MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
SEMINARY ROAD
INTERSECTION IMPROVEMENTS
C. I. P. PROJECT NO. 501307

PS&E FINAL DESIGN

PROJECT LIMITS

SEMINARY ROAD:	STA. 104+91.00 TO STA. 109+00.00
	STA. 301+57.76 TO STA. 304+26.14
	STA. 411+00.00 TO STA. 413+66.19
LINDEN LANE:	STA. 100+82.93 TO STA. 104+91.00
BROOKVILLE ROAD:	STA. 201+00.00 TO STA. 204+71.20
SECOND AVENUE:	STA. 300+29.63 TO STA. 301+57.76
SEMINARY PLACE:	STA. 413+66.19 TO STA. 421+00.00
RILEY PLACE:	STA. 500+00.00 TO STA. 501+25.00

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OWNER'S CERTIFICATION

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

12.6.18
DATE

TIMOTHY CUPPLES, P.E.
CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL," MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN CRITERIA" DATED JUNE, 2014.

11/8/2018
DATE

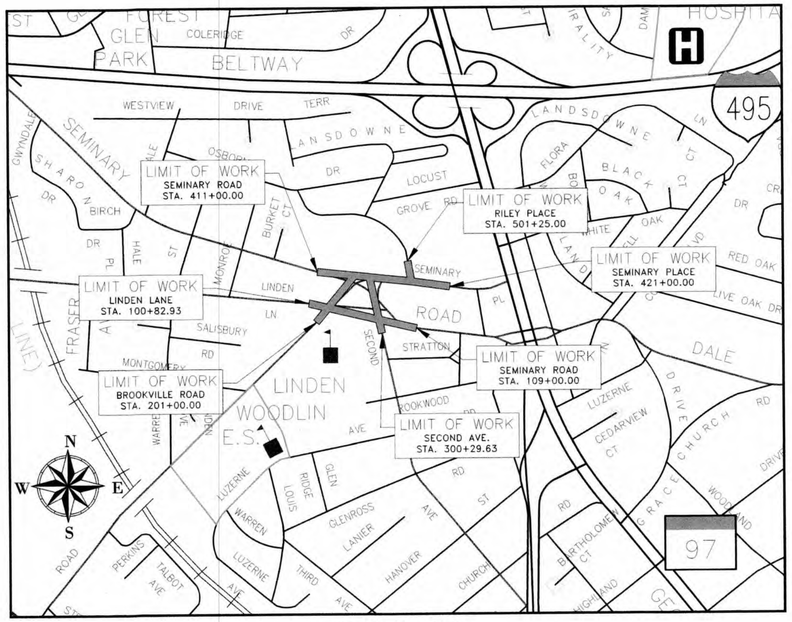
MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 3,520 CUBIC YARDS OF EXCAVATION, 652 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 151,750 SQUARE FEET OR 3.48 ACRES.

11/8/2018
DATE

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



VICINITY MAP
SCALE : 1"= 500'

DESIGN DATA–SEMINARY RD	
DESIGN CONTROL	30 MPH
24 HR A.D.T. (2007)	15,800
% HEAVY TRUCKS	2%

DESIGN DATA–BROOKVILLE RD	
DESIGN CONTROL	25 MPH
24 HR A.D.T. (2007)	1,900
% HEAVY TRUCKS	2%

DESIGN DATA–SEMINARY PL	
DESIGN CONTROL	30 MPH
24 HR A.D.T. (2007)	11,700
% HEAVY TRUCKS	2%

DESIGN DATA–LINDEN LANE	
DESIGN CONTROL	25 MPH
24 HR A.D.T. (2007)	22,600
% HEAVY TRUCKS	2%

DESIGN DATA–SECOND AVE	
DESIGN CONTROL	25 MPH
24 HR A.D.T. (2007)	14,500
% HEAVY TRUCKS	2%

DESIGN DATA–RILEY PLACE	
DESIGN CONTROL	25 MPH
24 HR A.D.T. (2007)	---
% HEAVY TRUCKS	2%

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 18589 EXPIRATION DATE: 2-10-2020

STATE OF MARYLAND · MICHAEL JOHN ROTHENHEBER · REGISTERED PROFESSIONAL ENGINEER

JMT

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

CONTACT:
REBECCA PARK, P.E.
PROJECT MANAGER
DESIGN SECTION
DIVISION OF TRANSPORTATION ENGINEERING
(240) 777-7263

RELATED REQUIRED PERMITS

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

IT IS THE RESPONSIBILITY OF 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			
DNR Roadside Tree Care Permit	x			Approval Date 12/22/2017	
DPS Roadside Tree Protection Plan	x		361403 ~~358362~~	Approval Date 12/27/17	
N.P.D.E.S. NOTICE OF INTENT	x				DATE FILED 01/09/2018
OTHERS (Please List):					

JUNE 2014

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
576,702 square feet	151,750 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
57	6
Fee in Lieu (Trees Required – Trees Planted) x $250	$ 12,750

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.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY
TREE CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
ESD to the MEP: microbio-ret. (4); non-rooftop disconnect (2); waiver	Reviewed 01/04/19	Reviewed 1/4/19
Reviewed 01/04/19	Date 01/04/19	Date 293016
Date 01/04/19	Approved Date	SEDIMENT CONTROL PERMIT NO.
Approved Date 236807		
SM FILE #		

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date 12/6/18

APPROVED
Chief, Division of Transportation Engineering — Date 12.6.18

Designed by : MTF Drawn by : SAH Checked by : JJR

GN-01 TITLE SHEET

SEMINARY ROAD
INTERSECTION IMPROVEMENTS

DATE: NOVEMBER 2018

Project No. : 501307 SHEET 1 of 123

ABBREVIATIONS

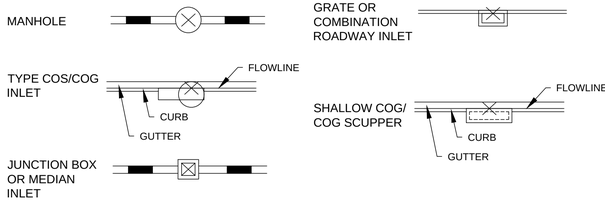
ABAN.	Abandoned	LOD	Limit of Disturbance	SSMH	Sewer Manhole
A.A.S.H.T.O.	American Association of State Highway Transportation Officials	LOW	Limit of Work	STA.	Station
		LP	Low Point	STD.	Standard
APPROX.	Approximate	LT	Left	SO.	Single Opening
ASTM	American Society for Testing and Materials	LVC	Length of Vertical Curve	S.Y.	Square Yards
B or B/L	Baseline	Maint.	Maintenance	SWM	Stormwater Management
BIT.	Bituminous	MH	Manhole	SW	Sidewalk
BOA	Beginning of Alignment	MAX.	Maximum	T	Tangent
BVCE	Beginning of Vertical Curve Elevation	MCDPS	Montgomery County Department of Permitting Services	T or Tele.	Telephone
BVCS	Beginning of Vertical Curve Station	MOD.	Modified	TBA	To Be Abandoned
BLDG..	Building	MIN.	Minimum	TCE	Temporary Construction Easement
BOT.	Bottom	M-NCPPC	Maryland-National Capital Park and Planning Commission	T.C.P.	Terra Cotta Pipe
C.A.	Center of Curve	N	North	TPF	Tree Protection Fence
C or C/L	Centerline	NAD	North American Datum	T.S.	Top of Structure Elevation
C.I.P.	Cast Iron Pipe	NAVD	North American Vertical Datum	TRAV.	Traverse
C.M.P.	Corrugated Metal Pipe	NB	Northbound	TYP.	Typical
C.O.	Cleanout	NE	Northeast	UG	Underground
COMB.	Combination	NO.	Number	UNK.	Unknown
CONC.	Concrete	N.T.S. or NTS	Not To Scale	U.P.	Utility Pole
CONSTR.	Construction	O.C.	On Center	VAR.	Varies
CPI	Curve Point of Intersection	PVMT.	Pavement	V.C.L.	Vertical Curve Length
C.P.P.	Corrugated Polyethylene Pipe	PED.	Pedestrian	W	Water
CRZ	Critical Root Zone	P.C.	Point of Curvature	W	West
D.B.H.	Diameter Breast Height	P.C.C.	Point of Compound Curve	W.B. or WB	Westbound
DC	Degree of Curve	P/C	Point of Crown	WHC	Water House Connection
DIA.	Diameter	PE	Perpetual Easement	WM	Water Meter
D.O.T. or DOT	Department Of Transportation	PGA	Point of Grade Application	WSSC	Washington Suburban Sanitary Commission
D.P.W. or DPW	Department of Public Works	P/GE	Profile Grade Elevation	W/O	Without
D.H.V.	Design Hour Volume	P.G.E.	Profile Ground Elevation	YR	Year
DWS	Detectable Warning Surface	P.G.L.	Profile Grade Line		
D.I.	Drop Inlet	P/GL	Profile Ground Line		
D.I.	Ductile Iron	P/R	Point of Rotation		
D.O.	Double Opening	P.I.	Point of Intersection		
E	East	P.O.C.	Point on Curve		
Elec.	Electric	P.O.T.	Point on Tangent		
EA.	Each	PROP.	Proposed		
E.B.	Eastbound	P.S.F.	Pounds per Square Foot		
EB	Electric Box	PT.	Point		
EM	Electric Meter	P.T.	Point of Tangency		
ELEV. or EL..	Elevation	P.V.C.	Point of Vertical Curve		
E.R.C.C.P.	Elliptical Reinforced Cement Concrete Pipe	PVC	Polyvinyl Chloride		
ES	End Section	PVI	Point of Vertical Intersection		
EVCE	End of Vertical Curve Elevation	R	Radius		
EVCS	End of Vertical Curve Station	RET. WALL	Retaining Wall		
EX. or EXIST.	Existing	RP	Root Pruning		
FT	Foot or Feet	RT	Right		
F or FL	Flowline	RW or R/W	Right of Way		
FWD	Forward	R.C.P.	Reinforced Cement Pipe		
G	Gas	R.C.C.P.	Reinforced Cement Concrete Pipe		
GM	Gas Meter	SIG.	Signal Pole		
Guy	Guy Wire	SHA. or S.H.A.	State Highway Administration		
HBX	Handbox	S	South		
H.D.P.E.	High-Density Polyethylene	S or SS or SAN.	Sanitary Sewer		
H.E.R.C.P.	Horizontal Elliptical Reinforced Concrete Pipe	SB	Southbound		
HGL	Hydraulic Grade Line	S.D.	Storm Drain		
HP	High Point	SDP	Shrub Deer Protection		
HMA	Hot Mix Asphalt	S.E.	Superelevation		
HT	Height	SF	Silt Fence		
IN	Inch	SFOP	Silt Fence On Pavement		
INV	Invert	SF	Square Feet		
L	Length	SHC	Sewer House Connection		
LANDSC.	Landscaped	SSD	Stopping Sight Distance		
L.F.	Linear Feet	SSF	Super Silt Fence		

LEGEND

- EB — ELECTRIC BOX
- E — ELECTRIC MANHOLE
- EM — ELECTRIC METER
- HBX — HANDBOX
- CO — CLEAN OUT
- MB — MAIL BOX
- G — GAS MANHOLE
- GM — GAS METER
- GV — GAS VALVE
- W — WATER MANHOLE
- WV — WATER VALVE
- WM — WATER METER
- FH — FIRE HYDRANT
- SS — SANITARY MANHOLE
- SD — STORM DRAIN MANHOLE
- T — TELEPHONE MANHOLE
- TEL — TELEPHONE RISER
- TV — TV (CABLE) RISER
- MH — UNKNOWN MANHOLE
- SIGN
- TREE
- HEDGE/BUSHES
- TRAVERSE POINT (#MT00)
- DETECTABLE WARNING SURFACE (DWS)
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- GUY — EXISTING GUY WIRE
- EXISTING UTILITY POLE WITH PROPOSED LEASE LIGHT
- PROPOSED PEDESTRIAN LIGHT POLE
- PROPOSED UTILITY POLE
- PROPOSED UTILITY POLE WITH PROPOSED LEASE LIGHT
- PROPOSED SIGNAL POLE

- 434.0 — SPOT ELEVATION
- WIRE FENCE / CHAIN LINK FENCE
- INDEX CONTOUR
- 430 — INTERVAL CONTOUR
- OHW — OVERHEAD WIRES
- ABANDONED GAS LINE
- G — EXISTING GAS
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- SAN — EXISTING SANITARY SEWER
- CTV — EXISTING CABLE TV
- FL — EXISTING FIRE LINE
- FO — EXISTING FIBER OPTIC
- W — EXISTING WATER
- PROPERTY LINE
- EXISTING RIGHT OF WAY
- F — TOE OF FILL
- C — TOP OF CUT
- LOD — LIMIT OF DISTURBANCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- RSE — REVERTIBLE SLOPE EASEMENT
- PE — PERPETUAL EASEMENT
- WOODEN RAILING / WOOD FENCE
- CURB AND GUTTER

DRAINAGE STRUCTURE STAKEOUT LOCATIONS



DRAINAGE BUBBLES



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

Designed by: MTF Drawn by: SAH Checked by: JJR

GN-02
ABBREVIATIONS AND SYMBOLS

SEMINARY ROAD
INTERSECTION IMPROVEMENTS

SCALE: NOT TO SCALE DATE: NOVEMBER 2017

Project No. : 501307 SHEET 2 of 123

GENERAL NOTES

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED 2017, ALL ERRATA AND ADDENDA THERETO, THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, WASHINGTON SUBURBAN SANITARY COMMISSION (W.S.S.C.) STANDARDS, MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS, AND SOIL CONSERVATION SERVICE POND CONSTRUCTION SPECIFICATIONS FOR MARYLAND.
2. FOR CONSTRUCTION, ALL HORIZONTAL SHALL BE BASED ON NAD 83/91, NAVD 88 DATUM.
3. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
4. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
5. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
6. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
7. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
8. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
9. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
10. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
11. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
12. ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS SHALL BE SEEDED AND MULCHED.
13. THE CONTRACTOR SHALL MAINTAIN THE APPROVED ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060
14. THE LOCATION OF RIGHT-OF-WAY AND EASEMENT LINES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. PLEASE REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.
15. ALL UTILITY POLES AND GUY WIRES NOTED FOR RELOCATION SHALL BE PERFORMED BY OTHERS.
16. CONTACT THE WASHINGTON SUBURBAN SANITARY COMMISSION SYSTEM MAINTENANCE ENGINEER BEFORE EXCAVATING BENEATH OR IN THE VICINITY OF EXISTING WATER OR SEWER LINES. BACKFILL TO BE DONE UNDER SUPERVISION OF W.S.S.C. CALL 301-699-4420
17. THE CONTRACTOR SHALL INSTALL PEDESTRIAN DETECTABLE WARNING SURFACES AT ALL SIDEWALK & PEDESTRIAN CROSSINGS. LOCATIONS AS DIRECTED BY THE ENGINEER. THE WARNING SURFACES SHALL BE IN CONFORMANCE WITH ADA REQUIREMENTS AND THE PROJECT SPECIAL PROVISION.
18. THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD UTILITY WIRES EXIST WITHIN THE PROJECT SITE. LOCATIONS OF WIRES SHOULD BE NOTED IN FIELD WITH SIGNAGE TO AVOID CONFLICTS DURING CONSTRUCTION.
19. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES AND EXCAVATIONS WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. IT IS RECOMMENDED THAT FIELD VERIFICATIONS OF THE EXISTING WASHINGTON GAS FACILITIES SHOULD BE PERFORMED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY WASHINGTON GAS AT (703) 750-1000 TO SCHEDULE PERSONNEL FOR DAMAGE PREVENTION 10 BUSINESS DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY EXPOSURE OF THE EXISTING GAS MAINS DURING THE CONSTRUCTION SHALL BE PERFORMED UNDER SUPERVISION OF ONSITE WASHINGTON GAS PERSONNEL(S). ALL EXPOSED GAS MAINS SHALL BE PROTECTED BY A WGL APPROVED PROTECTIVE SHIELD.
20. CONTRACTOR TO PERFORM TEST PITS ON EXISTING WASHINGTON GAS FACILITIES AT THE ONSET OF ROADWAY CONSTRUCTION. INFORMATION GATHERED FROM THE TEST PITS (LOCATION AND ELEVATION OF FACILITY AT EACH TEST PIT) MUST BE PROVIDED TO WASHINGTON GAS PRIOR TO ANY ADDITIONAL CONSTRUCTION ACTIVITIES WITHIN 5 FEET HORIZONTAL CLEARANCE OF EXISTING WASHINGTON GAS FACILITIES. WASHINGTON GAS WILL REVIEW THE INFORMATION PROVIDED TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO AVOID CONFLICT WITH THEIR EXISTING FACILITIES.
21. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES SMALLER THAN 16-INCHES IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 12-INCH VERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY.
22. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES THAT ARE 16-INCHES OR LARGER IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 24-INCHVERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY.

GENERAL NOTES FOR WORK ON M-NCPPC PROPERTY

1. ALL NOTES SHOWN ON THE DRAWINGS ARE TYPICAL UNLESS OTHERWISE SHOWN OR NOTED.
2. A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED BY THE M-NCPPC CONSTRUCTION MANAGER PRIOR TO START OF ANY CONSTRUCTION RELATED ACTIVITY AT THE PROJECT SITE. CONTACT JAY CHILDS (301-495-2574) TO SCHEDULE.
3. NO CLEARING, GRUBBING, OR GRADING SHALL COMMENCE UNTIL THE LIMITS OF DISTURBANCE ARE STAKED IN THE FIELD AND ARE APPROVED BY THE M-NCPPC CONSTRUCTION MANAGER AS WELL AS ANY OTHER APPLICABLE PERMITTING AGENCIES. AFTER THE LIMITS ARE APPROVED, NO DISTURBANCE WILL BE ALLOWED OUTSIDE OF THE APPROVED LIMITS. ANY ITEMS DISTURBED OUTSIDE OF THE APPROVED LIMITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
4. THE ENTIRE LOD SHALL BE FENCED AS DIRECTED BY THE PARK CONSTRUCTION MANAGER. WHERE SILT FENCE, SUPER SILT FENCE, OR TREE PROTECTION FENCE IS NOT REQUIRED, ORANGE BLAZE SAFETY FENCE MAY BE USED.
5. FIELD RUN TOPOGRAPHIC SURVEY PROVIDED BY JMT IN NOVEMBER 2015. SURVEY COORDINATES ARE REFERENCED TO THE MARYLAND STATE PLAN COORDINATE SYSTEM NAD 83(2011). ELEVATIONS ARE REFERENCED TO THE NORTHERN AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BOUNDARIES SHOWN ARE DERIVED FROM DEED AND PLAT INFORMATION.
6. M-NCPPC RESERVES THE RIGHT TO ADJUST AND MODIFY THE LIMITS OF DISTURBANCE IN THE FIELD TO MINIMIZE IMPACTS OF WORK.
7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING SAFE FACILITY ACCESS THROUGHOUT CONSTRUCTION AND PROVIDE ANY APPROPRIATE DETOURS, TEMPORARY FACILITIES, AND SIGNAGE AS REQUESTED BY THE M-NCPPC CONSTRUCTION MANAGER.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AND REPORT TO M-NCPPC CONSTRUCTION MANAGER ANY ERROR OR INCONSISTENCY WITH THE ACTUAL CIRCUMSTANCES IN THE FIELD BEFORE COMMENCING WORK.
9. THE CONTRACTOR SHALL STAKE-OUT THE LOCATION OF FACILITIES AND MEET WITH THE M-NCPPC CONSTRUCTION MANAGER TO REVIEW THE LOCATION. M-NCPPC RESERVES THE RIGHT TO ADJUST THE LOCATIONS AS NECESSARY.
10. SITE RESTORATION AND REPAIR/REPLACEMENT OF DAMAGED INFRASTRUCTURE SHALL BE IN ACCORDANCE WITH M-NCPPC DETAILS, STANDARDS, AND SPECIFICATIONS AT THE DIRECTION OF THE PARK INSPECTOR AT NO COST TO M-NCPPC.
11. TREE PROTECTION FENCING SHALL BE PER TREE PROTECTION FENCE DETAIL SHOWN ON PLANS. TREE PROTECTION FENCE SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY M-NCPPC CONSTRUCTION MANAGER PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH M-NCPPC CONSTRUCTION MANAGER AND M-NCPPC URBAN FORESTER PRIOR TO PLACEMENT OF ALL TREE PROTECTION.
12. ALL PLANTING SUBSTITUTIONS SHALL BE APPROVED BY M-NCPPC CONSTRUCTION MANAGER. PLANT MATERIALS AND LOCATIONS MUST BE INSPECTED BY M-NCPPC PRIOR TO INSTALLATION.
13. PROVIDE DEER PROTECTION FENCING PER M-NCPPC SPECIFICATIONS FOR ALL LANDSCAPE AND REFORESTATION TREES AND SHRUBS TO PREVENT DAMAGE FROM DEER. TUBEX SHALL NOT BE USED AS A SUBSTITUTE.
14. STAGING AREAS AND ACCESS ROUTES SHALL BE DETERMINED IN FIELD AND APPROVED BY THE M-NCPPC CONSTRUCTION MANAGER TO MINIMIZE IMPACTS.
15. M-NCPPC MAY INSPECT CONDITION OF TREES THROUGHOUT CONSTRUCTION AND REQUIRE REPAIR, REMOVAL, AND/OR REPLACEMENT OF ANY DAMAGED TREES AT NO COST TO M-NCPPC.
16. CONSTRUCTION MANAGER MAY AUTHORIZE SPECIAL TREE AND TREE ROOT PROTECTION MEASURES OTHER THAN SHOWN ON THESE PLANS DURING CONSTRUCTION. THESE MAY INCLUDE, BUT NOT BE LIMITED TO 12-INCH THICK MULCH LAYER ACCESS BEDDING, MATTING, ADDITIONAL TREE PROTECTION FENCING, AND ADDITIONAL SEDIMENT CONTROLS.
17. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR IDENTIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF THE CONSTRUCTION RELATED WORK AND SHALL COORDINATE THE WORK WITH M-NCPPC CONSTRUCTION MANAGER. THE CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES BETWEEN ALL EXISTING AND PROPOSED UTILITIES AT ALL TIMES AS REQUIRED BY THE UTILITY COMPANIES.
18. UTILITIES SHOWN HEREON ARE BASED ON BEST AVAILABLE INFORMATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF THIS INFORMATION. ANY COST ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY DAMAGE MADE TO THE UTILITY SHALL BE REPAIRED ON AN EMERGENCY BASIS PER THE LATEST SPECIFICATIONS OF THE CONCERNED UTILITY AND COMPLETED WORK SHALL BE APPROVED BY THE CONCERNED UTILITY. ANY DAMAGE SHALL BE REPORTED AND DOCUMENTED IMMEDIATELY TO THE M-NCPPC CONSTRUCTION MANAGER. REPAIR APPROVALS SHALL BE PROVIDED TO THE M-NCPPC CONSTRUCTION MANAGER.
19. DISCREPANCIES, OMISSION, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE CONSTRUCTION DOCUMENTS OR DOUBT ABOUT THEIR MEANING SHALL BE BROUGHT TO THE ATTENTION OF THE M-NCPPC CONSTRUCTION MANAGER FOR DIRECTION BEFORE PROCEEDING WITH WORK. IF CONFLICTS EXIST, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS OTHERWISE STATED IN WRITING BY THE M-NCPPC CONSTRUCTION MANAGER.
20. PRIOR TO VEGETATIVE STABILIZATION, ALL DISTURBED AREAS MUST BE TOPSOILED PER THE MONTGOMERY COUNTY "STANDARDS AND SPECIFICATIONS FOR TOPSOIL." IF ON-SITE MATERIALS DO NOT MEET REQUIREMENTS OF TOPSOIL, COORDINATE WITH M-NCPPC REGARDING TILLING-IN OF CERTIFIED COMPOST TO ON-SITE SOILS IN ORDER TO MEET SPECIFICATIONS.
21. PAVEMENT REMOVAL SHALL INCLUDE REMOVAL OF GRAVEL SUBBASE AND SCARIFICATION OF SUBGRADE, UNLESS OTHERWISE DIRECTED BY M-NCPPC.
22. THIS SITE IS LOCATED IN THE ANACOSTIA RIVER AND ROCK CREEK WATERSHEDS OF MONTGOMERY COUNTY. RUNOFF FROM THIS SITE DRAINS INTO A MUNICIPAL STORM DRAIN SYSTEM THAT OUTLETS TO THE MIDDLE SLIGO CREEK AND BETHESDA MAINSTEM TRIBUTARIES.

EARTHWORK SUMMARY

			PROPOSAL QUANTITY
CLASS I EXCAVATION			
CUT (FROM CROSS SECTIONS)	2,810	CY	
PAVEMENT REMOVAL	480	CY	
TOPSOIL UNDER FILL	–	CY	
ROOT MAT UNDER FILL	–	CY	
PLUS CUT (FROM SWM AREA)	230	CY	
TOTAL CLASS I EXCAVATION	3,520	CY	3,520 CY
CLASS IA EXCAVATION (ESTIMATED)			
MUCK REMOVAL (IF ANY)	–	CY	
UNDERCUTTING	–	CY	
TOTAL CLASS IA EXCAVATION	–	CY	– CY
CLASS 2 EXCAVATION			
CUT (FROM CROSS SECTIONS)	–	CY	
TOTAL CLASS 2 EXCAVATION	–	CY	– CY
EXCAVATION AVAILABLE FOR EMBANKMENT			
TOTAL CLASS I EXCAVATION + CLASS 2 EXCAVATION	3,520	CY	
MINUS:			
TOPSOIL (REMOVED IN CUT)	–	CY	
TOPSOIL (REMOVED UNDER FILL)	–	CY	
ROOT MAT (REMOVED IN CUT)	–	CY	
ROOT MAT (REMOVED IN FILL)	–	CY	
CUT ADJUSTED	3,520	CY	
CUT DENSIFIED (x 0.83)	598	CY	
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	2,922	CY	
EMBANKMENT REQUIRED			
FILL (FROM CROSS SECTIONS)	502	CY	
REFILL FOR TOPSOIL UNDER FILL	–	CY	
REFILL FOR ROOT MAT UNDER FILL	–	CY	
FILL (FROM SWM AREA)	150	CY	
TOTAL	652	CY	
MINUS EXCAVATION AVAILABLE FOR EMBANKMENT	(2,922)	CY	
ADJUSTED TOTAL	–	CY	
PLUS DENSIFICATION FACTOR (x 1.20)	–	CY	
MINUS SELECT BORROW	–	CY	
COMMON BORROW	–	CY	– CY
SELECT BORROW	150	CY	150 CY

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

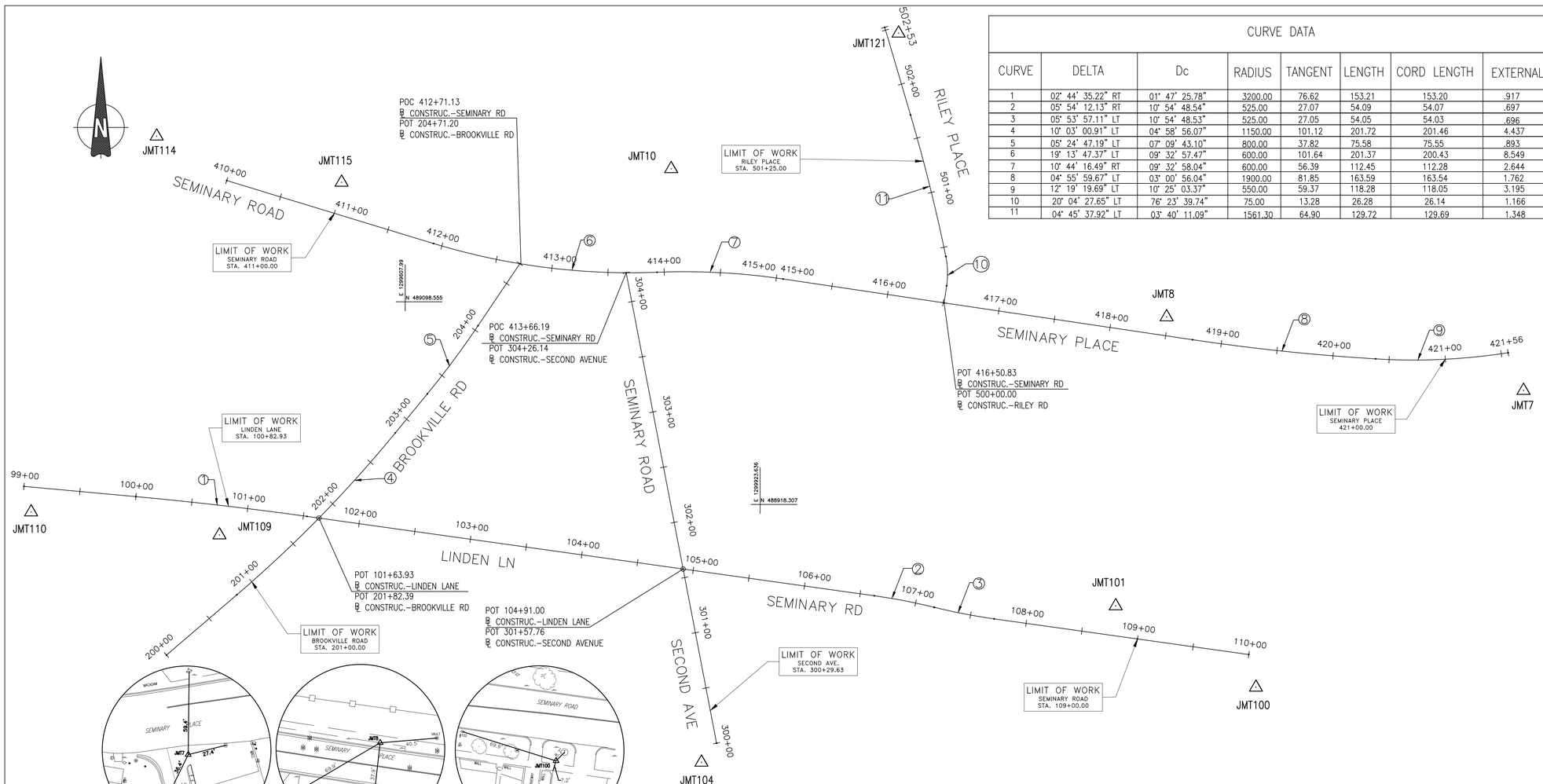
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

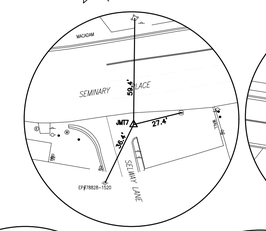
Designed by: MTF Drawn by: SAH Checked by: JJR

GN-03 NOTES AND EARTHWORK SUMMARY
SEMINARY ROAD INTERSECTION IMPROVEMENTS

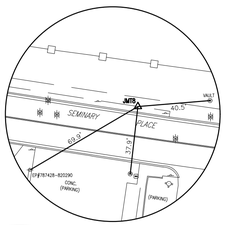
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Project No. : 501307 SHEET 3 of 123

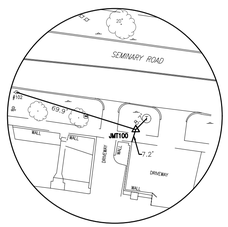




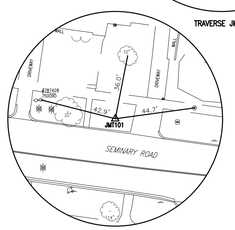
TRAVERSE JMT7



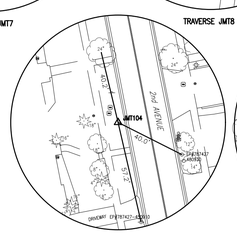
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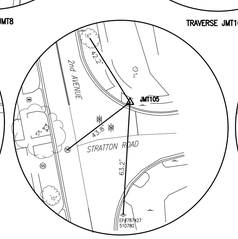
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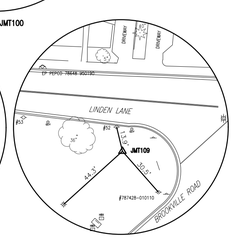
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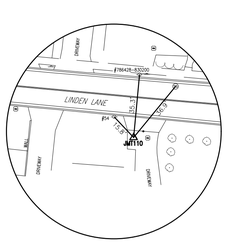
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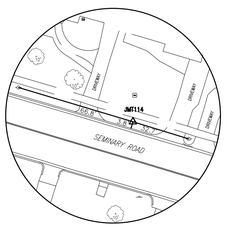
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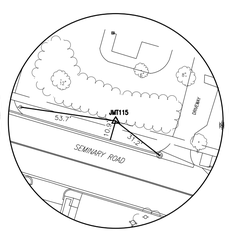
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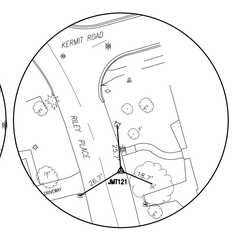
TRAVERSE JMT110



TRAVERSE JMT114



TRAVERSE JMT115



TRAVERSE JMT121

CURVE DATA							
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	CORD LENGTH	EXTERNAL
1	02° 44' 35.22" RT	01° 47' 25.78"	3200.00	76.62	153.21	153.20	.917
2	05° 54' 12.13" RT	10° 54' 48.54"	525.00	27.07	54.09	54.07	.697
3	05° 53' 57.11" LT	10° 54' 48.53"	525.00	27.05	54.05	54.03	.696
4	10° 03' 00.91" LT	04° 58' 56.07"	1150.00	101.12	201.72	201.46	4.437
5	05° 24' 47.19" LT	07° 09' 43.10"	800.00	37.82	75.58	75.55	.893
6	19° 13' 47.37" LT	09° 32' 57.47"	600.00	101.64	201.37	200.43	8.549
7	10° 44' 16.49" RT	09° 32' 58.04"	600.00	56.39	112.45	112.28	2.644
8	04° 55' 59.67" LT	03° 00' 56.04"	1900.00	81.85	163.59	163.54	1.762
9	12° 19' 19.69" LT	10° 25' 03.37"	550.00	59.37	118.28	118.05	3.195
10	20° 04' 27.65" LT	76° 23' 39.74"	75.00	13.28	26.28	26.14	1.166
11	04° 45' 37.92" LT	03° 40' 11.09"	1561.30	64.90	129.72	129.69	1.348

CONTROL COORDINATES – LINDEN LANE/SEMINARY ROAD				
CURVE	STATION	NORTH	EAST	BEARING
START	99+00.00	488934.365	1299268.854	S 84° 46' 37.00" E
PC	100+00.00	488925.262	1299368.439	S 84° 46' 37.00" E
CURVE 1 PI	100+76.62	488918.288	1299444.737	_
PT	101+53.21	488907.669	1299520.615	S 82° 02' 02.18" E
PC	106+62.77	488837.050	1300025.267	S 82° 02' 02.18" E
CURVE 2 PI	106+89.84	488833.299	1300052.076	_
PT	107+16.87	488826.809	1300078.356	S 76° 07' 50.05" E
PC	107+17.20	488826.731	1300078.676	S 76° 07' 50.05" E
CURVE 3 PI	107+44.25	488820.246	1300104.938	_
PT	107+71.25	488816.495	1300131.728	S 82° 01' 47.16" E
END	109+00.00	488798.643	1300259.235	S 82° 01' 47.16" E

CONTROL COORDINATES – BROOKVILLE ROAD				
CURVE	STATION	NORTH	EAST	BEARING
START	200+00.00	488784.286	1299395.663	N 49° 24' 20.22" E
PC	200+82.41	488837.910	1299458.239	N 49° 24' 20.22" E
CURVE 4 PI	201+83.53	488903.709	1299535.023	_
PT	202+84.13	488981.898	1299599.146	N 39° 21' 19.32" E
PC	203+29.08	489016.650	1299627.647	N 39° 21' 19.32" E
CURVE 5 PI	203+66.89	489045.893	1299651.629	_
PT	204+04.66	489077.267	1299672.745	N 33° 56' 32.13" E
END	204+71.20	489132.469	1299709.898	N 33° 56' 32.13" E

CONTROL COORDINATES – SECOND AVENUE				
CURVE	STATION	NORTH	EAST	BEARING
START	300+00.00	488705.925	1299884.914	N 10° 52' 32" W
END	304+26.14	489124.411	1299804.512	N 10° 52' 32" W

CONTROL COORDINATES – SEMINARY PLACE				
CURVE	STATION	NORTH	EAST	BEARING
START	410+00.00	489206.428	1299449.235	S 73° 03' 57.78" E
PC	411+92.30	489150.416	1299633.200	S 73° 03' 57.78" E
CURVE 6 PI	412+93.95	489120.810	1299730.436	_
PT	413+93.68	489124.882	1299831.997	N 87° 42' 14.85" E
PC	413+93.68	489124.882	1299831.998	N 87° 42' 14.85" E
CURVE 7 PI	414+50.07	489127.141	1299888.341	_
PT	415+06.12	489118.863	1299944.118	S 81° 33' 28.66" E
PC	418+74.33	489064.807	1300308.338	S 76° 07' 50.05" E
CURVE 8 PI	419+56.18	489052.791	1300389.298	_
PT	420+37.93	489047.782	1300470.991	S 86° 29' 28.33" E
PC	420+37.93	489047.782	1300470.992	S 86° 29' 28.33" E
CURVE 9 PI	420+97.30	489044.148	1300530.251	_
PT	421+56.21	489053.244	1300588.920	N 81° 11' 11.98" E
END	421+56.21	489053.245	1300588.921	N 81° 11' 11.98" E

CONTROL COORDINATES – RILEY PLACE				
CURVE	STATION	NORTH	EAST	BEARING
START	500+00.00	489097.619	1300087.256	N 08° 26' 31.34" E
PC	500+15.38	489112.827	1300089.513	N 08° 26' 31.34" E
CURVE 10 PI	500+28.65	489125.958	1300075.699	_
PT	500+41.65	489138.960	1300088.786	N 11° 37' 56.31" W
PC	500+41.66	489138.964	1300088.785	N 11° 37' 56.31" W
CURVE 11 PI	501+06.56	489202.530	1300075.697	_
PT	501+71.38	489264.791	1300057.383	N 16° 23' 34.23" W
END	502+52.63	489342.736	1300034.453	N 16° 23' 34.23" W

JMT SURVEY TRAVERSE CONTROL TABLE

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
JMT7	489019.61	1300602.60	365.08	REBAR & CAP
JMT8	489085.02	1300285.18	383.86	REBAR & CAP
JMT100	488755.55	1300364.62	376.77	REBAR & CAP
JMT101	488827.96	1300239.91	381.92	REBAR & CAP
JMT104	488688.77	1299871.44	383.23	REBAR & CAP
JMT105	488579.04	1299944.22	382.24	REBAR & CAP
JMT109	488891.00	1299442.74	377.77	REBAR & CAP
JMT110	488911.49	1299275.27	371.31	REBAR & CAP
JMT114	489245.86	1299386.96	359.91	REBAR & CAP
JMT115	489204.81	1299551.40	366.57	REBAR & CAP
JMT121	489337.41	1300046.74	373.43	REBAR & CAP

TRAVERSE NOTES

1. COORDINATES ARE REFERENCED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83(2011) ZONE 1900 EPOCH 2010 AS DETERMINED BY MULTIPLE GPS RTN (KEYNET) OBSERVATIONS ON OCTOBER 26, 2015 & NOVEMBER 3, 2015.
2. GPS OBSERVATIONS WERE THE BASIS OF A CONVENTIONAL TRAVERSE NETWORK BY JMT AND PROCESSED USING A LEAST SQUARES ADJUSTMENT PROGRAM.
3. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)(GEOID 12A) AS DETERMINED BY MULTIPLE GPS RTN (KEYNET) OBSERVATIONS ON OCTOBER 26, 2015 & NOVEMBER 3, 2015.
4. FIELD RUN DIGITAL LEVELS WERE PERFORMED BY JMT IN NOVEMBER 2015 AND INCORPORATED INTO THE LEAST SQUARES NETWORK ADJUSTMENT.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

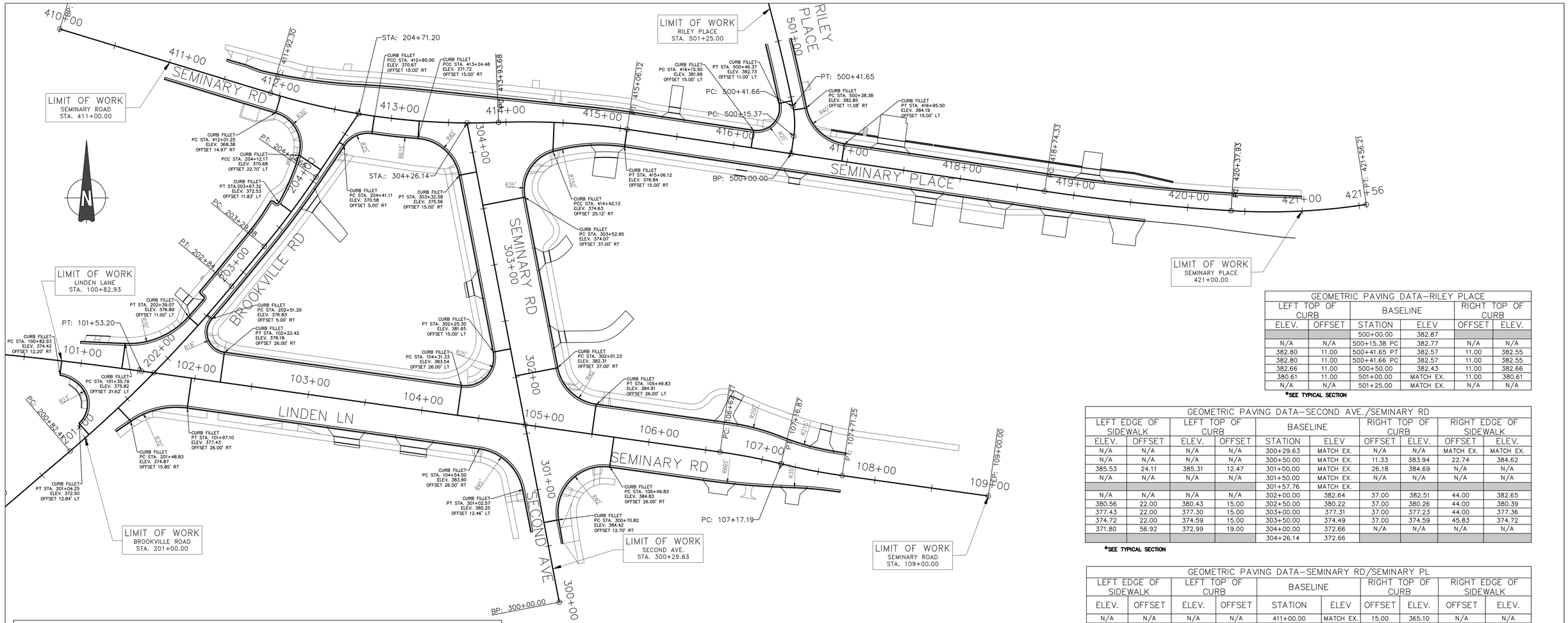
GS–01 GEOMETRIC LAYOUT

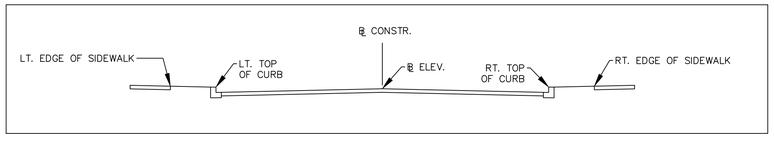
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50'

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 4 of 123





NOTES:
1. SIDEWALK CURB RAMPS SHALL BE CONSTRUCTED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. CURB RAMP CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES.

GEOMETRIC PAVING DATA–RILEY PLACE

LEFT TOP OF CURB		BASELINE		RIGHT TOP OF CURB	
ELEV.	OFFSET	STATION	ELEV	OFFSET	ELEV.
		500+00.00	382.87		
N/A	N/A	500+15.38 PC	382.77	N/A	N/A
382.80	11.00	500+41.65 PT	382.57	11.00	382.55
382.80	11.00	500+41.66 PC	382.57	11.00	382.55
382.66	11.00	500+50.00	382.43	11.00	382.66
380.61	11.00	501+00.00	MATCH EX.	11.00	380.61
N/A	N/A	501+25.00	MATCH EX.	N/A	N/A

*SEE TYPICAL SECTION

GEOMETRIC PAVING DATA–SECOND AVE./SEMINARY RD

LEFT EDGE OF SIDEWALK		LEFT TOP OF CURB		BASELINE		RIGHT TOP OF CURB		RIGHT EDGE OF SIDEWALK	
ELEV.	OFFSET	ELEV.	OFFSET	STATION	ELEV	OFFSET	ELEV.	OFFSET	ELEV.
N/A	N/A	N/A	N/A	300+29.63	MATCH EX.	N/A	N/A	MATCH EX.	MATCH EX.
N/A	N/A	N/A	N/A	300+50.00	MATCH EX.	11.33	383.94	22.74	384.62
385.53	24.11	385.31	12.47	301+00.00	MATCH EX.	26.18	384.69	N/A	N/A
N/A	N/A	N/A	N/A	301+50.00	MATCH EX.	N/A	N/A	N/A	N/A
				301+57.76	MATCH EX.				
N/A	N/A	N/A	N/A	302+00.00	382.64	37.00	382.51	44.00	382.65
380.56	22.00	380.43	15.00	302+50.00	380.22	37.00	380.26	44.00	380.39
377.43	22.00	377.30	15.00	303+00.00	377.31	37.00	377.23	44.00	377.36
374.72	22.00	374.59	15.00	303+50.00	374.49	37.00	374.59	45.83	374.72
371.80	56.92	372.99	19.00	304+00.00	372.66	N/A	N/A	N/A	N/A
				304+26.14	372.66				

*SEE TYPICAL SECTION

GEOMETRIC PAVING DATA–SEMINARY RD/SEMINARY PL

LEFT EDGE OF SIDEWALK		LEFT TOP OF CURB		BASELINE		RIGHT TOP OF CURB		RIGHT EDGE OF SIDEWALK	
ELEV.	OFFSET	ELEV.	OFFSET	STATION	ELEV	OFFSET	ELEV.	OFFSET	ELEV.
N/A	N/A	N/A	N/A	411+00.00	MATCH EX.	15.00	365.10	N/A	N/A
366.58	25.10	366.40	15.00	411+50.00	367.20	15.00	366.58	N/A	N/A
368.18	26.02	368.07	17.12	411+92.30 PC	367.94	15.00	368.51	15.66	369.00
369.07	26.14	368.92	17.83	412+00.00	368.18	15.00	369.22	15.66	369.22
370.23	29.95	370.08	22.90	412+50.00	369.59	N/A	N/A	N/A	N/A
370.70	32.30	370.24	25.25	412+71.13	370.15				
370.90	34.23	370.75	27.23	413+00.00	370.91	15.67	371.01	37.66	371.45
372.49	33.06	372.41	26.04	413+50.00	372.24	25.69	372.85	40.16	373.32
372.91	31.77	372.35	24.82	413+66.19	372.66				
373.64	28.56	372.96	21.48	413+93.68 PCC	373.39	N/A	N/A	N/A	N/A
373.72	27.63	373.64	20.57	414+00.00	373.56	N/A	N/A	N/A	N/A
375.17	22.80	375.09	15.79	414+50.00	374.90	22.79	375.62	29.80	375.70
376.69	20.00	376.61	15.00	415+00.00	376.51	15.12	376.61	21.00	376.71
376.96	20.00	376.36	15.00	415+06.12 PT	376.68	15.00	376.36	20.66	376.93
378.70	20.00	378.62	15.00	415+50.00	378.51	15.00	378.62	20.66	378.72
381.03	20.00	380.95	15.00	416+00.00	380.84	15.00	380.95	20.66	381.05
				416+50.00	382.85	15.00	383.36	20.66	383.46
384.34	20.00	384.25	15.00	417+00.00	384.11	15.00	384.25	20.66	384.35
384.77	20.00	384.68	15.00	417+50.00	384.57	15.00	384.68	20.66	384.78
384.39	20.00	384.30	15.00	418+00.00	384.20	15.00	384.30	16.87	384.30
383.18	20.00	383.10	15.00	418+50.00	382.99	15.00	383.10	19.69	383.10
382.29	20.00	381.73	15.00	418+74.33 PC	382.10	15.00	381.75	15.66	382.24
381.14	20.00	381.05	15.00	419+00.00	380.95	15.00	380.55	15.66	380.61
378.35	20.00	378.26	15.00	419+50.00	378.16	15.00	377.76	N/A	N/A
375.37	15.66	375.37	15.00	420+00.00	375.27	N/A	N/A	N/A	N/A
373.17	15.66	372.69	15.00	420+37.93 PCC	373.07	N/A	N/A	N/A	N/A
372.48	15.60	372.48	15.00	420+50.00	372.37	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	421+00.00	369.46	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	421+56.21	365.54	N/A	N/A	N/A	N/A

*SEE TYPICAL SECTION

GEOMETRIC PAVING DATA–LINDEN LN/SEMINARY RD

LEFT EDGE OF SIDEWALK		LEFT TOP OF CURB		BASELINE		RIGHT TOP OF CURB		RIGHT EDGE OF SIDEWALK	
ELEV.	OFFSET	ELEV.	OFFSET	STATION	ELEV.	OFFSET	ELEV.	OFFSET	ELEV.
N/A	N/A	N/A	N/A	100+82.93	MATCH EX.	MATCH EX.	MATCH EX.	N/A	N/A
N/A	N/A	375.09	18.59	101+00.00	MATCH EX.	18.12	374.25	18.94	374.24
376.54	25.22	376.54	24.50	101+50.00	MATCH EX.	44.17	374.43	45.07	374.40
376.58	26.32	376.39	25.56	101+53.21 PT	MATCH EX.	41.47	374.21	42.30	374.67
				101+63.93	MATCH EX.				
N/A	N/A	N/A	N/A	102+00.00	MATCH EX.	26.00	377.35	33.00	377.47
379.00	28.66	378.96	26.16	102+50.00	MATCH EX.	26.00	378.53	33.00	378.66
380.78	28.66	380.74	26.16	103+00.00	MATCH EX.	26.00	380.41	33.00	380.54
382.37	28.66	382.33	26.16	103+50.00	MATCH EX.	26.00	382.11	33.00	382.24
383.07	28.66	383.03	26.16	104+00.00	MATCH EX.	26.00	382.94	33.00	383.64
N/A	N/A	382.18	34.66	104+50.00	MATCH EX.	26.00	384.00	33.00	384.12
				104+91.00	MATCH EX.				
N/A	N/A	N/A	N/A	105+00.00	MATCH EX.	N/A	N/A	N/A	N/A
384.99	33.00	384.86	26.00	105+50.00	MATCH EX.	30.90	384.85	MATCH EX.	384.99
384.56	33.00	384.69	26.00	106+00.00	MATCH EX.	26.00	385.12	N/A	N/A
384.69	45.50	384.81	26.00	106+50.00	MATCH EX.	26.00	384.90	N/A	N/A
384.54	52.13	384.12	26.00	106+62.77 PC	MATCH EX.	25.93	384.31	N/A	N/A
384.41	41.15	383.96	24.25	107+00.00	MATCH EX.	23.20	384.07	N/A	N/A
384.20	38.93	383.69	22.00	107+16.87 PT	MATCH EX.	20.50	383.68	N/A	N/A
384.20	38.89	383.72	21.96	107+17.20 PC	MATCH EX.	20.43	383.68	N/A	N/A
383.57	36.75	383.18	19.41	107+50.00	MATCH EX.	15.00	383.88	N/A	N/A
383.81	35.51	382.75	19.43	107+71.25 PT	MATCH EX.	14.19	383.04	N/A	N/A
383.52	35.28	N/A	N/A	108+00.00	MATCH EX.	N/A	N/A	N/A	N/A
382.72	35.43	N/A	N/A	108+50.00	MATCH EX.	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	109+00.00	MATCH EX.	N/A	N/A	N/A	N/A

*SEE TYPICAL SECTION

GEOMETRIC PAVING DATA–BROOKVILLE RD

LEFT EDGE OF SIDEWALK		LEFT TOP OF CURB		BASELINE		RIGHT TOP OF CURB		RIGHT EDGE OF SIDEWALK	
ELEV.	OFFSET	ELEV.	OFFSET	STATION	ELEV.	OFFSET	ELEV.	OFFSET	ELEV.
N/A	N/A	N/A	N/A	201+00.00	MATCH EX.	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	201+50.00	MATCH EX.	18.65	375.15	19.35	375.16
				201+82.39	MATCH EX.				
376.61	22.55	376.61	21.77	202+00.00	MATCH EX.	N/A	N/A	N/A	N/A
376.22	18.66	376.13	10.92	202+50.00	376.55	5.00	377.13	10.00	377.22
375.37	18.66	374.88	18.00	202+84.13 PT	375.51	5.00	375.50	10.00	376.07
374.79	18.66	374.79	18.00	203+00.00	374.91	5.00	375.40	10.00	375.49
373.72	18.66	373.22	18.00	203+29.08 PC	373.86	5.00	373.95	10.00	374.41
372.95	19.22	372.95	18.55	203+50.00	373.07	5.00	373.56	10.00	373.64
371.20	20.00	371.20	19.29	204+00.00	371.26	5.00	371.74	10.50	371.83
371.02	21.25	370.69	20.49	204+04.66 PT	371.11	5.00	371.10	10.67	371.70
N/A	N/A	N/A	N/A	204+50.00	370.14	6.60	371.14	N/A	N/A
				204+71.20	370.15				

*SEE TYPICAL SECTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

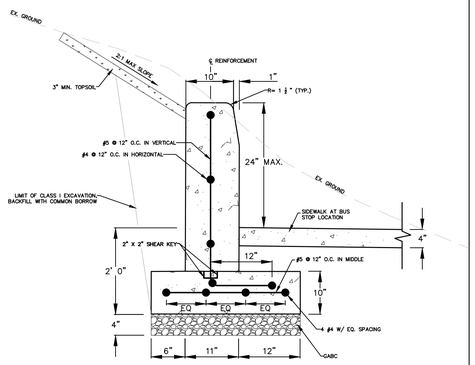
GS–02 GEOMETRIC LAYOUT ELEVATION CALLOUT SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: HORIZONTAL 1"=50'

DATE: NOVEMBER 2017

Project No. : 501307 SHEET 5 of 123



CONCRETE MODIFIED CURB

N.T.S

NOTES:

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS SECTION 602 FOR CURB MATERIALS AND METHODS OF CONSTRUCTION.

APPROVED	CATEGORY CODE ITEMS
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	306

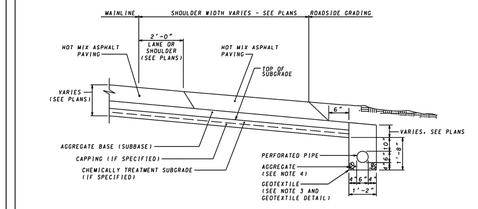
SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 3-6-86	APPROVAL 4-14-86
REVISED 10-1-91	REVISED 3-21-88
REVISED 7-29-11	REVISED 8-1-11
REVISED	REVISED

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

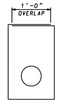
LONGITUDINAL UNDERDRAIN LOCATED AT SHOULDER EDGE FOR FLEXIBLE PAVEMENT

STANDARD NO. MD 387.11



NOTES

1. LONGITUDINAL UNDERDRAIN SHALL BE PLACED ACCORDING TO THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. THE UNDERDRAIN TRENCH SHALL NOT BE CONSTRUCTED BEFORE PLACEMENT OF THE BASE (SUBBASE) COURSE.
3. GEOTEXTILE CLASS SHALL BE AS SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS.
4. AGGREGATE SHALL CONFORM TO No. 57 AGGREGATE SECTION 901.01 OF THE STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS.
5. AGGREGATE SHALL BE TAMPED WITH A LIGHT VIBRATORY TAMPER PRIOR TO OVERLAPPING THE GEOTEXTILE FABRIC.
6. CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR 6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO DO THE WORK.



GEOTEXTILE FABRIC DETAIL

APPROVED	CATEGORY CODE ITEMS
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	306

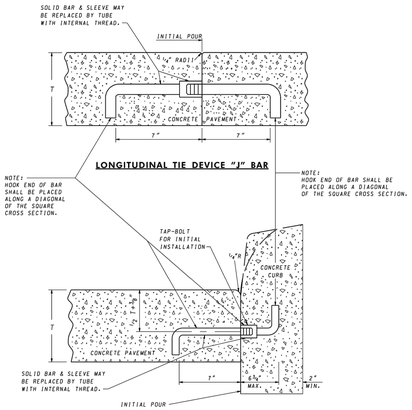
SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 3-6-86	APPROVAL 4-14-86
REVISED 10-1-91	REVISED 3-21-88
REVISED 7-29-11	REVISED 8-1-11
REVISED	REVISED

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

LONGITUDINAL UNDERDRAIN LOCATED AT SHOULDER EDGE FOR FLEXIBLE PAVEMENT

STANDARD NO. MD 387.11



APPROVED	CATEGORY CODE ITEMS
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	

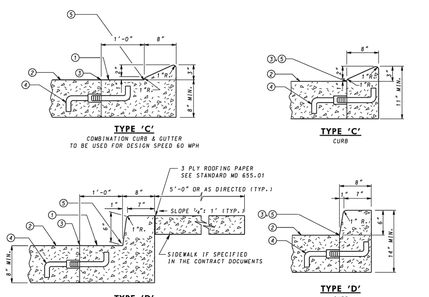
SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-15-64	APPROVAL 7-31-65
REVISED 3-23-16	REVISED 3-23-16
REVISED	REVISED
REVISED	REVISED

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

CONCRETE PAVEMENT LONGITUDINAL TIE DEVICES

STANDARD NO. MD 572.61



1. SLOPE GUTTER PAN ½" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS. EXCEPT INTERCHANGE RAMPS.
2. ROADWAY PAVEMENT SLOPE.
3. ROADWAY PAVEMENT CONSTRUCTION JOINT.
4. PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO MD 572.61.
5. FLOW LINE.

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.

B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.

C. TYPE C OR D COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.

D. TYPE C OR D CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

APPROVED	CATEGORY CODE ITEMS
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	602

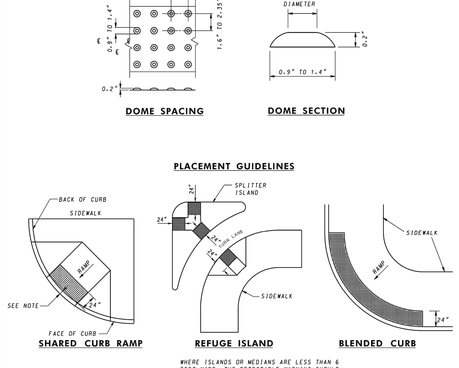
SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 3-10-04	APPROVAL 3-31-04
REVISED 3-23-16	REVISED 3-23-16
REVISED	REVISED
REVISED	REVISED

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

STANDARD TYPES C AND D CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER

STANDARD NO. MD 620.02-01



WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

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

APPROVED	CATEGORY CODE ITEMS
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	611

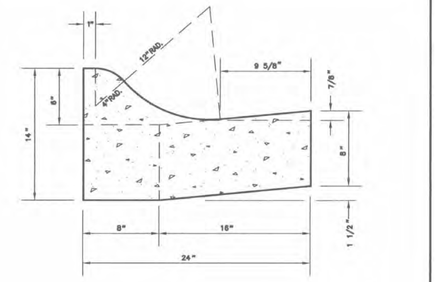
SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-10-04	APPROVAL 3-31-04
REVISED 4-17-06	REVISED 4-5-06
REVISED	REVISED
REVISED	REVISED

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

DETECTABLE WARNING SURFACES

STANDARD NO. MD 655.40



GENERAL NOTES

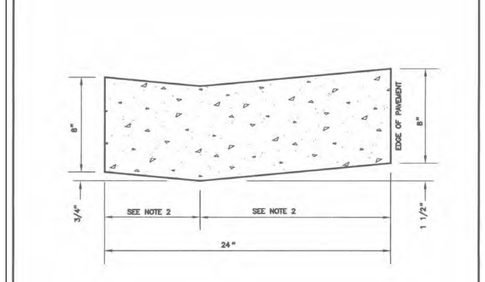
1. REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
2. THIS STANDARD SHALL BE USED ON PRIMARY, SECONDARY AND TERTIARY RESIDENTIAL ROADS EXCEPT AT CURB RETURNS AND INLET THROATS.
3. WHENEVER STANDARD MC-100.01 CURB IS USED IN CONJUNCTION WITH THIS STANDARD, A TEN FOOT TRANSITION SHALL BE PROVIDED FROM STANDARD MC-101.01 TO STANDARD MC-100.01 FOR CURB RETURNS AND CURB SECTIONS WHICH INCLUDE INLETS.
4. THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
5. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920. ⚠

APPROVED 14 APR '06 DATE	REVISED
DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION	⚠ ASTM-C920 4/2006
for CHIEF, DIV. OF CAP. DEV.	

MONTGOMERY COUNTY
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

COMBINATION CONCRETE CURB AND GUTTER TYPE C

STANDARD NO. MC-101.01



GENERAL NOTES

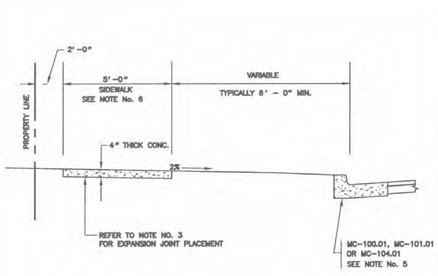
1. REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
2. THE DISTANCES FROM THE FLOWLINE TO THE FRONT AND BACK EDGE OF CURB SHALL BE ADJUSTED TO MATCH EXISTING CONDITIONS.
3. THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
4. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920. ⚠

APPROVED 14 APR '06 DATE	REVISED
DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION	⚠ ASTM-C920 4/2006
for CHIEF, DIV. OF CAP. DEV.	

MONTGOMERY COUNTY
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

DEPRESSED CURB ENTRANCE

STANDARD NO. MC-102.01



GENERAL NOTES

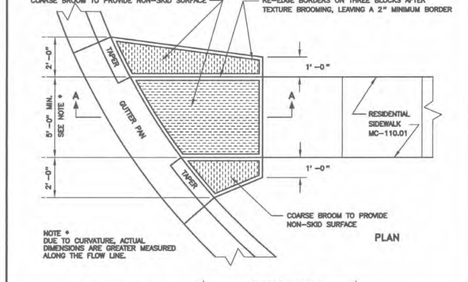
1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. REFER TO THE APPLICABLE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR DETAILS AT DRIVEWAYS.
3. EXPANSION JOINTS SHALL HAVE A MAXIMUM SPACING OF 100 FEET AND BE LOCATED AT POINTS OF CURVATURE. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING, TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920. ⚠
4. SCORE THE CONCRETE TO A DEPTH OF 1/3 THE SLAB THICKNESS TO PROVIDE WEAKENED PLANE TRANSVERSE JOINTS AT 5'-0" INTERVALS.
5. REFER TO THE APPLICABLE ROAD STANDARD AND CURB AND GUTTER STANDARDS FOR OTHER OPTIONS.
6. SIDEWALK WIDTH SHALL BE 4'-0" FOR SECONDARY AND TERTIARY ROADWAYS.

APPROVED 14 APR '06 DATE	REVISED
DIRECTOR, DEPT. OF TRANS.	⚠ ASTM-C920 4/2006
for CHIEF, DIV. OF CAP. DEV.	

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

RESIDENTIAL SIDEWALK CLOSED SECTION

STANDARD NO. MC-110.01



GENERAL NOTES

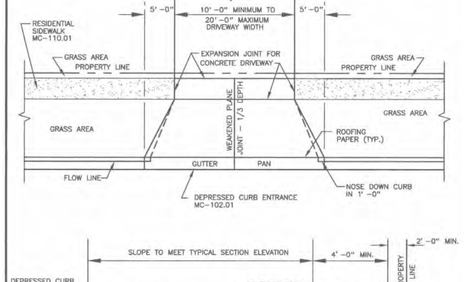
1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIAL AND METHODS OF CONSTRUCTION.
2. SIDEWALK RAMPS SHOULD BE LOCATED AS INDICATED. HOWEVER, EXISTING SURFACE UTILITIES AND EXISTING OR PROPOSED GEOMETRICS MAY AFFECT PLACEMENT.
3. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING, TWO COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT, COMPLYING WITH ASTM-C920. ⚠

APPROVED 14 APR '06 DATE	REVISED
DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION	⚠ ASTM-C920 4/2006
for CHIEF, DIV. OF CAP. DEV.	

MONTGOMERY COUNTY
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

RESIDENTIAL SIDEWALK RAMP

STANDARD NO. MC-112.01



GENERAL NOTES

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. DRIVEWAY AND DRIVEWAY APRON TO BE MAINTAINED BY PROPERTY OWNER.
3. PROVIDE WEAKENED PLANE JOINTS AT MAXIMUM INTERVALS OF 15'.
4. THE EXPANSION JOINTS SHALL BE PLACED AT LOCATIONS SHOWN.
5. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING, TWO COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT, COMPLYING WITH ASTM-C920. ⚠

APPROVED 14 APR '06 DATE	REVISED
DIRECTOR, DEPT. OF TRANS.	⚠ ASTM-C920 4/2006
for CHIEF, DIV. OF CAP. DEV.	

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

RESIDENTIAL DRIVEWAY

STANDARD NO. MC-301.01

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

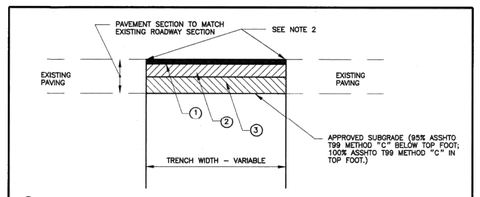
Designed by: MTF Drawn by: SAH Checked by: JJR

DT-01 STANDARD DETAILS

SEMINARY ROAD INTERSECTION IMPROVEMENTS

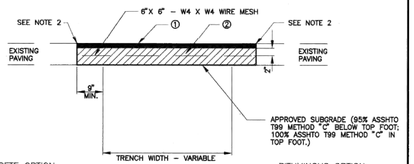
SCALE: NOT TO SCALE DATE: NOVEMBER 2017

Project No.: 501307 SHEET 6 of 123



① TWO – 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3.
③ SUBBASE MATERIAL SEE NOTE 3

ARTERIAL ROADWAY
(OR HIGHER CLASSIFICATION)



CONCRETE OPTION

① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② 6" MINIMUM CONCRETE PATCH

BITUMINOUS OPTION

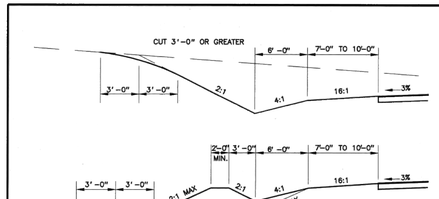
① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3

PRIMARY ROADWAY
(OR LOWER CLASSIFICATION)

GENERAL NOTES

1. REFER TO M.C.D.O.T. UTILITY PATCH SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION.
3. BASE COURSE AND SUBBASE MATERIAL SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR MATCH EXISTING CONDITION, WHICHEVER IS GREATER.

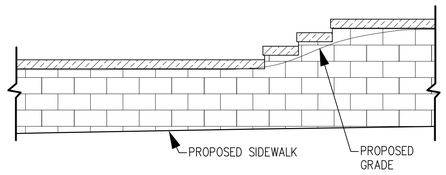
APPROVED JAN 5 '96 DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
DIRECTOR, DEPT. OF TRANS.		UTILITY PATCH IN FLEXIBLE PAVEMENT
CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC-801.02



GENERAL NOTES

1. ALL FILL SLOPES SHALL BE CONSTRUCTED TO PROVIDE A MAXIMUM SLOPE OF 2:1 AND SHALL CONFORM TO THE TYPICAL SECTION AS SPECIFIED IN THE APPLICABLE ROADWAY STANDARDS.
2. THE SIDE DITCH IN FILL SLOPES OF OPEN SECTION ROADWAYS MAY BE ELIMINATED IN AREAS NOT MASTER PLANNED FOR DEVELOPMENT ONLY AFTER OVERLAND FLOW PATH AND EROSION POTENTIAL ARE CONSIDERED.

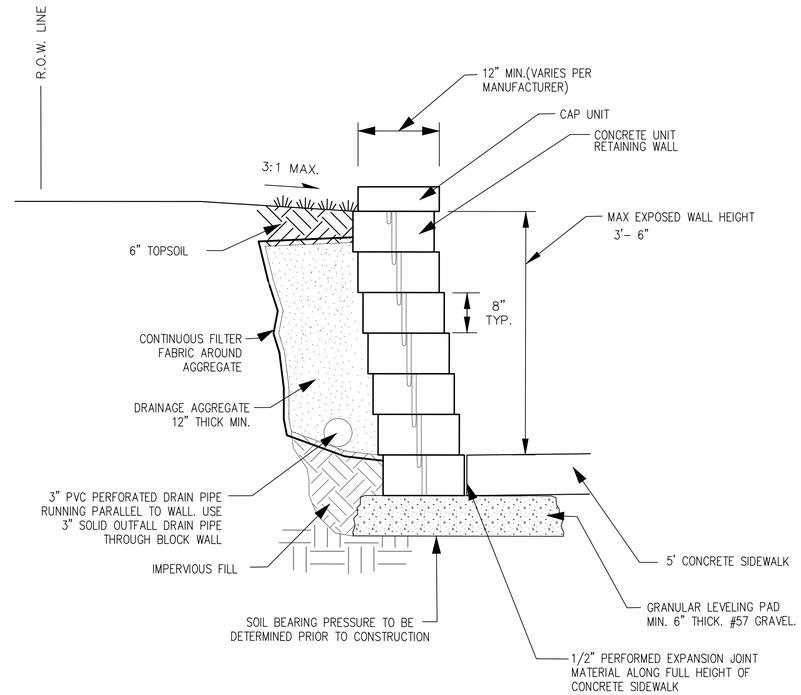
APPROVED JAN 5 '96 DATE	REVISED	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
DIRECTOR, DEPT. OF TRANS.		METHODS OF GRADING SIDE SLOPES
CHIEF, DIV. OF ENG. SERVICES		STANDARD NO. MC-811.01



ELEVATION

NOTES

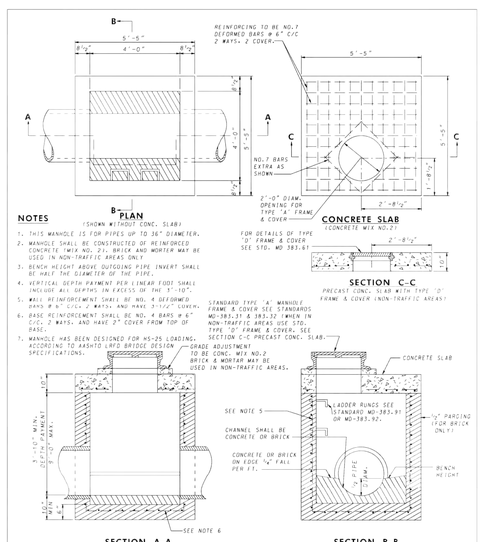
1. INFORMATION SHOWN SHALL BE USED AS A GUIDE FOR WALL DESIGN AT THIS LOCATION.
2. STATION/OFFSET ARE TAKEN FROM TRAIL CONSTRUCTION BASELINE.
3. THE RETAINING WALL SHOWN ON THE PLANS AND DETAILS IS CONCEPTUAL. THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL. A MARYLAND REGISTERED PROFESSIONAL ENGINEER SHALL SIGN AND SEAL ALL SUBMITTALS.
4. CONTRACTOR SHALL VERIFY IN FIELD FOR SOIL BEARING PRESSURE ASSUMED AS 2,000 PSF AS MINIMUM DESIGN REQUIREMENT.



SECTION

MODULAR BLOCK RETAINING WALL DETAIL

NOT TO SCALE



NOTES

1. THIS MANHOLE IS FOR PIPES UP TO 36" DIAMETER.
2. MANHOLE SHALL BE CONSTRUCTED OF REINFORCED CONCRETE (MIX NO. 2), BRICK AND MORTAR MAY BE USED IN NON-TRAFFIC AREAS ONLY.
3. BENCH HEIGHT ABOVE OUTGOING PIPE INVERT SHALL BE HALF THE DIAMETER OF THE PIPE.
4. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF THE 5'-10".
5. WALL REINFORCEMENT SHALL BE NO. 4 DEFORMED BARS @ 6" C/C, 2 WAYS, AND HAVE 3-1/2" COVER.
6. BASE REINFORCEMENT SHALL BE NO. 4 BARS @ 6" C/C, 2 WAYS, AND HAVE 2" COVER FROM TOP OF BASE.
7. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION 305	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
APPROVED DIRECTOR OF OFFICE OF HIGHWAY DEVELOPMENT		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHA State Highway Administration	APPROVAL & DATE / REVISIONS: APPROVED 10-1-01, REVISED 10-1-01, REVISED 10-7-14	APPROVAL & FEDERAL HIGHWAY ADMINISTRATION: APPROVED 3-1-83, REVISED 6-26-89, REVISED 9-29-14
		48" SQUARE STANDARD SHALLOW MANHOLE
		STANDARD NO. MD 383.00

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

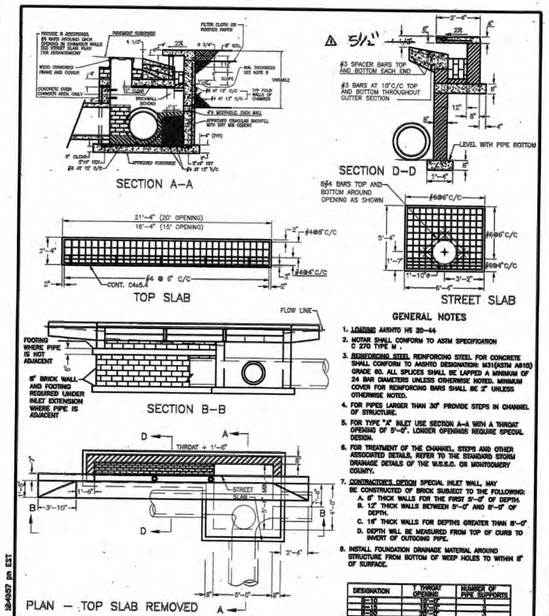
Designed by: MTF Drawn by: SAH Checked by: JJR

DT-02 STANDARD DETAILS

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: NOT TO SCALE DATE: NOVEMBER 2017

Project No.: 501307 SHEET 7 of 123



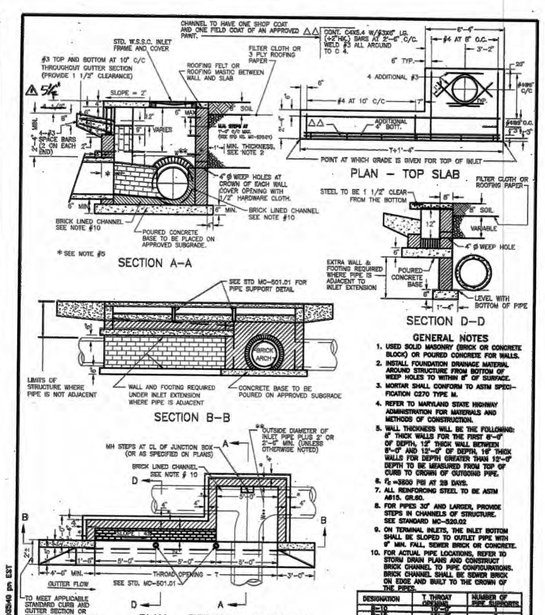
APPROVED JAN 5/96 DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED
⚠ RESTORED 11" DEPRESSION AT GUTTER ZONE 6/25/12

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

REVERSE "B" INLET

STANDARD NO. MC-502.02



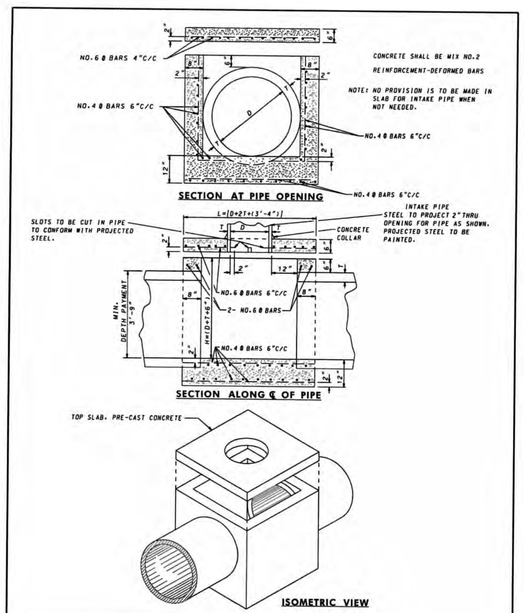
APPROVED JAN 5/96 DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED
⚠ RESTORED 11" DEPRESSION AT GUTTER ZONE 6/25/12

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

" B " INLET

STANDARD NO. MC-502.01



SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED Kirk G. Mallard DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

SHA State Highway Administration

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-7-51	APPROVAL 3-23-56
REVISED 10-1-91	REVISED
REVISED	REVISED
REVISED	REVISED

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

STANDARD JUNCTION BOX

STANDARD NO. MD 386.11

NOTES:

1. INTERIOR JUNCTION BOX DIMENSIONS SHALL BE 32" L x 32" W x 26.5" H
2. STANDARD TYPE 'D' FRAME AND COVER (MD 383.61) SHALL BE CAST INTO THE TOP SLAB.

MCDPS APPROVED FOR:

Stormwater Management:

MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.

Reviewed 1/4/19 Date

Approved 1/4/19 Date

236807
SM FILE #

Sediment Control Technical Requirements:

Reviewed 1/4/19 Date

Approved 1/4/19 Date

Administrative Requirements:

Reviewed 1/4/19 Date

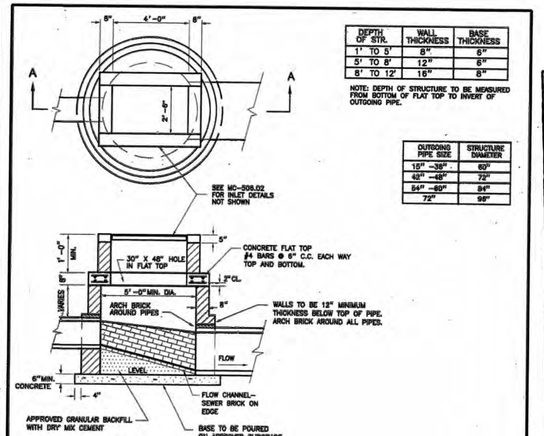
283016
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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

NOTE:
ONLY TYPE J INLETS AND TYPE J INLETS AS A TERMINUS ARE USED AS PART OF PROPOSED SWM FACILITIES. OTHER DRAINAGE STRUCTURES ARE NOT SUBJECT TO MCDPS REVIEW AND APPROVAL.



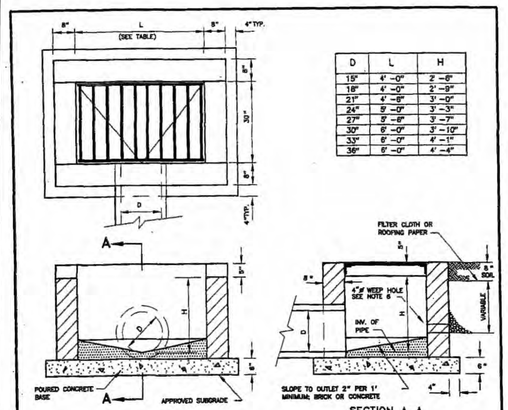
APPROVED JAN 5/96 DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

"J" INLET

STANDARD NO. MC-506.01



APPROVED JAN 5/96 DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

"J" INLET AS A TERMINUS

STANDARD NO. MC-506.02

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

DT-03 STANDARD DETAILS

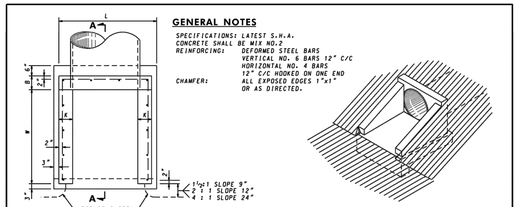
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: NOT TO SCALE DATE: NOVEMBER 2017

Project No. : 501307 SHEET 8 of 123

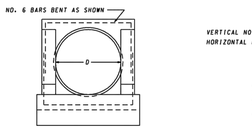
GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS
VERTICAL NO. 4 BARS 12" C/C
HORIZONTAL NO. 4 BARS
12" C/C HOOKED ON ONE END
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

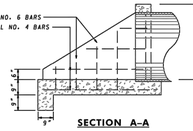


PLAN

ISOMETRIC VIEW



ELEVATION



SECTION A–A

SLOPE 1½:1									SLOPE 2:1								
OPENING		DIMENSIONS						QUANTITIES	OPENING		DIMENSIONS						QUANTITIES
		ENDWALL			WING			1- ENDWALL 2- WINGS			ENDWALL			WING			1- ENDWALL 2- WINGS
PIPE DIA. D	AREA SQ.FT.	L	B	H	W	K		CONC. C.Y. / STEEL LBS.	PIPE DIA. D	AREA SQ.FT.	L	B	H	W	K		CONC. C.Y. / STEEL LBS.
12"	0.79	2'-0"	9"	1'-8"	1'-0"	6"		.31 / 29	12"	0.79	2'-0"	9"	1'-7"	1'-4"	6"		.33 / 34
15"	1.23	2'-3"	9"	2'-1"	1'-5"	6"		.40 / 126	15"	1.23	2'-3"	9"	1'-11"	1'-11"	6"		.44 / 37
18"	1.77	2'-6"	9"	2'-3"	1'-10"	6"		.50 / 41	18"	1.77	2'-6"	9"	2'-2"	2'-5"	6"		.57 / 53
21"	2.40	2'-9"	9"	2'-6"	2'-3"	6"		.65 / 49	21"	2.40	2'-9"	9"	2'-5"	3'-0"	6"		.70 / 62
24"	3.14	3'-6"	12"	2'-11"	2'-9"	9"		1.05 / 53	24"	3.14	3'-6"	12"	2'-9"	3'-8"	9"		1.16 / 71
27"	3.98	3'-9"	12"	3'-3"	3'-2"	9"		1.18 / 70	27"	3.98	3'-9"	12"	3'-1"	4'-2"	9"		1.36 / 81
30"	4.91	4'-0"	12"	3'-6"	3'-7"	9"		1.43 / 73	30"	4.91	4'-0"	12"	3'-4"	4'-9"	9"		1.54 / 91
33"	5.94	4'-3"	12"	3'-9"	4'-0"	9"		1.65 / 93	33"	5.94	4'-3"	12"	3'-6"	5'-3"	9"		1.82 / 104
36"	7.07	4'-6"	12"	4'-0"	4'-4"	9"		1.86 / 104	36"	7.07	4'-6"	12"	3'-10"	5'-10"	9"		2.03 / 116
42"	9.62	5'-0"	12"	4'-7"	5'-1"	12"		2.40 / 126	42"	9.62	5'-0"	12"	4'-5"	6'-11"	12"		3.14 / 141
48"	12.57	6'-0"	12"	5'-1"	6'-0"	12"		3.15 / 155	48"	12.57	6'-0"	12"	4'-11"	8'-0"	12"		3.90 / 174
54"	15.90	6'-6"	12"	5'-7"	6'-9"	12"		3.74 / 187	54"	15.90	6'-6"	12"	5'-5"	9'-2"	12"		4.76 / 240
60"	19.64	7'-0"	12"	6'-1"	7'-7"	12"		4.52 / 218	60"	19.64	7'-0"	12"	5'-11"	10'-2"	12"		5.64 / 306

QUANTITIES FOR ESTIMATING PURPOSES ONLY

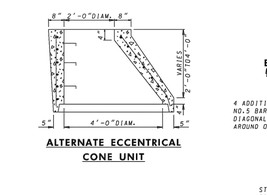
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 5-28-86	APPROVAL 12-12-86
	REVISED 10-1-91	REVISED
	REVISED	REVISED
	REVISED	REVISED

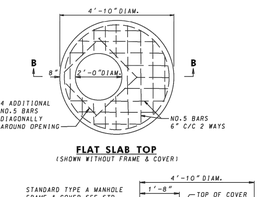
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD TYPE G ENDWALL
METAL OR CONCRETE ROUND PIPE

STANDARD NO. MD 360.01

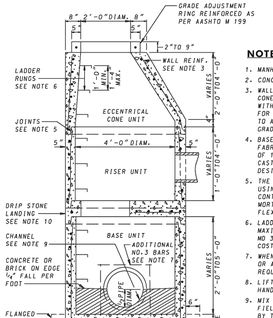


ALTERNATE ECCENTRICAL CONE UNIT



FLAT SLAB TOP
(SHOWN WITHOUT FRAME & COVER)

SECTION B–B



SECTION VIEW
(SHOWN WITHOUT FRAME & COVER)

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.12 IN^2/FT AND MAXIMUM SPACING OF 12" FOR THE 48" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.20 IN^2/FT AND A MAXIMUM SPACING OF 10" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTER, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS NO 383.51 OR NO 383.92 LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO. 57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

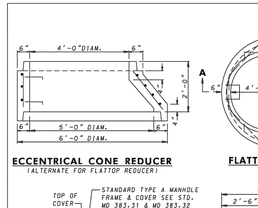
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 2-22-91	APPROVAL 1-2-91
	REVISED 10-7-14	REVISED 9-29-14
	REVISED –	REVISED
	REVISED	REVISED

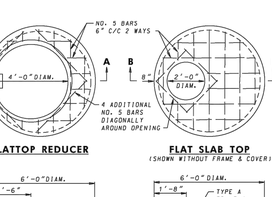
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

48" DIAMETER PRECAST MANHOLE
FOR 12" TO 24" PIPES

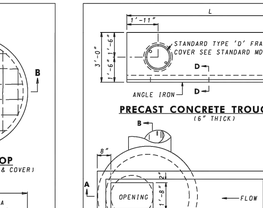
STANDARD NO. MD 384.01



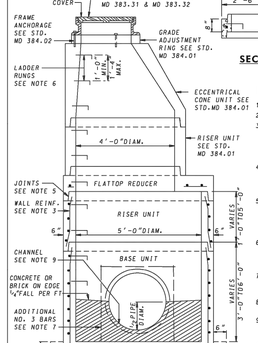
ECCENTRICAL CONE REDUCER
(ALTERNATE FOR FLATTOP REDUCER)



FLATTOP REDUCER



FLAT SLAB TOP
(SHOWN WITHOUT FRAME & COVER)



SECTION VIEW

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO.6 (4500PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.15 IN^2/FT AND MAXIMUM SPACING OF 9" FOR THE 60" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 IN^2/FT AND A MAXIMUM SPACING OF 8" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR. RUBBER O-RING GASKETS MEETING ASTM C 361 AND C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS NO 383.51 OR 383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MUTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO.3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO.2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO.57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

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

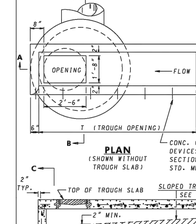
SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 2-22-91	APPROVAL 1-2-91
	REVISED 10-7-14	REVISED 9-29-14
	REVISED –	REVISED
	REVISED	REVISED

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

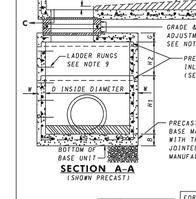
60" DIAMETER PRECAST MANHOLE
FOR 27" TO 36" PIPES

STANDARD NO. MD 384.03

PRECAST CONCRETE TROUGH SLAB
(6" THICK)



PLAN
(SHOWN WITHOUT TROUGH SLAB)



SECTION A–A

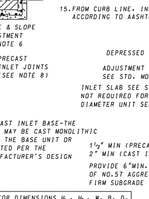
INLET TYPE	T	L
CDD-5	5'-0"	6'-0"
CDD-10	10'-0"	11'-0"
CDD-15	15'-0"	16'-0"
CDD-20	20'-0"	21'-0"

FOR SECTIONS C-C AND D-D SEE STD MD 374.55

FOR DIMENSIONS H, H₁, W, B, D, AND G SEE STD MD 374.62-01

NOTES

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



SECTION B–B
(SHOWN PRECAST)

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

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

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

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

STANDARD NO. MD 374.62

MCDPS APPROVED FOR:

Stormwater Management:

MICRO-BIORETENTION, NON-ROOFTOP

RUNOFF DISCONNECTION.

Reviewed Date

Approved Date

236807
SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

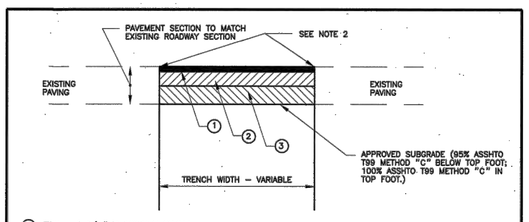
Reviewed Date

283016
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

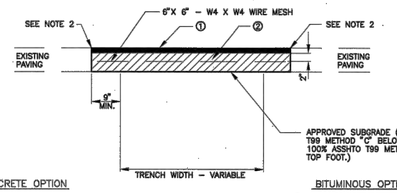
NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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



① TWO – 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3.
③ SUBBASE MATERIAL SEE NOTE 3

ARTERIAL ROADWAY
(OR HIGHER CLASSIFICATION)



CONCRETE OPTION

① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② 6" MINIMUM CONCRETE PATCH

BITUMINOUS OPTION

① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3

PRIMARY ROADWAY
(OR LOWER CLASSIFICATION)

GENERAL NOTES

1. REFER TO M.C.D.O.T. UTILITY PATCH SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION.
3. BASE COURSE AND SUBBASE MATERIAL SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR MATCH EXISTING CONDITION, WHICHEVER IS GREATER.

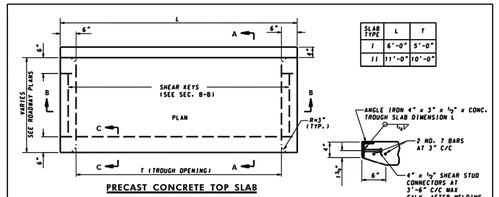
APPROVED JAN 5/96
DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

UTILITY PATCH
IN FLEXIBLE PAVEMENT

STANDARD NO. MC-801.02

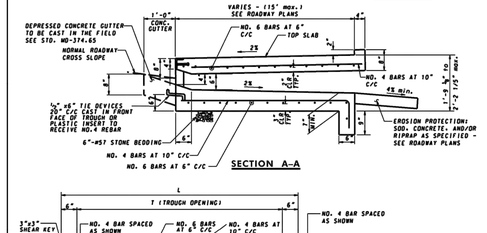


SLAB TYPE	L	T
I	6'-0"	5'-0"
II	11'-0"	10'-0"

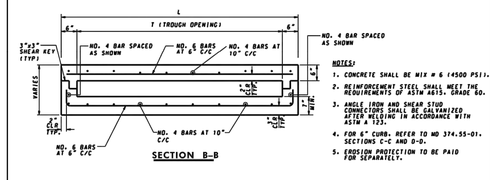
ANGLE IRON 4" x 3" x ½" x CONC. TROUGH SLAB DIMENSION L
2 NO. 7 BARS AT 3" C/C
4" x ½" SHEAR STUD CONNECTORS AT 3'-6" C/C MAX GALV. AFTER WELDING
NOTE: FOR 6" CURB, SEE NOTE 4 BELOW.

