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**OWNER
DEPARTMENT OF
ENVIRONMENTAL SERVICES**

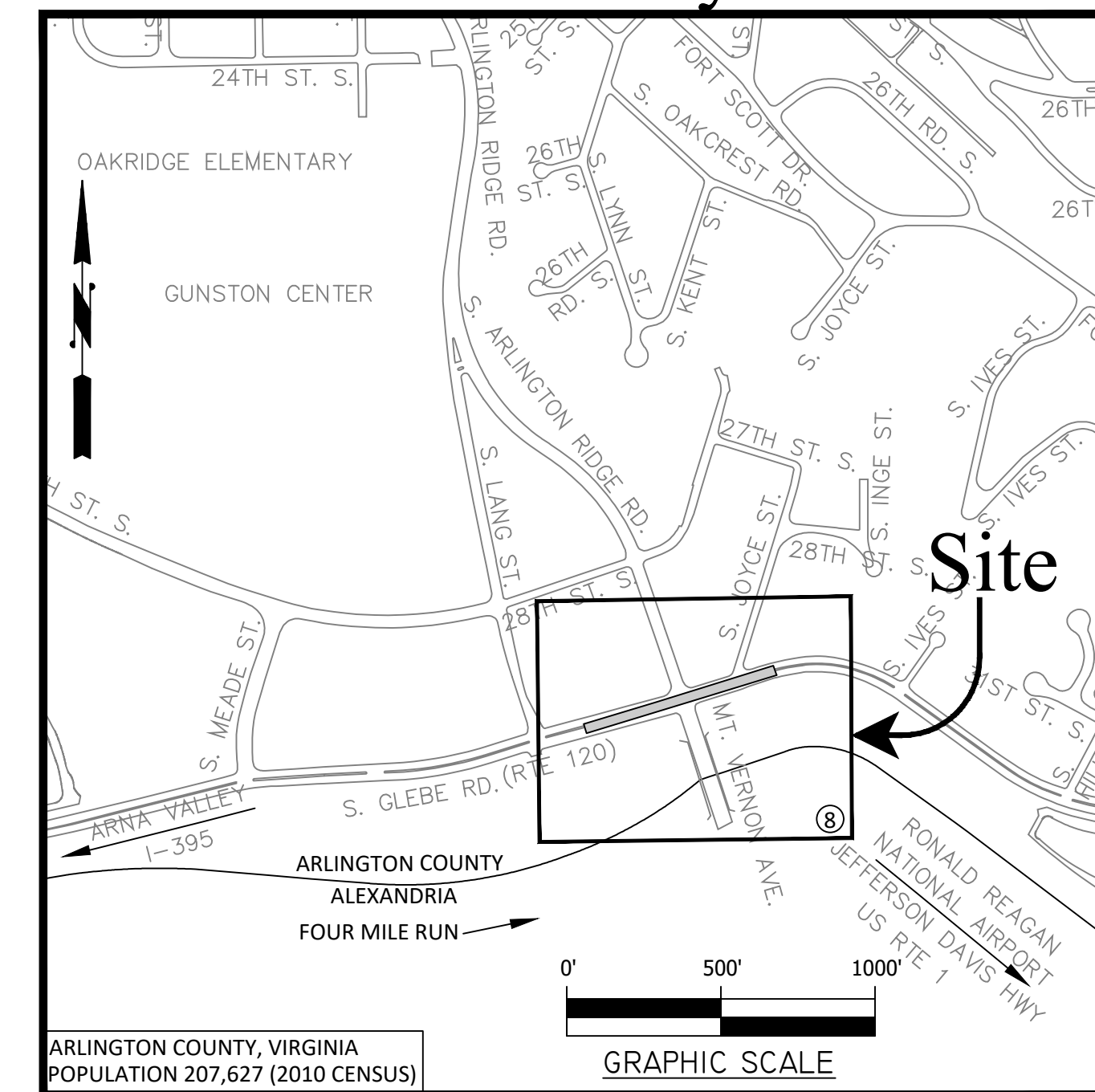
SIGNAL & ITS
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ARLINGTON, VA 22201
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**CONTRACTOR
TO BE DETERMINED**

Location Map

Scale: 1"=500'

Vicinity



CONSTRUCTION DRAWINGS FOR: S. Glebe Road Intersection Improvements

S. Glebe Road at S. Arlington Ridge Road

Project Number: TE07

SWM Number: SWM21-0010



DEPARTMENT OF
ENVIRONMENTAL SERVICES

Transportation Engineering and
Operations Bureau
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Seal



APPROVALS DATE

<i>J. K. [Signature]</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>Dennis W. Leach</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions Date

General Notes:

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
- ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (i.e. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER AND/OR SEWER LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
- EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
- THE SITE SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983 AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY.
- THE SITE SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY.

STORMWATER AND ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND/OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC., TO WITHIN THE DESIGNATED LIMITS OF WORK (LOW).
- ANY WORK WITHIN A RESOURCE PROTECTION AREA (RPA) SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 61 OF THE COUNTY CODE (THE CHESAPEAKE BAY PRESERVATION ORDINANCE).

TREE PROTECTION

- TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF SECTION 02100 - CLEARING AND GRUBBING.

TRAFFIC CONTROL

- CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST THREE (3) WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PRE-MARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PRE-MARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW THREE (3) WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PRE-MARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST FOUR (4) WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS.
- THE CONTRACTOR SHALL COORDINATE WITH THE DES-TRANSIT BUREAU AT 703-228-3049 AT LEAST FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF WORK WHEN TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO TRANSIT STOPS OR ROUTES. NOTE: ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND/OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM, AND SANITARY SEWER SYSTEMS

- UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF THE REQUIRED OPERATION.
- IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-5555 AND THE PROJECT OFFICER.
- LOCATIONS OF SEWER LATERALS, IF SHOWN, ARE APPROXIMATE AND BASED SOLELY ON AVAILABLE RECORDS.
- SANITARY SEWER LATERALS ARE PRIVATELY OWNED AND MAINTAINED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING LATERALS WITHIN THE LIMITS OF CONSTRUCTION. APPROPRIATE PERMITS AND INSPECTIONS FOR WORK ON ANY LATERALS MUST BE OBTAINED FROM INSPECTION SERVICES. ANY LATERALS ABANDONED WITH THE PROJECT WILL BE CAPPED AT THE SEWER MAIN.

MAINTENANCE

- ARLINGTON COUNTY SHALL HAVE MAINTENANCE RESPONSIBILITY FOR ALL ROADWAY INFRASTRUCTURE (SIDEWALK, ROAD ASPHALT, DRAINAGE, CURB/CURB & GUTTER, ETC.) WITHIN COUNTY RIGHT-OF-WAY. THE COUNTY WILL ALSO MAINTAIN ALL TRAFFIC SIGNAL INFRASTRUCTURE INDEPENDENT OF VDOT AND COUNTY RIGHT OF WAY BOUNDARIES. VDOT SHALL HAVE MAINTENANCE RESPONSIBILITY FOR ALL ROADWAY INFRASTRUCTURE (SIDEWALK, ROAD ASPHALT, DRAINAGE, CURB/CURB & GUTTER, ETC.), OUTSIDE OF THE TRAFFIC SIGNAL, WITHIN VDOT RIGHT-OF-WAY.

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AADT:

S. Glebe Road:
27,000 VEHICLES PER DAY (2015)
TBD (Year - Projected)
DHV: TBD (Year) / TBD (Year)
DESIGN SPEED: 35 MPH, VDOT STANDARD GS-5,
STANDARD TC-5.11 ULS, 2% MAX SUPERELEVATION
Design Vehicles: AASHTO 2011 City Bus, SU-30

S. Arlington Ridge Road:
3,000 VEHICLES PER DAY (2015)
TBD (Year - Projected)
DESIGN SPEED: 30 MPH, VDOT STANDARD GS-6

Mt. Vernon Avenue:
9,300 VEHICLES PER DAY (2015)
TBD (Year - Projected)
DESIGN SPEED: 30 MPH, VDOT STANDARD GS-6

Source: "2015 VDOT Daily Traffic Volumes Estimates -
Jurisdiction Report 00 - Arlington County / City of Alexandria

STREET CLASSIFICATION:

S. Glebe Road (Rte. 120): Urban Other Principal Arterial
S. Arlington Ridge Road: Urban Minor Arterial, County Arterial Type E Street
Mt. Vernon Avenue: Urban Minor Arterial, County Arterial Type C Street
Design Vehicles: AASHTO 2011 City Bus, SU-30

POSTED SPEED:

S. Glebe Road (Rte. 120): 35 MPH
S. Arlington Ridge Road: 25 MPH
Mt. Vernon Avenue: 25 MPH

Project Name and Location
**S. Glebe Road Intersection
Improvements**

COVER SHEET

S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: JMK
Drawn: JMK
Checked: MJK
Miss Utility Transmittal #:

Filename: 10101_Cover Sheet.dwg
Path: P:\Projects\20111110_Arlington\10101_S. Glebe Road\10101.dwg

Plotted: November 16, 2021
Plotted by: marnone

Scale: AS NOTED

Sheet

1

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING	---	---
CENTERLINE / BASELINE	---	---
COMMUNICATIONS CABLE	--- COM --- COM ---	--- COM --- COM ---
CONTOURS	--- 250 --- 250 --- 250 --- 250 ---	--- 250 --- 250 --- 250 --- 250 ---
CRITICAL ROOT ZONE	--- CRZ --- CRZ ---	--- CRZ --- CRZ ---
EASEMENT	---	---
ELECTRIC (UNDERGROUND)	--- UGE --- UGE ---	--- UGE --- UGE ---
FENCE (MATERIAL NOTED)	---X---X---X---X---X---X---	---X---X---X---X---X---X---
FLOOD HAZARD LINE (FLOODPLAIN & FLOODWAY)	---	---
FIBER OPTIC	--- FO --- FO ---	--- FO --- FO ---
GAS LINE	--- GAS --- GAS ---	--- GAS --- GAS ---
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	--- X" G --- X" G ---	--- X" G --- X" G ---
GUARDRAIL	---	---
HARDSCAPE FEATURE (MATERIAL NOTED)	---	---
LIMITS OF DISTURBANCE	---	--- LOD --- LOD ---
LIMITS OF WORK	---	--- LOW --- LOW ---
OVERHEAD WIRES	--- --- ---	--- --- ---
PROPERTY LINE	---	---
RESOURCE PROTECTION AREA (RPA)	--- RPA --- EDGE OF STREAM	--- RPA --- EDGE OF STREAM
RIGHT-OF-WAY LINE	---	---
ROOT PRUNING	--- RP --- RP ---	--- RP --- RP ---
SANITARY SEWER	--- SAN --- SAN ---	--- SAN --- SAN ---
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)	--- X" S --- X" S ---	---
SILT FENCE	--- SF --- SF --- SF ---	--- SF --- SF --- SF ---
STORM (SIZE NOTED)	---	---
STREAM	---	---
STREET LIGHT CONDUIT	--- SL --- SL ---	---
TELEPHONE (UNDERGROUND)	--- UGT --- UGT ---	--- UGT --- UGT ---
TREE LINE	---	---
TREE PROTECTION FENCE	--- TPF --- TPF ---	--- TPF --- TPF ---
WALL	---	---
WATER	--- W --- W ---	---
X" WATER (SIZE INCLUDED IF AVAILABLE)	--- X" W --- X" W ---	--- X" W --- X" W ---

SYMBOL LEGEND

EXISTING	PROPOSED
EX BENCHMARK	PROP FIRE HYDRANT
EX CABLE PEDESTAL	PROP GAS VALVE
EX ELECTRIC BOX	PROP LIGHT POLE
EX FIRE HYDRANT	PROP PAY STATION
EX GAS VALVE	PROP SANITARY MANHOLE
EX GROUND LIGHT	VDOT PROP STORM CATCH BASIN
EX GUY WIRES	PROP STORM MANHOLE
EX IRON PIPE OR PIN	PROP STORM MANHOLE BASE
EX LIGHT POLE	PROP STORM ENDWALL
EX MAILBOX	PROP TRAFFIC SIGN
EX MONUMENT	PROP TRASH CAN
EX PARKING METER	PROPOSED TREE REMOVAL
EX PAY STATION	PROP UTILITY POLE
EX SANITARY MANHOLE	PROP WATER MANHOLE
EX STORM BASIN	PROP WATER METER
EX STORM MANHOLE	PROP WATER VALVE
EX TELEPHONE PEDESTAL	PROP YARD INLET (TO SCALE)
EX TRAFFIC CONTROL BOX	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
EX TRAFFIC SIGN	CURVE NUMBER (SEE CURVE TABLE)
EX TRASH CAN	LINE NUMBER (SEE LINE TABLE)
EX TRAVERSE	NORTH ARROW
EX TREES, WOODED AREA	TEST HOLE
EX UTILITY MANHOLE TYPE INDICATED ELECTRIC, TELE, ETC	
EX UTILITY POLE	
EX WATER MANHOLE	
EX WATER METER	
EX WATER VALVE	
EX YARD INLET	

LABEL LEGEND

EXISTING	PROPOSED
EX SAN STRUC NO. EXISTING SANITARY STRUCTURE NUMBER	XXXX
EX STRM SEW STRUC NO. EXISTING STORM SEWER STRUCTUE NUMBER	XXXX
PROP SAN SEW STRUC NO. PROPOSED SANITARY SEWER STRUCTURE NUMBER	XXXX
PROP STRM SEW STRUC NO. PROPOSED STORM SEWER STRUCTURE NUMBER	XXXX

HATCH LEGEND

Asphalt - Mill & Overlay	[Hatch Pattern]
Asphalt - Full Depth	[Hatch Pattern]
Concrete	[Hatch Pattern]
Demolish Existing Concrete/ Brick Wall	[Hatch Pattern]
Demolish Existing Asphalt	[Hatch Pattern]



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APPROVALS	DATE
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[Signature]	01/07/2022
TE&O BUREAU CHIEF	
Dennis W. Leach	01/07/21
TRANSPORTATION DIRECTOR	

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

LEGEND SHEET

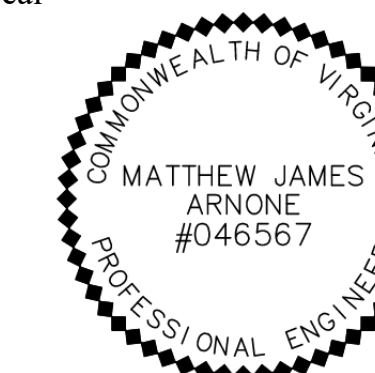
S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:
Filename: REP02_1.dwg
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Plotted: November 15, 2021
Plotted by: kmita
Scale: N.T.S.

Matthew J. Arnone
11-17-21

Seal



Matthew J. Arnone
11-17-21

VDOT GENERAL NOTES

GRADING GENERAL NOTES

- G-1 THE GRADE LINE DENOTES TOP OF FINISHED PAVEMENT UNLESS SHOWN OTHERWISE ON TYPICAL SECTIONS OR PLANS.
- G-3 EARTHWORK QUANTITIES ON THIS PROJECT ARE BASED ON ANTICIPATED SETTLEMENT AND MAY REQUIRE ADJUSTING DURING CONSTRUCTION. PAYMENT WILL BE MADE ONLY FOR QUANTITIES ACTUALLY MOVED.
- G-4 THE COST OF REMOVAL OF ALL EXISTING CONCRETE ITEMS LOCATED IN THE AREA TO BE GRADED, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING, SHALL BE INCLUDED IN THE PRICE BID FOR REGULAR EXCAVATION.
- G-6 THE BORROW MATERIAL FOR THIS PROJECT SHALL BE A MINIMUM CBR 5 OR AS APPROVED BY THE MATERIALS ENGINEER.
- G-7 MATERIAL FROM REGULAR EXCAVATION WHICH IS SUITABLE FOR STABILIZATION WITH HYDRAULIC CEMENT (LIME) SHALL BE PLACED IN THE TOP PORTION OF THE SUBGRADE.

DRAINAGE GENERAL NOTES

- D-1 THE HORIZONTAL LOCATION OF ALL DRAINAGE STRUCTURES ON THESE PLANS IS APPROXIMATE ONLY, WITH THE EXCEPTION OF STRUCTURES SHOWING SPECIFIC STATIONS, SPECIAL DESIGN BRIDGES AND STORM SEWER SYSTEMS.
- D-2 THE HORIZONTAL LOCATION AND INVERT ELEVATIONS SHOWN FOR PROPOSED CULVERTS AND STORM SEWER OUTFALL PIPES ARE BASED ON EXISTING DATA AND REQUIRED DESIGN CRITERIA. IF, DURING CONSTRUCTION, IT IS FOUND THAT THE HORIZONTAL LOCATION OR INVERT ELEVATIONS SHOWN ON THE PLANS DIFFER SIGNIFICANTLY FROM THE HORIZONTAL LOCATION OR ELEVATIONS OF THE STREAM OR SWALE IN WHICH THE CULVERT OR STORM SEWER OUTFALL PIPE IS TO BE PLACED, THE ENGINEER SHALL CONFER WITH, AND GET APPROVAL FROM, THE APPLICABLE DISTRICT DRAINAGE ENGINEER BEFORE INSTALLING CULVERT OR STORM SEWER OUTFALL PIPE.
- D-3 THE "H" DIMENSIONS SHOWN ON THE PLANS FOR DROP INLETS AND JUNCTION BOXES AND THE "L.F. (M)" DIMENSIONS SHOWN FOR MANHOLES ARE FOR ESTIMATING PURPOSES AND ARE BASED ON THE PROPOSED INVERT ELEVATIONS SHOWN FOR THE STRUCTURE AND THE ANTICIPATED TOP (RIM) ELEVATION BASED ON EXISTING OR PROPOSED FINISHED GRADE. THE ACTUAL "H" OR "L.F. (M)" DIMENSION ARE TO BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
- D-7 ALL PIPE ON THIS PROJECT SHALL BE REINFORCED CONCRETE PIPE (RCP), FOR STRENGTH, SHEET THICKNESS, OR CLASS DESIGNATION, AVAILABLE SIZES, HEIGHT OF COVER LIMITATIONS AND OTHER RESTRICTIONS FOR A PARTICULAR PIPE TYPE OR HEIGHT OF COVER, SEE THE APPLICABLE SECTIONS OF THE VDOT ROAD AND BRIDGE STANDARDS PC-1.
- D-12 ALL EXISTING DRAINAGE FACILITIES LABELED "TO BE ABANDONED" SHALL BE LEFT IN PLACE, BACKFILLED AND PLUGGED IN ACCORDANCE WITH THE VDOT ROAD AND BRIDGE STANDARD PP-1. BASIS OF PAYMENT WILL BE C.Y. (CUBIC METER) OF FLOWABLE BACKFILL.
- D-13 EXISTING DRAINAGE FACILITIES BEING UTILIZED AS A PART OF THE DRAINAGE SYSTEM, AND DESIGNATED ON THE PLANS "TO BE CLEANED OUT", SHALL BE CLEANED AS DIRECTED BY THE ENGINEER. THE COST INCIDENTAL TO THIS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE OTHER ITEMS.
- D-14 PROPOSED DROP INLETS WITH A HEIGHT (H) LESS THAN THE MINIMUM SHOWN IN THE VDOT ROAD AND BRIDGE STANDARDS SHALL BE CONSIDERED AND PAID FOR AS STANDARD DROP INLETS FOR THE TYPE SPECIFIED. PIPES WITH LESS THAN STANDARD MINIMUM FINISHED HEIGHT OF COVER SHALL BE NOTED AS SUCH IN THE DRAINAGE DESCRIPTION FOR THE PIPE. SPECIFIC PIPE BEDDING AND COVER REQUIREMENTS ARE PROVIDED IN THE APPLICABLE PB-1 AND PC-1 STANDARD DRAWINGS OF THE VDOT ROAD AND BRIDGE STANDARDS.
- D-16 WHEN STANDARD CG-6 OR CG-7 IS SPECIFIED ON A RADIUS (SUCH AS AT A STREET INTERSECTION), THE ENGINEER MAY APPROVE A DECREASE IN THE CROSS SLOPE OF THE GUTTER TO FACILITATE PROPER DRAINAGE.

PAVEMENT GENERAL NOTES

- P-2 THE PAVEMENT MATERIALS ON THIS PROJECT WILL BE PAID FOR ON A TONNAGE BASIS. THE WEIGHT WILL VARY IN ACCORDANCE WITH THE SPECIFIC GRAVITY OF THE AGGREGATES AND THE ASPHALTIC CONTENT OF THE MIX ACTUALLY USED TO SECURE THE DESIGN DEPTH. THE WEIGHT OF THE ASPHALT CONCRETE IS BASED ON 95% OF THEORETICAL MAXIMUM DENSITY. (SEE IIM-LD-158)

INCIDENTAL GENERAL NOTES

- I-6 CERTAIN TREES SHALL BE PRESERVED AS NOTED ON PLANS OR AS DIRECTED BY THE ENGINEER.
- I-7 WHERE STANDARD SLOPE ROUNDOFFS WOULD DAMAGE TREES, BUSHES OR OTHER DESIRABLE VEGETATION, THEY SHALL BE OMITTED WHEN SO ORDERED BY THE ENGINEER.
- I-18 ALL PAVEMENT MARKINGS AND TRAFFIC FLOW ARROWS SHOWN ON THE ROADWAY CONSTRUCTION PLANS ARE SCHEMATIC ONLY. THE ACTUAL LOCATION AND APPLICATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH SECTION 704 OF THE APPLICABLE VDOT ROAD AND BRIDGE SPECIFICATIONS, MUTCD, SEQUENCE OF CONSTRUCTION/TRAFFIC CONTROL PLANS, PAVEMENT MARKING PLAN SHEETS 20 THRU 20 AND AS DIRECTED BY THE ENGINEER.
- I-20 THE OFFICIAL ELECTRONIC PDF VERSION OF THE PLANS WILL OVERRIDE THE PAPER COPIES OR PRINTS OF SPECIFIC LAYERS. PORTIONS OF THIS PLAN ASSEMBLY HAVE BEEN CADD GENERATED. TO ASSIST IN THE PREPARATION OF THE BID AND CONSTRUCTION OF THE PROJECT, AUTOCAD CIVIL 3D FORMAT (.DWG) FILES WILL BE MADE AVAILABLE TO THE PRIME CONTRACTOR DURING BIDS AND AFTER AWARD OF THE CONTRACT.
- I-21 ALL ELECTRONIC PLAN ASSEMBLIES WILL INCLUDE THE CONSTRUCTION PLANS IN TWO FORMATS: PDF FILES AND AUTOCAD CIVIL 3D FORMAT (.DWG) FILES. ONLY THE PDF FILES WILL BE CONSIDERED AS PART OF THE OFFICIAL PLAN ASSEMBLY. THE AUTOCAD CIVIL 3D FORMAT (.DWG) FILES ARE FURNISHED ONLY AS INFORMATION FOR THE CONTRACTOR. THESE PLANS ARE DEVELOPED IN LAYERS (LEVELS) TO AID IN READABILITY. (SEE THE ARLINGTON COUNTY CADD MANUAL FOR CADD LEVEL STRUCTURE). HOWEVER, THE CONSTRUCTION ITEMS MAY OR MAY NOT BE IN THE PROPER LAYERING SCHEME AS DESCRIBED IN THE COUNTY CADD MANUAL. THE AUTOCAD FILES WILL ONLY MATCH THE SCANNED FILES IF ALL REQUIRED LEVELS ARE TURNED ON. AN AUTOCAD SOFTWARE LICENSE IS REQUIRED TO BE ABLE TO READ THESE FILES.

APPROVALS DATE

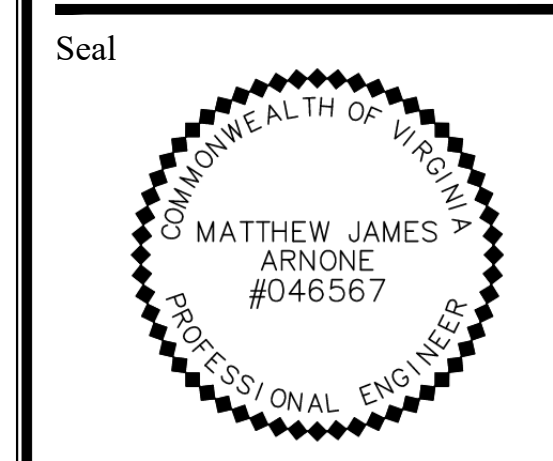
<i>Jung Kettle</i>	01/04/2022
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<i>John Nullo</i>	01/12/2022
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Revisions Date

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
NOTES SHEET
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:
Filename: TE07_2.dwg
Path: \\netwk.com\Civil\Projects\20111102_Arlington\887\Task 1 - S. Glebe Road\TE07.dwg
Plotted: November 15, 2021
Plotted by: kmita
Scale: N.T.S.



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Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

STANDARD DETAILS

S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:

Filename: REF02_1.dwg
Path: \\s:\m\c\c\c\p\p\p\20111102_Arnp\p\p\p\Task 1 - S. Glebe Road\CD02.dwg
Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

2016 ROAD & BRIDGE STANDARDS

CG-12

WITH BUFFER STRIP

WITHOUT BUFFER STRIP

EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT

TYPE B PARALLEL APPLICATION

ROADWAY GRADE IN PERCENT	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

NOTES:
1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.
3. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
4. DIAGONAL PLACEMENT IS NOT PERMITTED.

VDOT ROAD AND BRIDGE STANDARDS SHEET 3 OF 5 204.03

ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

CG-12

WITH BUFFER STRIP

WITHOUT BUFFER STRIP

EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT

TYPE A (PERPENDICULAR) APPLICATION

NOTES:
1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THIS DESIGN TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK (4' WIDE) REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION.
3. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
4. DIAGONAL PLACEMENT IS NOT PERMITTED.

VDOT ROAD AND BRIDGE STANDARDS SHEET 2 OF 5 204.02

ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

CG-12 DETECTABLE WARNING SURFACE TYPE A (PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

UD-4

PAVED SHOULDER SECTION (FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER)

CURB AND GUTTER SECTION (FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER)

NOTES:
1. 4" MINIMUM, PROVIDED ATTAINING MINIMUM 4" OF AGGREGATE ON TOP OF PIPE
2. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DRAIN INLET, MANHOLE, ETC.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
3. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 1'-0" ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
4. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
5. OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN. (3% DESIRABLE) GRADE AND LOCATED EVERY 350' MAXIMUM OR AS NOTED ON PLANS.
6. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
7. WITHIN THE LIMITS OF A COMMERCIAL ENTRANCE, NON-PERFORATED PIPE SHALL BE UTILIZED IN LIEU OF PERFORATED PIPE.
8. THE LENGTH OF PIPE BETWEEN THE WYE CONNECTION AND THE EW-12 SHALL BE LIMITED TO NO MORE THAN 1'-0" TO PERMIT CAMERA INSPECTION OF THE MAIN LINE IN EITHER DIRECTION.
9. IN SITUATIONS WHEN FULL DEPTH OF STABILIZED OPEN-GRADED MATERIAL CANNOT BE MAINTAINED UNDER CURB AND GUTTER, NO. 21B AGGREGATE SHALL BE USED UNDER CURB AND GUTTER. NO. 21B AGGREGATE MAY ALSO BE USED FROM TOP OF STABILIZED OPEN-GRADED MATERIAL LAYER AND CURB AND GUTTER.

VDOT ROAD AND BRIDGE STANDARDS SHEET 2 OF 2 108.07

STANDARD PAVEMENT EDGEDRAIN VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

STANDARD PAVEMENT EDGEDRAIN VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

WP-2

CONSTRUCTION JOINT DETAIL

REMOVE EXISTING ASPHALT LAYERS TO EXISTING SUBGRADE AND REPLACE WITH PROPOSED ASPHALT WIDENING LAYERS
PROPOSED MINIMUM 1 1/2 INCH THICK ASPHALT SURFACE COURSE (SEE NOTE 5)
MINIMUM 12 INCHES, OR GREATER AS NECESSARY TO ABUT THE FULL THICKNESS OF EXISTING ASPHALT LAYERS AS DETERMINED BY CORES (SEE NOTE 3)

NOTES:
1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1 1/2 INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS.

VDOT ROAD AND BRIDGE STANDARDS SHEET 1 OF 1 303.02

ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

UD-4

PAVED SHOULDER SECTION

CURB AND GUTTER SECTION

NOTES:
1. 4" MINIMUM, PROVIDED ATTAINING MINIMUM 4" OF AGGREGATE ON TOP OF PIPE
2. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DRAIN INLET, MANHOLE, ETC.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
3. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 1'-0" ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
4. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
5. OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN. (3% DESIRABLE) GRADE AND LOCATED EVERY 350' MAXIMUM OR AS NOTED ON PLANS.
6. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
7. WITHIN THE LIMITS OF A COMMERCIAL ENTRANCE, NON-PERFORATED PIPE SHALL BE UTILIZED IN LIEU OF PERFORATED PIPE.
8. THE LENGTH OF PIPE BETWEEN THE WYE CONNECTION AND THE EW-12 SHALL BE LIMITED TO NO MORE THAN 1'-0" TO PERMIT CAMERA INSPECTION OF THE MAIN LINE IN EITHER DIRECTION.
9. IN SITUATIONS WHEN FULL DEPTH OF STABILIZED OPEN-GRADED MATERIAL CANNOT BE MAINTAINED UNDER CURB AND GUTTER, NO. 21B AGGREGATE SHALL BE USED UNDER CURB AND GUTTER. NO. 21B AGGREGATE MAY ALSO BE USED FROM TOP OF STABILIZED OPEN-GRADED MATERIAL LAYER AND CURB AND GUTTER.

VDOT ROAD AND BRIDGE STANDARDS SHEET 1 OF 2 108.06

STANDARD PAVEMENT EDGEDRAIN VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

STANDARD PAVEMENT EDGEDRAIN VIRGINIA DEPARTMENT OF TRANSPORTATION 2016 ROAD & BRIDGE STANDARDS

**Typical Traffic Control
Shoulder Operation with Minor Encroachment
(Figure TTC-5.2)**

NOTES

- Standard**
- For required sign assemblies for multi-lane roadways see Note 1, TTC-4.1
 - Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
 - When work takes up part of a lane on a high volume roadway, vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.
- Option:**
- The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- Standard:**
- A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the first work crew.
 - Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
 - Taper length (L) and channelizing device spacing shall be at the following:**
- | Taper Length L | | | | | | | | | | | | |
|-------------------|-------------------|-----|-----|-----|----------|-------------------|-------------------|-----|-----|-----|---------|--|
| Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | |
| | 9 | 10 | 11 | 12 | | | 9 | 10 | 11 | 12 | | |
| 25 | 95 | 105 | 115 | 125 | L=S/W/60 | 50 | 450 | 500 | 550 | 600 | L=SW | |
| 30 | 135 | 150 | 165 | 180 | L=S/W/60 | 55 | 495 | 550 | 605 | 660 | L=SW | |
| 35 | 185 | 205 | 225 | 245 | L=S/W/60 | 60 | 540 | 600 | 660 | 720 | L=SW | |
| 40 | 240 | 270 | 295 | 320 | L=S/W/60 | 65 | 585 | 650 | 715 | 780 | L=SW | |
| 45 | 405 | 450 | 495 | 540 | L=SW | 70 | 630 | 700 | 770 | 840 | L=SW | |
- Limited Access highways shall use a 1000' merging taper regardless of the posted speed, a 750' shifting taper for posted speeds < 65 mph and a 1000' shifting taper for posted speeds ≥ 65 mph.²
Shoulder Taper = 1/2 L Minimum
- Channelizing device spacing shall be at the following:
- | Channelizing Device Spacing | | | | | |
|-----------------------------|-------------------|-----|------------------|-------------------|-----|
| Location Spacing | Speed Limit (mph) | | Location Spacing | Speed Limit (mph) | |
| | 0-35 | 36+ | | 0-35 | 36+ |
| Transition | 20' | 40' | Travelway | 40' | 80' |
- *Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.
- On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.²
 - The buffer space length. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
 - A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.
 - When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.
- 1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

**Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)**

NOTES

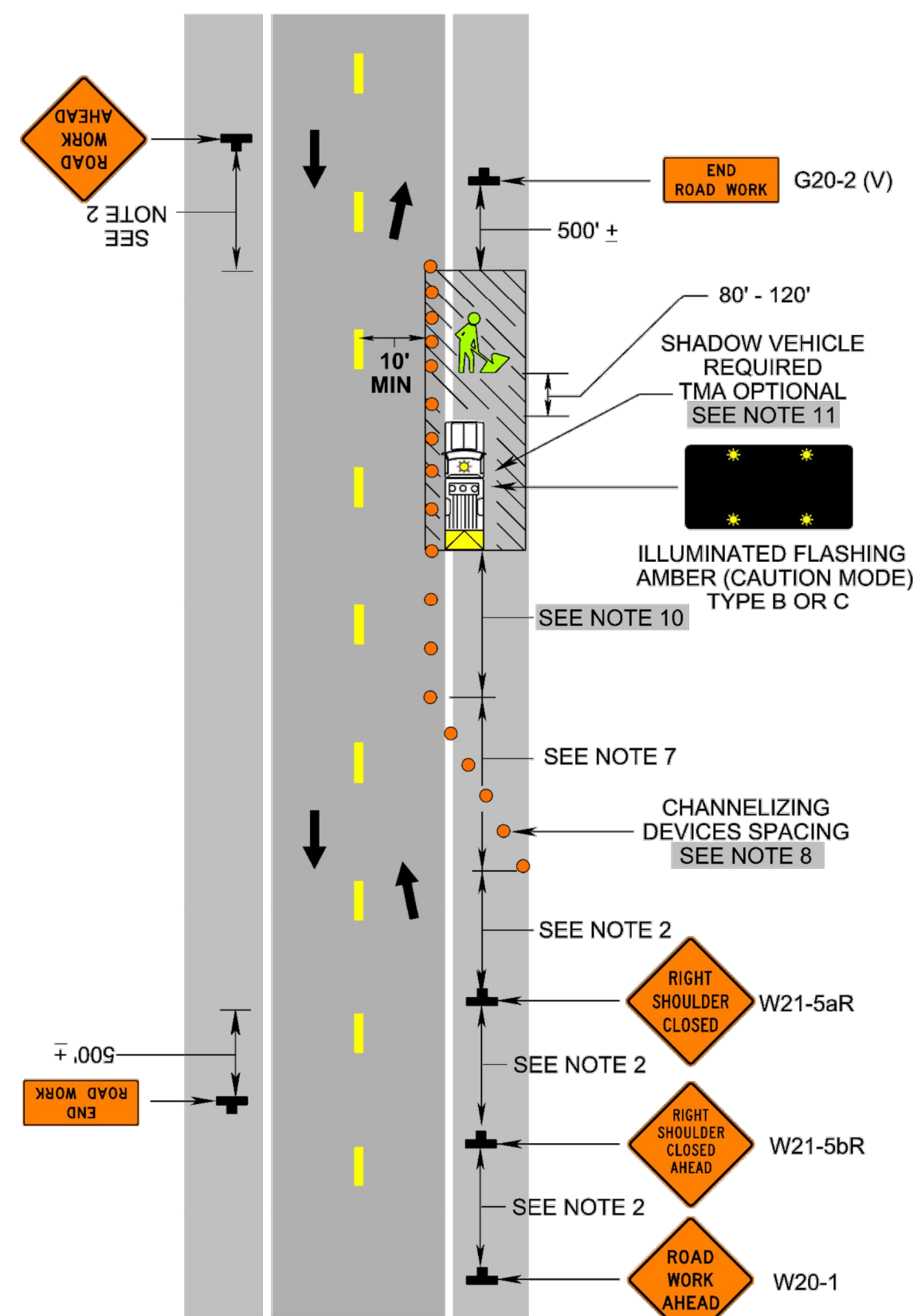
- Standard:**
- On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- Guidance:**
- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
 - When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.²
 - Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
 - All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.
- Standard:**
- Taper length (L) and channelizing device spacing shall be at the following:**
- | Taper Length L | | | | | | | | | | | | |
|-------------------|-------------------|-----|-----|-----|----------|-------------------|-------------------|-----|-----|-----|---------|--|
| Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | |
| | 9 | 10 | 11 | 12 | | | 9 | 10 | 11 | 12 | | |
| 25 | 95 | 105 | 115 | 125 | L=S/W/60 | 50 | 450 | 500 | 550 | 600 | L=SW | |
| 30 | 135 | 150 | 165 | 180 | L=S/W/60 | 55 | 495 | 550 | 605 | 660 | L=SW | |
| 35 | 185 | 205 | 225 | 245 | L=S/W/60 | 60 | 540 | 600 | 660 | 720 | L=SW | |
| 40 | 240 | 270 | 295 | 320 | L=S/W/60 | 65 | 585 | 650 | 715 | 780 | L=SW | |
| 45 | 405 | 450 | 495 | 540 | L=SW | 70 | 630 | 700 | 770 | 840 | L=SW | |
- Limited Access highways shall use a 1000' merging taper regardless of the posted speed.
Shifting Tapers see Table 6H-2.2
Shoulder Taper = 1/2 L Minimum
- Channelizing device spacing shall be at the following:
- | Channelizing Device Spacing | | | | | |
|-----------------------------|-------------------|-----|------------------|-------------------|-----|
| Location Spacing | Speed Limit (mph) | | Location Spacing | Speed Limit (mph) | |
| | 0-35 | 36+ | | 0-35 | 36+ |
| Transition | 20' | 40' | Travelway | 40' | 80' |
- *Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.
- An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
 - The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
 - A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
 - Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights.
 - When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.
- Option:**
- PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.2.
 - The supplemental PTRS may be eliminated.²
- 1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

**Typical Traffic Control
Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)**

NOTES

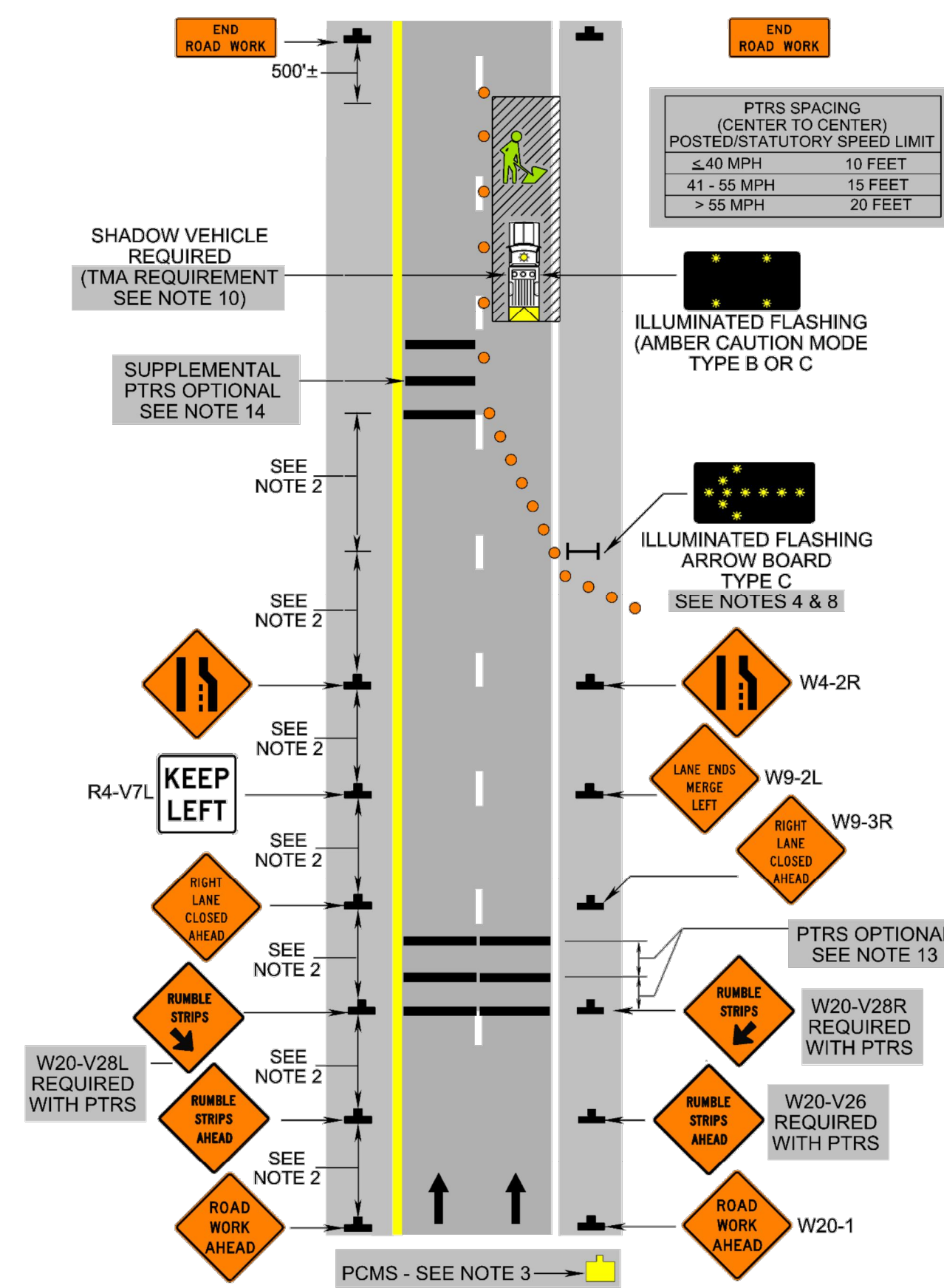
- Standard:**
- On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- Guidance:**
- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
 - When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.²
 - Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
 - All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.
- Standard:**
- Taper length (L) and channelizing device spacing shall be at the following:**
- | Taper Length L | | | | | | | | | | | | |
|-------------------|-------------------|-----|-----|-----|----------|-------------------|-------------------|-----|-----|-----|---------|--|
| Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | Speed Limit (mph) | Lane Width (Feet) | | | | Remarks | |
| | 9 | 10 | 11 | 12 | | | 9 | 10 | 11 | 12 | | |
| 25 | 95 | 105 | 115 | 125 | L=S/W/60 | 50 | 450 | 500 | 550 | 600 | L=SW | |
| 30 | 135 | 150 | 165 | 180 | L=S/W/60 | 55 | 495 | 550 | 605 | 660 | L=SW | |
| 35 | 185 | 205 | 225 | 245 | L=S/W/60 | 60 | 540 | 600 | 660 | 720 | L=SW | |
| 40 | 240 | 270 | 295 | 320 | L=S/W/60 | 65 | 585 | 650 | 715 | 780 | L=SW | |
| 45 | 405 | 450 | 495 | 540 | L=SW | 70 | 630 | 700 | 770 | 840 | L=SW | |
- Limited Access highways shall use a 1000' merging taper regardless of the posted speed.
Shifting Tapers see Table 6H-2.2
Shoulder Taper = 1/2 L Minimum
- Channelizing device spacing shall be at the following:
- | Channelizing Device Spacing | | | | | |
|-----------------------------|-------------------|-----|------------------|-------------------|-----|
| Location Spacing | Speed Limit (mph) | | Location Spacing | Speed Limit (mph) | |
| | 0-35 | 36+ | | 0-35 | 36+ |
| Transition | 20' | 40' | Travelway | 40' | 80' |
- *Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.
- An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
 - The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
 - A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
 - Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights.
 - When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.
- Option:**
- PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.2.
 - The supplemental PTRS may be eliminated.
- 1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

**Shoulder Operation with Minor Encroachment
(Figure TTC-5.2)**



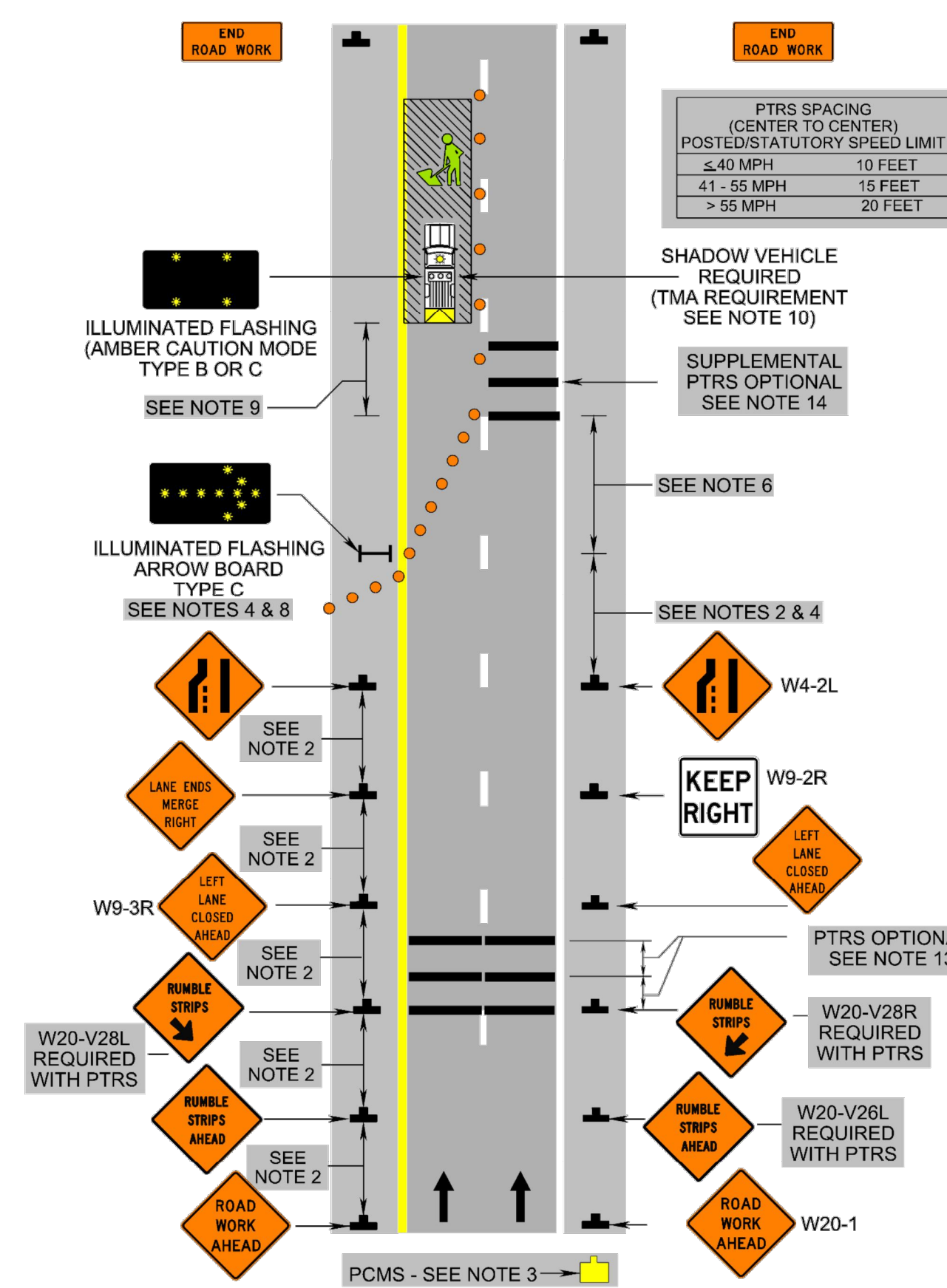
1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

**Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)**



2: Revision 2 - 9/1/2019

**Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)**



2: Revision 2 - 9/1/2019

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

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MATTHEW JAMES ARNONE #046567
PROFESSIONAL ENGINEER

APPROVALS DATE

J. P. Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER

John Nabe 01/12/2022
TRAFFIC ENGINEERING MANAGER

Collette 02/09/2022
WATER, SEWER, STREETS BUREAU CHIEF

Henry 01/07/2022
TE&O BUREAU CHIEF

Dennis W. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

STANDARD DETAILS
S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:

Filename: TRF02_1.dgn
Path: \\netw.com\csl\p\p\20111102_Arington\88\Task 1 - S. Glebe\Task 1.dgn
Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

Typical Traffic Control
Lane Closure Operation - Near Side of an Intersection
(Figure TTC-26.2)

NOTES

Guidance:
1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.

