MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

NORWOOD ROAD SHARED USE PATH

C.I.P. PROJECT NO. 502313

INDEX OF SHEETS

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. ________ and hereby certify 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, I have obtained it and have made copies of those permissions available to DPS.

______________________ Engineer's Signature ______________ Date

______________________ Printed Name

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
505,778 square feet	39,184 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
15	0
Fee in Lieu (Trees Required – Trees Planted) x $250	$ 3,750

Required Number of Shade Trees

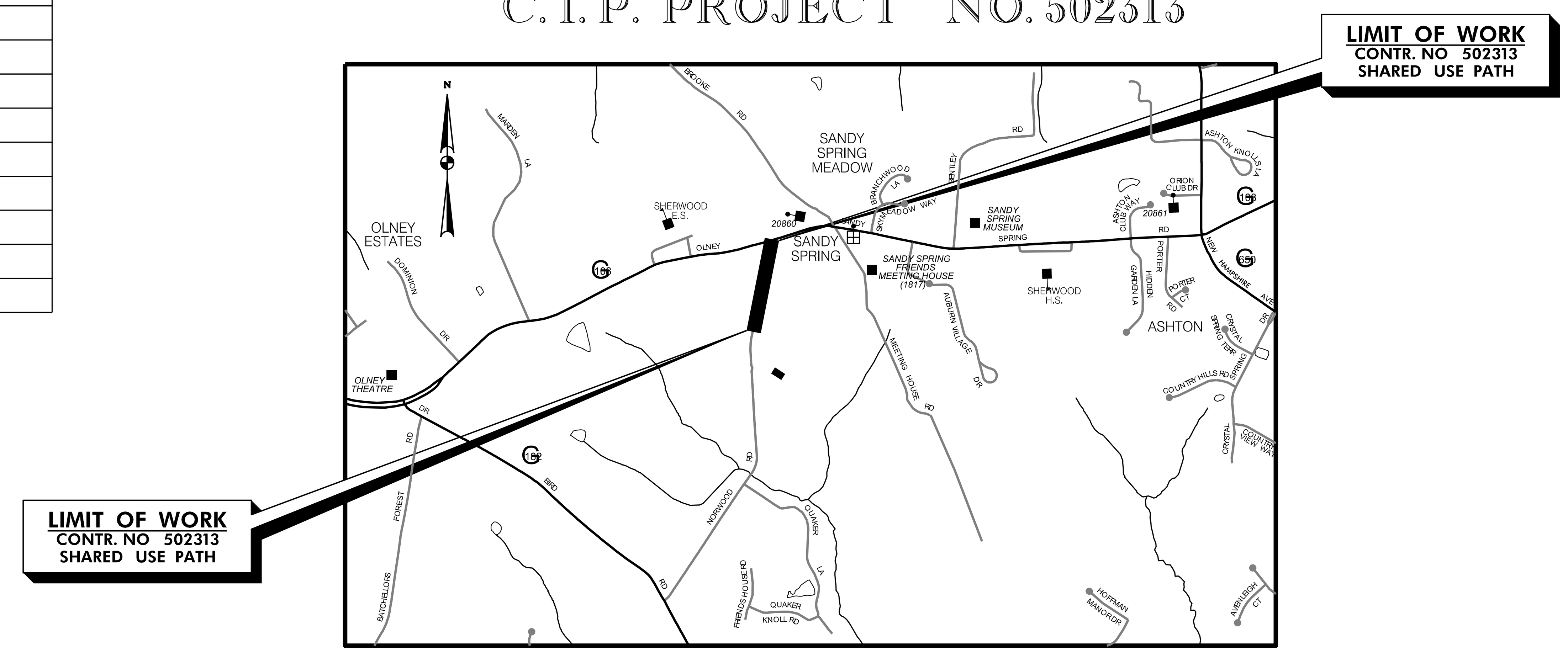
Area (sq. ft.) of the Limits of Disturbance FROM	TO	Number of Shade Trees Required
1	6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

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. ______________



VICINITY MAP
SCALE : 1"= 2000'

MONTGOMERY COUNTY
LENGTH OF PROJECT:
NORWOOD ROAD = 0.30 MILES

RELATED REQUIRED PERMITS

IT IS THE RESPONSIBILTY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED 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			
* DPS Roadside Trees Protection Plan	X		MCDOT BLANKET PERMIT NO. 361405	Approval Date	
N.P.D.E.S. NOTICE OF INTENT		X			DATE FILED
FEMA LOMR (Required Post Construction)		X			
OTHERS:					
DPS Erosion and Sediment Control	X				
MNCPPC Permit		X			

* A copy of the Roadside Trees Protection Plan must be delivered to the sediment control inspector at the preconstruction meeting.

OWNER/PERMIT APPLICANT INFORMATION

NAME: MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
ADDRESS: 100 EDISON PARK DRIVE 4th FLOOR, GAITHERSBURG, MD 20878
PHONE NUMBER: (240) 777-7263
CONTACT PERSON: REBECCA PARK, P.E.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION JULY 2023 AND MONTGOMERY COUNTY DESIGN STANDARDS.
2. 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.
3. 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.
4. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
5. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
6. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
7. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060.
9. THE PERMITTEE SHALL REFER TO THE ATTACHED TEMPORARY TRAFFIC CONTROL PLAN (TTCP) DRAWINGS TO SELECT THE APPROPRIATE WORK ZONE TEMPORARY TRAFFIC CONTROLS FOR EACH PHASE OF CONSTRUCTION. WORK ZONE SITUATIONS WHICH ARE NOT ADDRESSED IN THE ATTACHED TTCP SHALL CONFORM TO THE GUIDELINES SET FORTH IN SECTION 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), MOST RECENT EDITION.
10. FOR CONSTRUCTION, ALL HORIZONTAL AND VERTICAL CONTROLS SHALL BE NAD 83 (2007) AND NAVD 88 DATUM.

OWNER'S/DEVELOPER'S CERTIFICATION

I/We 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
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 Design Criteria" dated August 1988.

______________ DATE

______________________ MICHAEL MERCADO, P.E.
MERCADO CONSULTANTS, INC.

CERTIFICATION OF THE QUANTITIES

I hereby certify that the estimated total yards of excavation and fill as shown on this plan has been computed to 250 cubic yards of excavation, 70 cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be 39,184 square feet.

______________________ SIGNATURE ______________ DATE

MICHAEL MERCADO, P.E. — PRINTED NAME AND TITLE
38931 — REGISTRATION NUMBER

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

65% DESIGN SUBMISSION 11-20-2023

TECHNICAL REVIEW OF SEDIMENT CONTROL	ADMINISTRATIVE REVIEW	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.
REVIEWED DATE	REVIEWED DATE	
TECHNICAL REVIEW OF STORMWATER MANAGEMENT	SMALL LOT DRAINAGE APPROVAL	SEDIMENT CONTROL PERMIT NO.
	N/A: ☒ OR	SM. FILE NO. STORMWATER MANAGEMENT
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.	

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

PROFESSIONAL CERTIFICATION:

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

LICENSE NO: 38931 EXPIRATION DATE: 12-22-2023

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

RECOMMENDED FOR APPROVAL

______________________ Chief, Design Section ______ Date

APPROVED

______________________ Chief, Division of Transportation Engineering ______ Date

Designed by : MWM Drawn by : NL Checked by : MWM

NORWOOD ROAD
SHARED USE PATH

TITLE SHEET

SCALE : AS SHOWN DATE : NOVEMBER, 2023

Project No. : 502313 SHEET 1 of 20

11/20/2023
\\server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\pGN-T000_Norwood.dgn

ABBREVIATIONS

AASHTO ..... American Association of State Highway Transportation Officials
ADT ..... Average Daily Traffic
AHD ..... Ahead
APPROX ..... Approximate
℄ or B/L ..... Baseline
BK ..... Back / Book
BIT. ..... Bituminous
B.C. ..... Bituminous Concrete
B.M. ..... Bench Mark
BOT. ..... Bottom
C.C. ..... Center of Curve
CAP ..... Corrugated Aluminum Pipe
CAPA ..... Corrugated Aluminum Pipe Arch
CATV ..... Cable Television
C.B.R. ..... California Bearing Ratio
℄ or C/L ..... Centerline
CL. ..... Class
CLF ..... Chainlink Fence
CMP ..... Corrugated Metal Pipe
C.O. ..... Cleanout
COMB. ..... Combination
CONC. ..... Concrete
CONSTR. ..... Construction
COR. ..... Corner
CORR. ..... Correction
CPP-S ..... Corrugated Polyethylene Pipe - Type 'S'
CSP ..... Corrugated Steel Pipe - Aluminized Type 2
CSPA ..... Corrugated Steel Pipe Arch - Aluminized Type 2
DC ..... Degree of Curve
D.H.V. ..... Design Hourly Volume
D.I. ..... Drop Inlet
DIA. ..... Diameter
D.O. ..... Double Opening
E ..... East
E ..... Electric
E ..... External Distance
EA ..... Each
EB ..... Eastbound
ELEV ..... Elevation
ES ..... End Section
ESC ..... Erosion and Sediment Control
EX or EXIST ..... Existing
FT ..... Feet
F or FL ..... Flowline
F.B.D. ..... Flat Bottom Ditch
F.H. ..... Fire Hydrant
FWD ..... Forward
G ..... Gas
G.V. ..... Gas Valve
H.B. ..... Handbox
HDWL ..... Headwall
HERCP ..... Horizontal Ellipitical Reinforced Concrete Pipe
HP ..... High Point
IN ..... Inch
INV ..... Invert
J.B. ..... Junction Box
K ..... K Inlet
L ..... Length
LF ..... Linear Feet
L.L. ..... Liquid Limit
LOD ..... Limit of Disturbance
LP ..... Low Point
L.P. ..... Light Pole
LT ..... Left
MAC ..... Macadam
M.C. ..... Moisture Content
MAX ..... Maximum
M.D.D. ..... Maximum Dry Content
MOD. ..... Modified
MIN. ..... Minimum
N ..... North
NB ..... Northbound
NE ..... Northeast
N.P. ..... Non-Plastic
O.C. ..... On Center
OHE ..... Overhead Electric
O.M. ..... Optimum Moisture
PAV'T. ..... Pavement
PC ..... Point of Curvature
PCC ..... Point of Compound Curvature
P/C ..... Point of Crown
P/GE ..... Profile Grade Elevation
P.G.E. ..... Profile Ground Elevation
P.G.L. ..... Profile Grade Line
P/GL ..... Profile Ground Line
P/R ..... Point of Rotation
P.I. ..... Plasticity Index
PI ..... Point of Intersection
POC ..... Point On Curve
POT ..... Point On Tangent
PPWP ..... Polyvinyl Chloride Profile Wall Pipe
PROP ..... Proposed
PRC ..... Point of Reverse Curve
PT ..... Point
PT ..... Point of Tangency
PVC ..... Point of Vertical Curve
PVC ..... Polyvinyl Chloride
PVI ..... Point of Vertical Intersection
PVRC ..... Point of Vertical Reverse Curve
PVT ..... Point of Vertical Tangency
R ..... Radius
R.F. ..... Rock Fragments
RT ..... Right
RW or R/W ..... Right of Way
RCP ..... Reinforced Concrete Pipe
RCPP ..... Reinforced Concrete Pressure Pipe
R.Q.D. ..... Rock Quality Designation
R.M. ..... Rootmat
S ..... South
SAN ..... Sanitary Sewer
SB or S/B ..... Southbound
S.D. ..... Storm Drain
S.D.D. ..... Surface Drain Ditch
S/E ..... Super Elevation
SF ..... Silt Fence
SF ..... Square Feet
SHT ..... Sheet
SPP ..... Structural Steel Plate Pipe
SPPA ..... Structural Steel Plate Pipe Arch
S.P.T. ..... Standard Penetration Testing
SRP ..... Steel Spiral Rib Pipe - Aluminized Type 2
SRPA ..... Steel Spiral Rib Pipe Arch - Aluminized Type 2
SSD ..... Stopping Sight Distance
SSF ..... Super Silt Fence
STD. ..... Standard
STA. ..... Station
SO. ..... Single Opening
SY ..... Square Yards
SWM ..... Stormwater Management
T ..... Tangent
T ..... Telephone
T.C. ..... Top of Cover
T.G. ..... Top of Grate
T or TL ..... Traverse Line
T.M. ..... Top of Manhole
TRAV. ..... Traverse
TS ..... Temporary Swale
T.S. ..... Top of Slab
T.S. ..... Topsoil
TYP. ..... Typical
U.D. ..... Under Drain
U.G. ..... Underground
U.P. ..... Utility Pole
US EPA ..... United States Environmental Protection Agency
USDA ..... United States Department of Agriculture
VCL ..... Vertical Clearance
V.C.L. ..... Vertical Curve Length
W ..... Water
W ..... West
WB ..... Westbound
WB ..... Wetland Buffer
W.M. ..... Water Meter
W.S. ..... Wrapped Steel
WUS ..... Waters of the United States
W.V. ..... Water Valve

CONVENTIONAL SIGNS

PROPOSED MEDIAN BARRIER
ELECTRICAL HAND BOX – SIGNALS (H.B.)
FLOW LINE
STATE, COUNTY OR CITY LINES
PROPOSED TRAFFIC BARRIER W-BEAM
EXISTING TRAFFIC BARRIER W-BEAM
PROPOSED FENCE LINE
EXISTING FENCE LINE
PROPOSED CURB AND GUTTER
R/W LINE
TEMPORARY CONSTRUCTION EASEMENT (TCE)
EXISTING ROADWAY
BASE LINE OR SURVEY LINE (31 +50 32)
FIRE HYDRANT (F.H.)
HISTORIC BOUNDARY (H)
PARK BOUNDARY (P)
WATER LINE (W)
OVERHEAD ELECTRIC (E)
TRAFFIC BARRIER

EXISTING 100 YEAR FLOODPLAIN BOUNDARY
PROPOSED 100 YEAR FLOODPLAIN BOUNDARY
WETLAND BOUNDARY
PROPOSED PIPE / CULVERT
EXISTING PIPE / CULVERT
EXISTING DROP INLET
UTILITY POLE
EXISTING WATER (W)
EXISTING SANITARY SEWER (SAN)
EXISTING ELECTRIC (E)
EXISTING OVERHEAD ELECTRIC (E)
EXISTING FIBER OPTIC (FO)
EXISTING TELEPHONE (T)
WETLAND
WETLAND BUFFER (B)
WATERS OF THE U.S. (WUS, WL)
HEDGE / TREE LINE
BUSH / TREE
CONIFEROUS TREE
GROUND ELEVATION (DATUM LINE 173.6)
GRADE ELEVATION (DATUM LINE 210.22)
PIPE TO BE REMOVED
PIPE TO BE ABANDONED
DIRECTION OF TRAFFIC FLOW

MERCADO
CONSULTANTS, INC.

