC
C = 0.32
Tc = 15 MIN

DITCH: 195+06 LT
A = 0.05 AC
C = 0.19
Tc = 15 MIN

DITCH: 197+00 LT
A = 0.69 AC
C = 0.37
Tc = 15 MIN

DITCH: 198+00 LT
A = 0.64 AC
C = 0.39
Tc = 15 MIN

DITCH: 199+00 LT
A = 1.14 AC
C = 0.42
Tc = 15 MIN

DITCH: 200+00 LT
A = 0.68 AC
C = 0.35
Tc = 15 MIN

DITCH: 201+30 LT
A = 0.91 AC
C = 0.35
Tc = 15 MIN

DITCH: 204+41 LT
A = 0.76 AC
C = 0.29
Tc = 17.5 MIN

DITCH: 204+42 LT
AREA = 2.31 AC
C = 0.24
Tc = 16.8 MIN

DITCH: 206+00 LT
A = 0.50 AC
C = 0.28
Tc = 15 MIN

DITCH: 207+00 LT
A = 1.59 AC
C = 0.31
Tc = 15 MIN

DITCH: 208+57 LT
A = 0.78 AC
C = 0.30
Tc = 15 MIN

DITCH: 208+58 LT
A = 0.26 AC
C = 0.30
Tc = 15 MIN

DITCH: 210+00 LT
A = 1.37 AC
C = 0.27
Tc = 15 MIN

DITCH: 209+00 LT
A = 0.51 AC
C = 0.30
Tc = 15 MIN

LEGEND

- DITCH DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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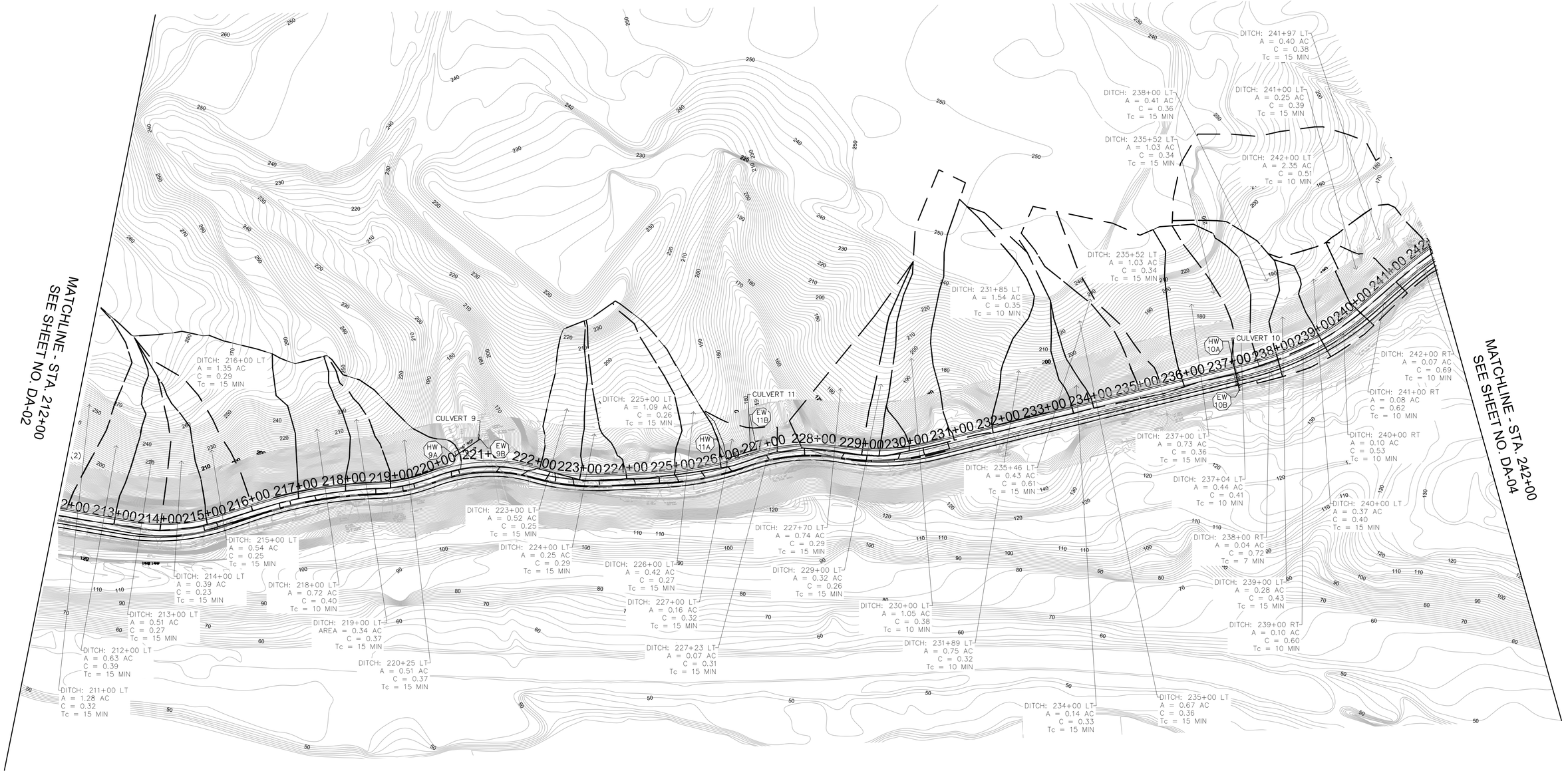
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DA-02
DITCH DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 38 of 285



LEGEND

- DITCH DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Division of Transportation Engineering — Date

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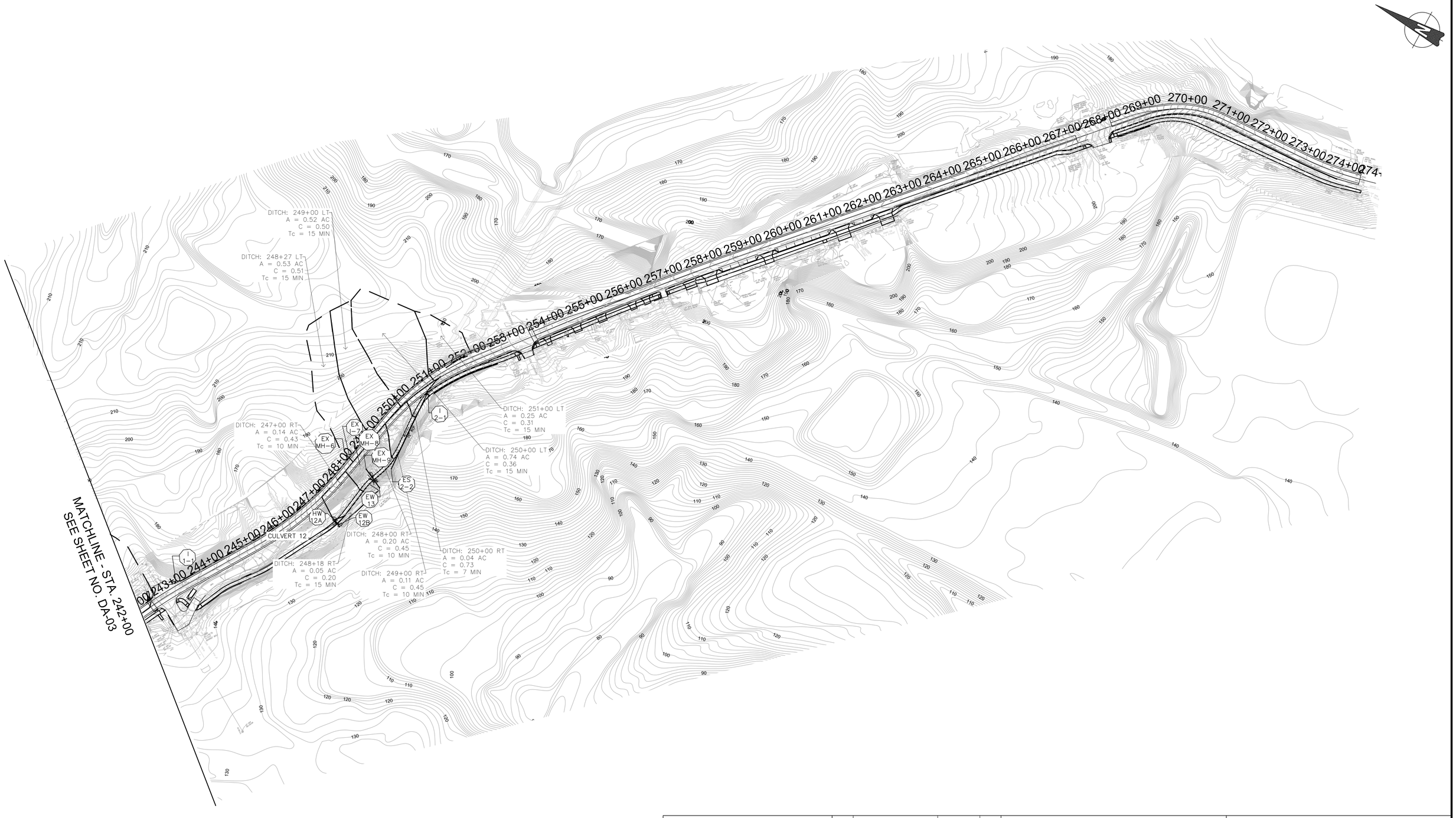
DA–03
DITCH DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 39 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-03 PLOTTED: Wednesday, June 26, 2024 – 3:09pm USER: mkane-seitz



LEGEND

- DITCH DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AGB Drawn by: AGB Checked by: WRB

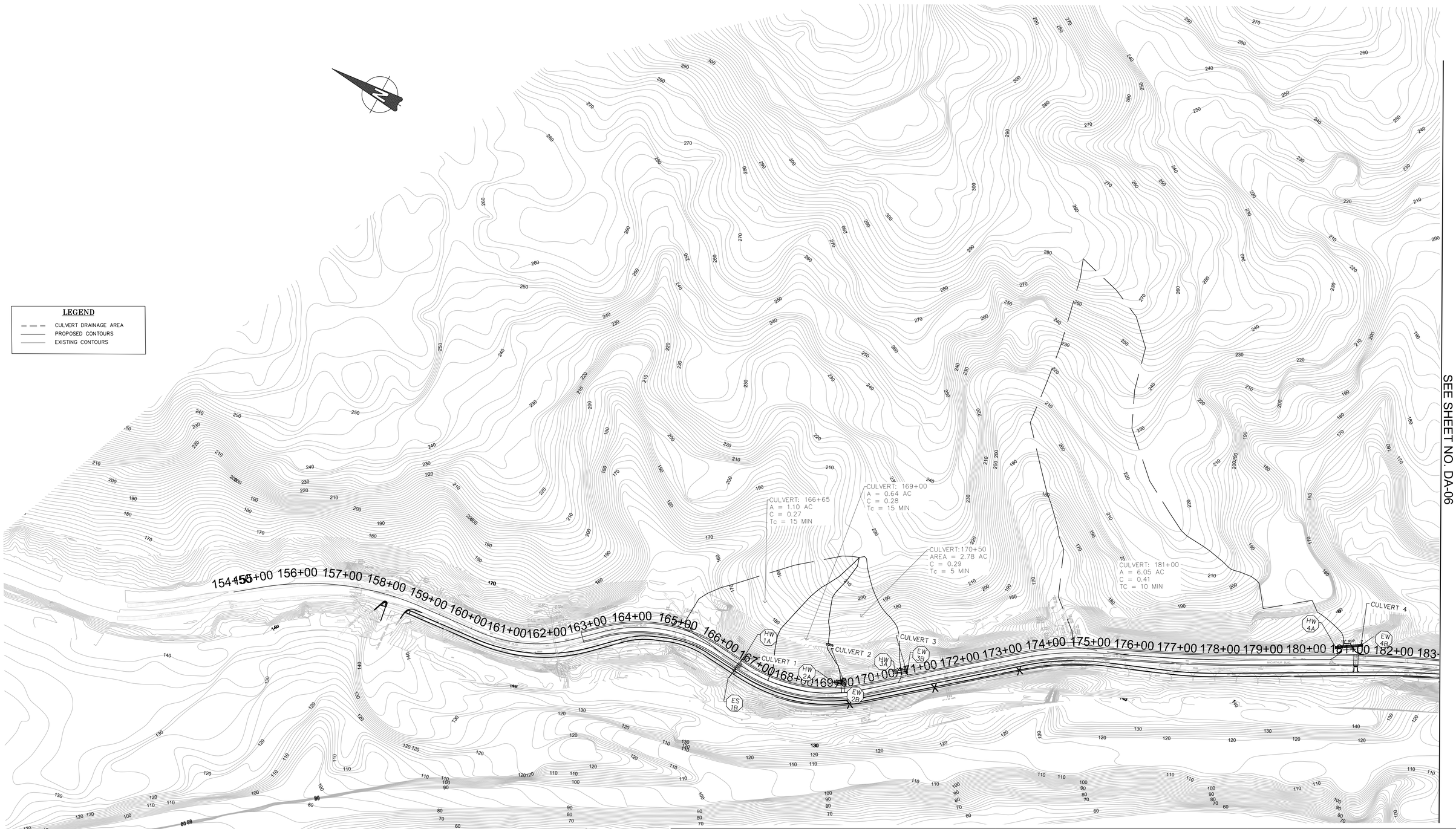
DA-04
DITCH DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No.: 500718 SHEET 40 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-04 PLOTTED: Wednesday, June 26, 2024 - 3:10pm USER: mkane-seitz



MATCHLINE - STA. 182+00
SEE SHEET NO. DA-06

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AGB Drawn by: AGB Checked by: WRB

DA-05
CULVERT/INLET DRAINAGE AREA MAPS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 41 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-05 PLOTTED: Wednesday, June 26, 2024 - 3:11pm USER: mkane-seitz

MATCHLINE - STA. 182+00
SEE SHEET NO. DA-05

MATCHLINE - STA. 212+00
SEE SHEET NO. DA-07

CULVERT: 195+00
A = 3.03 AC
C =
Tc = 15 MIN

CULVERT: 208+50
A = 2.91 AC
C = 0.28
Tc = 15 MIN

CULVERT: 189+00
A = 1.12 AC
C =0.38
Tc = 15 MIN

CULVERT 5

CULVERT 6

CULVERT 7

CULVERT 8(2)

HW 5A

EW 5B

HW 6A

EW 6B

HW 7A

EW 7B

HW 8A

EW 8B

CLARA BARTON PARKWAY

183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213

LEGEND

- CULVERT DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AGB Drawn by: AGB Checked by: WRB

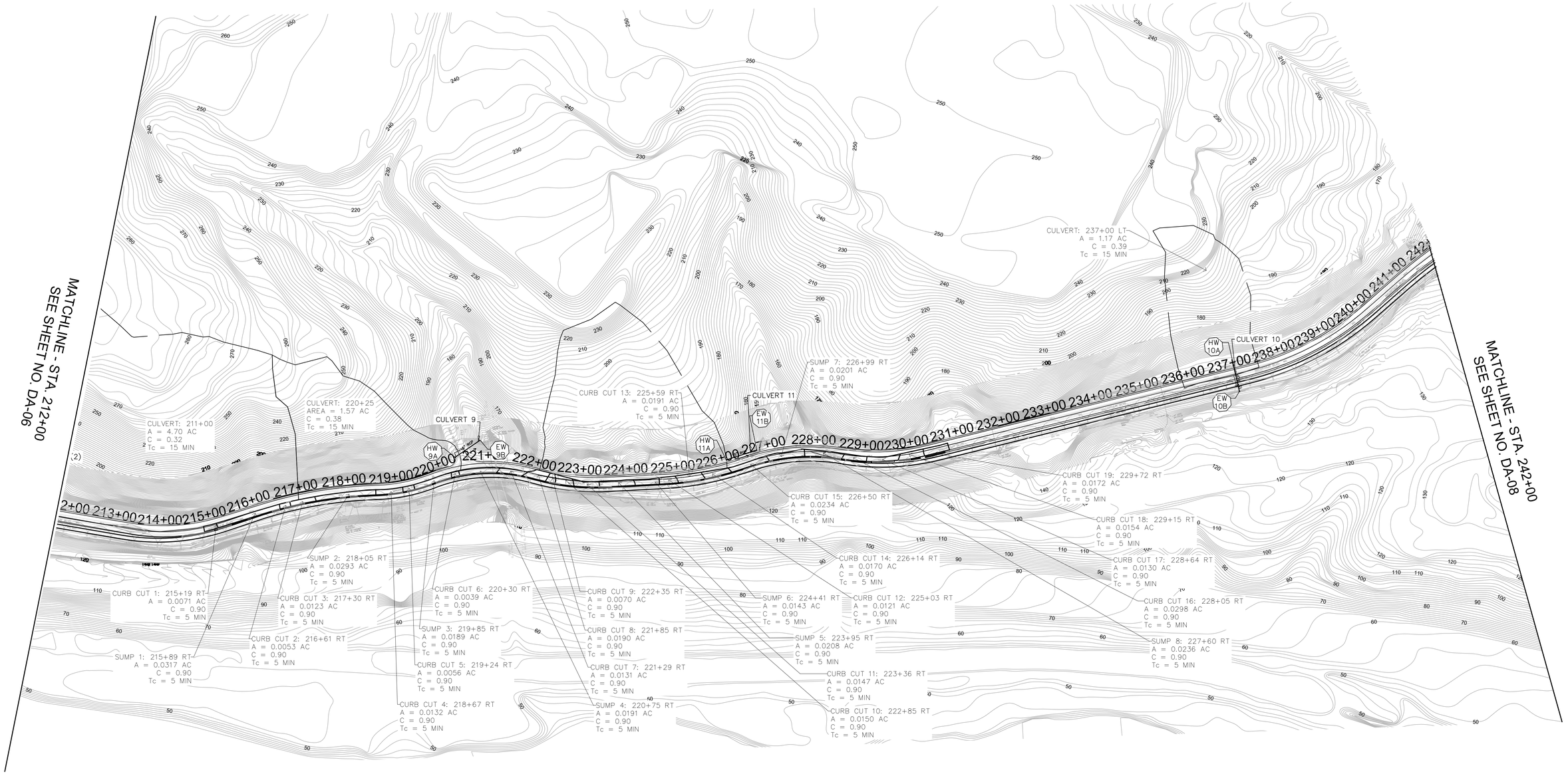
DA-06
CULVERT/INLET DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 42 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-06 PLOTTED: Wednesday, June 26, 2024 - 3:13pm USER: mkane-seitz



LEGEND

- CULVERT DRAINAGE AREA
- CURB CUT DRAINAGE AREA
- INLET DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

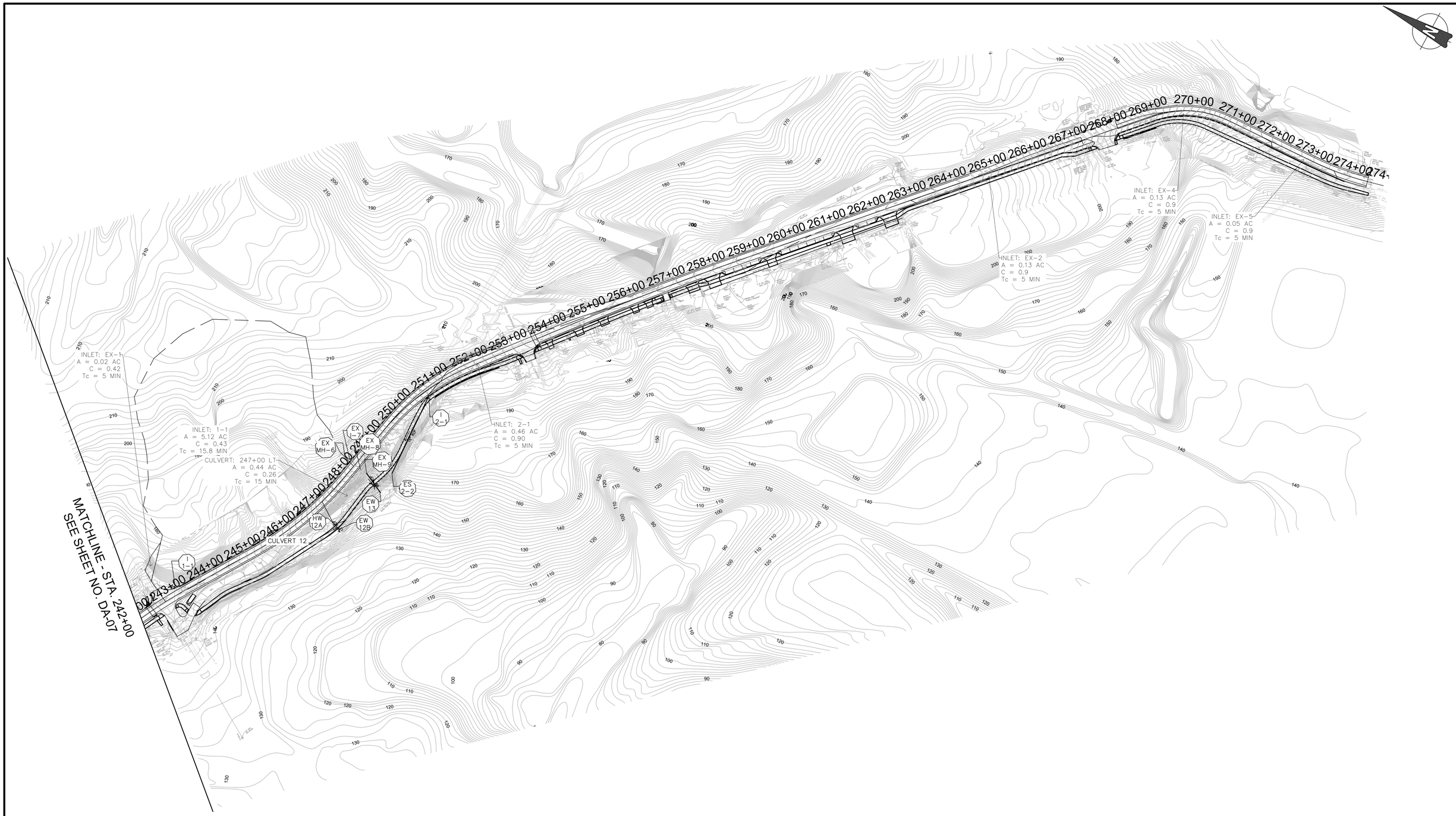
Designed by: AGB Drawn by: AGB Checked by: WRB

DA-07
CULVERT/INLET DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 43 of 285



LEGEND

- INLET DRAINAGE AREA
- PROPOSED CONTOURS
- EXISTING CONTOURS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AGB Drawn by: AGB Checked by: WRB

DA-08
CULVERT/INLET DRAINAGE AREA MAPS
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 200' 400'

SCALE: 1"=200' DATE: JUNE 2024

CIP No. : 500718 SHEET 44 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDA-0001_MacArthur.dwg LAYOUT NAME: DA-08 PLOTTED: Wednesday, June 26, 2024 - 3:15pm USER: mkane-seitz

STORM DRAIN STRUCTURE SCHEDULE						
NO.	STATION	OFFSET	TYPE	STD. NO.	INVERT IN	INVERT OUT
HW-1A	166+65	19 LT	C -12"	MD-345.01	-	148.53
ES-1B	166+65	41 RT	C -12"	MD-368.02	148.22	-
HW-2A	169+07	21 LT	13" x 17" Elliptical	MD-354.01	-	148.48
EW-2B	169+25	22 LT	13" x 17" Elliptical	MD-354.01	148.37	-
HW-3A	170+49	23 LT	13" x 17" Elliptical	MD-354.01	-	147.87
EW-3B	170+73	22 LT	13" x 17" Elliptical	MD-354.01	147.72	-
HW-4A	180+75	24 LT	Triple 15" RCP	EW-6	-	148.34
EW-4B	181+20	28 LT	Triple 15" RCP	EW-6	148.05	-
HW-5A	188+88	25 LT	C -15"	MD-354.01	-	147.69
EW-5B	189+38	25 LT	C -15"	MD-354.01	147.44	-
HW-6A	195+00	24 LT	Double 12" RCP	EW-6	-	147.81
EW-6B	195+00	44 RT	Double 12" RCP	EW-6	147.46	-
HW-7A	208+50	18 LT	Triple 12" RCP	EW-6	-	147.79
EW-7B	208+50	40 RT	Triple 12" RCP	EW-6	147.22	-
HW-8A	211+00	17 LT	Triple 12" RCP	EW-6	-	147.48
EW-8B	211+00	33 RT	Triple 12" RCP	EW-6	147.22	-
HW-9A	220+42	29 LT	C -15"	MD-354.01	-	147.8
EW-9B	220+86	54 LT	C -15"	MD-354.01	135.35	-
HW-10A	237+00	16 LT	C -15"	MD-354.01	-	147.48
EW-10B	237+00	38 RT	C -15"	MD-354.01	146.9	-
HW-11A	226+12	16 LT	C-15"	MD-354.01	-	148.23
EW-11B	226+81	17 LT	C-15"	MD-354.01	146.86	-
HW-12A	247+00	61 RT	C-12"	MD-345.01	-	151.21
EW-12B	247+00	61 RT	C-12"	MD-345.01		150.82
I-2-1	250+67	13 RT	15' COG	MD-374.61	-	187.33
ES-2-2	248+71	80 RT	15" RCP	MD-368.01	164.72	-
I-1-1*	248+34	35 LT	10' COG	MD-374.61	-	147.85
EW-13	248+24	88 RT	C-18"	MD-345.01	150.67	-
*Replaces existing 5' COG inlet						

STORM DRAIN PIPE SCHEDULE					
FROM	TO	SIZE & TYPE	LENGTH	INVERT OUT	INVERT IN
I-2-1	ES-2-2	15" RCP	199'	187.3	164.72
EX-MH-9	EW-13	18" RCP	55'	151.48	150.67

CULVERT SCHEDULE				
NO.	STATION	OFFSET	SIZE & TYPE	LENGTH (FT)
1	166+65	19 LT	12" RCP	58.6
2	169+00	21 LT	13" X 17" RCP	22.1
3	170+50	22 LT	13" X 17" RCP	29.1
4	181+00	25 LT	TRIPLE 15" RCP	63.3
5	189+00	24 LT	15" RCP	49.8
6	195+00	24 LT	DOUBLE 12" RCP	69.3
7	208+50	18 LT	TRIPLE 12" RCP	61.0
8	211+00	17 LT	TRIPLE 12" RCP	50.8
9	220+50	29 LT	15" RCP	65.0
10	237+00	16 LT	15" RCP	56.5
11	226+12	16 LT	15" RCP	64.3
12	247+00	61 RT	12" RCP	15.8

OUTFALL SCHEDULE								
OUTFALL	d50 Stone Size (in)	CLASS RIPRAP	SIDE SLOPE	DEPTH (FT)	LENGTH (FT)	WIDTH (FT)	THICKNESS (IN)	AMOUNT (SY)
227+00 LT	5.5	0	2:1	1.20	3	5	11	1.67
228+16 LT	5.5	0	2:1	1.17	4	5	11	2.22
ES 2-2	5.5	0	N/A	1.25	6	2	11	1.33
CULVERT 1	5.5	0	2:1	1.00	10	2	11	2.22
CULVERT 2	5.5	0	3:1	1.08	2	2	11	0.44
CULVERT 3	5.5	0	3:1	1.08	8	2	11	1.78
CULVERT 4	5.5	0	2:1	1.25	12	6	11	8.00
CULVERT 5	5.5	0	2:1	1.25	4	2	11	0.89
CULVERT 6	5.5	0	2:1	1.00	11	4	11	4.89
CULVERT 7	16	II	2:1	1.00	12	6	32	8.00
CULVERT 8	16	II	2:1	1.00	11	6	32	7.33
CULVERT 9	5.5	0	N/A	1.25	13	2	11	2.89
CULVERT 10	5.5	0	2:1	1.25	12	2	11	2.67
CULVERT 11	5.5	0	2:1	1.25	7	2	11	1.56
CULVERT 12	5.5	0	2:1	1	7	2	11	1.56
EW-13	5.5	0	2:1	1.5	20	3	11	6.67

DITCH LINING SCHEDULE							
FROM	TO	SS1 (H:V)	SS2 (H:V)	d (FT)	w (FT)	TYPE	QUANTITY (S.Y.)
STA. 167+45 LT.	STA. 171+43 LT.	3	3	1.5*	0	MATTING-TYPE A	386
STA. 202+00 LT.	STA. 196+17 LT.	3	3	2*	0	MATTING-TYPE A	800
STA. 202+00 LT.	STA. 204+41 LT.	2	2	2*	0	MATTING-TYPE A	241
STA. 207+52 LT	STA. 204+42 LT.	2	2	1.75*	0	MATTING-TYPE A	274
STA. 207+55 LT.	STA. 208+57 LT.	2	2	1.5	0	MATTING-TYPE A	75
STA. 210+95 LT.	STA. 208+58 LT.	2	2	1.5*	0	MATTING-TYPE A	110
STA. 217+00 LT.	STA. 215+00 LT.	2	2	1	0	MATTING-TYPE A	99
STA. 215+00 LT.	STA. 211+00 LT.	3	3	1.75*	0	MATTING-TYPE A	492
STA. 217+05 LT.	STA. 220+25 LT.	2	2	0.5	0	CONCRETE	80
STA. 222+10 LT.	STA. 226+10 LT.	2	2	1.5*	0	MATTING-TYPE A	300
STA. 231+00 LT.	STA. 227+70 LT.	2	2	1	0	MATTING-TYPE A	184
STA. 233+56 LT.	STA. 235+46 LT.	2	2	1.25*	0	MATTING-TYPE A	118
STA. 237+59 LT	STA. 241+97 LT.	3	3	1.5*	0	MATTING-TYPE A	463
STA. 242+30 LT.	STA. 242+00 LT.	2	2	1.5	0	MATTING-TYPE A	22
STA. 237+47 RT.	STA. 240+00 RT.	4	4	0.5	4	MATTING-TYPE A	228
STA. 240+00 RT.	STA. 241+00 RT.	4	4	0.5	3	MATTING-TYPE A	79
STA. 241+00 RT.	STA. 242+00 RT.	4	4	0.5	2	MATTING-TYPE A	68
STA. 252+08 LT	STA. 248+27 LT.	2	2	1.25*	0	MATTING-TYPE A	270
STA. 250+10 RT.	STA. 247+00 RT.	3	3	0.67	1	RIPRAP CLASS 0	310
STA. 247+00 RT.	STA. 248+18 RT.	3	3	1.25	0	MATTING-TYPE A	118

*Depth varies. See cross sections for elevations

STA. 167+45 To 171+43, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
168+00 LT	149.84	17	LT
169+00 LT	149.37	24	LT
170+00 LT	148.81	23	LT
171+43 LT	147.74	21	LT

STA. 202+00 LT To 196+17, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
201+30 LT	149.21	19	LT
200+00 LT	148.81	19	LT
199+00 LT	148.52	20	LT
198+00 LT	148.24	20	LT
197+00 LT	147.93	20	LT
196+17 LT	147.65	21	LT

STA. 202+00 To 204+41, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
203+00 LT	148.15	23	LT
204+41 LT	147.30	17	LT

STA. 207+52 To 204+42, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
207+00 LT	149.00	25	LT
206+00 LT	148.41	19	LT
204+42 LT	147.30	17	LT

STA. 207+55 To 208+57, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
208+00 LT	147.82	24	LT
208+57 LT	147.66	17	LT

STA. 210+95 To 208+58, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
210+00 LT	148.95	19	LT
209+00 LT	148.25	16	LT
208+58 LT	147.66	17	LT

STA. 247+00 To 248+18 RT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
248+18 LT	150.24	87	RT

STA. 217+00 To 215+00, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
216+00 LT	148.70	20	LT
215+00 LT	148.41	22	LT

STA. 215+00 To 211+00, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
214+00 LT	148.12	22	LT
213+00 LT	147.84	21	LT
212+00 LT	147.54	21	LT
211+00 LT	147.23	21	LT

STA. 217+05 To 220+25, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
218+00 LT	149.31	15	LT
219+00 LT	148.96	16	LT
220+25 LT	148.46	16	LT

STA. 222+10 LT To 226+10, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
223+00 LT	150.46	20	LT
224+00 LT	148.99	15	LT
225+00 LT	148.50	14	LT
226+10 LT	148.00	16	LT

STA. 231+00 To 227+70, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
230+00 LT	150.35	16	LT
229+00 LT	148.79	16	LT
227+70 LT	131.85	62	LT

STA. 233+56 To 235+46, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
234+00 LT	148.77	17	LT
235+00 LT	147.64	18	LT
235+46 LT	146.91	19	LT

STA. 237+59 LT To 241+97, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
238+00 LT	149.93	18	LT
239+00 LT	149.35	16	LT
240+00 LT	148.27	19	LT
241+00 LT	147.67	20	LT
241+97 LT	147.06	20	LT

STA. 242+30 LT To 242+00, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
242+00 LT	147.27	18	LT

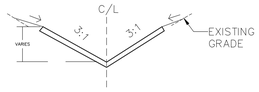
STA. 237+47 RT To 240+00, RT. - Trapezoidal Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
238+00 RT	149.71	31	RT
239+00 RT	149.36	31	RT
240+00 RT	149.01	31	RT

STA. 240+00 RT To 241+00, RT. - Trapezoidal Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
241+00 RT	148.66	30	RT

STA. 241+00 RT To 242+00, RT. - Trapezoidal Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
242+00 RT	148.28	29	RT

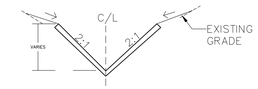
STA. 252+08 To 248+27, LT. - Triangular Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
251+00 LT	193.32	23	LT
250+00 LT	185.81	20	LT
249+00 LT	178.69	18	LT
248+27 LT	174.02	18	LT

STA. 250+10 RT To 247+00, RT. - Trapezoidal Bottom Ditch			
Sta.	Ditch Inv. (ft)	Offset (LF)	LT/RT
250+00 RT	182.81	33	RT
249+00 RT	170.69	58	RT
248+00 RT	156.45	46	RT
247+00 RT	151.26	58	RT



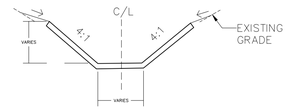
DITCH TYPICAL SECTION 1

FOR DITCH STATIONS: 167+45 TO 171+43 LT; 202+00 TO 196+17 LT; 214+00 TO 211+00 LT; 237+59 LT TO 241+97 LT; 250+03 TO 248+42 RT
NOT TO SCALE



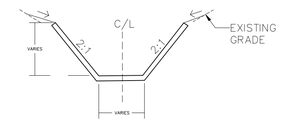
DITCH TYPICAL SECTION 2

FOR DITCH STATIONS: 159+00 TO 162+10 LT; 164+00 TO 162+11 LT; 165+00 LT; 166+00 TO 166+65 LT; 176+00 TO 180+70 LT; 182+62 LT; 190+00 TO 195+05 LT; 195+06 LT; 196+16 LT; 203+00 TO 204+41 LT; 207+00 TO 204+42 LT; 208+00 TO 208+57 LT; 210+00 TO 208+58 LT; 216+00 TO 211+00 LT; 218+00 TO 220+25 LT; 223+00 TO 227+23 LT; 230+00 TO 227+70 LT; 231+85 LT; 233+00 TO 231+89 LT; 234+00 TO 235+46 LT; 235+52 LT; 237+00 LT; 237+04 LT; 242+00 LT; 251+00 TO 248+27 LT
NOT TO SCALE



DITCH TYPICAL SECTION 3

FOR DITCH STATIONS: 237+47 to 242+00 RT
NOT TO SCALE



DITCH TYPICAL SECTION 4

FOR DITCH STATIONS: 178+00 TO 180+00 LT
NOT TO SCALE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

DS-01
DRAINAGE SCHEDULES

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

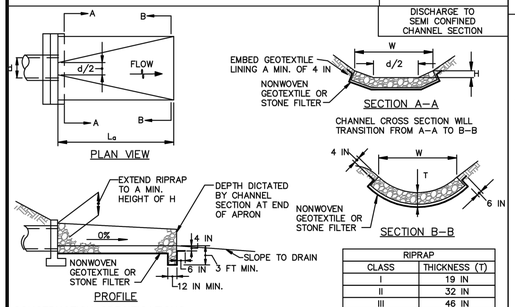
CIP No. : 500718 SHEET 45 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDS-0001_MacArthur.dwg LAYOUT NAME: Schedules PLOTTED: Wednesday, June 26, 2024 - 3:57pm USER: ABayagich

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1

DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

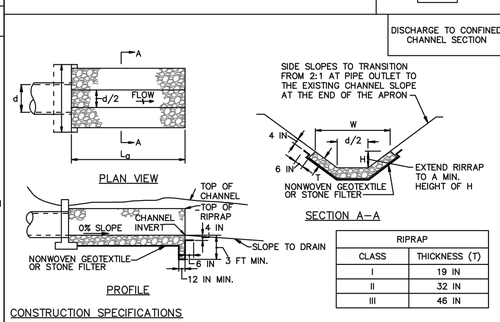
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

DISCHARGE TO CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

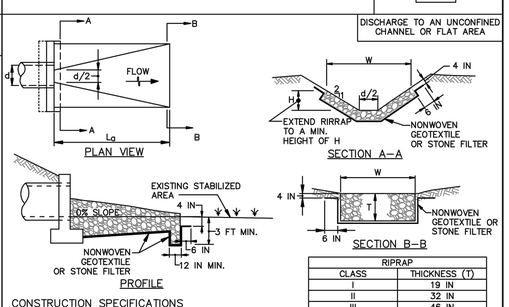
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-C ROCK OUTLET PROTECTION III

STANDARD SYMBOL: ROPIII

DISCHARGE TO AN UNCONFINED CHANNEL OR FLAT AREA



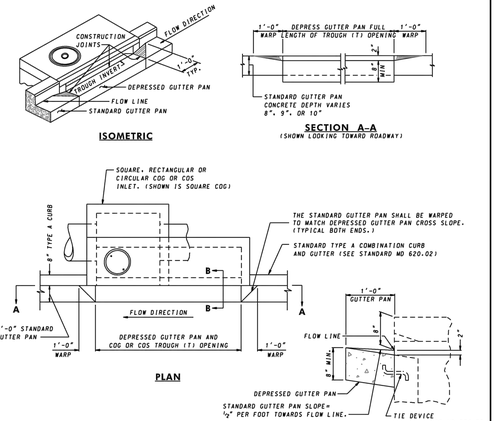
RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND RIPRAP DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



DETAILS FOR COG AND COS INLETS ARE SHOWN ON THE FOLLOWING STANDARDS

MD 374.51 PRECAST OR CAST IN PLACE SQUARE AND RECTANGULAR COG INLETS 5', 10', 15', & 20'
MD 374.55 PRECAST CONCRETE TROUGH INLET SLABS AND ADJUSTMENT COLLAR FOR COG AND COS INLETS
MD 374.61 PRECAST OR CAST IN PLACE SQUARE AND RECTANGULAR COS INLETS 5', 10', 15', & 20'
MD 374.62 PRECAST CIRCULAR COG INLETS 5', 10', 15', & 20'
MD 374.63 PRECAST CIRCULAR COS INLETS 5', 10', 15', & 20'
MD 374.64 ALTERNATE PRECAST TROUGHS FOR COG AND COS INLETS

NOTES

1. COST OF DEPRESSED CONCRETE GUTTER PAN IS INCIDENTAL TO THE COST OF THE INLET.
2. STANDARD TYPE A COMBINATION CURB AND GUTTER PAID FOR SEPARATELY.

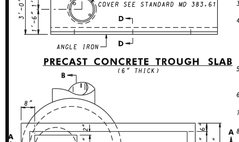
SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-23-91	APPROVAL 1-2-91
REVISED	10-1-91	REVISED
REVISED		REVISED
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DEPRESSED CONCRETE GUTTER PAN FOR COG AND COS INLETS

STANDARD NO. MD 374.65



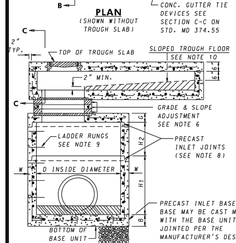
NOTES

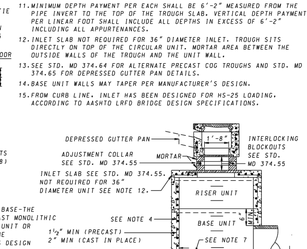
1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENINGS SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE SHALL BE MIX. NO.6(4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3(3500 PSI) FOR CAST IN PLACE UNITS.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC (PRECAST) OR REINFORCING BARS (CAST IN PLACE)AND SHALL CONFORM TO THE AREAS GIVEN UNDER IN THE CHART ON STD NO 374.62-01. WALL REINFORCEMENT SHALL BE CENTERED AT THE MIDDLE OF THE WALL. BASE REINFORCEMENT SHALL HAVE 1½" COVER (PRECAST) AND 2" COVER (CAST IN PLACE) FROM THE TOP OF THE BASE.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. MD 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS-THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C. RUNGS SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED. ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. MD 374.64 FOR ALTERNATE PRECAST COG TROUGHS AND STD. MD 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS MAY TAPER PER MANUFACTURER'S DESIGN.
15. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR MS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

PRECAST CONCRETE TROUGH SLAB
(6" THICK)

PLAN
(SHOWN WITHOUT TROUGH SLAB)

CONC. GUTTER TIE DEVICES SEE SECTION C-C ON STD. NO 374.55





FOR SECTIONS C-C AND D-D SEE STD NO 374.55

INLET TYPE	T	L
COG-5	5'-0"	6'-0"
COG-10	10'-0"	11'-0"
COG-15	15'-0"	16'-0"
COG-20	20'-0"	21'-0"

SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-23-91	APPROVAL 1-2-91
REVISED	8-3-10	REVISED 7-26-10
REVISED	10-7-14	REVISED 9-29-14
REVISED	–	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST OR CAST IN PLACE CIRCULAR COG INLETS 5', 10', 15', & 20'

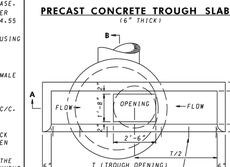
STANDARD NO. MD 374.62

D.21

NOTES

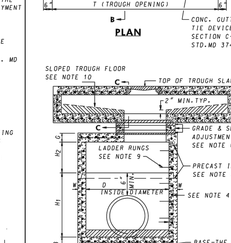
1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENING SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE TO BE MIX NO.6 (4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3 (3500 PSI) FOR STRUCTURES CAST IN PLACE.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC (PRECAST) OR REINFORCING BARS (CAST IN PLACE) AND SHALL CONFORM TO THE AREAS AND SPACING GIVEN IN THE TABLE ON STD NO 374.62-01. WALL REINFORCEMENT SHALL BE CENTERED AT THE MIDDLE OF THE WALL. BASE REINFORCEMENT SHALL HAVE 1½" COVER (PRECAST) AND 2" COVER (CAST IN PLACE) FROM THE TOP OF THE BASE.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. MD 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS- THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C RUNG TYPE SHALL BE IN ACCORDANCE WITH STDS. MD 383.91 OR MD 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED. ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. MD 374.64 FOR ALTERNATE PRECAST COS TROUGHS AND STD. MD 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS TAPER PER MANUFACTURER'S DESIGN.
15. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR MS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

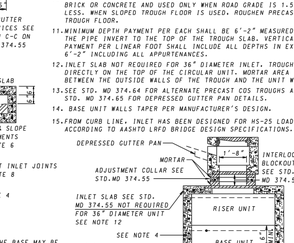
PRECAST CONCRETE TROUGH SLAB
(6" THICK)



PLAN

CONC. CUTTER TIE DEVICES SEE SECTION C-C ON STD.NO 374.55





FOR SECTION C-C AND D-D SEE STD NO 374.55

INLET TYPE	T	L
COS-5	5'-0"	6'-0"
COS-10	10'-0"	11'-0"
COS-15	15'-0"	16'-0"
COS-20	20'-0"	21'-0"

FOR DIMENSION H, H1, W, B, AND G SEE STD NO 374.62-01

SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

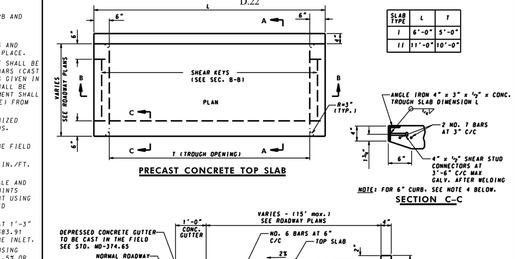
SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-23-91	APPROVAL 1-2-91
REVISED	8-3-10	REVISED 7-26-10
REVISED	10-7-14	REVISED 9-29-14
REVISED	–	REVISED

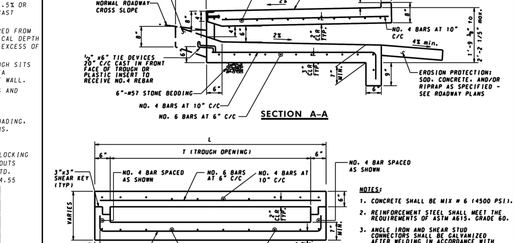
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

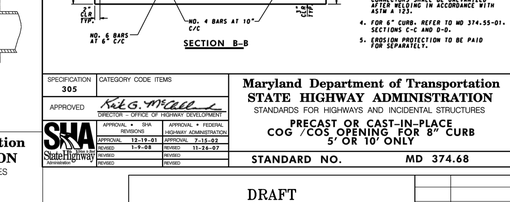
PRECAST OR CAST IN PLACE CIRCULAR COS INLETS 5', 10', 15, & 20'

STANDARD NO. MD 374.63

D.22







NOTES:

1. CONCRETE SHALL BE MIX # 6 (4500 PSI).
2. REINFORCEMENT STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60.
3. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123.
4. FOR 6" CURB, REFER TO MD 374.55-01. SECTIONS C-C AND D-D.
5. EROSION PROTECTION TO BE PAID FOR SEPARATELY.

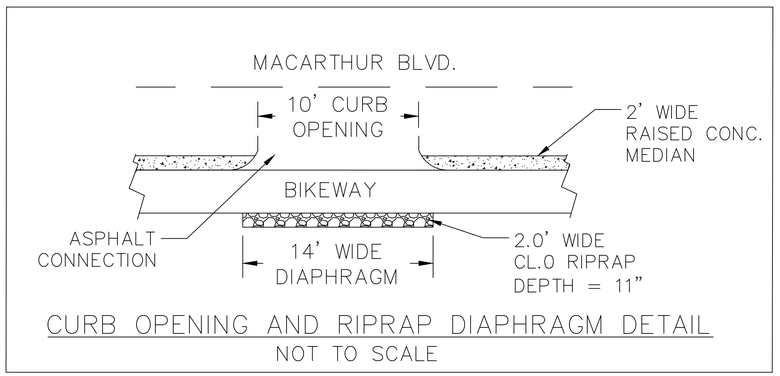
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	12-19-01	APPROVAL 7-15-02
REVISED	1-9-08	REVISED 11-26-07
REVISED		REVISED
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST OR CAST-IN-PLACE COG /COS OPENING FOR 8" CURB 5' OR 10' ONLY

STANDARD NO. MD 374.68



CURB OPENING AND RIPRAP DIAPHRAGM DETAIL

NOT TO SCALE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

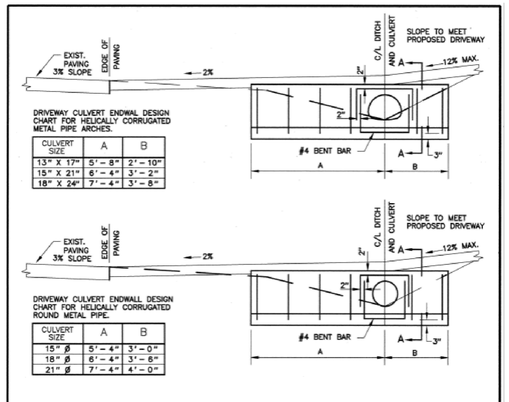
DS-02
DRAINAGE DETAILS

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 46 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDS-0002_MacArthur.dwg LAYOUT NAME: Details PLOTTED: Wednesday, June 26, 2024 – 3:42pm USER: mkane-seitz



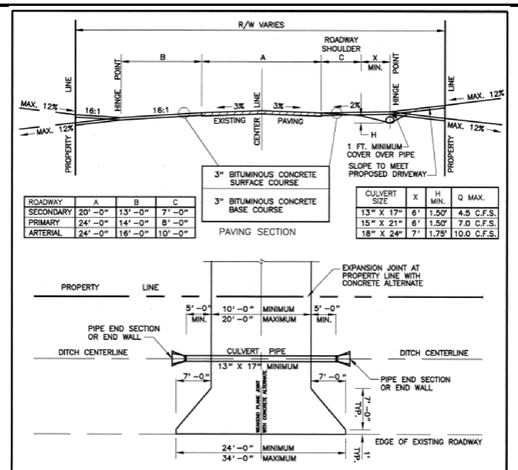
CULVERT SIZE	A	B
13" X 17"	5'-8"	2'-10"
15" X 21"	6'-4"	3'-2"
18" X 24"	7'-4"	3'-8"

CULVERT SIZE	A	B
15" ø	5'-4"	3'-0"
18" ø	6'-4"	3'-6"
21" ø	7'-4"	4'-0"

GENERAL NOTES

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. DRIVEWAY TO BE MAINTAINED BY PROPERTY OWNER.
3. CHAMFER ALL EXPOSED EDGES 3/4" X 3/4".
4. LARGER SIZE PIPES REQUIRE SPECIAL ENDWALL DESIGN.
5. ENDWALL MAY BE CONSTRUCTED OF REINFORCED CONCRETE, AS SHOWN, OR NON–REINFORCED MASONRY WITH AN 8 INCH WALL THICKNESS ON CONCRETE FOOTING AS SHOWN.

APPROVED JAN 5/95 DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
DIRECTOR, DEPT. OF TRANS.		DRIVEWAY ENDWALL OPEN SECTION ROAD
CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC–500.01



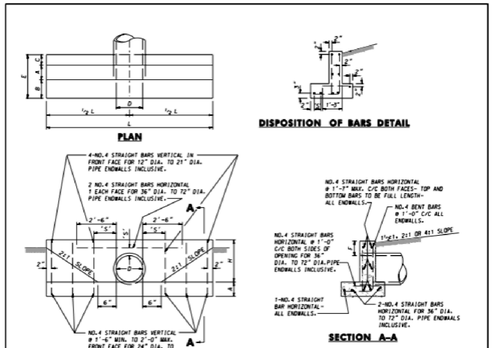
ROADWAY	A	B	C
SECONDARY	20'–0"	13'–0"	7'–0"
PRIMARY	24'–0"	14'–0"	8'–0"
ARTERIAL	24'–0"	16'–0"	10'–0"

CULVERT SIZE	X	H MIN.	Q MAX.
13" X 17"	6'	1.50'	4.5 C.F.S.
15" X 21"	6'	1.50'	7.0 C.F.S.
18" X 24"	7'	1.75'	10.0 C.F.S.

GENERAL NOTES

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. DRIVEWAY AND DRIVEWAY APRON TO BE MAINTAINED BY PROPERTY OWNER.
3. DITCH IS TO BE DESIGNED FOR A MAXIMUM Q. OF 12 C.F.S., A MAXIMUM V. OF 5 F.P.S. AND A DEPTH OF FLOW OF ONE FOOT. DEPTH OF FLOW MAY EXCEED ONE FOOT FOR CULVERT APPROACH HEAD REQUIREMENTS, WITH A MAXIMUM ALLOWABLE OF 6" ABOVE THE CROWN OF PIPE.
4. END SECTIONS ARE TO BE FASTENED TO THE FIRST CORRUGATION AND FITTED TO FORM A TIGHT CONNECTION. THE PIPE SHALL NOT PROJECT INTO THE END SECTION.
5. SPECIAL CARE MUST BE TAKEN TO PROVIDE PROPER COMPACTION OF BACKFILL AROUND THE CULVERT PIPE AND THE END SECTION.

APPROVED JAN 5/95 DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
DIRECTOR, DEPT. OF TRANS.		RESIDENTIAL DRIVEWAY OPEN SECTION ROAD
CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC–301.03



QUANTITIES FOR ESTIMATING PURPOSES ONLY

OPENING		DIMENSIONS							QUANTITIES	
D INCHES	AREA SQ.FT.	A	B	C	E	F	H	L	CONC. C.Y.	STEEL LBS.
12	0.79	9"	6"	6"	1'–9"	9"	1'–9"	6'–6"	0.61	41
15	1.23	9"	6"	6"	1'–9"	9"	2'–0"	7'–9"	0.77	47
18	1.77	9"	6"	6"	1'–9"	9"	2'–3"	9'–0"	0.95	54
21	2.40	9"	6"	6"	1'–9"	9"	2'–6"	10'–3"	1.14	59
24	3.14	9"	14"	6"	2'–5"	9"	2'–9"	11'–6"	1.56	80
27	3.98	9"	14"	6"	2'–5"	9"	3'–0"	12'–9"	1.82	88
30	4.91	9"	14"	6"	2'–5"	12"	3'–6"	14'–3"	2.22	98
33	5.94	9"	14"	6"	2'–5"	12"	3'–9"	15'–0"	2.48	105
36	7.07	12"	16"	10"	3'–2"	12"	4'–0"	16'–4"	4.16	182
42	9.62	12"	16"	10"	3'–2"	12"	4'–6"	19'–0"	5.07	206
48	12.57	12"	16"	10"	3'–2"	12"	5'–0"	21'–6"	6.09	244
54	15.90	12"	20"	12"	3'–8"	12"	5'–6"	24'–0"	7.62	275
60	19.64	12"	20"	12"	3'–8"	12"	6'–0"	26'–6"	8.82	304
72	28.27	12"	20"	12"	3'–8"	12"	7'–0"	31'–6"	11.46	377

'S' DISTANCES

4" FOR 12" DIA. TO 21" DIA. PIPES INCLUSIVE.
6" FOR 24" DIA. TO 36" DIA. PIPES INCLUSIVE.
8" FOR 42" DIA. TO 72" DIA. PIPES INCLUSIVE.

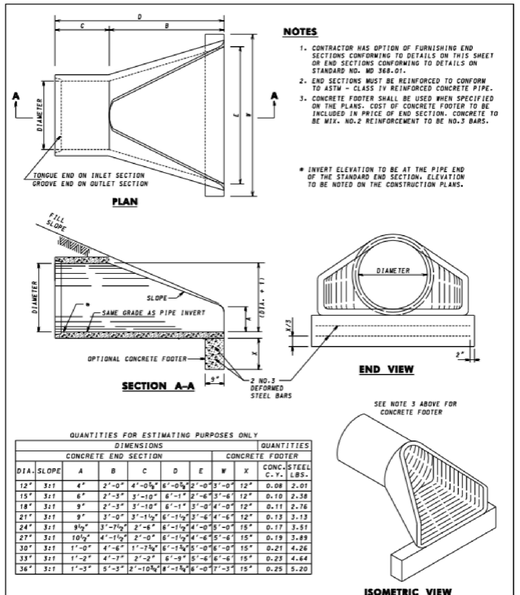
GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS–NO.4
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL + DIR. REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 8-28-84	APPROVAL 12-12-84
REVISED 10-1-91	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPE C ENDWALL METAL OR CONCRETE ROUND PIPE
STANDARD NO. MD 354.01



QUANTITIES FOR ESTIMATING PURPOSES ONLY

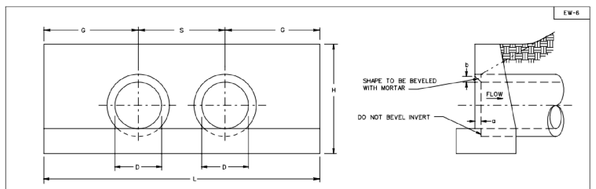
DIMENSIONS									QUANTITIES	
CONCRETE END SECTION						CONCRETE FOOTER				
DIA.	SLOPE	A	B	C	D	E	W	X	CONC. C.Y.	STEEL LBS.
12"	3:1	4"	2'–0"	4'–0⅝"	6'–0⅝"	2'–0"	3'–0"	12"	0.08	2.01
15"	3:1	6"	2'–3"	3'–10"	6'–1"	2'–6"	3'–6"	12"	0.10	2.38
18"	3:1	9"	2'–3"	3'–10"	6'–1"	3'–0"	4'–0"	12"	0.11	2.76
21"	3:1	9"	3'–0"	3'–1½"	6'–1½"	3'–6"	4'–6"	12"	0.13	3.13
24"	3:1	9½"	3'–1½"	2'–6"	6'–1½"	4'–0"	5'–0"	15"	0.17	3.51
27"	3:1	10½"	4'–1½"	2'–0"	6'–1½"	4'–6"	5'–6"	15"	0.19	3.89
30"	3:1	1'–0"	4'–6"	1'–7⅝"	6'–1⅝"	5'–0"	6'–0"	15"	0.21	4.26
33"	3:1	1'–2"	4'–7"	2'–2"	6'–9"	5'–6"	6'–6"	15"	0.23	4.64
36"	3:1	1'–3"	5'–3"	2'–10⅝"	8'–1⅝"	6'–0"	7'–3"	15"	0.25	5.20

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL + DIR. REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 8-28-84	APPROVAL 12-12-84
REVISED 9-12-86	REVISED 6-8-88
REVISED 7-1-89	REVISED 7-27-89
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE
STANDARD NO. MD 368.02

EW-6



NOTES:

1. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
3. ALL CAST IN PLACE CONCRETE TO BE CLASS A3, FOR PRECAST SEE SHEET 101.10.
4. THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND SKEW ANGLES TO 15°.
5. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALLS OCCUR.
6. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT).
7. HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
8. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
9. ¾" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.
10. QUANTITIES GIVEN ARE FOR ONE ENDWALL. PLEASE REFER TO STANDARD EW-1, SHEET 101.01 FOR ALL DIMENSIONS NOT GIVEN IN TABLES.

FOR CONCRETE PIPE						
D	S	G	L	CUBIC YARDS CONCRETE ONE DOUBLE ENDWALL	INCREASE FOR EACH ADDITIONAL PIPE	a	b
12"	1'-10"	2'-0"	5'-10"	0.329	0.088	0'-7¼"	0'-1"
15"	2'-3"	2'-6"	7'-3"	0.671	0.179	0'-11"	0'-1¼"
18"	2'-8"	3'-0"	8'-8"	0.941	0.244	0'-2"	0'-1½"
21" OR 24"	3'-6"	4'-0"	11'-6"	1.763	0.444	0'-2½"	0'-2"
27" OR 30"	4'-4"	5'-0"	14'-4"	2.730	0.663	0'-3½"	0'-2½"
33" OR 36"	5'-2"	6'-0"	17'-2"	3.854	0.907	0'-3¾"	0'-3"

FOR CORRUGATED METAL PIPE							
D	S	G	L	CUBIC YARDS CONCRETE ONE DOUBLE ENDWALL	INCREASE FOR EACH ADDITIONAL PIPE	a	b
12"	1'-7"	2'-0"	5'-7"	0.344	0.087	0'-11½"	0'-1"
15"	1'- 11½"	2'-6"	6'-11½"	0.696	0.175	0'-1⅜"	0'-1⅝"
18"	2'-4"	3'-0"	8'-4"	0.980	0.241	0'-2"	0'-1½"
24"	3'-1"	4'-0"	11'-1"	1.840	0.442	0'-2½"	0'-2"
27" OR 30"	3'-10"	5'-0"	13'-10"	2.868	0.670	0'-3½"	0'-2½"
36"	4'-7"	6'-0"	16'-7"	4.076	0.931	0'-3¾"	0'-3"

SPECIFICATION REFERENCE
705
302

STANDARD ENDWALLS FOR MULTIPLE PIPE CULVERTS
12"-36" PIPE
VIRGINIA DEPARTMENT OF TRANSPORTATION

101.11

Table H.1: Geotextile Fabrics

		WOVEN SLIT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MINIMUM AVERAGE ROLL VALUE[1]					
PROPERTY	TEST METHOD	MD	CD	MD	CD	MD	CD
Grab Tensile Strength	ASTM D-4632	200 lb	200 lb	370 lb	250 lb	200 lb	200 lb
Grab Tensile Elongation	ASTM D-4632	15%	10%	15%	15%	50%	50%
Trapezoidal Tear Strength	ASTM D-4533	75 lb	75 lb	100 lb	60 lb	80 lb	80 lb
Puncture Strength	ASTM D-6241	450 lb		900 lb		450 lb	
Apparent Opening Size[2]	ASTM D-4751	U.S. Sieve 30 (0.59 mm)		U.S. Sieve 70 (0.21 mm)		U.S. Sieve 70 (0.21 mm)	
Permittivity	ASTM D-4491	0.05 sec^{-1}		0.28 sec^{-1}		1.1 sec^{-1}	
Ultraviolet Resistance Retained at 500 hours	ASTM D-4355	70% strength		70% strength		70% strength	

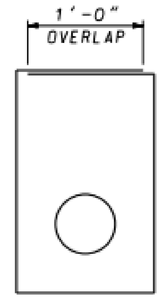
[1] All numeric values except apparent opening size (AOS) represent minimum average roll values (MARV). MARV is calculated as the typical minus two standard deviations. MD is machine direction; CD is cross direction.

[2] Values for AOS represent the average maximum opening.

Geotextiles must be evaluated by the National Transportation Product Evaluation Program (NTPEP) and conform to the values in Table H.1.

The geotextile must be inert to commonly encountered chemicals and hydrocarbons and must be rot and mildew resistant. The geotextile must be manufactured from fibers consisting of long chain synthetic polymers and composed of a minimum of 95 percent by weight of polyolefins or polyesters, and formed into a stable network so the filaments or yarns retain their dimensional stability relative to each other, including selvages.

When more than one section of geotextile is necessary, overlap the sections by at least one foot. The geotextile must be pulled taut over the applied surface. Equipment must not run over exposed fabric. When placing riprap on geotextile, do not exceed a one foot drop height.



GEOTEXTILE FABRIC
DETAIL

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ALB Drawn by: ALB Checked by: WRB

DS–03
DRAINAGE DETAILS

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 47 of 285

FILE NAME: C:\pwworking\jmt\d0320788\pDS–0003_MacArthur.dwg LAYOUT NAME: Details PLOTTED: Wednesday, June 26, 2024 – 4:04pm USER: ABayagich

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

OBERLIN AVENUE TO
DISTRICT OF COLUMBIA

C. I. P. PROJECT NO. 500718

EROSION & SEDIMENT CONTROL PLAN

INDEX OF SHEETS

SC/SWM SHT NO.	SHT.NO.	DWG. NO.	DWG. DESCRIPTION	ePLANS FILE NAME
1	48	SC-01	ESC TITLE SHEET	SC0001.PDF
2	49	SC-02	ESC NOTES SHEET	SC0002.PDF
3	50	SC-03	ESC PLAN	SC0003.PDF
4	51	SC-04	ESC PLAN	SC0004.PDF
5	52	SC-05	ESC PLAN	SC0005.PDF
6	53	SC-06	ESC PLAN	SC0006.PDF
7	54	SC-07	ESC PLAN	SC0007.PDF
8	55	SC-08	ESC PLAN	SC0008.PDF
9	56	SC-09	ESC PLAN	SC0009.PDF
10	57	SC-10	ESC PLAN	SC0010.PDF
11	58	SC-11	ESC PLAN	SC0011.PDF
12	59	SC-12	ESC PLAN	SC0012.PDF
13	60	SC-13	ESC PLAN	SC0013.PDF
14	61	SC-14	ESC PLAN	SC0014.PDF
15	62	SC-15	ESC PLAN	SC0015.PDF
16	63	SC-16	ESC PLAN	SC0016.PDF
17	64	SC-17	ESC PLAN	SC0017.PDF
18	65	SC-18	SEDIMENT CONTROL DETAILS	SC0018.PDF

RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

IT IS THE RESPONSIBILITY OF THE PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE SEDIMENT CONTROL PERMIT

TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		X			
WATERWAYS/WETLAND(S):					
a. Corps of Engineers	X				
b. MDE	X				
c. MDE Water Quality Certification		X			
MDE Dam Safety		X			
MSCD Small Pond Approval		X			
* DPS Roadside Trees Protection Plan	X			Approval Date	
**N.P.D.E.S. NOTICE OF INTENT	X				
FEMA LOMR (Required Post Construction)		X			
OTHERS (Please List):					
USACE Overweight Vehicle	X				

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes ☐ No ☒ If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
473,940 square feet	438,339 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
165	0
Fee in Lieu (Trees Required – Trees Planted) x $250	$ 41,250

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance FROM	TO	Number of Shade Trees Required
1	6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:

(Number of Square Feet in Limits of Disturbance ÷ 40,000) × 15

EXEMPTION CATEGORIES:

☐ 55-5(a) any activity that is subject to Article II of Chapter 22A;
☐ 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;
☐ 55-5(f) any activity conducted by the County Parks Department;
☐ 55-5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the maintenance has obtained all required permits;
☐ 55-5(h) any stream restoration project if the person performing the work has obtained all necessary permits;
☐ 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
☐ OTHER: Specify per Section 55-5 of the Code.

RECORD DRAWING CERTIFICATION

A record set of approved Sediment Control/Stormwater Management plans must be maintained on-site at all times. In addition to stormwater management items, these plans must include the number and location of all trees proposed to be planted to comply with the Tree Canopy Law. Any approved modifications or deletions of stormwater practices or tree canopy plantings or information must be shown on this record set of plans and on the Tree Canopy Requirements table. Upon completion of the project, this record set of plans, including hereon this signed Record Drawing Certification, must be submitted to the MCDPS inspector. In addition to this Record Drawing Certification, a formal Stormwater Management As-Built submission [ ] **is required** [x] **is not required** for this project.

If this project is subject to a **Stormwater Management Right of Entry and Maintenance Agreement, that document is recorded in Montgomery County Land Records at:**

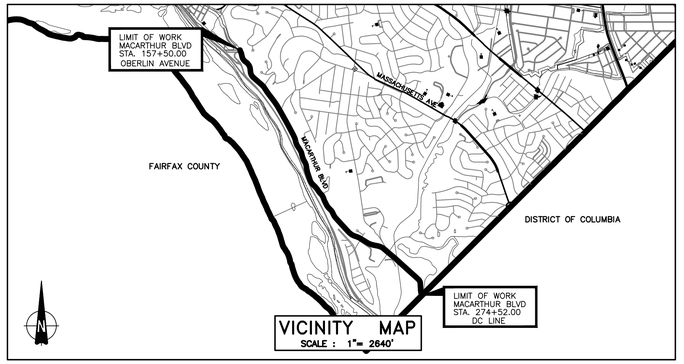
Liber N/A **Folio** N/A . This Record Drawing will serve as referenced in the recorded document.

"This record drawing accurately and completely represents the stormwater management practices and tree canopy plantings as they were constructed or planted. All stormwater management practices were constructed per the approved Sediment Control / Stormwater Management plans or subsequent approved revisions."

N/A
Owner/Developer Signature

Date

FIELD CHECK OF RECORD DRAWING BY MCDPS INSPECTOR: INITIALS: _____ DATE: _____



VICINITY MAP
SCALE : 1"= 2640'

OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DATE

JOSE THOMMANA
ACTING CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL," MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN CRITERIA" DATED AUGUST, 1988.

DATE

KEVIN SCHIEFER, P.E.
MD. REGISTRATION NO. 43192

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 11,384 CUBIC YARDS OF EXCAVATION, 714 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 438,339 SQUARE FEET OR 10.06 ACRES.

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

DRAINAGE STATEMENT

I UNDERSTAND THAT DPS APPROVAL OF THIS SEDIMENT CONTROL/STORMWATER MANAGEMENT PLAN IS FOR DEMONSTRATED COMPLIANCE WITH REQUIRED ENVIRONMENTAL RUNOFF TREATMENT STANDARDS. THIS DPS SEDIMENT CONTROL/STORMWATER MANAGEMENT PLAN APPROVAL DOES NOT RELIEVE ME OF PROFESSIONAL RESPONSIBILITY. I HAVE ANALYZED THE PROPOSED DESIGN FOR SEDIMENT CONTROL PERMIT NO. 290351 AND HEREBY STATE THAT, BASED UPON MY BACKGROUND, TRAINING AND EXPERIENCE, I HAVE DETERMINED THAT THE PROPOSED IMPROVEMENTS SHOWN ON THIS PLAN MEET RELEVANT LAWS AND REGULATIONS. I FURTHER ACKNOWLEDGE THAT I HAVE ANALYZED THE POST DEVELOPMENT DRAINAGE PATTERNS FOR THIS PROJECT FROM THE STANDPOINT OF MY RESPONSIBILITIES UNDER CURRENT MARYLAND LAW AND HAVE DETERMINED THAT IF PERMISSION IS REQUIRED FROM ADJACENT PROPERTY OWNERS, IT HAS BEEN OBTAINED AND COPIES OF THOSE PERMISSIONS HAVE BEEN MADE AVAILABLE TO DPS.

DATE

SCOTT A. MILLER, P.E.
MD. REGISTRATION NO. 28377

TECHNICAL REVIEW OF SEDIMENT CONTROL	ADMINISTRATIVE REVIEW
REVIEWED DATE	REVIEWED DATE
TECHNICAL REVIEW OF STORMWATER MANAGEMENT	**SMALL LOT DRAINAGE APPROVAL**
	N/A: ☐ OR
REVIEWED DATE	REVIEWED DATE
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.	NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

290351
SEDIMENT CONTROL PERMIT NO.

254373
SM. FILE NO.
STORMWATER MANAGEMENT:

OWNER/ADDRESS:
MONTGOMERY COUNTY DEPARTMENT
OF TRANSPORTATION
100 EDISON PARK DRIVE, 4TH FLOOR
GAITHERSBURG, MD 20878

CONTACT:
ANGEL CHENG, PE
PROJECT MANAGER
DESIGN SECTION
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7274

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC-01
SEDIMENT CONTROL TITLE SHEET
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 502109 SHEET 48 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES_T002_MacArthur.dwg LAYOUT NAME: ES-01 (Title Sheet) PLOTTED: Thursday, June 27, 2024 - 4:44pm USER: kevin

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

STANDARD EROSION AND SEDIMENT CONTROL NOTES

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 activity.

   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.

   D. Prior to removal or modification of any sediment control structure(s).

   E. Prior to final acceptance.

3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.

4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.

5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.

6. Following initial soil disturbance or re–disturbance, permanent or temporary stabilization must be completed within:

   a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

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

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

7. The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.

8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.

9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.

10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.

11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.

12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non– maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low–maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.

14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.

15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty–four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty–eight (48) hours after the end of a rainfall.

16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.

17. All inlets in non–sump areas shall have asphalt berms installed at the time of base paving establishment.

18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.

19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.

20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.

21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one–half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST–III) or when required by the sediment control inspector.

22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.

23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater 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 each application. The following methods may be considered:

   A. Pump discharge may be directed to another on–site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or

   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non–erosive outlet; or

   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non–woven fabric), or approved equivalent, located in an undisturbed buffer area.

   Remember: Dewatering operation and method must have prior approval by the DPS inspector.

27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.

28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

STANDARD SYMBOLS

AT–GRADE INLET PROTECTION	AGIP	REMOVABLE PUMPING STATION	RPS
BAFFLE BOARDS	BB	RIPRAP INFLOW PROTECTION	RRP-2
BENCHING	BENCHING	RIPRAP OUTLET SEDIMENT TRAP ST III	ST–III
CATCH BASIN INSERT	CBI	ROCK OUTLET PROTECTION 1	ROP1
CLEAR WATER DIVERSION PIPE	CWD – 12 (DESIGNATION CWD–12 REFERS TO 12 INCH CLEAR WATER DIVERSION)	ROCK OUTLET PROTECTION II	ROPII
CLEAR WATER PIPE	CWP	ROCK OUTLET PROTECTION III	ROPIII
COMBINATION INLET PROTECTION	COIP	SILT FENCE	SF
CONCRETE WASHOUT STRUCTURE	CWS	SILT FENCE ON PAVEMENT	SFOP
CURB INLET PROTECTION	CIP	SOD	
DIVERSION FENCE	DF	STABILIZED CONSTRUCTION ENTRANCE	SCE
EARTH DIKE	A–1 (PLACE DESIGNATION (A–1, B–2, etc.) ON FLOW CHANNEL SIDE OF DIKE)	STANDARD INLET PROTECTION	SIP
EMERGENCY SPILLWAY	ES	STOCKPILE AREA	
FILTER BAG	FB	STONE CHECK DAM	CD
FILTER BERM	FB–A / FB–B	STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	ST–II
FILTER LOG	FL–18 (DESIGNATION FL–18 REFERS TO 18 INCH DIAMETER FILTER LOG)	SUBSURFACE DRAINS	SSD
GABION INFLOW PROTECTION	GIP	SUMP PIT	SP
GABION INLET PROTECTION	GIP	SUPER SILT FENCE	SSF
HORIZONTAL DRAW–DOWN DEVICE	HDDD	TEMPORARY ACCESS BRIDGE	TB
LIMIT OF DISTURBANCE	LOD	TEMPORARY ACCESS CULVERT	TAC
MEDIAN INLET PROTECTION	MIP	TEMPORARY ASPHALT BERM	TAB
MEDIAN SUMP INLET PROTECTION	MSIP	TEMPORARY BARRIER DIVERSION	TBD
MOUNTABLE BERM	MB	TEMPORARY GABION OUTLET STRUCTURE	TGOS
PERIMETER DIKE/SWALE	PDS–1	TEMP. SOIL STABILIZATION MATTING–TYPE A	
PERM. SOIL STABILIZATION MATTING–TYPE B		TEMP. SOIL STABILIZATION MATTING–TYPE E	
PERM. SOIL STABILIZATION MATTING–TYPE C		TEMP. SOIL STABILIZATION MATTING–TYPE D	
PIPE OUTLET SEDIMENT TRAP ST I	ST–I	TEMPORARY STONE OUTLET STRUCTURE	TSOS
PIPE SLOPE DRAIN	PSD – 12 (DESIGNATION PSD–12 REFERS TO 12 INCH PIPE SLOPE DRAIN)	TEMPORARY SWALE	A–1 (PLACE DESIGNATION (A–1, B–2, etc.) ON FLOW CHANNEL SIDE OF SWALE)
PLUNGE POOL	PP	WASH RACK OPTION	WR
PORTABLE SEDIMENT TANK	PST	CHESAPEAKE BAY CRITICAL AREA	
DRAINAGE BOUNDARY		TREE PROTECTION FENCE	TPF
EXISTING CONTOURS	100	WETLAND	
PROPOSED CONTOURS	100	WETLAND BUFFER	B
		100–YEAR FLOODPLAIN	

STANDARD NOTES

1. The contractor will immediately inform the county of any discrepancies found between the project plans and contract specifications.
2. For construction, all horizontal control shall be NAD 83/91 and vertical control NAVD 88.
3. Types of storm drain structures refer to the 'Design Standards' of Montgomery County Department of Transportation, unless otherwise noted.
4. Information concerning underground utilities was obtained from available records, The contractor must determine the exact location and elevations of the lines by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than shown on this plan or six inches, whichever is less, the contractor shall contact the county.
5. Repairs to utilities or property damaged as a result of the contractor's negligence or method of operation must be made at the contractor's expense before proceeding with construction.
6. Call "Miss Utility" at 1–800–257–7777 fourty–eight (48) hours prior to beginning excavation to determine the exact location of existing utilities.
7. Clearing to be limited to the "limit of disturbance" as shown on the plans.
8. All grading shall be done in such a manner as to provide positive drainage.
9. Disturbed areas adjacent to established lawns shall be sodded. Other disturbed areas shall be seeded and mulched.
10. Any maintenance, treatment, planting, removal or root cutting on trees within the public right–of–way shall be performed in accordance with the Roadside Tree Permit requirements issued by the Department of Natural Resources – Maryland Forest, Park and Wildlife service whose telephone number is (301) 854–6060.
11. Contact the Washington Suburban Sanitary Commission system maintenance engineer before excavating beneath or in the vicinity of existing water or sewer lines. Backfill to be done under the supervision of W.S.S.C. call 301–699–4420.
12. Contact Washington gas dispatch officer at (703) 750–4831 before excavating beneath or in the vicinity of existing gas main and service laterals.
13. Prior to vegetative stabilization, all disturbed areas must be topsoiled per the MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

STANDARD SEQUENCE OF CONSTRUCTION NOTES

1. Prior to clearing trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on–site with the Montgomery County Department of Permitting Services (MCDPS) Sediment Control inspector (240) 777–0311 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement inspector (301)495–4550 (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 and roadside tree protection plans to the 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 form 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 (silt fence, super silt fence, and inlet protection).
5. Install sediment control devices.
6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading.
7. Same–day stabilization is required in all areas identified on plan sheets SC–03 through SC–17. Any disturbed areas that do not drain to an MCDPS–appproved sediment control device shall receive same–day stabilization.