Standard:
2. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
3. Taper length (L) shall be at the following:

Table with columns: Speed Limit (mph), Lane Width (Feet), Taper Length L, Remarks. Rows include various speed limits and lane widths with corresponding taper lengths and remarks.

Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways 1/2 L should be used. Shoulder Taper = 1/2 L Minimum

4. Channelizing device spacing shall be at the following:

Table with columns: Location Spacing, Speed Limit (mph), Location Spacing, Speed Limit (mph). Rows show spacing requirements for different speed limits and locations.

Guidance:
5. If room permits, a shadow vehicle with at least one rotating, oscillating, or amber strobe light should be parked 80'-120' in advance of the first work crew.

Standard:
6. If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.

7. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or two high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.

Guidance:
8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.

Standard:
9. If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.

Option:
10. PTRS may be used as shown in Figure TTC-17 and in accordance with Section 6F-99.
11. The supplemental PTRS may be eliminated.

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Typical Traffic Control
Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)

NOTES

Standard:
1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.
2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

Guidance:
3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
4. Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.
5. Temporary markings should be considered for operations exceeding three days in duration.

Option:
6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.

7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

Standard:
8. In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.
9. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.

Support:
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD for crosswalk lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:
11. The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line.
12. Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Typical Traffic Control
Signing for Project Limits
(Figure TTC-53.0)

NOTES

Support:
1. This layout depicts signing requirements for notifying motorists when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

Standard:
2. The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.

3. The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.

4. The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.
5. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

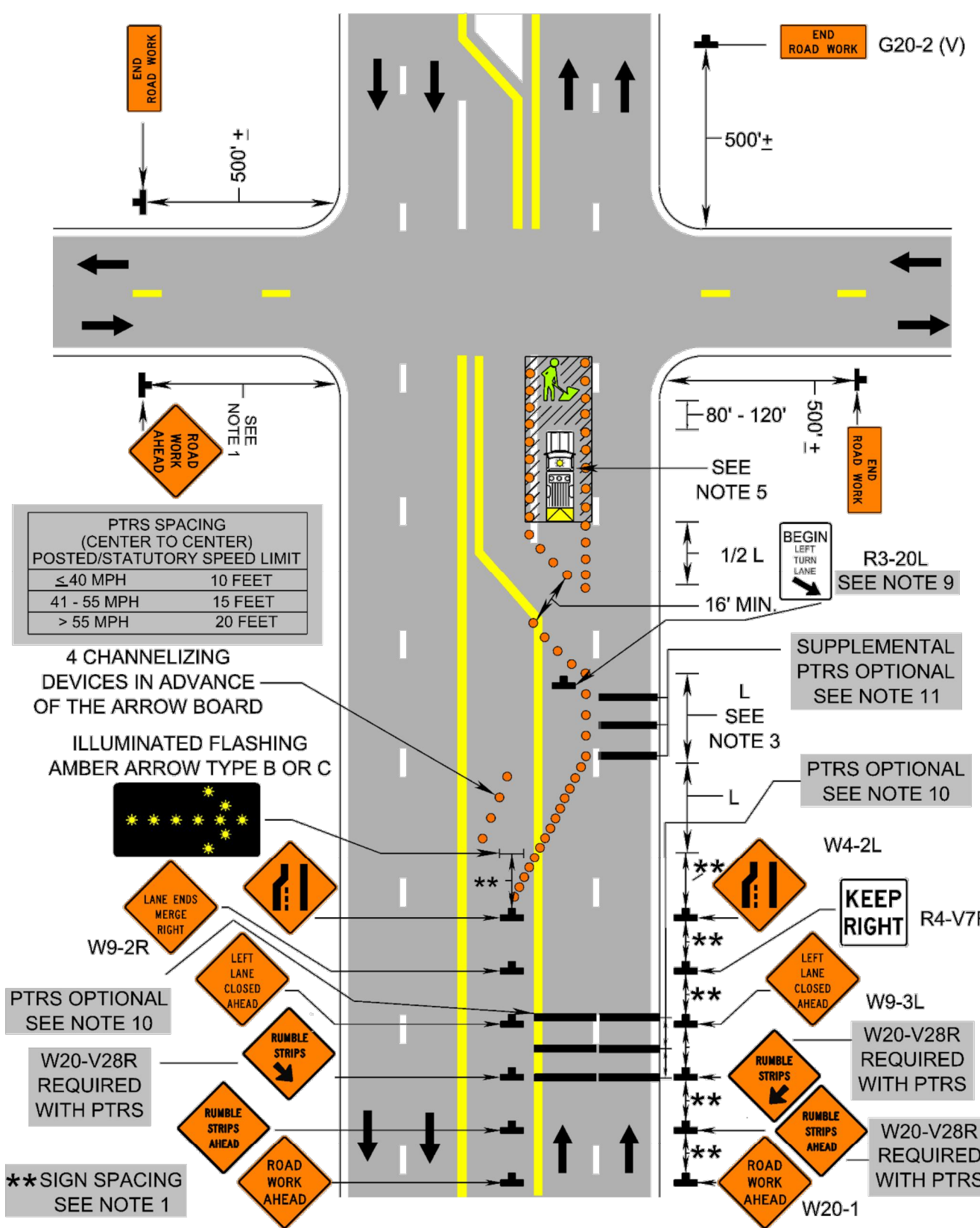
Guidance:
6. For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.

7. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

8. All connections within the project limits should be identified with signs indicating to motorists they are entering or exiting a potential construction/maintenance area.

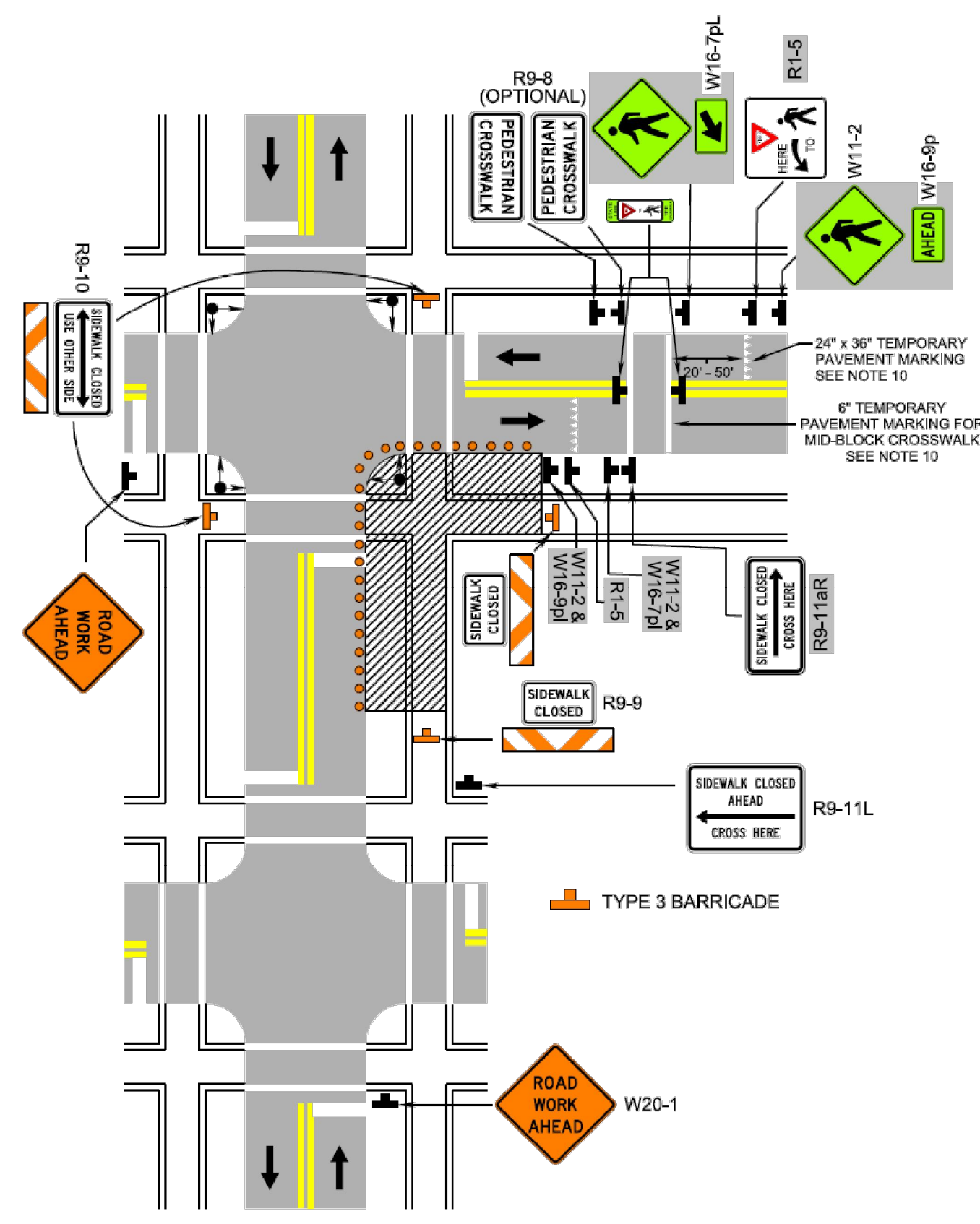
1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Lane Closure Operation - Near Side of an Intersection
(Figure TTC-26.2)



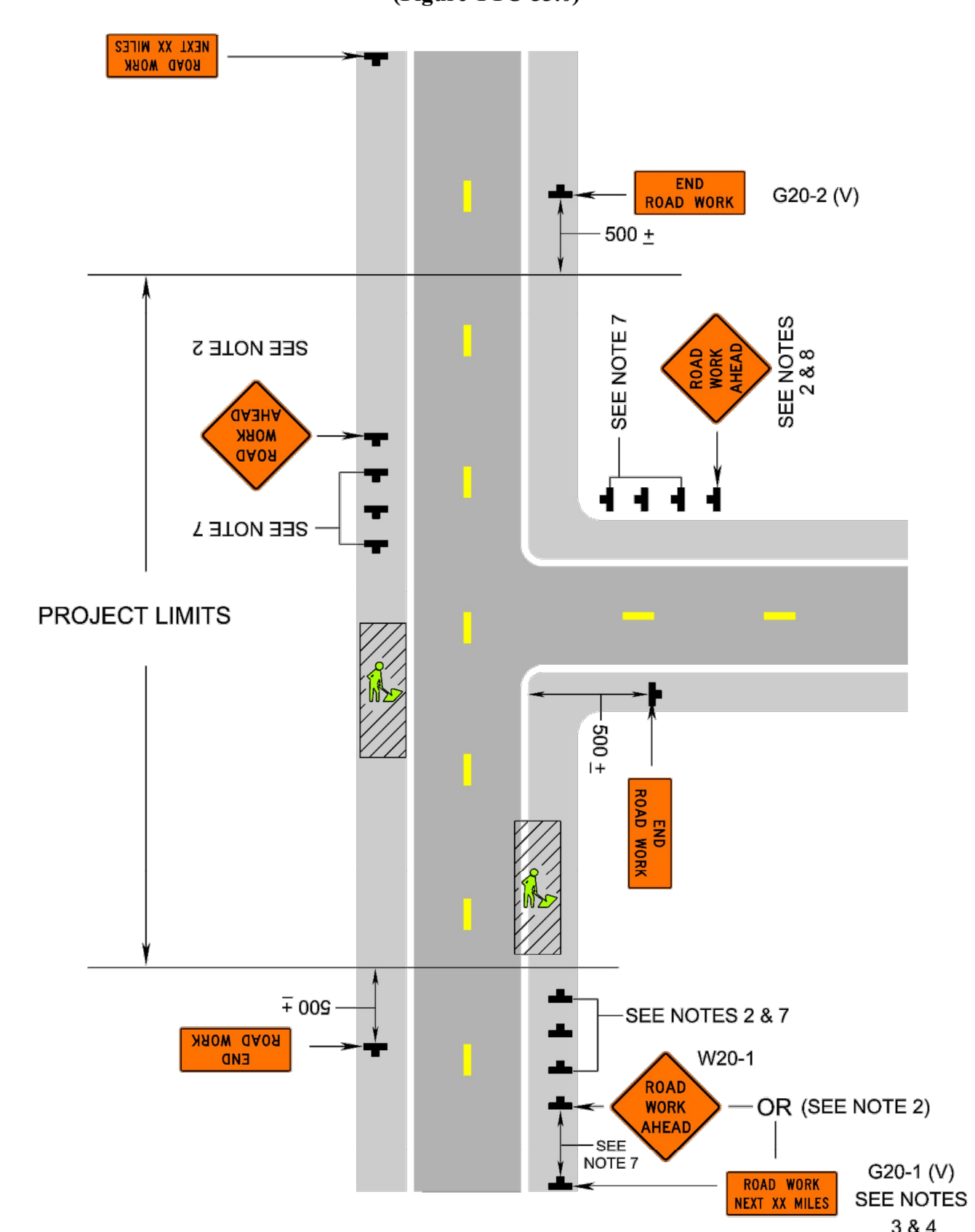
1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)



1: Revision 1 - 4/1/2015
2: Revision 2 - 7/1/2018

Signing for Project Limits
(Figure TTC-53.0)



1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719



Table with columns: APPROVALS, DATE. Lists signatures and dates for Traffic Signal Engineer, Traffic Engineering Manager, Water, Sewer, Streets Bureau Chief, and Transportation Director.

Table with columns: Revisions, Date. Shows a list of revisions and their dates.

Project Name and Location: S. Glebe Road Intersection Improvements
STANDARD DETAILS
S. Glebe Road at S. Arlington Ridge Road

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:
Filename: REF02_Layout.dwg
Path: \\net\work\civil\projects\20111112_Arlington\88\Task 1 - S. Glebe Road\0303.dwg
Plotted: November 15, 2021
Plotted by: kmita
Scale: N.T.S.

Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)

NOTES

Standard:

- 1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

Guidance:

- 2. Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.
- 3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
- 4. Temporary markings should be considered for operations exceeding three days in duration.

Option:

- 5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
- 6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
- 7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:

- 8. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.

2: Revision 2 - 9/1/2019



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Fax: 703.228.3719

Seal

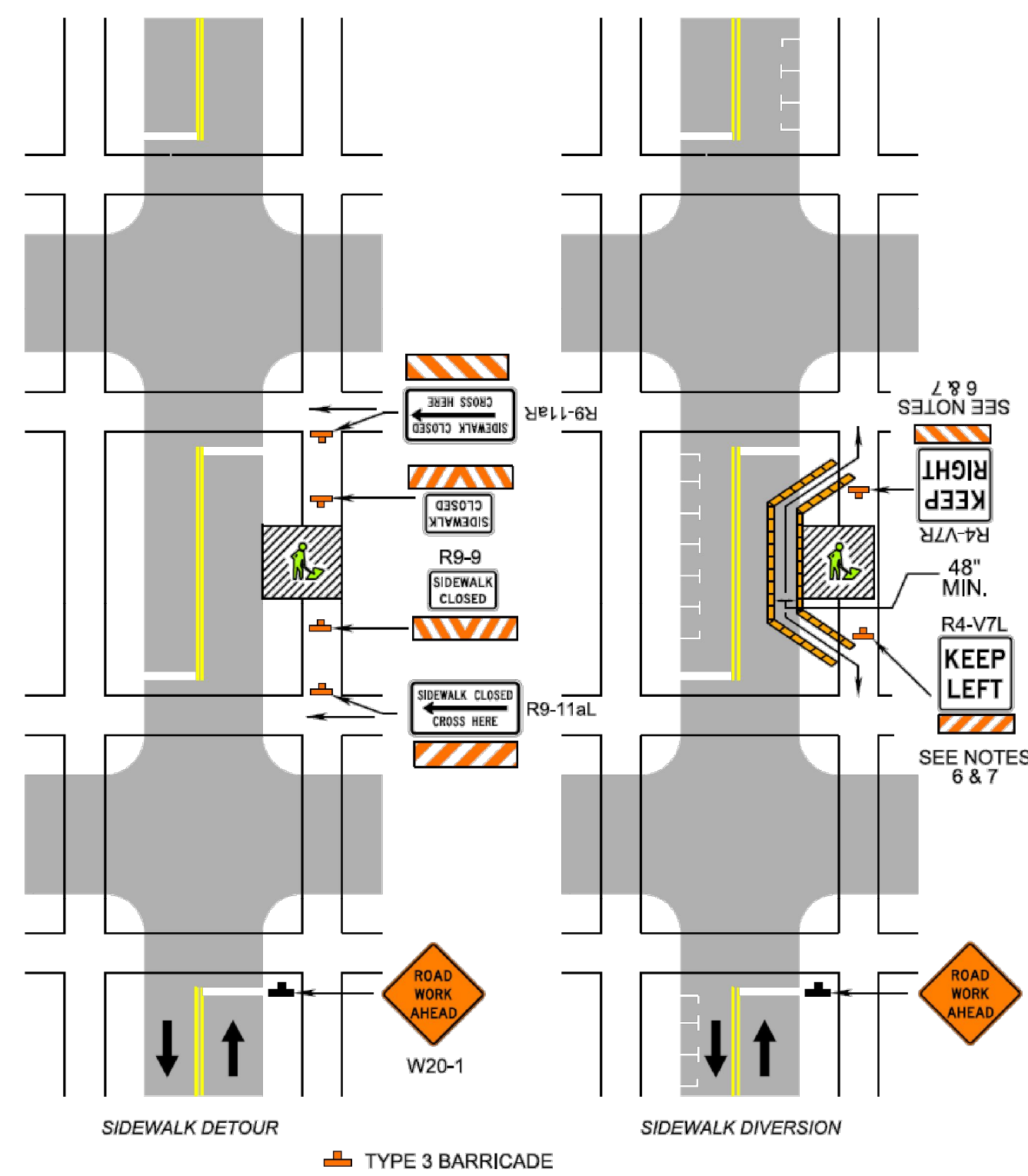


Matthew J. Arnone
11-17-21

APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)



2: Revision 2 - 9/1/2019

Project Name and Location
S. Glebe Road Intersection Improvements
STANDARD DETAILS
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: JMK
Drawn: JMK
Checked: JMK
Miss Utility Transmittal #:

Filename: TE07_1.dgn
Path: \\net\ms\cadd\p\proj\2021\1110_Arlington\TE07\Task 1 - S. Glebe Road\TE07.dgn
Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

NOTE

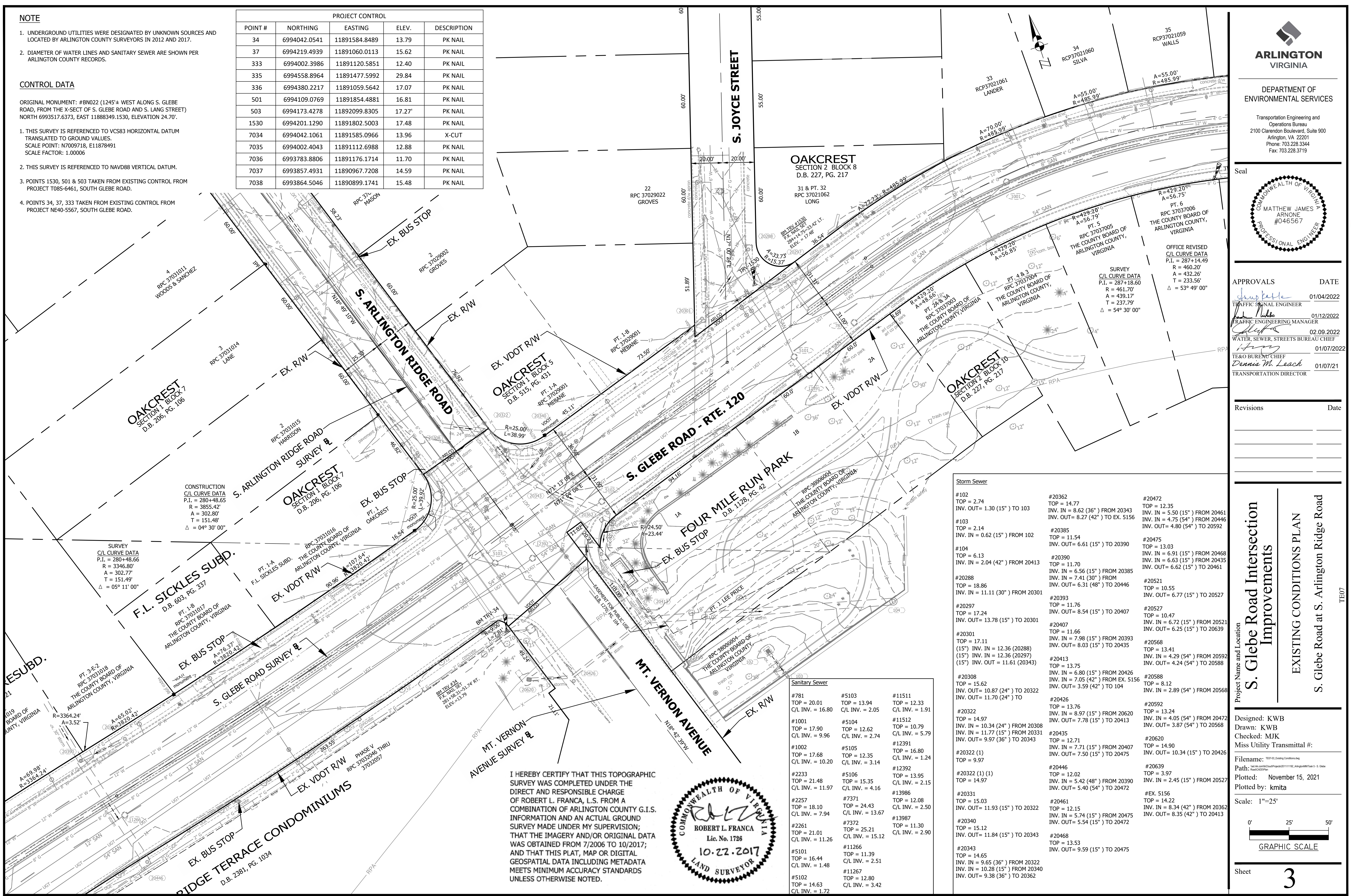
- UNDERGROUND UTILITIES WERE DESIGNATED BY UNKNOWN SOURCES AND LOCATED BY ARLINGTON COUNTY SURVEYORS IN 2012 AND 2017.
- DIAMETER OF WATER LINES AND SANITARY SEWER ARE SHOWN PER ARLINGTON COUNTY RECORDS.

CONTROL DATA

ORIGINAL MONUMENT: #BN022 (1245'± WEST ALONG S. GLEBE ROAD, FROM THE X-SECT OF S. GLEBE ROAD AND S. LANG STREET) NORTH 6993517.6373, EAST 11888349.1530, ELEVATION 24.70'.

- THIS SURVEY IS REFERENCED TO VCS83 HORIZONTAL DATUM TRANSLATED TO CONTROL VALUES.
SCALE POINT: N7009718, E11878491
SCALE FACTOR: 1.00006
- THIS SURVEY IS REFERENCED TO NAVD83 VERTICAL DATUM.
- POINTS 1530, 501 & 503 TAKEN FROM EXISTING CONTROL FROM PROJECT T085-6461, SOUTH GLEBE ROAD.
- POINTS 34, 37, 333 TAKEN FROM EXISTING CONTROL FROM PROJECT NE40-5567, SOUTH GLEBE ROAD.

PROJECT CONTROL				
POINT #	NORTHING	EASTING	ELEV.	DESCRIPTION
34	6994042.0541	11891584.8489	13.79	PK NAIL
37	6994219.4939	11891060.0113	15.62	PK NAIL
333	6994002.3986	11891120.5851	12.40	PK NAIL
335	6994558.8964	11891477.5992	29.84	PK NAIL
336	6994380.2217	11891059.5642	17.07	PK NAIL
501	6994109.0769	11891854.4881	16.81	PK NAIL
503	6994173.4278	11892099.8305	17.27	PK NAIL
1530	6994201.1290	11891802.5003	17.48	PK NAIL
7034	6994042.1061	11891585.0966	13.96	X-CUT
7035	6994002.4043	11891112.6988	12.88	PK NAIL
7036	6993783.8806	11891176.1714	11.70	PK NAIL
7037	6993857.4931	11890967.7208	14.59	PK NAIL
7038	6993864.5046	11890899.1741	15.48	PK NAIL



CONSTRUCTION
C/L CURVE DATA
P.I. = 280+48.65
R = 3855.42'
A = 302.80°
T = 151.49'
Δ = 04° 30' 00"

SURVEY
C/L CURVE DATA
P.I. = 280+48.66
R = 3346.80'
A = 302.77°
T = 151.49'
Δ = 05° 11' 00"

PT. 1-B
RPC 37031017
THE COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA

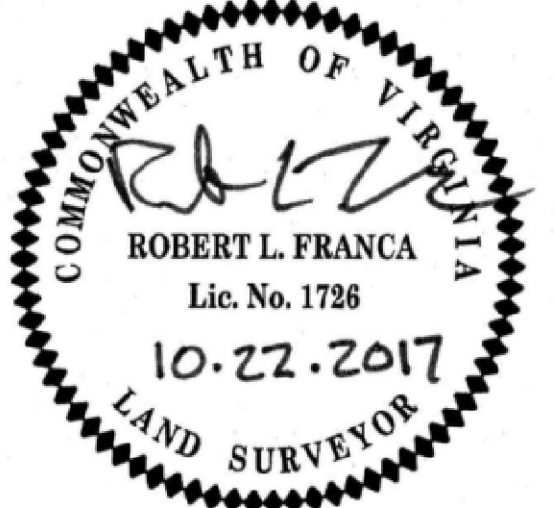
PT. 3-E2
RPC 37031018
THE COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA

PT. 1-A
F.L. SICKLES SUBD.
ARLINGTON COUNTY, VIRGINIA

PT. 1-B
RPC 37031016
THE COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA

PHASE V
RPC 37032046 THRU
37032057

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF ROBERT L. FRANCA, L.S. FROM A COMBINATION OF ARLINGTON COUNTY G.I.S. INFORMATION AND AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 7/2006 TO 10/2017; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



Sanitary Sewer					
#781	TOP = 20.01 C/L INV. = 16.80	#5103	TOP = 13.94 C/L INV. = 2.05	#11511	TOP = 12.33 C/L INV. = 1.91
#1001	TOP = 17.90 C/L INV. = 9.96	#5104	TOP = 12.62 C/L INV. = 2.74	#11512	TOP = 10.79 C/L INV. = 5.79
#1002	TOP = 17.68 C/L INV. = 10.20	#5105	TOP = 12.35 C/L INV. = 3.14	#12391	TOP = 16.80 C/L INV. = 1.24
#2233	TOP = 21.48 C/L INV. = 11.97	#5106	TOP = 15.35 C/L INV. = 4.16	#12392	TOP = 13.95 C/L INV. = 2.15
#2257	TOP = 18.10 C/L INV. = 7.94	#7371	TOP = 24.43 C/L INV. = 13.67	#13986	TOP = 12.08 C/L INV. = 2.50
#2261	TOP = 21.01 C/L INV. = 11.26	#7372	TOP = 25.21 C/L INV. = 15.12	#13987	TOP = 11.30 C/L INV. = 2.90
#5101	TOP = 16.44 C/L INV. = 1.48	#11266	TOP = 11.39 C/L INV. = 2.51	#11267	TOP = 12.80 C/L INV. = 3.42
#5102	TOP = 14.63 C/L INV. = 1.72				

Storm Sewer					
#102	TOP = 2.74 INV. OUT = 1.30 (15') TO 103	#20362	TOP = 14.77 INV. IN = 8.62 (36') FROM 20343 INV. OUT = 8.27 (42') TO EX. 5156	#20472	TOP = 12.35 INV. IN = 5.50 (15') FROM 20461 INV. OUT = 4.80 (54') TO 20592
#103	TOP = 2.14 INV. IN = 0.62 (15') FROM 102	#20385	TOP = 11.54 INV. OUT = 6.61 (15') TO 20390	#20475	TOP = 13.03 INV. IN = 6.91 (15') FROM 20468 INV. IN = 6.63 (15') FROM 20435 INV. OUT = 6.62 (15') TO 20461
#104	TOP = 6.13 INV. IN = 2.04 (42') FROM 20413	#20390	TOP = 11.70 INV. IN = 6.56 (15') FROM 20385 INV. IN = 7.41 (30') FROM 20446	#20521	TOP = 10.55 INV. OUT = 6.77 (15') TO 20527
#20288	TOP = 18.86 INV. IN = 11.11 (30') FROM 20301	#20393	TOP = 11.76 INV. OUT = 8.54 (15') TO 20407	#20527	TOP = 10.47 INV. IN = 6.72 (15') FROM 20521 INV. OUT = 6.25 (15') TO 20639
#20297	TOP = 17.24 INV. OUT = 13.78 (15') TO 20301	#20407	TOP = 11.66 INV. IN = 7.98 (15') FROM 20393 INV. OUT = 8.03 (15') TO 20435	#20568	TOP = 13.41 INV. IN = 4.29 (54') FROM 20592 INV. OUT = 4.24 (54') TO 20588
#20301	TOP = 17.11 (15') INV. IN = 12.36 (20288) (15') INV. IN = 12.36 (20297) (15') INV. OUT = 11.61 (20343)	#20413	TOP = 13.75 INV. IN = 6.80 (15') FROM 20426 INV. IN = 7.05 (42') FROM EX. 5156 INV. OUT = 3.59 (42') TO 104	#20588	TOP = 8.12 INV. IN = 2.89 (54') FROM 20568
#20308	TOP = 15.62 INV. OUT = 10.87 (24') TO 20322 INV. OUT = 11.70 (24') TO	#20426	TOP = 13.76 INV. IN = 8.97 (15') FROM 20620 INV. OUT = 7.78 (15') TO 20413	#20592	TOP = 13.24 INV. IN = 4.05 (54') FROM 20472 INV. OUT = 3.87 (54') TO 20568
#20322	TOP = 14.97 INV. IN = 10.34 (24') FROM 20308 INV. IN = 11.77 (15') FROM 20331 INV. OUT = 9.97 (36') TO 20343	#20435	TOP = 12.71 INV. IN = 7.71 (15') FROM 20407 INV. OUT = 7.50 (15') TO 20475	#20620	TOP = 14.90 INV. OUT = 10.34 (15') TO 20426
#20322 (1)	TOP = 9.97	#20446	TOP = 12.02 INV. IN = 5.42 (48') FROM 20390 INV. OUT = 5.40 (54') TO 20472	#20639	TOP = 3.97 INV. IN = 2.45 (15') FROM 20527
#20322 (1) (1)	TOP = 14.97	#20461	TOP = 12.15 INV. IN = 5.74 (15') FROM 20475 INV. OUT = 5.54 (15') TO 20472	#EX. 5156	TOP = 14.22 INV. IN = 8.34 (42') FROM 20362 INV. OUT = 8.35 (42') TO 20413
#20331	TOP = 15.03 INV. OUT = 11.93 (15') TO 20322	#20468	TOP = 13.53 INV. OUT = 9.59 (15') TO 20475		
#20343	TOP = 14.65 INV. IN = 9.65 (36') FROM 20322 INV. IN = 10.28 (15') FROM 20340 INV. OUT = 9.38 (36') TO 20362				



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
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Arlington, VA 22201
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Fax: 703.228.3719



APPROVALS

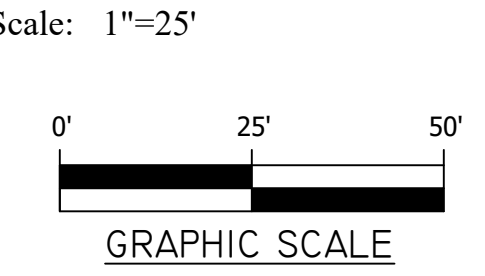
Name	Date
J. K. [Signature]	01/04/2022
[Signature]	01/12/2022
[Signature]	02/09/2022
[Signature]	01/07/2022
Dennis W. Leach	01/07/21

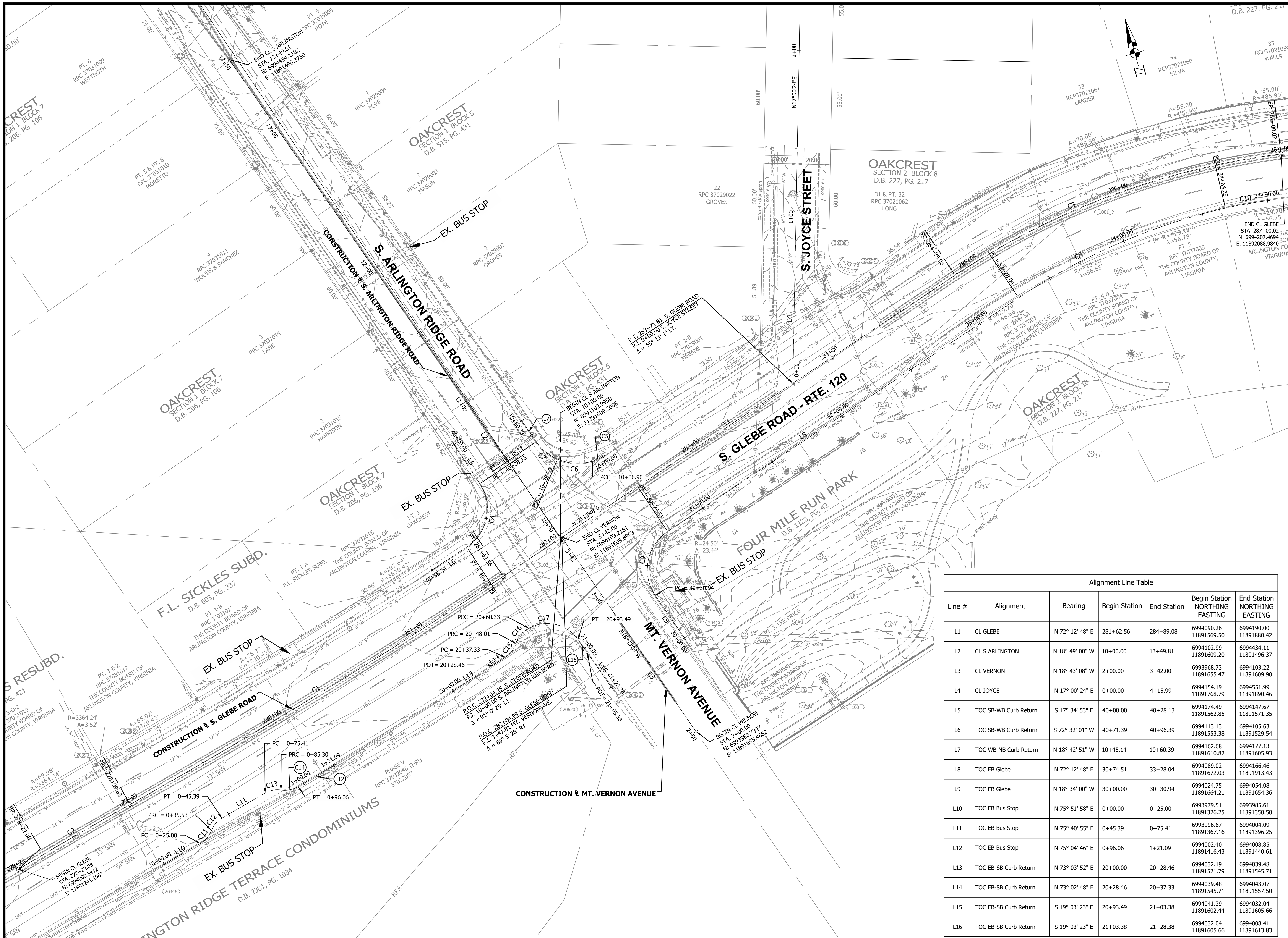
Revisions

No.	Description	Date

S. Glebe Road Intersection Improvements
EXISTING CONDITIONS PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: KWB
Drawn: KWB
Checked: MJK
Miss Utility Transmittal #:
Filename: [Path]
Plotted: November 15, 2021
Plotted by: KWB





Line #	Alignment	Bearing	Begin Station	End Station	Begin Station NORTHING EASTING	End Station NORTHING EASTING
L1	CL GLEBE	N 72° 12' 48" E	281+62.56	284+89.08	6994090.26 11891569.50	6994190.00 11891880.42
L2	CL S ARLINGTON	N 18° 49' 00" W	10+00.00	13+49.81	6994102.99 11891609.20	6994434.11 11891496.37
L3	CL VERNON	N 18° 43' 08" W	2+00.00	3+42.00	6993968.73 11891655.47	6994103.22 11891609.90
L4	CL JOYCE	N 17° 00' 24" E	0+00.00	4+15.99	6994154.19 11891768.79	6994551.99 11891890.46
L5	TOC SB-WB Curb Return	S 17° 34' 53" E	40+00.00	40+28.13	6994174.49 11891562.85	6994147.67 11891571.35
L6	TOC SB-WB Curb Return	S 72° 32' 01" W	40+71.39	40+96.39	6994113.13 11891553.38	6994105.63 11891529.54
L7	TOC WB-NB Curb Return	N 18° 42' 51" W	10+45.14	10+60.39	6994162.68 11891610.82	6994177.13 11891605.93
L8	TOC EB Glebe	N 72° 12' 48" E	30+74.51	33+28.04	6994089.02 11891672.03	6994166.46 11891913.43
L9	TOC EB Glebe	N 18° 34' 00" W	30+00.00	30+30.94	6994024.75 11891664.21	6994054.08 11891654.36
L10	TOC EB Bus Stop	N 75° 51' 58" E	0+00.00	0+25.00	6993979.51 11891326.25	6993985.61 11891350.50
L11	TOC EB Bus Stop	N 75° 40' 55" E	0+45.39	0+75.41	6993996.67 11891367.16	6994004.09 11891396.25
L12	TOC EB Bus Stop	N 75° 04' 46" E	0+96.06	1+21.09	6994002.40 11891416.43	6994008.85 11891440.61
L13	TOC EB-SB Curb Return	N 73° 03' 52" E	20+00.00	20+28.46	6994032.19 11891521.79	6994039.48 11891545.71
L14	TOC EB-SB Curb Return	N 73° 02' 48" E	20+28.46	20+37.33	6994039.48 11891545.71	6994043.07 11891557.50
L15	TOC EB-SB Curb Return	S 19° 03' 23" E	20+93.49	21+03.38	6994041.39 11891602.44	6994032.04 11891605.66
L16	TOC EB-SB Curb Return	S 19° 03' 23" E	21+03.38	21+28.38	6994032.04 11891605.66	6994008.41 11891613.83



DEPARTMENT OF ENVIRONMENTAL SERVICES

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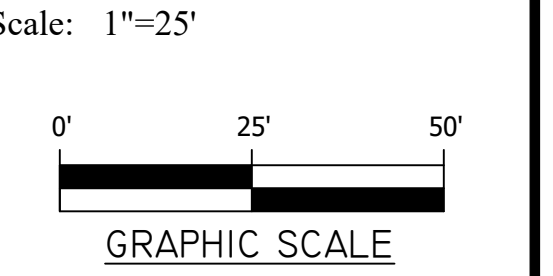
APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