SOILS LEGEND

A-3 SAND
A-2-7 CLAYEY SAND
A-7-4 SILTY CLAY
A-2 SAND & FINES
A-7-2 SANDY CLAY
A-7 CLAY
A-2-4 SILTY SAND
A-4 SILT
A-6 COLLOIDAL CLAY
A-4-2 SANDY SILT
A-4-7 CLAYEY SILT
A-5 MICA, DIATOMS

PLAN LOCATION OF SOIL BORINGS

BORING TARGETS AND PROFILES SCALE:
HORIZONTAL - NONE
VERTICAL - SEE PROFILE SHEETS

AO-ABOVE OPTIMUM
SAT-SATURATED
LIQ-LIQUEFIED

TS-TOPSOIL
RM-ROOT MAT
BC-BITUMINOUS CONCRETE
SB-STONE BASE
PCC-PORTLAND CEMENT CONCRETE

LL-LIQUID LIMIT (%)
PI-PLASTICITY INDEX (%)
NP-NON-PLASTIC
OMC-OPTIMUM MOISTURE CONTENT (%)
USC-UNIFIED SOIL CLASSIFICATION
USDA-UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION

W/GR-WITH GRAVEL
W/RF-WITH ROCK FRAGMENTS

NOTES: SOIL SYMBOLS DENOTE MSMT CLASSIFICATIONS

ALL DIMENSIONS, DEPTHS AND ELEVATIONS ARE NOTED IN FEET

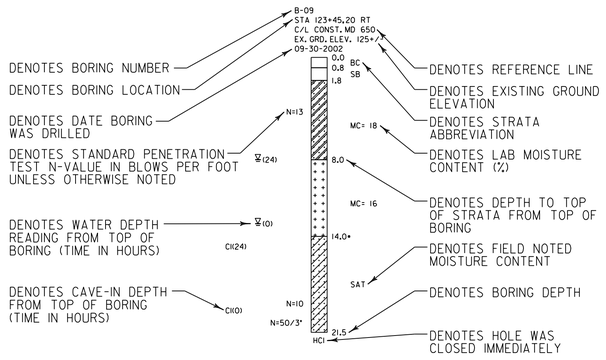
AN ASTERISK AT THE TOP DEPTH OF STRATA INDICATES THAT STRATA WAS VISUALLY CLASSIFIED BY DRILLER

MDD & OMC PER A.A.S.H.T.O. DESIGNATION T-180

N PER A.A.S.H.T.O. DESIGNATION T-206

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SURVEY BORINGS FOR ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY (09/2000 TO 06/2002)

SOIL BORING PROFILE EXAMPLE



SOILS TEST DATA								
BORING NUMBER	SAMPLE DEPTH	LL	PI	USDA	USC	MDD	OMC	REMARKS
B-09	1.8 - 8.0	18	NP	Sandy Loam	-	-	-	with Gravel
B-09	8.0 - 14.0	41	22	Silty Clay Loam	CL	121	12	-

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

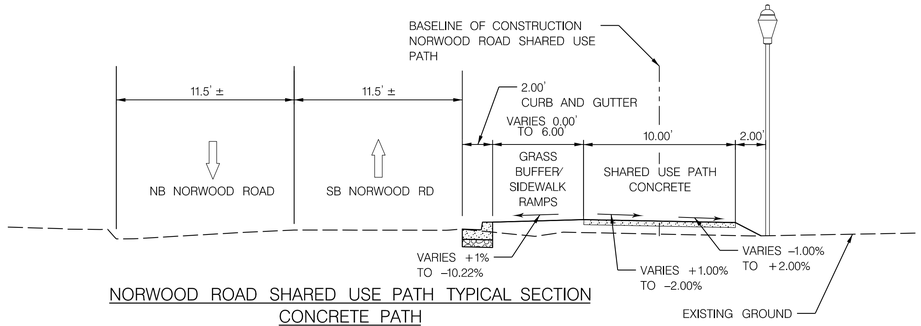
NORWOOD ROAD SHARED USE PATH

NOTES AND ABBREVIATIONS

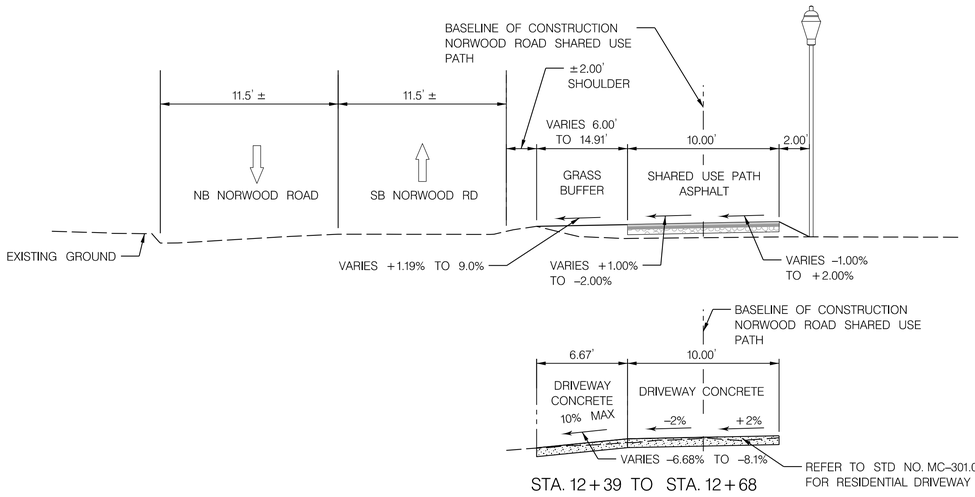
SCALE NONE DATE NOVEMBER, 2023

SHEET NO. 2 OF 20

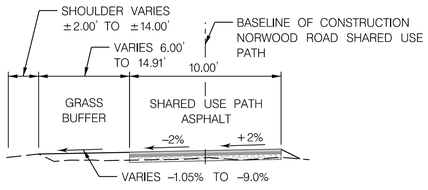
PLOTTED: 11/21/2023
FILE: \\server5\mercado data \1Projects\19068\19068.04 Sandy Spring Bikeway\05 Roadway\CADD\xGH-xN00_Norwood.dgn



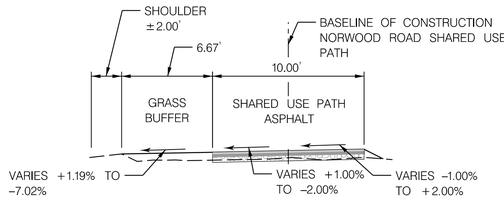
NORWOOD ROAD SHARED USE PATH TYPICAL SECTION
CONCRETE PATH
STA. 10+21 TO STA. 10+67
STA. 23+42 TO STA. 23+65



STA. 12+39 TO STA. 12+68



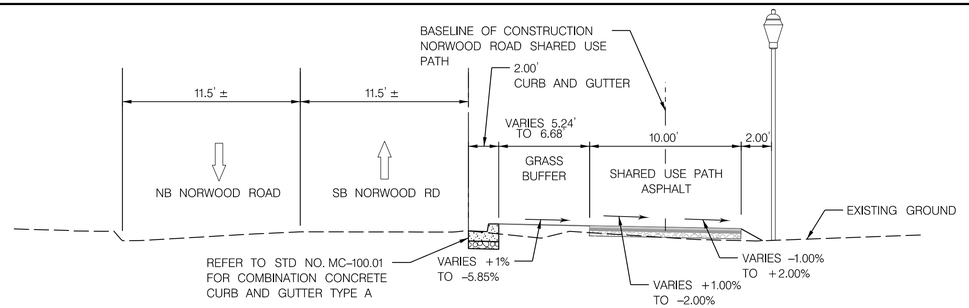
STA. 22+29 TO STA. 23+34



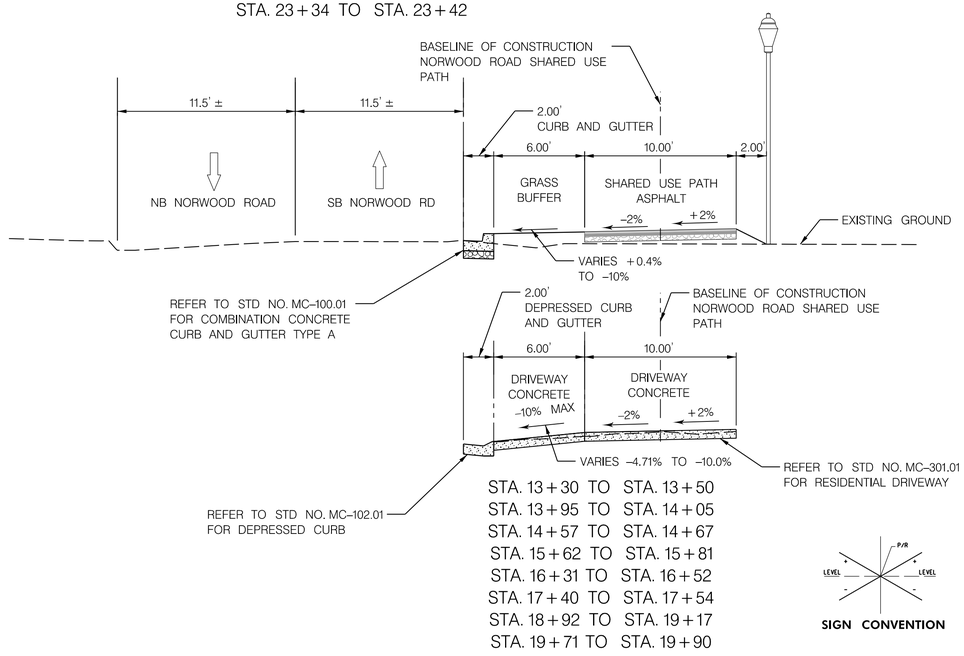
STA. 10+97 TO STA. 12+39
STA. 12+68 TO STA. 12+91
STA. 20+26 TO STA. 22+29

NORWOOD ROAD SHARED USE PATH TYPICAL SECTION
ASPHALT PATH AND CONCRETE DRIVEWAY
STA. 10+97 TO STA. 12+91
STA. 20+26 TO STA. 23+34

5' 0 5' 10'
SCALE: 1"=5'



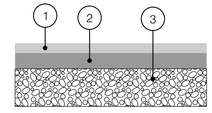
NORWOOD ROAD SHARED USE PATH TYPICAL SECTION
ASPHALT PATH WITH CURB AND GUTTER
STA. 10+67 TO STA. 10+97
STA. 23+34 TO STA. 23+42



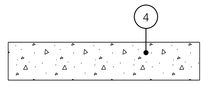
STA. 13+30 TO STA. 13+50
STA. 13+95 TO STA. 14+05
STA. 14+57 TO STA. 14+67
STA. 15+62 TO STA. 15+81
STA. 16+31 TO STA. 16+52
STA. 17+40 TO STA. 17+54
STA. 18+92 TO STA. 19+17
STA. 19+71 TO STA. 19+90

NORWOOD ROAD SHARED USE PATH TYPICAL SECTION
ASPHALT PATH AND CONCRETE DRIVEWAY WITH CURB AND GUTTER
STA. 12+91 TO STA. 20+26

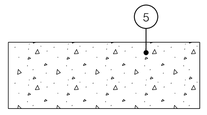
SIGN CONVENTION



SHARED USE PATH PAVEMENT SECTION
SCALE: N.T.S.



CONCRETE SIDEWALK
SCALE: N.T.S.



CONCRETE DRIVEWAY
SCALE: N.T.S.

PAVEMENT LEGEND

1	1.5"	BITUMINOUS CONCRETE SURFACE COURSE (ASPHALT)
2	2.5"	BITUMINOUS CONCRETE BASE COURSE (ASPHALT)
3	4"	GRADED AGGREGATE BASE
4	4"	CONCRETE FOR SIDEWALK
5	7"	CONCRETE FOR DRIVEWAY

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

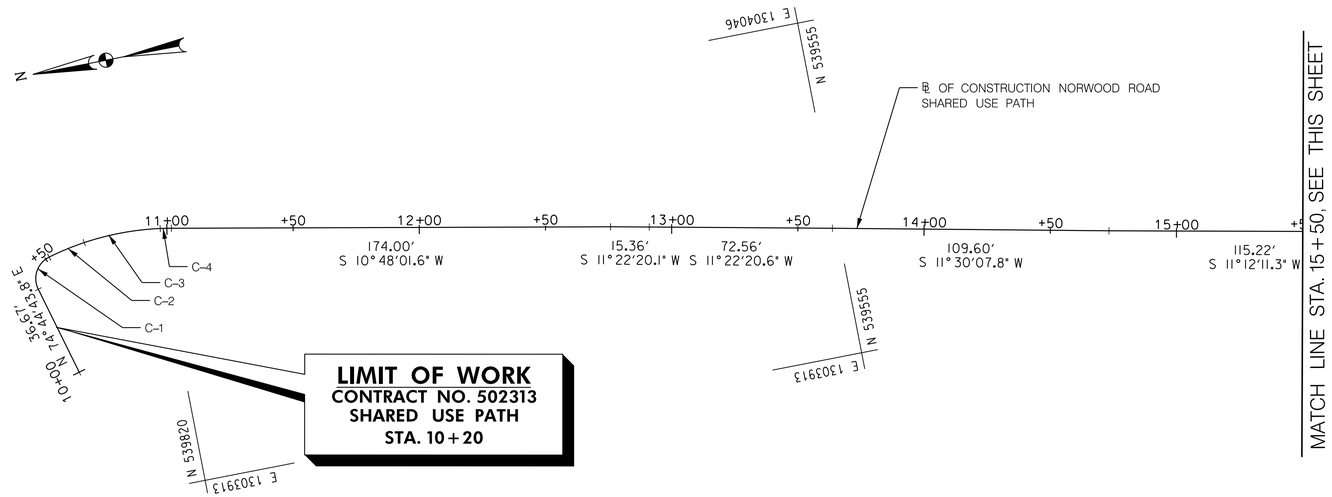
NORWOOD ROAD SHARED USE PATH

TYPICAL SECTIONS

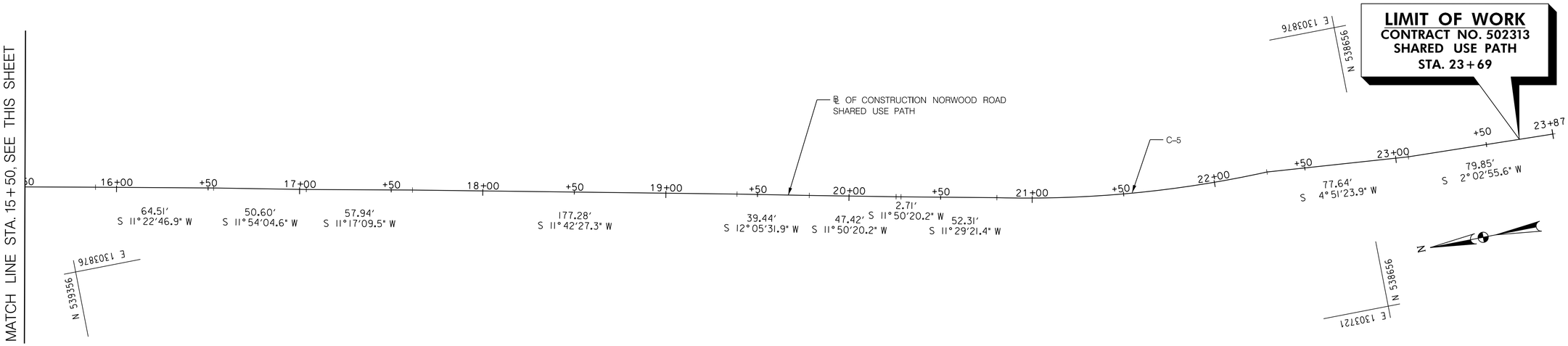
SCALE 1"=5' DATE NOVEMBER, 2023

SHEET NO. 3 OF 20

PLOTTED: 11/2/2023
FILE: \\Server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\pHT-X005_Norwood.dgn



CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
	BASELINE OF CONSTRUCTION SANDY SPRING BIKE PATH				
	POB	10+00.00	539860.8066	1303964.5451	N 74°44'43.77" E
C-1	PC	10+36.67	539870.4539	1303999.9199	
	PI	10+46.17	539872.9534	1304009.0852	
C-2	PCC	10+51.59	539863.7941	1304011.5829	S 15°15'16.2274" E
	PI	10+59.13	539856.5191	1304013.5796	
C-3	PCC	10+66.65	539849.0396	1304014.5644	S 7°30'02.9937" E
	PI	10+82.10	539833.7293	1304016.5803	
C-4	PCC	10+97.34	539818.4557	1304014.3026	S 8°28'54.2865" W
	PI	10+99.56	539816.254	1304013.9743	
	PT	11+01.79	539814.0673	1304013.5571	S 10°48'01.5614" W
	PT	12+75.79	539643.154	1303980.9523	
	PT	12+91.14	539628.0995	1303977.9244	S 11°22'20.1460" W
	PT	13+63.70	539556.9678	1303963.6174	S 11°22'20.5893" W
	PT	14+73.30	539449.5692	1303941.7627	S 11°30'07.7957" W
	PT	15+88.52	539336.543	1303919.3764	S 11°12'11.3239" W
	PT	16+53.03	539273.3023	1303906.6482	S 11°22'46.8651" W
	PT	17+03.63	539223.7891	1303896.213	S 11°54'04.6417" W
	PT	17+61.57	539166.9657	1303884.873	S 11°17'09.4693" W
	PT	19+38.85	538993.374	1303848.8999	S 11°42'27.3455" W
	PT	19+78.29	538954.8138	1303840.6388	S 12°05'31.8955" W
	PT	20+25.71	538908.4044	1303830.9105	S 11°50'20.1904" W
	PT	20+28.41	538905.7546	1303830.355	S 11°50'20.1904" W
C-5	PC	20+80.73	538854.4896	1303819.935	S 11°29'21.3574" W
	PI	21+55.34	538781.6667	1303803.7018	
	PT	22+29.20	538707.0803	1303805.589	S 4°51'23.8536" W
	PT	23+06.85	538629.7156	1303799.0155	
	POE	23+70.70	538549.9122	1303796.1607	S 2°02'55.5953" W



CURVE DATA						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
C-1	90°00'00.00" RT	603°06'55.34"	9.50	9.50	14.9225	3.9350
C-2	7°50'48.07" RT	52°05'13.51"	110.00	7.5441	15.0646	0.2584
C-3	15°58'57.28" RT	52°05'13.51"	110.00	15.4424	30.6843	1.0787
C-4	2°19'07.27" RT	52°05'13.51"	110.00	2.2261	4.4516	0.0225
C-5	14°00'57.23" LT	9°26'23.50"	606.96	74.6103	148.4757	4.5686

MERCADO
CONSULTANTS, INC.