PRECAST CONCRETE TOP SLAB

SECTION C–C



SECTION A–A



SECTION B–B

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

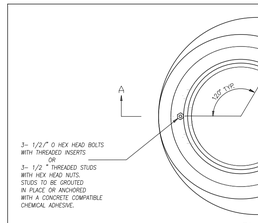
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

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

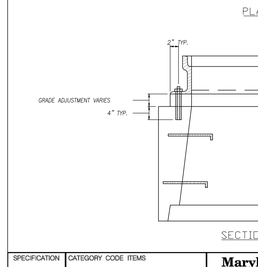
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

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

STANDARD NO. MD 374.68



PLAN



SECTION A–A

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

SHA	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 2-22-91	APPROVAL 1-2-91
	REVISED 10-1-91	REVISED
	REVISED	REVISED
	REVISED	REVISED

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

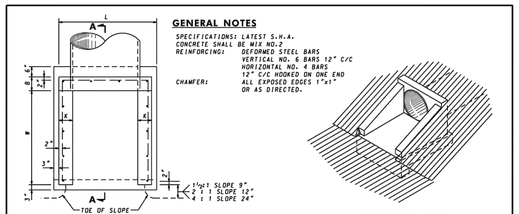
FRAME ANCHORAGE FOR
PRECAST MANHOLES

STANDARD NO. MD 384.02

CIRCULAR BASE AND RISER UNIT DIMENSIONS									INLET SLAB	
PIPE SIZE MIN.TO MAX.	H_1 BASE	H_2 RISER	W	WALL AREA STEEL IN IN^2/FT	MAX SPACING IN.	B	BASE AREA STEEL IN IN^2/FT	MAX SPACING IN.	D	C	Min. Distance, ℄ Top of Curb – Pipe Invert
12"	2" TO 4"	1" TO 4"	4"	.09	12"	6.5"	.15	6"	36"	NOT REQ.	3.84
15" TO 24"	3" TO 5"	1" TO 5"	5"	.12	12"	6.5"	.18	6"	48"	8"	4.11–4.92
27" TO 33"	3" TO 6"	1" TO 6"	6"	.15	12"	6.5"	.27	6"	60"	8"	5.19–5.73
36"	5" TO 6"	1" TO 6"	6"	.15	12"	6.5"	.27	6"	60"	8"	6.00
42"	5" TO 7"	1" TO 7"	7"	.18	11"	7.5"	.30	6"	72"	8"	6.55
48"	6" TO 7"	1" TO 7"	7"	.18	11"	7.5"	.30	6"	72"	8"	7.09
54"	6" TO 8"	1" TO 8"	8"	.21	8"	9.5"	.36	6"	84"	8"	7.63
60"	7" TO 8"	1" TO 8"	8"	.21	8"	9.5"	.36	6"	84"	8"	8.17
66" TO 72"	8" TO 9"	1" TO 8"	9"	.24	7"	9.5"	.40	6"	96"	8"	8.71–9.25
78" TO 84"	9" TO 10"	1" TO 8"	10"	.27	4"	12.5"	.40	6"	120"	8"	9.80–10.34

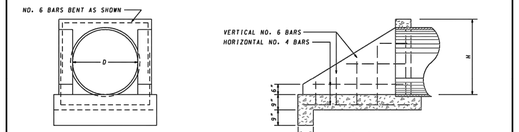
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

| SHA | APPROVA



PLAN

ISOMETRIC VIEW



ELEVATION

SECTION A–A

GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A. CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS
VERTICAL NO. 6 BARS 12" C/C
HORIZONTAL NO. 4 BARS 12" C/C HOOKED ON ONE END
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

SLOPE 1½:1													
OPENING		DIMENSIONS										QUANTITIES	
		ENDWALL					WING					1- ENDWALL 2- WINGS	
PIPE DIA. D	AREA SQ.FT.	L	B	H	W	K	W	K				CONC. C.Y.	STEEL LBS.
12"	0.79	2'-0"	9"	1'-8"	1'-0"	6"	1'-0"	6"				.31	29
15"	1.23	2'-3"	9"	2'-1"	1'-3"	6"	1'-3"	6"				.40	37
18"	1.77	2'-6"	9"	2'-3"	1'-10"	6"	1'-6"	6"				.50	41
21"	2.40	2'-9"	9"	2'-6"	2'-3"	6"	1'-9"	6"				.65	49
24"	3.14	3'-6"	12"	2'-11"	2'-9"	9"	2'-0"	6"				1.05	53
27"	3.98	3'-9"	12"	3'-3"	3'-2"	9"	2'-3"	6"				1.18	70
30"	4.91	4'-0"	12"	3'-6"	3'-7"	9"	2'-6"	6"				1.43	73
33"	5.94	4'-3"	12"	3'-9"	4'-0"	9"	2'-9"	6"				1.65	93
36"	7.07	4'-6"	12"	4'-0"	4'-4"	9"	3'-0"	6"				1.86	104
42"	9.62	5'-0"	12"	4'-6"	5'-0"	12"	3'-6"	6"				2.70	126
48"	12.57	6'-0"	12"	5'-1"	6'-0"	12"	4'-0"	6"				3.15	155
54"	15.90	6'-6"	12"	5'-7"	6'-9"	12"	4'-6"	6"				3.74	187
60"	19.64	7'-0"	12"	6'-1"	7'-7"	12"	5'-0"	6"				4.52	218

SLOPE 2:1													
OPENING		DIMENSIONS										QUANTITIES	
		ENDWALL					WING					1- ENDWALL 2- WINGS	
PIPE DIA. D	AREA SQ.FT.	L	B	H	W	K	W	K				CONC. C.Y.	STEEL LBS.
12"	0.79	2'-0"	9"	1'-7"	1'-4"	6"	1'-0"	6"				.33	34
15"	1.23	2'-3"	9"	1'-11"	1'-11"	6"	1'-3"	6"				.44	37
18"	1.77	2'-6"	9"	2'-2"	2'-5"	6"	1'-6"	6"				.57	53
21"	2.40	2'-9"	9"	2'-5"	3'-0"	6"	1'-9"	6"				.70	62
24"	3.14	3'-6"	12"	2'-9"	3'-8"	9"	2'-0"	6"				1.16	71
27"	3.98	3'-9"	12"	3'-1"	4'-2"	9"	2'-3"	6"				1.36	81
30"	4.91	4'-0"	12"	3'-4"	4'-9"	9"	2'-6"	6"				1.54	91
33"	5.94	4'-3"	12"	3'-6"	5'-3"	9"	2'-9"	6"				1.82	104
36"	7.07	4'-6"	12"	3'-10"	5'-10"	9"	3'-0"	6"				2.03	116
42"	9.62	5'-0"	12"	4'-5"	6'-11"	12"	3'-6"	6"				3.14	141
48"	12.57	6'-0"	12"	4'-11"	8'-0"	12"	4'-0"	6"				3.90	174
54"	15.90	6'-6"	12"	5'-5"	9'-1"	12"	4'-6"	6"				4.76	240
60"	19.64	7'-0"	12"	5'-11"	10'-2"	12"	5'-0"	6"				5.64	306

QUANTITIES FOR ESTIMATING PURPOSES ONLY

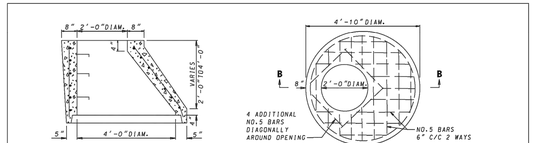
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	5-28-86	APPROVAL 12-12-86
REVISED	10-1-01	REVISED
REVISED		REVISED
REVISED		REVISED

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

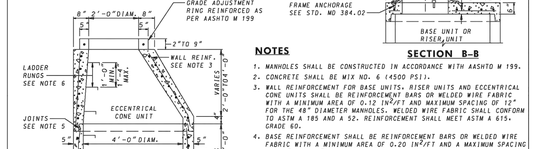
STANDARD TYPE G ENDWALL
METAL OR CONCRETE ROUND PIPE

STANDARD NO. MD 360.01

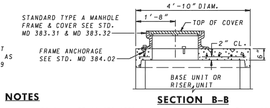


ALTERNATE ECCENTRICAL CONE UNIT

FLAT SLAB TOP
(SHOWN WITHOUT FRAME & COVER)



SECTION VIEW
(SHOWN WITHOUT FRAME & COVER)



SECTION B–B

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.12 IN²/FT AND MAXIMUM SPACING OF 12" FOR THE 48" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.20 IN²/FT AND A MAXIMUM SPACING OF 10" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTER, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS NO 383.51 OR NO 383.92 LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO. 57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

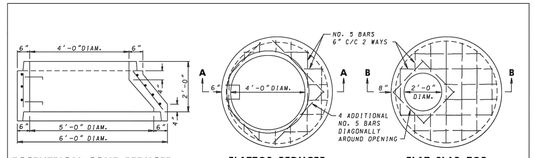
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-22-91	APPROVAL 1-2-91
REVISED	10-7-14	REVISED 9-29-14
REVISED	–	REVISED
REVISED		REVISED

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

48" DIAMETER PRECAST MANHOLE
FOR 12" TO 24" PIPES

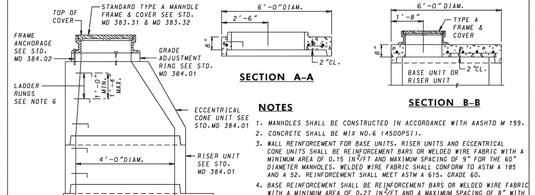
STANDARD NO. MD 384.01



ECCENTRICAL CONE REDUCER
(ALTERNATE FOR FLATTOP REDUCER)

FLATTOP REDUCER

FLAT SLAB TOP
(SHOWN WITHOUT FRAME & COVER)



SECTION VIEW

ECCENTRICAL CONE REDUCER
(ALTERNATE FOR FLATTOP REDUCER)

FLATTOP REDUCER

SECTION B–B

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO.6 (4500PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.15 IN²/FT AND MAXIMUM SPACING OF 9" FOR THE 60" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 IN²/FT AND A MAXIMUM SPACING OF 8" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR. RUBBER O-RING GASKETS MEETING ASTM C 361 AND C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS NO 383.51 OR 383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MUTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO.3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO.2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. NO 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO.57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING. ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

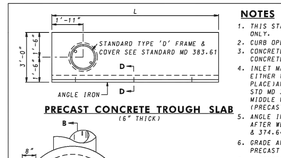
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-22-91	APPROVAL 1-2-91
REVISED	10-7-14	REVISED 9-29-14
REVISED	–	REVISED
REVISED		REVISED

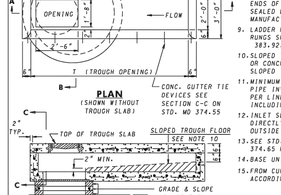
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

60" DIAMETER PRECAST MANHOLE
FOR 27" TO 36" PIPES

STANDARD NO. MD 384.03



PRECAST CONCRETE TROUGH SLAB
(6" THICK)



PLAN
(SHOWN WITHOUT TROUGH SLAB)

SECTION A–A

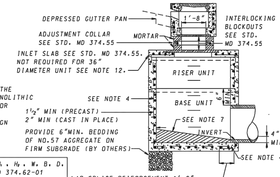
INLET TYPE	T	L
COG-5	5'-0"	6'-0"
COG-10	10'-0"	11'-0"
COG-15	15'-0"	16'-0"
COG-20	20'-0"	21'-0"

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

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

NOTES

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



SECTION B–B
(SHOWN PRECAST)

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

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	10-7-14	APPROVAL 7-24-15
REVISED	8-3-15	REVISED 9-29-14
REVISED	–	REVISED
REVISED		REVISED

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

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

STANDARD NO. MD 374.62

MCDPS
APPROVED FOR:

Stormwater Management:

MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.

Reviewed Date

Approved Date

236807
SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

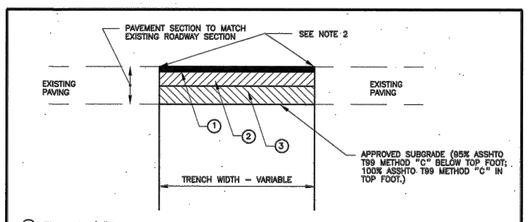
Reviewed Date

283016
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

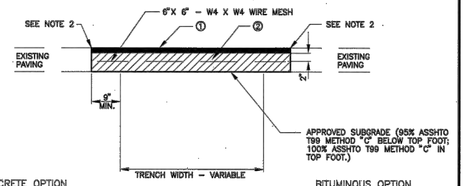
NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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



① TWO – 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3.
③ SUBBASE MATERIAL SEE NOTE 3

ARTERIAL ROADWAY
(OR HIGHER CLASSIFICATION)



CONCRETE OPTION

① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② 6" MINIMUM CONCRETE PATCH

BITUMINOUS OPTION

① 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
② BITUMINOUS CONCRETE BASE COURSE SEE NOTE 3

PRIMARY ROADWAY
(OR LOWER CLASSIFICATION)

GENERAL NOTES

1. REFER TO M.C.D.O.T. UTILITY PATCH SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT MUST BE SAW CUT FULL DEPTH PRIOR TO EXCAVATION.
3. BASE COURSE AND SUBBASE MATERIAL SHALL CONFORM TO APPROPRIATE ROADWAY CLASSIFICATION DESIGN STANDARD OR MATCH EXISTING CONDITION, WHICHEVER IS GREATER.

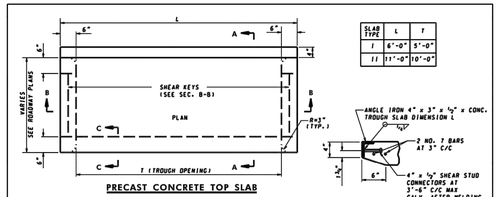
APPROVED JAN 5/96
DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

UTILITY PATCH
IN FLEXIBLE PAVEMENT

STANDARD NO. MC-801.02

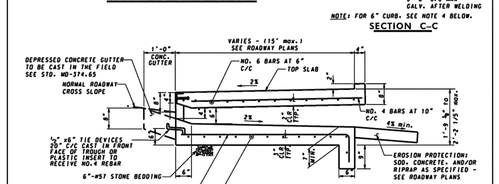


PRECAST CONCRETE TOP SLAB

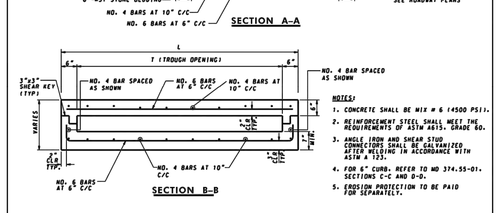
SLAB TYPE	L	T
I	6'-0"	5'-0"
II	11'-0"	10'-0"

NOTE: FOR 6" CURB, SEE NOTE 4 BELOW.

SECTION C–C



SECTION A–A



SECTION B–B

NOTES:

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

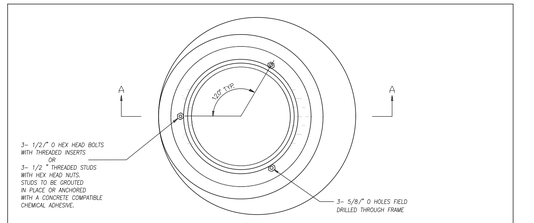
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	13-19-01	APPROVAL 7-15-02
REVISED	1-9-08	REVISED 11-26-07
REVISED		REVISED
REVISED		REVISED

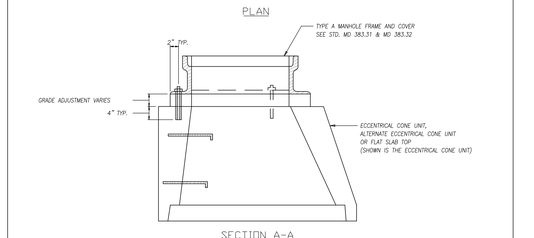
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

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

STANDARD NO. MD 374.68



PLAN



SECTION A–A

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

SHA State Highway Administration	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-22-91	APPROVAL 1-2-91
REVISED	10-1-01	REVISED
REVISED		REVISED
REVISED		REVISED

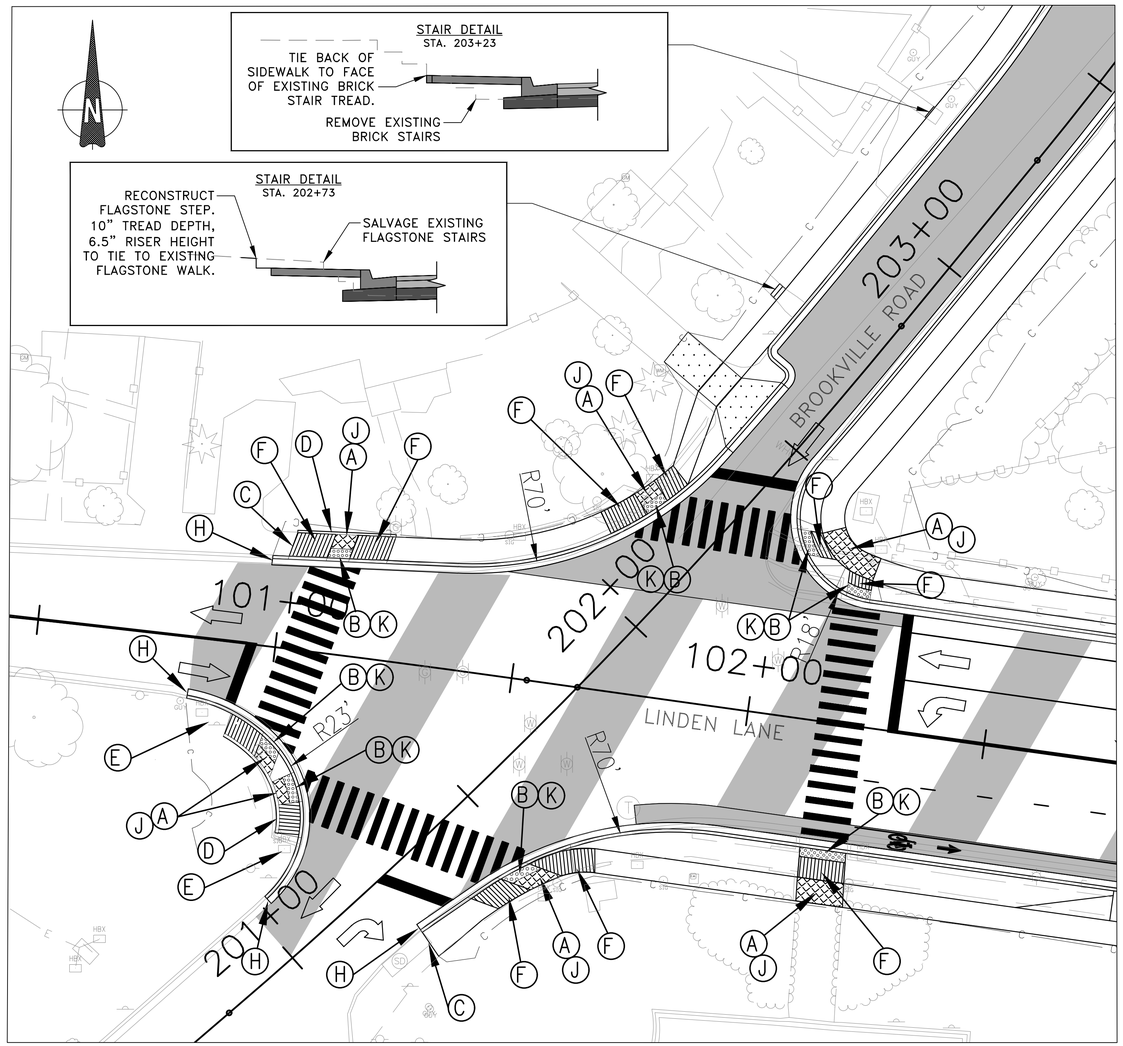
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

FRAME ANCHORAGE FOR
PRECAST MANHOLES

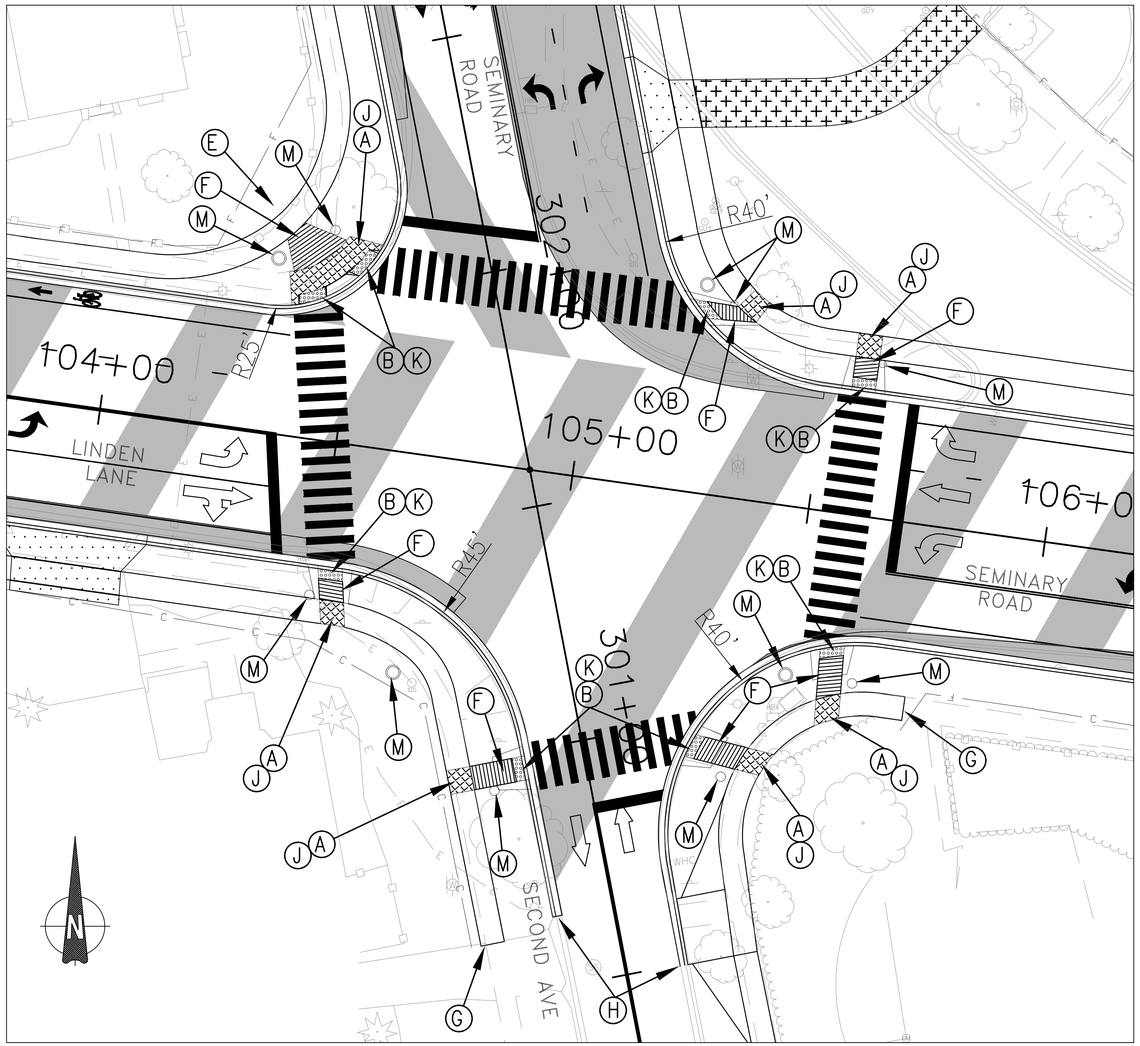
STANDARD NO. MD 384.02

CIRCULAR BASE AND RISER UNIT DIMENSIONS									INLET SCAB	
PIPE SIZE MIN TO MAX	H_1 BASE	H_2 RISER	W	WALL AREA STEEL IN / FT	MAX SPACING IN.	B	BASE AREA STEEL IN / FT	MAX SPACING IN.	D	C	Min. Distance, ℄ Top of Curb – Pipe Invert
12"	2" TO 4"	1" TO 4"	4"	.09	12"	6.5"	.15	6"	36"	NO SCAB	3.84
15" TO 24"	3" TO 5"	1" TO 5"	5"

LINDEN LN AND BROOKVILLE RD



LINDEN LN AND SEMINARY RD / SECOND AVE



CONSTRUCTION DETAILS

- (A) 5'x5' MIN. LANDING AREA, MAX. OF 2% SLOPE IN ALL DIRECTIONS
- (B) DETECTABLE WARNING SURFACE (DWS), TO BE INSTALLED PER MDSHA STANDARD NO. MD 655.40
- (C) TIE IN SIDEWALK SECTION WITH EXISTING SIDEWALK AT JOINT
- (D) INSTALL STANDARD TYPE "A" CURB (BACK CURB) 5' BEHIND BACK OF ROADWAY CURB
- (E) CONTRACTOR TO PERFORM MINIMAL GRADING BEHIND SIDEWALK, TIE IN SLOPE SHALL BE 3:1 OR LESS.
- (F) RAMP TRANSITION SECTION: RUNNING SLOPE SHALL BE NO GREATER THAN 12:1 AND MAX. CROSS SLOPE OF 2%. RAMP. IF SHOWN ON PLAN, FLARE SHALL BE INSTALLED PER STANDARD NO. MC-112.01
- (G) TIE IN TO EXISTING SIDEWALK
- (H) TIE NEW CURB AT EXISTING CURB AT JOINT
- (I) TIE IN SIDEWALK SECTION WITH EXISTING STORM DRAIN INLET
- (J) INSTALL SIDEWALK RAMP PER STANDARD NO. MC-112.01
- (K) CURB TO BE FULLY DEPRESSED FOR FULL WIDTH OF ADJOINING DWS LOCATIONS
- (L) ASPHALT SIDEWALK, REFER TO PAVEMENT DETAIL
- (M) PROPOSED CONCRETE FOUNDATION FOR PEDESTRIAN/SIGNAL MAST ARM POLE, REFER TO TRAFFIC SIGNAL PLANS

LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" GRIND & RESURFACE
- ADA RAMP – LANDING AREA
- ADA RAMP – TAPER SECTION
- ASPHALT SIDEWALK
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY

GENERAL CURB RAMP NOTES:

1. SIDEWALK AND TOP OF RAMP CROSS SLOPE SHALL BE 50:1 MAX, BOTTOM OF RAMP SHALL BE TRANSITIONED TO MEET ROADWAY GRADE.
2. CONTRACTOR SHALL TIE THE PROPOSED CURB RAMP INTO EXISTING SIDEWALK BY USING A TRANSITION LENGTH OF 2'(MIN.) FOR EACH 1% DIFFERENCE IN CROSS SLOPE BETWEEN THE RAMP AND THE SIDEWALK. THE TRANSITION LENGTH SHALL BE ROUNDED UP TO THE NEAREST MULTIPLE OF 5' TO ENSURE THAT THE TRANSITION IS WITHIN THE NORMAL 5' SPACING OF JOINTS FOR SIDEWALKS.
3. THE CONTRACTOR SHALL PROVIDE APPROPRIATE PEDESTRIAN DETOUR SIGNS TO REDIRECT PEDESTRIANS DURING THE CONSTRUCTION OF EACH RAMP. SEE MAINTENANCE OF TRAFFIC PLANS FOR MORE INFORMATION.
4. CONTRACTOR SHALL CONSTRUCT RESIDENTIAL DRIVEWAYS IN ACCORDANCE WITH MONTGOMERY COUNTY STANDARD MC-301.01.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

DT-05 STANDARD DETAILS
INTERSECTION DETAIL SHEET
SEMINARY ROAD
INTERSECTION IMPROVEMENTS

SCALE: 1"=15' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 10 of 123

GENERAL CURB RAMP NOTES:

1. SIDEWALK AND TOP OF RAMP CROSS SLOPE SHALL BE 50:1 MAX, BOTTOM OF RAMP SHALL BE TRANSITIONED TO MEET ROADWAY GRADE.
2. CONTRACTOR SHALL TIE THE PROPOSED CURB RAMP INTO EXISTING SIDEWALK BY USING A TRANSITION LENGTH OF 2'(MIN.) FOR EACH 1% DIFFERENCE IN CROSS SLOPE BETWEEN THE RAMP AND THE SIDEWALK. THE TRANSITION LENGTH SHALL BE ROUNDED UP TO THE NEAREST MULTIPLE OF 5' TO ENSURE THAT THE TRANSITION IS WITHIN THE NORMAL 5' SPACING OF JOINTS FOR SIDEWALKS.
3. THE CONTRACTOR SHALL PROVIDE APPROPRIATE PEDESTRIAN DETOUR SIGNS TO REDIRECT PEDESTRIANS DURING THE CONSTRUCTION OF EACH RAMP. SEE MAINTENANCE OF TRAFFIC PLANS FOR MORE INFORMATION.
4. CONTRACTOR SHALL CONSTRUCT RESIDENTIAL DRIVEWAYS IN ACCORDANCE WITH MONTGOMERY COUNTY STANDARD MC-301.01.

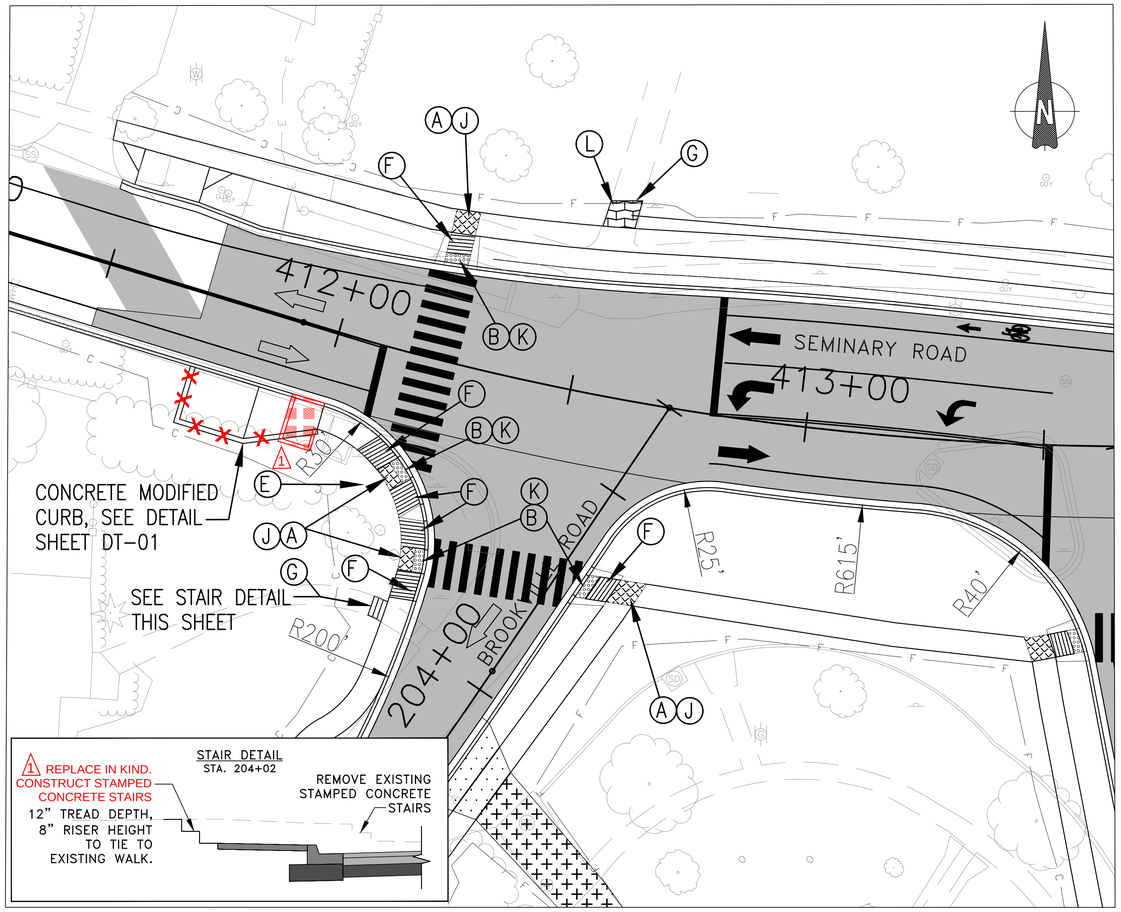
CONSTRUCTION DETAILS

- (A) 5'x5' MIN. LANDING AREA, MAX. OF 2% SLOPE IN ALL DIRECTIONS
- (B) DETECTABLE WARNING SURFACE (DWS), TO BE INSTALLED PER MDSHA STANDARD NO. MD 655.40
- (C) TIE IN SIDEWALK SECTION WITH EXISTING SIDEWALK AT JOINT
- (D) INSTALL STANDARD TYPE "A" CURB (BACK CURB) 5' BEHIND BACK OF ROADWAY CURB
- (E) CONTRACTOR TO PERFORM MINIMAL GRADING BEHIND SIDEWALK, TIE IN SLOPE SHALL BE 3:1 OR LESS.
- (F) RAMP TRANSITION SECTION: RUNNING SLOPE SHALL BE NO GREATER THAN 12:1 AND MAX. CROSS SLOPE OF 2%. RAMP. IF SHOWN ON PLAN, FLARE SHALL BE INSTALLED PER STANDARD NO. MC-112.01
- (G) TIE IN TO EXISTING SIDEWALK
- (H) TIE NEW CURB AT EXISTING CURB AT JOINT
- (I) TIE IN SIDEWALK SECTION WITH EXISTING STORM DRAIN INLET
- (J) INSTALL SIDEWALK RAMP PER STANDARD NO. MC-112.01
- (K) CURB TO BE FULLY DEPRESSED FOR FULL WIDTH OF ADJOINING DWS LOCATIONS
- (L) ASPHALT SIDEWALK, REFER TO PAVEMENT DETAIL
- (M) PROPOSED CONCRETE FOUNDATION FOR PEDESTRIAN/SIGNAL MAST ARM POLE, REFER TO TRAFFIC SIGNAL PLANS

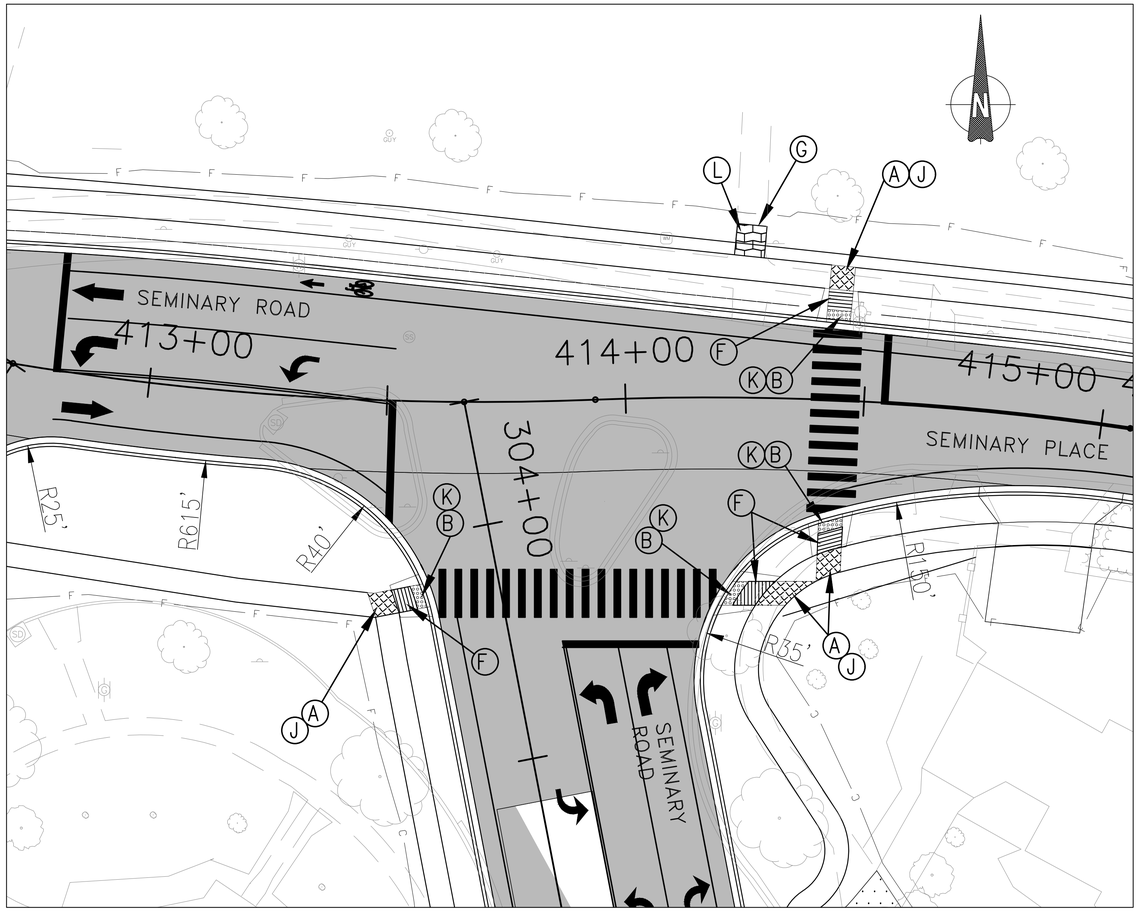
LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" GRIND & RESURFACE
- ADA RAMP – LANDING AREA
- ADA RAMP – TAPER SECTION
- ASPHALT SIDEWALK
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY

SEMINARY RD AND BROOKVILLE RD



SEMINARY RD AND SEMINARY PL



NO.	REVISION	DATE	BY
1	Stair Notes, Resize Bus Stop	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

Designed by: MTF Drawn by: SAH Checked by: JJR

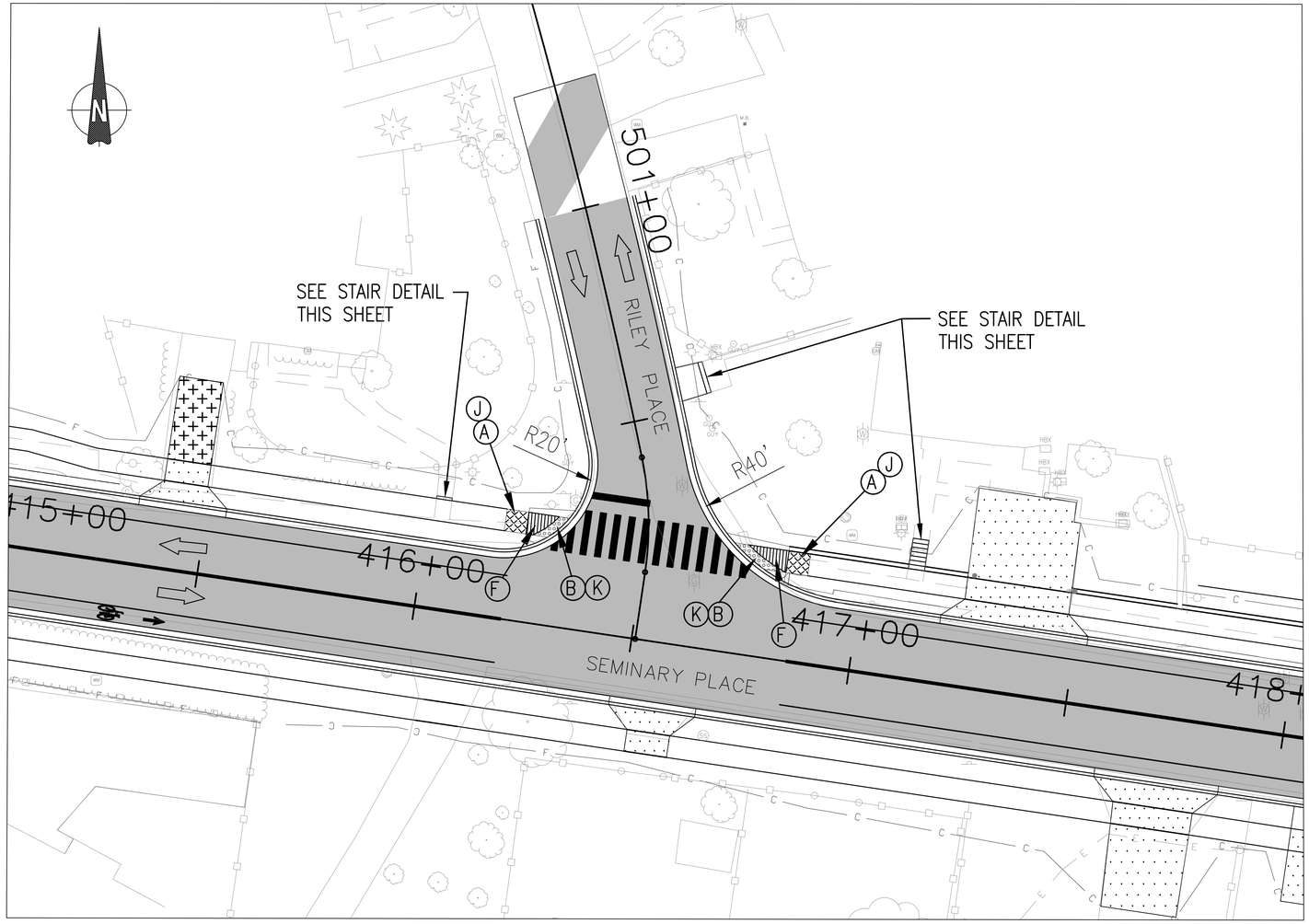
DT-06 STANDARD DETAILS
INTERSECTION DETAIL SHEET

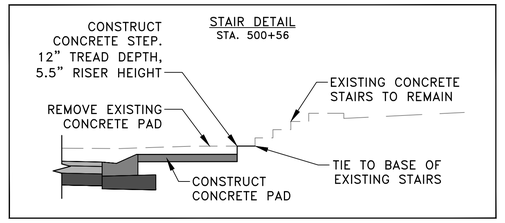
SEMINARY ROAD
INTERSECTION IMPROVEMENTS

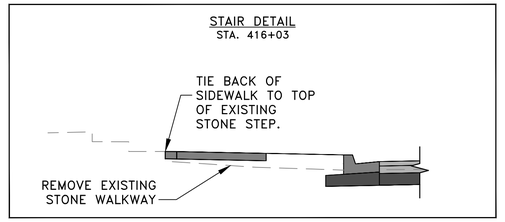
SCALE: 1"=15' DATE: NOVEMBER 2017

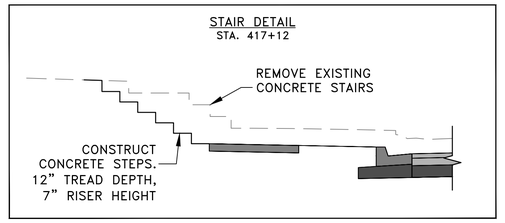
Project No. : 501307 SHEET 11 of 123

SEMINARY PL AND RILEY PL









LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" GRIND & RESURFACE
- ADA RAMP – LANDING AREA
- ADA RAMP – TAPER SECTION
- ASPHALT SIDEWALK
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY

GENERAL CURB RAMP NOTES:

1. SIDEWALK AND TOP OF RAMP CROSS SLOPE SHALL BE 50:1 MAX, BOTTOM OF RAMP SHALL BE TRANSITIONED TO MEET ROADWAY GRADE.
2. CONTRACTOR SHALL TIE THE PROPOSED CURB RAMP INTO EXISTING SIDEWALK BY USING A TRANSITION LENGTH OF 2'(MIN.) FOR EACH 1% DIFFERENCE IN CROSS SLOPE BETWEEN THE RAMP AND THE SIDEWALK. THE TRANSITION LENGTH SHALL BE ROUNDED UP TO THE NEAREST MULTIPLE OF 5' TO ENSURE THAT THE TRANSITION IS WITHIN THE NORMAL 5' SPACING OF JOINTS FOR SIDEWALKS.
3. THE CONTRACTOR SHALL PROVIDE APPROPRIATE PEDESTRIAN DETOUR SIGNS TO REDIRECT PEDESTRIANS DURING THE CONSTRUCTION OF EACH RAMP. SEE MAINTENANCE OF TRAFFIC PLANS FOR MORE INFORMATION.
4. CONTRACTOR SHALL CONSTRUCT RESIDENTIAL DRIVEWAYS IN ACCORDANCE WITH MONTGOMERY COUNTY STANDARD MC-301.01.

CONSTRUCTION DETAILS

- (A) 5'x5' MIN. LANDING AREA, MAX. OF 2% SLOPE IN ALL DIRECTIONS
- (B) DETECTABLE WARNING SURFACE (DWS), TO BE INSTALLED PER MDSHA STANDARD NO. MD 655.40
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- (J) INSTALL SIDEWALK RAMP PER STANDARD NO. MC-112.01
- (K) CURB TO BE FULLY DEPRESSED FOR FULL WIDTH OF ADJOINING DWS LOCATIONS
- (L) ASPHALT SIDEWALK, REFER TO PAVEMENT DETAIL
- (M) PROPOSED CONCRETE FOUNDATION FOR PEDESTRIAN/SIGNAL MAST ARM POLE, REFER TO TRAFFIC SIGNAL PLANS

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

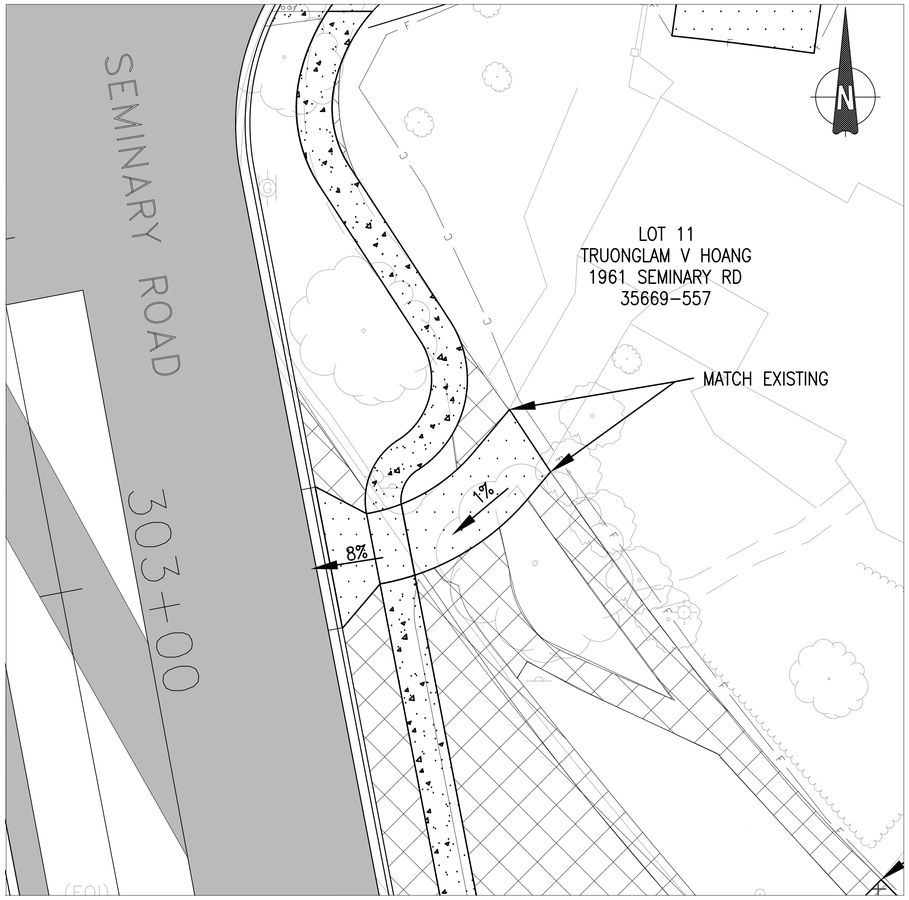
Designed by: MTF Drawn by: SAH Checked by: JJR

DT-07 STANDARD DETAILS
INTERSECTION DETAIL SHEET

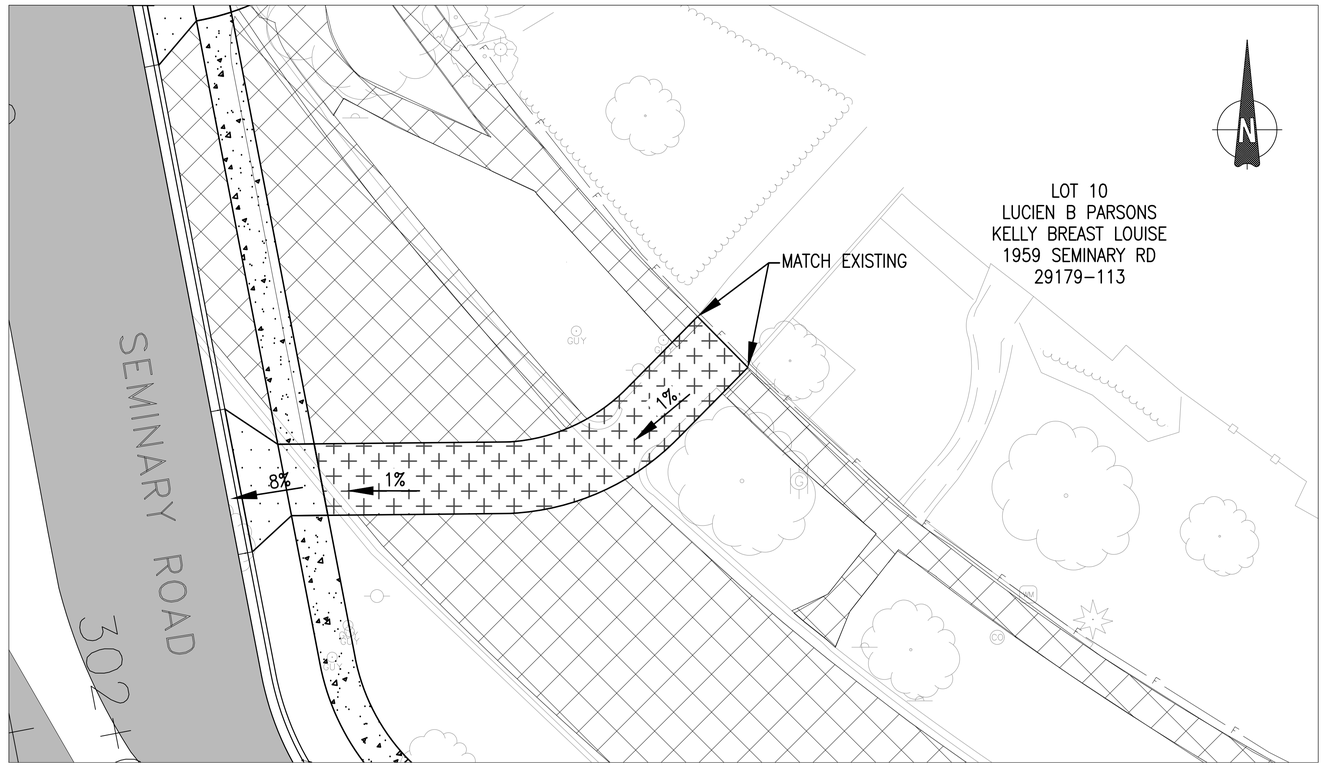
SEMINARY ROAD
INTERSECTION IMPROVEMENTS

SCALE: 1"=15' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 12 of 123



DRIVEWAY AT STATION 303+00 RT



DRIVEWAY AT STATION 302+30 RT

GENERAL DRIVEWAY NOTES:

1.CONTRACTOR SHALL CONSTRUCT RESIDENTIAL DRIVEWAYS IN ACCORDANCE WITH MONTGOMERY COUNTY STANDARD MC-301.01.

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" GRIND & RESURFACE
- REMOVE EXISTING PAVEMENT
- 7" CONCRETE DRIVEWAY
- 7" ASPHALT DRIVEWAY
- 5" CONCRETE SIDEWALK

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Design Section

APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

Designed by: MTF Drawn by: SAH Checked by: JJR

DT-08 STANDARD DETAILS
DRIVEWAYS

SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

Project No. : 501307 SHEET 13 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

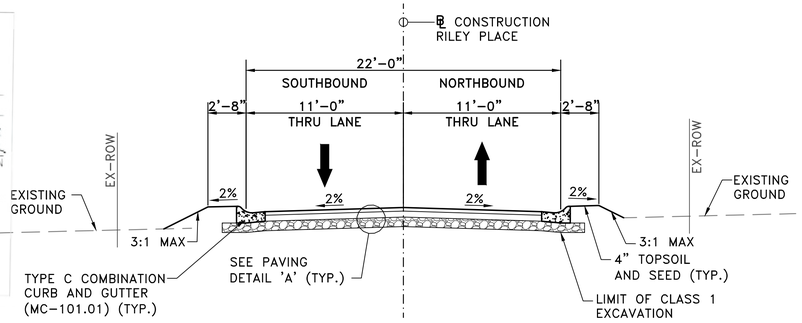
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

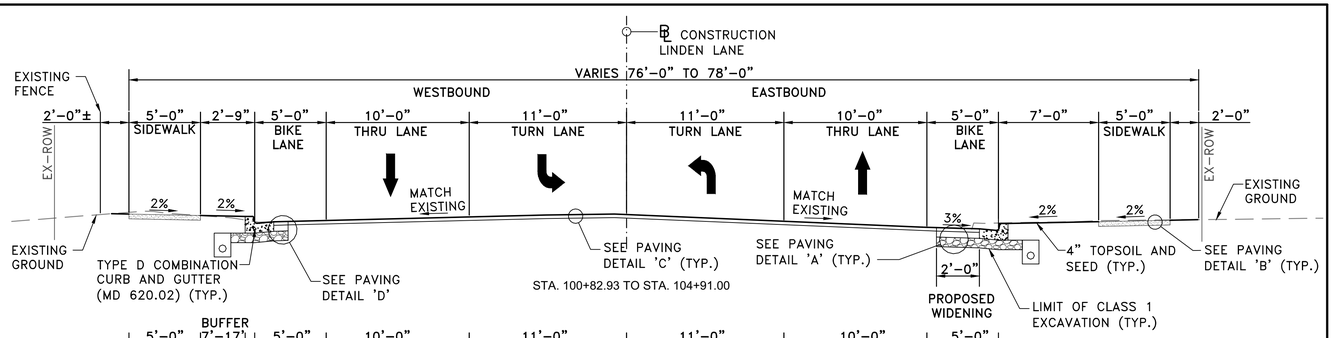
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574



RILEY PLACE

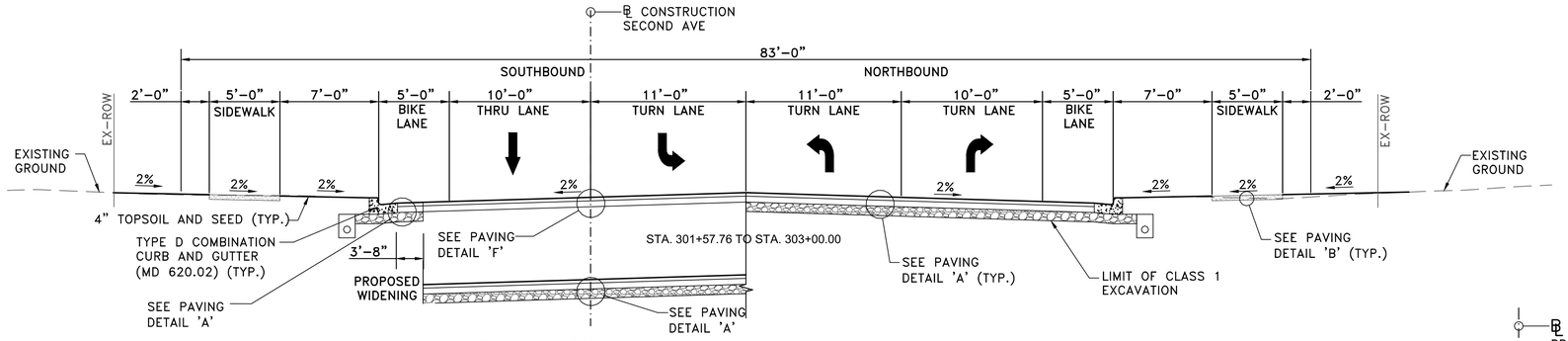
STA. 500+15.00 TO STA. 501+25.00



LINDEN LANE/SEMINARY ROAD

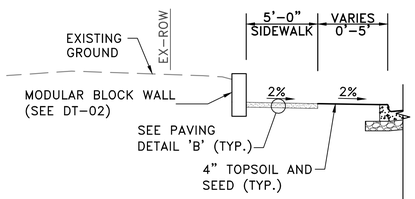
STA. 100+82.93 TO STA. 107+71.58

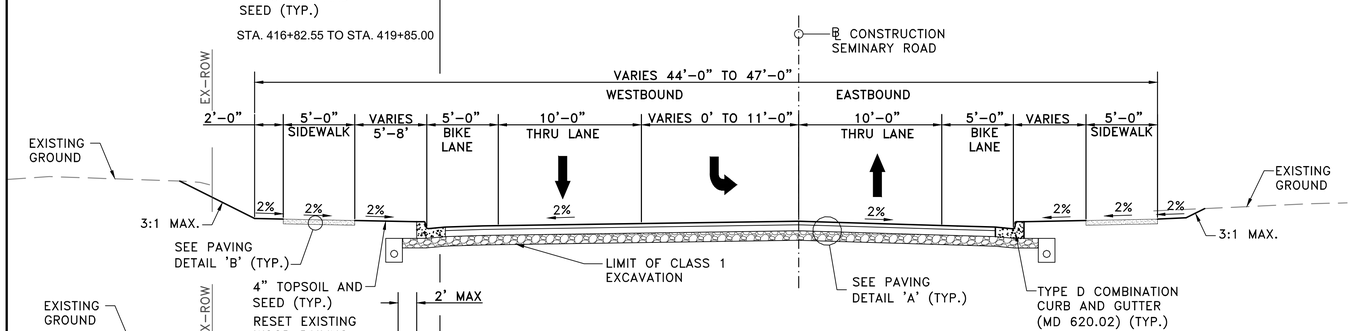
NOTE:
1. FOR CUT AND FILL SLOPES 3'-0" OR GREATER, SLOPE ROUNDING AT TOP OR TOE SHALL BE CONSTRUCTED PER MCDOT STANDARD MC-811.01 "METHODS OF GRADING SIDE SLOPES."



SEMINARY ROAD

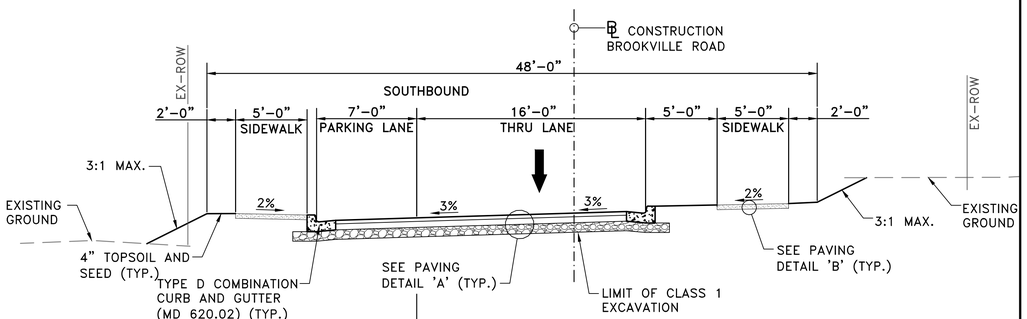
STA. 301+57.76 TO STA. 304+10.85





SEMINARY ROAD / PLACE

STA. 410+97.58 TO STA. 421+00.00



BROOKVILLE ROAD

STA. 202+00.00 TO STA. 204+54.75

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

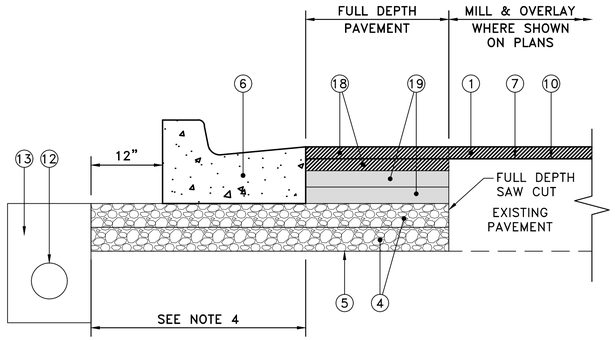
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

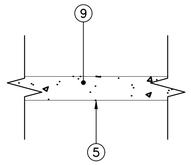
TS-01 TYPICAL SECTIONS
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: NOT TO SCALE DATE: FEBRUARY 2018

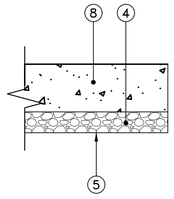
Project No.: 501307 SHEET 14 of 123



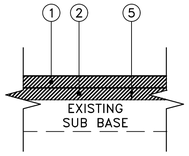
PAVING DETAIL 'A'
FULL DEPTH SECTION
N.T.S.



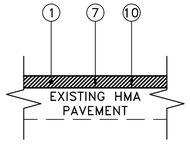
PAVEMENT DETAIL 'B'
CONCRETE SIDEWALK
N.T.S.



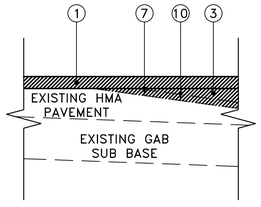
PAVEMENT DETAIL 'E'
CONCRETE DRIVEWAY
N.T.S.



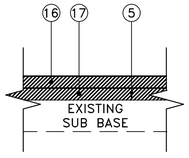
PAVEMENT DETAIL 'G'
ASPHALT SIDEWALK
N.T.S.



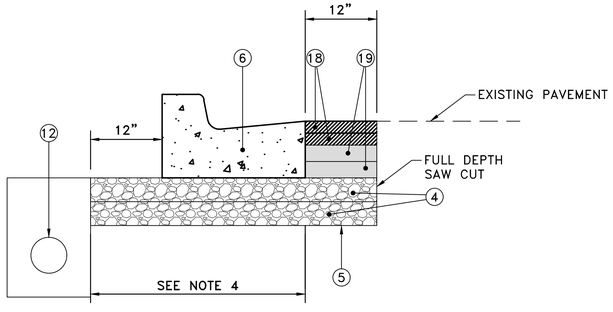
PAVEMENT DETAIL 'C'
MILLING AND RESURFACE
N.T.S.

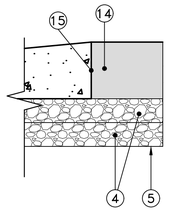


PAVEMENT DETAIL 'F'
WEDGE AND LEVEL
N.T.S.



PAVEMENT DETAIL 'H'
ASPHALT DRIVEWAY
N.T.S.





* PAVING DETAIL 'D'
CURB REPLACEMENT
N.T.S.

*SEE NOTE 7

PAVEMENT LEGEND

1. 2" HOT MIX ASPHALT SUPERPAVE 9.5mm, PG 64S–22, LEVEL 2, FOR SURFACE
2. 2" HOT MIX ASPHALT SUPERPAVE 19mm, PG 64S–22, LEVEL 2 FOR BASE
3. VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE FOR WEDGE/LEVEL, PG 64S–22, LEVEL 2, (1.0" MINIMUM, 2.0" MAXIMUM LIFT)
4. 4" BASE COURSE USING GRADED AGGREGATE BASE
5. LIMIT OF CLASS I OR CLASS 2 EXCAVATION
6. MODIFIED COMBINATION CONCRETE CURB AND GUTTER, TYPE 'D' OR TYPE "C" (REFER TO STANDARD MD–620.02 OR MC–101.01 FOR GENERAL NOTES AND DIMENSIONS)
7. TOP OF EXISTING PAVEMENT AFTER 2" MILLING
8. 7" JOINTED PORTLAND CEMENT CONCRETE MIX NO. 9 (REFER TO STANDARD NO. MC–301.01 FOR GENERAL NOTES)
9. 4" JOINTED PORTLAND CEMENT CONCRETE MIX NO. 3
10. TACK COAT
11. 2½" HOT MIX ASPHALT SUPERPAVE 9.5mm, PG 64S–22, FOR SURFACE
12. 6" UNDERDRAIN (REFER TO MD STANDARD NO. MD–387.11 FOR GENERAL NOTES AND DIMENSIONS.) (SEE NOTE 5 & 6)
13. NO. 57 GRAVEL FOR SWM FACILITY
14. 8" RIGID PAVEMENT, PORTLAND CEMENT CONCRETE MIX NO. 9
15. 3 PLY ROOFING PAPER
16. 3" HOT MIX ASPHALT SUPERPAVE 9.5MM, PG 64S–22, LEVEL 2, FOR SURFACE
17. 3" HOT MIX ASPHALT SUPERPAVE 19MM, PG 64S–22, LEVEL 2, FOR BASE
18. 1.5" HOT MIX ASPHALT SUPERPAVE 9.5mm, PG 64S–22, LEVEL 2, FOR SURFACE
19. 2.5" HOT MIX ASPHALT SUPERPAVE 19mm, PG 64S–22, LEVEL 2 FOR BASE

NOTES:
1. SEE PLAN SHEET FOR WEDGE AND LEVEL LOCATIONS.
2. REFER TO STANDARDS MC–301.01 AND MC–301.02 FOR RESIDENTAL AND COMMERCIAL DRIVEWAY GENERAL NOTES AND DIMENSIONS.
3. SEE PLAN SHEET FOR GRIND AND RESURFACE AREAS.
4. CLASS 2 EXCAVATION AND 4 INCH BASE COURSE USING GRADED AGGREGATED MATERIAL TO BE PLACED IN THIS AREA SHALL BE INCIDENTAL TO AND INCLUDED IN THE CURB AND GUTTER.
5. UNDERDRAIN SHALL BE WRAPPED IN CLASS SD TYPE II GEOTEXTILE FABRIC.
6. UNDERDRAIN SHALL NOT BE IMPLEMENTED UNIVERSALLY. SEE PLAN SHEET FOR LOCATIONS.
7. ROADWAY PAVEMENT MATERIAL CAN BE EITHER RIGID OR FLEXIBLE AT CONTRACTORS OPTION. FOR RIGID PAVEMENT, TRAVERSE JOINTS FOR BASE WIDENING SHOULD MATCH THOSE PLACED FOR CURBS. NO STEEL REINFORCEMENT OR DOWEL BARS AND TIE BARS SHALL BE USED IN THE CONCRETE.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

Designed by: MTF Drawn by: SAH Checked by: JJR

TS–02 TYPICAL SECTIONS
SEMINARY ROAD
INTERSECTION IMPROVEMENTS

SCALE: NOT TO SCALE DATE: NOVEMBER 2017

Project No. : 501307 SHEET 15 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

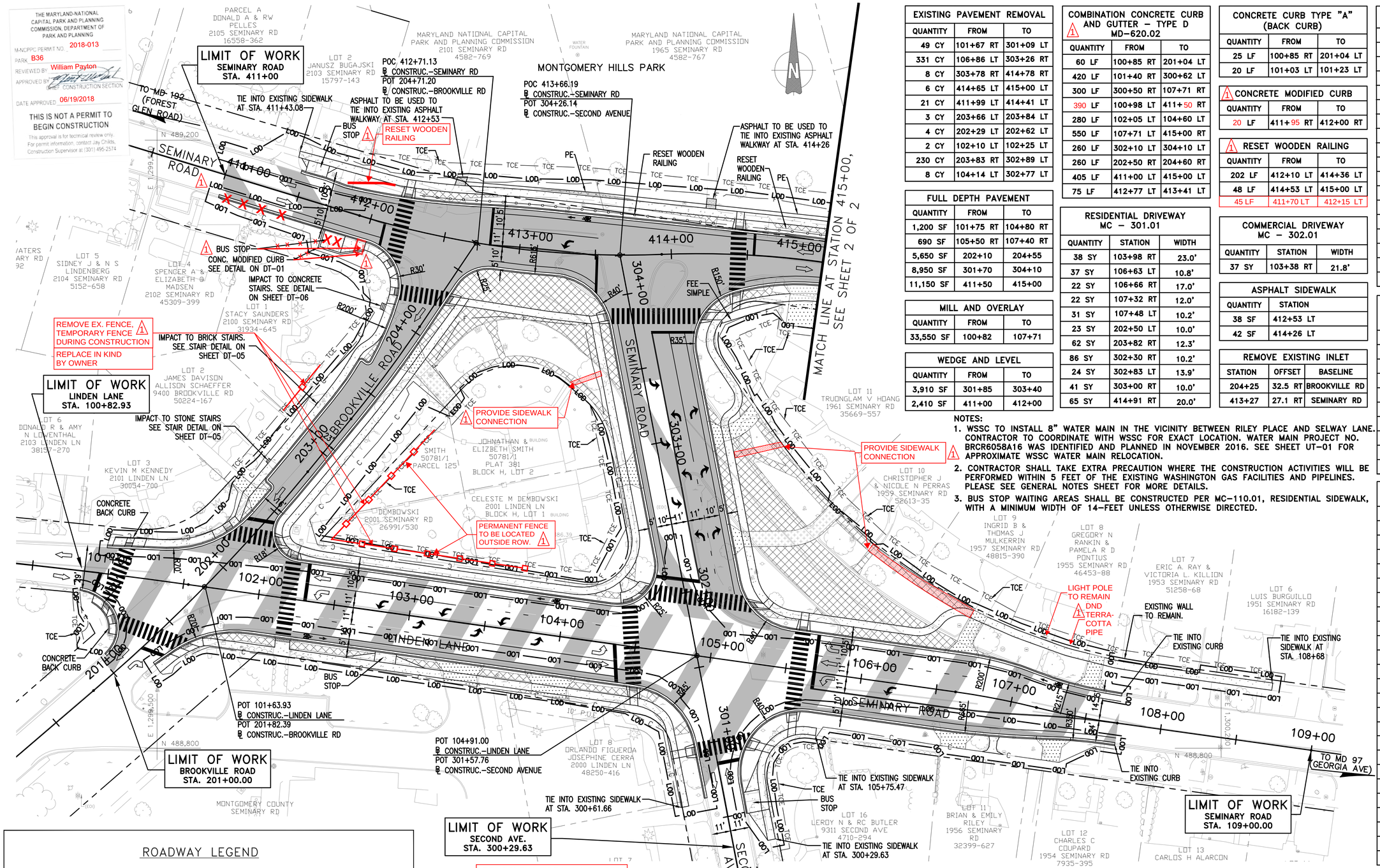
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

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ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" ~~GRIND & RESURFACE~~ MILL AND OVERLAY (1)
- REMOVE EXISTING PAVEMENT
- PROPOSED TRAFFIC FLOW
- 7" CONCRETE DRIVEWAY
- 7" ASPHALT DRIVEWAY
- 5" CONCRETE SIDEWALK
- 5" ASPHALT SIDEWALK
- EXISTING TRAFFIC FLOW

(1) RESIDENTIAL SIDEWALK, CLOSED SECTION MC - 110.01

QUANTITY	SHEET	STATION
54 SF	16	303+50 LT
117 SF	16	302+90 RT
387 SF	16	106+00 LT

DESIGN AND DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL – NAD 83 VERTICAL – NAVD 88

EXISTING PAVEMENT REMOVAL

QUANTITY	FROM	TO
49 CY	101+67 RT	301+09 LT
331 CY	106+86 LT	303+26 RT
8 CY	303+78 RT	414+78 RT
6 CY	414+65 LT	415+00 LT
21 CY	411+99 LT	414+41 LT
3 CY	203+66 LT	203+84 LT
4 CY	202+29 LT	202+62 LT
2 CY	102+10 LT	102+25 LT
230 CY	203+83 RT	302+89 LT
8 CY	104+14 LT	302+77 LT

FULL DEPTH PAVEMENT

QUANTITY	FROM	TO
1,200 SF	101+75 RT	104+80 RT
690 SF	105+50 RT	107+40 RT
5,650 SF	202+10	204+55
8,950 SF	301+70	304+10
11,150 SF	411+50	415+00

MILL AND OVERLAY

QUANTITY	FROM	TO
33,550 SF	100+82	107+71

WEDGE AND LEVEL

QUANTITY	FROM	TO
3,910 SF	301+85	303+40
2,410 SF	411+00	412+00

NOTES:
1. WSSC TO INSTALL 8" WATER MAIN IN THE VICINITY BETWEEN RILEY PLACE AND SELWAY LANE. CONTRACTOR TO COORDINATE WITH WSSC FOR EXACT LOCATION. WATER MAIN PROJECT NO. BRCR6058A16 WAS IDENTIFIED AND PLANNED IN NOVEMBER 2016. SEE SHEET UT-01 FOR APPROXIMATE WSSC WATER MAIN RELOCATION.
2. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. PLEASE SEE GENERAL NOTES SHEET FOR MORE DETAILS.
3. BUS STOP WAITING AREAS SHALL BE CONSTRUCTED PER MC-110.01, RESIDENTIAL SIDEWALK, WITH A MINIMUM WIDTH OF 14-FEET UNLESS OTHERWISE DIRECTED.

COMBINATION CONCRETE CURB AND GUTTER – TYPE D MD-620.02

QUANTITY	FROM	TO
60 LF	100+85 RT	201+04 LT
420 LF	101+40 RT	300+62 LT
300 LF	300+50 RT	107+71 RT
390 LF	100+98 LT	411+50 RT
280 LF	102+05 LT	104+60 LT
550 LF	107+71 LT	415+00 RT
260 LF	302+10 LT	304+10 LT
260 LF	202+50 RT	204+60 RT
405 LF	411+00 LT	415+00 LT
75 LF	412+77 LT	413+41 LT

RESIDENTIAL DRIVEWAY MC – 301.01

QUANTITY	STATION	WIDTH
38 SY	103+98 RT	23.0'
37 SY	106+63 LT	10.8'
22 SY	106+66 RT	17.0'
22 SY	107+32 RT	12.0'
31 SY	107+48 LT	10.2'
23 SY	202+50 LT	10.0'
62 SY	203+82 RT	12.3'
86 SY	302+30 RT	10.2'
24 SY	302+83 LT	13.9'
41 SY	303+00 RT	10.0'
65 SY	414+91 RT	20.0'

CONCRETE CURB TYPE "A" (BACK CURB)

QUANTITY	FROM	TO
25 LF	100+85 RT	201+04 LT
20 LF	101+03 LT	101+23 LT

(1) CONCRETE MODIFIED CURB

QUANTITY	FROM	TO
20 LF	411+95 RT	412+00 RT

(1) RESET WOODEN RAILING

QUANTITY	FROM	TO
202 LF	412+10 LT	414+36 LT
48 LF	414+53 LT	415+00 LT
45 LF	411+70 LT	412+15 LT

COMMERCIAL DRIVEWAY MC – 302.01

QUANTITY	STATION	WIDTH
37 SY	103+38 RT	21.8'

ASPHALT SIDEWALK

QUANTITY	STATION
38 SF	412+53 LT
42 SF	414+26 LT

REMOVE EXISTING INLET

STATION	OFFSET	BASELINE
204+25	32.5 RT	BROOKVILLE RD
413+27	27.1 RT	SEMINARY RD

LONGITUDINAL UNDERDRAIN MD-387.11

QUANTITY	FROM	TO
107 LF	101+40 RT	103+05 RT
140 LF	103+14 RT	104+55 RT
250 LF	202+58 RT	104+31 LT
47 LF	105+43 LT	302+08 RT
107 LF	202+63 RT	203+70 RT
71 LF	203+75 RT	204+45 RT
30 LF	302+11 LT	302+39 LT
148 LF	302+46 LT	303+94 LT
49 LF	302+16 RT	302+65 RT
59 LF	302+74 RT	303+32 RT
43 LF	303+44 RT	303+82 RT
87 LF	412+71 RT	413+50 RT
78 LF	412+71 LT	413+52 LT
101 LF	413+61 LT	414+60 LT
30 LF	414+34 RT	414+64 RT
34 LF	414+68 LT	415+00 LT
30 LF	414+69 RT	415+00 RT

RESIDENTIAL SIDEWALK CLOSED SECTION MC-110.01

QUANTITY	FROM	TO
120 SF	100+85 RT	201+04 LT
2,188 SF	101+40 RT	300+62 LT
934 SF	300+50 RT	105+80 RT
1,582 SF	100+98 LT	411+95 RT (1)
1,434 SF	102+05 LT	104+60 LT
2,632 SF	108+68 LT	415+00 RT
1,258 SF	302+10 LT	304+10 LT
949 SF	202+50 RT	204+60 RT
1,978 SF	411+30 LT	415+00 LT

DETECTABLE WARNING SURFACE MD-655.40

QUANTITY	STATION
10 SF	101+00 RT
12 SF	101+05 RT
10 SF	101+10 LT
15 SF	101+55 RT
20 SF	102+15 RT
10 SF	102+20 LT
10 SF	202+20 LT
13 SF	202+35 RT
12 SF	104+42 LT
12 SF	104+53 LT
10 SF	104+50 RT
10 SF	300+95 LT
11 SF	300+94 RT
11 SF	105+60 RT
10 SF	105+22 LT
10 SF	105+58 LT
10 SF	412+20 LT
11 SF	412+20 RT
11 SF	204+15 LT
11 SF	204+30 RT
11 SF	303+87 LT
11 SF	303+80 LT
11 SF	414+45 LT
11 SF	414+45 RT

NO.	REVISION	DATE	BY
1	Fence Replacement Notes, Sidewalk Connection Notes and Schedules, Reset Railing Resize Bus Stop, Reduce Curb Replacement	4/23/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-01 ROADWAY PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=30' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 16 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

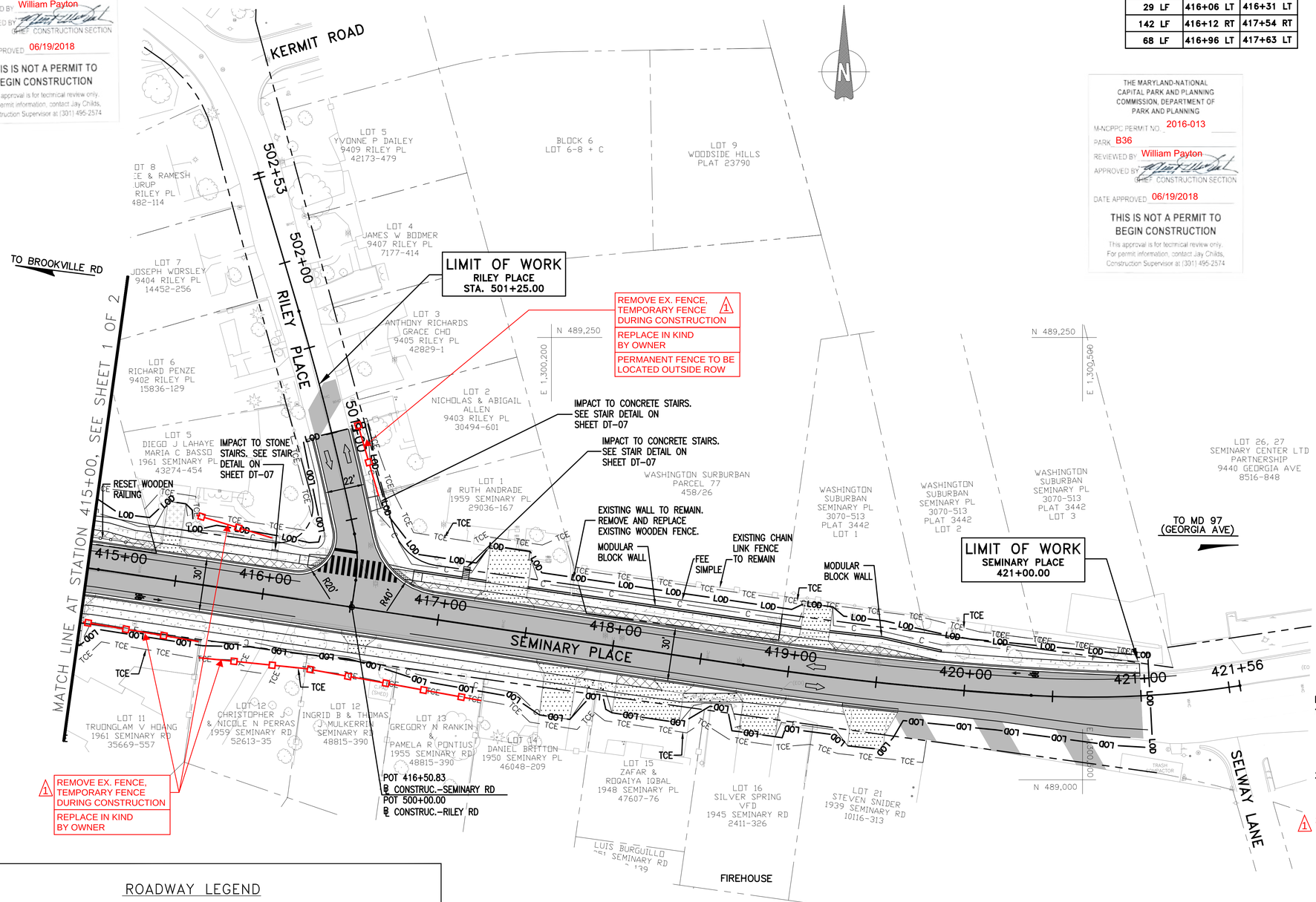
REVIEWED BY William Payton

APPROVED _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2016-013

PARK B36

REVIEWED BY William Payton

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DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

LONGITUDINAL UNDERDRAIN MD–387.11		
QUANTITY	FROM	TO
94 LF	415+00 RT	415+94 RT
97 LF	415+00 LT	415+98 LT
29 LF	416+06 LT	416+31 LT
142 LF	416+12 RT	417+54 RT
68 LF	416+96 LT	417+63 LT

MILL AND OVERLAY		
QUANTITY	FROM	TO
550 SF	501+00	501+25

RESET WOODEN RAILING		
QUANTITY	FROM	TO
30 LF	415+00 LT	415+30 LT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
17,000 SF	415+00	421+00
2,005 SF	500+20	501+00

WEDGE AND LEVEL		
QUANTITY	FROM	TO
2,195 SF	419+55 RT	420+90 RT

EXISTING PAVEMENT REMOVAL		
QUANTITY	FROM	TO
23 CY	415+00 LT	416+24 LT
46 CY	416+83 LT	419+85 LT
7 CY	418+05 RT	418+31 RT

⚠1 TEMPORARY FENCE		
QUANTITY	SHEET	STATION
320 LF	16	102+20 TO 104+40
130 LF	16	102+30 TO 103+60
100 LF	16	202+55 TO 203+55
40 LF	16	203+00 TO 203+40
70 LF	17	415+00 TO 415+70
60 LF	17	415+70 TO 417+30
45 LF	17	415+55 TO 416+00
45 LF	17	500+55 TO 501+00

⚠1 PERMANENT FENCE		
QUANTITY	SHEET	STATION
320 LF	16	102+20 TO 104+40
130 LF	16	102+30 TO 103+60
100 LF	16	202+55 TO 203+55
40 LF	16	203+00 TO 203+40
70 LF	17	415+00 TO 415+70
60 LF	17	415+70 TO 417+30
50 LF	17	415+55 TO 416+00
45 LF	17	500+55 TO 501+00

RESIDENTIAL SIDEWALK, CLOSED SECTION MC–110.01		
QUANTITY	FROM	TO
1,686 SF	415+00 RT	419+36 RT
622 SF	415+00 LT	416+33 LT
1,934 SF	416+68 LT	421+00 LT

DETECTABLE WARNING SURFACE MD–655.40		
QUANTITY	STATION	WIDTH
14 SF	416+30 LT	20.0'
20 SF	416+75 LT	20.0'

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
34 SY	415+44 LT	10.0'
14 SY	416+57 RT	10.0'
81 SY	417+35 LT	24.8'
54 SY	417+73 RT	18.3'
81 SY	418+37 RT	12.3'
45 SY	419+12 LT	16.5'
57 SY	419+50 RT	20.5'

COMMERCIAL DRIVEWAY MC – 302.01		
QUANTITY	STATION	WIDTH
52 SY	418+89 RT	20.6'

COMBINATION CONCRETE CURB AND GUTTER – TYPE D MD–620.02		
QUANTITY	FROM	TO
434 LF	415+00 RT	419+65 RT
117 LF	415+00 LT	500+47 LT
442 LF	500+38 RT	421+00 LT

MOUNTABLE CONCRETE CURB & GUTTER MC–101.01		
QUANTITY	FROM	TO
53 LF	500+47 LT	501+00 LT
63 LF	500+38 RT	501+00 RT

NOTES:

1. WSSC TO INSTALL 8" WATER MAIN IN THE VICINITY BETWEEN RILEY PLACE AND SELWAY LANE. CONTRACTOR TO COORDINATE WITH WSSC FOR EXACT LOCATION. WATER MAIN PROJECT NO. BRCR6058A16 WAS IDENTIFIED AND PLANNED IN NOVEMBER 2016. SEE SHEET UT–02 FOR APPROXIMATE WSSC WATER MAIN RELOCATION.
2. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. PLEASE SEE GENERAL NOTES SHEET FOR MORE DETAILS.
3. ⚠1 PROPERTY OWNERS AFFECTED BY TEMPORARY FENCE RELOCATIONS WILL BE MONETARILY COMPENSATED FOR NEW PERMANENT FENCES. ALL PERMANENT FENCE LOCATIONS SHALL BE RESTORED TO THE ORIGINAL LOCATIONS UNLESS OTHERWISE NOTED.