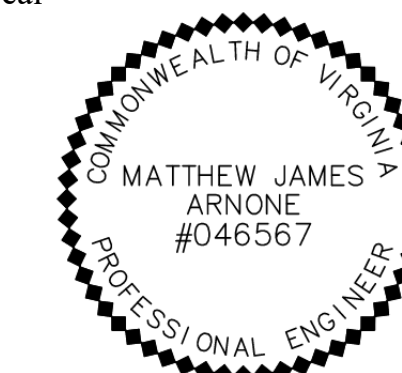
Project Name and Location
S. Glebe Road Intersection Improvements
GEOMETRIC CONTROL PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: JMK
Drawn: JMK
Checked: MJK
Miss Utility Transmittal #:

Filename: TEST04_Geometric Control Plan.dwg
Path: \\net\k\con\proj\2021\11112_Arnone\88\Task 1 - S. Glebe Road\GIS\Plan
Plotted: November 15, 2021
Plotted by: kmitta



Seal



Matthew J. Arnone
11-13-21

APPROVALS DATE

Jung Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER
John Nallo 01/12/2022
TRAFFIC ENGINEERING MANAGER
Edgardo 02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF
Henry 01/07/2022
TE&O BUREAU CHIEF
Dennis W. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions Date

Revisions	Date

Alignment Curve Table															
Curve #	Alignment	PC STATION	PI STATION	PT STATION	DELTA	DEGREE	TANGENT	RADIUS	EXTERNAL	CHORD	LENGTH	MID. ORD.	BEARING BACK BEARING AHEAD	NORTHING PC PI PT	EASTING PC PI PT
C1	CL GLEBE	278+99.63	280+31.16	281+62.56	4° 27' 34"	1° 41' 46"	131.53'	3378.08'	2.56	262.86	262.93'	2.56	N76° 40' 34"E N72° 13' 00"E	6994019.7756 6994050.0873 6994090.2590	11891316.2670 11891444.2563 11891569.5012
C2	CL GLEBE	278+22.08	278+60.86	278+99.63	1° 57' 56"	2° 32' 04"	38.78'	2260.58'	0.33	77.55	77.55'	0.33	N74° 42' 38"E N76° 40' 34"E	6994000.6128 6994010.8387 6994019.7756	11891241.1248 11891278.5315 11891316.2670
C3	CL GLEBE	284+89.08	285+96.48	287+00.02	26° 33' 45"	12° 35' 33"	107.40'	455.00'	12.50	209.06	210.94'	12.17	N72° 12' 48"E S81° 13' 27"E	6994190.0038 6994222.8119 6994206.4258	11891880.4182 11891982.6850 11892088.8282
C4	TOC SB-WB Curb Return	40+28.13	40+55.69	40+71.39	90° 07' 36"	208° 22' 11"	27.56'	27.50'	11.43	38.93	43.25'	8.08	S17° 35' 14"E S72° 32' 22"W	6994147.6728 6994121.4029 6994113.1341	11891571.3452 11891579.6721 11891553.3839
C5	TOC WB-NB Curb Return	10+00.00	10+03.47	10+06.90	16° 14' 11"	235° 25' 14"	3.47'	24.34'	0.25	6.87	6.90'	0.24	S73° 16' 11"W S89° 30' 21"W	6994143.1606 6994142.1612 6994142.1313	11891646.9268 11891643.6021 11891640.1306
C6	TOC WB-NB Curb Return	10+06.90	10+18.05	10+28.34	38° 45' 52"	180° 47' 46"	11.15'	31.69'	1.90	21.03	21.44'	1.80	S89° 53' 46"W N51° 20' 22"W	6994142.1313 6994142.1111 6994149.0760	11891640.1306 11891628.9816 11891620.2757
C7	TOC WB-NB Curb Return	10+28.34	10+36.98	10+45.14	32° 50' 31"	195° 29' 28"	8.64'	29.31'	1.25	16.57	16.80'	1.20	N51° 13' 26"W N18° 22' 56"W	6994149.0760 6994154.4855 6994162.6824	11891620.2757 11891613.5418 11891610.8179
C8	TOC EB Glebe	33+28.04	33+96.87	34+64.25	20° 24' 11"	14° 58' 45"	68.83'	382.50'	6.14	135.49	136.21'	6.05	N72° 12' 48"E S87° 23' 01"E	6994166.4635 6994187.4903 6994184.3481	11891913.4320 11891978.9753 11892047.7370
C9	TOC EB Glebe	30+30.94	30+58.82	30+74.51	90° 46' 48"	208° 20' 54"	27.88'	27.50'	11.66	39.15	43.57'	8.19	N18° 34' 00"W N72° 12' 48"E	6994054.0766 6994080.5027 6994089.0184	11891654.3579 11891645.4816 11891672.0261
C10	TOC EB Glebe	34+64.25	34+77.13	34+90.00	3° 59' 13"	15° 28' 50"	12.88'	370.11'	0.22	25.75	25.75'	0.22	S86° 02' 12"E S82° 02' 59"E	6994184.3481 6994183.4577 6994181.6759	11892047.7370 11892060.5882 11892073.3465
C11	TOC EB Bus Stop	0+25.00	0+30.48	0+35.53	38° 54' 20"	369° 39' 00"	5.47'	15.50'	0.94	10.32	10.52'	0.88	N75° 52' 28"E N36° 58' 08"E	6993985.6132 6993986.9492 6993991.3231	11891350.4975 11891355.8064 11891359.0987
C12	TOC EB Bus Stop	0+35.53	0+40.66	0+45.39	38° 57' 55"	395° 08' 36"	5.13'	14.50'	0.88	9.67	9.86'	0.83	N36° 58' 08"E N75° 56' 03"E	6993991.3231 6993995.4216 6993996.6683	11891359.0987 11891362.1836 11891367.1595
C13	TOC EB Bus Stop	0+75.41	0+80.55	0+85.30	39° 04' 41"	395° 08' 36"	5.15'	14.50'	0.89	9.70	9.89'	0.83	N75° 25' 48"E S65° 29' 31"E	6994004.0924 6994005.3869 6994003.2524	11891396.2475 11891401.2278 11891405.9100
C14	TOC EB Bus Stop	0+85.30	0+90.91	0+96.06	39° 47' 29"	369° 39' 01"	5.61'	15.50'	0.98	10.55	10.76'	0.93	S65° 29' 31"E N74° 43' 00"E	6994003.2524 6994000.9254 6994002.4040	11891405.9100 11891411.0142 11891416.4254
C15	TOC EB-SB Curb Return	20+37.33	20+42.89	20+48.01	39° 28' 59"	369° 39' 01"	5.56'	15.50'	0.97	10.47	10.68'	0.91	N73° 02' 46"E N33° 33' 47"E	6994043.0691 6994044.6911 6994049.3262	11891557.4995 11891562.8203 11891565.8955
C16	TOC EB-SB Curb Return	20+48.01	20+54.52	20+60.33	46° 09' 44"	374° 44' 23"	6.52'	15.29'	1.33	11.99	12.32'	1.22	N79° 43' 31"E N76° 28' 42"E	6994049.3262 6994054.7555 6994055.9177	11891565.8955 11891569.4977 11891575.9087
C17	TOC EB-SB Curb Return	20+60.33	20+80.75	20+93.49	84° 27' 56"	254° 38' 52"	20.43'	22.50'	7.89	30.25	33.17'	5.84	N76° 28' 42"E S19° 03' 23"E	6994055.9177 6994060.6934 6994041.3875	11891575.9087 11891595.7677 11891602.4365

Project Name and Location

**S. Glebe Road Intersection
Improvements**

GEOMETRIC CONTROL PLAN

S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: JMK
Drawn: JMK
Checked: MJK
Miss Utility Transmittal #:

Filename: TE07_Geometric Control Plan.dwg
Path: \\ark.com\Cad\Projects\20111102_Arlington\Task 1 - S. Glebe
Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

Sheet

4A

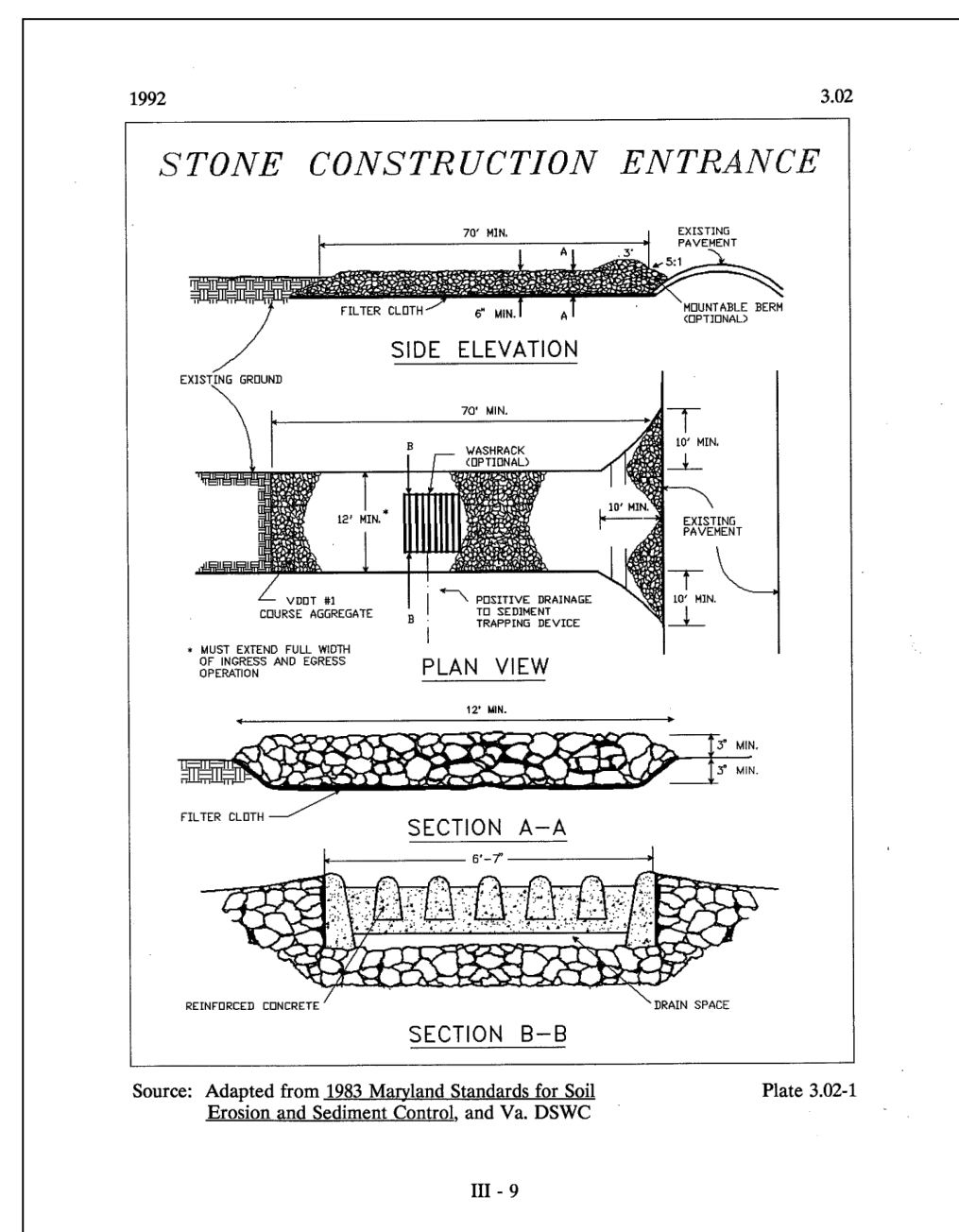
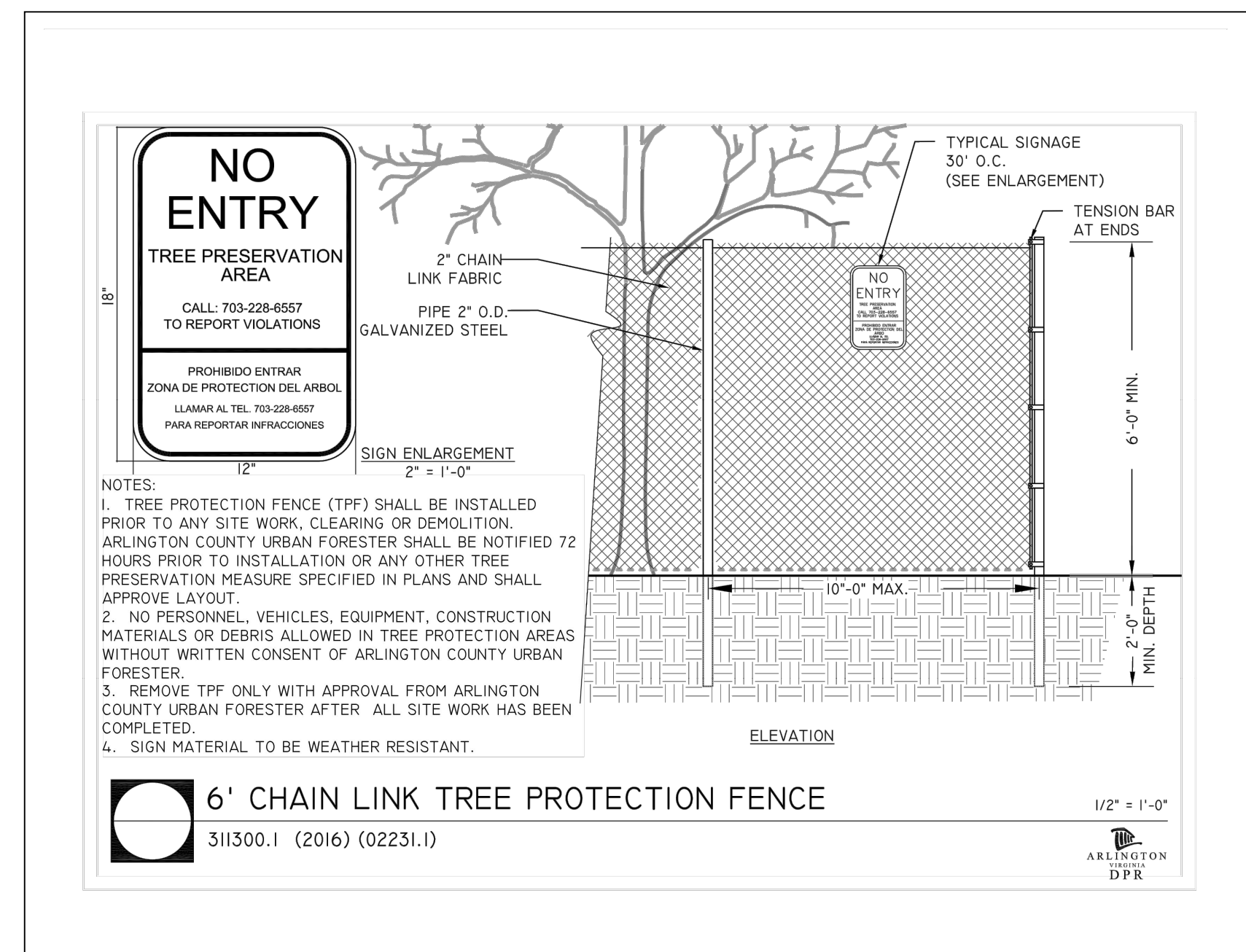
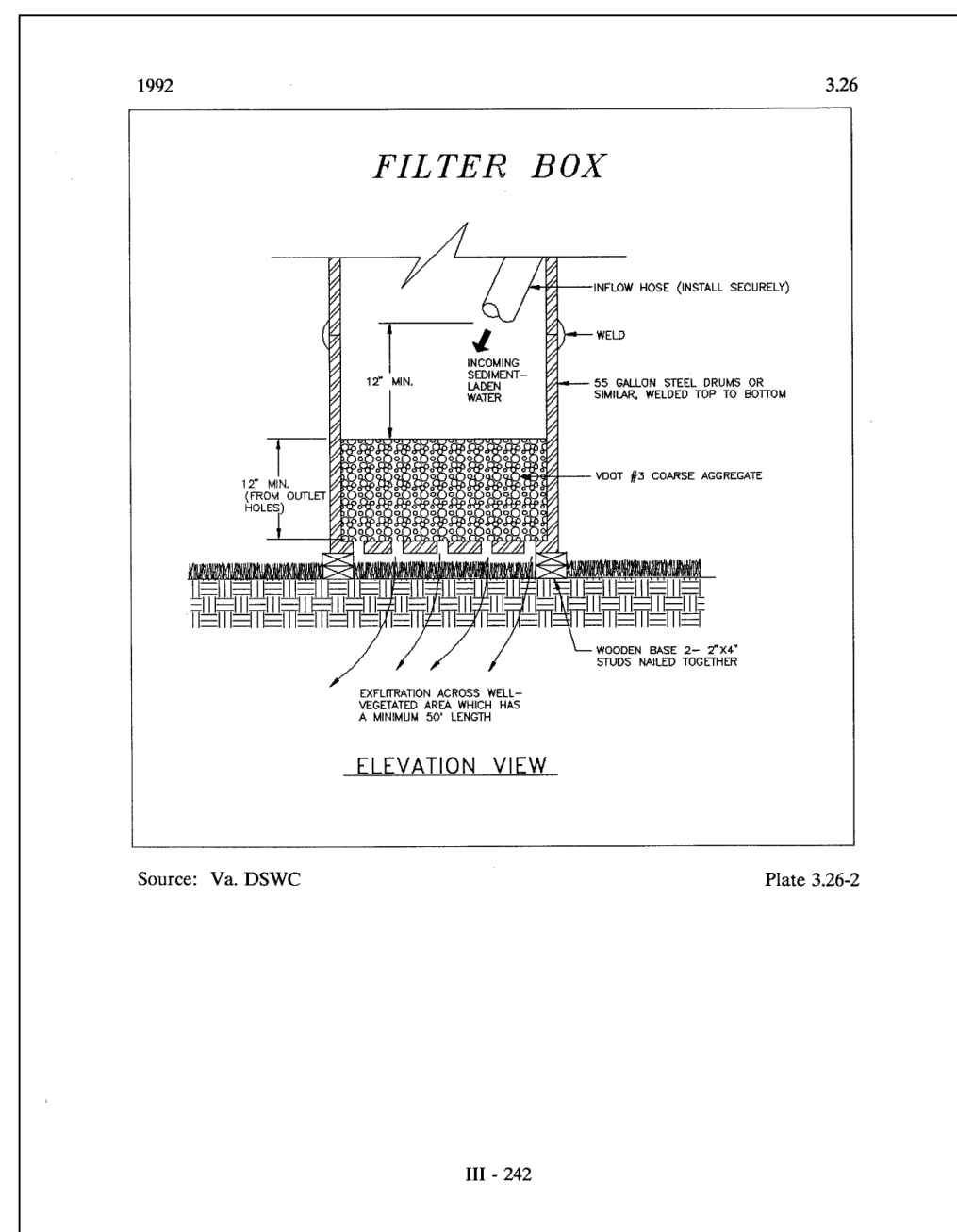
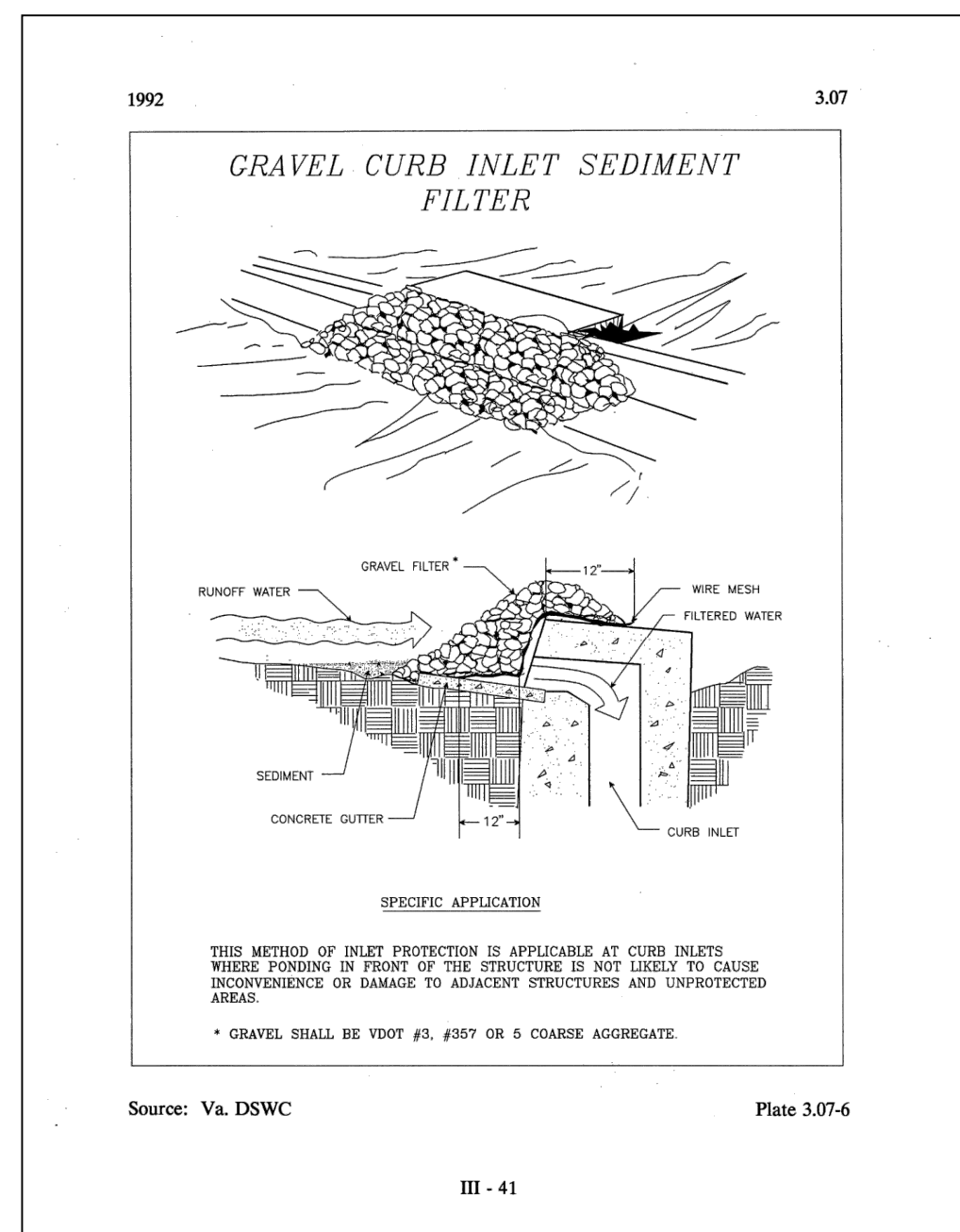
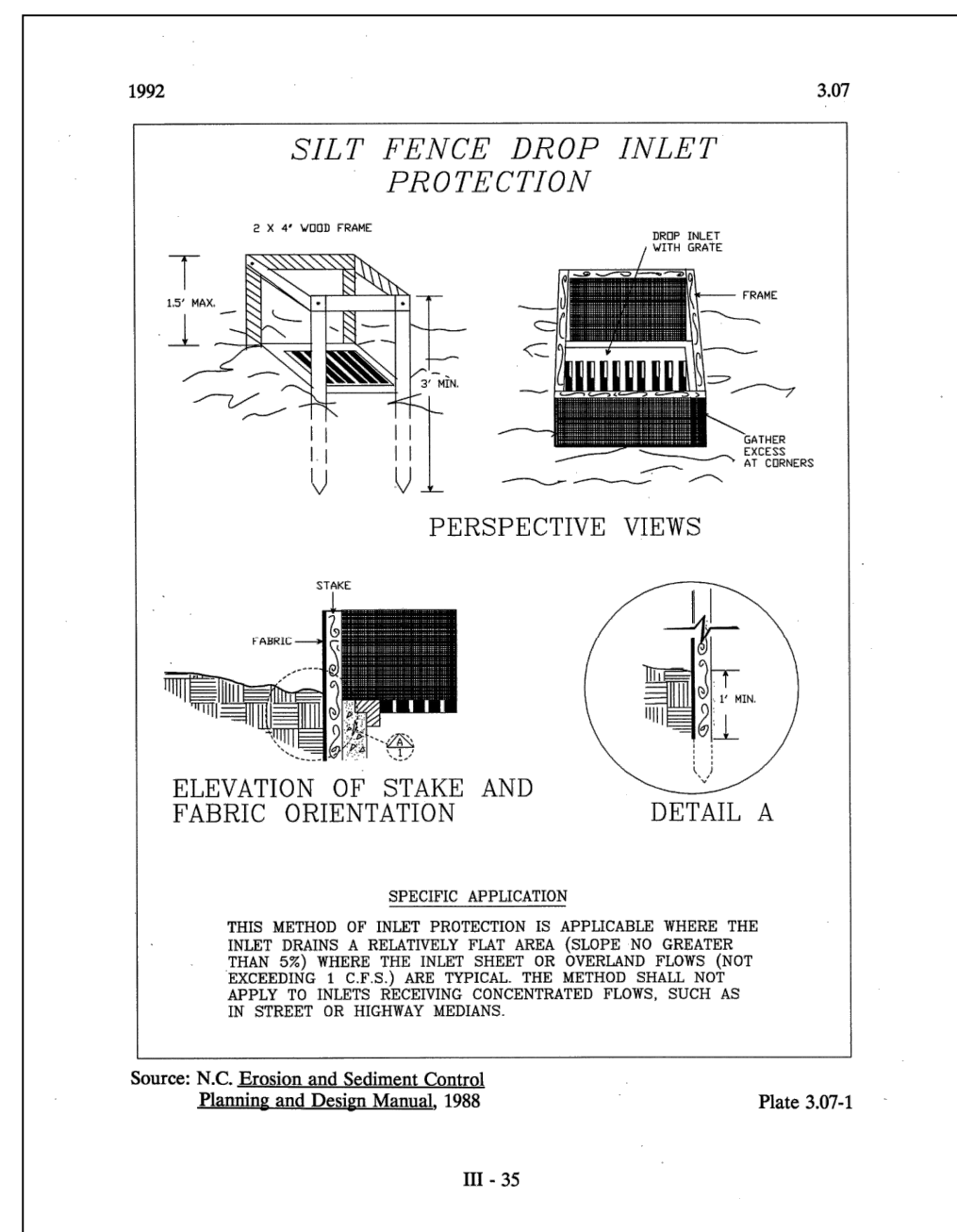
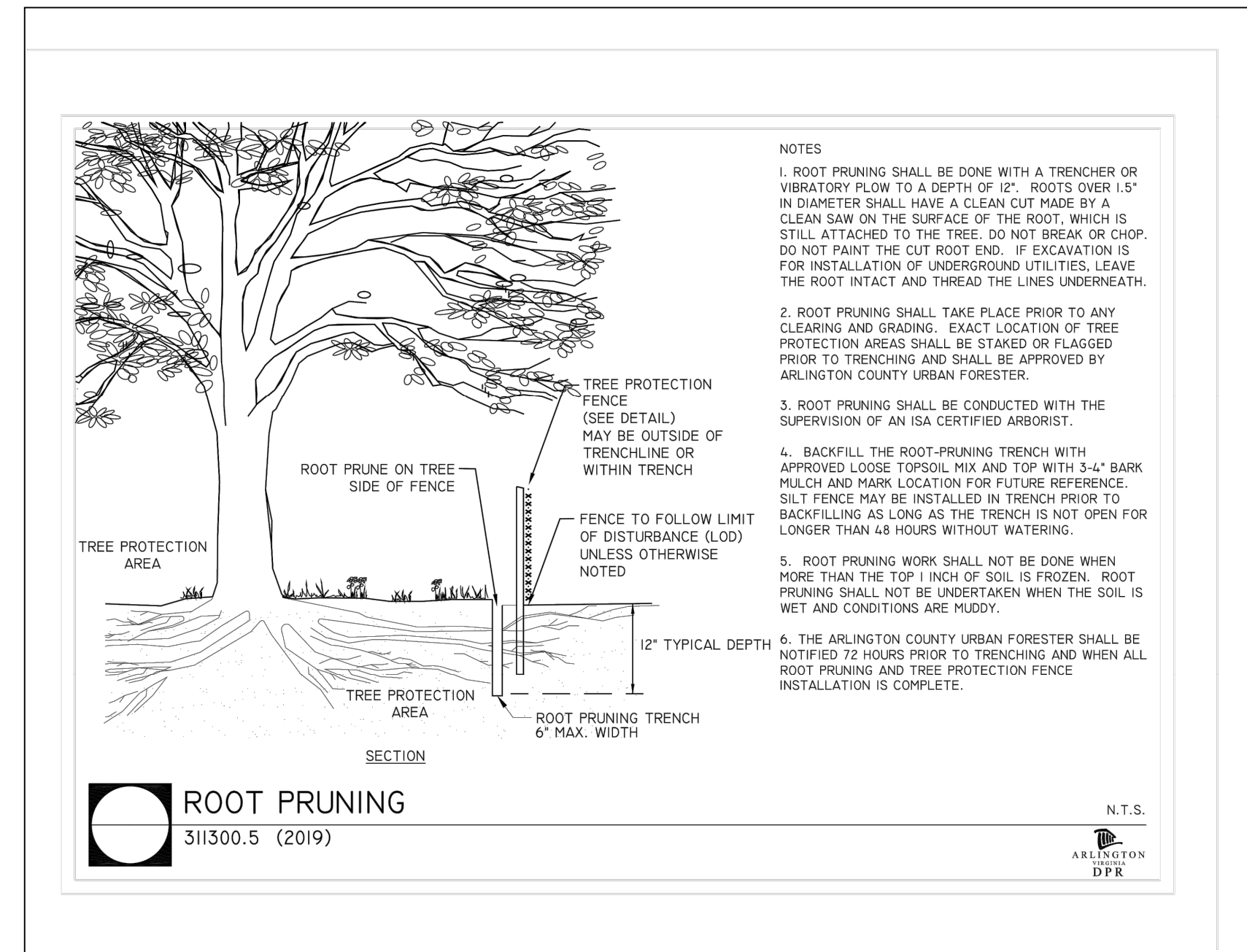
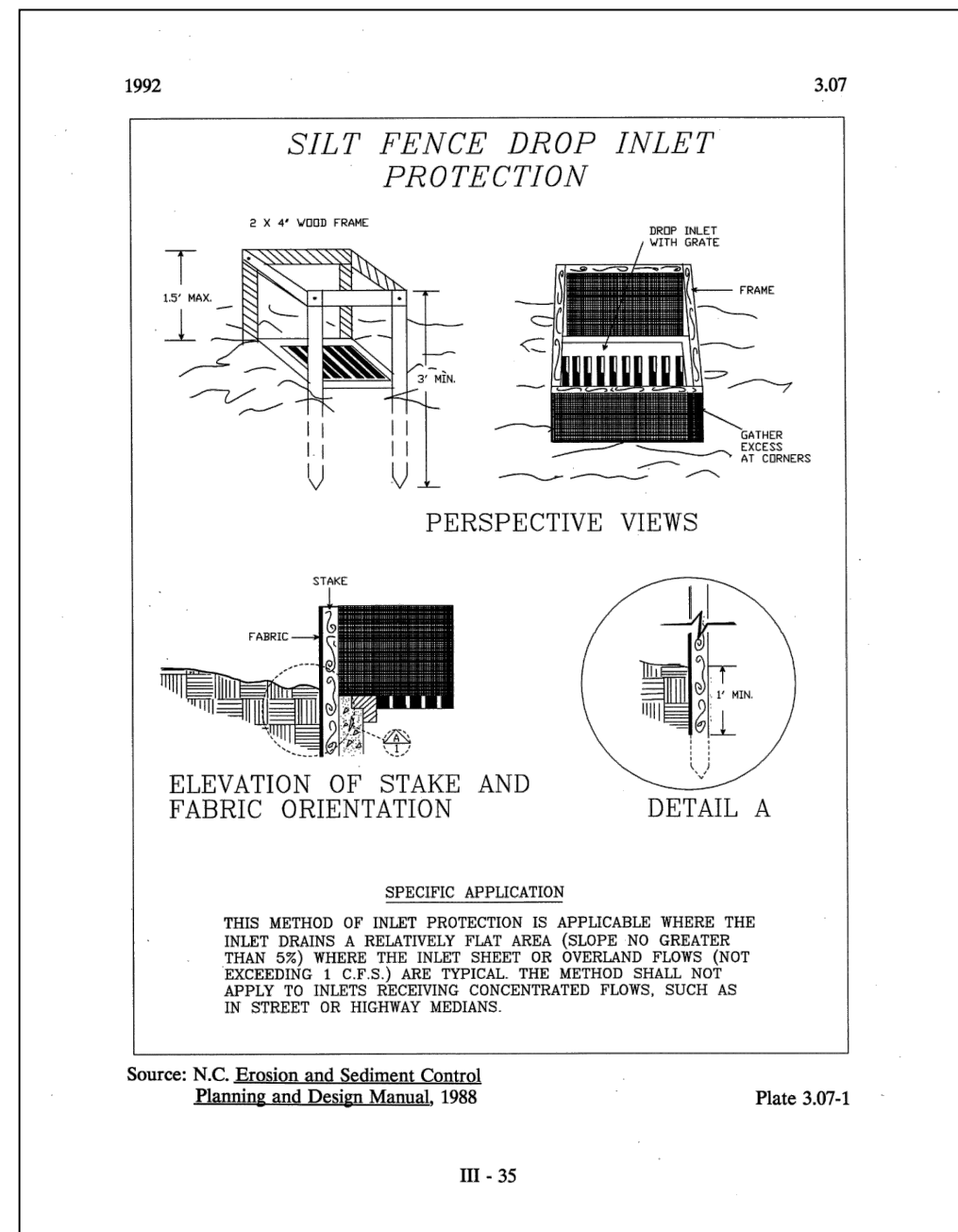
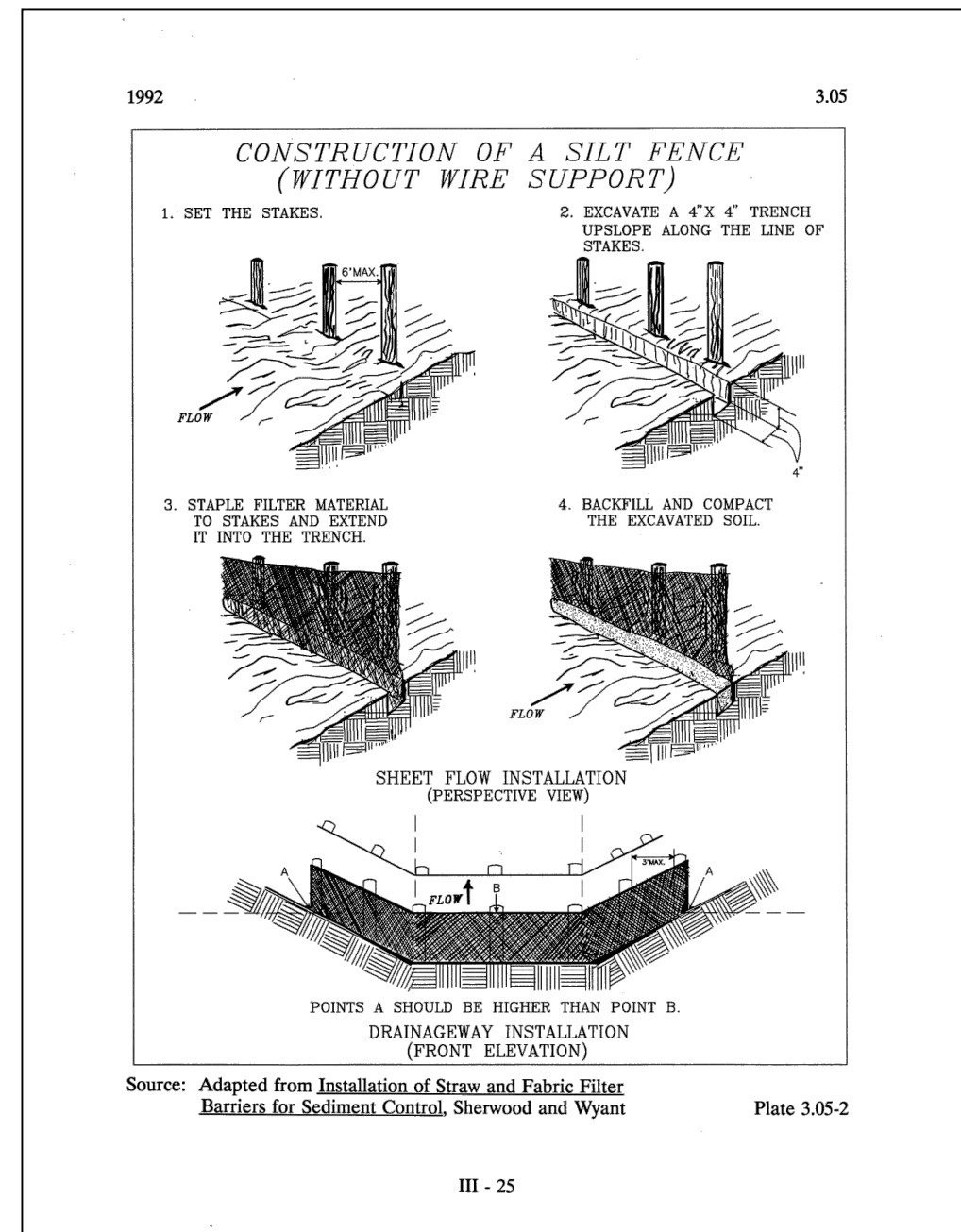
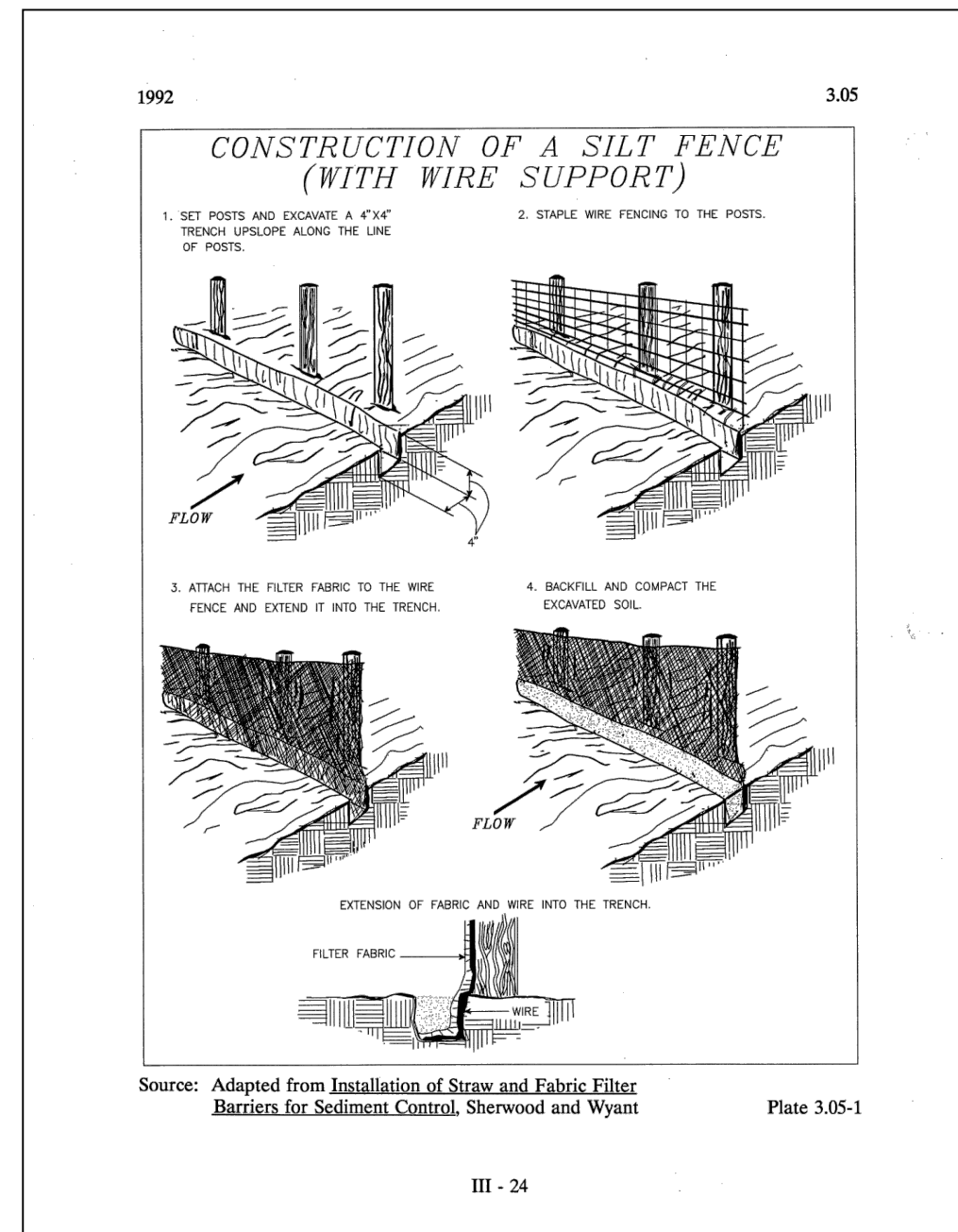


TABLE 3.32-E
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

LAND USE	SEED SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹ or Bermudagrass ²	175 - 200 lbs
High-Maintenance Lawn	Tall Fescue ¹ or Bermudagrass ² (seed) or Bermudagrass ² by other vegetative establishment method, see Sec. 8 & Spec. 3.34	75 lbs 200-250 lbs 40 lbs (unfertilized) or 30 lbs (fertilized)
General Slope (3:1 or less)	Tall Fescue ¹ Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ³	128 lbs 2 lbs 20 lbs TOTAL: 150 lbs
Low-Maintenance Slope (Slopes 3:1-1:1)	Tall Fescue ¹ Bermudagrass ² Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ³ Sericea Lespedeza ⁴	93-108 lbs 0-15 lbs 2 lbs 20 lbs 20 lbs TOTAL: 150 lbs

NOTE:
1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCA. A current turfgrass variety list is available at the local County Extension office or through VCA at 804-746-4864 or at <http://turfgrass.vt.edu/varietylist/>
2 - Use seasonal nurse crops in accordance with seeding dates as related below:
February, March - April Annual Ryegrass
May 1st - August Fescue Millet
September, October - November 15th Annual Ryegrass
November 16th - January Winter Ryegrass
3 - May through October, use unfertilized seed. All other seeding periods, use unfertilized seed. If creeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.
4 - 2003 Nutrient Management for Development Sites at <http://www.scr.state.va.us/nuw/nuw6.htm#table>

FERTILIZER & LIME
• Apply 10-20-10 fertilizer at a rate of 500 lbs / acre (or 12 lbs / 1,000 sq. ft.)
• Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs / 1,000 sq. ft.)

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

APPLICATION DATES	SEED SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi- forium) & Cereal (Winter) Rye (Secale cereale)	50 - 100 (lb/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi- forium)	60 - 100 (lb/acre)
May 1 - Aug. 31	German Millet	50 (lb/acre)

FERTILIZER & LIME
• Apply 10-10-10 fertilizer at a rate of 450 lbs / acre (or 10 lbs / 1,000 sq. ft.)
• Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at <http://www.scr.state.va.us/nuw/nuw6.htm#table>

FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA
EROSION & SEDIMENT CONTROL HANDBOOK



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719



APPROVALS DATE

J. K. Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER

D. M. M. 01/12/2022
TRAFFIC ENGINEERING MANAGER

C. J. 02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF

H. J. 01/07/2022
TE&O BUREAU CHIEF

Dennis W. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions Date

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

EROSION AND SEDIMENT CONTROL DETAILS
S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:
Filename: EROSION & Sediment Control Notes.dwg
Path: \\sdc\cadd\proj\20111102_Arington\EROSION & Sediment Control.dwg
Plotted: November 15, 2021
Plotted by: kmita
Scale: N.T.S.