NOTE 1: All sequences should call for the permittee to obtain written approval from MCDPS inspector, prior to the removal of any sediment control device.

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

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

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

SITE INFORMATION		
DISTURBED AREA (LOD)	CUT (CY)	FILL (CY)
10.06 ac	11,384	714

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

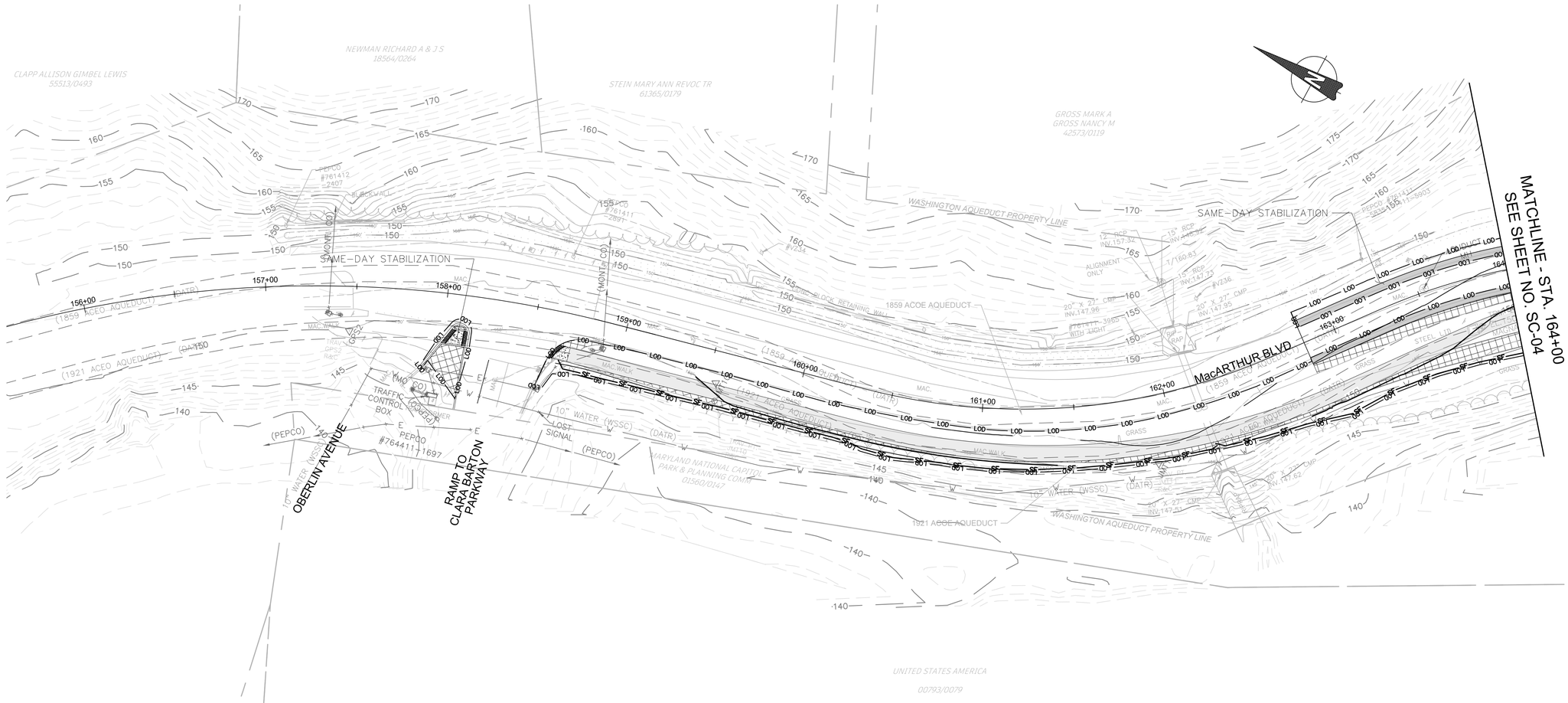
SC–02
EROSION AND SEDIMENT CONTROL

MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'

DATE: JUNE 2024

CIP No.: 502109 SHEET 49 of 285



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
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6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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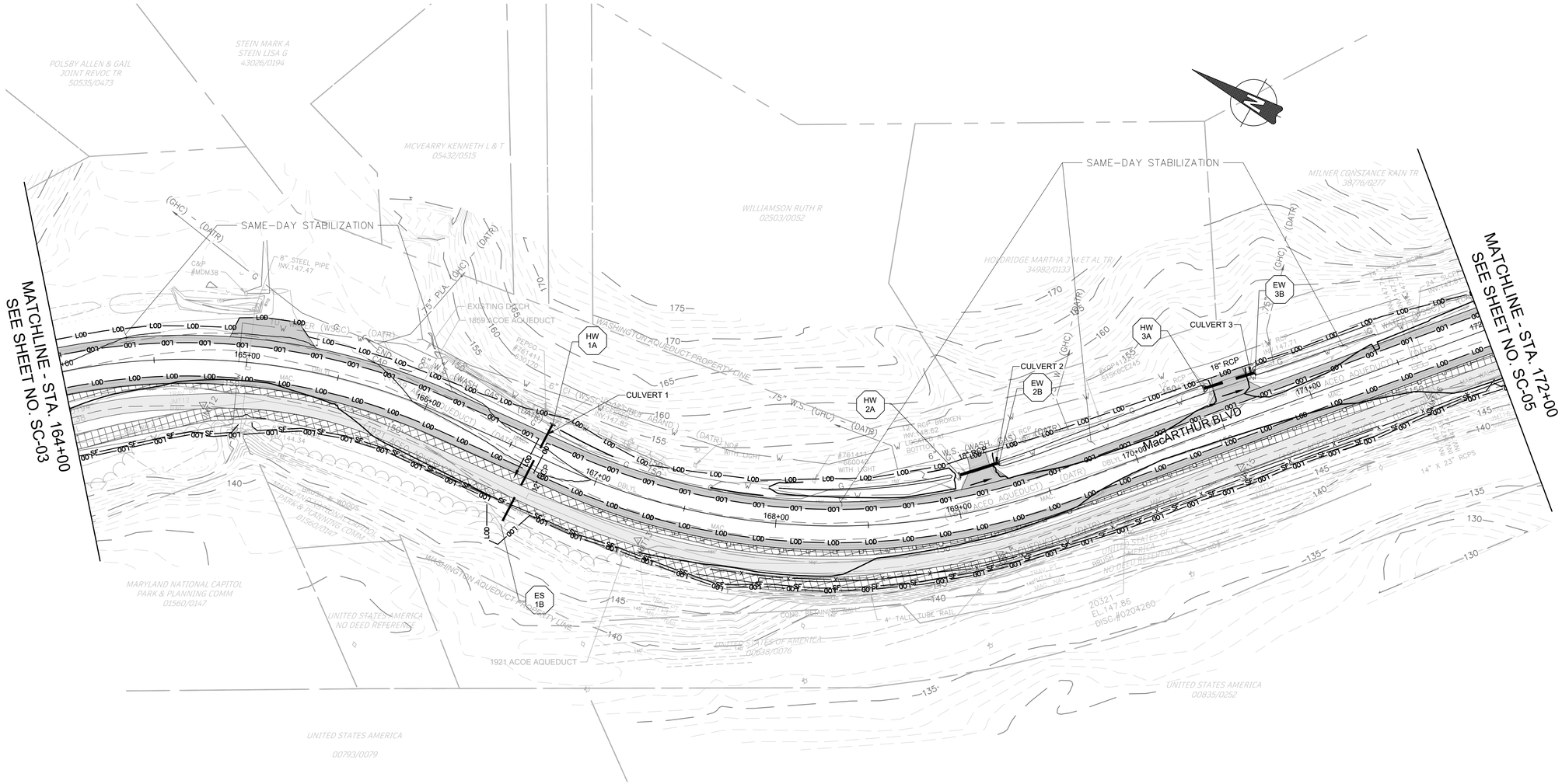
Designed by: KJS Drawn by: KJS Checked by: DZ

SC-03
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 502109 SHEET 50 of 285



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SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL–DEPTH PAVEMENT	
SHARED–USE PATH	

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RJM ENGINEERING

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

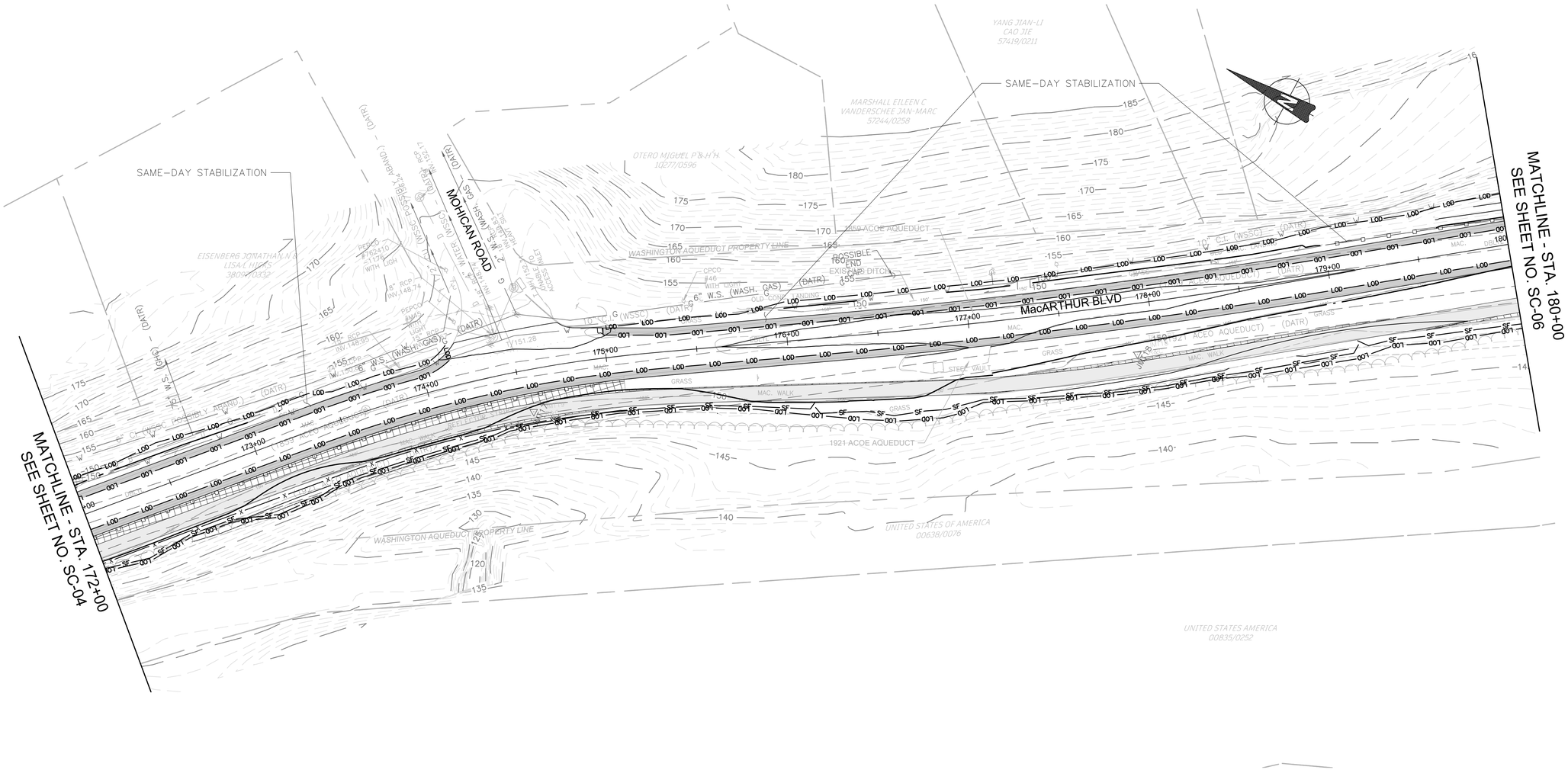
SC–04
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 502109 SHEET 51 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES–P101_MacArthur.dwg LAYOUT NAME: SC–04 PLOTTED: Thursday, June 27, 2024 – 4:44pm USER: kevin



GENERAL NOTES:

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LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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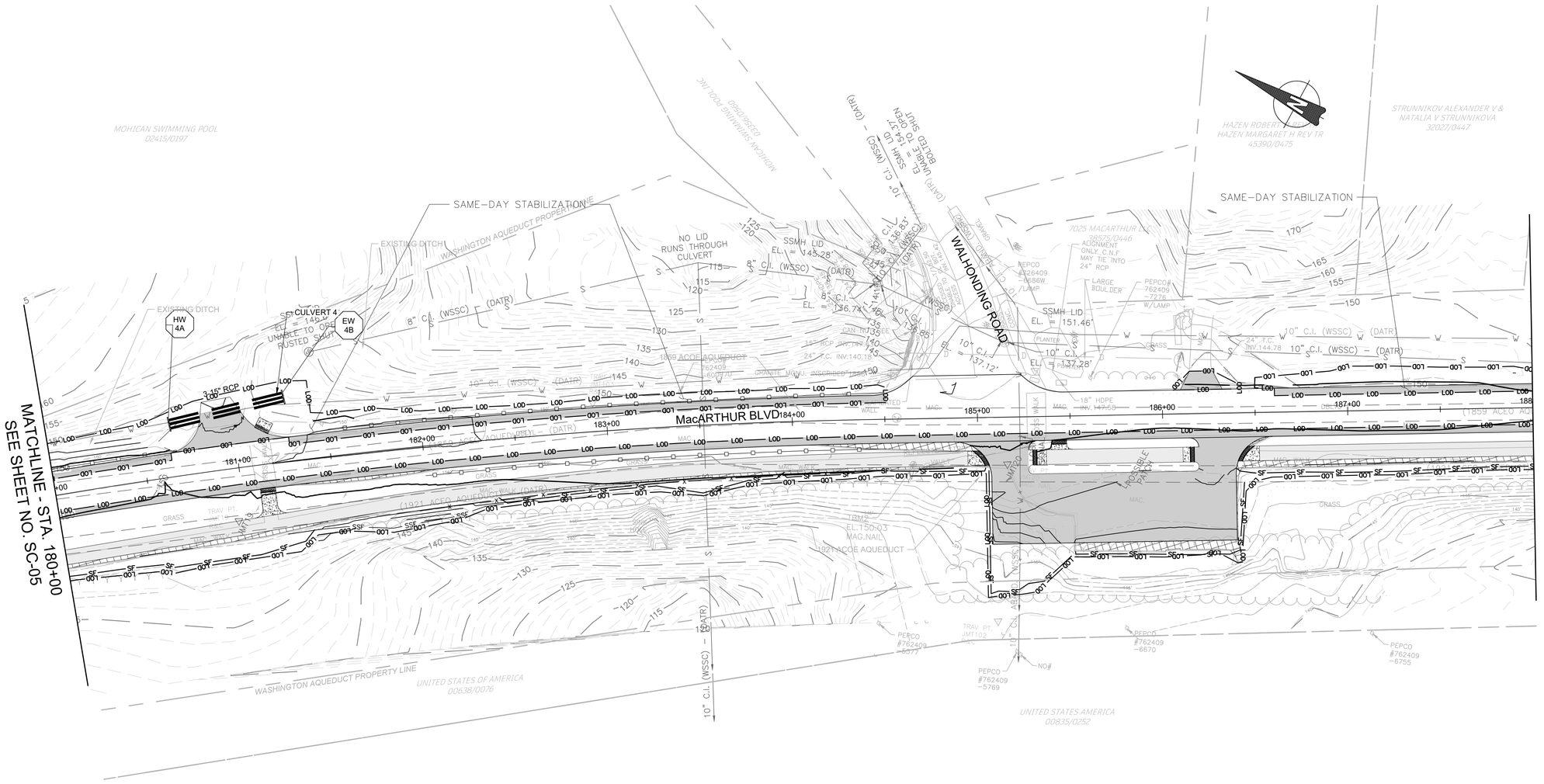
Designed by: KJS Drawn by: KJS Checked by: DZ

SC-05
EROSION AND SEDIMENT CONTROL

MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'
SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 502109 SHEET 52 of 285



GENERAL NOTES:

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SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL–DEPTH PAVEMENT	
SHARED–USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC–06
EROSION AND SEDIMENT CONTROL

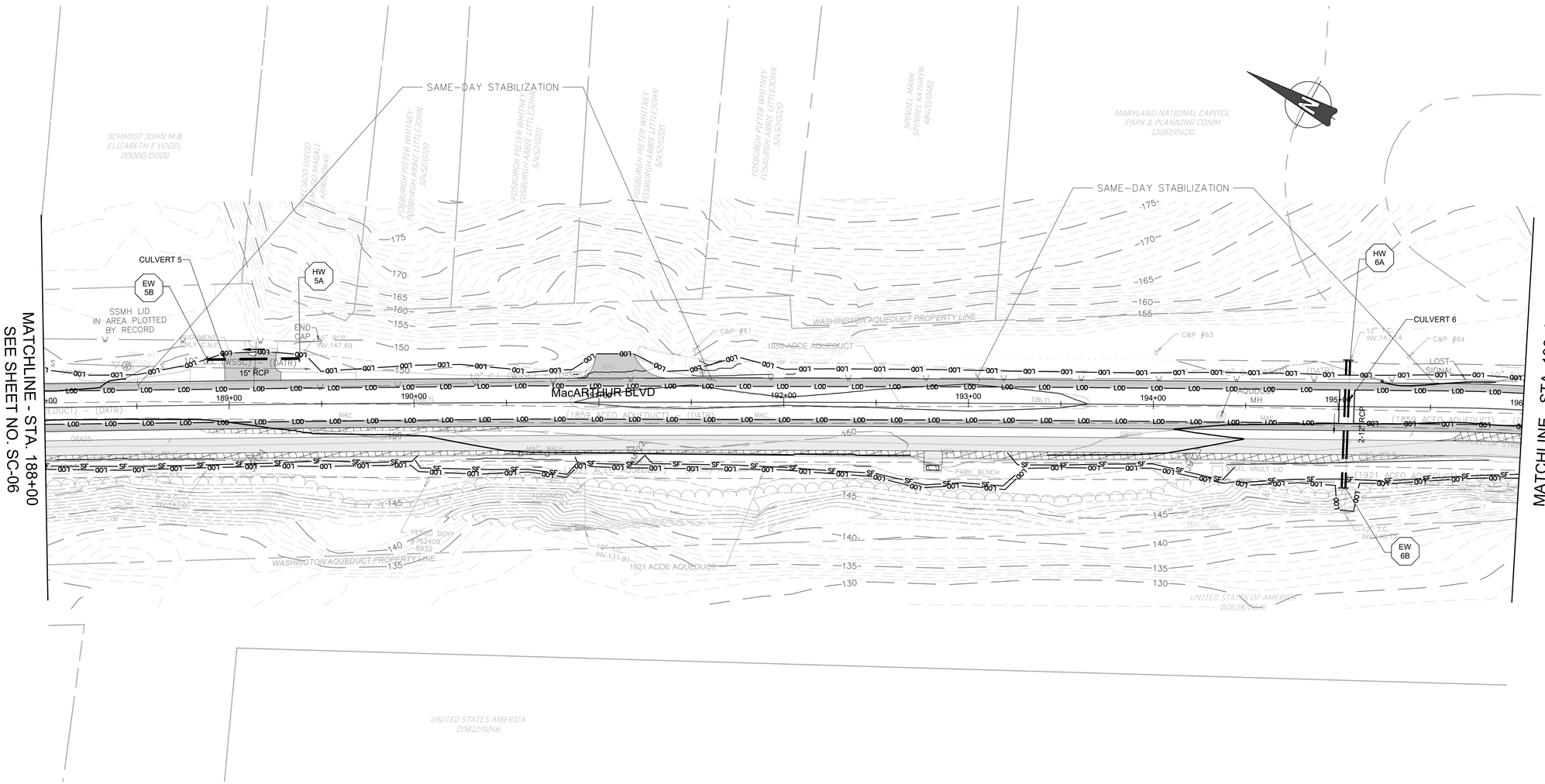
MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 502109 SHEET 53 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES–P101_MacArthur.dwg LAYOUT NAME: SC–06 PLOTTED: Thursday, June 27, 2024 – 4:45pm USER: kevin



GENERAL NOTES:

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SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL–DEPTH PAVEMENT	
SHARED–USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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SC–07
EROSION AND SEDIMENT CONTROL

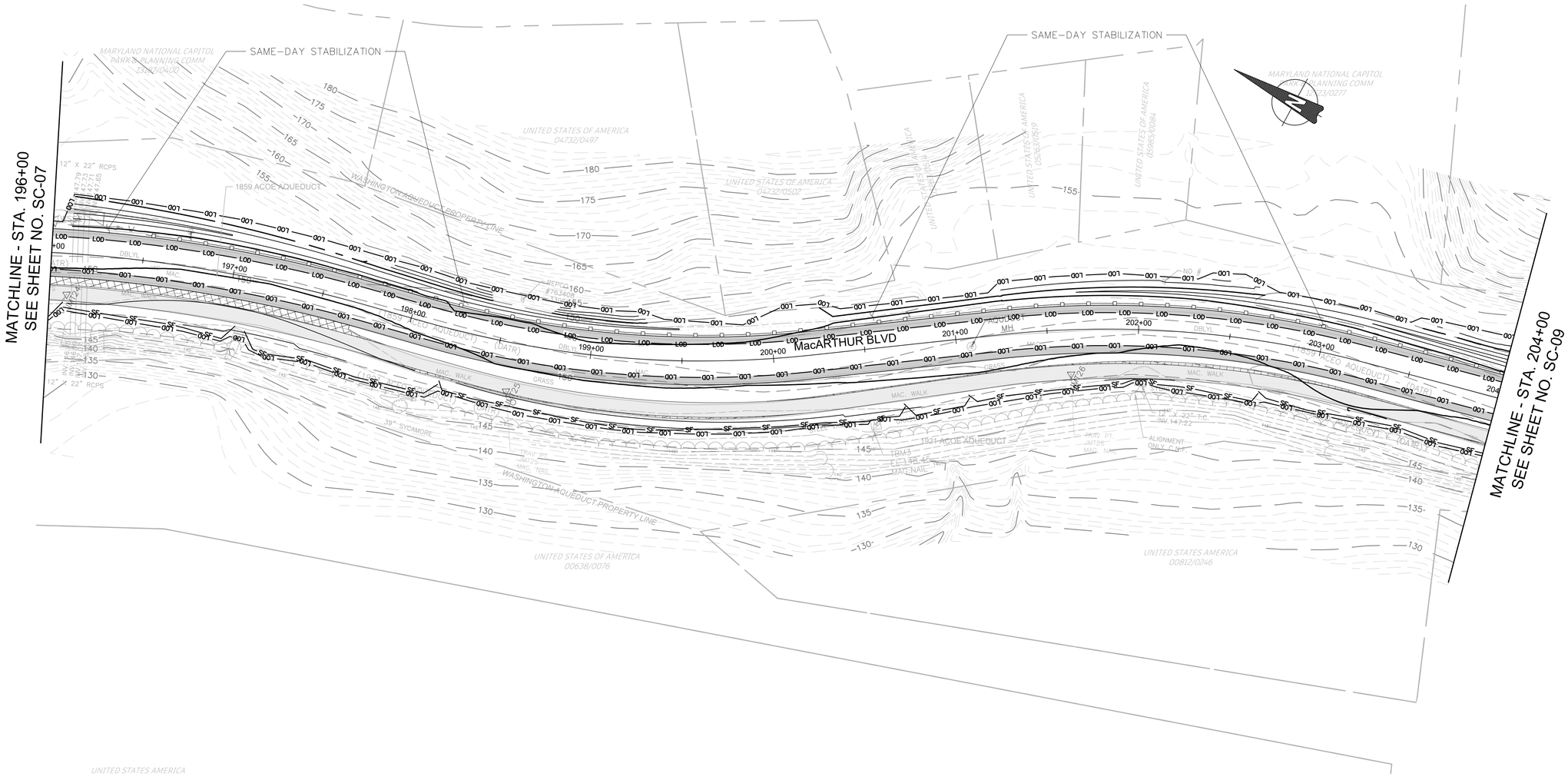
MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 502109

SHEET 54 of 285



GENERAL NOTES:

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LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
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RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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APPROVED

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SC-08
EROSION AND SEDIMENT CONTROL

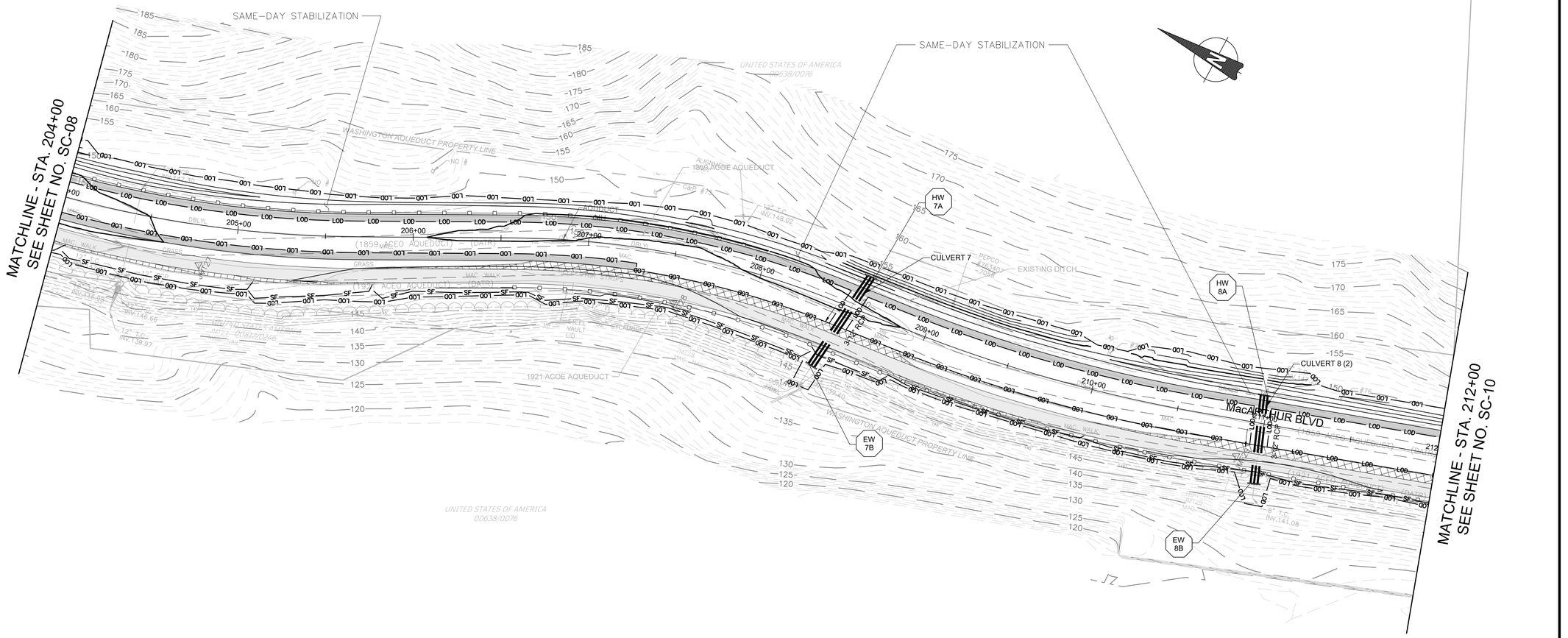
MACARTHUR BOULEVARD BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 502109 SHEET 55 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES-P101_MacArthur.dwg LAYOUT NAME: SC-08 PLOTTED: Thursday, June 27, 2024 - 4:45pm USER: kevin



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LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL–DEPTH PAVEMENT	
SHARED–USE PATH	

DRAFT
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MONTGOMERY COUNTY
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RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC–09
EROSION AND SEDIMENT CONTROL

MACARTHUR BOULEVARD
BIKEWAY PHASE III

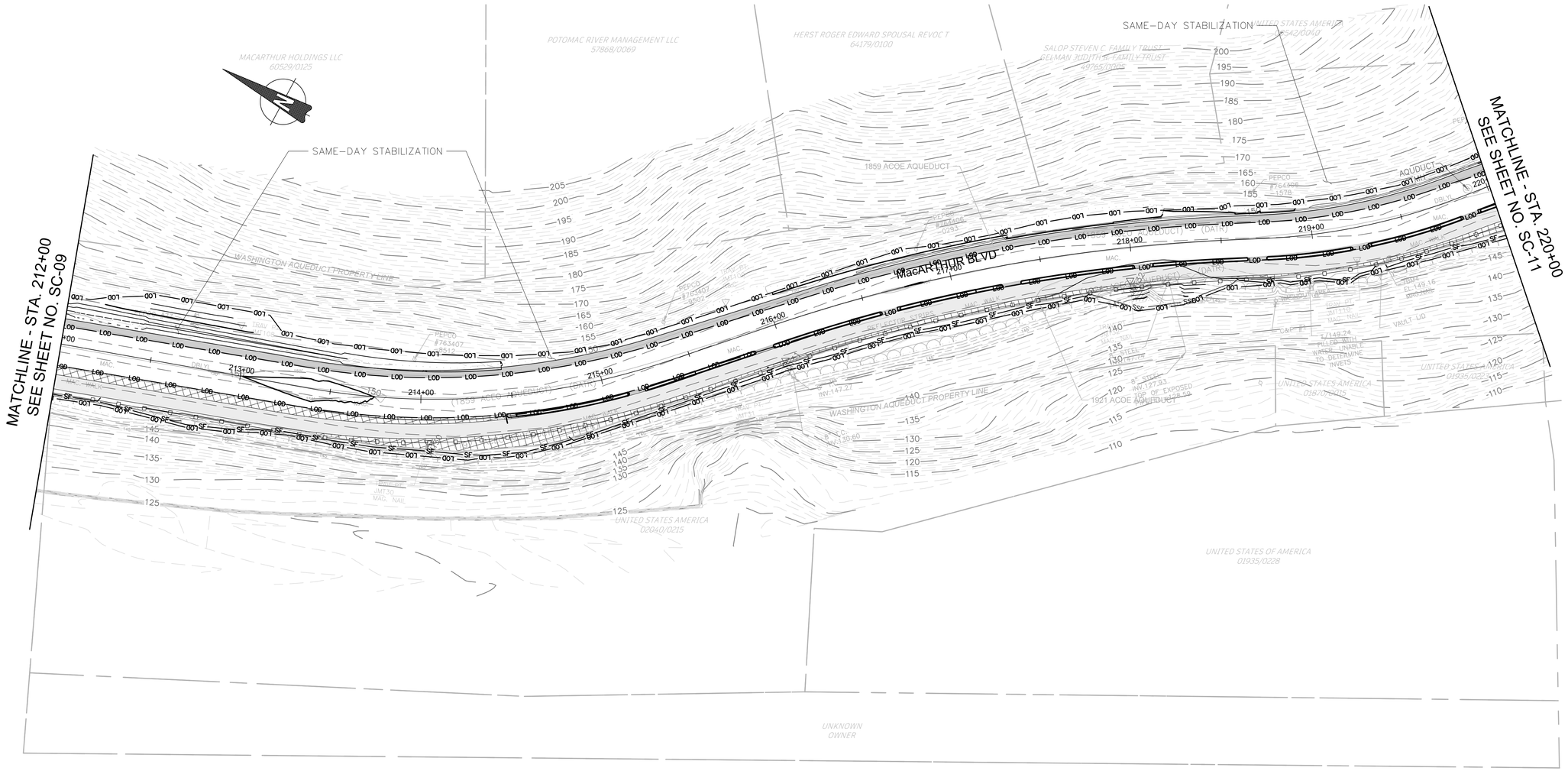
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SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 502109

SHEET 56 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES–P101_MacArthur.dwg LAYOUT NAME: SC–09 PLOTTED: Thursday, June 27, 2024 – 4:45pm USER: kevin



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
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LEGEND

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

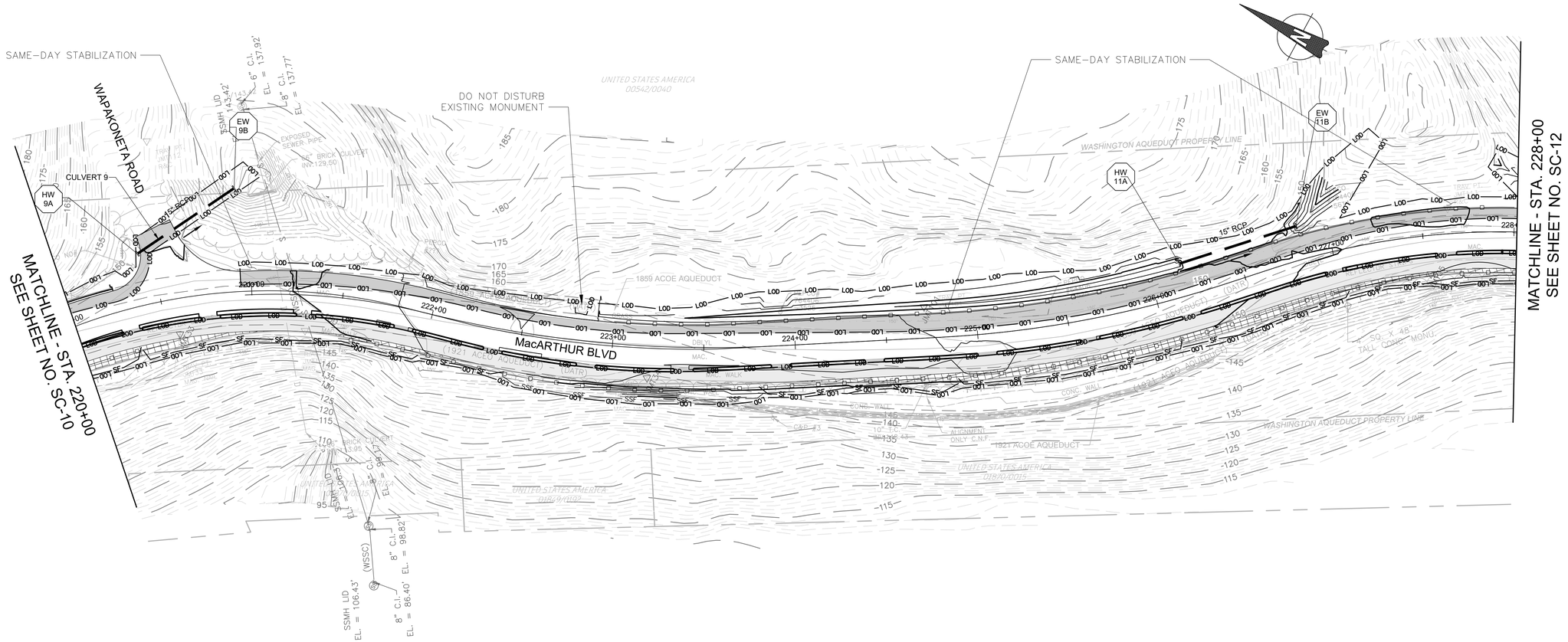
Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC-10
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'
SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 502109 SHEET 57 of 285



GENERAL NOTES:

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

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

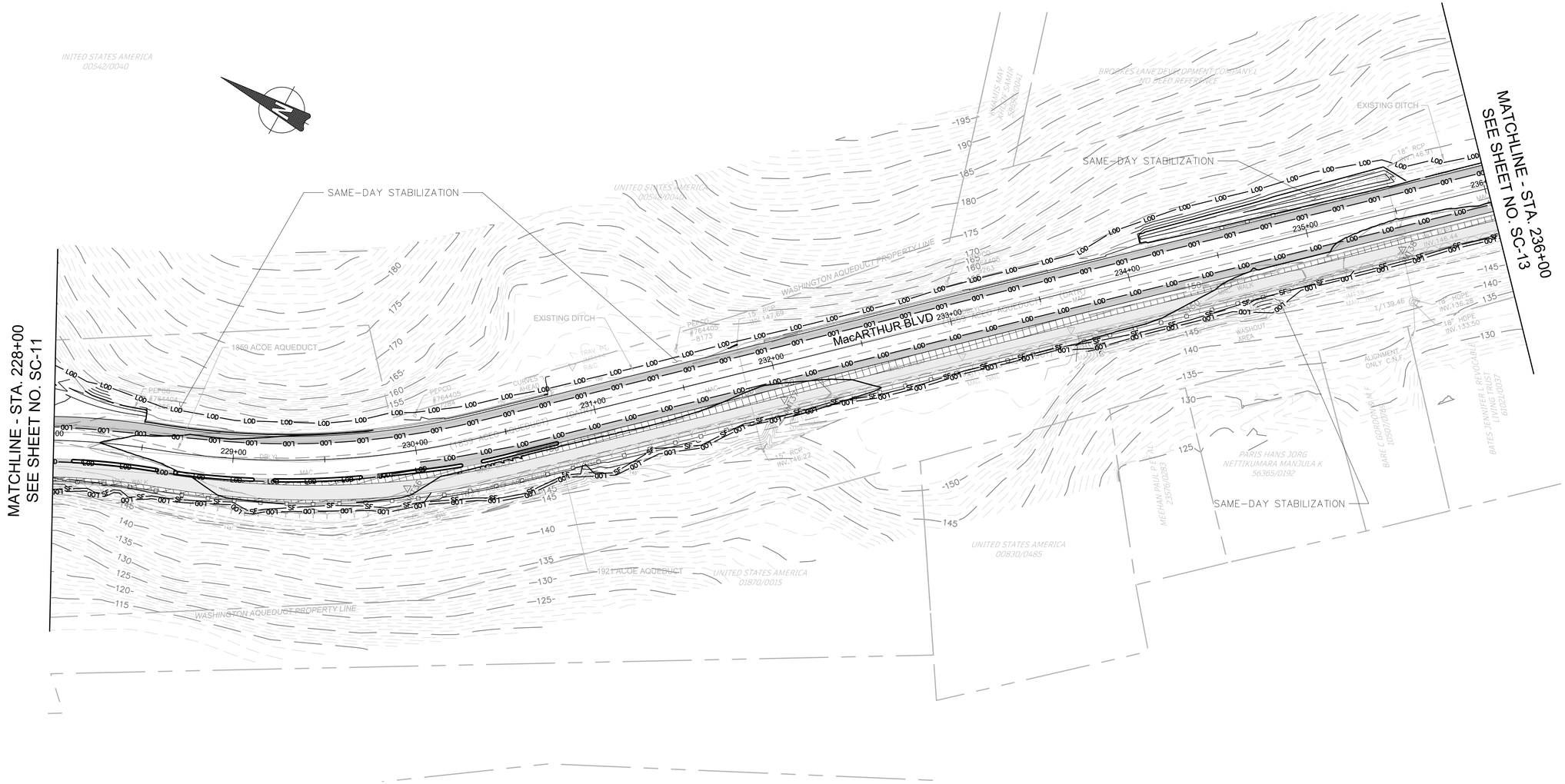
SC-11
EROSION AND SEDIMENT CONTROL

MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 502109 SHEET 58 of 285



GENERAL NOTES:

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LEGEND

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL–DEPTH PAVEMENT	
SHARED–USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

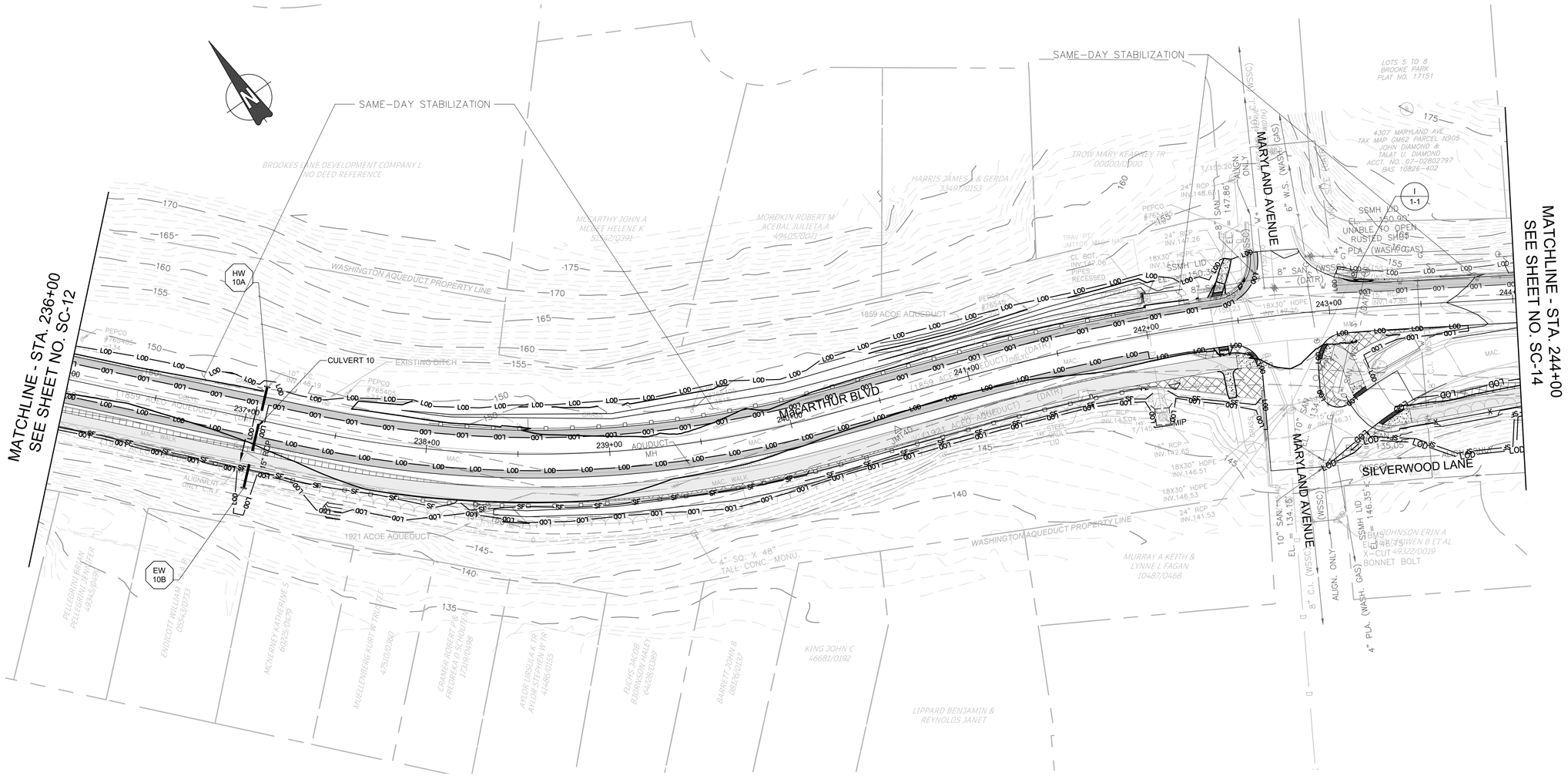
SC–12
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD
BIKEWAY PHASE III

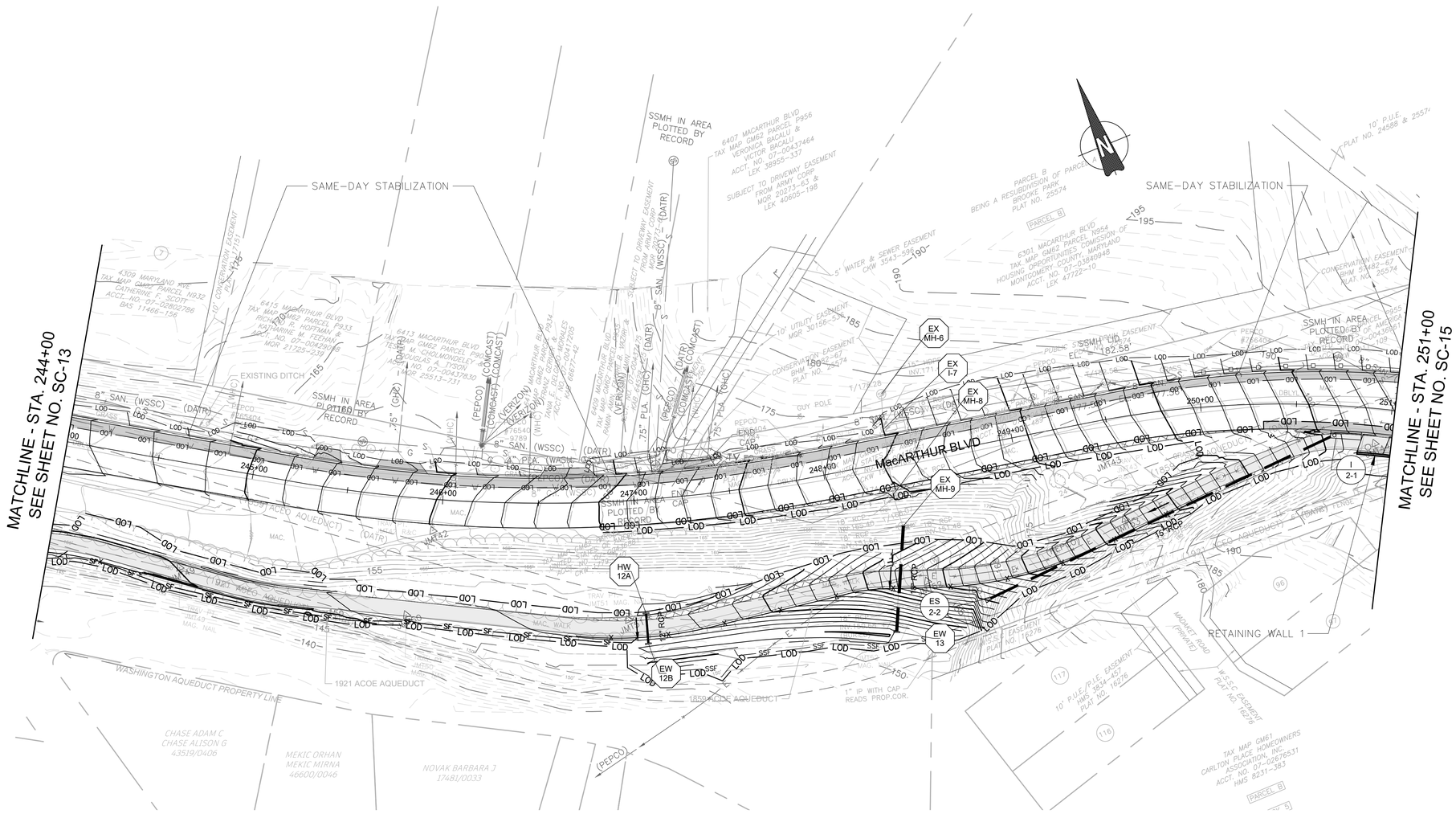
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 502109 SHEET 59 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES–P101_MacArthur.dwg LAYOUT NAME: SC–12 PLOTTED: Thursday, June 27, 2024 – 4:45pm USER: kevin


MATCHLINE - STA. 236+00
SEE SHEET NO. SC-12
MATCHLINE - STA. 244+00
SEE SHEET NO. SC-14
SAME-DAY STABILIZATION
SAME-DAY STABILIZATION
MACARTHUR BLVD
MARYLAND AVENUE
MARYLAND AVENUE
SILVERWOOD LANE
CULVERT 10
EXISTING DITCH
HW 10A
EW 10B
1859 ACOE AQUEDUCT
1921 ACOE AQUEDUCT
WASHINGTON AQUEDUCT PROPERTY LINE
WASHINGTON AQUEDUCT PROPERTY LINE
BROOKES LANE DEVELOPMENT COMPANY L
AND DEED REFERENCE
MCCARTHY JOHN A
MCGEE HELENE K
52342/0391
MORDKIN ROBERT W
ACEBAL JULIETA/A
49405/0071
HARRIS JAMES J & GERDA
23497/0153
TROW MARY KEARNEY TR
00000/0000
LOTS 5 TO 8
BROOKE PARK
PLAT NO. 17151
4307 MARYLAND AVE.
TAX MAP GM62 PARCEL N905
JOHN DIAMOND &
TALAT U. DIAMOND
ACCT. NO.- 07-02802797
BAS 10826-402
SSMH I.D.
EL.= 150.90'
UNABLE TO OPEN
RUSTED SHUT
SSMH LID
EL.= 150.30'
PEPCO
#765405
PEPCO
#765405
PEPCO
#765405



GENERAL NOTES:

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LEGEND

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: DZ Drawn by: DZ Checked by: KJS

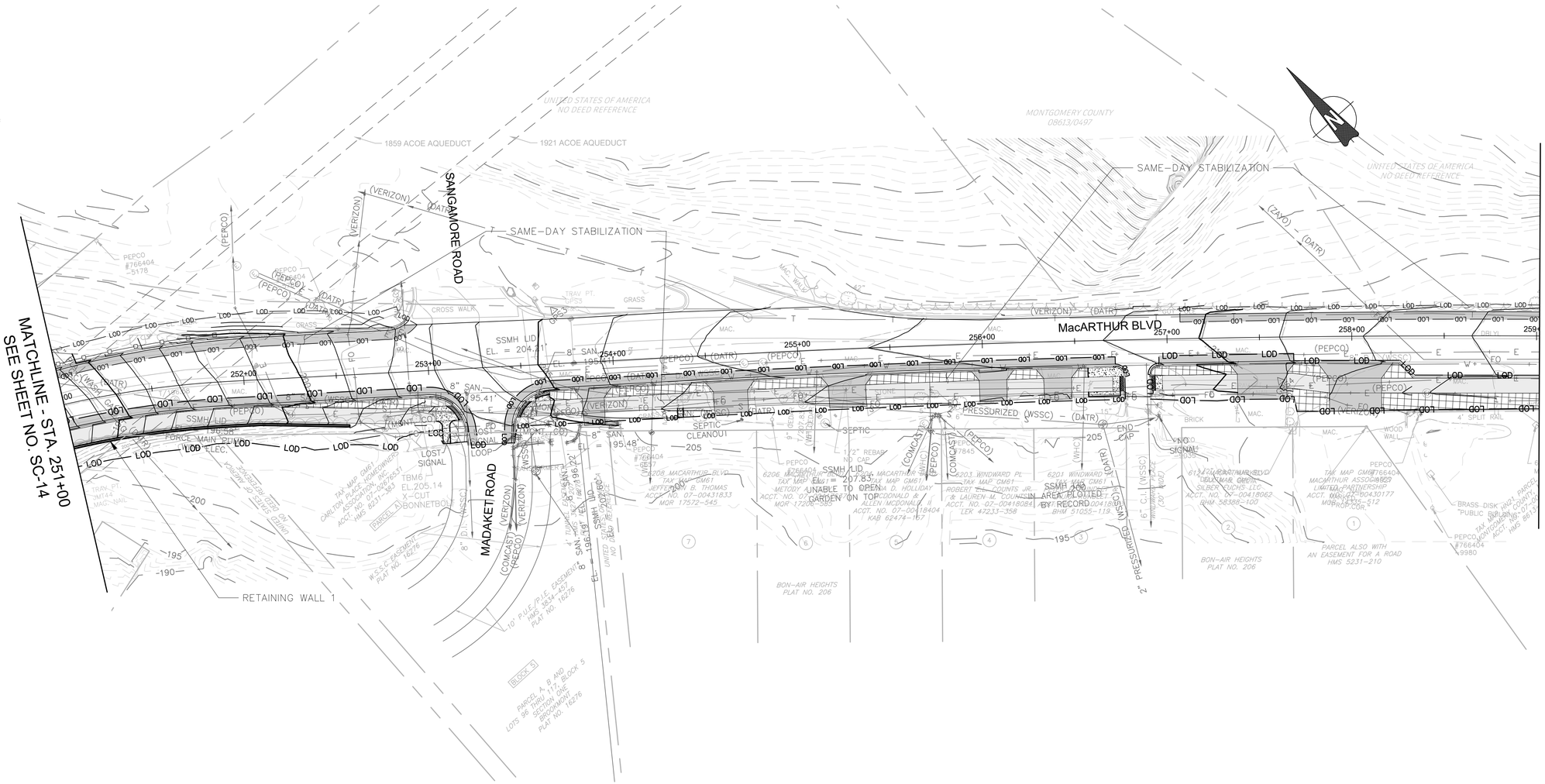
SC-14
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 502109 SHEET 61 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES-P101_MacArthur.dwg LAYOUT NAME: SC-14 PLOTTED: Thursday, June 27, 2024 - 4:45pm USER: kevin



GENERAL NOTES:

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LEGEND

LIMIT OF DISTURBANCE (LOD)	LOD LOD
SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC-15
EROSION AND SEDIMENT CONTROL

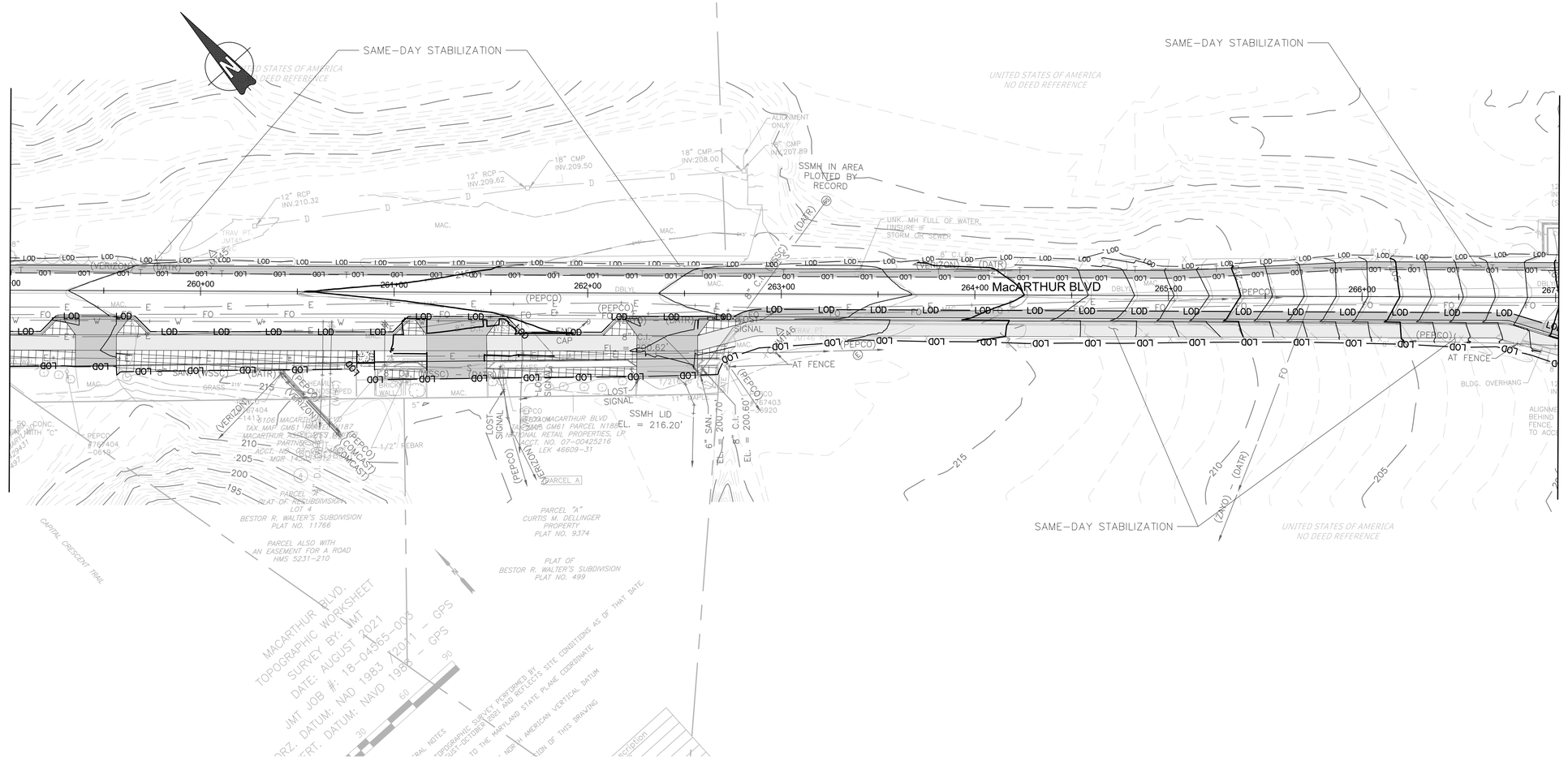
MACARTHUR BOULEVARD
BIKEWAY PHASE III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 502109 SHEET 62 of 285

MATCHLINE - STA. 259+00
SEE SHEET NO. SC-15



MATCHLINE - STA. 267+00
SEE SHEET NO. SC-17

GENERAL NOTES:

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SILT FENCE	SF SF
SUPER SILT FENCE	SSF
PAVEMENT REMOVAL	
FULL-DEPTH PAVEMENT	
SHARED-USE PATH	

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

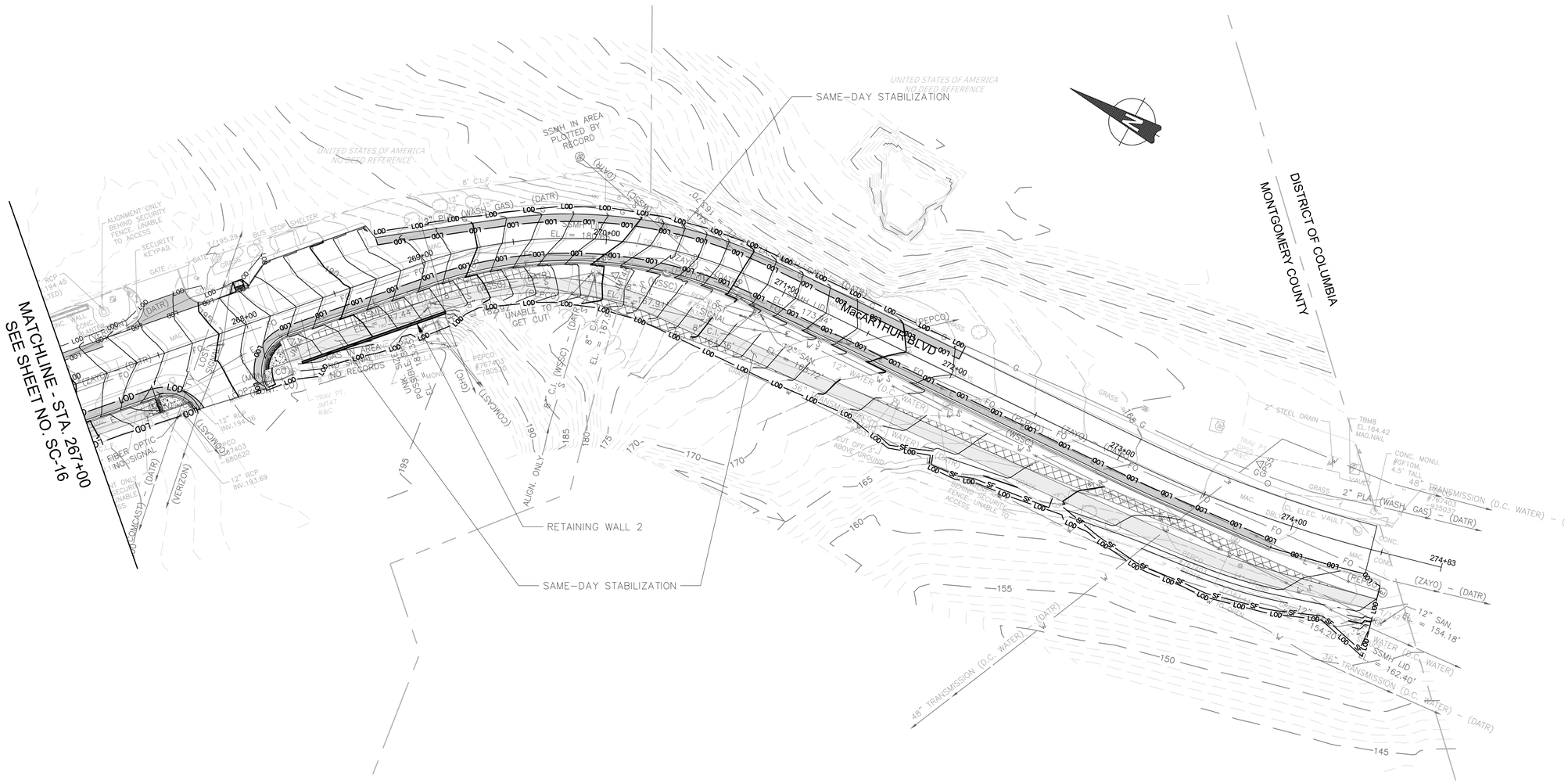
Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC-16
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD BIKEWAY PHASE III

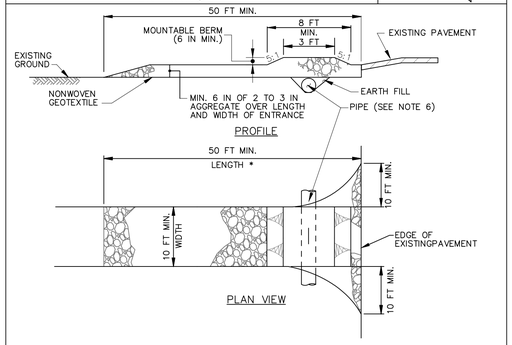
0 30' 60'
SCALE: 1"=30'
DATE: JUNE 2024

CIP No.: 502109
SHEET 63 of 285


MATCHLINE - STA. 267+00
SEE SHEET NO. SC-16
SAME-DAY STABILIZATION
RETAINING WALL 2
SAME-DAY STABILIZATION
MACARTHUR BLVD
DISTRICT OF COLUMBIA
MONTGOMERY COUNTY
UNITED STATES OF AMERICA
NO DEED REFERENCE
SSMH IN AREA PLOTTED BY RECORD
NO RECORDS
UNABLE TO GET OUT
ALIGN. ONLY
267+00
268+00
269+00
270+00
271+00
272+00
273+00
274+00
274+83
2" PLA. (WASH. GAS) – (DATR)
(ZAYO) – (DATR)
12" SAN. EL. = 154.18'
SSMH LID 162.40'
36" TRANSMISSION (D.C. WATER) – (DATR)
48" TRANSMISSION (D.C. WATER) – (DATR)
FIBER OPTIC (NOT SIGNAL)
(VERIZON)
(COMCAST) – (DATR)
(PEPCO) – (DATR)
(WASH. GAS) – (DATR)
(WSSC) – (DATR)
(OHC)
(COMCAST)
8" C.I. (WSSC) – (DATR)
EL. = 180.74'
EL. = 179.91'
EL. = 174.84'
EL. = 174.72'
EL. = 174.44'
EL. = 174.41'
EL. = 174.39'
EL. = 174.37'
EL. = 174.34'
EL. = 174.31'
EL. = 174.28'
EL. = 174.25'
EL. = 174.22'
EL. = 174.19'
EL. = 174.16'
EL. = 174.13'
EL. = 174.10'
EL. = 174.07'
EL. = 174.04'
EL. = 174.01'
EL. = 173.98'
EL. = 173.95'
EL. = 173.92'
EL. = 173.89'
EL. = 173.86'
EL. = 173.83'
EL. = 173.80'
EL. = 173.77'
EL. = 173.74'
EL. = 173.71'
EL. = 173.68'
EL. = 173.65'
EL. = 173.62'
EL. = 173.59'
EL. = 173.56'
EL. = 173.53'
EL. = 173.50'
EL. = 173.47'
EL. = 173.44'
EL. = 173.41'
EL. = 173.38'
EL. = 173.35'
EL. = 173.32'
EL. = 173.29'
EL. = 173.26'
EL. = 173.23'
EL. = 173.20'
EL. = 173.17'
EL. = 173.14'
EL. = 173.11'
EL. = 173.08'
EL. = 173.05'
EL. = 173.02'
EL. = 172.99'
EL. = 172.96'
EL. = 172.93'
EL. = 172.90'
EL. = 172.87'
EL. = 172.84'
EL. = 172.81'
EL. = 172.78'
EL. = 172.75'
EL. = 172.72'
EL. = 172.69'
EL. = 172.66'
EL. = 172.63'
EL. = 172.60'
EL. = 172.57'
EL. = 172.54'
EL. = 172.51'
EL. = 172.48'
EL. = 172.45'
EL. = 172.42'
EL. = 172.39'
EL. = 172.36'
EL. = 172.33'
EL. = 172.30'
EL. = 172.27'
EL. = 172.24'
EL. = 172.21'
EL. = 172.18'
EL. = 172.15'
EL. = 172.12'
EL. = 172.09'
EL. = 172.06'
EL. = 172.03'
EL. = 172.00'
EL. = 171.97'
EL. = 171.94'
EL. = 171.91'
EL. = 171.88'
EL. = 171.85'
EL. = 171.82'
EL. = 171.79'
EL. = 171.76'
EL. = 171.73'
EL. = 171.70'
EL. = 171.67'
EL. = 171.64'
EL. = 171.61'
EL. = 171.58'
EL. = 171.55'
EL. = 171.52'
EL. = 171.49'
EL. = 171.46'
EL. = 171.43'
EL. = 171.40'
EL. = 171.37'
EL. = 171.34'
EL. = 171.31'
EL. = 171.28'
EL. = 171.25'
EL. = 171.22'
EL. = 171.19'
EL. = 171.16'
EL. = 171.13'
EL. = 171.10'
EL. = 171.07'
EL. = 171.04'
EL. = 171.01'
EL. = 170.98'
EL. = 170.95'
EL. = 170.92'
EL. = 170.89'
EL. = 170.86'
EL. = 170.83'
EL. = 170.80'
EL. = 170.77'
EL. = 170.74'
EL. = 170.71'
EL. = 170.68'
EL. = 170.65'
EL. = 170.62'
EL. = 170.59'
EL. = 170.56'
EL. = 170.53'
EL. = 170.50'
EL. = 170.47'
EL. = 170.44'
EL. = 170.41'
EL. = 170.38'
EL. = 170.35'
EL. = 170.32'
EL. = 170.29'
EL. = 170.26'
EL. = 170.23'
EL. = 170.20'
EL. = 170.17'
EL. = 170.14'
EL. = 170.11'
EL. = 170.08'
EL. = 170.05'
EL. = 170.02'
EL. = 169.99'
EL. = 169.96'
EL. = 169.93'
EL. = 169.90'
EL. = 169.87'
EL. = 169.84'
EL. = 169.81'
EL. = 169.78'
EL. = 169.75'
EL. = 169.72'
EL. = 169.69'
EL. = 169.66'
EL. = 169.63'
EL. = 169.60'
EL. = 169.57'
EL. = 169.54'
EL. = 169.51'
EL. = 169.48'
EL. = 169.45'
EL. = 169.42'
EL. = 169.39'
EL. = 169.36'
EL. = 169.33'
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DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

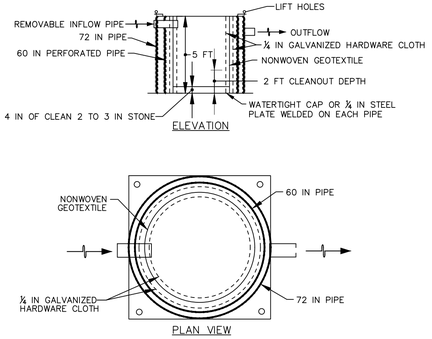
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: PST



CONSTRUCTION SPECIFICATIONS

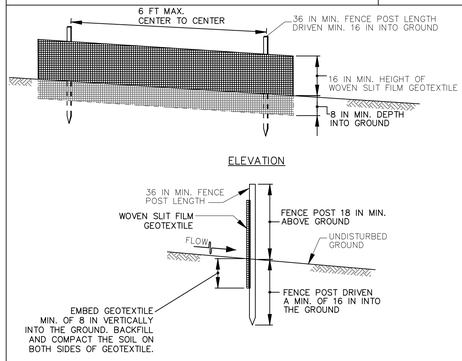
1. PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
2. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE
6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



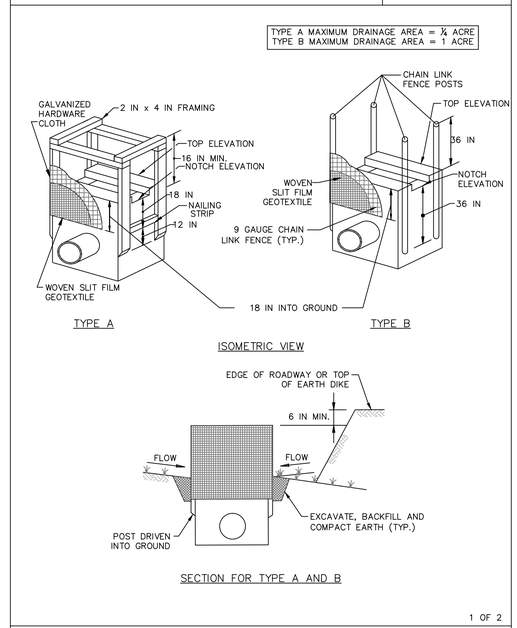
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP



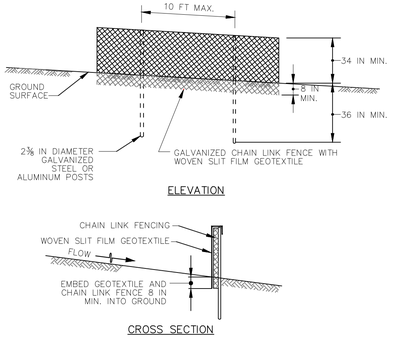
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

SC–18 DETAILS
EROSION AND SEDIMENT CONTROL
MACARTHUR BOULEVARD BIKEWAY PHASE III

0 30' 60'

DATE: JUNE 2024

CIP No. : 502109 SHEET 65 of 285

FILE NAME: C:\pwworking\jmt\d0322029\pES–D001_MacArthur.dwg LAYOUT NAME: SC–17 PLOTTED: Thursday, June 27, 2024 – 4:46pm USER: kevin

CRITERIA

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", 2023 EDITION AND SUBSEQUENT SUPPLEMENTS.

DESIGN WIND

100 MPH – WOOD SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH – GROUND MOUNT SIGN STEEL SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH – OVERHEAD AND CANTILEVER STRUCTURES
50 YEAR RECURRENCE INTERVAL

} ALL DISTRICTS

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.

1. GUIDE SIGNS
   - A) STRUCTURAL TYPES
     - OH – OVERHEAD
     - C – CANTILEVER
     - GM – GROUND MOUNT, BREAKAWAY OR NON–BREAKWAY
     - BM – BRIDGE MOUNTED
   - B) PANELS
     - MATERIAL – EXTRUDED ALUMINUM
     - COPY – DIRECT APPLIED
       1) HIGH INTENSITY (NEW SIGNS AND REVISIONS TO EXISTING SIGNS)

2. STANDARD SIGNS (REGULATORY, WARNING, ETC.)
   - A) STRUCTURAL TYPES
     - WOOD SUPPORTS
     - SQUARE TUBE
   - B) PANELS
     - MATERIAL – SHEET ALUMINUM
     - COPY – DIRECT APPLIED

IDENTIFICATION OF SIGNS AND PANELS

GUIDE SIGNS

EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM–1, GM–2, GM–3, etc)
SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LOWER CASE LETTER. (OH–1a, OH–1b, OH–1c)

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 UNLESS NOTED TO BE MODIFIED.