DESIGN AND DRAWING BASED ON MARYLAND COORDIANTE SYSTEM: HORIZONTAL – NAD 83 VERTICAL – NAVD 88

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- 2" GRIND & RESURFACE
- REMOVE EXISTING PAVEMENT
- PROPOSED TRAFFIC FLOW
- 7" CONCRETE DRIVEWAY
- 7" ASPHALT DRIVEWAY
- 5" CONCRETE SIDEWALK
- 5" ASPHALT SIDEWALK
- EXISTING TRAFFIC FLOW

NO.	REVISION	DATE	BY
⚠1	Fence Replacement Notes and Schedules	4/23/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Design Section

APPROVED
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Division of Transportation Engineering

Designed by: MTF Drawn by: SAH Checked by: JJR

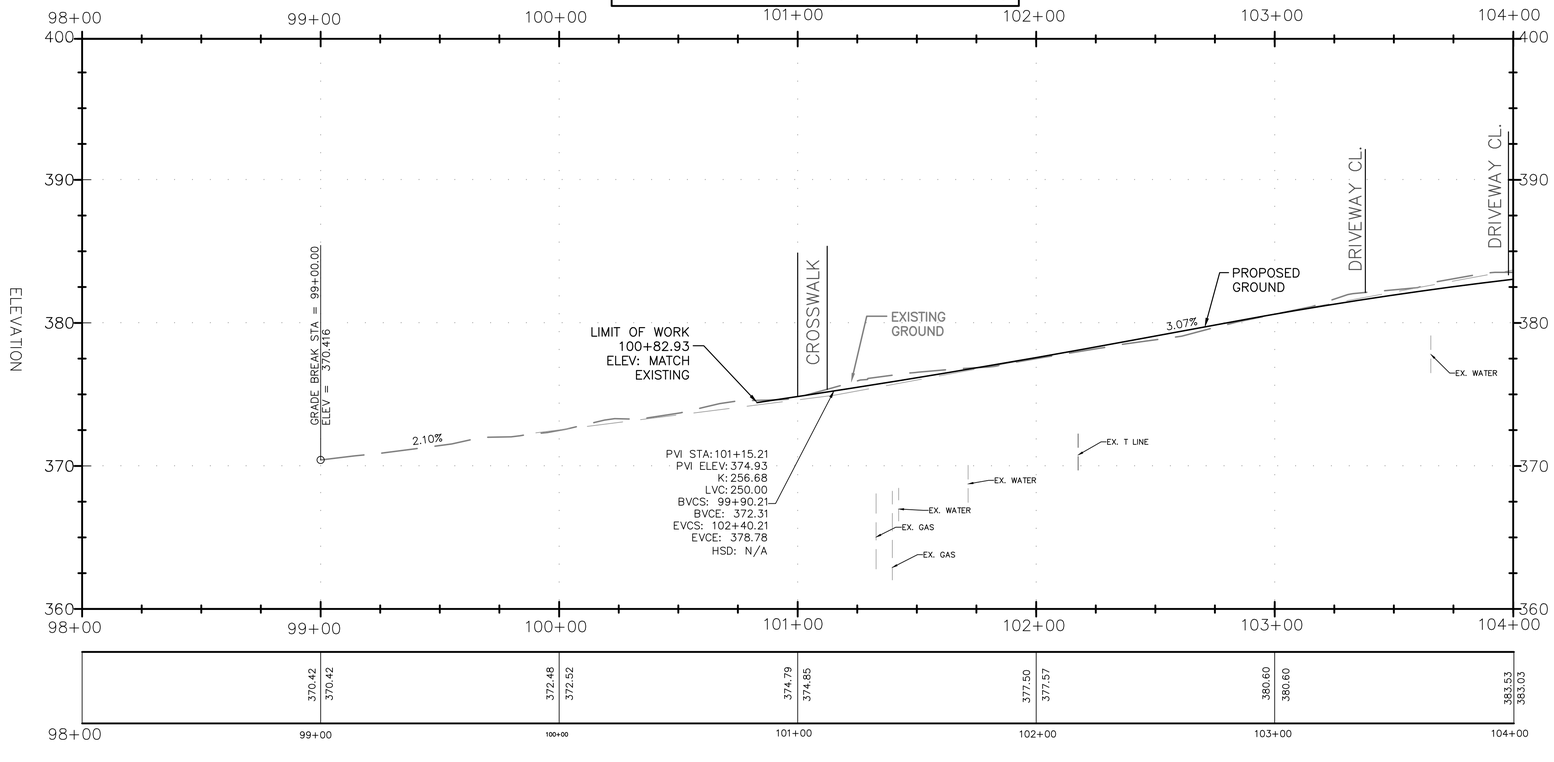
PS–02 ROADWAY PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

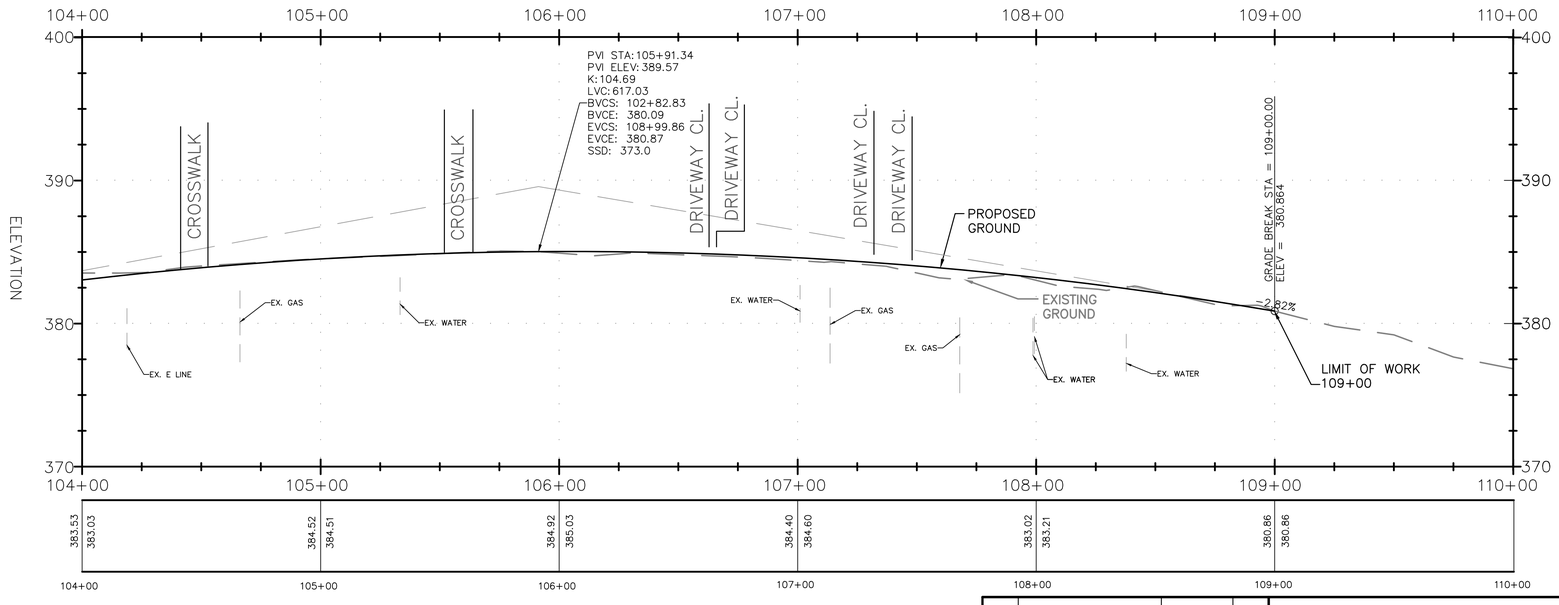
SCALE: 1"=30' 0 30' 60'

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 17 of 123

LINDEN LANE AND SEMINARY ROAD





VERTICAL SCALE
15'
10'
5'
0

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-03 ROADWAY PROFILES

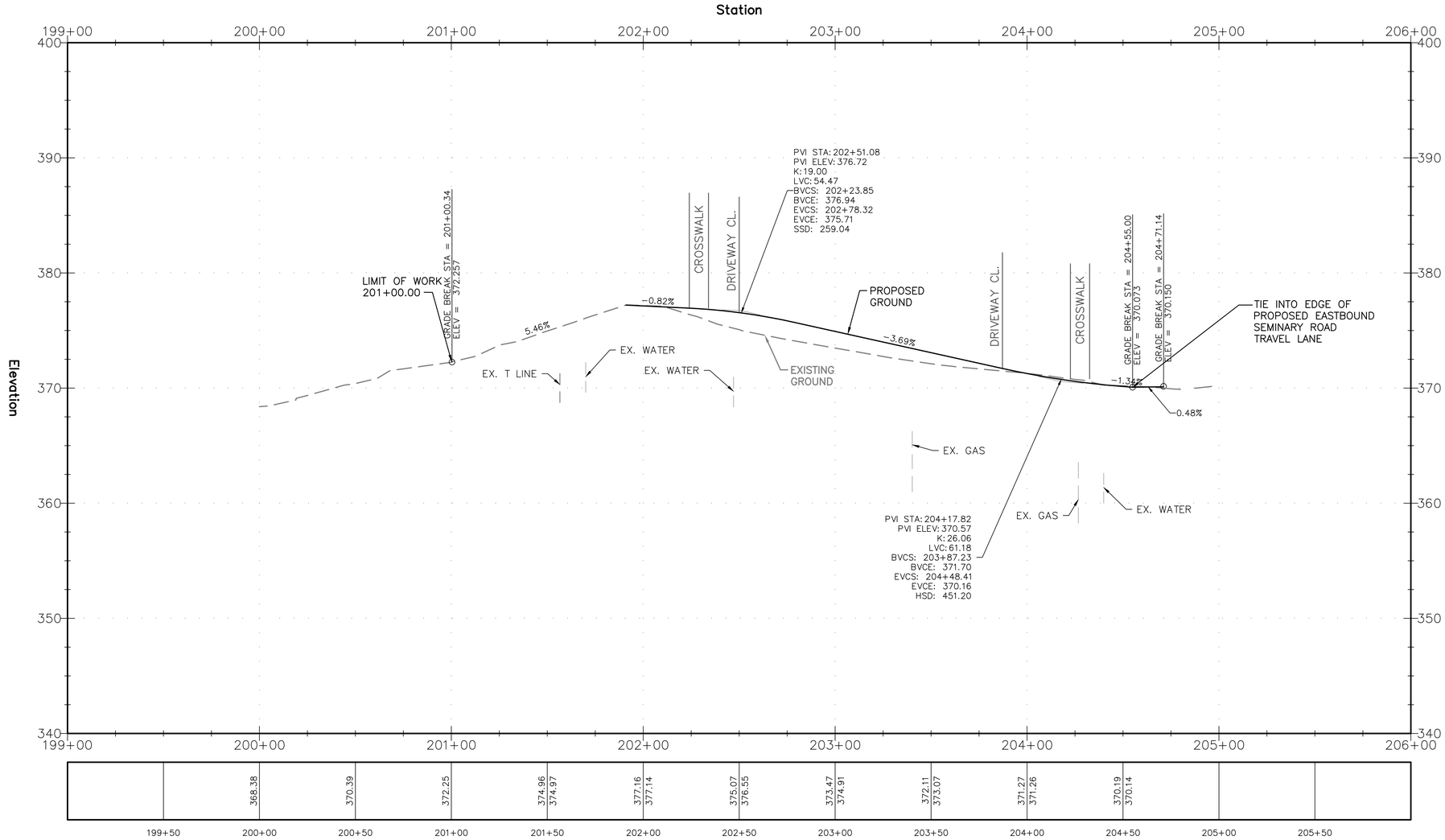
SEMINARY ROAD INTERSECTION IMPROVEMENT

0 30' 60'
SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5'

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 18 of 123

BROOKVILLE ROAD



VERTICAL SCALE
15'
10'
5'
0

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-04 ROADWAY PROFILES

SEMINARY ROAD INTERSECTION IMPROVEMENT

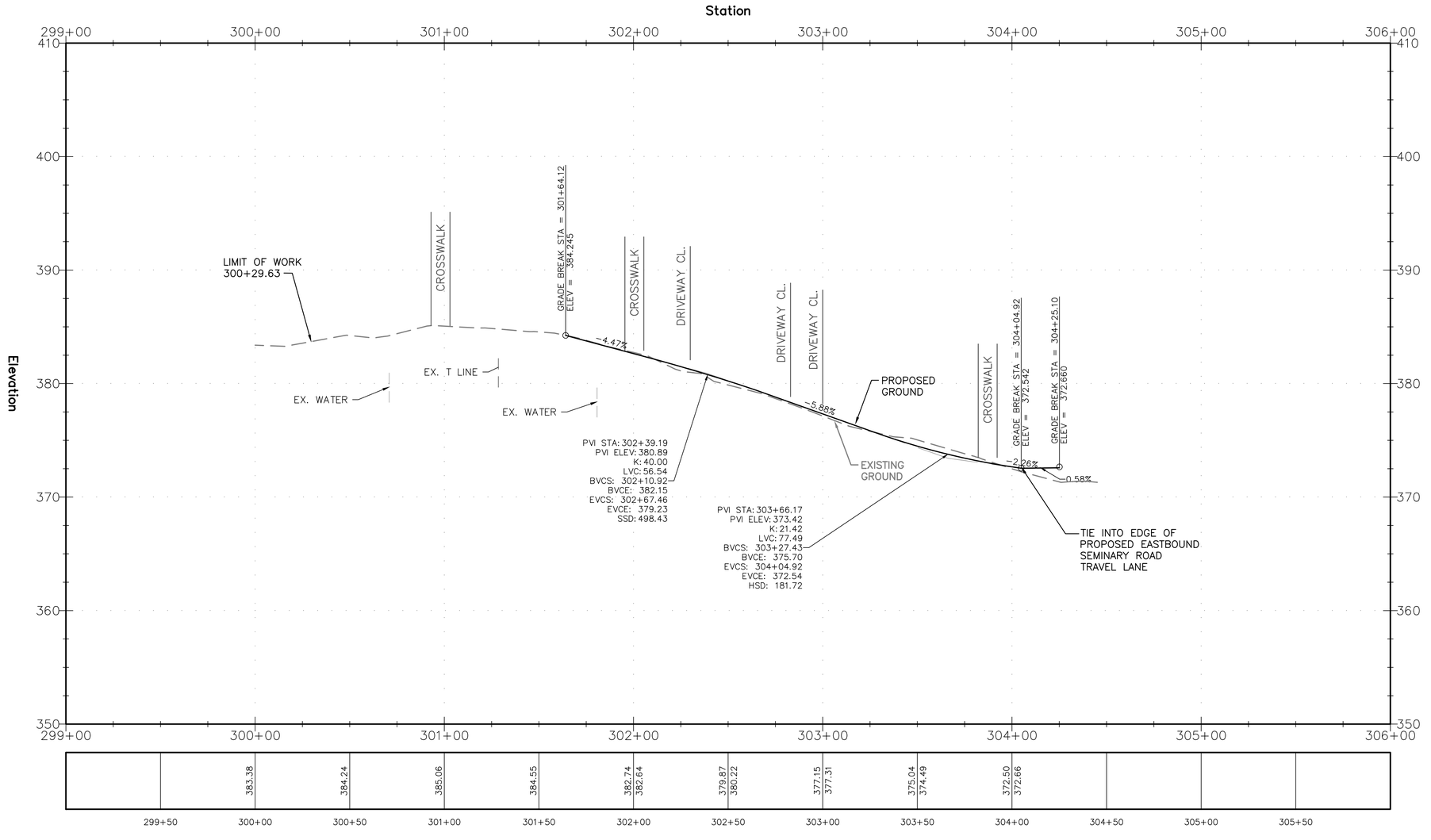
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SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5'

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 19 of 123

SECOND AVENUE AND SEMINARY ROAD



VERTICAL SCALE
15'
10'
5'
0

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-05 ROADWAY PROFILES

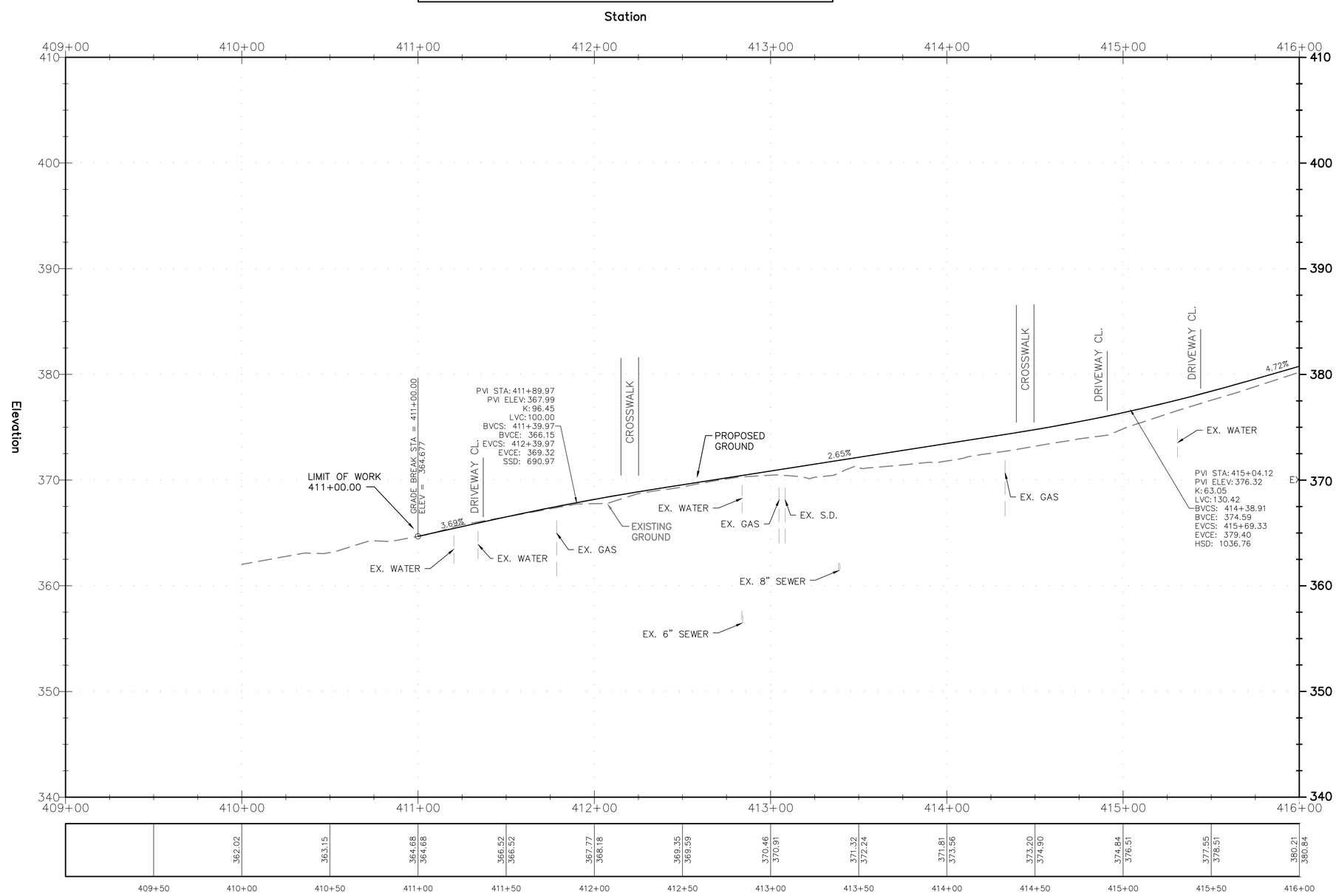
SEMINARY ROAD INTERSECTION IMPROVEMENT

0 30' 60'
SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5'

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 20 of 123

SEMINARY ROAD AND SEMINARY PLACE



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-06 ROADWAY PROFILES

SEMINARY ROAD INTERSECTION IMPROVEMENT

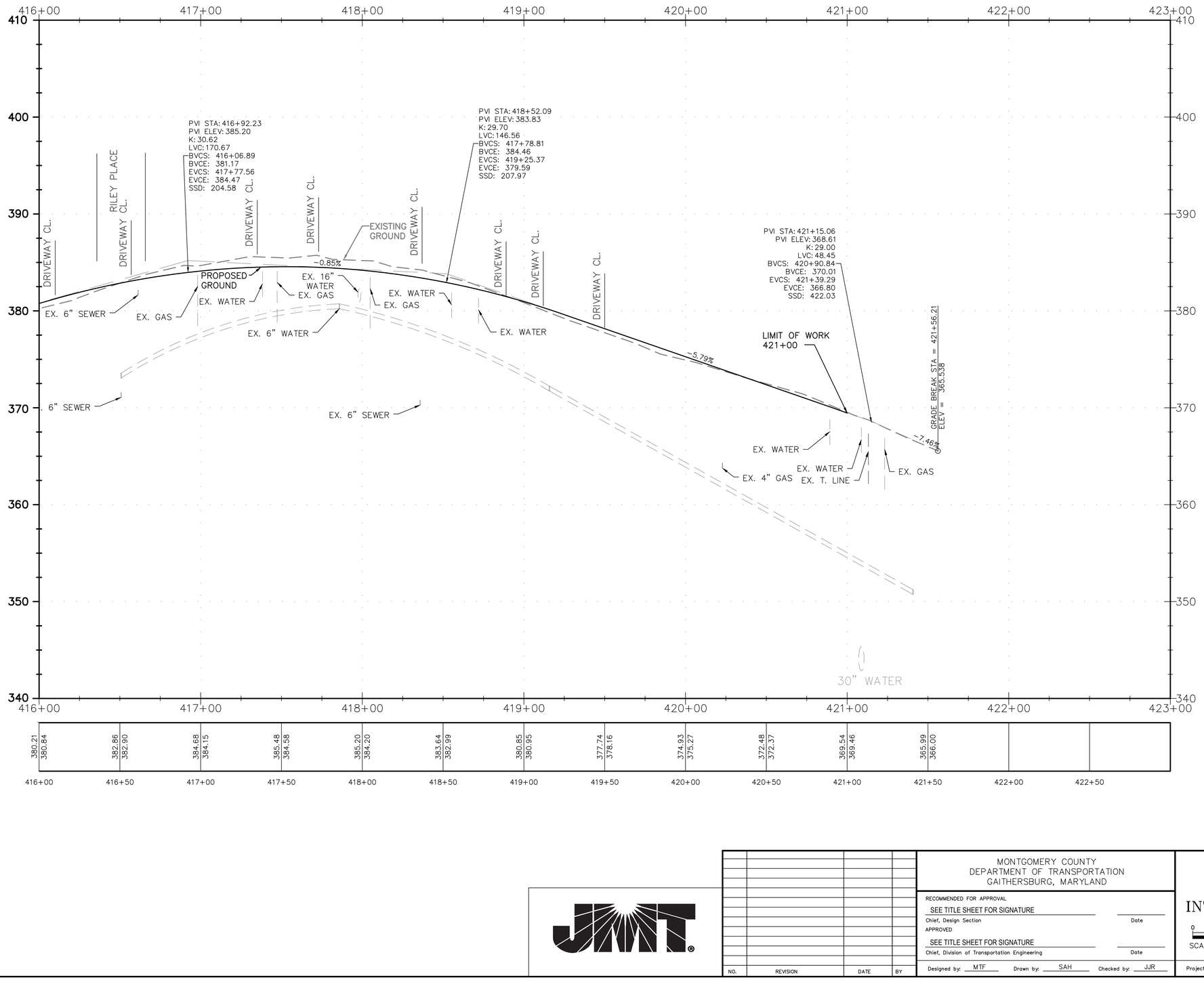
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SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5'

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 21 of 123

SEMINARY ROAD AND SEMINARY PLACE



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-07 ROADWAY PROFILES

SEMINARY ROAD INTERSECTION IMPROVEMENT

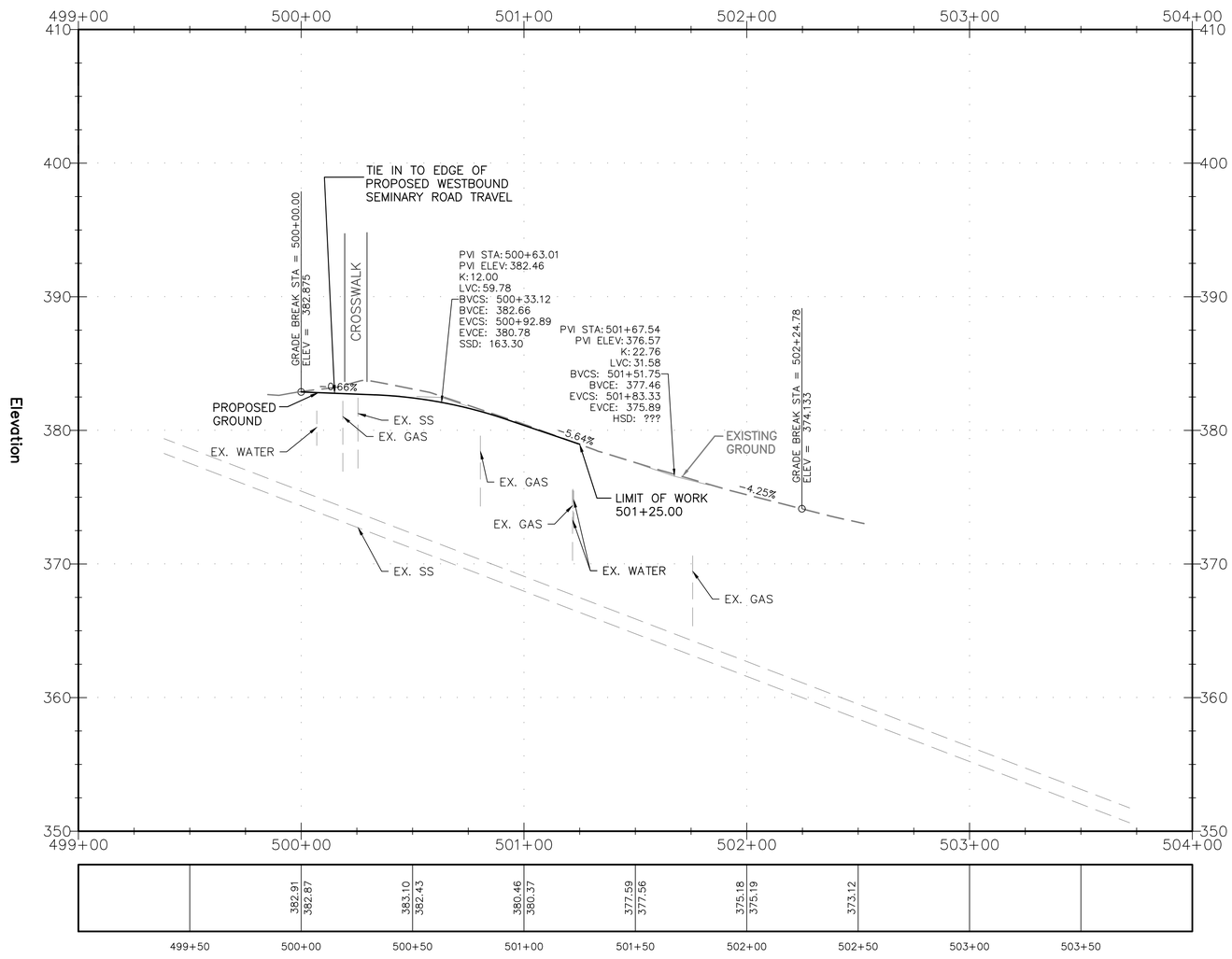
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SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5"

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 22 of 123

RILEY PLACE



VERTICAL SCALE
15'
10'
5'
0

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

PS-08 ROADWAY PROFILES

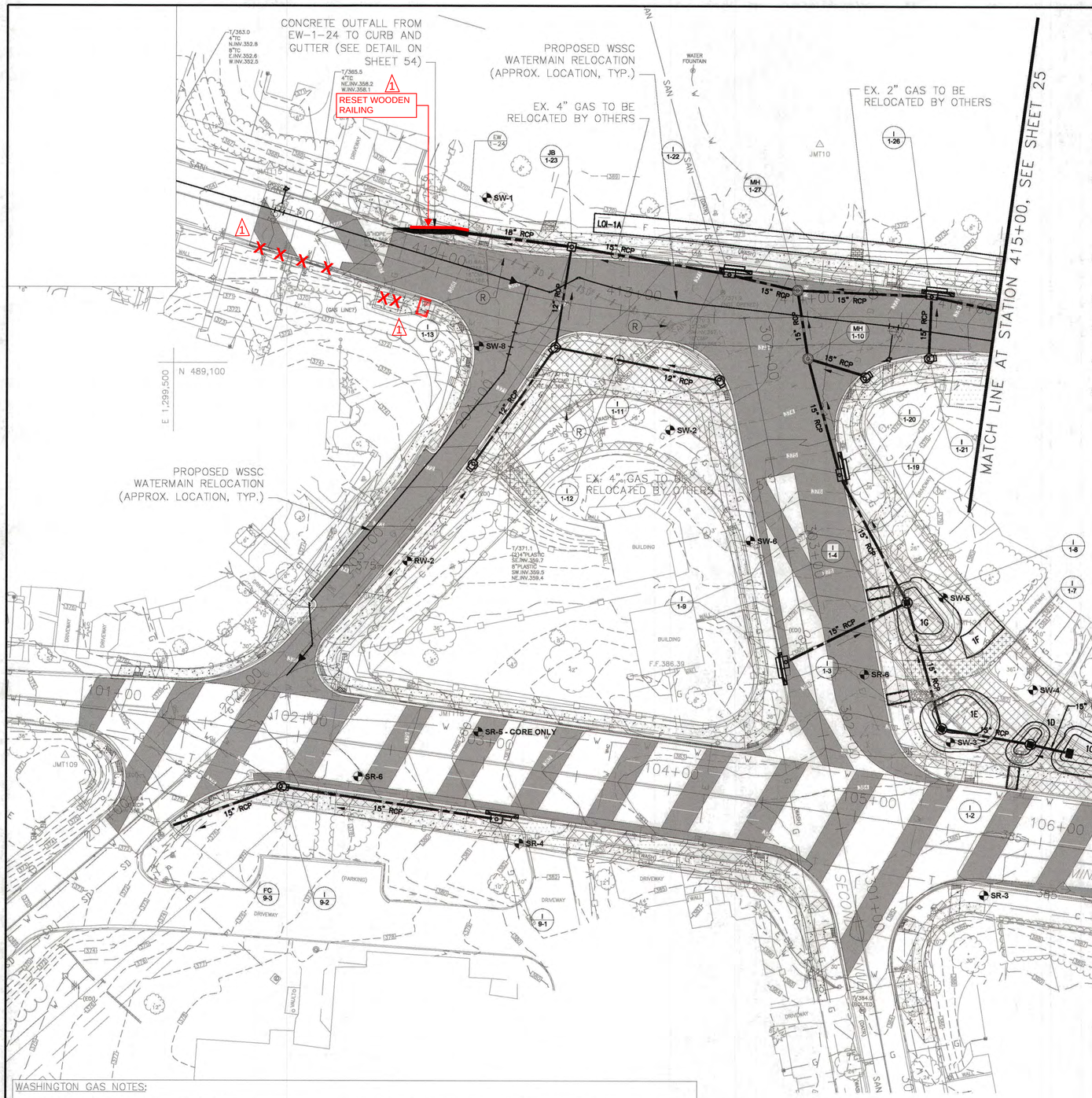
SEMINARY ROAD INTERSECTION IMPROVEMENT

0 30' 60'
SCALE: HORIZONTAL 1"=30'
VERTICAL 1"=5'

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 23 of 123



GENERAL NOTES FOR STORM DRAIN CONSTRUCTION

1) ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND MONTGOMERY COUNTY.
2) TYPE OF STRUCTURE REFERS TO THE LATEST DESIGN STANDARDS OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, STANDARD DETAILS OF THE WASHINGTON SUBURBAN SANITARY COMMISSION, AND BOOK OF STANDARDS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, UNLESS OTHERWISE NOTED.
3) WHERE THE DROP ON THE MAIN LINE THROUGH A STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES.
4) INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF THE UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THIS PLAN OR LESS THAN 12" WHEN NOT SPECIFIED, CONTACT THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES ROW INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
5) WHERE ANY PART OF THE STORM DRAIN SYSTEM IS LOCATED IN A FILL SECTION, PROVIDE SELECT FILL MATERIAL COMPACTED TO 95% AASHTO T-99 DENSITY FROM APPROVED SUBGRADE TO THE STRUCTURE BOTTOM SLABS AND/OR THE PIPE BEDDING.
6) ALL STORM DRAIN PIPES SHALL BE INSTALLED WITH CLASS "C" BEDDING AS SHOWN ON MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, "RCP SUPPORTING STRENGTH" LOADING CHARTS IN APPENDIX C.
7) CALL "MISS UTILITY" AT 1-800-257-7777 - 48 HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE LOCATION OF EXISTING UTILITIES (SEE ALSO HTTP://WWW.MISSUTILITY.NET/MARYLAND/).
8) ALL STORM DRAIN CONSTRUCTION ON THIS PLAN, EXCEPT DRIVEWAY CULVERTS, TO BE MAINTAINED BY MCDOT UNLESS OTHERWISE NOTED ON THE PLANS.
9) ALL FIELD MODIFICATIONS ARE SUBJECT TO MCDPS FIELD INSPECTOR APPROVAL.

REFERENCE SHEETS:

1. DRAINAGE STRUCTURE AND PIPE SCHEDULES ARE PRESENTED ON SHEET 27.
2. TEST HOLE SUMMARY TABLE IS PRESENTED ON SHEET 27.
3. LONGITUDINAL ROADWAY UNDERDRAINS ARE SHOWN ON SHEET 26.
4. FOR SWM FACILITY 1C (MICRO-BIORETENTION) DETAILS, SEE SHEET 50.
5. FOR SWM FACILITY 1D (MICRO-BIORETENTION) DETAILS, SEE SHEET 51.
6. FOR SWM FACILITY 1E (MICRO-BIORETENTION) DETAILS, SEE SHEET 52.
7. FOR SWM FACILITY 1F (NON-ROOFTOP RUNOFF DISCONNECTION) DETAILS, SEE SHEET 49.
8. FOR SWM FACILITY 1G (MICRO-BIORETENTION) DETAILS, SEE SHEET 53.

NOTES:

1. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES AND EXCAVATIONS WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. IT IS RECOMMENDED THAT FIELD VERIFICATIONS OF THE EXISTING WASHINGTON GAS FACILITIES SHOULD BE PERFORMED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY WASHINGTON GAS AT (703)750-1000 TO SCHEDULE PERSONNEL FOR DAMAGE PREVENTION 10 BUSINESS DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY EXPOSURE OF THE EXISTING GAS MAINS DURING THE CONSTRUCTION SHALL BE PERFORMED UNDER SUPERVISION OF ONSITE WASHINGTON GAS PERSONNEL. ALL EXPOSED GAS MAINS SHALL BE PROTECTED BY A WGL APPROVED PROTECTIVE SHIELD.
2. EXISTING GAS LINES TO BE RELOCATED BY OTHERS ARE IDENTIFIED ON THE PLANS. CONTRACTOR SHALL COORDINATE WITH THE COUNTY UTILITY COORDINATOR FOR ADDITIONAL INFORMATION ON THE WASHINGTON GAS RELOCATION PLANS.
3. LONGITUDINAL ROADWAY UNDERDRAINS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. THE LOCATIONS OF PROPOSED ROADWAY UNDERDRAINS ARE INDICATED ON SHEET 26.

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- ASPHALT DRIVEWAY
- 7" CONCRETE DRIVEWAY
- 2" GRIND & RESURFACE
- 5" CONCRETE SIDEWALK
- 5" ASPHALT SIDEWALK
- PAVEMENT REMOVAL
- PIPE ABANDONMENT
- (R) REMOVE EXISTING STRUCTURE
- PROPOSED STORM DRAIN PIPE
- F PROPOSED FILL BOUNDARY
- C PROPOSED CUT BOUNDARY
- SW-4 SOIL BORING LOCATION

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____
CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

WASHINGTON GAS NOTES:

1. CONTRACTOR TO PERFORM TEST PITS ON EXISTING WASHINGTON GAS FACILITIES AT THE ONSET OF ROADWAY CONSTRUCTION. INFORMATION GATHERED FROM THE TEST PITS (LOCATION AND ELEVATION OF FACILITY AT EACH TEST PIT) MUST BE PROVIDED TO WASHINGTON GAS PRIOR TO ANY ADDITIONAL CONSTRUCTION ACTIVITIES WITHIN 5' HORIZONTAL CLEARANCE OF EXISTING WASHINGTON GAS FACILITIES. WASHINGTON GAS WILL REVIEW THE INFORMATION PROVIDED TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO AVOID CONFLICT WITH THEIR EXISTING FACILITIES.
2. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES SMALLER THAN 16-INCHES IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 12-INCH VERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES THAT ARE 16-INCHES OR LARGER IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 24-INCH VERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY.

30 0 30 60
SCALE IN FEET

RJM ENGINEERING
6031 University Blvd., Ste. 390
Ellicott City, MD 21043

NO.	REVISION	DATE	BY
1	Reset Railing, Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

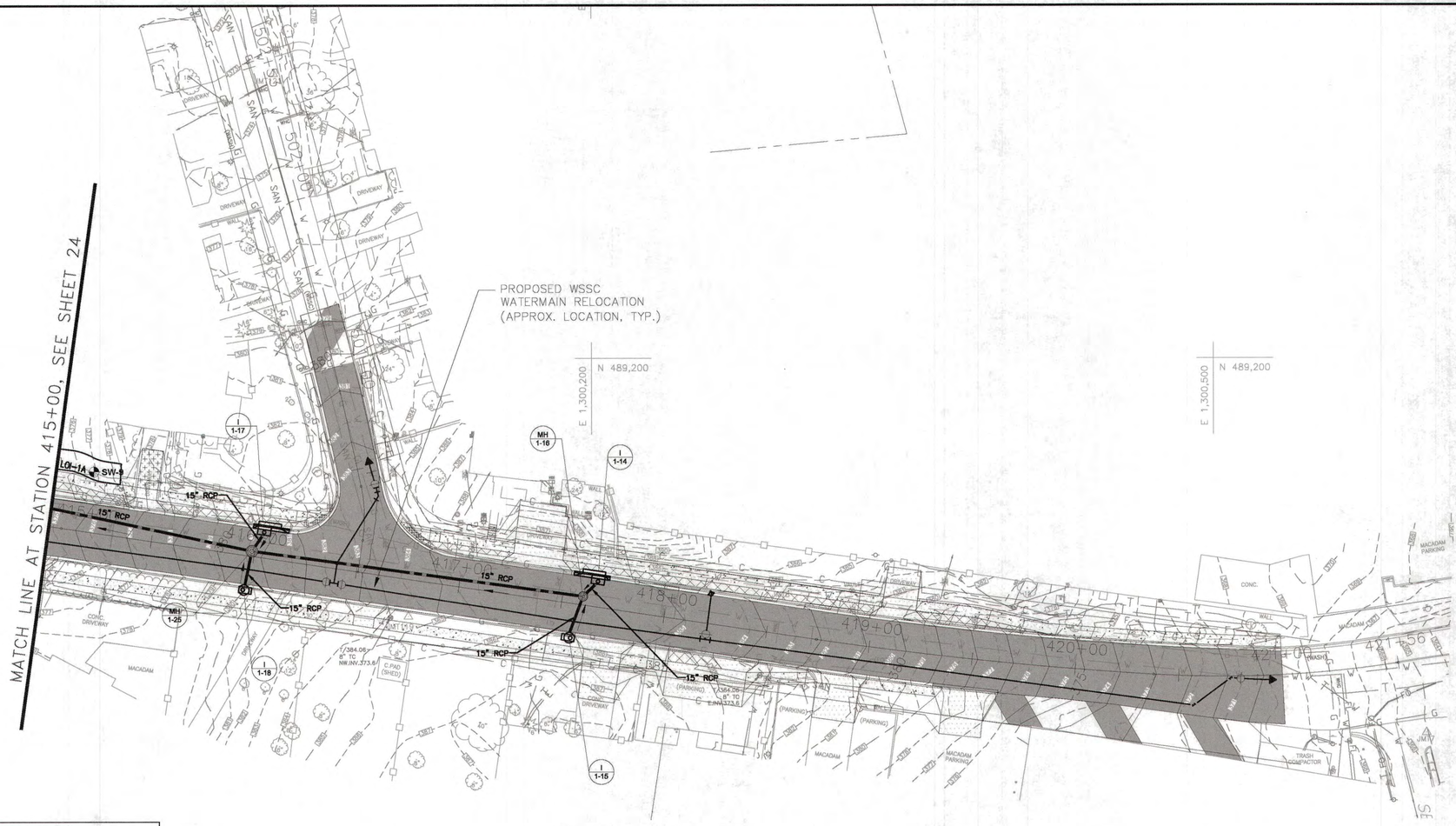
Designed by: KJS Drawn by: KJS Checked by: DZ

DD-01 GRADING AND DRAINAGE PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=30' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 24 of 123



REFERENCE SHEETS:

1. DRAINAGE STRUCTURE AND PIPE SCHEDULES ARE PRESENTED ON SHEET 27.
2. LONGITUDINAL ROADWAY UNDERDRAINS ARE SHOWN ON SHEET 26.
3. FOR SWM FACILITY 1C (MICRO-BIORETENTION) DETAILS, SEE SHEET 50.
4. FOR SWM FACILITY 1D (MICRO-BIORETENTION) DETAILS, SEE SHEET 51.
5. FOR SWM FACILITY 1E (MICRO-BIORETENTION) DETAILS, SEE SHEET 52.
6. FOR SWM FACILITY 1F (NON-ROOFTOP RUNOFF DISCONNECTION) DETAILS, SEE SHEET 49.
7. FOR SWM FACILITY 1G (MICRO-BIORETENTION) DETAILS, SEE SHEET 53.

NOTES:

1. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES AND EXCAVATIONS WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. IT IS RECOMMENDED THAT FIELD VERIFICATIONS OF THE EXISTING WASHINGTON GAS FACILITIES SHOULD BE PERFORMED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY WASHINGTON GAS AT (703)750-1000 TO SCHEDULE PERSONNEL FOR DAMAGE PREVENTION 10 BUSINESS DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY EXPOSURE OF THE EXISTING GAS MAINS DURING THE CONSTRUCTION SHALL BE PERFORMED UNDER SUPERVISION OF ONSITE WASHINGTON GAS PERSONNEL. ALL EXPOSED GAS MAINS SHALL BE PROTECTED BY A WGL APPROVED PROTECTIVE SHIELD.
2. EXISTING GAS LINES TO BE RELOCATED BY OTHERS ARE IDENTIFIED ON THE PLANS. CONTRACTOR SHALL COORDINATE WITH THE COUNTY UTILITY COORDINATOR FOR ADDITIONAL INFORMATION ON THE WASHINGTON GAS RELOCATION PLANS.
3. LONGITUDINAL ROADWAY UNDERDRAINS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. THE LOCATIONS OF PROPOSED ROADWAY UNDERDRAINS ARE INDICATED ON SHEET 26.

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- ASPHALT DRIVEWAY
- 7" CONCRETE DRIVEWAY
- 2" GRIND & RESURFACE
- 5" CONCRETE SIDEWALK
- 5" ASPHALT SIDEWALK
- PAVEMENT REMOVAL
- PIPE ABANDONMENT
- (R) REMOVE EXISTING STRUCTURE
- PROPOSED STORM DRAIN PIPE
- F PROPOSED FILL BOUNDARY
- C PROPOSED CUT BOUNDARY
- SW-4 SOIL BORING LOCATION

WASHINGTON GAS NOTES:

1. CONTRACTOR TO PERFORM TEST PITS ON EXISTING WASHINGTON GAS FACILITIES AT THE ONSET OF ROADWAY CONSTRUCTION. INFORMATION GATHERED FROM THE TEST PITS (LOCATION AND ELEVATION OF FACILITY AT EACH TEST PIT) MUST BE PROVIDED TO WASHINGTON GAS PRIOR TO ANY ADDITIONAL CONSTRUCTION ACTIVITIES WITHIN 5'HORIZONTAL CLEARANCE OF EXISTING WASHINGTON GAS FACILITIES. WASHINGTON GAS WILL REVIEW THE INFORMATION PROVIDED TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO AVOID CONFLICT WITH THEIR EXISTING FACILITIES.
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30 0 30 60
SCALE IN FEET

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

DD-02 GRADING AND DRAINAGE PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=30' DATE: FEBRUARY 2018

Project No. : 501307 SHEET 25 of 123

NOTES:

1. PROPOSED STORM DRAIN PIPES ARE NOT SHOWN FOR CLARITY.
2. PROPOSED ROADWAY FEATURES AND HATCHING SHOWN IN GRAYSCALE FOR CLARITY.

LEGEND

--------- 6" LONGITUDINAL UNDERDRAIN (REFER TO MD STANDARD NO. MD-387.11 FOR GENERAL NOTES AND DIMENSIONS)

30 0 30 60
SCALE IN FEET

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

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DD-03 ROADWAY UNDERDRAIN PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=30' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 26 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

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PIPE SCHEDULE

	FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
		I-1-8	372.50	372.50	22'	0.00%	6"	SCH. 40 PERFORATED PVC
		I-1-7	376.50	376.50	23'	0.00%	6"	SCH. 40 PERFORATED PVC
		I-1-6	377.75	377.75	8'	0.00%	6"	SCH. 40 PERFORATED PVC
		I-1-6	377.75	377.75	8'	0.00%	6"	SCH. 40 PERFORATED PVC
		I-1-5	378.25	378.25	25'	0.00%	6"	SCH. 40 PERFORATED PVC
*	I-1-5	I-1-6	376.87	376.23	17'	3.80%	15"	REINFORCED CONCRETE PIPE, CLASS IV
*	I-1-6	I-1-7	376.11	374.73	43'	3.25%	15"	REINFORCED CONCRETE PIPE, CLASS IV
*	I-1-7	I-1-8	374.54	371.82	64'	4.24%	15"	REINFORCED CONCRETE PIPE, CLASS IV
*	I-1-8	I-1-19	371.66	370.22	71'	2.04%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-9	I-1-8	376.25	372.35	68'	5.74%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-11	I-1-13	368.16	367.30	85'	1.02%	12"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-12	I-1-13	368.50	367.30	71'	1.67%	12"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-13	JB-1-23	367.20	367.10	52'	0.18%	12"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-14	MH-1-16	378.37	378.10	6'	4.25%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-15	MH-1-16	377.09	376.75	16'	2.10%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-17	MH-1-25	376.78	376.44	7'	5.05%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-19	MH-1-10	370.02	369.40	58'	1.08%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-20	MH-1-10	370.87	369.51	28'	4.95%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-21	I-1-26	371.45	371.14	31'	1.03%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-22	JB-1-23	367.70	367.35	81'	0.44%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-26	MH-1-27	371.04	369.07	69'	2.87%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	JB-1-23	EW-1-24	367.10	367.00	54'	0.18%	18"	REINFORCED CONCRETE PIPE, CLASS IV
	MH-1-10	MH-1-27	369.22	368.90	31'	1.01%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	MH-1-16	MH-1-25	376.50	374.29	156'	1.42%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	MH-1-25	I-1-26	374.16	371.44	132'	2.07%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	I-1-18	MH-1-25	376.49	376.67	16'	1.12%	15"	REINFORCED CONCRETE PIPE, CLASS IV
	MH-1-27	I-1-22	368.41	368.00	32'	1.27%	15"	REINFORCED CONCRETE PIPE, CLASS IV

PIPE SCHEDULE

FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
I-9-1	I-9-2	375.49	372.77	111'	2.45%	15"	REINFORCED CONCRETE PIPE, CLASS IV
I-9-2	FC-9-3	372.50	370.83	61'	2.76%	15"	REINFORCED CONCRETE PIPE, CLASS IV

STRUCTURE SCHEDULE

STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES
FC-9-3	488853.7	1299499.8	101+39.8	56.3 RT	LINDEN LN	372.34			1	370.83'		RCP FIELD CONNECTION
I-9-1	488857.5	1299673.0	103+11.0	28.5 RT	LINDEN LN	381.21	MC-502.01	TYPE B	1		375.49'	
I-9-2	488874.5	1299558.4	101+95.2	27.6 RT	LINDEN LN	376.71	MD 374.62	COG INLET	2	372.77'	372.50'	5' COG INLET

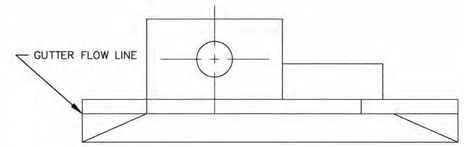
STRUCTURE SCHEDULE

STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES
EW-1-24	489169.1	1299657.0	412+10.4	24.5 LT	SEMINARY RD	369.21	MD 360.01	TYPE G	1	367.00'		SLOPE 1 $\frac{1}{2}$: 1
* I-1-1	488867.4	1299995.6	106+29.2	26.0 LT	LINDEN LN	384.92	MD 374.68	COG OPENING	0			5' COG OPENING (L=6', T-5')
* I-1-2	488874.2	1299947.5	105+80.6	26.0 LT	LINDEN LN	384.65	MD 374.68	COG OPENING	0			5' COG OPENING (L=6', T-5')
* I-1-3	488921.5	1299881.2	302+12.4	37.0 RT	SECOND AVE	381.89	MD 374.68	COG OPENING	0			5' COG OPENING (L=6', T-5')
* I-1-4	488977.4	1299870.4	302+69.3	37.0 RT	SECOND AVE	378.79	MD 374.68	COG OPENING	0			5' COG OPENING (L=6', T-5')
* I-1-5	488893.2	1299978.5	106+08.7	49.2 LT	LINDEN LN	382.50	MC-506.02	TYPE J	2	378.25'	376.87'	TYPE J INLET AS TERMINUS
* I-1-6	488898.0	1299957.6	105+87.3	51.0 LT	LINDEN LN	382.00	MC-506.01	TYPE J	4	376.23' 377.75' 377.75'	376.11'	
* I-1-7	488906.2	1299910.3	105+39.3	52.6 LT	LINDEN LN	380.75	MC-506.01	TYPE J	3	374.73' 376.50'	374.54'	
* I-1-8	488973.4	1299891.7	302+61.4	57.1 RT	SECOND AVE	377.50	MC-506.01	TYPE J	4	371.82' 372.35' 372.50'	371.66'	
I-1-9	488941.6	1299827.1	302+42.4	12.4 LT	SECOND AVE	380.84	MC-502.02	REV. TYPE B	1		376.25'	
I-1-11	489091.3	1299791.4	413+53.9	33.3 RT	SEMINARY RD	373.11	MD 374.62	COG INLET	1		368.16'	5' COG INLET
I-1-12	489046.4	1299659.9	203+72.1	7.2 RT	BROOKVILLE RD	372.77	MC-502.01	TYPE B	1		368.50'	
I-1-13	489108.4	1299703.8	412+69.1	24.8 RT	SEMINARY RD	371.14	MD 374.62	COG INLET	3	367.30' 367.30'	367.20'	5' COG INLET
I-1-14	489092.9	1300202.9	417+65.9	12.3 LT	SEMINARY RD	384.79	MC-502.02	REV. TYPE B	1		378.37'	
I-1-15	489065.8	1300188.9	417+56.1	16.6 RT	SEMINARY RD	384.69	MC-502.01	TYPE B	1		377.09'	
I-1-17	489116.8	1300042.0	416+03.3	12.3 LT	SEMINARY RD	381.13	MC-502.02	REV. TYPE B	1		376.78'	
I-1-18	489089.1	1300032.1	415+97.5	16.5 RT	SEMINARY RD	380.85	MC-502.01	TYPE B	1		376.67'	
I-1-19	489041.4	1299855.4	303+35.0	34.3 RT	SECOND AVE	375.42	MC-502.01	TYPE B	2	370.22'	370.02'	
I-1-20	489092.9	1299869.3	414+31.7	32.3 RT	SEMINARY RD	375.17	MC-502.01	TYPE B	1		370.87'	
I-1-21	489102.9	1299903.2	414+66.7	20.5 RT	SEMINARY RD	375.73	MD 374.62	COG INLET	1		371.45'	5' COG INLET
I-1-22	489147.2	1299796.4	413+57.6	22.7 LT	SEMINARY RD	372.01	MC-502.02	REV. TYPE B	2	368.00'	367.70'	
I-1-26	489136.0	1299904.4	414+65.2	12.5 LT	SEMINARY RD	375.56	MC-502.02	REV. TYPE B	3	371.14' 371.44'	371.04'	
JB-1-23	489162.0	1299712.3	412+68.6	29.5 LT	SEMINARY RD	368.90	MD 386.11	STANDARD JUNCTION BOX	3	367.10' 367.35'	367.10'	INTERIOR DIMS: 32" L x 32" W x 26.5" H (SEE DETAIL ON SHEET 8)
MH-1-10	489102.8	1299838.5	413+99.6	22.3 RT	SEMINARY RD	373.67	MD 384.03	PRECAST MANHOLE	3	369.40' 369.51'	369.22'	5' DIAMETER MANHOLE
MH-1-16	489085.8	1300195.7	417+59.9	4.2 LT	SEMINARY RD	384.48	MD 384.03	PRECAST MANHOLE	3	378.10' 376.75'	376.50'	5' DIAMETER MANHOLE
MH-1-25	489107.7	1300036.0	415+98.7	2.5 LT	SEMINARY RD	380.73	MD 384.03	PRECAST MANHOLE	4	376.44' 376.49' 374.29'	374.16'	5' DIAMETER MANHOLE
MH-1-27	489139.1	1299832.9	413+95.1	14.2 LT	SEMINARY RD	373.19	MD 384.03	PRECAST MANHOLE	3	368.90' 369.07'	368.41'	5' DIAMETER MANHOLE

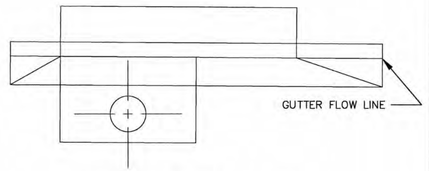
TEST HOLE SUMMARY TABLE

T.H. #	Northing	Easting	Utility	Depth	Top Elev.	Date Dug
1	489038.15	1299652.06	4.5" +/- O.D. Non-Metallic Gas Main	2.62'	369.21'	4/13/17
2	488944.72	1299822.94	Gas Main Did Not Encounter	N/A	N/A	4/12/17
3	489078.02	1299737.02	4.5" +/- O.D. Non-Metallic Gas Main	3.09'	368.85'	4/10/17
4	489156.17	1299743.19	2.5" +/- O.D. Non-Metallic Gas Main	2.74'	367.68'	4/12/17
5	489090.28	1299690.47	2.5" +/- O.D. Non-Metallic Gas Main	3.88'	367.03'	4/10/17
6	489143.64	1299873.23	2.5" +/- O.D. Non-Metallic Gas Main	2.70'	369.89'	4/12/17
7	489124.03	1300044.18	2.5" +/- O.D. Non-Metallic Gas Main	2.82'	377.55'	4/12/17
8	489094.93	1300131.92	4.5" +/- O.D. Metallic Gas Main	3.08'	381.83'	4/11/17
9	489068.14	1300188.00	4.5" +/- O.D. Metallic Gas Main	2.78'	383.14'	4/11/17
10	489095.34	1300203.51	2.5" +/- O.D. Non-Metallic Gas Main	2.85'	383.11'	4/11/17
11	489095.47	1299861.54	2.5" +/- O.D. Non-Metallic Gas Main	3.31'	370.06'	4/10/17
12	488976.05	1299910.01	2.5" +/- O.D. Non-Metallic Gas Main	3.03'	376.78'	4/10/17
13	489088.26	1300183.02	1.0" +/- O.D. Non-Metallic Gas Service	2.35'	383.30'	4/11/17
14	489051.45	1299860.12	2.5" +/- O.D. Non-Metallic Gas Main	2.99'	372.62'	4/10/17
15	488880.25	1299558.31	(4) Non-Metallic Conduits - Comms.	3.19'	373.18'	4/13/17
16	488857.80	1299512.87	Bottom Concrete Comms. Duct	5.31'	369.24'	4/13/17
17	488860.56	1299673.61	0.5" +/- O.D. Electric Cable	0.89'	380.45'	4/13/17

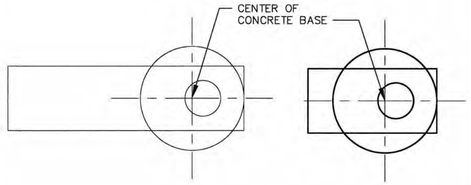
Notes: All depths are to top of pipe or structure unless the utility is a duct or other rectangular structure - then the depth shown is to the bottom.



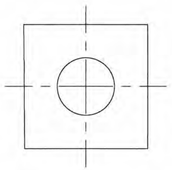
STATION AND OFFSET LOCATION FOR TYPE B INLETS



STATION AND OFFSET LOCATION FOR REVERSE TYPE B INLETS



STATION AND OFFSET LOCATION FOR COG INLETS



STATION AND OFFSET LOCATION FOR JUNCTION BOXES

*IDENTIFIES A STRUCTURE OR PIPE ASSOCIATED WITH A SWM FACILITY

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.

Reviewed 1/4/2019 Date

Approved 1/4/2019 Date

236807 SM FILE #

Sediment Control Technical Requirements:

Reviewed 1/4/2019 Date

Approved 1/4/2019 Date

Administrative Requirements:

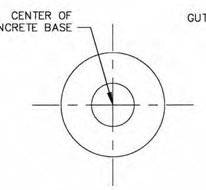
Reviewed 01/04/2019 Date

283016 SEDIMENT CONTROL PERMIT NO.

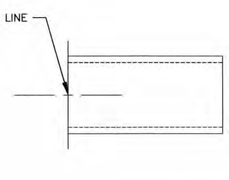
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

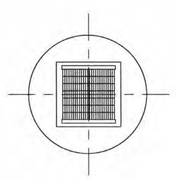
DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not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



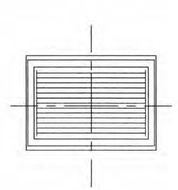
STATION AND OFFSET LOCATION FOR CIRCULAR MANHOLES



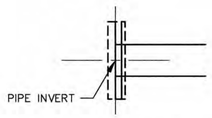
STATION AND OFFSET LOCATION FOR COG OPENINGS



STATION AND OFFSET LOCATION FOR TYPE J INLETS



STATION AND OFFSET LOCATION FOR TYPE J INLETS AS TERMINUS



STATION AND OFFSET LOCATION FOR ENDWALLS

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

DD-04 DRAINAGE SCHEDULE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: N.T.S. DATE: NOVEMBER 2017

Project No. : 501307 SHEET 27 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

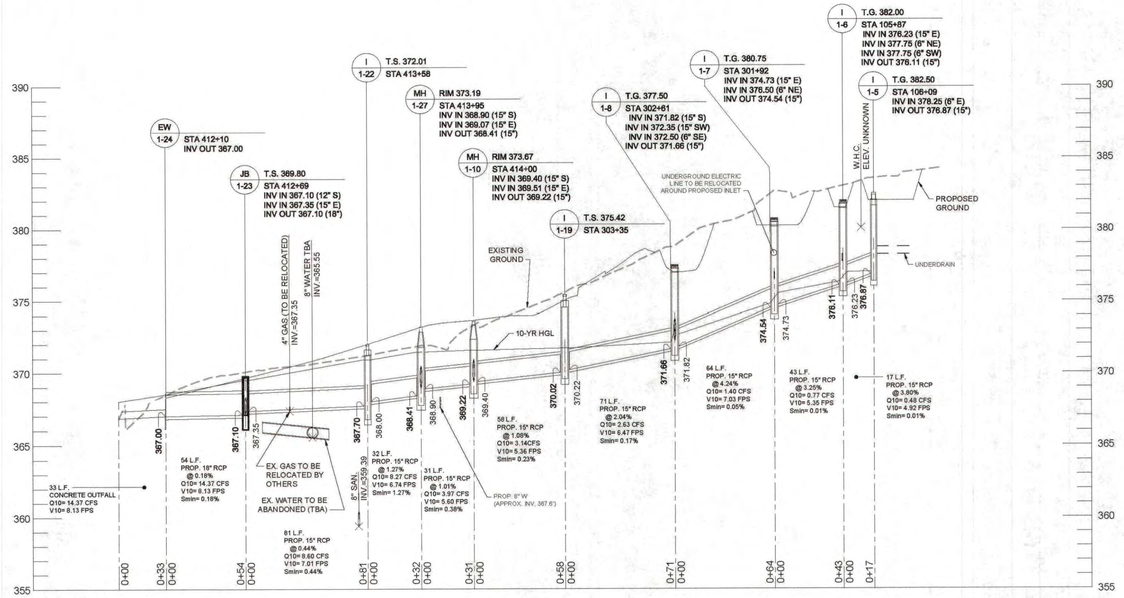
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

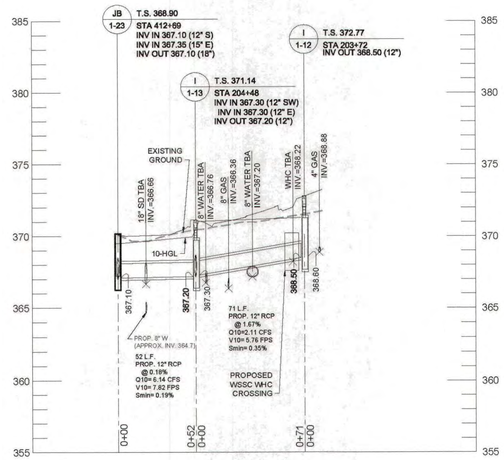
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574



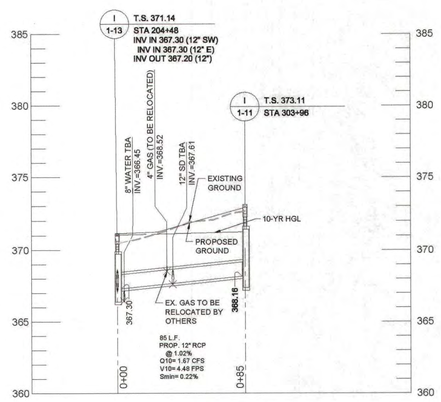
I-1-5 TO EW-1-24

SCALE: HORIZ. 1"=50' VERT. 1"=5'



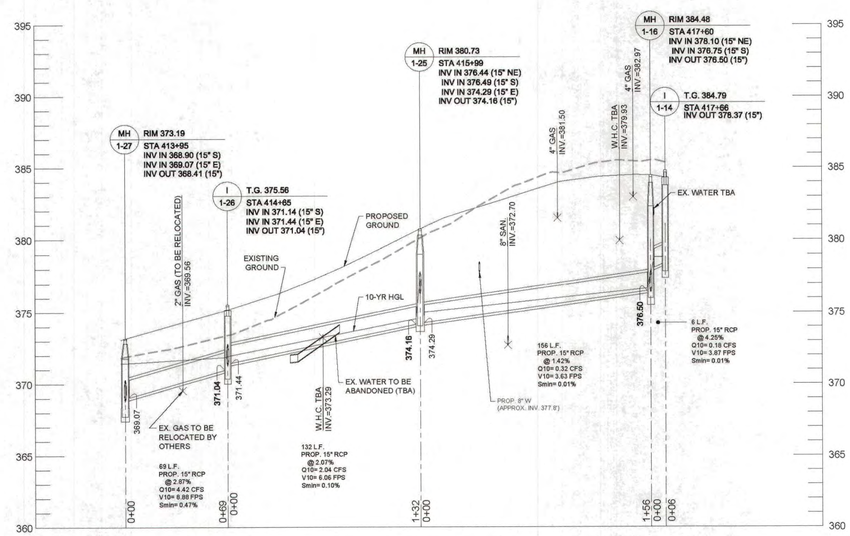
I-1-12 to JB-1-23

SCALE: HORIZ. 1"=50' VERT. 1"=5'



I-1-11 TO I-1-13

SCALE: HORIZ. 1"=50' VERT. 1"=5'



I-1-14 TO MH-1-27

SCALE: HORIZ. 1"=50' VERT. 1"=5'

NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY ELEVATIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER, UNDER, OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TEMPORARILY SUPPORT ALL EXCAVATIONS AS NECESSARY TO PROTECT EXISTING UTILITIES AND STRUCTURES AND MEET OSHA REQUIREMENTS.
3. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES AND EXCAVATIONS WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. IT IS RECOMMENDED THAT FIELD VERIFICATIONS OF THE EXISTING WASHINGTON GAS FACILITIES SHOULD BE PERFORMED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY WASHINGTON GAS AT (703)750-1000 TO SCHEDULE PERSONNEL FOR DAMAGE PREVENTION 10 BUSINESS DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY EXPOSURE OF THE EXISTING GAS MAINS DURING THE CONSTRUCTION SHALL BE PERFORMED UNDER SUPERVISION OF ONSITE WASHINGTON GAS PERSONNEL(S). ALL EXPOSED GAS MAINS SHALL BE PROTECTED BY A WGL APPROVED PROTECTIVE SHIELD.
4. ANY DAMAGE INCURRED TO THE EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE UTILITY OWNER AT THE CONTRACTOR'S EXPENSE.
5. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

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

0 50' 100'
HORIZONTAL SCALE: 1"=50'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

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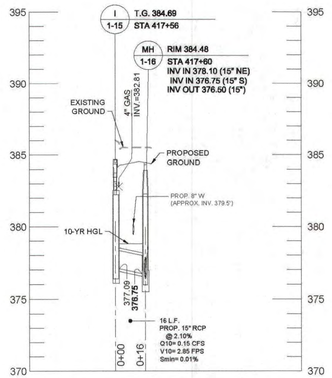
Designed by: KJS Drawn by: KJS Checked by: DZ

DP-01 DRAINAGE PIPE PROFILE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

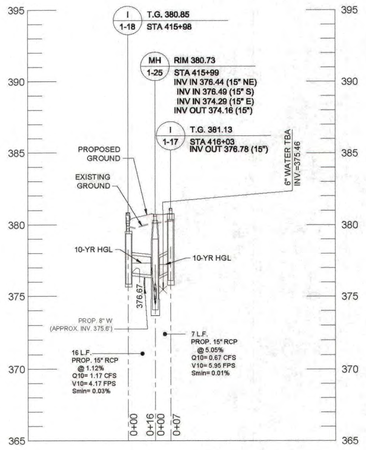
SCALE: AS NOTED DATE: FEBRUARY 2018

Project No.: 501307 SHEET 28 of 123



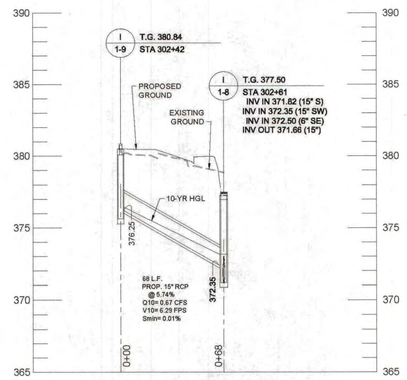
I-1-15 TO MH-1-16

SCALE: HORIZ. 1"=50' VERT. 1"=5'



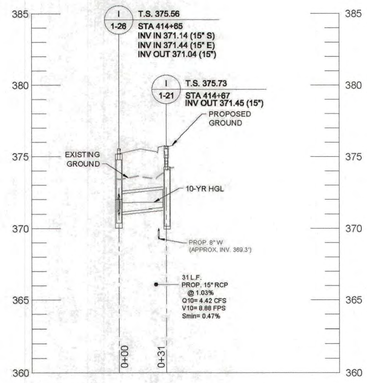
I-1-17 TO I-1-18

SCALE: HORIZ. 1"=50' VERT. 1"=5'



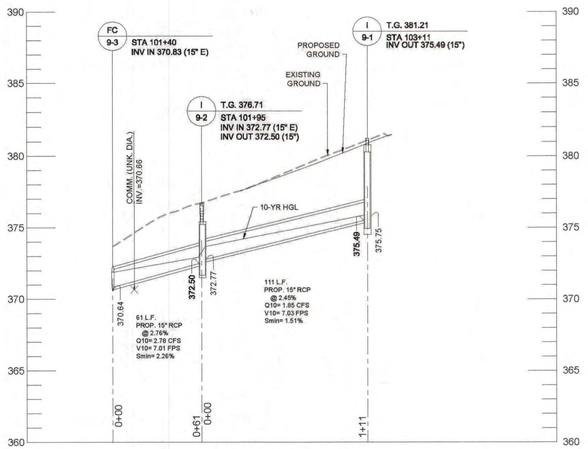
I-1-9 TO I-1-8

SCALE: HORIZ. 1"=50' VERT. 1"=5'



I-1-21 TO I-1-26

SCALE: HORIZ. 1"=50' VERT. 1"=5'



I-9-1 TO FC-9-3

SCALE: HORIZ. 1"=50' VERT. 1"=5'

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

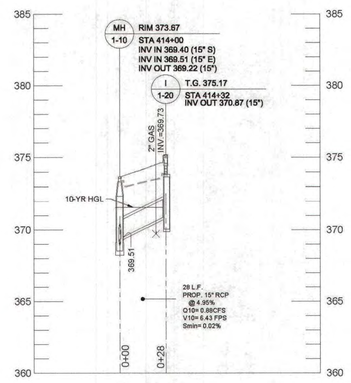
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

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I-1-20 TO MH-1-10

SCALE: HORIZ. 1"=50' VERT. 1"=5'

NOTES:

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

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HORIZONTAL SCALE: 1"=50'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

DP-02 DRAINAGE PIPE PROFILE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 29 of 123

EROSION AND SEDIMENT CONTROL — GENERAL NOTES

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. The permittee shall notify the Department of Permitting Services (DPS) forty–eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre–construction meeting between them or their representative, their engineer and an authorized representative of the Department.
2. The permittee must obtain inspection and approval by DPS at the following points:
   A. At the required pre–construction meeting.
   B. Following installation of sediment control measures and prior to any other land disturbing activity.
   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see inspection Checklist on plan). Notification prior to commencing construction is mandatory.
   D. Prior to removal or modification of any sediment control structure(s).
   E. Prior to final acceptance.
3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.
4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
6. Following initial soil disturbance or re–disturbance, permanent or temporary stabilization must be completed within:
   a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
   b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

   All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
7. The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.
12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non– maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low–maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty–four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty–eight (48) hours after the end of a rainfall.
16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
17. All inlets in non–sump areas shall have asphalt berms installed at the time of base paving establishment.
18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one–half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST–III) or when required by the sediment control inspector.
22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.
23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1–800–257–7777, 48 hours prior to the start of work.
25. Off–site spoil or borrow areas must have prior approval by DPS.
26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:
   A. Pump discharge may be directed to another on–site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non–erosive outlet; or
   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non–woven fabric), or approved equivalent, located in an undisturbed buffer area.
   Remember: Dewatering operation and method must have prior approval by the DPS inspector.
27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

STANDARD SYMBOLS

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

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018
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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

STANDARD NOTES

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

STANDARD SEQUENCE OF CONSTRUCTION NOTES

1. Prior to clearing trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on–site with the Montgomery County Department of Permitting Services (MCDPS) sediment control inspector (240) 777–6210 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement Inspector (301) 495–4571 (48 hours notice), the Owners representative, and the site Engineer. **
2. The limits of disturbance shall be field marked prior to clearing of trees, installation of sediment control measures, construction, or other land disturbing activities.
3. The permittee must obtain written approval from the MNCPPC inspector, certifying that the limits of disturbance and tree protection measures are correctly marked and installed prior to commencing any clearing.
4. Clear and grade for installation of sediment control devices.
5. Install sediment control devices. Traps and basins shall be constructed prior to construction of any earth dikes that convey drainage to a trap and/or basin.
6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading.
7. The detailed sequence of construction by phase is presented on Sheets SC–06 thru SC–20.

NOTE 1: The permittee shall obtain written approval from MCDPS inspector, prior to the removal of any sediment control devices.

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

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

**** In order for the meeting to occur, the applicant must provide one paper set of approved sediment control plans to the MCDPS sediment control inspector at the preconstruction meeting. If no plans are provided, the meeting shall not occur and will need to be rescheduled prior to commencing any work.**

SITE INFORMATION		
DISTURBED AREA (LOD)	CUT (CY)	FILL (CY)
3.48 ac	3,520	652

P.E. 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. 43192 , EXPIRATION DATE: 12–19–18

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:
MICRO–BIORETENTION, NON–ROOFTOP
RUNOFF DISCONNECTION.
Reviewed 1/4/2019 Date
Approved 1/4/2019 Date
236807 SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/2019 Date
Approved 1/4/2019 Date

Administrative Requirements:
Reviewed 1/4/2019 Date
283016 SEDIMENT CONTROL PERMIT NO.
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC–01 NOTES SHEET

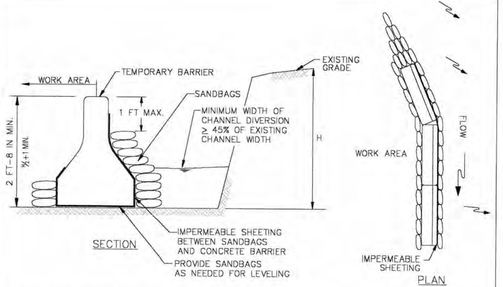
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 30 of 123

DETAIL C-7 TEMPORARY BARRIER DIVERSION

STANDARD SYMBOL: TBD



CONSTRUCTION SPECIFICATIONS

1. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA–VIOLET RADIATION, TEARING, AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
2. USE BARRIER MADE OF CONCRETE OR OTHER APPROVED MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNCTURING AND TEARING.
4. ESTABLISH TOP ELEVATION AT H/2 + 1 FOOT FOR PROJECTS OF DURATION LESS THAN 2 WEEKS OR AS SPECIFIED ON APPROVED PLAN.
5. INSTALL DIVERSION STRUCTURE FROM UPGRADE TO DOWNGRADE.
6. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 18 INCHES.
7. USE SANDBAG BASE FOR LEVELING AND TO ESTABLISH MINIMUM TOP ELEVATION OF THE BARRIER AS REQUIRED.
8. DISPOSE OF ALL EXCAVATED MATERIALS IN AN APPROVED DISPOSAL AREA OUTSIDE OF THE 100–YEAR FLOODPLAIN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. KEEP ABUTMENTS BETWEEN CONCRETE BARRIERS WATER TIGHT. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

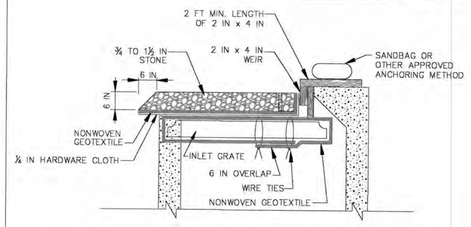
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

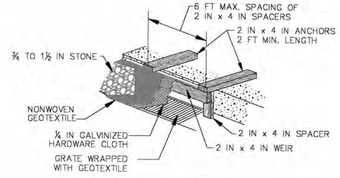
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

MAXIMUM DRAINAGE AREA = ¼ ACRE





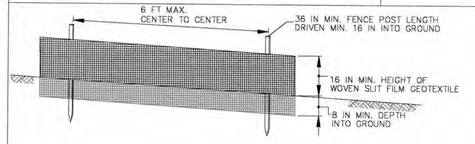
1 OF 2

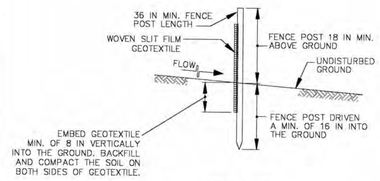
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

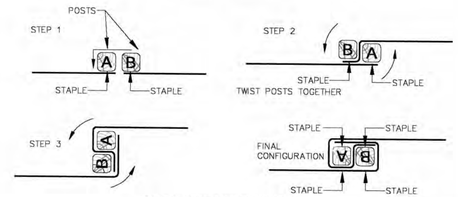
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF







1 OF 2

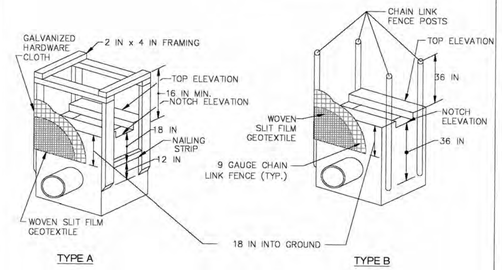
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

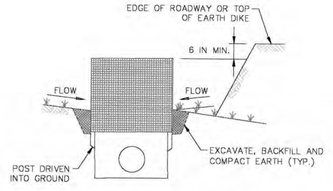
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ½ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE





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

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

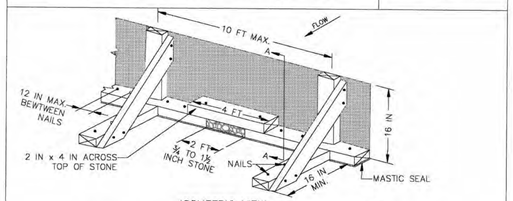
DATE APPROVED 12/03/2018

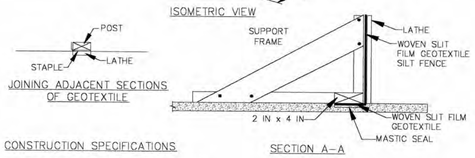
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574.

DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL: SFOP





CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
3. 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.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT–LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
4. ATTACH A CONTINUOUS PIECE OF ½ 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 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
6. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
7. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
8. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
9. FORM THE ¼ INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
10. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
11. 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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¼ X 1¼ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

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

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

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

MCDPS APPROVED FOR:

Stormwater Management:

MICRO–BIORETENTION, NON–ROOFTOP RUNOFF DISCONNECTION.

Reviewed 1/4/2019 Date

Approved 1/4/2019 Date

236807 SM FILE #

Sediment Control Technical Requirements:

Reviewed 1/4/2019 Date

Approved 1/4/2019 Date

Administrative Requirements:

Reviewed 1/4/2019 Date

283016 SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC–02 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

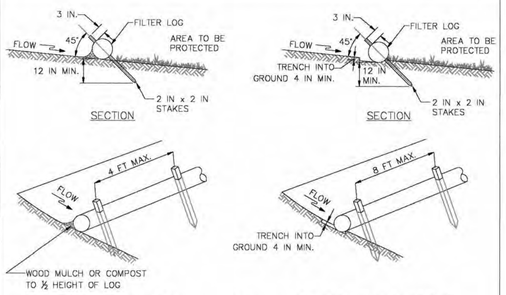
SCALE: AS NOTED DATE: NOVEMBER 2017

Project No.: 501307 SHEET 31 of 123

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.

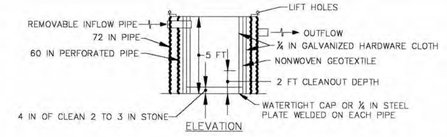
2 OF 2

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 F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: ⊠PST



CONSTRUCTION SPECIFICATIONS

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

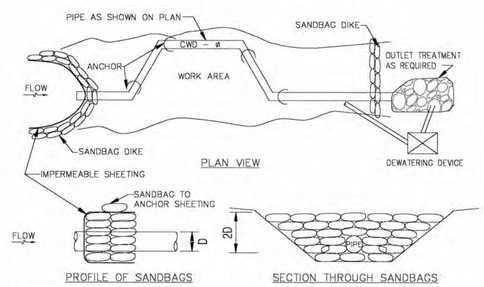
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL C-6 CLEAR WATER DIVERSION PIPE

STANDARD SYMBOL: CWD – 12

DESIGNATION CWD-12 REFERS TO 12 INCH CLEAR WATER DIVERSION.



CONSTRUCTION SPECIFICATIONS

1. FLEXIBLE PIPE IS PREFERRED. HOWEVER, CORRUGATED METAL PIPE OR EQUIVALENT PVC PIPE CAN BE USED. MAKE ALL JOINTS WATERTIGHT.
2. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA-VIOLENT RADIATION, TEARING, AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNTURING AND TEARING.
4. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 18 INCHES.
5. SET HEIGHT OF SANDBAG DIKE AT TWICE THE PIPE DIAMETER. MAINTAIN HEIGHT ALONG LENGTH OF SANDBAG DIKE. PLACE DOUBLE ROW OF SANDBAGS.
6. AT A MINIMUM, SECURELY ANCHOR DIVERSION PIPE AT EACH DOWNGRADE JOINT.
7. SET OUTLET END OF DIVERSION PIPE LOWER THAN INLET END.
8. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. KEEP POINT OF DISCHARGE FREE OF EROSION. MAINTAIN WATER TIGHT CONNECTIONS AND POSITIVE DRAINAGE. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

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

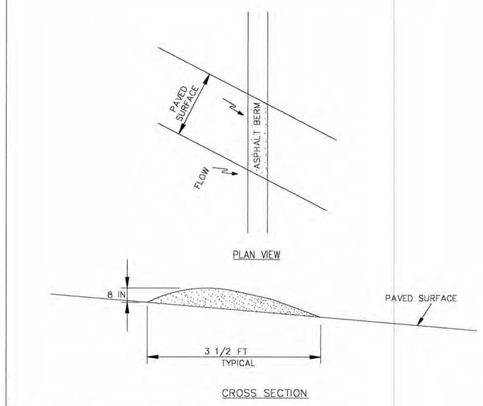
TREE PRESERVATION NOTES

COORDINATE ALL TREE PRESERVATION ACTIVITIES WITH EROSION & SEDIMENT CONTROL ACTIVITIES AND THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR.

1. PLACE TREE PROTECTION FENCE AS INDICATED ON THE PLANS AND AS PER THE DIRECTION OF THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR PRIOR TO CONSTRUCTION ACTIVITIES.
2. FOR UNDERGROUND UTILITY CONSTRUCTION, ALL TREE PROTECTION MEASURES AND EXCAVATION OPERATIONS SHALL HAVE ADDITIONAL SUPERVISION PROVIDED BY THE COUNTY ARBORIST. UTILITY WORK SHALL BE CONDUCTED SO AS TO AVOID INJURY TO THE TREE TRUNKS, BRANCHES, AND ROOTS.
3. MAINTAIN WELL-DEFINED AND MARKED PEDESTRIAN WALKWAYS DURING CONSTRUCTION AND DO NOT ALLOW PEDESTRIAN TRAFFIC OVER TREE ROOTS.
4. NONE OF THE FOLLOWING SHALL OCCUR WITHIN THE CRITICAL ROOT ZONE OF A STREET TREE WITHOUT THE COUNTY ARBORIST'S PERMISSION: ALTERATION OR DISTURBANCE TO EXISTING GRADE, STAGING/STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, OR DEBRIS; DISPOSAL OF ANY LIQUIDS E.G. CONCRETE, GAS, OIL, PAINT; AND BLACKTOP, AND TRENCHING.
5. NO HEAVY EQUIPMENT SHALL BE USED TO REMOVE EXISTING HARDSCAPE WITHIN THE DRIPLINE OF AN EXISTING STREET TREE. EXCAVATIONS WITHIN THE DRIP LINE SHALL PROCEED WITH CARE BY USE OF HAND TOOLS OR EQUIPMENT THAT WILL NOT CAUSE INJURY TO TREE TRUNKS, BRANCHES, AND ROOTS.
6. NO ROOTS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE CUT WITHOUT THE PERMISSION OF THE COUNTY ARBORIST.
7. PERFORM AERATION OPERATIONS AROUND TREE ROOTS AND GRASS PANEL AREAS TO IMPROVE DRAINAGE IN COMPACTED SOILS.
8. PROVIDE WATER, ADDITIONAL FERTILIZER, AND ORGANIC AMENDMENTS TO PLANTED AREAS THAT ARE EXPECTED TO REMAIN, PRIOR TO, DURING, AND POST-CONSTRUCTION. DO NOT ALLOW TREES TO BECOME WATER-STRESSED DURING OR POST-CONSTRUCTION.
9. AVOID CAUSING CHANGES TO PH IN SOILS ASSOCIATED WITH PLANTED AREAS. MATERIALS PLACED IN CLOSE PROXIMITY TO TREE ROOTS SHOULD BE AS SELF-CONTAINED AS POSSIBLE TO PREVENT FUTURE LEACHING OF MATERIALS AND CHEMICALS INTO SOILS.
10. MINIMIZE EXPOSURE OF ROOTS DURING CONSTRUCTION WHEN WORK IS PERFORMED IN COLD OR HOT WEATHER.

DETAIL C-5 TEMPORARY ASPHALT BERM

STANDARD SYMBOL: TAB



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT BERM ON AN UNINTERRUPTED, CONTINUOUS GRADE.
2. INSTALL BERM TO CONFORM TO CROSS SECTION. DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 3½ FEET.
3. PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
4. COMPACT ASPHALT BERM.
5. REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
6. UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

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

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

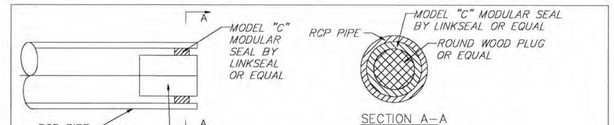
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574



TEMPORARY PLUG OF RCP PIPES

N.T.S.

NOTE:

CONTRACTOR MAY USE HIS / HER OWN DESIGN FOR TEMPORARY PLUG OF PIPE. SUCH ALTERNATE DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.		
Reviewed 1/4/2019 Date	Reviewed 1/4/2019 Date	Reviewed 1/4/2019 Date
Approved 1/4/2019 Date	Approved 1/4/2019 Date	283016 SEDIMENT CONTROL PERMIT NO.
236807 SM FILE #		MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL:

SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED

SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC-03 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 32 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY [signature] CHIEF, CONSTRUCTION SECTION

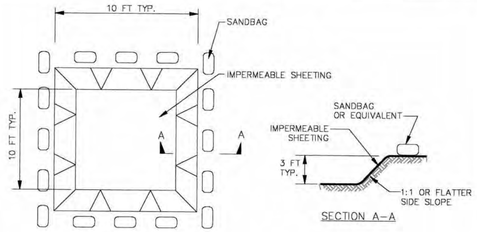
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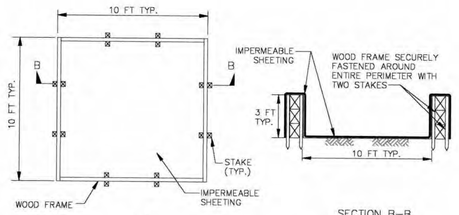
DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



PLAN

EXCAVATED WASHOUT STRUCTURE



PLAN

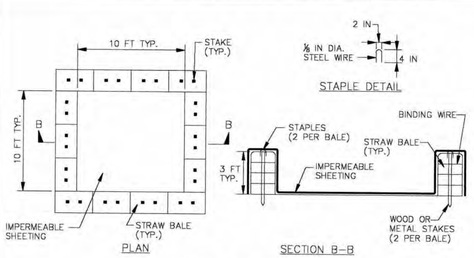
WASHOUT STRUCTURE WITH WOOD PLANKS

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 H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

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

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO–BIORETENTION, NON–ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/2019 Date	Reviewed 1/4/2019 Date
Reviewed 1/4/2019 Date	Approved 1/4/2019 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/2019 Date		
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC–04 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 33 of 123

PHASE 1A - SHEET 35

PHASE 1B - SHEET 36

PHASE 1C - SHEET 37

PHASE 1D - SHEET 37A

PHASE 2A - SHEET 38

PHASE 2B - SHEET 39

PHASE 3A - SHEET 40

PHASE 3B - SHEET 41

PHASE 3C - SHEET 42

PHASE 4A - SHEET 43

PHASE 4B - SHEET 44

PHASE 5A - SHEET 45

PHASE 5B - SHEET 46

PHASE 6A - SHEET 47

PHASE 6B - SHEET 48

LIMIT OF FIELD-RUN SURVEY

EROSION AND SEDIMENT CONTROL PLAN - KEY MAP
SCALE: 1" = 40'

LEGEND

LIMIT OF DISTURBANCE ——LOD——LOD——

DRAINAGE AREA BOUNDARY - - - - - -

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLANS (LS-05 & LS-06), SHEETS 82-83

SHADE TREE LOCATIONS ARE IDENTIFIED ON THE LANDSCAPING PLAN (LS-01), SHEET 78

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC-05 ESC KEY MAP

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=40' DATE: FEBRUARY 2018

Project No. : 501307 SHEET 34 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 11/4/2019 Date	Reviewed 11/4/2019 Date
Reviewed 11/4/2019 Date	Approved 11/4/2019 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/2019 Date		
236807 SM FILE #		

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DEPARTMENT OF PERMITTING SERVICES

Isiah Leggett, County Executive — Diane R. Schwartz Jones, Director

January 17, 2017

Mr. Scott Miller, P.E.
Johnson, Mirmiran, & Thompson, Inc.
72 Loveton Circle
Sparks, MD 21152

Re: ***SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN Revision*** Request for
Seminary Road Intersection Improvements
SM File #: 236807
Tract Size/Zone: 7.52/County Rights of Way
Total Concept Area: 3.4 Ac.
Watershed: Lower Rock Creek and Sligo Creek

Dear Mr. Miller:

Based on a review by the Department of Permitting Services Review Staff, the Site Development Stormwater Management Plan for the above mentioned site is **acceptable**. The plan proposes to meet required stormwater management goals via ESD to the MEP with the use of micro-bioretention and non-rooftop disconnect. Since the treatment provided does not meet a Pe of 1 and due to site limitations and existing shallow storm drain, a full waiver is granted for the remaining stormwater management.

The following **items** will need to be addressed **during** the final stormwater management design plan stage:

1. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
2. An engineered sediment control plan must be submitted for this development.
3. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
4. Landscaping shown on the approved Landscape Plan as part of the approved Site Plan are for illustrative purpose only and may be changed at the time of detailed plan review of the Sediment Control/Storm Water Management plans by the Mont. Co. Department of Permitting Services, Water Resources Section.
5. This site is considered as a redevelopment site.
6. Use MCDPS latest design criteria for design of the micro-bioretention structures.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is not required**. If a fee was required, it would be in the amount of $69,700.

255 Rockville Pike, 2nd Floor • Rockville, Maryland 20850 • 240-777-6300 • 240-777-6256 TTY
www.montgomerycountymd.gov
montgomerycountymd.gov/311 311 240-773-3556 TTY

This letter must appear on the final stormwater management design plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken; and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact David Kuykendall at 240-777-6332.

Sincerely,

Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

MCE: CN 236807 Seminary Road Intersection Improvements Revision.DWK

cc: SM File # 265795

ESD Acres: 0.65
STRUCTURAL Acres: 0.00
WAIVED Acres: 3.40

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

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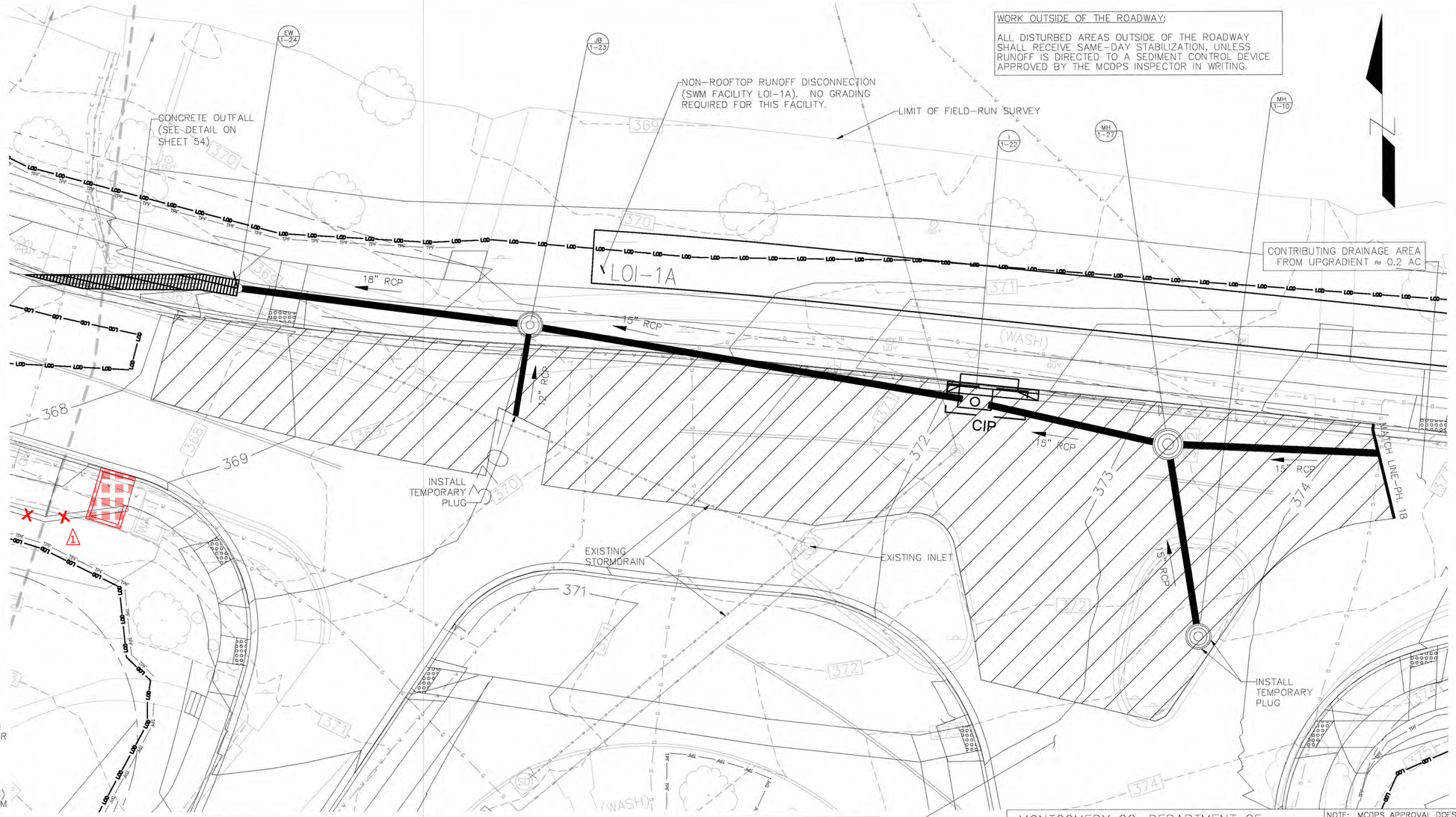
GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 1A):

1. PRIOR TO CLEARING OF 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), THE OWNERS REPRESENTATIVE, AND THE SITE ENGINEER. **
2. SETUP MOT WORK ZONE FOR PHASE 1 AS DIRECTED IN THE MOT PLANS.
3. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO BE INSTALLED PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN THE PHASE LIMITS. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
4. USING A 3-DAY DRY WEATHER PERIOD PER NOAA, REMOVE EXISTING CHANNELIZING ISLANDS WHILE KEEPING THE EXISTING INLET INTACT. CONSTRUCT STORM DRAIN (PIPES AND STRUCTURES) AND STABILIZE DISTURBED AREAS WITHIN WORK ZONE. THE STORM DRAIN SHALL BE CONSTRUCTED BEGINNING AT THE EW-1-24 OUTFALL AND WORKING FROM DOWNSTREAM TO UPSTREAM. INSTALL CURB INLET PROTECTION (CIP) AT I-1-22 ONCE CONSTRUCTED.
5. CONTRACTOR SHALL CONSTRUCT ONLY ENOUGH PIPE SO THAT THE PIPE TRENCH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY. PERFORM PAVING AS DICTATED BY MOT NEEDS.
6. TEMPORARILY PLUG ALL PIPE OPENINGS THAT CANNOT BE CONNECTED TO UPSTREAM DRAINAGE STRUCTURES UNTIL LATER PHASES, SO STORMWATER CAN BE CONVEYED THROUGH THE COMPLETED PIPES IN A NON-EROSIVE MANNER.
7. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

** THE M-NCPPC, PLANNING DEPARTMENT, AND PLANS ENFORCEMENT INSPECTOR (301) 495-4550 (48 HOURS NOTICE) SHALL ALSO BE NOTIFIED PRIOR TO THE PRECONSTRUCTION MEETING.
IN ORDER FOR THE MEETING TO OCCUR, THE APPLICANT MUST PROVIDE ONE PAPER SET OF APPROVED SEDIMENT CONTROL PLANS TO THE MCDPS SEDIMENT CONTROL INSPECTOR AT THE PRECONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.
A. THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.
B. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE M-NCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.