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

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

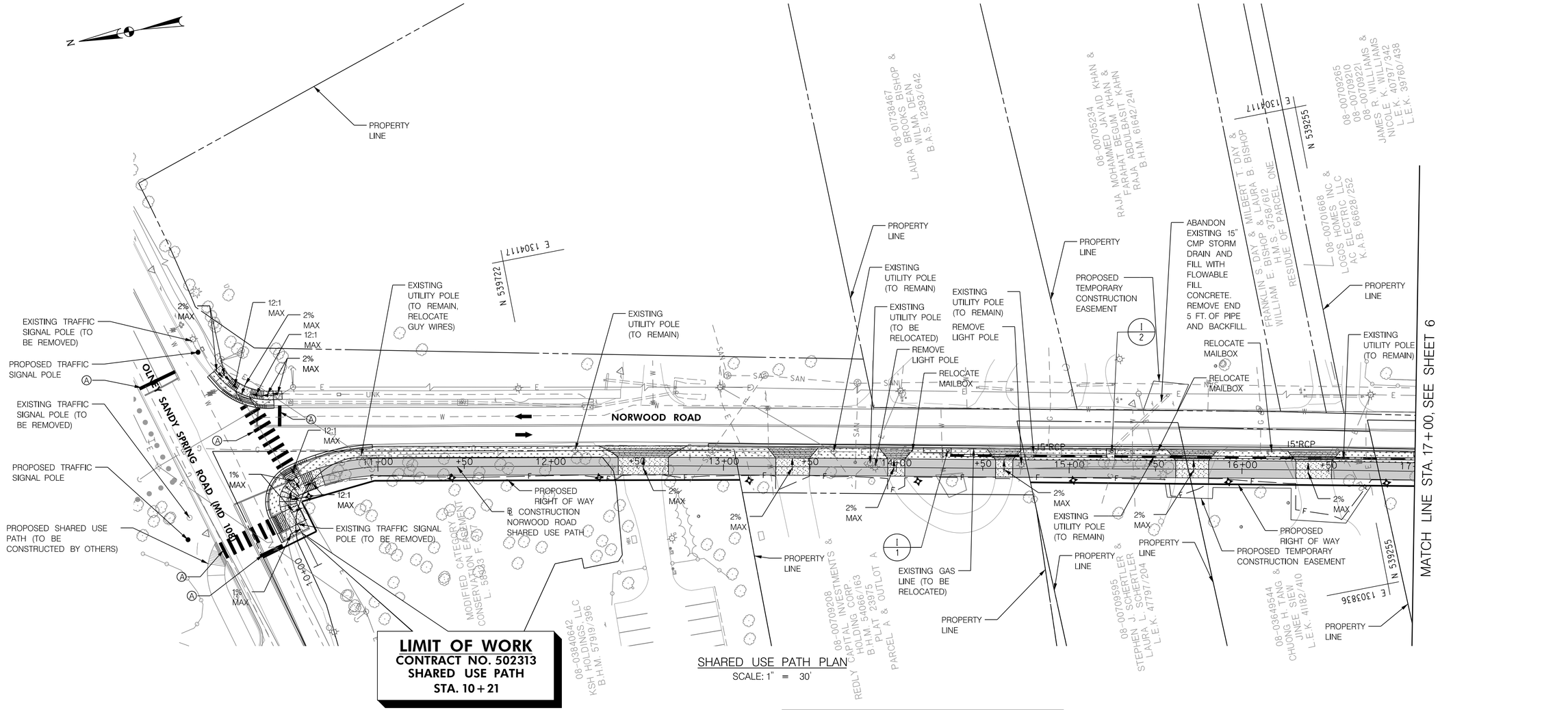
GEOMETRIC SHEET

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 4 OF 20

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

PLOTTED: 11/20/2023
FILE: \\Server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\prGSS-P001_Norwood.dgn



SHARED USE PATH PLAN
SCALE: 1" = 30'

LIMIT OF WORK
CONTRACT NO. 502313
SHARED USE PATH
STA. 10+21

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- GRASS BUFFER
- CLASS I RIPRAP
- DETECTABLE WARNING SURFACE
- F — CUT/FILL LINE
- PROPOSED LIGHT POLE
- EX. RIGHT OF WAY OR PROPERTY LINE
- PROPOSED RIGHT OF WAY
- EASEMENT
- Ⓐ 24 INCH WHITE THERMOPLASTIC PAVEMENT MARKINGS (SOLID)

TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH (STD MC-100.01)		
100	LF	NORWOOD ROAD - STA. 10+21 TO STA. 10+97, LT
35	LF	NORWOOD ROAD - STA. 10+50, 72 FT LT TO STA. 10+52, 47 FT LT
409	LF	NORWOOD ROAD - STA. 12+91 TO STA. 17+00, LT

TYPE A CURB ANY HEIGHT OR DEPTH		
18	LF	NORWOOD ROAD - STA. 10+21
6	LF	NORWOOD ROAD - STA. 10+26
6	LF	NORWOOD ROAD - STA. 10+37
6	LF	NORWOOD ROAD - STA. 10+49
6	LF	NORWOOD ROAD - STA. 10+56

4 INCH CONCRETE SIDEWALK (STD MC-112.01)		
567	SF	NORWOOD ROAD - STA. 10+21 TO STA. 10+67, LT
163	SF	NORWOOD ROAD - STA. 10+50, 73 FT LT TO STA. 10+60, 56 FT LT

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

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

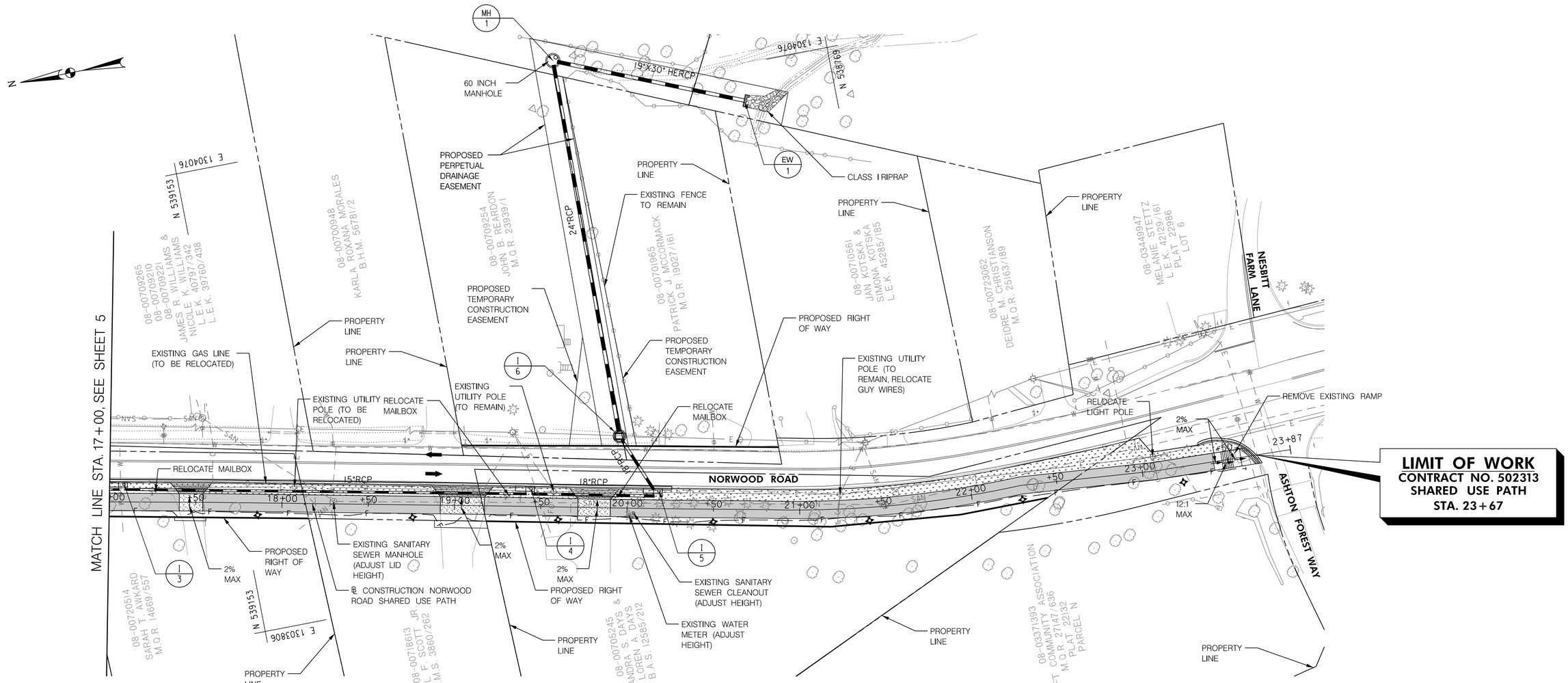
NORWOOD ROAD SHARED USE PATH

SHARED USE PATH PLAN-1

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 5 OF 20

PLOTTED: 11/21/2023
FILE: \\server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\pHD-P001_Norwood.dgn



SHARED USE PATH PLAN

SCALE: 1" = 30'

LIMIT OF WORK
CONTRACT NO. 502313
SHARED USE PATH
STA. 23+67

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- GRASS BUFFER
- CLASS I RIPRAP
- DETECTABLE WARNING SURFACE
- F — CUT/FILL LINE
- PROPOSED LIGHT POLE
- EX. RIGHT OF WAY OR PROPERTY LINE
- PROPOSED RIGHT OF WAY
- EASEMENT
- Ⓐ 24 INCH WHITE THERMOPLASTIC PAVEMENT MARKINGS (SOLID)

TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH		
326	LF	NORWOOD ROAD - STA. 17+00 TO STA. 20+26, LT
43	LF	NORWOOD ROAD - STA. 23+34 TO STA. 23+69, LT

4 INCH CONCRETE SIDEWALK (STD MC-112.01)		
163	SF	NORWOOD ROAD - STA. 23+42 TO STA. 23+65, LT

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

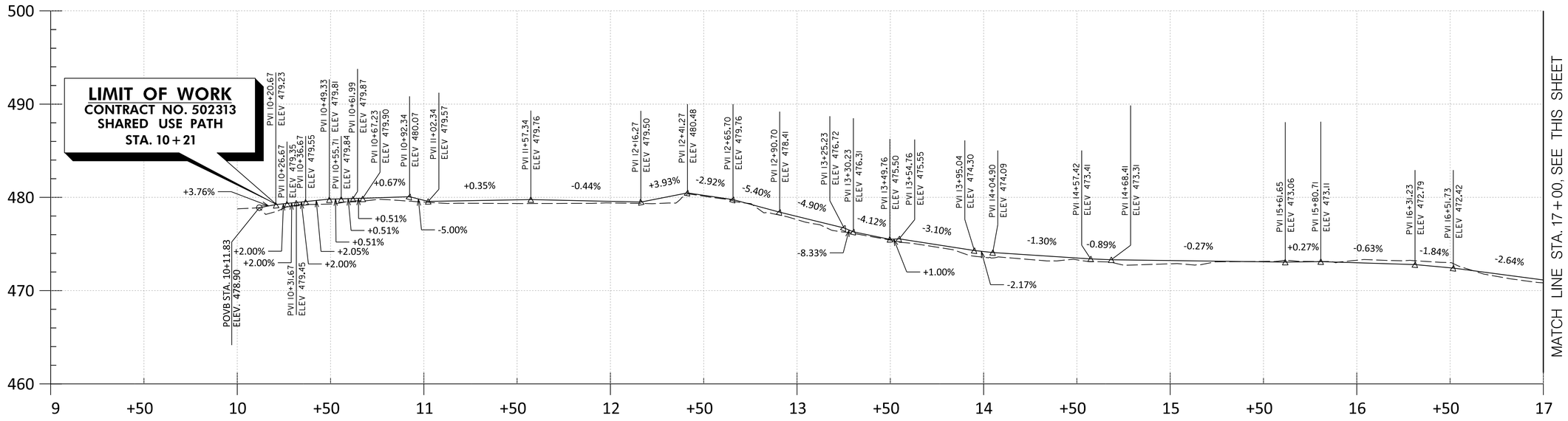
NORWOOD ROAD SHARED USE PATH

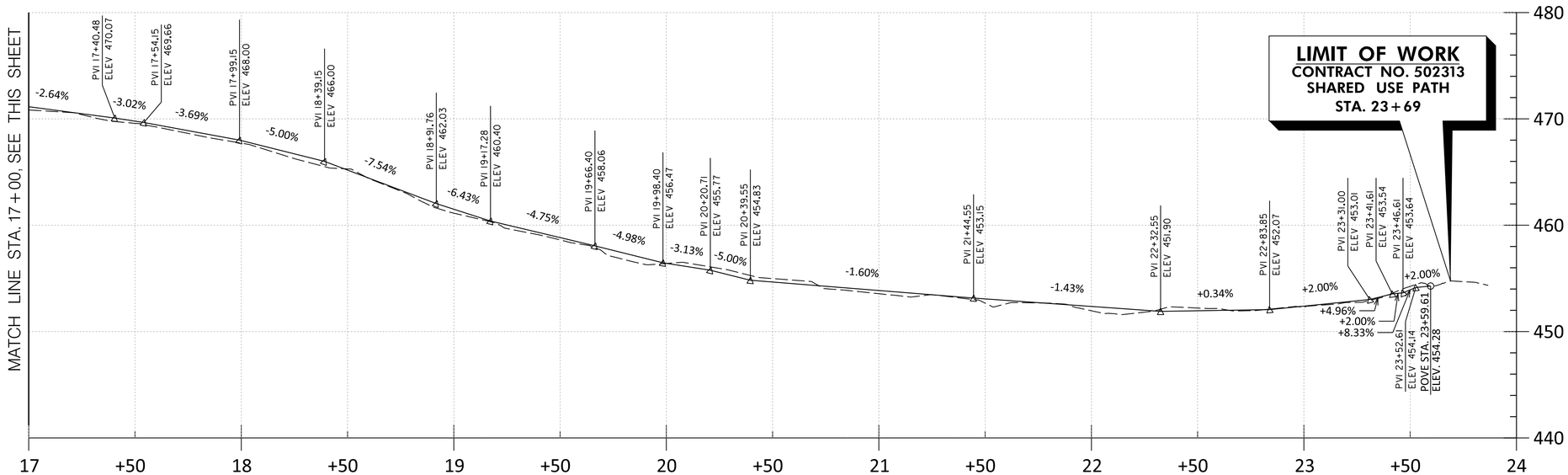
SHARED USE PATH PLAN–2

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 6 OF 20

PLOTTED: 11/2/2023
FILE: \\Server5\mercado data \1Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\pHD-PP002_Norwood.dgn





ROADWAY PROFILE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 6'

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

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

MERCADO
CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY XXX

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

SHARED USE PATH PROFILES

HORIZONTAL: 1"=30'
SCALE VERTICAL: 1"=5' DATE NOVEMBER, 2023

SHEET NO. 7 OF 20

PLOTTED: 11/20/2023
FILE: \\server6\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\pHP-V001_Norwood.dgn

I. TRAFFIC CONTROL PLAN GENERAL REQUIREMENTS

A. A PRIME REQUIREMENT OF THIS CONTRACT IS THAT TWO (2) WAY TRAFFIC BE MAINTAINED AT ALL TIMES ALONG NORWOOD ROAD, IN AN ORDERLY, EXPEDITIOUS AND SAFE MANNER UNLESS OTHERWISE NOTED IN THE PLANS. FLAGGER CONTROL SHALL BE UTILIZED AS A METHOD OF MAINTAINING ONE LANE TWO WAY TRAFFIC DURING WORKING HOURS. THE WIDTH OF ANY LANE SHALL REMAIN AT LEAST A MINIMUM OF NINE (9) FEET WIDE DURING NON-WORKING HOURS.