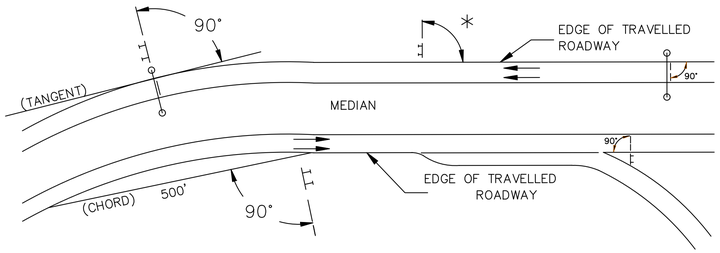
PANEL LAYOUT AND ALPHABETS

1. 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 @ https: /www.marylandroads.com/businesswithsha/ bizStdsSpecs/desManualStdPub/publicationsonline/oots/internet_signbook.asp

REFLECTORIZATION

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

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^

SIGN LOCATIONS

1. 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

1. 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

1. 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 ROADWAY TO THE BOTTOM OF LIGHT FIXTURES. ALL LIGHT FIXTURES ARE TO BE AT THE SAME ELEVATION.
   - B) IF THE CONTRACTOR CANNOT OBTAIN 17'–9" (SEE 3A) CLEARANCE, HE IS TO 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 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:

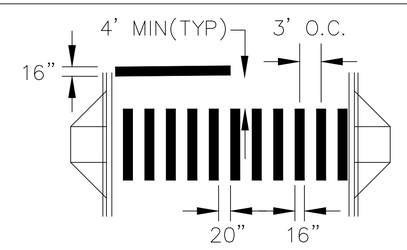
1. SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MDSHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JULY 2023) AND SUBSEQUENT REVISIONS
2. LISTED ON MDSHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL)

PROJECT REQUIREMENTS CONT'D

3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED FOR THE SPECIFIED SIGN CLASSIFICATIONS
   - A) GUIDE, EXIT GORE, AND GENERAL INFORMATION SIGNS– RETROREFLECTIVE SHEETING FOR GUIDE SIGNS, EXIT GORE, AND GENERAL INFORMATION (INCLUDES WHITE ON GREEN, WHITE ON BLUE, WHITE ON BROWN AND THE REVERSE OF THESE COLORS) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX LEGEND ON ASTM TYPE IX BACKGROUND. REGULATORY AND WARNING MESSAGES WITHIN GUIDE SIGNS SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING.
   - B) WARNING SIGNS – RETROREFLECTIVE SHEETING FOR BLACK ON FLUORESCENT YELLOW WARNING SIGNS SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING. REGULATORY MESSAGES WITHIN WARNING SIGNS SHALL FOLLOW THE GUIDELINES FOR REGULATORY SIGNS.
   - C) SCHOOL SIGNS – RETROREFLECTIVE SHEETING FOR SCHOOL SIGNS (BLACK ON FLUORESCENT YELLOW AND BLACK ON FLUORESCENT YELLOW GREEN) SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING. REGULATORY MESSAGES WITHIN SCHOOL SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.
   - D) REGULATORY SIGNS –FALL INTO THREE SUBCATEGORIES:
     - i. REGULATORY SIGNS (STOP, YIELD, DO NOT ENTER AND WRONG WAY) RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES WHITE ON RED AND RED ON WHITE) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX SHEETING.
     - ii. ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY (INCLUDES RED ON WHITE, GREEN ON WHITE, BLUE ON WHITE, BLACK ON WHITE AND THE REVERSE OF THESE COLORS) SHALL BE ASTM TYPE I LEGEND ON ASTM TYPE I BACKGROUND.
     - iii. ALL OTHER REGULATORY SIGNS – RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES BLACK ON WHITE) SHALL BE NON–REFLECTIVE BLACK LEGEND ON ASTM TYPE IV BACKGROUND. WHERE RED IS SPECIFIED, OR WHERE THE COLOR OF THE SIGN IS WHITE ON BLACK, THE LEGEND SHALL BE ASTM TYPE IV RETROREFLECTIVE SHEETING ON NON–REFLECTIVE BLACK BACKGROUND. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE GUIDELINES FOR WARNING SIGNS.
   - E) ROUTE MARKERS –RETROREFLECTIVE SHEETING FOR ROUTE MARKERS (INCLUDES BLACK ON WHITE , GREEN ON WHITE, WHITE ON GREEN, WHITE ON RED/BLUE) SHALL MEET THE REQUIREMENTS OF GUIDE SIGNS ABOVE WHEN SPECIFIED AS THE LEGEND OF A GUIDE SIGN. RETROREFLECTIVE SHEETING FOR ALL INDEPENDENT ROUTE MARKERS AND THEIR AUXILIARY PANELS SHALL BE ASTM TYPE IV AND/OR NON–REFLECTIVE BLACK LEGEND ON ASTM TYPE IV BACKGROUND.
   - F) LOGOS AND/OR GRAPHICS –WITHIN SIGNS SHALL FOLLOW THE GUIDELINES FOR THE RESPECTIVE SIGN CLASSIFICATION UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.
   - G) 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"



LADDER BAR CROSSWALK WITH STOPBAR DETAIL

DRAFT
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JMT

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

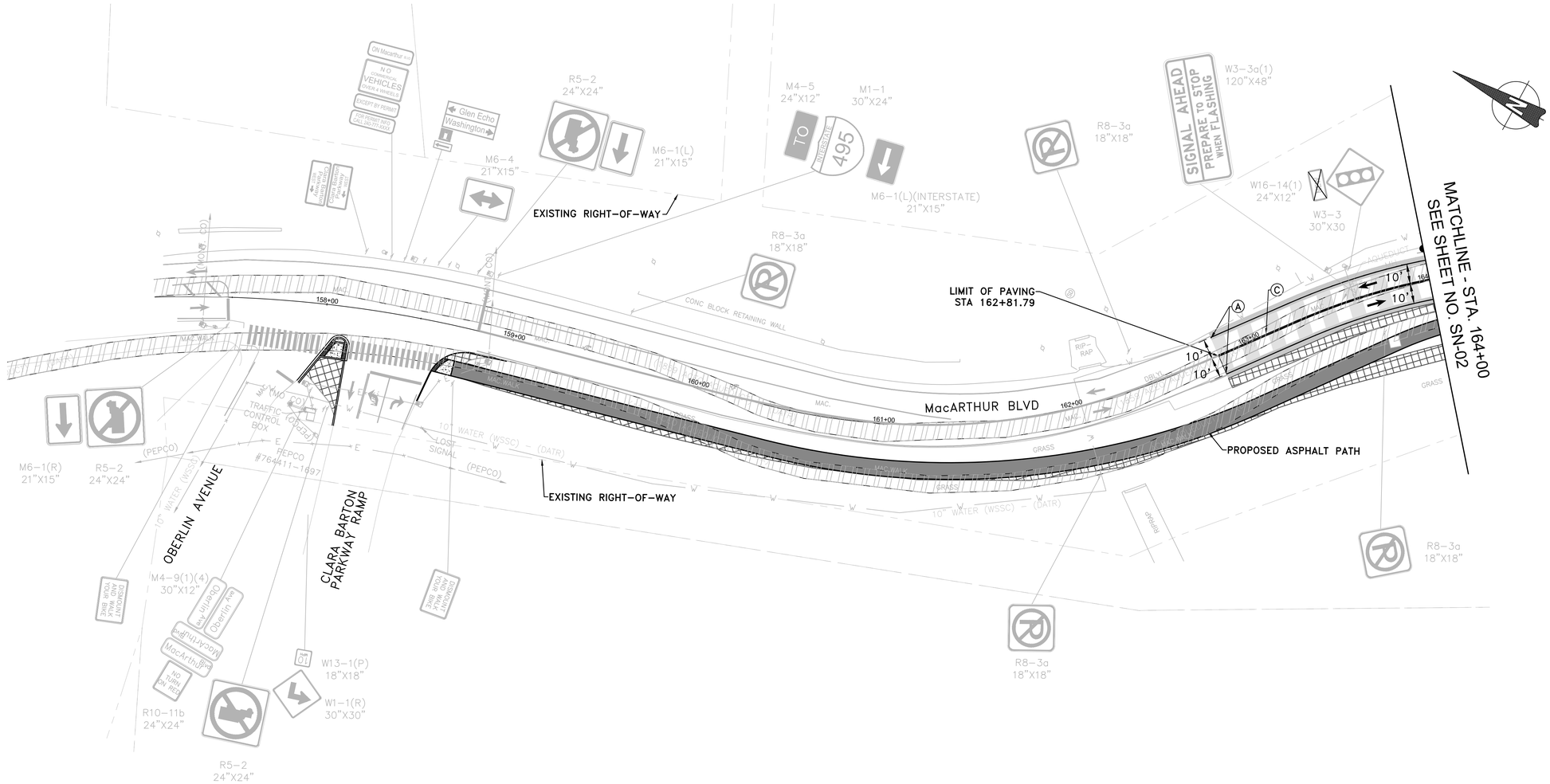
Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN–00
SIGNING & PAVEMENT MARKING NOTES
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 63 of 285



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SINGLE 5" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MCS

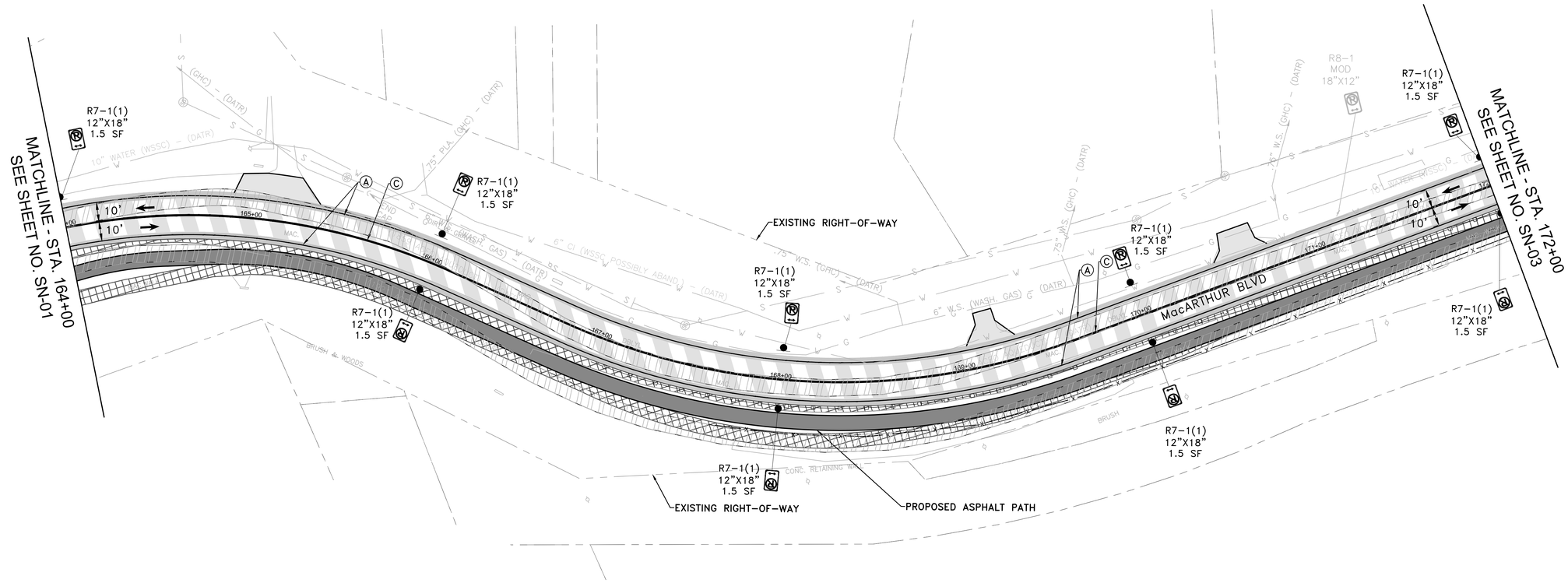
SN–01
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 64 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-01 PLOTTED: Thursday, June 27, 2024 – 4:22pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN–02
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

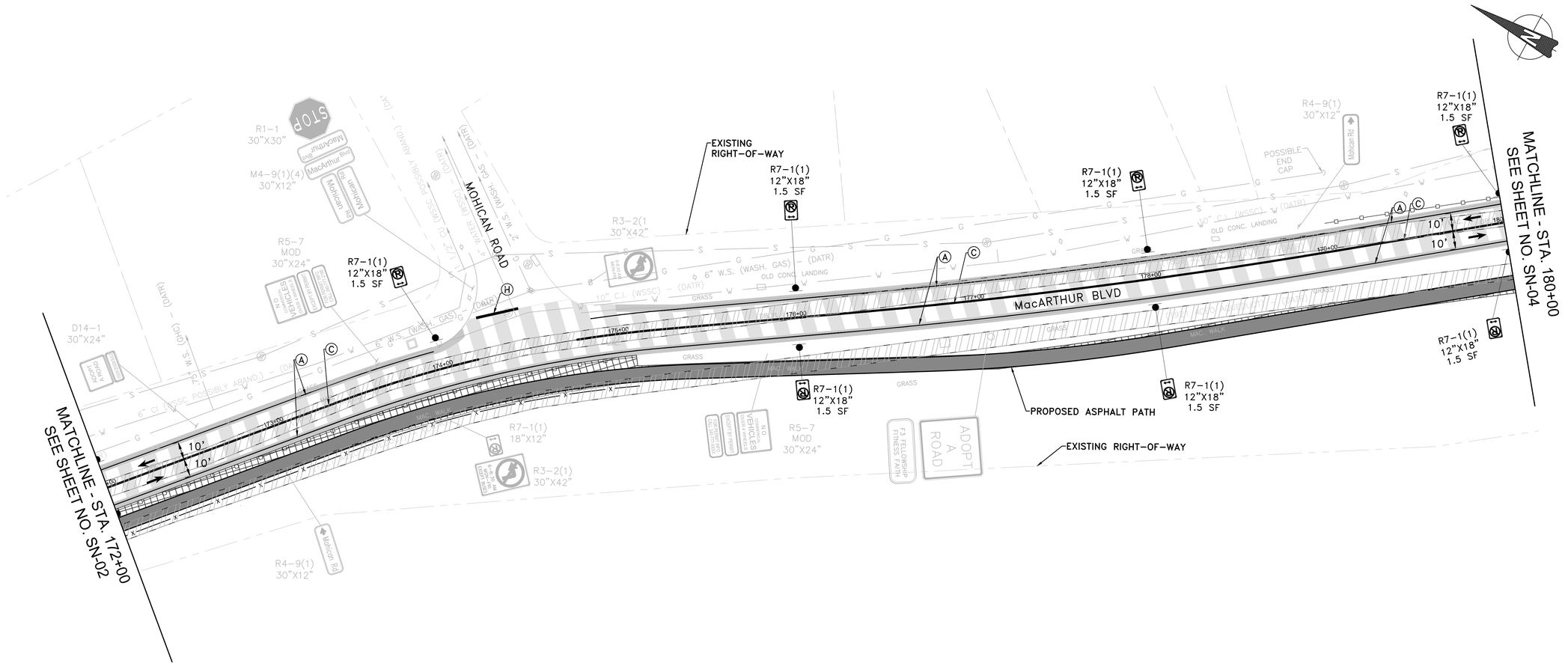
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DATE: JUNE 2024

CIP No. : 500718

SHEET 65 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN–0001_MacArthur.dwg LAYOUT NAME: SN–02 PLOTTED: Thursday, June 27, 2024 – 4:22pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

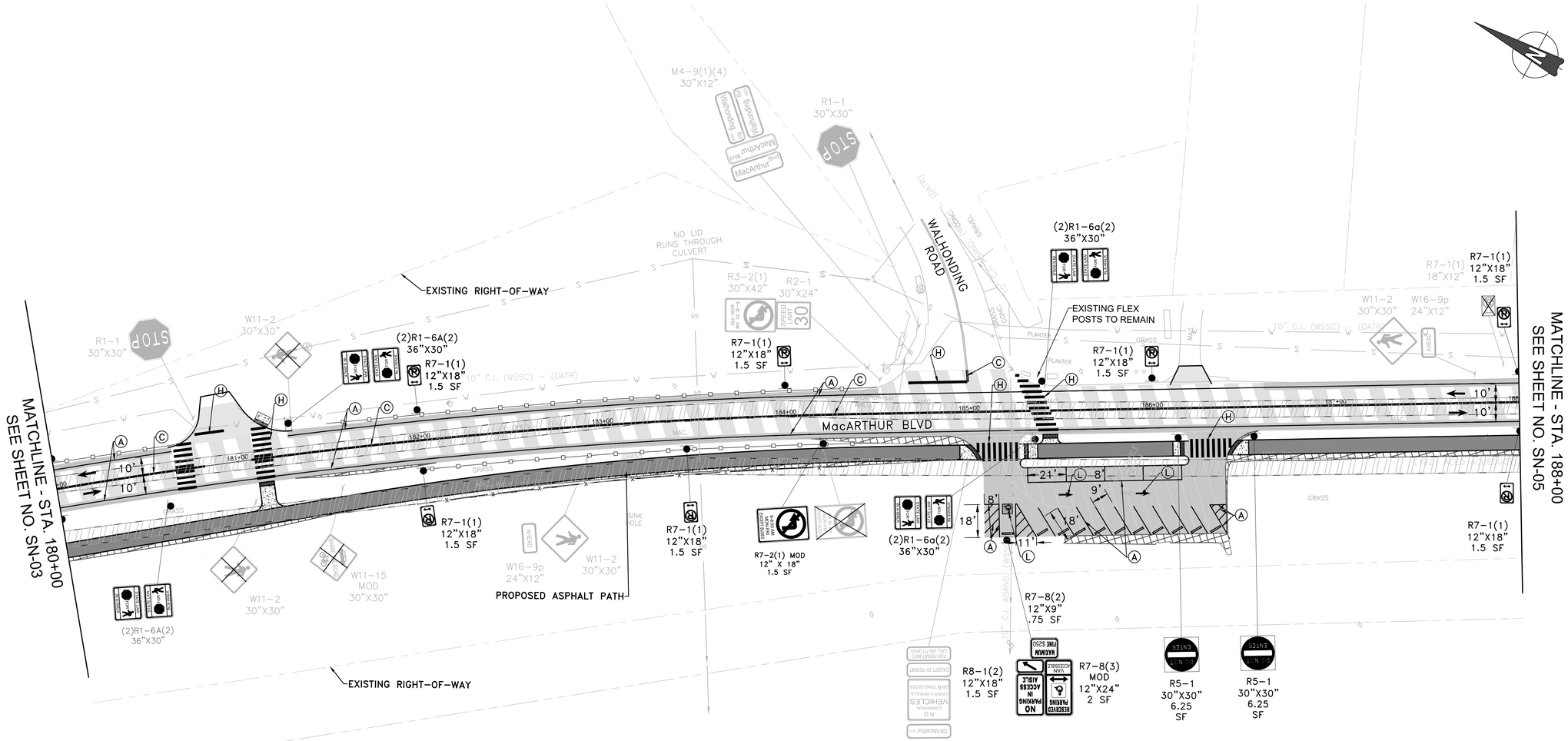
SN-03
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 66 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-03 PLOTTED: Thursday, June 27, 2024 - 4:22pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
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- PROPOSED PAVEMENT REMOVAL
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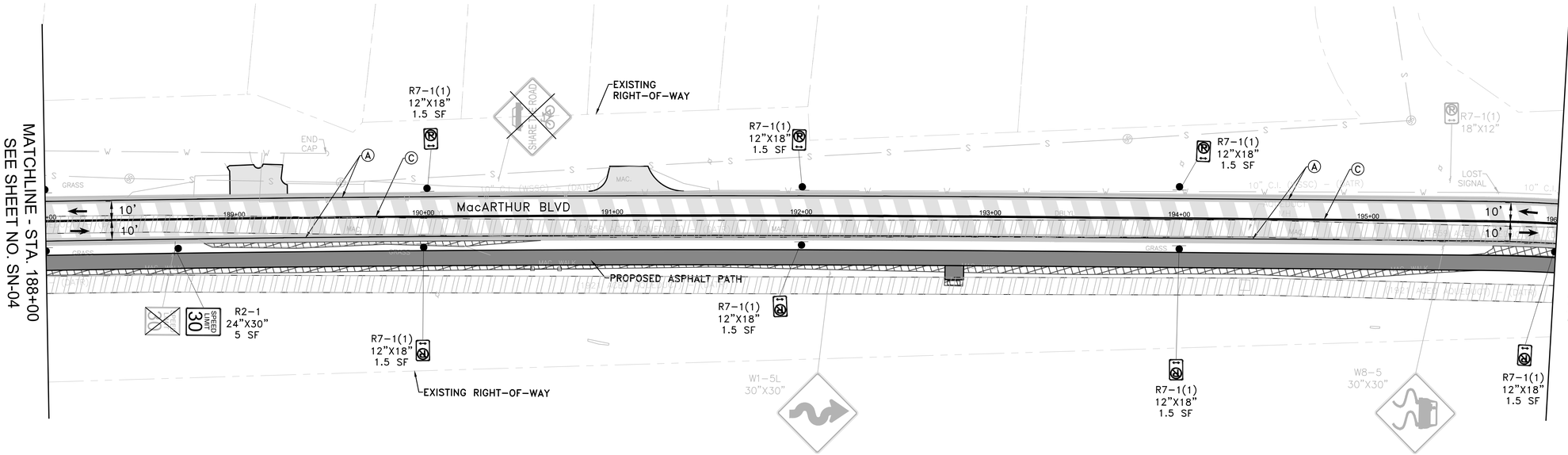
Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN-04
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 67 of 285



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
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- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
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- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

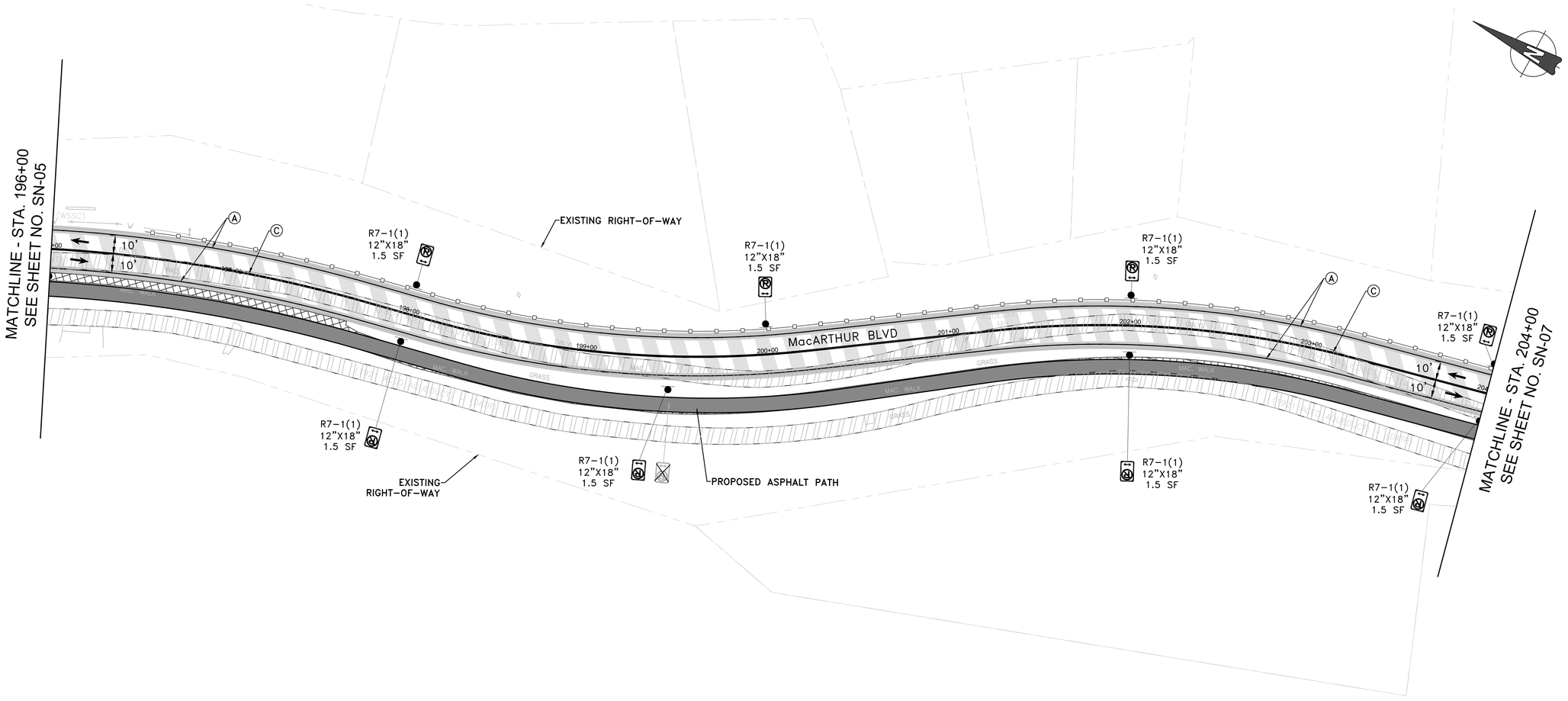
SN–05
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 68 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN–0001_MacArthur.dwg LAYOUT NAME: SN–05 PLOTTED: Thursday, June 27, 2024 – 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SINGLE 5" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (G) DOUBLE 5" 3' STRIPE 9' SKIP LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

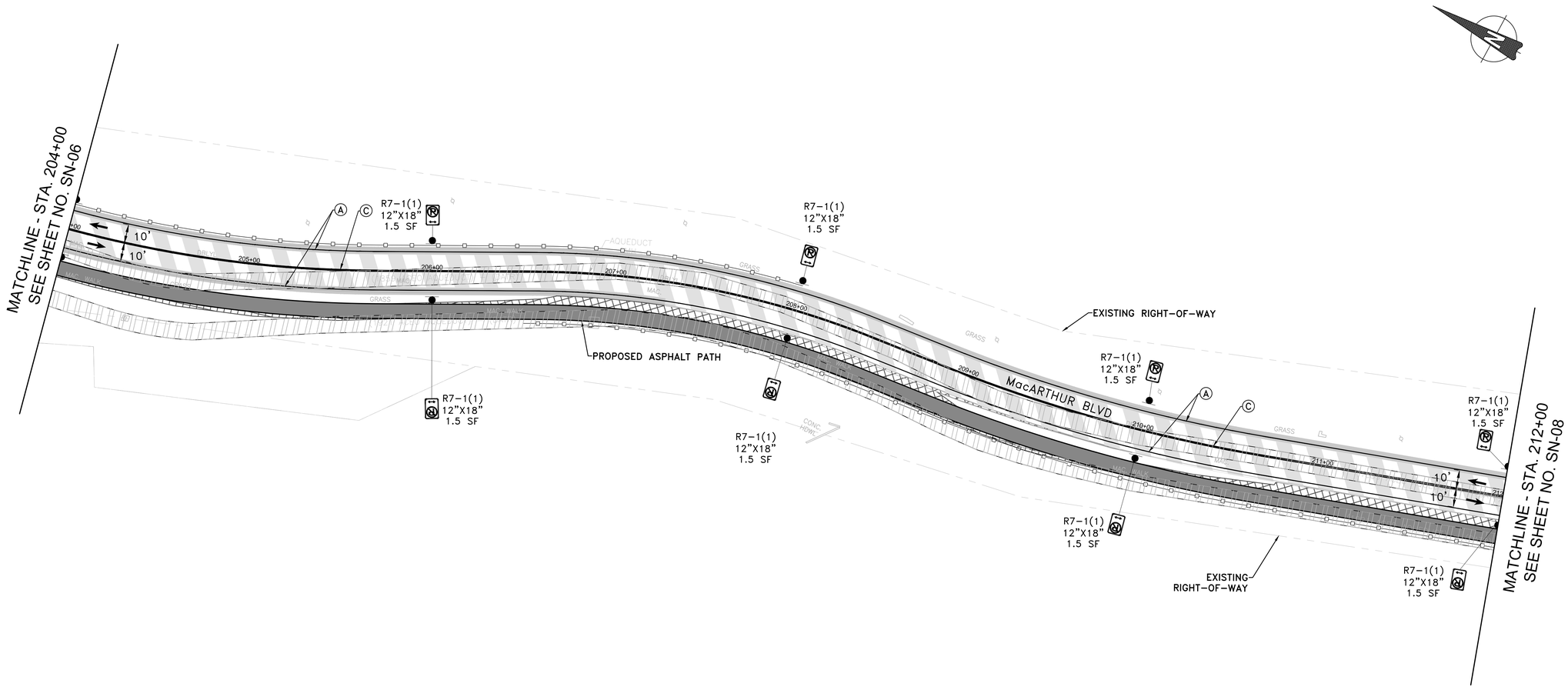
SN-06
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 69 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-06 PLOTTED: Thursday, June 27, 2024 - 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SINGLE 5" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (G) DOUBLE 5" 3' STRIPE 9' SKIP LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN–07
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

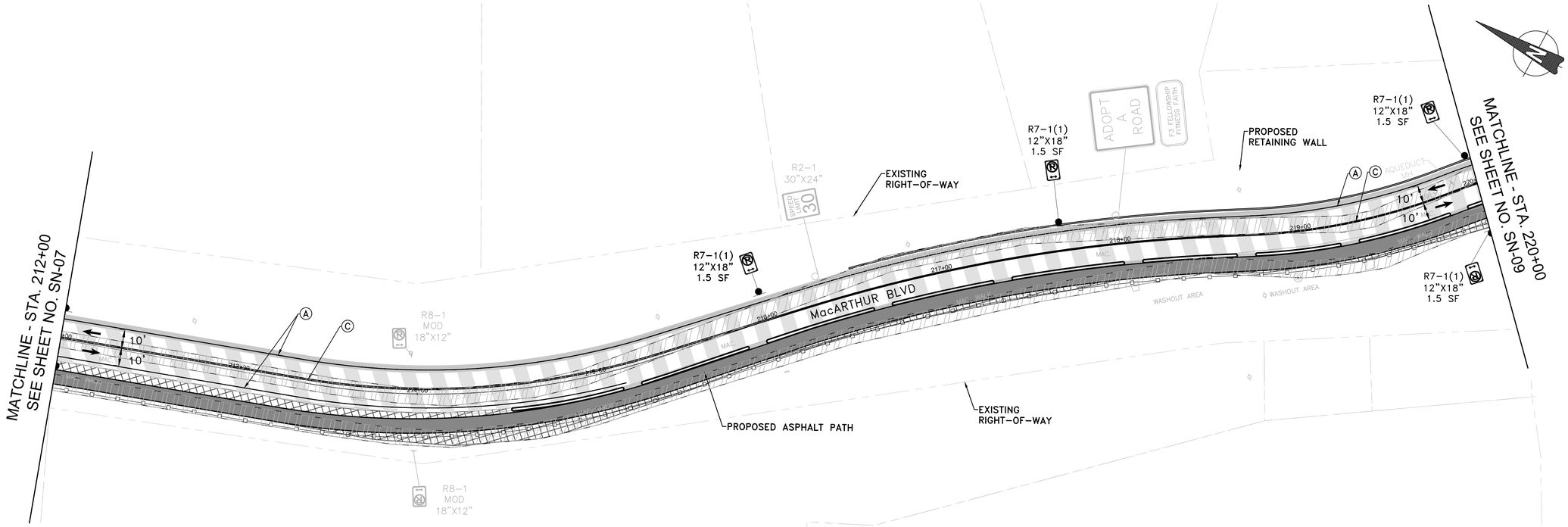
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 70 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN–0001_MacArthur.dwg LAYOUT NAME: SN–07 PLOTTED: Thursday, June 27, 2024 – 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (G) DOUBLE 5" 3' STRIPE 9' SKIP LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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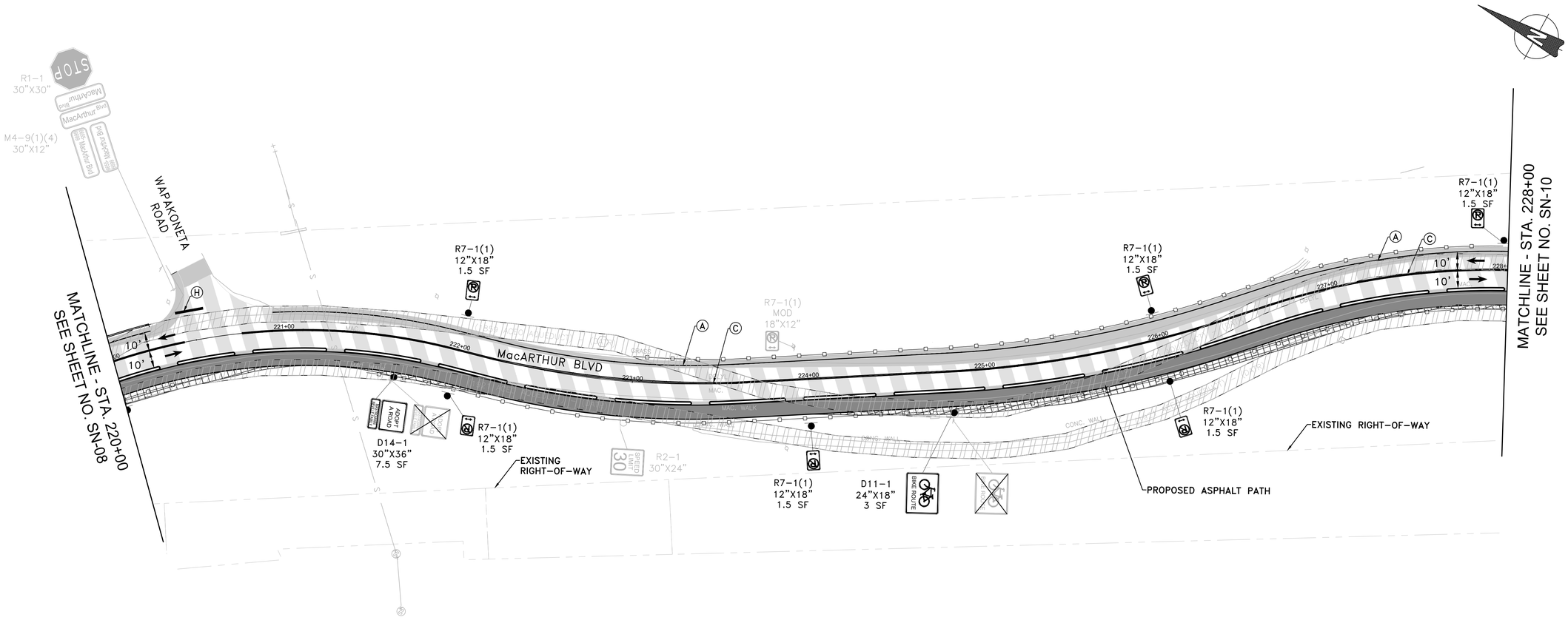
SN-08
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 71 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-08 PLOTTED: Thursday, June 27, 2024 - 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN-09
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

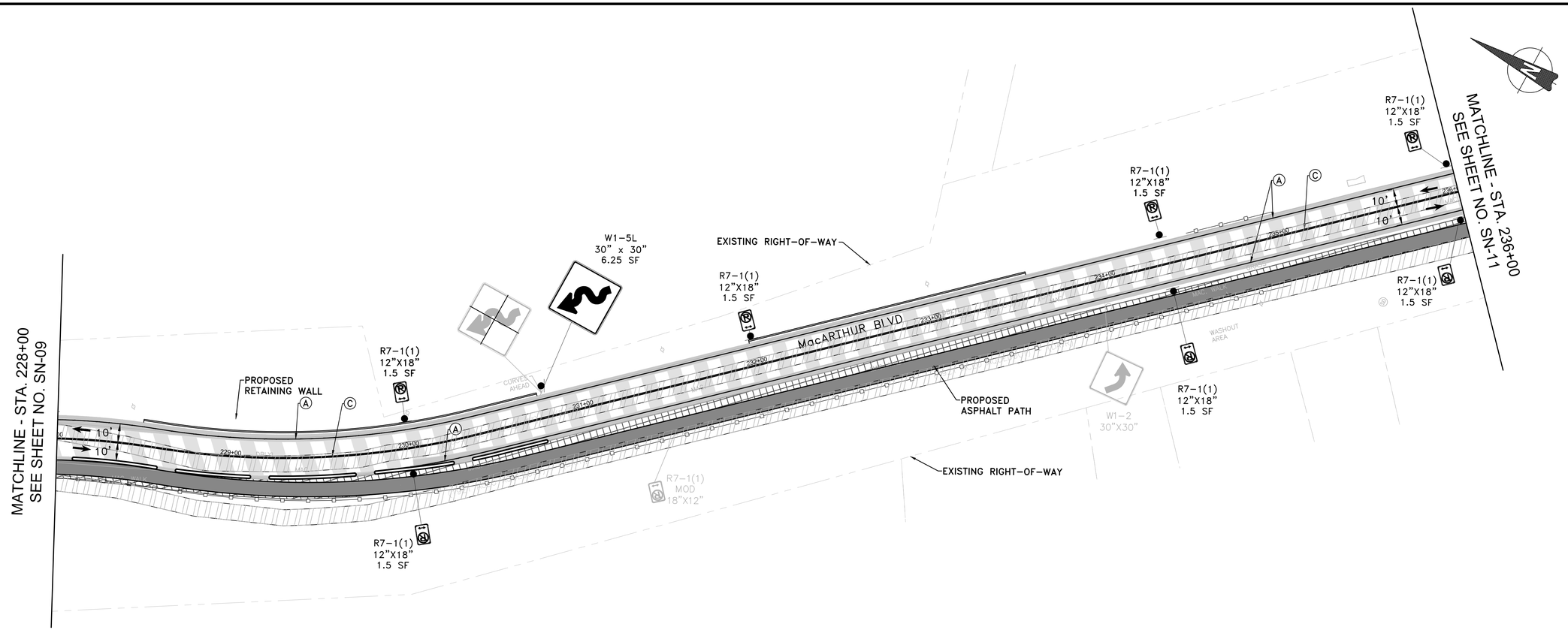
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DATE: JUNE 2024

CIP No. : 500718

SHEET 72 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-09 PLOTTED: Thursday, June 27, 2024 - 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

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NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

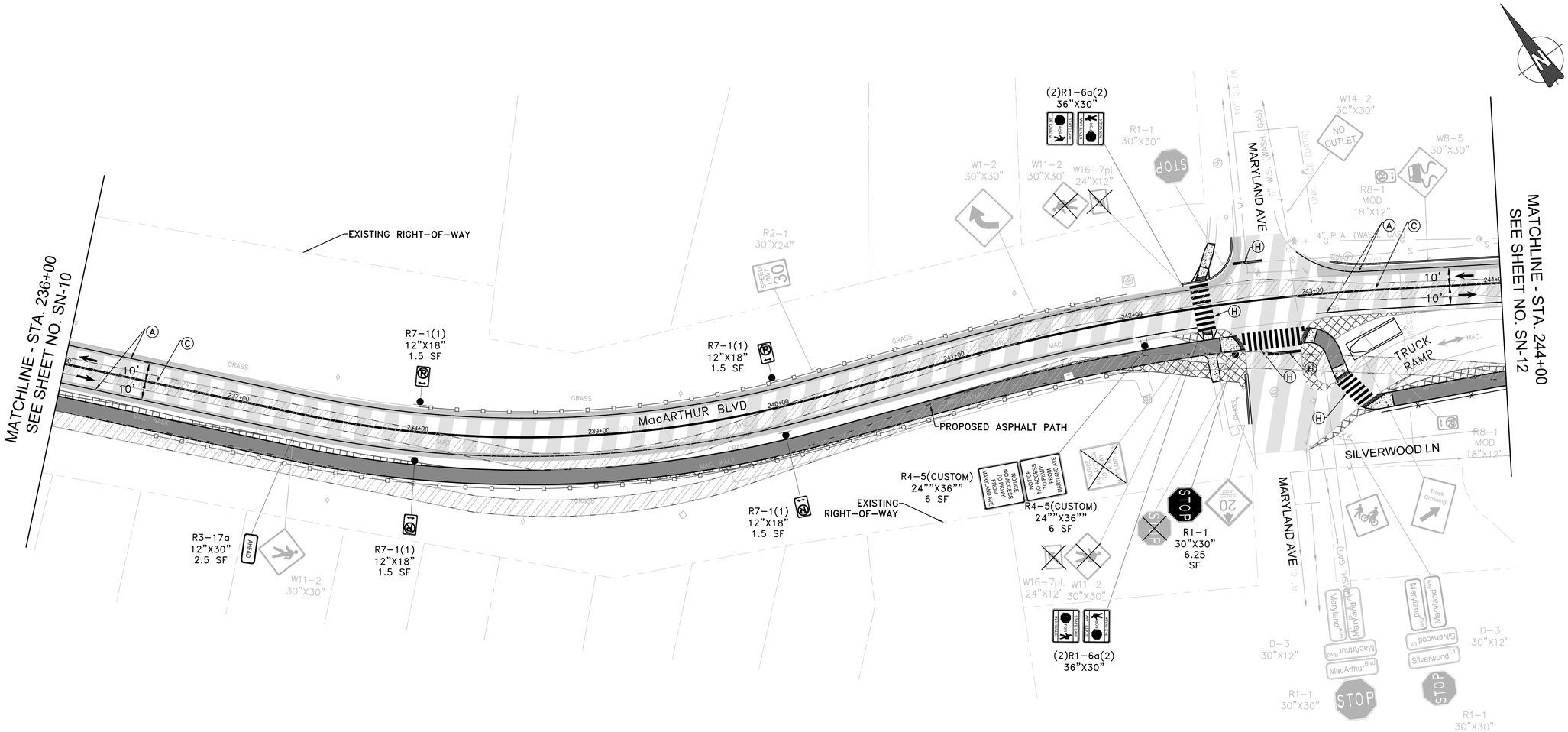
SN-10
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 73 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-10 PLOTTED: Thursday, June 27, 2024 - 4:23pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SINGLE 5" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (G) DOUBLE 5" 3' STRIPE 9' SKIP LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

DRAFT
NOT FOR CONSTRUCTION

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN-11
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

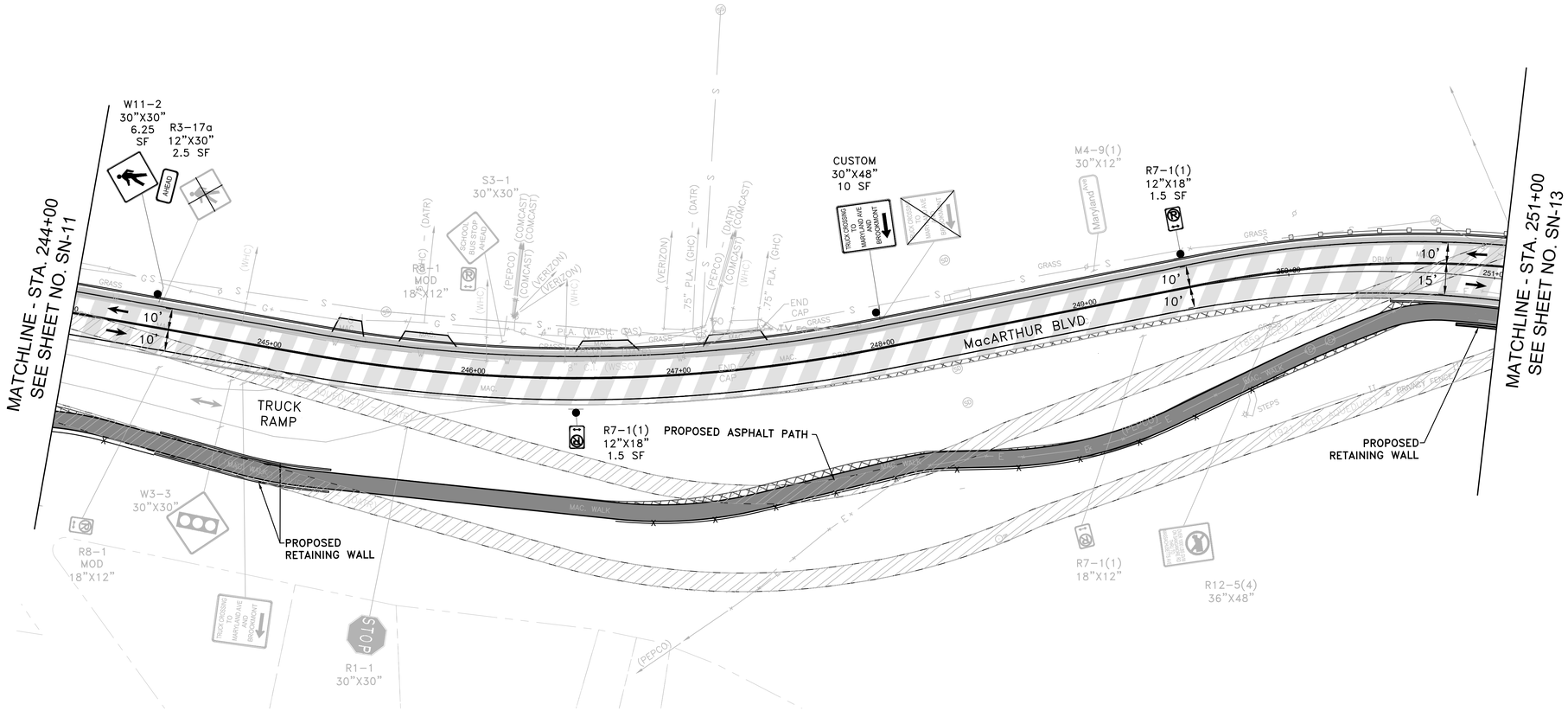
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SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 74 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-11 PLOTTED: Thursday, June 27, 2024 - 4:24pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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Chief, Division of Transportation Engineering — Date

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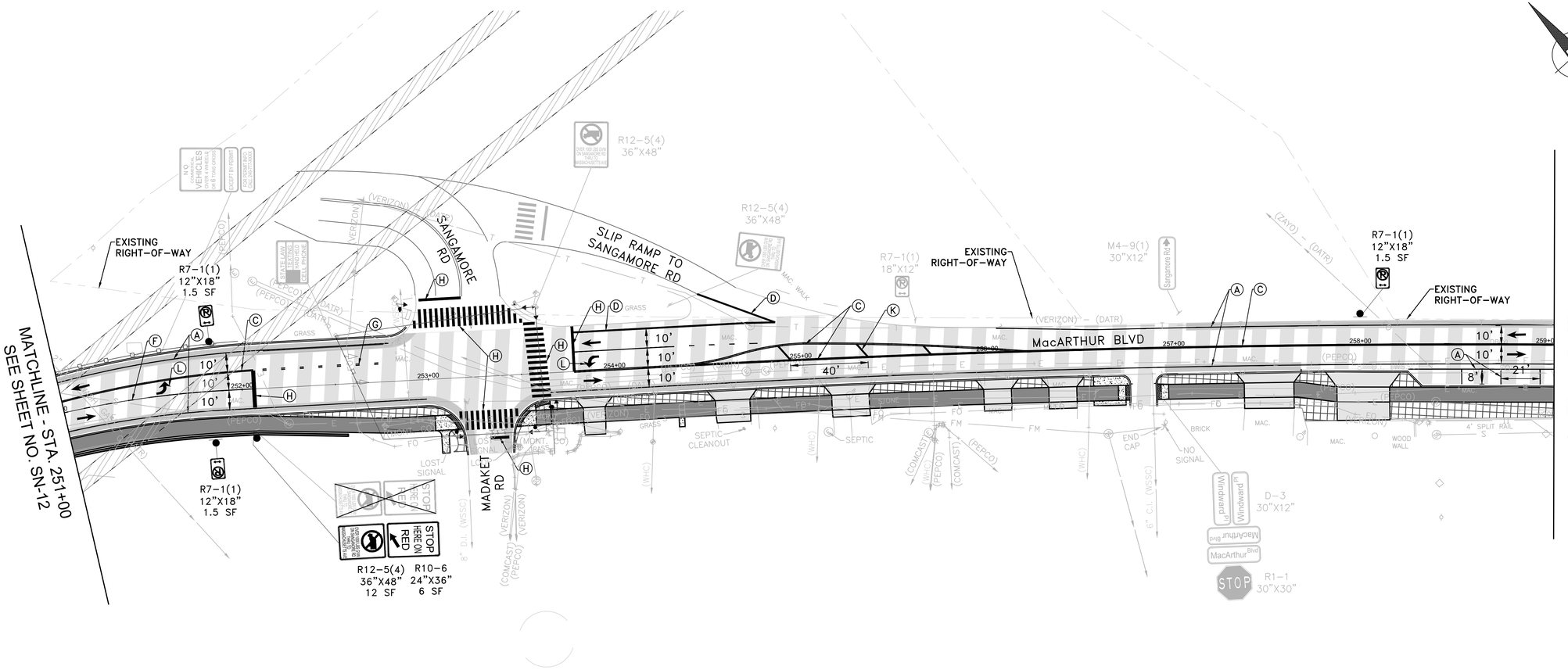
SN–12
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 75 of 285



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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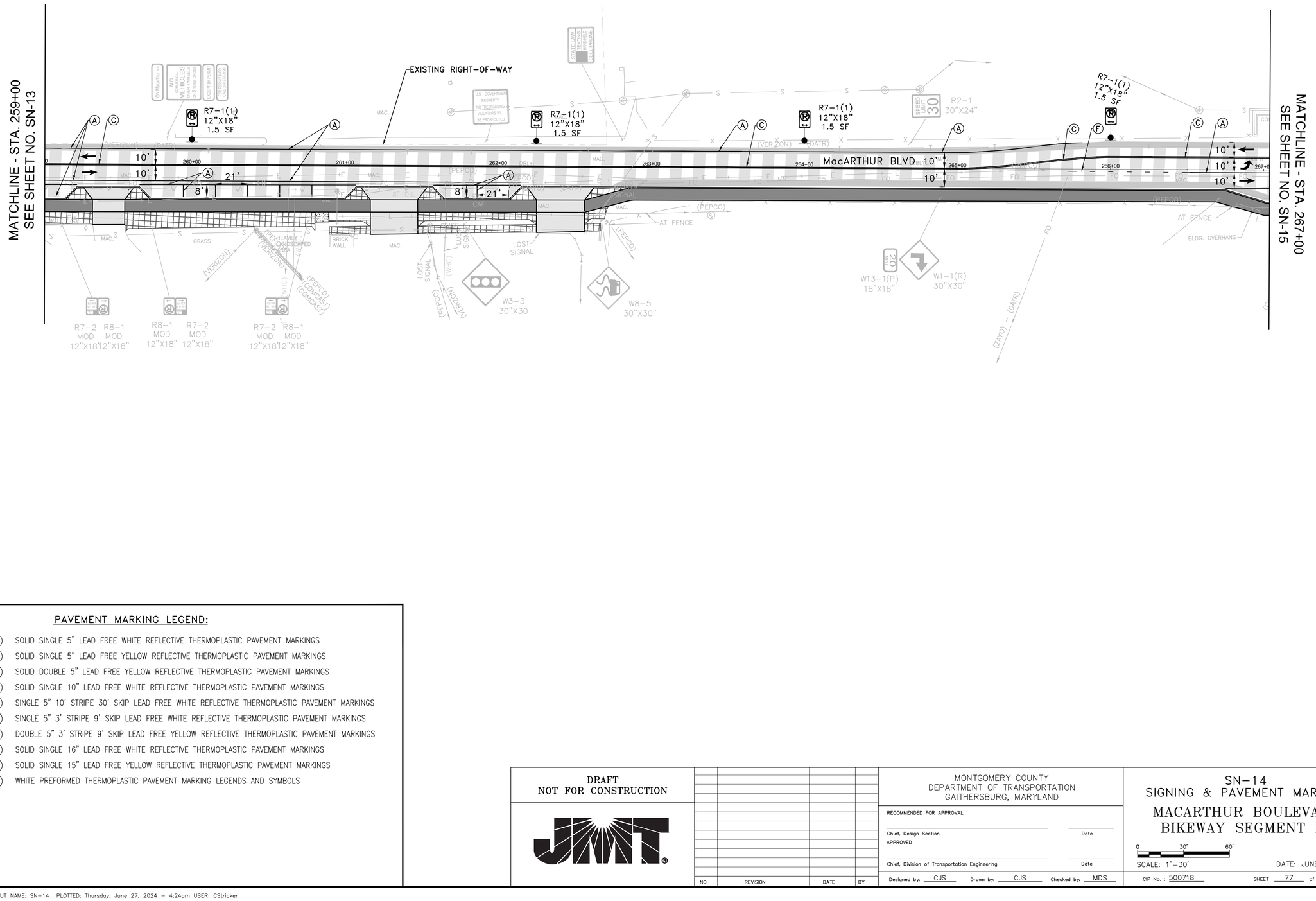
Designed by: CJS Drawn by: CJS Checked by: MDS

SN–13
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 76 of 285



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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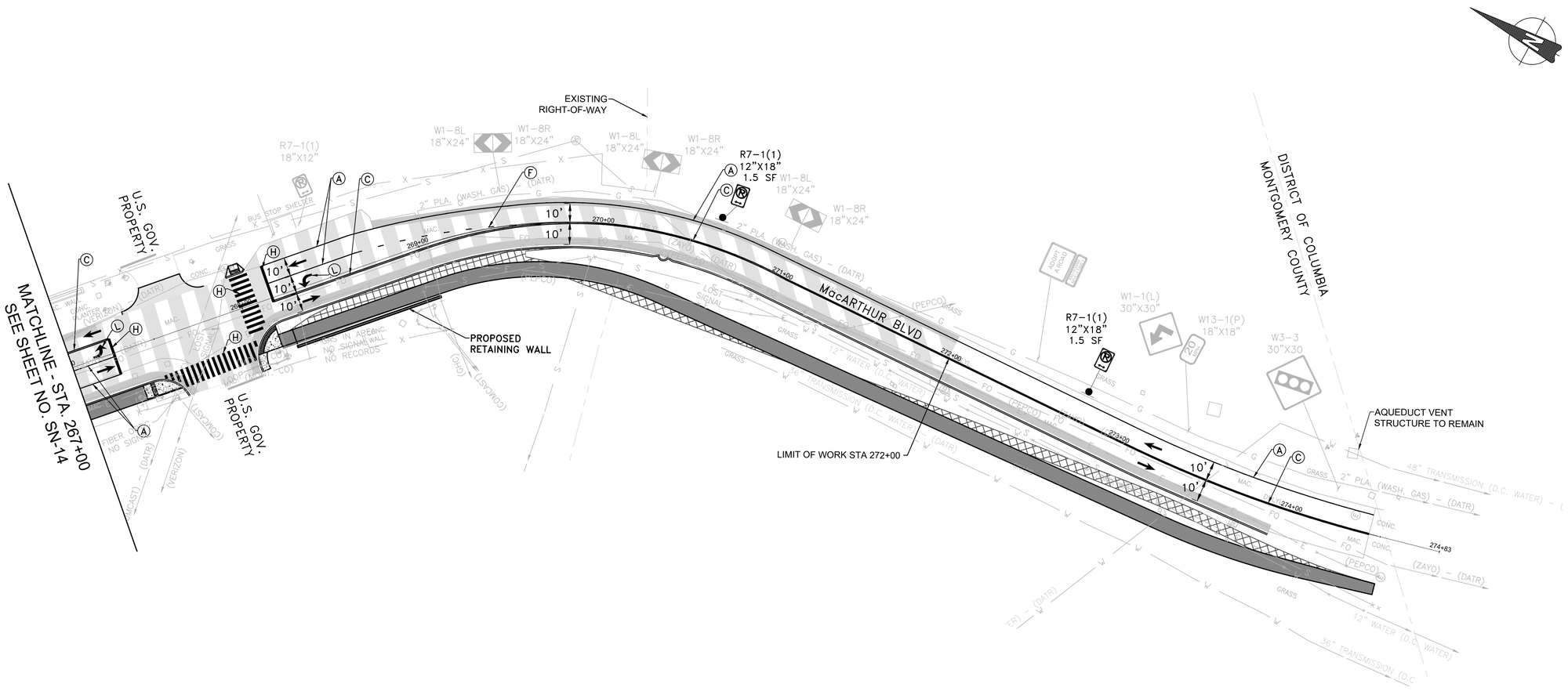
SN-14
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 77 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-14 PLOTTED: Thursday, June 27, 2024 - 4:24pm USER: CStricker



SIGNING LEGEND:

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

PAVING LEGEND:

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH

PAVEMENT MARKING LEGEND:

- (A) SOLID SINGLE 5" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 5" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SOLID SINGLE 10" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE 5" 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SINGLE 5" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (G) DOUBLE 5" 3' STRIPE 9' SKIP LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (H) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (L) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN-15
SIGNING & PAVEMENT MARKING
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 78 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pSN-0001_MacArthur.dwg LAYOUT NAME: SN-15 PLOTTED: Thursday, June 27, 2024 - 4:24pm USER: CStricker

PAVEMENT MARKINGS		
SHEET	REMARKS	LINEAR FEET
SN-01		
	5 INCH WHITE THERMOPLASTIC	237
	5 INCH YELLOW THERMOPLASTIC	237
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-02		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-03		
	5 INCH WHITE THERMOPLASTIC	1511
	5 INCH YELLOW THERMOPLASTIC	1688
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	20
SN-04		
	5 INCH WHITE THERMOPLASTIC	1904
	5 INCH YELLOW THERMOPLASTIC	1550
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	300
SN-05		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-06		
	5 INCH WHITE THERMOPLASTIC	1600
	6 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-07		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH YELLOW THERMOPLASTIC	0
SN-08		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-09		
	5 INCH WHITE THERMOPLASTIC	1530
	5 INCH YELLOW THERMOPLASTIC	1535
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-10		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-11		
	5 INCH WHITE THERMOPLASTIC	1540
	5 INCH YELLOW THERMOPLASTIC	1590
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	310
SN-12		
	5 INCH WHITE THERMOPLASTIC	1600
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-13		
	5 INCH WHITE THERMOPLASTIC	1334
	5 INCH YELLOW THERMOPLASTIC	1110
	10 INCH WHITE THERMOPLASTIC	111
	16 INCH WHITE THERMOPLASTIC	490
	15 INCH YELLOW THERMOPLASTIC	30

PAVEMENT MARKINGS		
SHEET	REMARKS	LINEAR FEET
SN-14		
	5 INCH WHITE THERMOPLASTIC	2825
	5 INCH YELLOW THERMOPLASTIC	1600
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	0
SN-15		
	5 INCH WHITE THERMOPLASTIC	717
	5 INCH YELLOW THERMOPLASTIC	1330
	10 INCH WHITE THERMOPLASTIC	0
	16 INCH WHITE THERMOPLASTIC	260
TOTALS		
	5 INCH WHITE THERMOPLASTIC	19900
	5 INCH YELLOW THERMOPLASTIC	21900
	10 INCH WHITE THERMOPLASTIC	120
	16 INCH WHITE THERMOPLASTIC	1400
	15 INCH YELLOW THERMOPLASTIC	30

SIGNING			
SHEET	REMARKS	SUPPORTS	SHEET ALUMINUM SIGN (SF)
SN-01			
SN-02	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
SN-03	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
SN-04	R1-6A	SINGLE SQUARE TUBULAR	7.5
	R1-6A		7.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-2(1) MOD	SINGLE SQUARE TUBULAR	1.5
	R1-6A	SINGLE SQUARE TUBULAR	7.5
	R1-6A		7.5
	R8-1(2)	SINGLE SQUARE TUBULAR	1.5
	R7-8(3)		2
	R7-8(2)		.75
	R5-1	SINGLE SQUARE TUBULAR	6.25
	R5-1	SINGLE SQUARE TUBULAR	6.25
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R1-6A	SINGLE SQUARE TUBULAR	7.5
	R1-6A		7.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R1-6A	SINGLE SQUARE TUBULAR	7.5
	R1-6A		7.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R1-6A	SINGLE SQUARE TUBULAR	7.5
	R1-6A		7.5
SN-05			
	R2-1	SINGLE SQUARE TUBULAR	5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
SN-06	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
SN-07	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5

SIGNING			
SHEET	REMARKS	SUPPORTS	SHEET ALUMINUM SIGN (SF)
SN-08	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
	R7-1(1)	SINGLE SQUARE TUBULAR	1.5
SN-09	D14-1	SINGLE SQUARE TUBULAR	7.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	D11-11	SINGLE SQUARE TUBULAR	3
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
SN-10	R7-1	SINGLE SQUARE TUBULAR	1.5
	W1-5L	SINGLE SQUARE TUBULAR	6.25
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
SN-11	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R4-5 (CUSTOM)	SINGLE SQUARE TUBULAR	6
	R4-5 (CUSTOM)		6
	R1-6a	SINGLE SQUARE TUBULAR	7.5
	R1-6a		7.5
	R1-1	SINGLE SQUARE TUBULAR	6.25
	R1-6a	SINGLE SQUARE TUBULAR	7.5
	R1-6a		7.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
SN-12	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	CUSTOM	SINGLE SQUARE TUBULAR	10
	W11-2	SINGLE SQUARE TUBULAR	6.25
	R3-17A		2.5
SN-13	R7-1	SINGLE SQUARE TUBULAR	1.5
	R12-5(4)	SINGLE SQUARE TUBULAR	12
	R10-6	SINGLE SQUARE TUBULAR	6
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
SN-14	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
SN-15	R7-1	SINGLE SQUARE TUBULAR	1.5
	R7-1	SINGLE SQUARE TUBULAR	1.5
TOTAL			315.5

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: CJS Drawn by: CJS Checked by: MDS

SN-16
SIGNING & PAVEMENT MARKING

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 79 of 285

PROPOSED SIGNS AND LED SIGNALS

10-15

16" LED COUNTDOWN PEDESTRIAN SIGNAL

16 17 18 19 20 21

R10-3(1) (MOD) 9" x 15"

EXISTING SIGNS TO BE REMOVED

16r,17r,18r,19r,20r,21r

R10-3(1) (MOD) 9" x 12"

EXISTING SIGNALS TO REMAIN

1,2,3,4, 6,9

R Y G

12"

5,7,8

R Y G G

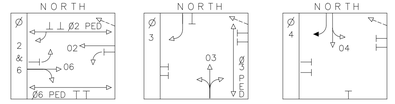
12"

EXISTING SIGNALS TO BE REMOVED

10r,11r,12r,13r,14r,15r

12"

SIGNAL PHASING



EXISTING SIGNS TO REMAIN

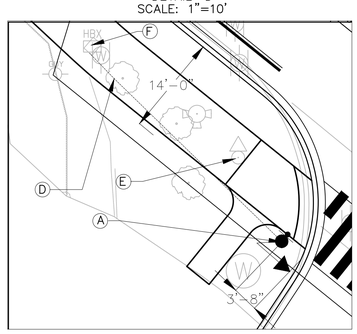
24,25
MacArthur Blvd
D-3(1) VAR. X 16"

23
Sangamore Rd
Madaket Rd
D-3(1) VAR. X 32"

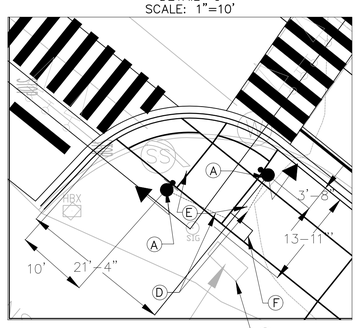
22
Madaket Rd
Sangamore Rd
D-3(1) VAR. X 32"

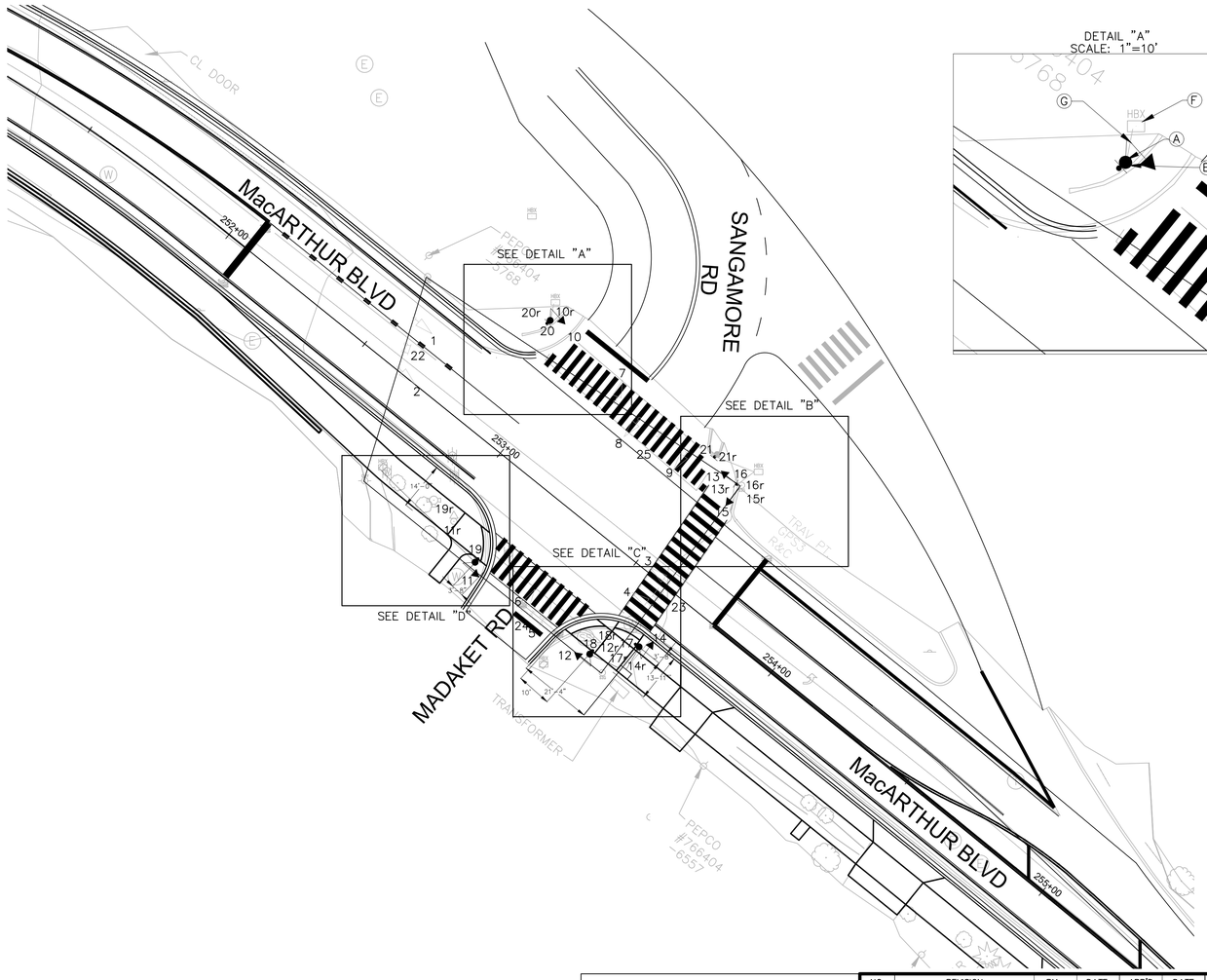
NOTE: MACARTHUR BOULEVARD IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

DETAIL "D"
SCALE: 1"=10'



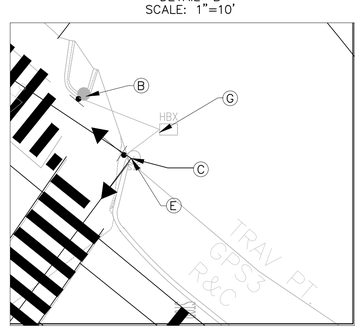
DETAIL "C"
SCALE: 1"=10'





DETAIL "A"
SCALE: 1"=10'

DETAIL "B"
SCALE: 1"=10'



CONSTRUCTION LEGEND:

A. INSTALL CONCRETE FOUNDATION WITH 10 FT. PEDESTAL STEEL POLE WITH MODIFIED BREAKAWAY BASE PER STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).

B. INSTALL CONCRETE FOUNDATION WITH MODIFIED BREAKAWAY BASE AND NEW PEDESTAL POLE, PEDESTRIAN SIGNAL, AND APS PUSH BUTTON AND SIGN.

C. INSTALL NEW APS PUSH BUTTON AND SIGN, AND PEDESTRIAN SIGNAL HEADS ON EXISTING SIGNAL POLE.

D. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.

E. REMOVE EXISTING PUSHBUTTON, COUNT DOWN PEDESTRIAN SIGNAL HEADS, AND SIGN. REMOVE EXISTING PEDESTAL FOUNDATION TO 24" MIN. BELOW GRADE.

F. USE EXISTING TRAFFIC SIGNAL HAND BOX.

G. USE EXISTING CONDUIT.

H. USE EXISTING TRAFFIC CABINET AND CONTROLLER. (NOTE: MONTGOMERY COUNTY FORCES SHALL INSTALL 2 WIRE CONTROL UNIT INTO CABINET.

CONSTRUCTION NOTES

1. ENSURE ADA COMPLIANCE FOR PEDESTRIAN RAMPS. REFER TO ROADWAY PLANS FOR PEDESTRIAN RAMP DETAILS.
2. REFER TO SIGN AND MARKING SHEETS FOR MARKINGS LAYOUT AND DETAILS.

0 20' 40'

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	BY	DATE	APP'D	DATE
2	Upgrade PED. signal and PB due to trail widening.	CJS	5/26/22		
1	Revise due to geometric changes. ADD APS.	RRZ	2/23/15		

DESIGNED BY:	DATE
DRAWN BY:	DATE
CHECKED BY:	DATE
DRAWING NO.:	DATE

Approved: _____ Division of Traffic Engineering and Operations

Approved: _____ Manager, Tranportation Systems Engineering

Approved: _____ Manager, Traffic Engineering Studies Section

Approved: _____ Engineer, Transportation Systems Engineering

ORIGINAL ON FILE

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS
MONTGOMERY COUNTY, MD

TRAFFIC SIGNAL PLAN

MACARTHUR BLVD AND MADAKET RD / SANGAMORE RD

SCALE: 1"=20' SG-01 SHEET 80 OF 271

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING STRAIN POLE TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MACARTHUR BLVD AND MADAKET RD/ SANGAMORE RD IN MONTGOMERY COUNTY. AS A PART OF THE LARGER SIDEWALK CONNECTIVITY IMPROVEMENT PROJECT, ALL CURB RAMPS, CROSSWALKS, ACCESSIBLE PEDESTRIAN SIGNALS (APS) WITH AUDIBLE PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNAL (CPS) HEADS WILL BE REPLACED. THIS INCLUDES THE INSTALLATION OF THREE (3) PEDESTRIAN SIGNAL POLES FOR THE INSTALLATION OF APS PUSHBUTTONS AND CPS HEADS. MACARTHUR BLVD IS ASSUMED TO RUN IN AN NORTH–SOUTH DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION SHALL CONTINUE TO OPERATE IN A NEMA FIVE–PHASE, FULLY–ACTUATED MODE, WITH THE SANGAMORE ROAD APPROACHES RUNNING CONCURRENTLY. THE EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR THE WESTBOUND APPROACH OF SANGAMORE ROAD SHALL REMAIN IN OPERATION. THE PEDESTRIAN PHASES CROSSING MACARTHUR BLVD AND SANGAMORE ROAD SHALL BE COUNTDOWN PEDESTRIAN PHASES WITH PUSHBUTTON ACTUATION.

2. THE EXISTING FULL–TRAFFIC–ACTUATED, EIGHT–PHASE CONTROLLER WITH ALL NECESSARY EQUIPMENT HOUSED IN A NEMA SIZE "6" BASE–MOUNTED CABINET SHALL BE UTILIZED AT THIS INTERSECTION.

3. MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL THE APS PANEL IN THE SIGNAL CABINET. CONTRACTOR SHALL DELIVER THE APS PANEL TO MONTGOMERY COUNTY SIGNAL SHOP.

III. SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.

2. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAL HAMUD AT (240) 777–8761 SEVENTY–TWO (72) HOURS IN ADVANCE OF INTENDED WORK.

3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS 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 THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

APS WILL FUNCTION AS FOLLOWS

FOR SANGAMORE ROAD
A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS SANGAMORE AT MACARTHUR BOULEVARD WAIT."
B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

FOR MACARTHUR BOULEVARD
A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS MACARTHUR BOULEVARD AT SANGAMORE ROAD WAIT."
B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

FOR MADAKET ROAD
A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS MADAKET ROAD AT MACARTHUR BOULEVARD WAIT."
B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

GENERAL NOTES

1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR FOLLOWING MONTGOMERY COUNTY GUIDELINES UTILIZING THE MOST RECENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR TRAFFIC CONTROL.
2. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY THE ULTIMATE GRADES PRIOR TO INSTALLATION OF ALL SIGNAL EQUIPMENT.
3. THE CONTRACTOR SHALL INTEGRATE CONCRETE FOUNDATIONS WITH THE PROPOSED SIDEWALK WHERE NECESSARY.
4. THE CONTRACTOR SHALL CONTACT MONTGOMERY COUNTY TMC AT 240–777–2100, 72 HOURS PRIOR TO STARTING ALL WORK.
5. PUSHBUTTON IS TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA DOES NOT HAVE TO REACH MORE THAN 18 INCHES.
7. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE FOUNDATIONS PRIOR TO INSTALLATION.
8. ALL PAVEMENT MARKINGS DETAILED ARE PROPOSED AND ARE TO BE INSTALLED IN ACCORDANCE WITH MONTGOMERY COUNTY STANDARDS. ALL CROSSWALKS SHALL BE CENTERED ON HANDICAP RAMPS OR MEDIAN CUT THROUGHS.
9. ALL TRAFFIC SIGNAL MODIFICATIONS SHALL BE CONSTRUCTED PRIOR TO SIDEWALK INSTALLATION, INCLUDING CONDUIT. MONTGOMERY COUNTY WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING, TERMINATING AND PROPERLY LABELING ALL SIGNAL CABLES.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MARYLAND MUTCD SECTION 4E.09 AND FIGURE 4E.2; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS AND NOTIFY THE PROJECT ENGINEER. IF NEEDED A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE CHIEF, MONTGOMERY COUNTY DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS.
11. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60 INCH X 60 INCH LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
12. THE CONTRACTOR SHALL REMOVE ALL UNUSED WIRING.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
805135	100 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT (TRENCHED)
861105	450 LF	2–CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
861107	450 LF	5–CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
802501	100 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
818001	4 EA	PEDESTAL POLE (ANY SIZE LARGER THATN 10 FEET) COATED, WITH BREAKAWAY COUPLING, FOUNDATION AND GROUND ROD
821003	1 EA	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURE
865210	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
860285	6 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
873005	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
865300	1 EA	2 WIRE APS CENTRAL CONTROL UNIT

SEQUENCE OF OPERATION SHEET

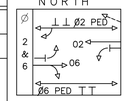
MACARTHUR BLVD IS ASSUMED TO RUN IN A NORTH–SOUTH DIRECTION

TRAFFIC OPERATIONS SECTION
DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

INTERSECTION: MACARTHUR BLVD AND MADAKET RD / SANGAMORE RD

NO. _____
PHASING

SIGNAL NO.	SIGNAL HEAD INDICATIONS 1,2,3,4,6,9	5,7,8			10–15
TOTAL:	6	3			6
LEGEND: OPTICALLY LIMITED; R RED; Y YELLOW; G GREEN; ◄ ARROW; F FLASHING	R Y G 12"	R Y ◄G 12"	R ◄Y ◄G 12"		 16"

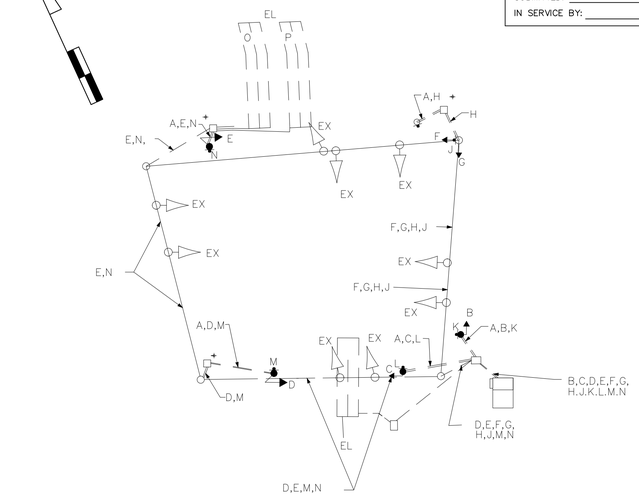


SIGNAL NO.	SEQUENCE OF OPERATION INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	FLASH
1	G	G	Y	R	R	R	R	R	R	R	R	R	FL/Y
2	G	G	Y	R	R	R	R	R	R	R	R	R	FL/Y
3	G	G	Y	R	R	R	R	R	R	R	R	R	FL/Y
4	G	G	Y	R	R	R	R	R	R	R	R	R	FL/Y
5	R	R	R	R	◄	◄	◄	Y	R	R	G	R	FL/R
6	R	R	R	R	G	G	G	Y	R	R	R	R	FL/R
7	R	R	R	R	◄	◄	◄	Y	R	R	G	R	FL/R
8	R	R	R	R	R	R	R	R	R	◄	Y	R	FL/R
9	R	R	R	R	R	R	R	R	R	G	Y	R	FL/R
10	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
11	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
12	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
13	WK	FL/DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DARK
14	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	FL/DW	DW	DARK
15	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	FL/DW	DW	DARK
PHASE	2 & 6			ALL RED	3				ALL RED	4		ALL RED	

NOTES:

SUBMITTED: _____	CHECKED: _____	APPROVED: _____
IN SERVICE BY: _____	DATE: _____	TIME: _____

WIRING DIAGRAM



WIRING KEY

A – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

B C D E F G – 5–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

H J K L M N – 2–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

Q – EXISTING UNDERGROUND ELECTRICAL SERVICE TO BE MAINTAINED BY PEPCO

EL EXISTING LOOP WIRE

LW – LOOP WIRE (NO. 14 A.W.G.)

⏚ – GROUND ROD

0 20' 40'

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	BY	DATE	APP'D	DATE
2	Upgrade PED. signal and PB due to trail widening.	CJS	11/22/23		
1	Revise due to geometric changes. ADD APS.	RRZ	2/23/15		

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
DRAWING NO.: DATE

Approved: _____
Division of Traffic Engineering and Operations
Approved: _____
Manager, Tranportation Systems Engineering
Approved: _____
Manager, Traffic Engineering Studies Section
Approved: _____
Engineer, Transportation Systems Engineering

ORIGINAL ON FILE

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS
MONTGOMERY COUNTY, MD

TRAFFIC SIGNAL PLAN

MACARTHUR BLVD AND
MADAKET RD / SANGAMORE RD

SCALE: 1"=20' SG–02 SHEET 81 OF 271

FILE NAME: C:\pwworking\jmt\d0320773\pSG–0002_MacArthur.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, June 27, 2024 – 3:58pm USER: CStricker

MAINTENANCE OF TRAFFIC NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST RECENT MONTOGOMERY COUNTY WORK ZONE TRAFFIC CONTROL STANDARDS, THE MARYLAND STATE HIGHWAY WORK ZONE TRAFFIC CONTROL TYPICALS IN CATEGORY 1 OF THE BOOK OF STANDARDS. THE 2011 MD MUTCD AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, THESE PLANS, AND OTHER CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION IN ACCORDANCE WITH THE METHOD OF TRAFFIC CONTROL SHOWN ON THESE DRAWINGS, OTHER CONTRACT DOCUMENTS, AND THE 2011 MD MUTCD AND SUBSEQUENT REVISIONS.
3. ALL TEMPORARY SIGNS FOR MAINTENANCE OF TRAFFIC SHALL BE PER MONTGOMERY COUNTY STANDARD TCP-100.01 AND SECTION 4.0 SIGNS OF THE MDSHA GENERAL NOTES FOR TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS (TTCTA) AS SHOWN ON ON MDSHA STD DETAIL 104.00-06 TO MDSHA STD 104.00-08. SIGN SHALL BE MOUNTED PER SECTION 4.0 OF THE TTCTA AND AS SHOWN ON MDSHA STD 104.01-17A TO MDSHA STD 104.01-17D OR AS OTHERWISE SHOWN ON THESE PLANS OR AS DIRECTION BY THE INSPECTOR..
4. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, DRUMS, BARRIER, AND PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL, AS APPROVED BY THE ENGINEER.
5. CONSTRUCTION WARNING SIGNS ABOUT SPECIFIC AREAS AND TYPE OF CONSTRUCTION WILL BE PLACED AS DIRECTED BY THE ENGINEER.
6. ALL EXISTING SIGNS AND PAVEMENT MARKINGS SHALL BE MAINTAINED THROUGHOUT THE DIRECTION OF CONSTRUCTION UNLESS A CHANGE IS SHOWN ON THE PLAN AND/OR AS DIRECTED BY THE ENGINEER.
7. UNLESS OTHERWISE SHOWN ON THE PLANS, ACCESS SHALL BE PROVIDED TO ALL DRIVEWAYS AND CROSS STREETS AT ALL TIMES.
8. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR AATSA APPROVED FLAGGERS AND SHALL BE USED AT THE DIRECTION OF THE MONTGOMERY COUNTY INSPECTOR.
9. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE MONTGOMERY COUNTY INSPECTOR OR IF THE FLAGGERS CANNOT SEE EACH OTHER AND/OR THE LANE CLOSURE EXCEEDS 200 FEET.
10. THE CONTRACTOR SHALL CONTACT MONTGOMERY COUNTY TMC AT 240-777-2100, 72 HOURS PRIOR TO STARTING ALL WORK.
11. DRUMS SHALL PROTECT THE WORK ZONE DURING NON-WORK HOURS AND SHALL BE RESET ACCORDING TO THE STANDARDS LISTED IN THE SEQUENCE OF CONSTRUCTION NOTED ON THIS PLAN DURING WORK HOURS.
12. CONTRACTOR TO UNDERSTAND AND COMPLY WITH ALL WEIGHT RESTRICTIONS RELATED TO EXISTING HISTORIC AQUEDUCTS WITHIN PROJECT LIMITS.
13. PERMIT OR APPROVAL WILL BE REQUIRED FROM DDOT FOR TEMPORARY TRAFFIC CONTROL SIGNAGE ON DDOT ROADWAYS.