ARLINGTON COUNTY PRE-STORM EROSION AND SEDIMENT CONTROL CHECKLIST

Pre-Storm Erosion and Sediment Control Checklist

Per Erosion and Sediment Control General Note 6, the Contractor is responsible for the installation and maintenance of any additional erosion and sediment control (ESC) measures necessary to prevent erosion and sedimentation as determined by the County. These supplementary practices are in addition to those shown in an ESC plan. ESC practices shall be modified as needed to ensure only clear water is discharged from the site.

The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.

Perimeter controls

- Silt fence shall be checked for undermining, holes, or deterioration of the fabric. Fencing shall be replaced immediately if the fabric is damaged or worn. Silt fence must be trenched into the ground per state specifications (Std & Spec 3.09).
- Wooden stakes or steel posts shall be properly secured upright into the ground. Damaged posts or stakes must be replaced.
- Sediment that has accumulated against the silt fence should be removed. Accumulated sediment must be removed when the level reaches one-half the height of the fencing.
- Hay bales or a stone berm should be placed across the construction entrance to prevent sediment from leaving the construction site.

Exposed slopes and soil

- Exposed slopes not at the final stabilization phase shall be covered with tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.
- Controls shall be installed to prevent concentrated flow down an exposed slope. Berms or diversion dikes shall be installed at the top of cut / exposed slopes to direct storm flow around the disturbed area.
- Exposed slopes at the final stabilization phase shall be stabilized using slope stabilization practices such as soil stabilization blankets or matting as specified in the Virginia Erosion and Sediment Control Handbook (VESCH) Std & Spec 3.36. Blankets or mats must be properly secured and anchored to the slope using staples, pins, or stakes.
- Seeded areas shall be checked and reseeded as necessary to cover exposed soil. Recently seeded areas shall be protected by straw or soil stabilization blankets to prevent seeding from being washed away.

Stockpiles

- Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side).

Inlet protection

- Inlet protection controls shall be inspected to ensure they are functioning properly and flooding will not occur. Clogged or damaged controls must be replaced immediately. Ensure controls allow for overflow / bypass of stormwater runoff during significant storm events.

In addition to these pre-storm actions, all erosion and sediment control (ESC) measures must be checked daily and after each significant rainfall.

ARLINGTON COUNTY RESPONSIBLE LAND DISTURBER LETTER

05-24-21

date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Services
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
S. GLEBE RD. AT ARLINGTON RIDGE RD.
street address

lot, block, section subdivision

permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-246-0028 with questions about this plan or my execution of the duties of Responsible Land Disturber.
telephone number

Sincerely,



signed

MATTHEW J. ARNONE

name printed

VIRGINIA P.E. (#046567)

professional registration (type and number)

NOTE: SIGNATURE PROVIDED FOR LDA APPROVAL ONLY. CONTRACTOR TO RESUBMIT UPON AWARD.



DEPARTMENT OF ENVIRONMENTAL SERVICES

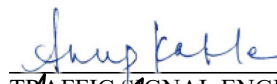
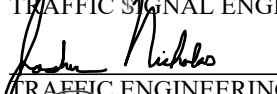
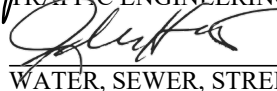
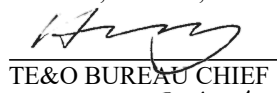

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719

Seal



Matthew J. Arnone
11-13-21

APPROVALS DATE

	01/04/2022
TRAFFIC SIGNAL ENGINEER	
	01/12/2022
TRAFFIC ENGINEERING MANAGER	
	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
	01/07/2022
TE&O BUREAU CHIEF	
	01/07/21
TRANSPORTATION DIRECTOR	

Revisions Date

Project Name and Location

S. Glebe Road Intersection Improvements
EROSION AND SEDIMENT CONTROL DETAILS
S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

Filename: ESC_Erosion & Sediment Control Notes.dwg
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Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

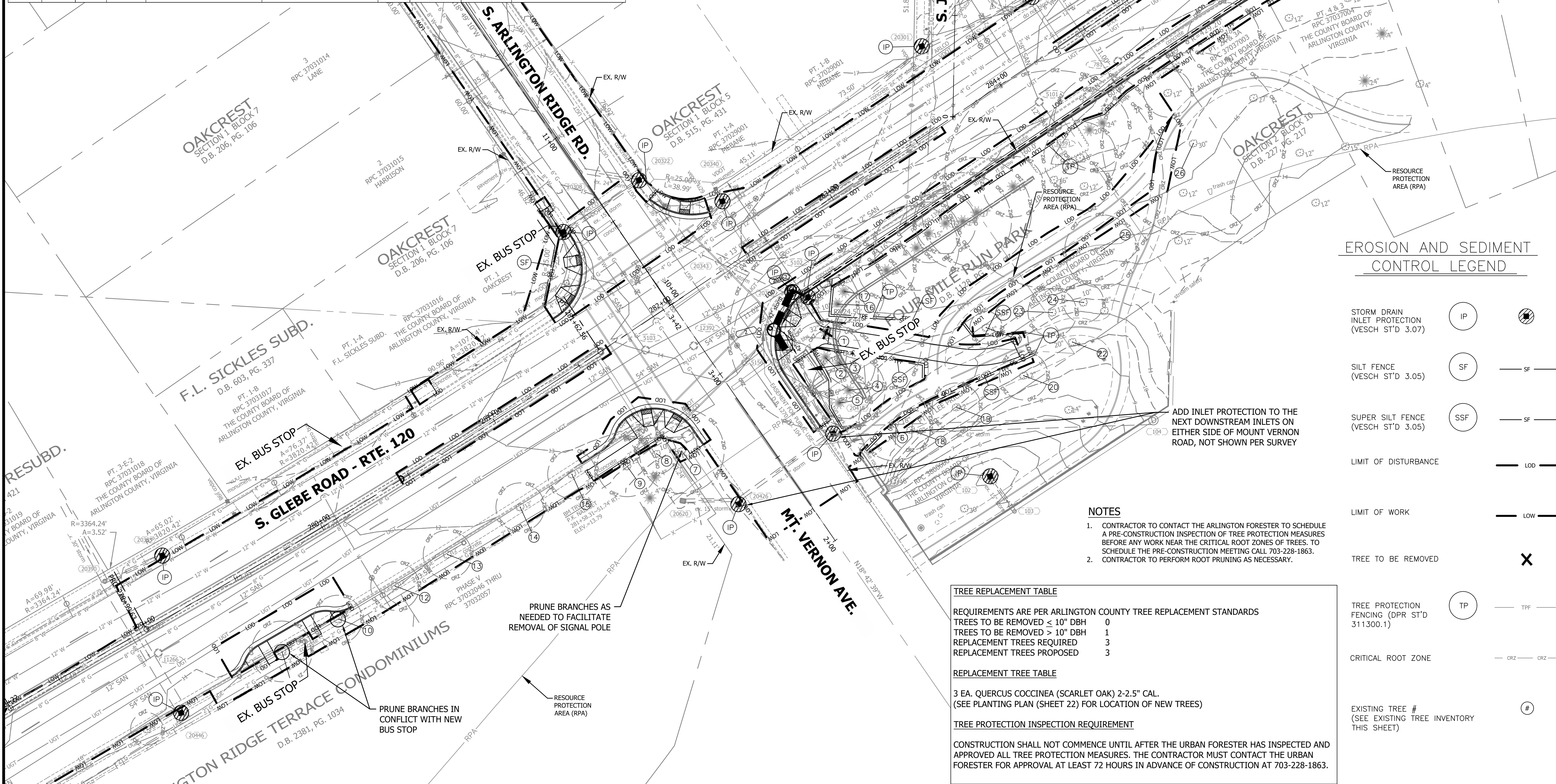
FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

Sheet

5B

EXISTING TREE INVENTORY

To Be Removed	#	DBH	Condition	Species	Common name	Species Rating	Replacement value	Replacements	Comments
X	1	27	80	Cedrus deodara	Deodar Cedar	70	15.12	3	Remove
	2	18	60	Cupressocyparis x leylandii	Leyland Cypress	40	4.32		Protect
	3	16	60	Cupressocyparis x leylandii	Leyland Cypress	40	3.84		Protect
	4	17	60	Cupressocyparis x leylandii	Leyland Cypress	40	4.08		Protect
	5	16	60	Cupressocyparis x leylandii	Leyland Cypress	40	3.84		Protect
	6	4	50	Photinia spp.	Photinia	60	1.2		Protect
	7	20	55	Pyrus calleryana	Callery Pear	20	2.2		Prune
	8	8	10	Fraxinus pennsylvanica	Green Ash	25	0.2		Not Impacted
	9	15	75	Gleditsia triacanthos	Honeylocust	70	7.875		Not Impacted
	10	16	70	Quercus rubra	Northern Red Oak	80	8.96		Prune
	11	22	70	Quercus rubra	Northern Red Oak	80	12.32		Prune
	12	16	70	Quercus rubra	Northern Red Oak	80	8.96		Not Impacted
	13	16	65	Quercus rubra	Northern Red Oak	80	8.32		Not Impacted
	14	19	70	Quercus rubra	Northern Red Oak	80	10.64		Not Impacted
	15	19	70	Quercus rubra	Northern Red Oak	80	10.64		Not Impacted
	16	5	40	Cupressocyparis x leylandii	Leyland Cypress	40	0.8		Protect/Prune
	17	14	60	Cupressocyparis x leylandii	Leyland Cypress	40	3.36		Protect/Prune
	18	4	50	Photinia spp.	Photinia	60	1.2		Protect
	19	14	75	Tilia americana	American Linden	80	8.4		Protect
	20	12	75	Tilia americana	American Linden	80	7.2		Protect
	21	4	80	Ginkgo biloba	Ginkgo	75	2.4		Protect
	22	12	55	Ulmus pumila	Siberian Elm	40	2.64		Not Impacted
	23	12	75	Liriodendron tulipifera	Tuliptree	70	6.3		Not Impacted
	24	10	75	Liriodendron tulipifera	Tuliptree	70	5.25		Not Impacted
	25	14	30	Fraxinus pennsylvanica	Green Ash	25	1.05		Not Impacted
	26	20	30	Acer saccharinum	Silver Maple	50	3		Not Impacted
								Total:	3



EROSION AND SEDIMENT CONTROL LEGEND

STORM DRAIN INLET PROTECTION (VESCH ST'D 3.07)	IP	
SILT FENCE (VESCH ST'D 3.05)	SF	
SUPER SILT FENCE (VESCH ST'D 3.05)	SSF	
LIMIT OF DISTURBANCE	LOD	
LIMIT OF WORK	LOW	
TREE TO BE REMOVED	X	
TREE PROTECTION FENCING (DPR ST'D 311300.1)	TP	
CRITICAL ROOT ZONE	CRZ	
EXISTING TREE # (SEE EXISTING TREE INVENTORY THIS SHEET)	#	

- NOTES**
- CONTRACTOR TO CONTACT THE ARLINGTON FORESTER TO SCHEDULE A PRE-CONSTRUCTION INSPECTION OF TREE PROTECTION MEASURES BEFORE ANY WORK NEAR THE CRITICAL ROOT ZONES OF TREES. TO SCHEDULE THE PRE-CONSTRUCTION MEETING CALL 703-228-1863.
 - CONTRACTOR TO PERFORM ROOT PRUNING AS NECESSARY.

TREE REPLACEMENT TABLE

REQUIREMENTS ARE PER ARLINGTON COUNTY TREE REPLACEMENT STANDARDS

TREES TO BE REMOVED < 10" DBH	0
TREES TO BE REMOVED > 10" DBH	1
REPLACEMENT TREES REQUIRED	3
REPLACEMENT TREES PROPOSED	3

REPLACEMENT TREE TABLE

3 EA. QUERCUS COCCINEA (SCARLET OAK) 2-2.5" CAL.
(SEE PLANTING PLAN (SHEET 22) FOR LOCATION OF NEW TREES)

TREE PROTECTION INSPECTION REQUIREMENT

CONSTRUCTION SHALL NOT COMMENCE UNTIL AFTER THE URBAN FORESTER HAS INSPECTED AND APPROVED ALL TREE PROTECTION MEASURES. THE CONTRACTOR MUST CONTACT THE URBAN FORESTER FOR APPROVAL AT LEAST 72 HOURS IN ADVANCE OF CONSTRUCTION AT 703-228-1863.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
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Arlington, VA 22201
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Fax: 703.228.3719



APPROVALS

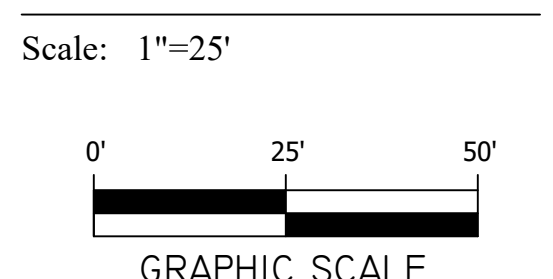
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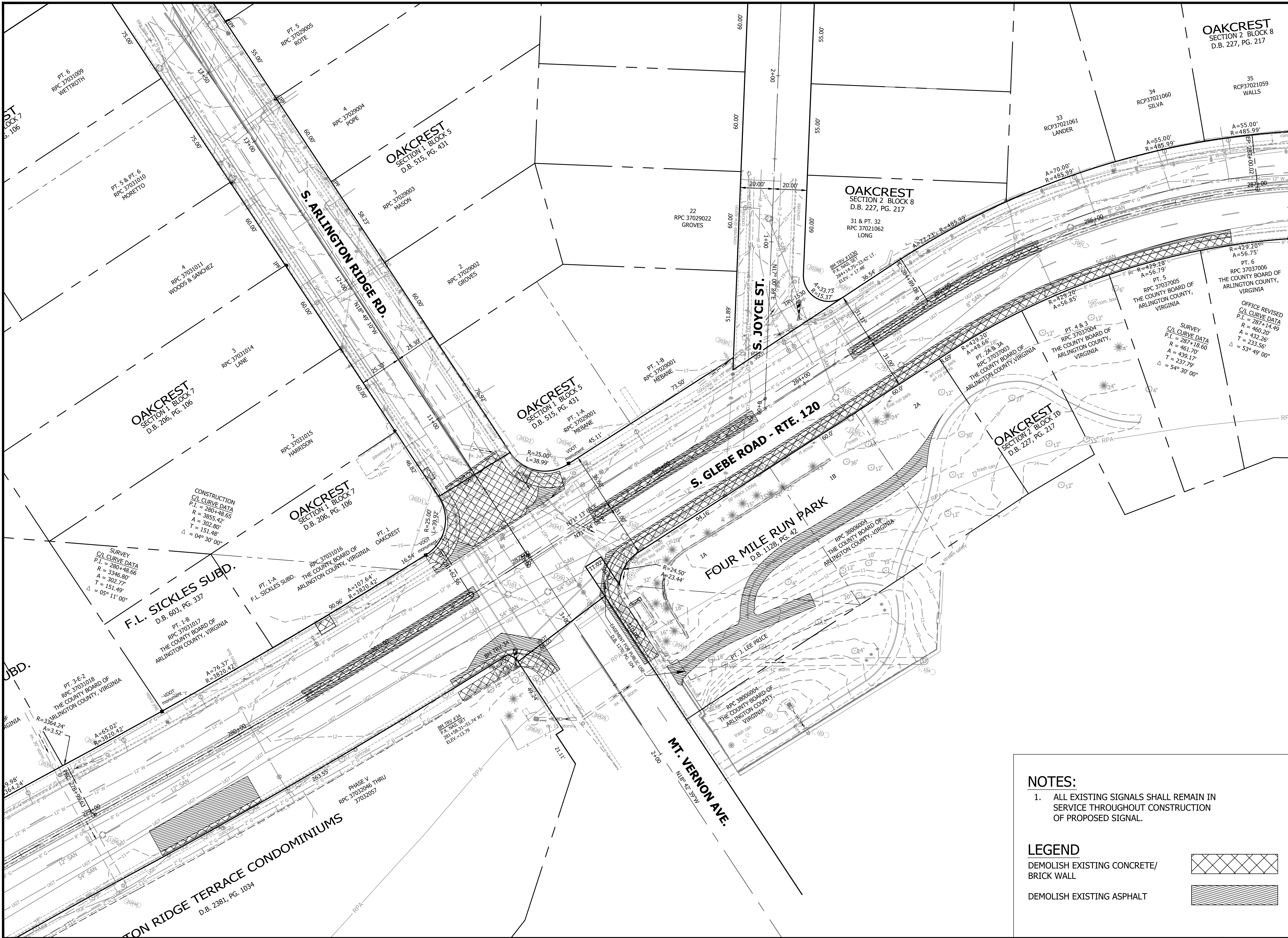
Revisions

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
EROSION & SEDIMENT CONTROL PLAN
S. Glebe Road at S. Arlington Ridge Road

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Drawn: TIS
Checked: MJA
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Plotted: November 15, 2021
Plotted by: kmita





DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719

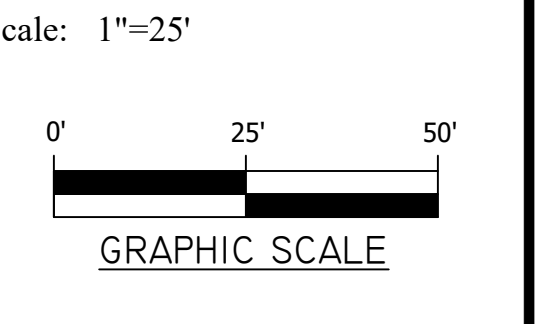


APPROVALS	DATE
<i>J. Kettle</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>M. Nallo</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>Cliff</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>Henry</i> TE&O BUREAU CHIEF	01/07/2022
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 DEMOLITION PLAN
 S. Glebe Road at S. Arlington Ridge Road
 TE07

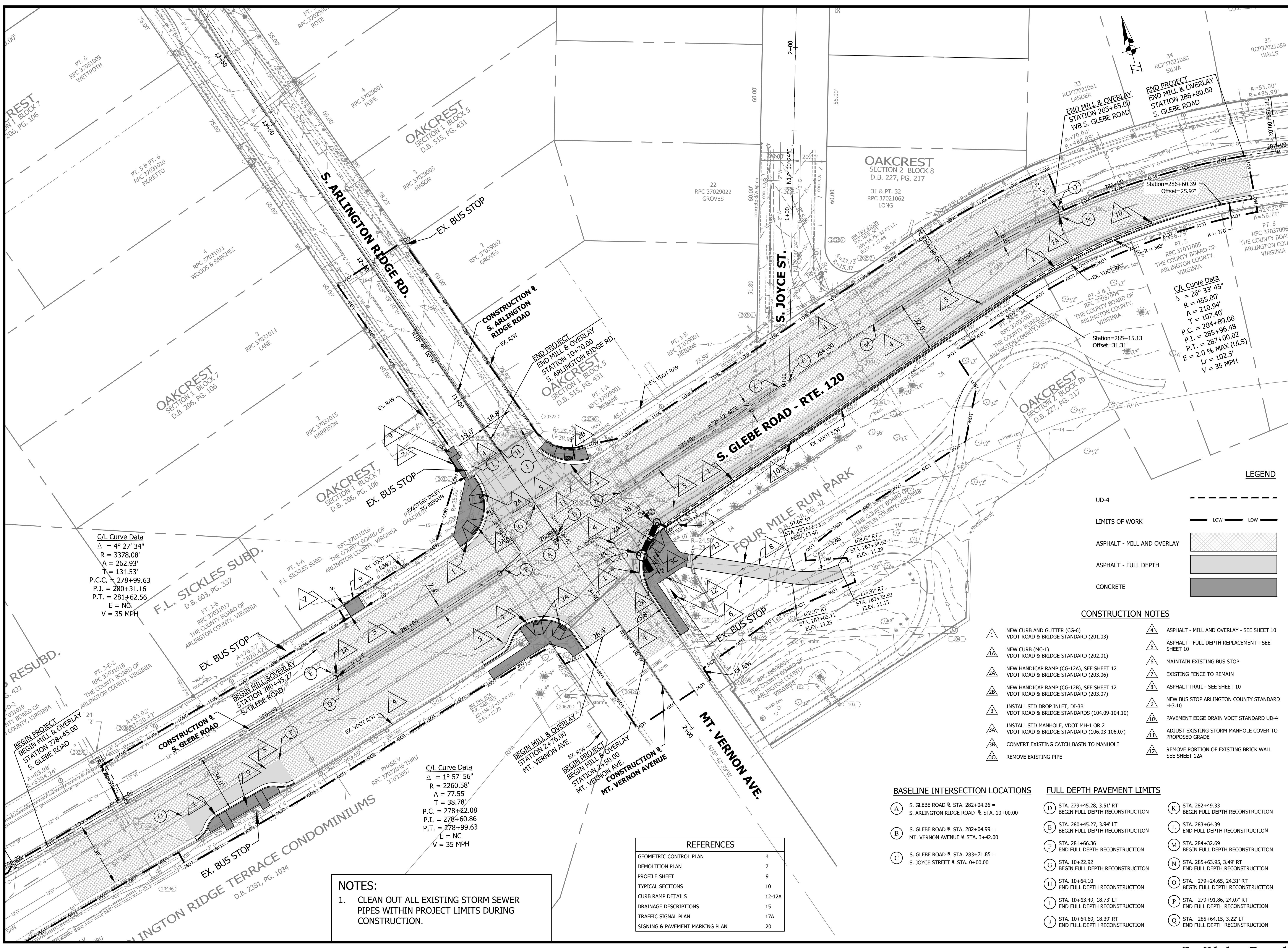
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 Plotted: November 15, 2021
 Plotted by: kmita



- NOTES:**
- ALL EXISTING SIGNALS SHALL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF PROPOSED SIGNAL.

LEGEND

DEMOLISH EXISTING CONCRETE/ BRICK WALL	
DEMOLISH EXISTING ASPHALT	



C/L Curve Data
 $\Delta = 4^\circ 27' 34''$
 $R = 3378.08'$
 $A = 262.93'$
 $T = 131.53'$
 $P.C.C. = 278+99.63$
 $P.I. = 280+31.16$
 $P.T. = 281+62.56$
 $E = NC$
 $V = 35 \text{ MPH}$

C/L Curve Data
 $\Delta = 1^\circ 57' 56''$
 $R = 2260.58'$
 $A = 77.55'$
 $T = 38.78'$
 $P.C. = 278+22.08$
 $P.I. = 278+60.86$
 $P.T. = 278+99.63$
 $E = NC$
 $V = 35 \text{ MPH}$

C/L Curve Data
 $\Delta = 26^\circ 33' 45''$
 $R = 455.00'$
 $A = 210.94'$
 $T = 107.40'$
 $P.C. = 284+89.08$
 $P.I. = 285+96.48$
 $P.T. = 287+00.02$
 $E = 2.0\% \text{ MAX (ULS)}$
 $Lr = 102.5'$
 $V = 35 \text{ MPH}$

LEGEND

- UD-4
- LIMITS OF WORK
- ASPHALT - MILL AND OVERLAY
- ASPHALT - FULL DEPTH
- CONCRETE

CONSTRUCTION NOTES

- 1 NEW CURB AND GUTTER (CG-6) VDOT ROAD & BRIDGE STANDARD (201.03)
- 1A NEW CURB (MC-1) VDOT ROAD & BRIDGE STANDARD (202.01)
- 2A NEW HANDICAP RAMP (CG-12A), SEE SHEET 12 VDOT ROAD & BRIDGE STANDARD (203.06)
- 2B NEW HANDICAP RAMP (CG-12B), SEE SHEET 12 VDOT ROAD & BRIDGE STANDARD (203.07)
- 3 INSTALL STD DROP INLET, DI-3B VDOT ROAD & BRIDGE STANDARDS (104.09-104.10)
- 3A INSTALL STD MANHOLE, VDOT MH-1 OR 2 VDOT ROAD & BRIDGE STANDARD (106.03-106.07)
- 3B CONVERT EXISTING CATCH BASIN TO MANHOLE
- 3C REMOVE EXISTING PIPE
- 4 ASPHALT - MILL AND OVERLAY - SEE SHEET 10
- 5 ASPHALT - FULL DEPTH REPLACEMENT - SEE SHEET 10
- 6 MAINTAIN EXISTING BUS STOP
- 7 EXISTING FENCE TO REMAIN
- 8 ASPHALT TRAIL - SEE SHEET 10
- 9 NEW BUS STOP ARLINGTON COUNTY STANDARD H-3.10
- 10 PAVEMENT EDGE DRAIN VDOT STANDARD UD-4
- 11 ADJUST EXISTING STORM MANHOLE COVER TO PROPOSED GRADE
- 12 REMOVE PORTION OF EXISTING BRICK WALL SEE SHEET 12A

BASILINE INTERSECTION LOCATIONS

- A S. GLEBE ROAD & STA. 282+04.26 = S. ARLINGTON RIDGE ROAD & STA. 10+00.00
- B S. GLEBE ROAD & STA. 282+04.99 = MT. VERNON AVENUE & STA. 3+42.00
- C S. GLEBE ROAD & STA. 283+71.85 = S. JOYCE STREET & STA. 0+00.00

FULL DEPTH PAVEMENT LIMITS

- D STA. 279+45.28, 3.51' RT BEGIN FULL DEPTH RECONSTRUCTION
- E STA. 280+45.27, 3.94' LT BEGIN FULL DEPTH RECONSTRUCTION
- F STA. 281+66.36 END FULL DEPTH RECONSTRUCTION
- G STA. 10+22.92 BEGIN FULL DEPTH RECONSTRUCTION
- H STA. 10+64.10 END FULL DEPTH RECONSTRUCTION
- I STA. 10+63.49, 18.73' LT END FULL DEPTH RECONSTRUCTION
- J STA. 10+64.69, 18.39' RT END FULL DEPTH RECONSTRUCTION
- K STA. 282+49.33 BEGIN FULL DEPTH RECONSTRUCTION
- L STA. 283+64.39 END FULL DEPTH RECONSTRUCTION
- M STA. 284+32.69 BEGIN FULL DEPTH RECONSTRUCTION
- N STA. 285+63.95, 3.49' RT END FULL DEPTH RECONSTRUCTION
- O STA. 279+24.65, 24.31' RT BEGIN FULL DEPTH RECONSTRUCTION
- P STA. 279+91.86, 24.07' RT END FULL DEPTH RECONSTRUCTION
- Q STA. 285+64.15, 3.22' LT END FULL DEPTH RECONSTRUCTION

REFERENCES	
GEOMETRIC CONTROL PLAN	4
DEMOLITION PLAN	7
PROFILE SHEET	9
TYPICAL SECTIONS	10
CURB RAMP DETAILS	12-12A
DRAINAGE DESCRIPTIONS	15
TRAFFIC SIGNAL PLAN	17A
SIGNING & PAVEMENT MARKING PLAN	20

NOTES:
 1. CLEAN OUT ALL EXISTING STORM SEWER PIPES WITHIN PROJECT LIMITS DURING CONSTRUCTION.



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 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
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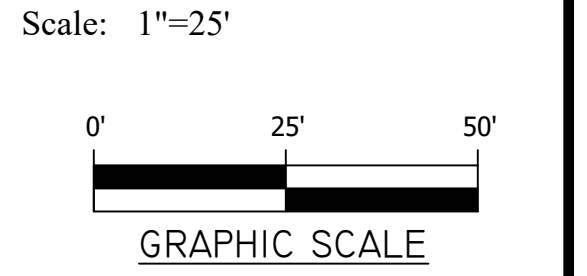
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<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

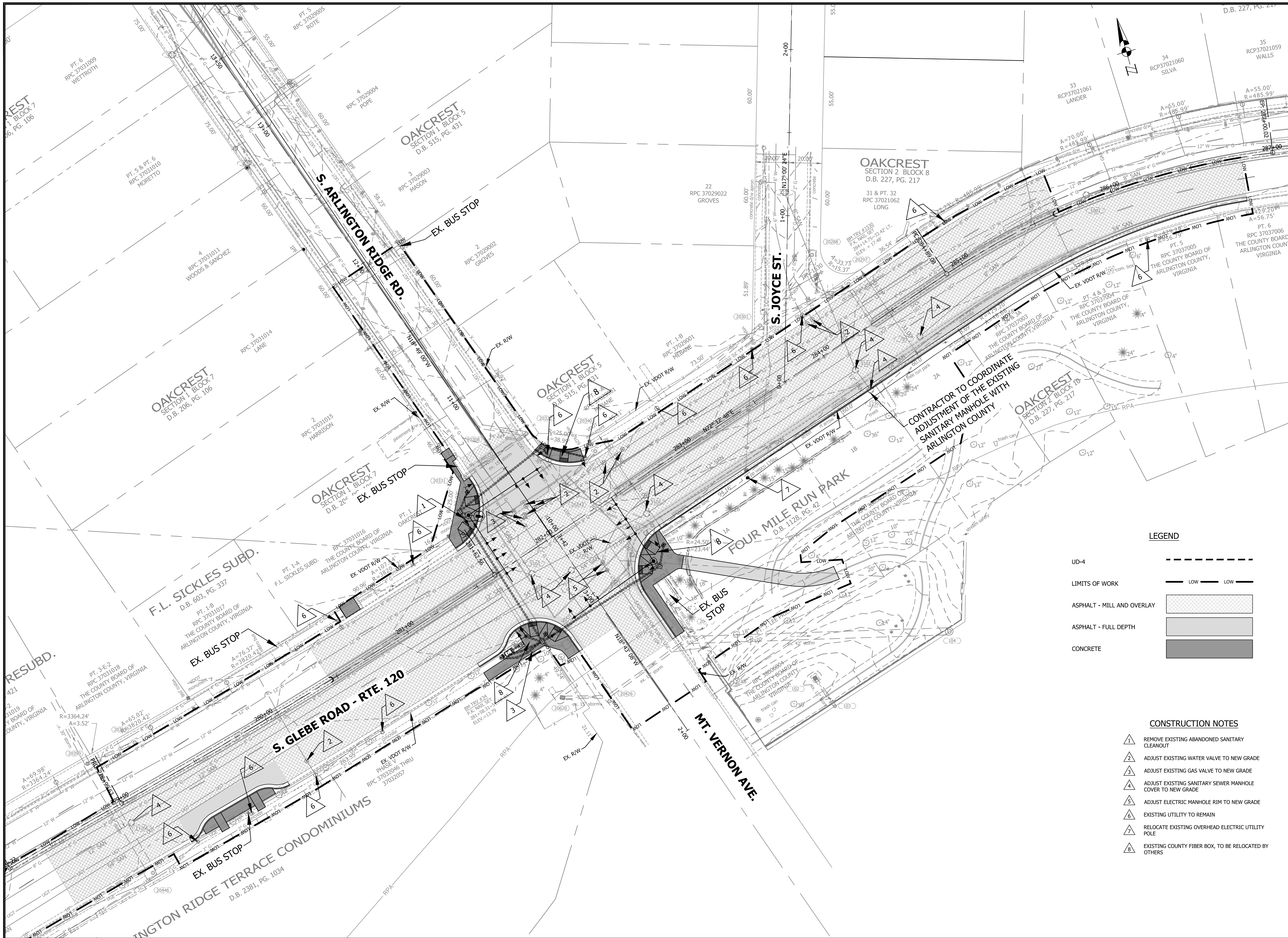
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 PLAN SHEET
 S. Glebe Road at S. Arlington Ridge Road

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 Drawn: JMK
 Checked: JMK
 Miss Utility Transmittal #:

Filename: 101708_Plan Sheet.dwg
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 Plotted: November 16, 2021
 Plotted by: marnone





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APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

LEGEND

- UD-4
- LIMITS OF WORK
- ASPHALT - MILL AND OVERLAY
- ASPHALT - FULL DEPTH
- CONCRETE

CONSTRUCTION NOTES

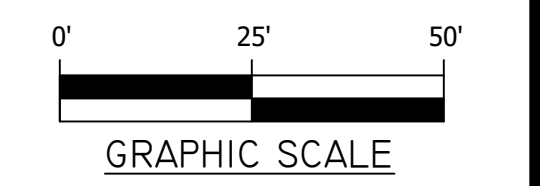
- 1 REMOVE EXISTING ABANDONED SANITARY CLEANOUT
- 2 ADJUST EXISTING WATER VALVE TO NEW GRADE
- 3 ADJUST EXISTING GAS VALVE TO NEW GRADE
- 4 ADJUST EXISTING SANITARY SEWER MANHOLE COVER TO NEW GRADE
- 5 ADJUST ELECTRIC MANHOLE RIM TO NEW GRADE
- 6 EXISTING UTILITY TO REMAIN
- 7 RELOCATE EXISTING OVERHEAD ELECTRIC UTILITY POLE
- 8 EXISTING COUNTY FIBER BOX, TO BE RELOCATED BY OTHERS

Project Name and Location
S. Glebe Road Intersection Improvements
 UTILITY PLAN SHEET
 S. Glebe Road at S. Arlington Ridge Road
 TE07

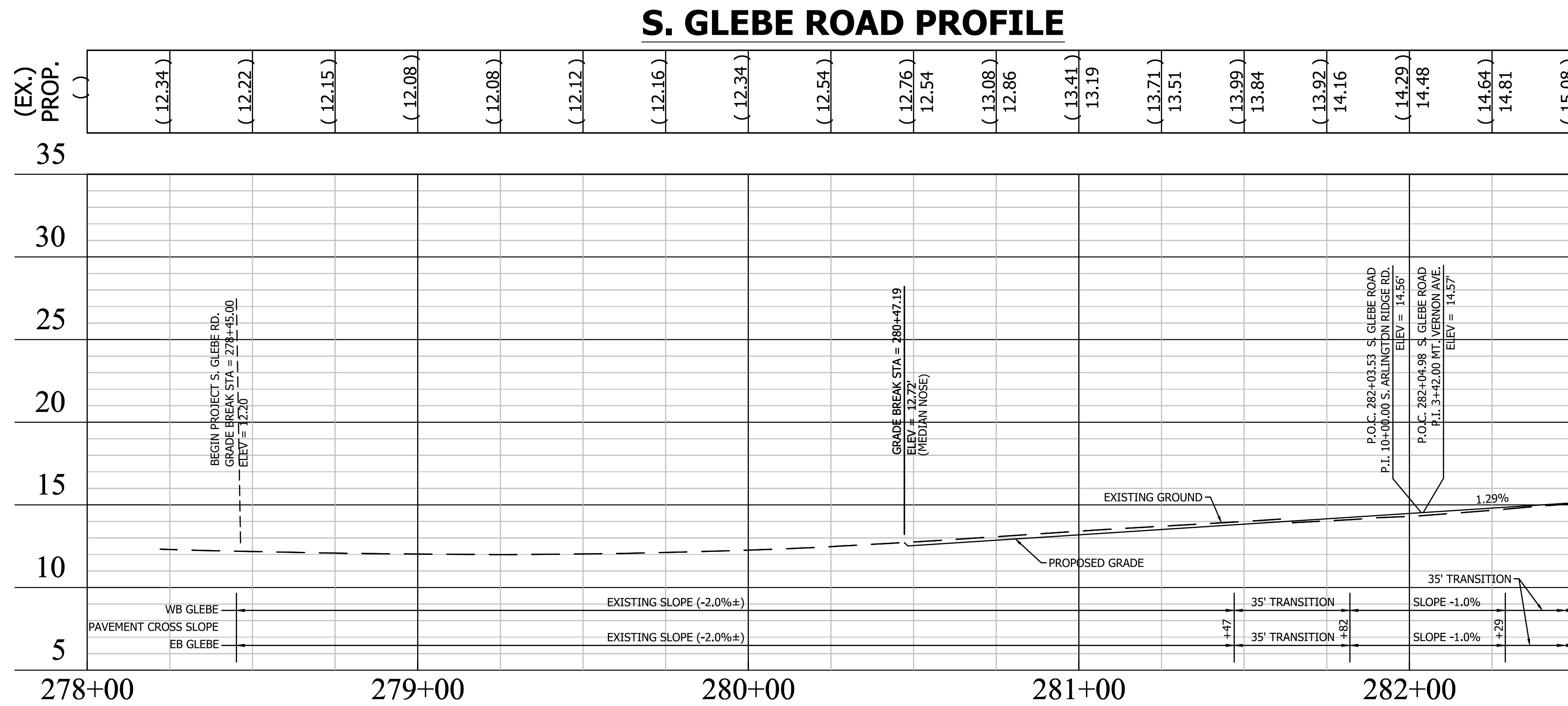
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 Plotted by: marnone

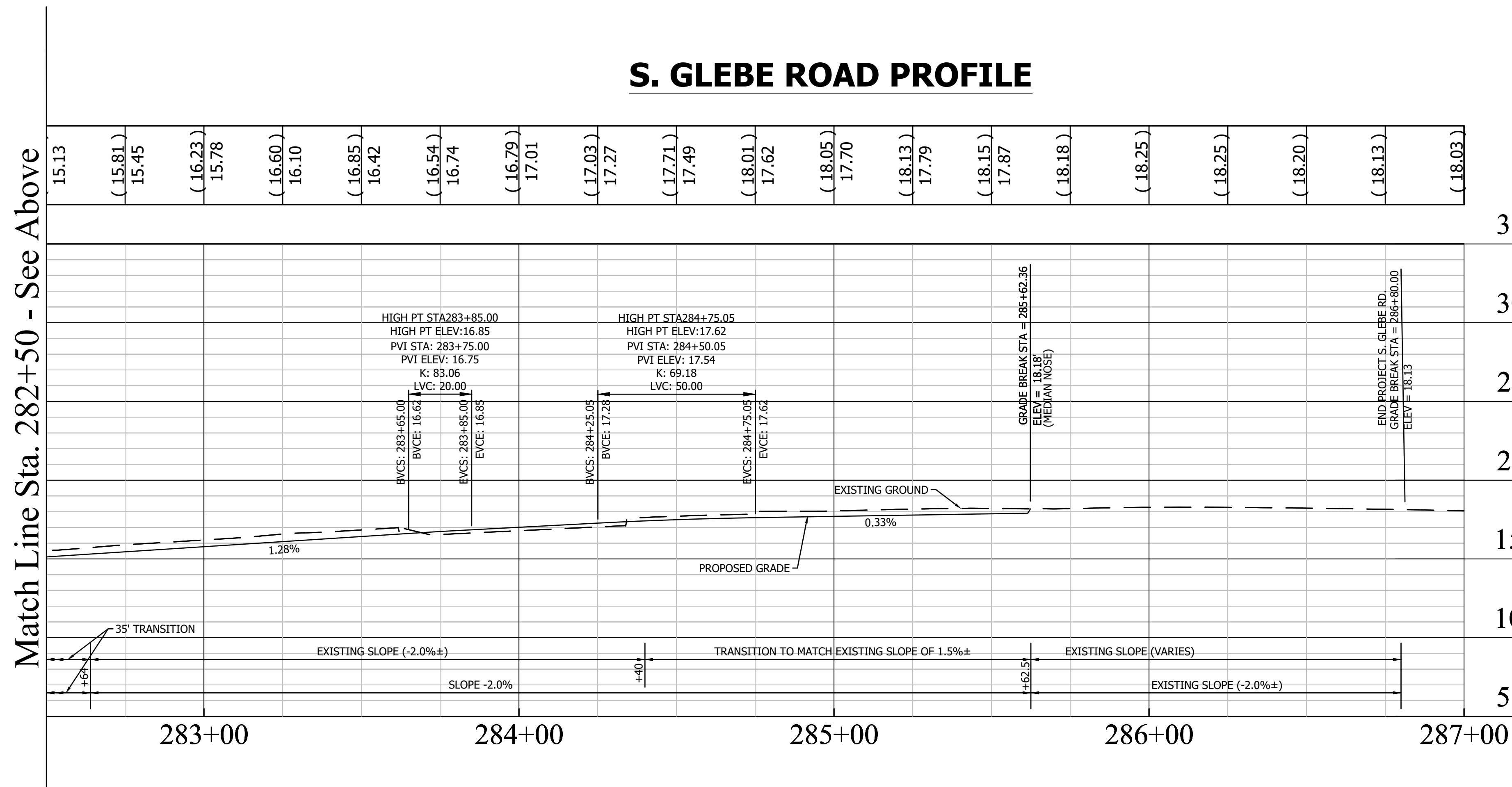
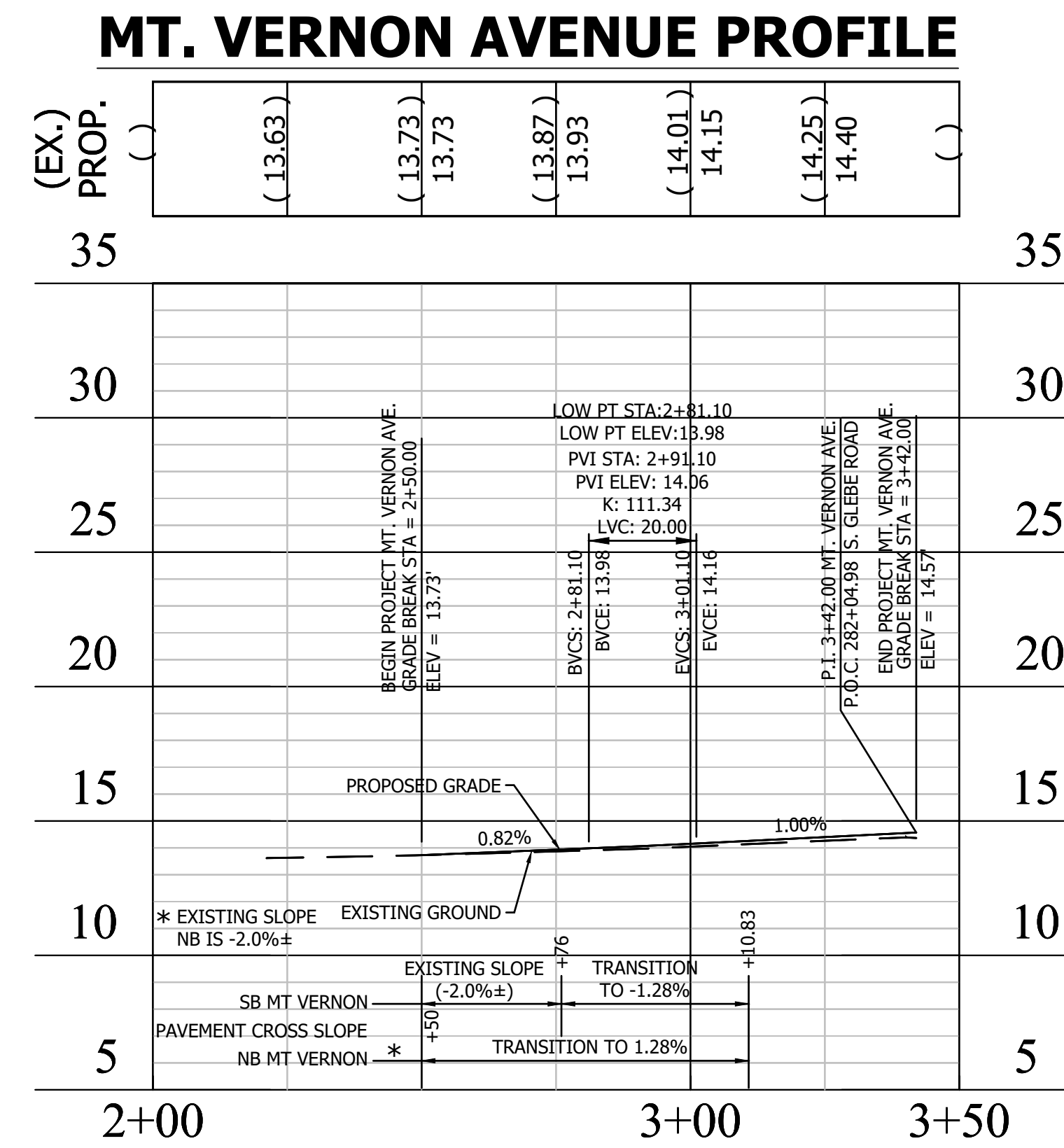
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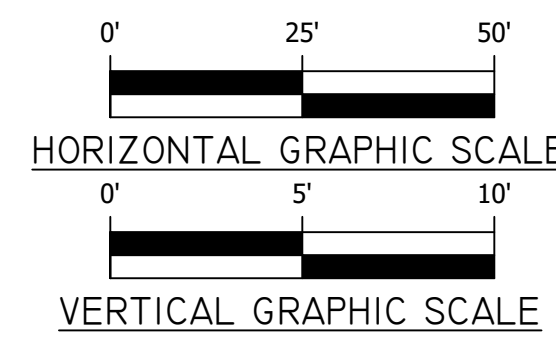
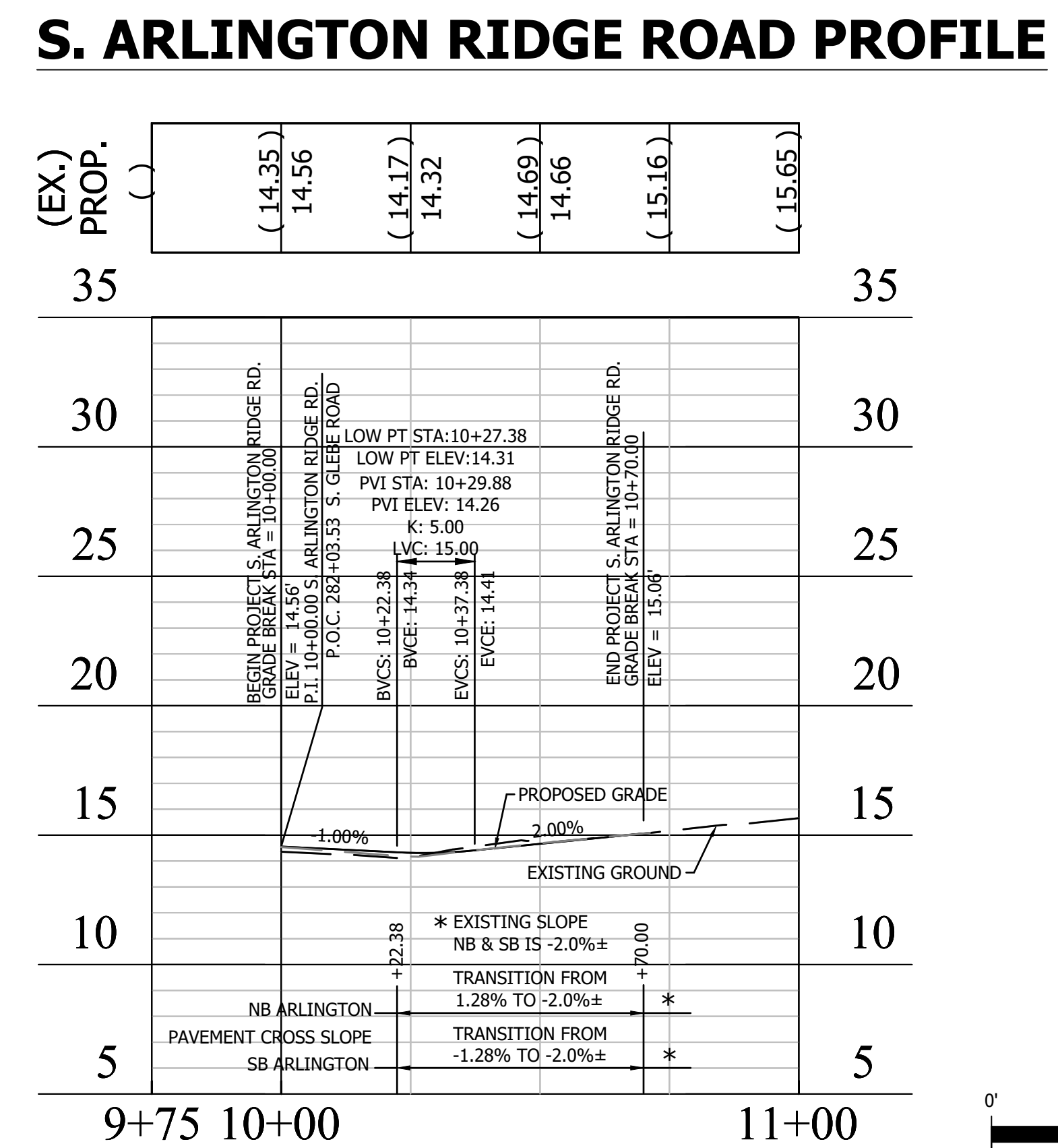
Sheet **8A**