EROSION AND SEDIMENT CONTROL PLAN – PHASE 1A

SCALE: 1" = 10'

LEGEND

PHASE WORKZONE (WITHIN ROADWAY)

LIMIT OF DISTURBANCE — LOD —

SILT FENCE ON PAVEMENT — SFOP —

TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD

CLEARWATER DIVERSION PIPE CWD-12

CURB INLET PROTECTION CIP

TREE PROTECTION FENCE — TPF —

SANDBAG DIVERSION BARRIER

STANDARD INLET PROTECTION (TYPE B) SIP

0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY
1	Resize Bus Stop	5/03/2019	ADS

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807 SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

Administrative Requirements:
Reviewed 1/4/19 Date
283016 SEDIMENT CONTROL PERMIT NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

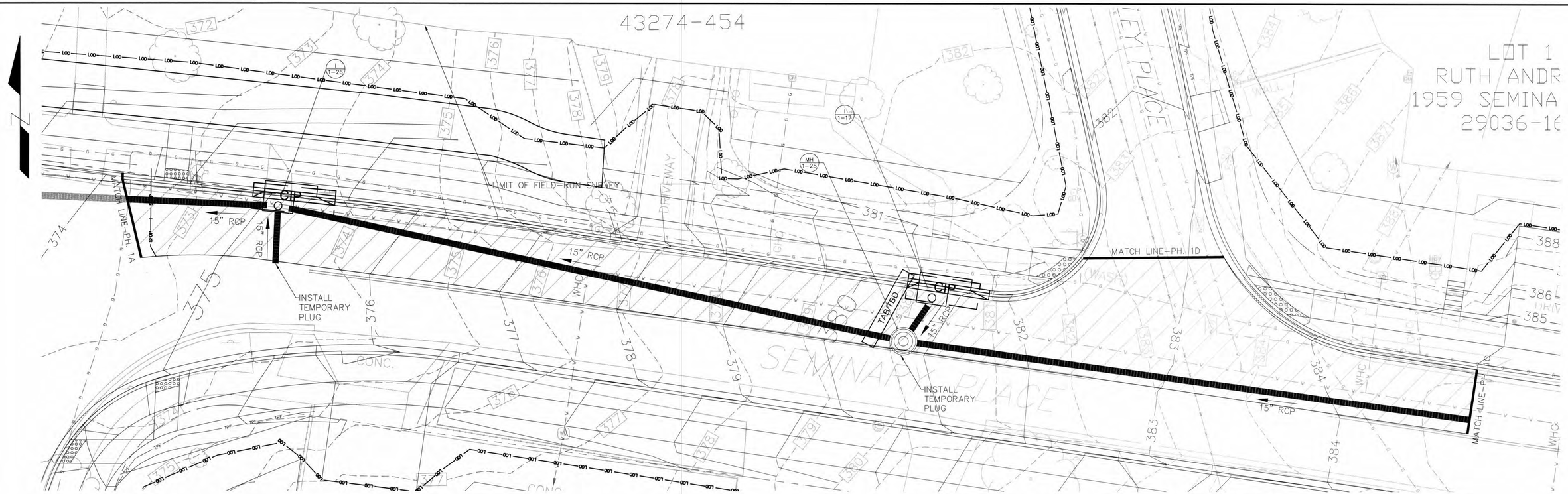
DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not 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.

EROSION AND SEDIMENT CONTROL
SC-06 PHASE 1A ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: FEBRUARY 2018

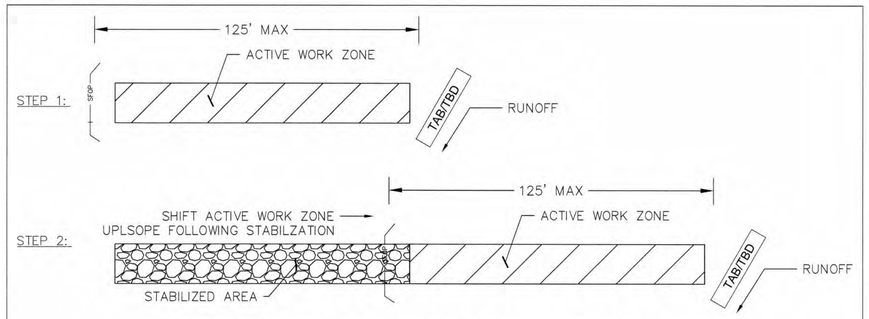
Project No.: 501307 SHEET 35 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 1B
1" = 10'

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.



WORK ZONE E&SC PROTECTION – TYPICAL DETAIL
NOT TO SCALE

NOTE: SAME-DAY STABILIZATION MAY BE UTILIZED IN LIEU OF PROVIDING TEMPORARY ASPHALT BERMS/BARRIER DIVERSIONS AND SILT FENCE ON PAVEMENT. WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO REMOVING ANY SEDIMENT CONTROL MEASURES.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION — TAB/TBD
- CLEARWATER DIVERSION PIPE — CWD-12
- SANDBAG DIVERSION BARRIER
- STANDARD INLET PROTECTION (TYPE B) — SIP
- CURB INLET PROTECTION — CIP
- TREE PROTECTION FENCE — TPF —

0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

SEQUENCE OF CONSTRUCTION (PHASE 1B):

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. INSTALL SILT FENCE ON PAVEMENT AT THE DOWNSTREAM END OF THE WORKZONE, INSTALL A TEMPORARY ASPHALT BERM/BARRIER DIVERSION UPSLOPE OF THE SILT FENCE ON PAVEMENT AT A DISTANCE OF NO MORE THAN 125 FEET.

   SAME-DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING TEMPORARY ASPHALT BERM/DIVERSION BARRIER AND SILT FENCE ON PAVEMENT.
3. CONSTRUCT STORM DRAINS (PIPES AND STRUCTURES) WITHIN THE WORK ZONE WORKING FROM DOWNSTREAM TO UPSTREAM. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION. INSTALL CIP AT I-1-26 AND I-1-17 UPON COMPLETION.
4. THE SFOP AND TBD MAY BE SHIFTED UPSLOPE AS THE ACTIVE WORK AREA PROGRESSES, PROVIDED A MAXIMUM SLOPE OF 125' DRAINS TO THE SFOP. SEE WORK ZONE E&SC PROTECTION DETAIL, THIS SHEET.
5. ONCE ENTIRE WORK ZONE HAS BEEN STABILIZED AND WRITTEN APPROVAL FROM THE MCDPS INSPECTOR HAS BEEN RECEIVED, SILT FENCE ON PAVEMENT SHALL BE REMOVED.
6. TEMPORARILY PLUG ALL PIPE OPENINGS THAT CANNOT BE CONNECTED TO UPSTREAM DRAINAGE STRUCTURES UNTIL LATER PHASES, SO STORMWATER CAN BE CONVEYED THROUGH THE COMPLETED PIPES IN A NON-EROSIVE MANNER.
7. PERFORM PAVING OPERATIONS AS DICTATED BY MOT NEEDS.
8. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

WORK OUTSIDE OF THE ROADWAY:

ALL DISTURBED AREAS OUTSIDE OF THE ROADWAY SHALL RECEIVE SAME-DAY STABILIZATION, UNLESS RUNOFF IS DIRECTED TO A SEDIMENT CONTROL DEVICE APPROVED BY THE MCDPS INSPECTOR IN WRITING.

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLANS (LS-05 & LS-06), SHEETS 82-83

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.		
Reviewed 11/4/19 Date	Reviewed 11/4/19 Date	Reviewed 11/4/19 Date
Approved 11/4/19 Date	Approved 11/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

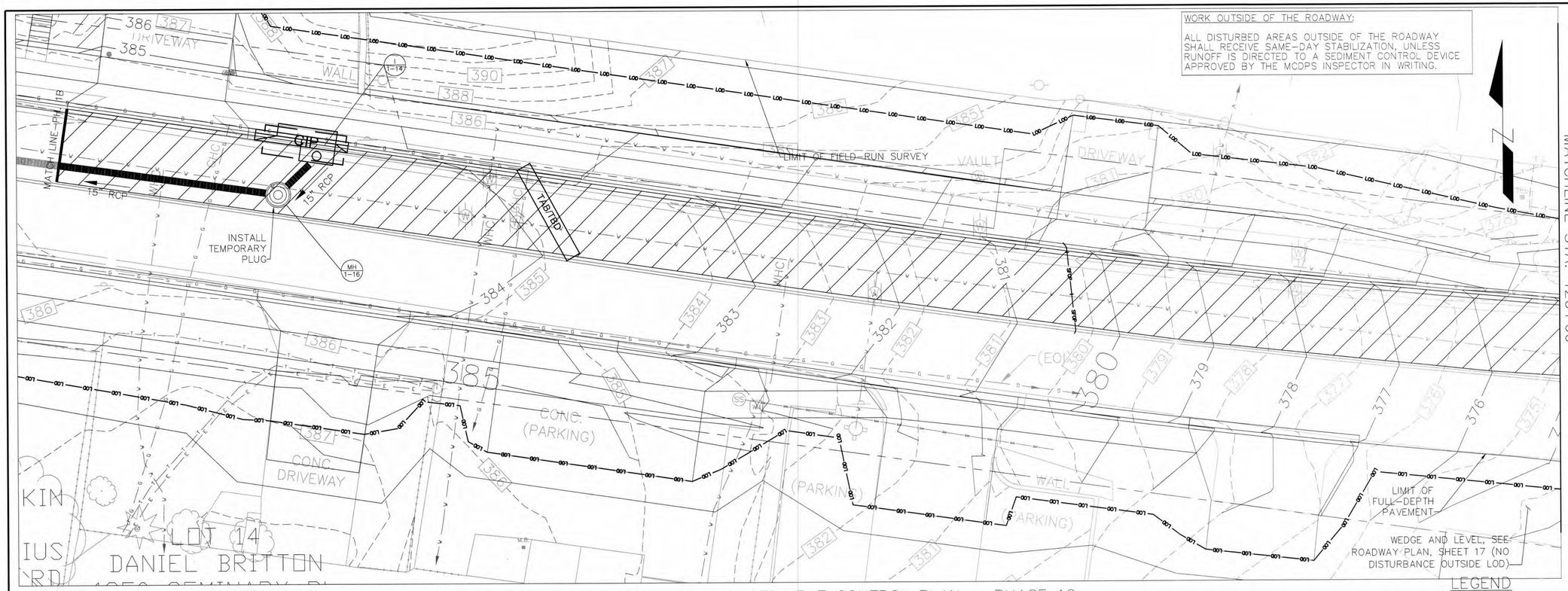
Designed by: KJS Drawn by: KJS Checked by: DZ

EROSION AND SEDIMENT CONTROL
SC-07 PHASE 1B ESC PLAN

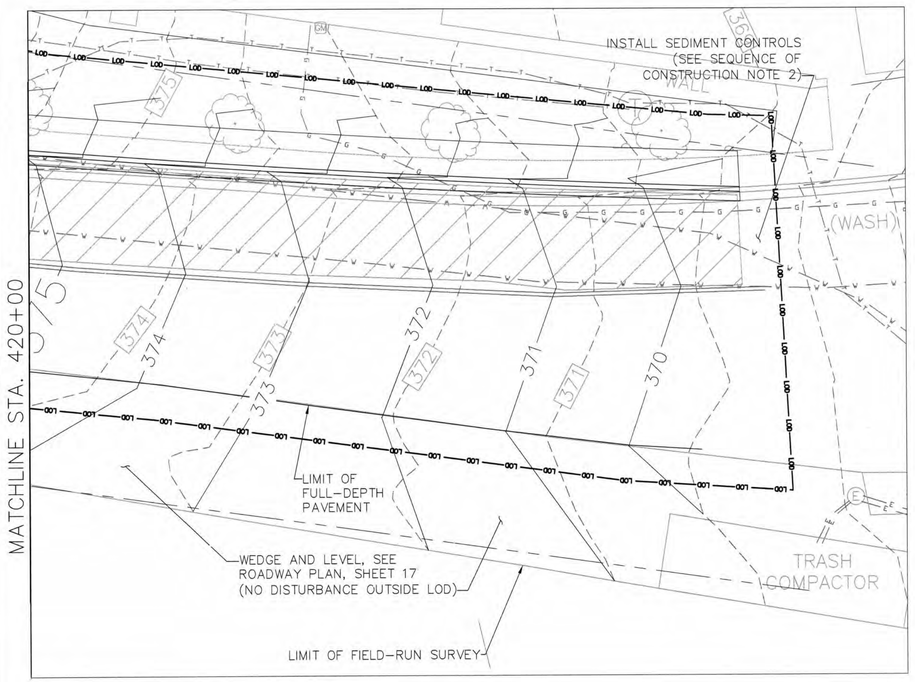
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: FEBRUARY 2018

Project No. : 501307 SHEET 36 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 1C
1" = 10'



EROSION AND SEDIMENT CONTROL PLAN – PHASE 1C
1" = 10'

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-06), SHEET 83

SEQUENCE OF CONSTRUCTION (PHASE 1C):

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. INSTALL SILT FENCE ON PAVEMENT AT THE DOWNSTREAM END OF THE WORKZONE, INSTALL A TEMPORARY ASPHALT BERM/BARRIER DIVERSION UPSLOPE OF THE SILT FENCE ON PAVEMENT AT A DISTANCE OF NO MORE THAN 125 FEET.

   SAME-DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING TEMPORARY ASPHALT BERM/DIVERSION BARRIER AND SILT FENCE ON PAVEMENT.
3. CONSTRUCT STORM DRAINS (PIPES AND STRUCTURES) WITHIN THE WORK ZONE WORKING FROM DOWNSTREAM TO UPSTREAM. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION. INSTALL CIP AT I-1-14 UPON COMPLETION.
4. THE SFOP AND TBD MAY BE SHIFTED ALONG THE ROADWAY AS THE ACTIVE WORK AREA PROGRESSES, PROVIDED A MAXIMUM SLOPE OF 125' DRAINS TO THE SFOP. SEE WORK ZONE E&SC PROTECTION DETAIL, SHEET 36.
5. ONCE ENTIRE WORK ZONE HAS BEEN STABILIZED AND WRITTEN APPROVAL FROM THE MCDPS INSPECTOR HAS BEEN RECEIVED, SILT FENCE ON PAVEMENT SHALL BE REMOVED.
6. TEMPORARILY PLUG ALL PIPE OPENINGS THAT CANNOT BE CONNECTED TO UPSTREAM DRAINAGE STRUCTURES UNTIL LATER PHASES, SO STORMWATER CAN BE CONVEYED THROUGH THE COMPLETED PIPES IN A NON-EROSIVE MANNER.
7. PERFORM PAVING OPERATIONS AS DICTATED BY MOT NEEDS.
8. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

PHASE WORKZONE (WITHIN ROADWAY)	
LIMIT OF DISTURBANCE	LOD
SILT FENCE ON PAVEMENT	SFOP
STANDARD INLET PROTECTION (TYPE B)	SIP
TEMPORARY ASPHALT BERM OR BARRIER DIVERSION	TAB/TBD
CLEARWATER DIVERSION PIPE	CWD-12
SANDBAG DIVERSION BARRIER	
CURB INLET PROTECTION	CIP
TREE PROTECTION FENCE	TPF

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved Date		
236807 SM FILE #		MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Transportation Planning and Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

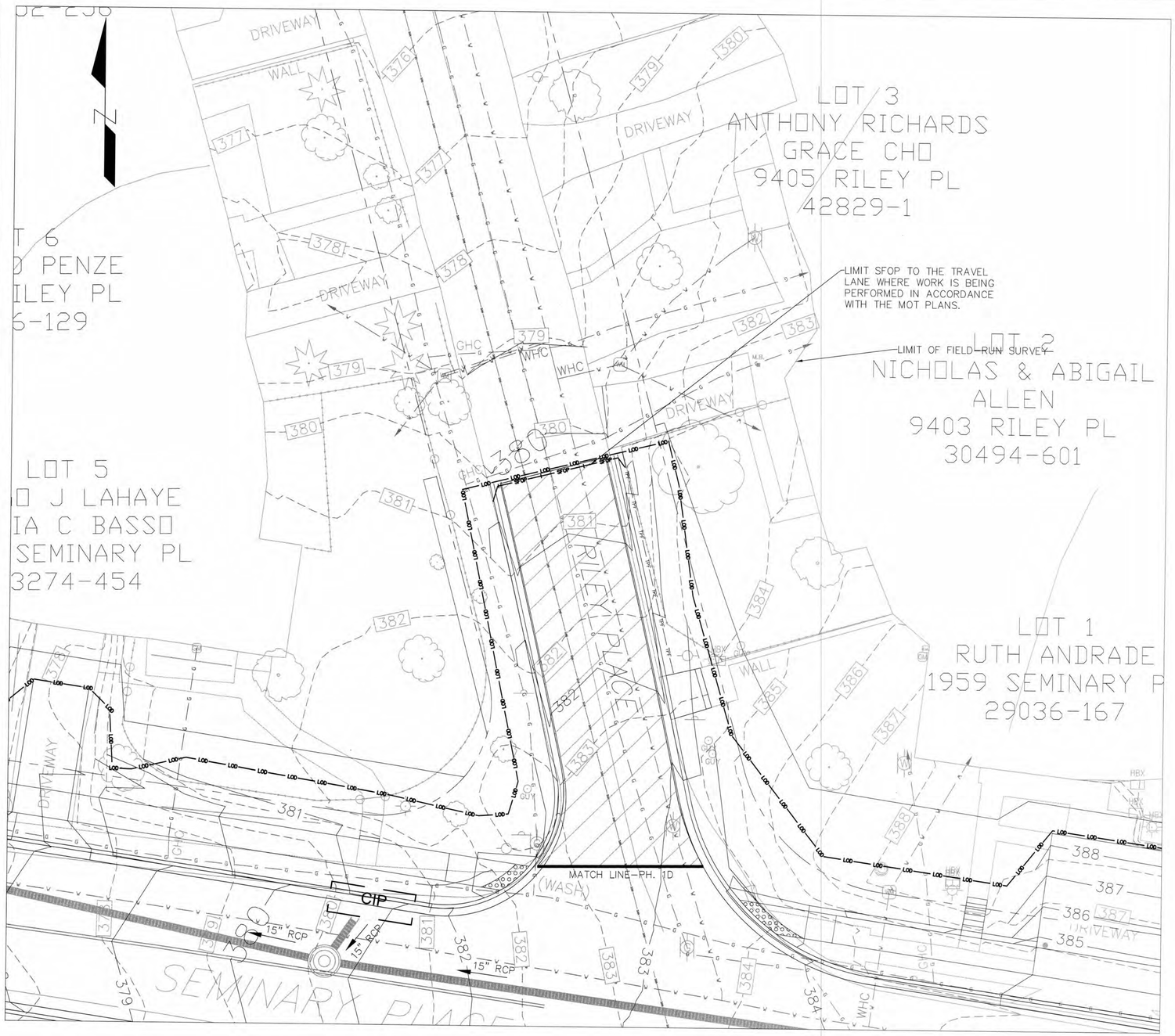
Designed by: KJS Drawn by: KJS Checked by: DZ

EROSION AND SEDIMENT CONTROL
SC-08 PHASE 1C ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 37 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 1D
1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLANS (LS-05 & LS-06), SHEETS 82-83

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 1D):

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO BE INSTALLED PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN THE PHASE LIMITS. SILT FENCE ON PAVEMENT SHALL BE INSTALLED AND MOVED AS NECESSARY TO KEEP A SINGLE LANE OF TRAFFIC OPEN AS DIRECTED IN THE MOT PLANS. WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO REMOVAL OF SEDIMENT CONTROLS.
3. INITIAL DISTURBANCE SHALL BE LIMITED TO THE SOUTHBOUND TRAFFIC LANE. ONCE FULL DEPTH CONSTRUCTION AND RESURFACING HAS BEEN COMPLETED IN THE SOUTHBOUND LANE AND WRITTEN APPROVAL IS OBTAINED FROM THE MCDPS INSPECTOR, SHIFT SILT FENCE ON PAVEMENT TO THE DOWNSTREAM END OF THE NORTHBOUND LANE AND COMPLETE FULL DEPTH CONSTRUCTION AND RESURFACING. ONCE ENTIRE WORK ZONE HAS BEEN STABILIZED AND WRITTEN APPROVAL IS OBTAINED, SILT FENCE ON PAVEMENT SHALL BE REMOVED. AREAS DOWNSLOPE FROM THE SFOP SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION [TAB/TBD]
- CLEARWATER DIVERSION PIPE [CWD-12]
- SANDBAG DIVERSION BARRIER
- STANDARD INLET PROTECTION (TYPE B) [SIP]
- CURB INLET PROTECTION [CIP]
- TREE PROTECTION FENCE — TPF —

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:
MICRO-BIORETENTION, NON-ROOFTOP
RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807
SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

Administrative Requirements:
Reviewed 1/4/19 Date
283016
SEDIMENT CONTROL PERMIT NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

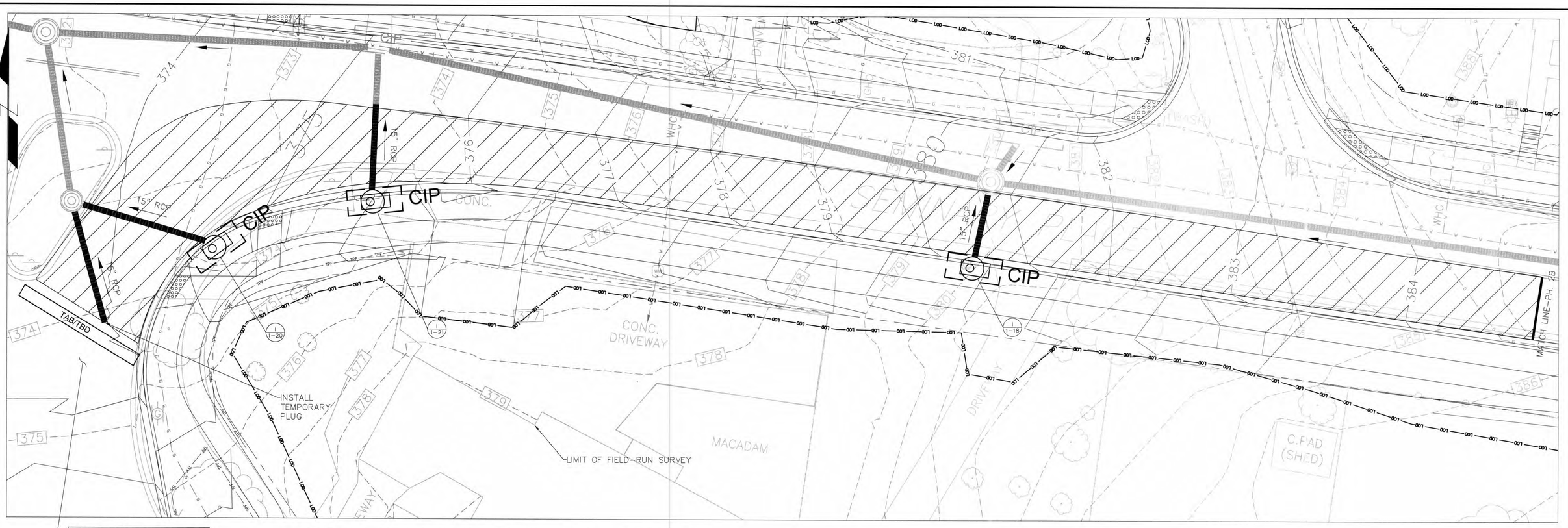
RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC-09 PHASE 1D ESC PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 37A of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 2A

1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLANS (LS-05 & LS-06), SHEETS 82-83

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 2A):

1. SETUP MOT FOR PHASE 2 AS DIRECTED IN THE PLANS.
2. INSTALL TAB/TBD ON SECOND AVENUE AS SHOWN TO PREVENT RUNOFF FROM SECOND AVENUE ENTERING THE WORK ZONE. WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH GRADING ACTIVITIES.
3. REMOVE TEMPORARY PLUG FROM MH-1-10 AND INSTALL PIPE TO I-1-20. INSTALL CIP UPON COMPLETION OF I-1-20.

   SAME-DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING TEMPORARY ASPHALT BERM/DIVERSION BARRIER AND SILT FENCE ON PAVEMENT.
4. WITH WRITTEN APPROVAL FROM THE MCDPS INSPECTOR, REMOVE TEMPORARY PLUGS AS NECESSARY TO CONNECT THE REMAINING PROPOSED STORM DRAINS. INSTALL CIP ON ALL INLETS IMMEDIATELY FOLLOWING INSTALLATION. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION.
5. CONTRACTOR SHALL CONSTRUCT ONLY ENOUGH PIPE SO THAT THE PIPE TRENCH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.
6. PERFORM PAVING OPERATIONS AS DICTATED BY MOT NEEDS.
7. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

PHASE WORKZONE (WITHIN ROADWAY)

LIMIT OF DISTURBANCE — LOD — LOD —

SILT FENCE ON PAVEMENT — SFOP — SFOP — SFOP —

STANDARD INLET PROTECTION (TYPE B) SIP

TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD

CLEARWATER DIVERSION PIPE CWD-12

SANDBAG DIVERSION BARRIER

CURB INLET PROTECTION CIP

TREE PROTECTION FENCE — TPF — TPF —

0 10' 20'

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/19 Date		
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

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Chief, Division of Transportation Engineering — Date

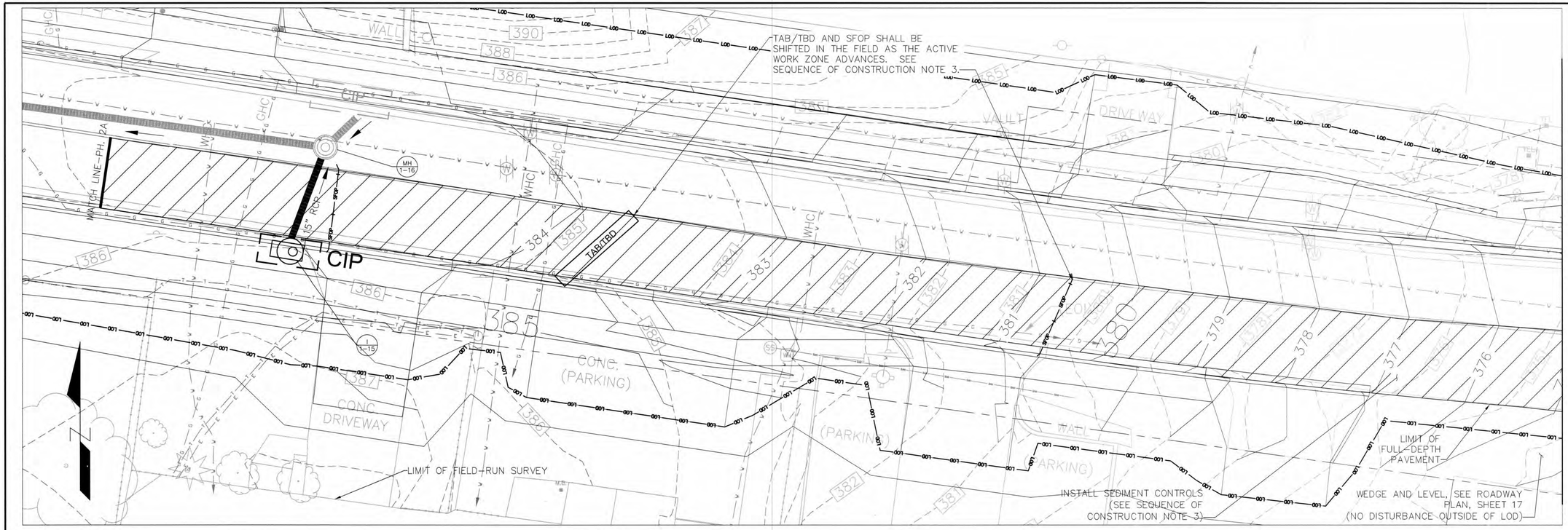
Designed by: KJS Drawn by: KJS Checked by: DZ

EROSION AND SEDIMENT CONTROL
SC-10 PHASE 2A ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

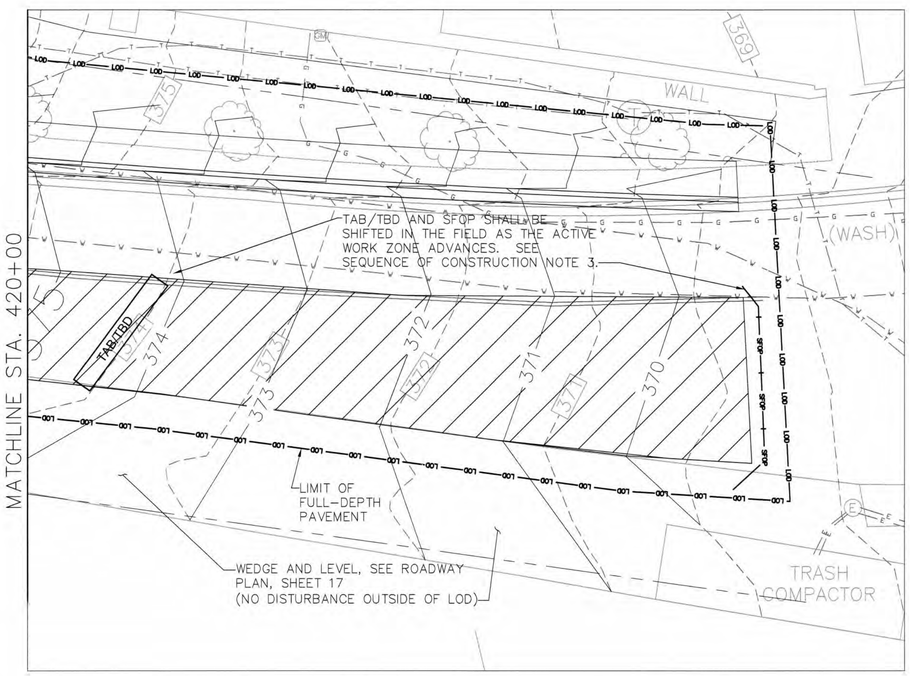
SCALE: 1"=10' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 38 of 123



MATCHLINE STA. 420+00

EROSION AND SEDIMENT CONTROL PLAN – PHASE 2B
1" = 10'



EROSION AND SEDIMENT CONTROL PLAN – PHASE 2B
1" = 10'

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION — TAB/TBD
- CLEARWATER DIVERSION PIPE — CWD-12 —
- SANDBAG DIVERSION BARRIER
- STANDARD INLET PROTECTION (TYPE B) — SIP
- CURB INLET PROTECTION — CIP
- TREE PROTECTION FENCE — TPF —

0 10' 20'

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS–APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT–OF–WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS–APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLANS (LS–05 & LS–06), SHEETS 82–83

SEQUENCE OF CONSTRUCTION (PHASE 2B):

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. INSTALL SFOP IMMEDIATELY EAST OF THE PROPOSED I–1–15 LOCATION AS SHOWN ON THE PLAN. REMOVE THE TEMPORARY PLUG AND INSTALL PIPE FROM MH–1–16 TO I–1–15. INSTALL CIP AT I–1–15 UPON COMPLETION. THE SFOP ADJACENT TO I–1–15 SHALL REMAIN IN PLACE UNTIL THE UPSLOPE AREAS ARE STABILIZED AND CIP IS INSTALLED ON I–1–15.
3. INSTALL TAB/TBD UPSLOPE FROM THE ACTIVE WORK AREA, AND INSTALL SFOP AT THE DOWNSTREAM END. THE SFOP AND TBD MAY BE SHIFTED ALONG THE ROADWAY AS THE ACTIVE WORK AREA PROGRESSES, PROVIDED A MAXIMUM SLOPE OF 125' DRAINS TO THE SFOP. SEE WORK ZONE E&SC PROTECTION DETAIL, SHEET 36. LIMIT CONSTRUCTION TO THE AREA BETWEEN THESE EROSION AND SEDIMENT CONTROL DEVICES. (SAME–DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING TEMPORARY ASPHALT BERM/DIVERSION BARRIER AND SILT FENCE ON PAVEMENT)
4. REPEAT THIS PROCESS UNTIL GRADED AGGREGATE BASE OR PAVEMENT HAS BEEN INSTALLED ALONG ENTIRE LENGTH OF PHASE 2B WORK ZONE. ONCE ENTIRE WORK ZONE HAS BEEN STABILIZED, SILT FENCE ON PAVEMENT AND TEMPORARY BARRIER DIVERSION SHALL BE REMOVED FROM THE TRAVEL LANES.
5. PERFORM PAVING OPERATIONS AS DICTATED BY MOT NEEDS.

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO–BIORETENTION, NON–ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/19 Date		
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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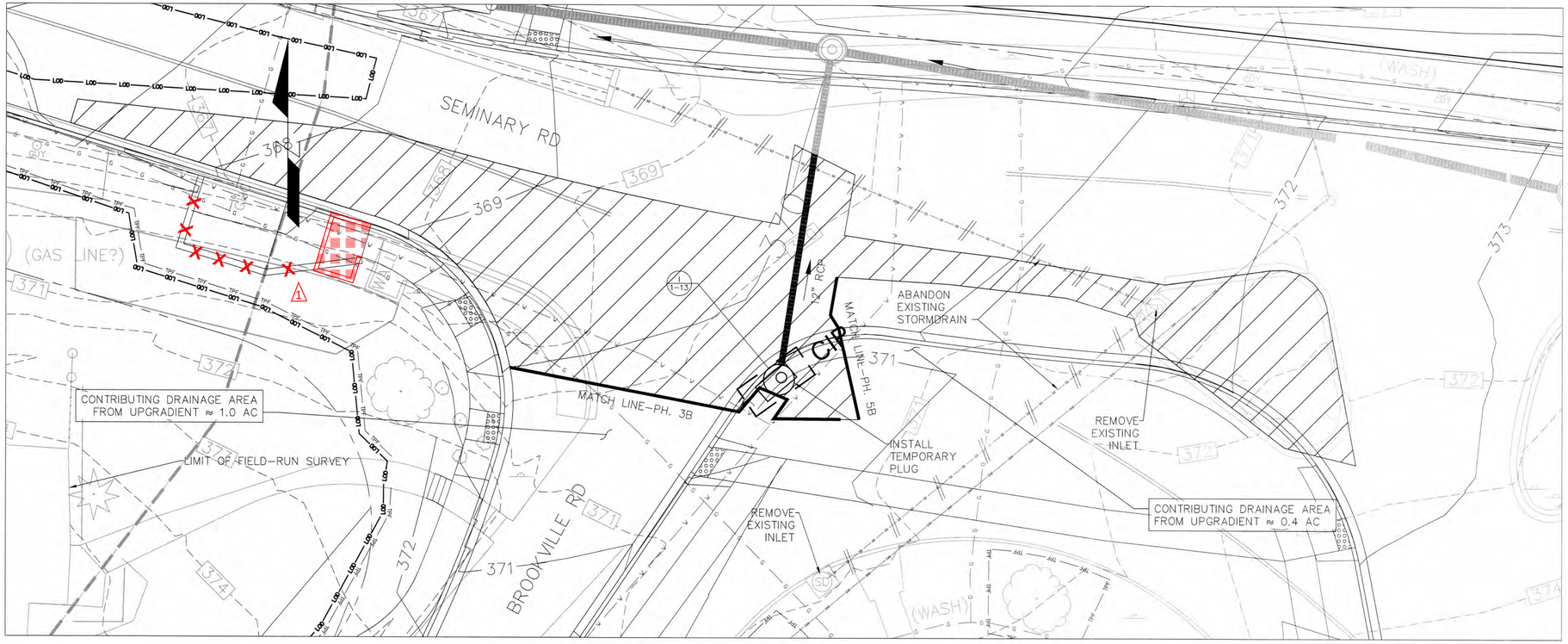
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Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC–11 PHASE 2B ESC PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 39 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 3A

1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-05), SHEET 82

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 3A):

1. SETUP MOT FOR PHASE 3 AS DIRECTED IN THE MOT PLANS.
2. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
3. DURING A 3-DAY DRY WEATHER PERIOD PER NOAA, REMOVE THE TEMPORARY PLUG AND INSTALL PIPE FROM TO I-1-13. REMOVE THE SECTION OF THE EXISTING PIPE NECESSARY TO INSTALL THE PROPOSED PIPE. ABANDON THE REMAINING STORM DRAIN SECTIONS IN PLACE WITH CONCRETE. INSTALL CIP AT I-1-13 FOLLOWING INSTALLATION.
4. TEMPORARILY PLUG THE PIPE OPENING IN I-1-13 ON THE EAST SIDE, WHICH WILL CONNECT TO I-1-11, SO STORMWATER CAN BE CONVEYED THROUGH I-1-13 IN A NON-EROSIVE MANNER (THE PLUG WILL REMAIN IN PLACE UNTIL PHASE 5A).
5. REMOVE THE EXISTING STORM DRAIN INLETS AS SHOWN ON THE PLAN.
6. COMPLETE FULL DEPTH RECONSTRUCTION WITHIN THE WORK ZONE, PROVIDING SAME-DAY STABILIZATION FOR AREAS NOT DRAINING TO AN INLET WITH INLET PROTECTION. PERFORM PAVING AS DICTATED BY MOT NEEDS.
7. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD — LOD —
- SILT FENCE ON PAVEMENT — SFOP — SFOP — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD
- CLEARWATER DIVERSION PIPE CWD-12
- SANDBAG DIVERSION BARRIER
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF — TPF —

0 10' 20'

NO.	REVISION	DATE	BY
1	Resize Bus Stop	5/03/2019	ADS

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION. Reviewed 1/4/19 Date; Approved 1/4/19 Date; 236807 SM FILE #

Sediment Control Technical Requirements: Reviewed 1/4/19 Date; Approved 1/4/19 Date

Administrative Requirements: Reviewed 1/4/19 Date; 283016 SEDIMENT CONTROL PERMIT NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

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

EROSION AND SEDIMENT CONTROL
SC-12 PHASE 3A ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 40 of 123

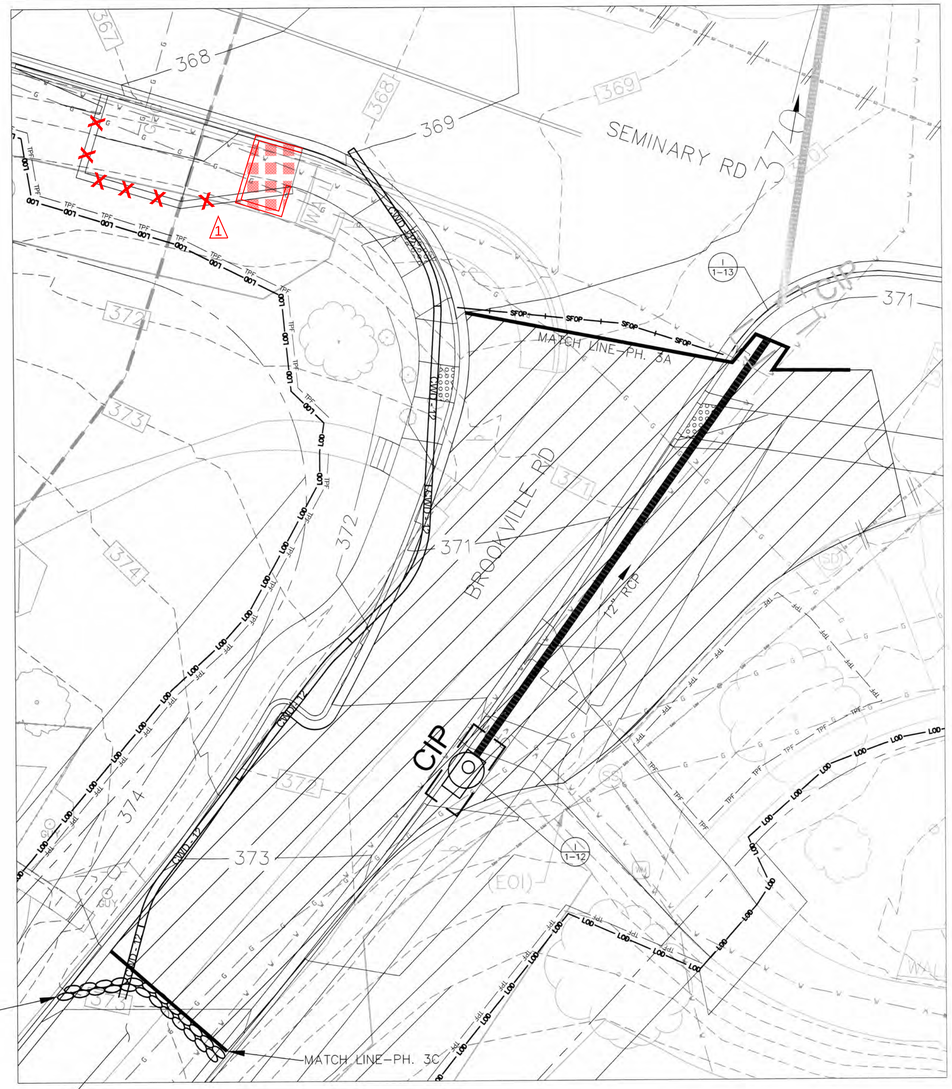
GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 3B):

1. INSTALL SAND BAGS AND CWD PIPE SO RUNOFF FROM BROOKVILLE ROAD BYPASSES WORK ZONE. INSTALL SILT FENCE ON PAVEMENT AT THE DOWNSTREAM END OF THE WORK ZONE.

   *SAME-DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING A CWD AND SILT FENCE ON PAVEMENT.
2. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
3. CONSTRUCT STORM DRAINS FROM DOWNSTREAM TO UPSTREAM AND COMPLETE FULL DEPTH RECONSTRUCTION WITHIN THE WORK ZONE. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION.
4. PERFORM PAVING AS DICTATED BY MOT NEEDS.



SANDBAG DIVERSION BARRIER
*SEE SEQUENCE OF CONSTRUCTION NOTE 1

CONTRIBUTING DRAINAGE AREA FROM UPGRADIENT ≈ 0.4 AC

EROSION AND SEDIMENT CONTROL PLAN - PHASE 3B
1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-05), SHEET 82

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.		
Reviewed 1/4/2019 Date	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Approved 1/4/2019 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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LEGEND

PHASE WORKZONE (WITHIN ROADWAY)

LIMIT OF DISTURBANCE — LOD —

SILT FENCE ON PAVEMENT — SFOP —

STANDARD INLET PROTECTION (TYPE B) SIP

TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD

CLEARWATER DIVERSION PIPE CWD-12

SANDBAG DIVERSION BARRIER

CURB INLET PROTECTION CIP

TREE PROTECTION FENCE — TPF —

0 10' 20'

NO.	REVISION	DATE	BY
1	Resize Bus Stop	5/03/2019	ADS

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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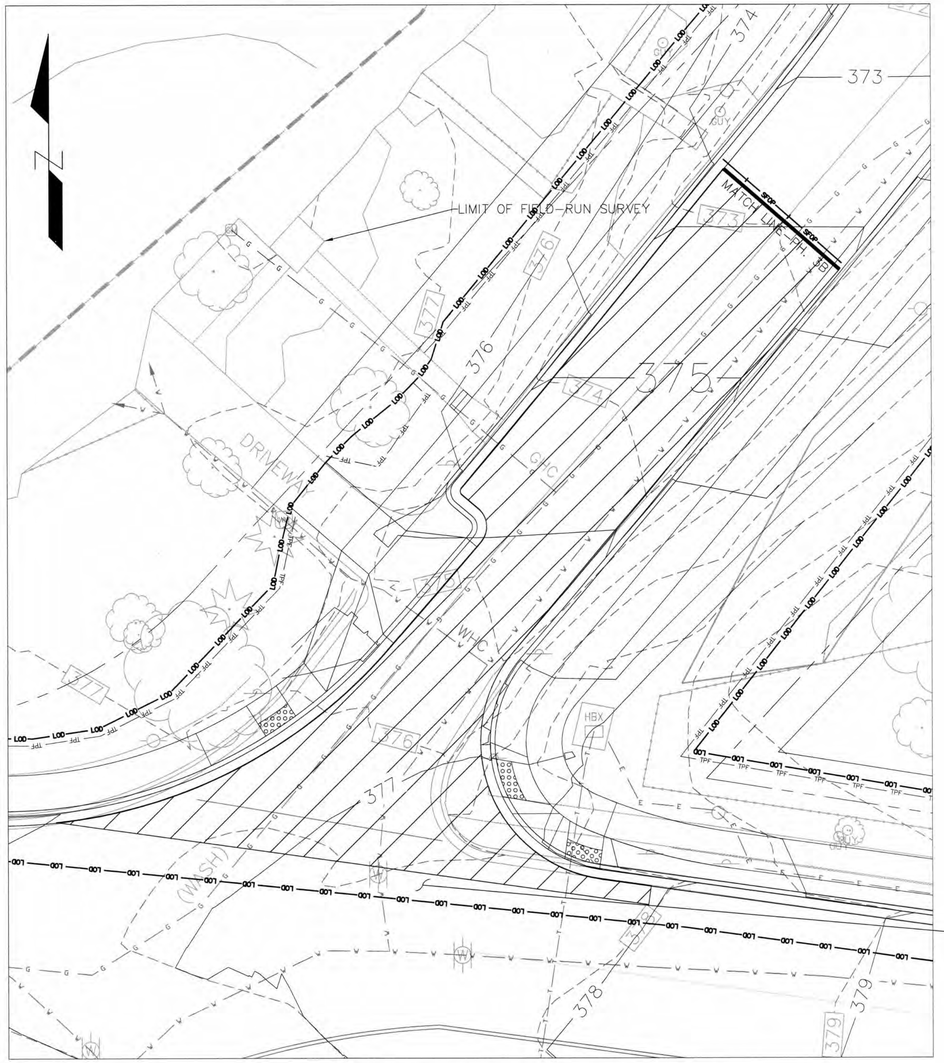
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EROSION AND SEDIMENT CONTROL
SC-13 PHASE 3B ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 41 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 3C
1" = 10'

CONTRIBUTING DRAINAGE AREA FROM UPGRADIENT ≈ 0.2 AC

ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-05), SHEET 82

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 3C):

1. SETUP MOT FOR PHASE 3 AS DIRECTED IN PLANS.
2. REMOVE CWD AND SANDBAGS WITH WRITTEN APPROVAL FROM MCDPS INSPECTOR. INSTALL SILT FENCE ON PAVEMENT AT DOWNSTREAM END OF PHASE 3C WORK ZONE. OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
3. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION.
4. COMPLETE FULL DEPTH RECONSTRUCTION WITHIN THE WORK ZONE. PERFORM PAVING AS DICTATED BY MOT NEEDS.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD
- CLEARWATER DIVERSION PIPE CWD-12
- SANDBAG DIVERSION BARRIER
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF —

0 10' 20'

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/19 Date		
236807 SM FILE #		

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RJM ENGINEERING
6031 University Blvd., Ste. 290
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ROCKVILLE, MARYLAND

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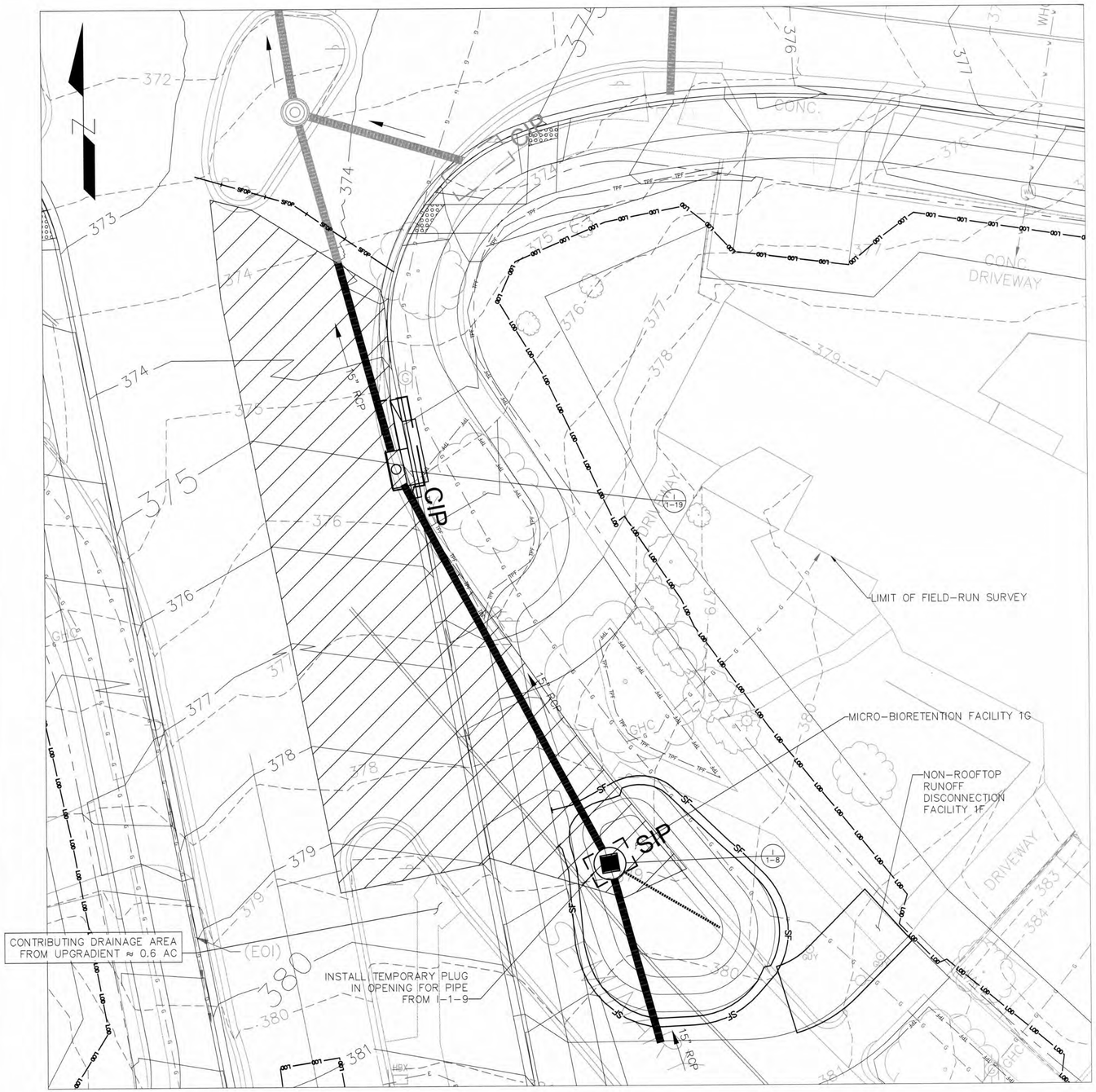
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EROSION AND SEDIMENT CONTROL
SC-14 PHASE 3C ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 42 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 4A
SCALE: 1" = 10'

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 4A):

1. SET MOT FOR PHASE 4 AS DIRECTED IN THE MOT PLANS.
2. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
3. WITH WRITTEN APPROVAL FROM THE MCDPS INSPECTOR, REMOVE TEMPORARY PLUG AND CONSTRUCT PIPE TO INLET I-1-19. INSTALL CIP UPON COMPLETION. CONSTRUCT STORM DRAINS FROM I-1-19 TO I-1-8. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION. DEWATERING OF PONDED WATER FROM ANY SWM FACILITIES SHALL BE DIRECTED THROUGH AN APPROVED SEDIMENT-CONTROL MEASURE.
4. ONCE INLET I-1-8, AND THE PERFORATED PVC UNDERDRAIN, AND DOWNSTREAM STORM DRAIN PIPES AND STRUCTURES ARE INSTALLED, INSTALL STANDARD INLET PROTECTION (SIP) AT I-1-8 AND SILT FENCE SURROUNDING FACILITY 1G. INSTALL A TEMPORARY PLUG IN THE WESTERN PIPE OPENING, WHICH WILL CONNECT TO I-1-9, SO STORMWATER CAN BE CONVEYED THROUGH THE INLET IN A NON-EROSIVE MANNER.
5. INSTALL THE PIPE SEGMENT THROUGH FACILITY 1G AND COMPLETE PRELIMINARY GRADING FOR THE FACILITY.
6. INSTALL SILT FENCE ON PAVEMENT IMMEDIATELY DOWNSTREAM OF THE WORK ZONE, THEN COMPLETE FULL DEPTH RECONSTRUCTION WITHIN THE WORKZONE.
8. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

PHASE WORKZONE (WITHIN ROADWAY)
LIMIT OF DISTURBANCE — LOD —
SILT FENCE ON PAVEMENT — SFOP —
SILT FENCE — SF —
STANDARD INLET PROTECTION (TYPE B) SIP
TREE PROTECTION FENCE — TPF —

TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD
CLEARWATER DIVERSION PIPE CWD-12
SANDBAG DIVERSION BARRIER
CURB INLET PROTECTION CIP

REFERENCE SHEETS:

1. FOR DETAILED SWM FACILITY GRADING AND GEOMETRY, REFER TO SHEET 49.

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLAN (LS-05), SHEET 82

SHADE TREE LOCATIONS ARE IDENTIFIED ON THE LANDSCAPING PLAN (LS-01), SHEET 78

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807 SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Administrative Requirements:
Reviewed 1/4/19 Date
283016 SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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.

0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

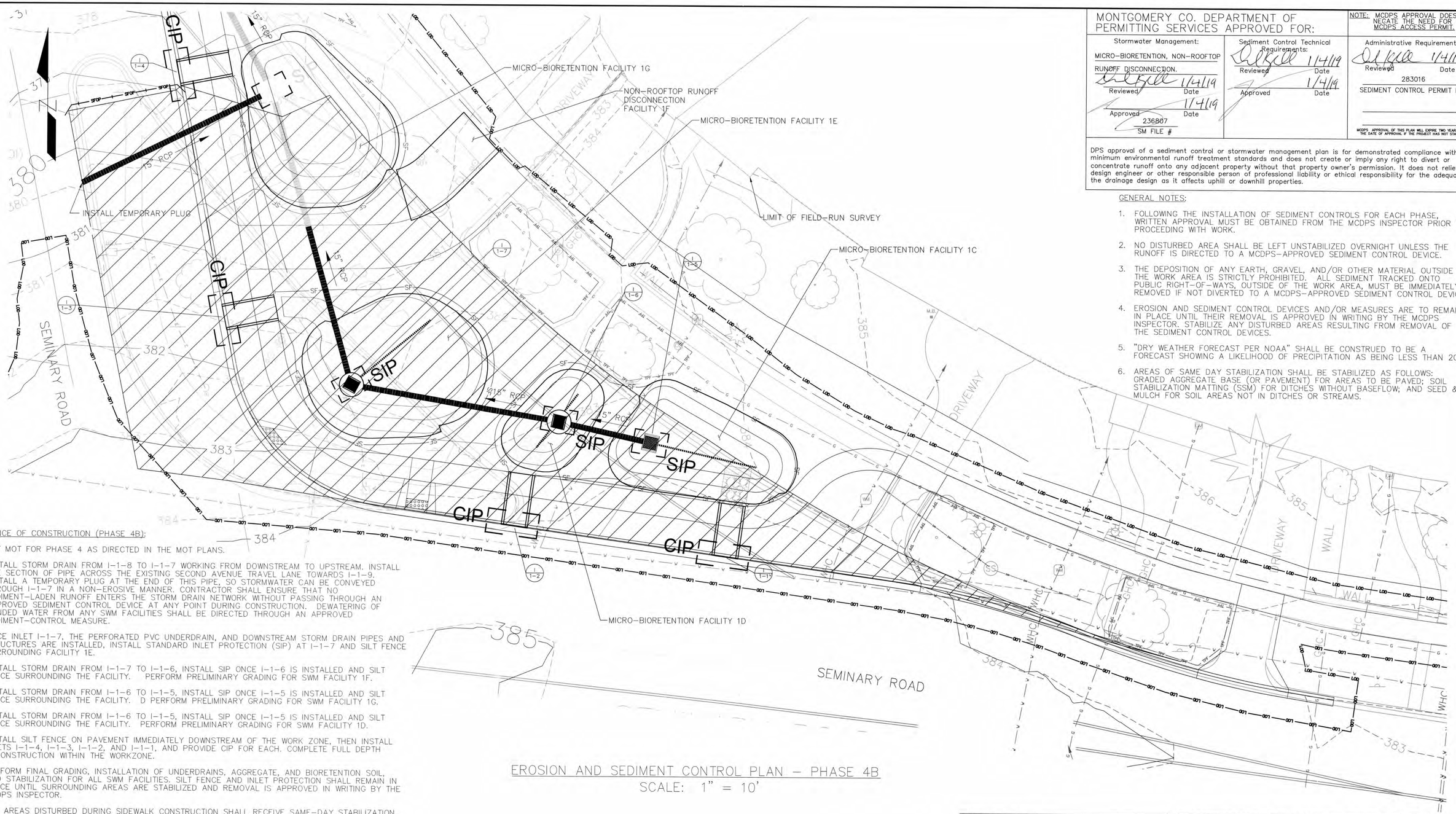
RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC-15 PHASE 4A ESC PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 43 of 123



SEQUENCE OF CONSTRUCTION (PHASE 4B):

1. SET MOT FOR PHASE 4 AS DIRECTED IN THE MOT PLANS.
2. INSTALL STORM DRAIN FROM I-1-8 TO I-1-7 WORKING FROM DOWNSTREAM TO UPSTREAM. INSTALL THE SECTION OF PIPE ACROSS THE EXISTING SECOND AVENUE TRAVEL LANE TOWARDS I-1-9. INSTALL A TEMPORARY PLUG AT THE END OF THIS PIPE, SO STORMWATER CAN BE CONVEYED THROUGH I-1-7 IN A NON-EROSIVE MANNER. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION. DEWATERING OF PONDED WATER FROM ANY SWM FACILITIES SHALL BE DIRECTED THROUGH AN APPROVED SEDIMENT-CONTROL MEASURE.
3. ONCE INLET I-1-7, THE PERFORATED PVC UNDERDRAIN, AND DOWNSTREAM STORM DRAIN PIPES AND STRUCTURES ARE INSTALLED, INSTALL STANDARD INLET PROTECTION (SIP) AT I-1-7 AND SILT FENCE SURROUNDING FACILITY 1E.
4. INSTALL STORM DRAIN FROM I-1-7 TO I-1-6, INSTALL SIP ONCE I-1-6 IS INSTALLED AND SILT FENCE SURROUNDING THE FACILITY. PERFORM PRELIMINARY GRADING FOR SWM FACILITY 1F.
5. INSTALL STORM DRAIN FROM I-1-6 TO I-1-5, INSTALL SIP ONCE I-1-5 IS INSTALLED AND SILT FENCE SURROUNDING THE FACILITY. D PERFORM PRELIMINARY GRADING FOR SWM FACILITY 1G.
6. INSTALL STORM DRAIN FROM I-1-6 TO I-1-5, INSTALL SIP ONCE I-1-5 IS INSTALLED AND SILT FENCE SURROUNDING THE FACILITY. PERFORM PRELIMINARY GRADING FOR SWM FACILITY 1D.
7. INSTALL SILT FENCE ON PAVEMENT IMMEDIATELY DOWNSTREAM OF THE WORK ZONE, THEN INSTALL INLETS I-1-4, I-1-3, I-1-2, AND I-1-1, AND PROVIDE CIP FOR EACH. COMPLETE FULL DEPTH RECONSTRUCTION WITHIN THE WORKZONE.
8. PERFORM FINAL GRADING, INSTALLATION OF UNDERDRAINS, AGGREGATE, AND BIORETENTION SOIL, AND STABILIZATION FOR ALL SWM FACILITIES. SILT FENCE AND INLET PROTECTION SHALL REMAIN IN PLACE UNTIL SURROUNDING AREAS ARE STABILIZED AND REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR.
9. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

EROSION AND SEDIMENT CONTROL PLAN – PHASE 4B
SCALE: 1" = 10'

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- SILT FENCE — SF —
- STANDARD INLET PROTECTION (TYPE B) SIP
- CURB INLET PROTECTION CIP
- CLEARWATER DIVERSION PIPE CWD-12
- SANDBAG DIVERSION BARRIER
- TEMPORARY ASPHALT BERM OR BARRIER DIVERSION TAB/TBD
- TREE PROTECTION FENCE — TPF —
- COG OPENING – STONE STABILIZATION

0 10' 20'

REFERENCE SHEETS:

1. FOR DETAILED SWM FACILITY GRADING AND GEOMETRY, REFER TO SHEET 49.

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLAN (LS-05), SHEET 82

SHADE TREE LOCATIONS ARE IDENTIFIED ON THE LANDSCAPING PLAN (LS-01), SHEET 78

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/19 Date		
236807 SM FILE #		

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

EROSION AND SEDIMENT CONTROL
SC-16 PHASE 4B ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: FEBRUARY 2018

Project No.: 501307 SHEET 44 of 123

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SEQUENCE OF CONSTRUCTION (PHASE 5A):

1. SETUP MOT WORK ZONE FOR PHASE 5 AS DIRECTED IN THE MOT PLANS.
2. INSTALL SFOP AS SHOWN ON THE PLAN. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
3. REMOVE THE TEMPORARY PLUG AND INSTALL THE STORM DRAIN TO INLET I-1-9. INSTALL CIP FOLLOWING THE CONSTRUCTION OF I-1-9. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION.
4. CONSTRUCT PROPOSED PAVING. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY APSHALT BERM OR BARRIER DIVERSION TAB/TBD
- CLEARWATER DIVERSION PIPE CWD-12
- SANDBAG DIVERSION BARRIER
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF —



EROSION AND SEDIMENT CONTROL PLAN - PHASE 5A
SCALE: 1" = 10'

0 10' 20'

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLAN (LS-05), SHEET 82

SHADE TREE LOCATIONS ARE IDENTIFIED ON THE LANDSCAPING PLAN (LS-01), SHEET 78

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807
SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

Administrative Requirements:
Reviewed 1/4/19 Date
283016
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

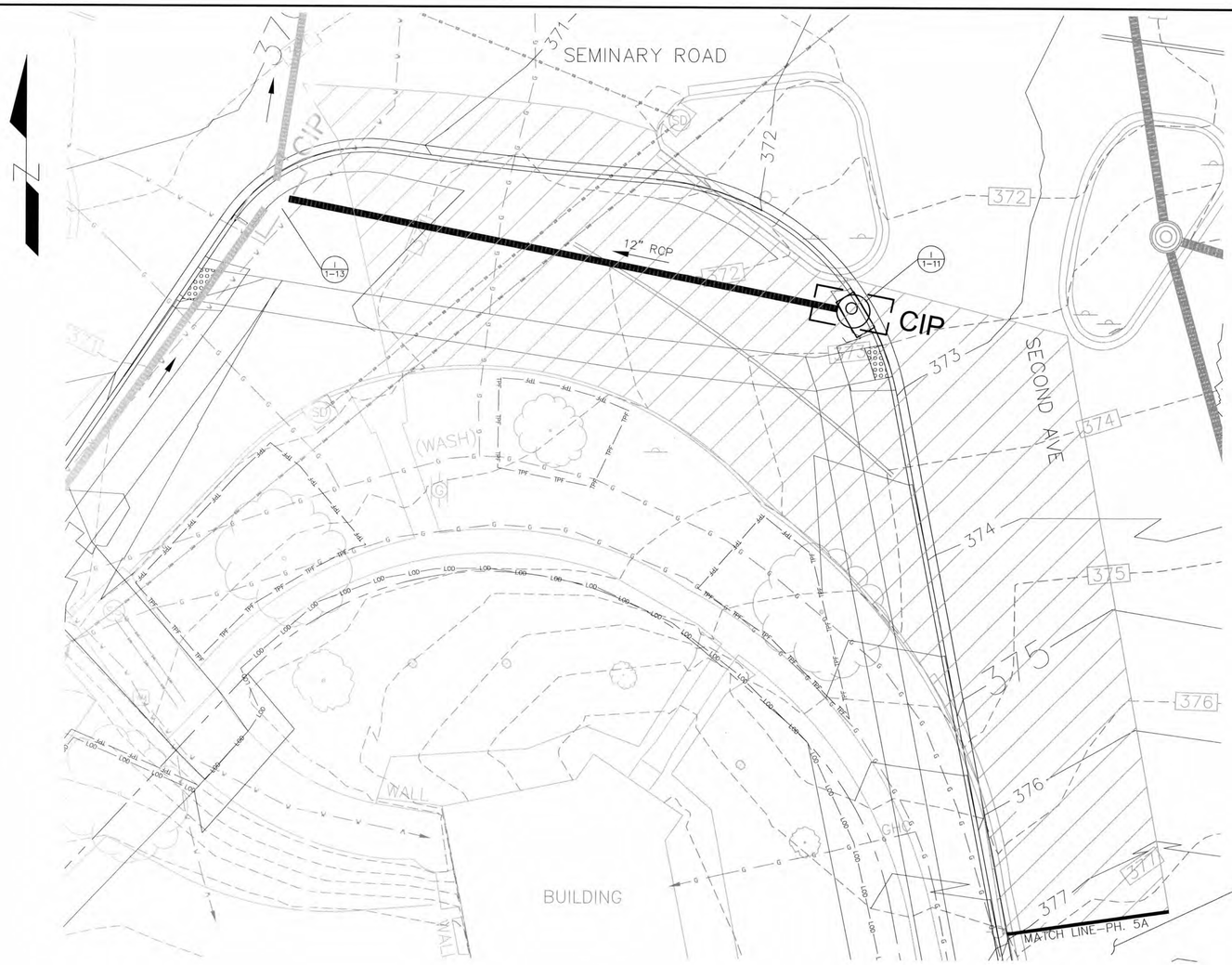
Designed by: KJS Drawn by: KJS Checked by: DZ

EROSION AND SEDIMENT CONTROL
SC-17 PHASE 5A ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10" DATE: NOVEMBER 2017

Project No. : 501307 SHEET 45 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 5B
SCALE: 1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON THE LANDSCAPING PLAN (LS-05), SHEET 82

SHADE TREE LOCATIONS ARE IDENTIFIED ON THE LANDSCAPING PLAN (LS-01), SHEET 78

SEQUENCE OF CONSTRUCTION (PHASE 5B):

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. WITH WRITTEN APPROVAL FROM THE MCDPS INSPECTOR, REMOVE TEMPORARY PLUG AND INSTALL STORM DRAIN FROM I-1-14 TO I-1-11 WORKING FROM DOWNSTREAM TO UPSTREAM. INSTALL CIP FOLLOWING THE CONSTRUCTION OF INLET I-1-11. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION.
3. CONSTRUCT PROPOSED PAVING. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY APSHALT BERM OR BARRIER DIVERSION TAB/TBD
- CLEARWATER DIVERSION PIPE CWD-12
- SANDBAG DIVERSION BARRIER
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF —

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

0 10' 20'

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.		
Reviewed 1/4/19 Date	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Approved 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

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Chief, Division of Transportation Engineering — Date

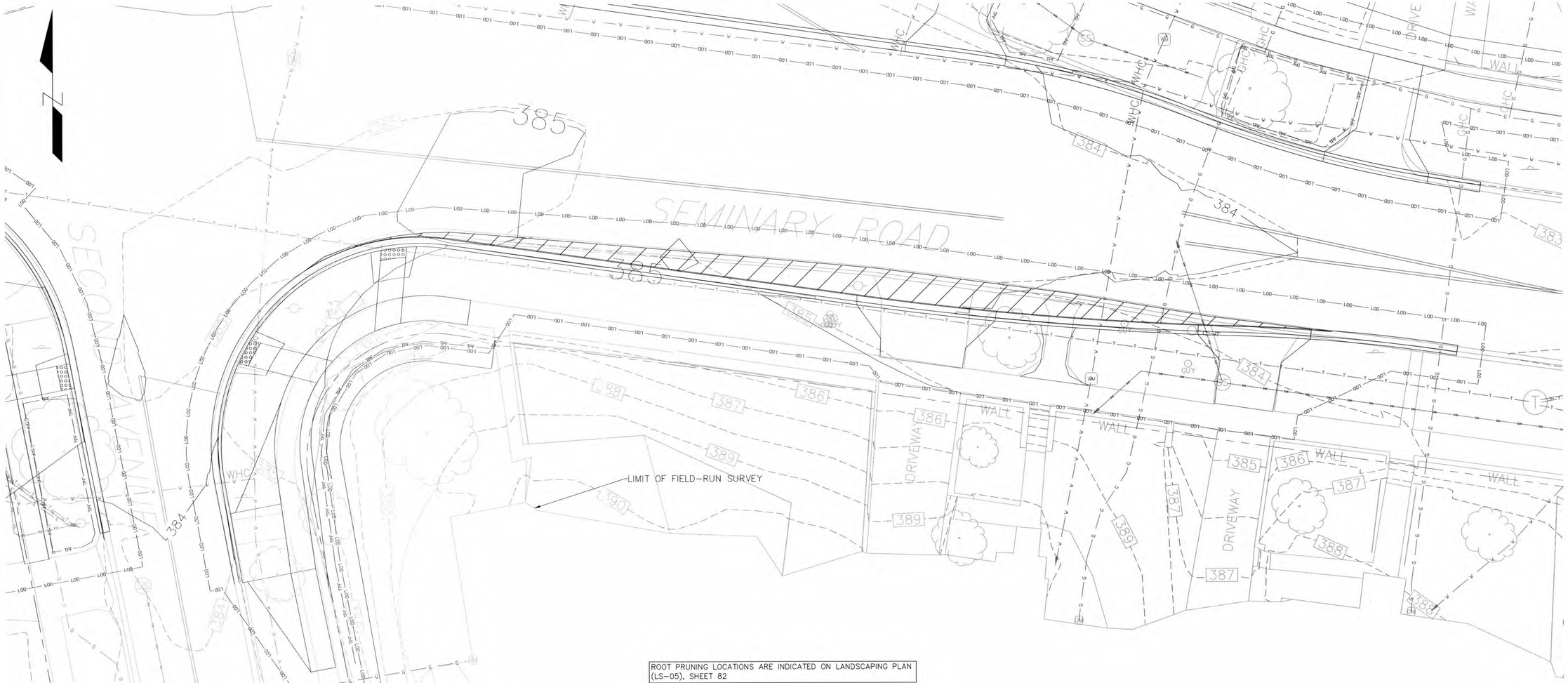
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EROSION AND SEDIMENT CONTROL
SC-18 PHASE 5B ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10" DATE: NOVEMBER 2017

Project No.: 501307 SHEET 46 of 123



ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-05), SHEET 82

EROSION AND SEDIMENT CONTROL PLAN – PHASE 6A
SCALE: 1" = 10'

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY APSHALT BERM OR BARRIER DIVERSION TAB/TBD
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF —

SEQUENCE OF CONSTRUCTION (PHASE 6A):

1. SETUP MOT WORK ZONE FOR PHASE 6 AS DIRECTED IN PLANS.
2. COMPLETE FULL DEPTH CONSTRUCTION AND RESURFACING WITHIN WORK ZONE. PERFORM PAVING AS DICTATED IN THE MOT, LIMITING OPERATIONS TO WHAT CAN BE STABILIZED IN ONE WORKING DAY.
3. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016 SEDIMENT CONTROL PERMIT NO.
Approved 1/4/19 Date		
236807 SM FILE #		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

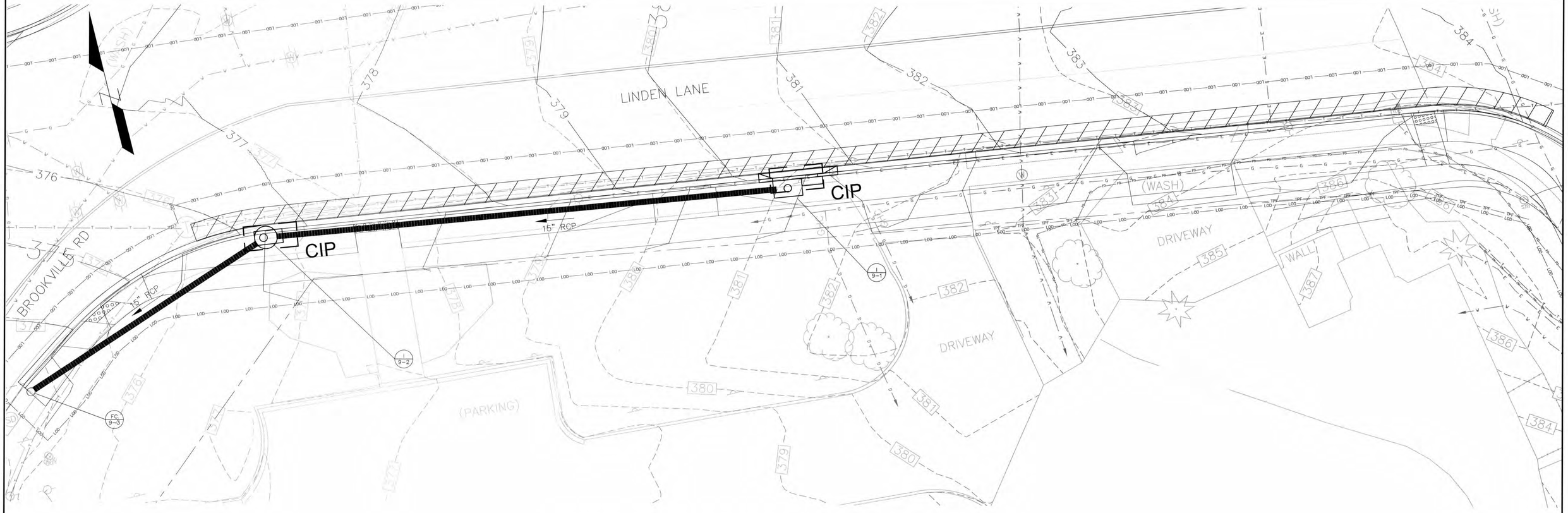
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EROSION AND SEDIMENT CONTROL
SC-19 PHASE 6A ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 47 of 123



EROSION AND SEDIMENT CONTROL PLAN – PHASE 6B
SCALE: 1" = 10'

ROOT PRUNING LOCATIONS ARE INDICATED ON LANDSCAPING PLAN (LS-05), SHEET 82

SEQUENCE OF CONSTRUCTION (PHASE 6B):

1. CONSTRUCT STORM DRAINS (PIPES AND STRUCTURES) AND COMPLETE FULL DEPTH CONSTRUCTION AND RESURFACING WITHIN WORK ZONE. STORM DRAIN SHALL BE CONSTRUCTED BEGINNING WITH FIELD CONNECTION FC-9-3 AND WORKING FROM DOWNSTREAM TO UPSTREAM. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAIN NETWORK WITHOUT PASSING THROUGH AN APPROVED SEDIMENT CONTROL DEVICE AT ANY POINT DURING CONSTRUCTION. INSTALL CIP AT INLETS ONCE COMPLETED.
2. CONTRACTOR SHALL CONSTRUCT ONLY ENOUGH PIPE SO THAT THE PIPE TRENCH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY. PERFORM PAVING AS DICTATED IN THE MOT AND GRADING, LIMITING OPERATIONS TO WHAT CAN BE STABILIZED IN ONE WORKING DAY.
3. ALL AREAS DISTURBED DURING SIDEWALK CONSTRUCTION SHALL RECEIVE SAME-DAY STABILIZATION.

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS FOR EACH PHASE, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND

- PHASE WORKZONE (WITHIN ROADWAY)
- LIMIT OF DISTURBANCE — LOD —
- SILT FENCE ON PAVEMENT — SFOP —
- STANDARD INLET PROTECTION (TYPE B) SIP
- TEMPORARY APSHALT BERM OR BARRIER DIVERSION TAB/TBD
- CURB INLET PROTECTION CIP
- TREE PROTECTION FENCE — TPF —

0 10' 20'

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	QRSEC 1/4/19 Reviewed Date	QRSEC 1/4/19 Reviewed Date
QRSEC 1/4/19 Reviewed Date	1/4/19 Approved Date	283016 SEDIMENT CONTROL PERMIT NO.
1/4/19 Approved Date		
236807 SM FILE #		MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

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

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Transportation Planning and Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Date
Chief, Division of Transportation Engineering

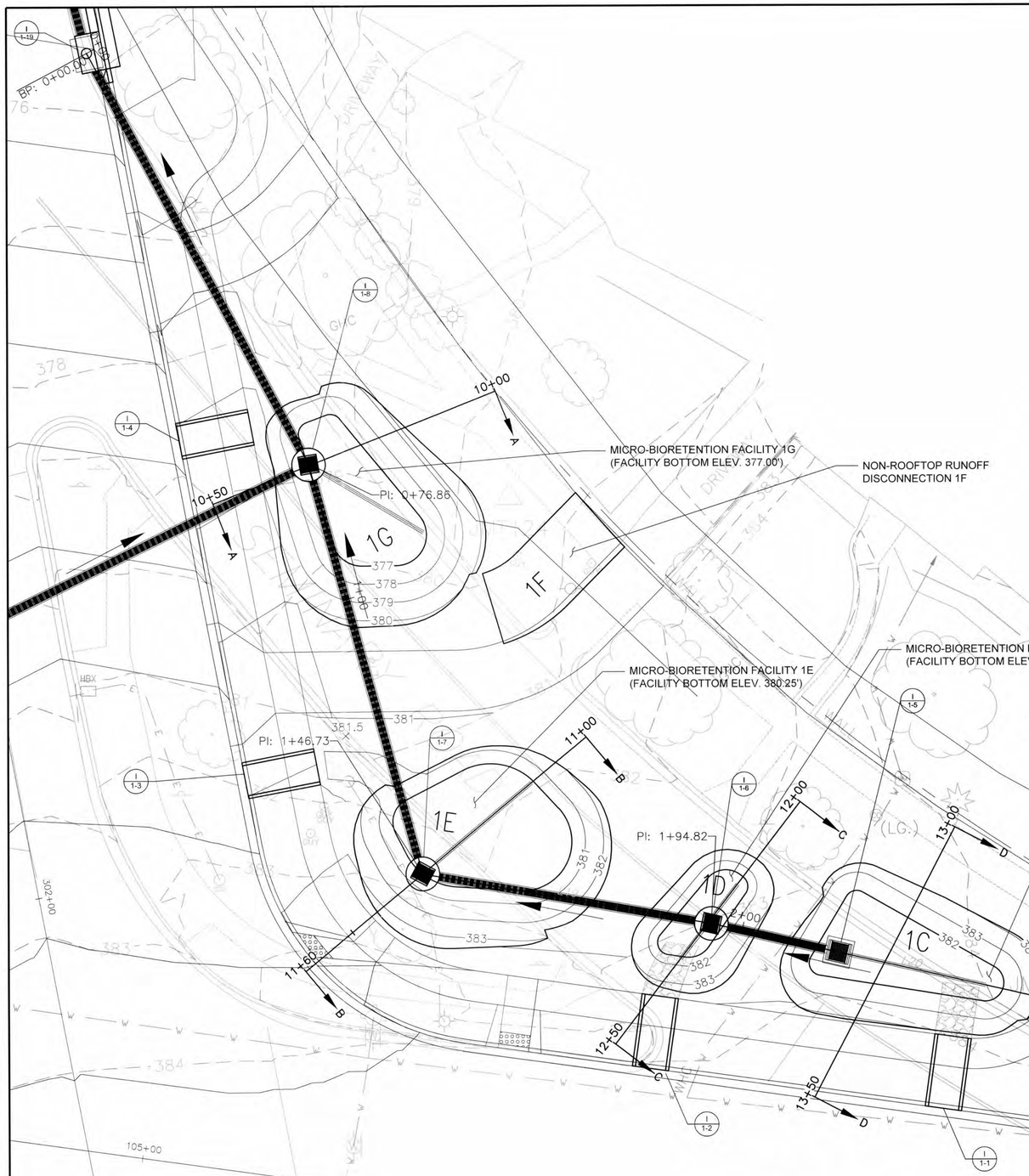
Designed by: KJS Drawn by: KJS Checked by: DZ

EROSION AND SEDIMENT CONTROL
SC-20 PHASE 6B ESC PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

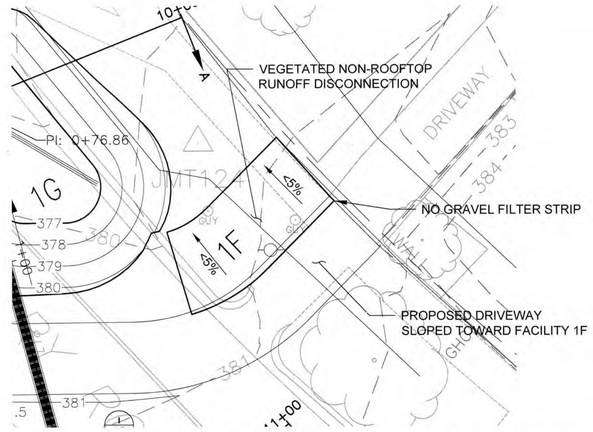
SCALE: 1"=10' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 48 of 123



SWM FACILITY PLAN
1" = 10'

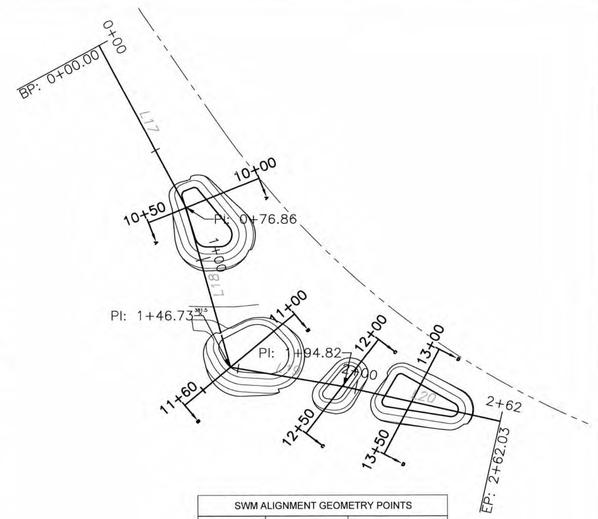
10 0 10 20
SCALE IN FEET



FACILITY 1F – NON-ROOFTOP RUNOFF DISCONNECTION
1" = 10'

NOTES:

1. CONTRACTOR SHALL AVOID COMPACTING SOILS WITHIN FACILITY 1F DURING CONSTRUCTION. IN THE EVENT THAT SOILS BECOME COMPACTED, THE CONTRACTOR SHALL SCARIFY THE SURFACE OR RETOOL THE SOIL TO A DEPTH OF 4 TO 6 INCHES TO ENSURE PERMEABILITY.



SWM ALIGNMENT GEOMETRY POINTS		
STATION	NORTHING	EASTING
BP: 0+00	489041.35	1299855.43
PI: 0+76.86	488973.57	1299891.66
PI: 1+46.73	488906.21	1299910.25
PI: 1+94.82	488897.96	1299957.63
EP: 2+62.03	488883.12	1300023.17

SWM FACILITY GEOMETRY
1" = 30'

FACILITY LOI-1A – NON-ROOFTOP RUNOFF DISCONNECTION NOTES:

1. NO GRAVEL FILTER STRIP IS REQUIRED ALONG THE SIDEWALK.
2. VEGETATED NON-ROOFTOP RUNOFF DISCONNECTION SHALL TIE-INTO THE EXISTING SLOPE.
3. CONTRACTOR SHALL AVOID COMPACTING SOILS WITHIN FACILITY 1F DURING CONSTRUCTION. IN THE EVENT THAT SOILS BECOME COMPACTED, THE CONTRACTOR SHALL SCARIFY THE SURFACE OR RETOOL THE SOIL TO A DEPTH OF 4 TO 6 INCHES TO ENSURE PERMEABILITY.

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807
SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Administrative Requirements:
Reviewed 1/4/19 Date
283016

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT WAS NOT STARTED.

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.

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

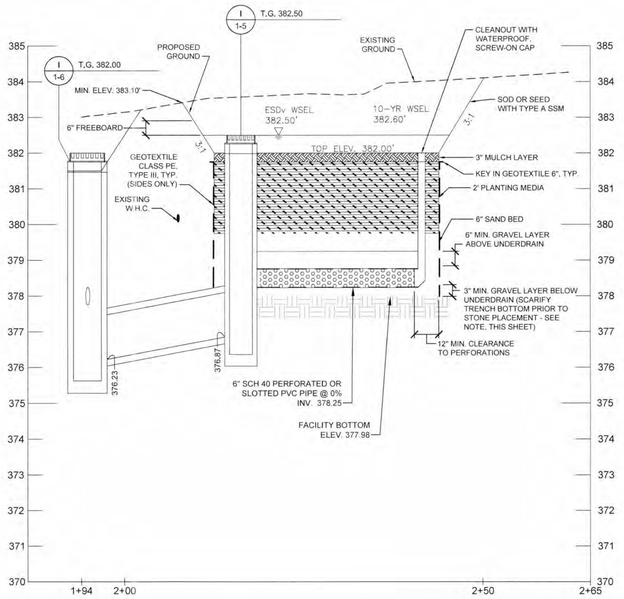
Designed by: KJS Drawn by: KJS Checked by: DZ

SWM-01 PLAN SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

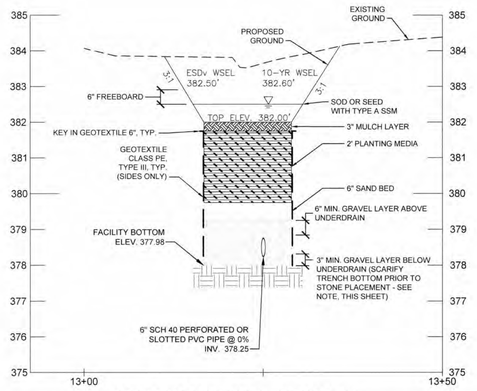
SCALE: 1"=10' DATE: NOVEMBER 2017

Project No.: 501307 SHEET 49 of 123



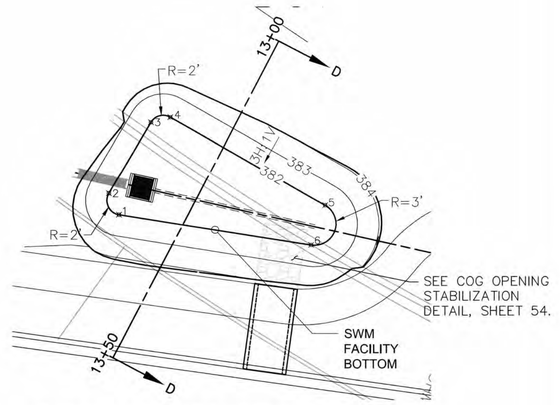
FACILITY 1C PROFILE

STA. 1+94 TO 2+65
SCALE: HORIZ. 1"=10' VERT. 1"=2'



FACILITY 1C CROSS SECTION (D-D)

STA. 13+00 TO 13+50
SCALE: HORIZ. 1"=10' VERT. 1"=2'



FACILITY 1C GEOMETRY POINTS

1" = 10'

GEOMETRY POINT TABLE				
Point #	Elevation	Northing	Easting	Description
1	382.00	488889.46	1299975.35	PC
2	382.00	488892.46	1299973.95	PT
3	382.00	488902.37	1299979.83	PC
4	382.00	488903.09	1299982.54	PC
5	382.00	488890.75	1300004.14	PC
6	382.00	488885.19	1300002.18	PT

FACILITY BOTTOM SURFACE AREA = 175 SF

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR BIORENTENTION FACILITY		
STAGE	COUNTY INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.** Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
1. Excavation for Micro Bioretention facility conforms to approved plans		
2. Placement of stone backfill and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

PROFILE AND CROSS SECTION – MICRO-BIORETENTION FACILITY 1C

H: 1" = 10' V: 1"=2'

NOTES:

1. PLANTING MEDIA SHALL CONFORM TO MONTGOMERY COUNTY MICRO-BIORETENTION FACILITY PLANTING MEDIA SPECIFICATIONS:

   1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL.

   THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA:

   CONTAIN NO MORE THAN 10% CLAY, 10-25% SILT AND 60-75% SAND AND BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.

2. THE FIRST LAYER OF THE PLANTING MEDIUM SHALL BE LIGHTLY TILLED TO MIX IT INTO THE 6-INCH SAND LAYER, SO AS NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
3. THE MULCH LAYER IS AN IMPORTANT PART OF THE MICRO-BIORETENTION DEVICE. MUCH OF THE POLLUTANT REMOVAL CAPACITY OF THE MICRO-BIORETENTION SYSTEM IS WITHIN THE MULCH LAYER. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD DOUBLE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE APPLIED UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.
4. GRAVEL BED: THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE(S) MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE(S), AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN FILTER MEDIA. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.
5. PERFORATED PIPE MUST HAVE PERFORATIONS ⅜ INCH IN DIAMETER AND LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BE AT LEAST 12 INCHES INSIDE THE FILTER MEDIA. IF THIS CANNOT BE ACHIEVED, THEN SIDES OF THE FILTER MEDIA MUST BE LINED WITH FILTER FABRIC. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE. AN ACCEPTABLE ALTERNATIVE TO PERFORATED PIPE IS 6••DIAMETER SCHEDULE 40 SLOTTED PVC PIPE WITH 0.125 INCH SLOTS. SLOTS SHALL BE 0.125 INCHES WIDE AND A MINIMUM OF 1.9 INCHES IN LENGTH, WITH A MINIMUM OF 4 SLOTS PER ROW AND 4 ROWS PER LINEAR FOOT OF PIPE.

SAND SPECIFICATIONS:

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

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

0 2' 4'
VERTICAL SCALE: 1"=2'

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

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016
Approved 1/4/19 Date		
236807 SM FILE #		

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

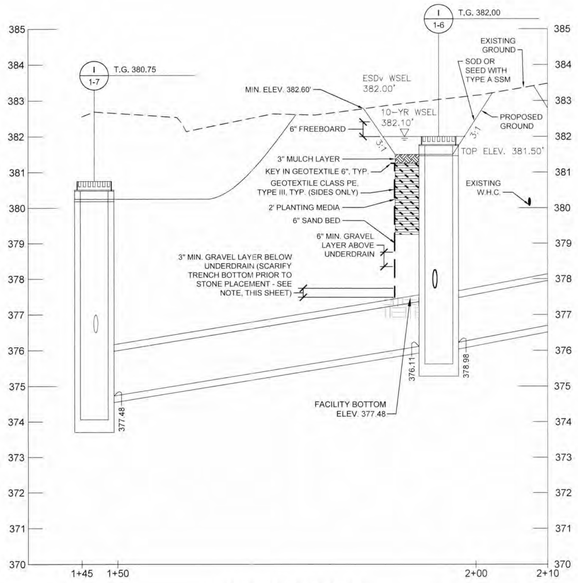
Designed by: KJS Drawn by: KJS Checked by: DZ

SWM-02 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

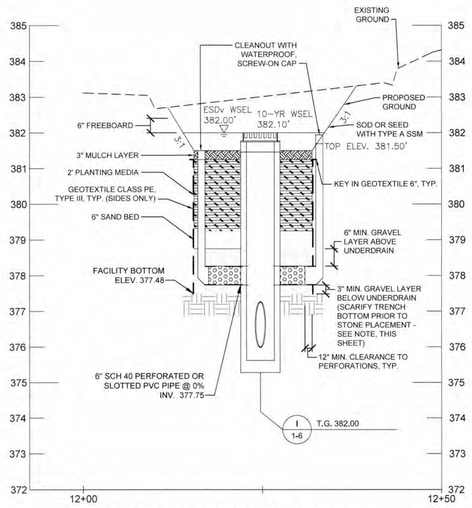
Project No. : 501307 SHEET 50 of 123



FACILITY 1D PROFILE

STA. 1+45 TO 2+10

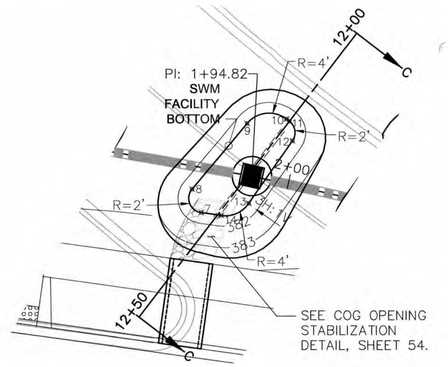
SCALE: HORIZ. 1"=10' VERT. 1"=2'



FACILITY 1D CROSS SECTION (C-C)

STA. 12+00 TO 12+50

SCALE: HORIZ. 1"=10' VERT. 1"=2'



FACILITY 1D GEOMETRY POINTS

1" = 10'

GEOMETRY POINT TABLE				
Point #	Elevation	Northing	Easting	Description
7	381.50	488892.88	1299950.52	PC
8	381.50	488896.14	1299949.26	PT
9	381.50	488905.33	1299956.96	PC
10	381.50	488905.94	1299962.46	PT
11	381.50	488905.63	1299962.86	PC
12	381.50	488902.90	1299963.28	PT
13	381.50	488894.16	1299957.19	PC
14	381.50	488892.48	1299953.35	PT

FACILITY BOTTOM SURFACE AREA = 73 SF

PROFILE AND CROSS SECTION – MICRO-BIORETENTION FACILITY 1D

H: 1" = 10' V: 1"=2'

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR BIORENTENTION FACILITY		
STAGE	COUNTY INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.** Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
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3. Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that has become contaminated by improper storage or installation practices will be rejected.
4. Manufactured sand or stone dust is not acceptable under any circumstance.