SEQUENCE OF CONSTRUCTION NOTES:

1. ESTABLISH ALL NECESSARY SEDIMENT AND EROSION CONTROL MEASURES.
2. PLACE MAINTENANCE OF TRAFFIC ITEMS AS INDICATED ON THE PLANS.

STAGE ONE:

1. PLACE MAINTENANCE OF TRAFFIC ITEMS AS INDICATED ON THE PLANS.
2. UTILIZE FLAGGING OPERATION PER MCDOT STANDARDS TTCP-102.02 'FLAGGING CONTROL NON- INTERSECTION', MCDOT STANDARDS TTCP-105.01 & TTCP-105.02 'FLAGGING CONTROL AT 4-LEG INTERSECTION', AND MCDOT STANDARDS TTCP-105.03 THROUGH TTCP-105.06 'FLAGGING CONTROL AT 3-LEG INTERSECTION' TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
3. SHIFT ONE-WAY TRAFFIC AS NEEDED TO COMPLETE PROPOSED CULVERT INSTALLATION WHERE APPLICABLE.
4. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING AND ASSOCIATED IMPROVEMENTS ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

STAGE TWO:

1. PLACE MAINTENANCE OF TRAFFIC ITEMS AS INDICATED ON THE PLANS.
2. UTILIZE FLAGGING OPERATIONS PER MCDOT STANDARDS TTCP-102.02 'FLAGGING CONTROL NON-INTERSECTION', MCDOT STANDARDS TTCP-105.01 & TTCP-105.02 'FLAGGING CONTROL AT 4-LEG INTERSECTION', AND MCDOT STANDARDS TTCP-105.03 THROUGH TTCP-105.06 'FLAGGING CONTROL AT 3-LEG INTERSECTION' TO ESTABLISH A 500' +/- WORK ZONE ALONG THE SOUTH SIDE OF MACARTHUR BOULEVARD.
3. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING AND ASSOCIATED IMPROVEMENTS ALONG THE SOUTH SIDE OF MACARTHUR BOULEVARD.

STAGE THREE:

1. PLACE MAINTENANCE OF TRAFFIC ITEMS AS INDICATED ON THE PLANS.
2. UTILIZE MCDOT STANDARD TCP-101.01 'TRAFFIC CONTROL FOR SHOULDER WORK' AS SHOWN ON PLANS. MAINTAIN ONE 10' MINIMUM LANE IN BOTH NORTHBOUND AND SOUTHBOUND DIRECTIONS. CLOSE EXISTING ASPHALT TRAIL TO ALL USERS. CONSTRUCT SHARED USE PATH AND ASSOCIATED IMPROVEMENTS INCLUDING PEDESTRIAN SIGNAL CHANGES TO SANGAMORE ROAD / MADAKEET RD.

STAGE FOUR:

1. COMPLETE FINAL MILL AND OVERLAY TO ESTABLISH FINISHED ROADWAY SURFACE. PLACE FINAL SURFACE COURSE ACROSS BOTH FULL DEPTH RECONSTRUCTION AND MILL/OVERLAY AREAS.
2. ESTABLISH FINAL SIGNING AND PAVEMENT MARKINGS.
3. STABILIZE AND CLEAN ALL CONSTRUCTION AREAS.
4. REMOVE ALL MAINTENANCE OF TRAFFIC ITEMS.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

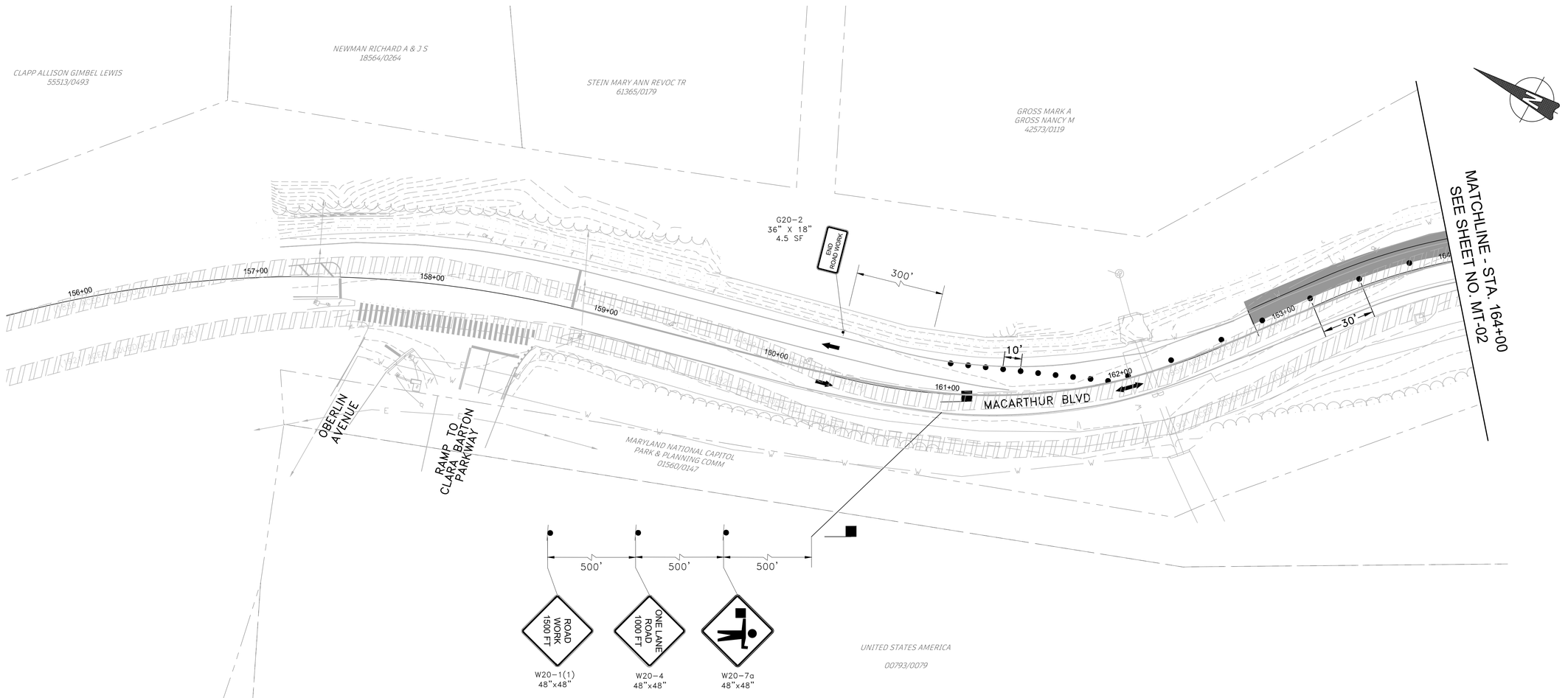
Chief, Division of Transportation Engineering — Date

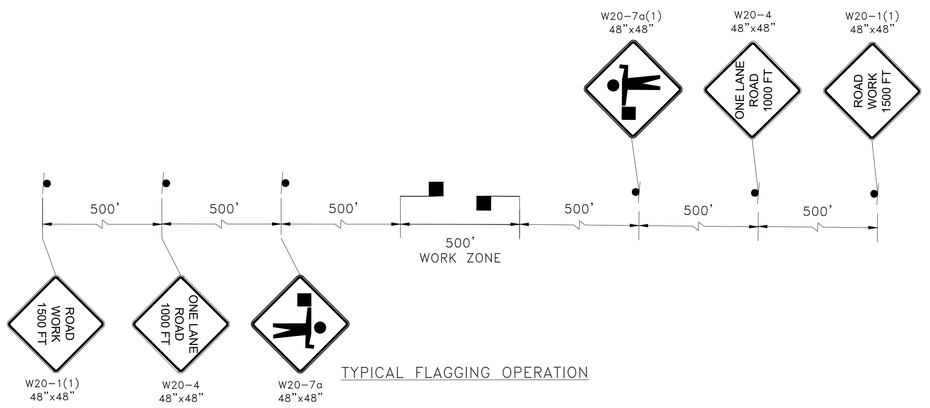
Designed by: MDS Drawn by: CJS Checked by: DJD

MT-00
MAINTENANCE OF TRAFFIC NOTES
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 82 of 271





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

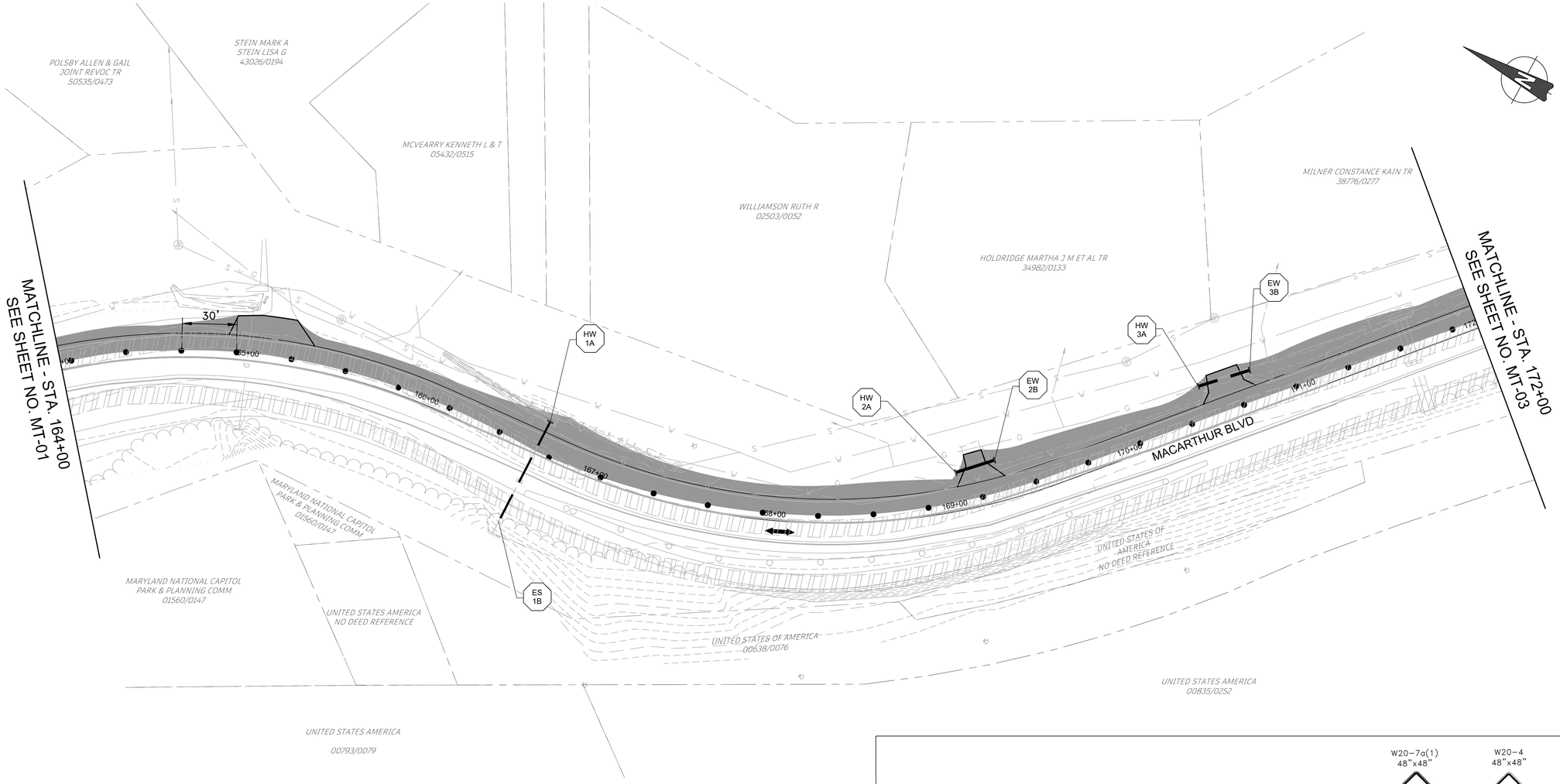
MT-01
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

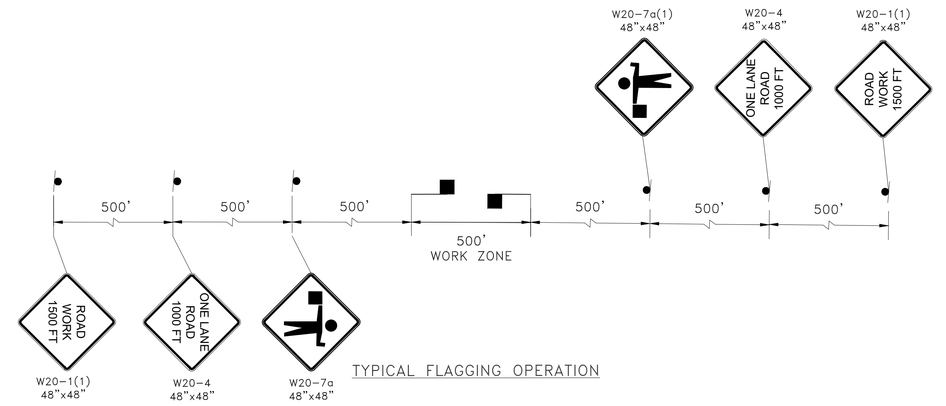
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SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 83 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-01 PLOTTED: Thursday, June 27, 2024 - 3:59pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

MT-02
MOT PLAN - STAGE 1

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

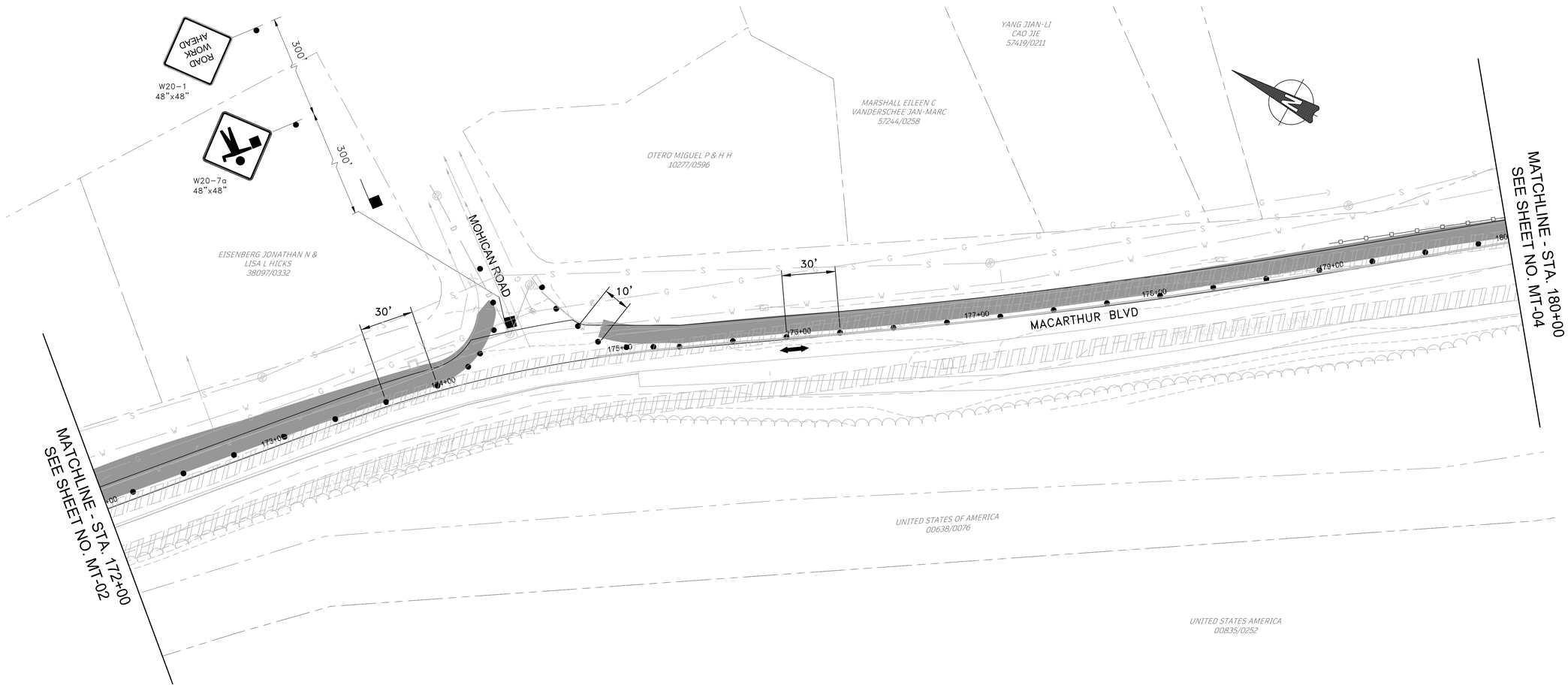
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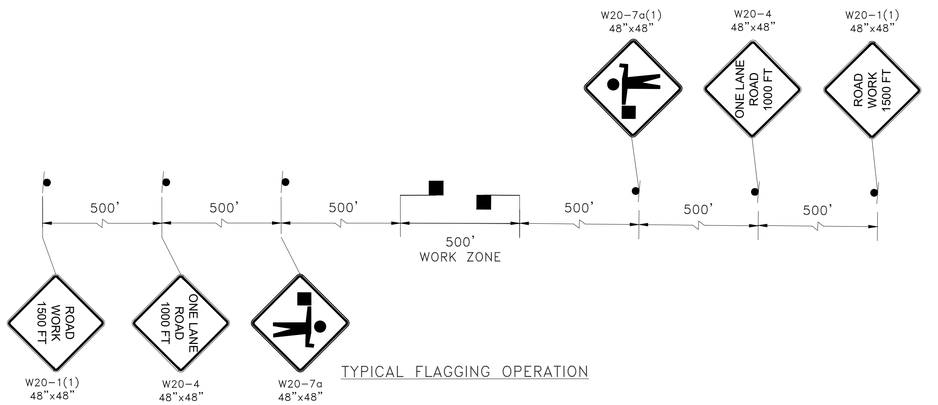
DATE: JUNE 2024

CIP No. : 500718

SHEET 84 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-02 PLOTTED: Thursday, June 27, 2024 - 3:59pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

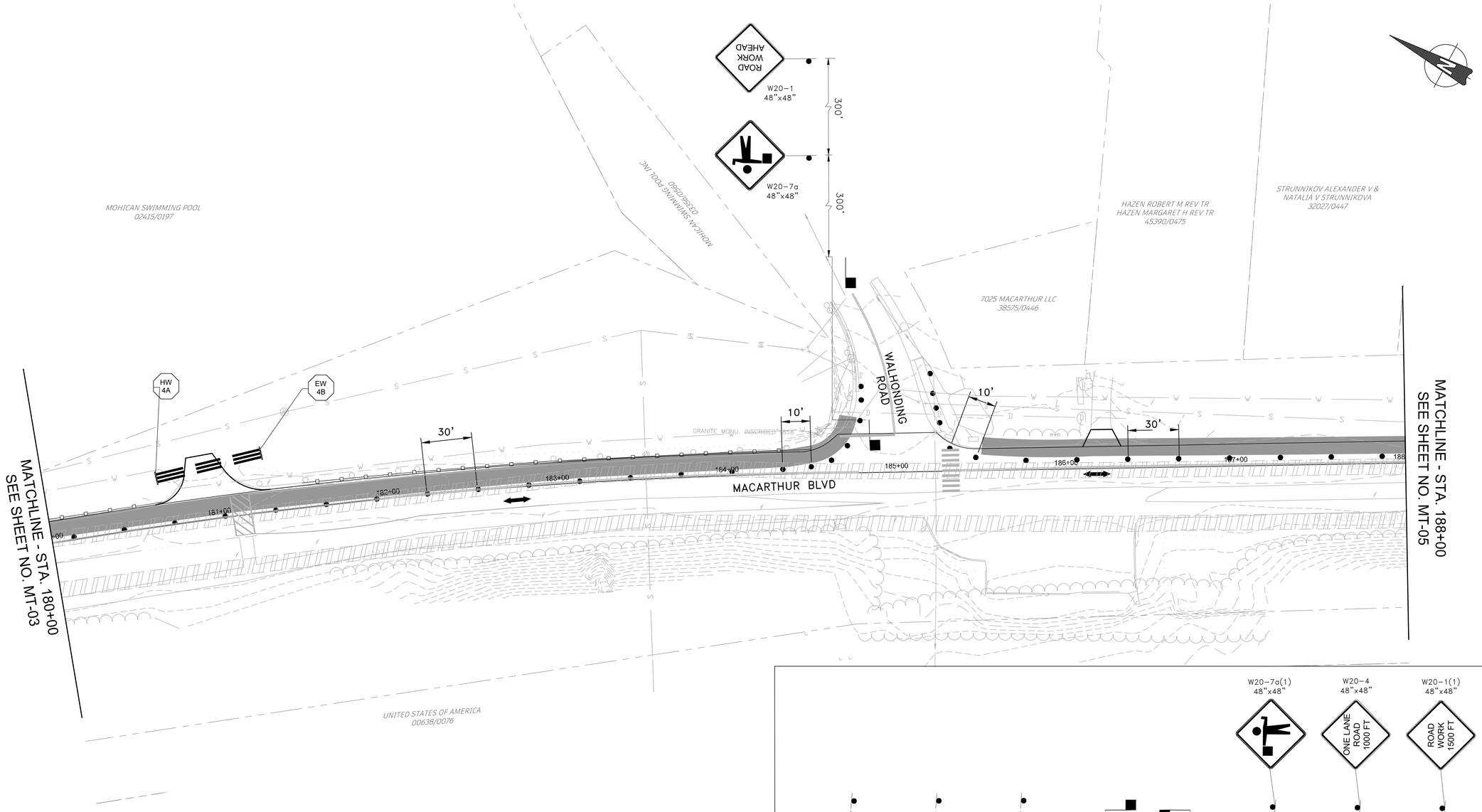
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MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

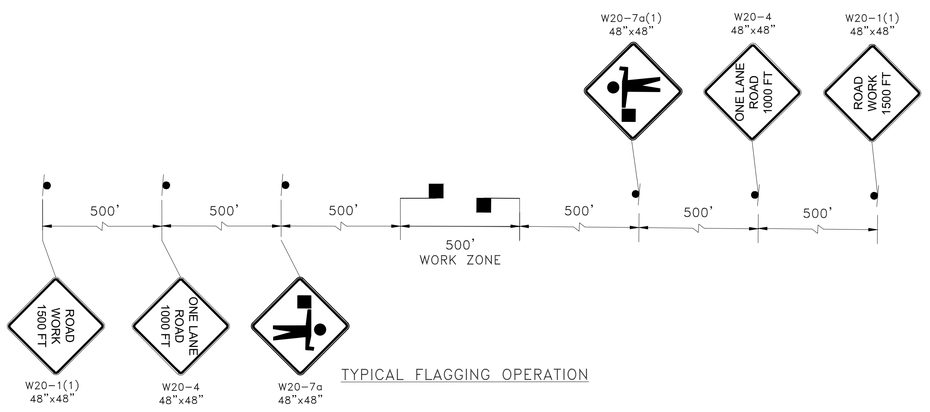
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SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 85 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-03 PLOTTED: Thursday, June 27, 2024 – 3:59pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-04
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

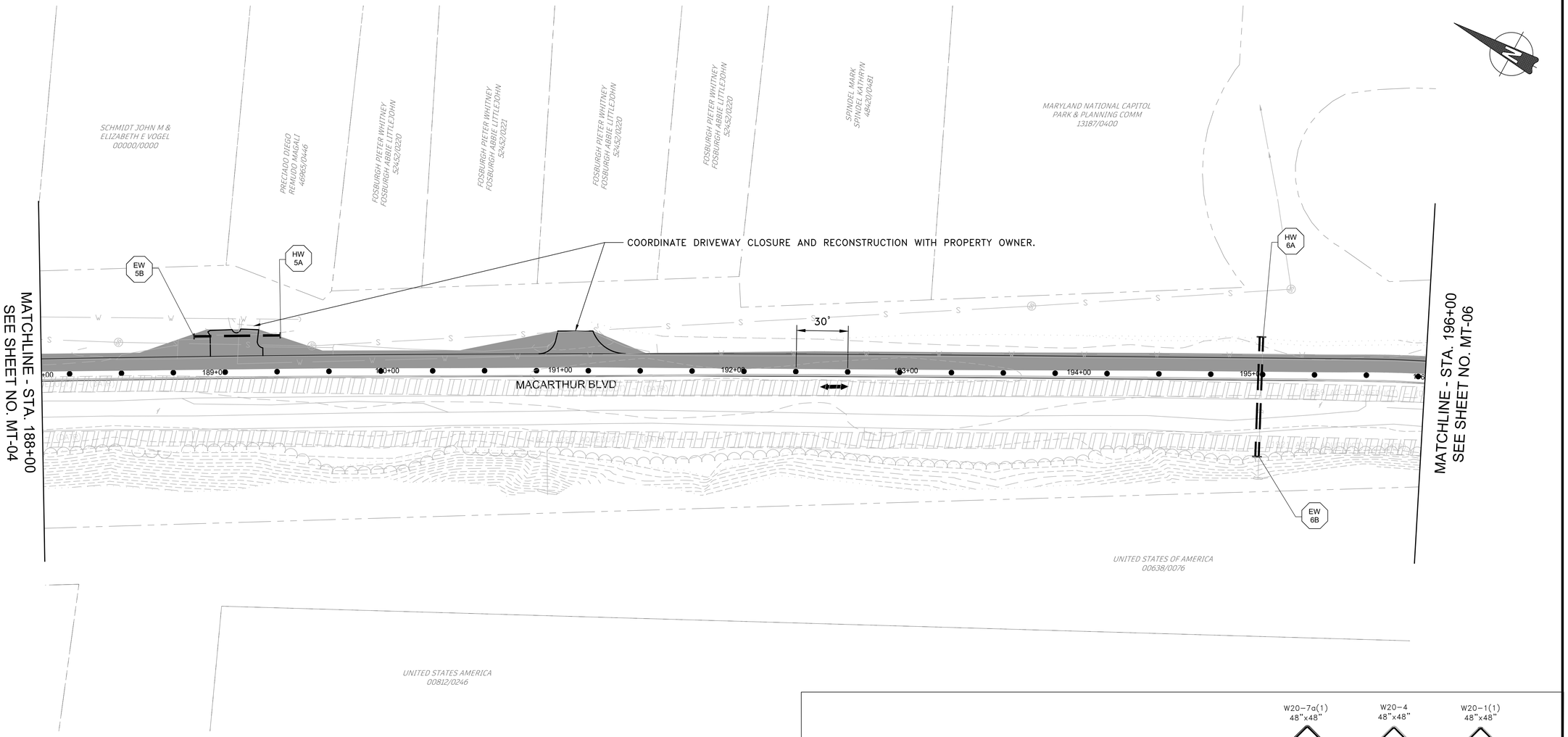
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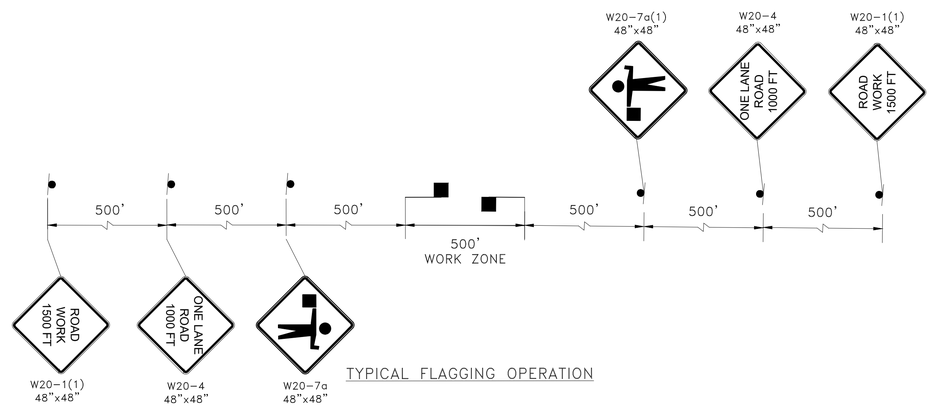
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 86 of 271





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-05
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

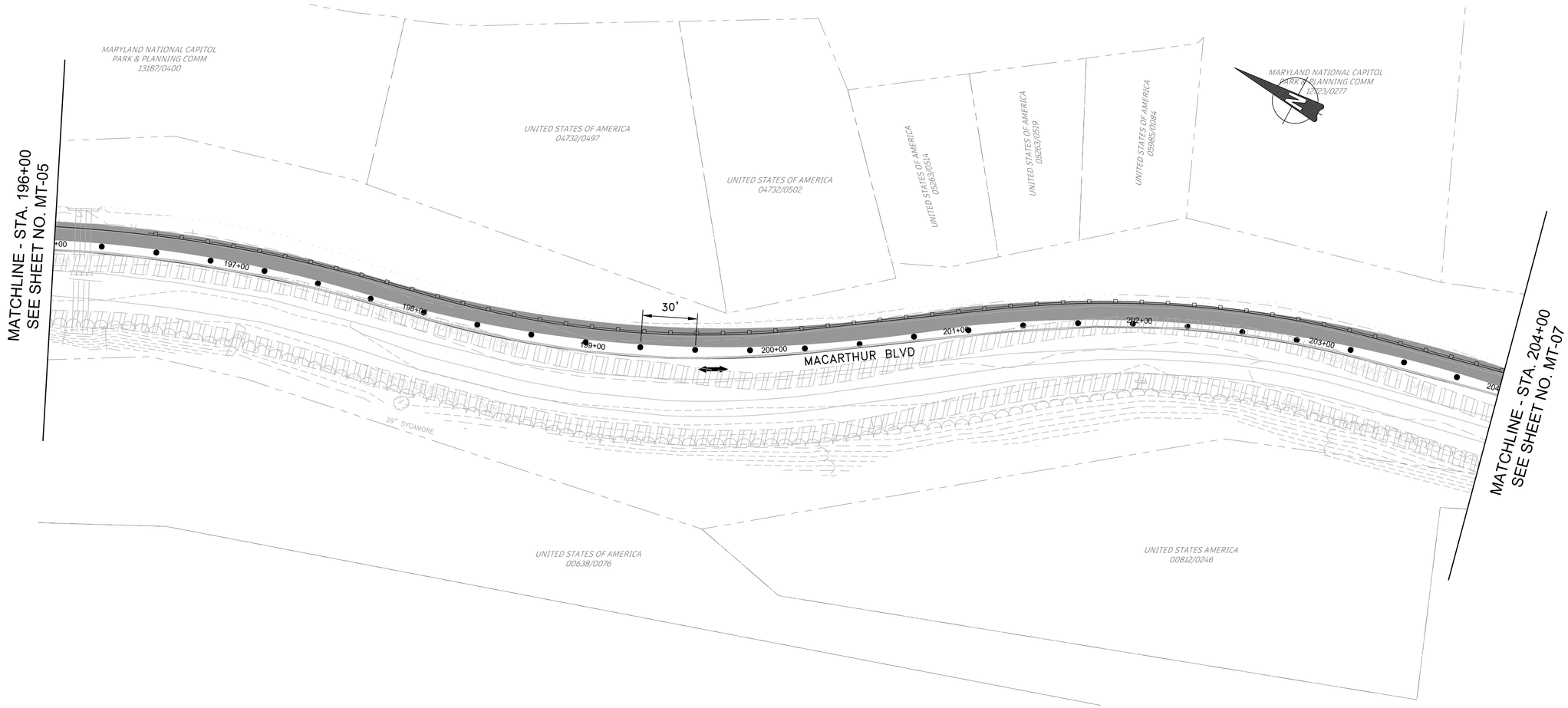
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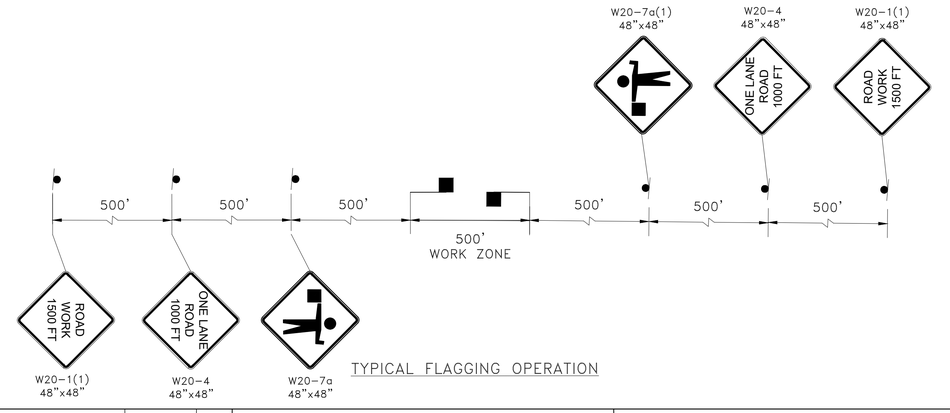
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DATE: JUNE 2024

CIP No. : 500718

SHEET 87 of 241





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-06
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

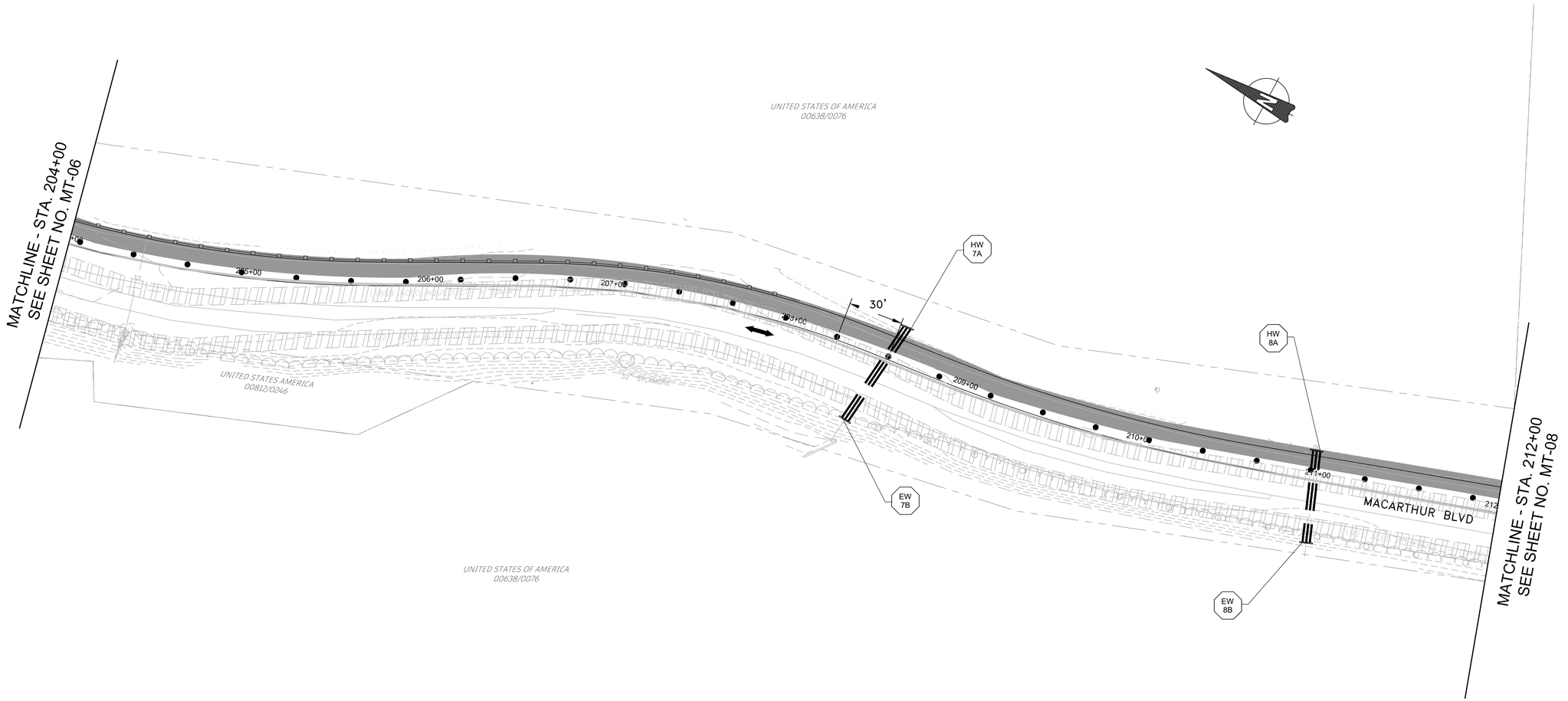
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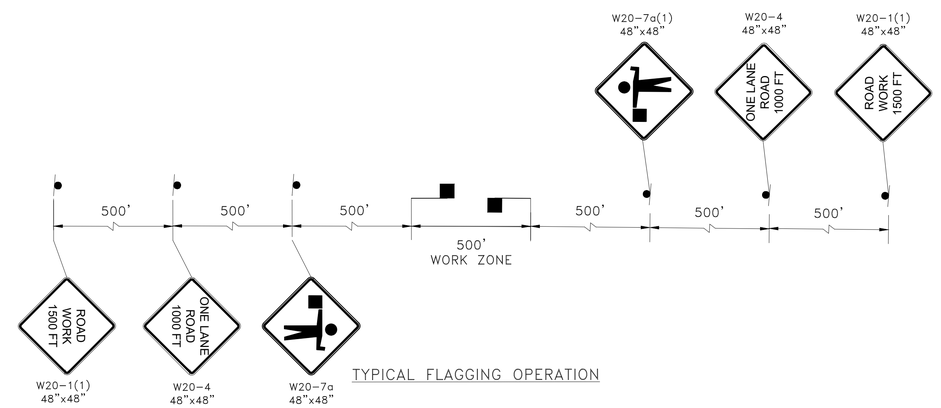
DATE: JUNE 2024

CIP No.: 500718

SHEET 88 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-06 PLOTTED: Thursday, June 27, 2024 – 4:00pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-07
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

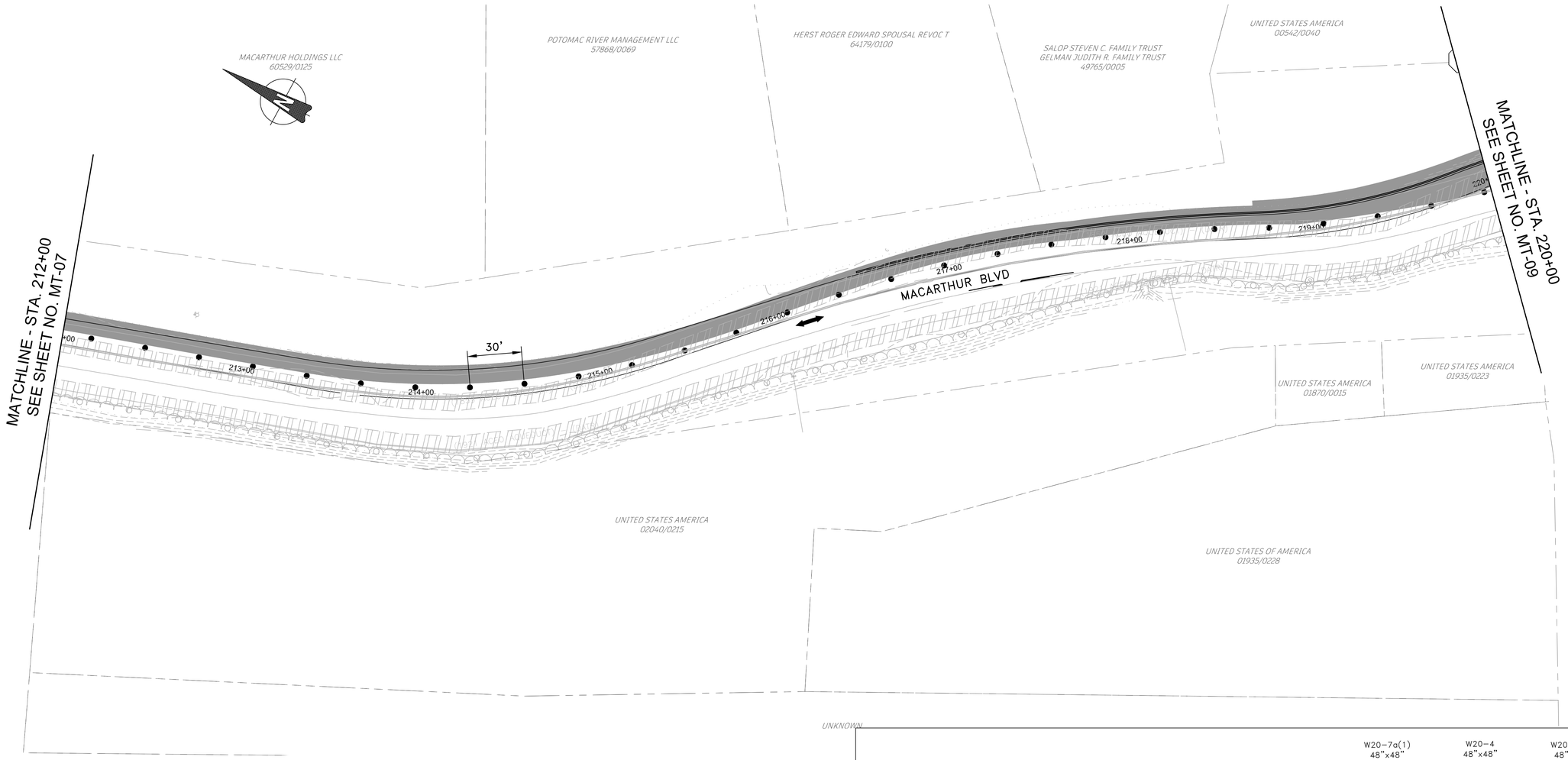
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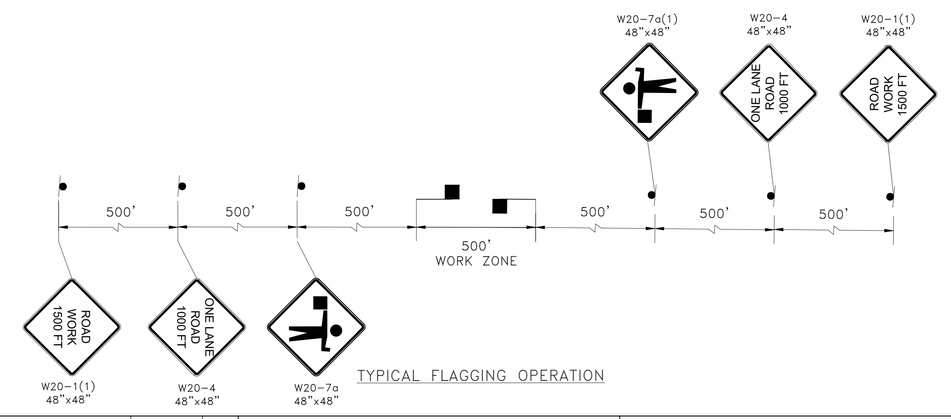
DATE: JUNE 2024

CIP No.: 500718

SHEET 89 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-07 PLOTTED: Thursday, June 27, 2024 – 4:00pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-08
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

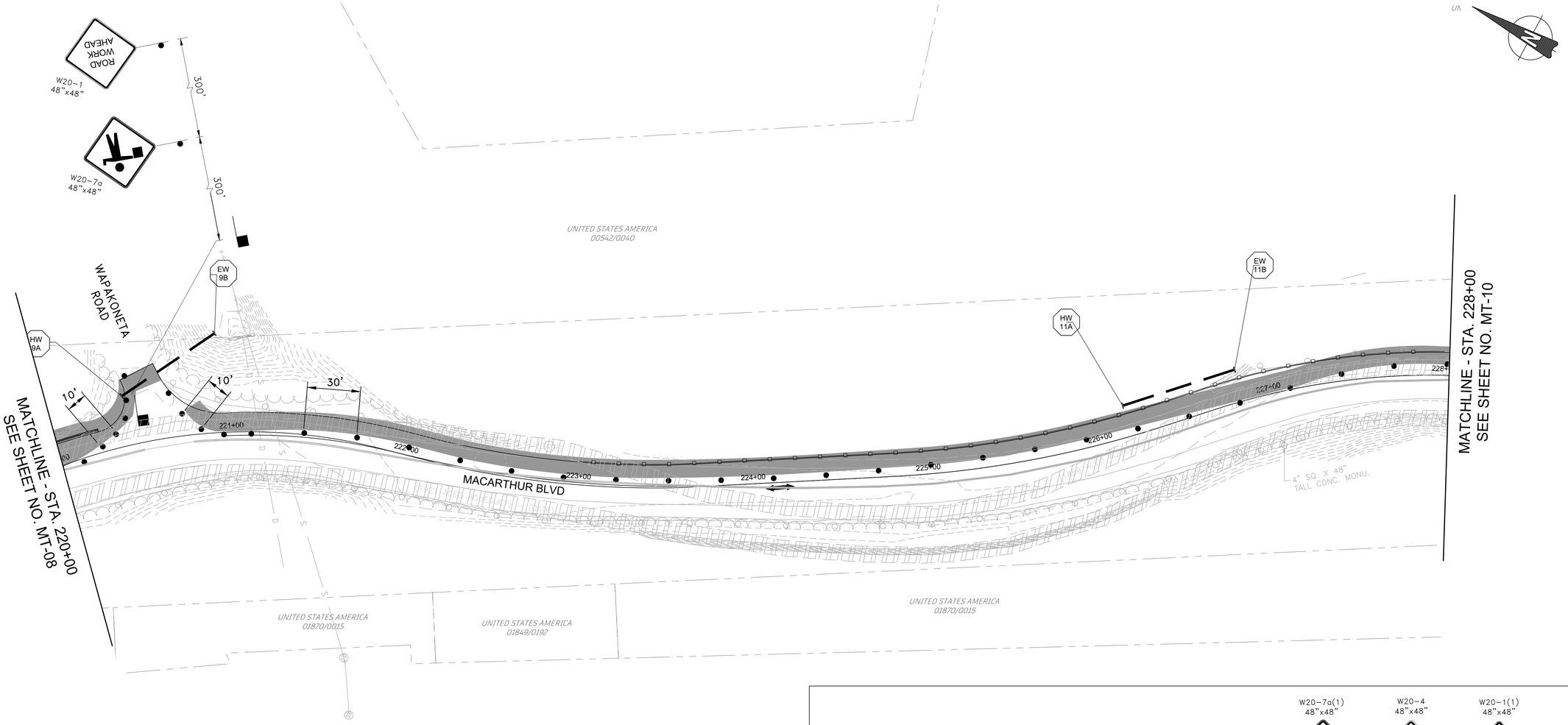
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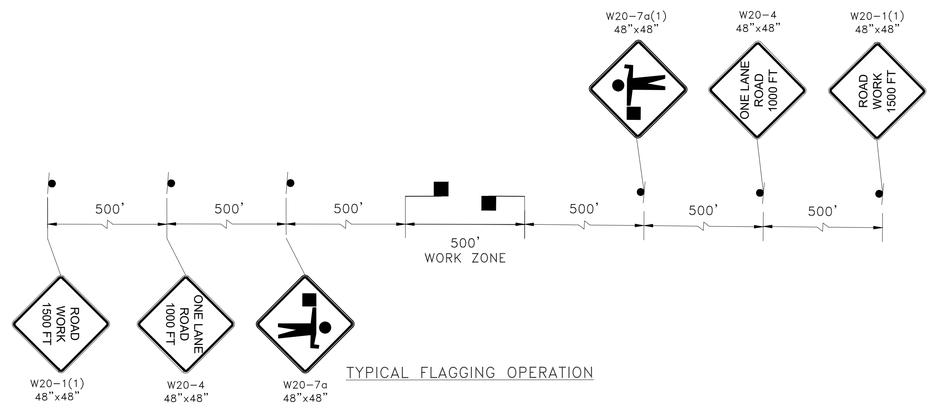
DATE: NOVEMBER 2023

CIP No.: 500718

SHEET 90 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-08 PLOTTED: Thursday, June 27, 2024 – 4:00pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-09
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

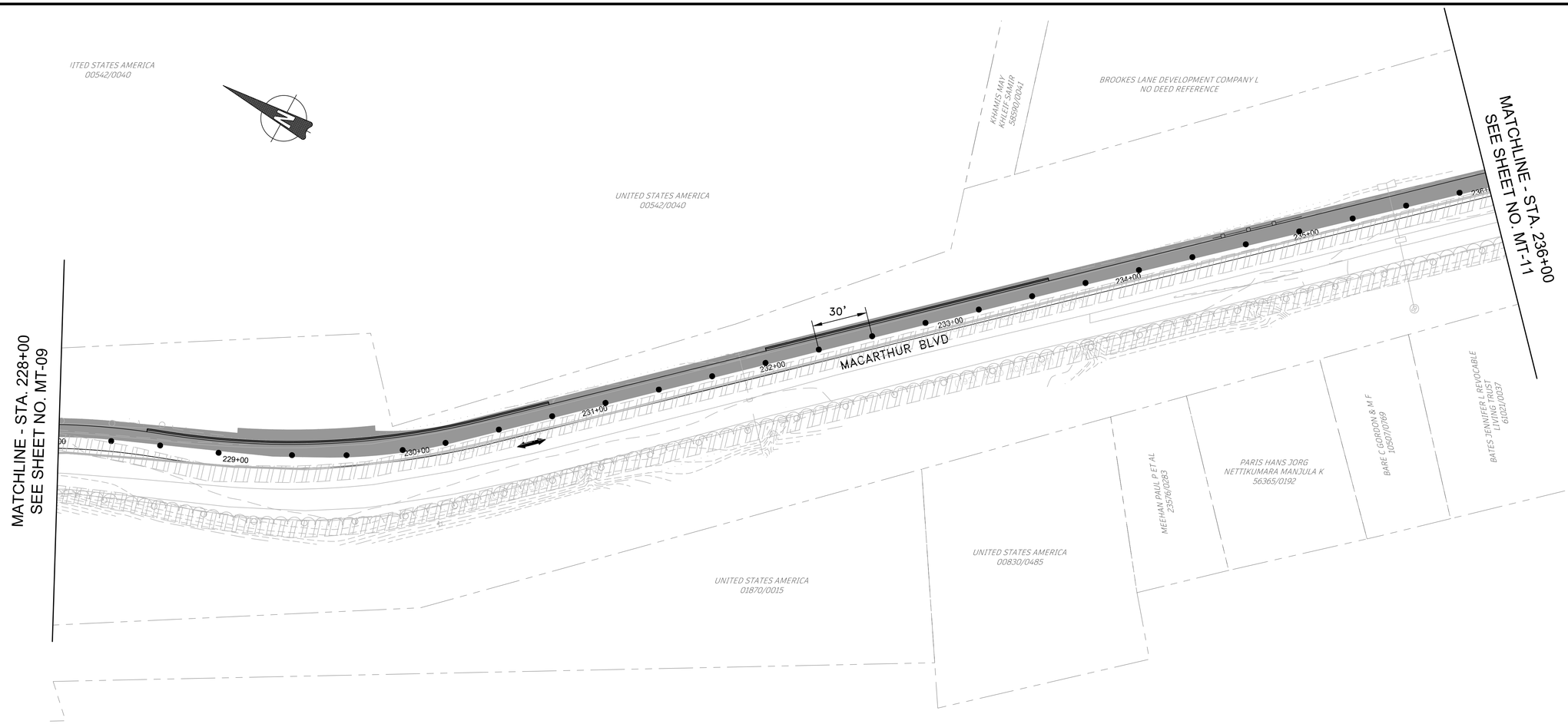
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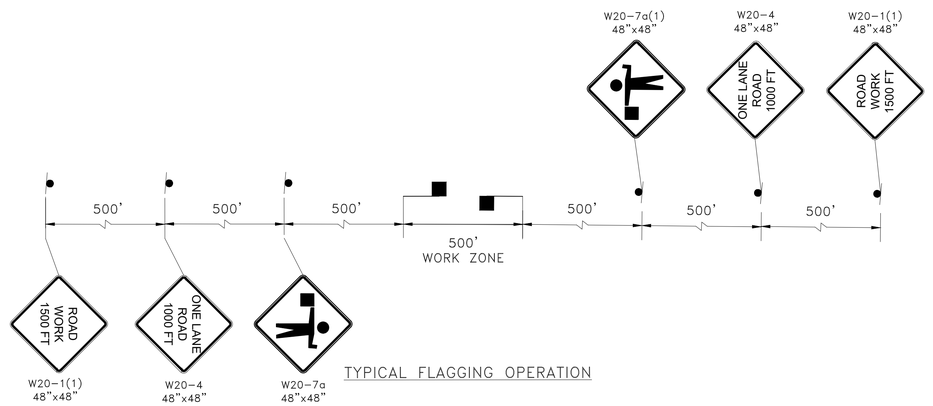
DATE: JUNE 2024

CIP No. : 500718

SHEET 91 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-09 PLOTTED: Thursday, June 27, 2024 – 4:00pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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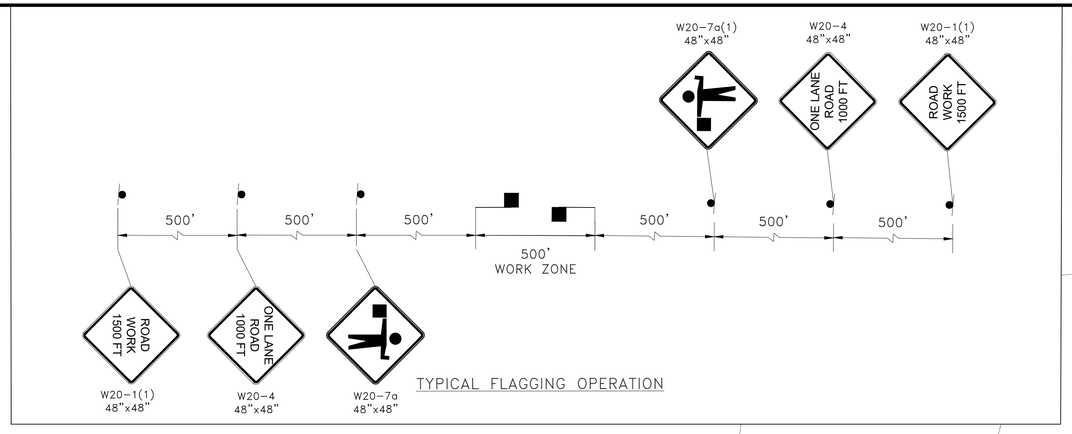
Designed by: MDS Drawn by: MDS Checked by: DJD

MT-10
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 92 of 271



TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

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GAITHERSBURG, MARYLAND

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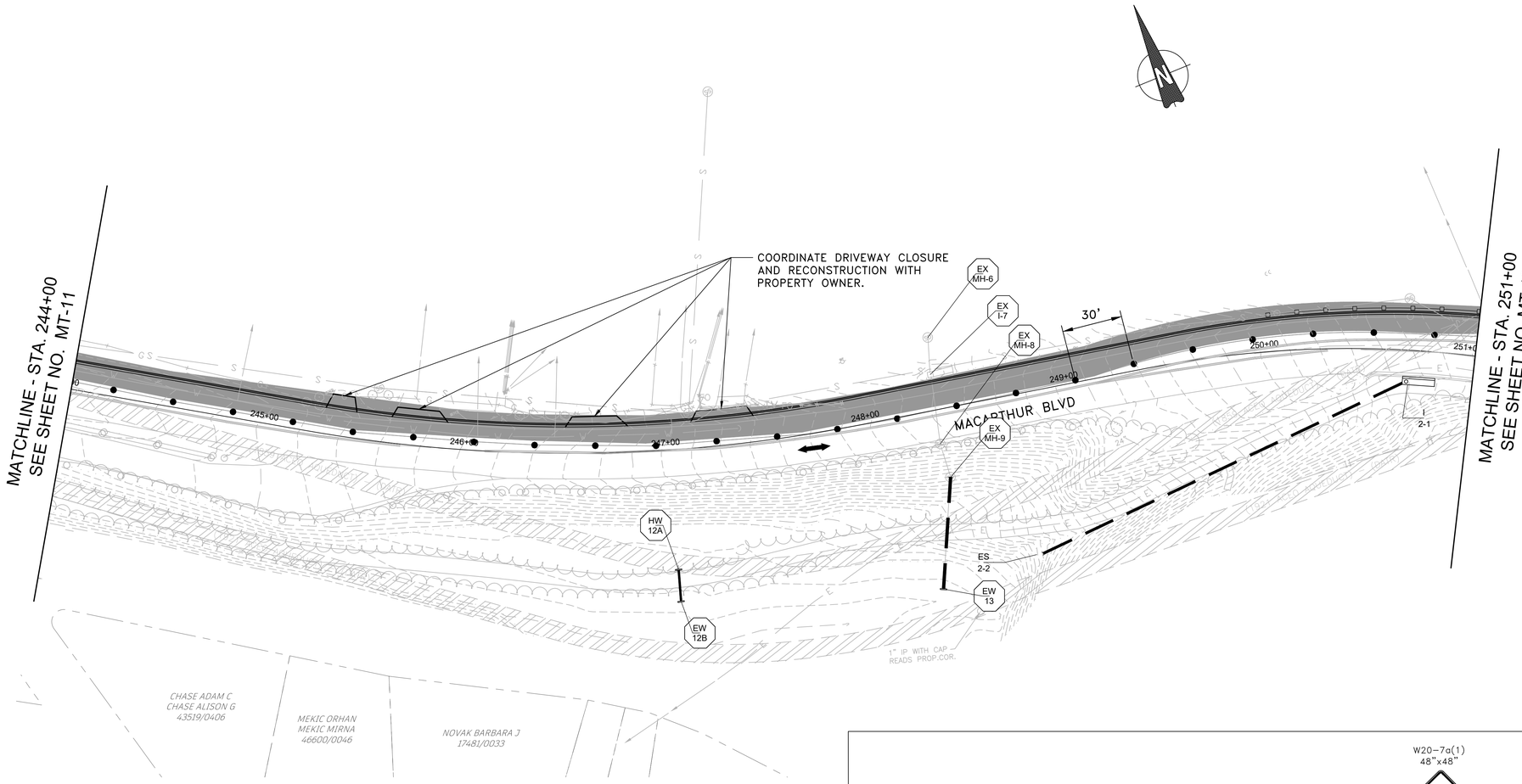
MT-11
MOT PLAN - STAGE 1

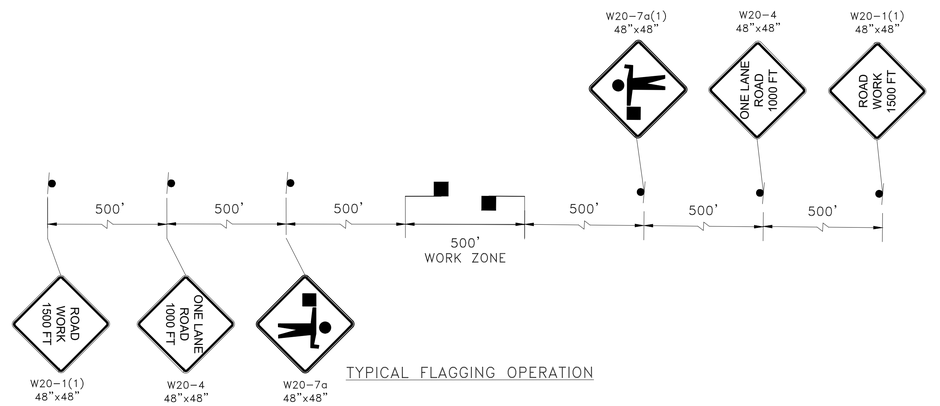
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 93 of 271





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

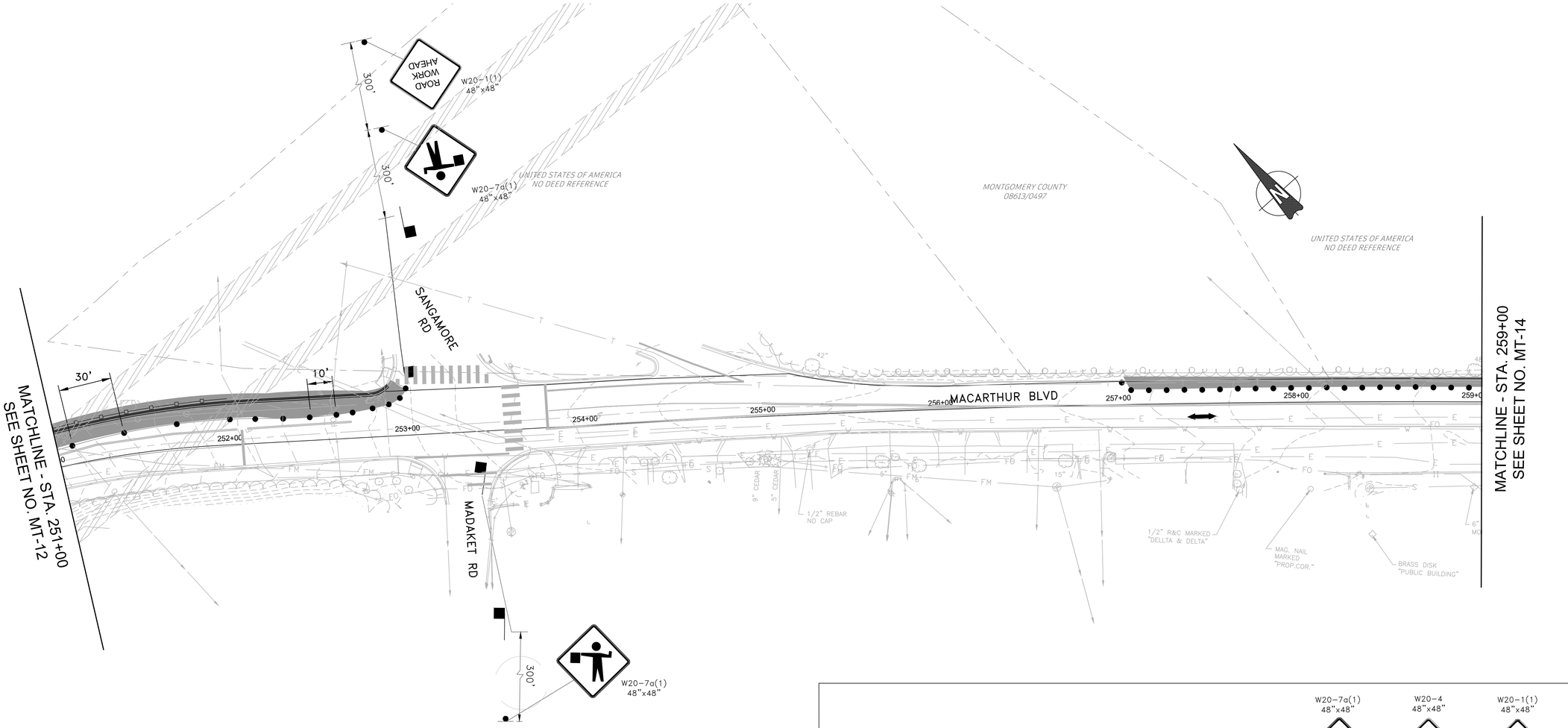
MT-12
MOT PLAN – STAGE 1
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

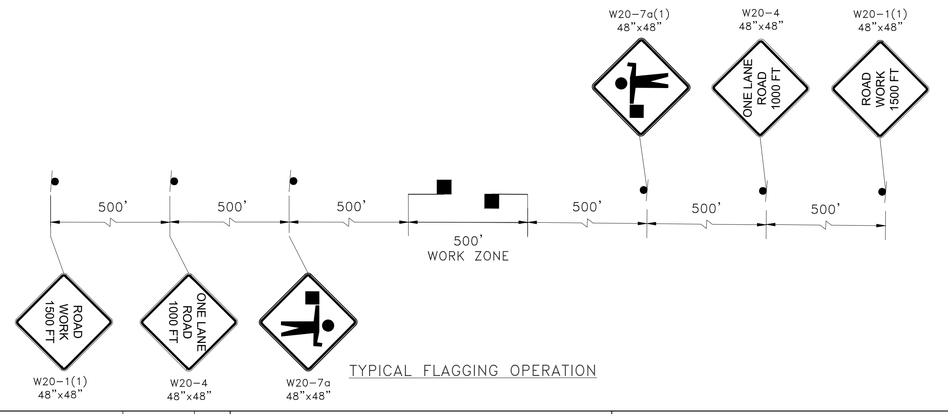
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 94 of 271





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

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GAITHERSBURG, MARYLAND

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

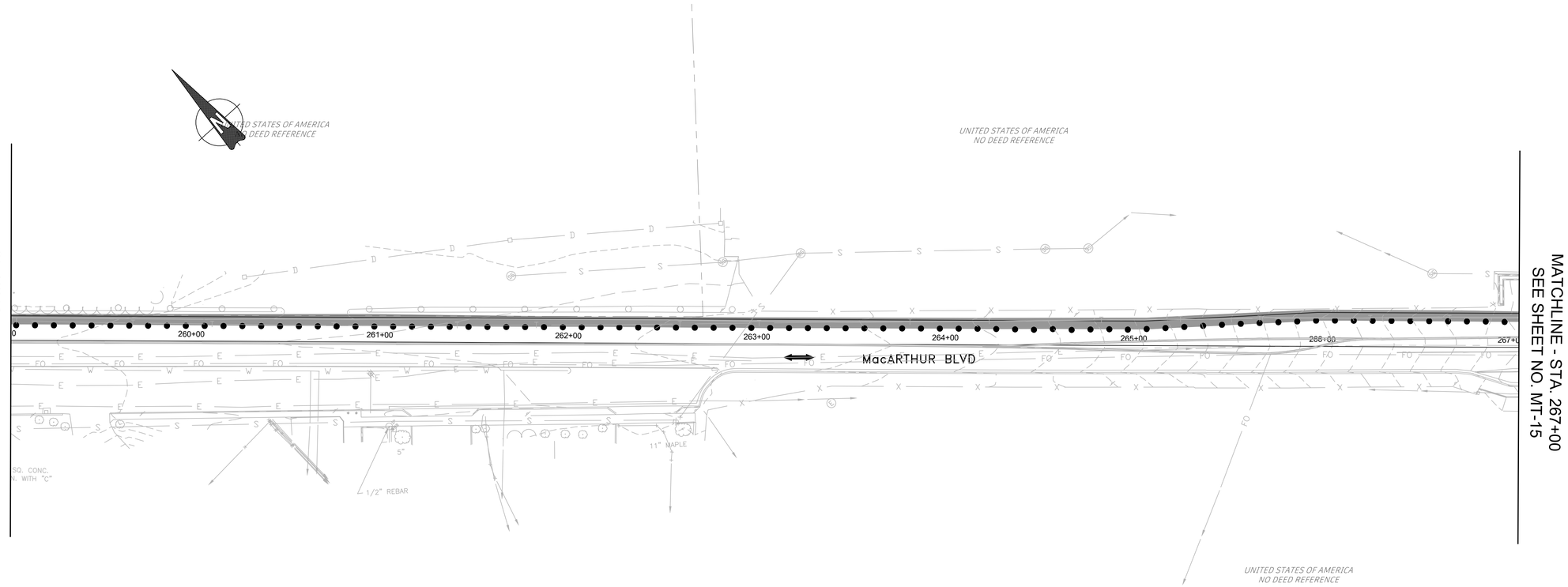
MT-13
MOT PLAN - STAGE 1
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

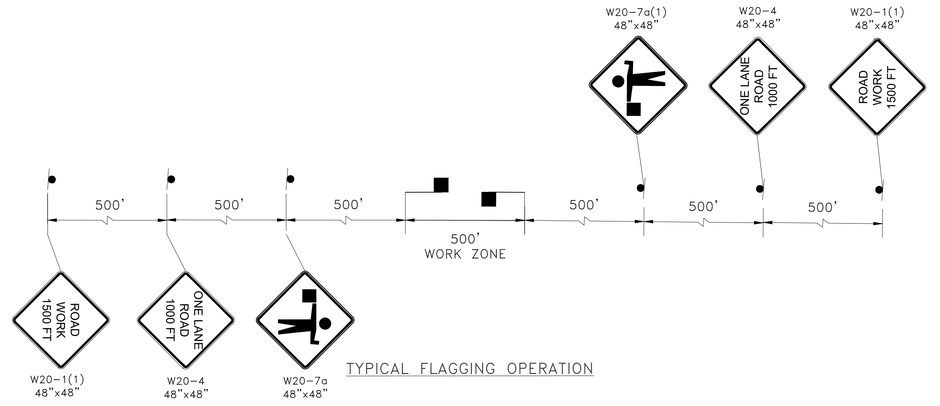
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SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 95 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-13 PLOTTED: Thursday, June 27, 2024 - 4:01pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
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DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

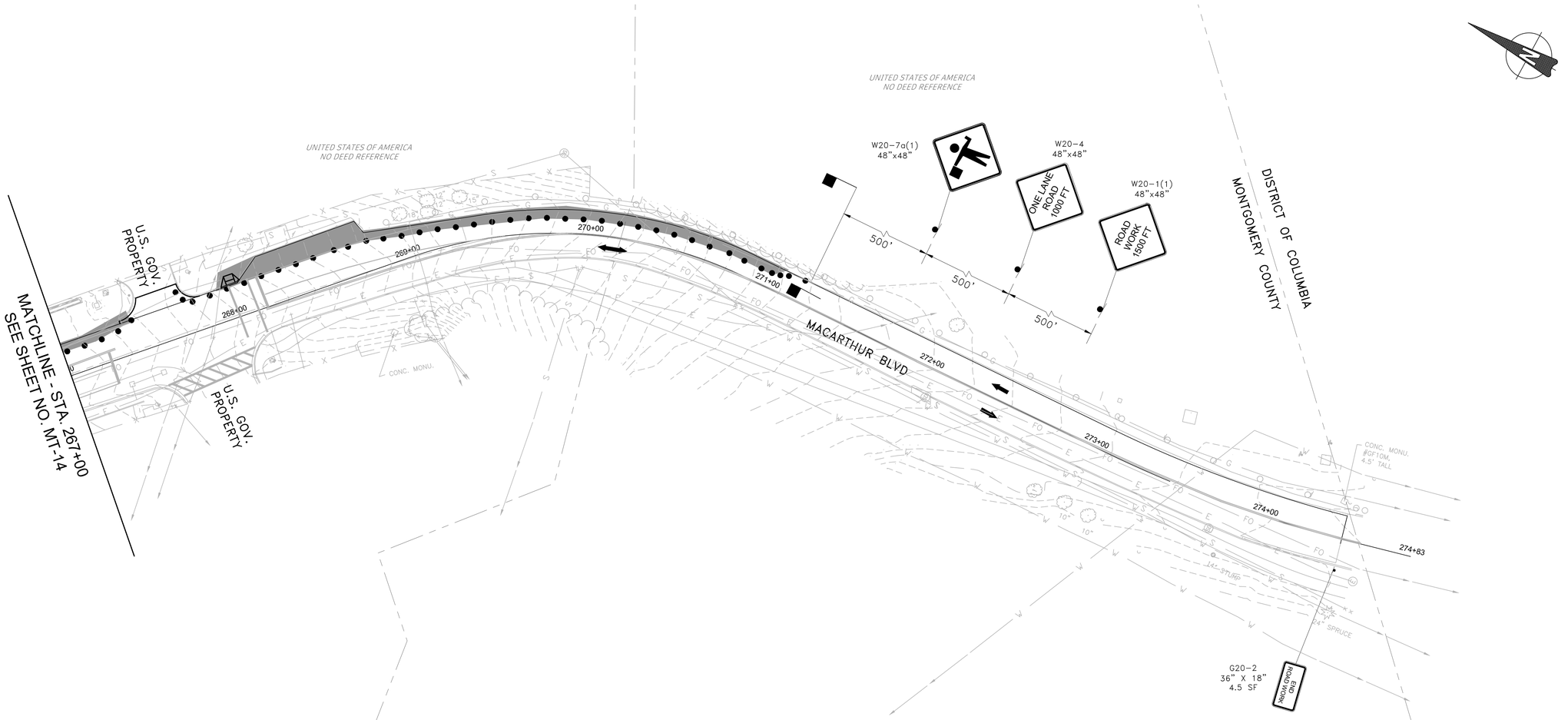
Designed by: MDS Drawn by: MDS Checked by: JMC

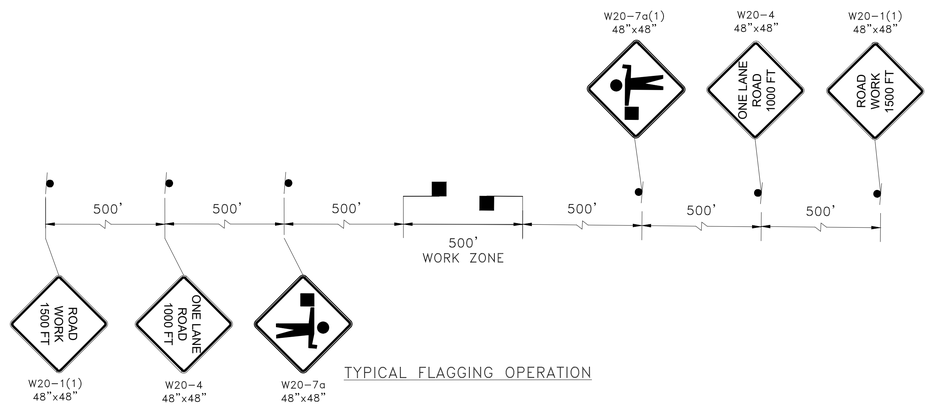
MT-14
MOT PLAN - STAGE 1
MACARTHUR BOULEVARD BIKEWAY

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 96 of 271





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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JMT