Match Line Sta. 282+50 - See Below



Match Line Sta. 282+50 - See Above



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<i>[Signature]</i> TRAFFIC ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

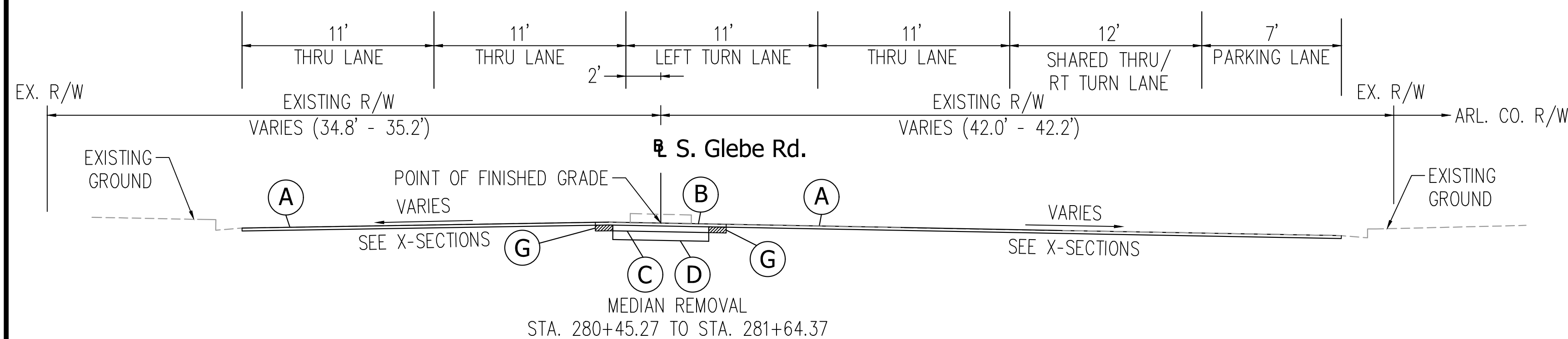
Project Name and Location
S. Glebe Road Intersection Improvements
 PROFILE SHEET
 S. Glebe Road at S. Arlington Ridge Road
 TE07

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 Checked: MJK
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 Plotted by: kmita

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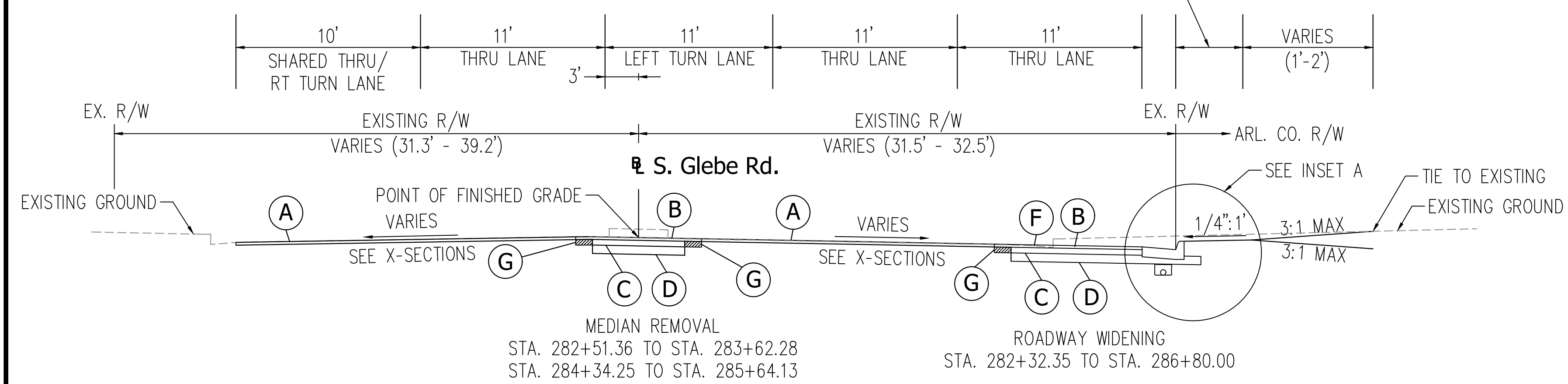
S. GLEBE RD.

(WEST OF THE INTERSECTION)
STATION 278+45.00 TO STATION 282+03.53



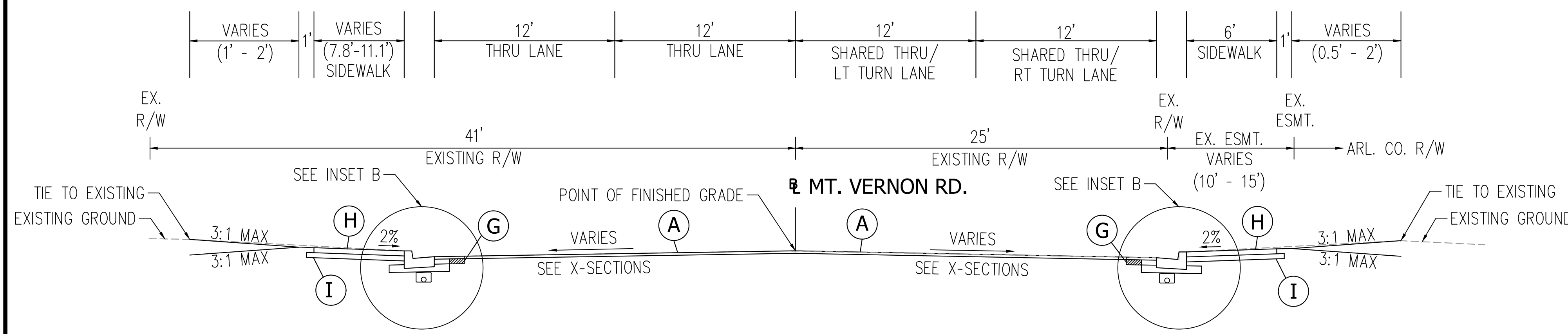
S. GLEBE RD.

(EAST OF THE INTERSECTION)
STATION 282+03.53 TO STATION 286+80.00



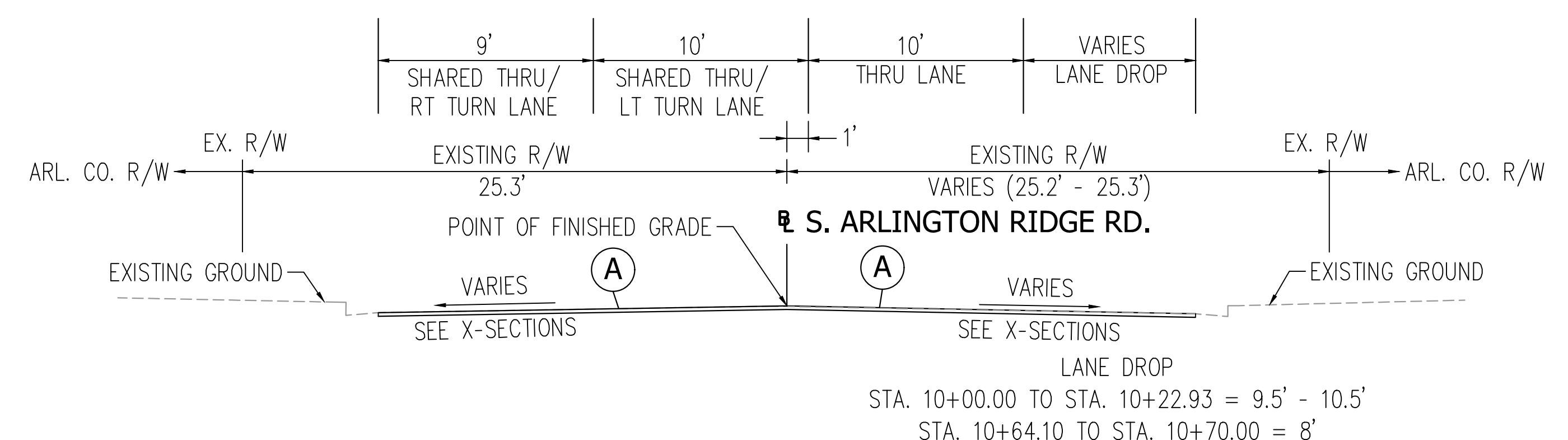
MT. VERNON AVE.

STATION 2+50.00 TO STATION 3+42.00



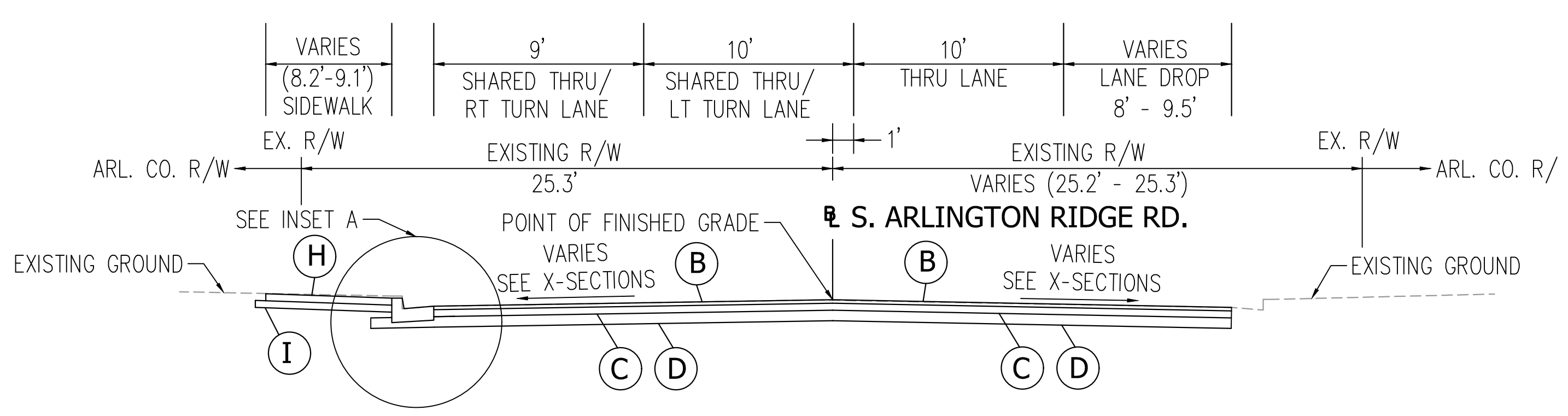
S. ARLINGTON RIDGE RD.

STATION 10+00.00 TO STATION 10+22.93
STATION 10+64.10 TO STATION 10+70.00



S. ARLINGTON RIDGE RD.

STATION 10+22.93 TO STATION 10+64.10



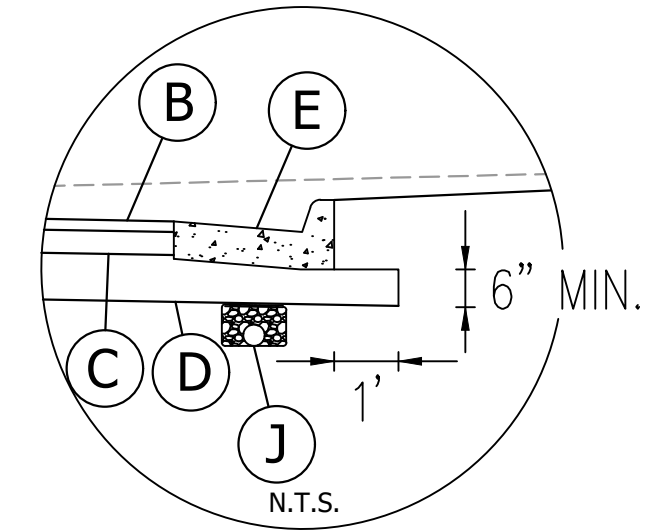
NOTES:

- ALL PAVEMENTS SHALL BE WIDENED IN ACCORDANCE WITH VDOT STANDARD WP-2 (SEE DETAIL SHEET 2B).
- BOTTOM OF THE SUBBASE AGGREGATE (EXISTING AND PROPOSED) MUST BE ALIGNED TO FACILITATE LATERAL DRAINAGE OF THE EXISTING PAVEMENT. AGGREGATE SUBBASE THICKNESS BENEATH THE WIDENED PAVEMENT SHALL BE 6 INCHES OR EXTEND TO THE BOTTOM OF THE EXISTING AGGREGATE BASE MATERIAL, WHICHEVER IS GREATER.

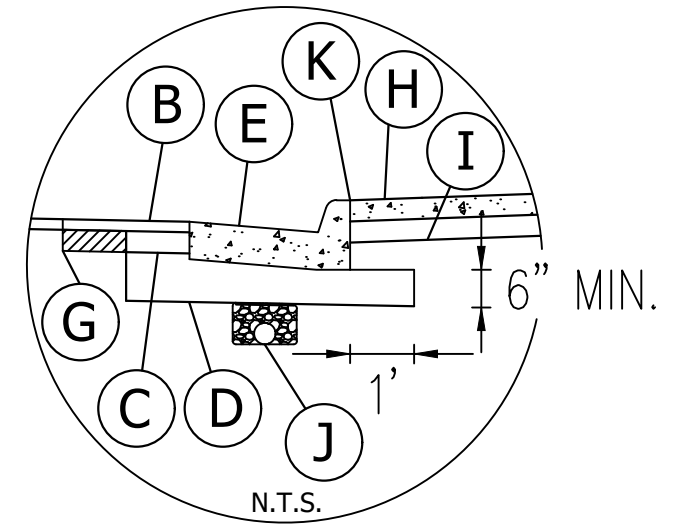
LEGEND

- (A) MILLING & OVERLAY - 2" ASPHALT CONCRETE TYPE SM-9.5D
- (B) 2" ASPHALT CONCRETE, TYPE SM-9.5D, ESTIMATED AT 238 LBS/SY
- (C) 8" ASPHALT CONCRETE BASE MATERIAL TYPE BM-25.0A
- (D) 6" MIN. AGGREGATE BASE MATERIAL TYPE 1 NO. 21B (ON THE HIGH SIDE OF PAVEMENT WIDENING, PROVIDE 6" CEMENT TREATED AGGREGATE (CTA) PER VDOT SPECIAL PROVISION, IN LIEU OF 21B)
- (E) VDOT STANDARD CG-6 CURB AND GUTTER
- (F) REMOVE EXISTING CURB AND GUTTER
- (G) FULL DEPTH SAWCUT REQUIRED
- (H) 4" HYDRAULIC CEMENT CONCRETE SIDEWALK, CLASS A3
- (I) 4" AGGREGATE BASE MATERIAL, TYPE 1 NO. 21B (EXTEND 4" BEYOND CONCRETE EDGES WHERE POSSIBLE)
- (J) VDOT STANDARD UD-4 UNDERDRAIN (WHERE APPLICABLE)
- (K) 1/2" PREMOLDED EXPANSION JOINT

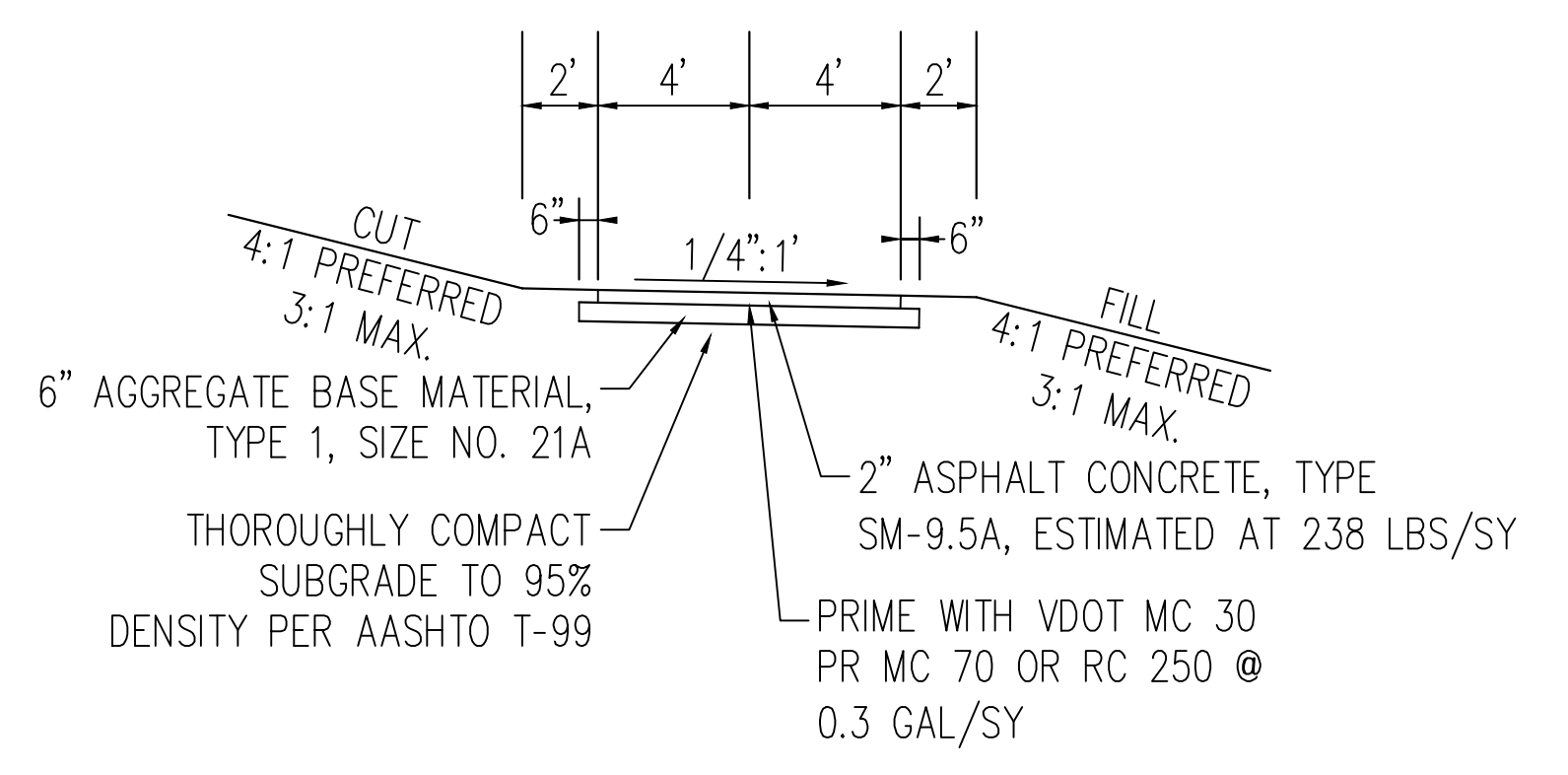
INSET A



INSET B



PROPOSED FOUR MILE RUN TRAIL



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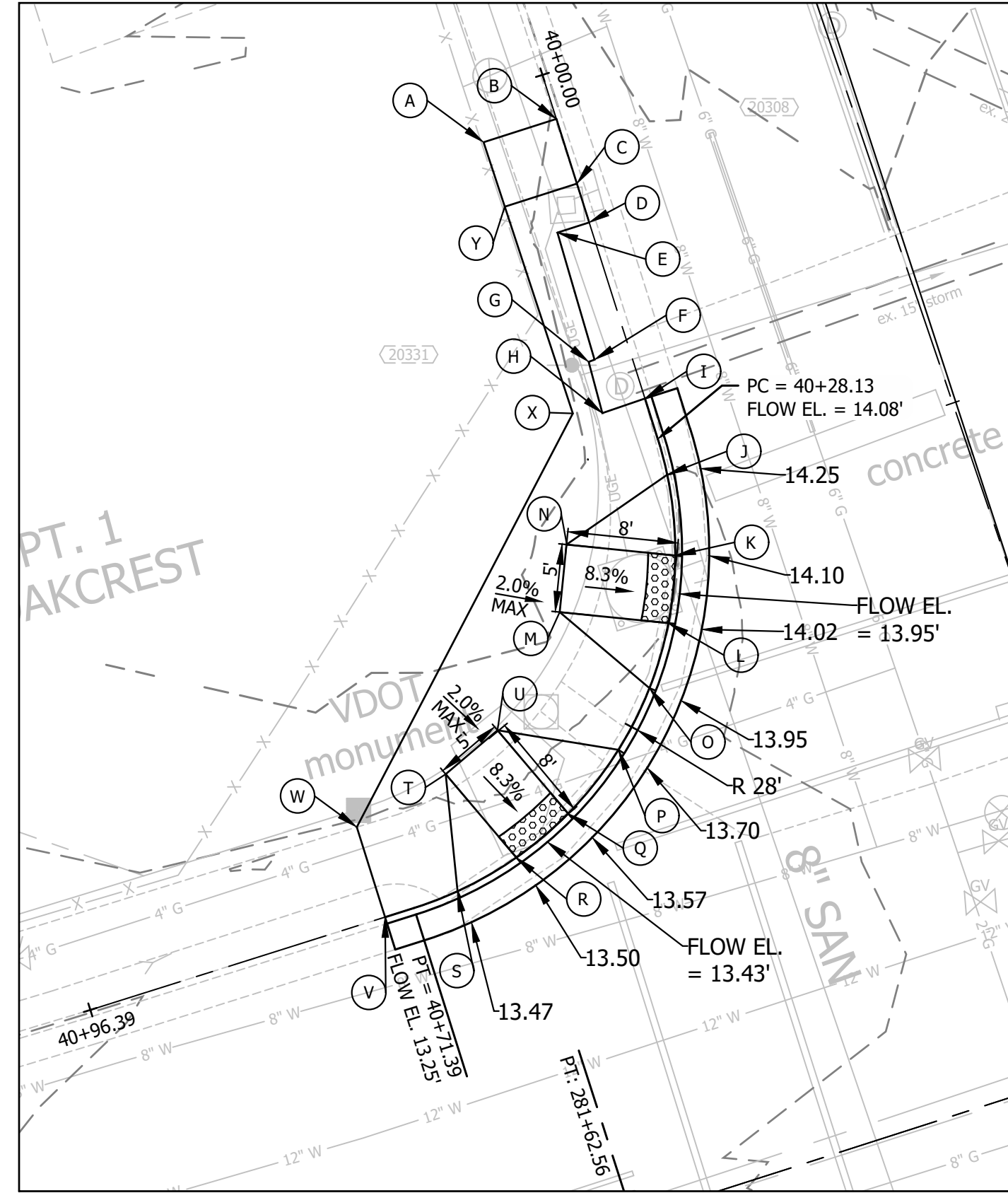


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<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>[Signature]</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions	Date

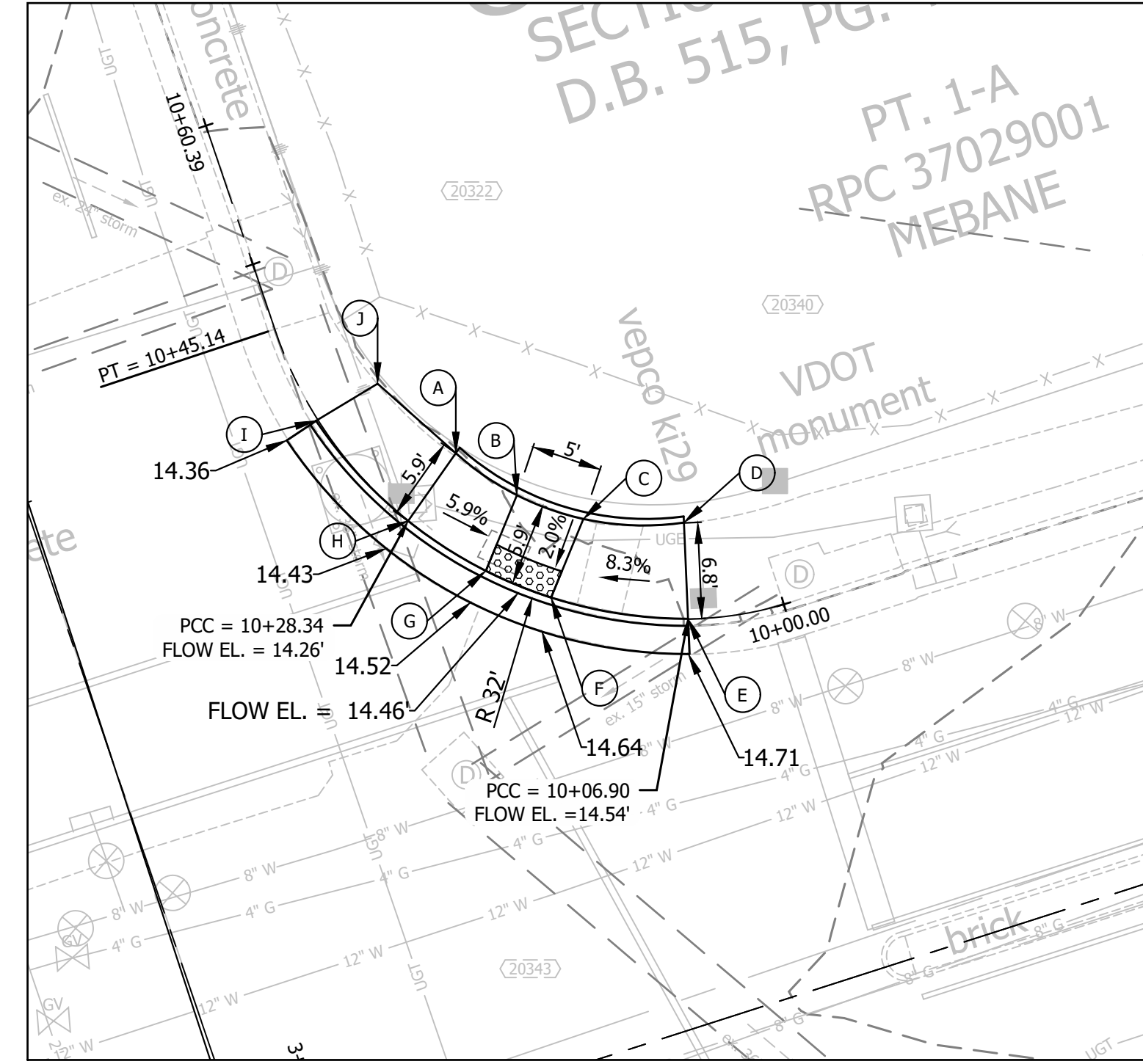
Project Name and Location
S. Glebe Road Intersection Improvements
TYPICAL SECTIONS
S. Glebe Road at S. Arlington Ridge Road

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Drawn: ABK
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Plotted by: marnone
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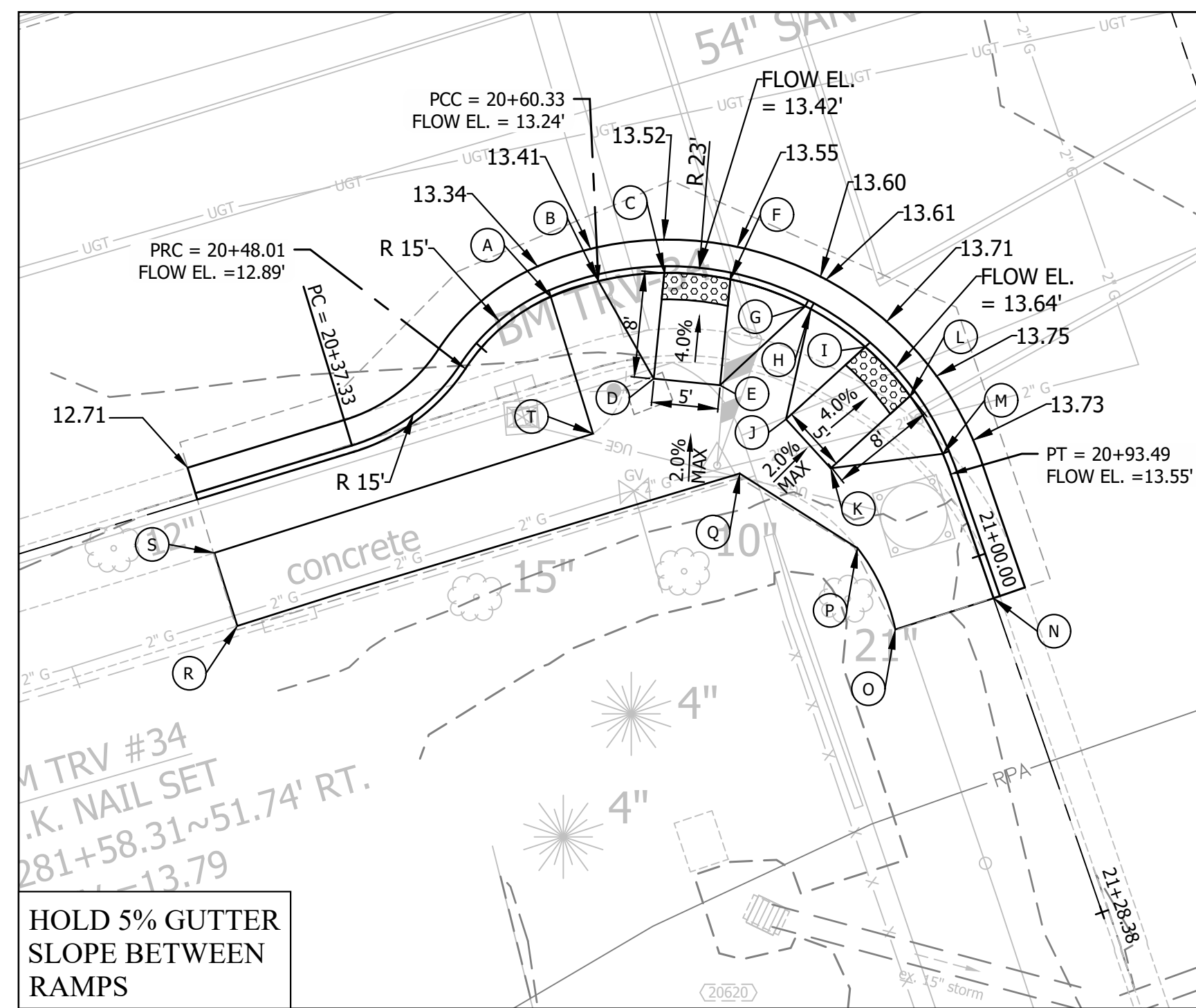
CG-12A - S. GLEBE RD RTE. 120/S. ARLINGTON RIDGE RD.
Scale: 1" = 10'

DETAIL 12-1	STA.	OFFSET	ELEV.
A	40+03.41	5.63' RT	15.23
B	40+03.40	0.00' RT	14.99
C	40+08.40	0.00' RT	14.86
D	40+11.40	0.00' RT	14.88
E	40+11.41	2.46' RT	14.90
F	40+21.15	2.68' RT	14.77
G	40+21.17	3.14' RT	14.77
H	40+25.08	3.31' RT	14.72
I	40+25.00	0.00' RT	14.71
J	40+30.85	0.00' RT	14.58
K	40+36.85	0.00' RT	14.00
L	40+41.86	0.00' RT	13.92
M	40+42.89	8.00' RT	14.58
N	40+35.82	8.00' RT	14.66
O	40+46.85	0.00' RT	14.29
P	40+51.94	0.00' RT	14.03
Q	40+57.94	0.00' RT	13.47
R	40+62.95	0.00' RT	13.40
S	40+67.94	0.00' RT	13.80
T	40+63.98	8.00' RT	14.06
U	40+56.91	8.00' RT	14.13
V	40+73.62	0.00' RT	13.85
W	40+73.62	6.95' RT	13.93
X	40+24.45	5.40' RT	15.08
Y	40+08.41	5.58' RT	15.10



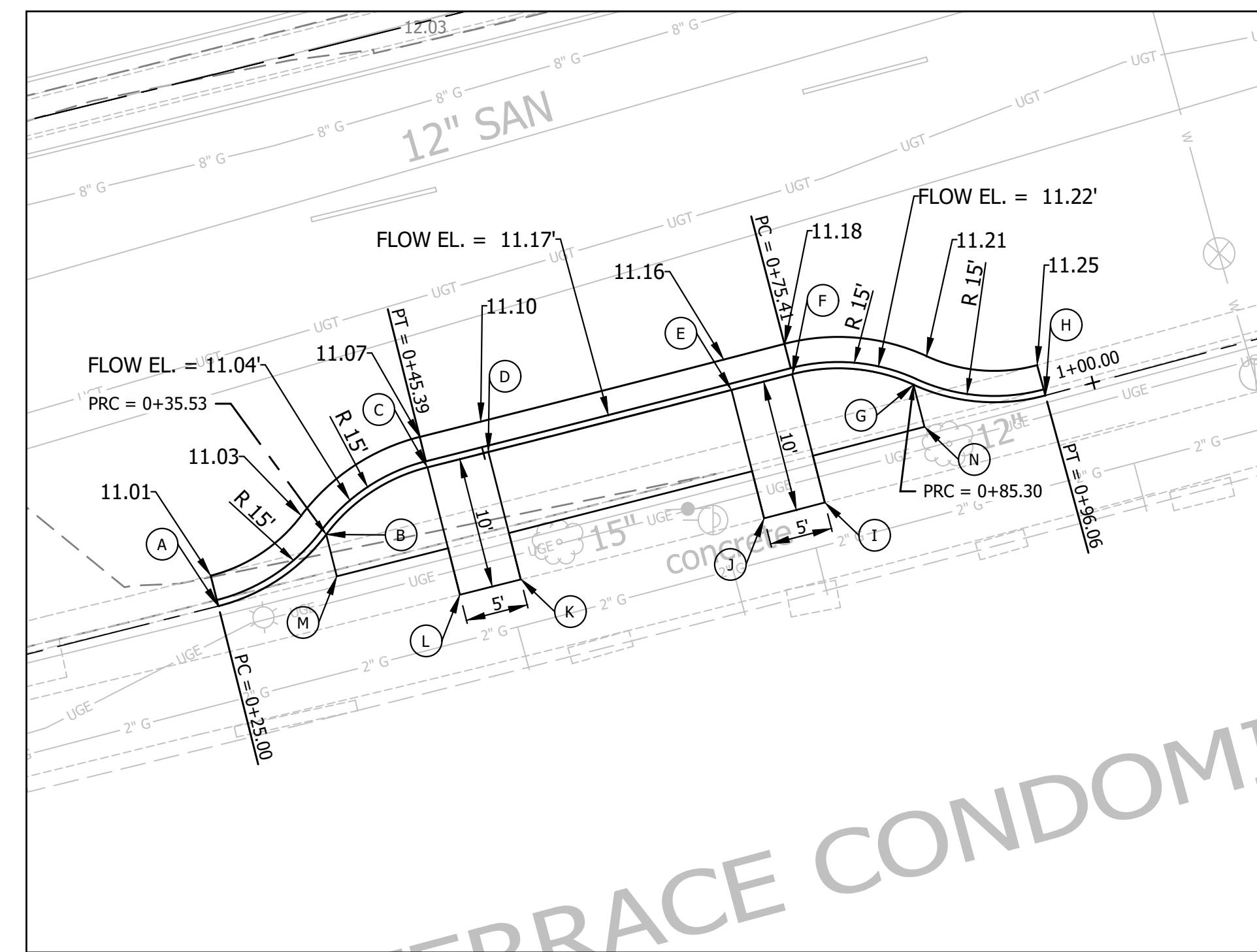
CG-12B - S. GLEBE RD RTE. 120/S. ARLINGTON RIDGE RD.
Scale: 1" = 10'

DETAIL 12-2	STA.	OFFSET	ELEV.	TOC ELEV.
A	10+28.81	5.87' RT	14.85	14.85
B	10+22.33	5.78' RT	14.54	15.04
C	10+16.18	6.01' RT	14.62	15.12
D	10+07.25	6.83' RT	15.22	15.22
E	10+06.90	0.00' RT	15.04	
F	10+16.77	0.00' RT	14.50	
G	10+21.77	0.00' RT	14.42	
H	10+28.34	0.00' RT	14.76	
I	10+38.01	0.00' RT	14.69	
J	10+37.88	4.96' RT	14.85	



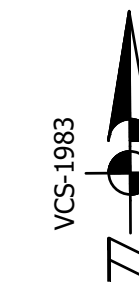
CG-12A - S. GLEBE RD RTE. 120/S. ARLINGTON RIDGE RD.
Scale: 1" = 10'

DETAIL 12-3	STA.	OFFSET	ELEV.
A	20+56.53	0.00' RT	13.67
B	20+60.33	0.00' RT	13.74
C	20+65.34	0.00' RT	13.42
D	20+63.95	7.92' RT	13.74
E	20+71.72	7.93' RT	13.78
F	20+70.35	0.00' RT	13.45
G	20+76.35	0.00' RT	14.00
H	20+76.81	0.00' RT	14.01
I	20+81.82	0.00' RT	13.61
J	20+80.43	8.00' RT	13.93
K	20+88.23	8.00' RT	13.97
L	20+86.83	0.00' RT	13.65
M	20+91.85	0.00' RT	14.06
N	21+03.38	0.00' RT	13.90
O	21+03.18	7.77' RT	14.15
P	20+96.46	8.46' RT	14.10
Q	20+79.79	13.35' RT	14.05
R	20+25.11	9.98' RT	13.35
S	20+25.06	4.21' RT	13.40
T	20+52.05	10.54' RT	13.80



BUS STOP EXTENSION - S. GLEBE RD RTE. 120
Scale: 1" = 10'

DETAIL 12-4	STA.	OFFSET	ELEV.
A	0+25.00	0.00' RT	11.35
B	0+35.53	0.00' RT	11.37
C	0+45.39	0.00' RT	11.41
D	0+50.40	0.00' RT	11.44
E	0+70.40	0.00' RT	11.50
F	0+75.40	0.00' RT	11.52
G	0+85.30	0.00' RT	11.55
H	0+96.06	0.00' RT	11.59
I	0+75.39	10.55' RT	11.65
J	0+70.39	10.57' RT	11.60
K	0+50.39	10.50' RT	11.58
L	0+45.39	10.47' RT	11.58
M	0+33.69	2.80' RT	11.40
N	0+87.15	2.82' RT	11.58



- NOTES**
- Elevations along curb lines always indicate top of proposed curb elevations along the TOC baselines/ back of curb unless noted otherwise.
 - All detail panes share the same orientation/north arrow.
 - Proposed elevations based upon digital terrain model interpolation, surveyed by Arlington County.
 - Contractor to field verify elevations prior to setting grade.