B. UNLESS OTHERWISE APPROVED BY THE TRAFFIC ENGINEERING AND OPERATIONS SECTION, THE NUMBER OF LANES OF TRAFFIC ON NORWOOD ROAD SHOWN ON THE T.C.P. SHALL BE MAINTAINED DURING NON-WORKING HOURS.

C. THE SEQUENCE OF OPERATIONS OF THE CONSTRUCTION REFERS SPECIFICALLY TO THE CRITICAL ITEMS OF WORK WHICH MUST BE COMPLETED. THE LISTED ITEMS ARE A SUGGESTED SEQUENCE OF WORK TO BE FOLLOWED TO PROVIDE FOR ORDERLY COMPLETION OF WORK. THE MANY OTHER ITEMS OF WORK WHICH ARE NOT LISTED AND WHICH MAY BE PERFORMED WITHOUT INTERRUPTING TRAFFIC OR AFFECTING THE CONSTRUCTION SCHEDULING AND DO NOT CONTROL THE OVERALL SCHEDULE FOR COMPLETING THE PROJECT ARE NOT LISTED.

D. ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS. ANY SIDEWALK CLOSURE GREATER THAN TWO (2) WEEKS SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS AND MAY REQUIRE ADDITIONAL TRAFFIC CONTROLS. SIDEWALK CLOSURES SHALL BE LIMITED TO OCCUR ONLY DURING THE ACTUAL WORK ACTIVITY. DURING CLOSURE, SIDEWALKS SHALL BE BARRICADED TO PHYSICALLY PREVENT PEDESTRIAN PASSAGE AND APPROPRIATE DETOURS SHALL BE POSTED. DURING ALL OTHER TIMES, PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK AREA, VIA A TEMPORARY WALKWAY SHALL BE PROVIDED.

E. ANY WORK WITHIN THE TRAVELED PORTION OF THE ROADWAY WILL BE RESTRICTED TO THE HOURS OF 9:00 A.M. TO 3:30 P.M., MONDAY THRU FRIDAY. NO WORK ON HOLIDAYS OR WEEKENDS UNLESS WRITTEN EXCEPTION IS GRANTED IN WRITING BY THE COUNTY'S DPS INSPECTOR.

F. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THAN THOSE DELINEATED WITHIN THE WORK ZONE.

G. EXCLUSIVE OF EMERGENCY WORK, THE CONTRACTOR SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND INFORM THEM OF THE SCOPE AND THE TIMING OF CONSTRUCTION. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE REQUIRED PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY ON THE SITE.

H. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY OWNER/MANAGER. HOWEVER, ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

I. IF ANY TRAFFIC CONTROL SIGNS ARE TO BE PLACED ALONG A MDOT SHA ROADWAY, OR WITHIN THE LIMITS OF AN INCORPORATED AREAS, THE PERMITTEE SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.

J. NO HAZARDOUS MATERIALS SHALL BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACE OR SIDEWALK DURING NON-WORK PERIODS. ALL STORED MATERIALS AND EQUIPMENT SHALL BE SET BACK AT LEAST SIX (6) FEET BEHIND THE CURB ALONG A CLOSED SECTION ROADWAY AND AT LEAST TWELVE (12) FEET FROM EDGE OF OPEN SECTION ROADWAY.

K. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORK DAY. " STEEL PLATES AHEAD" (W21-9) SIGNS SHALL BE PLACED APPROXIMATELY 250 FEET IN ADVANCE OF ANY STEEL PLATE. ANY EXCAVATIONS IN THE SIDEWALK SHALL BE BACKFILLED OR PLATED PRIOR TO THE END OF EACH WORKDAY AND SIDEWALK REOPENED TO ITS FULL CROSS SECTION.

L. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN (10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TTC DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE SLOPE. REFER TO MCDOT STD NO. TCP-108.01 FOR DETAILS.

M. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO (2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN TWO (2) INCHES BUT NO MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT 3:1 OR FLATTER SLOPE, PROVIDED WITH AN ABUTTING WEDGE OF BITUMINOUS MATERIAL AT 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC DRUMS.

N. IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO (2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:

1. WHERE LONGITUDINAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS SHALL BE POSTED INDICATING "UNEVEN PAVEMENT" (W8-II MOD.). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.

2. WHERE LATERAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A *BUMP* (W8-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.

3. WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC, A *ROUGH ROAD (W8-8) OR *GROOVED PAVEMENT* (W8-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA.

O. TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE FLUORESCENT ORANGE HIGH PERFORMANCE WIDE ANGLE RETROREFLECTIVE SHEETING. PLACEMENT OF ALL SIGNS SHALL NOT INTERFERE WITH TRAVELED WAYS OR SIGHT DISTANCES OF ANY ROADWAY, STREET OR DRIVEWAY AS PER AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, LATEST EDITION.

P. ALL EXISTING TRAFFIC CONTROL DEVICES THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE CONTRACTOR.

Q. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

R. THE IMPLEMENTATION DATE AND CONTINUANCE OF THIS PROJECT MAY BE ALTERED AT THE DISCRETION OF THE COUNTY'S INSPECTOR IN THE EVENT OF CONFLICTS WITH PREVIOUSLY APPROVED OR EMERGENCY ACTIVITIES.

S. AT THE COMPLETION OF THE PERMITTED WORK ACTIVITY, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THOSE WHICH EXISTED PRIOR TO THE WORK ACTIVITY.

T. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY TRAFFIC CONTROL DEVICES AT THE SITE.

U. ANY CHANGES TO TEMPORARY TRAFFIC CONTROL PLANS SHALL BE MADE IN WRITING AND APPROVED BY THE MONTGOMERY COUNTY TRAFFIC ENGINEERING AND OPERATIONS DIVISION.

V. ALL TTC DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.

II. SPECIFIC TRAFFIC CONTROL REQUIREMENTS

A. MAINTENANCE OF TRAFFIC

1. FLAGGERS SHALL BE USED AT THE DIRECTION OF THE COUNTY INSPECTOR.

2. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.

3. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR AATSA APPROVED FLAGGERS.

4. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE COUNTY INSPECTOR OR UNDER THE FOLLOWING CONDITIONS:

   a. IF THE FLAGGERS CANNOT SEE EACH OTHER.

   b. IF THE LANE CLOSURE EXCEEDS 200 FEET.

5. AT LEAST ONE 10 FOOT TRAVEL LANE SHALL BE AVAILABLE FOR TRAFFIC AT ALL TIMES.

6. PROVISION SHALL BE MADE FOR SAFE MAINTENANCE OF PEDESTRIAN AND BICYCLE TRAFFIC, SUBJECT TO THE APPROVAL OF THE COUNTY'S DPS INSPECTOR.

B. INSTALLATION OF TRAFFIC CONTROL DEVICES

1. SIGNAGE, TRAFFIC DRUMS, AND ARROW PANELS SHALL BE PLACED IN ACCORDANCE WITH THE APPROPRIATE TYPICAL SPACING CHART AND AS LISTED ON THE TRAFFIC CONTROL PLANS.

2. ALL SIGNS AND TRAFFIC DRUMS SHALL BE FULLY RELECTORIZED WITH HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MUTCD.

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

4. VARIABLE MESSAGE SIGNS (IF REQUIRED) SHALL BE PROVIDED TWO WEEKS BEFORE/AFTER AND DURING CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY ENGINEER.

5. DURING NIGHTTIME OPERATIONS, REFLECTORIZED TRAFFIC DRUMS SHOULD BE USED. HOWEVER, FOR EMERGENCY WORK ACTIVITIES, WHERE TRAFFIC DRUMS ARE NOT READILY AVAILABLE, REFLECTORIZED TRAFFIC CONES THAT ARE A MINIMUM OF TWENTY EIGHT (28) INCHES IN HEIGHT AND HAVING SIX (6) INCH AND FOUR (4) INCH REFLECTIVE COLLARS WITHIN THE TOP SIXTEEN (16) INCHES OF THE CONE MAY BE USED. ALL WORK AREAS LEFT UNATTENDED AT NIGHT SHALL BE DELINEATED WITH REFLECTORIZED TRAFFIC DRUMS.

6. CONTRACTOR SHALL EXCAVATE ONLY AS MUCH AS IS TO BE WORKED IN A DAY. IN CASE ANY EXCAVATED AREA IS LEFT OVERNIGHT, TEMPORARY CONCRETE BARRIERS SHALL BE PLACED SURROUNDING THAT AREA.

7. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF ONE (I) FOOT ABOVE THE LEVEL OF THE ROADWAY, WITH HIGHER MOUNTING HEIGHTS DESIRABLE.

8. WHEN PAVEMENT MARKINGS HAVE BEEN OBLITERATED BY THE WORK ACTIVITY, THE PERMITTEE SHALL INSTALL ANY CRITICAL INTERIM PAVEMENT MARKINGS PRIOR TO THE END OF THE WORK DAY AS SPECIFIED BY THE COUNTY'S DPS INSPECTOR AND/OR THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS.

   a. ON ROAD SECTIONS THAT ARE NOT SCHEDULED TO BE OVERLAID, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE (REMOVABLE) DETOUR GRADE MARKING TAPE. ANY CONFLICTING MARKINGS WHICH NEED TO BE TEMPORARILY REMOVED ARE TO BE MASKED USING "3M REMOVABLE BLACK LANE MASK" OR AN APPROVED EQUAL.

SEQUENCE OF CONSTRUCTION

1. GENERAL

   DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON THE EXISTING ROADWAYS. THE CONSTRUCTION EFFORT SHALL BE DIRECTED TO COMPLETING THE SHARED USE PATH OF THE NORWOOD ROAD AS DESCRIBED BELOW, SIDEWALK RAMPS, INSTALLATION OF TRAFFIC SIGNAL AT THE INTERSECTION OF NORWOOD ROAD AND MD 108, INSTALLATION OF LIGHT POLES ALONG SHARED USE PATH, RELOCATION OF GAS LINE, AND INSTALLATION OF STORM DRAIN SYSTEM.

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

2. SEQUENCE OF CONSTRUCTION

   A. INSTALL ALL TEMPORARY SIGNING AND MARKING REQUIRED FOR THE INITIAL CONSTRUCTION WORK TO BE PERFORMED.

   B. PRIOR TO COMMENCING ANY WORK AT ANY GIVEN LOCATION, THE INSTALLATION OF ALL NECESSARY SEDIMENT CONTROL FACILITIES REQUIRED DURING CONSTRUCTION MUST BE COMPLETED AND HAVE THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.

   C. MAKING USE OF FLAGGING OPERATION AS PER MCDOT TCP-102.02, AND TCP-105.06, MAINTAIN ONE LANE TWO WAY TRAFFIC ON NORWOOD ROAD DURING WORKING HOURS.

   D. CONSTRUCT NORWOOD SHARED USE PATH, RESIDENTIAL DRIVEWAYS, CURB AND GUTTER, SIDEWALK RAMPS AND STORM DRAIN SYSTEM AS SHOWN ON THE TCP PLANS. ALL CONSTRUCTION ACTIVITY THAT IMPACTS RESIDENTIAL PROPERTY MUST BE COORDINATED WITH THE PROPERTY OWNERS PRIOR TO THE START OF WORK, AND DONE IN ACCORDANCE WITH DIRECTIVES INCLUDED ELSEWHERE IN THE CONTRACT DOCUMENTS.

   E. COVER TEMPORARY SIGNS BEING USED DURING WORKING HOURS.

   F. INSTALL TEMPORARY CHANNELIZATION DEVICES AND TEMPORARY TRAFFIC SIGNS AS SHOWN ON THE TCP PLANS AS PER MCDOT TCP- 102.01 OR AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC DURING NON-WORKING HOURS.

   G. RESTORE FLAGGING OPERATION AND APPLICABLE TEMPORARY SIGNS DURING WORKING HOURS.

   H. AT THE COMPLETION OF WORK, REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

III. CONTACT INFORMATION

A. CONTACT THE MCDOT TRANSPORTATION MANAGEMENT CENTER 240-777-2100 BETWEEN 5:00 AM AND 11:00 PM TO INFORM THEM OF TEMPORARY LANE CLOSURES IN THE VICINITY OF ANY TRAFFIC SIGNALS.

B. CONTACT TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION AT 240-777-2190 (A MINIMUM OF ONE WEEK PRIOR) TO COORDINATE ANY MINOR TRAFFIC SIGNAL RELOCATIONS TO FACILITATE THIS WORK ACTIVITY. MAJOR SIGNAL RELOCATIONS SHALL BE COORDINATED A MINIMUM OF THIRTY (30) DAYS IN ADVANCE OF THE PROJECT. THE PERMITTEE SHALL CONTACT THE MONTGOMERY COUNTY TECHNICAL CENTER AT 301-279-1291 A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK TO HAVE TRAFFIC SIGNAL EQUIPMENT MARKED.

C. CONTACT TRAFFIC ENGINEERING STUDIED SECTION AT 240-777-2190 AT LEAST TEN (10) WORKING DAYS IN ADVANCE OF THE FINAL PAVING OPERATION TO SCHEDULE THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS AND SIGNS.

D. CONTACT MS. STELLA O. IGBINEDION AT 240-777-2190 TO REQUEST ANY FIELD ASSISTANCE BY THE MCDOT DIVISION OF TRAFFIC ENGINEERING AND OPERATION.

MERCADO
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MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

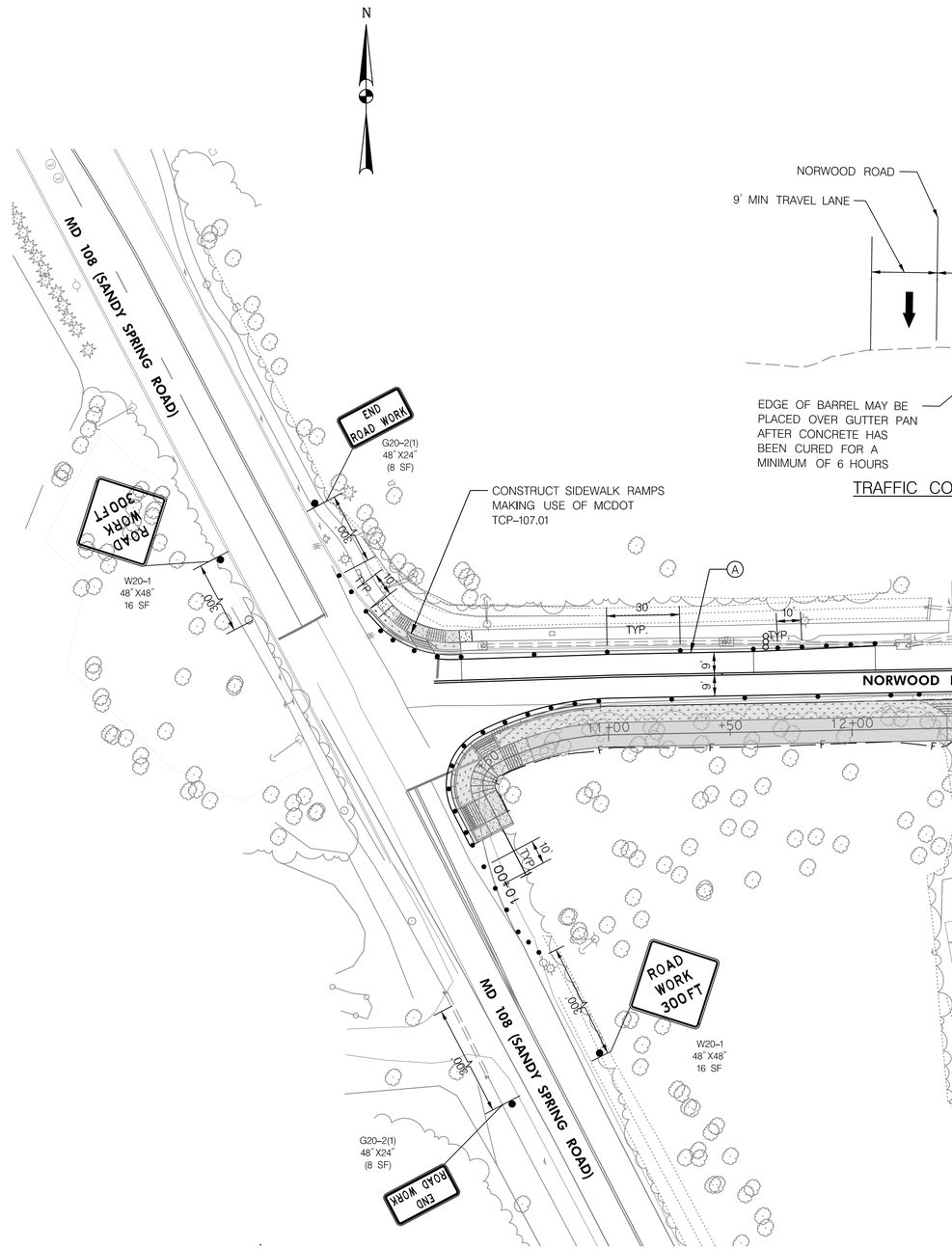
NORWOOD ROAD SHARED USE PATH

TRAFFIC CONTROL PLAN

SCALE NTS DATE NOVEMBER, 2023

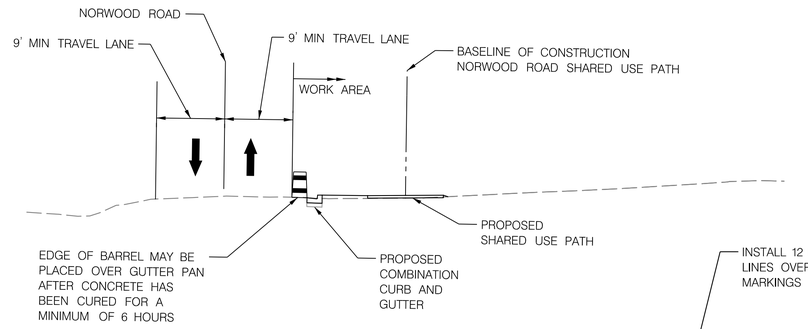
SHEET NO. 8 OF 20

PLOTTED: 11/20/2023
FILE: \\server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\xMT-N001_Norwood.dgn