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

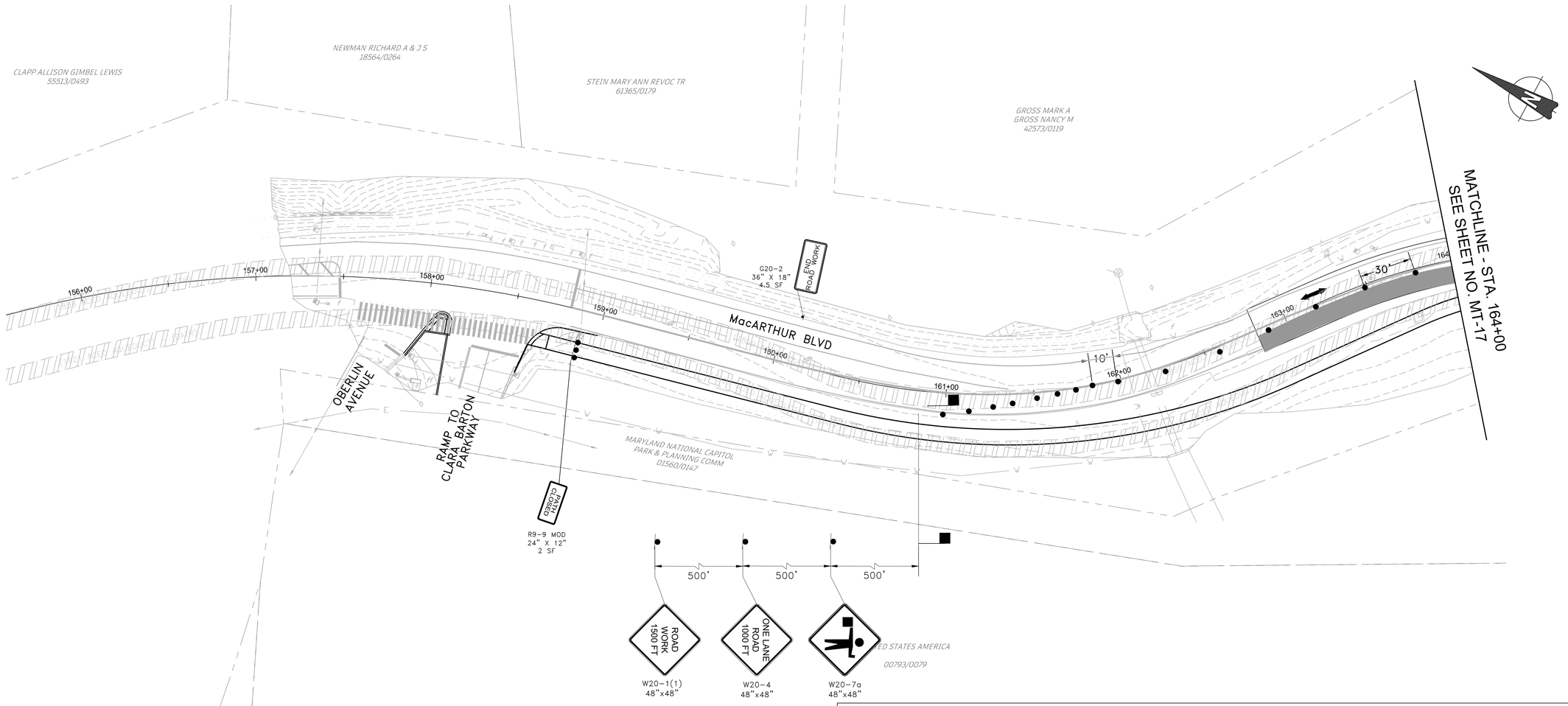
MT-15
MOT PLAN - STAGE 1
MACARTHUR BOULEVARD BIKEWAY

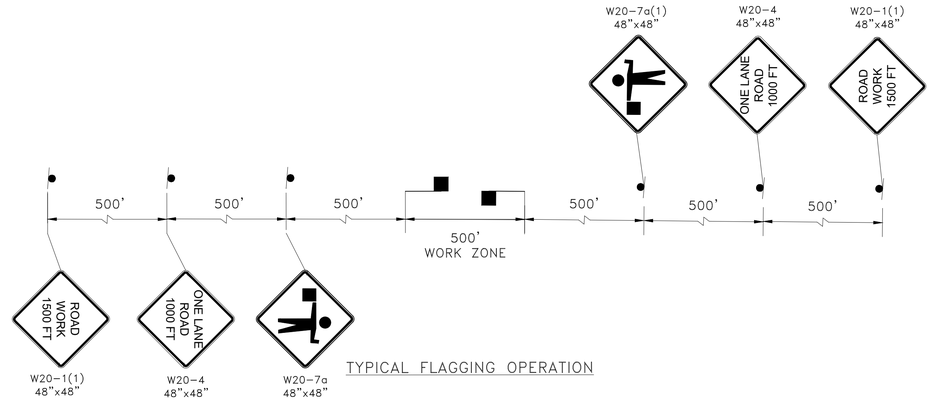
0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 97 of 271

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0001_MacArthur.dwg LAYOUT NAME: MT-15 PLOTTED: Thursday, June 27, 2024 - 4:01pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

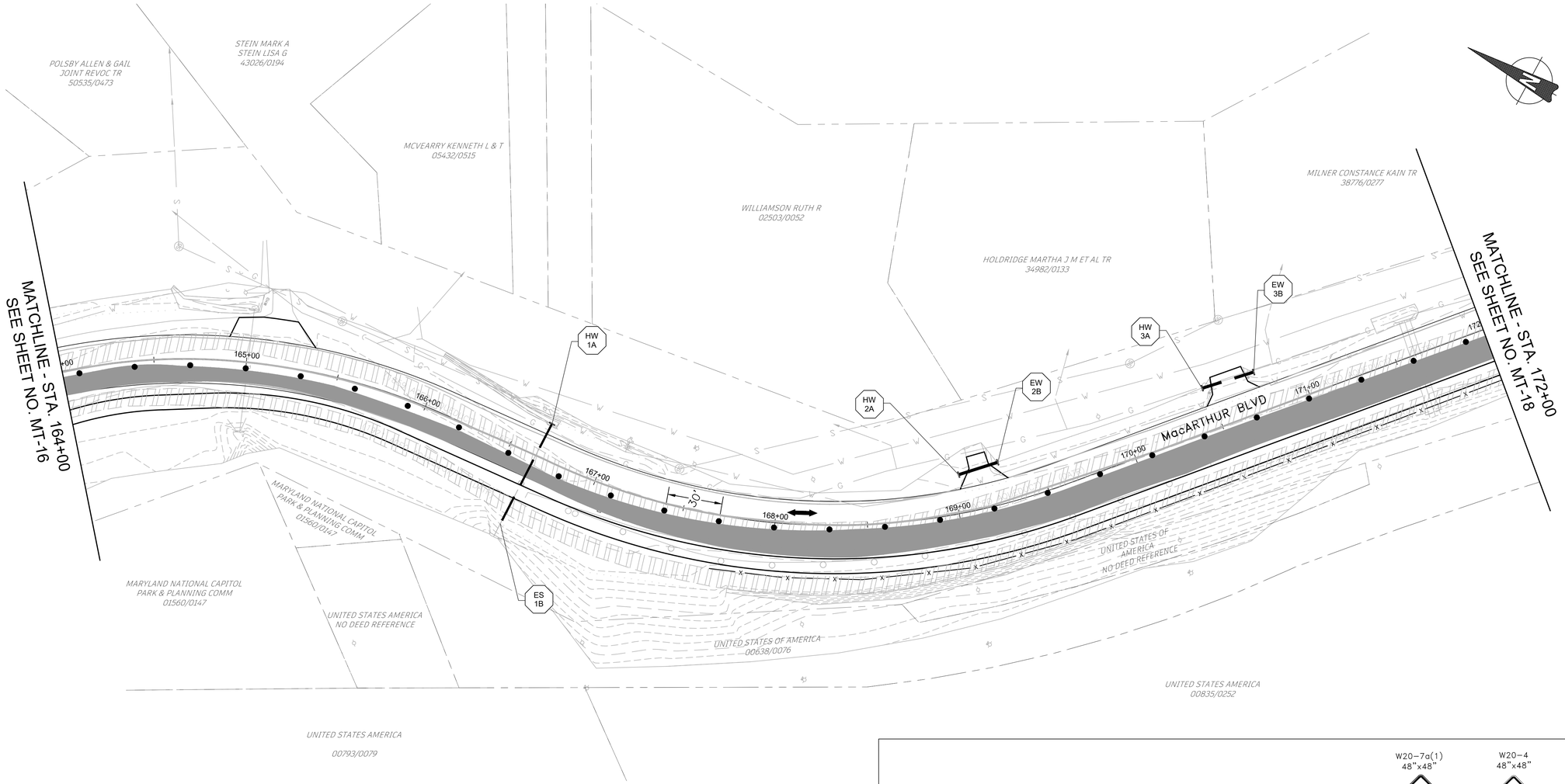
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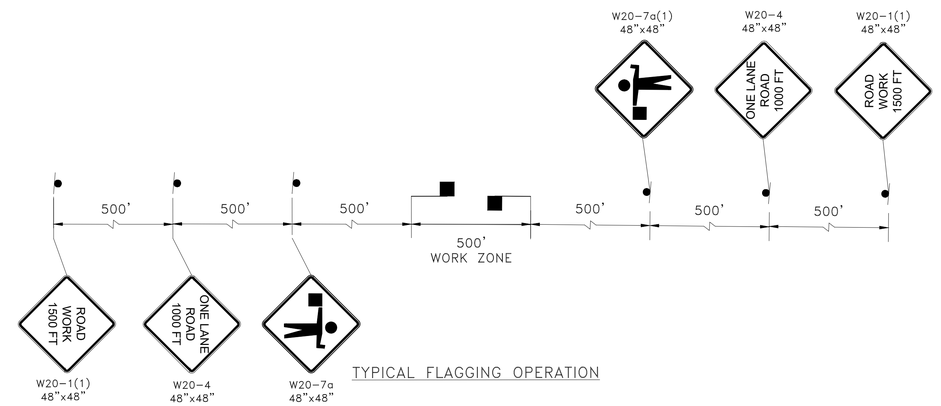
MT-16
MOT PLAN - STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 101 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

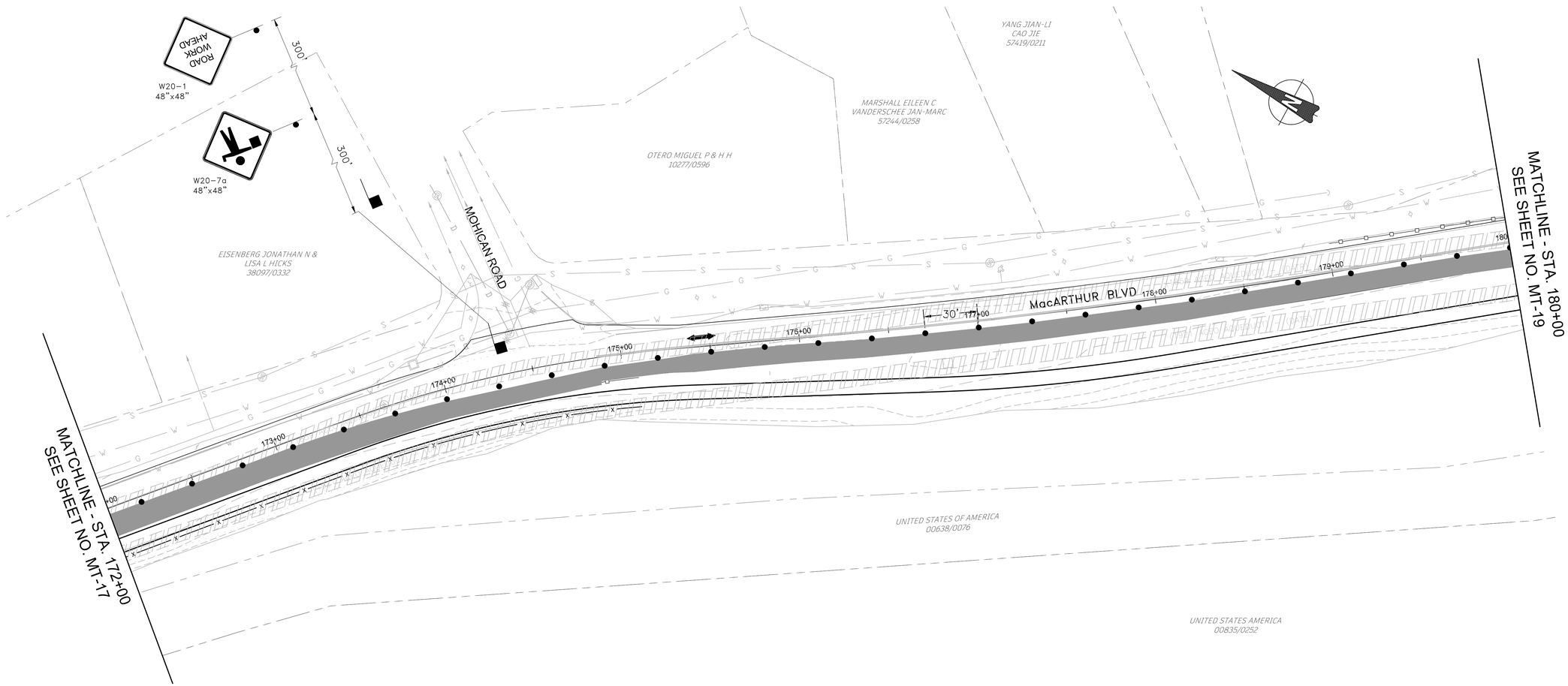
MT-17
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

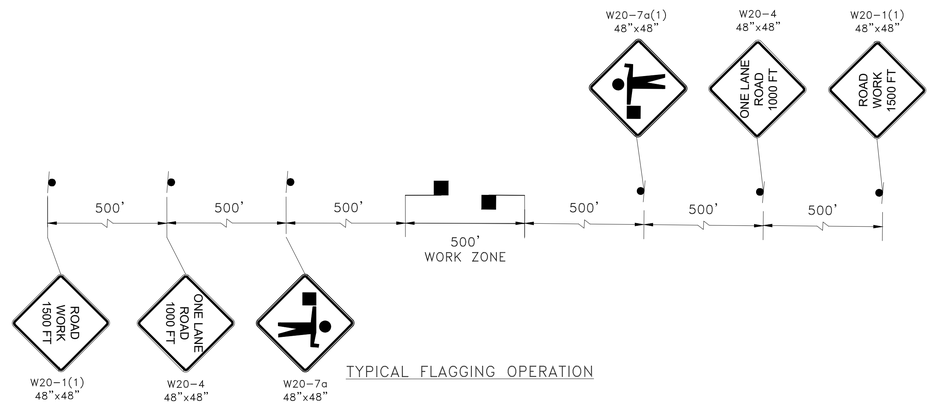
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SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 102 of 285

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TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
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DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

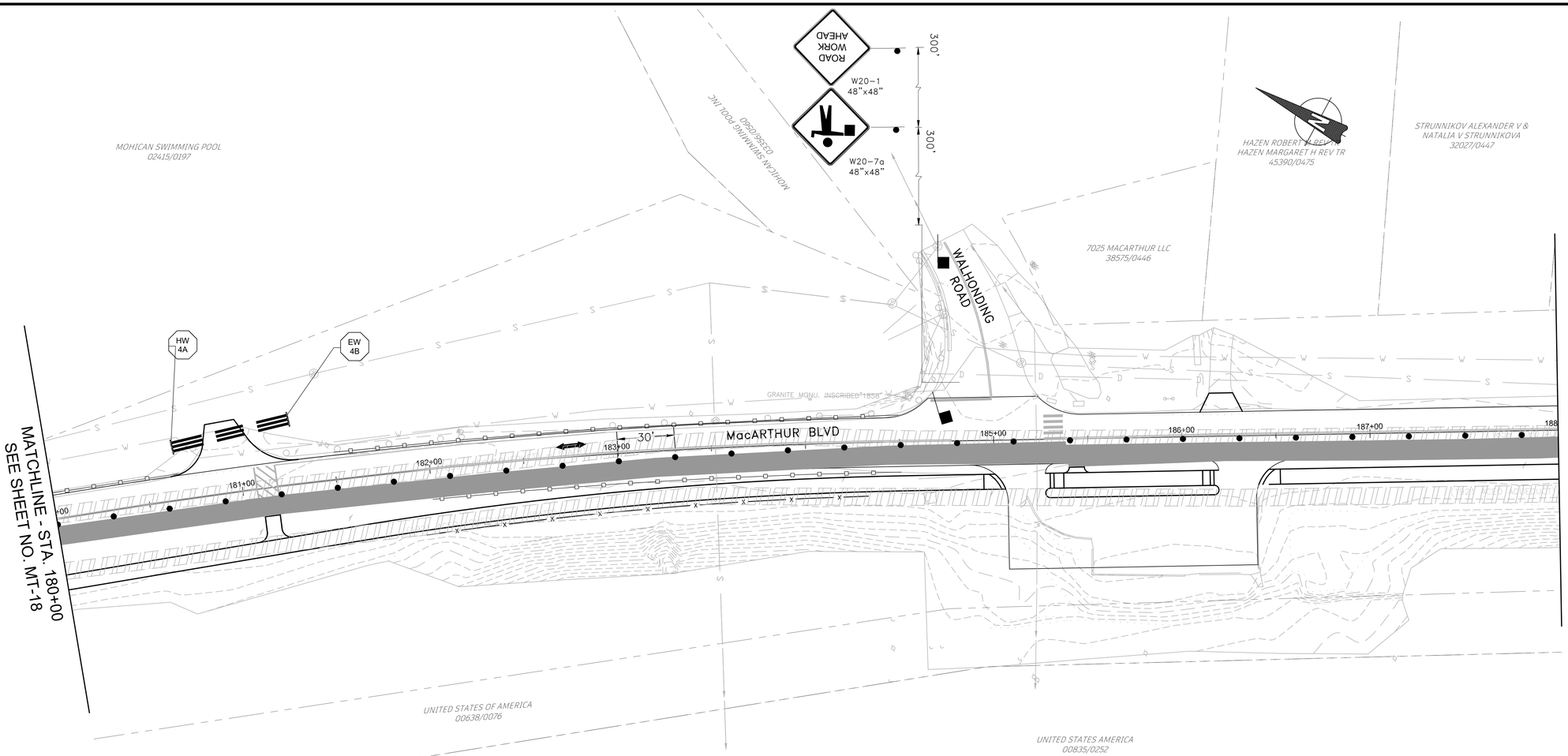
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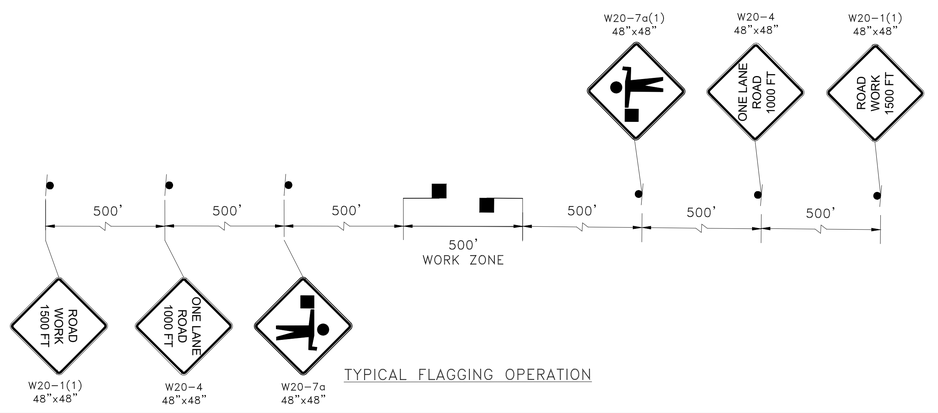
MT-18
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 103 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

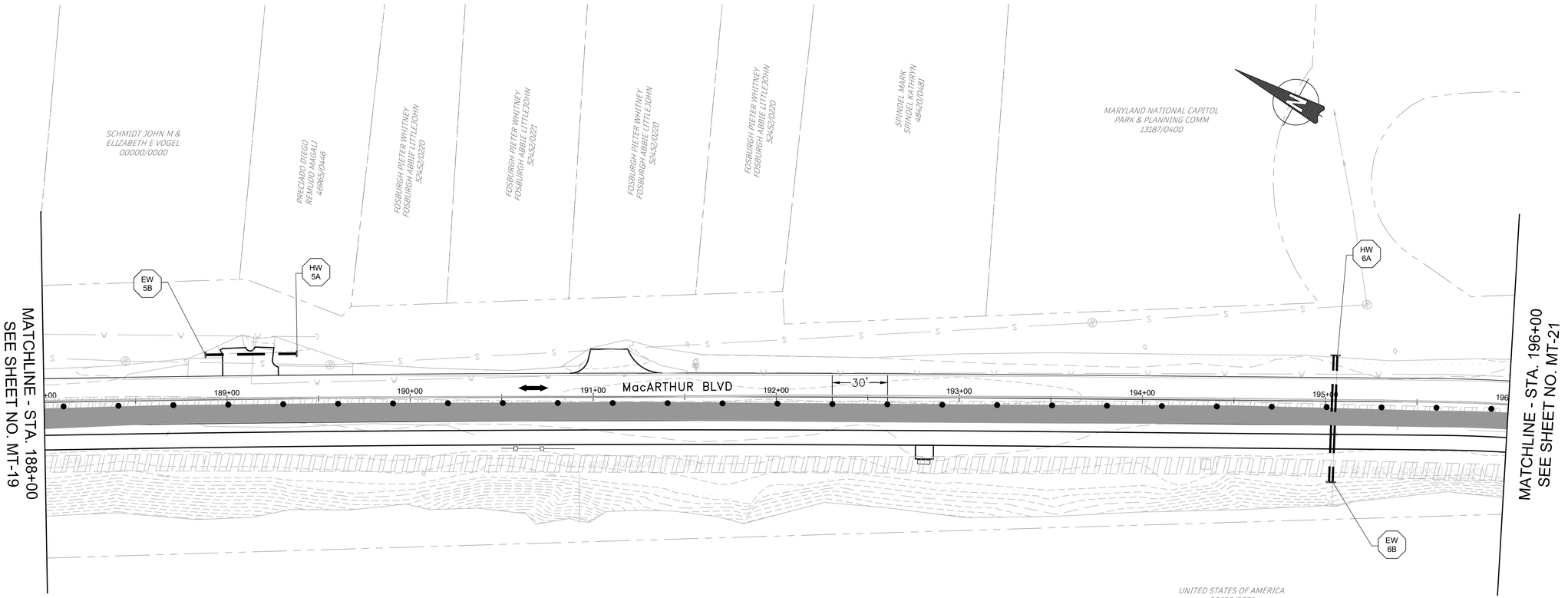
MT-19
MOT PLAN - STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

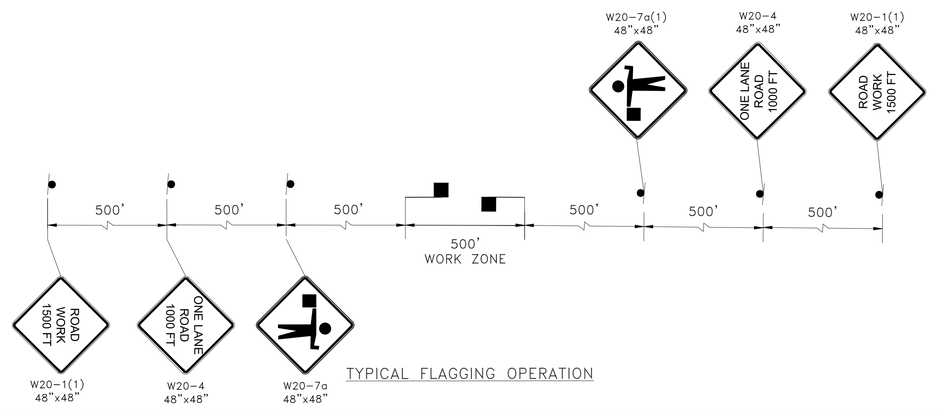
0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 104 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-19 PLOTTED: Thursday, June 27, 2024 - 4:03pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

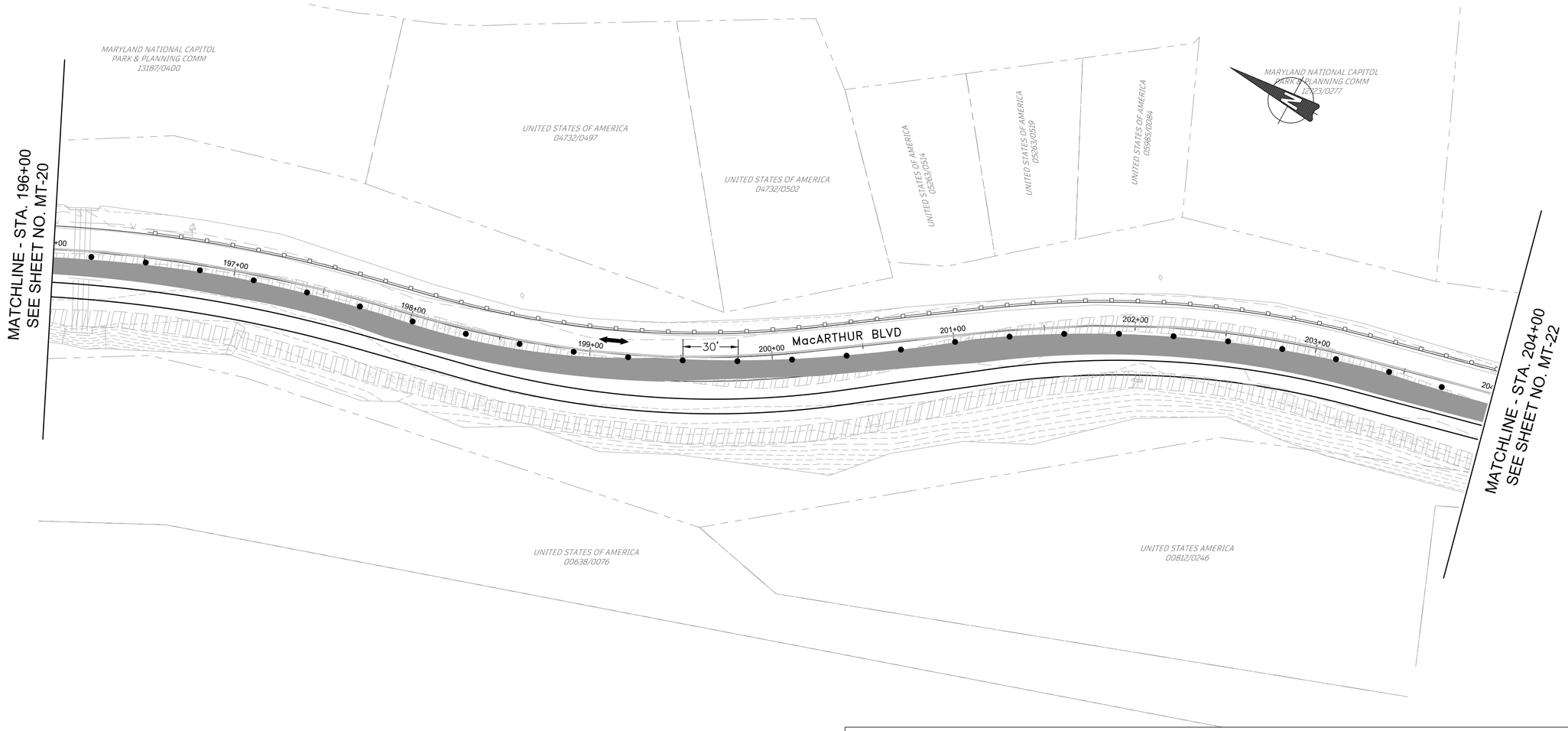
MT-20
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

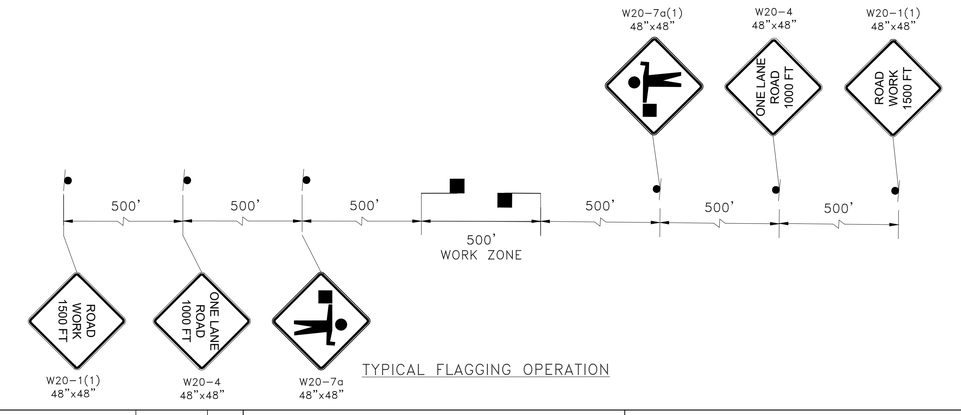
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SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 105 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-20 PLOTTED: Thursday, June 27, 2024 – 4:03pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

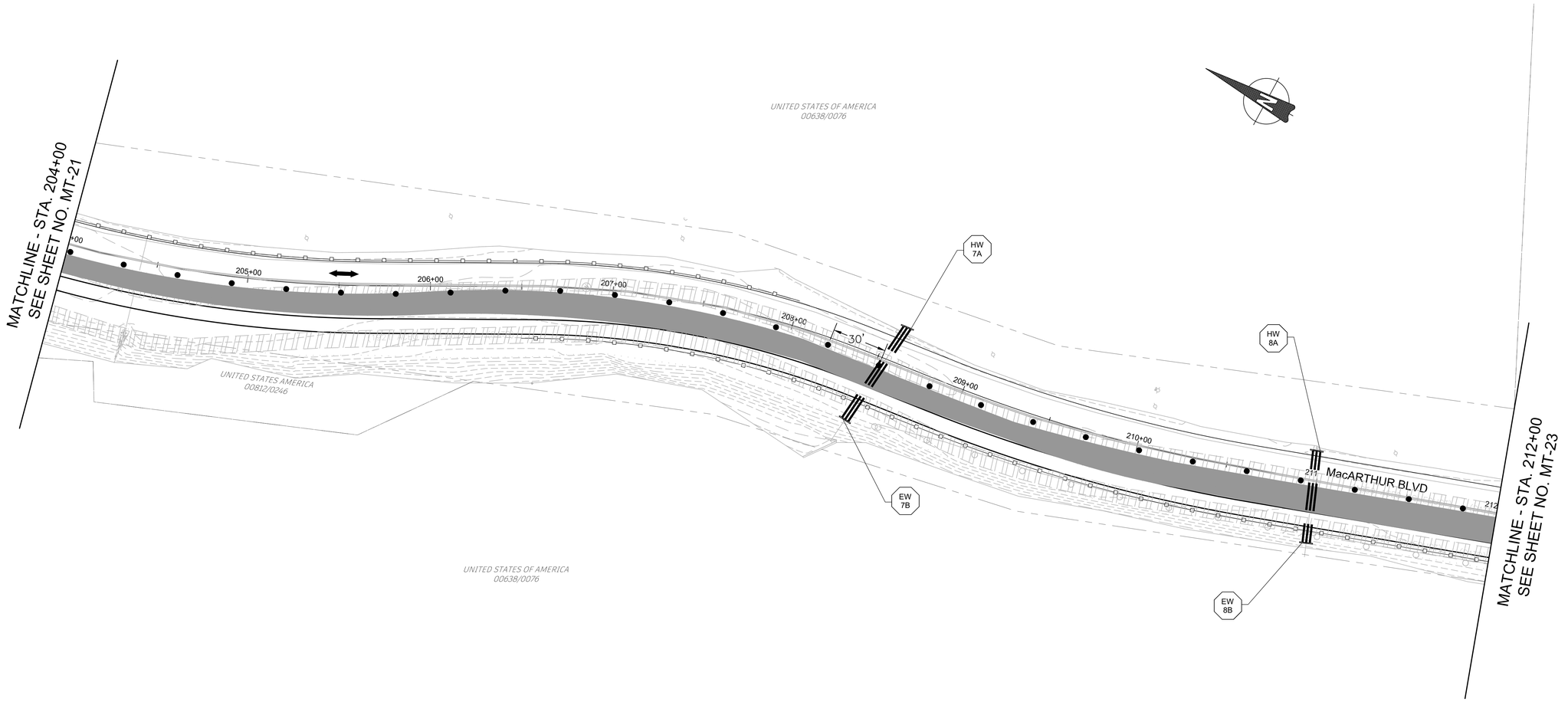
MT-21
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

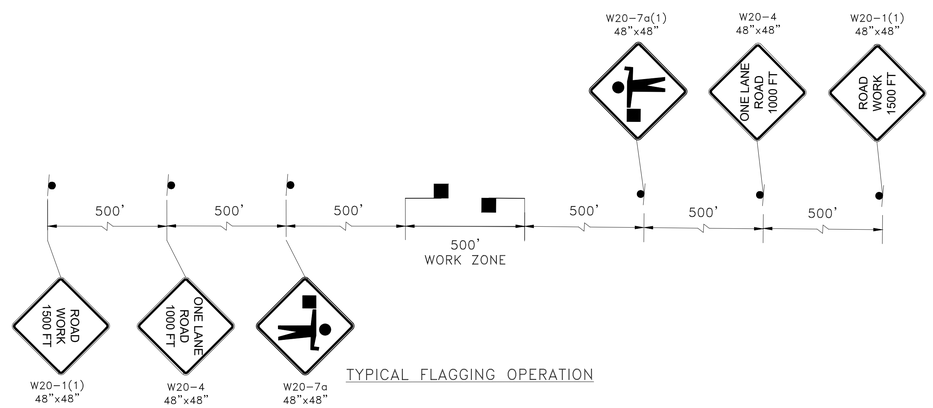
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SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 106 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-21 PLOTTED: Thursday, June 27, 2024 – 4:03pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-22
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

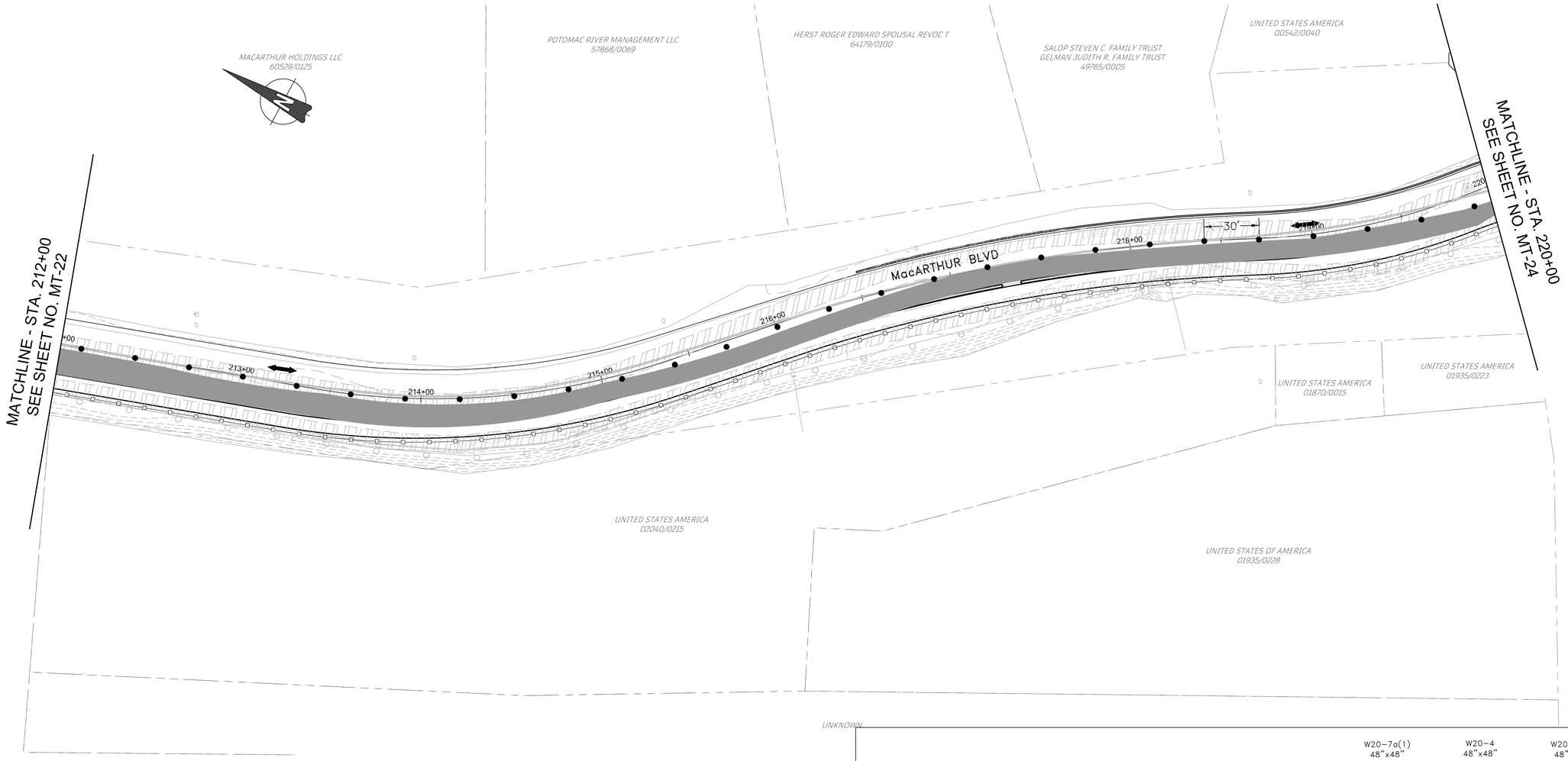
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SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 107 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-22 PLOTTED: Thursday, June 27, 2024 – 4:03pm USER: CStricker

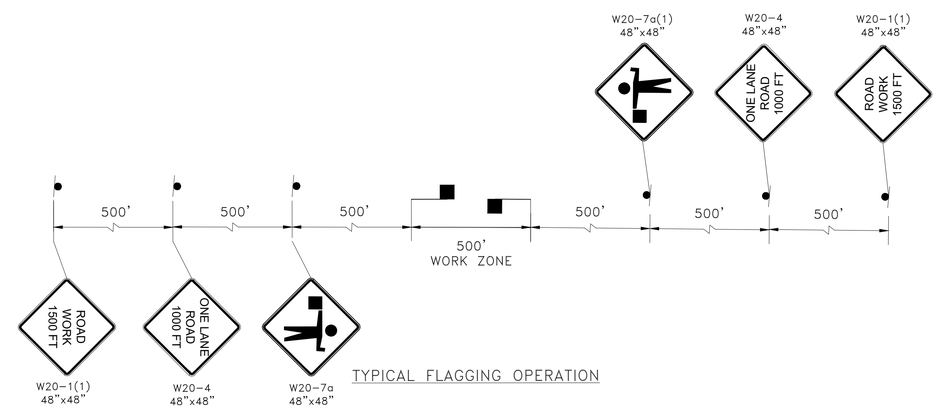


MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.



TYPICAL FLAGGING OPERATION

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JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

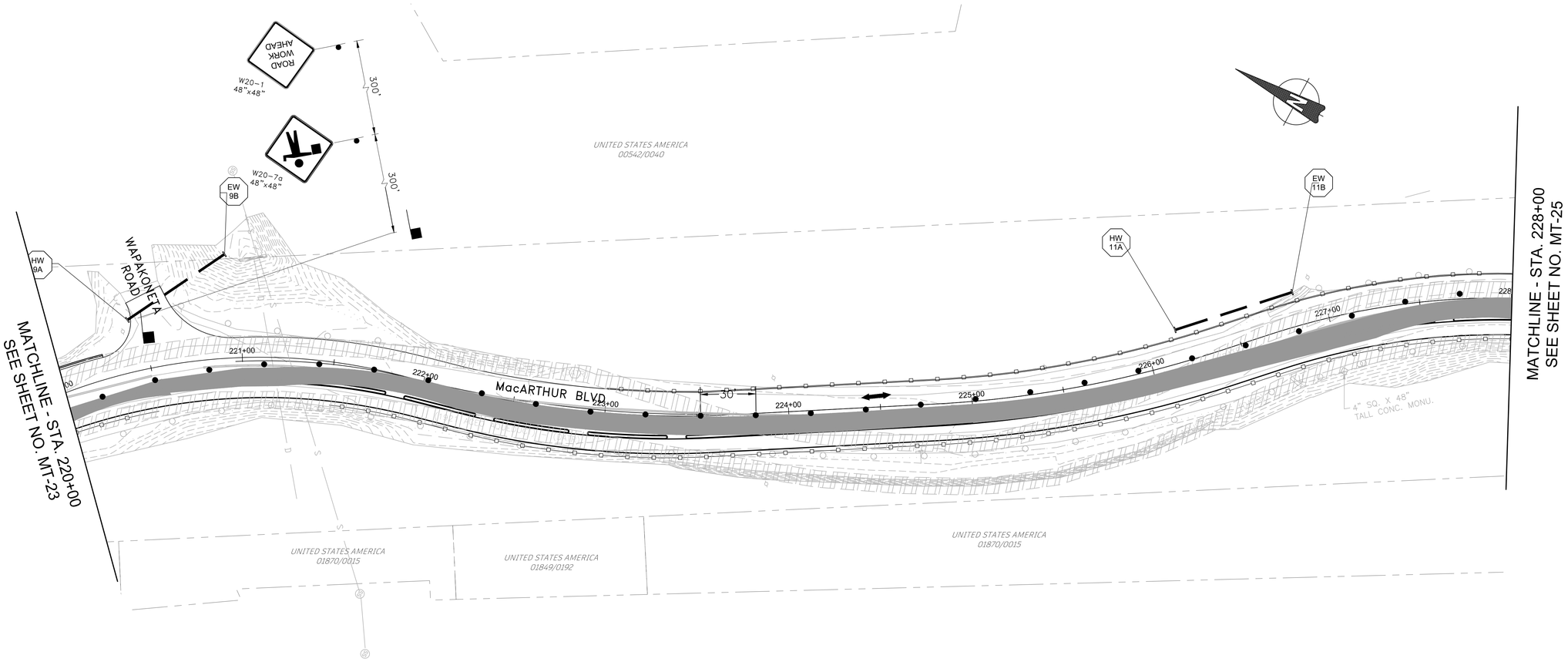
MT-23
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

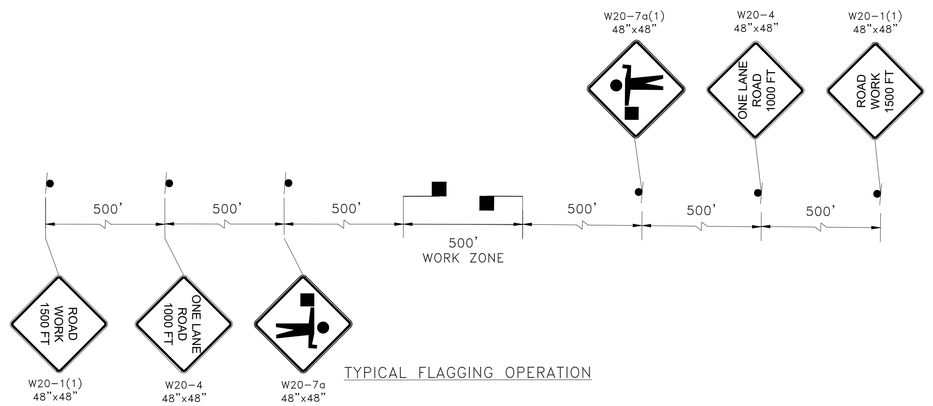
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SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 108 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-23 PLOTTED: Thursday, June 27, 2024 – 4:03pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

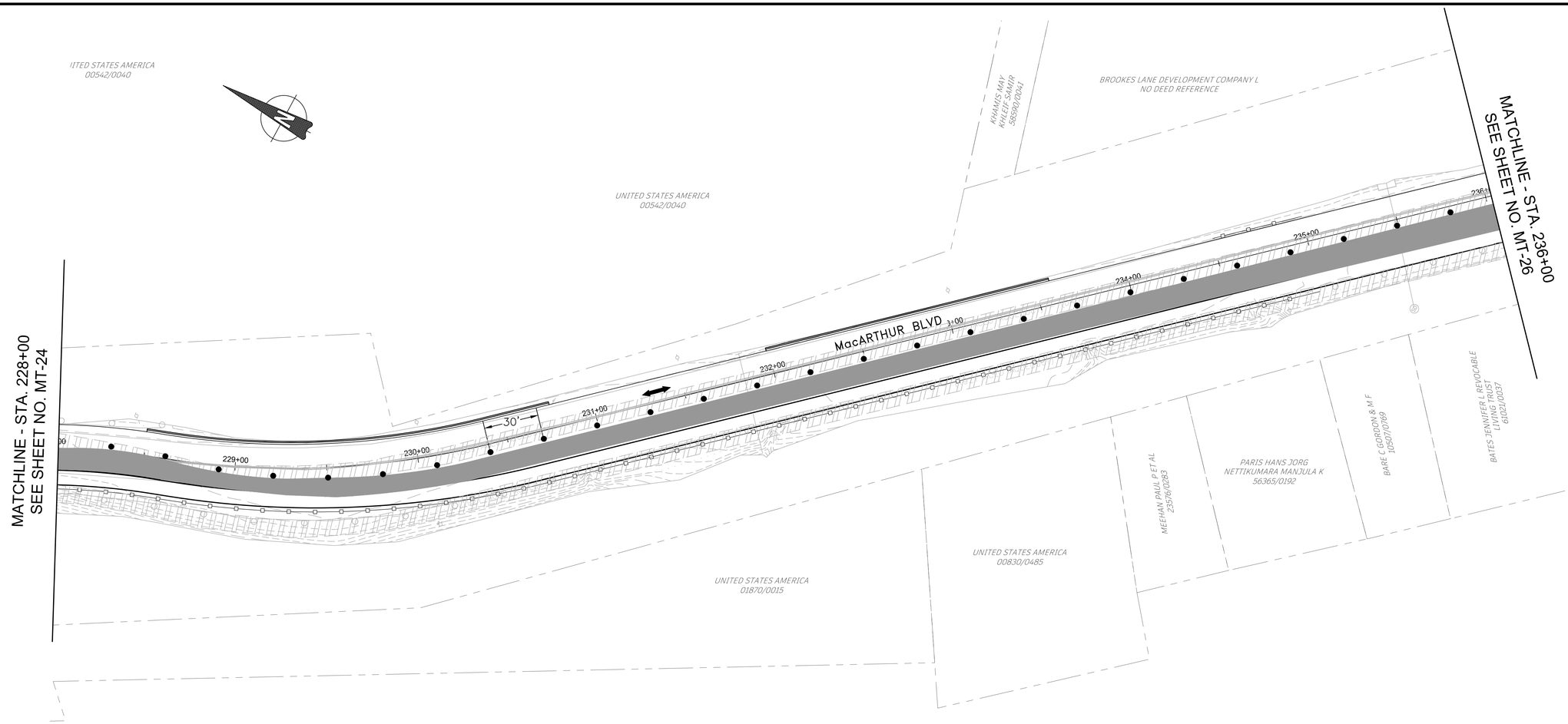
MT-24
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

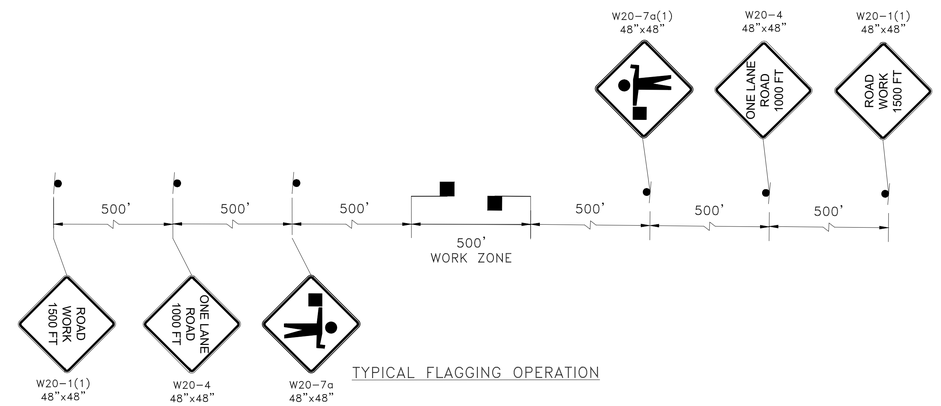
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SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 109 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-24 PLOTTED: Thursday, June 27, 2024 – 4:03pm USER: CStricker





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

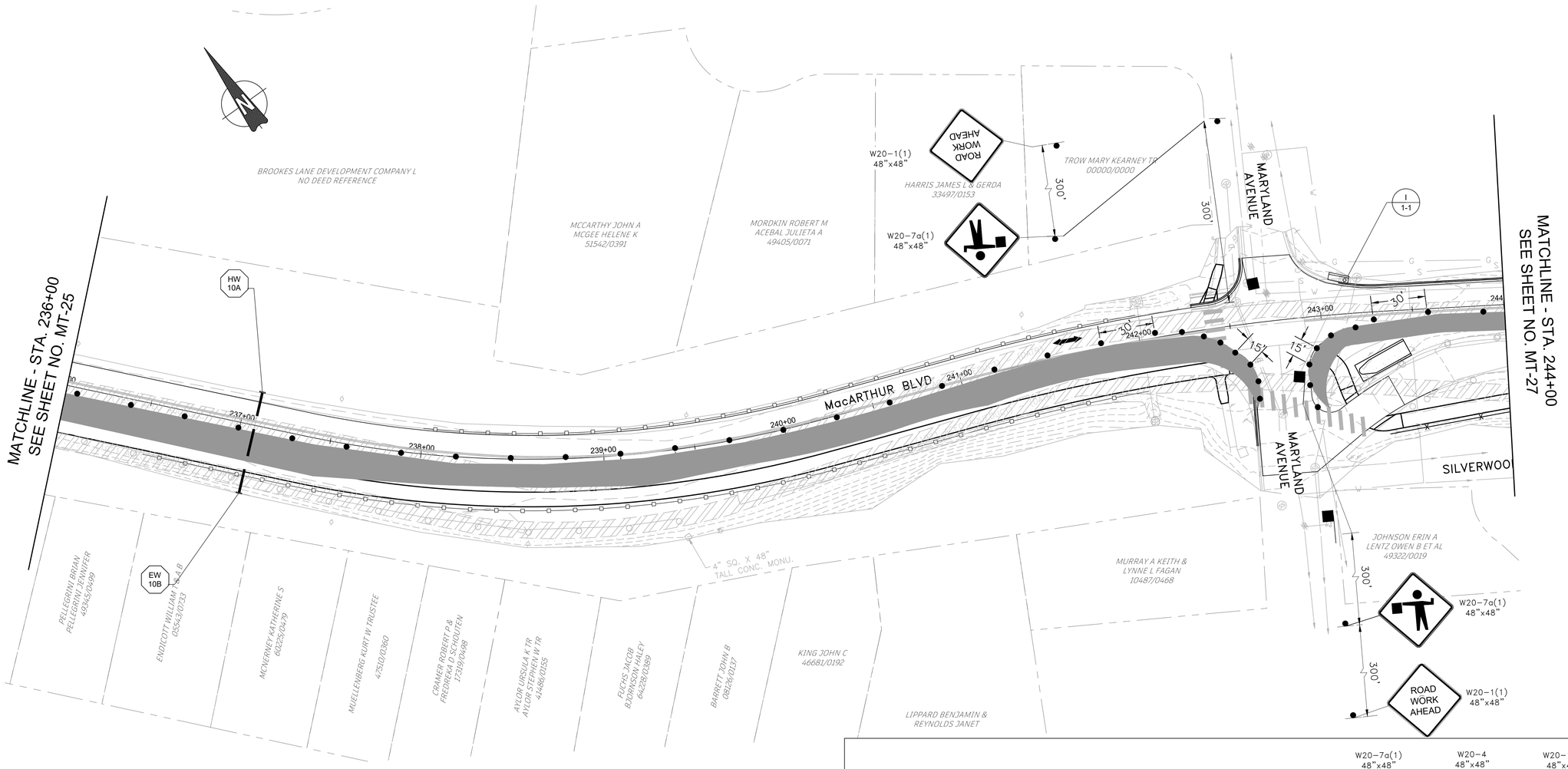
MT-25
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 110 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0002_MacArthur.dwg LAYOUT NAME: MT-25 PLOTTED: Thursday, June 27, 2024 – 4:04pm USER: CStricker



TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-26
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

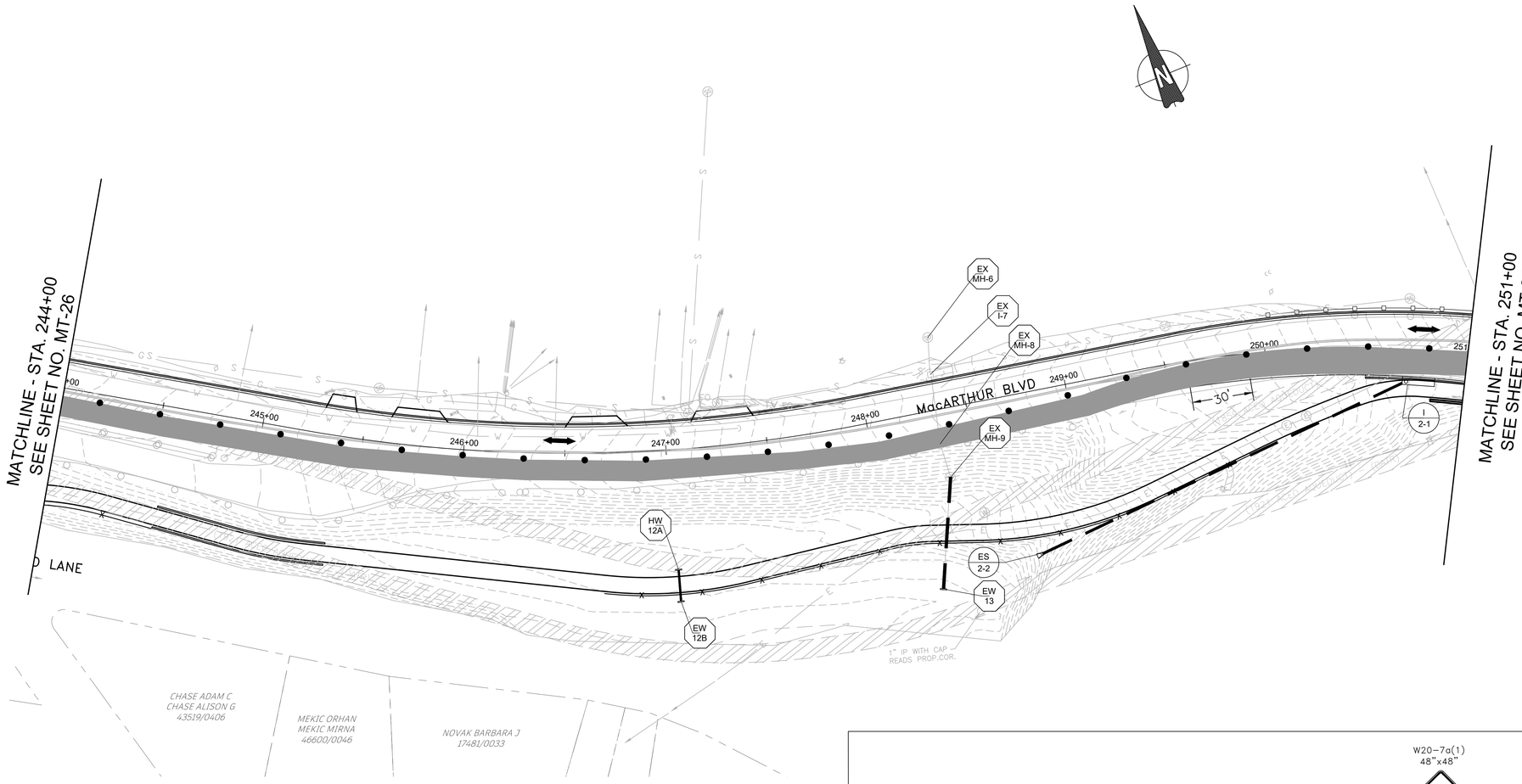
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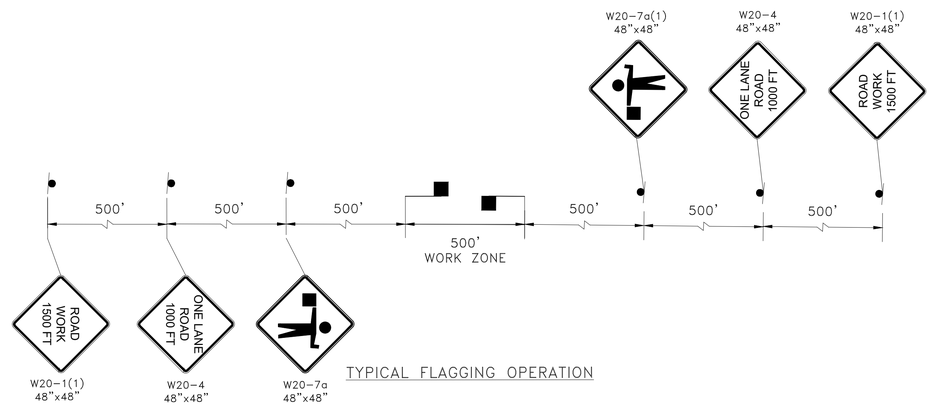
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 111 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

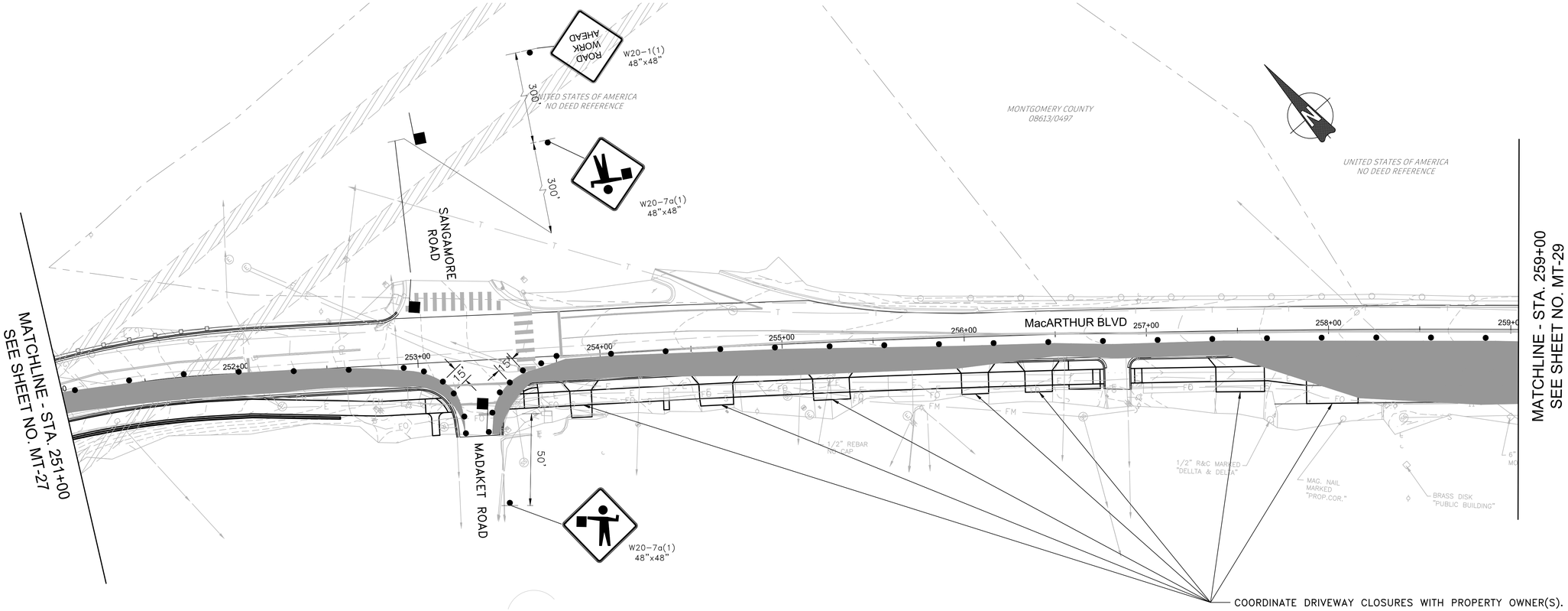
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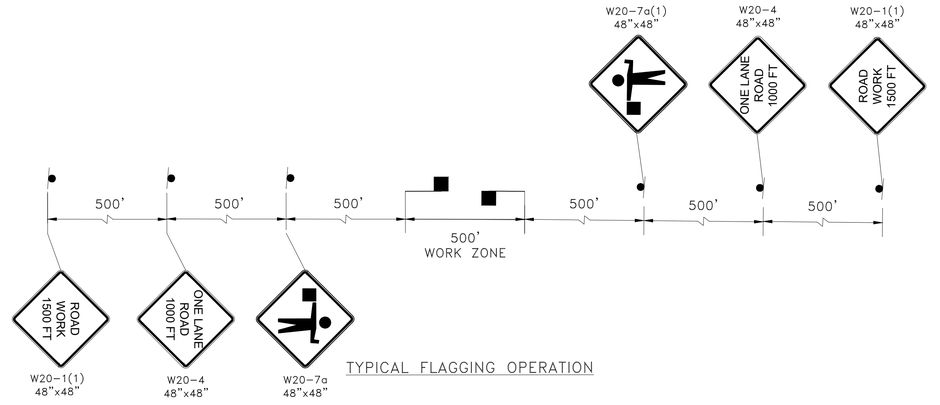
MT-27
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 112 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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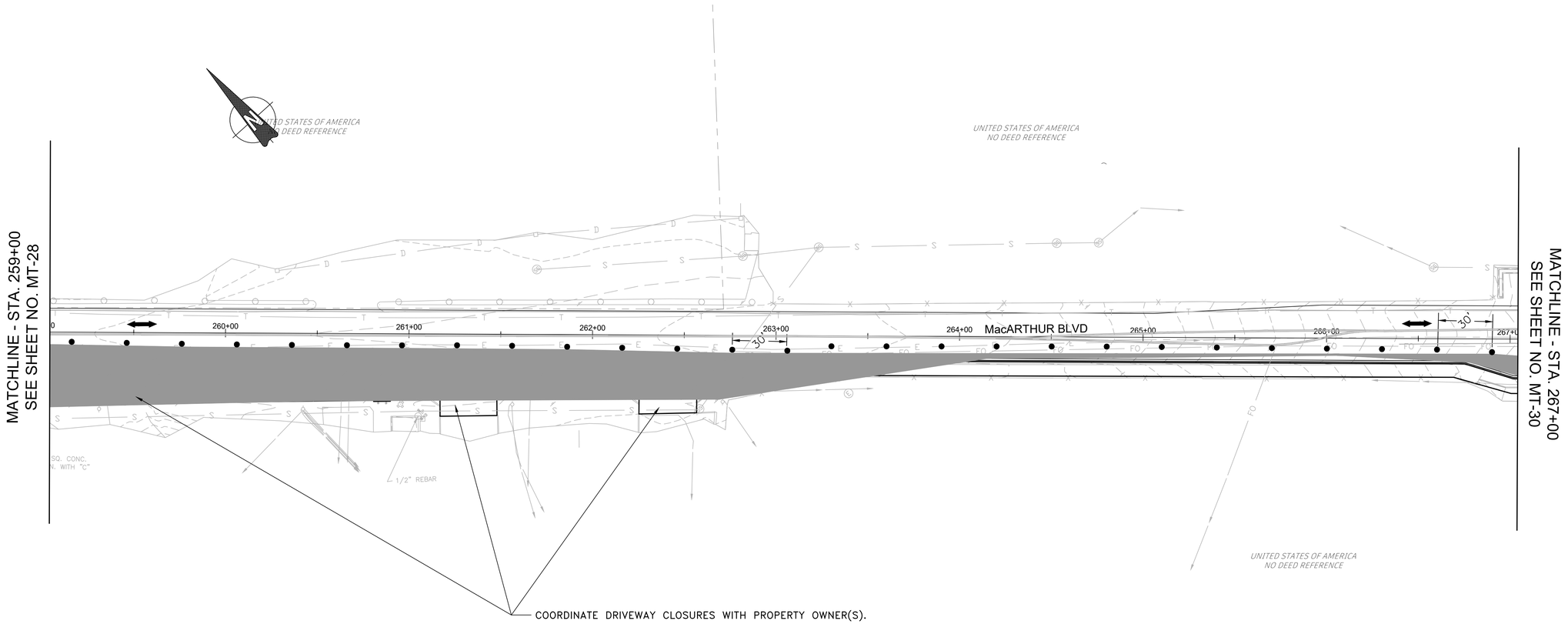
Designed by: MDS Drawn by: MDS Checked by: DJD

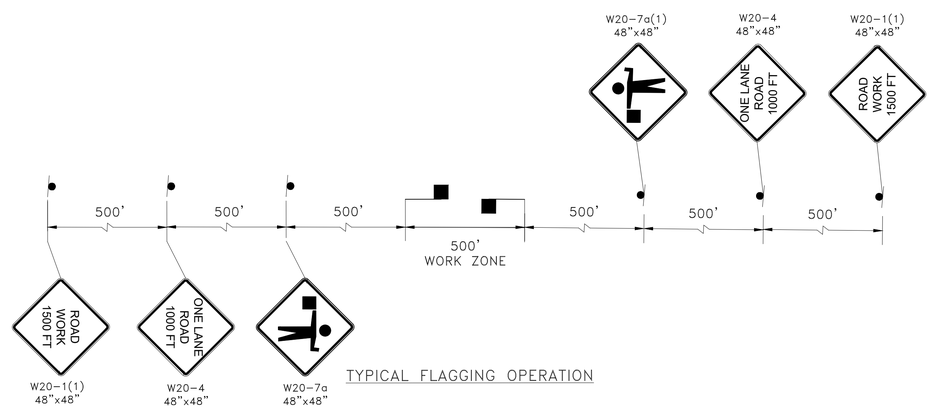
MT-28
MOT PLAN - STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 113 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

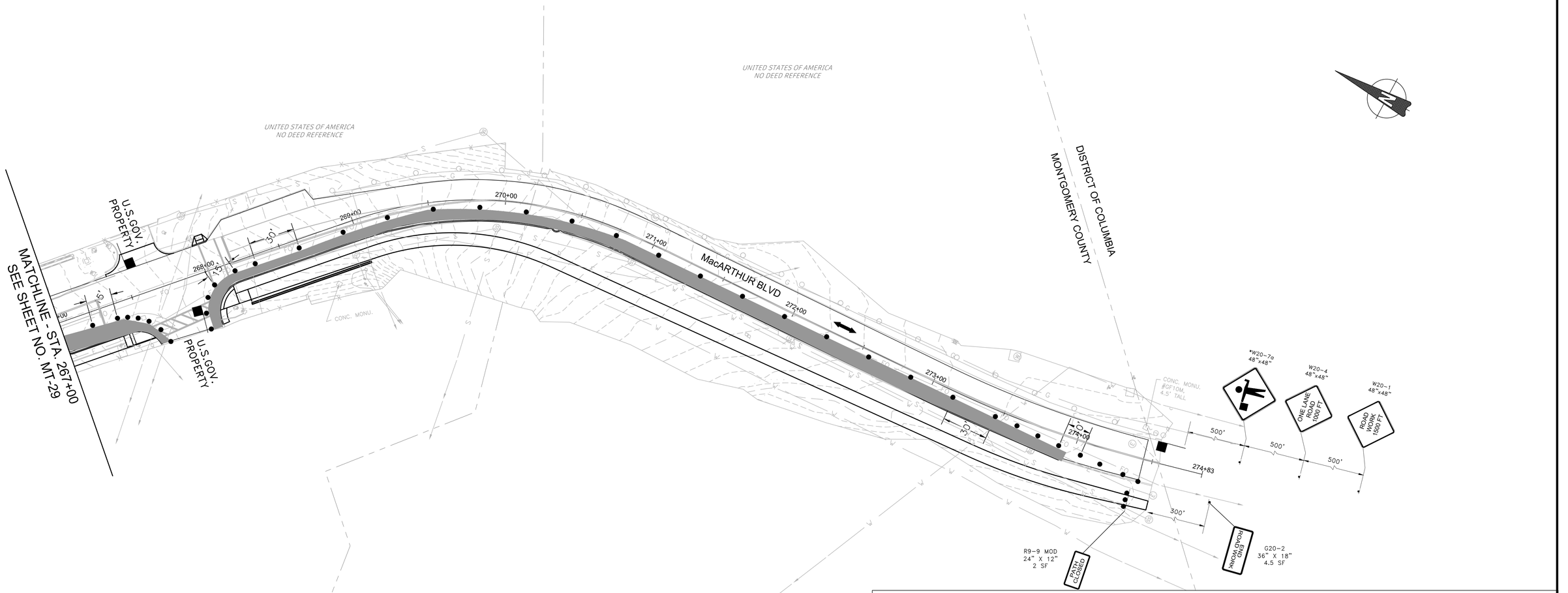
MT-29
MOT PLAN – STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

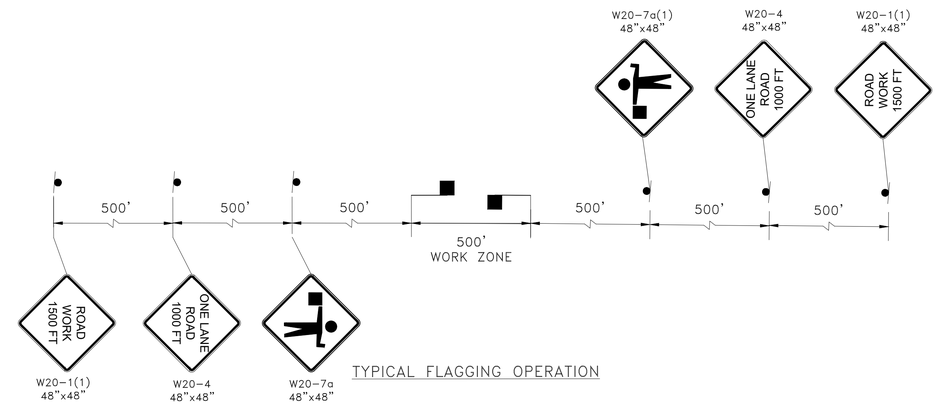
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 114 of 285





TYPICAL FLAGGING OPERATION

MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-30
MOT PLAN - STAGE 2
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

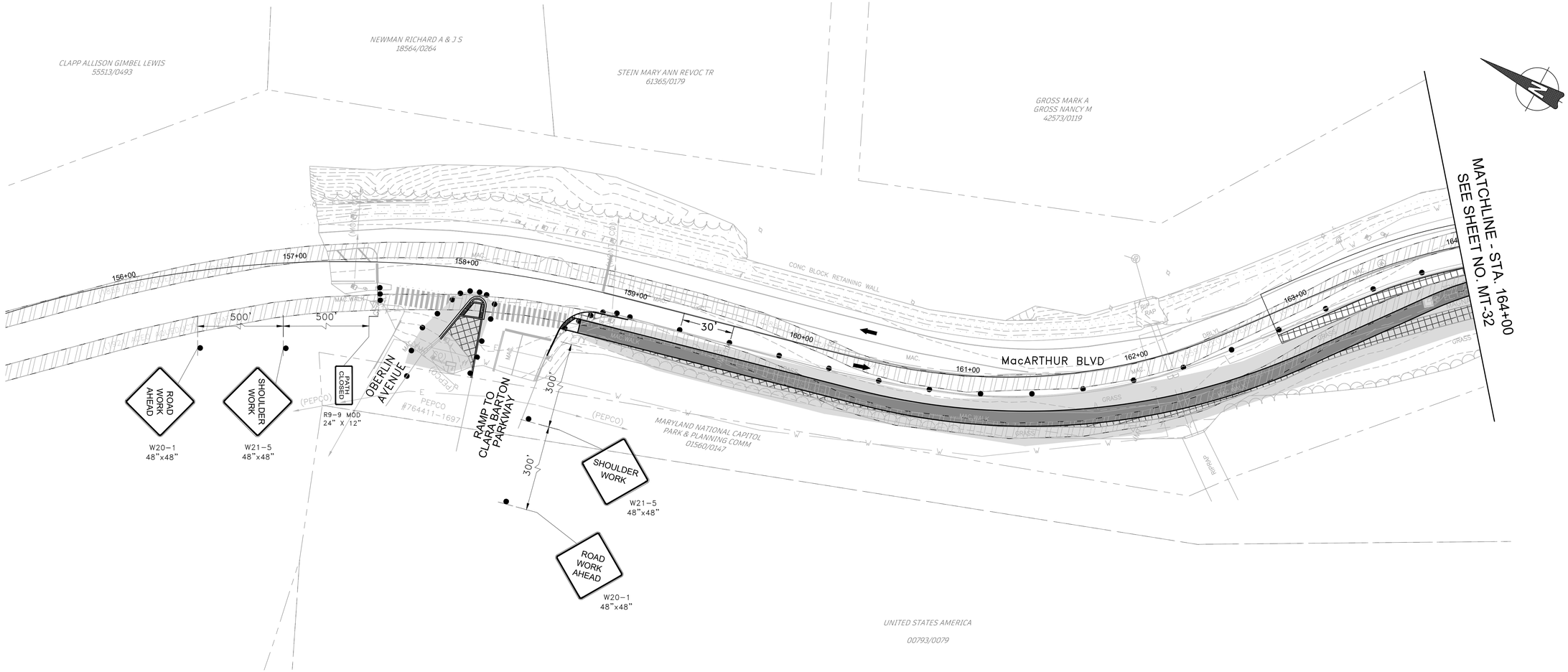
0 30' 60'

SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 115 of 285



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-31
MOT PLAN - STAGE 3

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

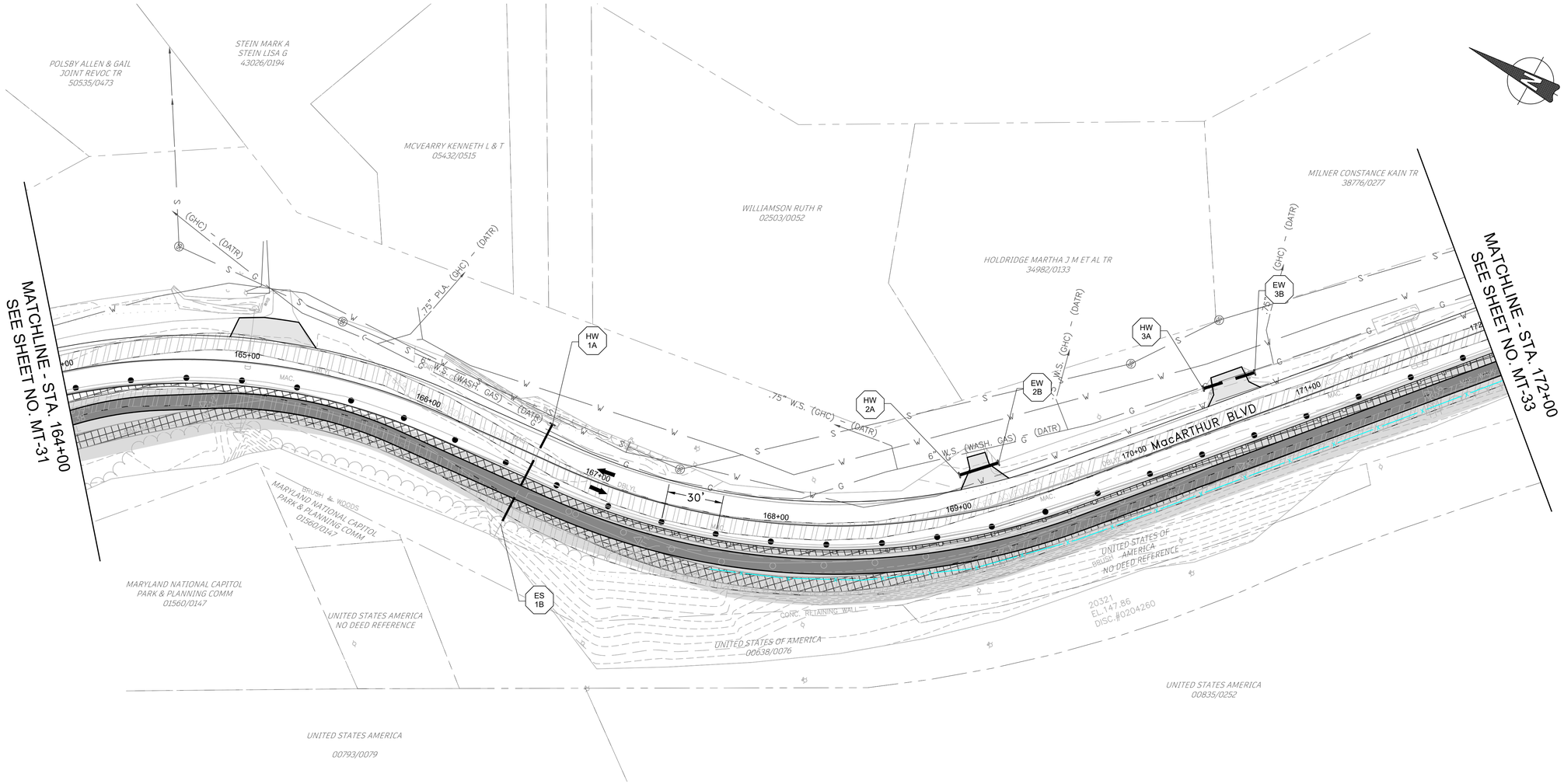
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 116 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-31 PLOTTED: Thursday, June 27, 2024 - 4:05pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