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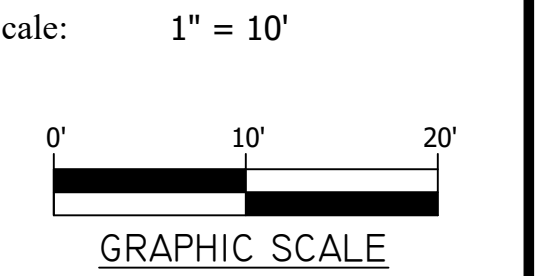
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<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

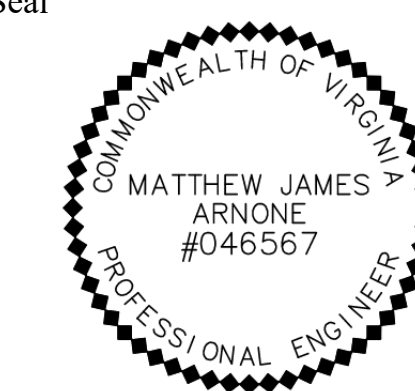
Project Name and Location
S. Glebe Road Intersection Improvements
CURB RAMP DETAILS
S. Glebe Road at S. Arlington Ridge Road

Designed: KWB
Drawn: KWB
Checked: KJY
Miss Utility Transmittal #:

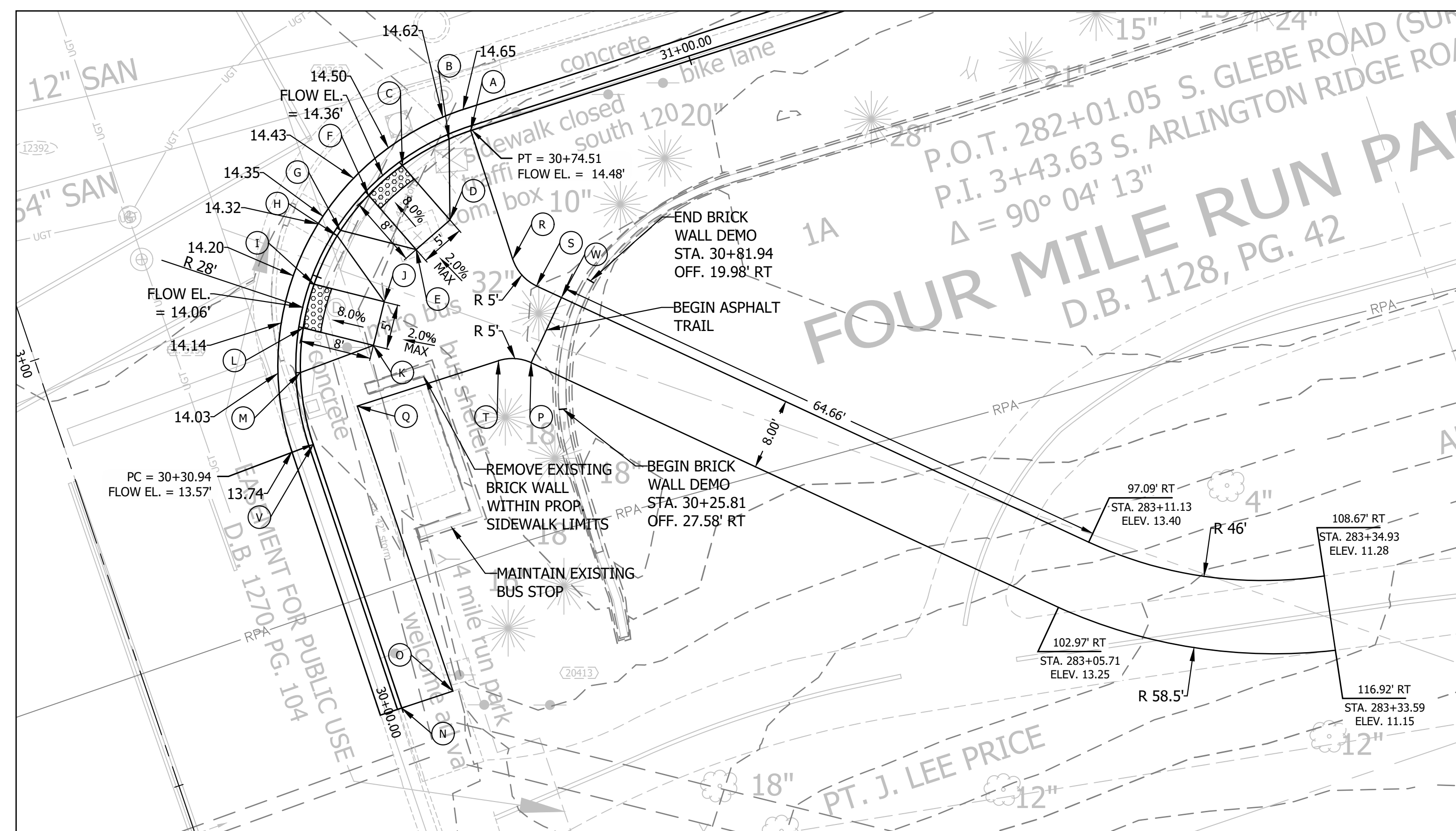
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Plotted: November 15, 2021
Plotted by: kmita



Seal



Matthew J. Arnone
11-13-21



CG-12A - S. GLEBE RD RTE. 120/S. ARLINGTON RIDGE RD.
Scale: 1" = 10'

DETAIL 12-5	STA.	OFFSET	ELEV.
A	30+74.36	0.00' RT	14.98
B	30+71.79	0.00' RT	14.95
C	30+65.79	0.00' RT	14.40
D	30+66.82	8.00' RT	15.04
E	30+59.75	8.00' RT	14.97
F	30+60.78	0.00' RT	14.33
G	30+55.78	0.00' RT	14.68
H	30+55.07	0.00' RT	14.65
I	30+49.08	0.00' RT	14.10
J	30+50.11	8.00' RT	14.74
K	30+43.04	8.00' RT	14.68
L	30+44.07	0.00' RT	14.04
M	30+39.08	0.00' RT	14.36
N	30+00.00	0.00' RT	13.90
O	30+00.00	6.00' RT	13.88
P	30+44.68	25.65' RT	15.05
Q	30+34.09	5.86' RT	14.20
R	30+74.36	15.04' RT	15.15
S	30+76.06	18.68' RT	15.18
T	30+42.61	22.02' RT	14.99
U		NOT USED	
V	30+30.94	0.00' RT	14.07
W	30+78.30	20.76' RT	15.20

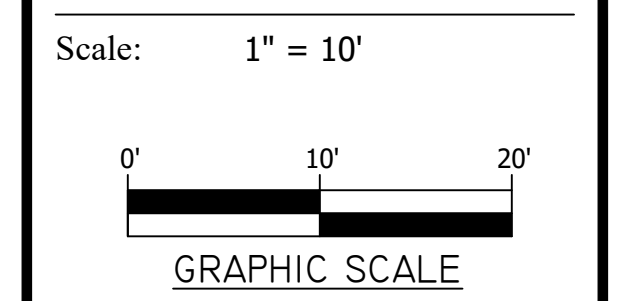
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<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

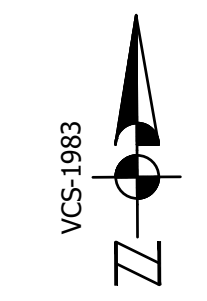
Project Name and Location
S. Glebe Road Intersection Improvements
CURB RAMP DETAILS
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: KWB
Drawn: KWB
Checked: KJY
Miss Utility Transmittal #:

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Plotted by: kmita

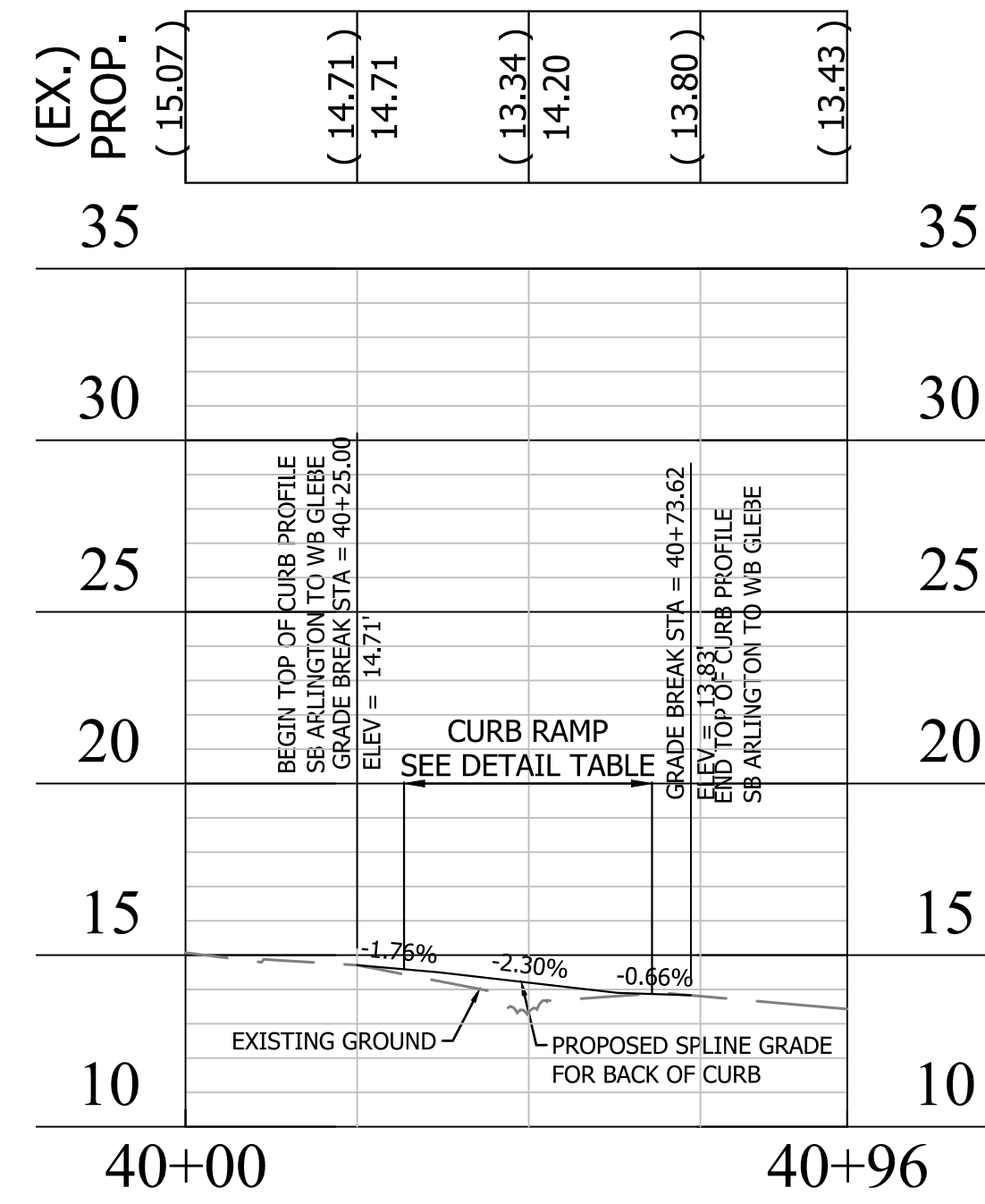


Sheet **12A**

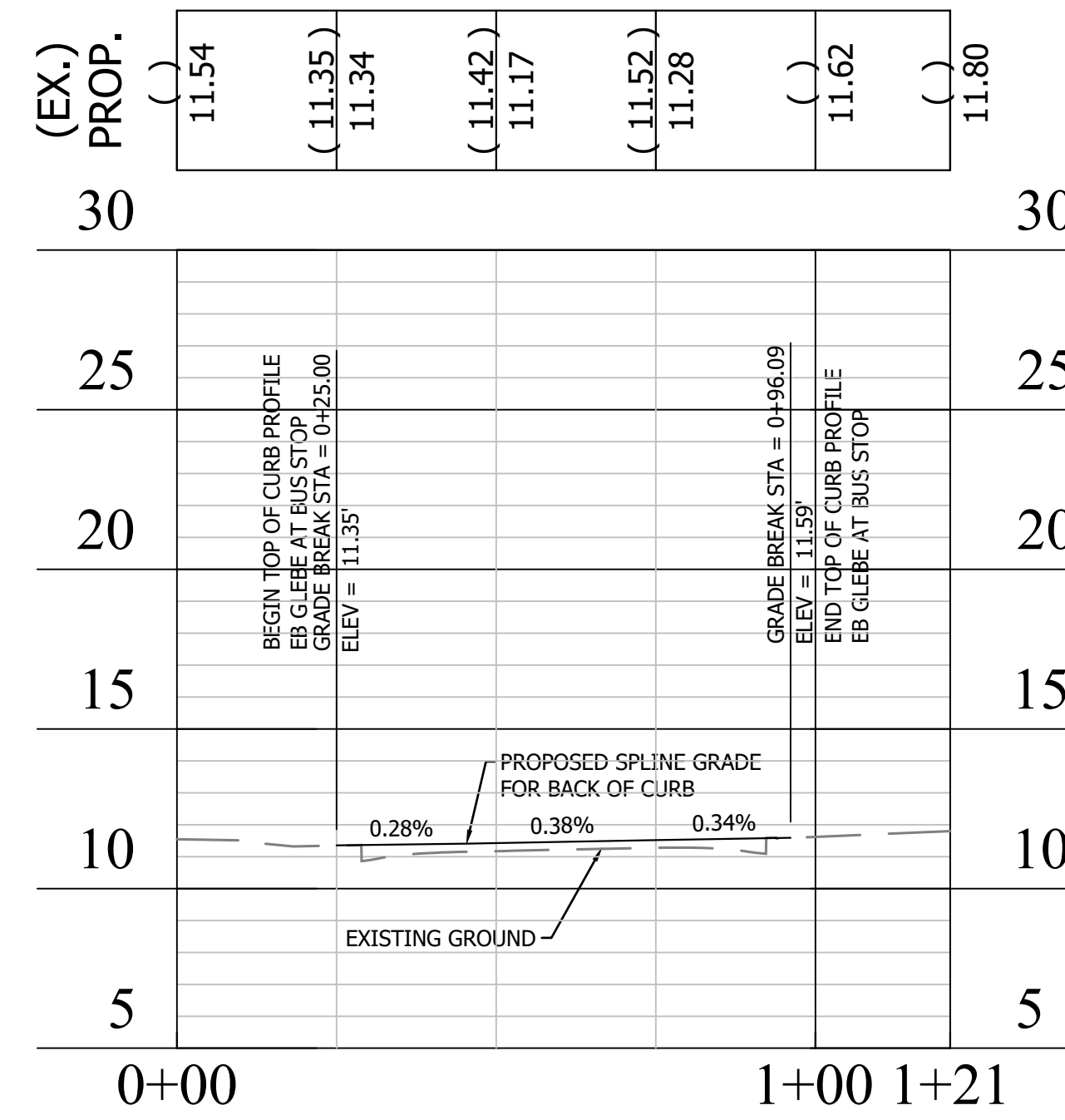


- NOTES**
- Elevations along curb lines always indicate top of proposed curb elevations along the TOC baselines/ back of curb unless noted otherwise.
 - All detail panes share the same orientation/north arrow.
 - Proposed elevations based upon digital terrain model interpolation, surveyed by Arlington County.
 - Contractor to field verify elevations prior to setting grade.

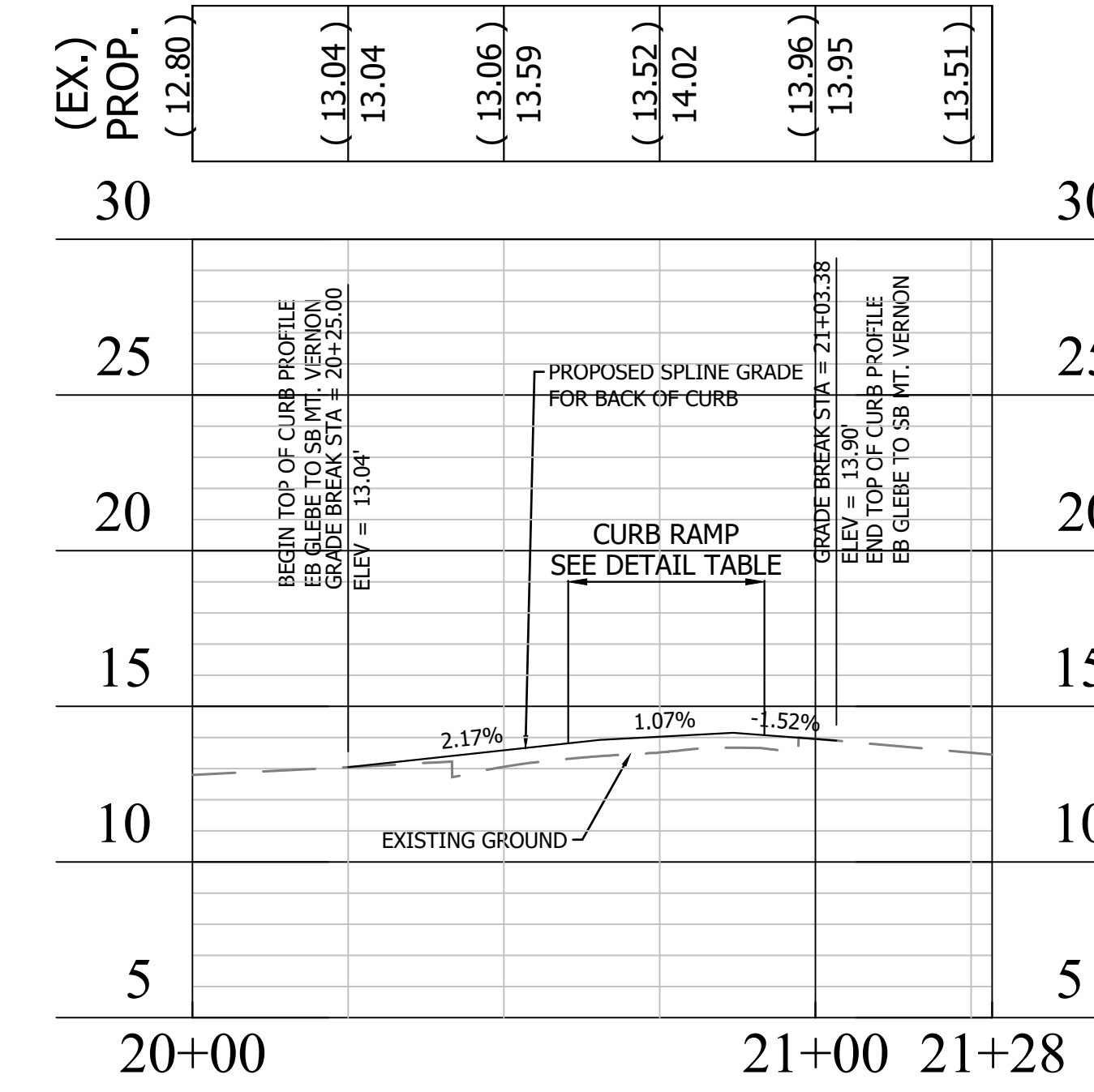
**TOP OF CURB - SB S. ARLINGTON
RIDGE ROAD TO WB S. GLEBE ROAD**



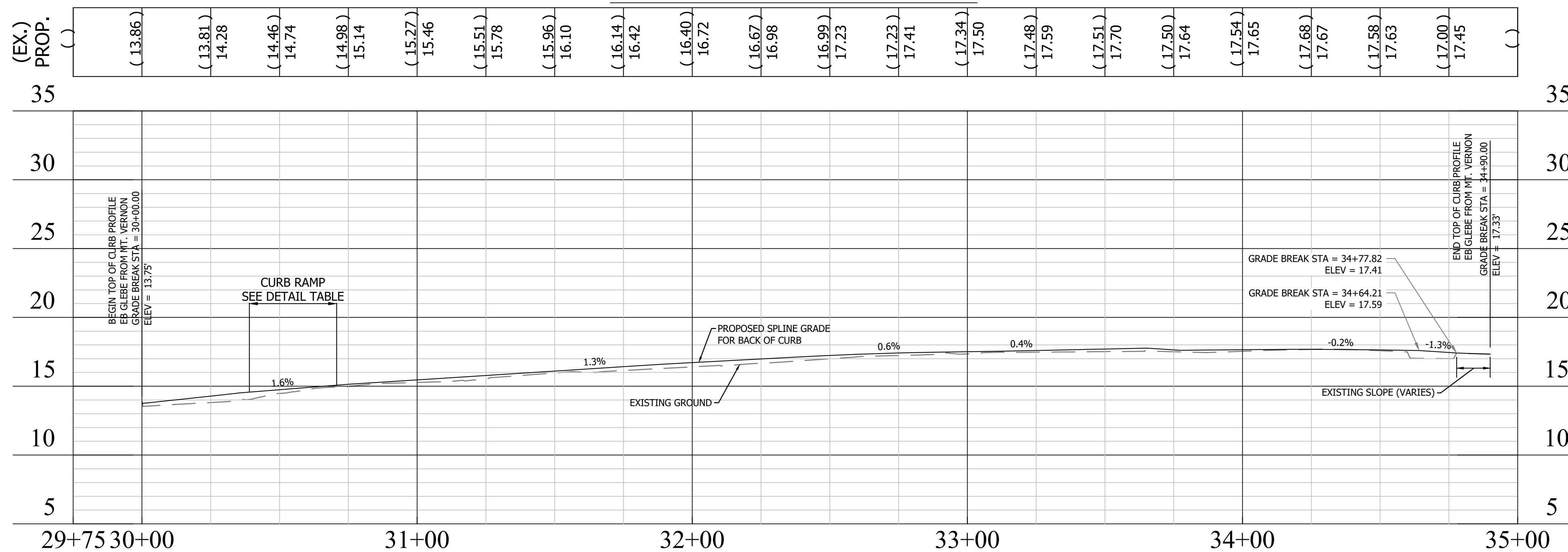
**TOP OF CURB - EB S. GLEBE
ROAD AT BUS STOP**



**TOP OF CURB - EB S. GLEBE ROAD TO
SB MT. VERNON ROAD**

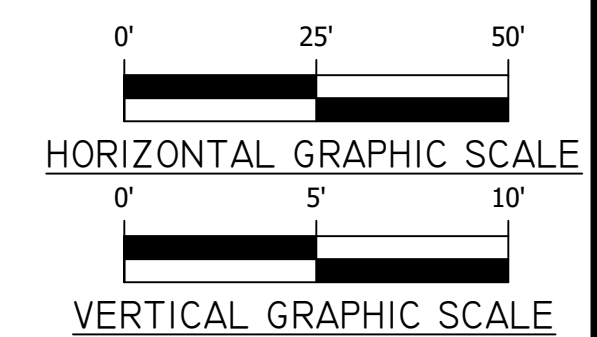


**TOP OF CURB - EB S. GLEBE ROAD
FROM MT. VERNON ROAD**



NOTE:

- BACK OF CURB PROFILES ARE SPLINE GRADES DEVELOPED OFF OF EXISTING GROUND ELEVATIONS. ALL GRADES ARE APPROXIMATE.
- SEE CURB RAMP DETAILS ON SHEET 12 FOR APPLICABLE ELEVATIONS FOR THE PROPOSED CG-12B RAMP IN THE NE CORNER OF THE INTERSECTION



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Arlington, VA 22201
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Seal



APPROVALS DATE

J. K. Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER
John N. Nicks 01/12/2022
TRAFFIC ENGINEERING MANAGER
John N. Nicks 02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF
Dennis W. Leach 01/07/2022
TE&O BUREAU CHIEF
TRANSPORTATION DIRECTOR

Revisions Date

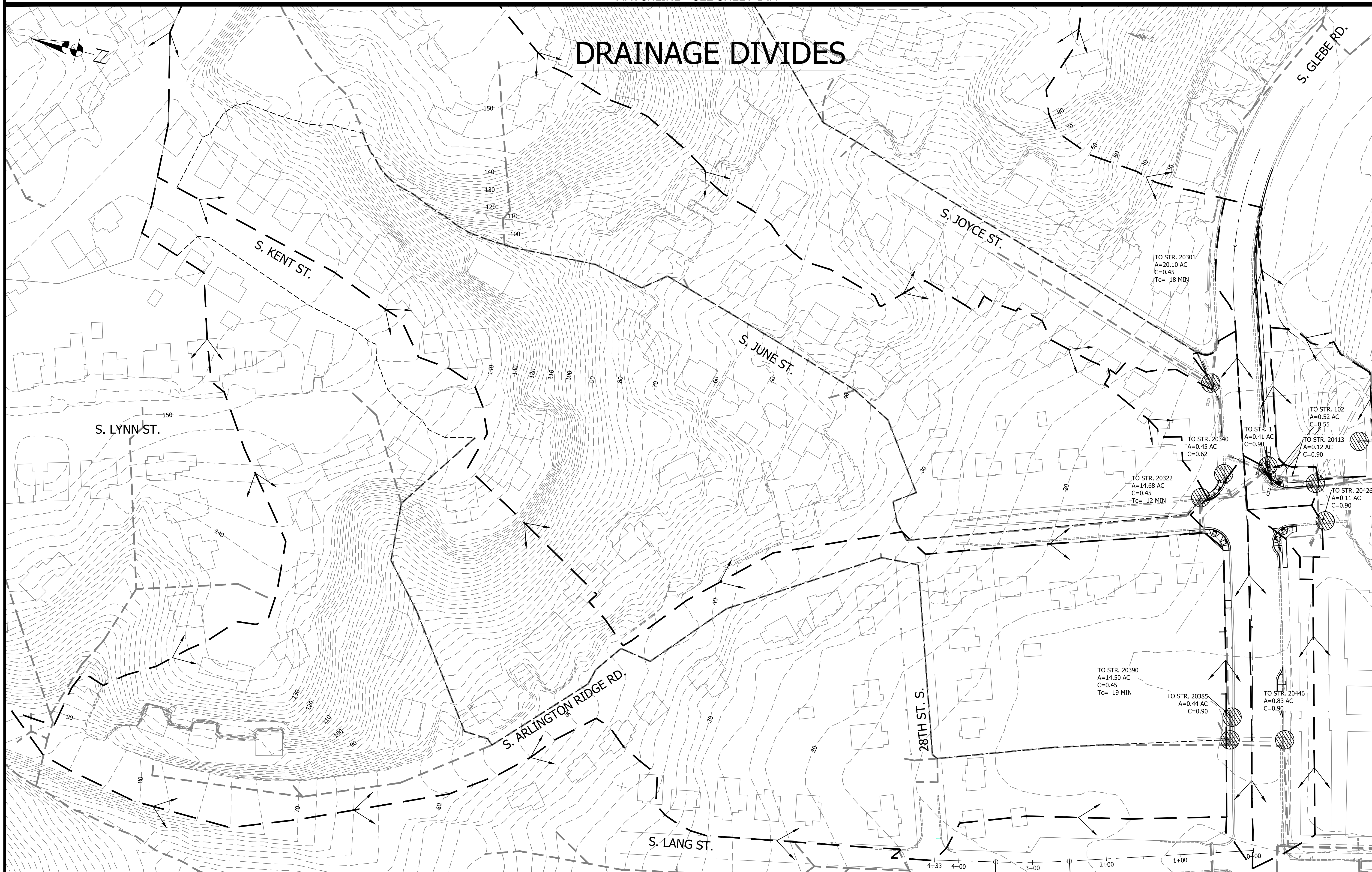
Project Name and Location
S. Glebe Road Intersection Improvements
CURB PROFILE SHEET
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: ABK
Drawn: ABK
Checked: MJK
Miss Utility Transmittal #:

Filename: TE07_Curb Profiles.dwg
Path: \\net\arc\GIS\Projects\20111112_Arlington\Task 1 - S. Glebe Road\TE07.dwg
Plotted: November 15, 2021
Plotted by: kmita

Scale: HOR: 1"=25'
VERT: 1"=5'

DRAINAGE DIVIDES



LEGEND

- DRAINAGE DIVIDE
- Tc PATH
- EX. STORM SEWER (PER ARL. CO. GIS)
- INLET LOCATION

NOTE: FOR THOSE TIMES OF CONCENTRATION NOT GRAPHICALLY SHOWN, A Tc OF 5 MINUTES IS USED.



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APPROVALS

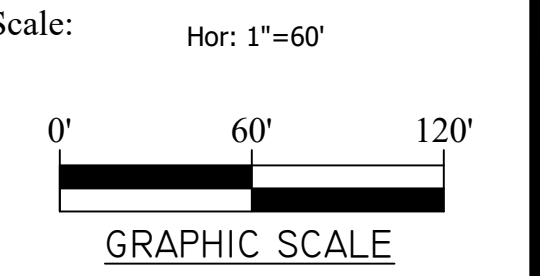
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<i>[Signature]</i>	01/07/2022
<i>[Signature]</i>	01/07/21

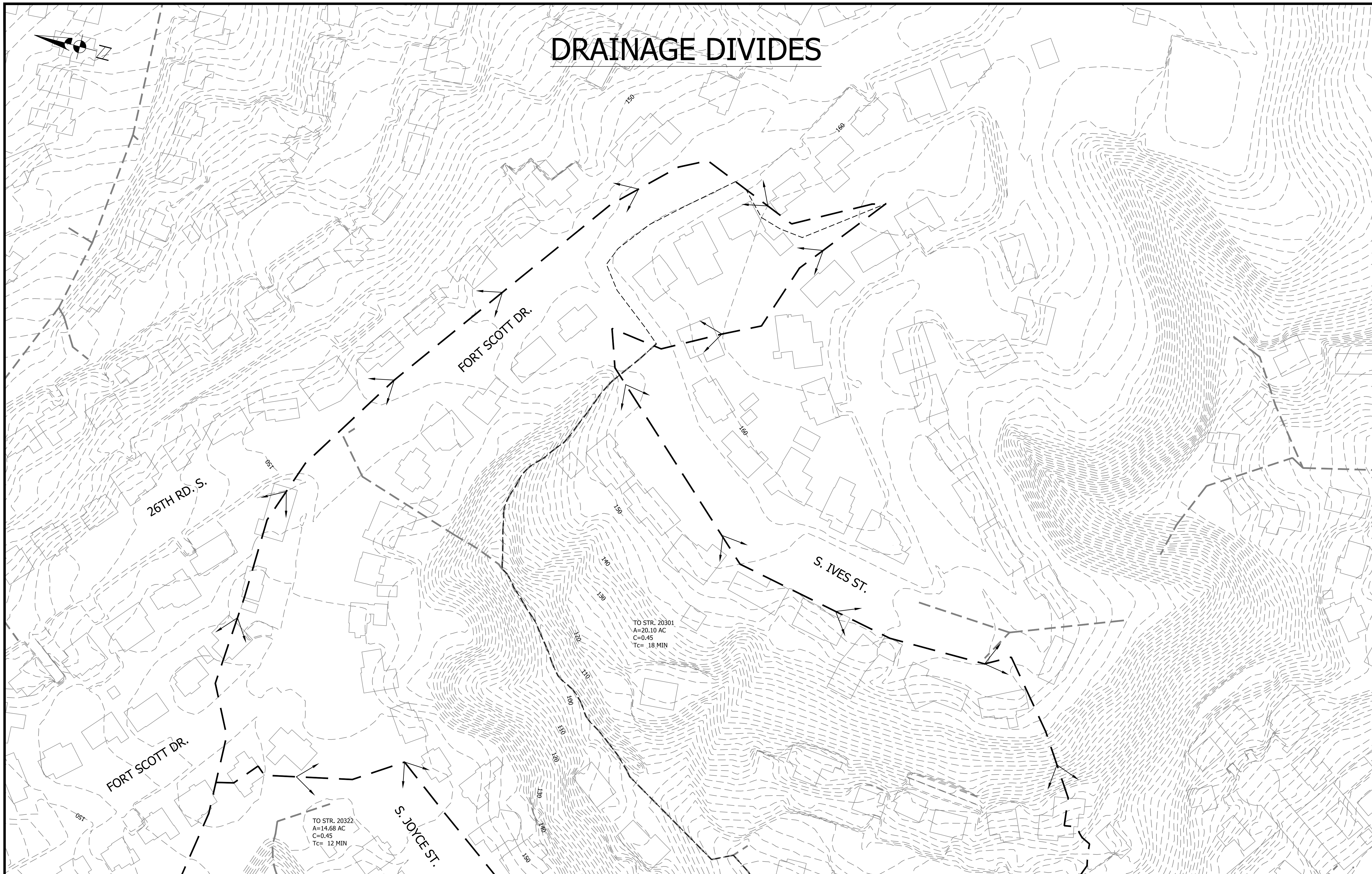
Revisions

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 DRAINAGE DIVIDES
 S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
 Drawn: TIS
 Checked: MJA
 Miss Utility Transmittal #:
 Filename: 160714_Drainage Divides.dwg
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 Plotted: November 16, 2021
 Plotted by: tsmoza

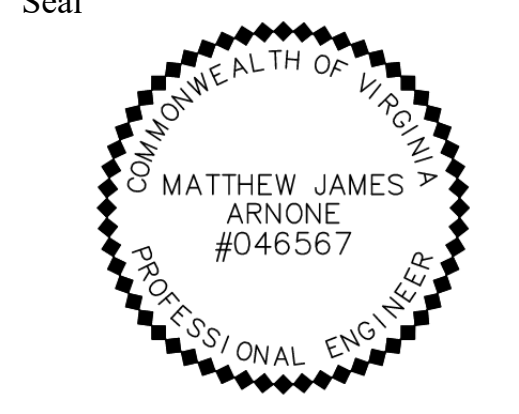




DRAINAGE DIVIDES



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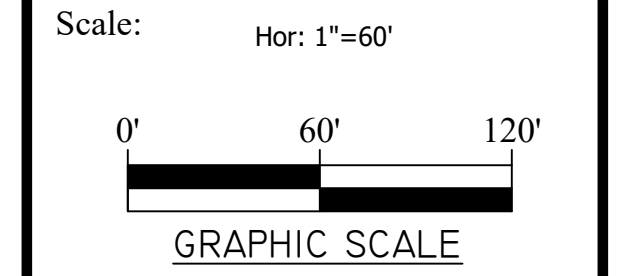
Matthew J. Arnone
 11-17-21

APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 DRAINAGE DIVIDES
 S. Glebe Road at S. Arlington Ridge Road
 TE07

Designed: TIS
 Drawn: TIS
 Checked: MJA
 Miss Utility Transmittal #:
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 Plotted: November 15, 2021
 Plotted by: kmita



Sheet **14A**

- LEGEND**
- DRAINAGE DIVIDE
 - Tc PATH
 - EX. STORM SEWER (PER ARL. CO. GIS)
 - INLET LOCATION

NOTE: FOR THOSE TIMES OF CONCENTRATION NOT GRAPHICALLY SHOWN, A Tc OF 5 MINUTES IS USED.

MATCHLINE - SEE SHEET 14

PROPOSED DRAINAGE DESCRIPTIONS

1	1 Std. DI-3B Req. L=8', H=5.0', Inv=10.00' Std. IS-1 Req. Connect to UD-4
1	20362 5'-15" Conc. Pipe Class III Req. (3' Cover) Silt-Tight Joint Type Inv.(In) 10.00', Inv.(Out) 9.80'
20362	20362 Modify Existing Structure Modify to Remove 42" Conc. Outlet Pipe Modify to Accept 15" Conc. Pipe Modify to Accept 42" Conc Pipe Convert Existing Curb Inlet to Manhole 1 Std. MH-1 Frame & Cover Req. Adjust to Grade, Proposed Top Elev. = 14.67 Std. IS-1 Req.
20362	2 17'-42" Conc. Pipe Class III Req. (2' Cover) Silt-Tight Joint Type Inv.(In) 8.62', Inv.(Out) 8.55' Excavate 24" Below Bottom of Culvert and Backfill with Bedding Material Aggregate #25 or 26 In Accordance with VDOT Std. PB-1 5 CY Minor Structure Excavation 4 Tons Bedding Material Aggregate #25 or 26 See Notes Below
2	5.1 LF MH-2 Req. 1 Std. MH-1 Frame & Cover Req. D=6', Inv=8.55' Std. IS-1 Req.
2	20413 Existing Pipe To Be Extended with 9'-42" Conc. Pipe Class III Req. (2' Cover) Field Connection Req. Silt-Tight Joint Type Inv.(In) 8.55', Inv.(Out) 8.35' Inv.(Out) Denotes Connection to Existing 42" Pipe Excavate 24" Below Bottom of Culvert and Backfill with Bedding Material Aggregate #25 or 26 In Accordance with VDOT Std. PB-1 3 CY Minor Structure Excavation 2 Tons Bedding Material Aggregate #25 or 26 See Notes Below

NOTES:

- IF GROUNDWATER IS ENCOUNTERED, IN LIEU OF 24" #25 OR 26, PROVIDE 18" OF NO. 57 AGGREGATE, COMPLETELY WRAPPED IN A WOVEN GEOTEXTILE SUBGRADE STABILIZATION FABRIC, TOPPED WITH 6" BEDDING IN ACCORDANCE WITH PB-1 FOR SOFT, YIELDING, OR OTHERWISE UNSUITABLE MATERIAL.
- MINOR STRUCTURE EXCAVATION AND PIPE BEDDING ARE INCIDENTAL TO THE COST OF THE PIPE.

EXISTING DRAINAGE DESCRIPTIONS

#102	TOP = 2.74 INV. OUT= 1.30 (15") TO 103	#20413	TOP = 13.75 INV. IN = 6.80 (15") FROM 20426 INV. IN = 7.05 (42") FROM EX. 5156 INV. OUT= 3.59 (42") TO 104
#103	TOP = 2.14 INV. IN = 0.62 (15") FROM 102	#20426	TOP = 13.76 INV. IN = 8.97 (15") FROM 20620 INV. OUT= 7.78 (15") TO 20413
#104	TOP = 6.13 INV. IN = 2.04 (42") FROM 20413	#20435	TOP = 12.71 INV. IN = 7.71 (15") FROM 20407 INV. OUT= 7.50 (15") TO 20475
#20288	TOP = 18.86 INV. IN = 11.11 (30") FROM 20301	#20446	TOP = 12.02 INV. IN = 5.42 (48") FROM 20390 INV. OUT= 5.40 (54") TO 20472
#20297	TOP = 17.24 INV. OUT= 13.78 (15") TO 20301	#20461	TOP = 12.15 INV. IN = 5.74 (15") FROM 20475 INV. OUT= 5.54 (15") TO 20472
#20301	TOP = 17.11 (15") INV. IN = 12.36 (20288) (15") INV. IN = 12.36 (20297) (15") INW. INV. OUT = 11.61 (20343)	#20468	TOP = 13.53 INV. OUT= 9.59 (15") TO 20475
#20308	TOP = 15.62 INV. OUT= 10.87 (24") TO 20322 INV. OUT= 11.70 (24") TO	#20472	TOP = 12.35 INV. IN = 5.50 (15") FROM 20461 INV. IN = 4.75 (54") FROM 20446 INV. OUT= 4.80 (54") TO 20592
#20322	TOP = 14.97 INV. IN = 10.34 (24") FROM 20308 INV. IN = 11.77 (15") FROM 20331 INV. OUT= 9.97 (36") TO 20343	#20475	TOP = 13.03 INV. IN = 6.91 (15") FROM 20468 INV. IN = 6.63 (15") FROM 20435 INV. OUT= 6.62 (15") TO 20461
#20331	TOP = 15.03 INV. OUT= 11.93 (15") TO 20322	#20521	TOP = 10.55 INV. OUT= 6.77 (15") TO 20527
#20340	TOP = 15.12 INV. OUT= 11.84 (15") TO 20343	#20527	TOP = 10.47 INV. IN = 6.72 (15") FROM 20521 INV. OUT= 6.25 (15") TO 20639
#20343	TOP = 14.65 INV. IN = 9.65 (36") FROM 20322 INV. IN = 10.28 (15") FROM 20340 INV. OUT= 9.38 (36") TO 20362	#20568	TOP = 13.41 INV. IN = 4.29 (54") FROM 20592 INV. OUT= 4.24 (54") TO 20588
#20362	TOP = 14.77 INV. IN = 8.62 (36") FROM 20343 INV. OUT= 8.27 (42") TO EX. 5156	#20588	TOP = 8.12 INV. IN = 2.89 (54") FROM 20568
#20385	TOP = 11.54 INV. OUT= 6.61 (15") TO 20390	#20592	TOP = 13.24 INV. IN = 4.05 (54") FROM 20472 INV. OUT= 3.87 (54") TO 20568
#20390	TOP = 11.70 INV. IN = 6.56 (15") FROM 20385 INV. IN = 7.41 (30") FROM INV. OUT= 6.31 (48") TO 20446	#20620	TOP = 14.90 INV. OUT= 10.34 (15") TO 20426
#20393	TOP = 11.76 INV. OUT= 8.54 (15") TO 20407	#20639	TOP = 3.97 INV. IN = 2.45 (15") FROM 20527
#20407	TOP = 11.66 INV. IN = 7.98 (15") FROM 20393 INV. OUT= 8.03 (15") TO 20435	#EX. 5156	TOP = 14.22 INV. IN = 8.34 (42") FROM 20362 INV. OUT= 8.35 (42") TO 20413



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APPROVALS DATE

<i>J. K. Kettle</i>	01/04/2022
TRAFFIC ENGINEER	
<i>J. K. Kettle</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>C. J. J. J.</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>D. W. Leach</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>Dennis W. Leach</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions Date

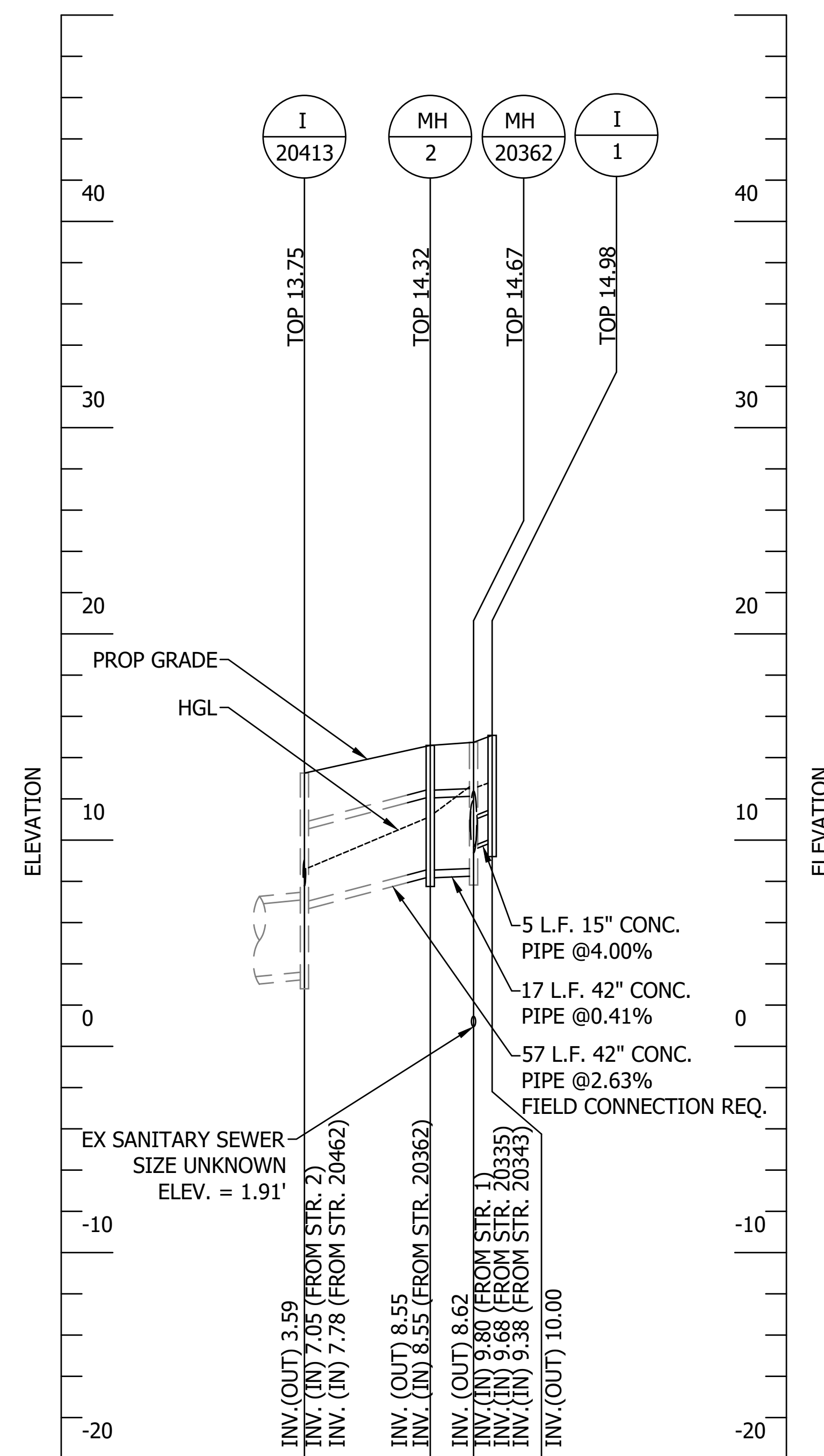
Project Name and Location
S. Glebe Road Intersection Improvements
DRAINAGE DESCRIPTIONS
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

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Plotted: December 17, 2021
Plotted by: tsomoza

Scale: N.T.S.