TRAFFIC CONTROL PLAN

SCALE: 1" = 30'



TRAFFIC CONTROL PLAN–TYPICAL SECTION

SCALE: 1" = 10'

CURRENT WORKZONE

DRUMS

TEMPORARY TRAFFIC SIGN SUPPORT

ARROW PANEL

TEMPORARY TRAFFIC SIGN

TRAFFIC FLOW ARROW

(A) 5 INCH WHITE REMOVABLE PAVEMENT LINE MARKINGS

(B) 5 INCH DOUBLE YELLOW REMOVABLE PAVEMENT LINE MARKINGS

MERCADO CONSULTANTS, INC.

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MONTGOMERY COUNTY
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ROCKVILLE, MARYLAND

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

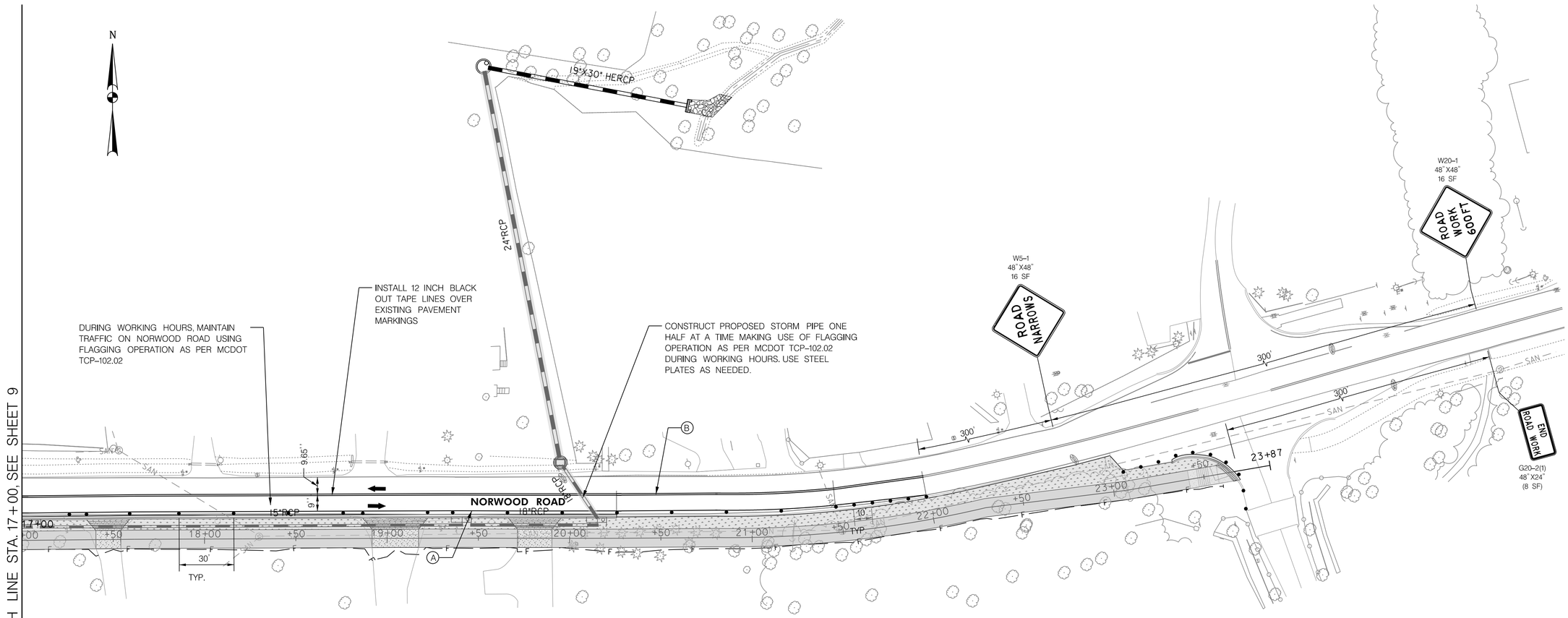
TRAFFIC CONTROL PLAN–NON WORKING HOURS

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 9 OF 20

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

PLOTTED: 11/20/2023
FILE: \\server5\mercado data 1\Projects\1908\1908.04 Sandy Spring Bikeway\05 Roadway\CADD\[uMT-Plot]_Norwood.dgn



LEGEND

- CURRENT WORKZONE
- DRUMS
- TEMPORARY TRAFFIC SIGN SUPPORT
- ARROW PANEL
- TEMPORARY TRAFFIC SIGN (ROAD WORK 300 FT)
- TRAFFIC FLOW ARROW
- (A) 5 INCH WHITE REMOVABLE PAVEMENT LINE MARKINGS
- (B) 5 INCH DOUBLE YELLOW REMOVABLE PAVEMENT LINE MARKINGS

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

TRAFFIC CONTROL PLAN–NON WORKING HOURS

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 10 OF 20

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

PLOTTED: 11/20/2023
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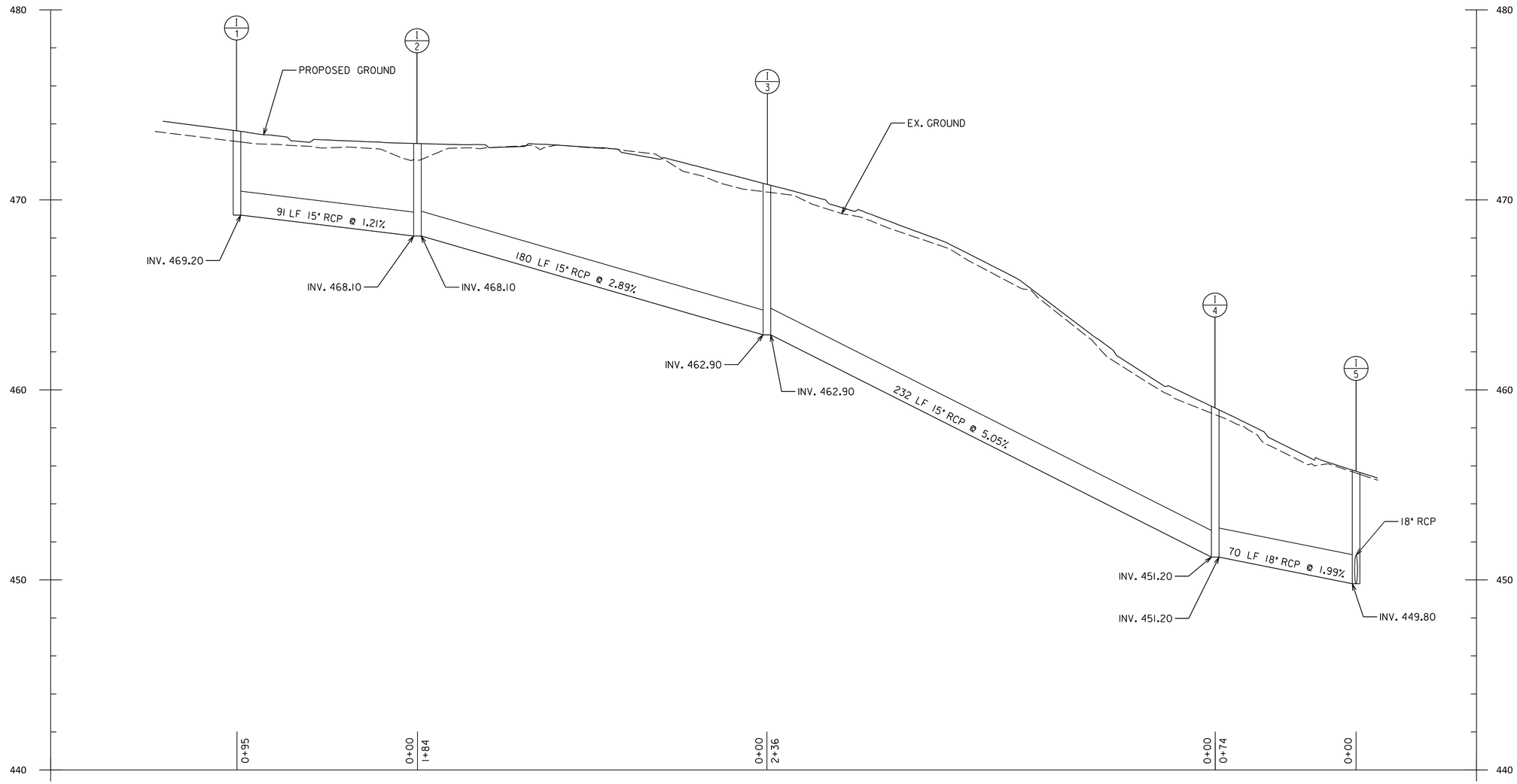

I-1 TO I-5

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

STORM DRAIN STRUCTURE SCHEDULE

STRUCTURE NO.	STRUCTURE TYPE	STANDARD NO.	NORTHING	EASTING	TOP ELEV.	INV. IN	INV. OUT
I-1	COG-15	MC 502.01	539491.68	1303957.73	443.36		469.20
I-2	COG-10	MC 502.01	539398.37	1303939.01	443.30	468.10	468.10
I-3	COG-10	MC 502.01	539218.11	1303902.50	443.08	462.90	462.90
I-4	COG-10	MC 502.01	538987.22	1303854.91	441.91	451.20	451.20
I-5	COG-10	MC 502.01	538914.73	1303839.65	441.57	449.80	449.80

STORM DRAIN PIPE SCHEDULE

FROM	TO	SIZE	MATERIAL	CLASS	LENGTH (FT.)
I-1	I-2	15"	RCP	IV	91
I-2	I-3	15"	RCP	IV	180
I-3	I-4	15"	RCP	IV	232
I-4	I-5	18"	RCP	IV	70

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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