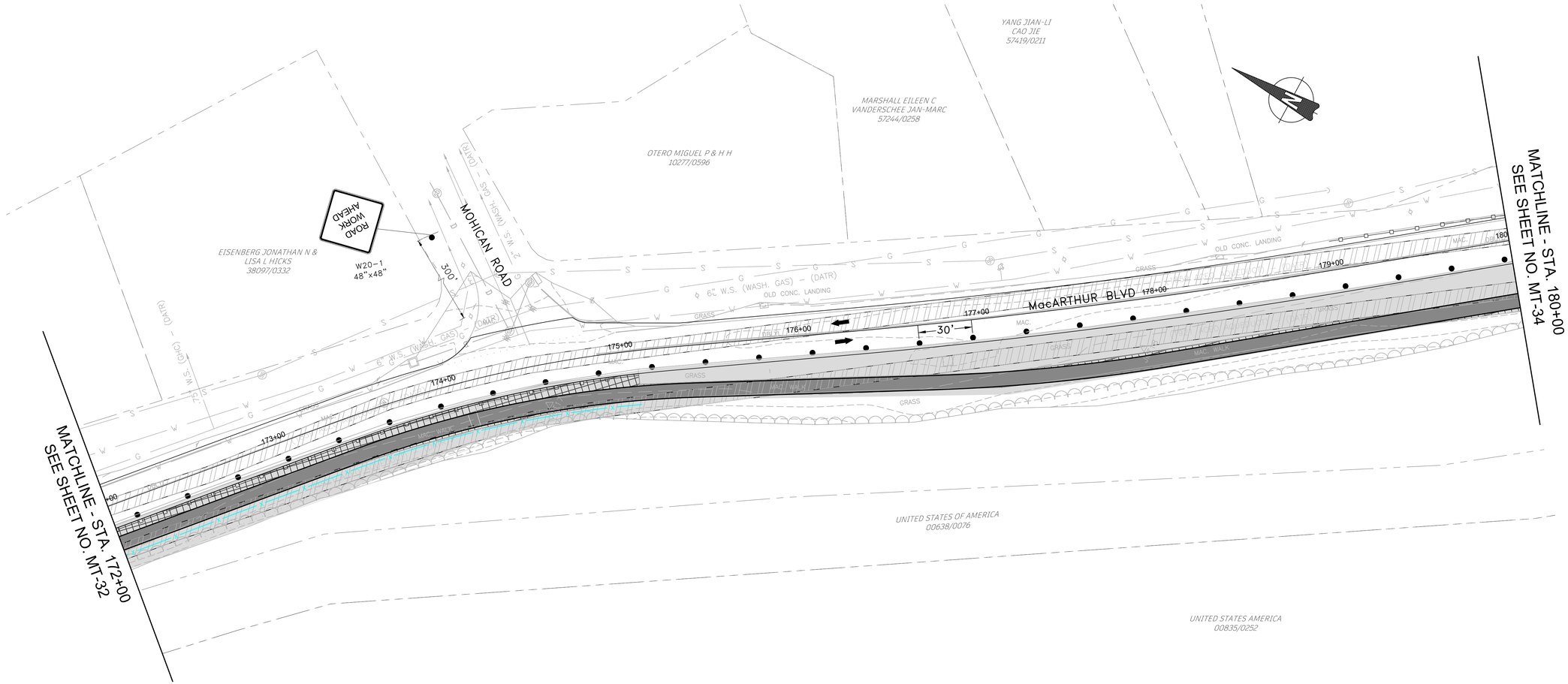
MT- 32
MOT PLAN – STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 117 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-32 PLOTTED: Thursday, June 27, 2024 – 4:05pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

MOT NOTES:

1. UTILIZE FLAGGING OPERATION TO ESTABLISH A 500' +/- WORK ZONE ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.
2. INCREMENTALLY STEP THE WORK ZONE ALONG THE CORRIDOR TO COMPLETE THE PROPOSED PAVEMENT WIDENING ALONG THE NORTH SIDE OF MACARTHUR BOULEVARD.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

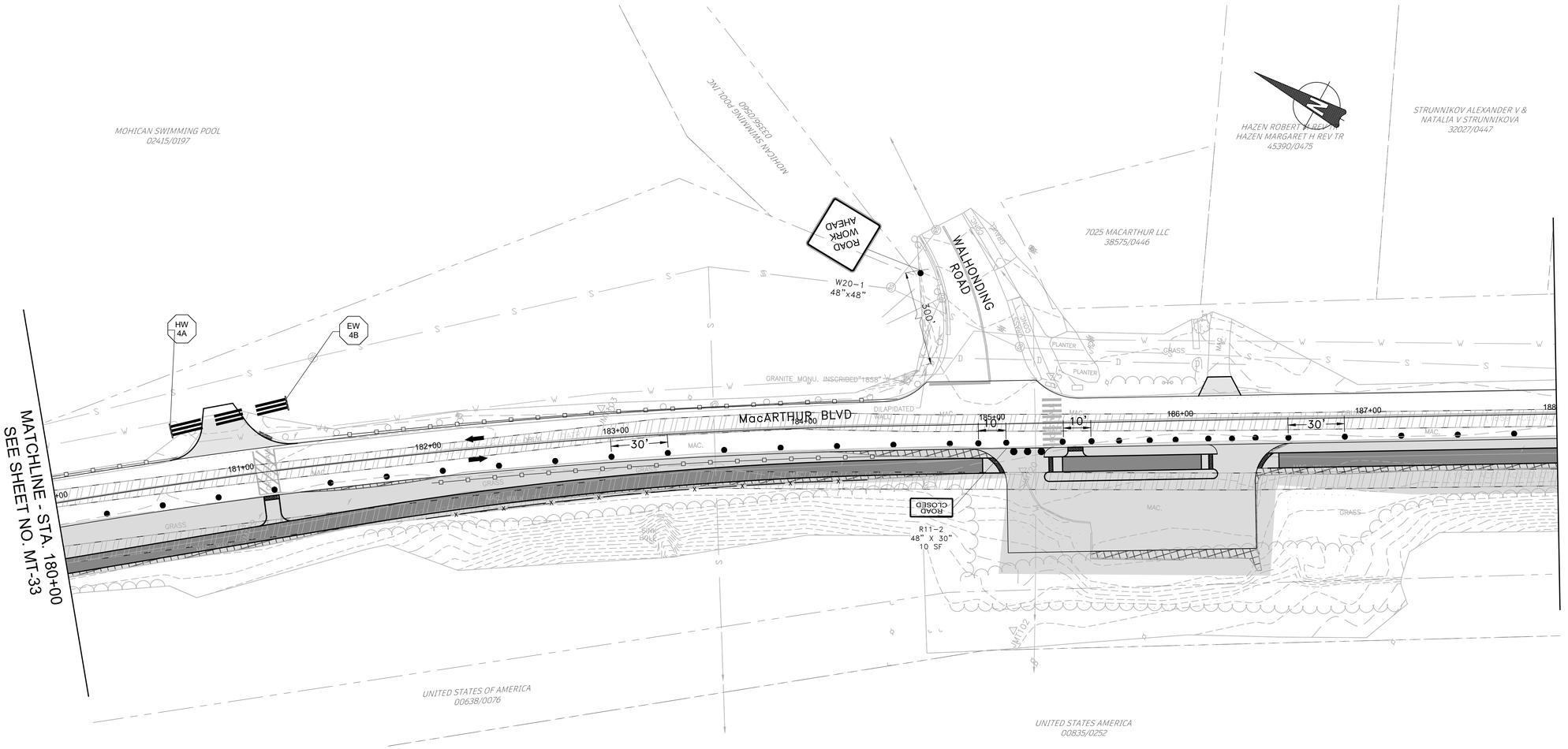
MT-33
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 118 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-33 PLOTTED: Thursday, June 27, 2024 - 4:05pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

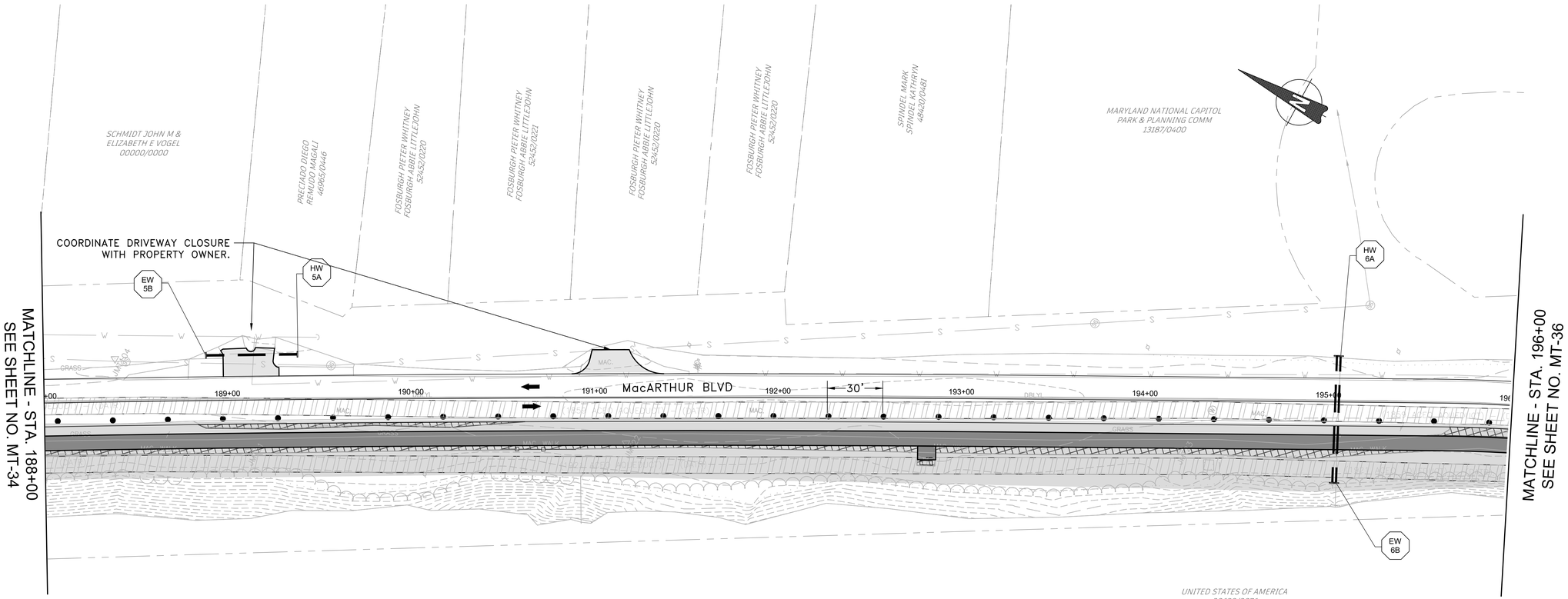
Designed by: MDS Drawn by: MDS Checked by: DJD

MT-34
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30'
DATE: JUNE 2024

CIP No. : 500718
SHEET 119 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-34 PLOTTED: Thursday, June 27, 2024 - 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-35
MOT PLAN – STAGE 3

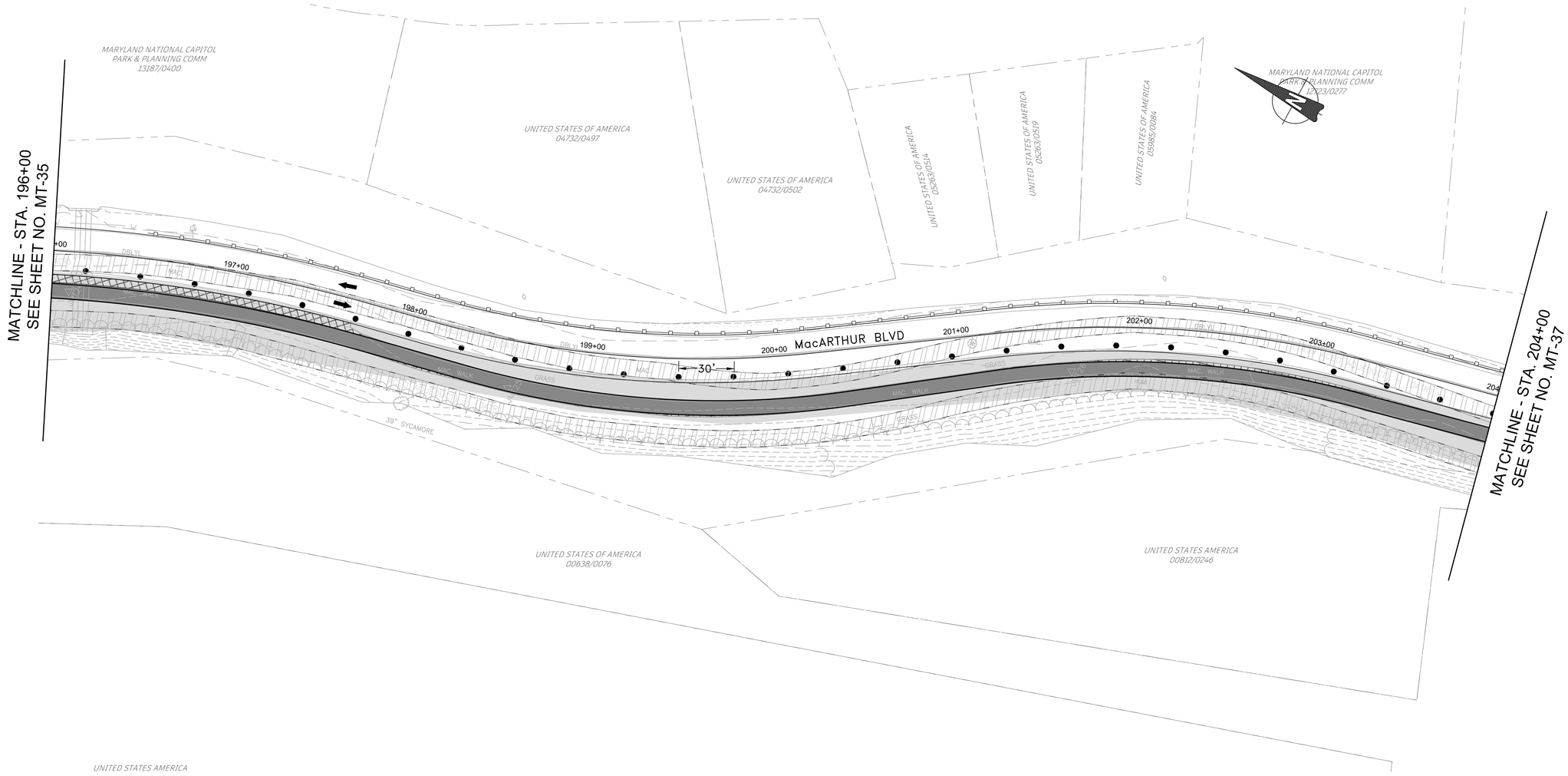
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 120 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-35 PLOTTED: Thursday, June 27, 2024 – 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-36
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

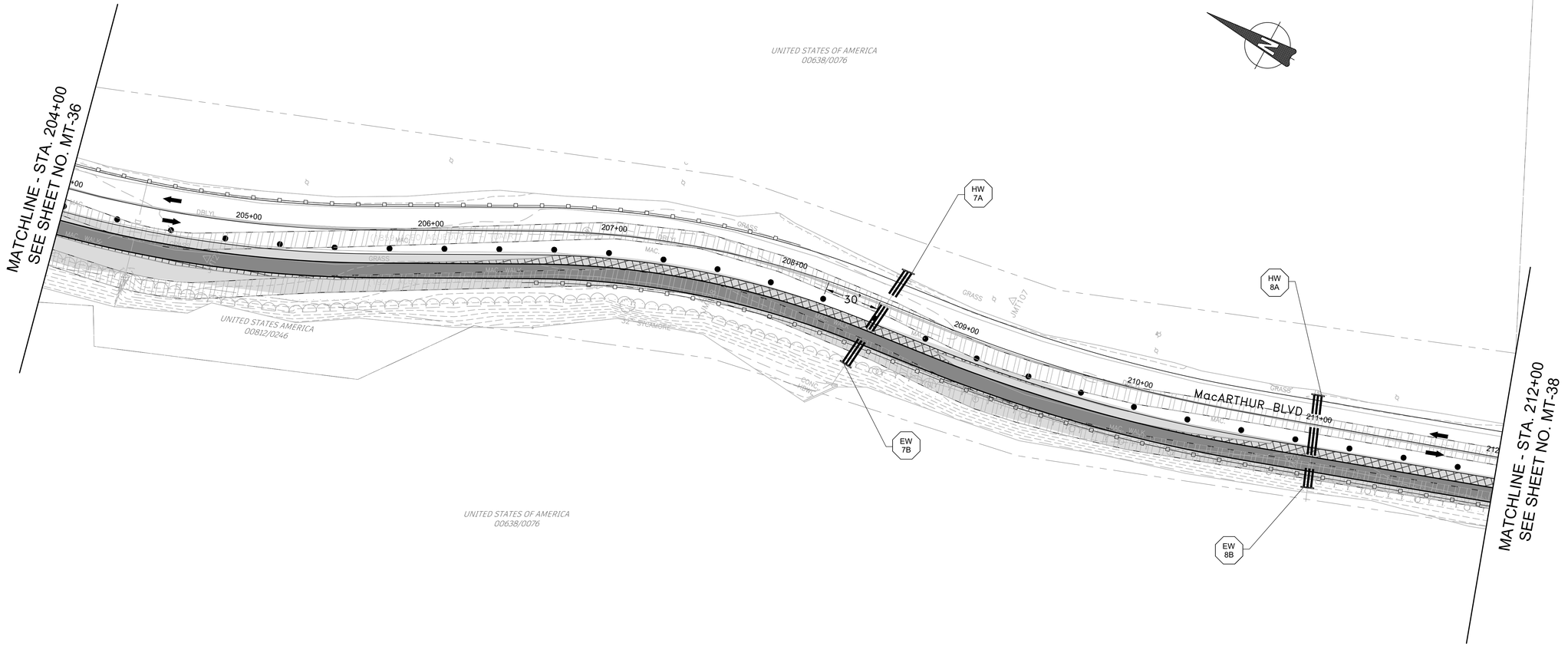
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 121 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-36 PLOTTED: Thursday, June 27, 2024 - 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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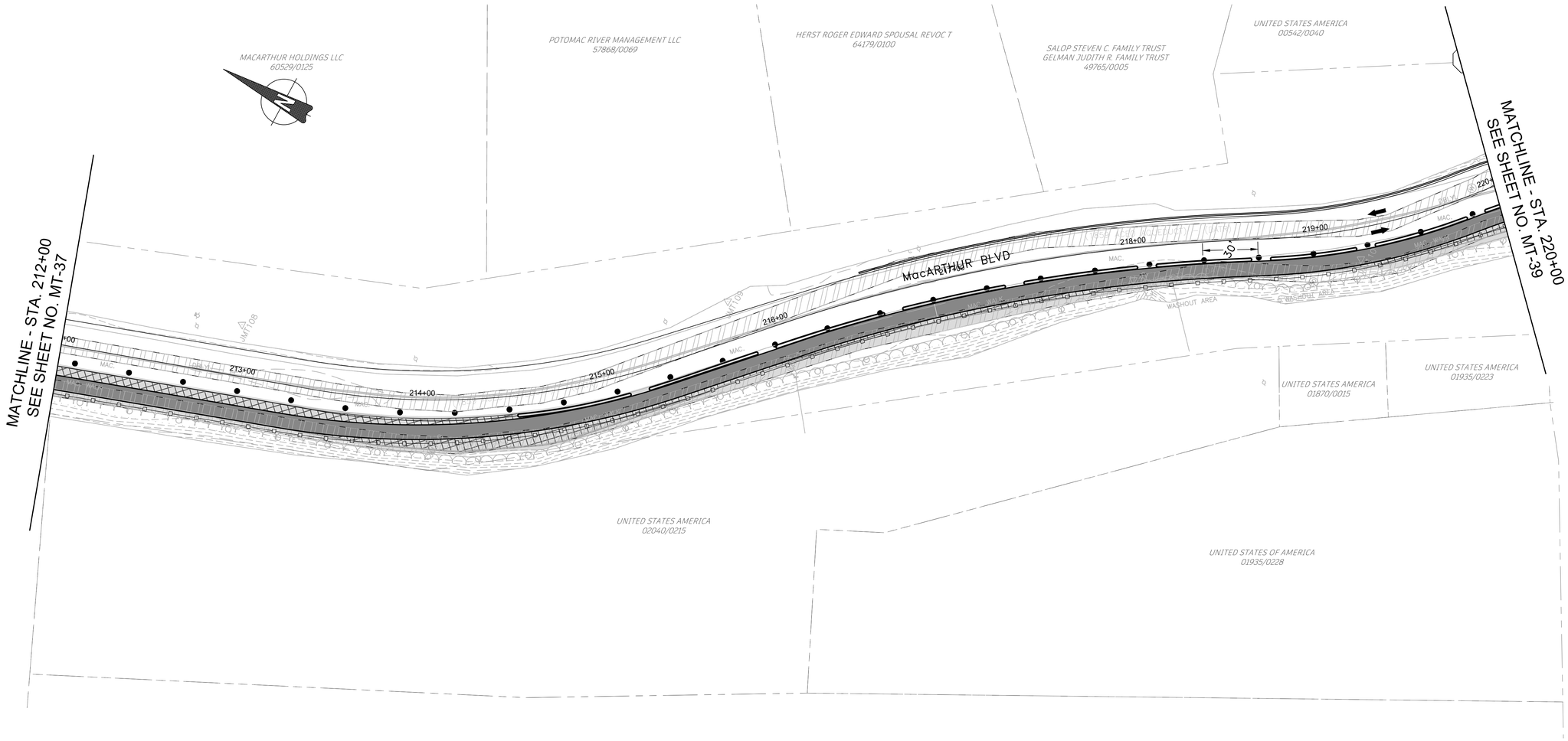
MT-37
MOT PLAN – STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 122 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-37 PLOTTED: Thursday, June 27, 2024 – 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
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- WORK ZONE THIS STAGE
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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-38
MOT PLAN - STAGE 3

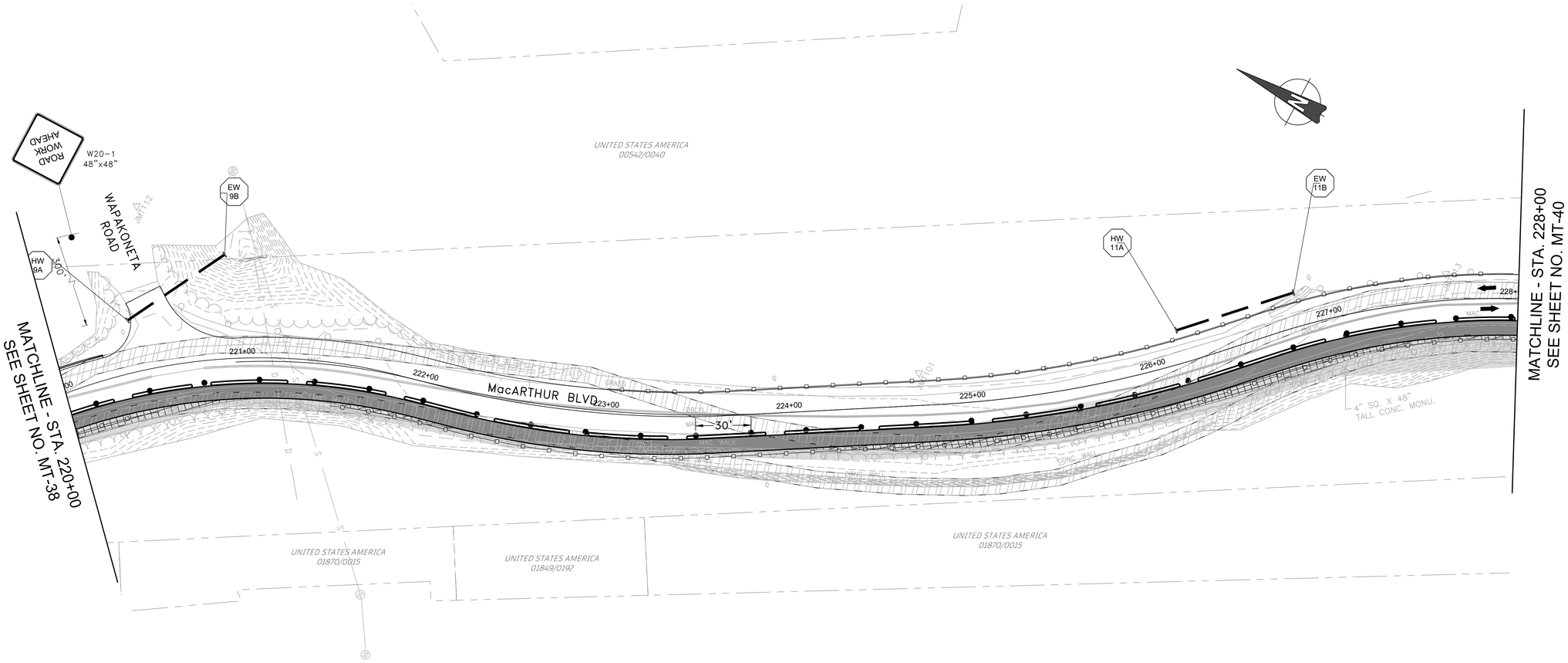
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 123 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-38 PLOTTED: Thursday, June 27, 2024 - 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
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- WORK ZONE THIS STAGE
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-39
MOT PLAN - STAGE 3

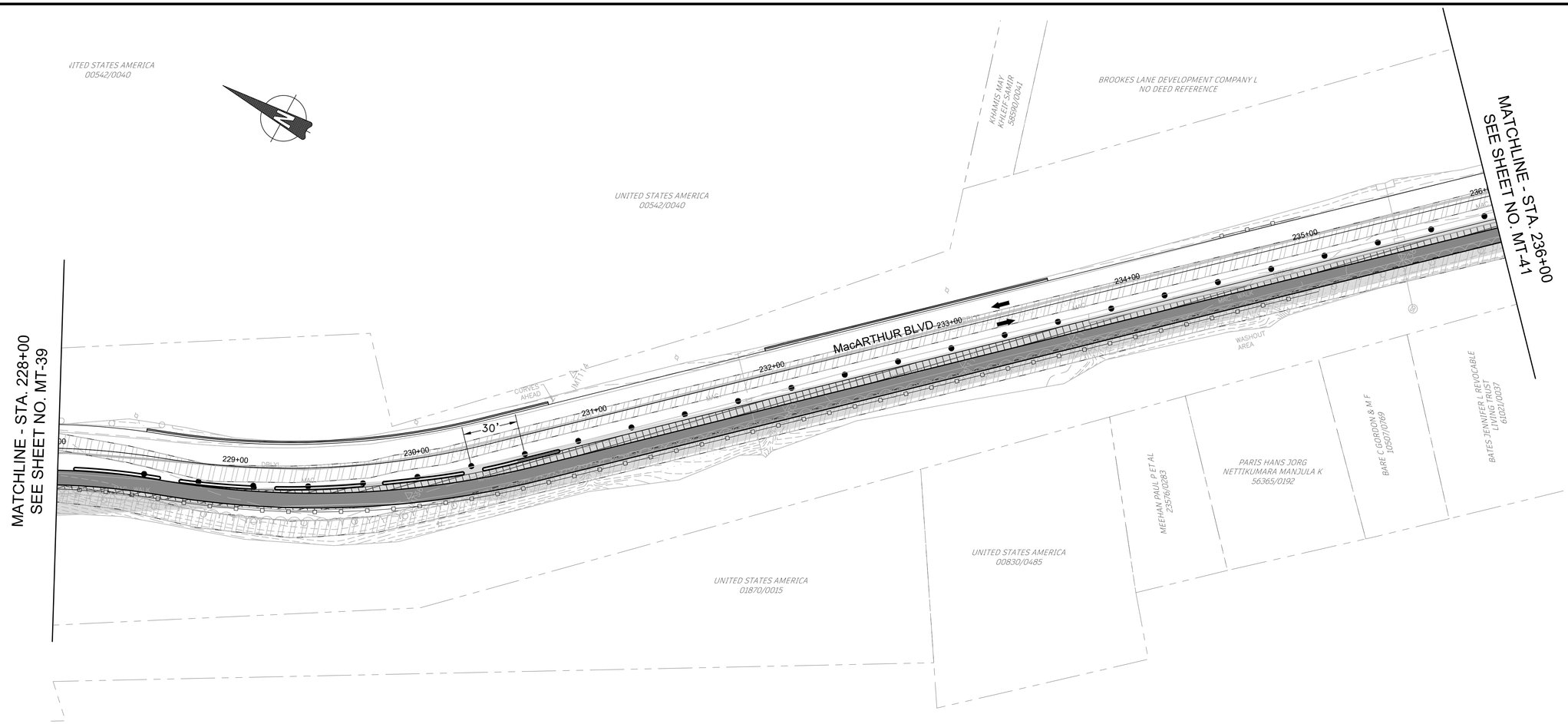
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 124 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-39 PLOTTED: Thursday, June 27, 2024 - 4:06pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
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- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

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Designed by: MDS Drawn by: MDS Checked by: DJD

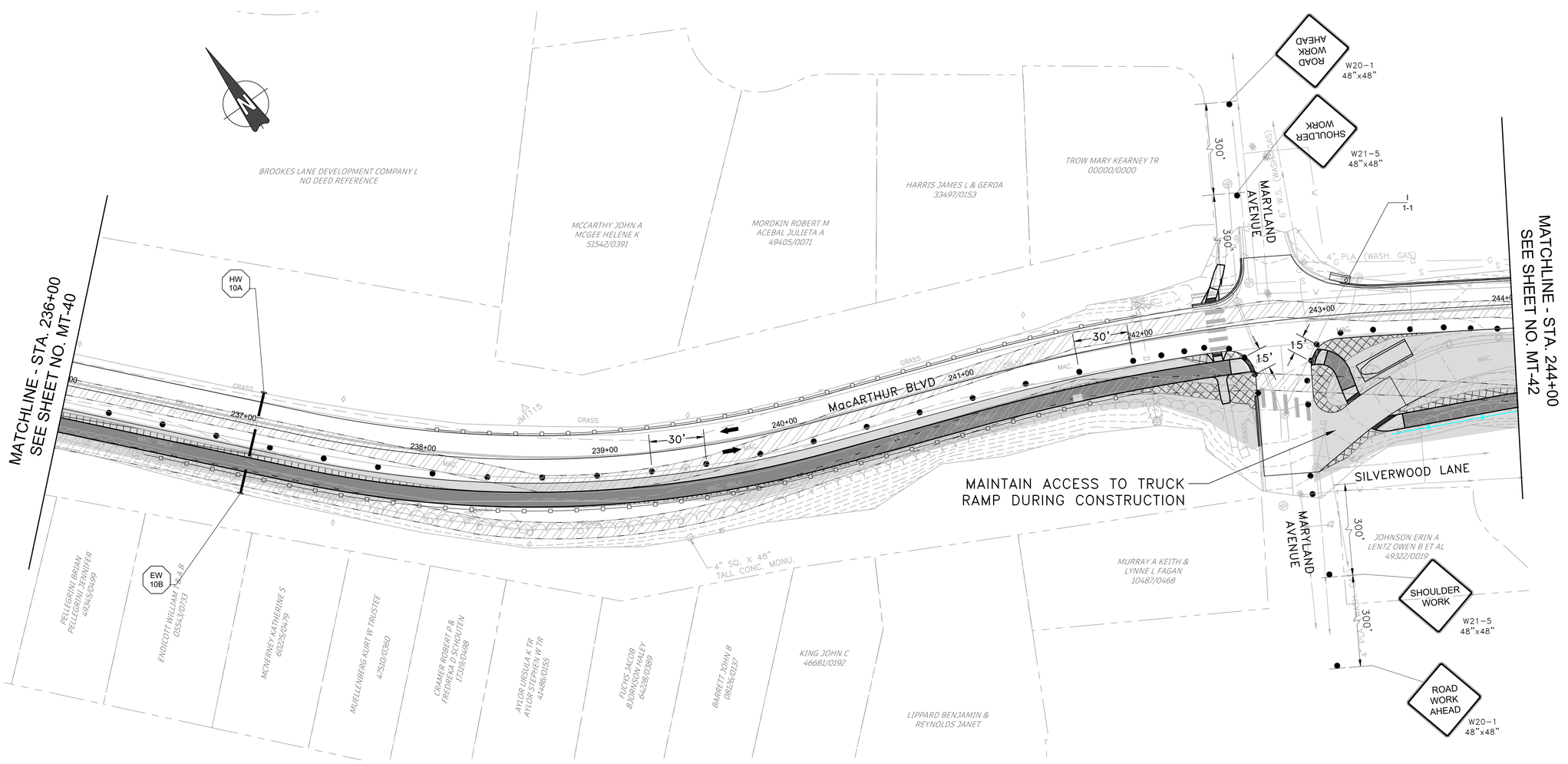
MT-40
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 125 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-40 PLOTTED: Thursday, June 27, 2024 - 4:07pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-41
MOT PLAN – STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 126 of 285



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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DRAFT
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

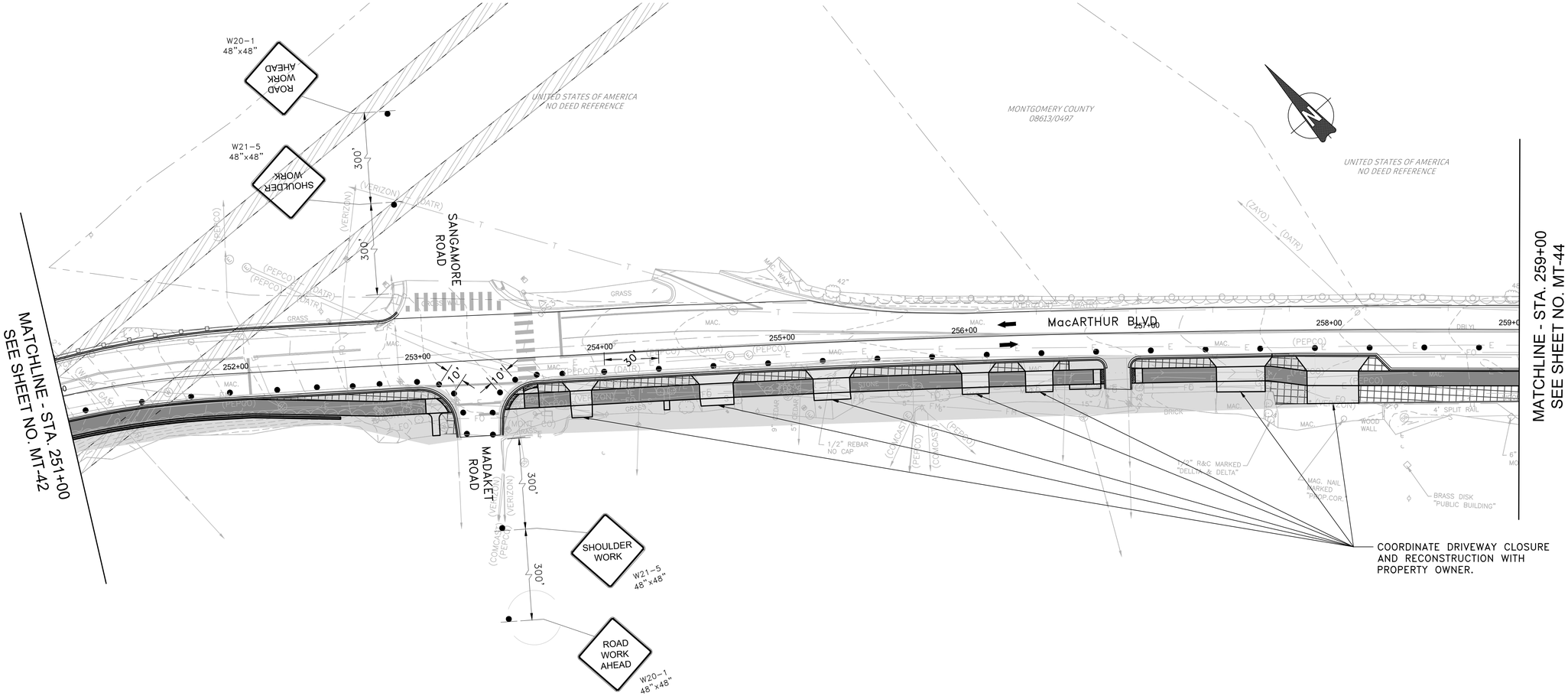
MT-42
MOT PLAN – STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 127 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-42 PLOTTED: Thursday, June 27, 2024 – 4:07pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

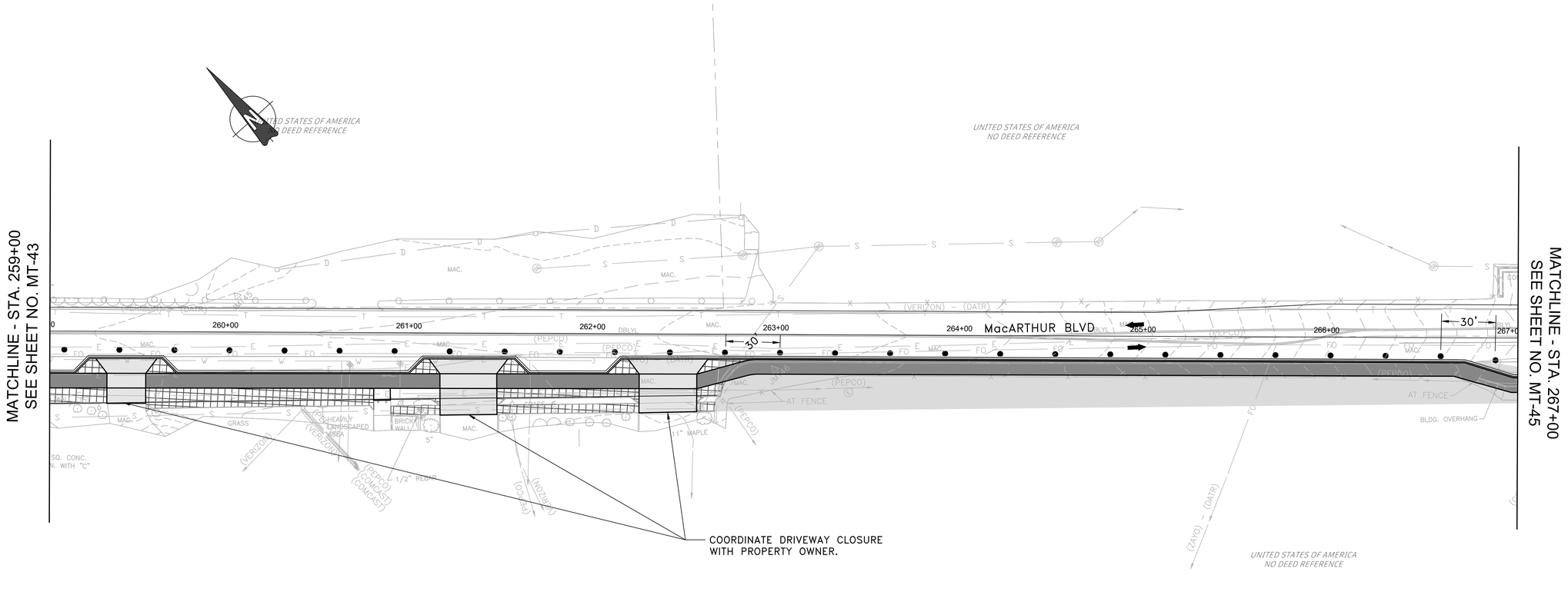
MT-43
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 128 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-43 PLOTTED: Thursday, June 27, 2024 - 4:07pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT–44
MOT PLAN – STAGE 3

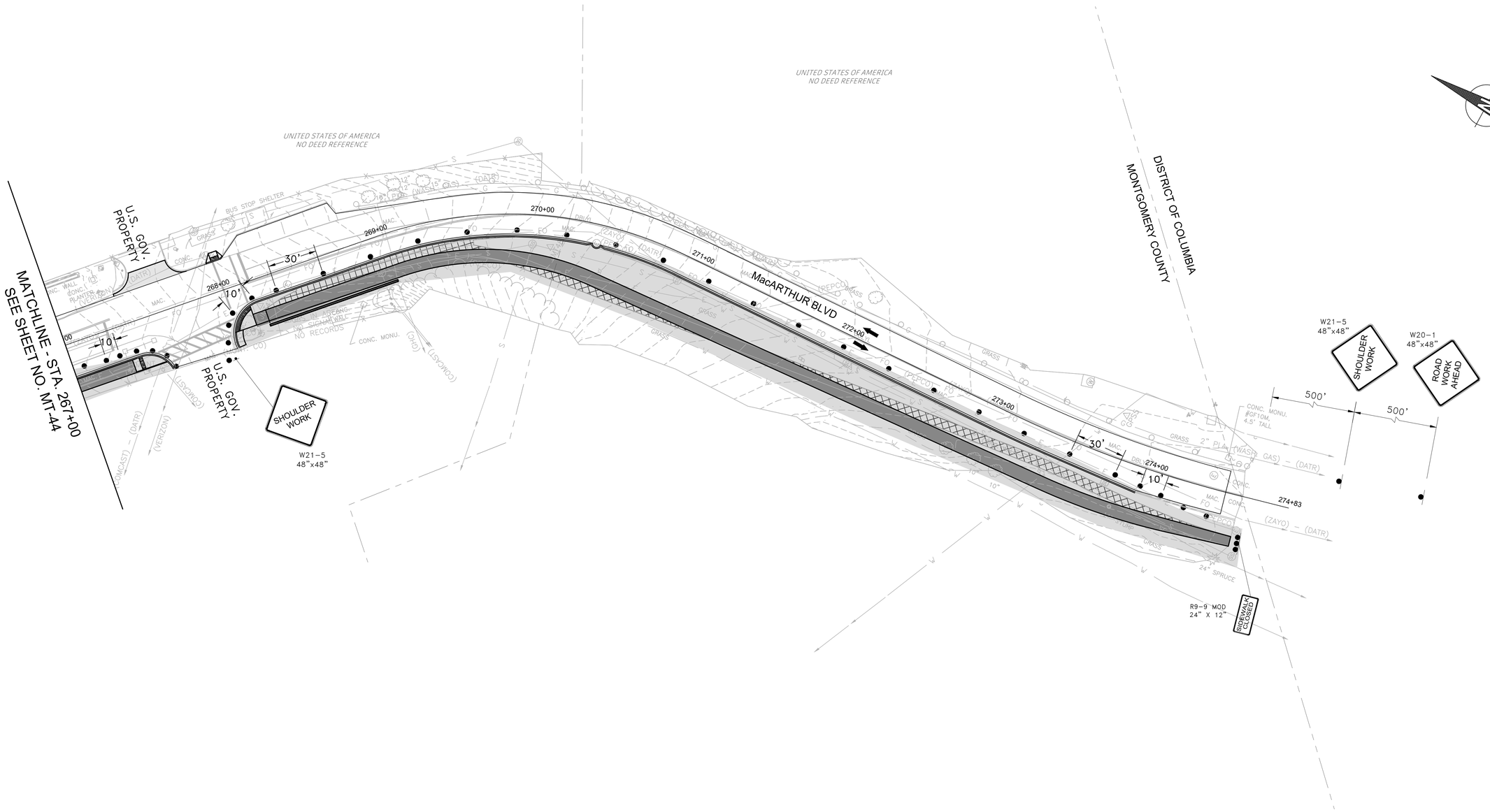
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 129 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT–0003_MacArthur.dwg LAYOUT NAME: MT–44 PLOTTED: Thursday, June 27, 2024 – 4:07pm USER: CStricker



MOT LEGEND:

- TEMPORARY SIGN
- FLAGGER LOCATION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- WORK ZONE THIS STAGE
- TRAFFIC FLOW ARROW

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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: DJD

MT-45
MOT PLAN - STAGE 3
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

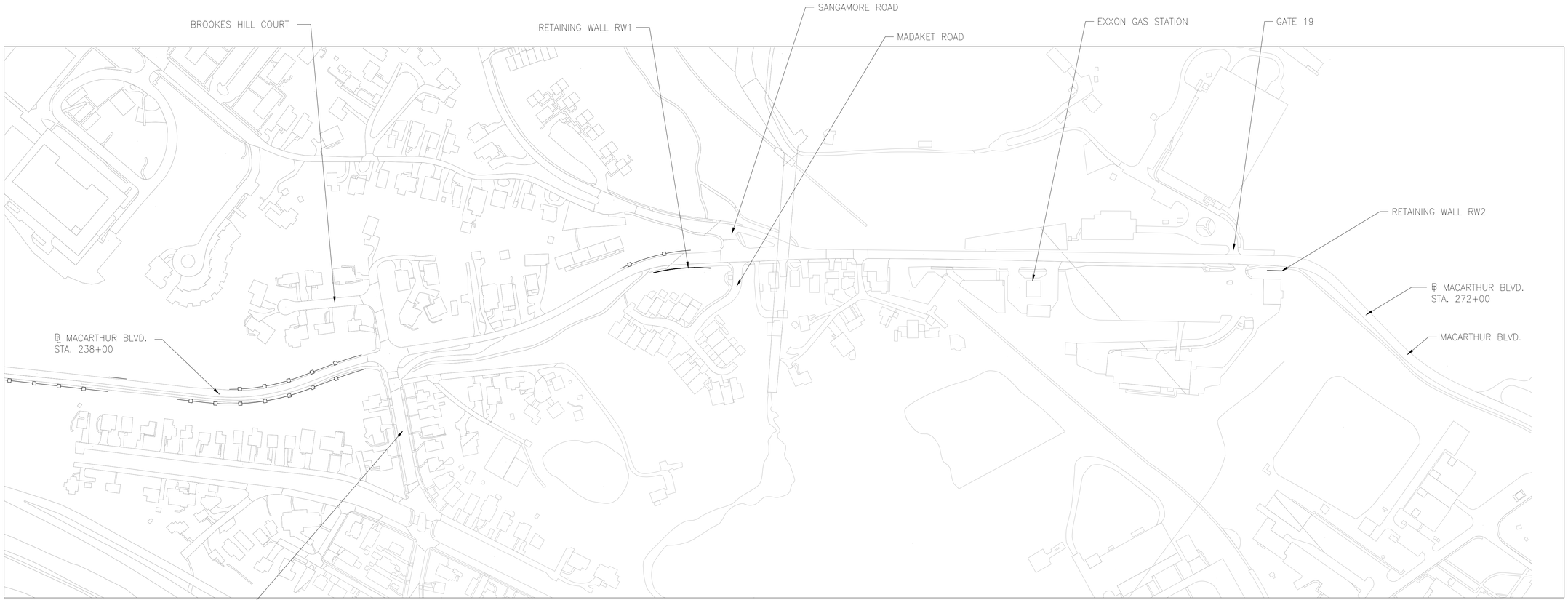
CIP No. : 500718 SHEET 130 of 285

FILE NAME: C:\pwworking\jmt\d0320773\pMT-0003_MacArthur.dwg LAYOUT NAME: MT-45 PLOTTED: Thursday, June 27, 2024 - 4:07pm USER: CStricker

GENERAL NOTES:

SPECIFICATIONS: MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY, 2023.

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION DATED 2020.



STRUCTURE LOCATION PLAN

SCALE: 1" = 150'-0"

DRAFT
NOT FOR CONSTRUCTION

ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: JS Drawn by: DT Checked by: KA

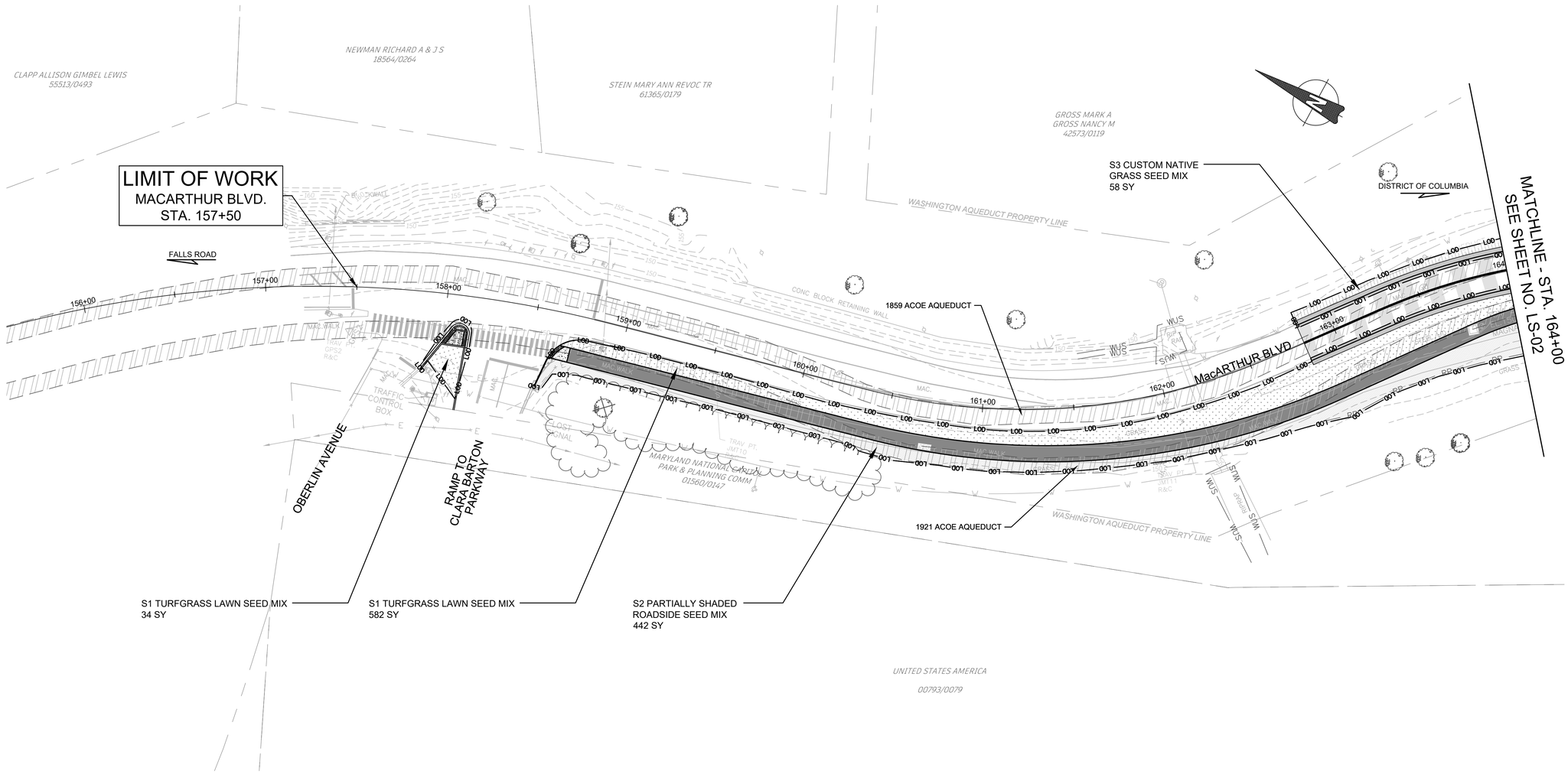
ST-01
GENERAL NOTES

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 148 of 285

FILE NAME: C:\pwworking\jmt\d0322045\01_General Notes.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 - 12:21pm USER: DTurner-Smith



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	616 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	442 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	58 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
2. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TOPSOIL, SEED MIX AS IDENTIFIED ON PLAN SHEET, AND MULCH.
4. REFER TO PLAN SHEET LS-16 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INSPECTIONS, AND TREE CANOPY INFORMATION.
5. REFER TO PLAN SHEET LS-17 FOR TREE PLANTING DETAIL.
6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
7. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
8. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 154+50 TO STA. 164+00

LS-01
LANDSCAPE PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

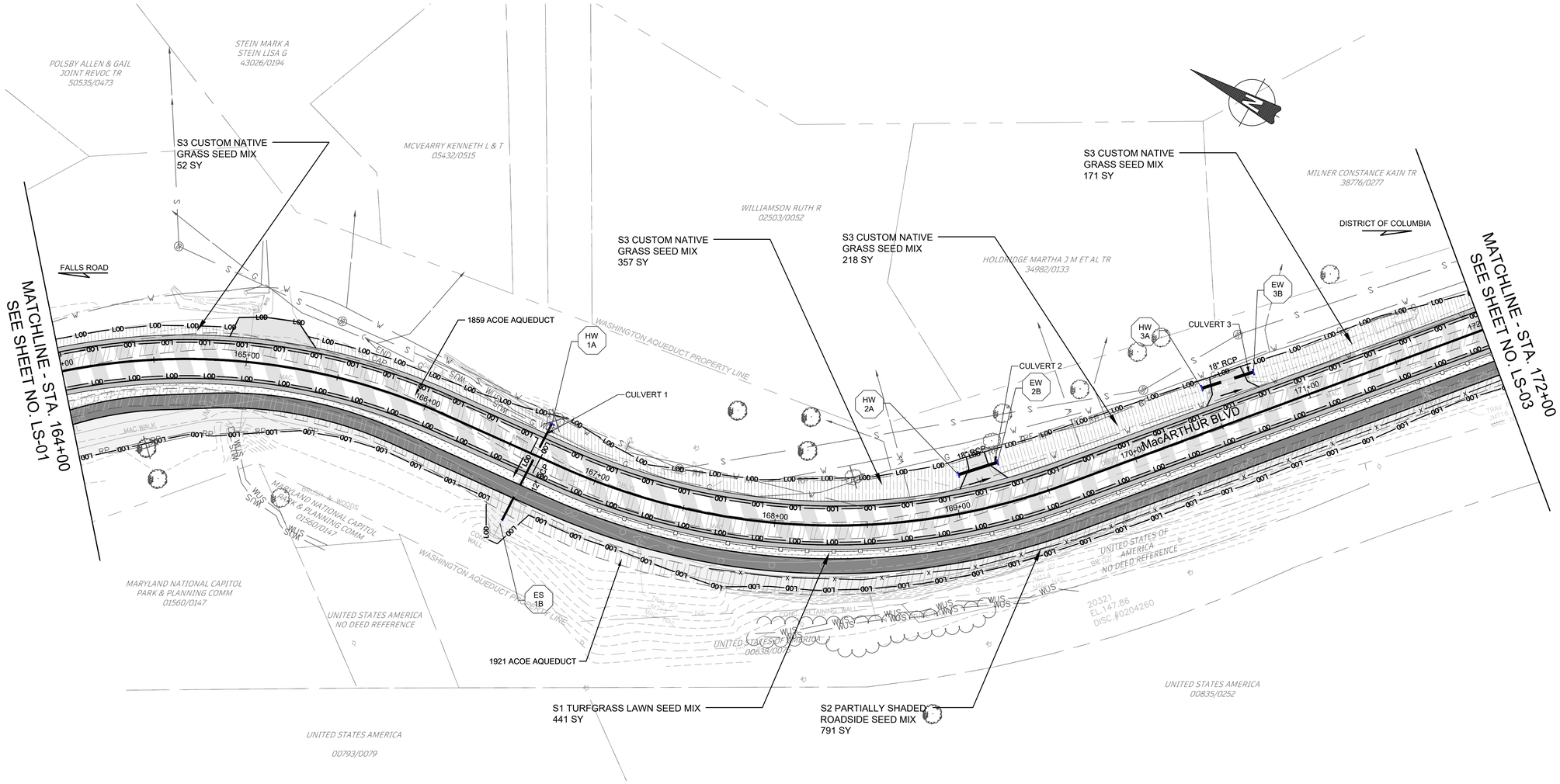
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 131 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	441 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	791 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	798 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
2. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TOPSOIL, SEED MIX AS IDENTIFIED ON PLAN SHEET, AND MULCH.
4. REFER TO PLAN SHEET LS-16 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INSPECTIONS, AND TREE CANOPY INFORMATION.
5. REFER TO PLAN SHEET LS-17 FOR TREE PLANTING DETAIL.
6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
7. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
8. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 164+00 TO STA. 172+00

LS-02
LANDSCAPE PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

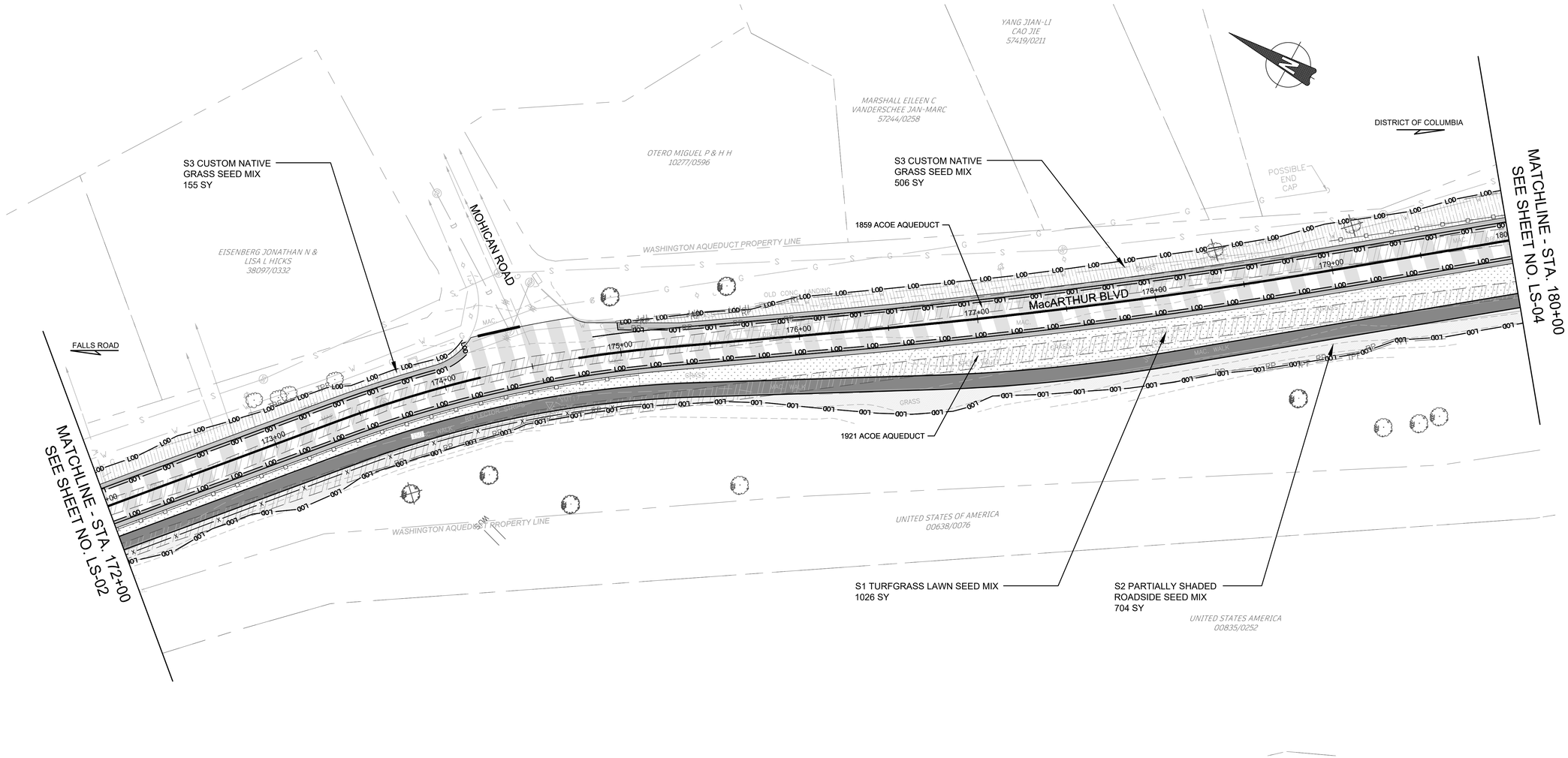
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No.: 500718

SHEET 132 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	1026 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	704 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	661 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 172+00 TO STA. 180+00

LS-03
LANDSCAPE PLAN

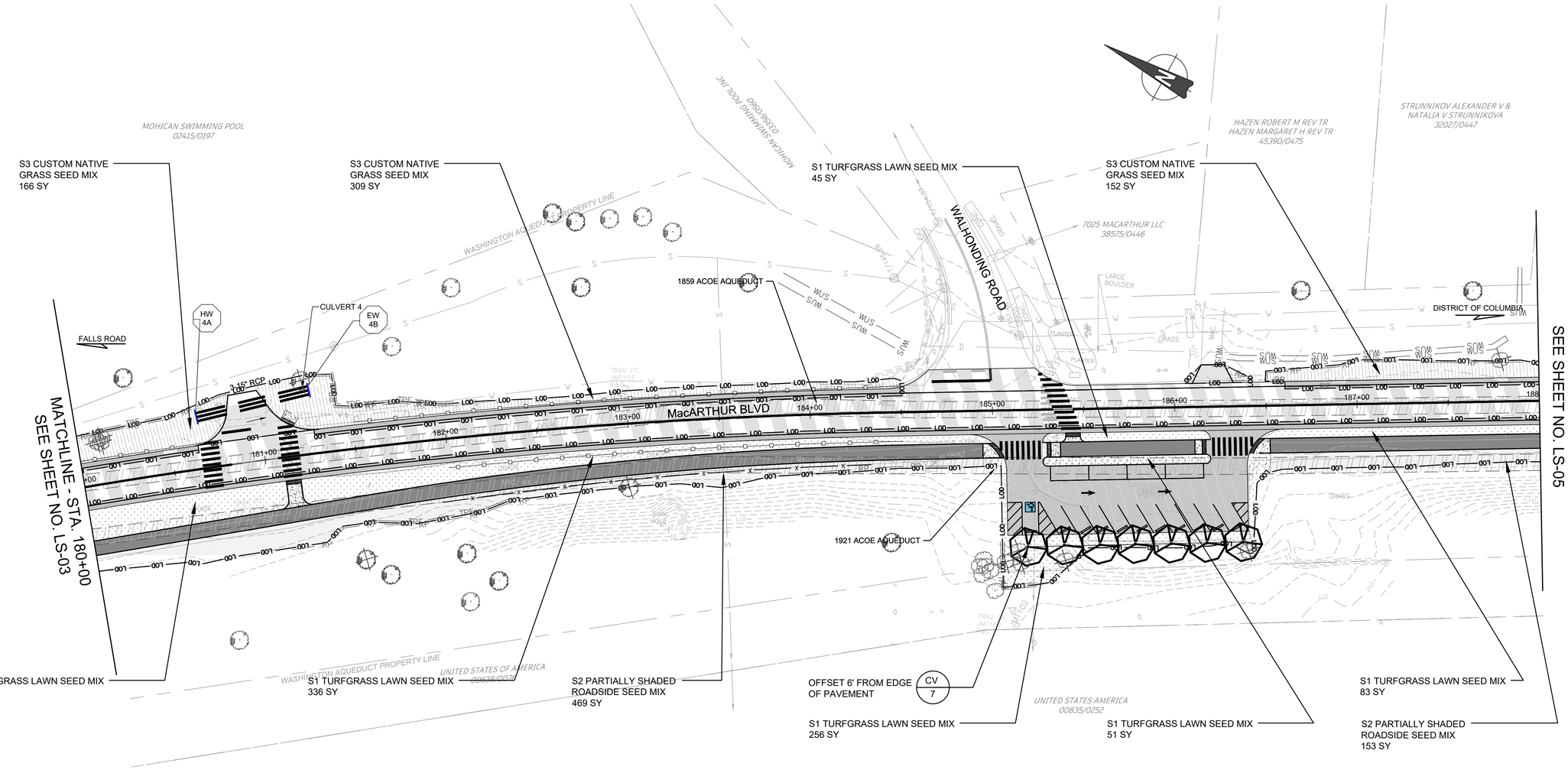
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 133 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	968 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	622 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	627 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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LANDSCAPE PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
CV	7	CRATAEGUS VIRIDIS 'WINTER KING'	'WINTER KING' GREEN HAWTHORN	2.5" CAL.	B&B	20' O.C.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 180+00 TO STA. 188+00

LS-04
LANDSCAPE PLAN

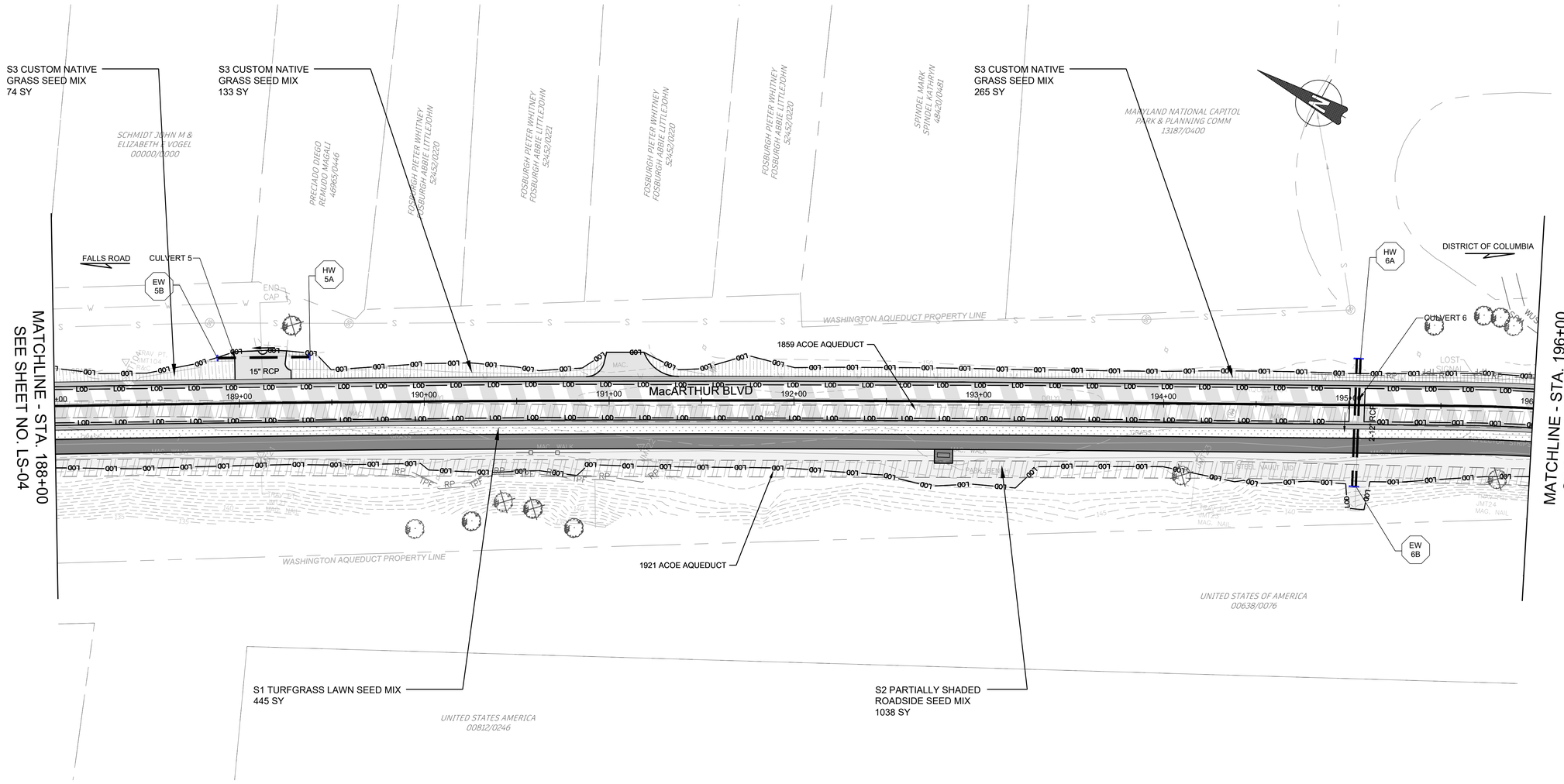
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 134 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	445 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1038 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	472 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 188+00 TO STA. 196+00

LS-05
LANDSCAPE PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

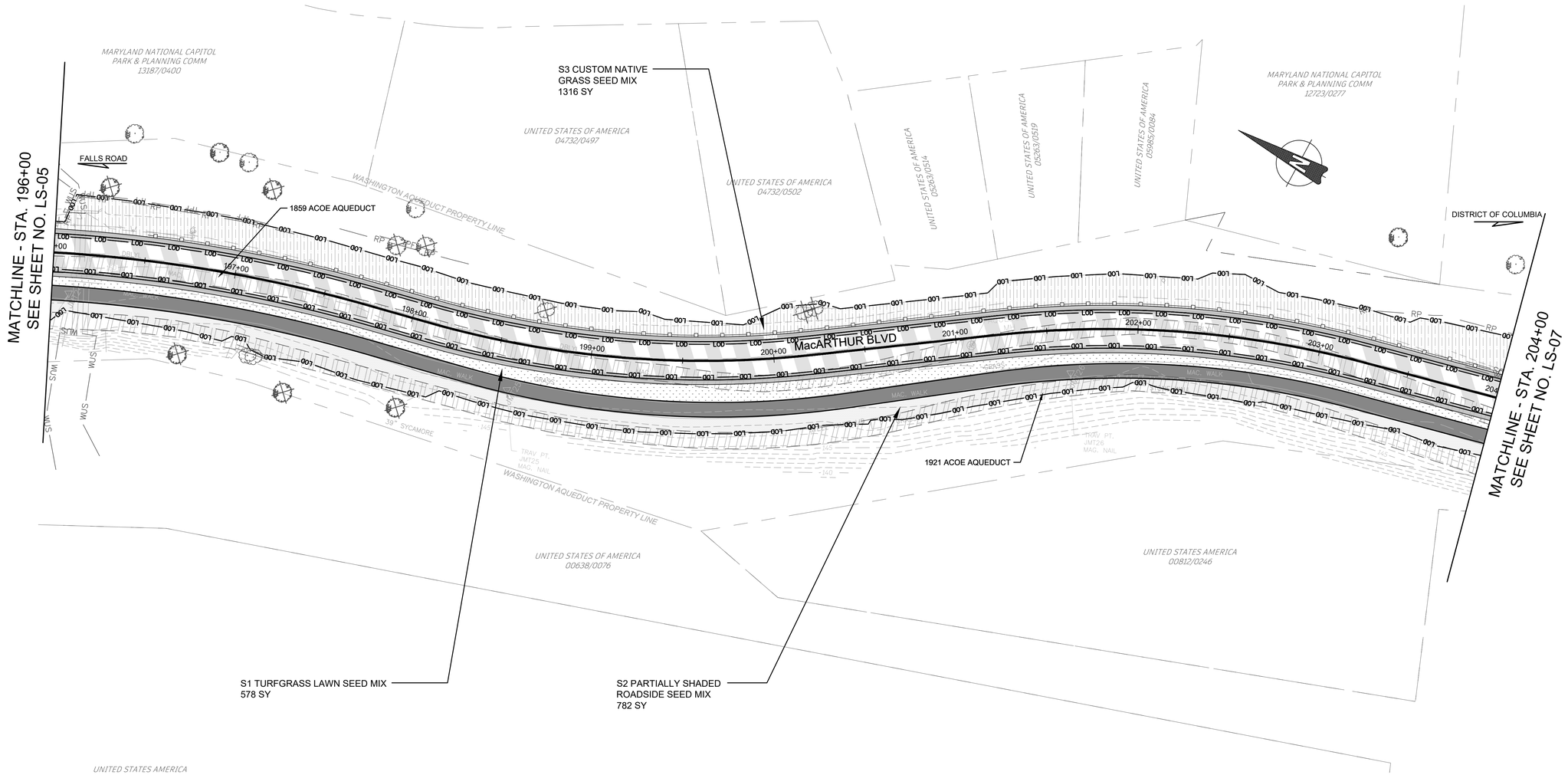
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 135 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	578 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	782 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1316 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 196+00 TO STA. 204+00

LS-06
LANDSCAPE PLAN

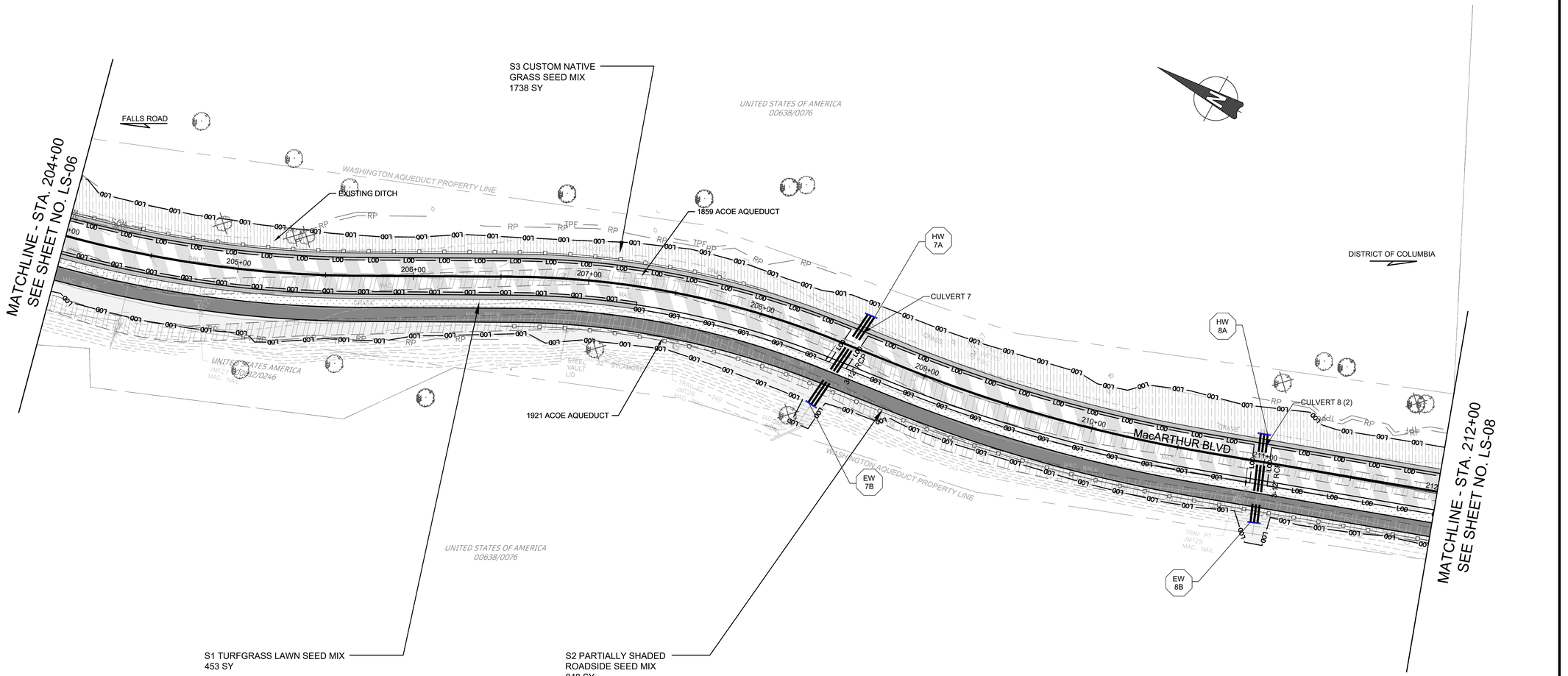
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 136 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	453 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	848 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1738 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 204+00 TO STA. 212+00