NOTES:

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0 2' 4'
VERTICAL SCALE: 1"=2'

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

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION. Reviewed Date 1/4/19; Approved Date 1/4/19; 236807 SM FILE #

Sediment Control Technical Requirements: Reviewed Date 1/4/19; Approved Date 1/4/19

Administrative Requirements: Reviewed Date 1/4/19; 283016

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

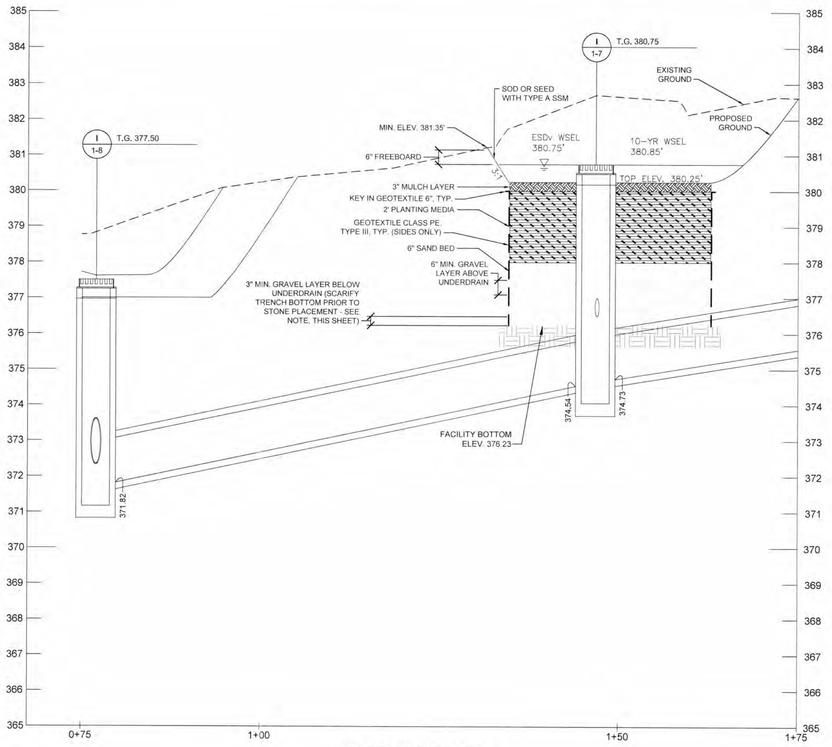
Designed by: KJS Drawn by: KJS Checked by: DZ

SWM-03 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

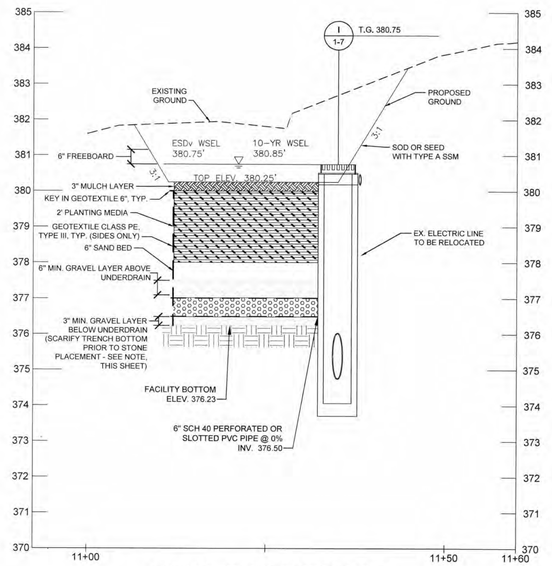
Project No. : 501307 SHEET 51 of 123



FACILITY 1E PROFILE

STA. 0+75 TO 1+75

SCALE: HORIZ. 1"=10' VERT. 1"=2'

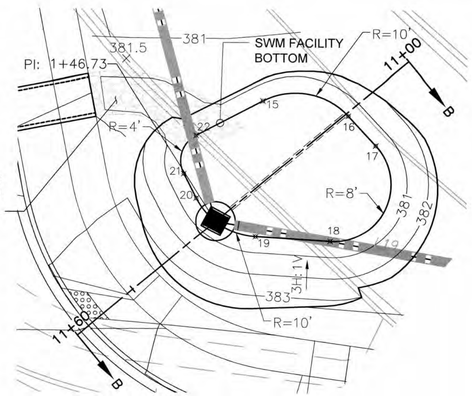


FACILITY 1E CROSS SECTION (B-B)

STA. 11+00 TO 11+60

SCALE: HORIZ. 1"=10' VERT. 1"=2'

SEE COG OPENING STABILIZATION DETAIL, SHEET 54.



FACILITY 1E GEOMETRY POINTS

1" = 10'

GEOMETRY POINT TABLE				
Point #	Elevation	Northing	Easting	Description
15	380.25	488923.09	1299916.81	PC
16	380.25	488921.03	1299928.76	PT
17	380.25	488916.88	1299932.62	PC
18	380.25	488903.45	1299926.28	PT
19	380.25	488904.07	1299915.85	PC
20	380.25	488909.47	1299907.56	PT
21	380.25	488912.86	1299905.80	PC
22	380.25	488918.24	1299907.51	PT

FACILITY BOTTOM SURFACE AREA = 460 SF

PROFILE AND CROSS SECTION – MICRO-BIORETENTION FACILITY 1E

H: 1" = 10' V: 1"=2'

SAND SPECIFICATIONS:

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

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

NOTES:

1. PLANTING MEDIA SHALL CONFORM TO MONTGOMERY COUNTY MICRO-BIORETENTION FACILITY PLANTING MEDIA SPECIFICATIONS:

   1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL.

   THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA:

   CONTAIN NO MORE THAN 10% CLAY, 10-25% SILT AND 60-75% SAND AND BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.

2. THE FIRST LAYER OF THE PLANTING MEDIUM SHALL BE LIGHTLY TILLED TO MIX IT INTO THE 6-INCH SAND LAYER, SO AS NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
3. THE MULCH LAYER IS AN IMPORTANT PART OF THE MICRO-BIORETENTION DEVICE. MUCH OF THE POLLUTANT REMOVAL CAPACITY OF THE MICRO-BIORETENTION SYSTEM IS WITHIN THE MULCH LAYER. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD DOUBLE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE APPLIED UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.
4. GRAVEL BED: THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE(S) MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE(S), AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN FILTER MEDIA. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.
5. PERFORATED PIPE MUST HAVE PERFORATIONS ⅜ INCH IN DIAMETER AND LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BE AT LEAST 12 INCHES INSIDE THE FILTER MEDIA. IF THIS CANNOT BE ACHIEVED, THEN SIDES OF THE FILTER MEDIA MUST BE LINED WITH FILTER FABRIC. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE. AN ACCEPTABLE ALTERNATIVE TO PERFORATED PIPE IS 6"-DIAMETER SCHEDULE 40 SLOTTED PVC PIPE WITH 0.125 INCH SLOTS. SLOTS SHALL BE 0.125 INCHES WIDE AND A MINIMUM OF 1.9 INCHES IN LENGTH, WITH A MINIMUM OF 4 SLOTS PER ROW AND 4 ROWS PER LINEAR FOOT OF PIPE.
6. CONTRACTOR SHALL USE CAUTION TO AVOID DAMAGING STORM DRAIN PIPES AND UNDERDRAINS WHEN GRADING AND INSTALLING GRAVEL LAYER.

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR BIORENTENTION FACILITY			
STAGE		COUNTY INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.** Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		INITIALS/DATE	INITIALS/DATE
1.	Excavation for Micro Bioretention facility conforms to approved plans		
2.	Placement of stone backfill and underdrain system conforms to approved plans		
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4.	Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5.	Final grading and permanent stabilization conforms to approved plans		

0 2' 4'

VERTICAL SCALE: 1"=2'

0 10' 20'

HORIZONTAL SCALE: 1"=10'

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION. Reviewed 1/4/19 Date; Approved 1/4/19 Date; 236807 SM FILE #

Sediment Control Technical Requirements: Reviewed 1/15/19 Date; Approved 1/4/19 Date

Administrative Requirements: Reviewed 1/4/19 Date; 283016

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

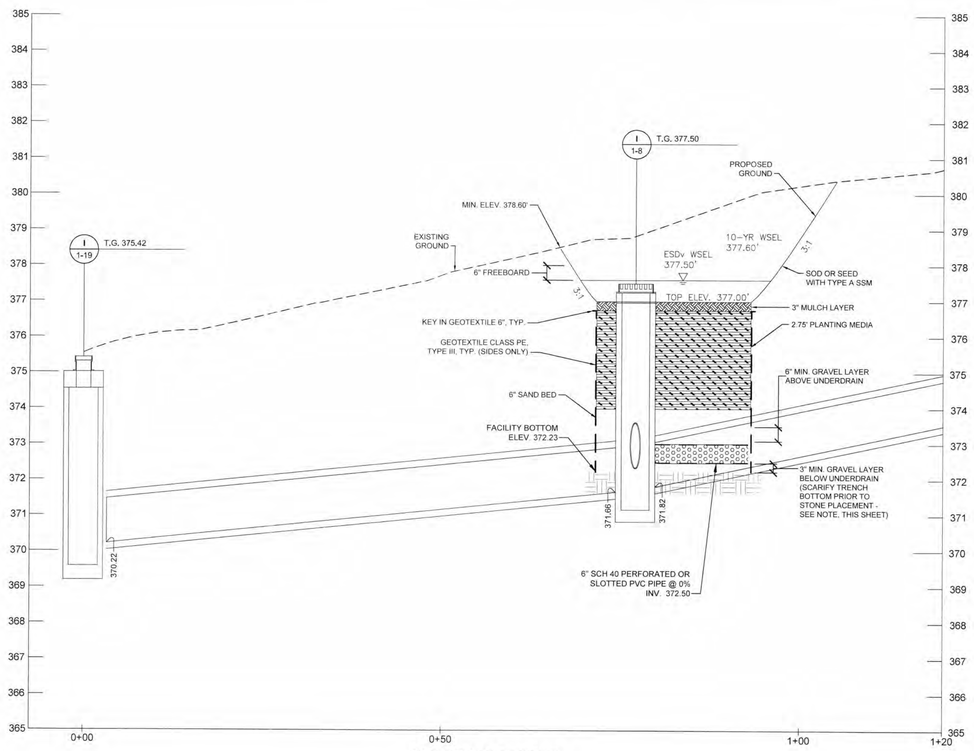
Designed by: KJS Drawn by: KJS Checked by: DZ

SWM-04 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

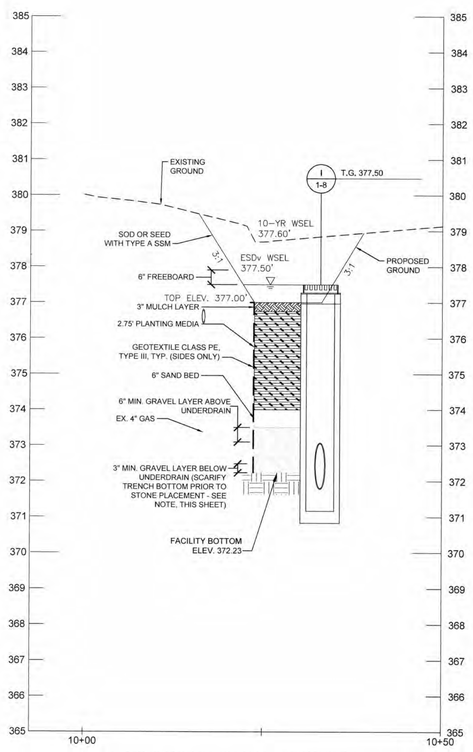
SCALE: AS NOTED DATE: FEBRUARY 2018

Project No. : 501307 SHEET 52 of 123



FACILITY 1G PROFILE

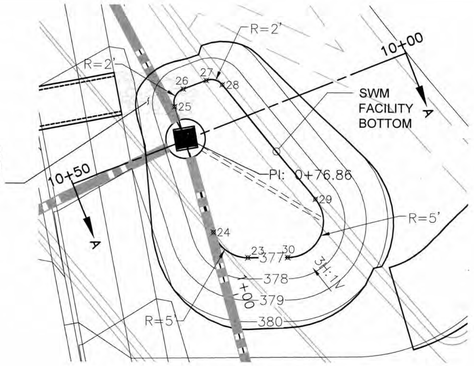
STA. 0+00 TO 1+20
SCALE: HORIZ. 1"=10' VERT. 1"=2'



FACILITY 1G CROSS SECTION (A-A)

STA. 10+00 TO 10+50
SCALE: HORIZ. 1"=10' VERT. 1"=2'

SEE COG OPENING STABILIZATION DETAIL, SHEET 54.



FACILITY 1G GEOMETRY POINTS

1" = 10'

GEOMETRY POINT TABLE

Point #	Elevation	Northing	Easting	Description
23	377.00	488956.75	1299900.48	PC
24	377.00	488960.26	1299895.66	PT
25	377.00	488977.87	1299890.14	PC
26	377.00	488980.34	1299891.34	PT
27	377.00	488981.56	1299894.54	PC
28	377.00	488980.96	1299896.80	PT
29	377.00	488964.97	1299909.88	PC
30	377.00	488956.81	1299906.06	PT

FACILITY BOTTOM SURFACE AREA = 330 SF

PROFILE AND CROSS SECTION – MICRO-BIORETENTION FACILITY 1G

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STAGE	**COUNTY INSPECTOR**	**OWNER/ DEVELOPER**
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0 2' 4'
VERTICAL SCALE: 1"=2'

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

RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.
Reviewed 1/4/19 Date
Approved 1/4/19 Date
236807
SM FILE #

Sediment Control Technical Requirements:
Reviewed 1/4/19 Date
Approved 1/4/19 Date

Administrative Requirements:
Reviewed 1/4/19 Date
283016

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

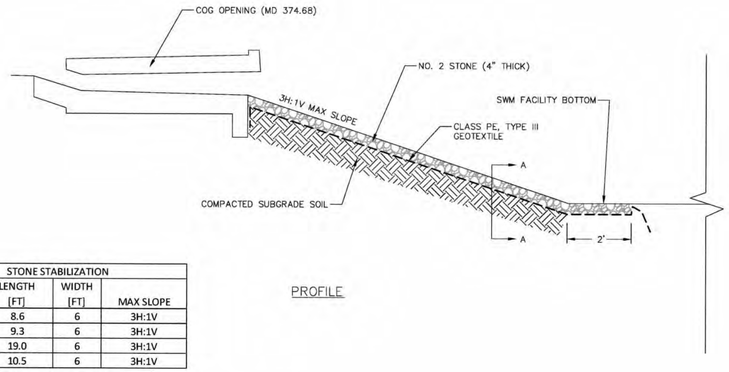
Designed by: KJS Drawn by: KJS Checked by: DZ

SWM-05 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

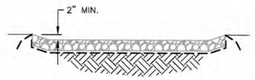
SCALE: AS NOTED DATE: FEBRUARY 2018

Project No. : 501307 SHEET 53 of 123



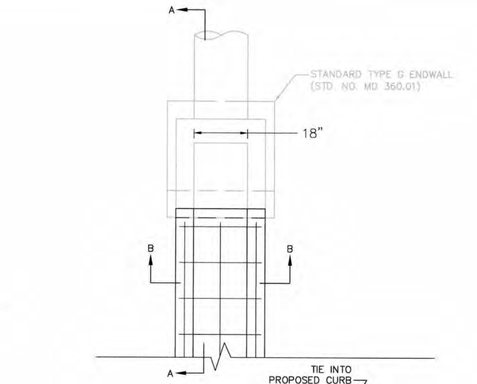
PROFILE

STONE STABILIZATION			
INLET #	LENGTH [FT]	WIDTH [FT]	MAX SLOPE
I-1-1	8.6	6	3H:1V
I-1-2	9.3	6	3H:1V
I-1-3	19.0	6	3H:1V
I-1-4	10.5	6	3H:1V

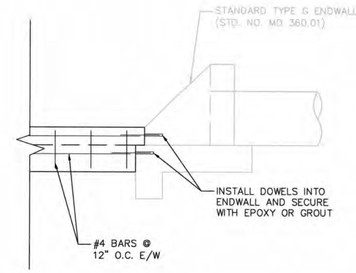


SECTION A–A

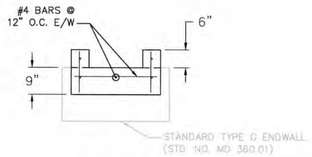
COG OPENING – TYPICAL STABILIZATION DETAIL
N.T.S



PLAN



SECTION A–A



SECTION B–B

NOTES:

1. PROPOSED STANDARD TYPE G ENDWALL SHOWN IN GRAY FOR CLARITY.
2. CONCRETE SHALL BE MIX NO. 2 INSTALLED IN ACCORDANCE WITH MD SHA SPECIFICATIONS.
3. CHAMFER ALL EDGES 1" X 1".
4. SAW CUT CONTRACTION JOINTS EVERY 20 FEET TO A DEPTH OF 2.5". FLUSH THE SAW CUT WITH WATER TO REMOVE ALL WASTE.

STORM DRAIN OUTFALL AT EW–1–24 – DETAILS
N.T.S

INLET #	Q_{10} (CFS)	V_{10} (FPS)	FLOW DEPTH (FT)
I-1-1	0.14	2.71	0.01
I-1-2	0.04	1.65	0.01
I-1-3	0.37	3.98	0.02
I-1-4	0.24	3.35	0.01

10–YEAR STORMWATER FLOW VALUES

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: MICRO–BIORETENTION, NON–ROOFTOP RUNOFF DISCONNECTION.
Reviewed _____ Date 1/4/19
Approved _____ Date 1/4/19
236807 SM FILE #

Sediment Control Technical Requirements:
Reviewed _____ Date 1/4/19
Approved _____ Date 1/4/19

Administrative Requirements:
Reviewed _____ Date 1/4/19
283016

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RJM ENGINEERING
6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Transportation Planning and Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

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

SWM–06 DETAIL SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

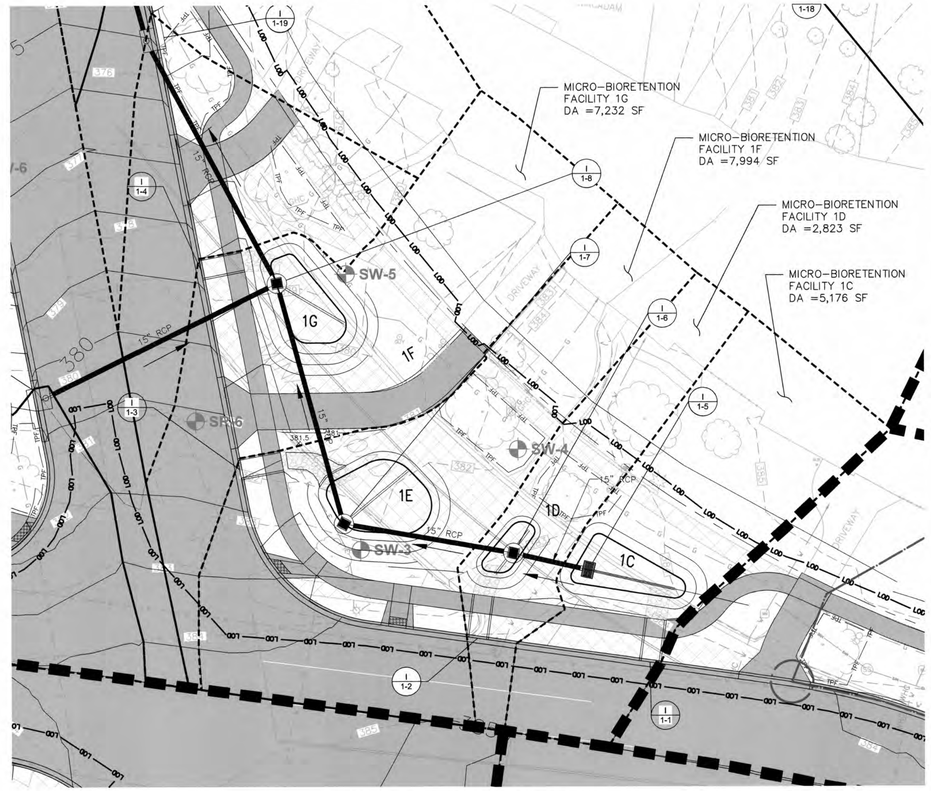
SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 54 of 123



SITE DRAINAGE AREA MAP
SCALE: 1" = 50'

0 50' 100'



SWM FACILITY DRAINAGE AREA MAP
SCALE: 1" = 20'

0 20' 40'

LEGEND

- OVERALL DRAINAGE AREA
- SUB-DRAINAGE AREA
- RIGHT OF WAY (R.O.W.) LINE
- SOIL GROUP BOUNDARY
- 100-YEAR FLOODPLAIN (NOT PRESENT ON SITE)
- LIMIT OF DISTURBANCE (LOD)
- HYDROLOGIC SOIL GROUP B/D
- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D
- WATER
- IMPERVIOUS AREA
- PAVEMENT REMOVAL AREA
- SWM POINT OF INVESTIGATION (POI)
- SOIL BORING LOCATION
- TIME OF CONCENTRATION PATH

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

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Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
MICRO-BIORETENTION, NON-ROOFTOP RUNOFF DISCONNECTION.	Reviewed 1/4/19 Date	Reviewed 1/4/19 Date
Reviewed 1/4/19 Date	Approved 1/4/19 Date	283016
Approved 1/4/19 Date		
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6031 University Blvd., Ste. 290
Ellicott City, MD 21043

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

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

SWM-07 DRAINAGE AREA MAPS

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: AS NOTED DATE: NOVEMBER 2017

Project No. : 501307 SHEET 54A of 123

MAINTENANCE OF TRAFFIC NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S "WORK ZONE TEMPORARY TRAFFIC CONTROL STANDARDS" – JULY 2014, MARYLAND STATE HIGHWAY WORK ZONE TRAFFIC CONTROL TYPICALS IN CATEGORY 1 OF THE BOOK OF STANDARDS, THE 2011 MD MUTCD, MD SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS – 2008, AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, THESE PLANS AND OTHER CONTRACT DOCUMENTS.

2. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION IN ACCORDANCE WITH THE METHOD OF TRAFFIC CONTROL SHOWN ON THESE DRAWINGS, OTHER CONTRACT DOCUMENTS, AND THE 2011 MD MUTCD AND SUBSEQUENT REVISIONS.

3. LONGITUDINAL DISTANCES OF ALL ADVANCED WARNING SIGNS MAY BE ADJUSTED DUE TO INTERSECTING STREETS, DRIVEWAYS, AND/OR FIELD CONDITIONS AS APPROVED BY THE ENGINEER. CHANGES TO CURRENT SIGNING AND TEMPORARY SIGNING SHALL BE MADE PER THE ENGINEER TO AVOID CONFUSING AND/OR CONFLICTING MESSAGES.

4. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, DRUMS, BARRIERS, AND PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL AS APPROVED BY THE ENGINEER.

5. CONSTRUCTION WARNING SIGNS ABOUT SPECIFIC AREAS AND TYPE OF CONSTRUCTION WILL BE PLACED AS DIRECTED BY THE ENGINEER.

6. ALL EXISTING SIGNS AND PAVEMENT MARKINGS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION UNLESS A CHANGE IS SHOWN ON THE PLAN AND/OR AS DIRECTED BY THE PROJECT ENGINEER.

7. WHERE TEMPORARY PAVEMENT MARKINGS ARE REQUIRED, CONFLICTING EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY HYDROBLASTING OR BY 3M REMOVABLE BLACK LANE MASK OR APPROVED EQUAL.

8. EXCAVATIONS SHALL BE BACKFILLED WITH GRADED AGGREGATE BASE PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH MONTGOMERY COUNTY'S TEMPORARY TRAFFIC CONTROL REQUIREMENTS.

9. WHERE A SIDEWALK IS CLOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A BARRIER ACROSS THE FULL WIDTH OF THE SIDEWALK APPROACHING THE CLOSURE. THIS BARRIER SHOULD BE DETECTABLE BY A VISUALLY IMPAIRED INDIVIDUAL TRAVELING WITH THE AID OF A CANE.

10. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR AATSA APPROVED FLAGGERS AND SHALL BE USED AT THE DIRECTION OF THE MONTGOMERY COUNTY INSPECTOR. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.

11. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE MONTGOMERY COUNTY INSPECTOR OR IF THE FLAGGERS CANNOT SEE EACH OTHER AND/OR THE LANE CLOSURE EXCEEDS 200 FEET.

12. THE CONTRACTOR SHALL CONTACT MONTGOMERY COUNTY TRANSPORTATION MANAGEMENT CENTER AT 240–777–2100, 72 HOURS PRIOR TO STARTING ALL WORK.

13. DRUMS SHALL PROTECT THE WORK ZONE DURING NON–WORK HOURS AND SHALL BE RESET ACCORDING TO THE STANDARDS LISTED IN THE SEQUENCE OF CONSTRUCTION NOTED ON THIS PLAN DURING WORK HOURS.

14. WHEN DRIVEWAYS ARE IMPACTED BY WORK ZONE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER. WHERE TWO ENTRANCES EXIST FOR ONE PROPERTY, CONSTRUCTION SHALL BE SEQUENCED SO THAT ONLY ONE ENTRANCE WILL BE DISTURBED.

15. ONCE ALL PHASES ARE COMPLETE FINAL PAVEMENT MARKINGS AND SIGNING SHALL MATCH SIGNING AND PAVEMENT MARKING PLAN WITHIN THESE PLANS.

16. THE CONTRACTOR SHALL ARRANGE AND HOST A PRE–PHASE TRAFFIC SWITCH MEETING AT LEAST TWO WEEKS PRIOR TO SWITCHING TRAFFIC. THE FOLLOWING OFFICES SHALL BE NOTIFIED OF THIS MEETING AND OF THE IMPENDING TRAFFIC SWITCH:
    - MONTGOMERY COUNTY, TRAFFIC ENGINEERING AND OPERATIONS SECTION (240–777–2190)
    - MONTGOMERY COUNTY, TRANSPORTATION SYSTEMS MANAGEMENT SECTION (240–777–2190)
    - MONTGOMERY COUNTY, TRANSIT SERVICES, MR. PHIL MCLAUGHLIN (240–777–5800)
    - MONTGOMERY COUNTY PUBLIC SCHOOLS, LOCAL DEPOT MANAGER
    - MONTGOMERY COUNTY FIRE AND RESCUE, LOCAL FIRE DEPARTMENT CAPTAIN
    - MONTGOMERY COUNTY POLICE, LOCAL TRAFFIC SERGEANT
    - MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES, PERMIT INSPECTION SECTION (240–777–6308)

    PRIOR TO ANY APPROVED ROAD CLOSURES, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING A MINIMUM OF SEVENTY–TWO (72) HOURS IN ADVANCE:
    - MONTGOMERY COUNTY, TRAFFIC ENGINEERING AND OPERATIONS SECTION, (240–777–2190)
    - MONTGOMERY COUNTY, TRANSPORTATION MANAGEMENT CENTER (240–777–2100)
    - MONTGOMERY COUNTY PUBLIC SCHOOLS, LOCAL DEPOT MANAGER
    - MONTGOMERY COUNTY, FIRE AND RESCUE, LOCAL FIRE DEPARTMENT CAPTAIN
    - MONTGOMERY COUNTY POLICE, LOCAL TRAFFIC SERGEANT
    - MONTGOMERY COUNTY, EMERGENCY OPERATIONS CENTER (240–777–0751)

17. IN AREAS TO BE CONSTRUCTED WITH FLAGGING OPERATIONS OR TEMPORARY LANE CLOSURES, CONTRACTOR SHALL ONLY OPEN AS MUCH OF THE ROADWAY AS CAN BE RECONSTRUCTED BY THE END OF THE WORK DAY TO ALLOW ALL LANES TO BE OPEN TO TRAFFIC.

18. ADVANCE NOTICE OF ROADWAY CLOSURES SHALL BE PROVIDED TWO WEEKS PRIOR TO THE CLOSURE TAKING EFFECT. NOTICE OF THE ANTICIPATED DATE THE ROADWAY WILL REOPEN WILL BE PROVIDED NO MORE THAN TWO DAYS AFTER THE ACTUAL DATE OF THE ROAD CLOSURE.

19. CONTRACTOR SHALL CONSTRUCT TEMPORARY WEDGE AND LEVEL AS NECESSARY AT RESIDENTIAL DRIVEWAYS TO MAINTAIN ACCESS DURING CONSTRUCTION OF THE ROADWAY AND SIDEWALK.

20. ALL WORK SHALL BE COORDINATED WITH THE FIRE HOUSE AND ACCOMMODATIONS SHALL BE MADE FOR ALL EMERGENCY VEHICLES.

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MCDOT
BY: _____ Date 5/7/14

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Design Section

APPROVED
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Division of Transportation Engineering

Designed by: JRM Drawn by: JRM Checked by: GAB

MT–01 MAINTENANCE OF TRAFFIC GENERAL NOTES

SEMINARY ROAD
INTERSECTION IMPROVEMENTS

DATE: NOVEMBER 2017

Project No. : 501307 SHEET 55 of 123

FILE NAME: O:\MPA\150605_MD4 Project_Management_Plan\CADD\MT-01-GeneralNotes.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, February 06, 2018 - 2:20pm USER: mcohn

SEQUENCE OF CONSTRUCTION

ESTABLISH THE WORK ZONE FOR PHASE 1A BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

DETOUR EASTBOUND SEMINARY PLACE ACCORDING TO PHASE 1A AND 2A DETOUR PLAN (24–HOUR CLOSURE).

SHIFT WESTBOUND SEMINARY PLACE TRAFFIC TO THE EASTBOUND LANE. SEMINARY PLACE SHALL BE A ONE WAY, ONE LANE ROADWAY FOR THE DURATION OF THE EASTBOUND DETOUR. CONTRACTOR SHALL SHIFT TRAFFIC AS NECESSARY ON SEMINARY PLACE WHILE RECONSTRUCTING THE ROADWAY TO INCORPORATE GRADE CHANGES WHILE STILL MEETING DROP–OFF REQUIREMENTS AND PROVIDING ACCESS TO PROPERTIES.

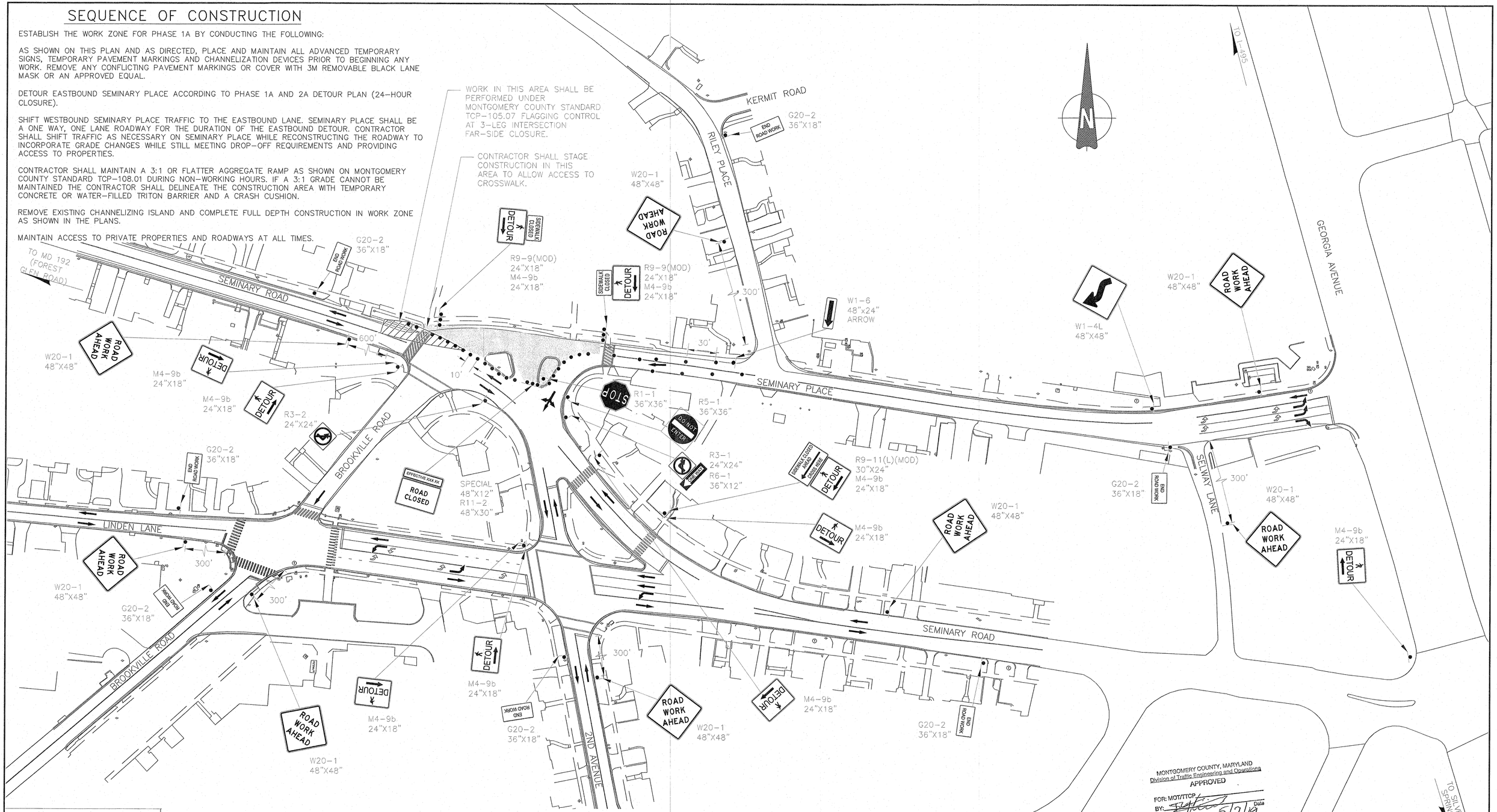
CONTRACTOR SHALL MAINTAIN A 3:1 OR FLATTER AGGREGATE RAMP AS SHOWN ON MONTGOMERY COUNTY STANDARD TCP–108.01 DURING NON–WORKING HOURS. IF A 3:1 GRADE CANNOT BE MAINTAINED THE CONTRACTOR SHALL DELINEATE THE CONSTRUCTION AREA WITH TEMPORARY CONCRETE OR WATER–FILLED TRITON BARRIER AND A CRASH CUSHION.

REMOVE EXISTING CHANNELIZING ISLAND AND COMPLETE FULL DEPTH CONSTRUCTION IN WORK ZONE AS SHOWN IN THE PLANS.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.

WORK IN THIS AREA SHALL BE PERFORMED UNDER MONTGOMERY COUNTY STANDARD TCP–105.07 FLAGGING CONTROL AT 3–LEG INTERSECTION FAR–SIDE CLOSURE.

CONTRACTOR SHALL STAGE CONSTRUCTION IN THIS AREA TO ALLOW ACCESS TO CROSSWALK.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: _____ Date 5/7/19

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT–02 MAINTENANCE OF TRAFFIC
PHASE 1A PLAN SHEET
SEMINARY ROAD
INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 56 of 123

SEQUENCE OF CONSTRUCTION

ESTABLISH THE WORK ZONE FOR PHASE 1B BY CONDUCTING THE FOLLOWING:

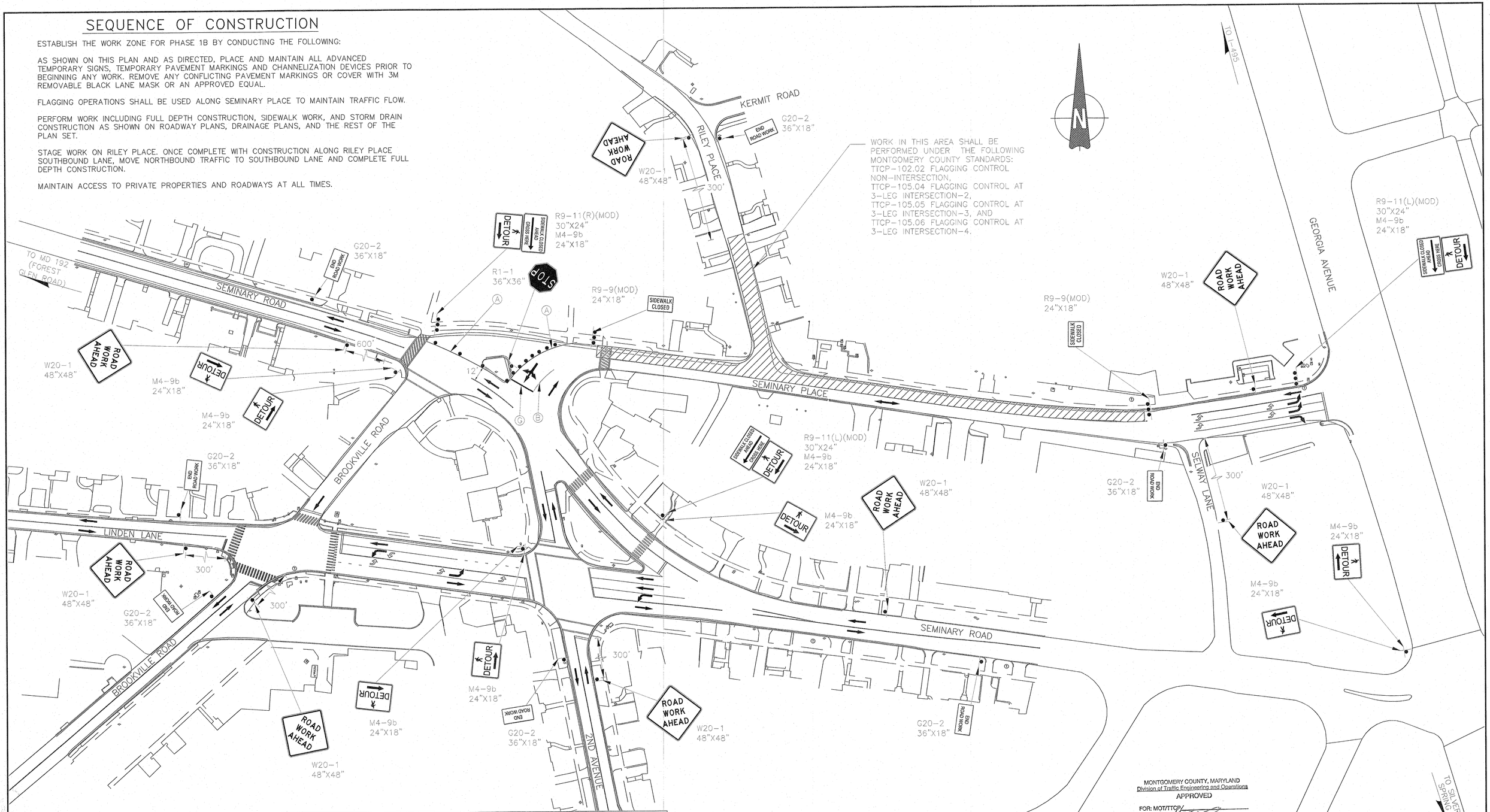
AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

FLAGGING OPERATIONS SHALL BE USED ALONG SEMINARY PLACE TO MAINTAIN TRAFFIC FLOW.

PERFORM WORK INCLUDING FULL DEPTH CONSTRUCTION, SIDEWALK WORK, AND STORM DRAIN CONSTRUCTION AS SHOWN ON ROADWAY PLANS, DRAINAGE PLANS, AND THE REST OF THE PLAN SET.

STAGE WORK ON RILEY PLACE. ONCE COMPLETE WITH CONSTRUCTION ALONG RILEY PLACE SOUTHBOUND LANE, MOVE NORTHBOUND TRAFFIC TO SOUTHBOUND LANE AND COMPLETE FULL DEPTH CONSTRUCTION.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: 5/7/19 Date

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE — Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE — Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-03 MAINTENANCE OF TRAFFIC
PHASE 1B PLAN SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=50' (0, 50', 100')
DATE: NOVEMBER 2017

Project No.: 501307 SHEET 57 of 123

File Name: d:\MAINTENANCE\Sht Files_Maintenance Sheet Files\MT-03-Phase 1B.dgn Layout Name: Layout Plotted: Wednesday, May 01, 2019 - 10:58am

SEQUENCE OF CONSTRUCTION

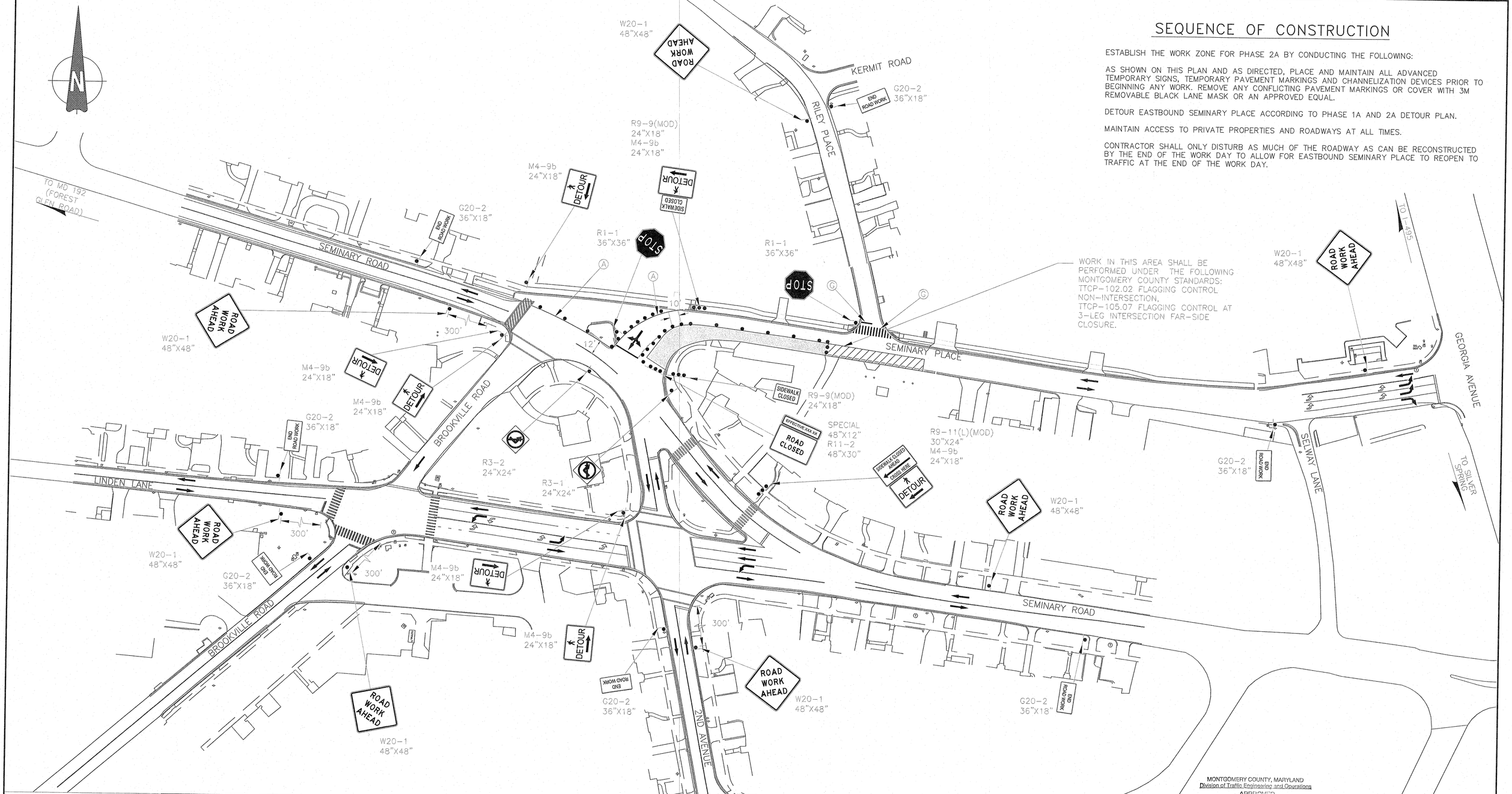
ESTABLISH THE WORK ZONE FOR PHASE 2A BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

DETOUR EASTBOUND SEMINARY PLACE ACCORDING TO PHASE 1A AND 2A DETOUR PLAN.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.

CONTRACTOR SHALL ONLY DISTURB AS MUCH OF THE ROADWAY AS CAN BE RECONSTRUCTED BY THE END OF THE WORK DAY TO ALLOW FOR EASTBOUND SEMINARY PLACE TO REOPEN TO TRAFFIC AT THE END OF THE WORK DAY.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: _____ 5/7/19 Date

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-04 MAINTENANCE OF TRAFFIC
PHASE 2A PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 58 of 123

SEQUENCE OF CONSTRUCTION

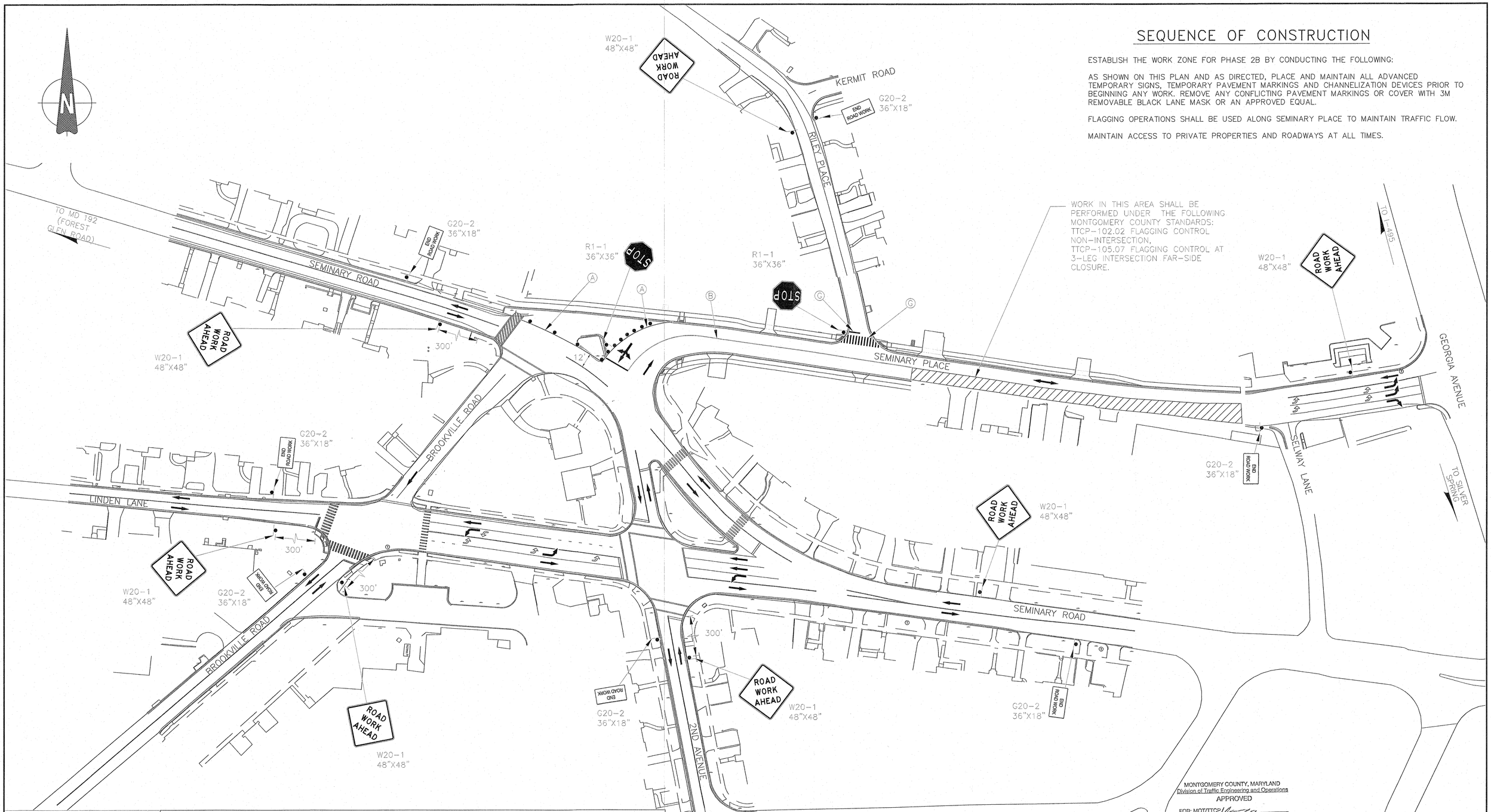
ESTABLISH THE WORK ZONE FOR PHASE 2B BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

FLAGGING OPERATIONS SHALL BE USED ALONG SEMINARY PLACE TO MAINTAIN TRAFFIC FLOW.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.

WORK IN THIS AREA SHALL BE PERFORMED UNDER THE FOLLOWING MONTGOMERY COUNTY STANDARDS: TTCP-102.02 FLAGGING CONTROL NON-INTERSECTION, TTCP-105.07 FLAGGING CONTROL AT 3-LEG INTERSECTION FAR-SIDE CLOSURE.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: _____ 5/7/19 Date

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

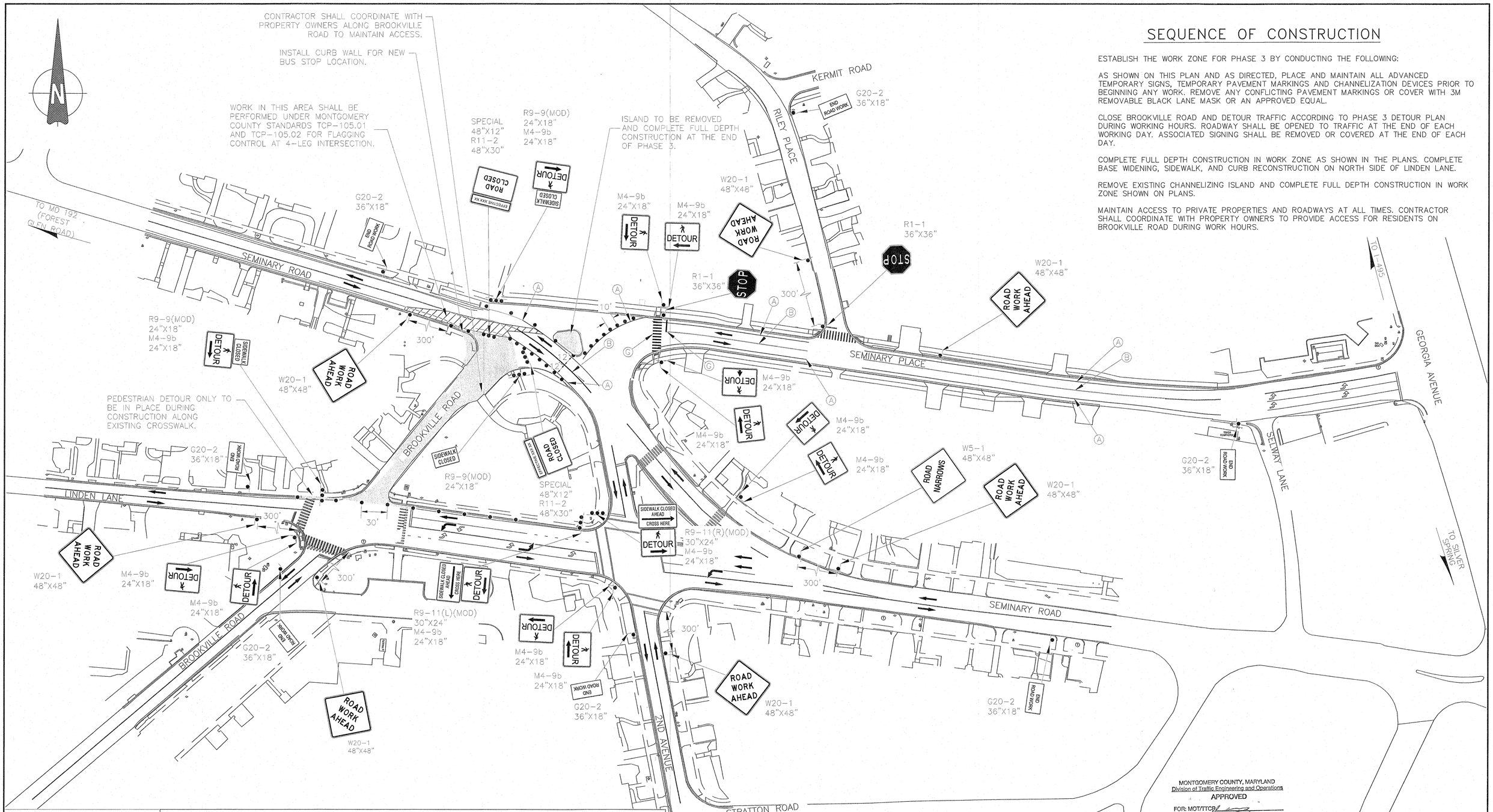
MT-05 MAINTENANCE OF TRAFFIC
PHASE 2B PLAN SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50'

DATE: NOVEMBER 2017

Project No. : 501307 SHEET 59 of 123



SEQUENCE OF CONSTRUCTION

ESTABLISH THE WORK ZONE FOR PHASE 3 BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

CLOSE BROOKVILLE ROAD AND DETOUR TRAFFIC ACCORDING TO PHASE 3 DETOUR PLAN DURING WORKING HOURS. ROADWAY SHALL BE OPENED TO TRAFFIC AT THE END OF EACH WORKING DAY. ASSOCIATED SIGNING SHALL BE REMOVED OR COVERED AT THE END OF EACH DAY.

COMPLETE FULL DEPTH CONSTRUCTION IN WORK ZONE AS SHOWN IN THE PLANS. COMPLETE BASE WIDENING, SIDEWALK, AND CURB RECONSTRUCTION ON NORTH SIDE OF LINDEN LANE.

REMOVE EXISTING CHANNELIZING ISLAND AND COMPLETE FULL DEPTH CONSTRUCTION IN WORK ZONE SHOWN ON PLANS.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO PROVIDE ACCESS FOR RESIDENTS ON BROOKVILLE ROAD DURING WORK HOURS.

LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTOP
BY: _____ Date 5/7/19

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-06 MAINTENANCE OF TRAFFIC
PHASE 3 PLAN SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'

SCALE: 1"=50' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 60 of 123

SEQUENCE OF CONSTRUCTION

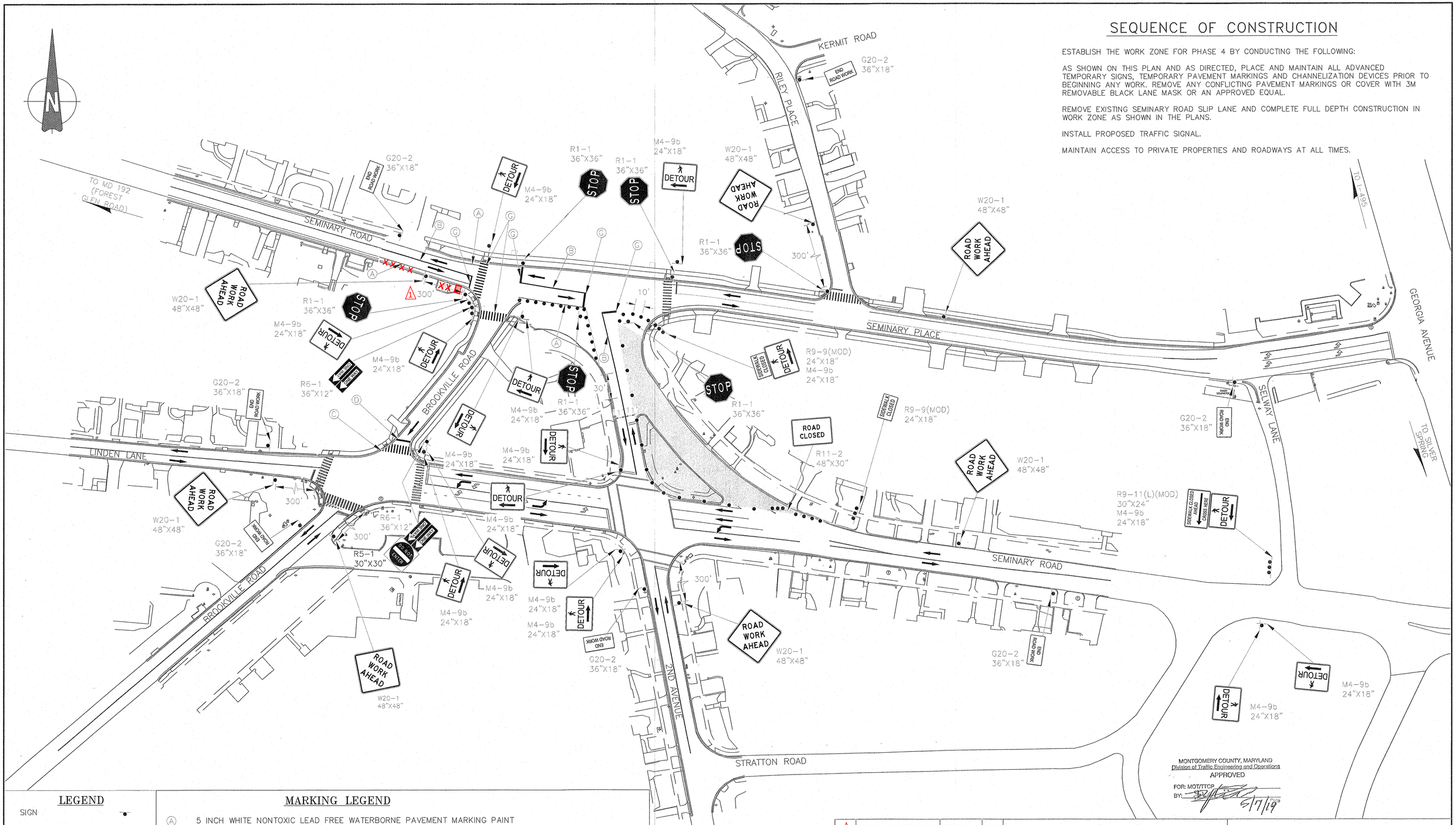
ESTABLISH THE WORK ZONE FOR PHASE 4 BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

REMOVE EXISTING SEMINARY ROAD SLIP LANE AND COMPLETE FULL DEPTH CONSTRUCTION IN WORK ZONE AS SHOWN IN THE PLANS.

INSTALL PROPOSED TRAFFIC SIGNAL.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: 5/7/19

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

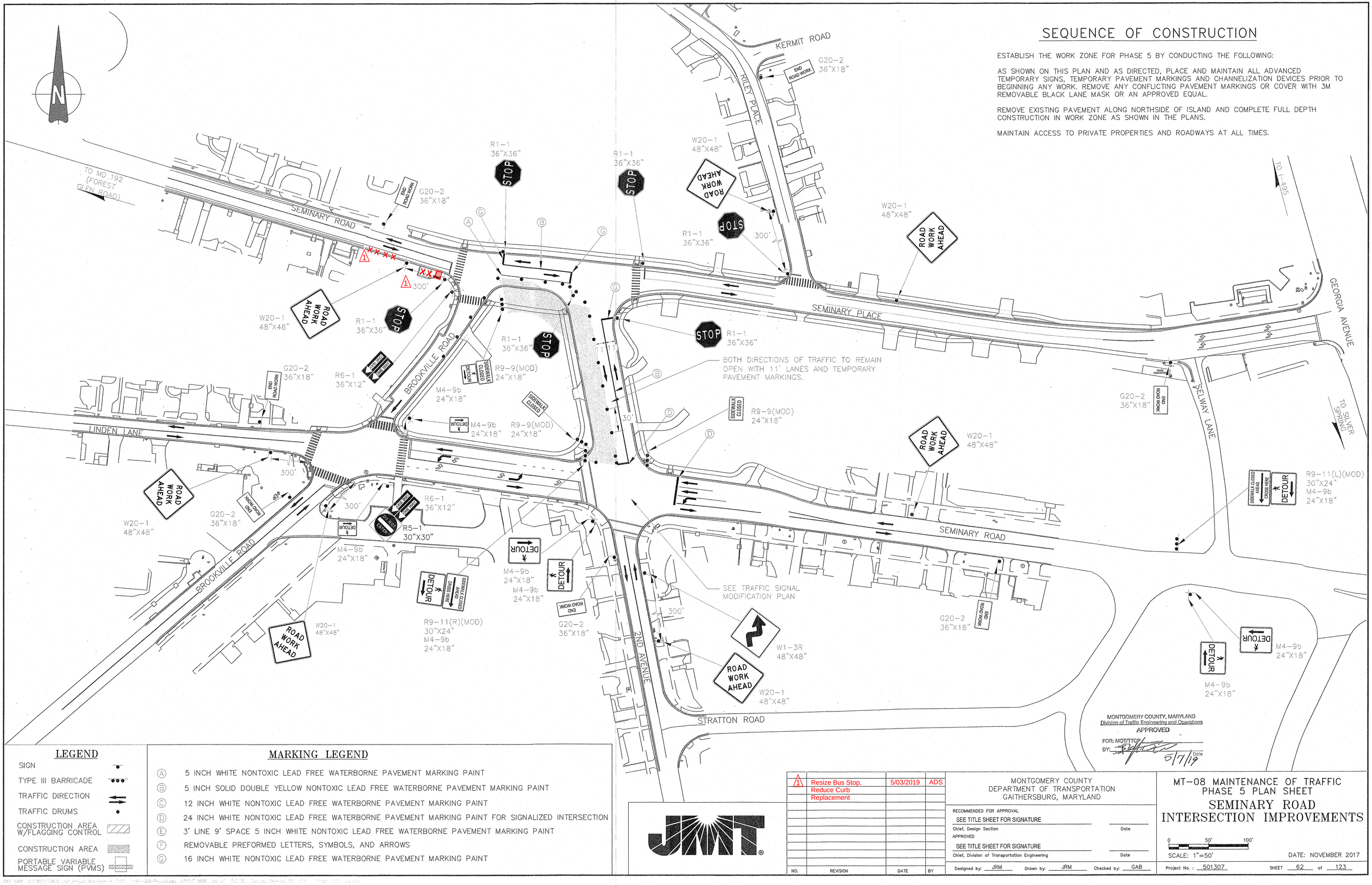
Designed by: JRM Drawn by: JRM Checked by: GAB

MT-07 MAINTENANCE OF TRAFFIC PHASE 4 PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=50' (0, 50', 100')

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 61 of 123



SEQUENCE OF CONSTRUCTION

ESTABLISH THE WORK ZONE FOR PHASE 5 BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

REMOVE EXISTING PAVEMENT ALONG NORTHSIDE OF ISLAND AND COMPLETE FULL DEPTH CONSTRUCTION IN WORK ZONE AS SHOWN IN THE PLANS.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.

LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: _____ Date 5/7/19

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-08 MAINTENANCE OF TRAFFIC
PHASE 5 PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50'
DATE: NOVEMBER 2017

Project No. : 501307 SHEET 62 of 123

SEQUENCE OF CONSTRUCTION

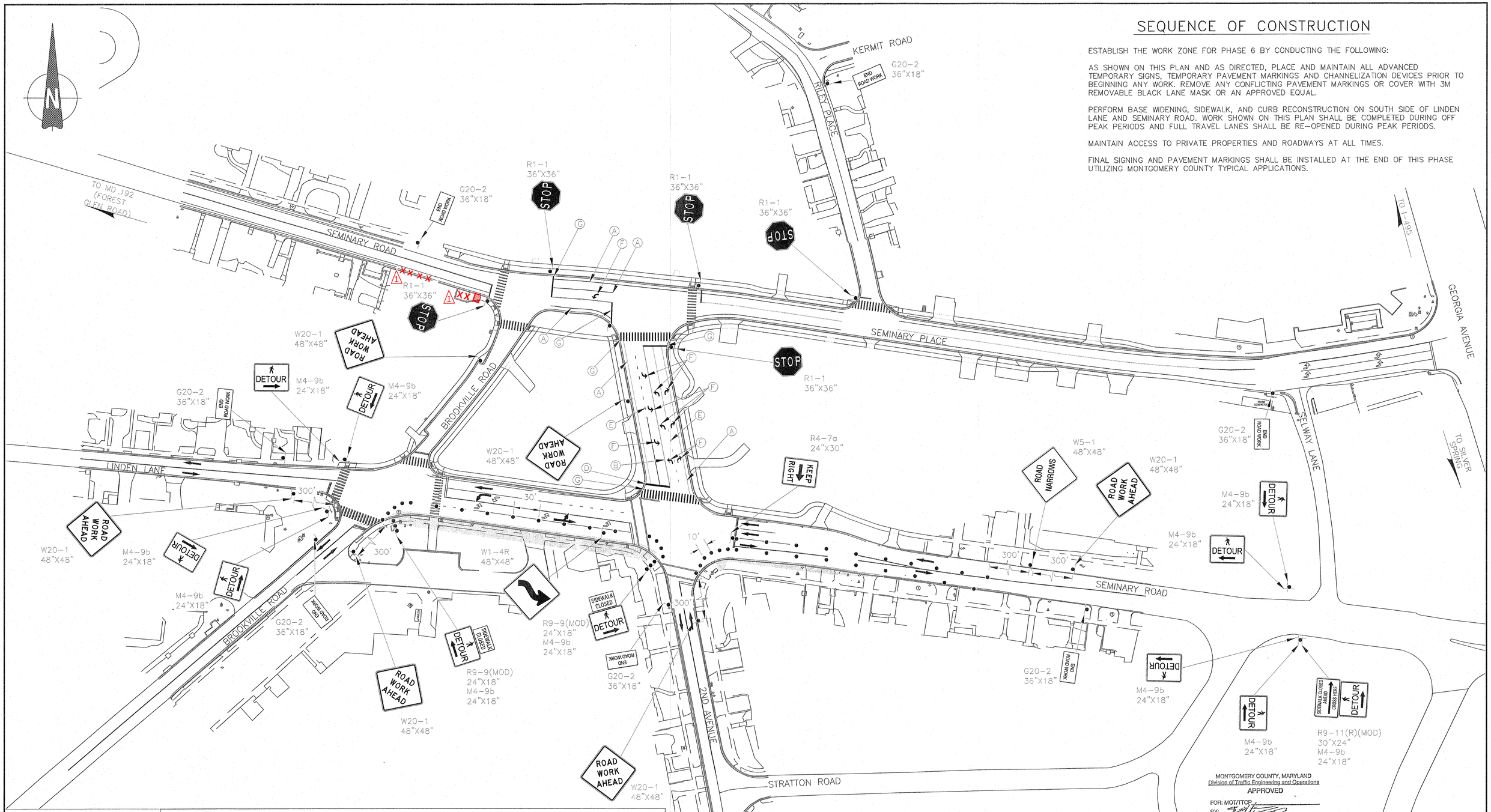
ESTABLISH THE WORK ZONE FOR PHASE 6 BY CONDUCTING THE FOLLOWING:

AS SHOWN ON THIS PLAN AND AS DIRECTED, PLACE AND MAINTAIN ALL ADVANCED TEMPORARY SIGNS, TEMPORARY PAVEMENT MARKINGS AND CHANNELIZATION DEVICES PRIOR TO BEGINNING ANY WORK. REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR COVER WITH 3M REMOVABLE BLACK LANE MASK OR AN APPROVED EQUAL.

PERFORM BASE WIDENING, SIDEWALK, AND CURB RECONSTRUCTION ON SOUTH SIDE OF LINDEN LANE AND SEMINARY ROAD. WORK SHOWN ON THIS PLAN SHALL BE COMPLETED DURING OFF PEAK PERIODS AND FULL TRAVEL LANES SHALL BE RE-OPENED DURING PEAK PERIODS.

MAINTAIN ACCESS TO PRIVATE PROPERTIES AND ROADWAYS AT ALL TIMES.

FINAL SIGNING AND PAVEMENT MARKINGS SHALL BE INSTALLED AT THE END OF THIS PHASE UTILIZING MONTGOMERY COUNTY TYPICAL APPLICATIONS.



LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MARKING LEGEND

- (A) 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (B) 5 INCH SOLID DOUBLE YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (C) 12 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (D) 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT FOR SIGNALIZED INTERSECTION
- (E) 3' LINE 9' SPACE 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT
- (F) REMOVABLE PREFORMED LETTERS, SYMBOLS, AND ARROWS
- (G) 16 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: 5/7/19 Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

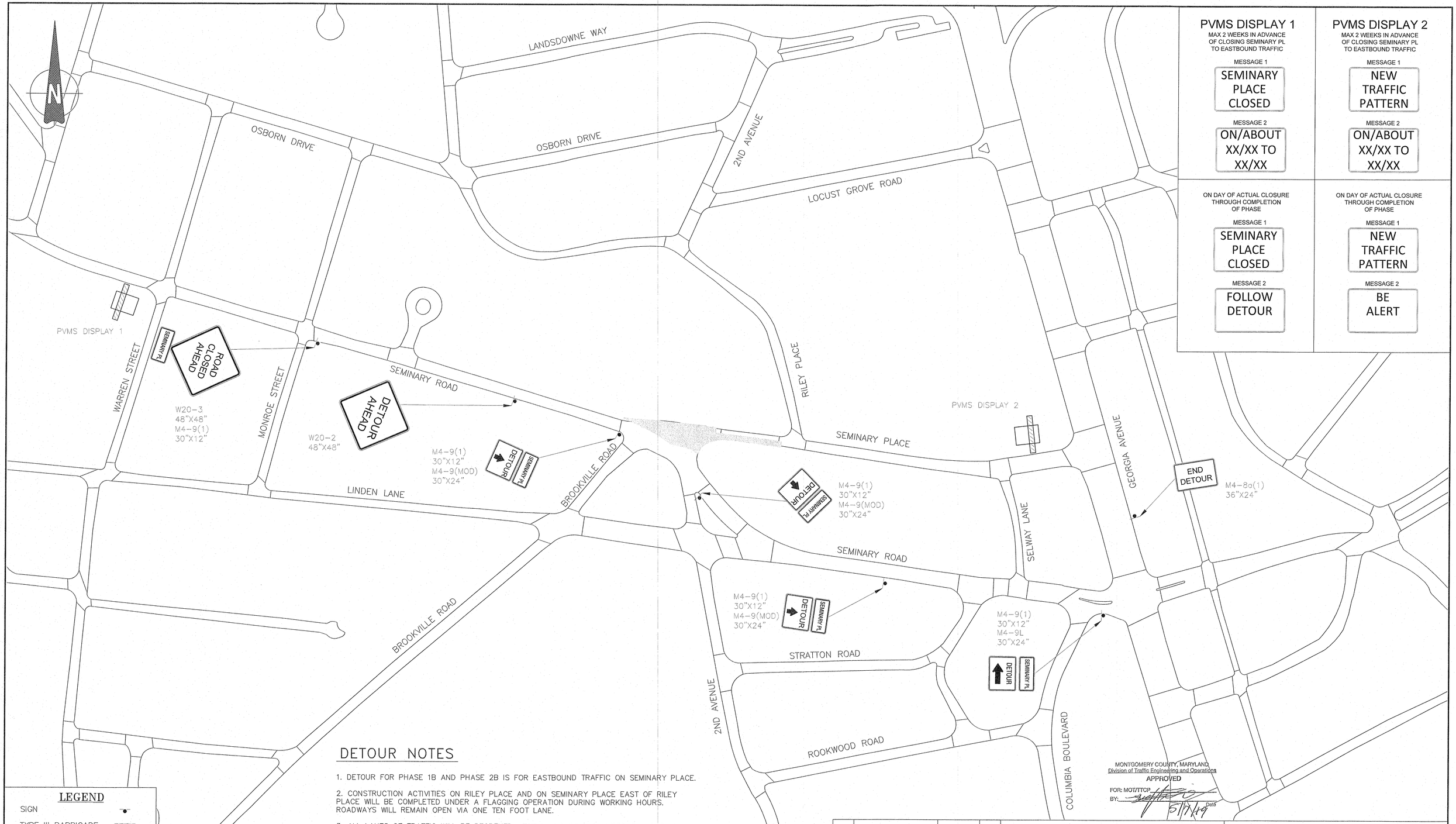
Designed by: JRM Drawn by: JRM Checked by: GAB

MT-09 MAINTENANCE OF TRAFFIC
PHASE 6 PLAN SHEET

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 63 of 123



PVMS DISPLAY 1	PVMS DISPLAY 2
MAX 2 WEEKS IN ADVANCE OF CLOSING SEMINARY PL TO EASTBOUND TRAFFIC	MAX 2 WEEKS IN ADVANCE OF CLOSING SEMINARY PL TO EASTBOUND TRAFFIC
MESSAGE 1: SEMINARY PLACE CLOSED	MESSAGE 1: NEW TRAFFIC PATTERN
MESSAGE 2: ON/ABOUT XX/XX TO XX/XX	MESSAGE 2: ON/ABOUT XX/XX TO XX/XX
ON DAY OF ACTUAL CLOSURE THROUGH COMPLETION OF PHASE	ON DAY OF ACTUAL CLOSURE THROUGH COMPLETION OF PHASE
MESSAGE 1: SEMINARY PLACE CLOSED	MESSAGE 1: NEW TRAFFIC PATTERN
MESSAGE 2: FOLLOW DETOUR	MESSAGE 2: BE ALERT

DETOUR NOTES

1. DETOUR FOR PHASE 1B AND PHASE 2B IS FOR EASTBOUND TRAFFIC ON SEMINARY PLACE.

2. CONSTRUCTION ACTIVITIES ON RILEY PLACE AND ON SEMINARY PLACE EAST OF RILEY PLACE WILL BE COMPLETED UNDER A FLAGGING OPERATION DURING WORKING HOURS. ROADWAYS WILL REMAIN OPEN VIA ONE TEN FOOT LANE.

3. ALL LANES OF TRAFFIC WILL BE REOPENED AT THE END OF EACH WORK DAY DURING PHASE 1A AND PHASE 2A.

LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MOT/TTCP
BY: _____ Date 5/17/19

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-10 MAINTENANCE OF TRAFFIC PHASE 1A AND 2A VEHICLE DETOUR
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'
SCALE: 1"=50'
DATE: NOVEMBER 2017

Project No.: 501307
SHEET 64 of 123

FILE NAME: \\jmt-prod\proj\pmwin\501307_SHT_Project Management_FLOAT\mt10-maintenance.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, February 21, 2019 - 1:29pm

N

OSBORN DRIVE

OSBORN DRIVE

2ND AVENUE

LOCUST GROVE ROAD

PVMS DISPLAY 1

WARREN STREET

MONROE STREET

SEMINARY ROAD

ROAD CLOSED AHEAD
BROOKVILLE RD
W20-3
48"X48"
M4-9(1)
30"X12"

M4-9(1)
30"X12"
M4-9L
30"X24"

R11-2
48"X30"
ROAD CLOSED

DETOUR
BROOKVILLE RD

RILEY PLACE

DETOUR AHEAD
BROOKVILLE RD
W20-2
48"X48"
M4-9(1)
30"X12"

ROAD CLOSED AHEAD
BROOKVILLE RD
W20-3
48"X48"
M4-9(1)
30"X12"

DETOUR
BROOKVILLE RD
TRUCK
M4-4
30"X15"
M4-9(1)
30"X12"
M4-9(MOD)
30"X24"

DETOUR AHEAD
BROOKVILLE RD
W20-2
48"X48"
M4-9(1)
30"X12"

DETOUR
BROOKVILLE RD
M4-9(1)
30"X12"
M4-9(MOD)
30"X24"

SEMINARY PLACE

PVMS DISPLAY 1

LINDEN LANE

BROOKVILLE ROAD

DETOUR
BROOKVILLE RD
M4-9(1)
30"X12"
M4-9R
30"X24"

DETOUR
BROOKVILLE RD
TRUCK
M4-4
30"X15"
M4-9(1)
30"X12"
M4-9R
30"X24"

SELWAY LANE

GEORGIA AVENUE

R11-2
48"X30"
ROAD CLOSED

SEMINARY ROAD

END DETOUR
M4-8a
30"X24"

DETOUR
BROOKVILLE RD
M4-9(1)
30"X12"
M4-9R
30"X24"

BROOKVILLE ROAD

STRATTON ROAD

2ND AVENUE

ROOKWOOD ROAD

COLUMBIA BOULEVARD

PVMS DISPLAY 1

MIN 2 WEEKS IN ADVANCE OF CLOSING BROOKVILLE ROAD TO TRAFFIC

MESSAGE 1

BROOK-
VILLE RD
CLOSED

MESSAGE 2

ON/ABOUT
XX/XX TO
XX/XX

ON DAY OF ACTUAL CLOSURE THROUGH COMPLETION OF PHASE

MESSAGE 1

BROOK-
VILLE RD
CLOSED

MESSAGE 2

FOLLOW
DETOUR

LEGEND

- SIGN
- TYPE III BARRICADE
- TRAFFIC DIRECTION
- TRAFFIC DRUMS
- CONSTRUCTION AREA W/FLAGGING CONTROL
- CONSTRUCTION AREA
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations
APPROVED
FOR: MCDOT/DTEO
BY: 7/17/19 Date

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

MT-11 MAINTENANCE OF TRAFFIC PHASE 3 VEHICLE DETOUR

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 50' 100'

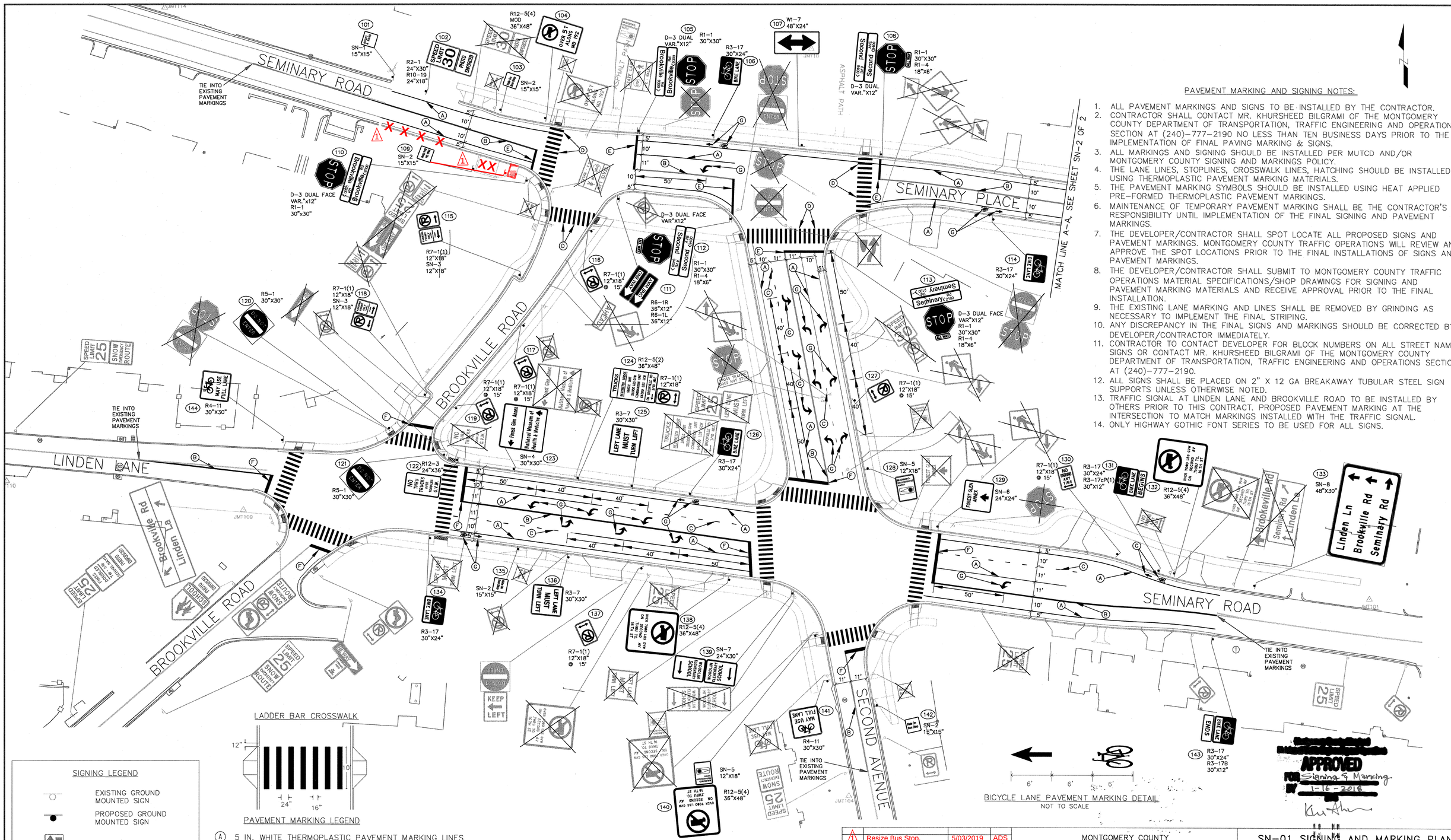
SCALE: 1"=50'

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 65 of 123

FILE NAME: C:\MKT\501307_MT-11_Maintenance_of_Traffic_Phase_3_Vehicle_Detour_Seminary_Rd_Intersection_Improvements.dgn



PAVEMENT MARKING AND SIGNING NOTES:

1. ALL PAVEMENT MARKINGS AND SIGNS TO BE INSTALLED BY THE CONTRACTOR.
2. CONTRACTOR SHALL CONTACT MR. KHURSHEED BILGRAMI OF THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, TRAFFIC ENGINEERING AND OPERATIONS SECTION AT (240)-777-2190 NO LESS THAN TEN BUSINESS DAYS PRIOR TO THE IMPLEMENTATION OF FINAL PAVING MARKING & SIGNS.
3. ALL MARKINGS AND SIGNING SHOULD BE INSTALLED PER MUTCD AND/OR MONTGOMERY COUNTY SIGNING AND MARKINGS POLICY.
4. THE LANE LINES, STOPLINES, CROSSWALK LINES, HATCHING SHOULD BE INSTALLED USING THERMOPLASTIC PAVEMENT MARKING MATERIALS.
5. THE PAVEMENT MARKING SYMBOLS SHOULD BE INSTALLED USING HEAT APPLIED PRE-FORMED THERMOPLASTIC PAVEMENT MARKINGS.
6. MAINTENANCE OF TEMPORARY PAVEMENT MARKING SHALL BE THE CONTRACTOR'S RESPONSIBILITY UNTIL IMPLEMENTATION OF THE FINAL SIGNING AND PAVEMENT MARKINGS.
7. THE DEVELOPER/CONTRACTOR SHALL SPOT LOCATE ALL PROPOSED SIGNS AND PAVEMENT MARKINGS. MONTGOMERY COUNTY TRAFFIC OPERATIONS WILL REVIEW AND APPROVE THE SPOT LOCATIONS PRIOR TO THE FINAL INSTALLATIONS OF SIGNS AND PAVEMENT MARKINGS.
8. THE DEVELOPER/CONTRACTOR SHALL SUBMIT TO MONTGOMERY COUNTY TRAFFIC OPERATIONS MATERIAL SPECIFICATIONS/SHOP DRAWINGS FOR SIGNING AND PAVEMENT MARKING MATERIALS AND RECEIVE APPROVAL PRIOR TO THE FINAL INSTALLATION.
9. THE EXISTING LANE MARKING AND LINES SHALL BE REMOVED BY GRINDING AS NECESSARY TO IMPLEMENT THE FINAL STRIPING.
10. ANY DISCREPANCY IN THE FINAL SIGNS AND MARKINGS SHOULD BE CORRECTED BY DEVELOPER/CONTRACTOR IMMEDIATELY.
11. CONTRACTOR TO CONTACT DEVELOPER FOR BLOCK NUMBERS ON ALL STREET NAME SIGNS OR CONTACT MR. KHURSHEED BILGRAMI OF THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, TRAFFIC ENGINEERING AND OPERATIONS SECTION AT (240)-777-2190.
12. ALL SIGNS SHALL BE PLACED ON 2" X 12 GA BREAKAWAY TUBULAR STEEL SIGN SUPPORTS UNLESS OTHERWISE NOTED.
13. TRAFFIC SIGNAL AT LINDEN LANE AND BROOKVILLE ROAD TO BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT. PROPOSED PAVEMENT MARKING AT THE INTERSECTION TO MATCH MARKINGS INSTALLED WITH THE TRAFFIC SIGNAL.
14. ONLY HIGHWAY GOTHIC FONT SERIES TO BE USED FOR ALL SIGNS.