STORM SEWER PROFILES



OUTFALL TO 20413

NOTES

1. ONLY EXISTING UTILITIES, AT THE TIME OF THE SURVEY, ARE SHOWN ON THE STORM SEWER PIPE PROFILES. THESE PROFILES DO NOT REFLECT EITHER PLANNED RE-LOCATION OF UTILITIES OR PROPOSED UTILITIES. THE CONTRACTOR IS ALSO DIRECTED TO ANY UTILITY PLANS THAT MAY EXIST AS PART OF THIS PLAN ASSEMBLY.
2. ALL UTILITY LOCATIONS ARE APPROXIMATE.
3. UTILITY CLEARANCE DIMENSIONS SHOWN ASSUME THE USE OF CONCRETE STORM SEWER PIPE AND CORRESPONDING PIPE THICKNESSES (WORST CASE SCENARIO).
4. A POST INSTALLATION VISUAL/VIDEO INSPECTION SHALL BE CONDUCTED BY THE CONTRACTOR ON ALL PIPES IDENTIFIED ON THE PLANS AS PROPOSED STORM SEWER PIPE. INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 302.03(D) OF THE VDOT 2016 ROAD & BRIDGE SPECIFICATIONS.
5. THE CONTRACTOR SHALL VERIFY INVERTS OF ALL EXISTING STRUCTURES WHICH WILL TIE TO PROPOSED STORM SEWER. IF INVERTS DIFFER FROM THOSE LISTED ON SHEET 15, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY PROJECT OFFICER TO ADJUST PROPOSED STORM SEWER INVERTS AS NECESSARY.



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Matthew J. Arnone
11-17-21

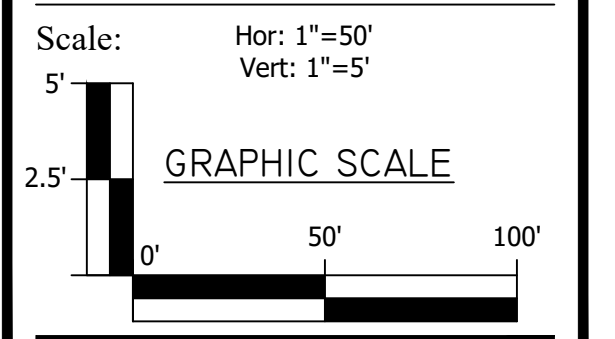
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<i>[Signature]</i> TRAFFIC ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
STORM SEWER PROFILES
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

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Plotted: November 15, 2021
Plotted by: kmita



Sheet **15A**

STORMWATER MANAGEMENT NARRATIVE

THIS PROJECT IS AN INTERSECTION IMPROVEMENT OF THE SOUTH GLEBE ROAD, S. ARLINGTON RIDGE ROAD, AND MT. VERNON AVENUE INTERSECTION. IMPROVEMENTS BEGIN JUST WEST OF THE S. ARLINGTON MILL DRIVE INTERSECTION AND CONTINUE JUST EAST OF THE INTERSECTION. IMPROVEMENTS CONSIST OF THE INSTALLATION OF SIGNALS WITH UPDATED VEHICLE DETECTION, CCTV, EMERGENCY VEHICLE PREEMPTION, ACCESSIBLE PUSHBUTTON SYSTEMS FOR PEDESTRIANS AND IMPROVED INTERSECTION LIGHTING. THE IMPROVEMENTS ALSO INCLUDE MODIFICATIONS TO CREATE SEPARATE LEFT TURN LANES ON SOUTH GLEBE ROAD, SIDEWALK UPGRADES IN THREE OF THE FOUR CORNERS OF THE INTERSECTION AND MODIFICATIONS TO THE TRAIL IN FOUR MILE RUN PARK. IN ADDITION DRAINAGE IMPROVEMENTS, UTILITY RELOCATIONS, NEW PAVEMENT MARKINGS AND SIGN UPGRADES ARE ALSO INCLUDED. THE SITE DRAINS TO THE POTOMAC RUN-FOURMILE RUN (PL25) WATERSHED. THE PROJECT FALLS WITHIN ARLINGTON COUNTY AND VDOT RIGHT-OF-WAY. THE RIGHT-OF-WAY ALONG SOUTH GLEBE ROAD IS CONTROLLED BY VDOT. PROJECT FUNDING WAS ESTABLISHED AFTER TO 7/1/2012, THEREFORE THE PROJECT IS SUBJECT TO THE PART IIB TECHNICAL CRITERIA, DETAILED UNDER THE VIRGINIA ADMINISTRATIVE CODE 870.

WATER QUALITY
THE TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED FOR THE PROJECT HAS BEEN DETERMINED BY UTILIZING THE VIRGINIA RUNOFF REDUCTION METHOD. SINCE THIS IS A LINEAR DEVELOPMENT PROJECT OCCURRING ON PRIOR DEVELOPED LANDS, THE TOTAL PHOSPHOROUS LOAD SHALL BE REDUCED 20% BELOW THE PREDEVELOPMENT TOTAL PHOSPHOROUS LOAD.

THE PROJECT HAS A TOTAL OF 0.4253 ACRES OF DISTURBED AREA, EXCLUDING OFFSITE STAGING AREAS AND PROPOSED MILLING AND OVERLAY AREAS. THE DISTURBED AREA IS SPLIT BETWEEN ARLINGTON COUNTY RIGHT-OF-WAY (0.1623AC) AND VDOT RIGHT-OF-WAY (0.2630 AC). MILL AND OVERLAY IS CONSIDERED TO BE A MAINTENANCE ACTIVITY SINCE THE SUB GRADE MATERIAL WILL NOT BE DISTURBED.

THE PRE-REDEVELOPED CONDITIONS AND POST-DEVELOPMENT CONDITIONS CONSIST OF MANAGED TURF AND IMPERVIOUS COVER. IN ARLINGTON COUNTY, THE PROPOSED STREET IMPROVEMENTS CREATE A NET DECREASE IN IMPERVIOUS COVER (FROM 0.0732 ACRES OF EXISTING IMPERVIOUS TO 0.0553 ACRES OF PROPOSED IMPERVIOUS). THE RESULTING TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED IS 0.01 LBS/YR. WITHIN VDOT RIGHT-OF-WAY, THE PROPOSED STREET IMPROVEMENTS CREATE A SMALL INCREASE IN IMPERVIOUS COVER (FROM 0.2448 ACRES OF EXISTING IMPERVIOUS TO 0.2488 ACRES OF PROPOSED IMPERVIOUS). THE RESULTING TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED IS 0.11 LBS/YR. THE NUTRIENT CREDITS HAVE BEEN PURCHASED TO MEET THIS REQUIREMENT, EVIDENCE OF PURCHASE IS SHOWN ON THIS SHEET.

WATER QUALITY
THE PROJECT HAS THREE OUTFALLS; SHOWN IN THE POST-REDEVELOPMENT CONDITIONS MAP ON THIS SHEET. PROJECT OUTFALLS CONSIST OF DIRECT PIPE DISCHARGES INTO FOUR MILE RUN. OUTFALL TO STR. 104 IS AN EXISTING 42-INCH TRUNK LINE THAT CONVEYS MAJORITY OF THE PROJECT SITE, INCLUDING ALL ROADWAY DRAINAGE. OUTFALL TO STR. 103 IS A YARD INLET TO A 15-INCH RCP THAT CONVEYS RUNOFF FROM FOUR MILE RUN PARK. OUTFALL TO STR. 20472 CATCHES A SMALL PORTION OF THE LOD, DRAINING TO THE LOW POINT OF SOUTH GLEBE ROAD. THIS OUTFALL FLOWS THRU EXISTING STORM SEWER, DIRECTLY INTO FOUR MILE RUN.

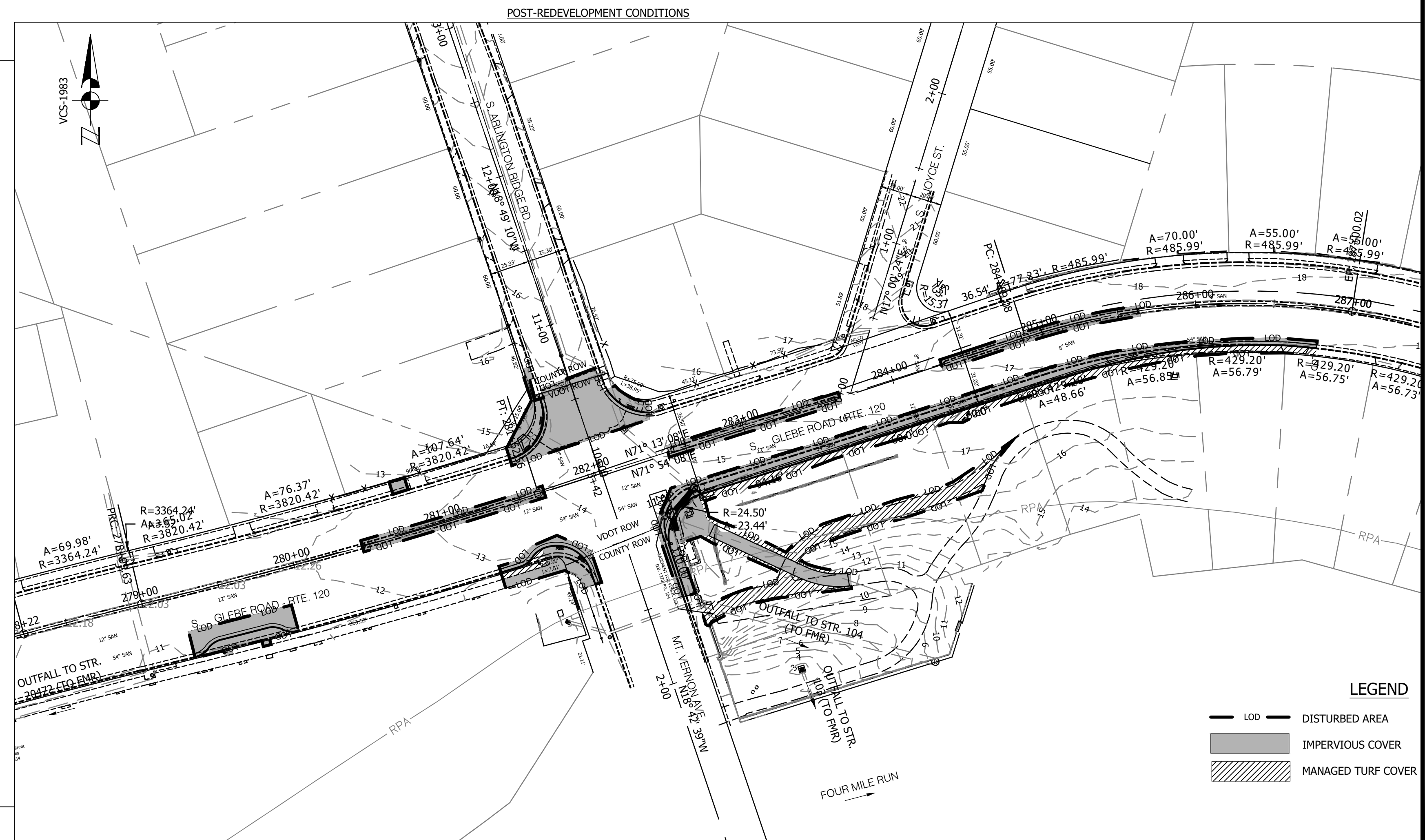
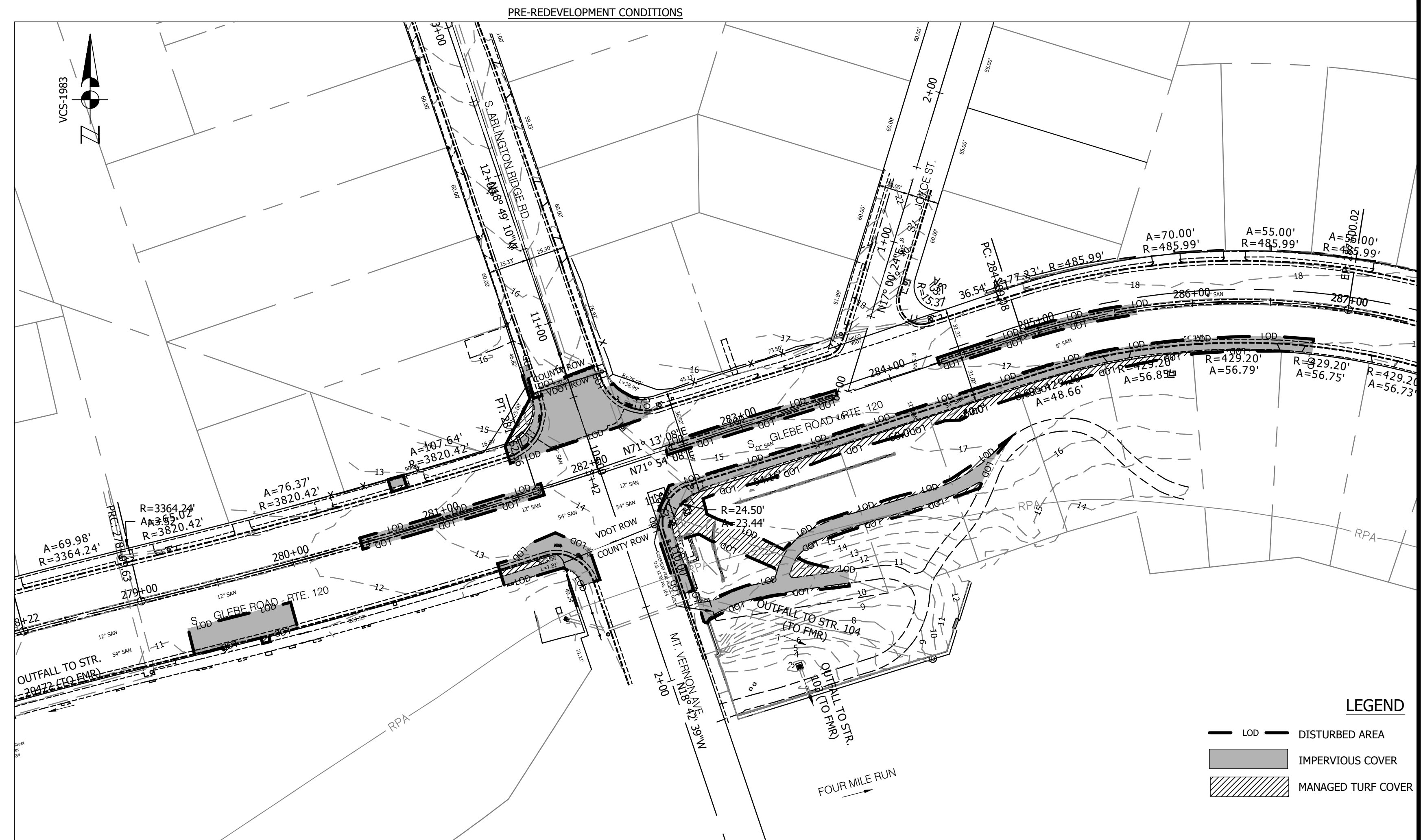
AS SHOWN IN THE DRAINAGE CALCULATIONS (SEE SHEET 14C) THE EXISTING SYSTEM IS ADEQUATE CAPACITY TO HANDLE THE 10-YEAR, 24-HOUR DESIGN STORM. THERE IS ONE PIPE WHICH IS UNDER PRESSURE FLOW, STR. 20305 TO STR. 20390. THE CAPACITY OF THIS PIPE IS 2.59 CFS, WHILE THE COMPUTED FLOW IS 2.72 CFS. DUE TO THIS SMALL DIFFERENCE, THE LOCATION OF THE PIPE AT THE TOP OF THE RUN, AND THE FACT THAT THIS DOES NOT CAUSE ANY HGL ISSUES, THIS IS NOT PROBLEMATIC.

THE SITE'S DISTURBED AREA IS LESS THAN OR EQUAL TO 1.0% OF THE TOTAL WATERSHED AREA (7.8 SQ. MI.) AT THE OUTFALL OF EACH STORM SEWER SYSTEM, THIS IS THE LIMIT FOR CHANNEL PROTECTION. THE LIMIT OF ANALYSIS FOR FLOOD PROTECTION HAS BEEN IDENTIFIED AT THE POINT WHERE EACH STORM SEWER SYSTEM ENTERS THE MAPPED FLOODPLAIN OF FOUR MILE RUN.

SINCE IMPERVIOUS AREA IS DECREASED FROM THE EXISTING TO THE PROPOSED CONDITION, FLOW FROM THE SITE IS ALSO DECREASED. COMPUTATIONS ARE INCLUDED ON SHEET 16A. SINCE DRAINAGE IS CONTAINED WITHIN THE EXISTING SYSTEMS, AND THERE IS A REDUCTION IN FLOW, DOWNSTREAM PROPERTIES WILL NOT BE ADVERSELY IMPACTED BY THIS PROJECT. FURTHER, § 60-11.C OF THE COUNTY CODE, PROHIBITING INCREASES IN PEAK DISCHARGE WITHIN THE FOUR MILE RUN WATERSHED IS SATISFIED.

DRAINAGE
SOUTH GLEBE ROAD IS CLASSIFIED AS AN URBAN PRINCIPAL ARTERIAL WITHOUT SHOULDER WITH A DESIGN SPEED OF 35 MPH, WHILE SOUTH ARLINGTON RIDGE ROAD AND MOUNT VERNON AVENUE ARE BOTH URBAN MINOR ARTERIALS WITH A DESIGN SPEED OF 25 MPH. THE VDM DICTATES THAT THE DESIGN STORM FOR STORMDRAIN IS THE 10-YEAR FOR ALL ROADS WITHIN THE PROJECT AREA. THE RAINFALL INTENSITIES FOR THE STORMDRAIN ARE BASED ON THE LATEST BDE FACTORS (VDM) AS SHOWN IN THE DRAINAGE DESIGN CRITERIA IN THIS SECTION OF THIS REPORT. THESE FACTORS REPRESENT THE RAINFALL PRECIPITATION FREQUENCY DATA PROVIDED BY NOAA ATLAS 14, VOLUME 2, VERSION 3. INLET COMPUTATIONS UTILIZE A 4 IN/HR INTENSITY, WITH SPREAD LIMITED TO HALF OF THE DIVING LANE PLUS THE GUTTER WIDTH AND PONDING DEPTH LIMITED TO ONE INCH BELOW THE TOP OF CURB. STARTING HGL ELEVATIONS ARE BASED ON 0.8D. VELOCITIES FOR PROPOSED PIPES ARE BETWEEN 3 AND 10 FPS. EXISTING PIPE VELOCITIES ARE A MAXIMUM OF 40 FPS PER THE AMERICAN CONCRETE PIPE ASSOCIATION.

THERE HAVE BEEN NO REPORTED FLOODING ISSUES WITHIN THE PROJECT AREA. THE SITE IS LOCATED ADJACENT TO THE FOUR MILE RUN FLOOD WALL AND A PORTION OF THE PROJECT IS WITHIN THE 100-YEAR FLOODPLAIN, SO THERE IS A RISK FOR FLOODING WITH LOWER FREQUENCY STORM EVENTS.



DEPARTMENT OF ENVIRONMENTAL SERVICES

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APPROVALS	DATE
<i>[Signature]</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>[Signature]</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
STORMWATER MANAGEMENT PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

Filename: 102116_SWM and 08999.dwg
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Plotted: November 16, 2021
Plotted by: tsmoza

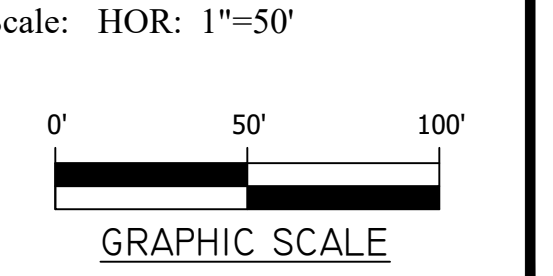


Exhibit A

CBAY-VA LLC – COLES POINT
AFFIDAVIT OF PHOSPHOROUS CREDIT SALE

CBAY-VA LLC, a Virginia limited liability company (the "Company"), hereby certifies the following:

1. Pursuant to that certain Purchase Order dated August 5, 2021 (the "Agreement"), between the Company (as Seller) and ARLINGTON COUNTY VIRGINIA ("Purchaser"), the Company, for the benefit of the Purchaser, agreed to sell 0.12 pounds of nonpoint source phosphorus Credits to Purchaser and retire the associated ratio of nonpoint source nitrogen Credits at the credit generating facility in the amount of 1.88 pounds of nitrogen Credits;

2. The Company and the Purchaser, as of the date hereof, have closed the transaction contemplated by the Agreement and the Company has sold to Purchaser the phosphorus Credits.

WITNESS the following signature:

CBAY-VA LLC,
a Virginia limited liability company
By: *[Signature]*
Authorized Signatory
Date: August 10, 2021

Sworn to and subscribed before me this 10th day of August, 2021, by Caitlan B. Parker, Authorized Signatory, on behalf of CBAY-VA LLC, a Virginia limited liability company.

Notary registration number: State of South Carolina
City / County of Charleston
My commission expires: 07/02/2030

[Signature]
Notary Public

Permit #: Pending
Project Description: Arlington Ridge & S Glebe Intersection, Arlington County, VA
Permittee: ARLINGTON COUNTY VIRGINIA
Phosphorus Credits: 0.12 pounds
Associated Nitrogen Credits: 1.88 pounds



Exhibit B

CBAY-VA LLC – COLES POINT
BILL OF SALE

BILL OF SALE, made as of August 10, 2021, by CBAY-VA LLC, a Virginia limited liability company ("Seller"), to ARLINGTON COUNTY VIRGINIA ("Purchaser").

WHEREAS, Seller and Purchaser have entered into that certain Purchase Order as of August 5, 2021 (the "Agreement"), with respect to the sale by the Seller and purchase by the Purchaser of nonpoint source phosphorus Credits generated within Coles Point Property in Westmoreland County, Virginia.

NOW, THEREFORE, for and in consideration of the payment of the Purchase Price (as defined in the Agreement) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers and sets over to Purchaser, its successors and assigns, 0.12 pounds of phosphorus Credits and retires 1.88 pounds of nitrogen Credits associated with the phosphorus Credits generated at Coles Point Property as such are described in the Agreement.

TO HAVE AND TO HOLD all such phosphorus Credits hereby sold and transferred to Buyer and its successors and assigns forever.

IN WITNESS WHEREOF, Seller has caused this Bill of Sale to be executed by its duly authorized representative as of the date first above written.

CBAY-VA LLC,
a Virginia Limited Liability Company
By: *[Signature]*
Authorized Signatory

VRRM - ARLINGTON COUNTY RIGHT-OF-WAY

VRRM - VDOT RIGHT-OF-WAY

WATER QUANTITY COMPUTATIONS

2011 BMP Standards and Specifications									
2013 Draft BMP Standards and Specifications									
Project Name:		S. Glebe Road Improvements - Arlington County Areas		CLEAR ALL		data input cells		constant values	
Date:		Aug 21				calculation cells		final results	
Site Information									
Linear Development Project? Yes									
Post-Development Project (Treatment Volume and Loads)									
Enter Total Disturbed Area (acres) → 0.16									
Maximum reduction required: 20%									
The site's net increase in impervious cover (acres) is: 0									
Post-Development TP Load Reduction for Site (lb/yr): 0.01									
Pre-ReDevelopment Land Cover (acres)									
Forest/Open Space (acres) - undisturbed: 0.00									
Managed Turf (acres) - disturbed, graded for yards or other turf to be reseeded/managed: 0.09									
Impervious Cover (acres): 0.07									
Post-Development Land Cover (acres)									
Forest/Open Space (acres) - undisturbed: 0.00									
Managed Turf (acres) - disturbed, graded for yards or other turf to be reseeded/managed: 0.10									
Impervious Cover (acres): 0.06									
Area Check: OK									
Constants									
Annual Rainfall (inches): 43									
Target Rainfall Event (inches): 1.00									
Total Phosphorus (TP) (lb/acre/yr): 0.26									
Total Nitrogen (TN) (lb/acre/yr): 1.86									
Target TP Load (lb/acre/yr): 0.41									
Target TN Load (lb/acre/yr): 0.90									
LAND COVER SUMMARY -- PRE-REDEVELOPMENT									
LAND COVER SUMMARY -- POST DEVELOPMENT									
Treatment Volume and Nutrient Load									
Pre-Development Treatment Volume (acre-ft): 0.0077									
Post-Development Treatment Volume (acre-ft): 0.0066									
Pre-Development TP Load (lb/yr): 0.21									
Post-Development TP Load (lb/yr): 0.18									
Pre-Development TP Load per acre (lb/acre/yr): 1.29									
Post-Development TP Load per acre (lb/acre/yr): 1.11									
Max. Reduction Required (Below Pre-Development Load): 20%									
TP Load Reduction Required for Redeveloped Area (lb/yr): 0.01									
TP Load Reduction Required for New Impervious Area (lb/yr): 0									
Post-Development Requirement for Site Area									
TP Load Reduction Required (lb/yr): 0.01									
Nitrogen Loads (Informational Purposes Only)									
Pre-Development TN Load (lb/yr): 1.50									
Final Post-Development TN Load (lb/yr): 1.29									

2011 BMP Standards and Specifications									
2013 Draft BMP Standards and Specifications									
Project Name:		S. Glebe Road Improvements - VDOT		CLEAR ALL		data input cells		constant values	
Date:		Aug 21				calculation cells		final results	
Site Information									
Linear Development Project? Yes									
Post-Development Project (Treatment Volume and Loads)									
Enter Total Disturbed Area (acres) → 0.26									
Maximum reduction required: 20%									
The site's net increase in impervious cover (acres) is: 0.00397									
Post-Development TP Load Reduction for Site (lb/yr): 0.11									
Pre-ReDevelopment Land Cover (acres)									
Forest/Open Space (acres) - undisturbed: 0.00									
Managed Turf (acres) - disturbed, graded for yards or other turf to be reseeded/managed: 0.02									
Impervious Cover (acres): 0.24									
Post-Development Land Cover (acres)									
Forest/Open Space (acres) - undisturbed: 0.00									
Managed Turf (acres) - disturbed, graded for yards or other turf to be reseeded/managed: 0.01									
Impervious Cover (acres): 0.25									
Area Check: OK									
Constants									
Annual Rainfall (inches): 43									
Target Rainfall Event (inches): 1.00									
Total Phosphorus (TP) (lb/acre/yr): 0.26									
Total Nitrogen (TN) (lb/acre/yr): 1.86									
Target TP Load (lb/acre/yr): 0.41									
Target TN Load (lb/acre/yr): 0.90									
LAND COVER SUMMARY -- PRE-REDEVELOPMENT									
LAND COVER SUMMARY -- POST DEVELOPMENT									
Treatment Volume and Nutrient Load									
Pre-Development Treatment Volume (acre-ft): 0.0198									
Post-Development Treatment Volume (acre-ft): 0.0200									
Pre-Development TP Load (lb/yr): 0.54									
Post-Development TP Load (lb/yr): 0.55									
Pre-Development TP Load per acre (lb/acre/yr): 2.06									
Post-Development TP Load per acre (lb/acre/yr): 2.08									
Max. Reduction Required (Below Pre-Development Load): 0.11									
TP Load Reduction Required for Redeveloped Area (lb/yr): 0.11									
TP Load Reduction Required for New Impervious Area (lb/yr): 0.01									
Post-Development Requirement for Site Area									
TP Load Reduction Required (lb/yr): 0.11									
Nitrogen Loads (Informational Purposes Only)									
Pre-Development TN Load (lb/yr): 3.87									
Final Post-Development TN Load (lb/yr): 3.91									

Rainfall Depth by Rainfall Return Period						
2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.17	4.07	4.87	6.09	7.18	8.41	2.62

Storm Data Source: User-provided custom storm data
 Rainfall Distribution Type: Type NO.5
 Dimensionless Unit Hydrograph: <standard>

Hydrograph Peak/Peak Time Table						
Sub-Area or Reach Identifier	Peak Flow (cfs)	Peak Time (hr)	2-Yr (cfs)	5-Yr (cfs)	10-Yr (cfs)	1-Yr (cfs)
PR LOD	1.29	2.07	3.68	1.03	12.12	12.12

Hydrograph Peak/Peak Time Table						
Sub-Area or Reach Identifier	Peak Flow (cfs)	Peak Time (hr)	2-Yr (cfs)	5-Yr (cfs)	10-Yr (cfs)	1-Yr (cfs)
PR LOD	1.29	2.07	3.68	1.03	12.12	12.12

Sub-Area Summary Table						
Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description	
PR LOD	.41	0.100	94	Outlet		
Total Area: .41 (ac)						

NOTES:

- LAND DISTURBANCE ON VDOT PROPERTY IS COVERED BY VDOT'S MS4 PERMIT.
- LAND DISTURBANCE ON ARLINGTON COUNTY PROPERTY IS COVERED BY THE COUNTY'S MS4 PERMIT.
- The Runoff Reduction Spreadsheet information on this plan is for data tracking purposes to document the area of land disturbance and to characterize pre- and post-development land use conditions. In accordance with Arlington County's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan, approved by the Virginia Department of Environmental Quality (DEQ) on September 1, 2015, linear development projects conducted by the County are administered and tracked as follows consistent with 9VAC25-870-69.A.4, 9VAC25-870-76, and 9VAC25-870-92:
 - Pollutant load changes will be computed as described in Section 3.A of the Action Plan.
 - Retrofit opportunities will be evaluated for each project, using the screening and selection criteria applied and described in the adopted Stormwater Master Plan.
 - Retrofit projects that meet the screening criteria and are determined by Arlington to be feasible and cost-effective will be implemented with specific linear development projects. Pollutant load reductions from retrofit projects will be computed as described in Section 5 of the Action Plan.
 - In cases where retrofit projects are not feasible and cost-effective for a particular linear project, any pollutant of concern (POC) load increases that might occur for that project will be addressed by larger overall POC load reductions in place or added through TMDL action plan implementation. In the above manner Arlington, as the MS4 operator and the construction site operator for its linear development projects, implements linear projects and retrofit projects in a manner that achieves the most TMDL POC reduction for the least cost, while fully accounting for load changes that occur with linear development project activity consistent with the DEQ Chesapeake Bay TMDL Special Condition Guidance.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719



APPROVALS DATE

Jay Pette 01/04/2022
 TRAFFIC SIGNAL ENGINEER

Paul Nabe 01/12/2022
 TRAFFIC ENGINEERING MANAGER

Denise M. Leach 01/07/2022
 WATER, SEWER, STREETS BUREAU CHIEF

Denise M. Leach 01/07/21
 TRANSPORTATION DIRECTOR

Revisions Date

Project Name and Location
S. Glebe Road Intersection Improvements

STORMWATER MANAGEMENT COMPUTATIONS
 S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
 Drawn: TIS
 Checked: MJA
 Miss Utility Transmittal #:

Filename: 1001-16_SDM and SDRPP_Aug
 Path: \\ad.w.com\GIS\Projects\20111112_Arlington\Task 1 - S. Glebe Road\DWG\DWG

Plotted: November 15, 2021
 Plotted by: kmitta

Scale: N.T.S.

STORMWATER POLLUTION PREVENTION PLAN

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
Arlington County Projects
(Linear Development / Stormwater Retrofit)

For Construction Activities At:

S. Glebe Road Intersection Improvements
S. Glebe Road at S. Arlington Ridge Road
Arlington, VA 22204

Latitude: 38.5043 N (decimal degrees)

Longitude: 77.0354 W (decimal degrees)

Construction Activity Operator:

Insert Company/Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Email Address
Insert 24-hour Emergency Contact

SWPPP Preparation Date:

August 27, 2021

CERTIFICATION

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name: _____

Title: _____

Signature: _____

Date: _____

STORMWATER POLLUTION PREVENTION PLAN

1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Notice of Coverage Letter	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Construction General Permit	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NA
Pollution Prevention Plan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA
Erosion & Sediment Control Plan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA
Stormwater Management Plan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA

Required documents must be kept at a centralized location on the project site (i.e. in a mail box or other container)

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
External buildings wash down	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uncontaminated foundation or footing drains	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uncontaminated excavation dewatering	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Landscape irrigation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Others [describe]	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

3.0 Pollution Prevention Awareness

Employees will be given a "walk through" of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices (identified in Sections 4.0 and 5.0 of this SWPPP) that are applicable to their assigned job duties. A refresher meeting and "walk through" will be conducted on an as needed basis.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
<input type="checkbox"/>	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page)
<input checked="" type="checkbox"/>	Silt Fence (Std. & Spec. 3.05)			
<input type="checkbox"/>	Culvert Inlet Protection (Std. & Spec. 3.08)			
<input type="checkbox"/>	Outlet Protection (Std. & Spec. 3.18)			
<input checked="" type="checkbox"/>	Temporary Seeding (Std. & Spec. 3.31)	As required	NA	
<input checked="" type="checkbox"/>	Permanent Seeding (Std. & Spec. 3.32)		NA	
<input type="checkbox"/>	Sodding (Std. & Spec. 3.33)			
<input checked="" type="checkbox"/>	Mulching (Std. & Spec. 3.35)		NA	
<input type="checkbox"/>	Safety Fence (Std. & Spec. 3.01)			

STORMWATER POLLUTION PREVENTION PLAN

<input checked="" type="checkbox"/>	Storm Drain Inlet Protection (Std. & Spec 3.08 and/or Arlington County Std. & Spec from approved ESC plan)		
<input checked="" type="checkbox"/>	Dewatering (Std. & Spec 3.26 and/or Arlington County Std. & Spec from approved ESC plan)		
<input type="checkbox"/>	Turbidity Curtain (Std. & Spec 3.27 and/or Arlington County Std. & Spec from approved ESC plan)		
<input checked="" type="checkbox"/>	Tree Protection (Arlington County Std. & Spec from approved ESC plan)		
<input type="checkbox"/>	Stream Crossing / Cofferdams (Std. & Spec 3.25 or on plan)		
<input type="checkbox"/>	Pump Around System (detail on approved plan)		
<input type="checkbox"/>	Rip Rap (Std. & Spec. 3-19)		
<input checked="" type="checkbox"/>	Trees, Shrubs, Vines & Ground Covers (Std. & Spec. 3.37)		

Pre-Storm Erosion and Sediment Control Checklist

The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.

- Perimeter controls (silt fence, hay bales, stone berms) used to prevent sediment from leaving the site shall be checked for undermining, holes, or deterioration and repaired/replaced if needed.
- Sediment that has accumulated against perimeter controls shall be removed if the depth exceeds more than 1/2 of the silt fence height.
- Exposed soil or slopes shall be covered with straw, tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.
- Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or berms should be placed along the perimeter of the stock pile (downhill side). Stockpiled materials should not obstruct flow along the curb line.
- Inlet protection controls shall be inspected to ensure they are installed per approved ESC plan, are functioning properly, and maintained as needed.

STORMWATER POLLUTION PREVENTION PLAN

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants										Pollution Prevention Practice	Responsible Party
		Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals			
Clearing, grading, excavating, and un-stabilized areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X								X	(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving and saw cutting operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X			X	(2)		
Concrete operations, washout, and cement waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			X	X					X	(3)		
Washing / cleaning	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X		X	X	X	X	(4)		
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X							X	(5)		
Material / chemical use and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X	(6)		
Equipment and vehicle maintenance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				X		X		X	X	(7)		
Waste management / disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							X	X	X	(8)		
Sanitary waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			X	X				X		(9)		
Nutrient management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X						X	X	(10)		

STORMWATER POLLUTION PREVENTION PLAN

Pollution Prevention Practices:

- (1) **Clearing, grading, excavating, and un-stabilized areas** – Maintain as much existing vegetation as practicable. Utilize erosion and sediment controls to prevent sediment from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Plastic sheeting, tarps, 2" deep straw cover, and/or erosion matting can be used for temporary slope stabilization.
- (2) **Paving and saw cutting operations** – Cover storm drain inlets during paving and saw cutting operations. Use pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids. Slurry from saw cutting operations may not enter a storm drain; it must be captured and disposed of properly.

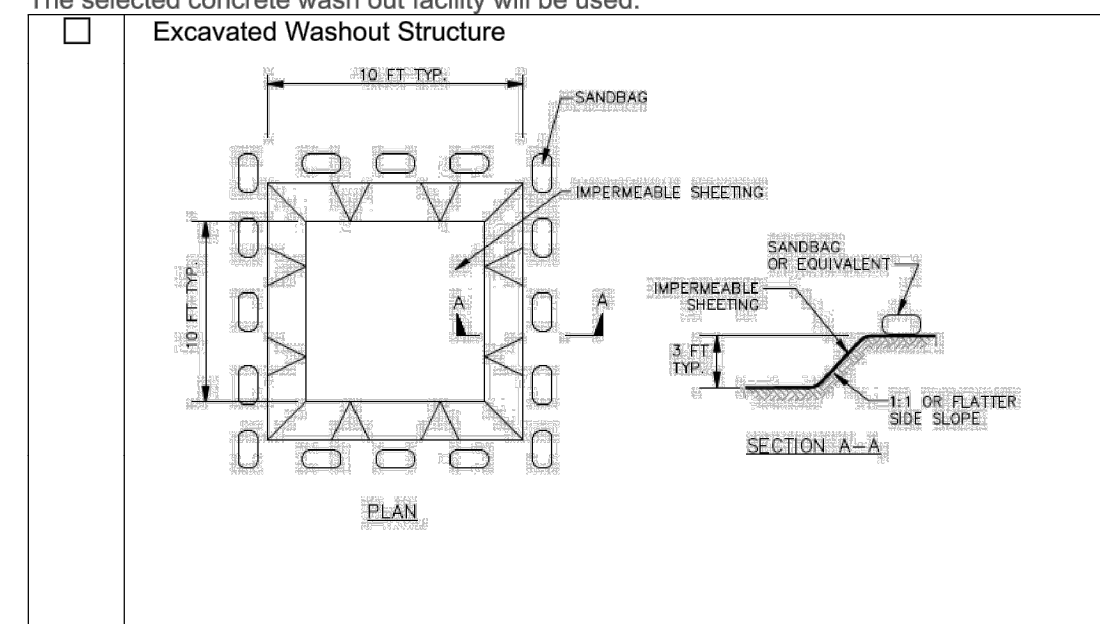
Temporary controls (i.e. tarp and block, sand berms, booms, and/or filter fabric) shall be used to cover storm drains during paving and saw cutting operations to prevent any discharges from entering the storm drain. These temporary controls SHALL BE REMOVED AT THE END OF EACH DAY. Inlet protection specified in the approved ESC plan shall be installed or reinstalled following the completion of paving or saw cutting work.

- Method of covering / protecting storm drains:
- Method for containment, collection, disposal of saw cut slurry:

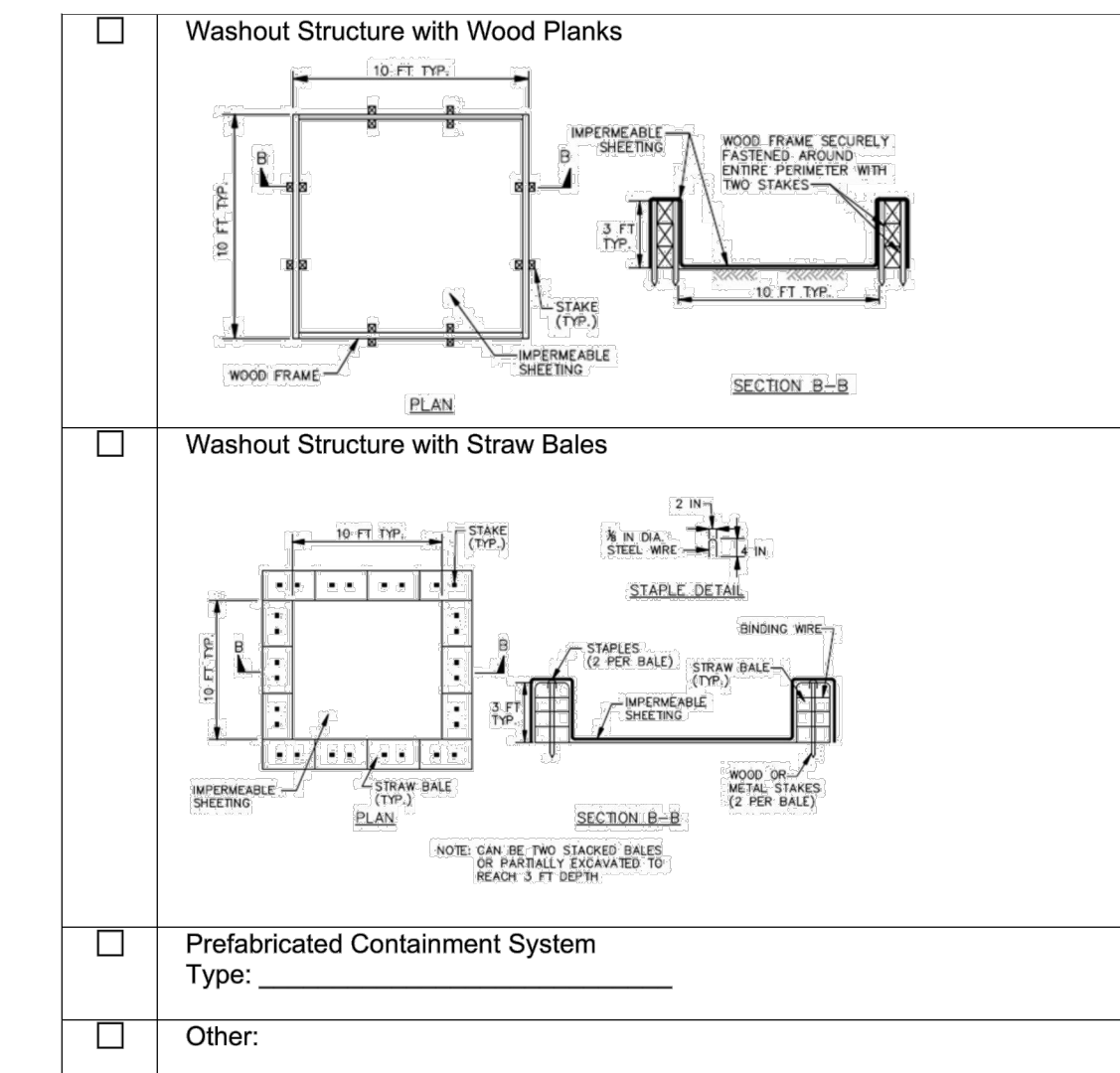
- (3) **Concrete operations, washout, and cement waste** – Direct concrete wash water into a leak-proof container or leak-proof settling basin that is designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes.