LS-07
LANDSCAPE PLAN

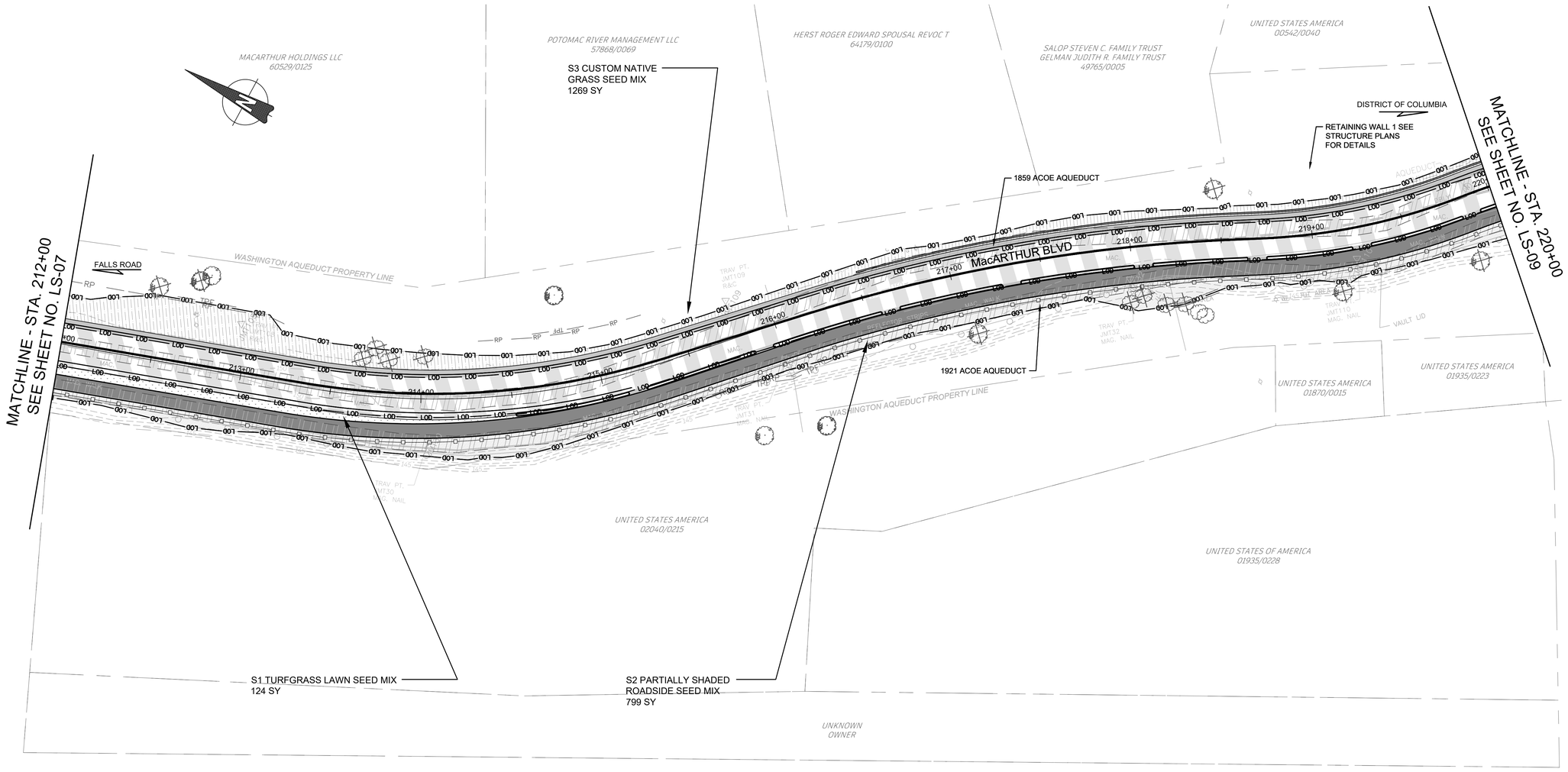
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 137 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	124 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	799 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1269 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 212+00 TO STA. 220+00

LS-08
LANDSCAPE PLAN

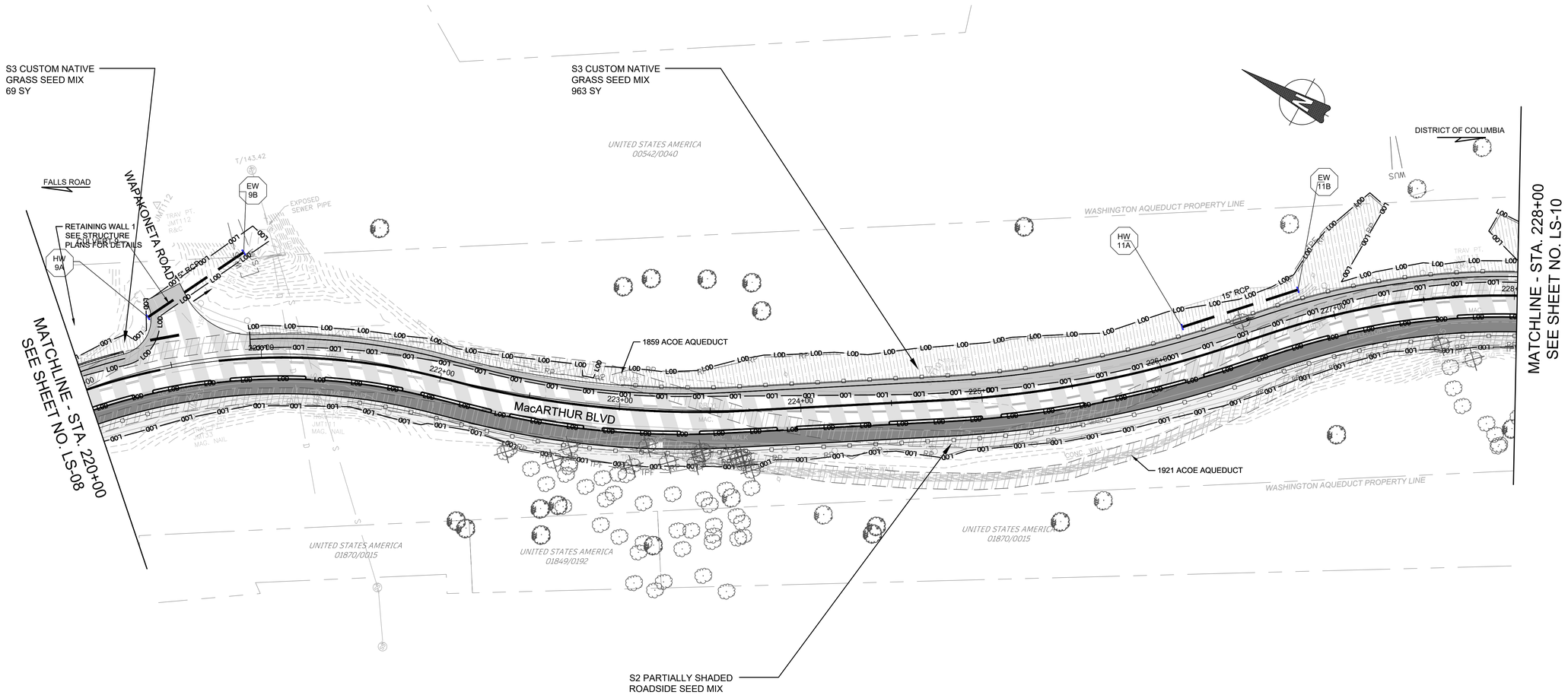
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 138 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	0 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	744 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1032 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 220+00 TO STA. 228+00

LS-09
LANDSCAPE PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

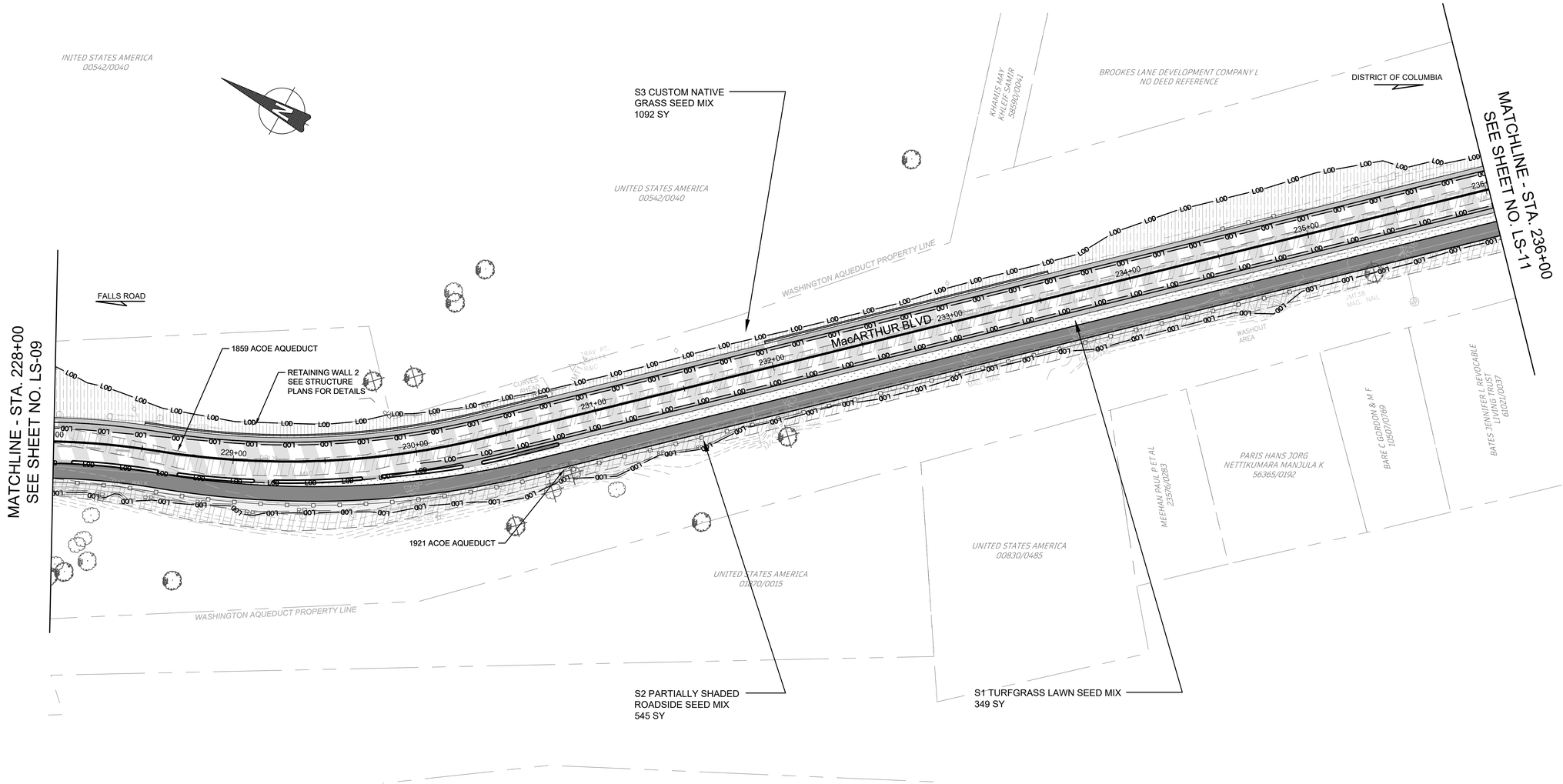
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 139 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	349 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	545 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	1092 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
2. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TOPSOIL, SEED MIX AS IDENTIFIED ON PLAN SHEET, AND MULCH.
4. REFER TO PLAN SHEET LS-16 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INSPECTIONS, AND TREE CANOPY INFORMATION.
5. REFER TO PLAN SHEET LS-17 FOR TREE PLANTING DETAIL.
6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
7. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
8. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 228+00 TO STA. 236+00

LS-10
LANDSCAPE PLAN

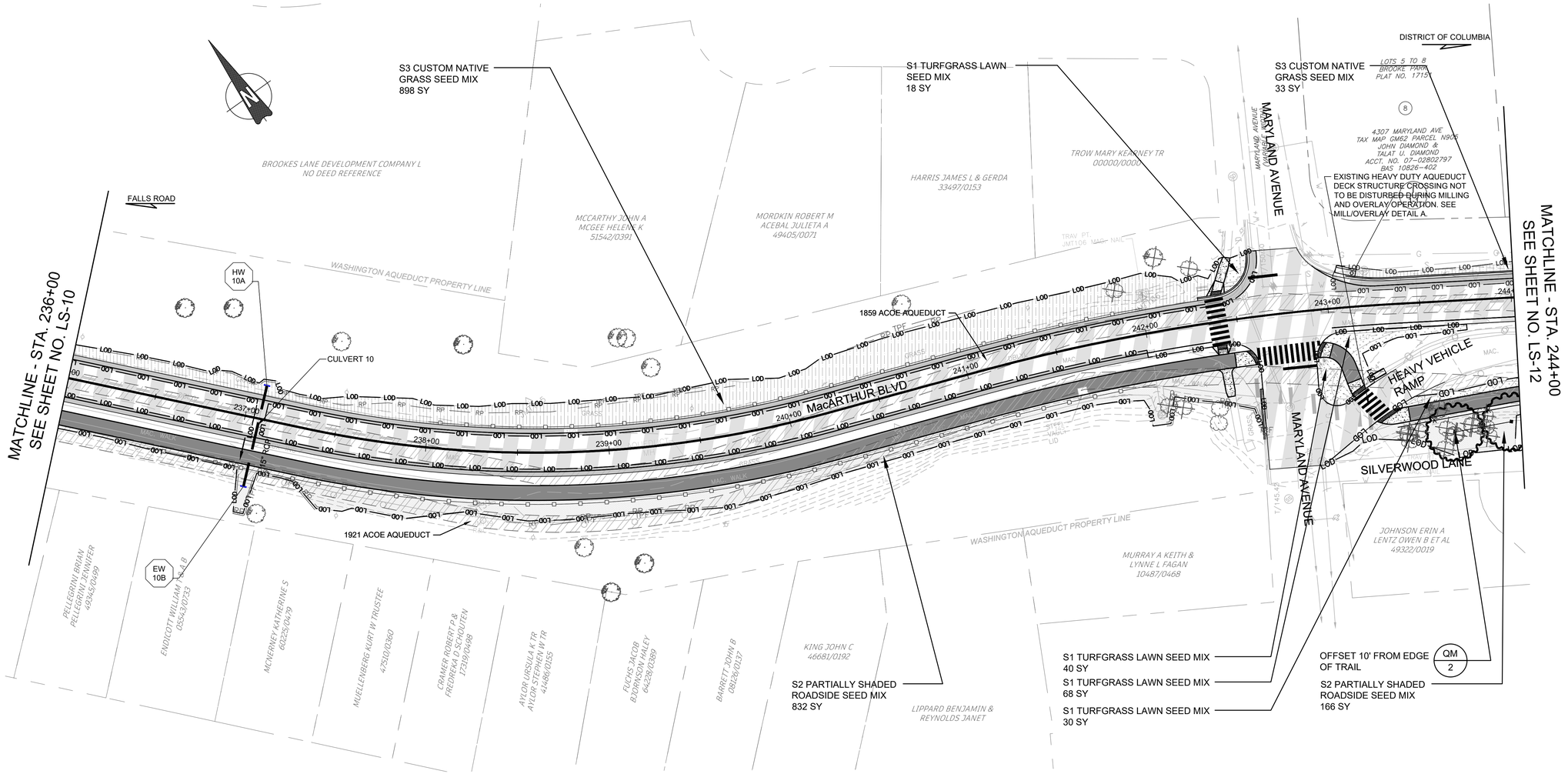
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 140 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	156 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	998 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	931 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
2. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TOPSOIL, SEED MIX AS IDENTIFIED ON PLAN SHEET, AND MULCH.
4. REFER TO PLAN SHEET LS-16 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INSPECTIONS, AND TREE CANOPY INFORMATION.
5. REFER TO PLAN SHEET LS-17 FOR TREE PLANTING DETAIL.
6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
7. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
8. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.

LANDSCAPE PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
QM	2	QUERCUS MACROCARPA	BUR OAK	2.5" CAL.	B&B	30' O.C.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 236+00 TO STA. 244+00

LS-11
LANDSCAPE PLAN

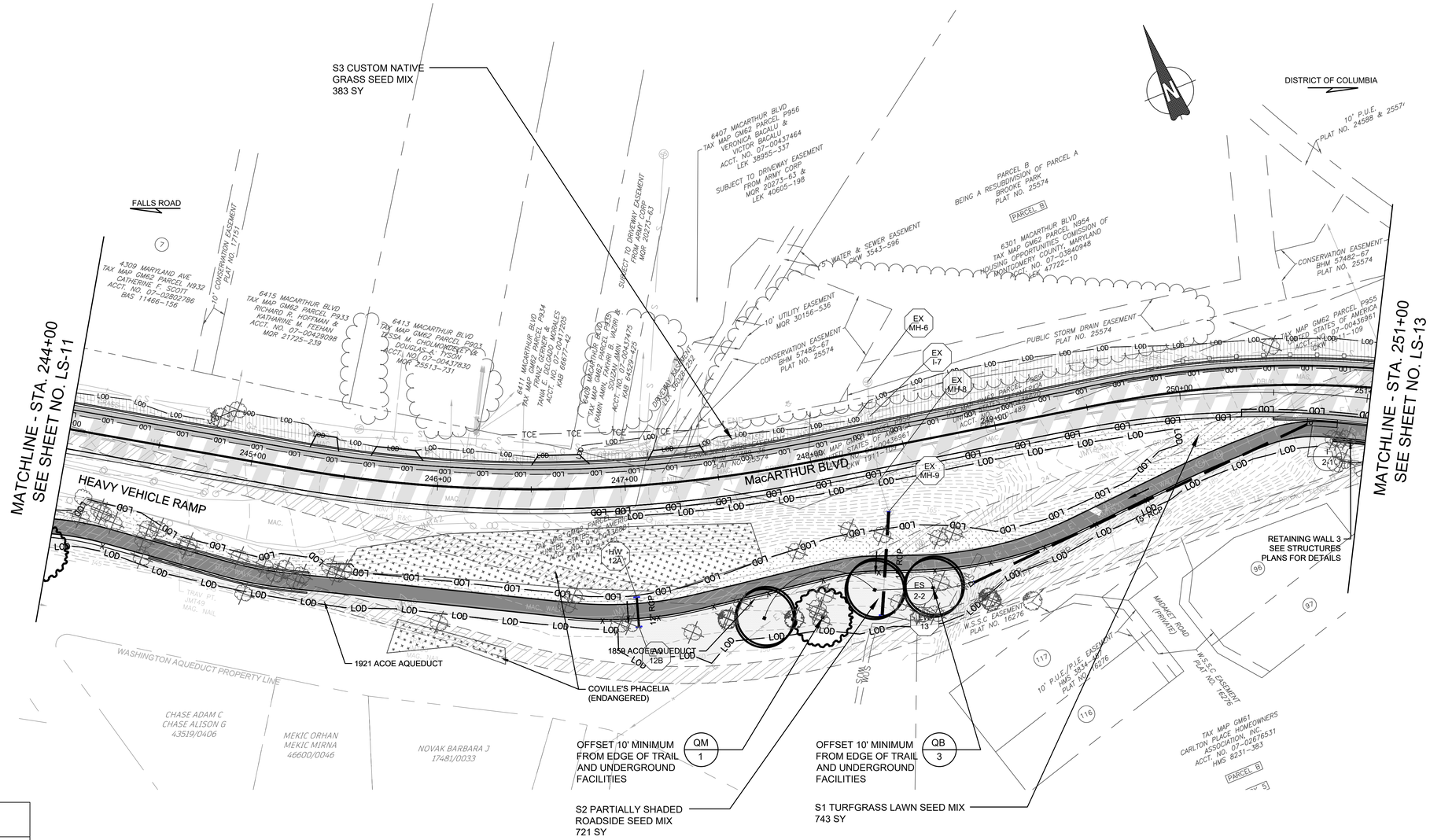
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 141 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	743 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	721 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	383 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
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3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TOPSOIL, SEED MIX AS IDENTIFIED ON PLAN SHEET, AND MULCH.
4. REFER TO PLAN SHEET LS-16 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INSPECTIONS, AND TREE CANOPY INFORMATION.
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6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
7. COORDINATION WITH US ARMY CORPS OF ENGINEERS WILL BE REQUIRED FOR ANY WORK ABOVE OR NEAR THE HISTORIC AQUEDUCTS TO MINIMIZE DISTURBANCE AND AVOID IMPACT.
8. THE CONTRACTOR SHALL BE MADE AWARE OF TWO AQUEDUCTS THAT EXIST UNDER MACARTHUR BLVD, AND SHALL AVOID IMPACTS TO THESE AT ALL TIMES. EXISTING UNDERGROUND AQUEDUCT STRUCTURES SHALL NOT BE DISTURBED. ANY POTENTIAL CONFLICTS WITH THE AQUEDUCTS BY PROPOSED CONSTRUCTION ACTIVITIES SHALL BE INDICATED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION OPERATION.

LANDSCAPE PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
QB	3	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	30' O.C., AS SHOWN
QM	1	QUERCUS MACROCARPA	BUR OAK	2.5" CAL.	B&B	30' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 244+00 TO STA. 251+00

LS-12
LANDSCAPE PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

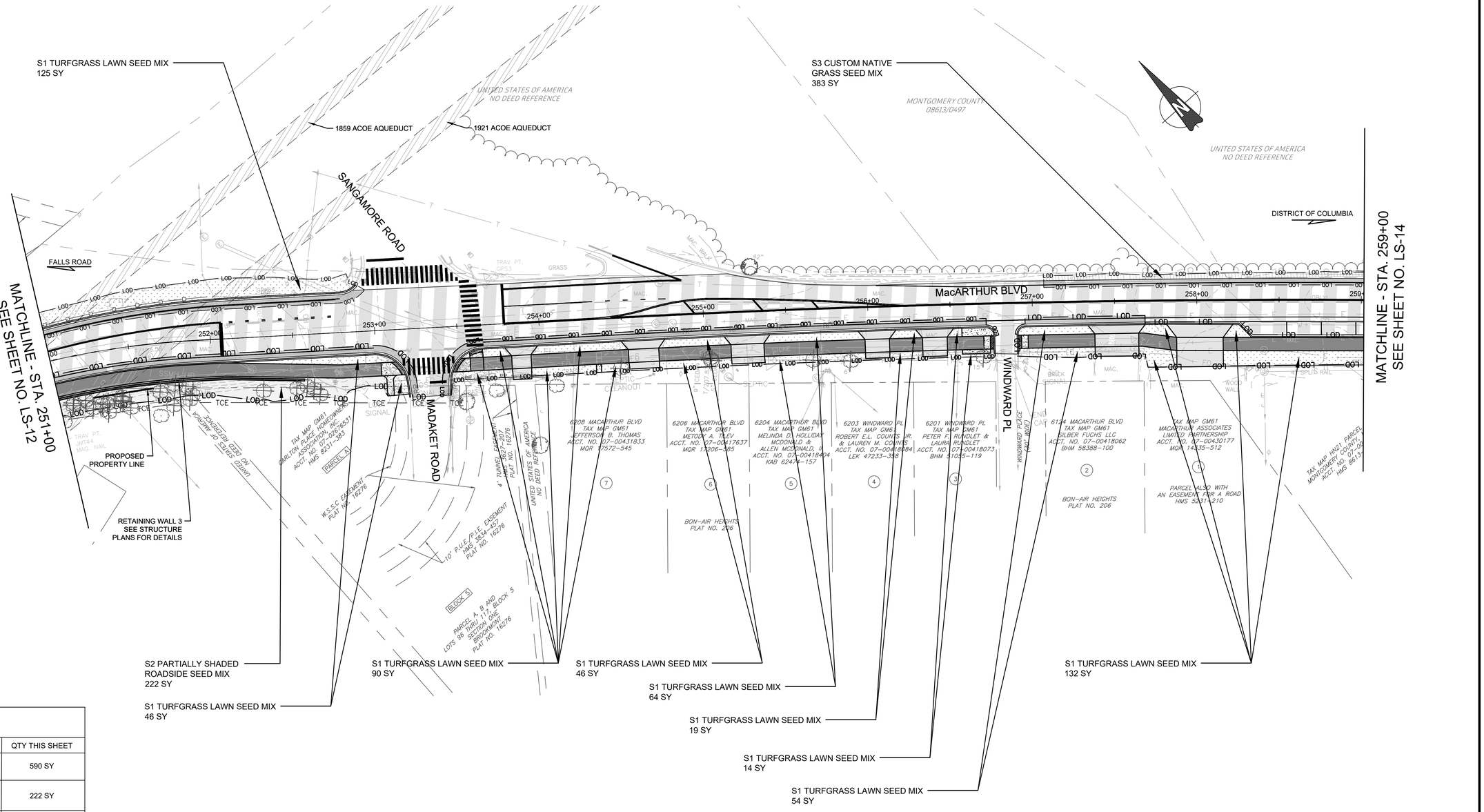
0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 142 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	590 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	222 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	383 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
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- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 251+00 TO STA. 259+00

LS-13
LANDSCAPE PLAN

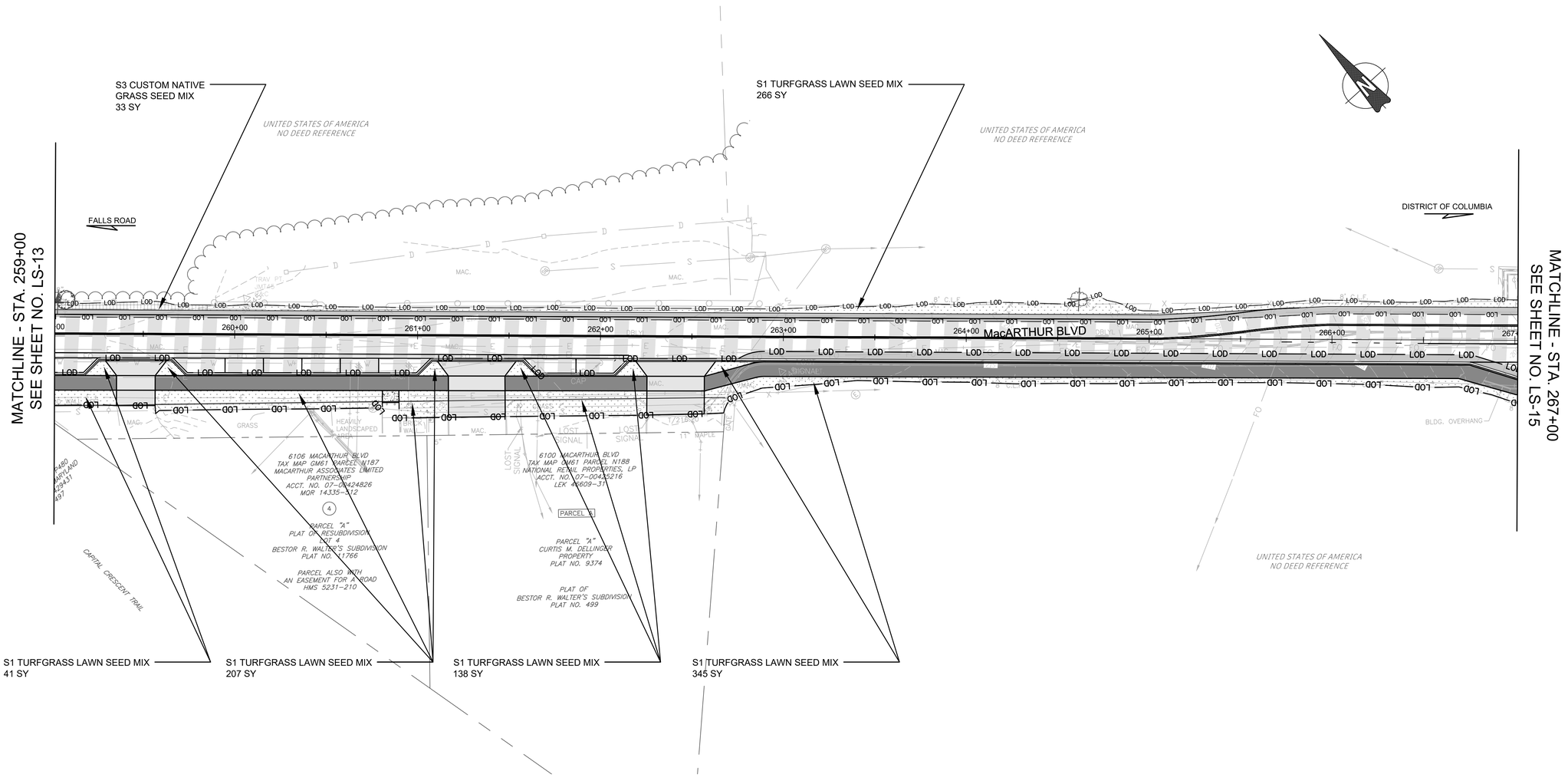
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 143 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	997 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	0 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	33 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 259+00 TO STA. 267+00

LS-14
LANDSCAPE PLAN

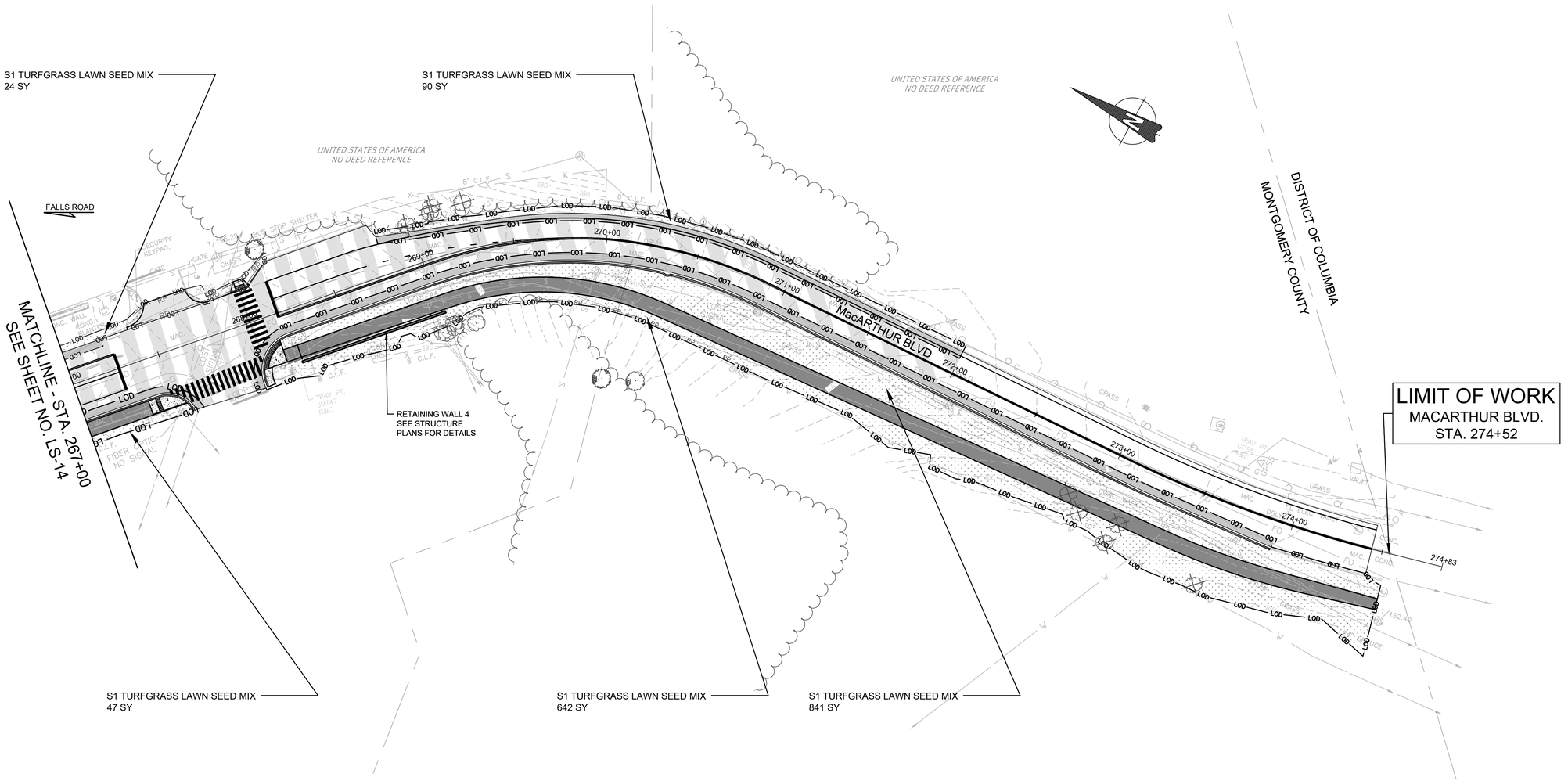
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 144 of 285

RText (RText)



SEEDING SCHEDULE		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	1644 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	0 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	0 SY

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE
- GUARD RAIL

NOTES:

1. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
2. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
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6. EXISTING TREES SHOWN FOR INFORMATIONAL PURPOSES, ONLY. REFER TO TREE SAVE PLANS FOR DETAILED EXISTING TREE INFORMATION.
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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JMT

STA. 267+00 TO STA. 274+52

LS-15
LANDSCAPE PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'
SCALE: 1"=30'

DATE: JUNE 2024

CIP No. : 500718

SHEET 145 of 285

RText (RText)

TREE PRESERVATION NOTES

1. ALL WORK PERFORMED SHALL MEET OR EXCEED INDUSTRY STANDARDS AS MOST RECENTLY PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY THE COUNTY ARBORIST.
2. TREES DESIGNATED FOR REMOVAL ALONG THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING A CHAINSAW TO AVOID DAMAGE TO SURROUNDING TREES TO BE PRESERVED AND UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE ONLY WITH THE APPROVAL OF THE COUNTY ARBORIST USING A STUMP-GRINDING MACHINE IN A MANNER THAT CAUSES AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES, VEGETATION AND SOIL CONDITIONS.
3. ROOT PRUNING SHALL BE PERFORMED, AS NEEDED, TO COMPLY WITH THE FOREST CONSERVATION REQUIREMENTS OF THESE DEVELOPMENT CONDITIONS. ALL TREATMENTS SHALL BE CLEARLY IDENTIFIED, LABELED, AND DETAILED ON THE TREE PRESERVATION AND LANDSCAPE SHEETS OF THE PLAN SUBMISSION. THE DETAILS FOR THESE TREATMENTS SHALL BE REVIEWED AND APPROVED BY THE COUNTY ARBORIST, ACCOMPLISHED IN A MANNER THAT PROTECTS AFFECTED AND ADJACENT VEGETATION TO BE PRESERVED. ROOT PRUNING DETAILS MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: (1) ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18 INCHES; (2) ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING AND/OR INSTALLATION OF SUPER SILT FENCE, DIVERSION FENCE OR TREE PROTECTION FENCE; (3) ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF THE COUNTY ARBORIST; AND (4) THE COUNTY ARBORIST SHALL BE INFORMED WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.
4. IMMEDIATELY AFTER THE E&S ACTIVITIES ARE COMPLETE, TREES INDICATED FOR MULCHING IN THE TREE INVENTORY SHALL BE MULCHED TO PROTECT THE ROOTS AND RETAIN MOISTURE. HARDWOOD CHIPS OR SHREDDED MULCH SHALL BE APPLIED AT A MAXIMUM DEPTH OF 4 INCHES AROUND THESE SPECIFIC TREES AND ONLY WITHIN 10 FEET OF THE LIMITS OF DISTURBANCE. ADDITIONAL AREAS MAY BE MULCHED AS PART OF THE INVASIVE SPECIES MANAGEMENT, SEE INVASIVE SPECIES MANAGEMENT NOTES, THIS SHEET.
5. ALL CONSTRUCTION ACTIVITY BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE PLAN SHALL BE PROHIBITED UNLESS PREVIOUSLY APPROVED. THE STORAGE OF EQUIPMENT, MATERIALS, CHEMICALS, AND DEBRIS AS WELL AS VEHICULAR TRAFFIC OR THE PARKING OF VEHICLES SHALL NOT BE PERMITTED WITHIN TREE PRESERVATION AREAS.
6. THE SERVICES OF THE PROJECT SURVEYOR SHALL BE RETAINED TO HAVE THE LIMITS OF CLEARING AND GRADING IN THE AREAS OF TREE PRESERVATION MARKED WITH A CONTINUOUS LINE OF FLAGGING PRIOR TO THE WALK-THROUGH MEETING TO BE HELD PRIOR TO ANY CLEARING AND GRADING. DURING THE TREE PRESERVATION WALK-THROUGH MEETING, THE COUNTY ARBORIST SHALL WALK SUCH LIMITS OF CLEARING AND GRADING WITH INSPECTORS TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS CAN BE MADE TO INCREASE THE AREA OF TREE PRESERVATION AND/OR TO INCREASE THE SURVIVABILITY OF TREES AT THE EDGE OF THE LIMITS OF CLEARING AND GRADING. SUCH ADJUSTMENT SHALL BE IMPLEMENTED; PROVIDED, HOWEVER, THAT NO ADJUSTMENT SHALL BE REQUIRED THAT WOULD AFFECT THE LOCATION AND/OR DESIGN OF THE DEVELOPMENT, INCLUDING A REQUIREMENT FOR ADDITIONAL RETAINING WALLS. TREES WITHIN THE PRESERVATION AREAS THAT ARE IDENTIFIED SPECIFICALLY BY THE COUNTY ARBORIST IN WRITING AS DEAD OR DYING MAY BE REMOVED AS PART OF THE CLEARING OPERATION. ANY TREE THAT IS SO DESIGNATED SHALL BE REMOVED USING A CHAIN SAW AND SUCH REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP-GRINDING MACHINE IN A MANNER CAUSING AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES AND ASSOCIATED UNDERSTORY VEGETATION AND SOIL CONDITIONS.
7. THE LIMITS OF CLEARING AND GRADING SHALL BE STRICTLY CONFORMED TO, AS SHOWN ON THE PLAN, SUBJECT TO ALLOWANCES SPECIFIED IN THESE DEVELOPMENT CONDITIONS AND FOR THE INSTALLATION OF FENCES AND/OR UTILITIES AS DETERMINED NECESSARY BY THE COUNTY ARBORIST. IF IT IS DETERMINED NECESSARY TO INSTALL FENCES AND/OR UTILITIES IN AREAS PROTECTED BY THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THE PLAN, THEY SHALL BE LOCATED IN THE LEAST DISRUPTIVE MANNER NECESSARY AS DETERMINED BY THE COUNTY ARBORIST.
8. DURING ANY CLEARING OR TREE/VEGETATION REMOVAL IN THE AREAS ADJACENT TO THE TREE PRESERVATION AREAS, THE COUNTY ARBORIST SHALL BE PRESENT TO MONITOR THE PROCESS AND ENSURE THAT THE ACTIVITIES ARE CONDUCTED AS CONDITIONED. MONITORING VISITS SHALL BE CONDUCTED WEEKLY DURING E&S INSTALLATION (CLEARING AND GRADING) CONSTRUCTION AND MONTHLY THEREAFTER UNTIL PROJECT COMPLETION.
9. ALL TREES SHOWN TO BE PRESERVED ON THE FOREST CONSERVATION PLAN SHALL BE PROTECTED BY TREE PROTECTION FENCE. TREE PROTECTION FENCING OR SUPER SILT FENCING SHALL BE ERECTED AT THE LIMITS OF CLEARING AND GRADING ADJACENT TO THE TREE PRESERVATION AREAS AS SHOWN ON THE PLANS, AS MAY BE MODIFIED BY THE DEVELOPMENT CONDITIONS BELOW. SUPER SILT FENCE ADJACENT TO MAJOR ROOTS OF TREES MAY BE NOTCHED, AS APPROVED, BY THE DPS INSPECTOR IN THE FIELD. ALL TREE PROTECTION FENCING SHALL BE INSTALLED AFTER THE TREE PRESERVATION WALK-THROUGH MEETING BUT PRIOR TO ANY CLEARING AND GRADING ACTIVITIES. THE INSTALLATION OF ALL TREE PROTECTION FENCING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE COUNTY ARBORIST, AND ACCOMPLISHED IN A MANNER THAT DOES NOT HARM EXISTING VEGETATION THAT IS TO BE PRESERVED.
10. SIGNS STATING "TREE PRESERVATION AREA" SHALL BE AFFIXED TO THE TREE PRESERVATION FENCE AT LEAST EVERY 30 FEET. SIGNS SHALL INCLUDE BOTH ENGLISH AND SPANISH AS SHOWN ON DETAIL.

STANDARD TREE CANOPY NOTES

ANY SHADE TREE PLANTED TO COMPLY WITH CHAPTER 55 OF THE COUNTY CODE MUST CONFORM TO THE FOLLOWING:

1. EACH SHADE TREE MUST MEET THE REQUIREMENTS FOR PLANT MATERIAL IN ANSI Z60.1;
2. EACH SHADE TREE MUST BE A MINIMUM OF 2" CALIPER;
3. INSTALLATION OF EACH SHADE TREE MUST MEET ALL REQUIREMENTS OF ANSI A300;
4. AT THE TIME OF PLANTING:
   a. TREE GUARDS TO PROTECT TREES FROM DEER RUBBING, MOWERS, WEED EATERS, OTHER EQUIPMENT AND LARGE RODENTS MUST BE INSTALLED ON ALL SHADE TREES;
   b. MULCH MUST BE APPLIED;
   c. SUFFICIENT WATER MUST BE APPLIED TO AID IN PROPER PLANTING.
5. SHADE TREES MUST BE INSTALLED BETWEEN OCTOBER 15TH AND MAY 15TH AS LONG AS THE GROUND IS NOT FROZEN, SATURATED, OR COVERED WITH SNOW SUCH THAT A SUITABLE HOLE CANNOT BE DUG;
6. SHADE TREES MUST NOT BE INSTALLED BETWEEN MAY 16TH AND OCTOBER 14TH OF EACH YEAR. IF INSTALLATION CANNOT OCCUR BETWEEN OCTOBER 15TH AND MAY 15TH FOR ANY REASON, OR IF PROPOSED TREES ARE NOT PLANTED FOR ANY OTHER REASON, THE PERMITTEE MUST PAY THE REQUIRED FEE IN LIEU.
7. IF SHADE TREES ARE INSTALLED PRIOR TO FINAL STABILIZATION OF THE LAND DISTURBING ACTIVITY THEN NO ADDITIONAL DISTURBANCE MUST OCCUR WITHIN FIVE FEET OF THE STEM OF THE TREE. PROTECTIVE FENCING MUST BE INSTALLED AT THE EDGE OF THIS AREA AT THE SAME TIME THE TREE IS INSTALLED AND MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION OCCURS.
8. THE LOCATION OF GROWING ZONES AND PLANTING AREAS MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO INSTALLATION OF ANY SHADE TREE.
9. A COPY OF THE APPROVED SEDIMENT CONTROL PLAN SHOWING ALL APPROVED GROWING ZONES AND PLANTING AREAS MUST BE AVAILABLE ON THE SITE AT ALL TIMES.
10. AT LEAST ONE INSPECTION MUST OCCUR AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED TO DETERMINE THE LEVEL OF COMPLIANCE WITH SHADE TREE PLANTING REQUIREMENTS.

INSPECTIONS NOTES

1. ALL FIELD INSPECTIONS MUST BE REQUESTED BY THE APPLICANT. INSPECTIONS MUST BE CONDUCTED AS FOLLOWS:
   a. AFTER THE LIMITS OF DISTURBANCE HAVE BEEN STAKED AND FLAGGED, BUT BEFORE ANY CLEARING OR GRADING BEGINS
   b. AFTER NECESSARY STRESS REDUCTION MEASURES HAVE BEEN COMPLETED AND PROTECTION MEASURES HAVE BEEN INSTALLED, BUT BEFORE ANY CLEARING AND GRADING BEGIN
   c. AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES, BUT BEFORE REMOVAL OF TREE PROTECTION FENCING, TO DETERMINE THE LEVEL OF COMPLIANCE WITH THE PROVISION OF THE FOREST CONSERVATION.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ### Drawn by: ### Checked by: ###

STA. 267+00 TO STA. 274+52

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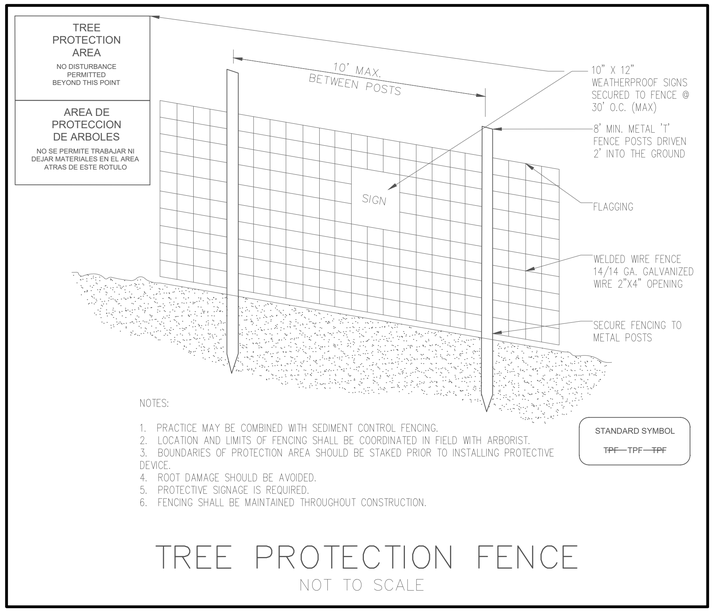
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 146 of 285

RText (RText)



TREE PROTECTION FENCE

NOT TO SCALE

LANDSCAPE PLANT SCHEDULE (TOTALS)

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
CV	7	CRATAEGUS VIRIDIS 'WINTER KING'	'WINTER KING' GREEN HAWTHORN	2.5" CAL.	B&B	20' O.C., AS SHOWN
QB	3	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	30' O.C., AS SHOWN
QM	3	QUERCUS MACROCARPA	BUR OAK	2.5" CAL.	B&B	30' O.C., AS SHOWN

SEEDING SCHEDULE (TOTALS)		
KEY	DESCRIPTION	QTY THIS SHEET
S1 - TURFGRASS LAWN SEED MIX	TALL FESCUE SEED MIX FOR MOWING	9130 SY
S2 - PARTIALLY SHADED ROADSIDE SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	9699 SY
S3 - CUSTOM NATIVE GRASS SEED MIX	NATIVE SEED & COMPANION SEED MIX FOR NO MOWING	11234 SY

* SEEDING RATES: 15 LBS. PER ACRE OR $\frac{1}{3}$ LB. TO $\frac{1}{2}$ LB. PER 1,000 SF.

S1 - TURFGRASS LAWN SEED MIX

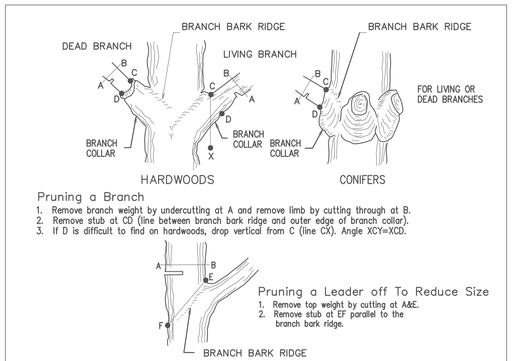
85%	MD CERTIFIED TALL FESCUE
10%	KENTUCKY BLUEGRASS
5%	PERENNIAL RYEGRASS

S2 - PARTIALLY SHADED ROADSIDE SEED MIX

16%	AGROSTIS PERENNANS		AUTUMN BENTGRASS
16%	ELYMUS HYSTRIX		BOTTLEBRUSH GRASS
16%	ELYMUS VIRGINICUS		VIRGINIA WILD RYE
7%	PENSTEMON DIGITALIS		TALL WHITE BEARD TONGUE
6%	HELIOPSIS HEIANTHOIDES		OX EYE SUNFLOWER
5%	CHAMAECRISTA FASTICULATA		PARTRIDGE PEA
5%	PANICUM CLANDESTINUM		TIOGA DEER TONGUE
5%	RUDBECKIA TRILOBA		BROWN EYED SUSAN
4.5%	ASCLEPIAS SYRIACA		COMMON MILKWEED
4%	DESMODIUM CANADENSE		SHOWY TICK TREFOIL
3%	ZIZIA AUREA		GOLDEN ALEXANDERS
2.5%	GEUM CANADENSE		WHITE AVENS
2%	ASTER CORDIFOLIUS		BLUE WOOD ASTER
2%	HYPERICUM PYRAMIDATUM		GREAT ST. JOHN'S WORT
2%	MONARDA FISTULOSA		WILD BERGAMOT
1%	ANEMONE VIRGINIANA		THIMBLEWEED
1%	PENSTEMON LAEVIGATUS		APPALACHIAN BEARD TONGUE
1%	BROMUS CILIATUS		FRINGED BROME GRASS
1%	SOLIDAGO CAESIA		WOODLAND GOLDENROD

S3 - CUSTOM NATIVE GRASS SEED MIX

10%	AGROSTIS ALBA		REDTOP
5%	ELYMUS VIRGINICUS		VIRGINIA WILD RYE
25%	ANDROPOGON SCOPARIUS		LITTLE BLUESTEM
15%	ELYMUS CANADENSIS		CANADA WILD RYE
20%	PANICUM VIRGATUM		SWITCHGRASS
15%	SORGHASTRUM NUTANS		INDIANGRASS
5%	ELYMUS VILLOSUS		SILKY WILD RYE
5%	ELYMUS HYSTRIX		BOTTLEBRUSH GRASS



Medium pruning shall consist of the removal of dead, dying, diseased, interfering, objectionable and weak branches on the main trunk as well as those within the leaf area. An occasional branch up to one inch in diameter may remain within the main leaf area where it is not practical to remove it.

The following specifications shall apply:

a. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. Clean cuts shall be made at all times.

b. It is necessary to precut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.

c. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of dressing.

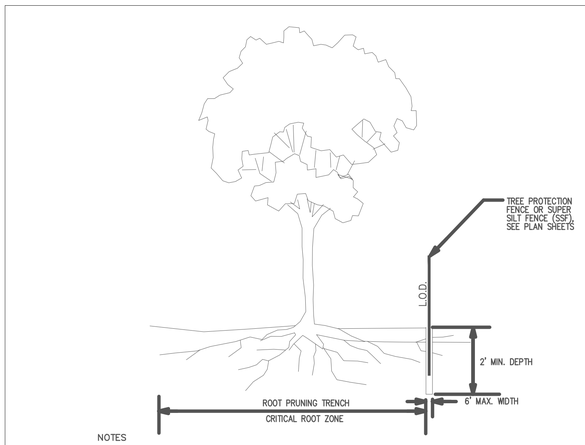
d. On trees known to be diseased, tools are to be disinfected with methyl alcohol at 70% (denatured wood alcohol diluted appropriately with water) or Chlorox solution after each cut and between trees where there is known to be a danger of transmitting the disease on tools.

e. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be traced where appropriate. If desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.

f. All girdling roots visible to the eye are to be reported to the supervisor and the Engineer.

g. The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches, should be reported in writing to the supervisor and the Engineer, and corrective measures recommended.

CROWN PRUNING



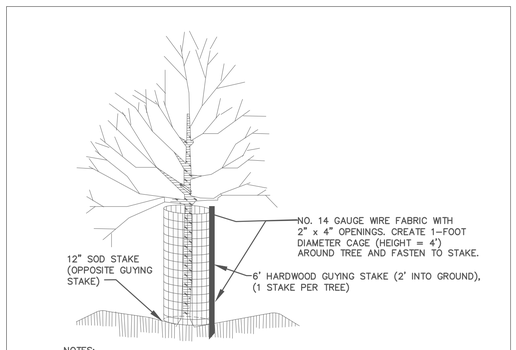
NOTES

1. RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS SHALL BE STAKED AND FLAGGED PRIOR TO TRENCHING.
3. EXACT LOCTION OF TRENCH SHALL BE INDENTIFIED.
4. TRENCH SHALL BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.
5. ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
6. ALL SIGNIFICANT TREES SHALL BE INSPECTED BY A ISA CERTIFIED ARBORIST PRIOR TO CONSTRUCTION AND ROOT PRUNING.

SOURCE: CITY OF GAITHERSBURG, MARYLAND: CITY TREE MANUAL

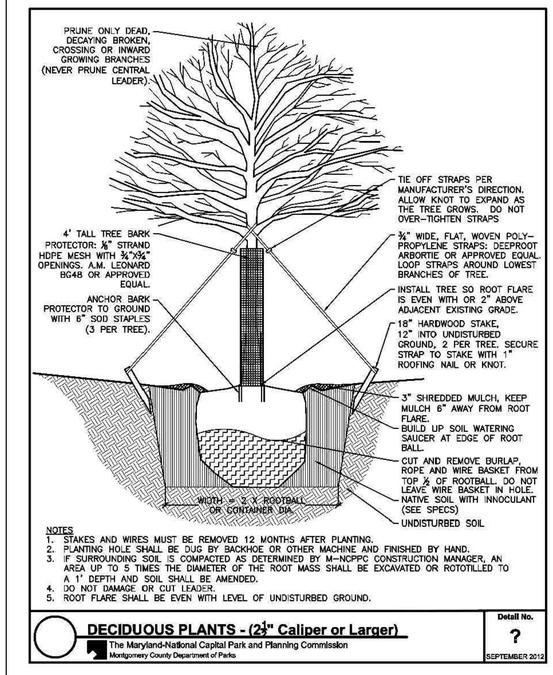
ROOT PRUNING PRIOR TO CONSTRUCTION

(IF NEEDED)



NOTES:
1. CAGE SHALL BE NO. 14 GAUGE WIRE FABRIC WITH 2"x 4" OPENINGS.
2. CAGE HEIGHT SHALL BE 4' (MIN.)
3. CREATE A 1-FOOT DIAMETER CAGE AROUND TREE.
4. FOR MULTI-STEM TREES AND SHRUBS OR TREES WITH LEADERS BELOW 4', USE WIDER CAGE TO LEAVE A 1-FOOT DIAMETER AROUND TREE.
5. CAGE SHALL BE FASTENED TO STAKE WITH TWO (MIN.) 11-INCH TWIST TIES, ONE AT TOP AND ONE AT 6"(MIN.) ABOVE THE GROUND.
6. INSTALL 6' HARDWOOD GUYING STAKE, 2' INTO GROUND, 1 STAKE (MIN.) PER CAGE.
7. ENSURE CAGE IS FASTENED TO THE GROUND TO PREVENT UPLIFT BY DEER BY INSTALLING A 12"SOD STAKE OPPOSITE THE GUYING STAKE.
8. FOR TREES LARGER THAN 3"CALIPER WITH NO BRANCHING BELOW 4', CAGE CAN BE SUBSTITUTED WITH DEER BARK PROTECTORS (ITEMS #bg48, BY A.M. LEONARD) OR EQUAL.
9. DO NOT DAMAGE TREE DURING INSTALLATION.
10. CAGES TO BE REMOVED ONLY AT DIRECTION OF FOREST ECOLOGIST.

TREE DEER PROTECTION



NOTES
1. STAKES AND WIRES MUST BE REMOVED 12 MONTHS AFTER PLANTING.
2. PLANTING HOLE SHALL BE DUG BY BACKHOE OR OTHER MACHINE AND FINISHED BY HAND.
3. IF SURROUNDING SOIL IS COMPACTED AS DETERMINED BY M-NCPPC CONSTRUCTION MANAGER, AN AREA UP TO 5 TIMES THE DIAMETER OF THE ROOT MASS SHALL BE EXCAVATED OR ROTOTILLED TO A 1' DEPTH AND SOIL SHALL BE AMENDED.
4. DO NOT DAMAGE OR CUT LEADER.
5. ROOT FLARE SHALL BE EVEN WITH LEVEL OF UNDISTURBED GROUND.

DECIDUOUS PLANTS - (2½" Caliper or Larger)

The Maryland-National Capital Park and Planning Commission
Montgomery County Department of Parks

Detail No. ?

SEPTEMBER 2012

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ### Drawn by: ### Checked by: ###

STA. 267+00 TO STA. 274+52

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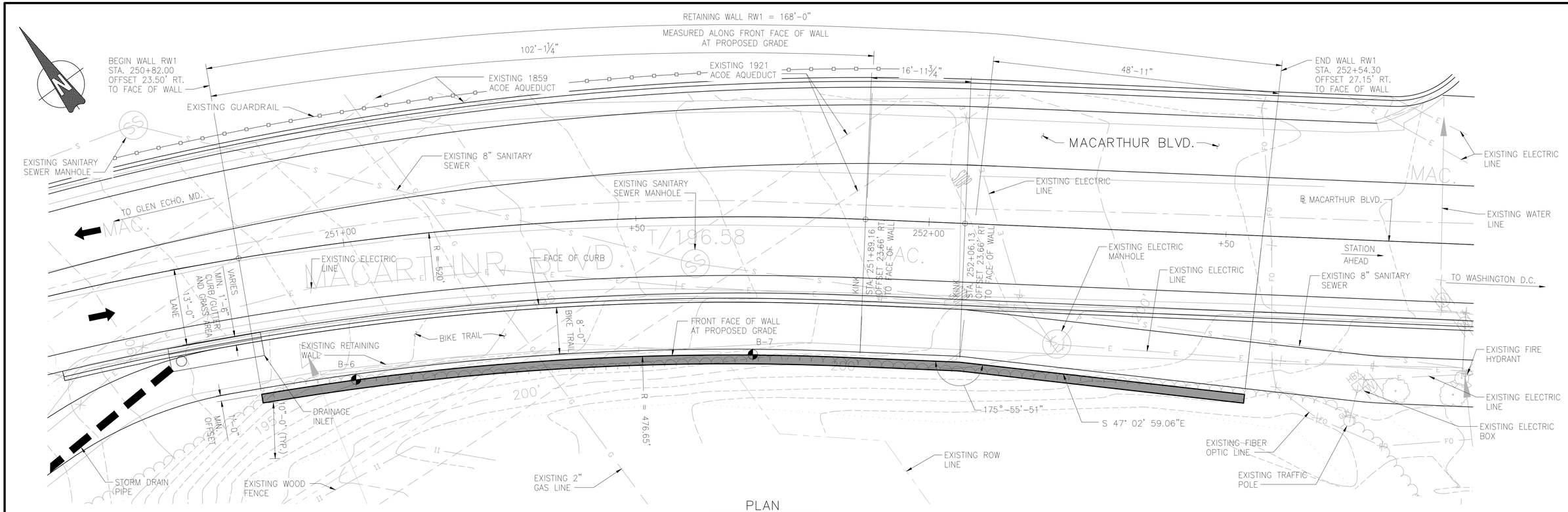
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

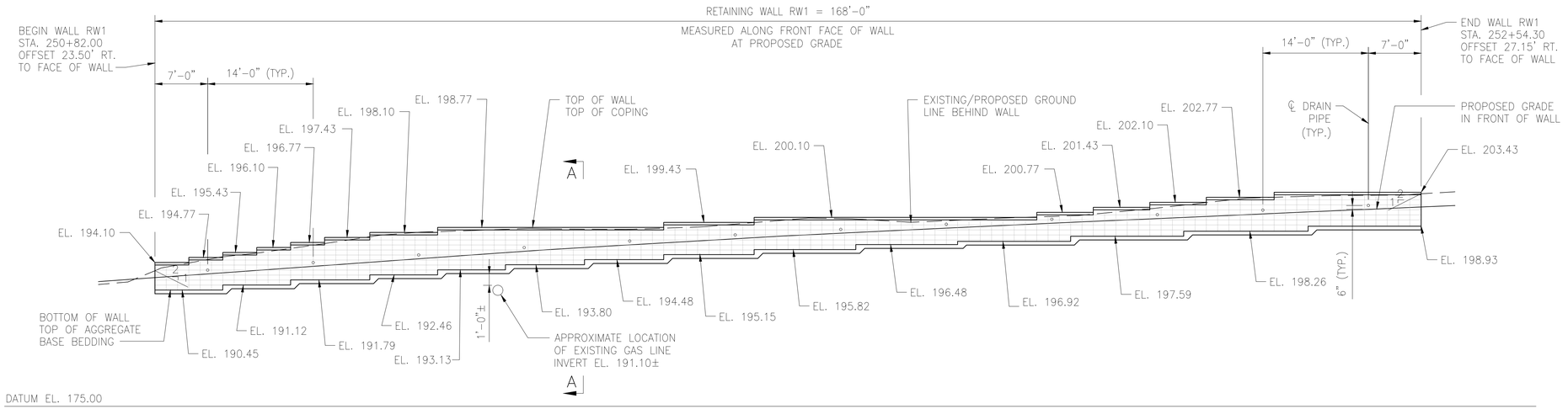
CIP No. : 500718 SHEET 147 of 285

RText (RText)



PLAN

SCALE: 1/8" = 1'-0"



ELEVATION

SCALE: 1/8" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE DWG. NO. ST-01.
2. FOR RETAINING WALL RW1 TYPICAL SECTION A-A, SEE DWG. NO. ST-04.
3. FOR TEST BORING LOGS, SEE DWG. NO. ST-05.
4. FOR EQUIPMENT RESTRICTIONS, SEE DWG. NO. GN-03 AND SPECIAL PROVISIONS.
5. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH OF UTILITIES PRIOR TO BEGINNING CONSTRUCTION OF WALL.
6. OFFSET DIMENSIONS ARE MEASURED TO FRONT FACE OF WALL.

DRAFT
NOT FOR CONSTRUCTION

ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers — Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

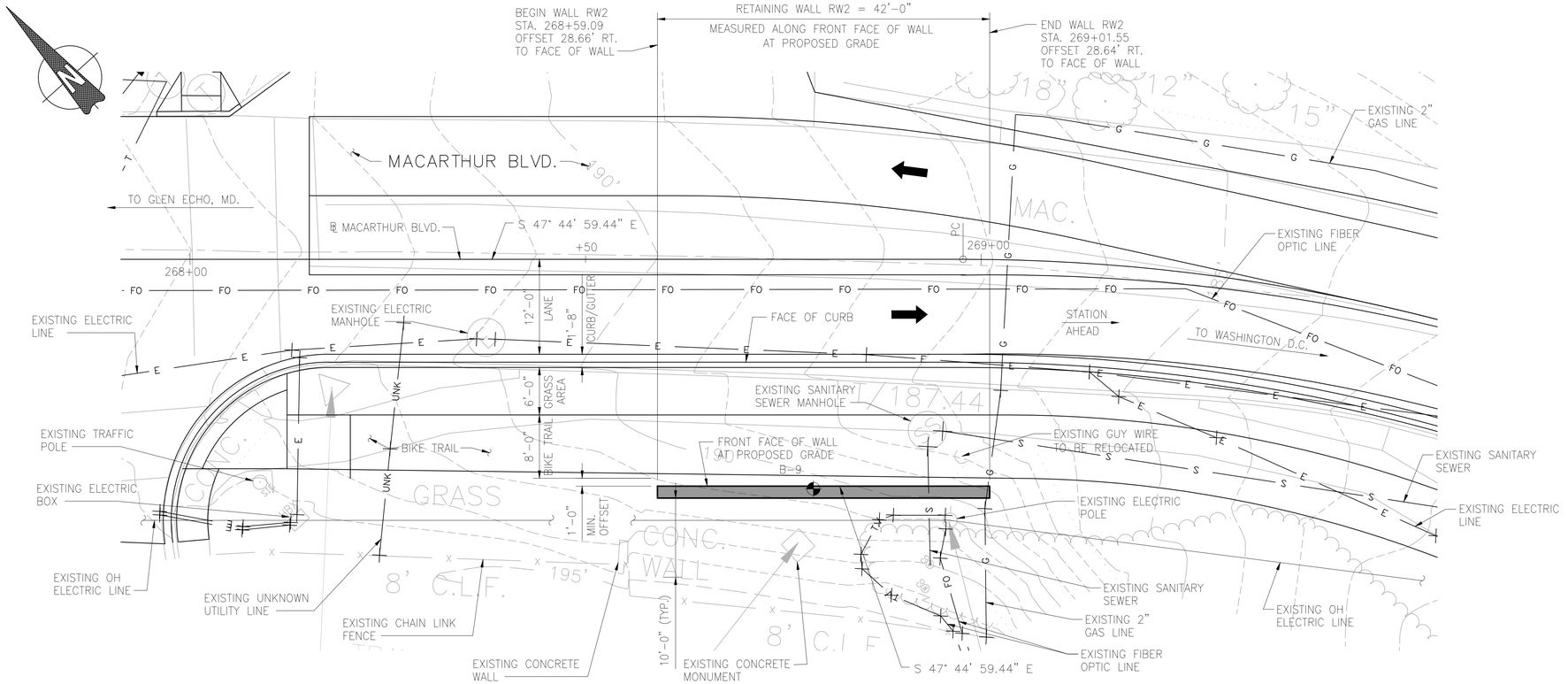
Designed by: JS Drawn by: DT Checked by: KA

ST-02
RETAINING WALL 1
PLAN & ELEVATION
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

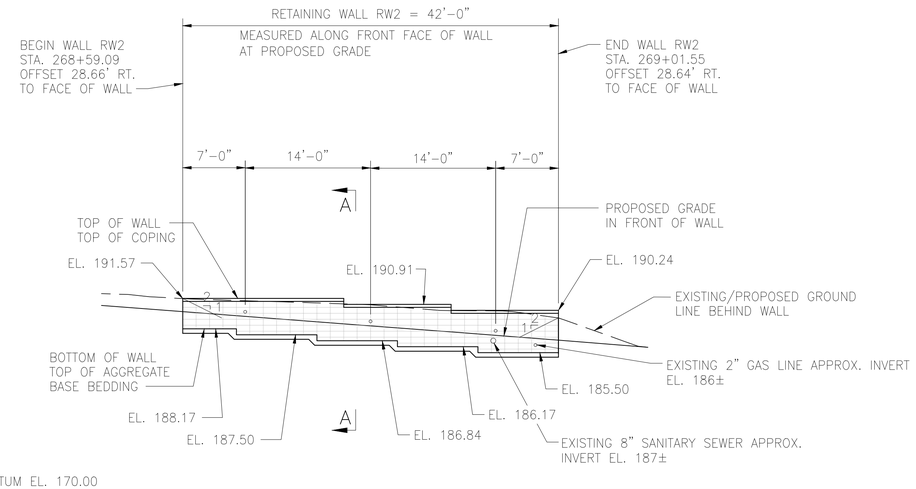
CIP No.: 500718 SHEET 149 of 285

FILE NAME: C:\pwworking\jmt\d0322045\04_Retaining Wall 3 – Plan and Elevation.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 – 2:13pm USER: DTurner-Smith



PLAN

SCALE: 1/8" = 1'-0"



ELEVATION

SCALE: 1/8" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE DWG. NO. ST-01.
2. FOR RETAINING WALL RW2 TYPICAL SECTION A-A, SEE DWG. NO. ST-04.
3. FOR TEST BORING LOGS, SEE DWG. NO. ST-06.
4. FOR EQUIPMENT RESTRICTIONS, SEE DWG. NO. GN-03 AND SPECIAL PROVISIONS.
5. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH OF UTILITIES PRIOR TO BEGINNING CONSTRUCTION OF WALL.
6. OFFSET DIMENSIONS ARE MEASURED TO FRONT FACE OF WALL.
7. STRAP LENGTH AND LAYOUT SHALL BE DESIGNED TO PREVENT IMPACTING EXISTING CONCRETE MONUMENT.

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ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

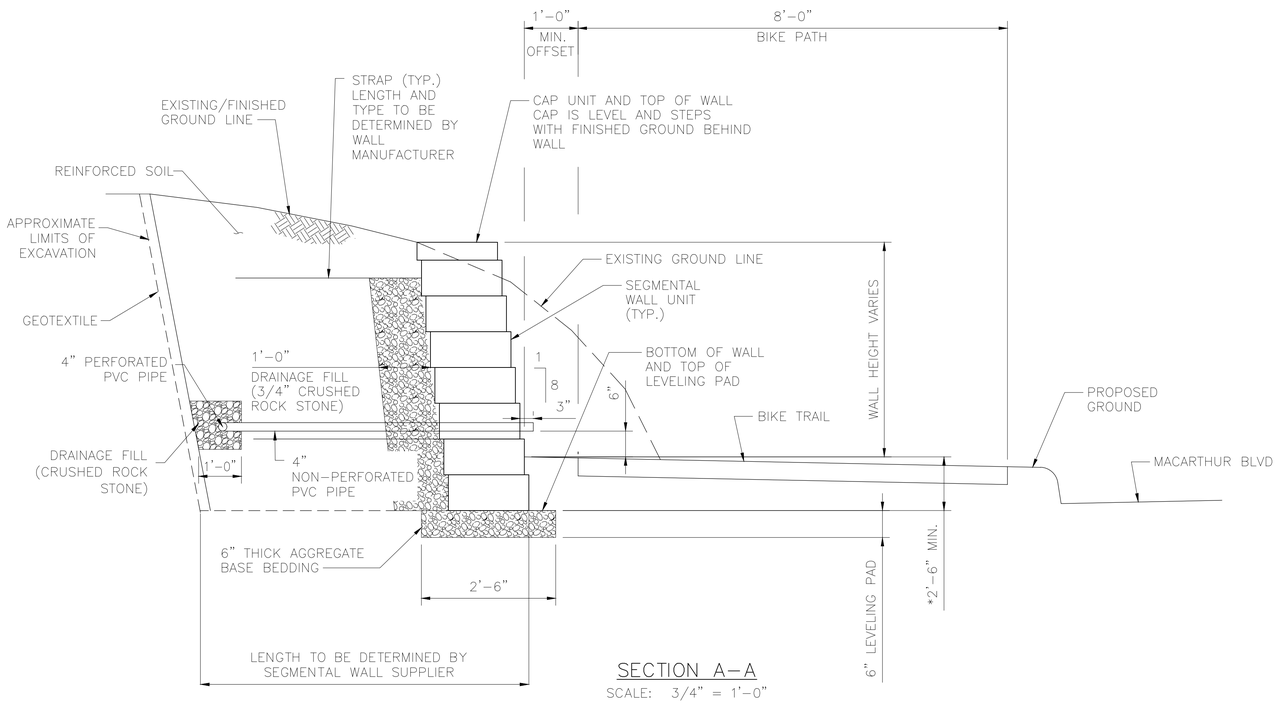
Designed by: JS Drawn by: DT Checked by: KA

ST-03
RETAINING WALL 2
PLAN & ELEVATION
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 150 of 285

FILE NAME: C:\pwworking\jmt\d0322045\05_Retaining Wall 4 – Plan and Elevation.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 – 2:24pm USER: DTurner-Smith



SECTION A–A

SCALE: 3/4" = 1'-0"

SEGMENTAL WALL NOTES:

1. THE MAXIMUM ALLOWABLE BEARING PRESSURE UNDER THE SEGMENTAL WALL SHALL BE 1.5 TONS PER SQUARE FOOT.
*2. THE WALL EMBEDMENT DEPTH SHALL BE INCREASED AS REQUIRED FOR WALL GLOBAL STABILITY.
3. REINFORCED SOIL SHALL BE #57 STONE UNLESS OTHERWISE SPECIFIED BY THE WALL SUPPLIER.
4. FOR ADDITIONAL REQUIREMENTS FOR THE SEGMENTAL WALL, SEE SPECIAL PROVISIONS "SEGMENTAL RETAINING WALL".
5. FOR ROADWAY SECTIONS, SEE ROADWAY PLANS.
6. WHEN SITE CONDITIONS REQUIRE, WRAP DRAINAGE PIPE IN 3/4" AGGREGATE AND FILTER FABRIC.

DRAFT
NOT FOR CONSTRUCTION

ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: JS Drawn by: DT Checked by: KA

ST-04
TYPICAL SECTIONS

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 SHEET 151 of 285

FILE NAME: C:\pwworking\jmt\d0322045\06_Typical Sections.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 - 6:01pm USER: DTurner-Smith

ELEVATION 191.77
BOTTOM OF WALL/TOP OF
ELEVATION PAD

KIM KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Baltimore, Maryland

BORING NUMBER B-6
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson, Inc.
PROJECT NAME MacArthur Blvd Bikeway Improvements Phase III
PROJECT NUMBER C21079
PROJECT LOCATION Montgomery County, Maryland
DATE STARTED 9/28/22 COMPLETED 9/28/22
GROUND ELEVATION 195.74 ft HOLE SIZE 3"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A.
AT TIME OF DRILLING Dry
LOGGED BY SE CHECKED BY TL
AT END OF DRILLING Dry
NOTES
AFTER DRILLING —

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL — FINES CONTENT (%) — 20 40 60 80
		195.74	2.5" Asphalt 10" Base Light brown, tan, brown, gray, moist, medium dense, silty SAND (SM) with mica and gravel.	SS 1	78	8-12-18 (30)			
				SS 2	100	21-21-26 (47)			
5		190.74	DECOMPOSED ROCK classified as light brown, brown, tan, moist, very dense, silty SAND (SM) with mica and gravel.	SS 3	94	21-38-50/5"			
				SS 4	100	50/3"			
10				SS 5	100	50/3"			
		181.99	Bottom of hole at 13.8 feet.	SS 6	100	50/3"			

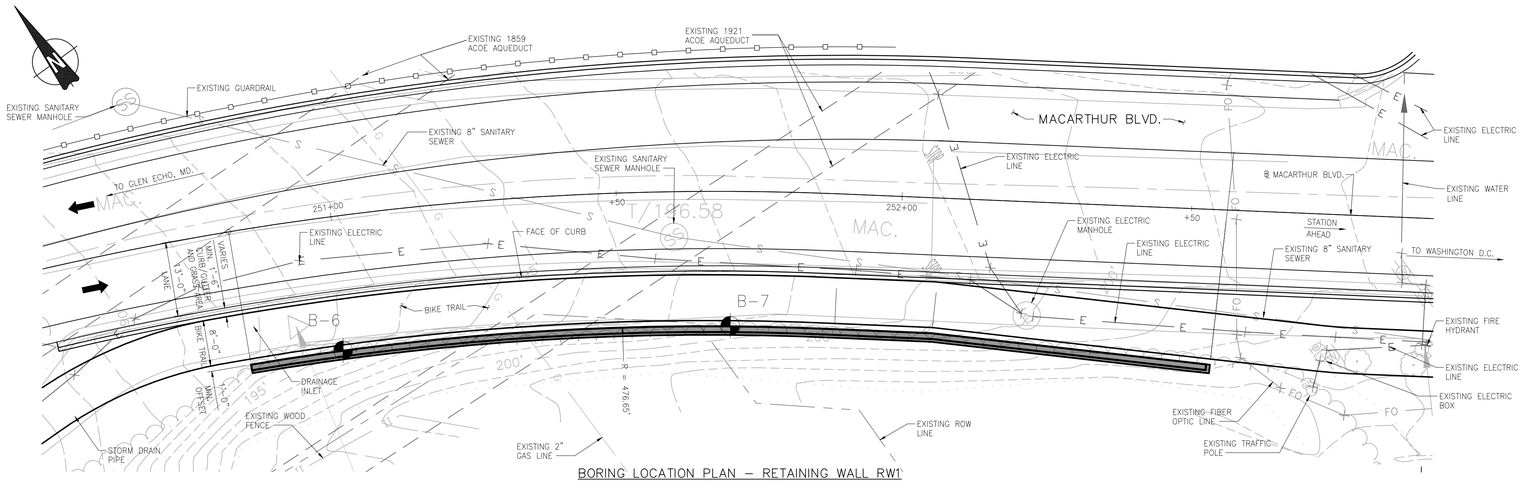
ELEVATION 197.10
BOTTOM OF WALL/TOP OF
ELEVATION PAD

KIM KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Baltimore, Maryland

BORING NUMBER B-7
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson, Inc.
PROJECT NAME MacArthur Blvd Bikeway Improvements Phase III
PROJECT NUMBER C21079
PROJECT LOCATION Montgomery County, Maryland
DATE STARTED 9/28/22 COMPLETED 9/28/22
GROUND ELEVATION 198.96 ft HOLE SIZE 3"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A.
AT TIME OF DRILLING Dry
LOGGED BY SE CHECKED BY TL
AT END OF DRILLING Dry
NOTES
AFTER DRILLING —

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL — FINES CONTENT (%) — 20 40 60 80
		197.94	2.5" Asphalt 6" Base DECOMPOSED ROCK classified as light brown, dark brown, gray, brown, tan, greenish gray, moist, very dense, silty SAND (SM) with mica and gravel.	SS 1	67	8-25-38 (63)			
				SS 2	100	50/5"			
5				SS 3	100	50/3"			
				SS 4	100	38-50/5"			
10				SS 5	100	50/4"			
		184.14	Bottom of hole at 14.4 feet.	SS 6	100	40-50/5"			



BORING LOCATION PLAN – RETAINING WALL RW1
SCALE: 1" = 150'-0"

NOTES:

1. TEST BORINGS WERE DRILLED IN SEPTEMBER 2022 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING OPEN BOREHOLE.
4. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D2113.
5. SOIL HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
6. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
7. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST.