STORM DRAIN PROFILES-1

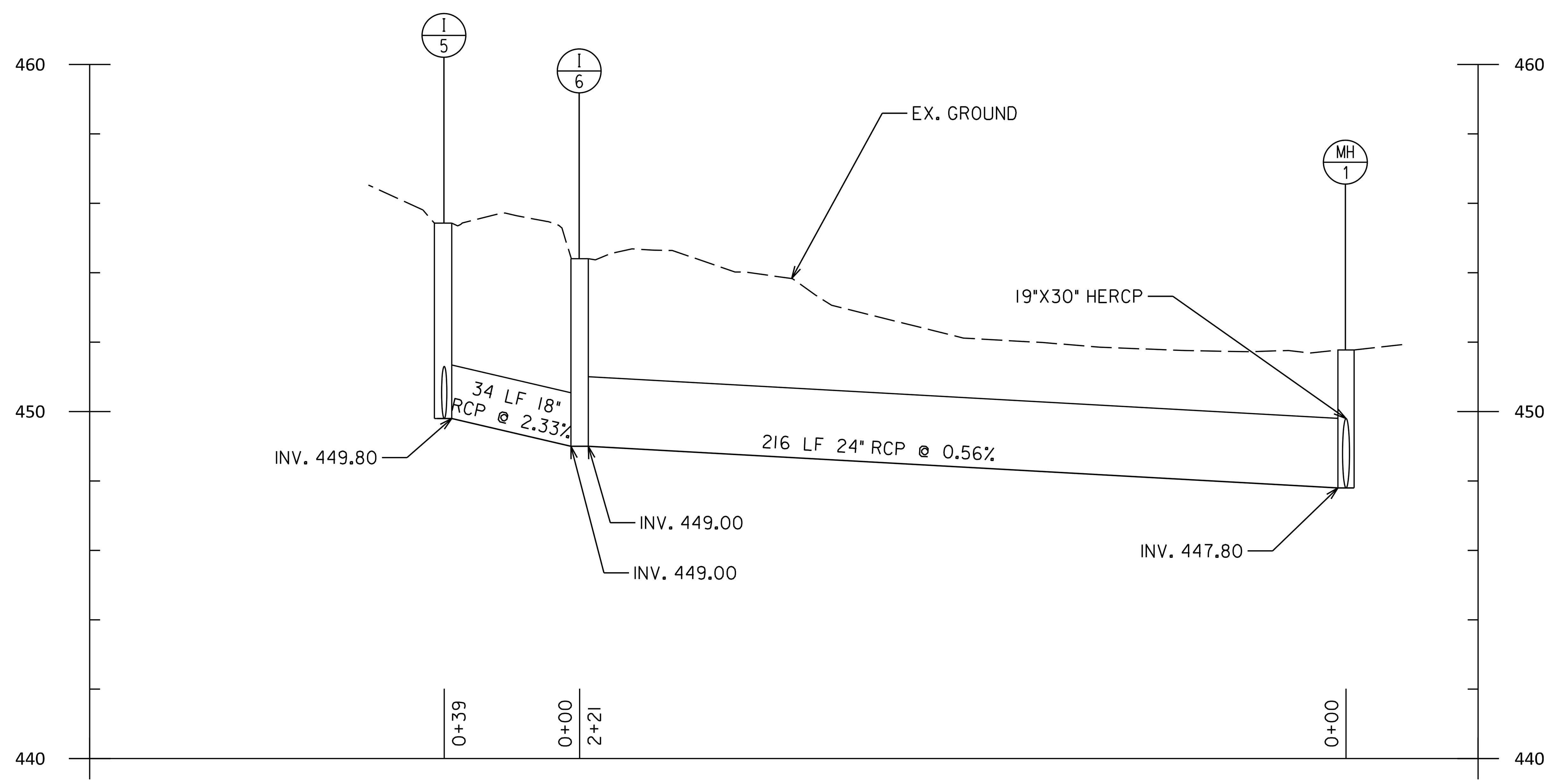
SCALE AS SHOWN DATE NOVEMBER, 2023

SHEET NO. 11 OF 20

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

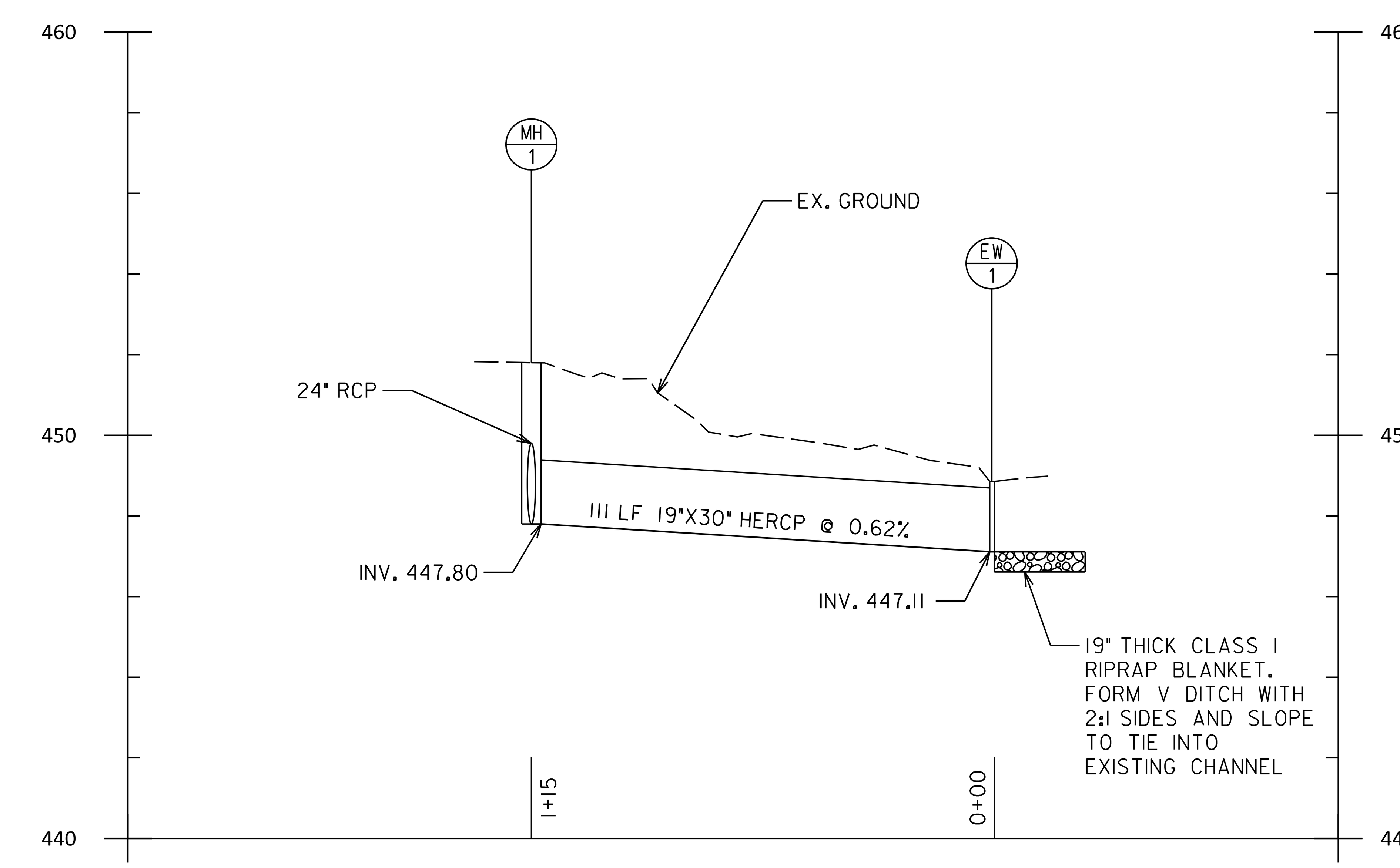
SC0002

PLOTTED: 11/29/2023
FILE: \\server5\mercado data 1\Projects\1906\1908.04 Sandy Spring Bikeway\06 Water Resources\ut\DP-A001_Norwood.dgn



I-6 TO MH-1

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'



MH-1 TO EW-1

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

STORM DRAIN STRUCTURE SCHEDULE

STRUCTURE NO.	STRUCTURE TYPE	STANDARD NO.	NORTHING	EASTING	TOP ELEV.	INV. IN	INV. OUT
I-5	COG-10	MC 502.01	538914.73	1303839.65	441.57	449.80	449.80
I-6	TYPE J DITCH INLET	MC 506.01	538929.96	1303877.88	441.44	449.00	449.00
MH-1	MANHOLE 60 INCH DIA	MD 510.01	538926.39	1304098.64	441.18	447.80	447.80
EW-1	END WALL	MD 355.01	538821.59	1304054.80	440.89	447.11	

STORM DRAIN PIPE SCHEDULE

FROM	TO	SIZE	MATERIAL	CLASS	LENGTH (FT.)
I-5	I-6	18"	RCP	IV	34
I-6	MH-1	24"	RCP	IV	216
MH-1	EW-1	19"X30"	HERCP	IV	111

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0003

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

STORM DRAIN PROFILES-2

SCALE AS SHOWN DATE NOVEMBER, 2023

MERCADO
CONSULTANTS, INC.

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 NONMAINTENANCE 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 SPLASH BLOCK 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".

VEGETATIVE STABILIZATION
PERMANENT AND TEMPORARY SEEDING, SODDING AND MULCHING

I. SITE PREPARATION

PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A.) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, GRASSED WATERWAYS, SEDIMENT BASINS, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND (B.) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

II. SEEDBED PREPARATION AND SEEDING APPLICATION

THE TOP LAYER OF SOIL SHALL BE LOOSENED, LIMED AND FERTILIZED BY RAKING, DISCING OR HARROWING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. FLAT AREAS AND SLOPES UP TO 3 TO 1 GRADE SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3 INCHES. SLOPES STEEPER THAN 3 TO 1 SHALL HAVE THE TOP 1-3 INCHES OF SOIL LOOSE AND FRIABLE BEFORE SEEDING.

APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL CULTIPACKER, SEEDER OR HYDROSEEDER ON A FIRM MOIST SEEDBED.

III. SOIL AMENDMENTS

LIME AND FERTILIZE ACCORDING TO SOIL TESTS IN LIEU OF SOIL TEST APPLY THE FOLLOWING:

DOLOMITIC: 2 TONS PER ACRE OR 92 LBS./1000 (PERMANENT AND SODDING) SQ. FT.
LIMESTONE: 1 TON PER ACRE OR 46 LB./1000 SQ. FT. (TEMPORARY)
FERTILIZER: 10-10-10 OR EQUIVALENT AT 1000 LBS. PER ACRE OR 23 LBS. PER 1000 SQ. FT. (PERMANENT AND SODDING) 10-10-10 OR EQUIVALENT AT 600 LBS. PER ACRE OR 15 LBS./1000 SQ. FT. (TEMPORARY)

IV. SEDIMENT CONTROL PRACTICE SEEDING

SEED: ANNUAL RYEGRASS 40 LBS./ACRE OR 1.0 LBS./1000 SQ. FT.
DATE: 3/1 TO 5/15 AND 8/1 TO 10/15
SEED: FOXTAIL MILLET 30 LBS./ACRE OR 0.7 LBS./1000 SQ. FT.
DATE: 5/16 TO 7/31

V. TEMPORARY SEEDING: PER GROWING SEASON

SEED: ANNUAL RYEGRASS 40 LBS./ACRE OR 1.0 LBS./1000 SQ. FT.
DATE: 3/1 TO 5/15 AND 8/1 TO 10/15
SEED: FOXTAIL MILLET 30 LBS./ACRE OR 0.7 LBS./1000 SQ. FT.
DATE: 5/16 TO 7/31

VI. PERMANENT SEEDING

SEED: TALL FESCUE 60 LBS./ACRE OR 1.38 LBS./1000 SQ. FT. AND KENTUCKY BLUEGRASS 40 LBS./ ACRE OR 0.92 LBS./1000 SQ. FT.
DATE: 3/1 TO 10/15 IRRIGATION REQUIRED

VII. MULCHING

ALL SEEDINGS REQUIRE MULCHING. USE MULCH ONLY DURING NON-SEEDING DATES UNTIL SEEDING CAN BE DONE.

MULCH SHALL BE UNROTTED, UNCHOPPED SMALL GRAIN STRAW APPLIED AT A RATE OF 1½ TO 2 TONS/ACRE OR 70-90 LBS./1000 SQ. FT. (2 BALES). MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDBEDS AND SHALL BE FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY MECHANICALLY OR BY HAND. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY MULCH NETTINGS, MULCH ANCHORING TOLL, PEG AND TWINE, OR LIQUID MULCH BINDERS.

LIQUID MULCH BINDER SHALL BE RAPID CURING APPLIED AT A RATE OF 200 GAL./ACRE OR 5 GAL./1000 SQ. FT.
SLOPES 8 FT. OR MORE HIGH USE 348 GAL/ACRE OR 8 GAL./1000 SQ. FT.

VIII. SODDING

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD IS TO BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR WITH STAGGERED JOINTS WITH ALL ENDS TIGHTLY ABUTTING AND NOT OVER LAPPING. SOD SHALL BE ROLLED AND THOROUGHLY WATERED WITHIN 8 HOURS OF INSTALLATION. DAILY WATERING TO MAINTAIN 4 INCH DEPTH OF MOISTURE FOR THE FIRST WEEK IS REQUIRED IN THE ABSENCE OF RAINFALL. SOD IS NOT TO BE APPLIED ON FROZEN GROUND.

IX. MAINTENANCE

A. IRRIGATION: WHEN SOIL MOISTURE BECOMES DEFICIENT, IRRIGATE TO PREVENT LOSS OF STAND OF PROTECTIVE VEGETATION.
B. REPAIRS: IF STAND IS INADEQUATE FOR EROSION CONTROL, OVERSEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY APPLIED. IF STAND IS OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL RATES AND PROCEDURES.

NOTES: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL THE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0004

MERCADO
CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN NOTES

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 13 OF 20

PLOTTED: 11/20/2023
FILE: P:\Projects\1958\1958.04 Sandy Spring Bikeway\06 Water Resources\ESC\pES-N000_Norwood.dgn

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

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION:

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 TO MCDPS SEDIMENT CONTROL INSPECTOR AT THE PRECONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.
2. THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.
3. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MNCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.
4. CLEAR AND GRADE FOR INSTALLATION OF SEDIMENT CONTROL DEVICES.
5. INSTALL ALL TREE PROTECTION FENCE, FILTER LOG, AND STABILIZED CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS. ONCE THESE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING OR GRADING.
6. INSTALL CLASS I RIPRAP AT OUTFALL OF HW-1, I-6, MH-1, HW-1, AND ALL STORM DRAIN PIPES BETWEEN I-6 TO HW-1.
7. INSTALL INLET PROTECTION SIP 2.1.
8. INSTALL SILT FENCE SF 2.4, SF 2.5, SF 2.6, AND SF 2.7. CONSTRUCT SHARED USE PATH BETWEEN 20+26 TO 23+67.
9. INSTALL I-3, I-4, AND I-5 ALONG WITH ALL STORM DRAIN PIPES, CURB AND GUTTER, GRASS BUFFER, AND DRIVEWAY APRONS BETWEEN I-3 TO I-5. INSTALL STORM DRAIN BETWEEN I-5 AND I-6.
10. INSTALL SILT FENCE SF 2.1, SF 2.2, AND SF 2.3. INSTALL INLET PROTECTION CIP 2.1, CIP 2.2, AND CIP 2.3.
11. INSTALL SHARED USE PATH BETWEEN I-3 AND I-5 (STA. 17+10 TO 20+26).
12. INSTALL I-1 AND I-2 ALONG WITH ALL STORM DRAIN PIPES, CURB AND GUTTER, GRASS BUFFER, AND DRIVEWAY APRONS BETWEEN I-1 TO I-3. INSTALL STORM DRAIN BETWEEN I-5 AND I-6. FILL EXISTING CMP STORM DRAIN CROSSING NORWOOD ROAD AT I-2 WITH FLOWABLE FILL CONCRETE, EXCAVATE AND REMOVE 5' FROM DOWNSTREAM END OF EXISTING CMP, AND BURY CMP OUTFALL WITH SOIL TO MATCH EXISTING EMBANKMENT SLOPE ALONG NORWOOD ROAD.
13. INSTALL SILT FENCE SF 1.4, SF 1.5, SF 1.6, AND SF 1.7. INSTALL INLET PROECTION CIP 1.1 AND CIP 1.2.
14. INSTALL SHARED USE PATH BETWEEN I-1 AND I-3 (STA. 14+25 TO 17+10).
15. INSTALL SILT FENCE SF 1.1, SF 1.2, AND SF 1.3.
16. INSTALL ALL CURB AND GUTTER, GRASS BUFFER, AND DRIVEWAY APRONS FROM 12+91 TO 14+25.
17. CONSTRUCT REMAINING SHARED USE PATH FROM 10+21 TO 14+25.
18. INSTALL NEW TRAFFIC SIGNAL POLES AT NORWOOD ROAD AND OLNEY SANDY SPRING ROAD AND COMPLETE CONSTRUCTION OF INTERSECTION.
19. STABILIZE ALL REMAINING DISTURBED AREAS.
20. REMOVE SEDIMENT CONTROL DEVICES AFTER WRITTEN APPROVAL OF ENGINEER AND MCDPS INSPECTOR.

MERCADO
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MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0005

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT SEQUENCE OF CONSTRUCTION

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 14 OF 20

PLOTTED: 11/20/2023
FILE: P:\Projects\13068\13068.04 Sandy Spring Bikeway\06 Water Resources\ESC\pES-NXX_Norwood.dgn

INLET PROTECTION (IP)			
ID NO.	STATION	QUATITY	DRAINAGE AREA (AC)
CIP 1.1	STA. 14+24, LT	1 EA	0.7
CIP 1.2	STA. 15+19, LT	1 EA	0.47

STABILIZED CONSTRUCTION ENTRANCE (SCE)		
ID NO.	QUATITY	STATION
SCE 1.1	1 EA	STA. 10+53
SCE 1.2	1 EA	STA. 14+98

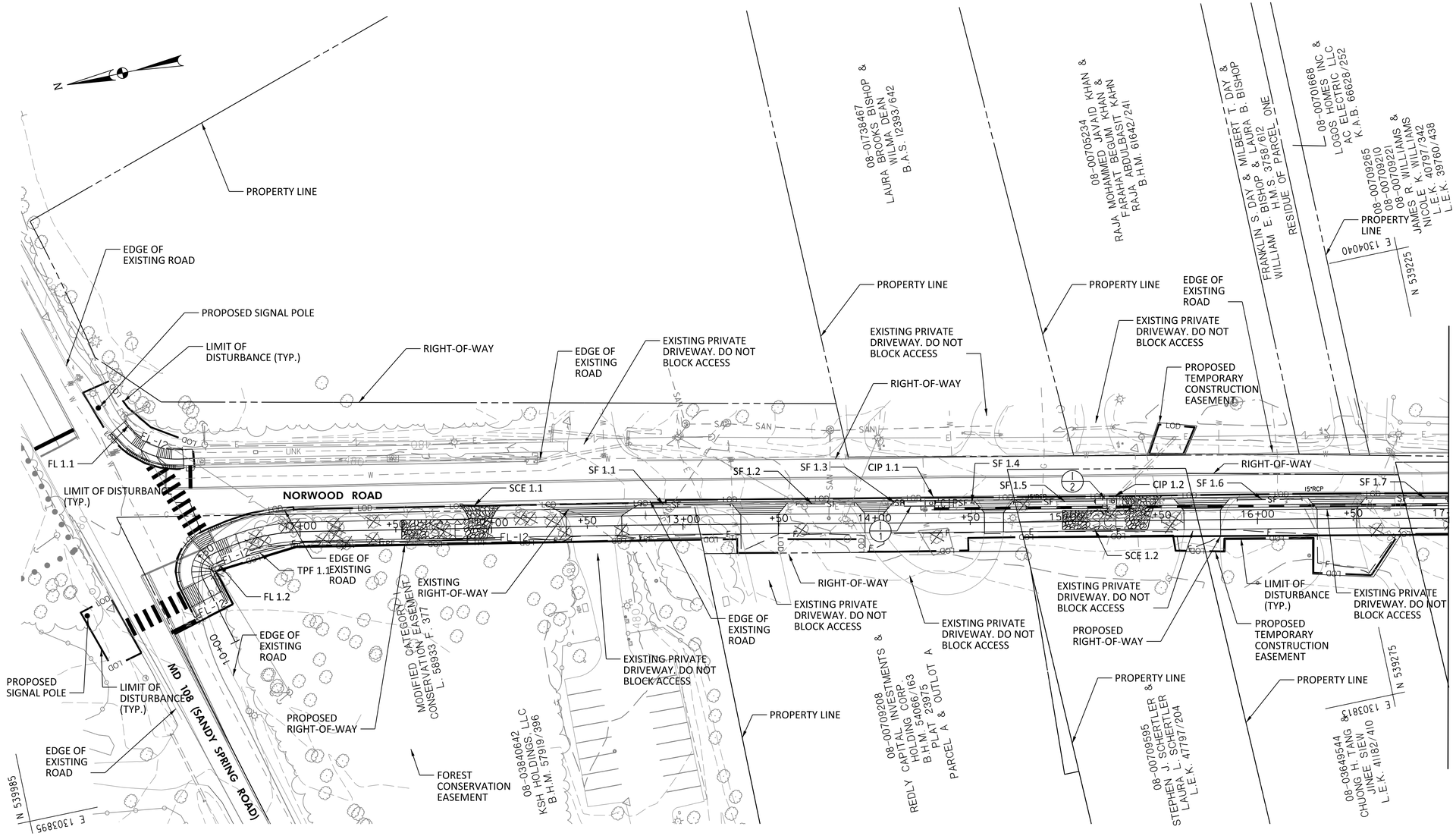
SILT FENCE		
ID NO.	QUATITY	STATION
SF 1.1	47 LF	STA. 12+78, LT
SF 1.2	30 LF	STA. 13+59, LT
SF 1.3	5 LF	STA. 14+10, LT
SF 1.4	20 LF	STA. 14+32, LT
SF 1.5	42 LF	STA. 14+73, LT
SF 1.6	34 LF	STA. 15+88, LT
SF 1.7	42 LF	STA. 16+57, LT