SIGNING LEGEND

- EXISTING GROUND MOUNTED SIGN
- PROPOSED GROUND MOUNTED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND

- (A) 5 IN. WHITE THERMOPLASTIC PAVEMENT MARKING LINES
- (B) 5 IN. DOUBLE YELLOW PAVEMENT MARKING LINES
- (C) 5 IN. WHITE PAVEMENT MARKING LINES – 3' LINE 9' SPACE
- (D) 16 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR CROSS WALK
- (E) 16 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE
- (F) 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE
- (G) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGEND AND SYMBOLS

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement, Move Bus Stop Sign	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

SN-01 SIGNING AND MARKING PLAN

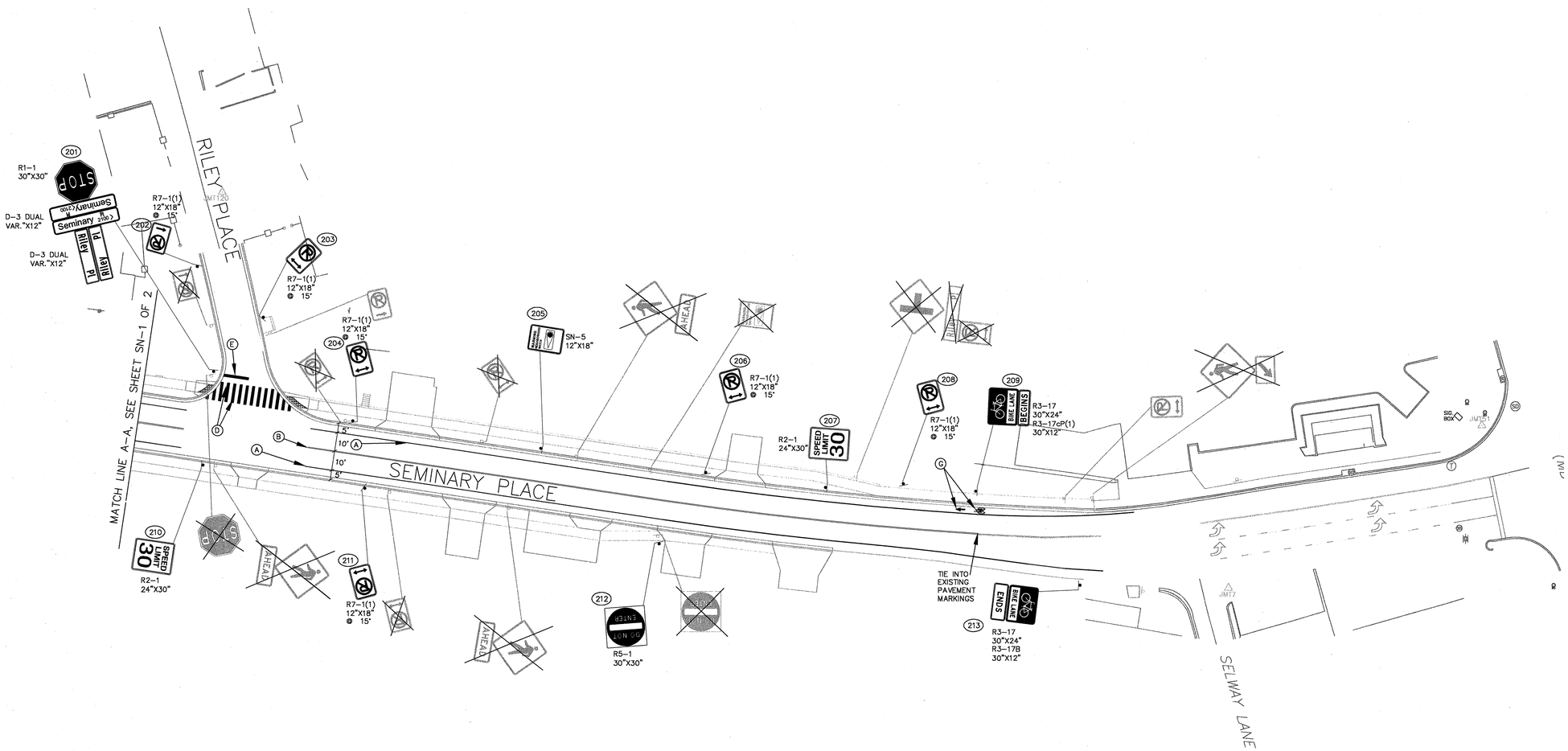
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 40' 80'

SCALE: 1"=40' DATE: NOVEMBER 2017

Project No. : 501307 SHEET 66 of 123

FILE NAME: Q:\SMD\130505_004_Project_Management_FY\CADD\pSN-P001 Seminary.dwg LAYOUT NAME: Layout1 PLOTTED: Wednesday, November 29, 2017 12:21pm USER: sevesind



SIGNING LEGEND

- EXISTING GROUND MOUNTED SIGN
- PROPOSED GROUND MOUNTED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND

- (A) 5 IN. WHITE THERMOPLASTIC PAVEMENT MARKING LINES
- (B) 5 IN. DOUBLE YELLOW PAVEMENT MARKING LINES
- (C) 5 IN. WHITE PAVEMENT MARKING LINES – 3' LINE 9' SPACE
- (D) 16 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR CROSS WALK
- (E) 16 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE
- (F) 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE
- (G) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGEND AND SYMBOLS

APPROVED
FOR Signing & Marking
BY 01-16-2018

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

SN-02 SIGNING AND MARKING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 40' 80'

SCALE: 1"=40'

DATE: NOVEMBER 2017

Project No.: 501307 SHEET 67 of 123

FILE NAME: Q:\SMD\130505_004_Project_Management_1\CADD\pSN-P001 Seminary.dwg LAYOUT NAME: Layout 2 PLOTTED Tuesday, November 14, 2017 - 7:01pm USER: stevriand

SHEET NO.	REMARKS	SUPPORT	CODE NUMBERS *																			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SN-01																						
101	SN-1 (ADOPT A ROAD) [15"x15"] (BLACK ON WHITE)		1	1	1.6																	
102	R2-1 [24"x30"], R10-19 [24"x18"]		1	1	8																	
103	SN-2 (BUS STOP) [15"x15"] (BLUE ON WHITE)		1	1	1.6																	
104	R12-5(4) MOD [36"x48"]		2	2	12																	
105	D-3 DUAL FACE [VAR"x12"], R1-1 [30"x30"]		2	2	11																	
106	R3-17 [30"x24"]		1	1	5																	
107	W1-7 [48"x24"]		1	1	8																	
108	D-3 DUAL FACE [VAR"x12"], R1-1 [30"x30"], R1-4 [18x"6"]		2	2	11																	
109	SN-2 (BUS STOP) [15"X15"] (BLUE ON WHITE)		1	1	1.6																	
110	D-3 DUAL FACE [VAR"x12"], R1-1 [30"X30"]		2	2	11																	
111	R6-1R [36"x12"], R6-1L [36"x12"]		1	1	6																	
112	D-3 DUAL FACE [VAR"x12"], R1-1 [30"x30"], R1-4 [18"x6"]		2	2	11																	
113	D-3 DUAL FACE [VAR"x12"], R1-1 [30"x30"], R1-4 [18"x6"]		2	2	11																	
114	R3-17 [30"x24"]		1	1	5																	
115	R7-1(I) [12"x18"], SN-3 (PERMIT PARKING) [12"x18"] (RED ON WHITE)		1	1	3																	
116	R7-1(I) [12"x18"]		1	1	1.5																	
117	R7-1(I) [12"x18"]		1	1	1.5																	
118	R7-1(I) [12"x18"], SN-3 (PERMIT PARKING) [12"x18"] (RED ON WHITE)		1	1	3																	
119	R7-1(I) [12"x18"]		1	1	1.5																	
120	R5-1 [30"x30"]		1	1	6.3																	
121	R5-1 [30"x30"]		1	1	6.3																	
122	R12-3 [24"x36"]		1	1	6																	
123	SN-4 (NATIONAL MUSEUM) [30"x30"] (WHITE ON GREEN)		1	1	6.3																	
124	R12-5(2) [36"X48"], R7-1(I) [12"X18"]		2	2	13.5																	
125	R3-7 [30"x30"]		1	1	6.3																	
126	R3-17 [30"x24"]		1	1	5																	
127	R7-1(I) [12"x18"]		1	1	1.5																	
128	SN-5 (NEIGHBORHOOD WATCH) [12"x18"] (BLACK AND BLUE ON WHITE)		1	1	1.5																	
129	SN-6 (FOREST GLEN) [24"x24"] (WHITE ON GREEN)		1	1	4																	
130	R7-1(I) [12"x18"]		1	1	1.5																	
131	R3-17 [30"x24"], R3-17cP(I) [30"x12"]		1	1	7.5																	
132	R12-5(4) [36"x48"]		2	2	12																	
133	SN-8 [48"x30"] (WHITE ON GREEN)		2	2	10																	
134	R3-17 [30"x24"]		1	1	5																	
135	SN-2 (BUS STOP) [15"x15"] (BLUE ON WHITE)		1	1	1.6																	
136	R3-7 [30"x30"]		1	1	6.3																	
137	R7-1(I) [12"x18"]		1	1	1.5																	
138	R12-5(4) [36"x48"]		2	2	12																	
139	DUAL FACE, SN-7 (ELEMENTARY SCHOOL) [24"x30"] (WHITE ON GREEN)		1	1	10																	
140	R12-5(4) [36"X48"], SN-5 (NEIGHBORHOOD WATCH) [12"x18"] (BLACK AND BLUE ON WHITE)		2	2	13.5																	
141	R4-11 [30"X30"]		1	1	6.3																	
142	SN-2 (BUS STOP) [15"x15"] (BLUE ON WHITE)		1	1	1.6																	
143	R3-17 [30"x24"], R3-17B [30"X12"]		1	1	7.5																	
144	R4-11 [30"X30"]		1	1	6.3																	
	REMOVE EXISTING GROUND MOUNTED SIGNS					310																
	PAVEMENT MARKINGS						2625	2490	1700	205	321											
SN-02																						
201	R1-1 [30"x30"], D-3 DUAL FACE [VAR."X12"], D-3 DUAL FACE [VAR."X12"]		2	2	15																	
202	R7-1(I) [12"x18"]		1	1	1.5																	
203	R7-1(I) [12"x18"]		1	1	1.5																	
204	R7-1(I) [12"x18"]		1	1	1.5																	
205	SN-5 (NEIGHBORHOOD WATCH) [12"x18"] (BLACK AND BLUE ON WHITE)		1	1	1.5																	
206	R7-1(I) [12"x18"]		1	1	1.5																	
207	R2-1 [24"x30"]		1	1	5																	
208	R7-1(I) [12"x18"]		1	1	1.5																	
209	R3-17 [30"x24"], R3-17cP(I) [30"x12"]		1	1	7.5																	
210	R2-1 [24"x30"]		1	1	5																	
211	R7-1(I) [12"x18"]		1	1	1.5																	
212	R5-1 [30"x30"]		1	1	6.3																	
213	R3-17 [30"x24"], R3-17b [30"x12"]		1	1	7.5																	
	REMOVE EXISTING GROUND MOUNTED SIGNS					61																
	PAVEMENT MARKINGS						750	750	135	0	12											
	TOTAL QUANTITIES		69	69	330.4	371	3375	3240	1835	205	333											

* CODE NUMBER DESCRIPTION & UNIT

CODE NUMBERS	CAT. CODE	DESCRIPTION	UNIT	CODE NUMBERS	CAT. CODE	DESCRIPTION	UNIT
1	801130	2" X 12 GA BREAKAWAY TUBULAR STEEL SIGN POSTS	EA	11			
2	801135	SQUARE TUBULAR STEEL ANCHOR BASES	EA	12			
3	801605	ALUMINUM SIGNS	SF	13			
4	801711	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS	SF	14			
5	549601	5 INCH WHITE PERM. PREFORMED PATTERNED REFLECTIVE PAVT MARKINGS	LF	15			
6	549603	5 INCH YELLOW PERM. PREFORMED PATTERNED REFLECTIVE PAVT MARKINGS	LF	16			
7	549615	16 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	17			
8	549617	24 INCH WHITE PREFORMED THERMOPLASTIC PAVT MARKINGS	LF	18			
9	549620	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	SF	19			
10				20			

Montgomery County, Maryland
Division of Traffic Engineering and Operations
APPROVED
FOR Signing & Marking
BY 01-16-2018
Date

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

SN-03 SIGNING AND MARKING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

DATE: NOVEMBER 2017

Project No. : 501307 SHEET 68 of 123

FILE NAME: Q:\SMD\130605_004_Project_Management_f\CADD\Traffic\pSN-P1101_SeminaryRoad.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, November 14, 2017 - 2:11pm USER: stevens

N

SEMINARY ROAD/LINDEN LANE IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

EXISTING SIGNALS

3a,5a,6a, 9a,11a,12a — 12"

2a,8a — 12"

13a,14a,15a, 16a,17a,20a — 12"

22a,25a — R3-5(L) (30"x36")

28a — D-3(1) (VAR.x36")
⇦ Linden La 2000
Seminary Rd 1900 ⇨

EXISTING SIGNS

23a — D-3(1) (VAR.x18") DUAL FACE
Second Av 9400

26a — D-3(1) (VAR.x18") DUAL FACE
Second Av 9400

31a — D-3(1) (VAR.x36")
⇦ Seminary Rd 1900
Linden La 2000 ⇨

36a,39a — R10-4 9" x 12"
PUSH BUTTON WAIT FOR WALK SIGNAL

PROPOSED BLACK FACED LED SIGNALS

3,4,5,6,7, 8,9,12 — 12"

1,2, 10,11 — 12"

13,14,15,16, 17,18,19,20 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

a,b,c,d — PROPOSED VIDEO DETECTION

PROPOSED SIGNS

21,23,24,26 — D-3(1) (VAR.x18")
Second AVE

27,28 — D-3(1) (VAR.x36")
Linden LA
Seminary RD

22,25,30 — R3-5(L) (30"x36")
ONLY

29,31 — D-3(1) (VAR.x36")
Seminary RD
Linden LA

32,34 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS SECOND AVE
START CROSSING WHEN WALK SIGNAL IS ON
SECOND AVE IS BRAILLE TYPE 2

33,35 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS SECOND AVE
START CROSSING WHEN WALK SIGNAL IS ON
SECOND AVE IS BRAILLE TYPE 2

36 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS LINDEN LN
START CROSSING WHEN WALK SIGNAL IS ON
LINDEN LN IS BRAILLE TYPE 2

37 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS SEMINARY RD
START CROSSING WHEN WALK SIGNAL IS ON
SEMINARY RD IS BRAILLE TYPE 2

38 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS SEMINARY RD
START CROSSING WHEN WALK SIGNAL IS ON
SEMINARY RD IS BRAILLE TYPE 2

39 — R10-3e (MOD) 9" x 15"
PUSH BUTTON TO CROSS LINDEN LN
START CROSSING WHEN WALK SIGNAL IS ON
LINDEN LN IS BRAILLE TYPE 2

PHASING DIAGRAM

NORTH

Ø 2 & 6: Ø2 PED, Ø2, Ø6, Ø6 PED

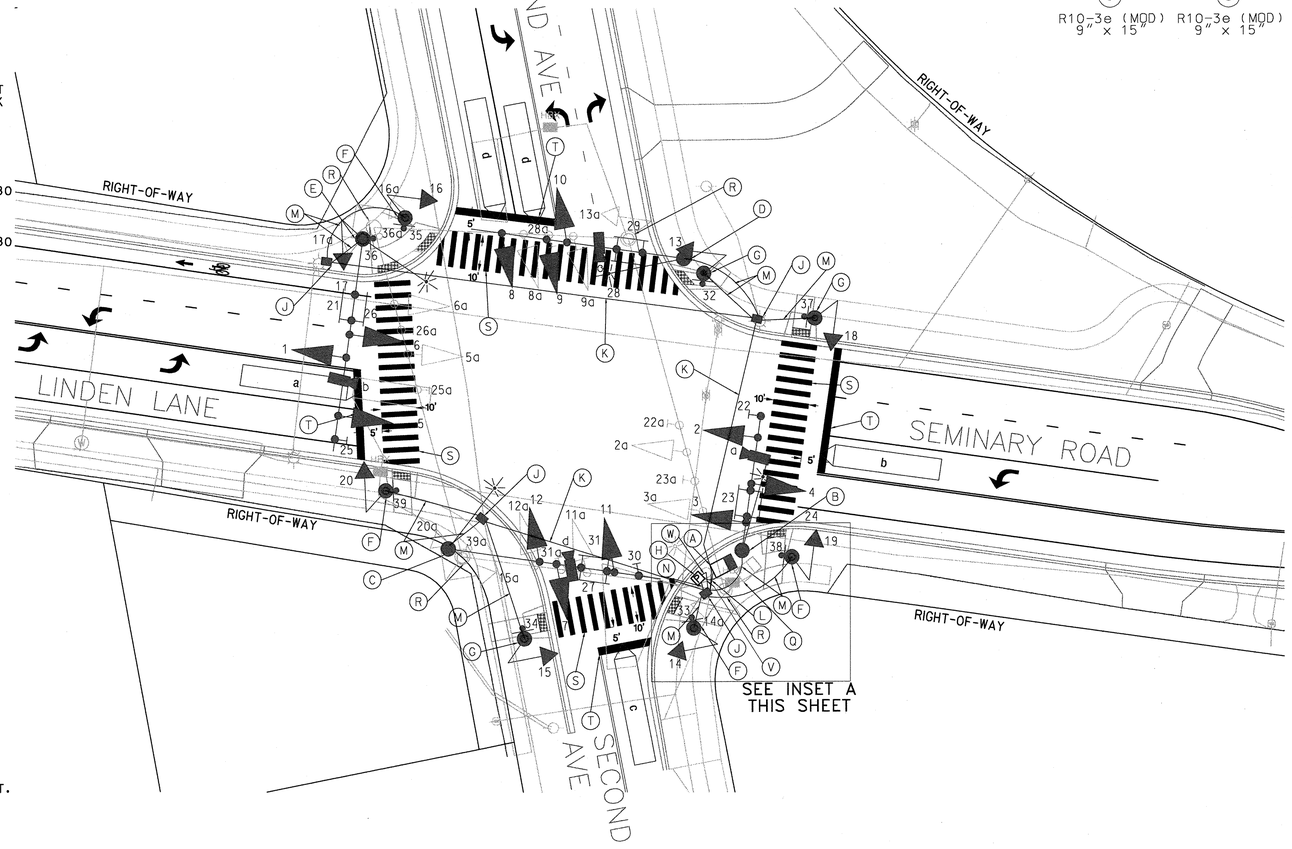
Ø 4 & 7: Ø4&7 PED, Ø4

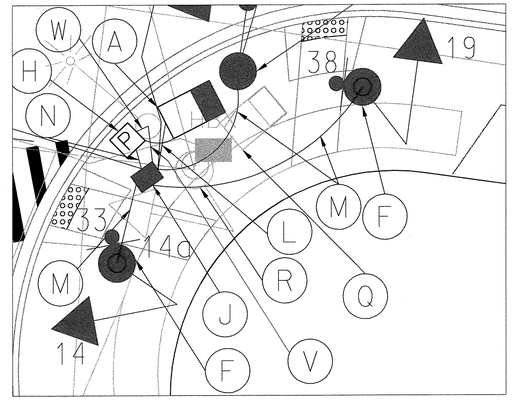
Ø 4 & 8: Ø4 PED, Ø8 PED, Ø4, Ø8

Ø 1 & 6: Ø1, Ø6, Ø6 PED

CONSTRUCTION DETAILS

A. INSTALL A NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH VIDEO DETECTION BOARD AND INTERFACE PANEL, DETECTOR RACK POWER SUPPLY, 2-WIRE CONTROL UNIT, AND ALL NECESSARY EQUIPMENT AS SHOWN. AN UNINTERRUPTED POWER SUPPLY (UPS) WITH BATTERY BACK UP SHALL BE PIGGY BACKED TO THE RIGHT SIDE OF THE CABINET. (NOTE: 2-2", 90^POLYVINYL CHLORIDE (SCHEDULE 80) BEND, 1-3" 90^POLYVINYL CHLORIDE (SCHEDULE 80) BEND AND A 2-4", 90^ POLYVINYL CHLORIDE (SCHEDULE 80) BENDS).
B. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH 38 FT. MAST ARM, LED TRAFFIC SIGNAL HEADS, SIGNS, OVERHEAD DETECTION CAMERA, AND LUMINAIRE. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
C. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH 60 FT. MAST ARM, LED TRAFFIC SIGNAL HEADS, SIGNS, OVERHEAD DETECTION CAMERA, AND LUMINAIRE. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
D. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH 60 FT. MAST ARM, LED TRAFFIC SIGNAL HEADS, SIGNS, OVERHEAD DETECTION CAMERA, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AND APS PUSHBUTTON AND SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
E. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH 60 FT. MAST ARM, LED TRAFFIC SIGNAL HEADS, SIGNS, OVERHEAD DETECTION CAMERA, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AND APS PUSHBUTTON AND SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
F. INSTALL CONCRETE FOUNATION WITH 10 FT. PEDESTAL STEEL POLE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
G. INSTALL CONCRETE FOUNATION WITH 10 FT. PEDESTAL STEEL POLE WITH MODIFIED BREAKAWAY BASE PER STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
H. INSTALL METERED SERVICE PEDESTAL (NOTE: 3-2 IN. AND 1-4 IN. 90 DEGREE PVC BENDS). PEPCO #79066 (SERVICE POLE).
J. INSTALL ELECTRICAL HANDHOLE.
K. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED.
L. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
M. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
N. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
Q. REMOVE EXISTING BASE MOUNTED CABINET, CONTROLLER AND FOUNDATION 12 IN. BELOW GRADE AND BACKFILL AFTER NEW SIGNAL IS OPERATIONAL.
R. REMOVE EXISTING POLE, STRAIN WIRE, ALL ASSOCIATED EQUIPMENT AND FOUNDATION 12 IN. BELOW GRADE AND BACKFILL AFTER NEW SIGNAL IS OPERATIONAL.
S. INSTALL 12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
T. INSTALL 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
U. INSTALL 1 IN. GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
V. PULL EXISTING INTERCONNECT CABLE FROM EXISTING CABINET BACK TO PEPCO POLE AND REROUTE TO NEW CABINET THROUGH 4 IN. CONDUIT.
W. RUN 30 FEET OF 3-1 CONDUCTOR NO.4/0 ALUMINUM UP THE POLE FOR ELETRICAL SERVICE THROUGH 4 IN. CONDUIT.





INSET A

GENERAL NOTES

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

GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
SD SD — STORM DRAIN
G G — GAS MAIN
W W — WATER MAIN
S S — SEWER MAIN
E E — ELECTRIC CABLES
A A — AERIAL CABLES
T T — TELEPHONE CABLES
F F — FIBER-OPTIC

NO.	REVISION	BY	DATE	APP'D	DATE
1	RECONSTRUCT SIGNAL WITH MAST ARMS, ADD UPS, CPS, ADA, AND VIDEO DETECTION	SLE	11-2017	KH	1-3-18

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
DRAWING NO: DATE
Approved: Division of Traffic Engineering and Operations
Reviewed: Manager, Transportation Systems Engineering
Reviewed: Manager, Traffic Engineering Studies Section
Recommended: Engineer, Transportation Systems Engineering
ORIGINAL ON FILE

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

TRAFFIC SIGNAL PLAN

SEMINARY ROAD/LINDEN LANE
AND SECOND AVENUE

SCALE : 1"=20'

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC CONTROL SIGNAL. A NEW MAST ARM TRAFFIC CONTROL SIGNAL SHALL BE INSTALLED AT THE INTERSECTION OF SEMINARY ROAD/LINDEN LANE AND SECOND AVENUE IN MONTGOMERY COUNTY. COUNTDOWN PEDESTRIAN SIGNALS WITH AUDIBLE PUSHBUTTONS SHALL BE INSTALLED AT THIS INTERSECTION. SEMINARY ROAD/LINDEN LANE IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION SHALL CONTINUE TO OPERATE IN A SIX-PHASE, SEMI-ACTUATED MODE, WITH THE SEMINARY ROAD/LINDEN LANE APPROACHES RUNNING CONCURRENTLY. THE EXISTING PEDESTRIAN PHASES ACROSS ALL LEGS OF THE INTERSECTION SHALL BE UPGRADED TO A COUNTDOWN PEDESTRIAN PHASE WITH AUDIBLE PUSHBUTTON ACTUATION.

2. A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR CHANNEL, RACK MOUNTED LOOP DETECTOR AMPLIFIERS, RACK POWER SUPPLY, DETECTOR RACK, UPS BATTERY BACK UP SYSTEM PIGGY BACKED ONTO CABINET AND ALL NECESSARY EQUIPMENT HOUSED IN A SIZE "6" BASE-MOUNTED CABINET SHALL BE INSTALLED AT THIS INTERSECTION.

3. MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CONTROL UNIT INTO CONTROLLER CABINET. THE APS PUSH BUTTONS SHOULD BE DELIVERED TO MR. GREG WHITENER AT THE MONTGOMERY COUNTY TRAFFIC FOR PROGRAMMING AT LEAST TWO WEEKS PRIOR TO THE BEGINNING OF WORK.

III. SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
2. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.
3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

APS WILL FUNCTION AS FOLLOWS

FOR SEMINARY ROAD

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

FOR LINDEN LANE

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

FOR SECOND AVENUE

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS SECOND AVENUE AT SEMINARY ROAD WAIT" OR "WAIT TO CROSS SECOND AVENUE AT LINDEN LANE WAIT".
B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

EQUIPMENT LIST

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

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

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

ITEM NO.	QUANTITY	DESCRIPTION
2001	3 CY	TEST PIT EXCAVATION
5001	640 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING
5002	105 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING
8001	20 CY	CONCRETE FOUNDATION
8002	150 LF	1 INCH GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE)
8003	10 LF	2 INCH POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED)
8004	510 LF	3 INCH POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED)
8005	10 LF	4 INCH POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED)
8006	330 LF	4 INCH POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (BORED)
8007	4 EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH WITH CLAMP
8008	1980 LF	LOOP WIRE (NO. 14 AWG) ENCASED IN 1/4 IN. FLEXIBLE TUBING
8009	1100 LF	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8010	1200 LF	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8011	700 LF	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8012	475 LF	3-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) COPPER TYPE, TC
8013	600 LF	1-CONDUCTOR ELECTRICAL CABLE (NO. 6 AWG) STRANDED BARE COPPER GROUND WIRE
8014	3 EA	FURNISH AND INSTALL MAST ARM POLE WITH 60 FT. ARM
8015	1 EA	FURNISH AND INSTALL MAST ARM POLE WITH 38 FT. ARM
8016	7 EA	FURNISH AND INSTALL PEDESTAL POLE
8017	6 EA	TRAFFIC SIGNAL HANDBOX
8018	4 EA	LED ROADWAY LUMINAIRE
8019	15 EA	REMOVAL AND SALVAGE OF SIGNS LESS THAN 50 SF
8020	4 EA	REMOVAL OF SPAN AND ASSOCIATED WIRING
8021	4 EA	REMOVAL AND SALVAGE OF STRAIN POLE
8022	1 EA	REMOVAL AND SALVAGE OF CABINET
8023	1 EA	REMOVAL OF SIGNAL HANDBOX
8024	28 EA	REMOVAL AND SALVAGE OF ANY SIGNAL HEAD

EQUIPMENT LIST CONTINUED

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

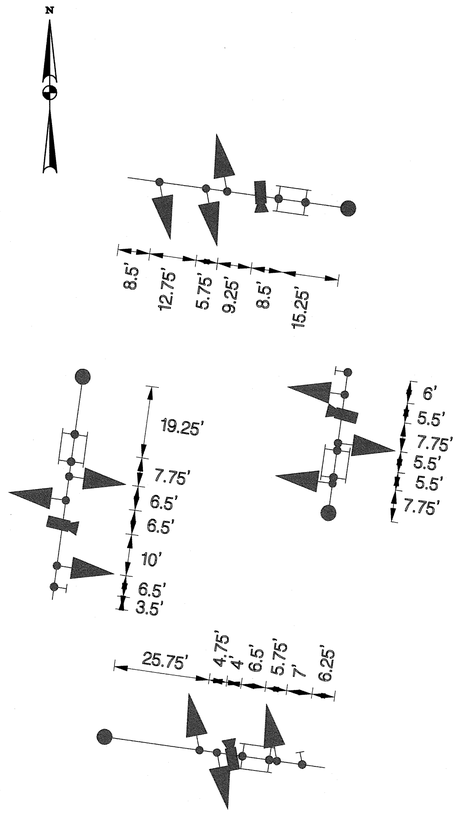
ITEM NO.	QUANTITY	DESCRIPTION
8025	8 EA	FURNISH AND INSTALL AUDIBLE PUSHBUTTON AND SIGN
8026	48 EA	FURNISH AND INSTALL 12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD
8027	8 EA	FURNISH AND INSTALL 12 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
8028	1 EA	FURNISH AND INSTALL METERED SERVICE PEDESTAL
8029	4 EA	D-3(1) "SECOND AVE" SIGN (VARIABLE X 16") MAST ARM MOUNTED
8030	2 EA	D-3(1) "LINDEN LA/SEMINARY RD" SIGN (VARIABLE X 32") MAST ARM MOUNTED
8031	2 EA	D-3(1) "SEMINARY RD/LINDEN LN" SIGN (VARIABLE X 32") MAST ARM MOUNTED
8032	4 EA	R10-3e(MOD) PEDESTRIAN PUSHBUTTON AND PEDESTRIAN SIGN (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS SECOND AVE")
8033	2 EA	R10-3e(MOD) PEDESTRIAN PUSHBUTTON AND PEDESTRIAN SIGN (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS LINDEN LN")
8034	2 EA	R10-3e(MOD) PEDESTRIAN PUSHBUTTON AND PEDESTRIAN SIGN (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS SEMINARY RD")
8035	1 EA	UNINTERRUPTED POWER SUPPLY (UPS) WITH BATTERY BACK UP
8036	1 EA	FURNISH AND INSTALL TRAFFIC SIGNAL CONTROLLER AND CABINET
8037	1 EA	2-WIRE APS CENTRAL CONTROL UNIT
8038	4 EA	VIDEO DETECTION CAMERA
8039	15 LF	DISCONNECT, PULL-BACK AND REROUTE EXISTING CABLE OR DUCT CABLE
8040	5 LF	ELECTRICAL CABLE - 3 WIRE (NO.4 AWG)
8041	35 LF	ELECTRICAL CABLE - 3 WIRE (NO.4 ALUMINUM)

C. IF THE CABINET IS TO BE REMOVED MONTGOMERY COUNTY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

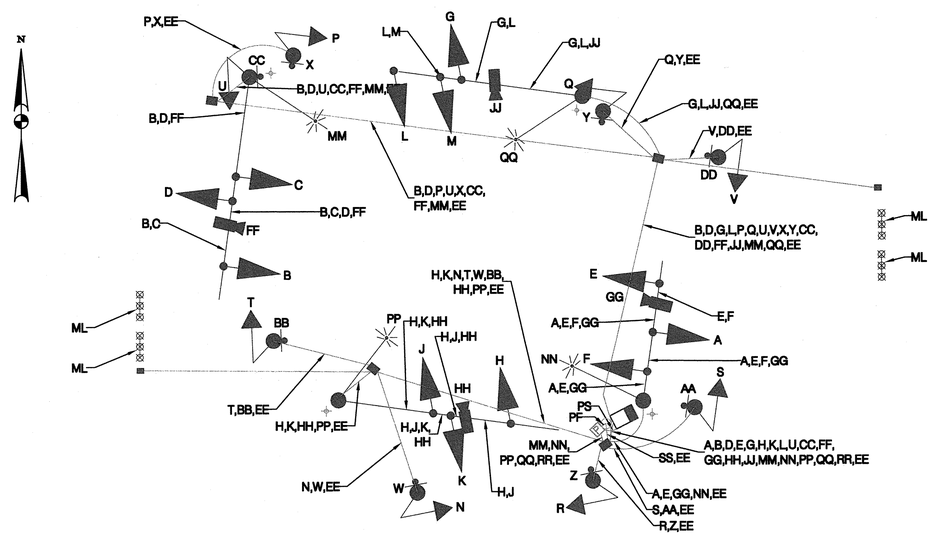
PHASE CHART

SIGNAL NO.	SEQUENCE OF OPERATION INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	FLASH
1	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	Y
2	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	Y
3	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	Y
4	G	G	Y	R	R	R	R	R	R	R	R	R	◀G/G	◀G/Y	G	Y
5	G	G	Y	R	R	R	R	R	R	R	R	R	◀G/G	◀G/Y	G	Y
6	G	G	Y	R	R	R	R	R	R	R	R	R	G	G	R	Y
7	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R
8	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R
9	R	R	R	R	G	G	G	G	G	G	Y	R	R	R	R	R
10	R	R	R	R	◀G/G	◀G/Y	G	G	G	G	Y	R	R	R	R	R
11	R	R	R	R	◀G/G	◀G/Y	G	G	G	G	Y	R	R	R	R	R
12	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R
13	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	DARK
14	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	DARK
15	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	DW	DARK
16	WK	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	WK	WK	DW	DARK
17	DW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DARK
18	DW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DARK
19	DW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DARK
20	DW	DW	DW	DW	DW	DW	DW	WK	FDW	DW	DW	DW	DW	DW	DW	DARK
PHASE	2 & 6			ALL RED	4 & 7		ALL RED	4 & 8				ALL RED	1 & 6		ALL RED	

DIMENSION DETAILS



WIRING DIAGRAM



WIRING KEY

D E G H K L U V	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
A B C M N P Q T	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
W Y Z AA BB CC DD	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
EE	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
FF GG HH JJ	VIDEO DETECTION CABLE
KK LL	NON-INVASIVE MICRO LOOP PROBE LEAD-IN CABLE (1000 FT.)
MM	ELECTRICAL CABLE
NN	3-CONDUCTOR NO. 12 AWG
PP QQ	COPPER TYPE TC
RR	12 PAIR JELLY-FILLED NO. 19 AWG
SS	INTERCONNECT CABLE
PF	PROPOSED UNDERGROUND POWER FEED BY PEPCO
PS	PROPOSED UNDERGROUND SERVICE 3-1 CONDUCTOR NO. 4/0 AWG
PT	PROPOSED TELEPHONE DROP
ML	MICRO LOOP PROBE SET
+	3/4 IN. X 10 FT. GROUND ROD

NO.	REVISION	BY	DATE	APP'D	DATE
1	RECONSTRUCT SIGNAL WITH MAST ARMS, ADD UPS, CPS, ADA, AND VIDEO DETECTION	SLE	11-2017	KH	1-3-18

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

Approved: ORIGINAL ON FILE
Division of Traffic Engineering and Operations
Reviewed:
Manager, Transportation Systems Engineering
Reviewed:
Manager, Traffic Engineering Studies Section
Recommended:
Engineer, Transportation Systems Engineering

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

TRAFFIC SIGNAL PLAN

SEMINARY ROAD/LINDEN LANE
AND SECOND AVENUE

SCALE : NONE

N

SEMINARY ROAD/LINDEN LANE IS ASSUMEDTO RUN IN AN EAST-WEST DIRECTION

EXISTING SIGNALS

2,3,4, 6,7,8 — 12"

1,5 — 12"

9,10,11, 12,13,14 — 12"

EXISTING SIGNS

15,17 — R3-5(L) (30"x36")

16 — D-3(1) (VAR.x18") DUAL FACE

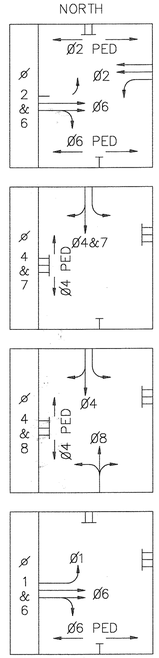
18 — D-3(1) (VAR.x18") DUAL FACE

19 — D-3(1) (VAR.x36")

20 — D-3(1) (VAR.x36")

21,22 — R10-4 9" x 12"

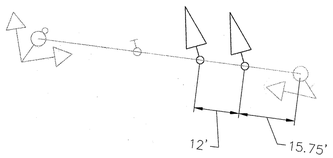
PHASING DIAGRAM

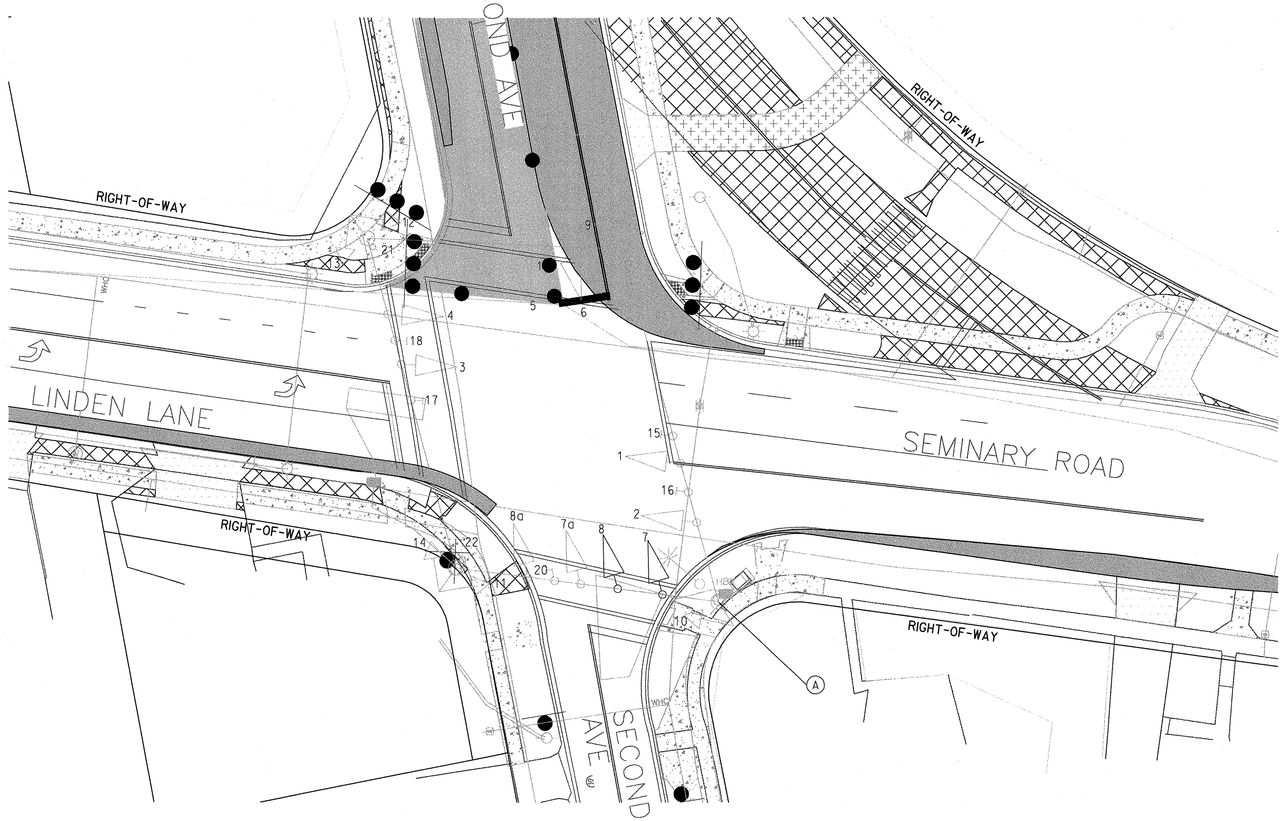


CONSTRUCTION DETAILS

A. SHIFT SIGNAL HEADS 7 AND 8 TO ACCOMMODATE LANE SHIFT ON SOUTHBOUND SECOND AVENUE APPROACH DURING MAINTENANCE OF TRAFFIC.

SIGNAL HEAD SPACING FOR MAINTENANCE OF TRAFFIC





GENERAL NOTES

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

GEOMETRIC LEGEND

EXISTING
PROPOSED

UTILITY LEGEND

SD — STORM DRAIN
G — GAS MAIN
W — WATER MAIN
S — SEWER MAIN
E — ELECTRIC CABLES
A — AERIAL CABLES
T — TELEPHONE CABLES
F — FIBER-OPTIC

NO.	REVISION	BY	DATE	APP'D	DATE
1	SHIFT SIGNAL HEADS FOR MAINTENANCE OF TRAFFIC	SLE	11-2017	KH	1-3-18

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

Approved: _____
Division of Traffic Engineering and Operations

Reviewed: _____
Manager, Transportation Systems Engineering

Reviewed: _____
Manager, Traffic Engineering Studies Section

Recommended: _____
Engineer, Transportation Systems Engineering

ORIGINAL ON FILE

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

TRAFFIC SIGNAL PLAN

SEMINARY ROAD/LINDEN LANE AND SECOND AVENUE

SCALE : 1"=20'

FILE NAME: Q:\SMO\130605_004_Project_Management_F\CADD\pSG-001_Seminary_MOT.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, November 14, 2017 - 6:42am USER: severiano

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

Montgomery County
Division of Traffic Engineering & Operations
Street Lighting

Residential Type	Commercial Quantity
P3 (Washington Globe)	20
Standard P3 (OH)	4
Total	2
	26

Legend
P1 - Post Top (UG)
P2 - Pendant (UG)
P3 - Decorative Residential (UG)
P4 - Bronze Rectilinear (UG)
P5 - Overhead LED
L - LED
O - Other

The location of streetlights shown or plan are approved (as revised).

_____ Design & Operations Section

1/24/18 Date

LIGHTING NOTES

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. SEE SIGNAL PLAN FOR INTERSECTION LIGHTING.
5. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE IFB #1063092

N

787428-0448
787428-1944
787428-3442
01906
01915
01913
787428-3436
01911
01907
01909
787428-1728
09305
09302
RL
09301
09303
787428-0919
787428-1718
02009
45601
45602
02013
02011
02006
89603
02008
02010
45604
45603
02012
787428-7204

SEMINARY ROAD
SEMINARY PLACE
LINDEN LANE
BROOKVILLE ROAD
SECOND AVENUE
MATCH LINE A-A, SEE SHEET LT-2 OF 2

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 109+00
200+00 201+00 202+00 203+00 204+00 301+00 302+00 303+00 304+00
410+00 411+00 412+00 413+00 414+00 415+00

LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- PROPOSED LED LIGHT ON SIGNAL POLE
- EXISTING LED LIGHT ON SIGNAL POLE
- EXISTING TREE
- PROPOSED TREE
- 201 — LIGHT POLE NUMBER
- R — EXISTING LIGHT POLE & LIGHT TO BE REMOVED
- RL — EXISTING LIGHT TO BE REMOVED

JMT
72 LOVETON CIRCLE | SPARKS, MD 21152
P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

LT-01 LIGHTING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 72 of 123

FILE NAME: Q:\SMO\130605_004_Project_Management_1\CADD\pLT-P001-Seminary.dwg LAYOUT NAME: LT-01 PLOTTED: Wednesday, January 17, 2018 - 4:29pm USER: mwsmith

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

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Montgomery County
Division of Traffic Engineering & Operations
Street Lighting

Residential ____ Commercial ____
Type Quantity

P1 See Sht. 1 for details

Total ____

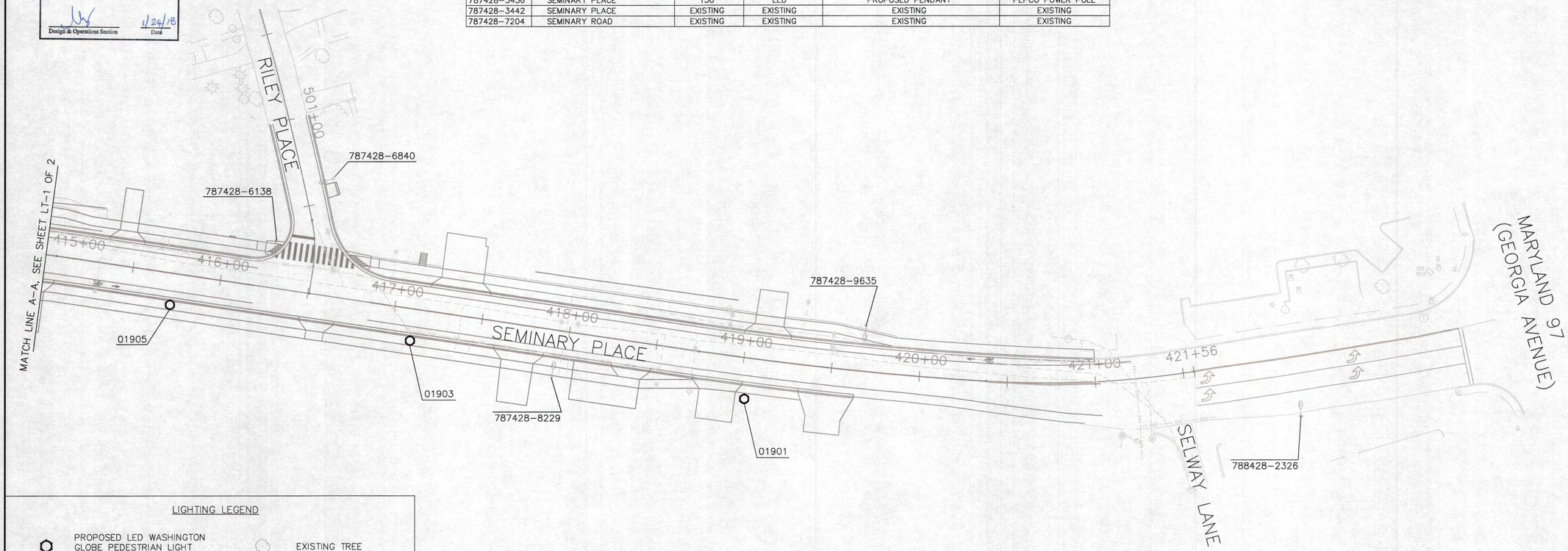
Legend
P1 - Post Top (UG)
P2 - Pendant (UG)
P3 - Decorative Residential (UG)
P4 - Bronze Rectilinear (UG)
P5 - Overhead LED
L - LED
O - Other

The location of streetlights shown or plan are approved (as revised).

_____ 1/24/18
Design & Operations Section Date

POLE #	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
01906	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01907	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01909	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01911	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01913	SEMINARY ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01915	SEMINARY ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02006	LINDEN LANE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02008	LINDEN LANE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02009	LINDEN LANE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02010	LINDEN LANE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02011	SEMINARY ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02012	SEMINARY ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
02013	SEMINARY ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
09301	2ND AVENUE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
09302	2ND AVENUE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
09303	BROOKVILLE ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
09305	BROOKVILLE ROAD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
45601	SEMINARY ROAD	150	LED	PROPOSED PENDANT	SIGNAL POLE
45602	SEMINARY ROAD	150	LED	PROPOSED PENDANT	SIGNAL POLE
45603	SEMINARY ROAD	150	LED	PROPOSED PENDANT	SIGNAL POLE
45604	SEMINARY ROAD	150	LED	PROPOSED PENDANT	SIGNAL POLE
89603	LINDEN LANE	EXISTING	EXISTING	EXISTING	SIGNAL POLE
787428-0448	SEMINARY ROAD	EXISTING	EXISTING	EXISTING	EXISTING
787428-0919	BROOKVILLE ROAD	EXISTING	EXISTING	EXISTING	EXISTING
787428-1718	LINDEN LANE	EXISTING	EXISTING	EXISTING	EXISTING
787428-1728	BROOKVILLE ROAD	150	LED	PROPOSED PENDANT	PEPCO POWER POLE
787428-1944	SEMINARY ROAD	EXISTING	EXISTING	EXISTING	EXISTING
787428-3436	SEMINARY PLACE	150	LED	PROPOSED PENDANT	PEPCO POWER POLE
787428-3442	SEMINARY PLACE	EXISTING	EXISTING	EXISTING	EXISTING
787428-7204	SEMINARY ROAD	EXISTING	EXISTING	EXISTING	EXISTING

POLE #	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
01901	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01903	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
01905	SEMINARY PLACE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINIUM
788428-2326	SEMINARY PLACE	EXISTING	EXISTING	EXISTING	EXISTING
787428-6138	SEMINARY PLACE	EXISTING	EXISTING	EXISTING	EXISTING
787428-6840	RILEY PLACE	EXISTING	EXISTING	EXISTING	EXISTING
787428-8229	SEMINARY PLACE	EXISTING	EXISTING	EXISTING	EXISTING
787428-9635	SEMINARY PLACE	EXISTING	EXISTING	EXISTING	EXISTING



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- PROPOSED LED LIGHT ON SIGNAL POLE
- EXISTING LED LIGHT ON SIGNAL POLE
- EXISTING TREE
- PROPOSED TREE
- 201 — LIGHT POLE NUMBER
- R — EXISTING LIGHT POLE & LIGHT TO BE REMOVED
- RL — EXISTING LIGHT TO BE REMOVED

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P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

LT-02 LIGHTING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 73 of 123

FILE NAME: Q:\SMD\130605_004_Project_Management_F\CADD\plT-P001-Seminary.dwg LAYOUT NAME: LT-02 PLOTTED: Wednesday, January 17, 2018 - 4:29pm USER: mwsmith

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC AND PARKING SERVICES

JUNE 2016

WASHINGTON GLOBE DECORATIVE LED STYLE LUMINAIRE
SEMI CUT-OFF HARD TOP

1) PURPOSE

The purpose of these specifications is to provide minimum requirements for the design, manufacture, finishing and delivery of the Washington Globe (hard top) LED luminaire. The Washington Globe is intended to be mounted on decorative pole as specified, along roadways throughout Montgomery County. Any manufacturer, distributor or vendor who submits bid shall agree with these specifications

2) DESCRIPTION

The luminaire shall be an outdoor decorative post top fixture, cylindrical in shape with an overall height between 42.5 +/- 2.0 inches and a overall width between 16.5 +/- 0.5 inches for the globe (see attached drawing). All exterior and structural parts shall consist of aluminum alloy or cast iron. Exterior castings shall be cast in one piece having a smooth surface finish and free of mold lines. A separate cover for a ballast drawer/tray is permitted if the ballast drawer cover is secured to the luminaire body with captive fasteners. All components shall fit together snugly and shall be fitted with continuous neoprene gaskets so as to weather proof joints between metal interfaces. Visible metal surfaces shall have raised decorations integrally molded in the base piece. All metal parts shall be corrosion resistant. The luminaire shall come ready for quick an easy field assembly or fully assembled:

Each luminaire shall include the following components:
1) LED Optical Assembly (Type III distribution)
2) 120 volt LED Driver
3) Button type photocell installed on the metal body of the luminaire or ballast tray cover;
4) All necessary hardware and fasteners to assemble and secure on post tenon.

3) DESIGN CRITERIA

3.1) AASHTO Standards

The luminaire shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO), Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" latest edition.

3.2) Wind Load

All components of the luminaire shall be designed to resist (at yield strength of the materials without permanent deflection or destruction), test loads equivalent to the calculated loads developed by the velocity pressure of at least an 80 MPH wind. A minimum safety factor of 1.82 on the yield strength shall be maintained.

4) GLOBE

The globe should be supplied as two pieces, chemically matching material as a unit and permanently sealed together with a chemical bonding process. The globe bottom shall be alabaster rippled and made of UV stabilized acrylic. The globe roof shall be of a spun aluminum design. The roof and bottom globe sections are secured in a slip-fit, 1/2" overlap design and providing a mechanical lock and enabling easy future replacement of either the roof or bottom globe section if required. The roof finish shall be polyester thermoset powdercoat. The globe shall be of a traditional "Washington Globe" (acorn) shape designed to achieve the photometric performance specified by Illumination Engineering Society (IES). The bottom surface of the globe shall interface closely with the metal body of the fixture so as to provide a weather, dust, and insect proof interface. The globe or its mounting ring shall be fastened with three or more recessed set screws to the body of the fixture.

5) DRIVER and SURGE PROTECTOR

The driver shall be mounted to facilitate easy removal for maintenance operations. The driver shall be equipped with a 10KV Surge Protection and suppression system. All electrical connections shall be polarized and of plug-in design. The driver shall be wired to receive 120 volt AC current. The driver shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees. The terminal block shall be capable of accepting up to a #6 AWG wire.

6) LED Color Temperature (CCT) and Rendering Index (CRI)

The Correlated Color Temperature (CCT) shall be a nominal Kelvin Temperature of 3500K ±200K with a minimum Color Rendering Index (CRI) of 70.

7) PHOTOCELL

The photocell shall be a twist-lock type or equal, mounted on the metal body of the luminaire or the cover of the ballast tray drawer.

8) METAL BODY

The body shall be cast in one piece and shall have raised surface decorations. The body shall taper smoothly between the slip fitter to the base of the globe. The body shall be constructed with weep holes or channels to prevent rainwater from collecting at the top of the body.

9) SLIP FITTER

The slip fitter shall have a nominal inside diameter of 3.375 inches +/- 0.25 and shall be secured to the lamp post tenon with three of four evenly spaced set screws. The slip fitter shall accommodate a tenon 3.0 inches long.

10) FINIAL

The finial shall be made of cast aluminum, and securely fastened to the top of the globe.

11) FINISH

The exterior surface of the finial and luminaire body shall be factory finished with a dark green electrostatically applied polyester powder coat. The color shall be "Federal Green", federal color 595a, #14036.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY [signature] CHIEF, CONSTRUCTION SECTION
DATE APPROVED 06/19/2018
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION
This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

Montgomery County
Division of Traffic Engineering & Operations
Street Lighting

Residential ____ Commercial ____
Type Quantity
All cobra head fixtures
Total
Legend
P1 - Post Top (UG) L - LED
P2 - Pendant (UG) O - Other
P3 - Decorative Residential (UG)
P4 - Bronze Rectilinear (UG)
P5 - Overhead LED
The location of streetlights shown or plan are approved (as revised),
Design & Operations Section 6/21/18 Date

Item # 44

Philips LEDgine
Bottom View
Sideside
Houseside
LENS: TEMPERED GLASS
HEAT SINK: DIE-CAST ALUMINUM
LENS FRAME: DIE-CAST ALUMINUM
PHILIPS LEDGINE, SEE SPECIFICATIONS
Ordering Guide:
C9024D: LUMINAIRE
Color: Green

Philips LEDgine Specifications
- 64, 3000K (warm) Philips Lumileds Luxeon 1 LEDs, typical 75 Color Rendering Index (CRI), >60,000 hours of operational life (at 25°C ambient temperature & 70% lumen maintenance), injection molded Type III optical plates, IP66 rated LED module.
- Integral Philips Advance Xitanium LED driver, class 1, IP66 rated, 350mA, installed 120-277 VAC, 50-60 Hz, RoHS compliant, field replaceable 10kV/10kA surge suppression.
- Delivered lumens: 7041, Wattage: 69W, BUG Rating: B1-U3-G2.

Luminaire Specifications
- UL8750 & UL1598 compliant, ETL & cETL listed to U.S. & Canadian standards for wet locations, manufactured to ISO 9001:2008 standards, vibration tested to ANSI C136.31 for Normal Applications, LM80 & LM79 tested, DLC listed.

17.90
45.85
FINIAL: CAST ALUMINUM
ROOF: SPUN ALUMINUM
CAGE ASSEMBLY: DIE-CAST ALUMINUM W/ (4) LEDS EA. W/ SQUARE DECORATIVE FLOWER BLOCK, FLUTED RECTANGULAR BAND AROUND TOP OF CAGE
GLOBE: CLEAR ACRYLIC
DRIVER COVER: DIE-CAST ALUMINUM
CAMDEN ADAPTOR: DIE-CAST ALUMINUM
GLOBE HOLDER: CAST ALUMINUM
PHOTO CONTROL: TWIST-LOCK RECEPTACLE (eye supplied by others)
DRIVER ENCLOSURE: DIE-CAST ALUMINUM W/ SIDE HINGED ACCESS DOOR, TOOL-LESS ENTRY
SLIP FITTER: 3" I.D.
FASTENERS: 5/16-18 STAINLESS STEEL HEX BOLTS W/ LOCKING NUTS

CONFIDENTIAL: This drawing is confidential and proprietary to Philips Hadco and may not be reproduced without the express written consent of Philips Hadco. Any use hereof or of any of the information or detail herein shall be for the sole benefit of Philips Hadco.
NOTICE: This drawing is for reference only. Check for latest revision prior to ordering.
PRODUCT APPROVALS: HADCO ____ SDK ____ CUSTOMER ____
100 Craftway Drive, Littlestown, Pa 17340
Phone: 800-331-4185
Fax: 717-359-9289
www.philips.com
PHILIPS HADCO
JOB NAME: Montgomery County
SCALE: 1:8 DATE: 04/15/15
DRAWN BY: SMK DRAWING NUMBER: C9024-DWG09
REP: DePorter, Dominick
REV: B FOR: 16-021
BY: SMK DATE: 06/02/16

SPECIFICATIONS FOR STREETLIGHT HARDWARE



MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS

JUNE 2016

DECORATIVE (RESIDENTIAL) LAMP POST
FOR USE ON STREETS CLASSIFIED PRIMARY OR LOWER

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of residential, decorative, cast, streetlight poles. These decorative streetlight poles are intended for use along roadways in Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and the attached drawings.

Each pole shall include the following:

a) Access plate with attachment hardware;
b) Anchor Bolts, nuts, and washers (as specified);
c) Typical footer design specifications including but not limited to, base template, anchor dimensions, reinforcement and footer details;
d) One (1) pint of touch-up paint, Federal Green, federal color # 595B, # 14036.

2) DESIGN CRITERIA

2.1 AASHTO Standards

The residential, decorative, cast, streetlight post shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO) Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

2.2 Wind Load

The residential, decorative, cast, streetlight post shall be deigned to resist (at yield strength of the material without permanent deflection or destruction), test loads equivalent to the calculated wind loads developed by the velocity pressures of a 80 MPH wind with a 30% gust factor. A minimum safety factor of 1.82 on the yield strength shall be maintained.

2.3 Effective Projected Area (EPA)

The residential, decorative, cast, streetlight post shall have a EPA allowable for the following assumptions:

a) Streetlight luminaire shall be assumed to be rectangular in shape with triangular shapes at the top and bottom, minimum length plus width of sixty-five (65) inches, when viewed from the side.

b) The streetlight luminaire shall have a nominal mounting height of 12 feet above the base.

c) One or two (24" x 36") maximum traffic signs may be mounted with the sign's bottom edge 7 feet above the base.

3) MATERIALS

3.1 Iron Casting

The lamp post shall be integrally cast as one piece and shall be cast iron per ASTM A-48--72, Class 30. The sections are to be indicated below. The castings are to be true to pattern, with 16 flutes separated by 16 flat facets. There shall be no visible signs of separation between the cope and drag sections of the mold. All ornamental components shall be cast iron.

3.2 Aluminum Casting

The lamp post may be cast in one piece, as described above, of aluminum alloy of the same details as described above and minimum wall thickness as described below. The alloy used in the casting shall have a minimum yield strength of 30,000 PSI and shall be heat treated as required to provide that yield strength.

3.3 Split Casting

The lamp post may be a multiple piece castings that are factory-assembled into one piece may be considered, provided that there are no gaps between any pieces of the assembly that would allow water seepage or rust. Prior written approval required for the method.

4) PEDESTAL

The pedestal shall be 17 inches +/- 0.25 inch in diameter with a height of 17 1/4 inches +/- 1.0 inch.

5) BOLT CIRCLE

The nominal bolt circle of the lamp post shall be 12.5 inch in diameter and consist of four (4) equally spaced slots to accommodate 5/8 inch diameter anchor bolts

6) SHAFT

The shaft shall taper uniformly from six (6) inches outside diameter at the bottom to a minimum of four (4) inches outside diameter at the top. The shaft section shall consist of sixteen (16) equally spaced flutes. The outer portion of each flute shall have a flat face, 3/8 +/- 1/16 inches in width. The flutes shall remain constant from the top to the bottom of the tapered shaft

7) HEIGHT

The height of the post, less tenon, shall be 12 feet 0 inches. The weight of the cast iron post with complete door assembly, shall be 460 lbs. +/- 5%. All castings shall be painted with a shop coat of iron oxide primer.

8) TENON

The top of the post shall be equipped with a luminaire mounting tenon integrally cast as a part of the post casting. The tenon shall measure 3.25 +/- 0.25 inches outside diameter and be 2.5 inches long.

9) GROUNDING LUG

The post shall be drilled and tapped for a 1/4 inch - # 20 grounding screw, inside the lamp post and opposite the access door,

10) HANDHOLE

The post shall have an handhole/access door with minimum opening 6 +/- 0.5 inches high and shall be a minimum of 3 ½ +/- 1.0 inch wide at the top and 7.5 inches +/- 1.0 inches wide at the bottom secured with stainless steel machine screw shall be provided in the base of the lamp post. The handhole is at 90 degrees clockwise with respect to the luminaire arm when viewed from above the pole.

11) BOTTOM ACCESS HOLE

The pedestal shall have a clear opening at grade a minimum of nine (9) inches in diameter. The base of the lamp post shall have an inside diameter sufficient to accommodate two four inch diameter schedule 40 PVC conduits at the bottom of the post, side by side, for streetlight wiring in accordance with utility company requirements.

12) TOLERANCES

Dimensions may be subject to a tolerance of plus or minus 10%, provided that the appearance and proportions are reasonably identical to the post shown on the attached drawing, in the sole judgement of the County. The 10% tolerance shall not apply to the height of the post nor to the diameter of the tenon, for which no tolerance will be allowed other than normal manufacturing tolerances.

13) ANCHOR BOLTS

Each post shall be furnished with four (4) anchor bolts, each 5/8 inches diameter x 24 inch long, plus a 3" "L" at the bottom. Each bolt shall be supplied with one (1) nut and one (1) washer. Bolts, nuts, and washers shall be fully hot dipped galvanized in accordance with ASTM A153.

14) FINISH

15.1 Cast Aluminum

The cast aluminum poles, access doors, and hardware shall be finished with a dark green electrostatically-applied thermoset polyester powder coat, color "Federal Green" or approved equal, as per the attached finish specification "ICS-2". One pint can of Federal Green touch-up enamel or approved equal, shall be supplied.

15.2 Cast Iron

The cast iron poles and all components shall be supplied with one coat of oil-based red lead primer paint. Two (2) coats of enamel "Federal Green", federal color 595B, # 14036 shall be applied to each pole in the field.

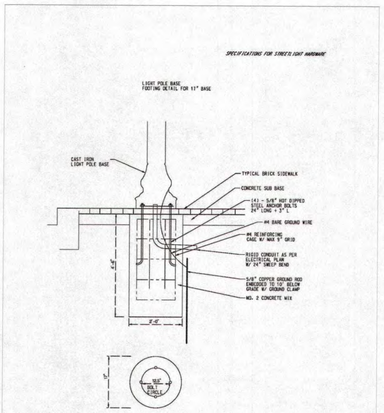
16) POLE INFORMATION

The lamp post shall be either the Antique Capitol Series, C12/17-C1/PP, the Washington #12 Standard modified to 12 foot 0 inches in height, less tenon, or approved equal.

SPECIFICATIONS FOR STREETLIGHT HARDWARE



SPECIFICATIONS FOR STREETLIGHT HARDWARE



JMT
72 LOVETON CIRCLE | SPARKS, MD 21152
P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

LT-03 LIGHTING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2017

Project No. : 501307
SHEET 74 of 123

FILE NAME: \\jmt.corp.local\jmtdfs\SMD\130605_004_Project_Management_F\CADD\pLT-P001-Seminary.dwg LAYOUT NAME: LT-03 (2) PLOTTED: Wednesday, January 31, 2018 - 11:59am USER: ddurbin

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

JULY 2010

STREETLIGHT INSTALLATION GUIDELINES
UNDERGROUND DISTRIBUTION

Policy LTG-2

I) Residential Areas

A) Single Family Land Use - roadways 36' or less.

1) Luminaires - (each equipped with a photocell)

a) Colonial post top (Type III distribution) - energized by utility company.
b) Contemporary post top (Type III distribution) -energized by utility company.
c) Decorative "Washington Globe" post top (Type III distribution) - furnished and installed by others -energized by utility company - (specifications separately approved by DTEO in advance)

2) Posts

For luminaire a) or b): 12' to 16' above ground, direct burial, black or grey fiberglass.

For luminaire c) 12' cast iron or cast aluminum with 17" pedestal (footings are required for this style post).

3) Lamps

For luminaire a), b) or c):

PEPCO area - 70 watt HPSV (mid-block) and 100 watt HPSV at intersections and specially designated areas as approved by DTEO.

BG&E and Allegheny Power areas - 100 watt HPSV as approved by DTEO (minimum wattage provided by these areas).

4) Lateral Placement

For luminaire a), b) or c):

Streetlights at intersections shall be placed two feet (2') from the back of the curb or a minimum of six feet (6') from the edge of pavement in open section roadways.

Streetlights throughout a subdivision shall be placed one foot (1') in front (street side) of the sidewalk on open or closed section tertiary, secondary, or primary residential roadways.

Streetlights throughout a subdivision shall be placed ten foot (10') minimum from edge of pavement/curb or as directed by engineer on open or closed section tertiary, secondary, or primary residential roadways.

5) Longitudinal Spacing

For luminaire a), b) or c):

High density (19,999 Sq. Ft. or less lots) -- 175' maximum alternate arrangement desirable, using property lines whenever possible, and using opposite arrangement for divided roadways.

Low density (20,000 Sq. Ft. or greater lots) -- 300' maximum alternate arrangement using property line where possible and using opposite arrangement for divided roadways.

6) General Installation Guidelines

a) Provide appropriate streetlight at intersection with an existing roadway. Use existing utility poles if available.

b) Install the first streetlight a maximum of one half of the specified longitudinal spacing from intersection.

c) Streetlights should be oriented towards the major road at T-type intersections and at four-way stop intersections.

d) Maintain the following minimum clearance distances; Five feet (5') from driveways, inlets, storm drains, and fire hydrants, water, gas, electric and sewer lines;
Fifteen feet (15') from trees.

B) Multi-Family Land Use - roadways 36' wide or less (NOTE: for multi-family land use roadways wider than 36', see Part II, Commercial/Industrial Areas).

1) Luminaire - (each equipped with a photocell)

a) Colonial post top (Type III distribution) - energized by utility company.

b) Cobra (Type III distribution), cut-off [flat glass] - energized by utility company.

c) Rectilinear (Type III distribution), decorative bronze - furnished and installed by others - energized by utility company (specifications approved by DTEO). PEPCO region only.

d) Residential decorative (Washington Globe) (Type III distribution), decorative green - furnished and installed by others - energized by utility company (specifications approved by DTEO).

2) Post

For luminaire a): 12' to 16' above ground, black or grey fiberglass, direct burial.

For luminaire b): 26' pendant aluminum post, concrete footing or screw base required.

For luminaire c): 25' round, galvanized steel or aluminum, bronze coated pole (specifications shall be approved by DTEO), concrete footing or screw base required.

For luminaire d): 12' cast iron or cast aluminum with 17" pedestal (concrete footings are required for this style post).

3) Lamp

For luminaire a) or d): 100 to 150 watt, HPSV.

For luminaire b): 100 to 250 watt, HPSV.

For luminaire c): 150 to 250 watt, HPSV.

4) Lateral Placement

For luminaire a), b), c) or d):

Streetlights at intersections shall be placed two feet (2') from the back of the curb or a minimum of six feet (6') from the edge of pavement in open or closed section roadways.

Streetlights throughout a subdivision shall be placed one foot (1') in front of the sidewalk on open or closed section tertiary, secondary, or primary residential roadways.

Streetlights shall be placed one foot (1') behind the sidewalk and/or one foot (1') in front of the property line on open or closed section master plan arterial, or higher roadways.

5) Longitudinal Spacing

150' maximum alternate arrangement desirable.

6) General Installation Guidelines

a) Provide appropriate streetlight at intersection with an existing roadway. Use existing utility poles if available.

b) Install the first streetlight a maximum of one half the specified longitudinal spacing from intersection.

c) Streetlights should be oriented towards the major road at T-type intersections and at four-way stop intersections.

d) Maintain the following clearance minimum distances:

Five foot (5') from driveways, inlets, storm drains, and fire hydrants, water, gas, electric and sewer lines:
Fifteen foot (15') from trees.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 06/19/2018
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION
This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

Montgomery County
Division of Traffic Engineering & Operations
Street Lighting

Residential ____ Commercial ____

Type	Quantity
Total	

Legend
P1 - Post Top (UG)
P2 - Pendant (UG)
P3 - Decorative Residential (UG)
P4 - Bronze Rectilinear (UG)
P5 - Overhead LED
L - LED
O - Other
The location of streetlights shown or plan are approved (as revised).

Design & Operations Section _____ Date 1/24/18

C) Public Maintained Land (pathways)

1) Luminaires - (each equipped with a photocell)

a) Colonial post top (Type III distribution) - energized by utility company.
b) Contemporary post top (Type III distribution) -energized by utility company.
c) Decorative "Washington Globe" post top (Type III distribution) - furnished and installed by others -energized by utility company - (specifications separately approved by DTEO in advance)

2) Posts

For luminaire a) or b): 12' to 16' above ground, direct burial, black or grey fiberglass.

For luminaire c) 12' cast iron or cast aluminum with 17" pedestal (footings are required for this style post).

3) Lamps

For luminaire a), b) or c):

PEPCO area - 70 watt HPSV (mid-block) and 100 watt HPSV at intersections and specially designated areas as approved by DTEO.

BG&E and Allegheny Power areas - 100 watt HPSV as approved by DTEO (minimum wattage provided by these areas).

4) Lateral Placement

For luminaire a), b) or c):

Streetlights shall be placed two feet (2') from the edge of pavement.

5) Longitudinal Spacing

For luminaire a), b) or c):

75' maximum alternate arrangement desirable, using property lines whenever possible

6) General Installation Guidelines

a) Provide appropriate streetlight at intersection with an existing roadway. Use existing utility poles if available.

b) Install the first streetlight a maximum of one half of the specified longitudinal spacing from intersection.

c) Streetlights should be oriented towards the road at T-type intersections and at four-way stop intersections.

d) Maintain the following minimum clearance distances; Five feet (5') from driveways, inlets, storm drains, and fire hydrants, water, gas, electric and sewer lines; Fifteen feet (15') from trees.

II. Commercial and Industrial Areas

(NOTE : This includes multi-family land use on roadways wider than 36').

1) Luminaires - (each equipped with a photocell)

a. Cobra (Type III distribution), cut-off [flat glass] - energized by utility company.

b. Rectilinear (Type III distribution), decorative bronze - furnished and installed by others - energized by PEPCO (specifications separately approved by DTEO are available upon request). PEPCO region only.

c. Rectilinear (rectangular) (Type III distribution), decorative bronze - furnished, installed and energized by utility company. ALLEGHENY POWER AND BALTIMORE GAS & ELECTRIC regions.

2) Posts

For luminaire a): 26' spun aluminum pendant style, concrete footing or screw base preferred (direct burial may be allowed in special circumstances.) *

For luminaire b): 25' to 40' galvanized steel or aluminum, bronze coated pole (specifications shall be approved by DTEO.)

For luminaire c): 25' or 30', square steel pole, bronze colored pole, screw base mounted.

3) Lamps

For luminaire a): 100-250 watt HPSV with photoelectric control on each pole.

For luminaire b): 100-250 watt HPSV HPSV with photoelectric control on each pole. (Specification as separately approved by DTEO upon request).

For luminaire c): 100 - 200 watt HPSV HPSV with photoelectric control on each pole.

4) Lateral Placement

For luminaire a), b) or c): one foot (1') behind the back of the sidewalk or one foot in front of the County right-of-way line.

5) Longitudinal Spacing

For luminaire a), b) or c): 125' to 150' opposite arrangement desirable.

6) General Installation Guidelines

a. Provide appropriate streetlight at intersection with an existing roadway. Use existing utility poles if available.

b. Install the first streetlight a maximum of one half of the specified longitudinal spacing.

c. Streetlight should be oriented towards the major road at T-type intersections and at four-way stop intersections.

d. Maintain the following clearance distances:

Five foot (5') from driveways, inlets, storm drains, and fire hydrants, water, gas, electric and sewer lines:
Fifteen foot (15') from trees.

III) Arterial and Major Roadways (CIP Projects)

1) Liminaires - (each equipped with a photocell)

a. Cobra (Type III distribution) cut-off - furnished, installed and energized by utility company.

b. Rectilinear (Type III distribution) decorative bronze --furnished by others and installed by either utility company or others - energized by utility company. (Specifications as separately approved by DTEO)

c. Rectilinear (rectangular), (Type III distribution) decorative bronze -- furnished, installed and energized by utility company. ALLEGHENYPOWER OR BALTIMORE GAS & ELECTRIC regions.

2) Posts

For luminaire a): 26' pendant style, concrete footing or crew base mounted preferred.

For luminaire b): 25' to 40' galvanized steel or aluminum, bronze coated poles, concrete footing required (specifications shall be approved by DTEO.)

For luminaire c): 25 or 30', square pole, concrete footing or screw base mounted.

3) Lamps

For luminaire a): 100 - 250 watt, HPSV HPSV with photoelectric control on each pole.

For luminaire b): 100 - 250 watt HPSV HPSV with photoelectric control on each pole. (Specification as approved by DTEO.)

For luminaire c): 100 or 200 watt HPSV HPSV with photoelectric control on each pole.

4) Lateral Placement

For luminaire a), b) or c): one foot (1') behind the back of the sidewalk or one foot in front of the County right-of-way line or as directed by the engineer.

5) Longitudinal Spacing

For luminaire a), b), or c):

a) 125' to 150' desirable.
b) alternate spacing for roadways up to 36' wide.
c) opposite arrangement for roadways over 36' wide and for divided roadways.

6) General Installation Guidelines

a. Provide appropriate streetlight at intersection with an existing roadway, Use existing utility poles if available.

b. Install the first streetlight a maximum of one half of the specified longitudinal spacing from the intersection.

c. Streetlight should be oriented towards the major road at T-type intersections and at four-way stop intersections.

d. Maintain the following minimum clearance distances:

Five foot (5') from driveways, inlets, storm drains, and fire hydrants, water, gas, electric and sewer lines:
Fifteen foot (15') from trees.

IV. Metro-Impact Areas/Urban Revitalization Districts

1) Lateral Placement

Shall be installed as specified in the master plan and/or sector plan, most recent publication, as approved by M-NCPPC/ DTEO.

2) Longitudinal Placement

Shall be as specified in the master plan and/or sector plan, most recent publication, as approved by M-NCPPC/ DTEO.

The following architecturally designed streetlight fixtures (luminaires and posts) have been approved for use:

Vehicular Streetlights

Bethesda Lantern
Damascus Highlight
Rectilinear, Decorative Bronze
Silver Spring Highlight
Silver Spring Vehicular Tear-drop
Wheaton Highlight
Avenel Decorative Lights

Pedestrian Lights

Damascus Light
Silver Spring Washington Globe
Silver Spring Cluster
Silver Spring Pedestrian Tear-drop
Washington Globe
Wheaton Light

All the above fixtures are furnished, installed by others - energized by the utility company. Specifications as separately approved by DTEO are available on requests.

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JMT
72 LOVETON CIRCLE | SPARKS, MD 21152
P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Design Section
APPROVED
SEE TITLE SHEET FOR SIGNATURE _____ Date
Chief, Division of Transportation Engineering

Designed by: JRM Drawn by: JRM Checked by: GAB

LT-04 LIGHTING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2017

Project No. : 501307 SHEET 75 of 123

FILE NAME: \\jmt.corp.local\jmtdfs\SMD\130605_004_Project_Management_1\CADD\pLT-P001-Seminary.dwg LAYOUT NAME: LT-04 (2) PLOTTED: Friday, February 02, 2018 - 11:05am USER: dduarte

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS
JUNE 2016
ROADWAY (PENDANT), LED OPTICS,
STYLE LUMINAIRE WITH TYPE III DISTRIBUTION

1) PURPOSE
The purpose of these specifications is to provide minimum requirements for the design, manufacture, fabrication, finishing and delivery of a roadway, LED optics (flat glass) style luminaire with Type III distribution shall be made of low copper die-cast aluminum housing. The roadway, LED, style luminaire is intended for use along roadways in Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and the attached drawings.

2) DESCRIPTION
Each streetlight luminaire include the following:
- **a)** Die-cast aluminum housing and drop style door;
- **b)** 120 volt LED Driver;
- **c)** LED Optical Assembly (Type III distribution);
- **d)** NEMA 3-prong twist-lock standard photoelectric control receptacle on the top of the luminaire;
- **e)** NEMA 3-prong twist-lock multi-volt standard photocell;
- **f)** All necessary hardware required for mounting on bracket arm, as specified.

3) DESIGN CRITERIA

3.1) AASHTO Standards
The luminaire shall meet the requirements of AASHTO Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

3.2) Shape and Minimum Size
a) The luminaire shall be of a rounded rectangular shape. The actual size may vary depending on specified wattage.
b) The luminaire shall be suitable to accommodate several LED Optical Assembly (Type III distribution) and associated LED driver.

3.3) Effective Projected Area (EPA)
The luminaire shall have a maximum estimated allowable EPA for luminaire of 0.7 square feet.

3.4) Finish
The luminaire have a gray polyester powder coat finish. During the finishing process, all critical openings shall be plugged to prevent contamination of the threads or reduction of other critical openings.

4) MATERIALS

4.1 Housing
The luminaire shall consist of a water tight housing fabricated from low copper die-cast aluminum housing, with die-cast aluminum drop-style doors. The drop-style doors shall be hinged on one side and secured on the opposite side with a captive stainless steel latch or captive stainless steel screw. All castings used to fabricate the luminaire housing shall be clean and smooth, with details defined and true to pattern. The housing shall be suitable to accommodate the LED Optical Assembly and LED driver.

4.2) LED Color Temperature (CCT) and Rendering Index (CRI)
The Correlated Color Temperature (CCT) shall be a nominal Kelvin Temperature of 3500K ± 200K with a minimum Color Rendering Index (CRI) of 70

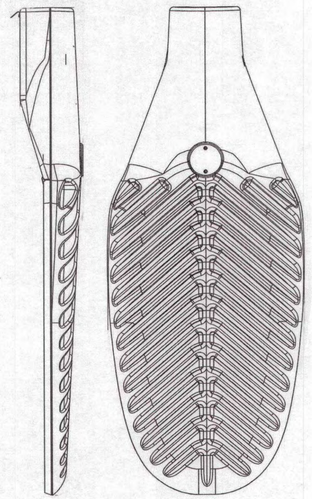
4.3) Driver & Surge Protection
The driver shall be mounted to facilitate easy removal for maintenance operations and replacement. The driver shall be equipped with a 10KV Surge Protection and suppression system. All electrical connections shall be polarized and of plug-in design. The driver shall be wired to receive 120 volt AC current. The driver shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees. The terminal block shall be capable of accepting up to a #6 AWG wire.

4.4) Cooling System
The luminaire shall consist of a heat sink with no fans, pumps, or liquids, and shall have wide angular fin in design to be resistant debris buildup that may degrade thermal dissipation performance.

4.5) Photoelectric Cell
The luminaire photocell receptacle shall be mounted on the die-cast aluminum housing. The photocell shall be of the 3-prong NEMA twist-lock type.

4.6) Optical System
The luminaire shall contain a precision designed injection molded acrylic optic plate and LED chamber, with a type III distribution pattern. The LED optical system compartment shall be IP 70 rated.

4.7) Mounting Bracket Arm
The luminaire shall be able to be mounted on bracket arms with 1 ½ or 2 inch slipfitter tenons. This may include two (2) or four (4) bolt slipfitter bracket assemblies with vertical tilt adjustment range of +/- 5%. The mounting bracket area shall be protected with a bird-guard type gasket.



MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS SECTION

JUNE 2016

STREETLIGHT POST NUMBERING TAGS

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of streetlight post numbering tags. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and attached drawings.

2) DESIGN CRITERIA

The streetlight post numbering tags are to be made of aluminum and finished with a similar color coating as that of the streetlight pole it is to be rigidly attached to. This streetlight post numbering tag is intended for use on all streetlight post maintained by Montgomery County.

Each pole numbering tag shall comply to the following:
a) Be 2" wide and 12" long
b) Be a color similar to the streetlight pole
c) Have 5 numbers of an opposite color placed vertically
d) All White/Silver surfaces shall be made of retroreflective sheeting
e) All colored surfaces shall be nonreflective

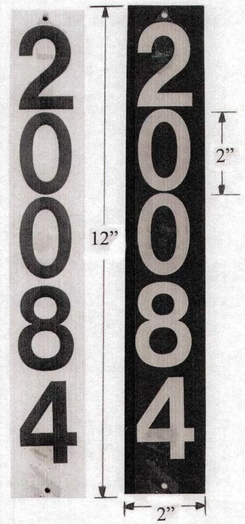
3) MATERIALS

a) TAG

The streetlight post numbering tags shall be 12 inches X 2 inches, fabricated from clear anodized 1/16 inch thick aluminum. The edges shall be smooth and corners rounded and the tag shall fit the streetlight pole shaft.

b) REFLECTIVE AREAS

The streetlight post numbering tag reflective area shall conform to D4956, Type III retroreflective sheeting.



c) NONRELECTIVE AREAS The streetlight post numbering tags nonrelective areas shall be as follows:

a. Numbers on white/silver reflective post tag

b. Backing on all other streetlight post tags

4) MOUNTIING HEIGHT

The streetlight post numbering tag should be mounted at a height approximately 10 foot from the surrounding elevation of the ground, unless otherwise approved and directed by the Engineer.

5) MOUNTING ORIENTATION

The streetlight post numbering tag shall be oriented and rigidly mounted at a 30 to 45 degree angle, so that approaching traffic can readily observe the tags numbers.

6) MOUNTING HARDHARE

The streetlight post numbering tag shall be secured to the shaft of the streetlight by a means of two (2) 1/8 inch diameter,18-8 stainless steel tamper-proof screw.

7) NUMBERS

The streetlight post numbering tag numbers shall be a minimum of 2 inch high with a minimum of a ¼ inch stroke width.

THE MARYLAND-NATIONAL
CAPITAL PARK AND PLANNING
COMMISSION, DEPARTMENT OF
PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____
CHIEF, CONSTRUCTION SECTION
DATE APPROVED 06/19/2018
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION
This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

Montgomery County
Division of Traffic Engineering & Operations
Street Lighting
Residential ___ Commercial ___
Type Quantity
P6 see str 1 2/26/16
Total
Legend
P1 - Post Top (UG)
P2 - Pendant (UG)
P3 - Decorative Residential (UG)
P4 - Bronze Rectilinear (UG)
P5 - Overhead LED
L - LED
O - Other
The location of streetlights shown or plan are approved (as revised).
Design & Operations Section
1/24/18
Date

JMT
72 LOVETON CIRCLE | SPARKS, MD 21152
P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

LT-05 LIGHTING PLAN

SEMINARY ROAD
INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2017

Project No. : 501307
SHEET 76 of 123

FILE NAME: \\jmt.corp.local\jmtdfs\SMD\130605_004_Project_Management_A\CADD\pLT-P001-Seminary.dwg LAYOUT NAME: LT-05 (2) PLOTTED: Friday, February 02, 2018 - 11:09am USER: dduarte

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

JUNE 2016

STREETLIGHT DEVELOPMENT PROCEDURES
UNDERGROUND DISTRIBUTION

Policy LTG-1

I. PEPCO Region (Commercial, Industrial, and Residential)

A. Streetlights furnished and installed by PEPCO at the developer's request

1) The developer prepares a preliminary streetlight layout on approved storm drain and paving plans (showing storm drains, water and sewer, other utilities, and driveways) and submits three copies to the Division of Traffic Engineering and Operations (DTEO) for review and approval. (The developer shall provide to DTEO a CADD file (.DXF format) of the roadway geometry and property lines for the improved area). Plans that are incorrect or incomplete will be returned to the developer for revision and resubmission.

2) The streetlight plans are reviewed and minor revisions, if necessary, are made by DTEO. All three copies of the plans are approved (as revised). A Montgomery County DTEO stamp indicating the type, wattage and number of lights will be affixed to the each plan and signed as approved by the designated County official.

3) DTEO shall keep one copy of the signed plan for its records and return two copies of the signed plan to the developer with an official letter of approval. A copy of the approval letter will also be sent to PEPCO (without plans).

4) The developer shall submit one copy of the approved streetlight plan to PEPCO with a request for streetlight installation and energization.

5) PEPCO prepares the streetlight installation/electrical drawings in accordance with the County approved streetlight layout plan and submits a cost estimate to the developer for the installation and energization of the streetlights.

6) After PEPCO receives payment, the streetlights are scheduled for installation in conjunction with the construction of the subdivision streets. PEPCO advises DTEO, in writing, when payment is received.

7) Remittance of payment alone does not release the developer from lighting responsibility. (The developer shall repair any damage to the streetlights following their installation, and prior to County acceptance of the street(s).

8) Upon notification, by the Department of Permitting Services (DPS), which the developer has applied for release of the paving permit, DTEO will inspect the project to assure that all streetlights have been installed per the approved plans.

9) Once it is determined that the streetlights have been installed satisfactorily and PEPCO has confirmed in writing that they have received payment for their installation, DTEO will sign the DPS check-off sheet accepting the streetlights for county maintenance.

B. Streetlights furnished and installed by the developer outside Urban Revitalization Districts (without streetscaping).

The streetlight development procedure is the same as in Part I, Section A, with the following exceptions:

1) The developer obtains the streetlight fixtures (luminaires and poles) that have been approved by DTEO;

2) The developer and PEPCO shall coordinate the installation of the fixtures and underground cabling connections.

C. Streetlights furnished and installed by the developer within an Urban Revitalization District (with streetscaping).

1) DTEO shall provide the developer/consultant with the design standards, equipment specifications, and construction details for the street lighting equipment.

2) The developer shall prepare and submit a streetscape and streetlight plan showing streetlight locations, tree locations and connecting underground conduits. The plans shall be submitted to DTEO for review and approval.

3) The plans are reviewed and minor revisions, if necessary, are made by DTEO. All three copies of the plans are approved (as revised). A Montgomery County DTEO stamp indicating the type, wattage and number of lights will be affixed to the each plan and signed as approved by the designated County official.

4) The developer shall provide DTEO with seven copies of the approved streetlight plan and two copies of the approved streetscape plan with a letter committing the developer to pay PEPCO for the initial costs to energize the streetlights.

5) The developer obtains the County approved streetlight fixtures (luminaires and poles).

6) The developer and PEPCO shall coordinate the installation of the fixtures and underground cabling connections.

7) DTEO submits to PEPCO a written request to energize the new lights with five copies of the approved streetlight plan, and one copy of the developers' commitment to pay letter. The developer should not install conduit prior to receiving the approved electrical plan from PEPCO.

8) PEPCO shall determine the source and location of the power connection and provide DTEO and the developer with the approved electrical plan showing the conduit connection to the power source. PEPCO shall submit an energization cost request to the developer for payment.

9) The developer/contractor shall install all streetlight fixtures per County standards and install conduits in accordance with the PEPCO's electrical plan and construction standards. The developer/contractor shall coordinate inspection of all underground conduit work with PEPCO prior to backfilling.

10) Once all streetlight equipment is installed and wired to the bases and after PEPCO has been paid, the developer/contractor shall request PEPCO to energize the streetlights.

11) Once the streetlights are energized and inspected by DTEO, the permit will be released and DTEO will accept the streetlights for County maintenance.

D. Streetlights furnished and installed by PEPCO at the County's request.

1) DTEO prepares a streetlight layout on paving plans showing storm drains, water, sewer, driveways, and other utilities, then submits one copy of the approved plan to PEPCO with a request for streetlight installation and energization.

2) PEPCO submits a cost agreement to DTEO for approval. DTEO returns the signed cost agreement and encumbers the necessary funds for future payment.

3) PEPCO schedules the installation of the streetlights and notifies DTEO when the work has been completed. DTEO schedules an inspection of the streetlights, authorizes payment, and accepts the streetlight for County maintenance.

II. Baltimore Gas and Electric Region

A. Streetlights furnished and installed by Baltimore Gas and Electric at the developer's request.

Streetlight procedure is the same as in PEPCO region (Part I, Section A) except that the streetlight maintenance is the responsibility of Baltimore Gas and Electric.

B. Streetlights furnished and installed by Baltimore Gas and Electric at the County's request.

Streetlight procedure is the same as in PEPCO region (Part I, Section D) except maintenance is the responsibility of Baltimore Gas and Electric.

III. Allegheny Power Region

A. Streetlights furnished and installed by Allegheny Power at the developer's request.

Streetlight procedure is the same as in PEPCO region (Part I, Section A) except that the streetlight maintenance is the responsibility of Allegheny Power.

B. Streetlights furnished and installed by Allegheny Power at the County's request

Streetlight procedure is the same as in PEPCO Region (Part I, section D) except that the streetlight maintenance is the responsibility of Allegheny Power.

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THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 06/19/2018
THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION
This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

Montgomery County
Division of Traffic Engineering & Operations
Street Lighting

Residential ____ Commercial ____

Type	Quantity
____ (Pls see Sht for details)	____
____	____
____	____
Total ____	____

Legend
P1 - Post Top (UG)
P2 - Pendant (UG)
P3 - Decorative Residential (UG)
P4 - Bronze Reetilinear (UG)
P5 - Overhead LED
L - LED
O - Other
The location of streetlights shown or plan are approved (as revised).

Design & Operations Section — 1/24/18 Date

STREETLIGHT CONDUIT INSTALLATION CHECKLIST

1) FOUR INCH (4"), SCHEDULE 40, PVC CONDUIT TO BE INSTALLED BY THE CONTRACTOR CONNECTING EACH SPLICEBOX IN A CONTINUOUS RUN.

2) TWO INCH (2"), SCHEDULE 40, PVC CONDUIT TO BE INSTALLED BY THE CONTRACTOR CONNECTING THE SPLICEBOX TO THE STREETLIGHT FOOTING.

3) CONTRACTOR TO PROVIDE AND INSTALL PHOTOCELLS FOR EACH STREETLIGHT LUMINAIRE.

4) STREETLIGHT AND POST ERECTED BY THE CONTRACTOR ARE TO BE WIRED WITH # 10 AWG (MIN.) COPPER WITH A THREE FOOT MINIMUM LOOP OF SLACK IN THE SPLICEBOX FOR ATTACHMENT BY PEPCO.

5) STREETLIGHT POSTS ARE TO HAVE A GROUNDING LUG ATTACHED TO THE BASE OF THE POST WITH A MINIMUM THREE FOOT LOOP OF SLACK IN THE SPLICEBOX OF # 6 AWG BARE COPPER WIRE ATTACHED.

6) ALL SWEEPBENDS TO BE A MINIMUM OF 36 INCHES RADIUS.

7) ¼" NYLON PULL-LINE IS TO BE INSTALLED IN EACH CONDUIT DUCT.

8) CONTRACTOR TO INSTALL MARKING TAPE ONE FOOT (1') ABOVE EACH CONDUIT RUN.

9) NO MORE THAN 180 DEGREES OF BENDS IN A CONDUIT RUN.

10) CONDUIT IS TO HAVE THREE (3) FEET (MINIMUM)] OF COVER OVER IT.

11) INSTALLATION OF ALL UNDERGROUND LIGHTING FACILITIES ARE ALSO SUBJECT TO PEPCO INSPECTION AND WRITTEN APPROVAL BEFORE CONCEALMENT. FAILURE TO OBTAIN SUCH INSPECTION WILL RESULT IN THE UNCOVERING OF FACILITIES AT THE CONTRACTOR'S EXPENSE. CALL 301-670-8808 OR 301-670-8828 7:00 TO 9:00 AM OR 3:00 TO 4:00 PM TWO WORKING DAYS IN ADVANCE TO ARRANGE INSPECTION.

12) ALL STREETLIGHT EQUIPMENT AND MATERIALS SHALL BE SUBMITTED TO MCDPWT FOR APPROVAL PRIOR TO BEING INSTALLED ON THE PROJECT. SEE SPECIAL PROVISIONS FOR STREETLIGHT SPECIFICATION.

13) ALL STREETLIGHTS SHALL BE INSTALLED 2' 6" BEHIND THE FACE OF CURB (EXCEPT AS NOTED ON PLANS).