DRAFT
NOT FOR CONSTRUCTION

ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Design Section Date
APPROVED
Chief, Division of Transportation Engineering Date

Designed by: JS Drawn by: DT Checked by: KA

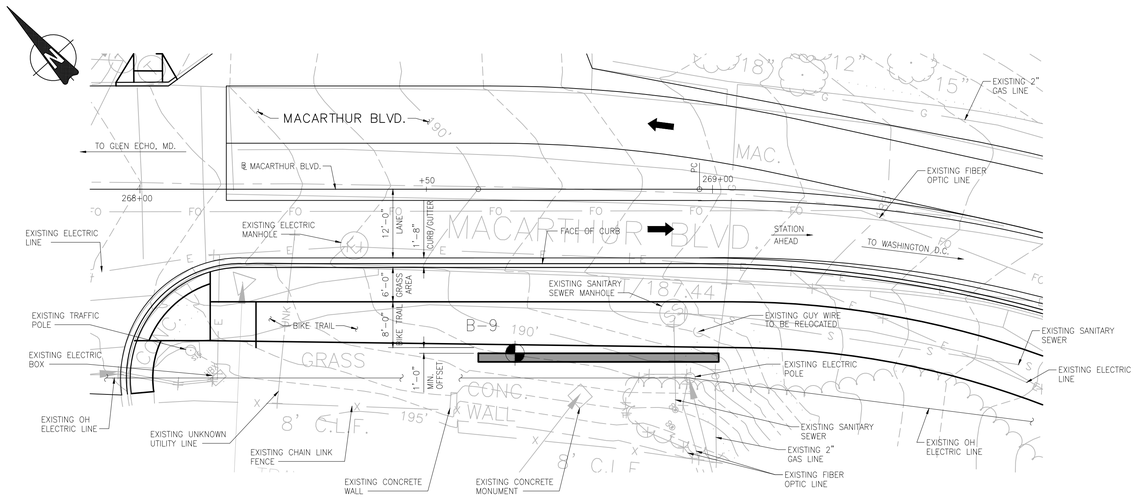
ST-05
BORING AND DRIVE TESTS – 1

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No.: 500718 SHEET 152 of 285

FILE NAME: C:\pwworking\jmt\d0322045\11_Borings and Drive Test.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 – 1:11pm USER: DTurner-Smith



BORING LOCATION PLAN – RETAINING WALL RW2

SCALE: 1" = 150'-0"

ELEVATION 186.58
BOTTOM OF WALL/TOP OF ELEVATION PAD

KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Baltimore, Maryland

BORING NUMBER B-9
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson, Inc. — PROJECT NAME MacArthur Blvd Bikeway Improvements Phase III
PROJECT NUMBER G21079 — PROJECT LOCATION Montgomery County, Maryland
DATE STARTED 9/28/22 — COMPLETED 9/28/22 — GROUND ELEVATION 190.95 ft — HOLE SIZE 3"
DRILLING CONTRACTOR Kim Engineering Inc.
DRILLING METHOD H.S.A.
LOGGED BY SE — CHECKED BY TL
NOTES
GROUND WATER LEVELS:
AT TIME OF DRILLING Dry
AT END OF DRILLING Dry
AFTER DRILLING —

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL; □ FINES CONTENT (%) □ 20 40 60 80
		190.53	3" Topsoil	SS 1	78	1-1-2 (3)			
			Brown, orange brown, dark brown, gray, moist, very loose to medium dense, silty SAND (SM) with mica and roots.	SS 2	89	5-7-8 (15)			
5				SS 3	100	9-10-11 (21)			
				SS 4	78	7-8-10 (18)			
10				SS 5	78	8-11-13 (24)			
		177.45 176.82	DECOMPOSED ROCK classified as brown, orange brown, moist, very dense, silty SAND (SM) with mica. Bottom of hole at 14.3 feet.	SS 6	100	22-50/4"			>>

NOTES:

1. TEST BORINGS WERE DRILLED IN SEPTEMBER 2022 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING OPEN BOREHOLE.
4. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D2113.
5. SOIL HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
6. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
7. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST.

DRAFT
NOT FOR CONSTRUCTION

ATHAVALE, LYSTAD & ASSOCIATES INC.
Consulting Engineers — Bethesda, Maryland

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

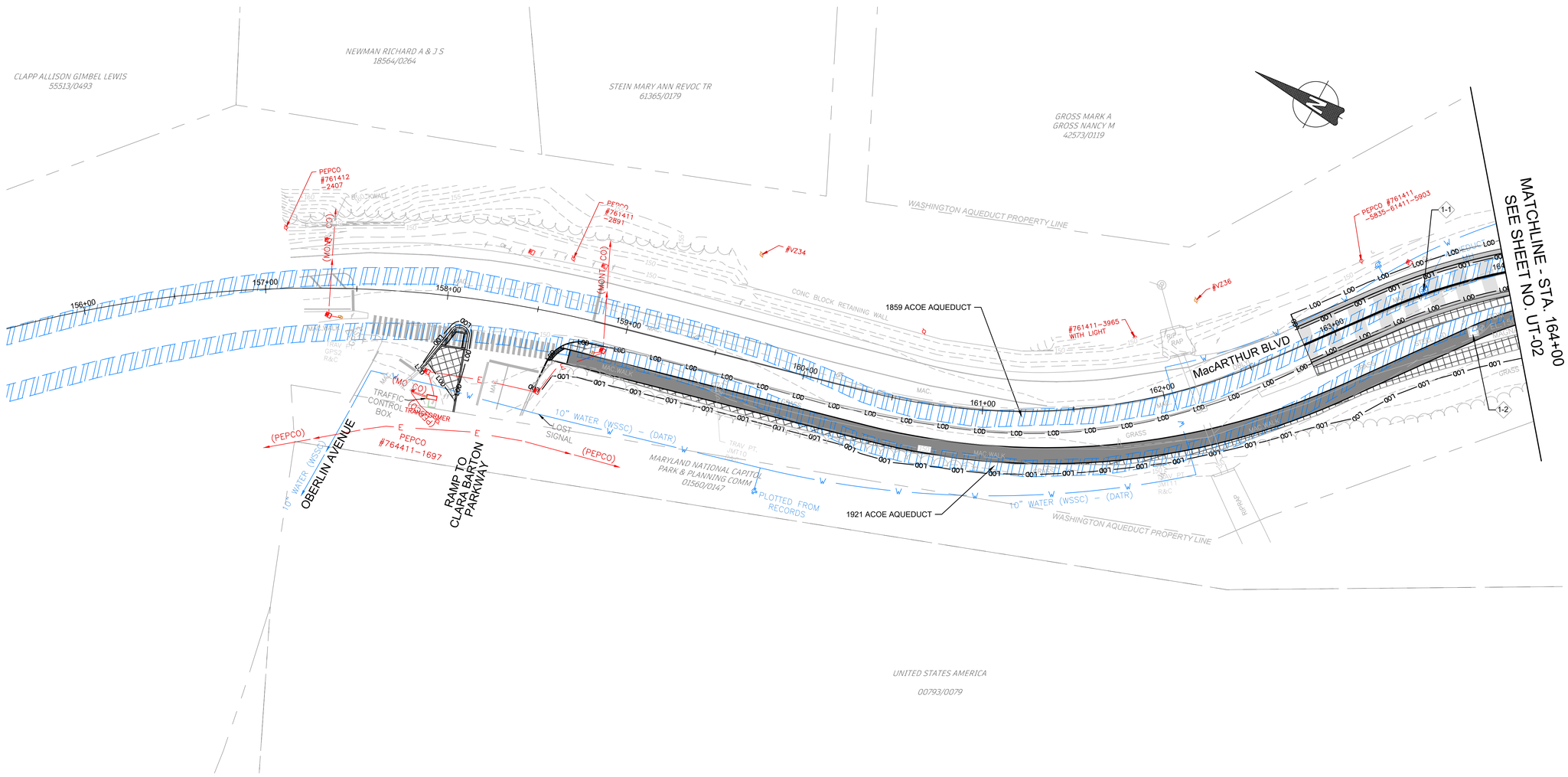
Designed by: JS — Drawn by: DT — Checked by: KA

ST-06
BORING AND DRIVE TESTS – 2
MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

DATE: JUNE 2024

CIP No. : 500718 — SHEET 153 of 285

FILE NAME: C:\pwworking\jmt\d0322045\12_Borings and Drive Test.dwg LAYOUT NAME: 24x36 PLOTTED: Wednesday, June 26, 2024 – 1:15pm USER: DTurner-Smith



UTILITY DATA				
NUMBER	STATION	UTILITY	CONFLICT	NOTES
1-1	163+54 LT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE
1-2	163+73 RT	USACE-WA	AQUEDUCT VAULT	DO NOT DISTURB

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD LIMIT OF DISTURBANCE

NOTES:
1. PRIOR TO THE PLANNING OF ANY UTILITY WORK, NOTIFY THE U.S. ARMY CORPS OF ENGINEERING WASHINGTON AQUEDUCT (USACE–WA) POINT OF CONTACT (POC)AT 202–345–2734. ALL UTILITY WORK WILL REQUIRE APPROVAL FROM USACE–WA.

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NOT FOR CONSTRUCTION

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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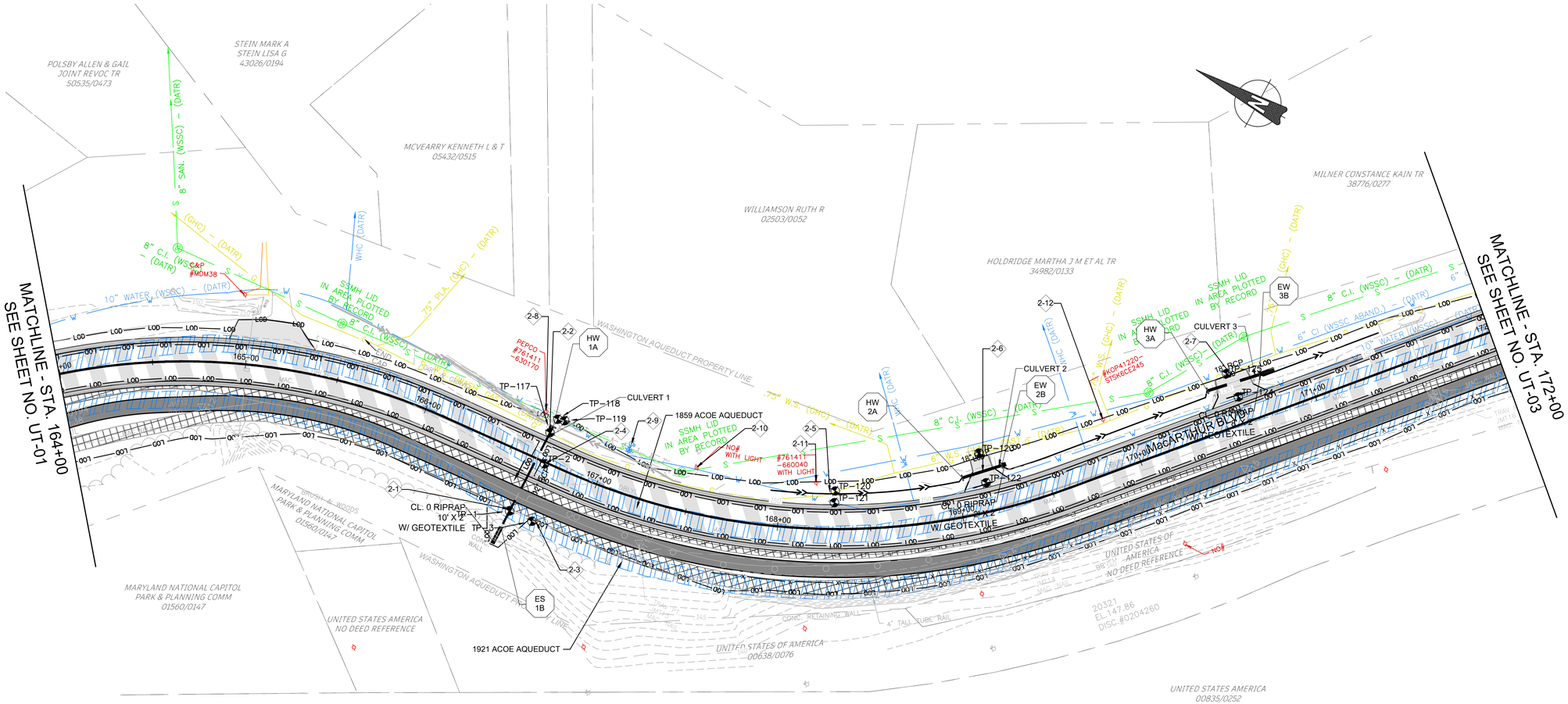
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–01
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 154 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-117	166+65.90	-15.59	0.00	471996.8341	1274037.7802	GAS
TP-118	166+66.76	-23.82	0.00	471996.5937	1274046.0466	WATER
TP-119	166+70.42	-24.57	0.00	471993.0004	1274047.0743	SEWER
TP-120	168+30.92	-20.45	0.00	471847.4358	1274083.1920	GAS
TP-121	168+30.50	-14.16	0.00	471844.8128	1274077.4563	WATER
TP-122	169+16.18	-15.57	0.00	471778.4851	1274125.6055	WATER
TP-123	169+16.24	-31.96	0.00	471789.3662	1274137.8497	GAS
TP-124	170+61.12	-14.32	0.00	471681.4897	1274230.6588	WATER
TP-125	170+59.50	-28.25	0.00	471693.0384	1274238.6124	GAS

TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-1	166+63.32	31.72	149.92	471995.8514	1273990.4056	Culvert Pipe
TP-2	166+70.01	0.92	151.18	471991.4912	1274021.6233	Old Conduit
TP-3	166+76.46	31.86	149.96	471982.7328	1273991.2587	New Conduit

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
2-1	166+63 RT	MCDOT	STORM DRAIN CULVERT	TP-1
2-2	166+63 LT	WASHINGTON GAS	GAS MAIN	TP-117
2-3	166+70 RT	USACE-WA	OLD CONDUIT	TP-2
2-4	166+76 RT	USACE-WA	NEW CONDUIT	TP-3
2-5	167+00 LT	WASHINGTON GAS	GAS MAIN	TP-120
2-6	169+20 LT	WSSC	WATER MAIN	TP-118, TP-121, TP-122, TP-124
2-7	170+60 LT	WASHINGTON GAS	GAS MAIN	TP-125
2-8	166+65 LT	PEPCO	UTILITY POLE	TO REMAIN. MAY REQUIRE STABILIZATION DURING CONSTRUCTION.
2-9	167+10 LT	WSSC	HYDRANT	TO REMAIN.
2-10	167+50 LT	UNKNOWN	UTILITY POLE	TO REMAIN.
2-11	168+20 LT	PEPCO	UTILITY POLE	TO REMAIN
2-12	169+90 LT	UNKNOWN	UTILITY POLE	TO REMAIN. MAY REQUIRE STABILIZATION DURING CONSTRUCTION.

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

NOTES:
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DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

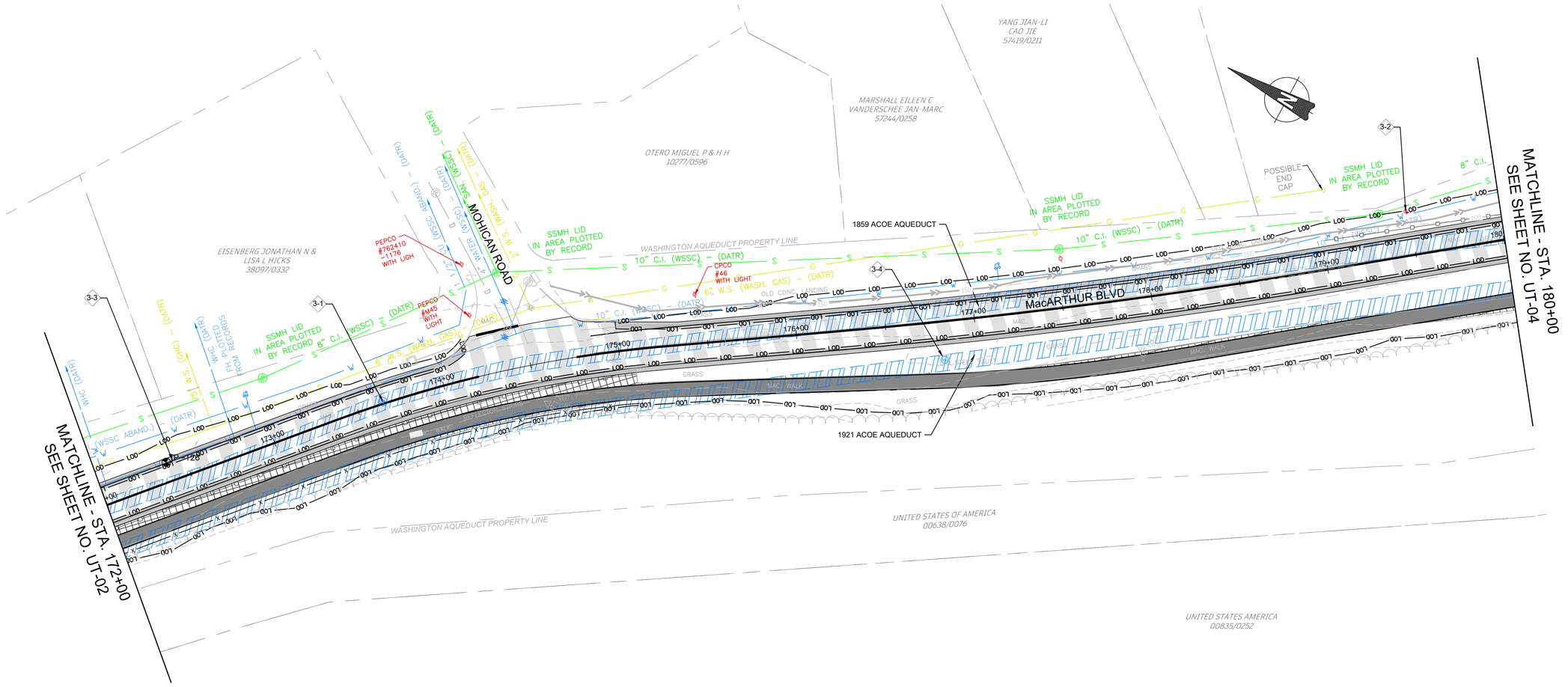
Designed by: ADH Drawn by: ADH Checked by: JJR

UT-02
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 155 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP–126	172+39.15	–11.00	0.00	471561.7665	1274362.4554	WATER

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
3-1	173+65 LT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE. BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE
3-2	179+48 LT	UNKNOWN	UTILITY POLE	POLE TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION
3-3	171+00 TO 174+00 LT	WSSC	WATER MAIN	
3-4	177+00 RT	UNKNOWN	BURIED MANHOLE	BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

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NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

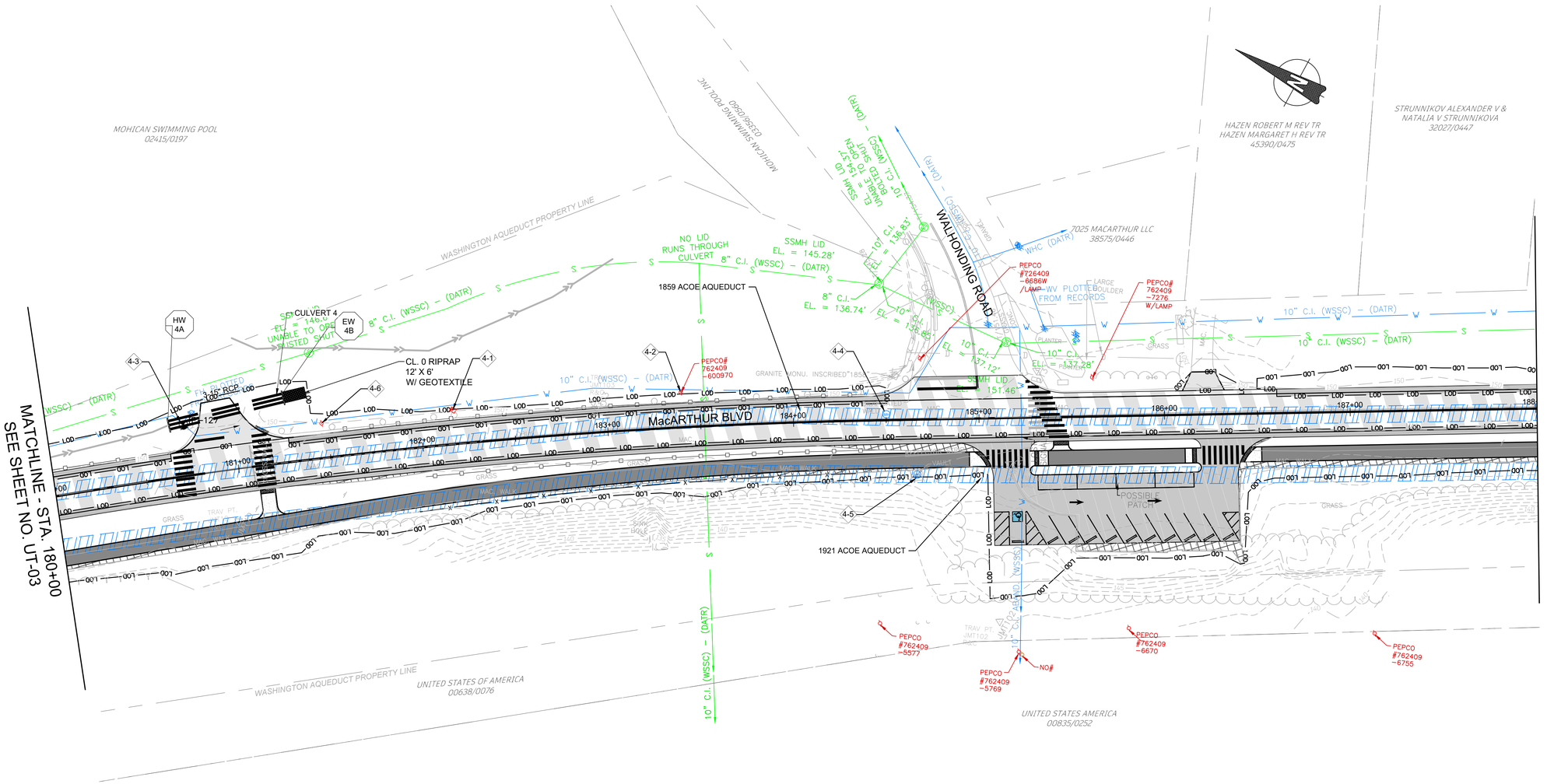
UT–03
UTILITY PLAN

MACARTHUR BOULEVARD
BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 156 of 285



TEST HOLES						
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP–127	180+73.83	–27.42	0.00	470920.1308	1274896.1724	WATER

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
4-1	182+18 LT	PEPCO	HANDBOX	MAY REQUIRE ADJUSTMENT
4-2	183+40 LT	PEPCO	UTILITY POLE	POLE TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION
4-3	180+75 LT	WSSC	WATER MAIN AND HYDRANT	RELOCATE HYDRANT
4-4	184+50 LT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO ROADWAY SURFACE
4-5	184+70 RT	USACE-WA	AQUEDUCT VAULT / MANHOLE	DO NOT DISTURB
4-6	181+45 LT	UNKNOWN	UTILITY POLE	POLE TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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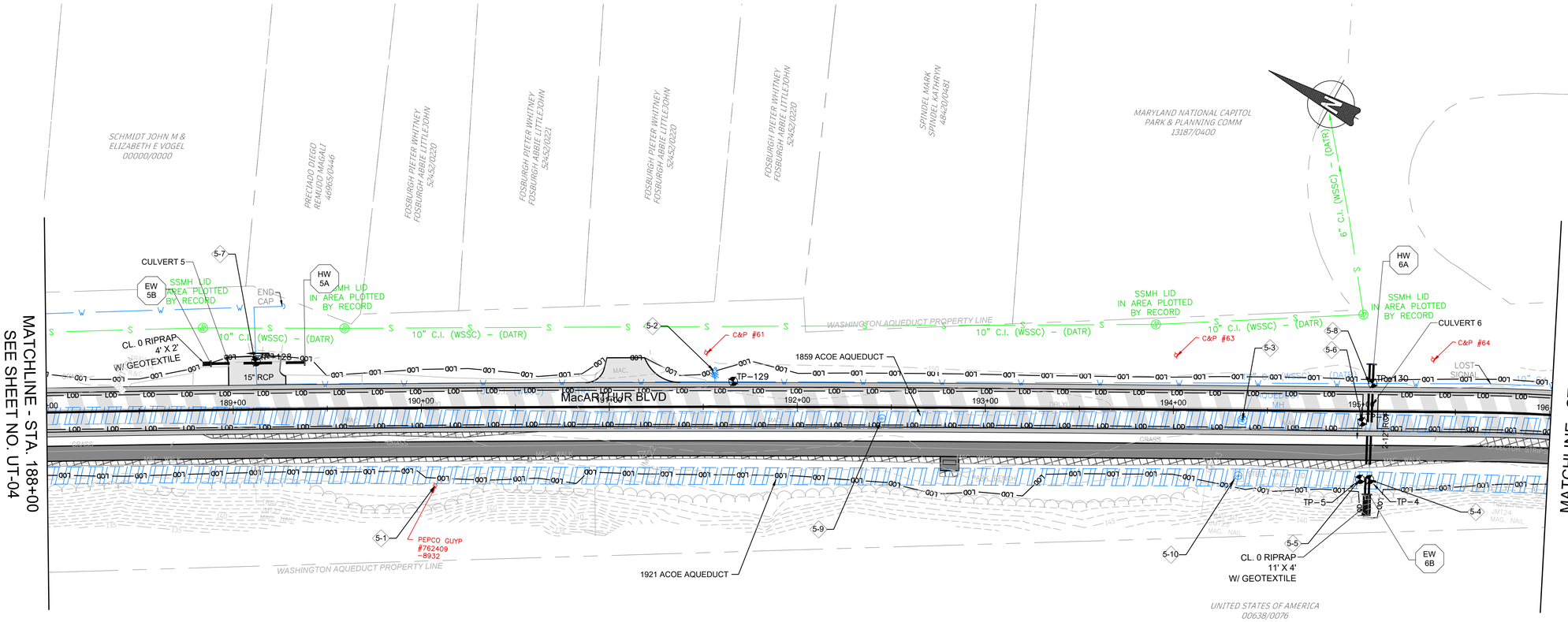
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–04
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 157 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP–128	189+12.42	–25.37	0.00	470198.3605	1275328.6838	WATER
TP–129	191+65.89	–13.53	0.00	469970.3160	1275440.5312	WATER
TP–130	195+05.87	–15.00	0.00	469670.9175	1275601.8563	WATER

TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP–4	195+04.58	36.22	148.33	469648.0586	1275556.0154	Culvert Pipe
TP–5	194+99.58	36.14	148.38	469652.5121	1275553.7426	New Conduit
TP–6	195+00.43	5.52	150.22	469666.1132	1275581.1885	Old Conduit

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
5-1	190+07 RT	PEPCO	GUY POLE	POLE TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION
5-2	191+55 LT	WSSC	FIRE HYDRANT	TO REMAIN
5-3	194+36 RT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE, BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE
5-4	195+05 RT	MCDOT	STORM DRAIN	TP-4
5-5	195+00 RT	USACE-WA	NEW CONDUIT	TP-5
5-6	195+00 RT	USACE-WA	OLD CONDUIT	TP-6
5-7	189+15 LT	WSSC	WATER MAIN	TP-128
5-8	195+00 LT	WSSC	WATER MAIN	TP-129, TP-130
5-9	192+40 LT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO ROADWAY SURFACE
5-10	194+30 RT	USACE-WA	AQUEDUCT VAULT / MANHOLE	DO NOT DISTURB

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD LIMIT OF DISTURBANCE

NOTES:
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DRAFT
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JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

UT–05
UTILITY PLAN

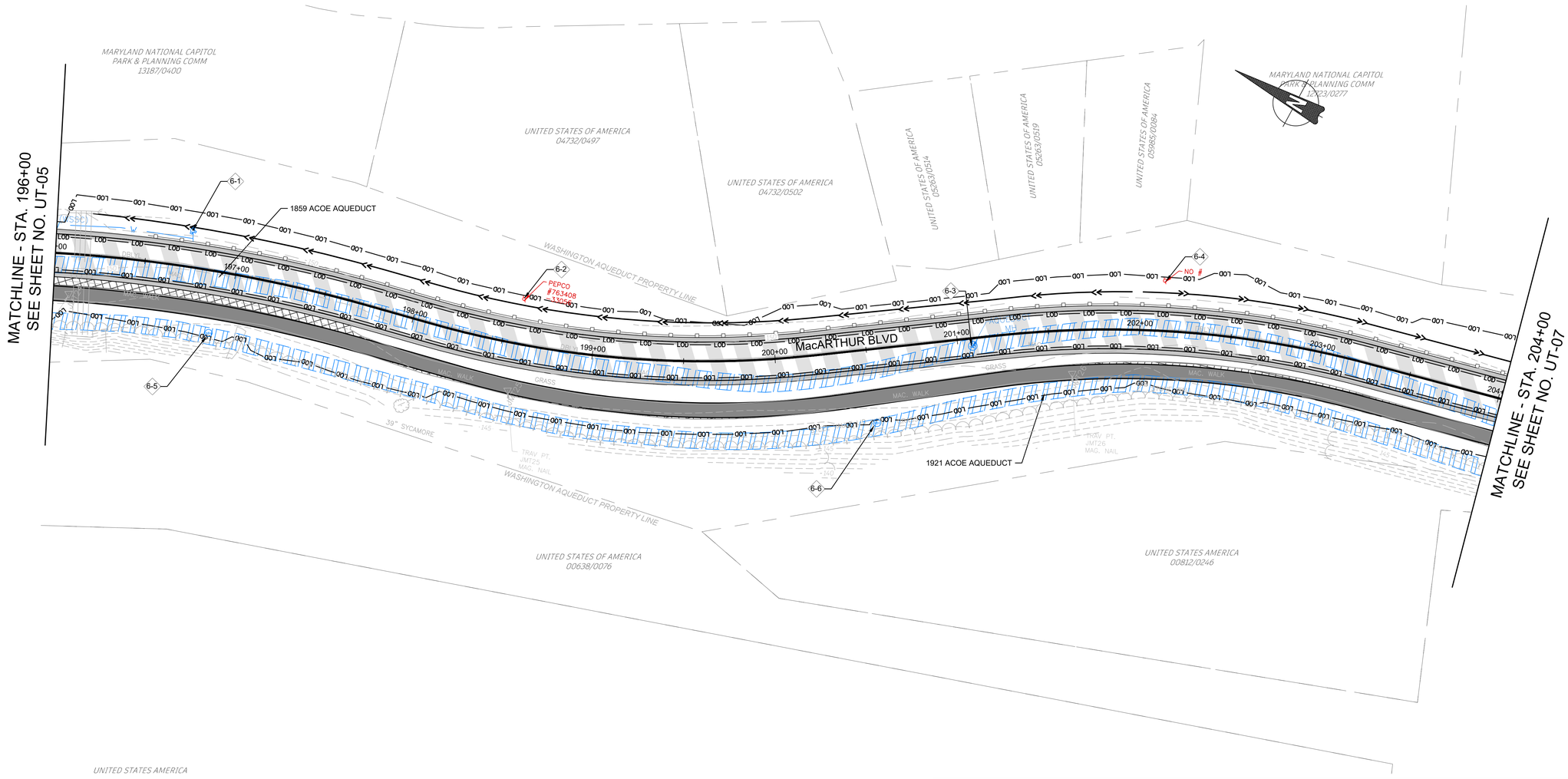
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No.: 500718 SHEET 158 of 285

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UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
6-1	196+73 LT	WSSC	FIRE HYDRANT	TO BE RELOCATED
6-2	198+58 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
6-3	201+08 RT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE
6-4	202+12 LT	UNKNOWN	UTILITY POLE	TO BE RELOCATED
6-5	196+90 RT	USACE-WA	BURIED MANHOLE	DO NOT DISTURB
6-6	200+50 RT	USACE-WA	AQUEDUCT VAULT / MANHOLE	DO NOT DISTURB

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

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GAITHERSBURG, MARYLAND

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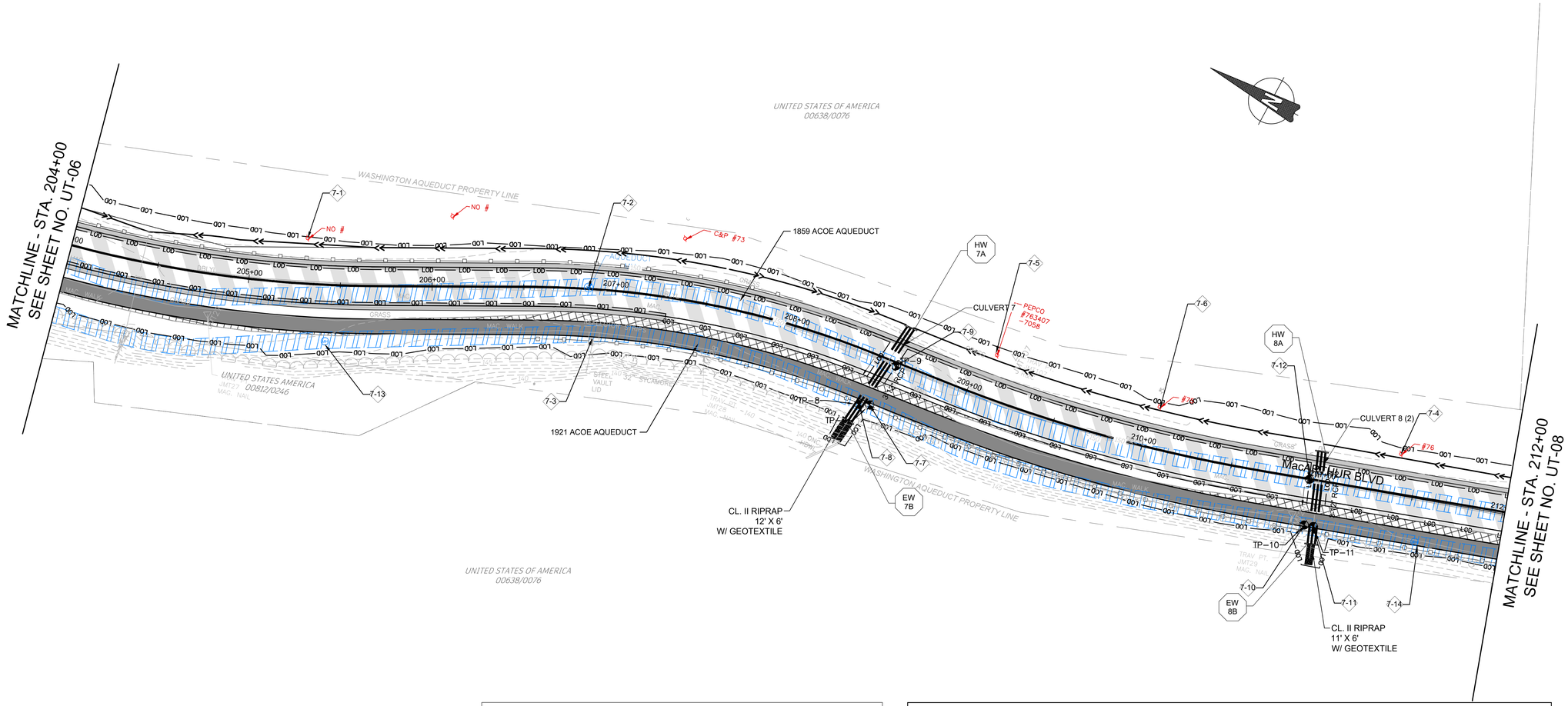
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UT–06
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 159 of 285



TEST HOLES						
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-7	208+53.68	26.97	149.11	468423.6153	1276069.6477	New Conduit
TP-8	208+48.26	28.85	148.86	468428.7816	1276067.1526	Culvert Pipe
TP-9	208+59.18	1.71	150.15	468421.0573	1276095.3699	Old Conduit

TEST HOLES						
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-10	210+94.51	25.26	148.89	468184.2259	1276125.0266	New Conduit
TP-11	210+99.51	25.23	148.87	468179.5024	1276126.6662	Culvert Pipe
TP-12	210+93.19	0.18	149.68	468193.5753	1276148.3397	Old Conduit

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
7-1	205+30 LT	UNKNOWN	UTILITY POLE	TO BE RELOCATED
7-2	206+85 LT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE, BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE
7-3	206+90 RT	USACE-WA	AQUEDUCT VAULT	TO REMAIN, BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE
7-4	211+40 LT	UNKNOWN	UTILITY POLE	TO BE RELOCATED
7-5	209+10 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
7-6	210+00 LT	UNKNOWN	UTILITY POLE	TO BE RELOCATED
7-7	208+54 RT	USACE-WA	NEW CONDUIT	TP-7
7-8	208+48 RT	MCDOT	STORM DRAIN	TP-8
7-9	208+60 RT	USACE-WA	OLD CONDUIT	TP-9
7-10	210+95 RT	USACE-WA	NEW CONDUIT	TP-10
7-11	211+00 RT	MCDOT	STORM DRAIN	TP-11
7-12	210+93 RT	USACE-WA	OLD CONDUIT	TP-12
7-13	205+40 RT	USACE-WA	BURIED MANHOLE	DO NOT DISTURB
7-14	211+60 RT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO BIKEWAY SURFACE

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

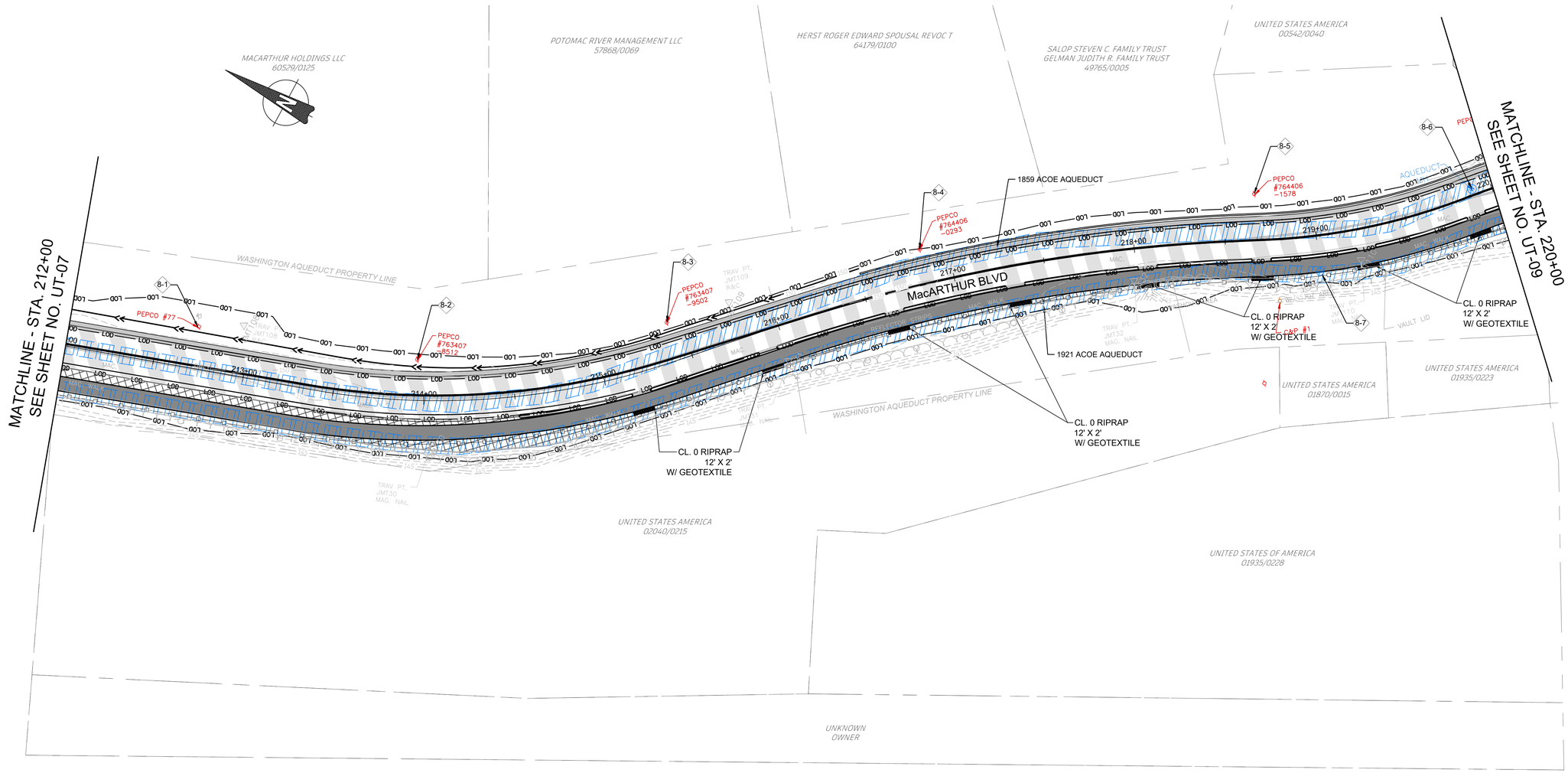
Designed by: ADH Drawn by: ADH Checked by: JJR

UT-07
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 160 of 285



UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
8-1	212+72 LT	PEPCO	UTILITY POLE / GUY POLE	TO BE RELOCATED
8-2	213+95 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
8-3	215+40 LT	PEPCO	UTILITY POLE	TO REMAIN
8-4	216+84 LT	PEPCO	UTILITY POLE	TO REMAIN
8-5	218+66 LT	PEPCO	UTILITY POLE	TO REMAIN
8-6	219+88 LT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE
8-7	219+00 RT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO BIKEWAY SURFACE

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
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APPROVED

Chief, Division of Transportation Engineering — Date

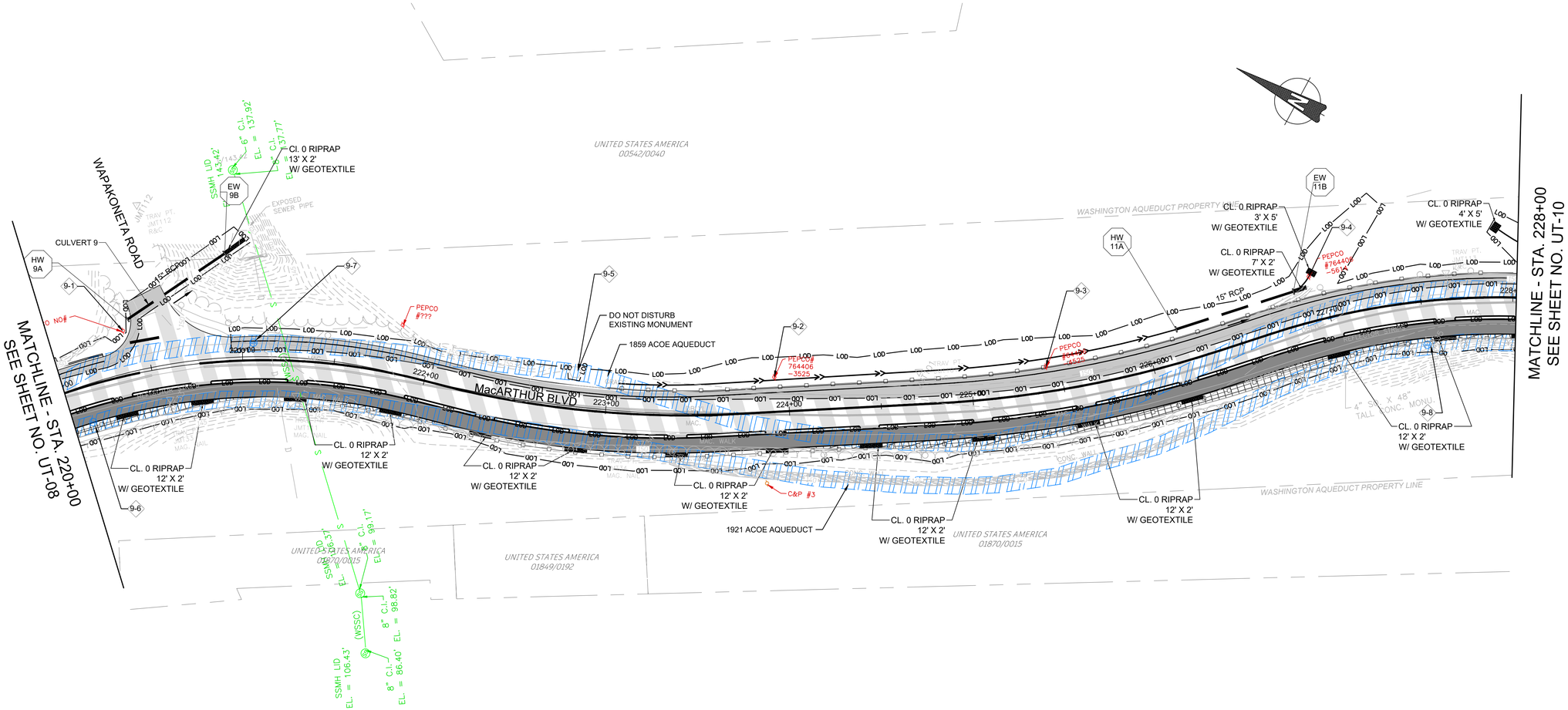
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–08
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 161 of 285



UTILITY DATA				
NUMBER	STATION	UTILITY	CONFLICT	NOTES
9-1	220+38 LT	PEPCO	UTILITY POLE	TO REMAIN
9-2	223+91 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
9-3	225+40 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
9-4	226+92 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
9-5	222+75 LT	USACE-WA	MONUMENT	DO NOT DISTURB
9-6	220+30 RT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO BIKEWAY SURFACE
9-7	221+10 LT	USACE-WA	BURIED MANHOLE	BRING MANHOLE TO ROADWAY SURFACE
9-8	227+50 RT	USACE-WA	BURIED MANHOLE	DO NOT DISTURB

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD LIMIT OF DISTURBANCE

NOTES:
1. PRIOR TO THE PLANNING OF ANY UTILITY WORK, NOTIFY THE U.S. ARMY CORPS OF ENGINEERING WASHINGTON AQUEDUCT (USACE–WA) POINT OF CONTACT (POC)AT 202–345–2734. ALL UTILITY WORK WILL REQUIRE APPROVAL FROM USACE–WA.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

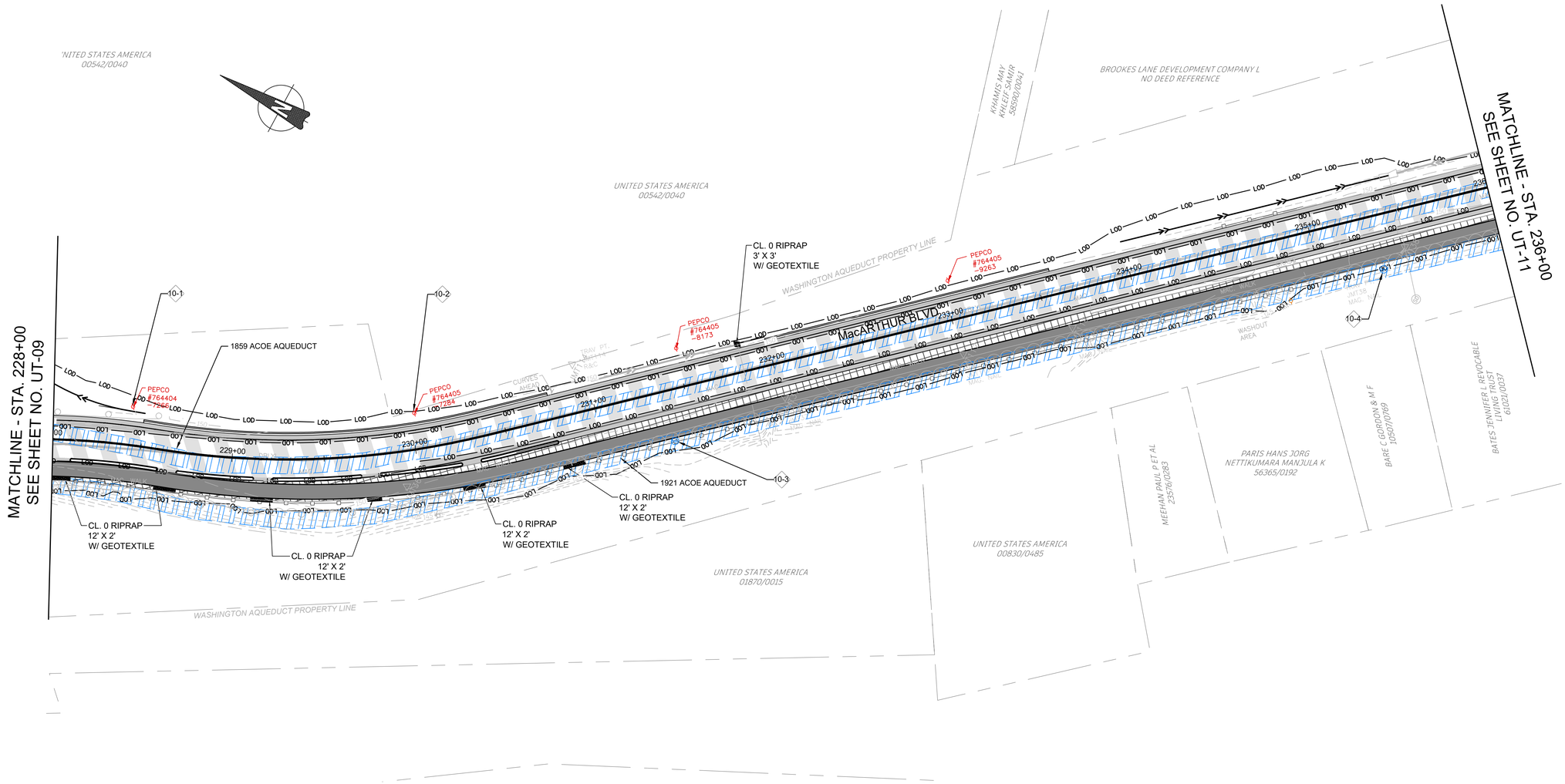
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–09
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 162 of 285



UTILITY DATA				
NUMBER	STATION	UTILITY	CONFLICT	NOTES
10-1	228+45 LT	PEPCO	UTILITY POLE	
10-2	230+00 LT	PEPCO	UTILITY POLE	POLE TO REMAIN. MAY REQUIRE STABILIZATION DURING CONSTRUCTION.
10-3	231+40 RT	USACE-WA	BURIED MANHOLE	DO NOT DISTURB
10-4	235+20 RT	USACE-WA	BURIED MANHOLE	DO NOT DISTURB

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

NOTES:
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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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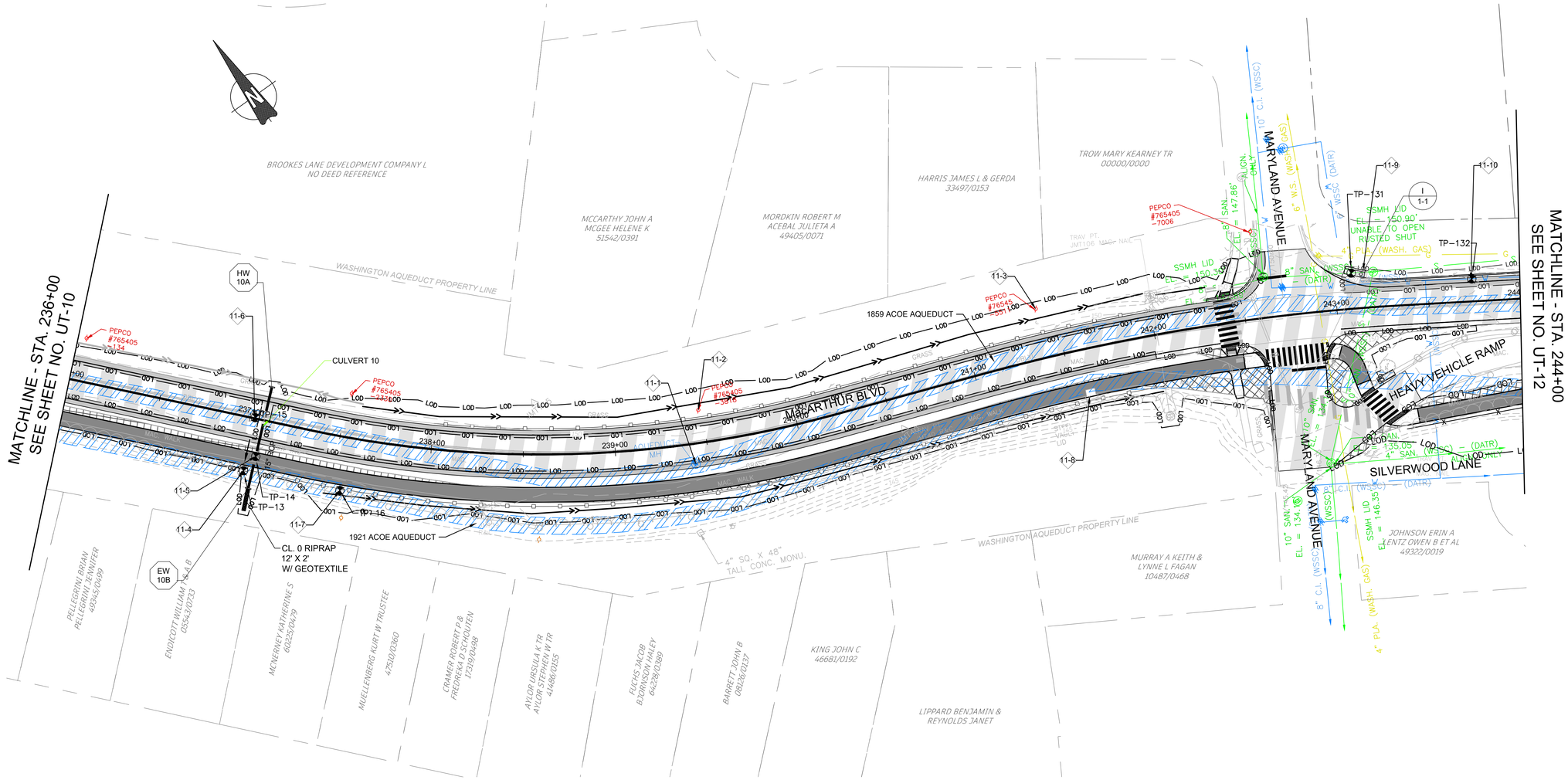
UT-10
UTILITY PLAN

MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 163 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-131	243+08.87	-19.36	0.00	465797.6186	1278145.2947	SEWER
TP-132	243+73.50	-12.25	0.00	465756.9995	1278196.6606	WATER

TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-13	237+00.95	29.10	149.64	466060.2047	1277593.8725	New Conduit
TP-14	237+05.87	20.06	149.99	466062.6658	1277603.8697	Culvert Pipe
TP-15	237+01.26	-0.40	150.57	466079.8749	1277615.8688	Old Conduit

TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-16	237+53.30	29.05	149.75	466021.0898	1277630.2006	New Conduit

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
11-1	239+40 RT	USACE-WA	AQUEDUCT MANHOLE	MILL OVERLAY NOT TO COVER MANHOLE, BRING MANHOLE TO ROADWAY / BIKEWAY SURFACE NOT TO COVER MANHOLE
11-2	239+46 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
11-3	241+39 LT	PEPCO	UTILITY POLE	POLE TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION
11-4	237+00 RT	USACE-WA	NEW CONDUIT	TP-13
11-5	237+05 RT	MCDOT	STORM DRAIN	TP-14
11-6	237+01 LT	USACE-WA	OLD CONDUIT	TP-15
11-7	237+53 RT	USACE-WA	NEW CONDUIT	TP-16
11-8	241+55 RT	USACE-WA	AQUEDUCT VAULT	TO REMAIN, DO NOT DISTURB
11-9	243+10 LT	WSSC	SEWER MAIN	
11-10	243+00 TO 244+00 LT	WSSC	WATER MAIN	

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

NOTES:
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NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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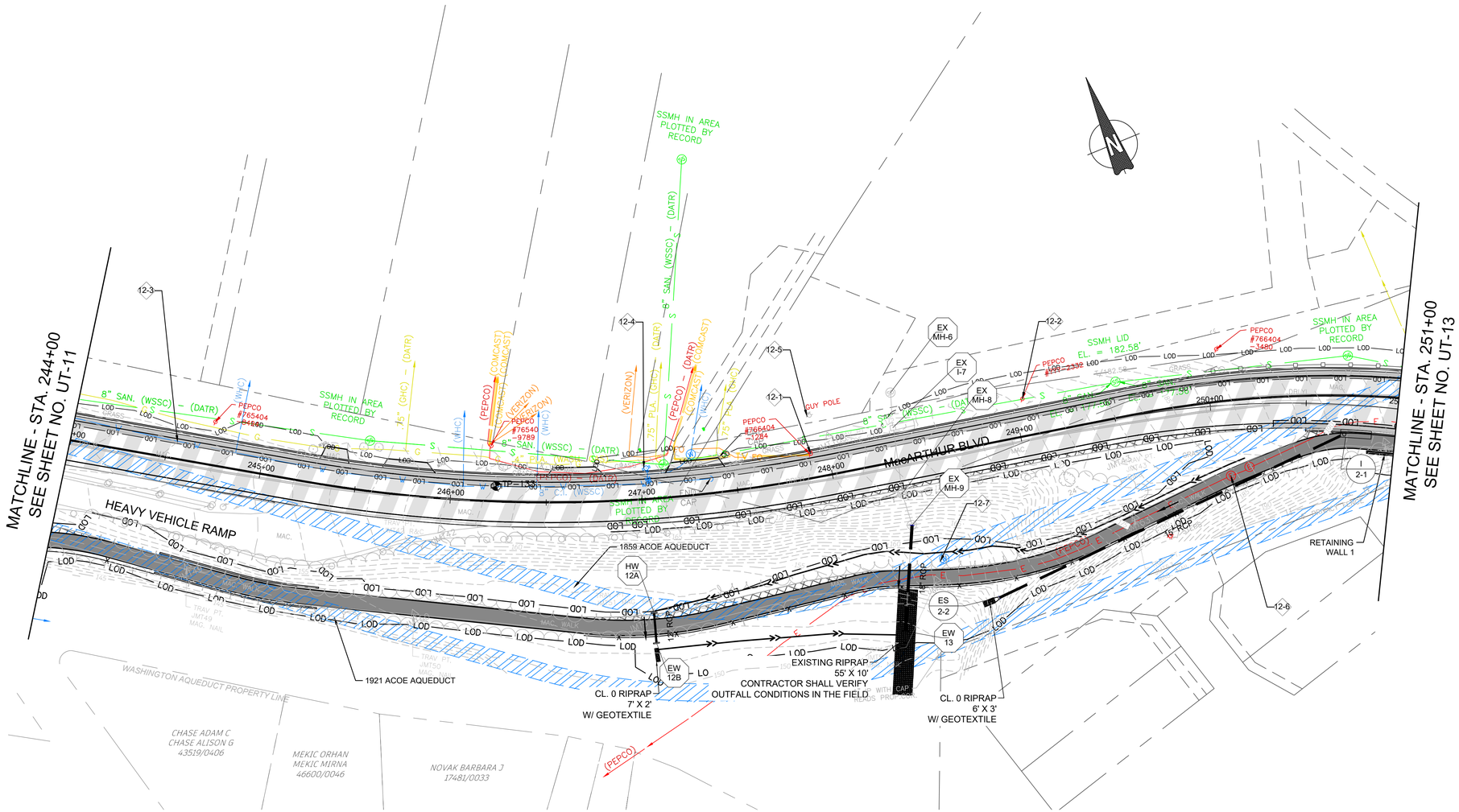
Designed by: ADH Drawn by: ADH Checked by: JJR

UT-11
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 164 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-133	246+23.30	-8.02	0.00	465626.1265	1278407.7689	WATER

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
12-1	247+89 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
12-2	249+03 LT	PEPCO	UTILITY POLE	TO BE RELOCATED
12-3	244+00 TO 247+25 LT	WSSC	WATER MAIN	
12-4	247+05 LT	WSSC	FIRE HYDRANT	TO BE RELOCATED
12-5	247+95 LT	PEPCO	GUY POLE	TO BE RELOCATED
12-6	250+00 RT	PEPCO	MANHOLES	TO BE ADJUSTED
12-7	248+50 RT	USACE-WA	MANHOLE	BRING MANHOLE TO SURFACE. DO NOT COVER MANHOLE

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD LIMIT OF DISTURBANCE

NOTES:
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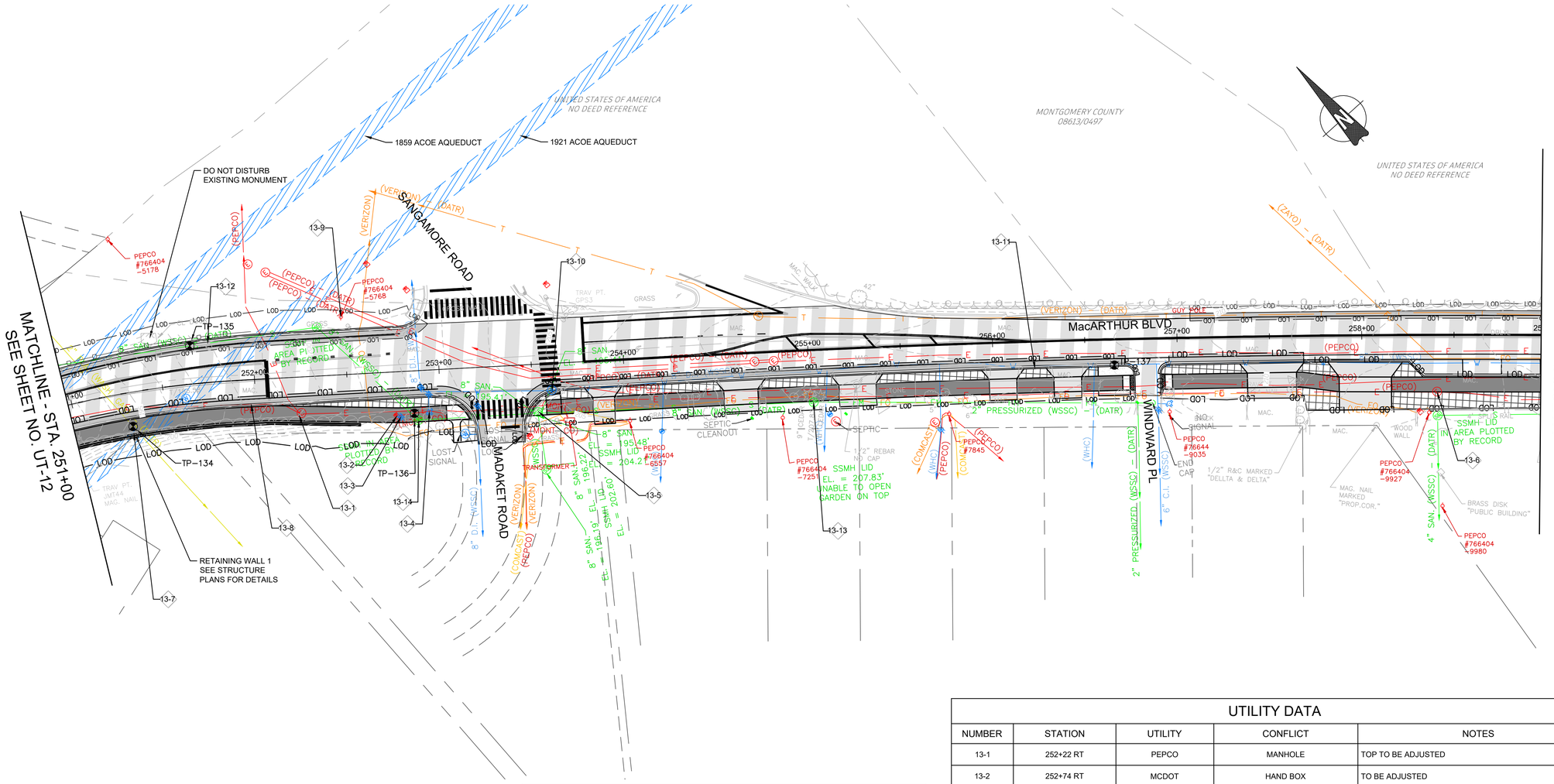
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–12
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 165 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP-134	251+30.30	18.48	0.00	465451.9025	1278875.5269	GAS
TP-135	251+66.52	-20.64	0.00	465463.8389	1278927.5212	SEWER
TP-136	252+85.07	22.96	0.00	465355.3382	1278993.5505	ELECTRIC
TP-137	256+65.35	14.00	0.00	465121.2389	1279292.7312	WATER

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
13-1	252+22 RT	PEPCO	MANHOLE	TOP TO BE ADJUSTED
13-2	252+74 RT	MCDOT	HAND BOX	TO BE ADJUSTED
13-3	252+76 RT	WSSC	WATER VALVE	TO BE ADJUSTED
13-4	252+92 RT	WSSC	FIRE HYDRANT	TO BE RELOCATED
13-5	253+50 RT	WSSC	SEWER MANHOLE	TO BE ADJUSTED
13-6	258+39 RT	PEPCO	MANHOLE	TOP TO BE ADJUSTED
13-7	251+30 RT	WASHINGTON GAS	GAS MAIN	
13-8	252+00 RT	PEPCO	CONDUIT	
13-9	252+50 LT	PEPCO	UTILITY POLE	TO REMAIN, MAY REQUIRE STABILIZATION DURING CONSTRUCTION
13-10	253+60 RT	WSSC	WATER MANHOLE	TOP TO BE ADJUSTED
13-11	253+50 TO 258+25 RT	WSSC	WATER MAIN	TP-137
13-12	251+75 LT	WSSC	SEWER MAIN	TP-135
13-13	255+00 RT	WSSC	SEWER MANHOLE	TOP TO BE ADJUSTED
13-14	252+85 RT	WSSC	SEWER MANHOLE	TOP TO BE ADJUSTED

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL-IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD LIMIT OF DISTURBANCE

NOTES:
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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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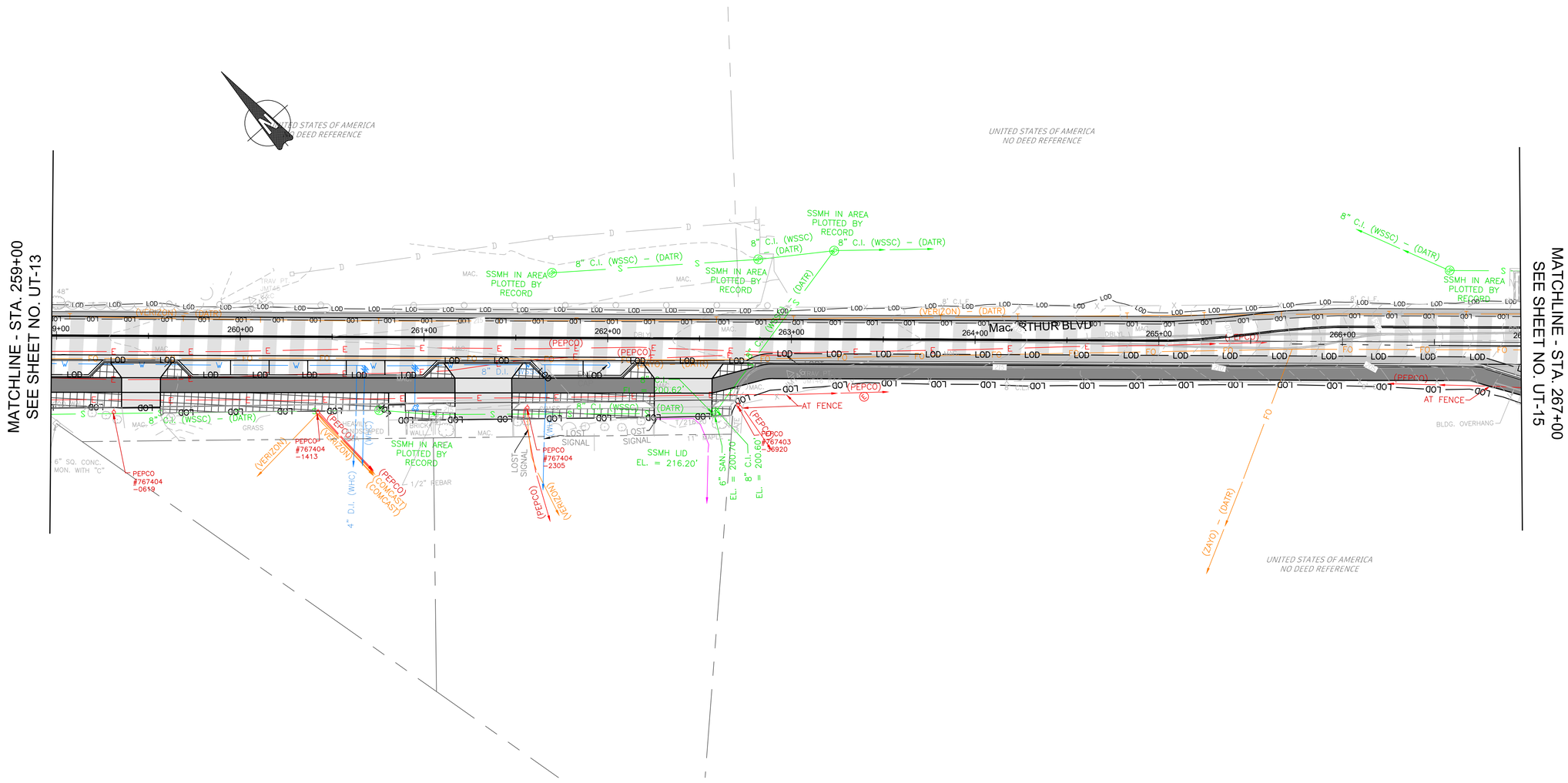
Designed by: ADH Drawn by: ADH Checked by: JJR

UT-13
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 166 of 285



LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

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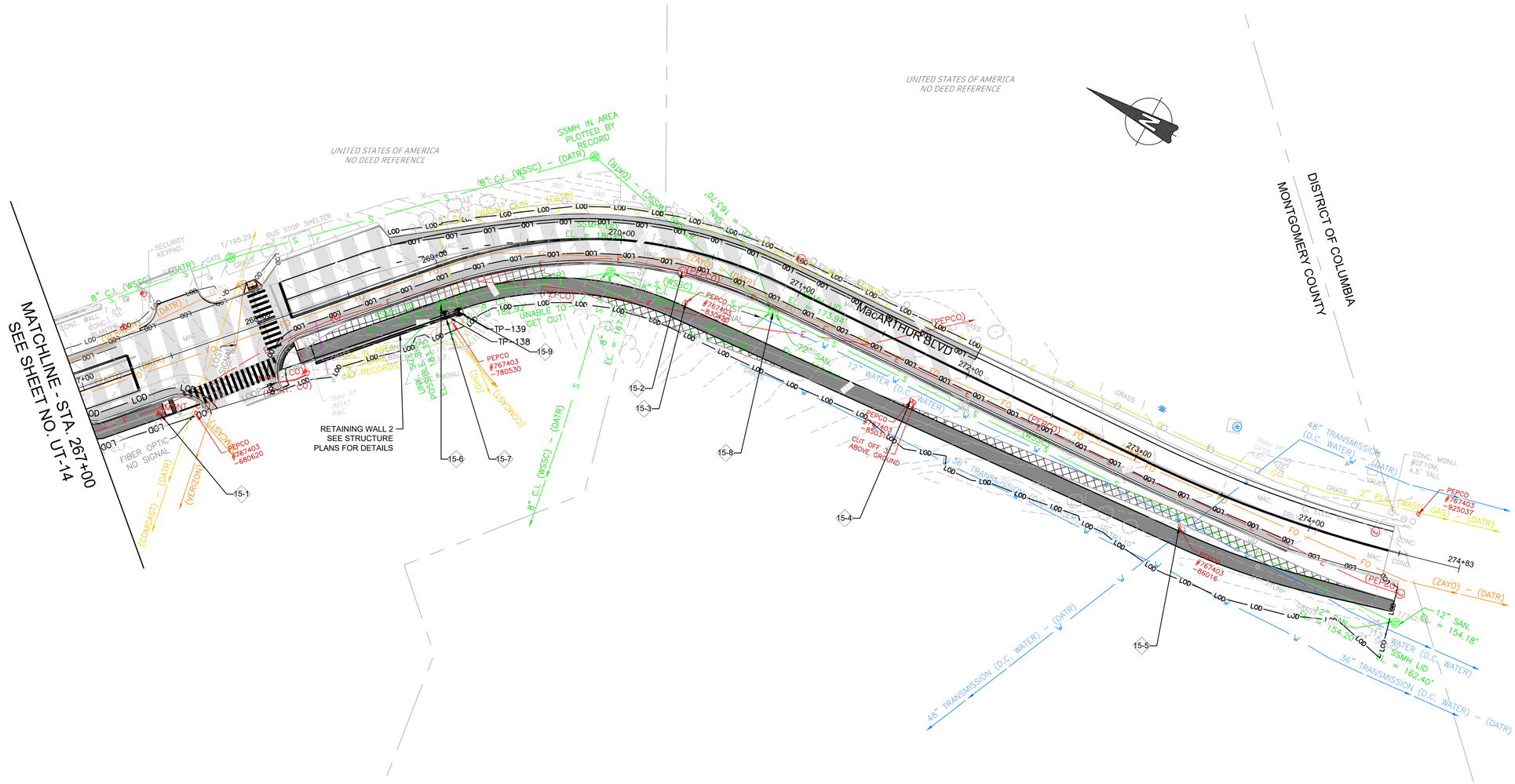
Designed by: ADH Drawn by: ADH Checked by: JJR

UT–14
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 167 of 285



TEST HOLES

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
TP–138	268+94.60	27.67	0.00	464287.5086	1280195.4756	SEWER
TP–139	269+02.55	28.65	0.00	464281.7124	1280200.3695	GAS

UTILITY DATA

NUMBER	STATION	UTILITY	CONFLICT	NOTES
15-1	267+32 RT	PEPCO	HAND BOX	TO BE ADJUSTED
15-2	270+34 RT	PEPCO	MANHOLE	TO BE ADJUSTED
15-3	270+40 RT	PEPCO	UTILITY POLE	TO REMAIN
15-4	271+77 RT	PEPCO	UTILITY POLE	TO REMAIN
15-5	273+34 RT	PEPCO	UTILITY POLE	TO REMAIN
15-6	268+95 RT	WSSC	SEWER MANHOLE	TOP TO BE ADJUSTED
15-7	268+95 RT	WSSC	SEWER MAIN	TP-138
15-8	270+95 RT	WSSC	SEWER MANHOLE	TO REMAIN
15-9	269+05 RT	WASHINGTON GAS	GAS MAIN	TP-139

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT REMOVAL
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED CONCRETE PATH
- LOD — LIMIT OF DISTURBANCE

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UT–15
UTILITY PLAN
MACARTHUR BOULEVARD BIKEWAY SEGMENT III

0 30' 60'

SCALE: 1"=30' DATE: JUNE 2024

CIP No. : 500718 SHEET 168 of 285