12-INCH FILTER LOG		
ID NO.	QUATITY	STATION
FL 1.1	35 LF	STA. 10+20, RT
FL 1.2	228 LF	STA. 10+50, LT

TREE PROTECTION FENCE (TPF)		
ID NO.	QUATITY	STATION
TPF 1.1	207 LF	STA. 10+20, RT

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- SCE — STABALIZED CONSTRUCTION ENTRANCE
- SIP — STANDARD INLET PROTECTION
- CIP — CURB INLET PROTECTION
- TREE TO BE REMOVED
- TPF — TREE PROTECTION FENCE
- FL-12 — 12" FILTER LOG



30' 0 30' 60'

SCALE: 1"=30'

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0006

MERCADO CONSULTANTS, INC.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

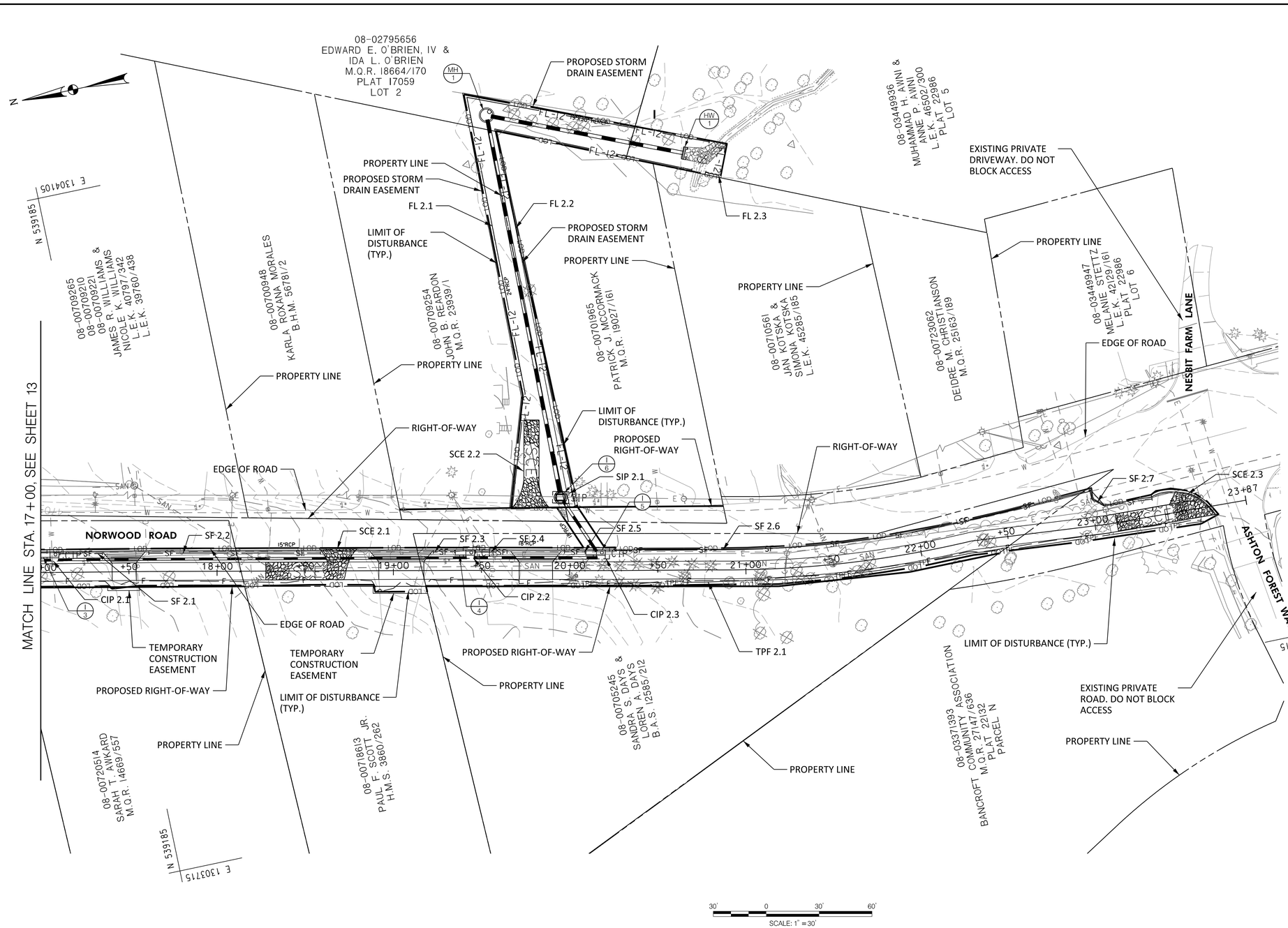
NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 15 OF 20

PLOTTED: 11/20/2023
FILE: P:\Projects\1908\1908.04 Sandy Spring Bikeway\06 Water Resources\ESC\plES-P001_Norwood.dgn



INLET PROTECTION (IP)			
ID NO.	STATION	QUATITY	DRAINAGE AREA (AC)
CIP 2.1	STA. 17+04, LT	1 EA	0.45
CIP 2.2	STA. 19+40, LT	1 EA	0.67
CIP 2.3	STA. 20+15, LT	1 EA	0.75
SIP 2.1	STA. 19+90, LT	1 EA	0.70

STABILIZED CONSTRUCTION ENTRANCE (SCE)		
ID NO.	QUATITY	STATION
SCE 2.1	1 EA	STA. 18+28
SCE 2.2	1 EA	STA. 19+70, LT
SCE 2.3	1 EA	STA. 23+12

SILT FENCE		
ID NO.	QUATITY	STATION
SF 2.1	24 LF	STA. 17+11, LT
SF 2.2	98 LF	STA. 17+62, LT
SF 2.3	12 LF	STA. 19+23, LT
SF 2.4	18 LF	STA. 19+47, LT
SF 2.5	12 LF	STA. 19+97, LT
SF 2.6	270 LF	STA. 20+26, LT
SF 2.7	41 LF	STA. 22+98, LT

12-INCH FILTER LOG		
ID NO.	QUATITY	STATION
FL 2.1	376 LF	STA. 19+88, LT
FL 2.2	333 LF	STA. 20+03, LT
FL 2.3	24 LF	STA. 20+77, LT

TREE PROTECTION FENCE (TPF)		
ID NO.	QUATITY	STATION
TPF 2.1	367 LF	STA. 19+95, RT

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- SCE — STABALIZED CONSTRUCTION ENTRANCE
- SIP — STANDARD INLET PROTECTION
- CIP — CURB INLET PROTECTION
- TREE TO BE REMOVED
- TPF — TREE PROTECTION FENCE
- FL-12 — 12" FILTER LOG

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0007

MERCADO
CONSULTANTS, INC.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

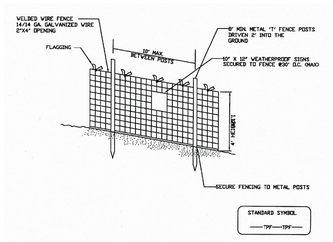
SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 16 OF 20

PLOTTER: 11/20/2023
FILE: P:\Projects\1908\1908.04 Sandy Spring Bikeway\06 Water Resources\ESC\ut\ES-P002_Norwood.dgn

Tree Protection Fence Detail

Not to scale



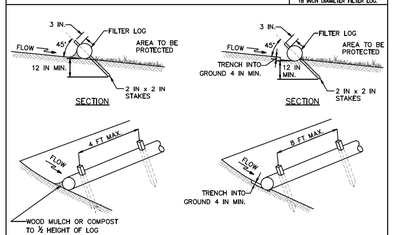
NOTES

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

DETAIL E-6 FILTER LOG

STANDARD SYMBOL: FL-18

DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG



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-6 FILTER LOG

STANDARD SYMBOL: FL-18

DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG

CONSTRUCTION SPECIFICATIONS

1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H–1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF ½ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

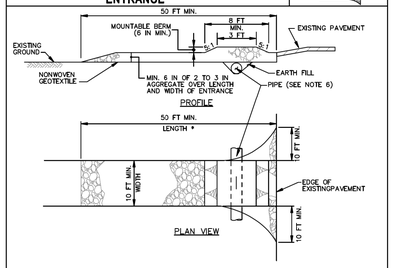
2 OF 2

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 B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

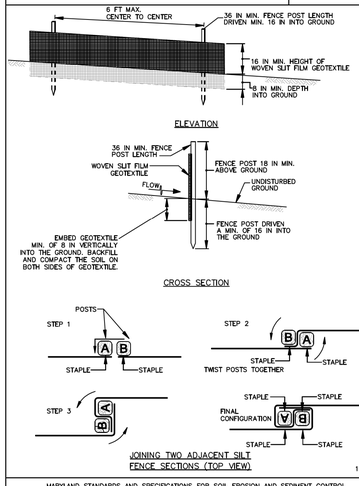
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING 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 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-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ 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

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0008

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT STANDARD DETAILS

SCALE 1"=30' DATE NOVEMBER, 2023

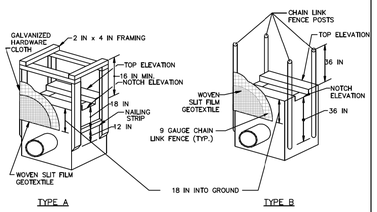
SHEET NO. 17 OF 20

PLOTTED: 11/20/2023
FILE: P:\Projects\19068\19068.04 Sandy Spring Bikeway\06 Water Resources\ESC\pES-D201_Norwood.dgn

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

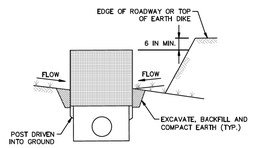
TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



TYPE A

TYPE B

ISOMETRIC VIEW



SECTION FOR TYPE A AND B

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

E.24

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 16 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 2½ 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

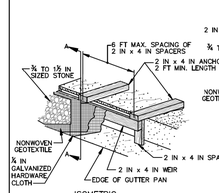
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.25

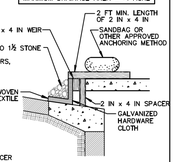
DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



ISOMETRIC



SECTION A–A

CONSTRUCTION SPECIFICATIONS:

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. 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.

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

E.27

MERCADO CONSULTANTS, INC.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RA DRAWN BY NM CHECKED BY MWM

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

SC0009

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

NORWOOD ROAD SHARED USE PATH

EROSION AND SEDIMENT STANDARD DETAILS

SCALE 1"=30' DATE NOVEMBER, 2023

SHEET NO. 18 OF 20

PLOTTED: 11/20/2023
FILE: P:\Projects\1908\1908.04 Sandy Spring Bikeway\06 Water Resources\ESC\plES-D002_Norwood.dgn

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 108 (OLNEY SANDY SPRING ROAD) AND NORWOOD ROAD IN MONTGOMERY COUNTY.

THE MODIFICATIONS INCLUDE THE ADDITION OF APS PUSH BUTTONS, PEDESTRIAN SIGNAL HEADS, ADVANCED VIDEO DETECTION, AND THE TRANSFER OF SIGNAL HEADS FROM SPAN WIRE TO MAST ARM POLES.

MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION IS TO OPERATE IN A NEMA 6-PHASE, FULLY-ACTUATED MODE, WITH THE MD 108 (OLNEY SANDY SPRING ROAD) APPROACHES OPERATING CONCURRENTLY AND THE NORWOOD ROAD APPROACH OPERATING SPLIT. PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR THE WESTBOUND MD 108 APPROACH. AN ALTERNATIVE PEDESTRIAN PHASE IS PROVIDED ALONG THE WEST LEG OF MD 108.

III. CONTROLLER REQUIREMENTS

INSTALL A FULLY-ACTUATED FOUR-PHASE CONTROLLER WITH THREE (3) FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS RACK MOUNT, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, NIC MODULE, RACK DETECTOR SYSTEM, AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE '5' BASE MOUNTED CABINET.

GENERAL NOTES

1. FOR FINAL PAVEMENT MARKINGS, REFER TO THE PAVEMENT MARKING PLANS, AS APPLICABLE: OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH ADMINISTRATION STANDARDS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. 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 THE APPROPRIATE 800 SERIES STANDARD PLATES. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
4. FOR MONTGOMERY COUNTY PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING THE VIDEO INTERFACE EQUIPMENT TO THE MONTGOMERY COUNTY SIGNAL SHOP. COUNTY FORCES WILL COMPLETE THE RETROFIT WORK IN THE EXISTING CABINET.
5. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY ????? FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. CONTACT MR./MS. ??? AT (XXX) XXX-XXXX SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.
6. 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.
7. FOR DEVELOPER JOBS, NOTE: CONTROLLER AND CABINET SHALL BE PURCHASED FROM ECONOLITE AND DELIVERED TO S.H.A. SIGNAL SHOP FOR WIRING AND TESTING A MINIMUM OF THREE (3) WEEKS PRIOR TO INSTALLATION. CONTACT MR. ED RODENHIZER (410) 787-7650 TO COORDINATE THIS EFFORT.
8. THE CONTRACTOR SHALL MAINTAIN THE CONTINUOUS OPERATION OF ALL INTERCONNECT, VEHICULAR, PEDESTRIAN DETECTORS, AND LIGHTING DEVICES. IF ANY DEVICE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPAIRED WITHIN 72 HOURS BY THE CONTRACTOR AT NO COST TO THE ADMINISTRATION AFTER NOTIFICATION BY THE ENGINEER.
9. DURING CONSTRUCTION, PROPOSED SIGNAL EQUIPMENT SHALL NOT BLOCK EXISTING SIGNAL EQUIPMENT
10. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR

PROJECT CONTACT LIST

DISTRICT 3

VACANT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7404

MR. MARK LOEFFLER
DISTRICT UTILITY ENGINEER
301-513-7350

MR. GREGORY EDWARDS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

MS. AMY ANDREWS
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION (ADMIN.)
301-513-7300

VACANT
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION (FIELD)
301-513-7336

OFFICE OF TRAFFIC AND SAFETY

REBECCA LICHTENSTEIN, P.E.
CHIEF, TRAFFIC OPERATIONS DIVISION
410-787-7630

MR. ANTOINE YATES
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS DIVISIONS
410-787-7625

MR. MICHAEL BASSO
SECTION CHIEF, SIGNAL OPERATIONS SECTION
410-787-7657

MR. TODD JONES
SIGN SHOP MANAGER
410-787-7676

MR. MICHAEL BOYLE
WAREHOUSE SECTION CHIEF
410-787-7673

EQUIPMENT LIST

EQUIPMENT LIST A.