CONTRACTOR FURNISHED EQUIPMENT NOTES:

PEPCO TO PROVIDE
ENERGY & CABLING

CONTRACTOR SHALL PROVIDE
LUMINAIRES, POLES, PHOTOCELLS,
FOOTINGS AND CONDUIT

CONTRACTOR TO PROVIDE
CONDUIT AS REQUESTED
BY PEPCO

REFER TO CONDUIT CHECKLIST
FOR ADDITIONAL INFORMATION

JMT
72 LOVETON CIRCLE | SPARKS, MD 21152
P: (410) 329-3100 | F: (410) 472-2200 | www.jmt.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: JRM Drawn by: JRM Checked by: GAB

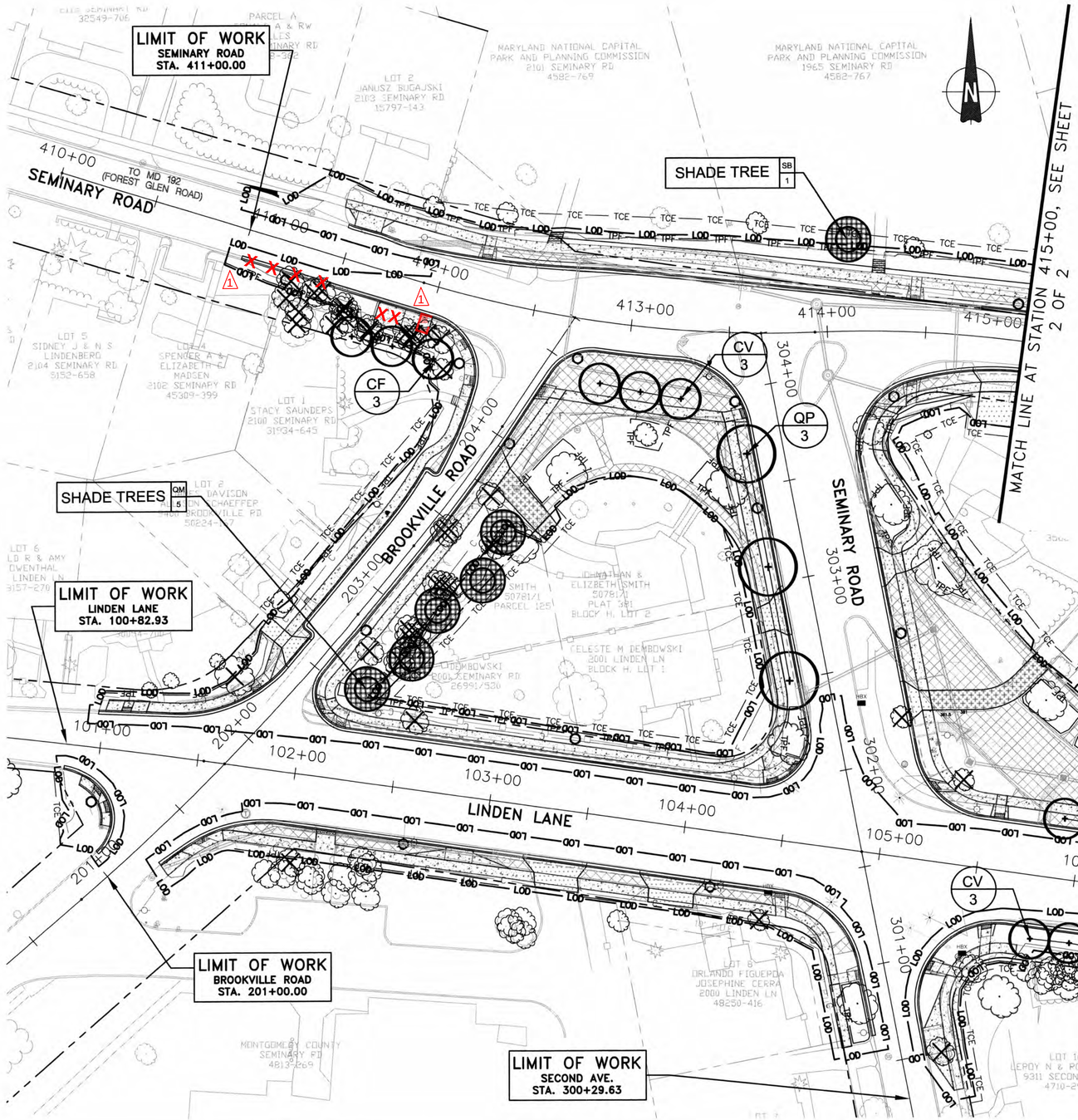
LT-06 LIGHTING PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2017

Project No. : 501307
SHEET 77 of 123

FILE NAME: \\jmt.corp.local\jmtdfs\SMD\130605_004_Project_Management_I\CADD\pLT-P001-Seminary.dwg LAYOUT NAME: LT-06 (2) PLOTTED: Friday, February 02, 2018 - 11:10am USER: dduarte



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/06/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

LEGEND

- PROPOSED TREE
- SHADE TREE (CROSSHATCH AREA SHOWN IS 400SF GROWING ZONE PER EXECUTIVE REGULATION 22-13) — SB 1 SHADE TREE
- TREE TO BE REMOVED
- PROPOSED LIGHT POLE
- TPF — TREE PROTECTION FENCE

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Onsite / waived.		
Reviewed 1/4/19	Reviewed 1/4/19	Reviewed 1/4/19
Approved 1/4/19	Approved 1/4/19	SEDIMENT CONTROL PERMIT NO. 283016
SM FILE # 236807		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

STANDARD TREE CANOPY NOTES

ANY SHADE TREE PLANTED TO COMPLY WITH CHAPTER 55 OF THE COUNTY CODE MUST CONFORM TO THE FOLLOWING:

1. EACH SHADE TREE MUST MEET THE REQUIREMENTS FOR PLANT MATERIAL IN ANSI Z60.1;
2. EACH SHADE TREE MUST BE A MINIMUM OF 2" CALIPER;
3. INSTALLATION OF EACH SHADE TREE MUST MEET ALL REQUIREMENTS OF ANSI A300;
4. AT THE TIME OF PLANTING:
   A. TREE GUARDS TO PROTECT TREES FROM DEER RUBBING, MOWERS, WEED EATERS, OTHER EQUIPMENT AND LARGE RODENTS MUST BE INSTALLED ON ALL SHADE TREES;
   B. MULCH MUST BE APPLIED;
   C. SUFFICIENT WATER MUST BE APPLIED TO AID IN PROPER PLANTING.
5. SHADE TREES MUST BE INSTALLED BETWEEN OCTOBER 15TH AND MAY 15TH AS LONG AS THE GROUND IS NOT FROZEN, SATURATED, OR COVERED WITH SNOW SUCH THAT A SUITABLE HOLE CANNOT BE DUG;
6. SHADE TREES MUST NOT BE INSTALLED BETWEEN MAY 16TH AND OCTOBER 14TH OF EACH YEAR. IF INSTALLATION CANNOT OCCUR BETWEEN OCTOBER 15TH AND MAY 15TH FOR ANY REASON, OR IF PROPOSED TREES ARE NOT PLANTED FOR ANY OTHER REASON, THE PERMITTEE MUST PAY THE REQUIRED FEE IN LIEU.
7. IF SHADE TREES ARE INSTALLED PRIOR TO FINAL STABILIZATION OF THE LAND DISTURBING ACTIVITY THEN NO ADDITIONAL DISTURBANCE MUST OCCUR WITHIN FIVE FEET OF THE STEM OF THE TREE. PROTECTIVE FENCING MUST BE INSTALLED AT THE EDGE OF THIS AREA AT THE SAME TIME THE TREE IS INSTALLED AND MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION OCCURS.
8. THE LOCATION OF GROWING ZONES AND PLANTING AREAS MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO INSTALLATION OF ANY SHADE TREE.
9. A COPY OF THE APPROVED SEDIMENT CONTROL PLAN SHOWING ALL APPROVED GROWING ZONES AND PLANTING AREAS MUST BE AVAILABLE ON THE SITE AT ALL TIMES.
10. AT LEAST ONE INSPECTION MUST OCCUR AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED TO DETERMINE THE LEVEL OF COMPLIANCE WITH SHADE TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE [SHEET LS-01]

	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
TREES (21)	CF	3	*Cornus florida 'Cherokee Princess'*	'Cherokee Princess' Flowering Dogwood	6' HGT.	B&B	AS SHOWN
	CV	9	*Crataegus viridis 'Winter King'*	'Winter King' Green Hawthorn	2" CAL.	B&B	20' o.c., AS SHOWN
	QM	5	*Quercus macrocarpa*	Bur Oak	2" CAL.	B&B	30' o.c., AS SHOWN
	QP	3	*Quercus phellos*	Willow Oak	2" CAL.	B&B	30' o.c., AS SHOWN
	SB	1	*Salix babylonica*	Weeping Willow	2" CAL.	B&B	AS SHOWN

LANDSCAPE ARCHITECT 1165 SCOTT JOHN RASMUSSEN STATE OF MARYLAND

JMT

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SBD Checked by: SJR

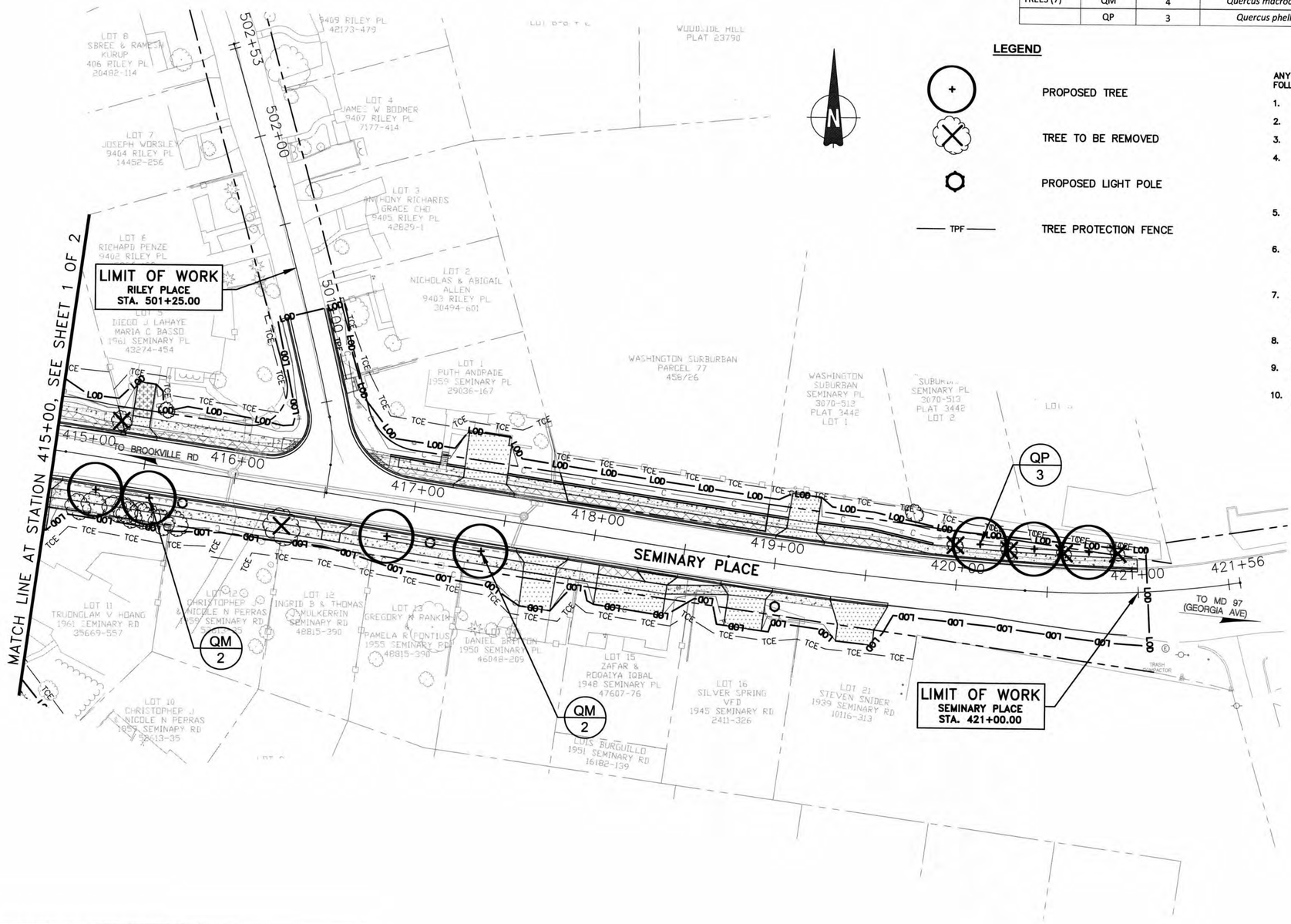
LS-01 LANDSCAPE PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'

SCALE: 1"=30' DATE: OCTOBER 2018

Project No. : 501307 SHEET 78 of 123

PLANTING SCHEDULE [SHEET LS-02]							
	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
TREES (7)	QM	4	*Quercus macrocarpa*	Bur Oak	2" CAL.	B&B	30' o.c., AS SHOWN
	QP	3	*Quercus phellos*	Willow Oak	2" CAL.	B&B	30' o.c., AS SHOWN



LEGEND

- PROPOSED TREE
- TREE TO BE REMOVED
- PROPOSED LIGHT POLE
- TPF — TREE PROTECTION FENCE

STANDARD TREE CANOPY NOTES

ANY SHADE TREE PLANTED TO COMPLY WITH CHAPTER 55 OF THE COUNTY CODE MUST CONFORM TO THE FOLLOWING:

1. EACH SHADE TREE MUST MEET THE REQUIREMENTS FOR PLANT MATERIAL IN ANSI Z60.1;
2. EACH SHADE TREE MUST BE A MINIMUM OF 2" CALIPER;
3. INSTALLATION OF EACH SHADE TREE MUST MEET ALL REQUIREMENTS OF ANSI A300;
4. AT THE TIME OF PLANTING:
   A. TREE GUARDS TO PROTECT TREES FROM DEER RUBBING, MOWERS, WEED EATERS, OTHER EQUIPMENT AND LARGE RODENTS MUST BE INSTALLED ON ALL SHADE TREES;
   B. MULCH MUST BE APPLIED;
   C. SUFFICIENT WATER MUST BE APPLIED TO AID IN PROPER PLANTING.
5. SHADE TREES MUST BE INSTALLED BETWEEN OCTOBER 15TH AND MAY 15TH AS LONG AS THE GROUND IS NOT FROZEN, SATURATED, OR COVERED WITH SNOW SUCH THAT A SUITABLE HOLE CANNOT BE DUG;
6. SHADE TREES MUST NOT BE INSTALLED BETWEEN MAY 16TH AND OCTOBER 14TH OF EACH YEAR. IF INSTALLATION CANNOT OCCUR BETWEEN OCTOBER 15TH AND MAY 15TH FOR ANY REASON, OR IF PROPOSED TREES ARE NOT PLANTED FOR ANY OTHER REASON, THE PERMITTEE MUST PAY THE REQUIRED FEE IN LIEU.
7. IF SHADE TREES ARE INSTALLED PRIOR TO FINAL STABILIZATION OF THE LAND DISTURBING ACTIVITY THEN NO ADDITIONAL DISTURBANCE MUST OCCUR WITHIN FIVE FEET OF THE STEM OF THE TREE. PROTECTIVE FENCING MUST BE INSTALLED AT THE EDGE OF THIS AREA AT THE SAME TIME THE TREE IS INSTALLED AND MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION OCCURS.
8. THE LOCATION OF GROWING ZONES AND PLANTING AREAS MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO INSTALLATION OF ANY SHADE TREE.
9. A COPY OF THE APPROVED SEDIMENT CONTROL PLAN SHOWING ALL APPROVED GROWING ZONES AND PLANTING AREAS MUST BE AVAILABLE ON THE SITE AT ALL TIMES.
10. AT LEAST ONE INSPECTION MUST OCCUR AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED TO DETERMINE THE LEVEL OF COMPLIANCE WITH SHADE TREE PLANTING REQUIREMENTS.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING
M-NCPPC PERMIT NO. 2018-013
PARK B36
REVIEWED BY William Payton
APPROVED BY _____ CHIEF, CONSTRUCTION SECTION
DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
See Sht #1		
Reviewed 1/4/19	Reviewed 1/4/19	Reviewed 1/4/19
Approved 1/4/19	Approved 1/4/19	SEDIMENT CONTROL PERMIT NO. 283016
SM FILE # 236807		MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

LANDSCAPE ARCHITECT 1165 SCOTT JOHN RASMUSSEN STATE OF MARYLAND

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

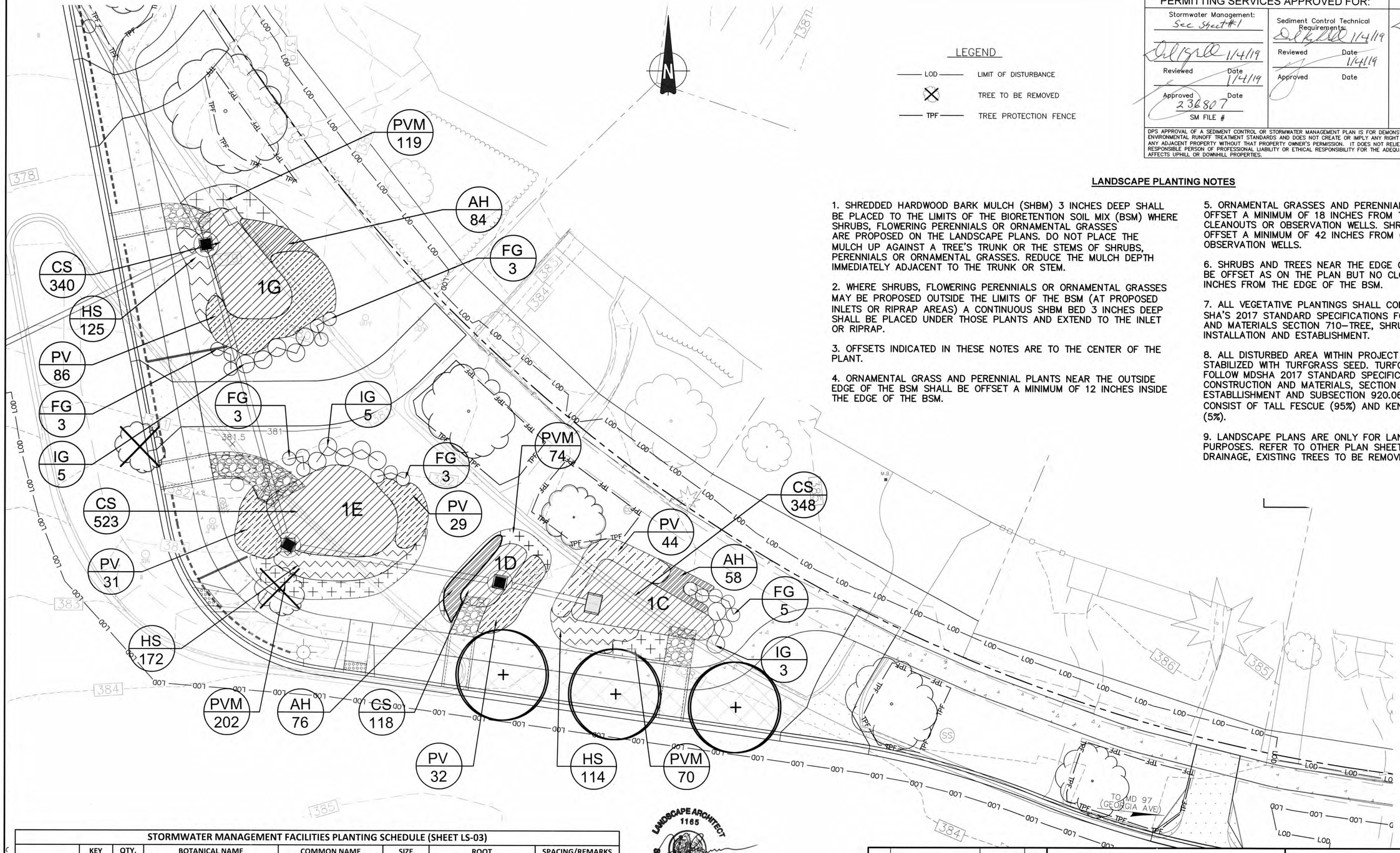
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SBD Checked by: SJR

LS-02 LANDSCAPE PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: OCTOBER 2018

Project No. : 501307 SHEET 79 of 123



LEGEND

LOD	LIMIT OF DISTURBANCE
	TREE TO BE REMOVED
TPF	TREE PROTECTION FENCE

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: See Sheet #1
Reviewed — Date 1/4/19

Sediment Control Technical Requirements:
Reviewed — Date 1/4/19

Administrative Requirements:
Reviewed — Date 1/4/19

Approved — Date 1/4/19
SM FILE # 236807

Approved — Date
SEDIMENT CONTROL PERMIT NO. 283016

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

LANDSCAPE PLANTING NOTES

1. SHREDDED HARDWOOD BARK MULCH (SHBM) 3 INCHES DEEP SHALL BE PLACED TO THE LIMITS OF THE BIORETENTION SOIL MIX (BSM) WHERE SHRUBS, FLOWERING PERENNIALS OR ORNAMENTAL GRASSES ARE PROPOSED ON THE LANDSCAPE PLANS. DO NOT PLACE THE MULCH UP AGAINST A TREE'S TRUNK OR THE STEMS OF SHRUBS, PERENNIALS OR ORNAMENTAL GRASSES. REDUCE THE MULCH DEPTH IMMEDIATELY ADJACENT TO THE TRUNK OR STEM.

2. WHERE SHRUBS, FLOWERING PERENNIALS OR ORNAMENTAL GRASSES MAY BE PROPOSED OUTSIDE THE LIMITS OF THE BSM (AT PROPOSED INLETS OR RIPRAP AREAS) A CONTINUOUS SHBM BED 3 INCHES DEEP SHALL BE PLACED UNDER THOSE PLANTS AND EXTEND TO THE INLET OR RIPRAP.

3. OFFSETS INDICATED IN THESE NOTES ARE TO THE CENTER OF THE PLANT.

4. ORNAMENTAL GRASS AND PERENNIAL PLANTS NEAR THE OUTSIDE EDGE OF THE BSM SHALL BE OFFSET A MINIMUM OF 12 INCHES INSIDE THE EDGE OF THE BSM.

5. ORNAMENTAL GRASSES AND PERENNIAL PLANTS SHALL BE OFFSET A MINIMUM OF 18 INCHES FROM THE CENTER OF CLEANOUTS OR OBSERVATION WELLS. SHRUBS SHALL BE OFFSET A MINIMUM OF 42 INCHES FROM CLEANOUTS OR OBSERVATION WELLS.

6. SHRUBS AND TREES NEAR THE EDGE OF THE BSM SHALL BE OFFSET AS ON THE PLAN BUT NO CLOSER THAN 24 INCHES FROM THE EDGE OF THE BSM.

7. ALL VEGETATIVE PLANTINGS SHALL COMPLY WITH MARYLAND SHA'S 2017 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS SECTION 710–TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT.

8. ALL DISTURBED AREA WITHIN PROJECT LIMITS WILL BE STABILIZED WITH TURFGRASS SEED. TURFGRASS SEED MIX WILL FOLLOW MDSHA 2017 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 705– TURFGRASS ESTABLLISHMENT AND SUBSECTION 920.06.07. THE MIX SHALL CONSIST OF TALL FESCUE (95%) AND KENTUCKY BLUEGRASS (5%).

9. LANDSCAPE PLANS ARE ONLY FOR LANDSCAPE PLANTING PURPOSES. REFER TO OTHER PLAN SHEETS FOR GRADING, DRAINAGE, EXISTING TREES TO BE REMOVED, ETC.

STORMWATER MANAGEMENT FACILITIES PLANTING SCHEDULE (SHEET LS-03)

	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
SHRUBS (30)	FG	17	*Fothergilla gardenii*	Dwarf Fothergilla	18" HGT	NO. 5 CONTAINER GROWN	3' O.C.
	IG	13	*Ilex glabra 'Shamrock'*	Inkberry Holly	18" HGT	NO. 5 CONTAINER GROWN	4' O.C.
PERENNIALS (1,094)	AH	218	*Amsonia hubrichtii*	Blue Star	#SP4	CONTAINER GROWN	1' O.C.
	HS	411	*Helianthus angustifolius 'Low Down'*	Willow-Leaved Sunflower	#SP4	CONTAINER GROWN	1' O.C.
	PVM	465	*Physostegia virginiana 'Pink Manners'*	Obedient Plant	#SP4	CONTAINER GROWN	1' O.C.
GRASSES (1,551)	CS	1329	*Carex stricta*	Tussock Sedge	#SP4	CONTAINER GROWN	1' O.C.
	PV	222	*Panicum virgatum 'Shenandooh'*	Switchgrass	#1 CONT.	NO. 1 CONTAINER GROWN	2' O.C.

LANDSCAPE ARCHITECT 1165 SCOTT JOHN RASMUSSEN STATE OF MARYLAND

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SBD Checked by: SJR

LS–03 SWM LANDSCAPE PLAN SHEET
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=10' DATE: OCTOBER 2018

Project No. : 509337 SHEET 80 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

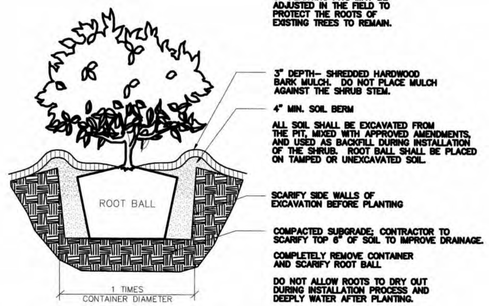
REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 12/03/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574



NOTE: LOCATIONS AND SIZES OF PLANTING PITS MAY BE ADJUSTED IN THE FIELD TO PROTECT THE ROOTS OF EXISTING TREES TO REMAIN.

3" DEPTH– SHREDDED HARDWOOD BARK MULCH. DO NOT PLACE MULCH AGAINST THE SHRUB STEM.

4" MIN. SOIL BERM

ALL SOIL SHALL BE EXCAVATED FROM THE PIT, MIXED WITH APPROVED AMENDMENTS, AND USED AS BACKFILL DURING INSTALLATION OF THE SHRUB. ROOT BALL SHALL BE PLACED ON TAMPED OR UNEXCAVATED SOIL.

SCARIFY SIDE WALLS OF EXCAVATION BEFORE PLANTING

COMPACTED SUBGRADE; CONTRACTOR TO SCARIFY TOP 6" OF SOIL TO IMPROVE DRAINAGE.

COMPLETELY REMOVE CONTAINER AND SCARIFY ROOT BALL.

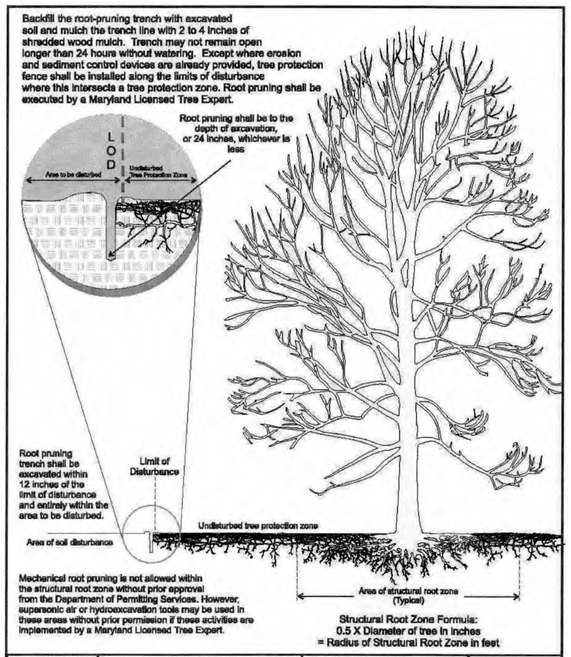
DO NOT ALLOW ROOTS TO DRY OUT DURING INSTALLATION PROCESS AND DEEPLY WATER AFTER PLANTING.

SHRUB PLANTING DETAIL

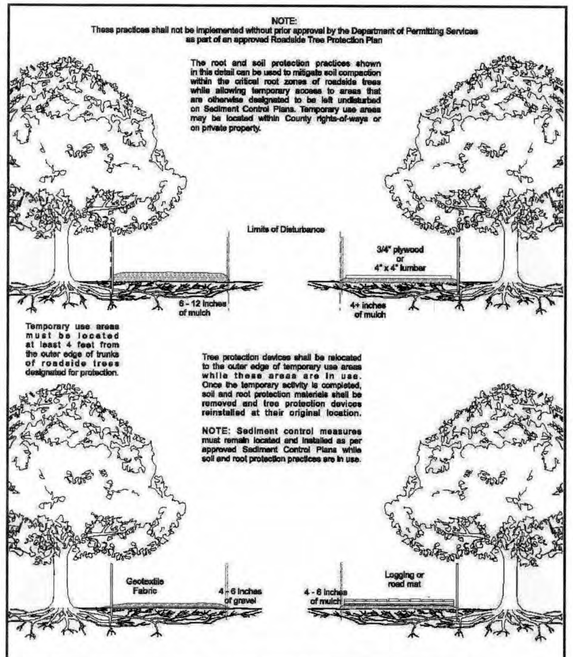
NOT TO SCALE

TOTAL PLANTING SCHEDULE

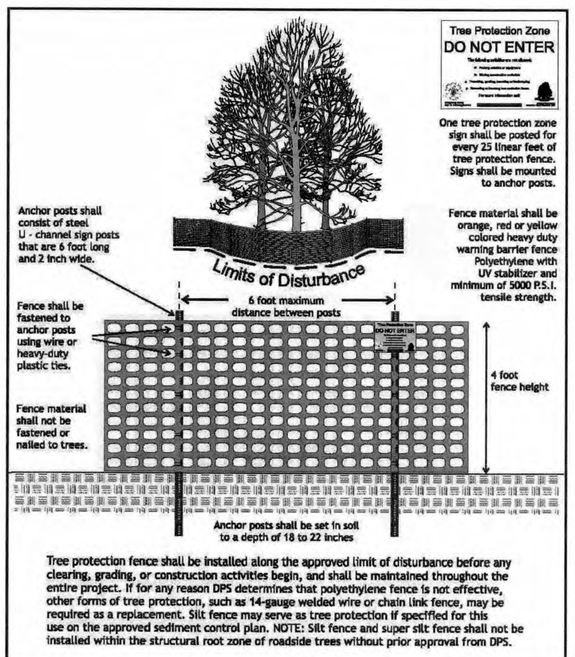
	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
TREES	CF	3	*Cornus florida 'Cherokee Princess'*	'Cherokee Princess' Flowering Dogwood	6' HGT.	B&B	AS SHOWN
	CV	9	*Crataegus viridis 'Winter King'*	'Winter King' Green Hawthorn	2" CAL.	B&B	20' o.c., AS SHOWN
	QM	9	*Quercus macrocarpa*	Bur Oak	2" CAL.	B&B	30' o.c., AS SHOWN
	QP	6	*Quercus phellos*	Willow Oak	2" CAL.	B&B	30' o.c., AS SHOWN
	SB	1	*Salix babylonica*	Weeping Willow	2" CAL.	B&B	AS SHOWN
SHRUBS	FG	17	*Fothergilla gardenii*	Dwarf Fothergilla	18" hgt.	NO. 5 CONTAINER GROWN	2' O.C.
	IG	13	*Ilex glabra 'Shamrock'*	Inkberry Holly	18" hgt.	NO. 5 CONTAINER GROWN	4' O.C.
PERENNIALS	AH	218	*Amsonia hubrichtii*	Blue Star	#SP4	CONTAINER GROWN	1' O.C.
	HS	411	*Helianthus angustifolius 'Low Down'*	Willow-Leaved Sunflower	#SP4	CONTAINER GROWN	1' O.C.
	PVM	465	*Physostegia virginiana 'Pink Manners'*	Obedient Plant	#SP4	CONTAINER GROWN	1' O.C.
GRASSES	CS	1329	*Carex stricta*	Tussock Sedge	#SP4	CONTAINER GROWN	1' O.C.
	PVS	222	*Panicum virgatum 'Shenandoah'*	Switchgrass	#1 CONT.	NO. 1 CONTAINER GROWN	2' O.C.



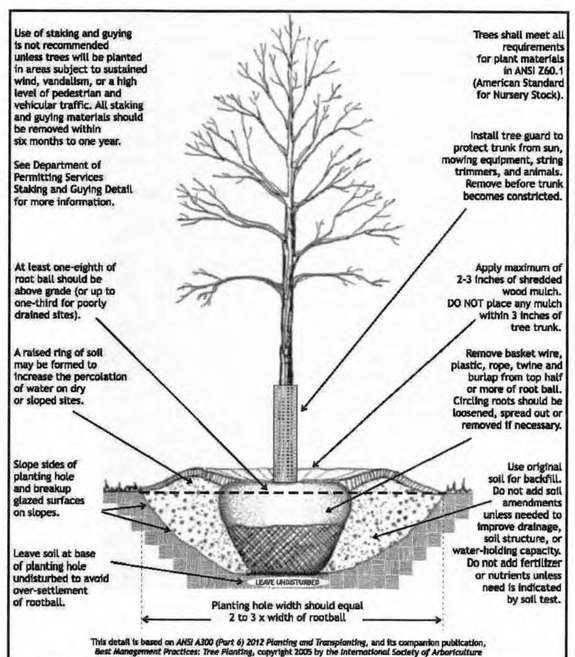
MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	ROOT PRUNING AND STRUCTURAL ROOT ZONE FORMULA	DATE: 5/16
		SCALE: NONE



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	Temporary Soil and Root Protection Practices	DATE: 5/16
		SCALE: NONE



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	TREE PROTECTION FENCING DETAIL	DATE: 5/16
		SCALE: NONE



MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	TREE PLANTING DETAIL FOR BALLED AND BURLAP NURSERY STOCK	DATE: 5/16
		SCALE: NONE

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management: See Sheet #1

Reviewed _____ Date 1/4/19

Approved _____ Date 1/4/19

SM FILE # 236807

Sediment Control Technical Requirements:

Reviewed _____ Date 1/4/19

Approved _____ Date 1/4/19

Administrative Requirements:

Reviewed _____ Date 1/4/19

SEDIMENT CONTROL PERMIT NO. 283016

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

LANDSCAPE ARCHITECT 1165 SCOTT JOHN RASMUSSEN STATE OF MARYLAND

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section _____ Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering _____ Date

Designed by: SJR Drawn by: SBD Checked by: SJR

LS-04 LANDSCAPE DETAILS

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'

SCALE: 1"=30' DATE: OCTOBER 2018

Project No. : 501307 SHEET 81 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

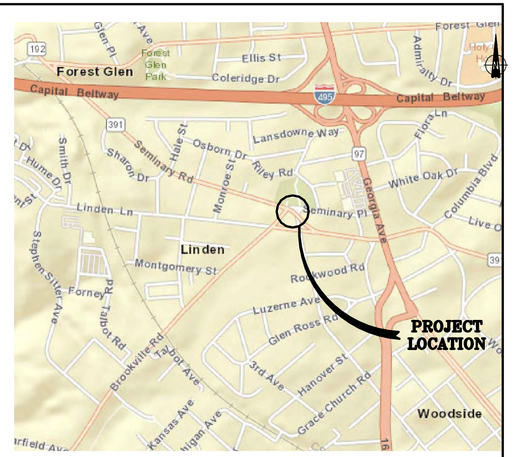


ENVIRONMENTAL SUMMARY (WITHIN TRACT AREA)		
1	WETLANDS	0
2	WETLAND BUFFER	0
3	STREAM BUFFER	0
4	100-YEAR FLOODPLAIN	0
5	TOTAL FOREST	0
6	FOREST IN FLOODPLAIN	0
7	FOREST OUTSIDE FLOODPLAIN	0
8	FORESTED WETLANDS	0
9	FOREST IN WETLAND BUFFER	0
10	FOREST STREAM BUFFER	0

*Tract Area includes all areas inside the LOD

LEGEND

- LOD — LIMIT OF DISTURBANCE
- T-44 — TREE OUTSIDE COUNTY R.O.W. WITHIN PROJECT LIMITS
- T-48 — TREE WITHIN COUNTY R.O.W. (>2" DBH)
- X — TREE TO BE REMOVED
- TPF — TREE PROTECTION FENCE
- 18E / 10 — SOIL BOUNDARY WITH MAP UNIT SYMBOL
- ROOT PRUNING



VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. FIELD WORK WAS CONDUCTED ON FEBRUARY 29, 2016 BY S. GILL AND S. KNIGHT.
2. NO STREAMS, WETLANDS, OR FOREST EXIST WITHIN THE PROJECT AREA.
3. THE SITE IS NOT WITHIN A SPECIAL PROTECTION AREA. NO FORESTED AREAS OR STREAM BUFFERS ARE REMOVED OR ENCROACHED UPON.
4. NO RARE, THREATENED, OR ENDANGERED PLANTS OR ANIMALS, OR CRITICAL HABITAT WERE OBSERVED WITHIN THE PROJECT LIMITS.
5. NO CHAMPION TREES OR TREES 75 PERCENT OR MORE OF THE DIAMETER OF THE CURRENT STATE CHAMPION FOR A GIVEN SPECIES ARE PRESENT INSIDE THE LOD.
6. ACCORDING TO SEC. 22A-5 (EXEMPTIONS) OF THE MONTGOMERY COUNTY FOREST CONSERVATION LAW, THE REQUIREMENTS OF ARTICLE II DO NOT APPLY TO A STATE OR HIGHWAY.
7. CONSTRUCTION ACTIVITY THAT IS SUBJECT TO SECTION 5-103 OF THE NATURAL RESOURCES ARTICLE 0F THE MARYLAND CODE, OR SECTION 22A-9. THEREFORE, THIS LINEAR PROJECT IS EXEMPT.
8. A CULTURAL OR HISTORIC SITE EXISTS ADJACENT TO THE PROJECT LIMITS - MONTGOMERY HILLS JR HIGH SCHOOL (M-36-20).
9. WATERSHED: LOWER ROCK CREEK WATERSHED (USE I/IP).
10. TRACK AREA: APPROXIMATELY 3.6 ACRES WITHIN LOD.
11. NRI/FSD EXEMPTION: NRI#42010013E APPROVED OCTOBER 8, 2009.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE FOREST CONSERVATION TECHNICAL MANUAL AND MONTGOMERY COUNTY TREES APPROVED TECHNICAL MANUAL.

Stacey Thompson Gill 01-18-18

STACEY THOMPSON GILL, DNR QUALIFIED PROFESSIONAL DATE

JMT

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SG Drawn by: SG Checked by: JJR

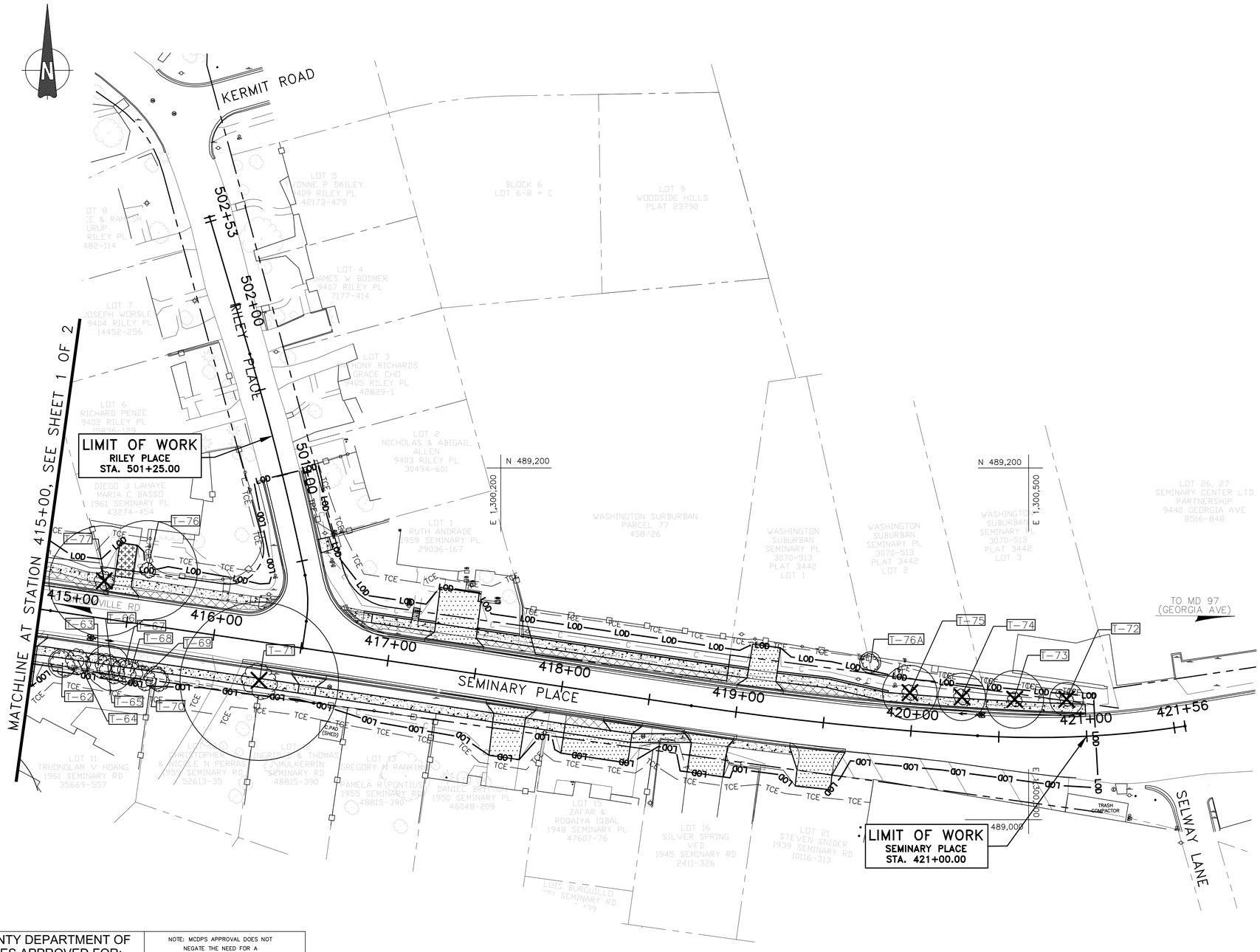
LS-05 ROADSIDE TREE PROTECTION PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'

SCALE: 1"=30' DATE: JANUARY 2018

Project No: : 501307 SHEET 82 of 123



LEGEND

- LOD — LIMIT OF DISTURBANCE
- T-44 — TREE OUTSIDE COUNTY R.O.W. WITHIN PROJECT LIMITS
- T-48 — TREE WITHIN COUNTY R.O.W. (>2" DBH)
- TREE TO BE REMOVED
- TPF — TREE PROTECTION FENCE
- 18E / 10 — SOIL BOUNDARY WITH MAP UNIT SYMBOL
- ROOT PRUNING

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT NO.

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Stacey Thompson Gill — 01-18-18

STACEY THOMPSON GILL, DNR QUALIFIED PROFESSIONAL — DATE

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SG Drawn by: SG Checked by: JJR

LS-06 ROADSIDE TREE PROTECTION PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'

SCALE: 1"=30'

DATE: JANUARY 2018

Project No. : 501307 SHEET 83 of 123

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

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Tree Inventory Table

Project: Seminary Road
Location: Montgomery County, Maryland

Date: 2/29/16
Investigators: S. Knight & S. Gill

Tree No.	DBH (Inches)	Common Name	Scientific Name	Condition	Comments
T-1	32.1	Red Maple	*Acer rubrum*	Fair	Heavy Vines
T-2	5.1/5.7/4.1/3.1/5.1/5.8	Red Mulberry	*Morus rubra*	Good	TO BE REMOVED
T-3	2.5/5.5	Black Walnut	*Juglans nigra*	Good	
T-4	8.0	Black Walnut	*Juglans nigra*	Good	
T-5	9.2	Black Walnut	*Juglans nigra*	Good	
T-6	3.5/5.5	Black Walnut	*Juglans nigra*	Good	
T-7	18.0	Sugar Maple	*Acer saccharum*	Good	
T-8	6.5/6.5	Black Walnut	*Juglans nigra*	Good	Vines
T-9	6.0/6.5	Black Walnut	*Juglans nigra*	Good	
T-10	5.0/6.0/2.0	Black Walnut	*Juglans nigra*	Good	
T-11	12.0	Black Walnut	*Juglans nigra*	Good	
T-12	7.5/8.9/9.6/4.0	American Elm	*Ulmus americana*	Good	
T-13	12.6	Black Walnut	*Juglans nigra*	Poor	Dying
T-14	11.2	Boxelder	*Acer negundo*	Fair	Dead branches
T-15	9.0/7.3	Boxelder	*Acer negundo*	Good	
T-16	7.3/5.0/10.0	Boxelder	*Acer negundo*	Fiar	Dead Branches/Vines
T-17	10.6	Red Maple	*Acer rubrum*	Good	
T-18	10.5	Red Maple	*Acer rubrum*	Good	TO BE REMOVED
T-19	29.3	Pin Oak	*Quercus palustris*	Good	
T-20	3.0/3.5/3.0/2.0	Crapemyrtle	*Lagerstroemia indica*	Good	
T-20A	13.2	Silver Maple	*Acer scchariunum*	Good	TO BE REMOVED
T-21	4.0/3.5/3.5	Red Mulberry	*Morus rubra*	Good	
T-22	34.0	Silver Maple	*Acer saccharuinum*	Good	
T-23	2.0/2.0/2.0/2.5	Crapemyrtle	*Lagerstroemia indica*	Good	
T-24	10.7	Eastern Hemlock	*Tsuga canadensis*	Good	
T-25	4.8	Eastern Hemlock	*Tsuga canadensis*	Good	
T-26	2.5/8.8	Eastern Hemlock	*Tsuga canadensis*	Good	
T-27	9.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-28	14.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-29	10.5	Eastern Hemlock	*Tsuga canadensis*	Good	
T-30	10.5	Eastern Hemlock	*Tsuga canadensis*	Good	
T-31	10.4	Eastern Hemlock	*Tsuga canadensis*	Good	
T-32	9.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-33	12.0/6.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-34	14.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-35	6.5/4.5	Eastern Hemlock	*Tsuga canadensis*	Good	
T-36	8.0/6.5	Eastern Hemlock	*Tsuga canadensis*	Good	
T-37	10.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-38	10.0/6.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-39	10.0/4.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-40	14.0/14.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-41	9.0	Eastern Hemlock	*Tsuga canadensis*	Good	

Tree Inventory Table

Project: Seminary Road
Location: Montgomery County, Maryland

Date: 2/29/16
Investigators: S. Knight & S. Gill

Tree No.	DBH (Inches)	Common Name	Scientific Name	Condition	Comments
T-42	4.2	Boxelder	*Acer negundo*	Good	
T-43	18.1	Boxelder	*Acer negundo*	Good	
T-44	6.0/3.0	Eastern Hemlock	*Tsuga canadensis*	Good	
T-45	19.4	American Basswood	*Tilia americana*	Good	TO BE REMOVED
T-46	27.3	Red Oak	*Quercus rubra*	Good	
T-47	18.0	Boxelder	*Acer negundo*	Fair	Dead branches
T-48	24.8	Red Oak	*Quercus rubra*	Good	Canopy thru power lines
T-49	22.9	Red Oak	*Quercus rubra*	Good	Canopy thru power lines
T-50	33.2	Pin Oak	*Quercus palustris*	Good	
T-51	42.7	Pin Oak	*Quercus palustris*	Good	
T-52	20.7	Red Oak	*Quercus rubra*	Good	
T-53	40.2	Red Oak	*Quercus rubra*	Good	
T-54	16.1	Red Oak	*Quercus rubra*	Good	TO BE REMOVED
T-55	9.2	Sugar Maple	*Acer sacharum*	Good	TO BE REMOVED
T-56	29.3	Pin Oak	*Quercus palustris*	Good	
T-57	37.1	American Elm	*Ulmus americana*	Good	
T-58	4.5	Sweetbay Magnolia	*Magnolia virginiana*	Good	
T-59	4.4	Black Cherry	*Prunus serotina*	Good	
T-60	3.4	Black Cherry	*Prunus serotina*	Good	
T-61	26.1	Pin Oak	*Quercus palustris*	Good	
T-62	5.4	Red Cedar	*Juniperus virginiana*	Good	
T-63	4.0	Red Cedar	*Juniperus virginiana*	Good	
T-64	2.2	Red Cedar	*Juniperus virginiana*	Good	
T-65	6.5/7.0/6.0/8.0	Black Cherry	*Prunus serotina*	Poor	Dead branches
T-66	6.0/7.5/6.0	Black Cherry	*Prunus serotina*	Good	
T-67	2.5	Red Cedar	*Juniperus virginiana*	Good	
T-68	3.5	Red Cedar	*Juniperus virginiana*	Good	
T-69	3.5	Red Cedar	*Juniperus virginiana*	Good	
T-70	3.8	Red Cedar	*Juniperus virginiana*	Good	
T-71	30.0	Pin Oak	*Quercus palustris*	Good	TO BE REMOVED
T-72	6.3	Pin Oak	*Quercus palustris*	Good	TO BE REMOVED
T-73	10.9	Black Willow	*Salix nigra*	Good	TO BE REMOVED
T-74	9.0	Black Willow	*Salix nigra*	Good	TO BE REMOVED
T-75	10.3	Black Willow	*Salix nigra*	Good	TO BE REMOVED
T-76	18.8	Black Willow	*Salix nigra*	Good	
T-76A	4.0/3.0/3.0	Red Mulberry	*Morus rubra*	Good	
T-77	20.9	Sugar Maple	*Acer sacharum*	Good	TO BE REMOVED
T-78	25.5	Weeping Willow	*Salix babylonica*	Good	
T-79	23.4	Weeping Willow	*Salix babylonica*	Good	
T-80	11.7	Flowering Cherry	*Prunus serrulata*	Good	
T-81	12.3	Red Maple	*Acer rubrum*	Good	
T-82	10.0/7.0	Red Maple	*Acer rubrum*	Fair	Heavy Vines; TO BE REMOVED

Tree Inventory Table

Project: Seminary Road
Location: Montgomery County, Maryland

Date: 2/29/16
Investigators: S. Knight & S. Gill

Tree No.	DBH (Inches)	Common Name	Scientific Name	Condition	Comments
T-83	3.8	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-84	2.0	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-85	6.7	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-86	8.3	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-87	2.0	Eastern Hemlock	*Tsuga canadensis*	Fair	Heavy Vines; TO BE REMOVED
T-88	8.0	Eastern Hemlock	*Tsuga canadensis*	Fair	Heavy Vines; TO BE REMOVED
T-89	13.0	Sugar Maple	*Acer sacharum*	Fair	Heavy Vines; TO BE REMOVED
T-90	3.5	Sugar Maple	*Acer sacharum*	Good	TO BE REMOVED
T-91	6.2	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-92	6.2	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-93	7.5	Eastern Hemlock	*Tsuga canadensis*	Good	TO BE REMOVED
T-94	4.5	Blue Spruce	*Picea pungens*	Good	TO BE REMOVED
T-95	4.1	Blue Spruce	*Picea pungens*	Good	TO BE REMOVED
T-96	5.5	Blue Spruce	*Picea pungens*	Good	TO BE REMOVED
T-97	5.5	Blue Spruce	*Picea pungens*	Good	TO BE REMOVED
T-98	4.0	Blue Spruce	*Picea pungens*	Good	TO BE REMOVED
T-99	8.0	Flowering Dogwood	*Cornus florida*	Good	TO BE REMOVED
T-100	12.0	Flowering Dogwood	*Cornus florida*	Good	
T-101	6.0/5.0	Red Cedar	*Juniperus virginiana*	Good	
T-102	21.3	Sweetbay Magnolia	*Magnolia virginiana*	Good	TO BE REMOVED
T-103	16.3	Red Mulberry	*Morus rubra*	Good	
T-104	9.6	Boxelder	*Acer negundo*	Good	
T-105	34.0	Black Walnut	*Juglans nigra*	Good	TO BE REMOVED
T-106	8.0	Black Walnut	*Juglans nigra*	Fair	Heavy vines; TO BE REMOVED
T-107	6.5	Black Walnut	*Juglans nigra*	Fair	Heavy vines; TO BE REMOVED
T-108	3.0	Tree of Heaven	*Ailanthus altissima*	Good	TO BE REMOVED
T-109	3.0	Tree of Heaven	*Ailanthus altissima*	Good	TO BE REMOVED
T-110	4.0	Tree of Heaven	*Ailanthus altissima*	Good	TO BE REMOVED
T-111	12.0/10.0/8.0/10.0/12.5	Tree of Heaven	*Ailanthus altissima*	Poor	Heavy vines; TO BE REMOVED
T-112	10.1	Tree of Heaven	*Ailanthus altissima*	Good	TO BE REMOVED
T-113	3.0	Tree of Heaven	*Ailanthus altissima*	Good	TO BE REMOVED
T-114	11.3/8.0	Black Walnut	*Juglans nigra*	Good	TO BE REMOVED
T-115	16.5	Pin Oak	*Quercus palustris*	Poor	TO BE REMOVED
T-116	6.5	Pin Oak	*Quercus palustris*	Good	TO BE REMOVED
T-117	2.4	Black Cherry	*Prunus serotina*	Good	TO BE REMOVED
T-118	6.5/5.0/2.0	Boxelder	*Acer negundo*	Good	TO BE REMOVED
T-119	35.0	Sugar Maple	*Acer sacharum*	Good	
T-120	19.0	Pin Oak	*Quercus palustris*	Good	
T-121	35.2	Pin Oak	*Quercus palustris*	Good	
T-122	35.5	Red Oak	*Quercus rubra*	Good	
T-123	3.5/3.0/4.0/4.5/2.0/2.0/2.5	Red Oak	*Quercus rubra*	Good	TO BE REMOVED

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED

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.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE FOREST CONSERVATION TECHNICAL MANUAL AND MONTGOMERY COUNTY TREES APPROVED TECHNICAL MANUAL.

Stacey Thompson Gill 01-18-18

STACEY THOMPSON GILL, DNR QUALIFIED PROFESSIONAL DATE

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: SG Drawn by: SBD Checked by: JJR

LS-07 ROADSIDE TREE PROTECTION PLAN

SEMINARY ROAD INTERSECTION IMPROVEMENTS

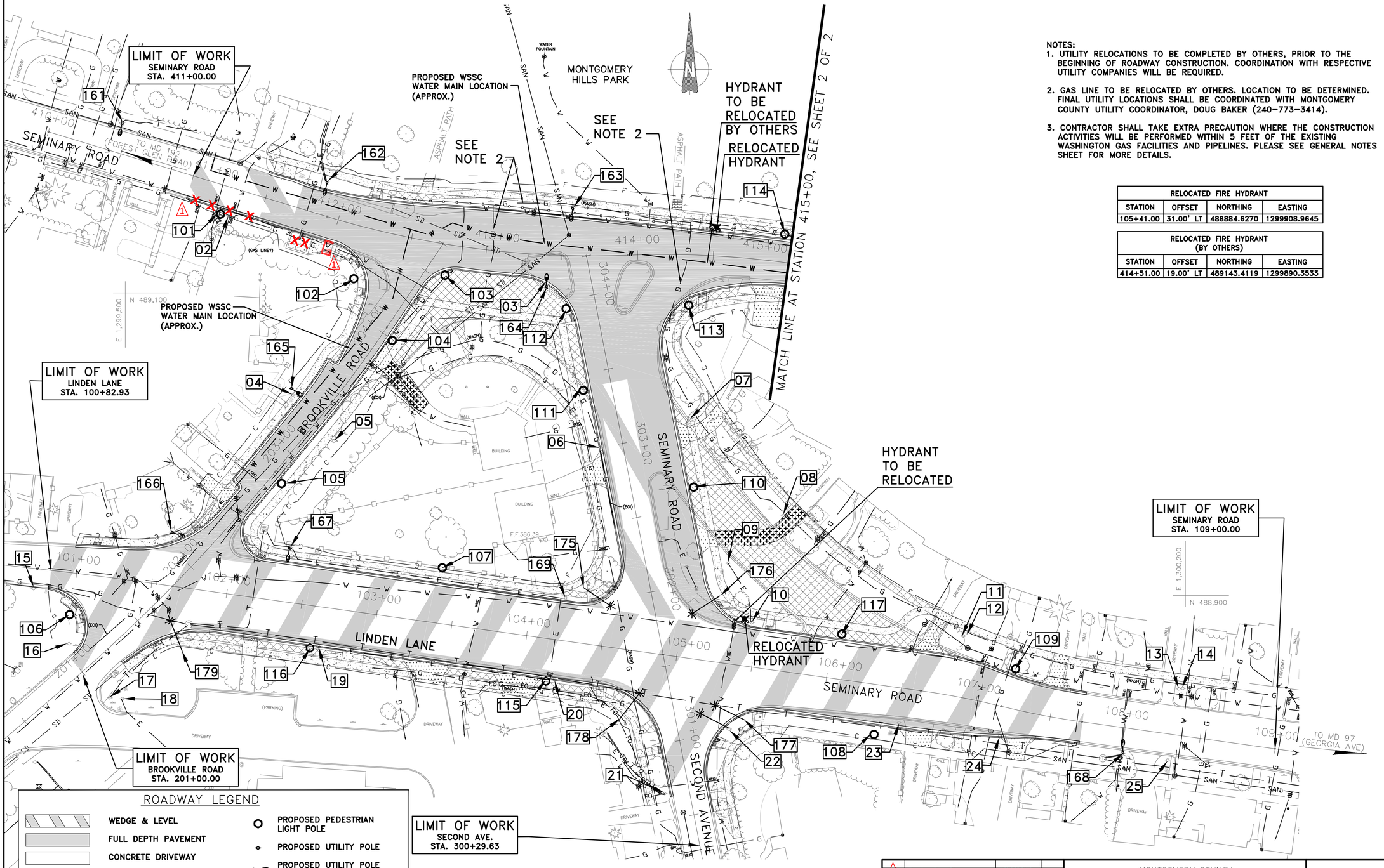
0 30' 60'

SCALE: 1"=30'

DATE: JANUARY 2018

Project No. : 501307

SHEET 83-A of 123



NOTES:
1. UTILITY RELOCATIONS TO BE COMPLETED BY OTHERS, PRIOR TO THE BEGINNING OF ROADWAY CONSTRUCTION. COORDINATION WITH RESPECTIVE UTILITY COMPANIES WILL BE REQUIRED.
2. GAS LINE TO BE RELOCATED BY OTHERS. LOCATION TO BE DETERMINED. FINAL UTILITY LOCATIONS SHALL BE COORDINATED WITH MONTGOMERY COUNTY UTILITY COORDINATOR, DOUG BAKER (240-773-3414).
3. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. PLEASE SEE GENERAL NOTES SHEET FOR MORE DETAILS.

RELOCATED FIRE HYDRANT			
STATION	OFFSET	NORTHING	EASTING
105+41.00	31.00' LT	488884.6270	1299908.9645

RELOCATED FIRE HYDRANT (BY OTHERS)			
STATION	OFFSET	NORTHING	EASTING
414+51.00	19.00' LT	489143.4119	1299890.3533

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- CONCRETE DRIVEWAY
- 2" GRIND & RESURFACE
- REMOVE EXISTING PAVEMENT
- CONCRETE SIDEWALK
- EXISTING ROADWAY LIGHT POLE
- EXISTING UTILITY POLE
- PROPOSED PEDESTRIAN LIGHT POLE
- PROPOSED UTILITY POLE
- PROPOSED UTILITY POLE WITH PROPOSED LEASE LIGHT
- EXISTING UTILITY POLE WITH PROPOSED LEASE LIGHT
- PROPOSED SIGNAL POLE WITH LIGHT

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

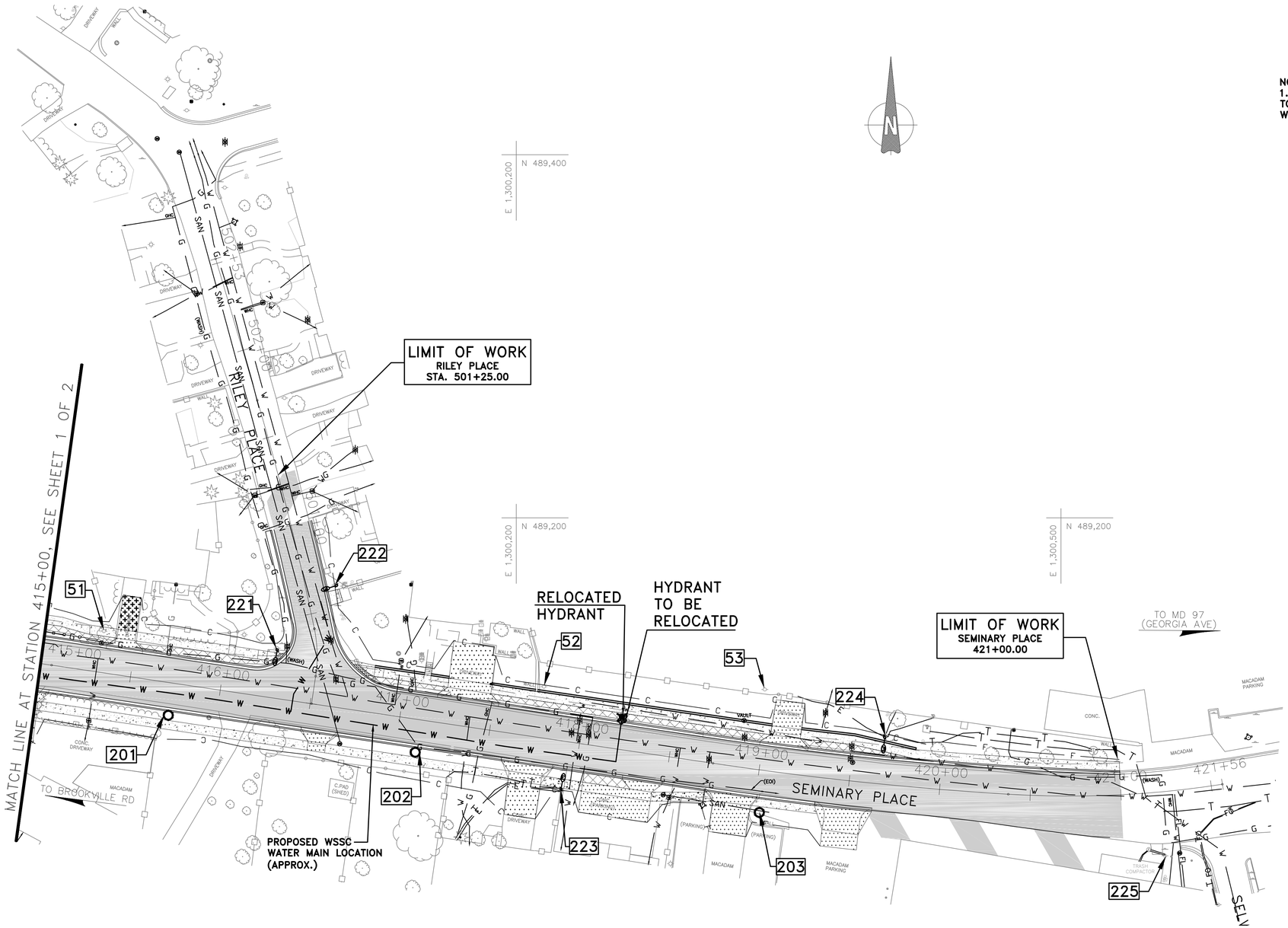
APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

UT-01 UTILITY RELOCATION PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: FEBRUARY 2018

Project No. : 501307
SHEET 84 of 123



NOTE:
1. UTILITY RELOCATIONS TO BE COMPLETED BY OTHERS, PRIOR TO THE BEGINNING OF ROADWAY CONSTRUCTION. COORDINATION WITH RESPECTIVE UTILITY COMPANIES WILL BE REQUIRED.

RELOCATED FIRE HYDRANT			
STATION	OFFSET	NORTHING	EASTING
418+21.00	18.00' LT	489090.4414	1300258.2253

ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- CONCRETE DRIVEWAY
- 2" GRIND & RESURFACE
- REMOVE EXISTING PAVEMENT
- CONCRETE SIDEWALK
- EXISTING ROADWAY LIGHT POLE
- EXISTING UTILITY POLE
- PROPOSED PEDESTRIAN LIGHT POLE
- PROPOSED UTILITY POLE
- PROPOSED UTILITY POLE WITH PROPOSED LEASE LIGHT
- EXISTING UTILITY POLE WITH PROPOSED LEASE LIGHT
- PROPOSED SIGNAL POLE WITH LIGHT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

UT-02 UTILITY RELOCATION PLAN
SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 30' 60'
SCALE: 1"=30'
DATE: FEBRUARY 2018

Project No.: 501307
SHEET 85 of 123

NUMBER	EXISTING POLE		RELOCATED / PROPOSED POLE		EXISTING POLE STATUS	EXISTING LIGHT FIXTURE WATT	PROPOSED LIGHT FIXTURE WATT	LUMINARIES DIST TYPE	POST MATERIAL	EXISTING LIGHT BRACKET LENGTH	PROPOSED LIGHT BRACKET LENGTH	POST OWNER	Pole Number
	Station	Offset	Station	Offset									
161	410+45.09	20.16' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-0448
02	411+29.80	18.28' RT	-	-	TO REMAIN	-	-	-	-	-	-		-
03	413+40.54	16.64' RT	-	-	TO BE RELOCATED (SEE POLE 164)	-	-	-	-	-	-		787428-3436
04	203+30.56	23.27' LT	-	-	TO BE RELOCATED (SEE POLE 165)	-	-	-	-	-	-		787428-1728
05	203+23.99	16.99' RT	-	-	TO REMAIN	-	-	-	-	-	-		-
06	303+00.00	14.91' LT	-	-	TO BE RELOCATED	-	-	-	-	-	-		787428-390250
07	303+07.61	46.39' RT	-	-	TO BE RELOCATED	-	-	-	-	-	-		787428-450280
08	302+33.18	95.48' RT	-	-	TO REMAIN	-	-	-	-	-	-		787428-52000
09	302+09.08	53.61' RT	-	-	TO REMAIN	-	-	-	-	-	-		787428-490180
10	105+46.05	29.12' LT	-	-	TO BE REMOVED	EXISTING	-	EXISTING	ALUMINUM	EXISTING	-		01075
11	106+83.97	40.01' LT	-	-	TO REMAIN	-	-	-	-	-	-		787428-600130
12	106+84.51	41.67' LT	-	-	TO REMAIN	-	-	-	-	-	-		-
13	108+31.50	30.41' RT	-	-	TO REMAIN	-	-	-	-	-	-		787428-750090
14	108+34.15	31.08' RT	-	-	TO REMAIN	-	-	-	-	-	-		
15	100+72.97	13.36' RT	-	-	TO REMAIN	-	-	-	-	-	-	PEPCO	52
16	201+05.98	19.67' LT	-	-	TO REMAIN	-	-	-	-	-	-	PEPCO	787428-010110
17	201+02.34	24.92' RT	-	-	TO REMAIN	-	-	-	-	-	-	EPC&C	249-1/2
18	201+08.03	30.91' RT	-	-	TO REMAIN	-	-	-	-	-	-		787428-0400
19	102+64.72	26.01' RT	-	-	TO BE RELOCATED (SEE POLE 116)	10	-	EXISTING	ALUMINUM	EXISTING	-		02004
20	104+22.44	26.23' RT	-	-	TO BE RELOCATED (SEE POLE 115)	15	-	EXISTING	ALUMINUM	EXISTING	-		02002
21	300+67.48	16.33' LT	-	-	TO REMAIN	-	-	-	-	-	-		-
22	301+01.33	33.48' RT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-450060
23	106+51.48	22.91' RT	-	-	TO BE RELOCATED	-	-	-	-	-	-		-
24	107+20.49	19.71' RT	-	-	TO BE RELOCATED	-	-	-	-	-	-	PEPCO	104
25	108+30.84	17.15' RT	-	-	TO REMAIN	-	-	-	-	-	-		787428-7204
101	-	-	411+24.56	18.98' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01915
102	-	-	412+19.65	34.80' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01913
103	-	-	412+75.58	20.36' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01911
104	-	-	203+99.48	7.80' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		09305
105	-	-	202+80.62	8.14' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		09303
106	-	-	100+98.79	27.60' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		02006
107	-	-	103+38.70	36.70' LT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		02009
108	-	-	106+36.22	32.88' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		02012
109	-	-	107+20.45	26.28' LT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		02011
110	-	-	302+62.66	40.68' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		09301
111	-	-	303+39.24	18.80' LT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		09302
112	-	-	413+53.70	35.03' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01909
113	-	-	414+34.70	33.27' RT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01907
114	-	-	414+95.01	18.61' LT	-	-	70	WASHINGTON GLOBE	ALUMINIUM	-	-		01906
115	-	-	104+16.69	28.04' RT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		02010
116	-	-	102+59.41	27.87' RT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		02008
117	-	-	106+06.00	29.83' LT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		02013
162	411+85.66	22.37' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-1944
163	413+57.01	31.91' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-3442
164	-	-	413+40.72	21.21' RT	-	-	150	PENDANT	UTILITY POLE	-	10		-
165	-	-	203+33.49	26.66' LT	-	-	150	PENDANT	UTILITY POLE	-	10		-
166	202+07.75	25.48' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-	PEPCO	787428-0919
167	102+37.47	36.12' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-1718
168	108+00.00	17.09' RT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-	C&P	3
169	104+22.03	28.27' LT	-	-	TO BE REMOVED	EXISTING	-	EXISTING	EXISTING	EXISTING	-		-
175	-	-	104+32.77	36.63' LT	-	-	150	PENDANT	SIGNAL POLE	-	10		45601
176	-	-	105+22.53	43.61' LT	-	-	150	PENDANT	SIGNAL POLE	-	10		45602
177	-	-	105+50.02	35.14' RT	-	-	150	PENDANT	SIGNAL POLE	-	10		45603
178	-	-	104+68.46	46.04' RT	-	-	150	PENDANT	SIGNAL POLE	-	10		45604
179	101+76.12	41.71' RT	-	-	TO REMAIN	EXISTING	-	EXISTING	SIGNAL POLE	EXISTING	-		89603

NUMBER	EXISTING POLE		RELOCATED / PROPOSED POLE		EXISTING POLE STATUS	EXISTING LIGHT FIXTURE WATT	PROPOSED LIGHT FIXTURE WATT	LUMINARIES DIST TYPE	POST MATERIAL	EXISTING LIGHT BRACKET LENGTH	PROPOSED LIGHT BRACKET LENGTH	POST OWNER	POLE NUMBER
	Station	Offset	Station	Offset									
51	415+31.83	22.78' LT	-	-	TO BE RELOCATED	-	-	-	-	-	-		-
52	417+76.08	28.07' LT	-	-	TO REMAIN	-	-	-	-	-	-		-
53	418.97.16	44.27' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		-
201	-	-	415+73.71	17.88' RT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		01905
202	-	-	417+11.25	18.06' RT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		01903
203	-	-	419+03.21	23.28' RT	-	-	70	WASHINGTON GLOBE	ALUMINUM	-	-		01901
221	416+27.56	27.48' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-6138
222	500+62.65	16.11' RT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-6840
223	417+94.05	27.29' RT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-8229
224	419+67.35	26.65' LT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		787428-9635
225	421+21.14	35.28 RT	-	-	TO REMAIN	EXISTING	-	EXISTING	EXISTING	EXISTING	-		-

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

UT-03 UTILITY RELOCATION PLAN

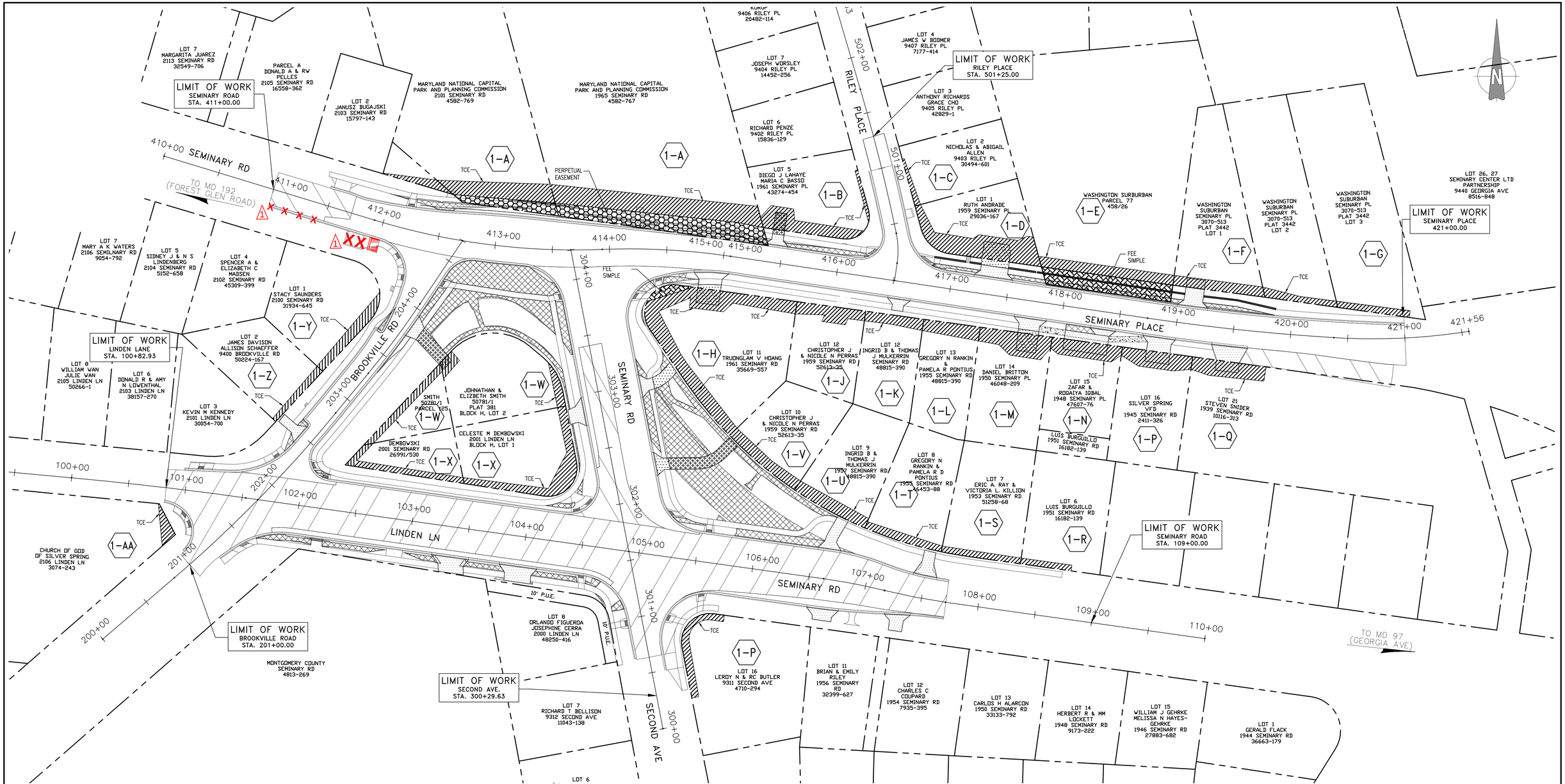
SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: FEBRUARY 2018

Project No. : 501307

SHEET 86 of 123



ROADWAY LEGEND

- WEDGE & LEVEL
- FULL DEPTH PAVEMENT
- CONCRETE/ ASPHALT DRIVEWAY
- 2" MILLING & RESURFACE
- REMOVE EXISTING PAVEMENT
- CONCRETE SIDEWALK
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- PERPETUAL EASEMENT (PE)
- FEE SIMPLE

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

NO.	REVISION	DATE	BY
1	Resize Bus Stop, Reduce Curb Replacement	5/03/2019	ADS

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

RW-01 RIGHT-OF-WAY AND EASEMENT PLAN

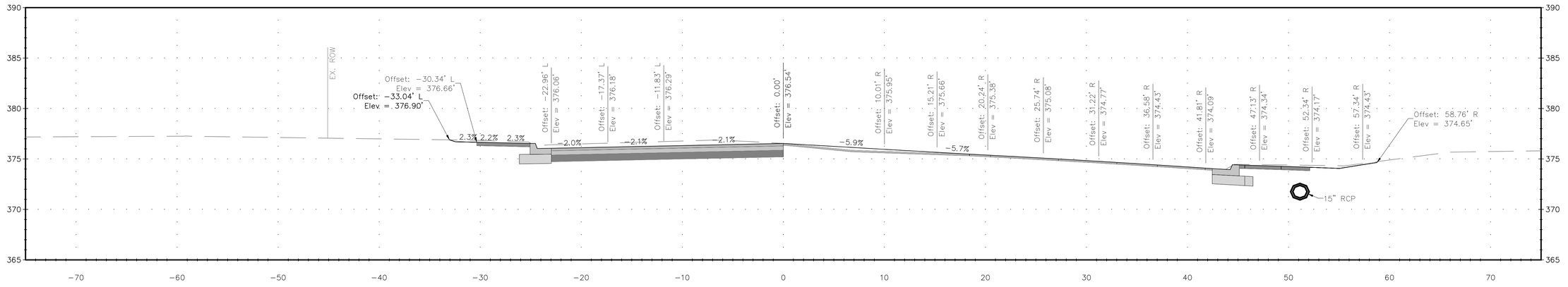
SEMINARY ROAD INTERSECTION IMPROVEMENTS

SCALE: 1"=40' (0, 20', 40')

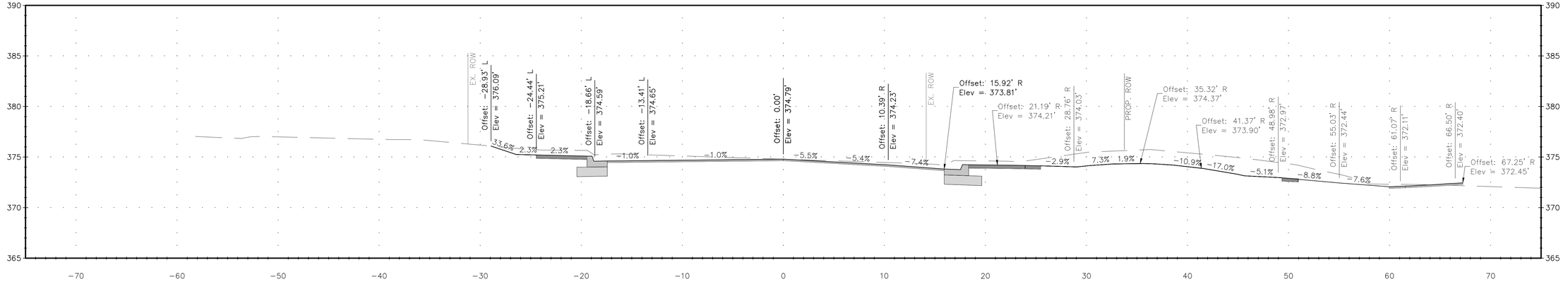
DATE: FEBRUARY 2018

Project No. : 501307 SHEET 87 of 123

101+50.00



101+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-01 CROSS SECTION – LINDEN LANE/SEMINARY ROAD

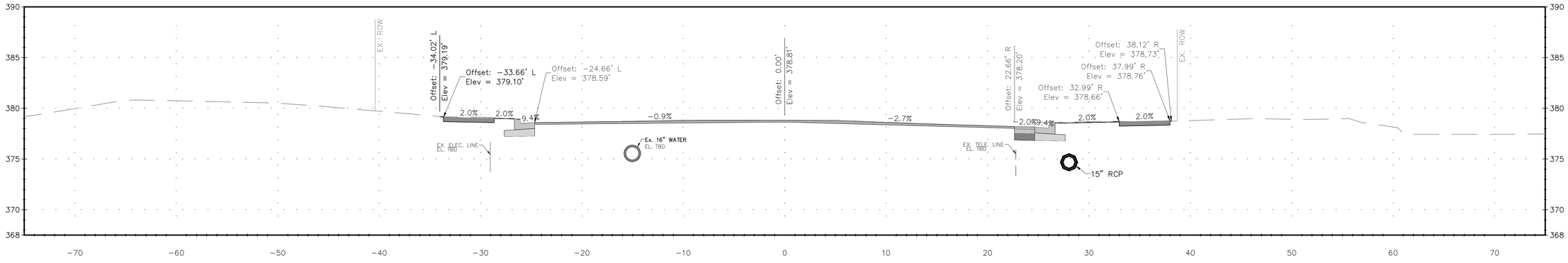
SEMINARY ROAD INTERSECTION IMPROVEMENTS

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SCALE: 1"=5'

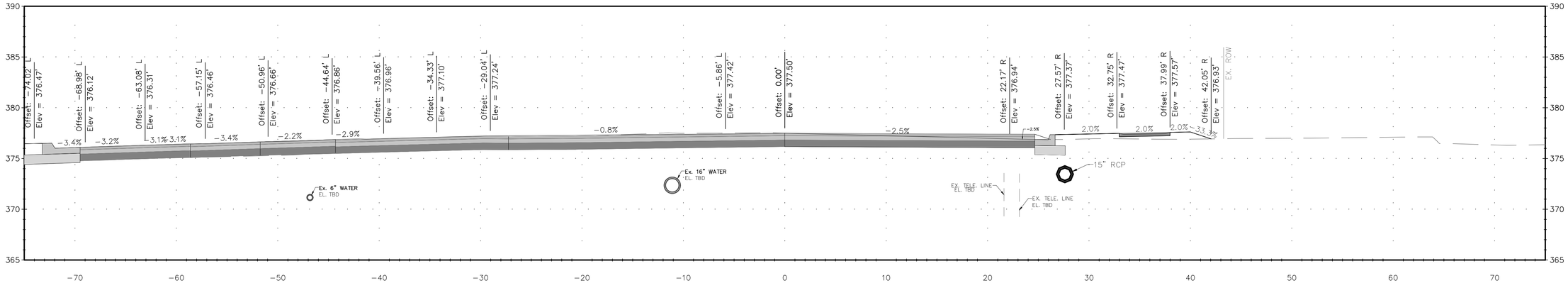
DATE: NOVEMBER 2017

Project No. : 501307

102+50.00



102+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-02 CROSS SECTION – LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

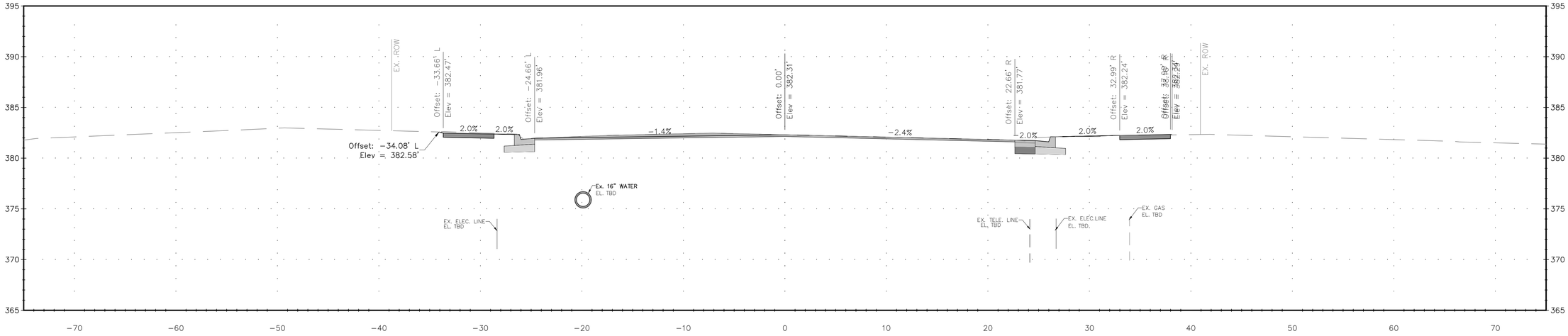
SCALE: 1"=5'

DATE: NOVEMBER 2017

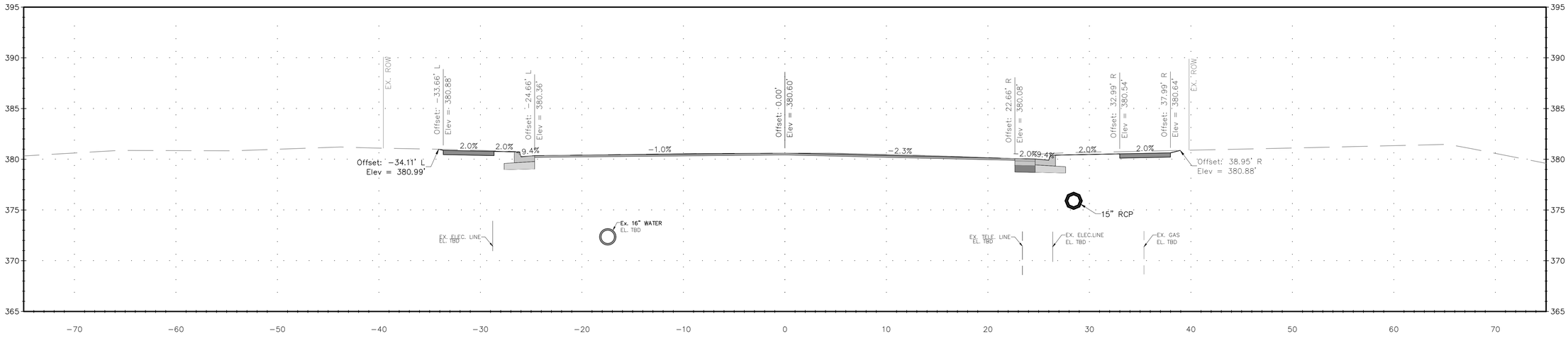
Project No. : 501307

SHEET 89 of 123

103+50.00



103+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-03 CROSS SECTION - LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

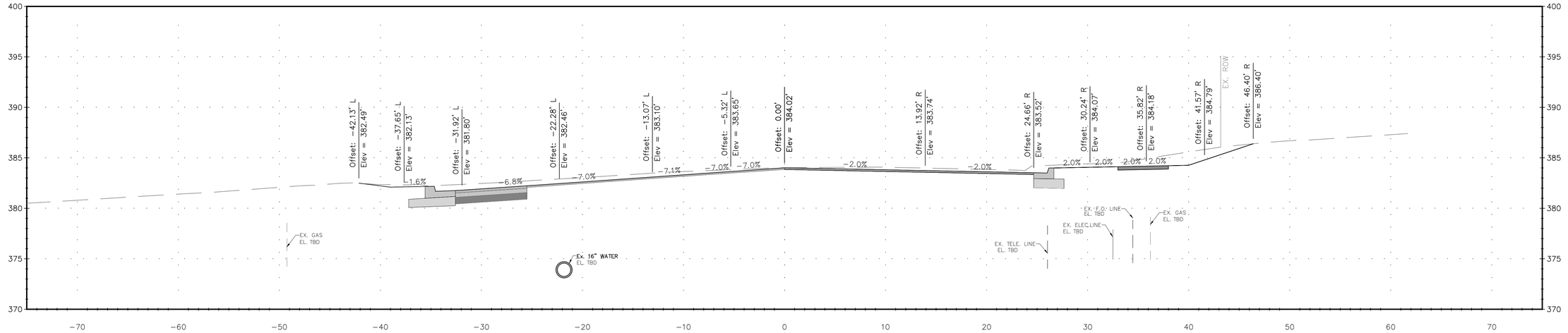
0 5' 10'
SCALE: 1"=5'

DATE: NOVEMBER 2017

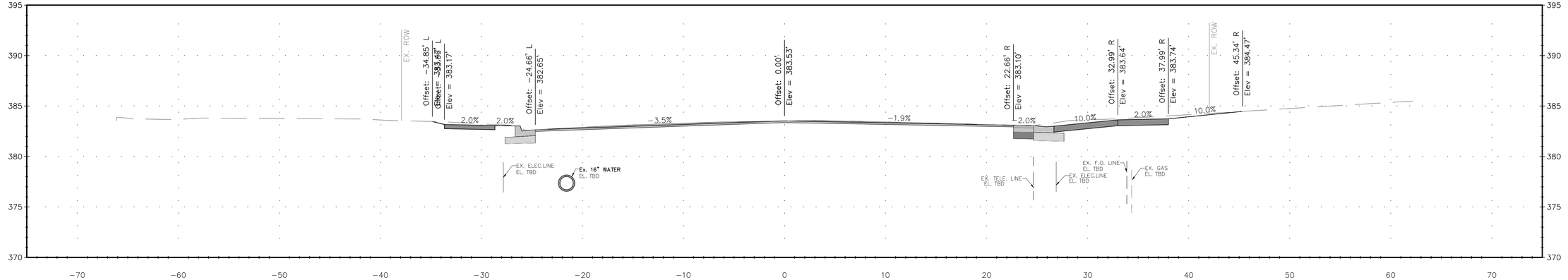
Project No. : 501307

SHEET 90 of 123

104+50.00



104+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-04 CROSS SECTION - LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

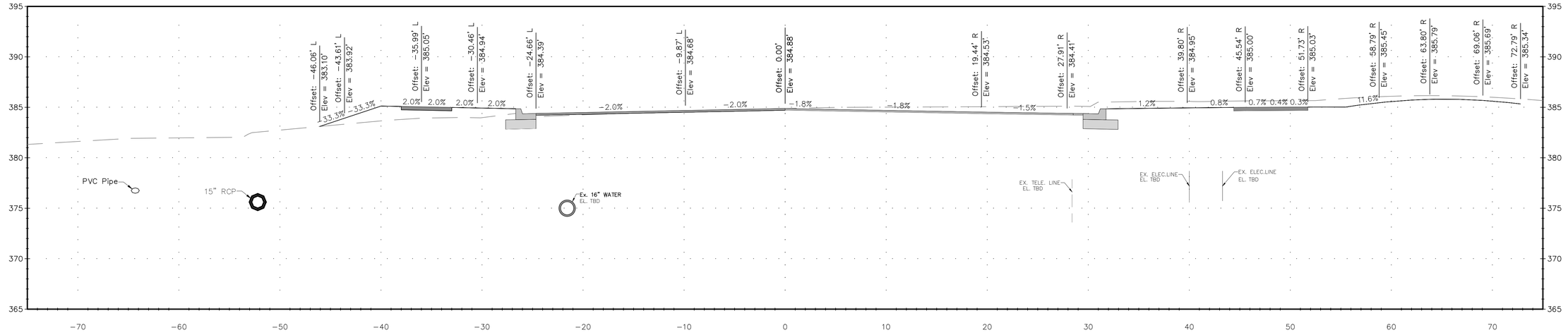
SCALE: 1"=5'

DATE: NOVEMBER 2017

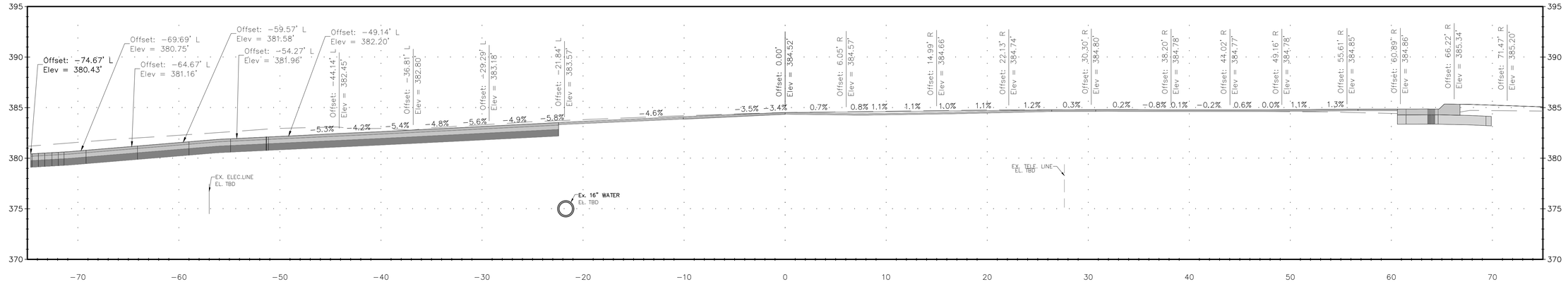
Project No. : 501307

SHEET 91 of 123

105+50.00



105+00.00



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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-05 CROSS SECTION – LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

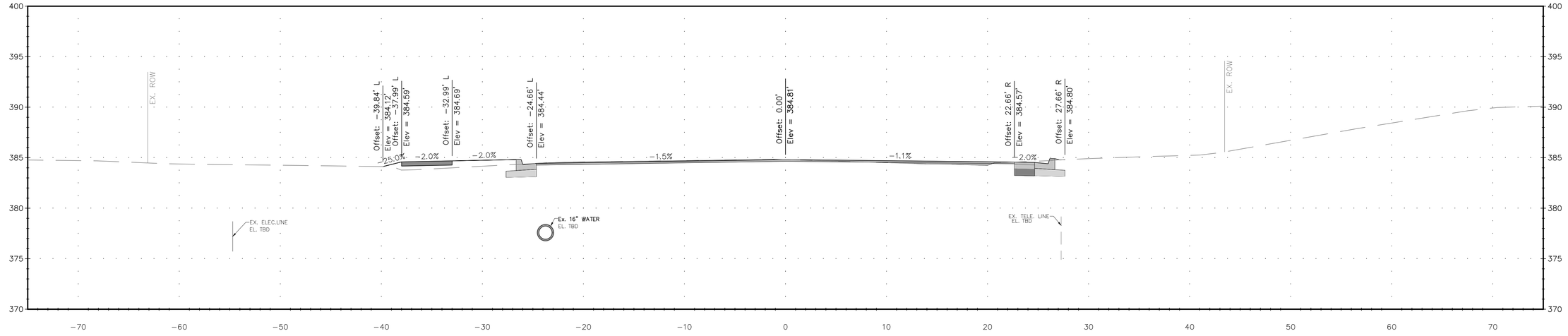
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DATE: NOVEMBER 2017

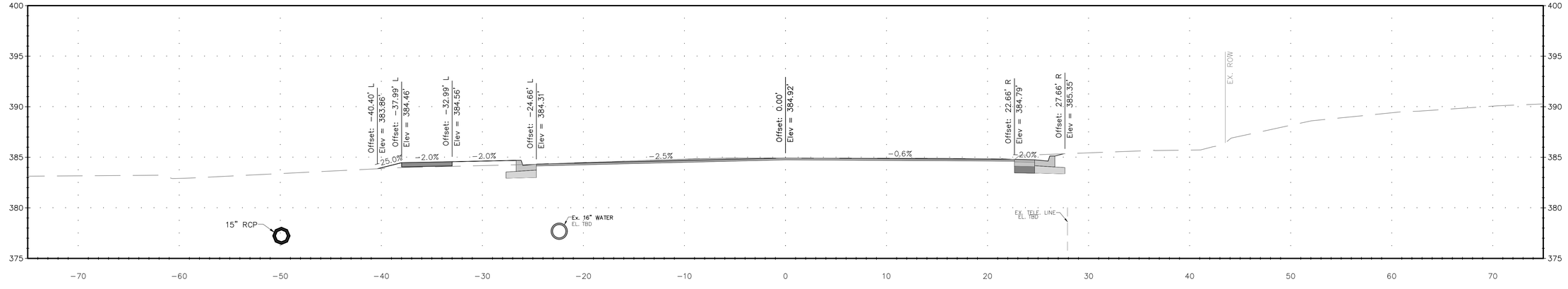
Project No. : 501307

SHEET 92 of 123

106+50.00



106+00.00



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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-06 CROSS SECTION - LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

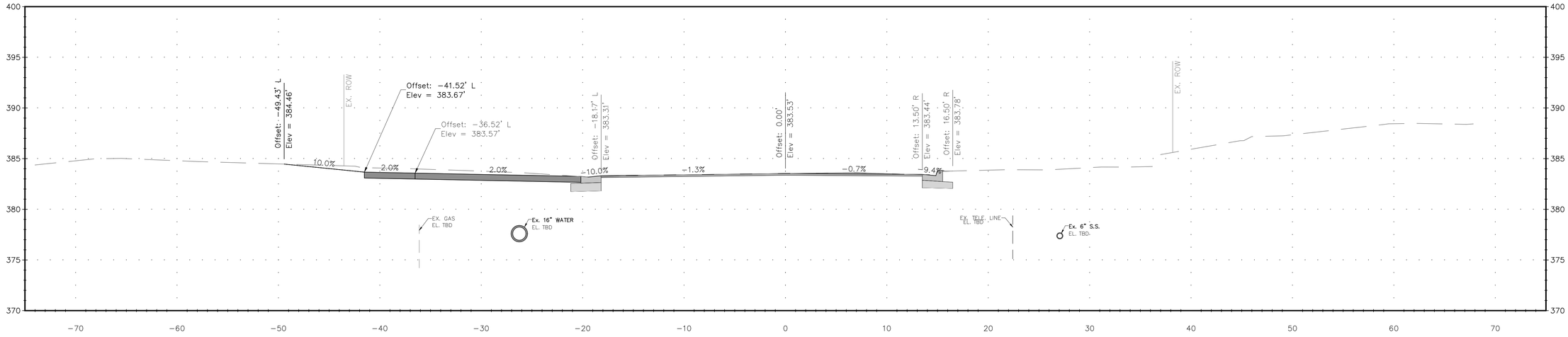
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SCALE: 1"=5'

DATE: NOVEMBER 2017

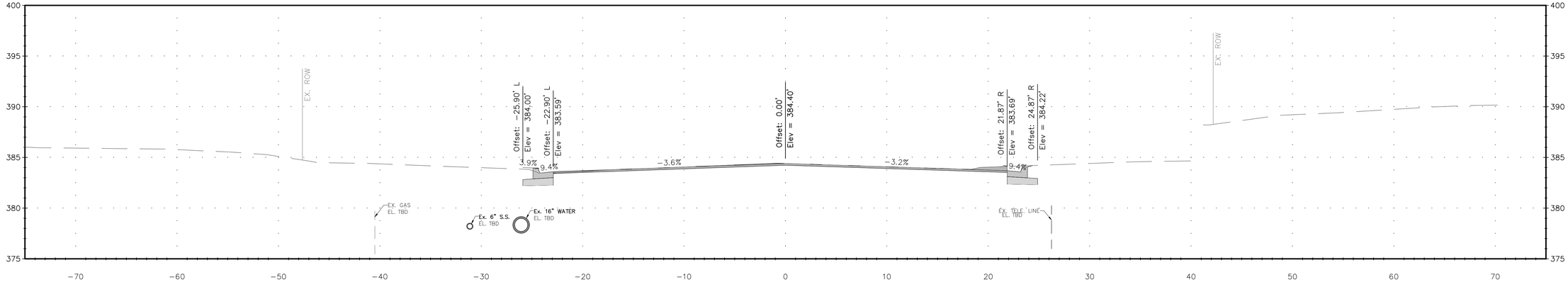
Project No. : 501307

SHEET 93 of 123

107+50.00



107+00.00



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GAITHERSBURG, MARYLAND

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SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

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SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-07 CROSS SECTION – LINDEN LANE/SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

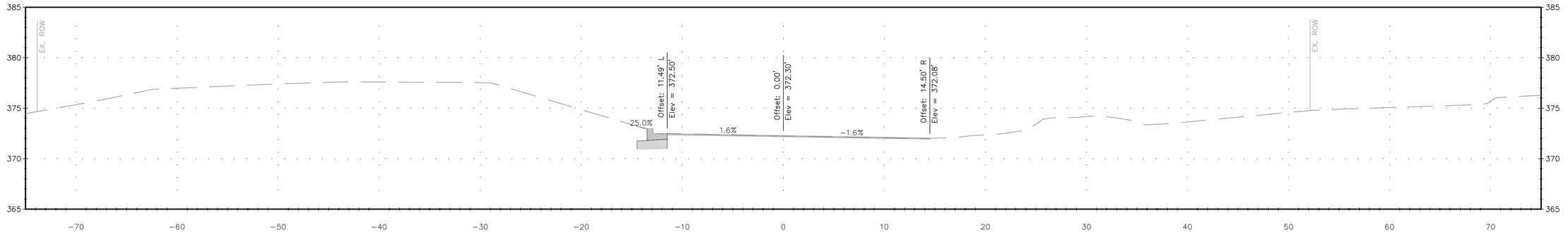
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DATE: NOVEMBER 2017

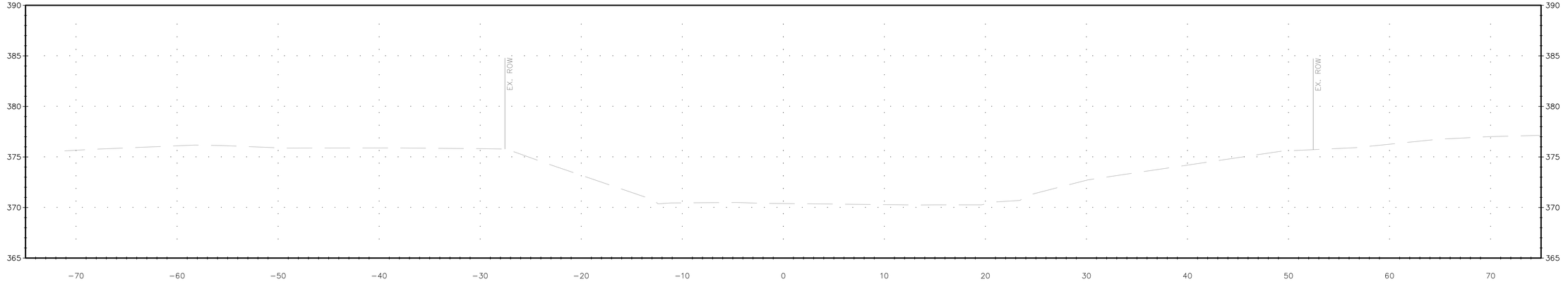
Project No. : 501307

SHEET 94 of 123

201+00.00



200+50.00



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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-08 CROSS SECTION - BROOKVILLE ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

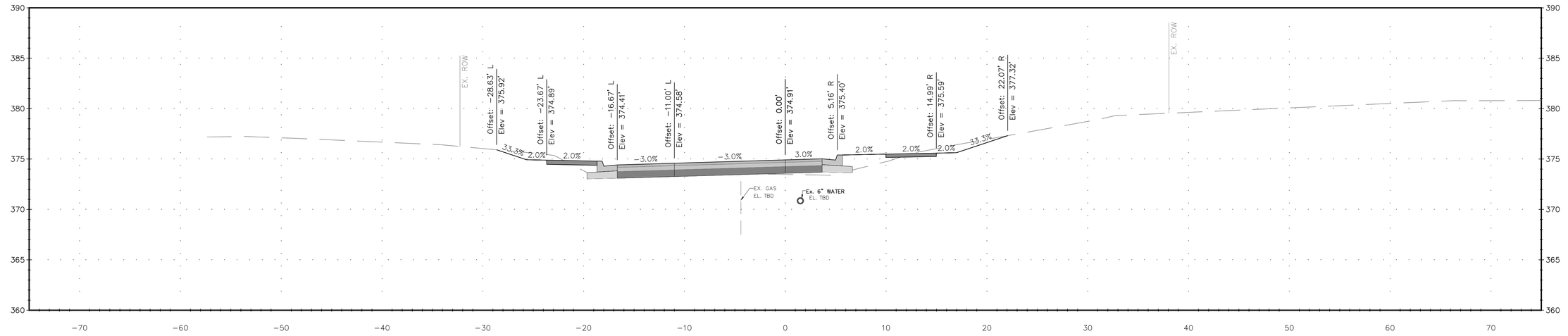
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DATE: NOVEMBER 2017

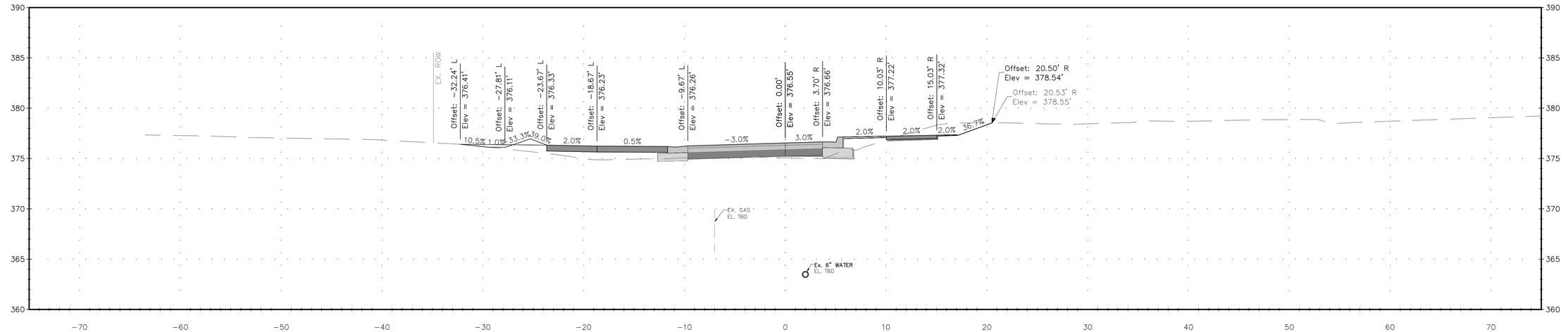
Project No. : 501307

SHEET 95 of 123

203+00.00



202+50.00



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GAITHERSBURG, MARYLAND

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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-09 CROSS SECTION - BROOKVILLE ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

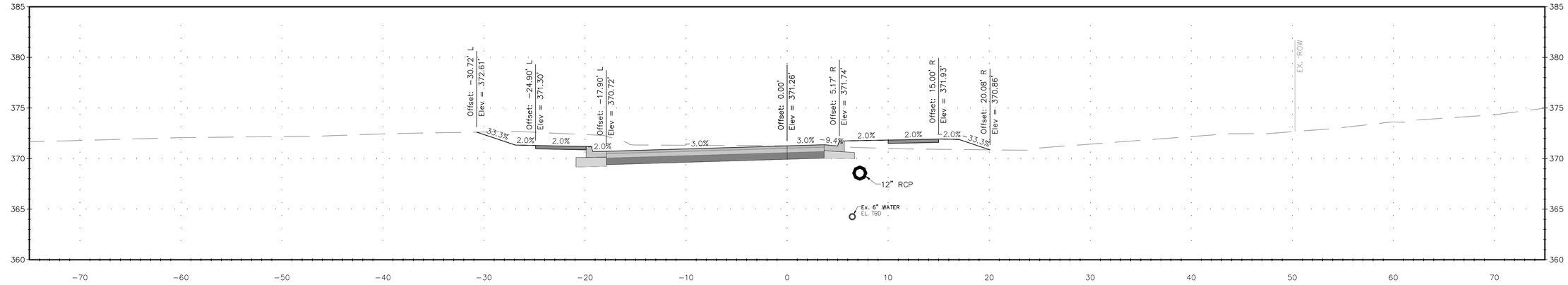
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DATE: NOVEMBER 2017

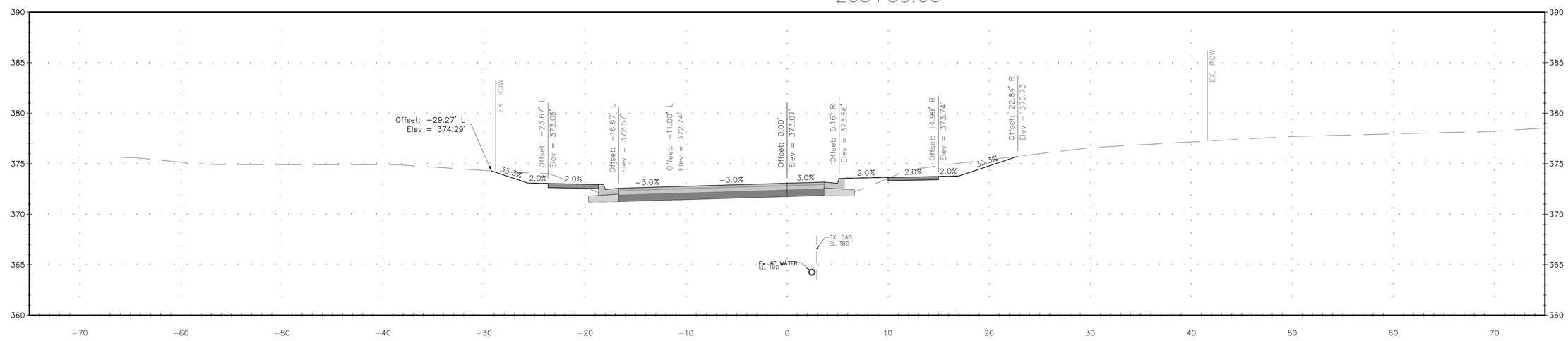
Project No. : 501307

SHEET 96 of 123

204+00.00



203+50.00



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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS−10 CROSS SECTION − BROOKVILLE ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

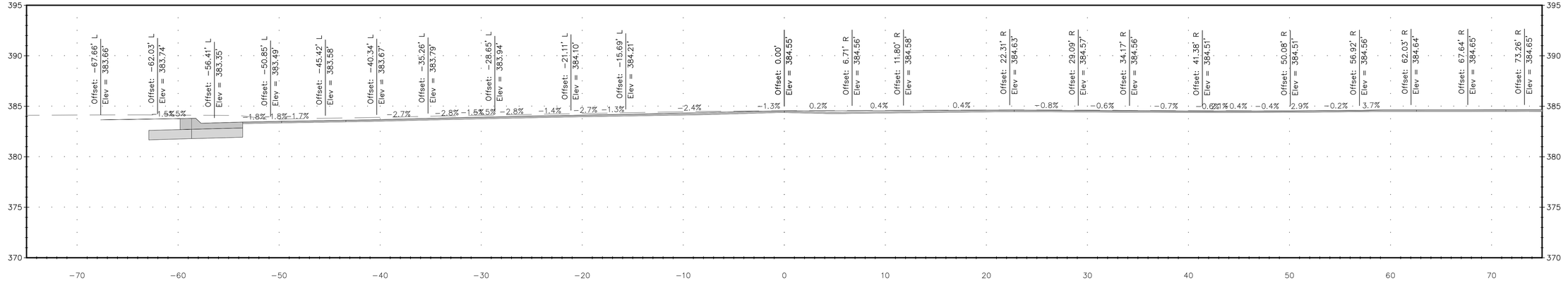
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DATE: NOVEMBER 2017

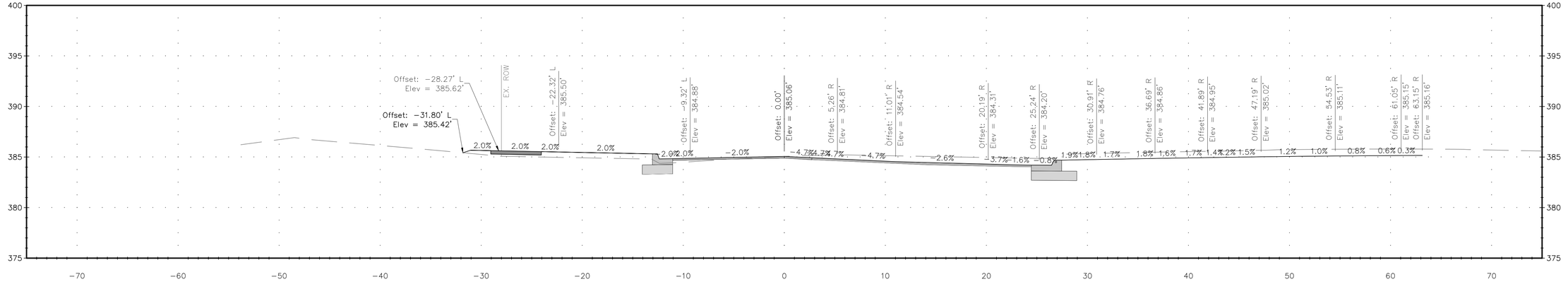
Project No. : 501307

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301+50.00



301+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-11 CROSS SECTION - SECOND AVENUE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

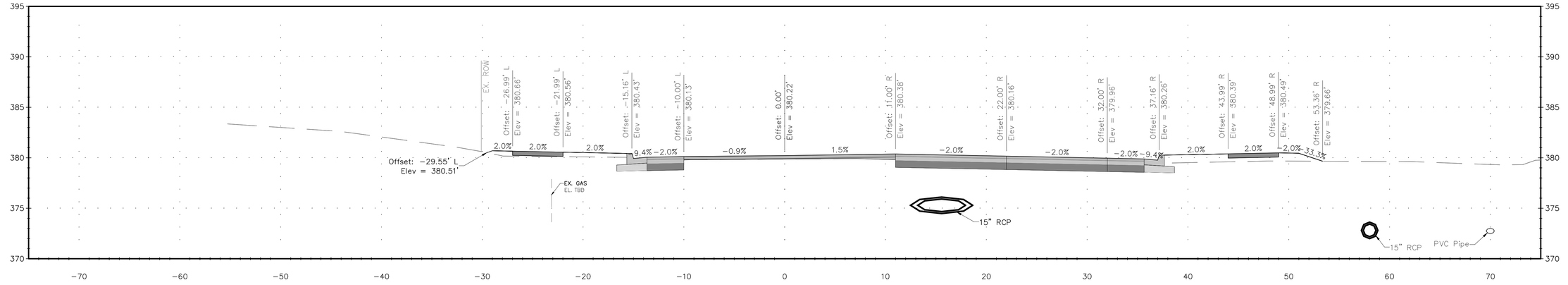
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DATE: NOVEMBER 2017

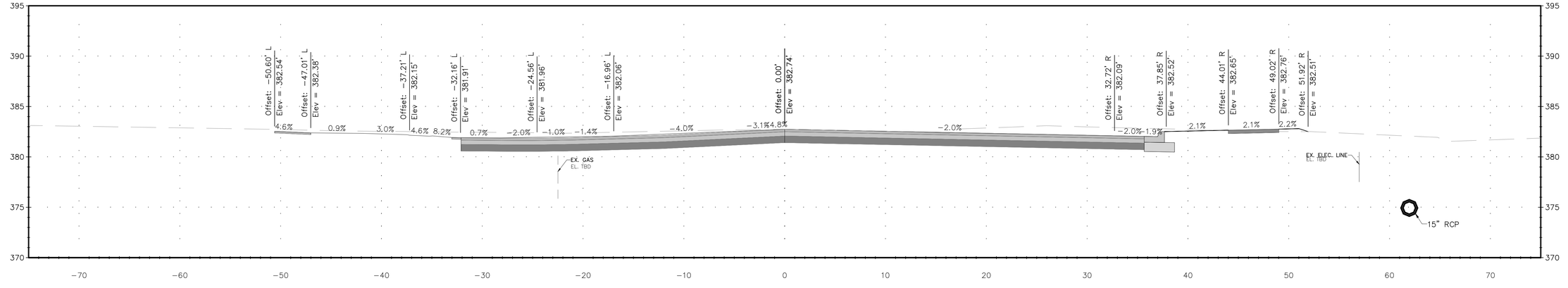
Project No. : 501307

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302+50.00



302+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-12 CROSS SECTION - SECOND AVENUE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

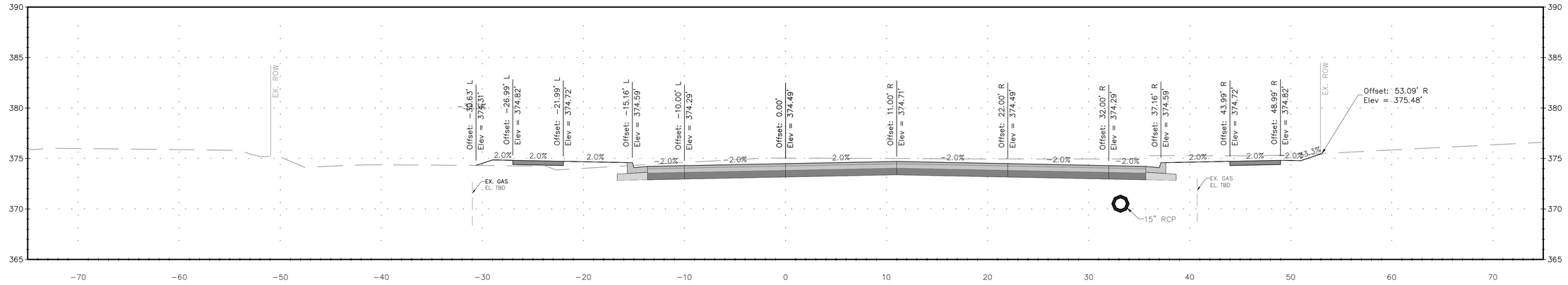
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SCALE: 1"=5'

DATE: NOVEMBER 2017

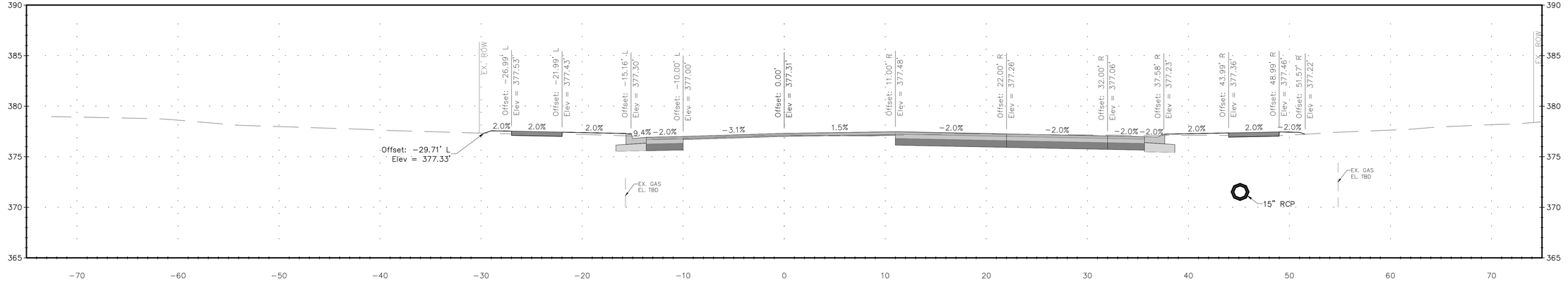
Project No. : 501307

SHEET 99 of 123

303+50.00



303+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-13 CROSS SECTION - SECOND AVENUE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

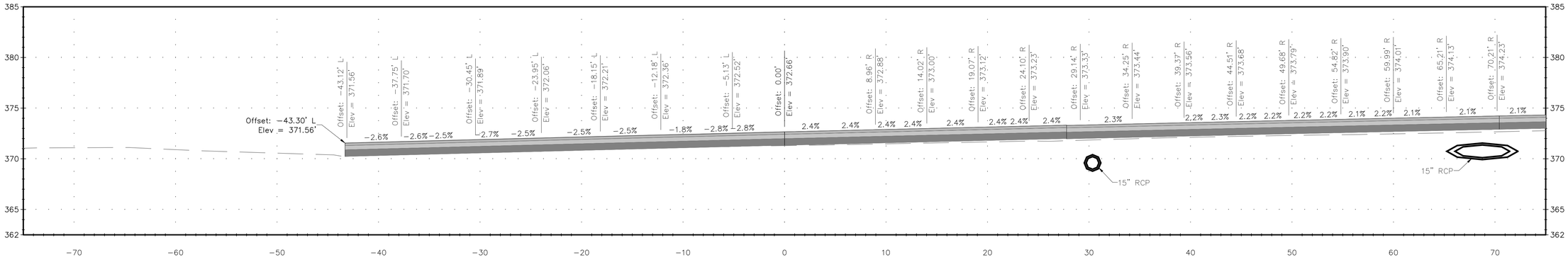
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DATE: NOVEMBER 2017

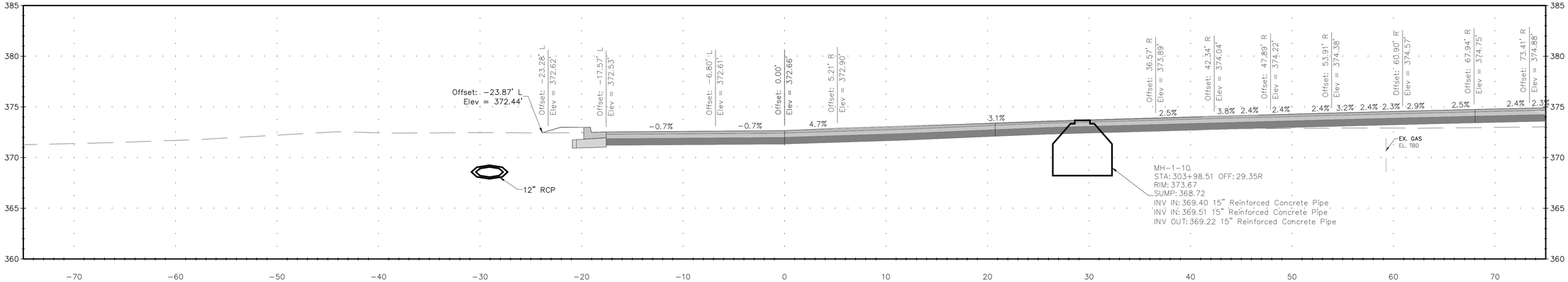
Project No. : 501307

SHEET 100 of 123

304+26.14



304+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

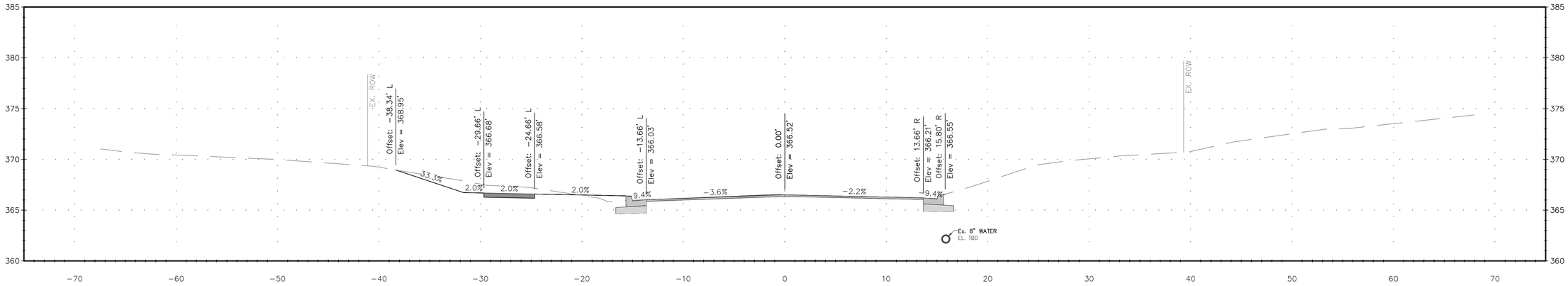
XS−14 CROSS SECTION − SECOND AVENUE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

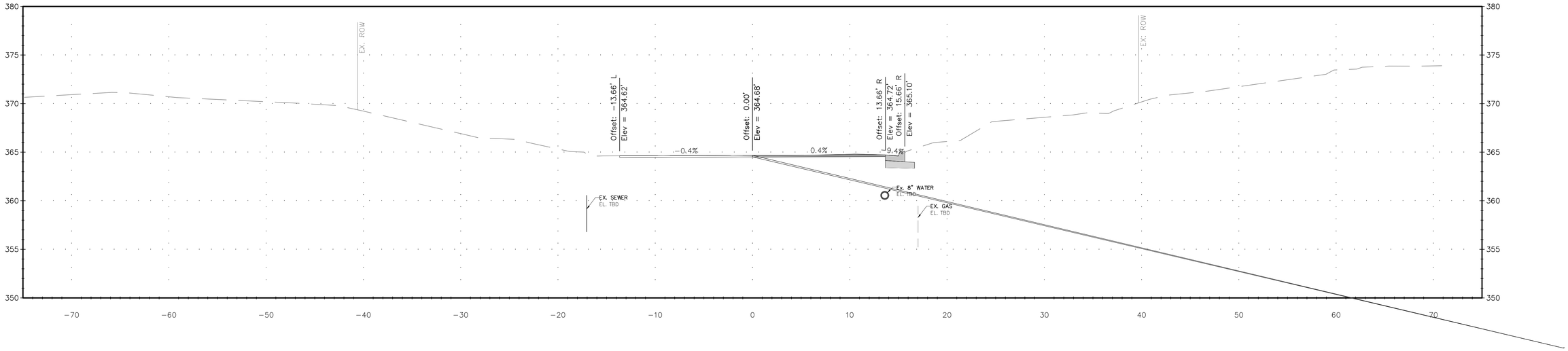
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SCALE: 1"=5'
DATE: NOVEMBER 2017

Project No. : 501307
SHEET 101 of 123

411+50.00



411+00.00



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-15 CROSS SECTION -
SEMINARY ROAD / SEMINARY PLACE

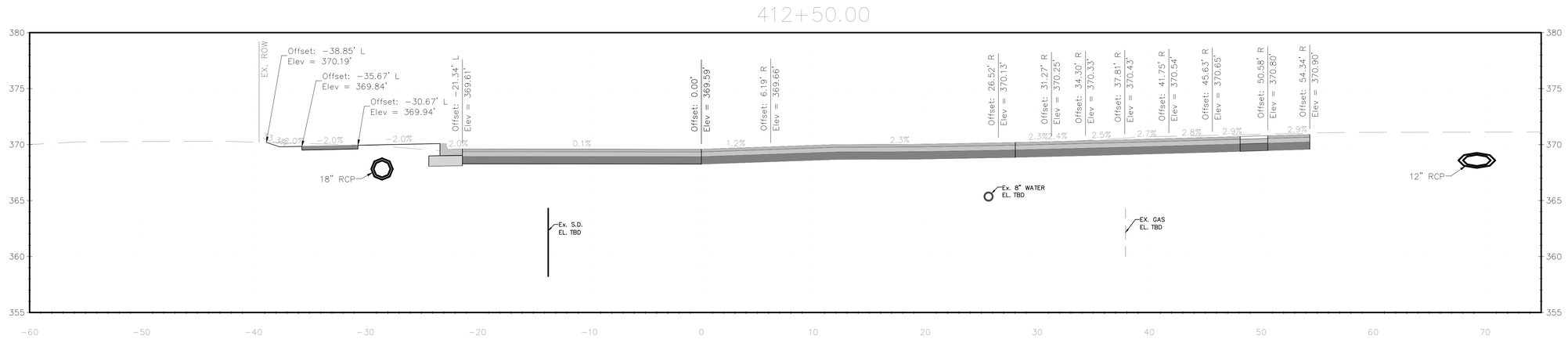
SEMINARY ROAD INTERSECTION IMPROVEMENTS

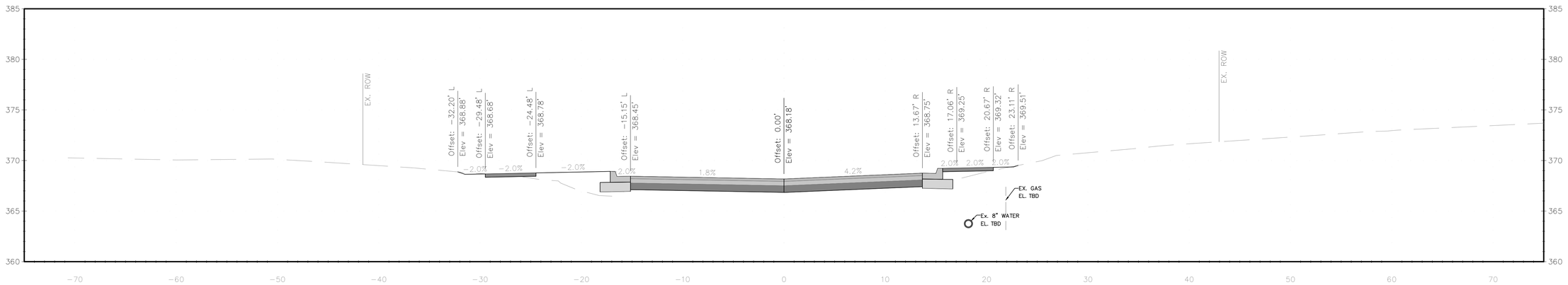
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SCALE: 1"=5'

DATE: NOVEMBER 2017

Project No. : 501307

SHEET 102 of 123





THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

THIS IS NOT A PERMIT TO BEGIN CONSTRUCTION

This approval is for technical review only. For permit information, contact Jay Childs, Construction Supervisor at (301) 495-2574

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
SEE TITLE SHEET FOR SIGNATURE
Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS−16 CROSS SECTION − SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

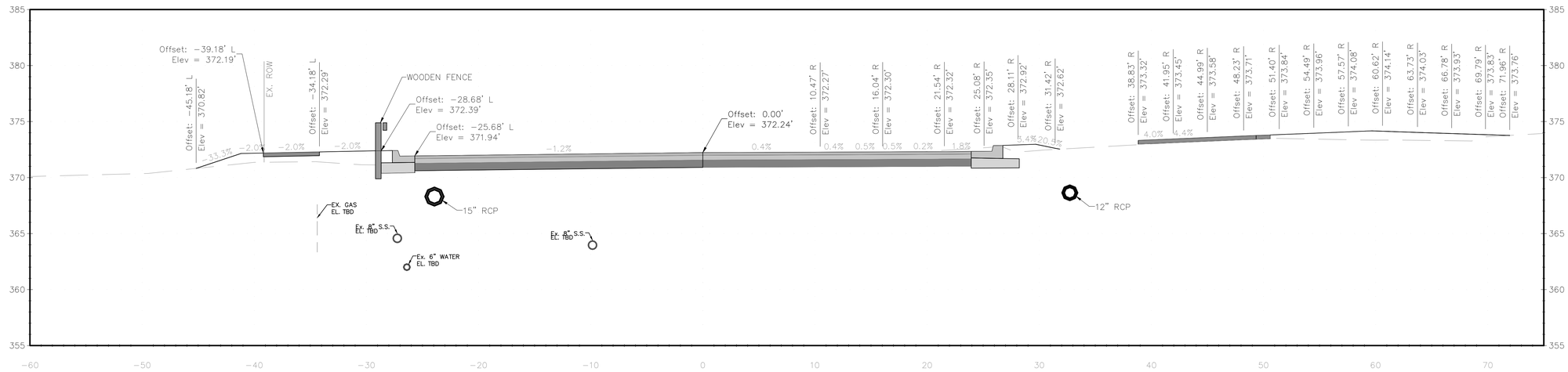
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DATE: FEBRUARY 2018

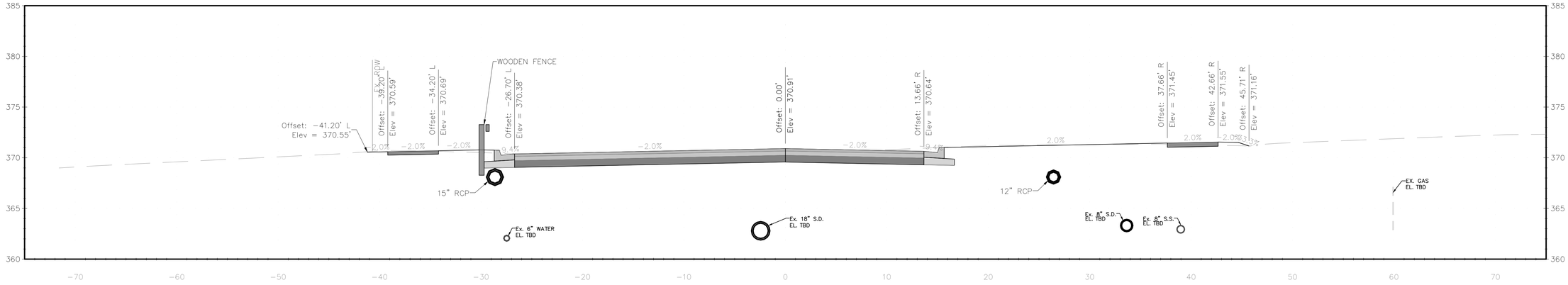
Project No. : 501307

SHEET 103 of 123

413+50.00



413+00.00



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____ CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
SEE TITLE SHEET FOR SIGNATURE
Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-17 CROSS SECTION – SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

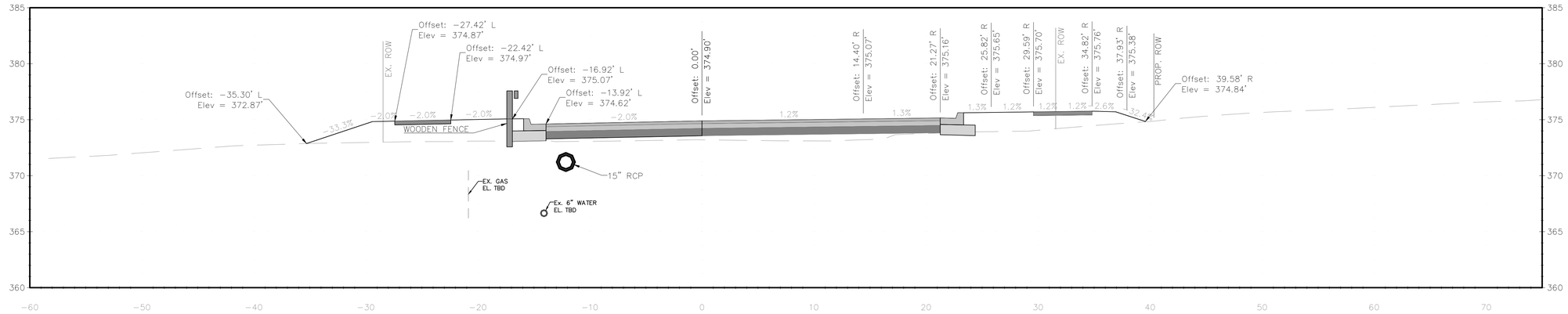
SCALE: 1"=5'

DATE: FEBRUARY 2018

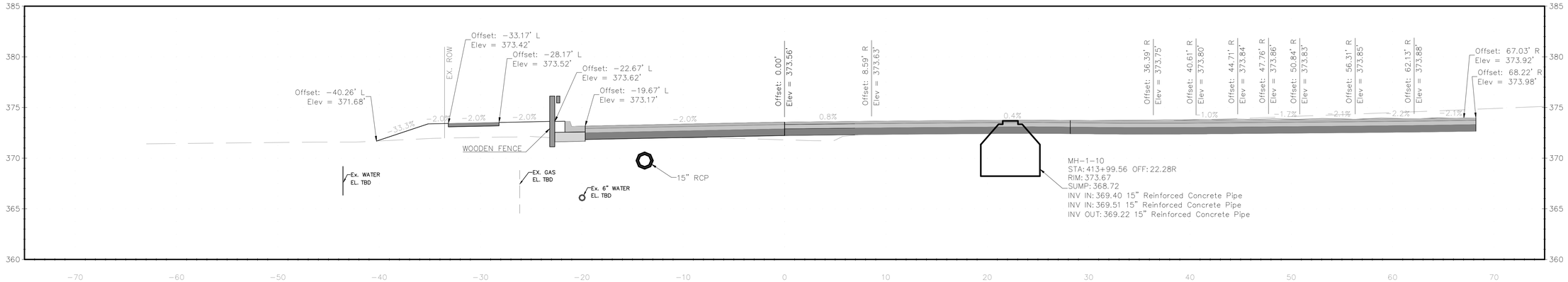
Project No. : 501307

SHEET 104 of 123

414+50.00



414+00.00



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO.: 2018-013

PARK: B36

REVIEWED BY: William Payton

APPROVED BY: CHIEF, CONSTRUCTION SECTION

DATE APPROVED: 06/19/2018

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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS−18 CROSS SECTION − SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

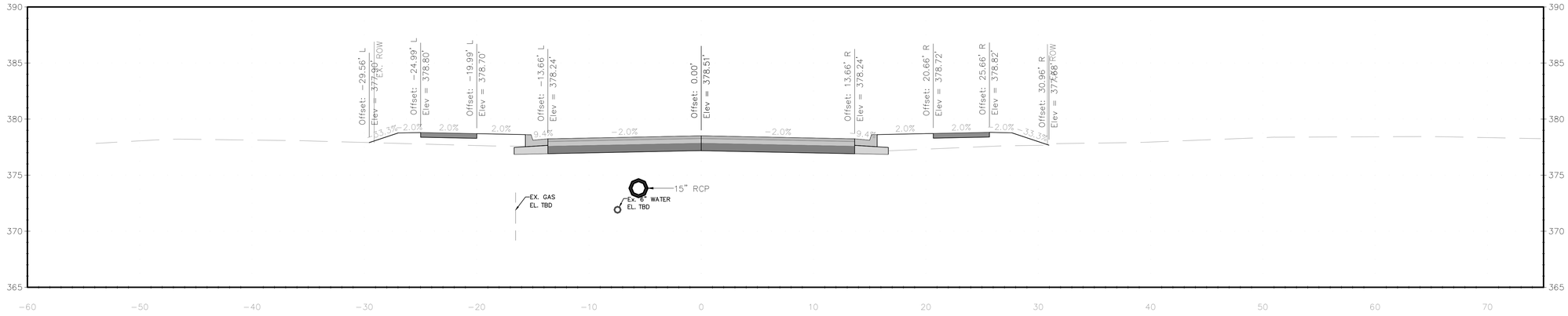
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DATE: FEBRUARY 2018

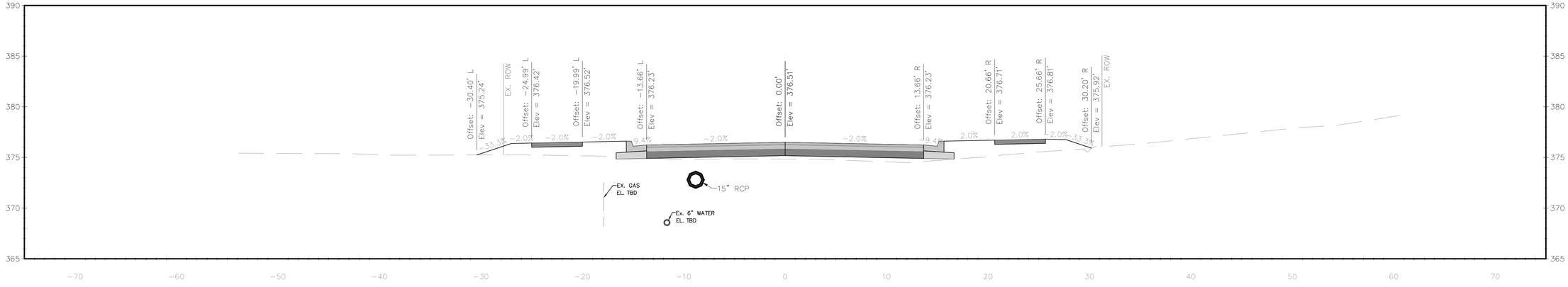
Project No. : 501307

SHEET 105 of 123

415+50.00



415+00.00



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION, DEPARTMENT OF PARK AND PLANNING

M-NCPPC PERMIT NO. 2018-013

PARK B36

REVIEWED BY William Payton

APPROVED BY _____
CHIEF, CONSTRUCTION SECTION

DATE APPROVED 06/19/2018

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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED
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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-19 CROSS SECTION – SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

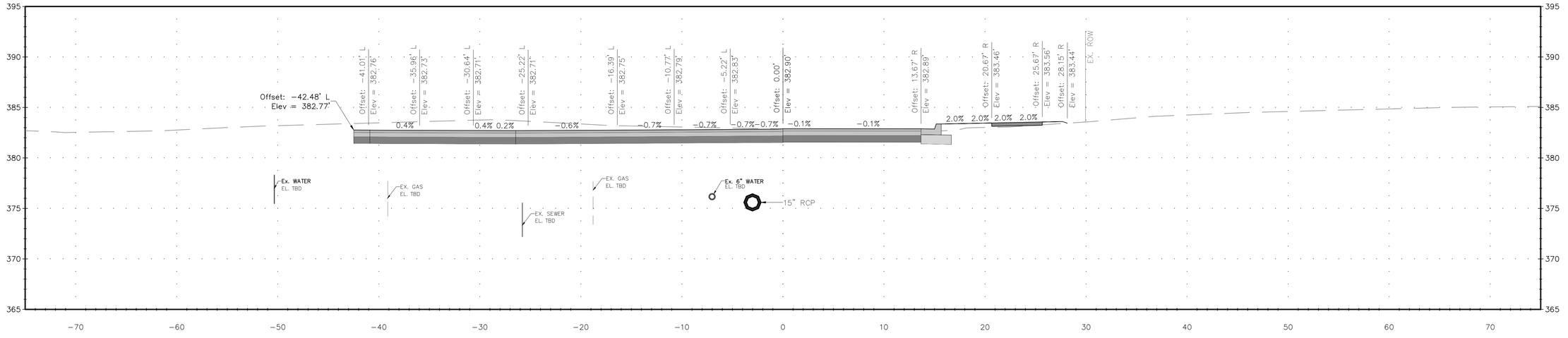
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DATE: FEBRUARY 2018

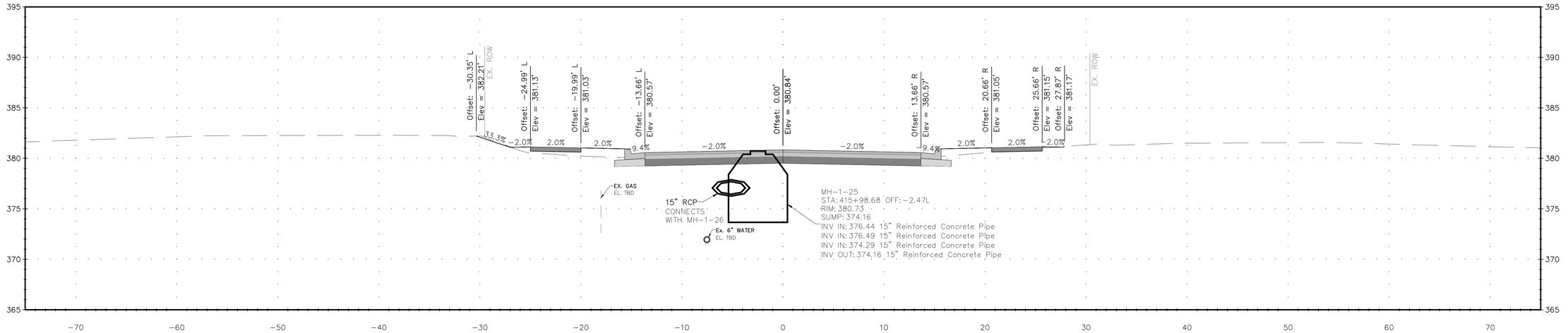
Project No. : 501307

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416+50.00



416+00.00



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS−20 CROSS SECTION −
SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

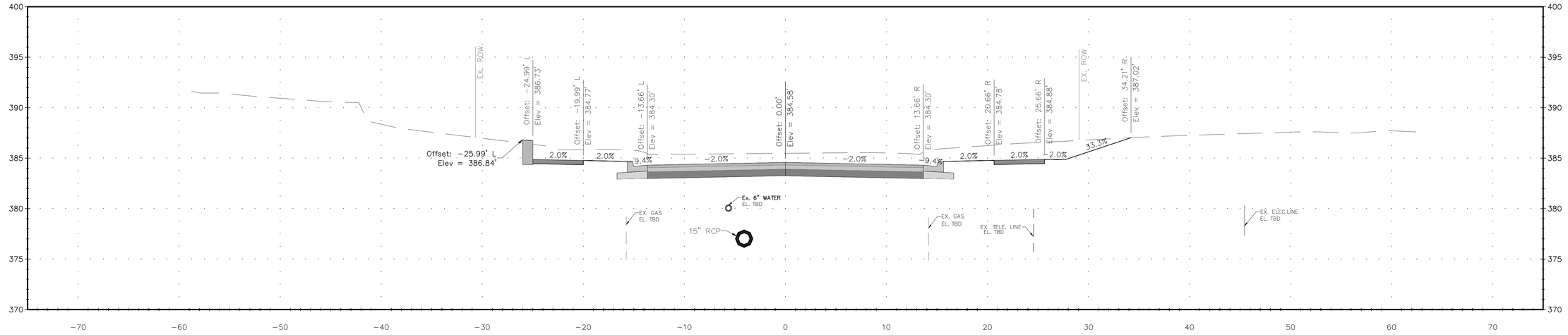
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SCALE: 1"=5'

DATE: NOVEMBER 2017

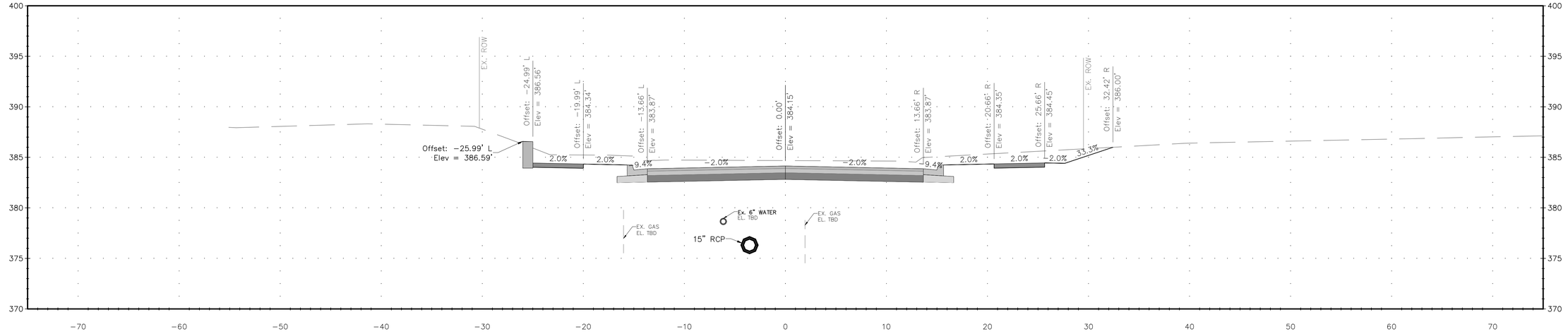
Project No. : 501307

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417+50.00



417+00.00



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS-21 CROSS SECTION -
SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

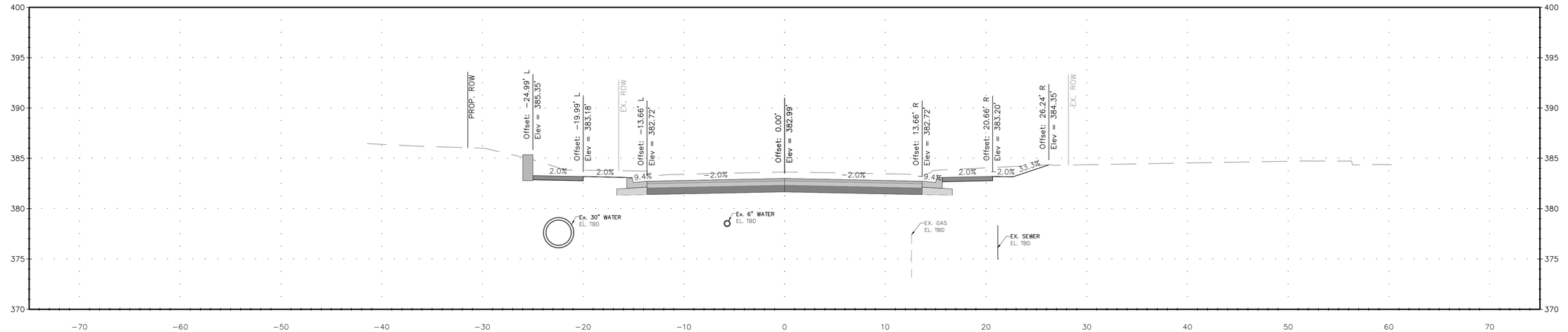
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SCALE: 1"=5'

DATE: NOVEMBER 2017

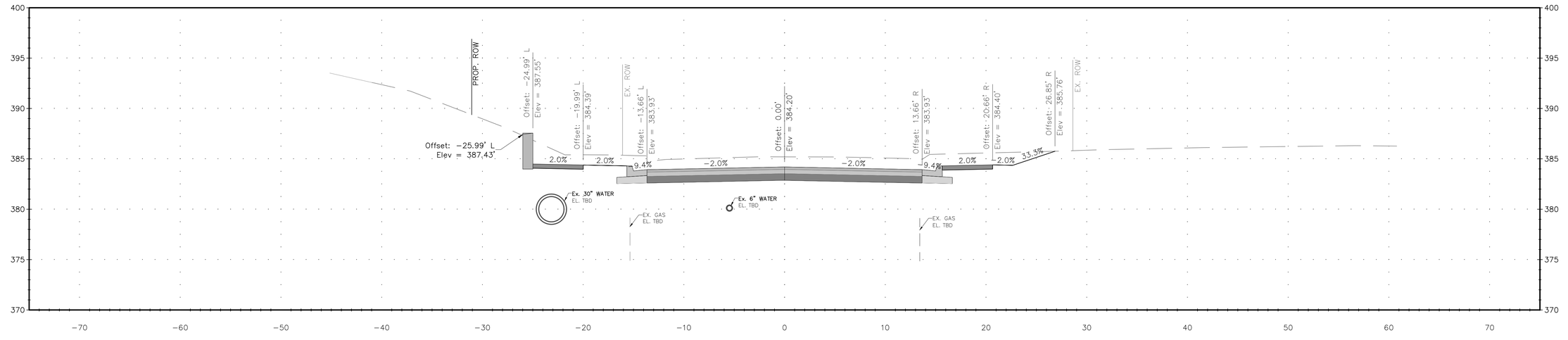
Project No. : 501307

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418+50.00



418+00.00



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS-22 CROSS SECTION - SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

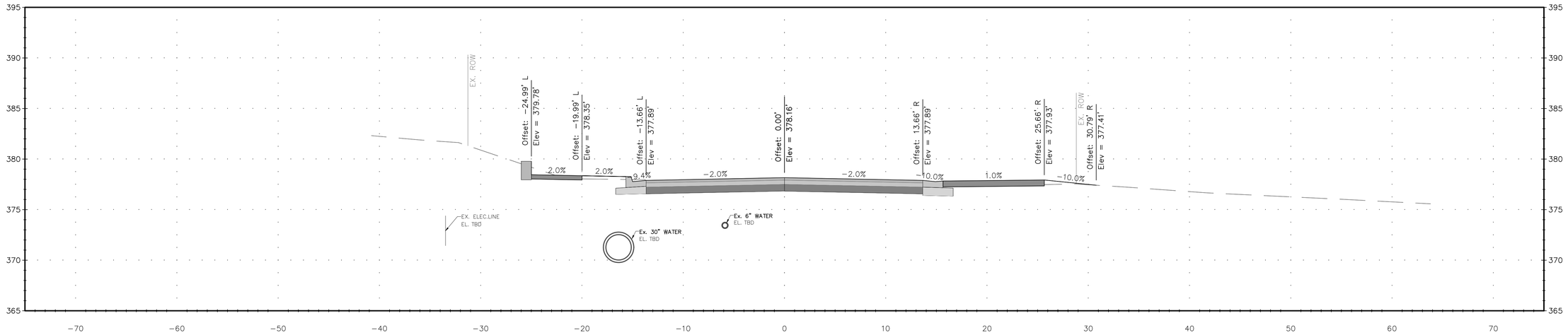
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SCALE: 1"=5'

DATE: NOVEMBER 2017

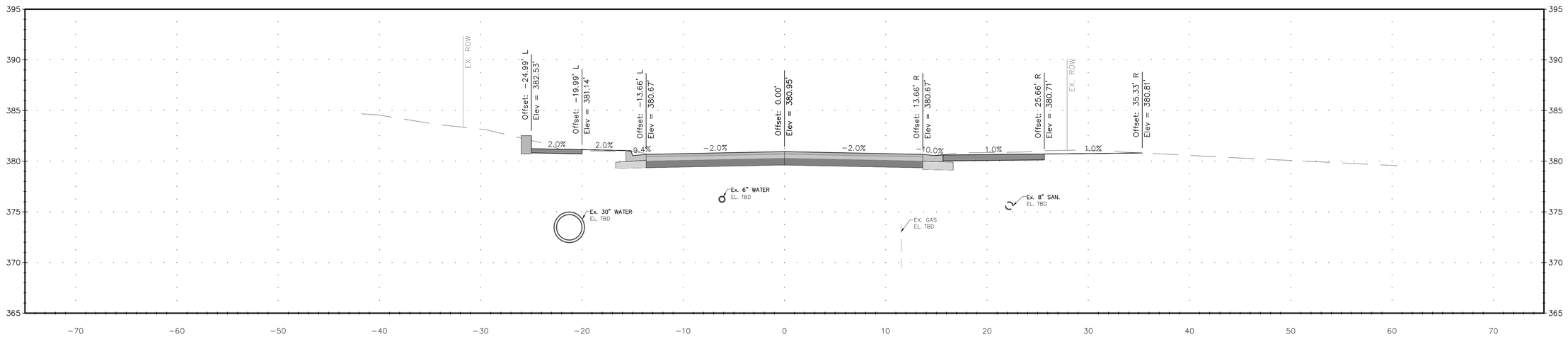
Project No. : 501307

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419+50.00



419+00.00



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS-23 CROSS SECTION -
SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

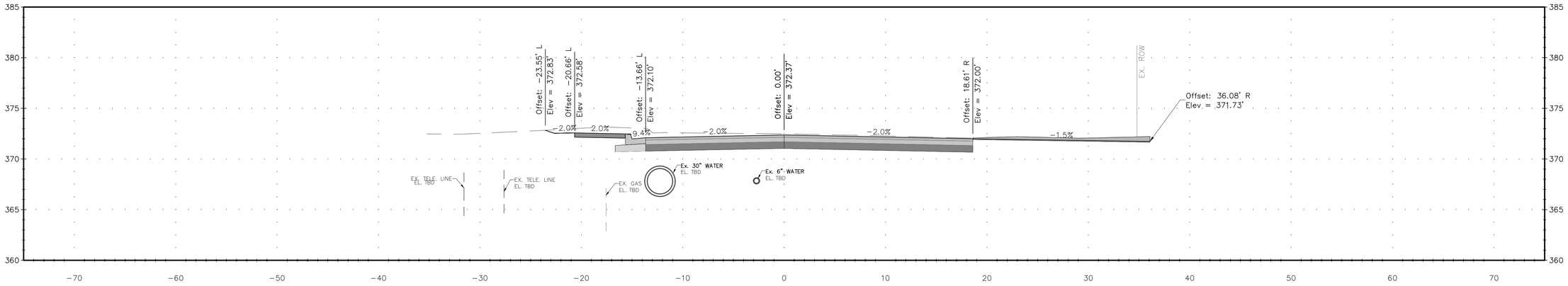
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DATE: NOVEMBER 2017

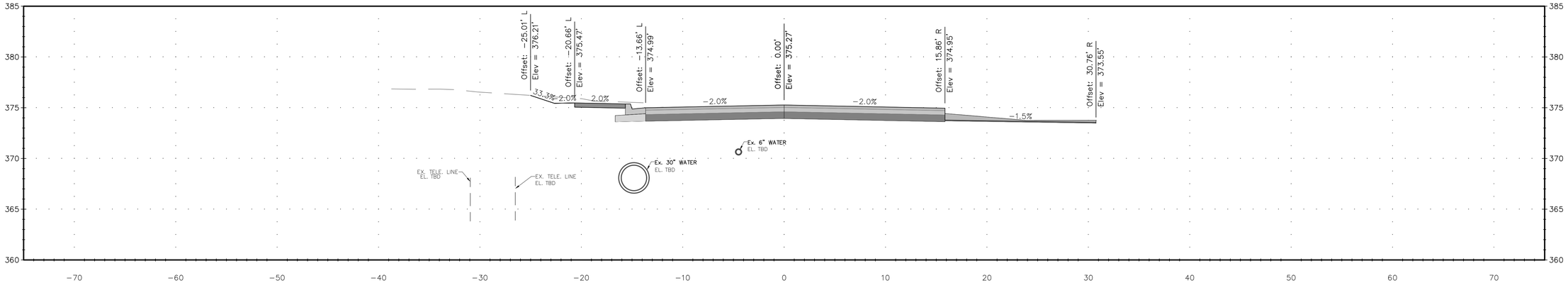
Project No. : 501307

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420+50.00



420+00.00



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS-24 CROSS SECTION –
SEMINARY ROAD / SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'

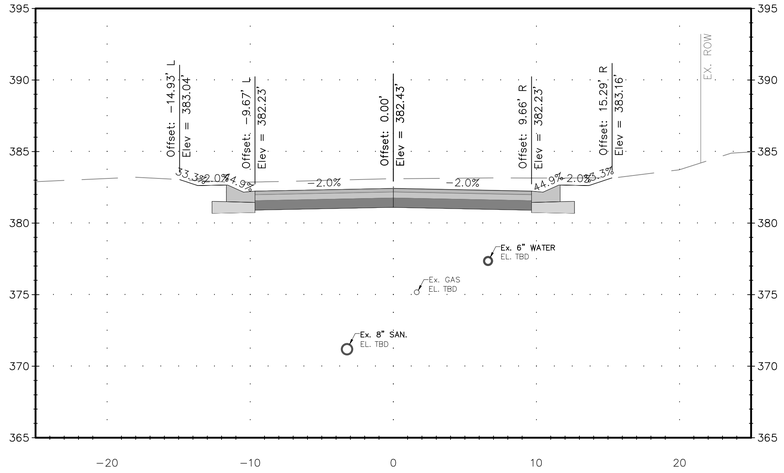
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DATE: NOVEMBER 2017

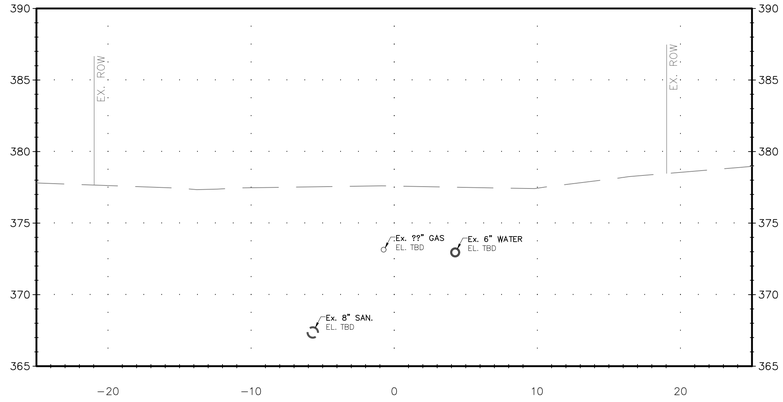
Project No. : 501307

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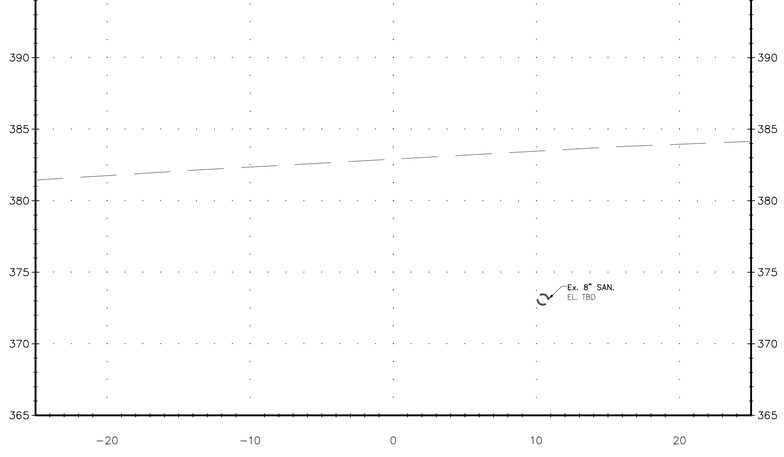
500+50.00



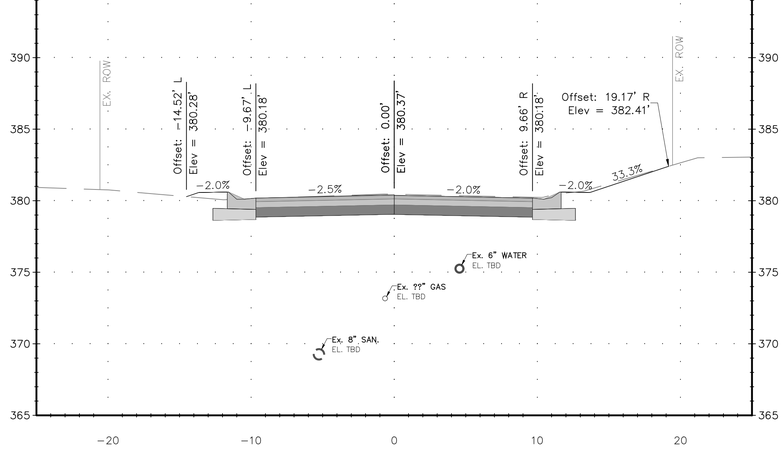
501+50.00



500+00.00



501+00.00



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XS-25 CROSS SECTION - RILEY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

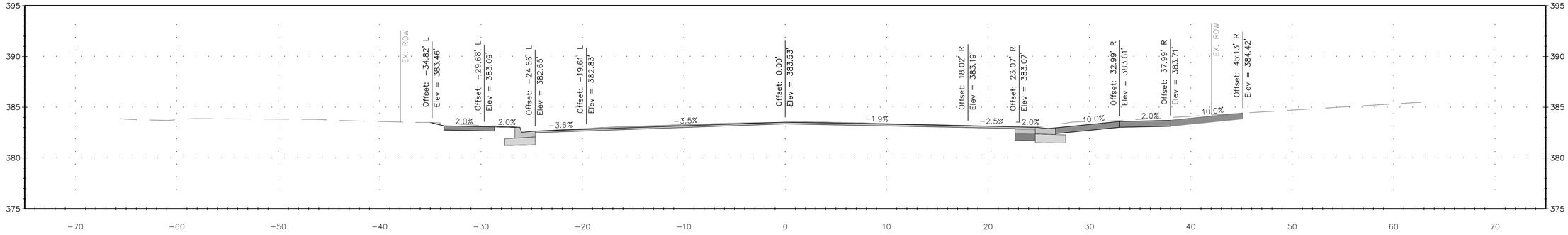
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SCALE: 1"=5'

DATE: NOVEMBER 2017

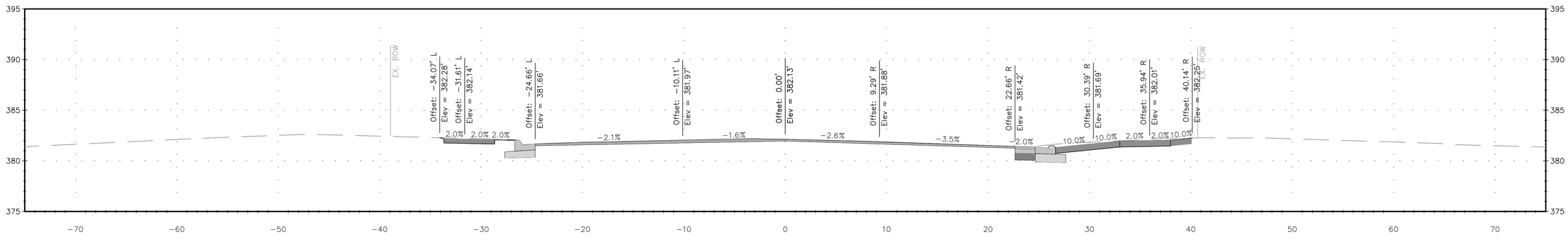
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103+98.43



103+38.33



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XS-26 CROSS SECTION - DRIVEWAY: LINDEN LANE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

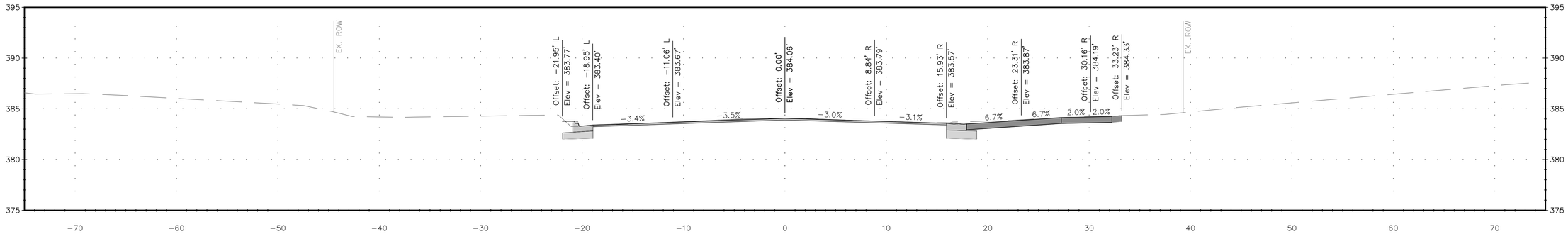
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SCALE: 1"=5'

DATE: NOVEMBER 2017

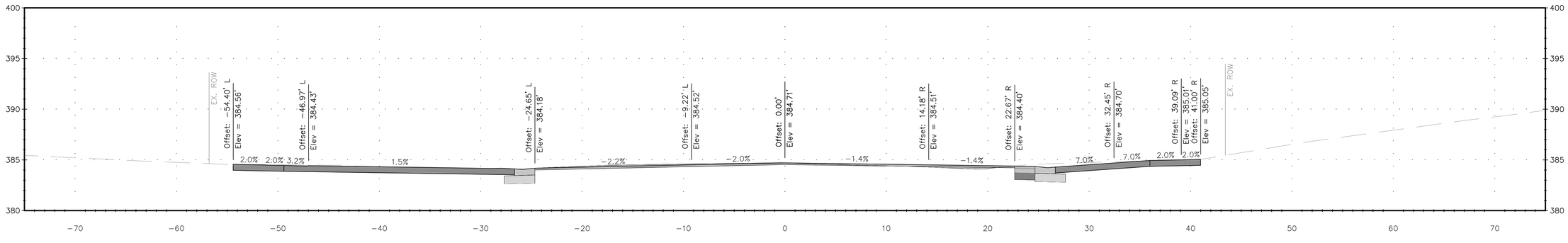
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107+32.69



106+66.47



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XS-27 CROSS SECTION - DRIVEWAY: SEMINARY ROAD

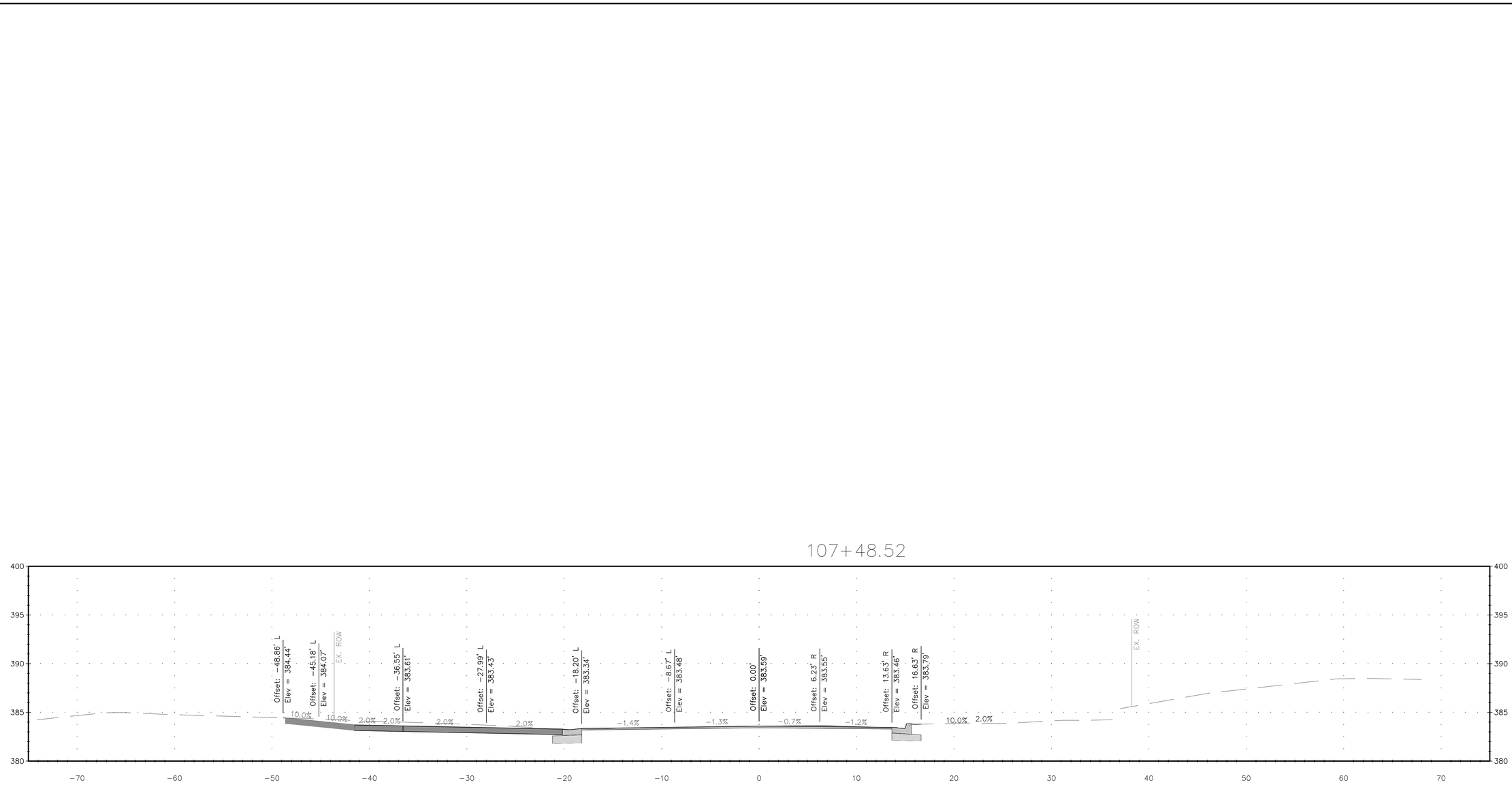
SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

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XS−28 CROSS SECTION − DRIVEWAY: SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

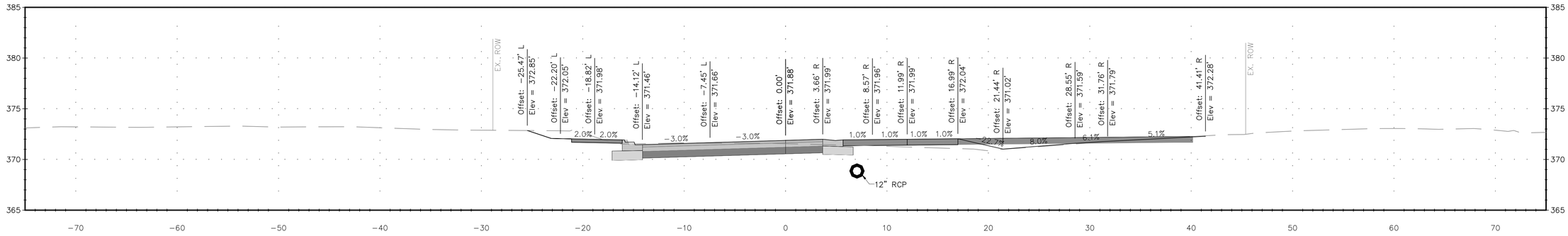
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SCALE: 1"=5'

DATE: NOVEMBER 2017

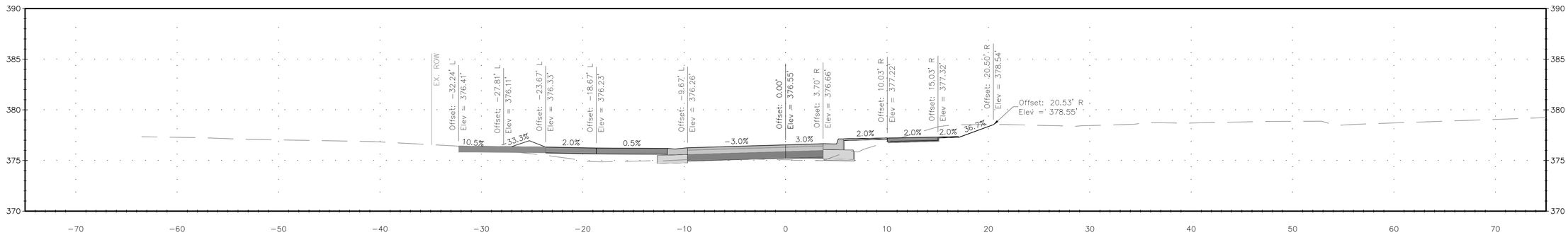
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203+82.30



202+50.00



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Chief, Division of Transportation Engineering — Date

Designed by: MTF Drawn by: SAH Checked by: JJR

XS-29 CROSS SECTION - DRIVEWAY: BROOKVILLE ROAD

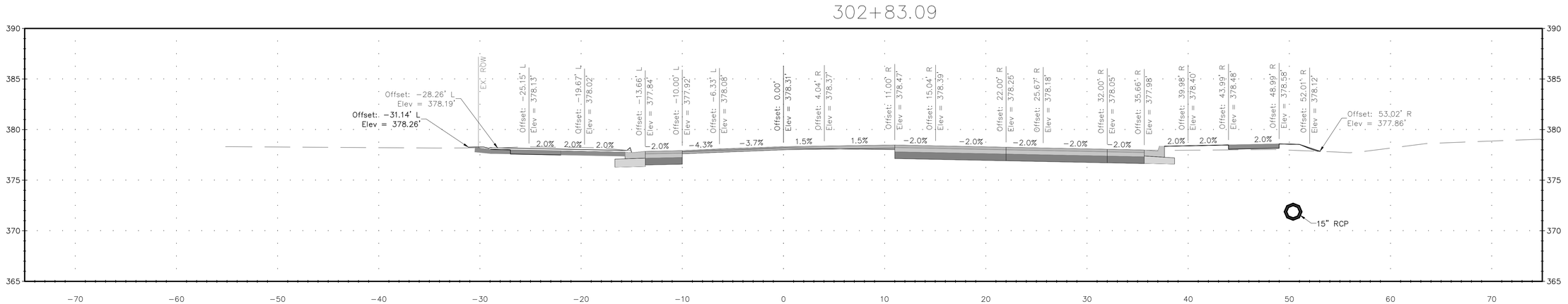
SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

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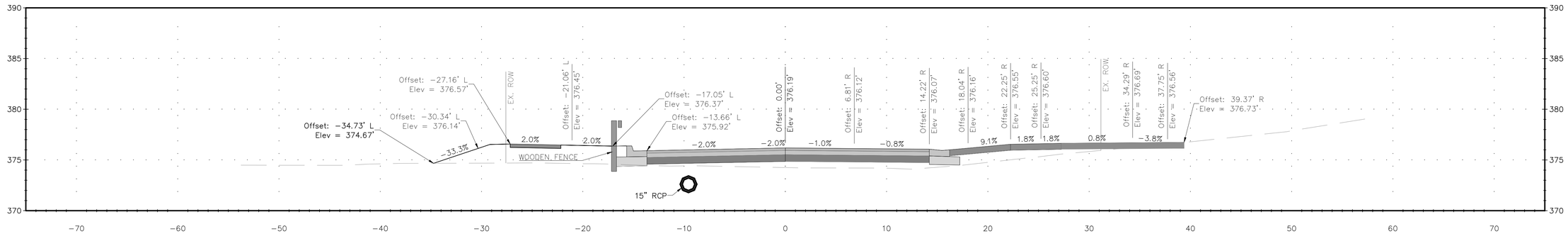
Designed by: MTF Drawn by: SAH Checked by: JJR

XS−30 CROSS SECTION − DRIVEWAY: SECOND AVENUE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

0 5' 10'
SCALE: 1"=5'
DATE: NOVEMBER 2017

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Designed by: MTF Drawn by: SAH Checked by: JJR

XS−31 CROSS SECTION − DRIVEWAY: SEMINARY ROAD

SEMINARY ROAD INTERSECTION IMPROVEMENTS

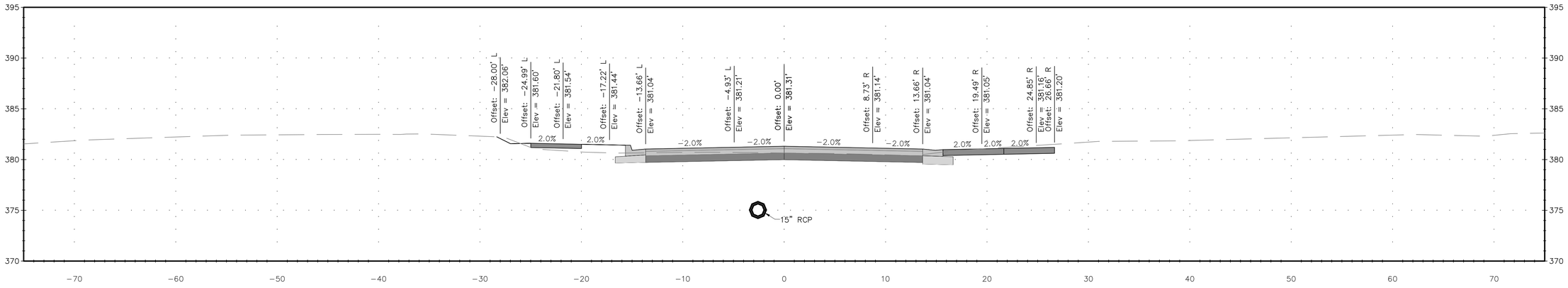
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SCALE: 1"=5'

DATE: NOVEMBER 2017

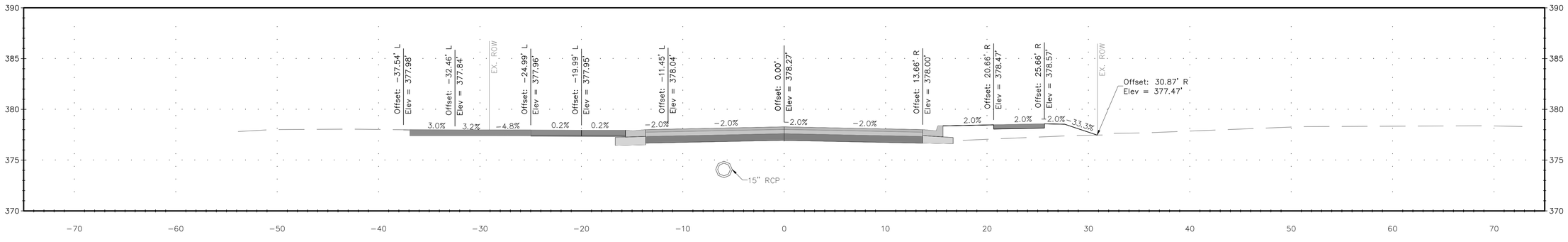
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416+10.00



415+44.48



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XS-32 CROSS SECTION - DRIVEWAY: SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

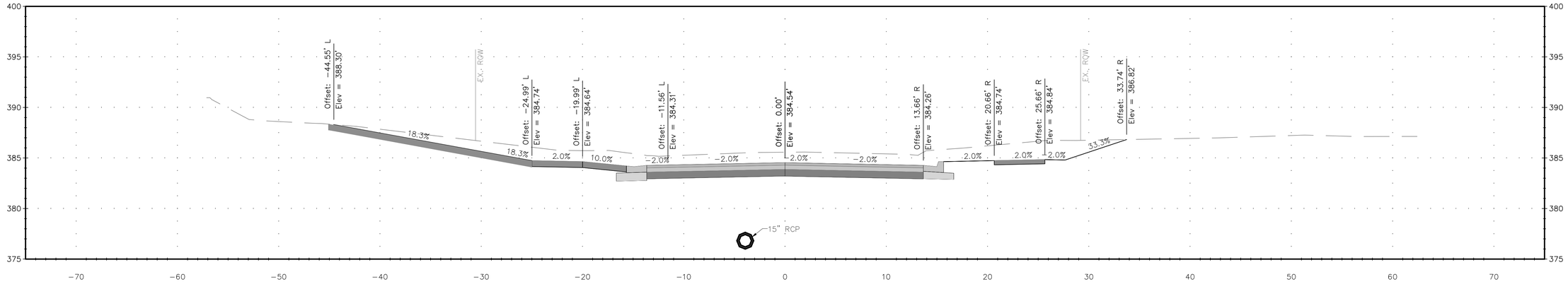
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SCALE: 1"=5'

DATE: NOVEMBER 2017

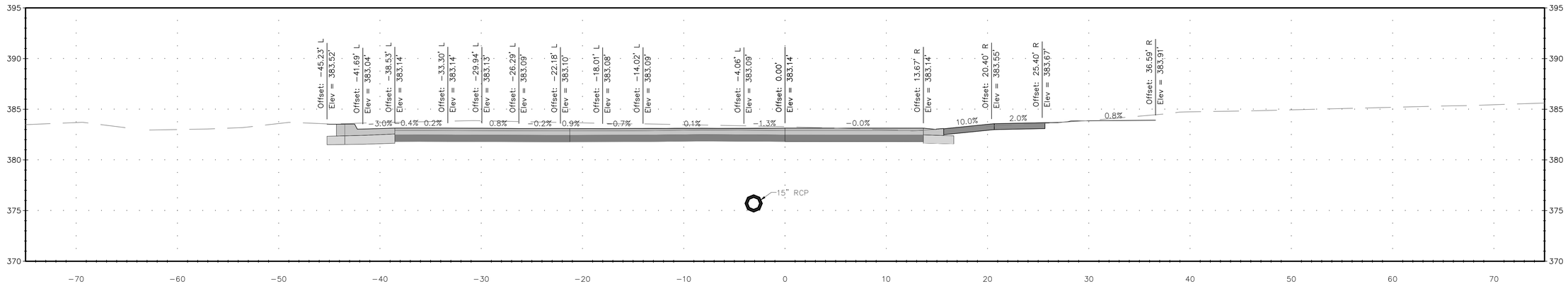
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417+35.77



416+57.53



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XS-33 CROSS SECTION - DRIVEWAY: SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

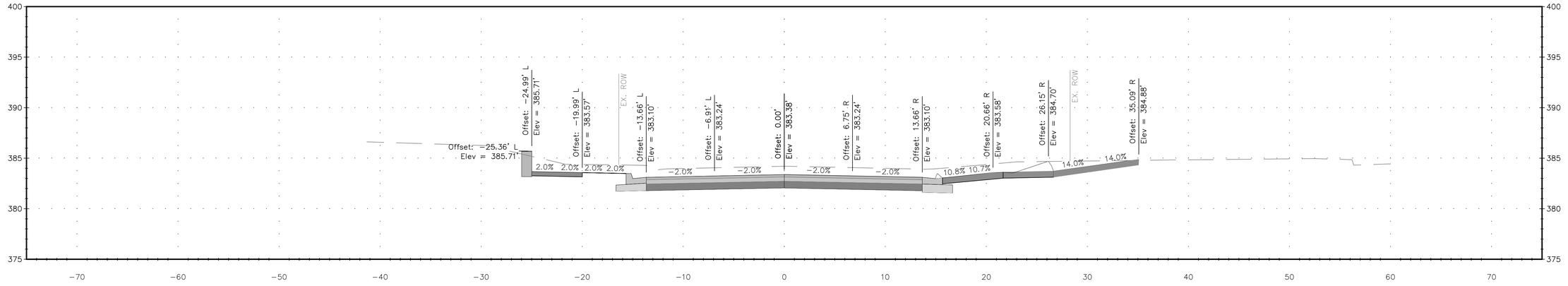
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DATE: NOVEMBER 2017

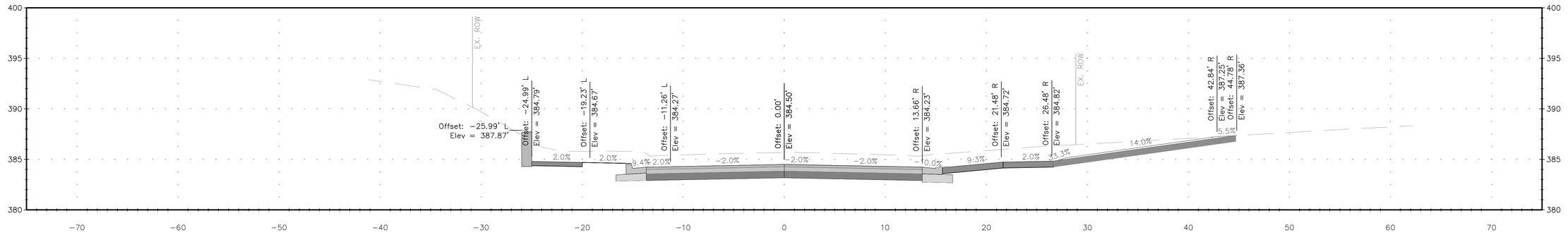
Project No. : 501307

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418+37.14



417+73.06



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Designed by: MTF Drawn by: SAH Checked by: JJR

XS−34 CROSS SECTION − DRIVEWAY: SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

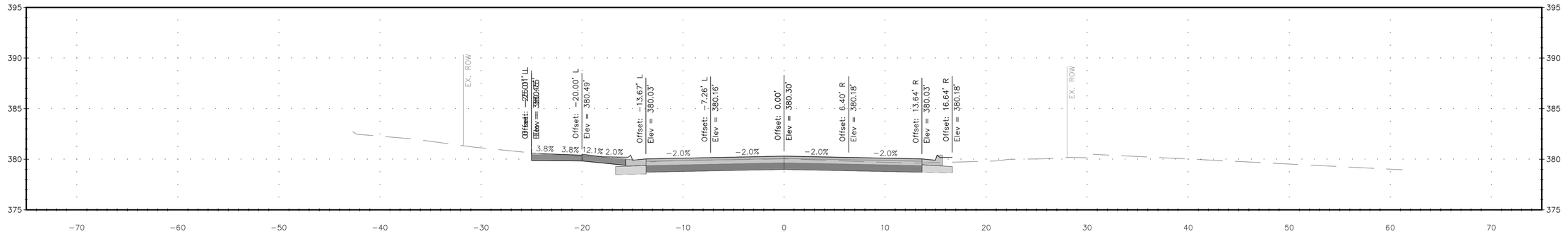
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SCALE: 1"=5'

DATE: NOVEMBER 2017

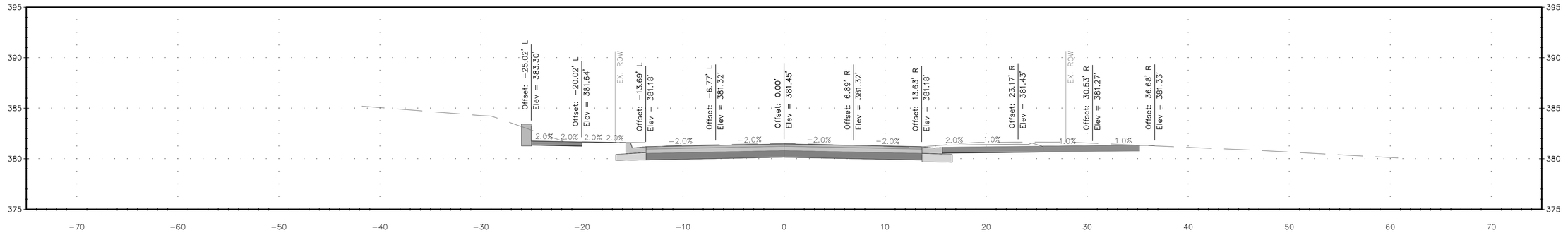
Project No. : 501307

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419+12.33



418+88.88



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XS-35 CROSS SECTION - DRIVEWAY: SEMINARY PLACE

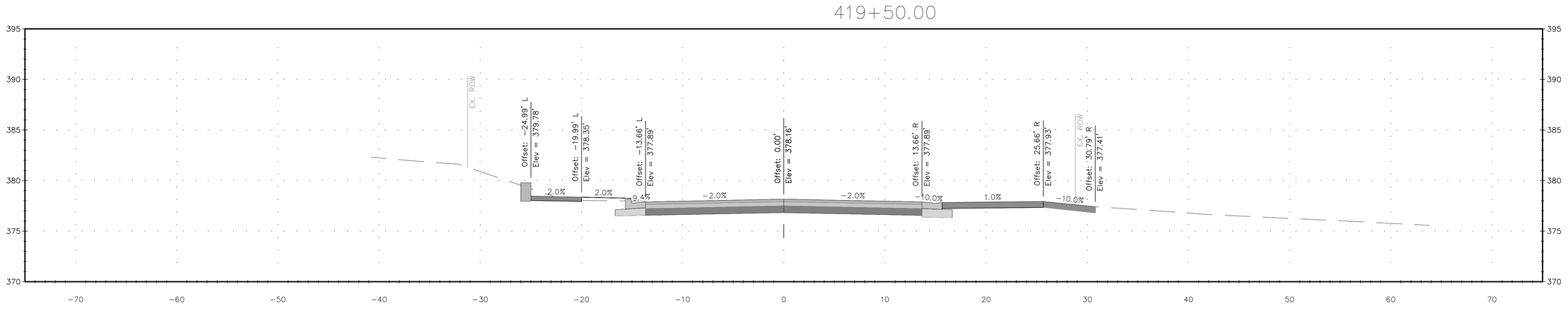
SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

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Designed by: MTF Drawn by: SAH Checked by: JJR

XS-36 CROSS SECTION - DRIVEWAY: SEMINARY PLACE

SEMINARY ROAD INTERSECTION IMPROVEMENTS

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

DATE: NOVEMBER 2017

Project No. : 501307

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