ITEM NUMBER	QUANTITY		DESCRIPTION
	2	EA	THREE-PHASE FULLY-ACTUATED CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-3 CAMERAS), 3 FOUR-CHANNEL LOOP DETECTOR AMPLIFIERS AND INTERSECTION MONITOR HOUSED IN A NEMA SIZE 5 BASE MOUNTED CABINET
			SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT)
	2	EA	R10-3(1) SIGN (9 IN. X 15 IN) TO READ " PUSH BUTTON TO CROSS SANDY SPRING ROAD"
	2	EA	R10-3(1) SIGN (9 IN. X 15 IN) TO READ " PUSH BUTTON TO CROSS NORWOOD ROAD"
	1	EA	M1-5(1) SIGN (78 IN. X 36 IN) - MAST ARM MOUNT
	2	EA	R10-11b(1) SIGN (36 IN. X 36 IN) - MAST ARM MOUNT
	2	EA	D-3(2) SIGN (VAR. X 16 IN) - MAST ARM MOUNT
	1	EA	D-3(1) SIGN (VAR. X 16 IN) - MAST ARM MOUNT

EQUIPMENT LIST B.

ITEM NUMBER	QUANTITY		DESCRIPTION
120500	1	LS	MAINTENANCE OF TRAFFIC
801004	11	CY	CONCRETE FOR SIGNAL FOUNDATION
114280	135	LF	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES
549617	202	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
549603	714	LF	5 INCH YELLOW PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
860284	21	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
865300	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
865210	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
818004	4	EA	10 FOOT BREAKAWAY PEDESTAL POLE
807500	1	EA	EMBEDDED METERED SERVICE PEDESTAL
816105	1	EA	TRAFFIC SIGNAL CABINET NEMA SIZE 5
860285	4	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
873003	1	EA	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
818162	1	EA	MAST ARM POLE AND 50' MAST ARM, ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
818164	1	EA	MAST ARM POLE AND 60' MAST ARM, ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
816010	3	EA	VIDEO DETECTION CAMERA TO CONTROLLER & CABLE UP TO 500 FT
805118	258	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805125	149	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	31	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	119	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
801616	29	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
802501	557	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861105	377	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	891	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	508	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
803013	1	EA	FURNISH AND INSTALL SIGN/LUMINAIRE SUPPORTS
837001	6	EA	GROUND ROD - ¾ INCH DIAMETER X 10 FOOT LENGTH

EQUIPMENT LIST C.
EQUIPMENT TO BE SALVAGED AND RETURNED TO SHA

ITEM NUMBER	QUANTITY	DESCRIPTION
	ALL REMOVED MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR	

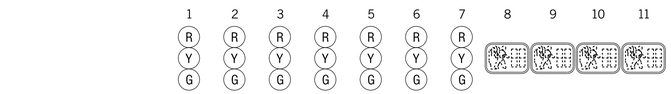
MAINTENANCE OF TRAFFIC NOTE

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL:

STANDARD NO. 104.03-01 (MULTI-LANE UNDIVIDED SHOULDER WORK)
STANDARD NO. 104.04-01 (MULTI-LANE DIVIDED SHOULDER WORK)

ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

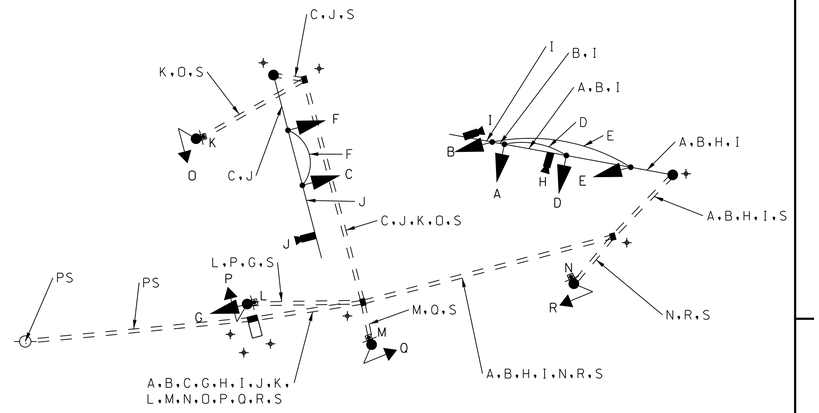
PHASE CHART



PHASE 2 AND 6	R	R	G	G	G	G	G	DW	DW	WK	WK	
PED CLEARANCE	R	R	G	G	G	G	G	DW	DW	FL/DW	FL/DW	
2 AND 6 CHANGE	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	
PHASE 4	G	G	R	R	R	R	R	WK	WK	DW	DW	
PED CLEARANCE	G	G	R	R	R	R	R	FL/DW	FL/DW	DW	DW	
4 CHANGE	Y	Y	R	R	R	R	R	DW	DW	DW	DW	
FLASHING OPERATION	FL /R	FL /R	FL /Y	FL /Y	FL /Y	FL /Y	FL /Y	DARK	DARK	DARK	DARK	

WIRING DIAGRAM

NOT TO SCALE



WIRING KEY

A B C	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	O P Q R	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) PEDESTRIAN SIGNAL HEADS
D E F G	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)		
H I J	IP-BASED VIDEO DETECTION CABLE (3/C #18)	S	#6 AWG GROUND WIRE
K L M N	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) APS PUSHBUTTONS	✦	GROUND ROD

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

TOOLE DESIGN
8484 GEORGIA AVENUE, SUITE 800
SILVER SPRING, MD 20910
PHONE: 301.927.1900
FAX: 301.927.2800
www.tooledesign.com

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

SANDY SPRING BIKEWAY FACILITY PLANNING
MD 108 (OLNEY SANDY SPRING ROAD)
AT NORWOOD ROAD TRAFFIC SIGNAL

GENERAL INFORMATION SHEET

SCALE N.T.S. ADVERTISED DATE _____ CONTRACT NO. <CONTRACT NO>

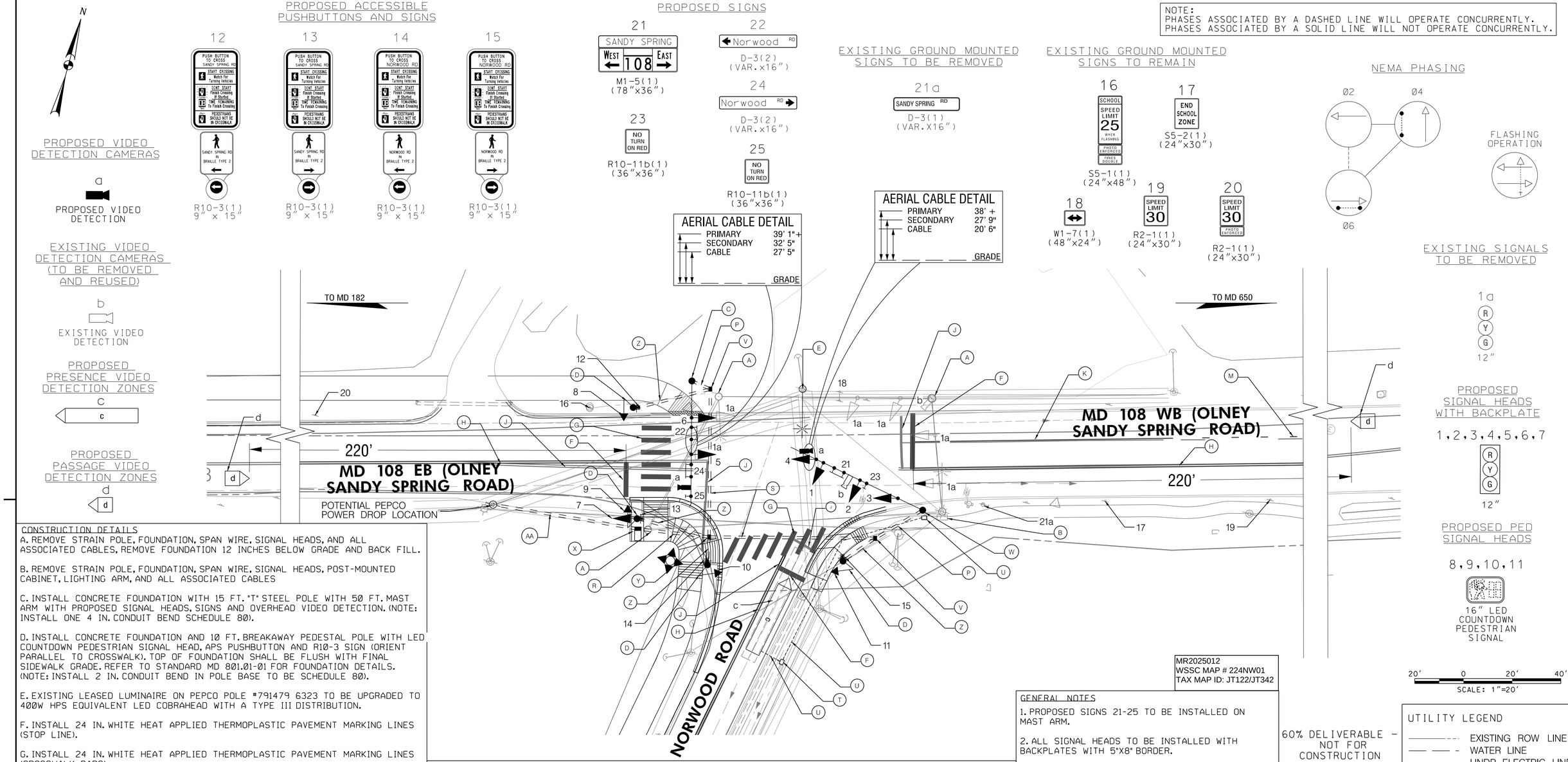
DESIGNED BY CB
DRAWN BY CB
CHECKED BY MJ
MDE/PRD <00-AA-0000>

COUNTY MONTGOMERY
LOGMILE <LOGMILE>
<TIMS NO>
<TOD NO>

<TS NO> | XX 1 1 | SHEET NO. 19 OF 20

BY: cbelton –

PLOTTED: 11/14/2023
FILE: H:\50000\00DCA.50707.07_S_Sandy Spring SUP Facility Final Design\PRODUCTION\CADD\PLANS\pSG-N002_Norwood.dgn



NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

CONSTRUCTION DETAILS

A. REMOVE STRAIN POLE, FOUNDATION, SPAN WIRE, SIGNAL HEADS, AND ALL ASSOCIATED CABLES, REMOVE FOUNDATION 12 INCHES BELOW GRADE AND BACK FILL.

B. REMOVE STRAIN POLE, FOUNDATION, SPAN WIRE, SIGNAL HEADS, POST-MOUNTED CABINET, LIGHTING ARM, AND ALL ASSOCIATED CABLES

C. INSTALL CONCRETE FOUNDATION WITH 15 FT. "T" STEEL POLE WITH 50 FT. MAST ARM WITH PROPOSED SIGNAL HEADS, SIGNS AND OVERHEAD VIDEO DETECTION. (NOTE: INSTALL ONE 4 IN. CONDUIT BEND SCHEDULE 80).

D. INSTALL CONCRETE FOUNDATION AND 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND R10-3 SIGN (ORIENT PARALLEL TO CROSSWALK). TOP OF FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. (NOTE: INSTALL 2 IN. CONDUIT BEND IN POLE BASE TO BE SCHEDULE 80).

E. EXISTING LEASED LUMINAIRE ON PEPCO POLE #791479 6323 TO BE UPGRADED TO 400W HPS EQUIVALENT LED COBRAHEAD WITH A TYPE III DISTRIBUTION.

F. INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LINES (STOP LINE).

G. INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LINES (CROSSWALK BARS).

H. INSTALL 5 IN. DOUBLE YELLOW HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LINES (CENTERLINE).

J. REMOVE EXISTING PAVEMENT MARKING LINE.

K. INSTALL 6 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LINE.

M. INSTALL 6 IN. (3'-9' SKIP) WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LINE.

P. INSTALL ONE-3 INCH RIGID PVC CONDUIT TRENCHED.

R. INSTALL TWO-4 INCH AND TWO-2 INCH RIGID PVC CONDUIT SCHEDULE 80 TRENCHED.

S. INSTALL TWO-4 INCH RIGID PVC CONDUIT BORED. (ONE SPARE CONDUIT TO BE TERMINATED AND CAPPED AT FACE OF CURB)

T. EXISTING HANDHOLE ABANDONED. REMOVE FOUNDATION 12 INCHES BELOW, BACK FILL AND COVER.

U. EXISTING CONDUIT TO BE CAPPED AND ABANDONED.

V. INSTALL MDOT SHA STANDARD HANDHOLE.

W. INSTALL CONCRETE FOUNDATION WITH 15 FT. "T" STEEL POLE WITH 60 FT. MAST ARM WITH PROPOSED SIGNAL HEADS SIGNS AND OVERHEAD VIDEO DETECTION. (NOTE: INSTALL ONE-4 INCH CONDUIT BEND SCHEDULE 80).

X. INSTALL A NEMA SIZE 5 BASE MOUNTED CONTROLLER AND CABINET WITH 2-WIRE APS CENTRAL CONTROL UNIT AND EMBEDDED METERED SERVICE PEDESTAL. (NOTE: INSTALL THREE-4 INCH PVC. AND TWO-2 INCH PVC CONDUIT BENDS TO BE SCHEDULE 80).

Y. INSTALL MDOT SHA STANDARD OVERSIZED HANDHOLE.

Z. INSTALL ONE-2 INCH RIGID PVC CONDUIT TRENCHED.

AA. INSTALL ONE-4 INCH RIGID PVC CONDUIT SCHEDULE 80 STUBBED UP 6 INCHES ABOVE GRADE AT BASE OF PEPCO POLE.

MR2025012
WSSC MAP # 224NW01
TAX MAP ID: JT122/JT342

GENERAL NOTES

1. PROPOSED SIGNS 21-25 TO BE INSTALLED ON MAST ARM.

2. ALL SIGNAL HEADS TO BE INSTALLED WITH BACKPLATES WITH 5"X8" BORDER.

3. NEAR SIDE SIGNAL 7 TO BE INSTALLED ON PEDESTAL POLE FOR EASTBOUND SANDY SPRING APPROACH. REFER TO STANDARD MD-814.04 FOR MOUNTING DETAILS.

4. PASSAGE DETECTION ZONES TO BE INSTALLED AT 220' FROM THE STOP BAR ALONG THE MAINLINE (OLNEY SANDY SPRING ROAD).

5. ASSOCIATED VIDEO DETECTION CAMERAS TO BE INSTALLED ON "T" MAST ARM AT A HEIGHT OF AT LEAST 22' FROM GROUND LEVEL.

60% DELIVERABLE - NOT FOR CONSTRUCTION

UTILITY LEGEND

————	EXISTING ROW LINE
—— —— -	WATER LINE
—— – ——	UNDR ELECTRIC LINE
————	OVR ELECTRIC LINE
— — — —	GAS LINE

TOOLE DESIGN

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.

MD LICENSE NUMBER

EXPIRATION DATE

APPROVALS

TEAM LEADER

ASST. DIV. CHIEF

DIVISION CHIEF

OFFICE DIRECTOR

REVISIONS

1 RECONFIGURATION OF PROPOSED MAST ARM POLE DESIGN, SHARED USE PATH ALIGNMENT WITH NEW CROSSWALK MARKING AND PEDESTRIAN SIGNAL LOCATIONS.

DESGN	CB	DRWN	CB	CHK	MNJ

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

SANDY SPRING BIKEWAY FACILITY PLANNING
MD 108 (OLNEY SANDY SPRING ROAD)
AT NORWOOD ROAD TRAFFIC SIGNAL

SIGNALIZATION PLAN SHEET

SCALE 1" = 20' ADVERTISED DATE 4 / 93 CONTRACT NO. <CONTRACT NO>

DESIGNED BY J.F.L. (FOR DCI) COUNTY MONTGOMERY
DRAWN BY B. KENT (FOR DCI) LOGMILE <LOGMILE>
CHECKED BY DOR TIMS NO. <TIMS NO>
MDE/PRD <00-AA-0000> TOD NO. <TOD NO>

TS NO.<TS NO> | DRAWING SG-01 OF XX | SHEET NO. 20 OF 20

BY: cbelton –

PLOTTED: 11/17/2023
FILE: H:\50000\00DCA.50707.07_S_Sandy Spring SUP Facility Final Design\PRODUCTION\CADD\PLANS\pSG-P001_Norwood.dgn