- Washouts must be sized appropriately for the needs of the project.
- Do not locate washouts near storm drains. Concrete wash water is not allowed to enter a storm drain.
- Concrete washout areas cannot be used for the purpose of dewatering.
- Set up and operate small mixers on top of plywood that is covered by tarps or heavy plastic drop cloths.
- Wash out mixers and truck chutes in designated contained washout areas
- No tracking from washout areas may occur.
- Place plastic sheeting, boards, or tarps under concrete truck chutes during pouring

The selected concrete wash out facility will be used:



STORMWATER POLLUTION PREVENTION PLAN



- Prefabricated Containment System Type: _____
- Other: _____
- (4) **Washing / cleaning** – Prevent the discharge of wash water to the storm drain system or surface waters.
 - Wash water or liquid wastes may not enter a storm drain or surface waters.
 - Provide a suitable containment system for cleaning equipment such as a drum, prefabricated system, lined container, or portable wash pad.
 - The wash / containment area must be sized appropriately for the needs of the project.
 - Locate wash / containment areas away from storm drains.
- (5) **Dewatering operations** – Construction site dewatering may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.
 - Dewatering detail on approved ESC plan will be used.
 - Dewatering option from Planning & Field Guide for Pollution Prevention (P2):
 - Filter Box
 - Straw Bale/Silt Fence Pit
 - Portable Sediment Tank
 - Filter Bag



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719



APPROVALS DATE

Greg Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER
John Nabele 01/12/2022
TRAFFIC ENGINEERING MANAGER
John Nabele 02/09/2022
WATER, SEWER, STREETS BUREAU CHIEF
Denise M. Leach 01/07/2022
TE&O BUREAU CHIEF
Denise M. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions Date

Project Name and Location
S. Glebe Road Intersection Improvements
STORMWATER POLLUTION PREVENTION PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

Filename: 1001-16_SWM and SWPPP.dwg
Path: \\sdc\corporate\projects\10011116_Arlington\MT\Task 1 - S. Glebe Road\CD\DWG
Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

STORMWATER POLLUTION PREVENTION PLAN

- Pump from Settling Pit
- Manufactured System: _____
- Other: _____

(6) **Material / chemical use and storage** – Designate areas of the construction site for material delivery and storage. Locate these areas near construction entrances and away from waterways and storm drains. Enclose, cover or berm construction material storage areas if susceptible to stormwater.

Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side).

Stockpiled materials located on the edge of roadways should not obstruct flow along the curb line (gutter). Leave at least a one (1) foot space away from the curb to allow stormwater to flow along the curb line. Boards with cinder blocks and/or bricks may be used to create the flow through space.

Method used to ensure flow through: _____

- Provide secondary containment for paint, pesticides, cleaners, solvents, and/or other chemicals and keep these items secured and covered when not in use
- Regularly inspect containers.

(7) **Equipment and vehicle maintenance** – Use a designated area, away from storm drains and surface waters, to refuel vehicle or equipment or perform maintenance.

- Regularly inspect vehicles and equipment for leaks. Clean up all spills and leaks upon discovery.
- Use containment measures when conducting fueling (e.g. place spill pad, board, plastic sheeting on ground)
- Regularly inspect fuel containers.
- Provide secondary containment and secure storage for fuel, oil, and/or lubricants
- Keep drip pans, sheeting, and/or absorbent pads under heavy equipment when not in use (i.e. overnight) to capture leaks.

(8) **Waste management / disposal** – Designate a waste collection area on the construction site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterway. Ensure that waste containers have lids so they can be covered before periods of rain. Schedule waste collection to prevent the containers from overflowing.

- A sufficient number of waste containers must be kept on a site to handle the quantity of waste produced.
- Keep roll off containers covered and/or dumpster / trash lids closed.
- Check waste containers frequently for damage / leaks and clean using DRY methods when necessary. Never clean out a dumpster by power washing or hosing it out.
- Replace containers that are leaking, cracked, corroded, or otherwise deteriorating.
- Do not bury waste material. Dispose of excess dry concrete, grout and mortar in the trash.

STORMWATER POLLUTION PREVENTION PLAN

(9) **Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities.

- Locate portable lavatories away from storm drains and surface waters.
- Keep portable lavatories level and provide secondary containment (i.e. trays)
- Regularly inspect facilities for leaks
- Schedule routine maintenance

(10) **Nutrient management** – Apply nutrients in accordance with manufacturer's recommendations. Do not apply during rainfall events or windy conditions. Provide secondary containment and keep fertilizer properly secured when not being used.

Additional information and details can be found in the Arlington County Planning & Field Guide for Pollution Prevention (P2).

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
<input type="checkbox"/>	Exempted – stormwater management retrofit facility or stream restoration project	NA	NA
<input checked="" type="checkbox"/>	Linear development project per Arlington County Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan ¹	NA	NA
<input type="checkbox"/>	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
<input type="checkbox"/>	Rooftop Disconnection		Construction Activity Operator

¹ In accordance with Arlington County's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan, approved by the Virginia Department of Environmental Quality (DEQ) on September 1, 2015, linear development projects conducted by the County are administered and tracked as follows consistent with 9VAC25-870-69 A, 4, 9VAC25-870-76, and 9VAC25-870-92:

- Pollutant load changes will be computed as described in Section 3.A of the Action Plan.
- Retrofit opportunities will be evaluated for each project, using the screening and selection criteria applied and described in the adopted Stormwater Master Plan.
- Retrofit projects that meet the screening criteria and are determined by Arlington to be feasible and cost-effective will be implemented with specific linear development projects. Pollutant load reductions from retrofit projects will be computed as described in Section 5 of the Action Plan.
- In cases where retrofit projects are not feasible and cost-effective for a particular linear project, any POC load increases that might occur for that project will be addressed by larger overall POC load reductions in place or added through TMDL action plan implementation.

In the above manner Arlington, as the MS4 operator and the construction site operator for its linear development projects, implements linear projects and retrofit projects in a manner that achieves the most TMDL POC reduction for the least cost, while fully accounting for load changes that occur with linear development project activity consistent with the DEQ Chesapeake Bay TMDL Special Condition Guidance.

STORMWATER POLLUTION PREVENTION PLAN

<input type="checkbox"/>	Sheet flow to Vegetated Filter (1 or 2)	(See Cover Page of this SWPPP)
<input type="checkbox"/>	Grass Channel	
<input type="checkbox"/>	Rainwater Harvesting	
<input type="checkbox"/>	Permeable Pavement (1 or 2)	
<input type="checkbox"/>	Infiltration (1 or 2)	
<input type="checkbox"/>	Bio-retention (1 or 2)	
<input checked="" type="checkbox"/>	Others [Purchase required nutrient credits.]	

STORMWATER POLLUTION PREVENTION PLAN

7.0 Spill Prevention & Response

Most spills can be cleaned up using a spill kit. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

- 1st Priority: Protect all people
- 2nd Priority: Protect equipment and property
- 3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.**
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain; contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts
 Arlington County Fire & Police 703-558-2222
 DES Water, Sewer, Streets 24-Hour Emergency 703-228-6555
 Washington Gas Emergency 703-750-1400

Nights, Holidays & Weekends
 VA Dept. of Emergency Management 804-674-2400
 24 Hour Reporting Service

Spill kit on site: Yes No

Location(s) of spill kit: _____

STORMWATER POLLUTION PREVENTION PLAN

8.0 Self Inspection Report & Corrective Action Log (make additional copies as necessary)

Company/Organization: _____

Name of Inspector: _____

Telephone Number: _____

Qualifications: _____

Inspection Schedule

Discharges to impaired waters, surface waters within a TMDL watershed, or exceptional waters:

- Once every 4 business days

Inspection Date: _____

Describe phase of construction: _____

Is a copy of the SWPPP available on site? Yes No Is the SWPPP complete? Yes No

Erosion & Sediment Controls/ Pollution Prevention Practices	In Compliance?	Corrective Action Needed & Notes	Date Corrective Action Taken
Are controls in place to prevent sediment from being tracked off site or onto the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are perimeter controls adequately installed and properly maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are storm drains properly protected / approved inlet protection is in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are all slopes and disturbed areas, including stockpiles, not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are dewatering operations working properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Is construction dust properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are mature trees and/or natural areas properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		

STORMWATER POLLUTION PREVENTION PLAN

Are washout facilities (concrete, paint) available, labeled, and properly maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are trash and waste materials properly managed and disposed of?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are trash receptacles covered and not leaking?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are non-stormwater discharges (i.e. wash water, saw cut slurry) properly managed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are vehicle and equipment fueling, maintenance, and/or staging areas free of spills and leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are materials that are potential stormwater contaminants stored properly (covered / have secondary containment)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are portable lavatories level, in good condition, and located away from storm drains?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Is a spill kit accessible onsite?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		

Are there any unauthorized discharges at the time of this inspection? Yes No

If yes, describe: _____

Has any unauthorized discharge occurred since the last inspection? Yes No

If yes, describe: _____

Non – Compliance Issues

Describe any incidents of non-compliance not described above (use another page if necessary)

Certification

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator or Assigned Qualified Personnel Name: _____

Signature: _____

Date: _____



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719

Seal



APPROVALS DATE

<i>[Signature]</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>[Signature]</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions Date

Project Name and Location

S. Glebe Road Intersection Improvements

STORMWATER POLLUTION PREVENTION PLAN

S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: TIS
 Drawn: TIS
 Checked: MJA
 Miss Utility Transmittal #:

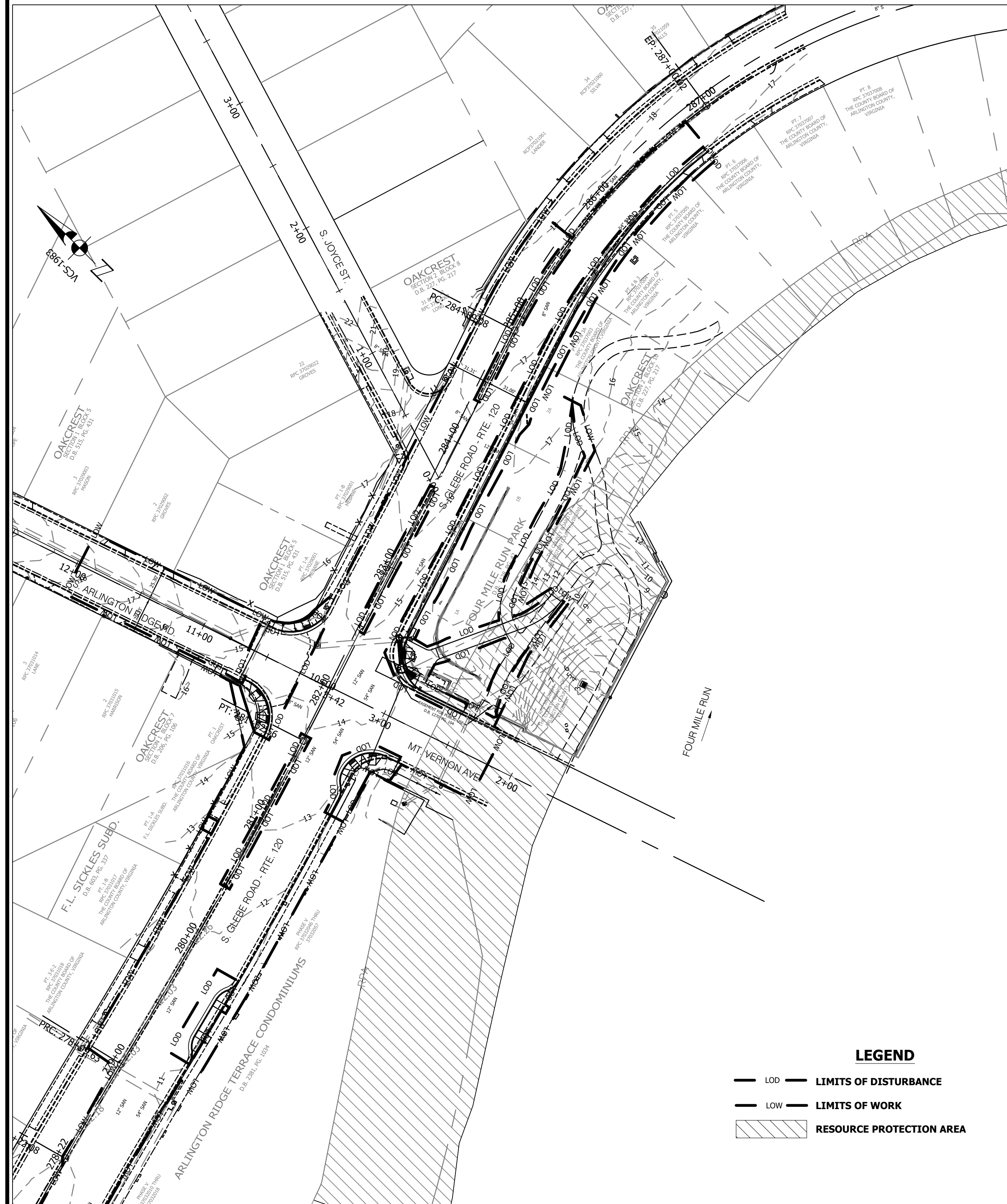
Filename: TE07-01_SWM and SWPPP.dwg

Path: \\atl-nr.com\cnc\proj\p2022\0111182_Arlington\Task 1 - S. Glebe Road\CAD\DWG

Plotted: November 15, 2021

Plotted by: kmita

Scale: N.T.S.



WATER QUALITY IMPACT ASSESSMENT (WQIA) NARRATIVE

THIS PROJECT IS AN INTERSECTION IMPROVEMENT OF THE SOUTH GLEBE ROAD, S. ARLINGTON RIDGE ROAD, AND MT. VERNON AVENUE INTERSECTION. THE SITE AREA FOR THE WQIA IS DEFINED BY THE LIMITS OF WORK. A SITE SPECIFIC RPA WAS DETERMINED FOR THE FOUR MILE RUN TIDAL RESTORATION. THAT DELINEATION IS USED FOR IMPACTS CALCULATED HEREIN.

EXISTING CONDITIONS
 FOUR MILE RUN PARALLELS SOUTH GLEBE ROAD. SINCE THE SITE IS LOCATED IN THE FOUR MILE RUN FLOODPLAIN IT IS RELATIVELY FLAT. DUE TO THE LOCATION, WITHIN THE RIGHT-OF-WAY OF A DENSELY DEVELOPED URBAN AREA, THE MAJORITY OF THE SITE COVER IS IMPERVIOUS. WITHIN THE SITE AREA, THE ROAD HAS CURB AND GUTTER AND ROADWAY RUNOFF OUTFALLS TO STORM SEWER.

EXISTING SOILS CONSIST OF URBAN LAND-UDORTHERTS COMPLEX, 2 TO 15 PERCENT SLOPES (12) AND UDORTHERTS, LOAMY (13). THESE TWO SOILS ARE NOT CLASSIFIED AS ONE OF THE FOUR HYDROLOGIC SOIL GROUPS.

THE SITE IS LOCATED IN THE ATLANTIC COASTAL PLAIN PHYSIOGRAPHIC PROVINCE. THE MAJORITY OF THE SITE IS ALLUVIUM (QAL), ALTHOUGH THE NORTHERN PORTION CONTAINS UNDIVIDED POTOMAC FORMATION (KPU) AND STREAM TERRACE DEPOSITS (QTS). THESE GEOLOGIC REGIONS ARE TYPICAL OF A HISTORIC STREAM VALLEY. THE POTOMAC FORMATION COINCIDES WITH THE UDORTHERTS COMPLEX, SUGGESTING AN AREA OF NON-NATIVE FILL.

THE SITE AREA IS LOCATED IN A HEAVILY DEVELOPED AREA. NORTH AND SOUTH OF THE PROJECT AREA, LAND IS ZONED AS RESIDENTIAL AND EAST OF THE PROJECT AREA IS ZONED AS OPEN SPACE.

PROPOSED IMPROVEMENTS
 IMPROVEMENTS BEGIN JUST WEST OF THE S. ARLINGTON MILL DRIVE INTERSECTION AND CONTINUE JUST EAST OF THE INTERSECTION. IMPROVEMENTS CONSIST OF THE INSTALLATION OF SIGNALS WITH UPDATED VEHICLE DETECTION, CCTV, EMERGENCY VEHICLE PREEMPTION, ACCESSIBLE PUSHBUTTON SYSTEMS FOR PEDESTRIANS AND IMPROVED INTERSECTION LIGHTING. THE IMPROVEMENTS ALSO INCLUDE MODIFICATIONS TO CREATE SEPARATE LEFT TURN LAMES ON SOUTH GLEBE ROAD, SIDEWALK UPGRADES IN THREE OF THE FOUR CORNERS OF THE INTERSECTION AND MODIFICATIONS TO THE TRAIL IN FOUR MILE RUN PARK. IN ADDITION DRAINAGE IMPROVEMENTS, UTILITY RELOCATIONS, NEW PAVEMENT MARKINGS AND SIGN UPGRADES ARE ALSO INCLUDED. THE MAJORITY OF THE IMPROVEMENTS ARE AT GRADE, OR IN FILL. FILL MATERIAL WILL BE VDOT STANDARD CLEAN FILL, SOURCED BY THE CONTRACTOR. ALTHOUGH NEW IMPERVIOUS HAS BEEN ADDED TO THE SITE, THERE IS AN OVERALL NET REDUCTION IN IMPERVIOUS COVER.

TREES/VEGETATION IMPACTS
 THE CONTRACTOR WILL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION, UNLESS OTHERWISE INDICATED. TWO TREES WILL BE REMOVED FROM THE SITE AREA, AND WILL BE REPLACED WITH 3 TREES. EXISTING TREES TO REMAIN WILL REQUIRE ROOT PRUNING AND/OR STANDARD TREE PROTECTION. TREE PROTECTION, REMOVAL, AND PRUNING AS WELL AS EXISTING TREE SURVEY AND TREE REPLACEMENT TABLES ARE SHOWN ON SHEET 6. A LANDSCAPE PLAN IS INCLUDED ON SHEET 22.

STORMWATER AND RUNOFF IMPACTS
 THE SITE DRAINS TO THE POTOMAC RUN-FOURMILE RUN (PL25) WATERSHED. THREE OUTFALLS HAVE BEEN IDENTIFIED. PROJECT OUTFALLS CONSIST OF CONCENTRATED FLOW TO MAN-MADE STORMWATER CONVEYANCE SYSTEMS. EACH STORM SEWER SYSTEM HAS BEEN VERIFIED TO PROVIDE ADEQUATE CHANNEL AND FLOOD PROTECTION.

ALTHOUGH THERE IS A NET REDUCTION IN IMPERVIOUS AREA, THE TOTAL PHOSPHOROUS LOAD IS REQUIRED TO BE REDUCED 20% BELOW THE PREDEVELOPMENT TOTAL PHOSPHOROUS LOAD. THEREFORE, 0.11 AND 0.01 LBS/YR OF NUTRIENT CREDITS WILL BE REQUIRED WITHIN VDOT AND ARLINGTON COUNTY RIGHT-OF-WAY RESPECTIVELY.

NO WETLANDS HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS. THERE IS A HIGH LIKELIHOOD THAT WETLANDS ARE PRESENT DOWNSTREAM OF THE PROJECT AREA BECAUSE OF THE VICINITY TO FOUR MILE RUN. SINCE THE IMPERVIOUS COVER HAS NOT SUBSTANTIALLY CHANGED, HYDROLOGY TO ANY EXISTING WETLANDS WILL NOT BE SIGNIFICANTLY IMPACTED.

EROSION AND SEDIMENT CONTROL IMPACTS
 STRUCTURAL E&S MEASURES FOR THIS PROJECT INCLUDE INLET PROTECTION, SILT FENCE, TREE PROTECTION, AND DEWATERING BASINS. ANY PART OF THE SITE AREA REMAINING INACTIVE FOR SEVEN (7) DAYS SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED. ADDITIONAL E&S MEASURES WILL BE PLACED BY THE CONTRACTOR AS NECESSARY AND IN ACCORDANCE WITH DEQ EROSION AND SEDIMENT CONTROL REQUIREMENTS.

MITIGATION MEASURES
 THE LIMITS OF WORK HAVE BEEN DRAWN TO MINIMIZE DISTURBED AREA. A LARGE PORTION OF THE SITE AREA IS CURRENTLY COVERED IN IMPERVIOUS SURFACE, FOR WHICH THE SUBGRADE WILL NOT BE DISTURBED. SCHEDULED E&S INSPECTION AS DICTATED BY THE STORMWATER POLLUTION PREVENTION PLAN.

WATER QUALITY FOR THIS PROJECT WILL BE PROVIDED THROUGH NUTRIENT CREDITS, ALLOCATED TO THIS PROJECT BY VDOT.

- REQUIRED PERMITS**
- LAND DISTURBING ACTIVITY PERMIT-ARLINGTON COUNTY DES
 - TRANSPORTATION RIGHT-OF-WAY PERMIT-ARLINGTON COUNTY DES
 - PUBLIC RIGH-OF-WAY PERMIT-ARLINGTON COUNTY DES

Appendix C. Water Quality Impact Assessment Data Sheet

Project Address S. GLEBE ROAD AT S. ARLINGTON RIDGE ROAD	Date: APRIL 2021
Applicant Name/Affiliation: RUMMEL KLEPPER & KAHL, LLP	Applicant Contact Information (phone and email): 703-246-0028
Owner/Client Name: ARLINGTON COUNTY DES	Owner/Client Contact Information (phone and email): 703-228-3829

Section 1: Type of activity proposed

Activity type (check all that apply):

<input type="checkbox"/> New construction (residential, commercial, public, etc.)	<input type="checkbox"/> Deck, patio, or retaining wall
<input type="checkbox"/> Alteration of non-residential structure	<input type="checkbox"/> Landscaping (includes tree removal)
<input type="checkbox"/> Residential addition	<input type="checkbox"/> Utility work
<input type="checkbox"/> Detached residential structure	<input type="checkbox"/> Fence
	<input checked="" type="checkbox"/> Other (please describe): INTERSECTION IMPROVEMENTS

Section 2: Key details of the proposed activity

Complete all that apply	Explanation
Total area of disturbance on parcel (sf)	18,022 Includes building footprint plus a 10 foot buffer. Also includes all soil disturbance, ingress/egress areas, stockpiling areas, etc.
Area of disturbance within RPA (sf)	1,939 Does not removal of trees ≥ 3" in diameter
Area of disturbance on slopes greater than or equal to 15 percent located adjacent to landward RPA boundary (sf)	0 Does not apply to RPA parcels Chain Bridge Road (15 percent and greater slopes are included as part of RPA)

Complete all fields	Existing condition	Proposed condition	Explanation
RPA encroachment (ft)			
Left third of parcel or site	67	76	The distance (in feet) from the existing or proposed structure to the designated RPA feature (edge of stream or open channel, wetland, etc.). Encroachments of zero (0) indicate the project will impact the stream or other RPA feature.
Middle third of parcel or site	62	62	
Right third of parcel or site	56	N/A (TRAIL REMOVED)	
Total development footprint in RPA (sf)	1,217	494	The existing footprint includes the area of any existing structures, patios, decks, walkways, etc. Proposed footprint is the anticipated post-project area of all structures, additions, decks, walkways, graded area behind a retaining wall, etc.
Impervious footprint in RPA (sf)	1,217	494	Total area of impervious surfaces within the RPA (rooftops, pavement, etc.)

STAFF USE ONLY

Building/demolition/LDA/Fence permit number(s):

Major WQIA required? Yes No

Date WQIA/Exception request information complete:

Date Chesapeake Bay Preservation Ordinance and E/S ordinance (if applicable) approvals issued in Permits Plus:

Section 3: Plan and Narrative

Provide a plan showing the location of the proposed activity, along with the RPA boundary. Briefly describe the proposed project, including any potential water quality impacts and mitigation measures proposed. The narrative must address three impact categories: 1. Tree/vegetation impacts, 2. Stormwater and runoff 3. Erosion and sediment control. Please refer to the WQIA plan/narrative checklist for additional information.

NARRATIVE: SEE WATER QUALITY IMPACT ASSESSMENT NARRATIVE ON THIS SHEET.

PLAN: LOCATION OF REQUIRED PLAN ELEMENTS PER WATER QUALITY IMPACT ASSESSMENT DATA SHEET AND NARRATIVE CHECKLIST ARE LISTED IN THE TABLE BELOW.

WQIA ELEMENT	SHEET NO.
RPA BOUNDARY	16E
LIMITS OF DISTURBANCE	8
EXISTING CONDITIONS	3
IMPERVIOUS COVER	16
UTILITY PLAN	8A
SIGNAL PLAN	17-17A
DOWNSPOUT LOCATIONS	N/A
EROSION & SEDIMENT CONTROLS	5-6
TREE PROTECTION	5-6
LANDSCAPE PLAN	22
PLANT LIST	22

Additional Water Quality Impact Assessment Information

The information supplied on this form satisfies the minimum requirements for a Minor Water Quality Impact Assessment. For projects that disturb over 2500 square feet, elements of a Major Water Quality Impact Assessment may also be required, depending on the nature and extent of the proposed RPA encroachment, as outlined in Section 61-12 of the ordinance.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719

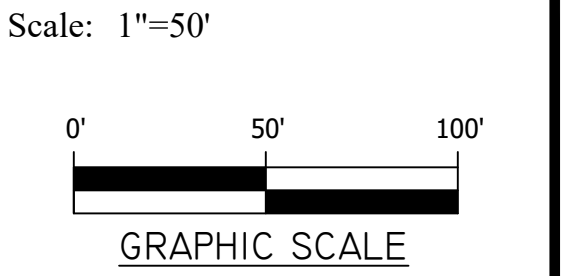


APPROVALS	DATE
<i>Drugs Kettle</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>John Nublo</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>Chelise</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>Wesley</i> TE&O BUREAU CHIEF	01/07/2022
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 WATER QUALITY IMPACT ASSESSMENT
 S. Glebe Road at S. Arlington Ridge Road
 TE07

Designed: TIS
 Drawn: TIS
 Checked: MJA
 Miss Utility Transmittal #:
 Filename: TE07-16_SRM and SRPP.dwg
 Path: \\atl06.cortec.com\proj\20111110_Arlington\MT\16-5_Glebe\Task\CAD\DWG
 Plotted: November 15, 2021
 Plotted by: kmita



Signal Notes

A. POLES AND FOUNDATIONS

- MAST ARM LENGTH IS TO BE AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY.
- MAST ARM POLES SHALL BE DESIGNED TO THE PROPER HEIGHT TO ACCOMMODATE A STREET LIGHT LUMINAIRE AND INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS.
- MAST ARM POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. ALL POLES SHALL HAVE A 6-BOLT PATTERN.
- AT THE COUNTY'S REQUEST, THE CONTRACTOR SHALL DIG TEST PITS TO VERIFY THAT SIGNAL POLE FOUNDATIONS WILL NOT CONFLICT WITH UNDERGROUND UTILITIES AND THAT FOUNDATIONS WILL FIT WITHIN THE EXISTING RIGHT-OF-WAY.
- SIGNAL POLES AND MAST ARMS SHALL BE NON-ORNAMENTAL. COBRA LIGHTING SHALL BE LED.
- COBRA LUMINAIRE SHALL BE LUMEC RFL-145W64LED-4K-G2-R2M-UNV-DALI-RC7-BK. DECORATIVE LED POST TOP LUMINAIRE SHALL BE HADCO LUMILOCK LED RPTLD 34 S N A 2 DL N N SP1.

B. CONTROLLER AND FOUNDATION

- NEW CONTROLLER CABINETS SHALL BE TS2, P TYPE WITH BATTERY BACKUP PER ARLINGTON COUNTY REQUIREMENTS.
- CONTROLLER SHALL BE INTELIGHT X-3 AND SHALL BE INSTALLED AND SET AS FOLLOWS:
 - TO REST IN PHASE 2 & 6 GREEN INTERVAL
 - TO START/RESTART IN PHASE 2 & 6 YELLOW CHANGE INTERVAL
- THE CONTROLLER CABINET AND FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL SPECIFICATIONS 66-01, 66-02, AND 70-01.
- THE COUNTY WILL PROVIDE SIGNAL TIMINGS TO THE CONTRACTOR FOR THE CONTROLLER WHEN THE INTERSECTION IS TOTALLY PREPARED FOR OPERATION. THE CONTRACTOR SHALL NOTIFY THE COUNTY IN WRITING 10 DAYS IN ADVANCE OF REQUIRING FINAL TIMINGS.

C. TRAFFIC SIGNAL HEADS

- ALL NEW VEHICULAR SIGNAL SECTIONS SHALL BE 12 INCHES IN DIAMETER CAST ALUMINUM WITH LED DISPLAYS.
- PEDESTRIAN SIGNAL HEAD SECTIONS SHALL BE CAST ALUMINUM WITH LED DISPLAYS (COUNTDOWN).
- ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR.

D. DETECTORS

- ALL NEW PEDESTRIAN PUSH BUTTON STATIONS SHALL CONFORM TO ARLINGTON COUNTY'S SPECIFICATIONS FOR ACCESSIBLE SIGNAL DESIGN AND SHALL USE POLARA NAVIGATOR VIBRO-TACTILE/AUDIO PUSH BUTTON ASSEMBLIES UNLESS OTHERWISE SPECIFIED.
- NEW OVERHEAD VIDEO DETECTION SHALL BE FLIR CAMERAS AND SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS.
- EMERGENCY VEHICLE PRE-EMPTION (EVP) EQUIPMENT (GTT MODEL M711 OR M721), OR APPROVED SUBSTITUTE, SHALL BE INSTALLED COMPLETE WITH DISCRIMINATOR CARDS, WIRING, ETC. IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS.
- EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD.

E. CONDUIT, CONDUCTORS, AND ELECTRICAL

- ALL JUNCTION BOXES SHALL HAVE THE WORDS "ARLINGTON COUNTY TRANSPORTATION" CAST IN THE LID. ALL JUNCTION BOXES SHALL BE INSTALLED PER STANDARDS 61-01, 61-02, 61-03, AND 61-04.
- METER PEDESTAL SHALL BE INSTALLED PER COUNTY STANDARDS. UNDERGROUND SERVICE SHALL BE OBTAINED FROM THE NEAREST UTILITY POLE OR SERVICE POINT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL AND COORDINATING WITH POWER SERVICE COMPANY FOR CONNECTION.
- CONDUIT SYSTEM SHALL BE ADDED TO CONNECT EXISTING COMMUNICATION CABLE PLANT TO THE NEW CONTROLLER CABINET LOCATION AS DIRECTED BY THE COUNTY ENGINEER.
- ALL CONDUIT ENTERING INTO JUNCTION BOXES SHALL NOT EXTEND OVER 3" MAXIMUM NOR 2" MINIMUM INSIDE THE JUNCTION BOXES, AND SHALL BE FITTED WITH BELL ENDS OR BUSHING.
- ALL JUNCTION BOXES SHALL HAVE A GROUND ROD INSTALLED. ALL JUNCTION BOXES SHALL BE PROPERLY CONNECTED TO THE INTERSECTION GROUNDING SYSTEM. METAL LIDS SHALL BE BONDED TO THE GROUNDING SYSTEM.
- CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES AT PROPOSED CONDUIT CROSSINGS PRIOR TO EXCAVATING CONDUIT TRENCHES OR BORING.
- ALL CONDUITS BENEATH ROADWAYS SHALL BE DIRECTIONAL DRILLED UNLESS DIRECTED OTHERWISE BY THE COUNTY CONSTRUCTION MANAGER. WHERE DIRECTED ON THE PLANS OR BY THE CONSTRUCTION MANAGER, THE CONTRACTOR SHALL INSTALL SPARE CONDUITS WITH PULL TAPE AND TRACER WIRE FOR ROAD CROSSINGS.
- ALL EXISTING CONDUIT AND CABLES ARE BASED ON RECORD DRAWINGS OR WERE ESTIMATED. CONTRACTOR SHALL VERIFY CONDUIT FILL CAPACITY IN EXISTING CONDUITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY IF CONDUIT CAPACITY IS NOT AVAILABLE IN EXISTING CONDUIT FOR NEW CABLES.
- NEW CCTV CAMERAS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY REQUIREMENTS. CONTRACTOR SHALL CONFIRM MOUNTING LOCATION OF CCTV CAMERA WITH COUNTY PRIOR TO INSTALLATION.
- CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
- ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
- REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES.

F. SIGNS

- ALL MAST ARM SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS. SIGNS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
- STREET NAME SIGNS SHALL HAVE A WHITE LEGEND ON GREEN BACKGROUND. CONTRACTOR SHALL SUBMIT SIGN DETAILS TO COUNTY TO REVIEW. THE DIMENSIONS PROVIDED ON PLANS ARE ESTIMATED.

G. DEMOLITION/SALVAGE

- ALL EXISTING SIGNAL EQUIPMENT IS TO BE REMOVED & RETURNED TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES LOCATED AT 4300 29TH ST S., ARLINGTON, VA 22206.
- ALL EXISTING SIGNAL POLE FOUNDATIONS SHALL BE DEMOLISHED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATIONS.

H. COMMUNICATIONS

- EXISTING COUNTY FIBER JUNCTION BOXES AND CONDUITS CONTAIN LIVE FIBER OPTIC CABLES. THE CONTRACTOR SHALL NOT CUT OR DAMAGE THE COUNTY'S EXISTING FIBER CABLES.
- ALL FIBER OPTIC CABLE INSTALLATION, REMOVAL, SPLICING, AND TESTING SHALL BE PERFORMED BY THE COUNTY AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MAY CONTRACT DIRECTLY WITH THE COUNTY'S FIBER CONTRACTORS. UPON REQUEST 703-228-7726, THE COUNTY WILL PROVIDE THE CONTACT INFORMATION FOR CURRENT QUALIFIED COUNTY FIBER CONTRACTORS.
- CONTACT ARLINGTON COUNTY DTS FOR FIBER OPTIC CABLE REMOVAL OR INSTALLATION AT LEAST 10 BUSINESS DAYS IN ADVANCE.
- CONTRACTOR SHALL FURNISH FIBER PATCH PANEL FOR INSTALLATION BY THE COUNTY. FIBER PATCH PANEL SHALL BE APPROPRIATE LENGTH TO ALLOW FOR 50 FEET OF SLACK IN EACH INTERMEDIATE JUNCTION BOX. CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PATCH PANEL (INDICATING THE TAIL LENGTH) FOR COUNTY REVIEW PRIOR TO ORDERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF PROPOSED JUNCTION BOXES AND CONDUITS INCLUDING ALL APPURTENANCES SUCH AS GROUND RODS, TRACER WIRE, PULL TAPE, ETC.
- ALL NEW CONDUITS SHALL HAVE PULL TAPE INSTALLED BETWEEN JUNCTION BOXES AND TRACER WIRE INSTALLED WITHIN OR BESIDE AT LEAST ONE OF THE CONDUITS. TRACER WIRE SHALL BE CONNECTED TO THE GROUND RODS INSTALLED IN THE ADJACENT JUNCTION BOXES.
- DO NOT SPLICE TRACER WIRE.

I. INSPECTIONS

- THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER FOR INSPECTIONS THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONSTRUCTION MANAGER.
- THE COUNTY SHALL VERIFY POLE LOCATIONS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY MR. SHAHID MOHIDDIN, 703-228-7555 TO SCHEDULE INSPECTION PRIOR TO EXCAVATION, AND AGAIN PRIOR TO POURING CONCRETE. STAKEOUT IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER WITHIN 7 BUSINESS DAYS OF SIGNAL ACTIVATION. ALL POWER AND COMMUNICATIONS SHALL BE IN OPERATION AT THE TIME OF ACTIVATION UNLESS APPROVED BY THE COUNTY CONSTRUCTION MANAGER.

J. ACCESSIBLE PEDESTRIAN SIGNAL (APS) MESSAGES

- TO CROSS SOUTH GLEBE ROAD AT MOUNT VERNON AVENUE (FROM NE QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS GLEBE ROAD AT MOUNT VERNON AVENUE. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS MOUNT VERNON AVENUE AT SOUTH GLEBE ROAD (FROM NE QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MOUNT VERNON AVENUE AT GLEBE ROAD. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS SOUTH GLEBE ROAD AT MOUNT VERNON AVENUE (FROM SE QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS GLEBE ROAD AT MOUNT VERNON AVENUE. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE "GLEBE ROAD, WALK SIGN IS ON TO CROSS GLEBE ROAD."
- TO CROSS MOUNT VERNON AVENUE AT SOUTH GLEBE ROAD (FROM SE QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MOUNT VERNON AVENUE AT GLEBE ROAD. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE "MOUNT VERNON AVENUE, WALK SIGN IS ON TO CROSS MOUNT VERNON AVENUE."
- TO CROSS MOUNT VERNON AVE AT SOUTH GLEBE ROAD (FROM SW QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MOUNT VERNON AVENUE AT GLEBE ROAD. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS SOUTH GLEBE ROAD AT MOUNT VERNON AVENUE (FROM SW QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO GLEBE ROAD AT MOUNT VERNON AVENUE. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS SOUTH GLEBE ROAD AT MOUNT VERNON AVENUE (FROM NW QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS GLEBE ROAD AT MOUNT VERNON AVENUE. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS MOUNT VERNON AT SOUTH GLEBE ROAD (FROM NW QUADRANT):
 - WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO MOUNT VERNON AVENUE AT SOUTH GLEBE ROAD. WAIT."
 - WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CLEARANCE INTERVAL CHART

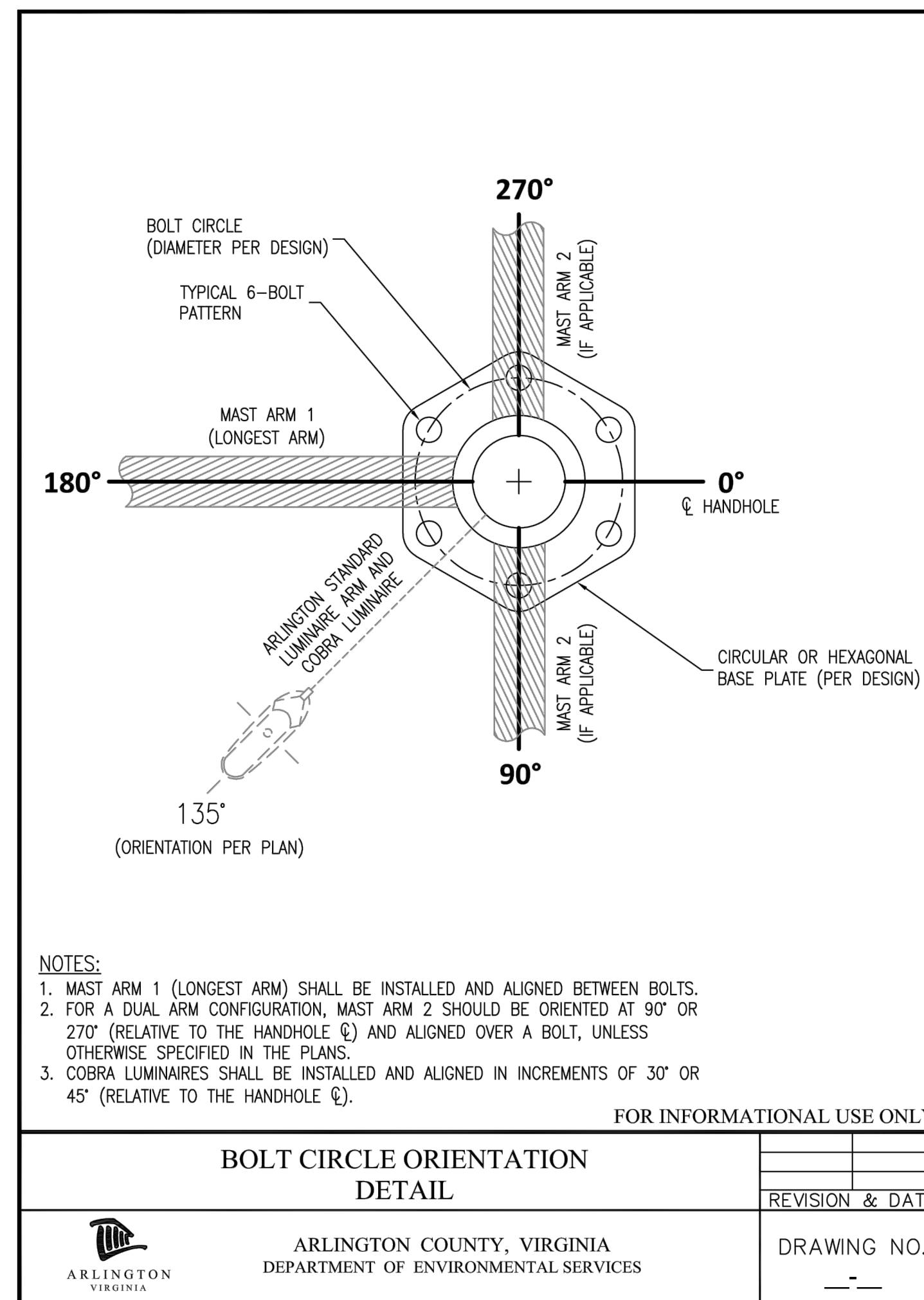
PHASES	1	2	4	5	6	8
CALCULATED MINIMUM YELLOW	4.2	4.2	3.6	4.2	4.2	3.6
RED	1.6	1.6	1.8	1.6	1.6	1.8
CONTROLLER INPUTS YELLOW	4.2	4.2	3.6	4.2	4.2	3.6
RED	1.6	1.6	1.8	1.6	1.6	1.8

NOTES:

- THE CALCULATED MINIMUMS SHOWN ON THE CLEARANCE INTERVAL CHART ARE THE CALCULATED MINIMUM INTERVALS USING VDOT MEMORANDUM TE-306 AND DO NOT INCLUDE PHASING OR OTHER CONSIDERATIONS AND ARE NOT TO BE USED IN THE CONTROLLER.

CONTROLLER TIMING CHART

PHASE	1	2	3	4	5	6	7	8
MOVEMENT	WBL S GLEBE RD	EBT S GLEBE RD	-	SB S ARLINGTON	EBL S GLEBE RD	WBT S GLEBE RD	-	NB MT. VERNON AVE
PHASE ON	X	X		X	X	X		X
PHASE OFF			X				X	
INTERVAL	PHASE TIMINGS							
MIN GREEN	7.0	15.0	-	7.0	7.0	15.0	-	7.0
PASSAGE	3.0	3.0	-	3.0	3.0	3.0	-	3.0
YELLOW	4.2	4.2	-	3.6	4.2	4.2	-	3.6
RED	1.6	1.6	-	1.8	1.6	1.6	-	1.8
MAX 1	25.0	50.0	-	25.0	25.0	50.0	-	25.0
MAX 2	-	-	-	-	-	-	-	-
MIN GAP	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION	0.0	0.0	-	0.0	0.0	0.0	-	0.0
TIME TO REDUCE	0.0	0.0	-	0.0	0.0	0.0	-	0.0
LEADING PED WALK	0.0	0.0	-	0.0	0.0	0.0	-	0.0
PED WALK	-	7.0	-	7.0	-	7.0	-	7.0
PED CLEARANCE	-	17.0	-	19.0	-	16.0	-	20.0
MODE	NON-LOCK	MIN RECALL	-	NON-LOCK	NON-LOCK	MIN RECALL	-	NON-LOCK



NOTES:

- MAST ARM 1 (LONGEST ARM) SHALL BE INSTALLED AND ALIGNED BETWEEN BOLTS.
- FOR A DUAL ARM CONFIGURATION, MAST ARM 2 SHOULD BE ORIENTED AT 90° OR 270° (RELATIVE TO THE HANDHOLE ☉) AND ALIGNED OVER A BOLT, UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- COBRA LUMINAIRES SHALL BE INSTALLED AND ALIGNED IN INCREMENTS OF 30° OR 45° (RELATIVE TO THE HANDHOLE ☉).

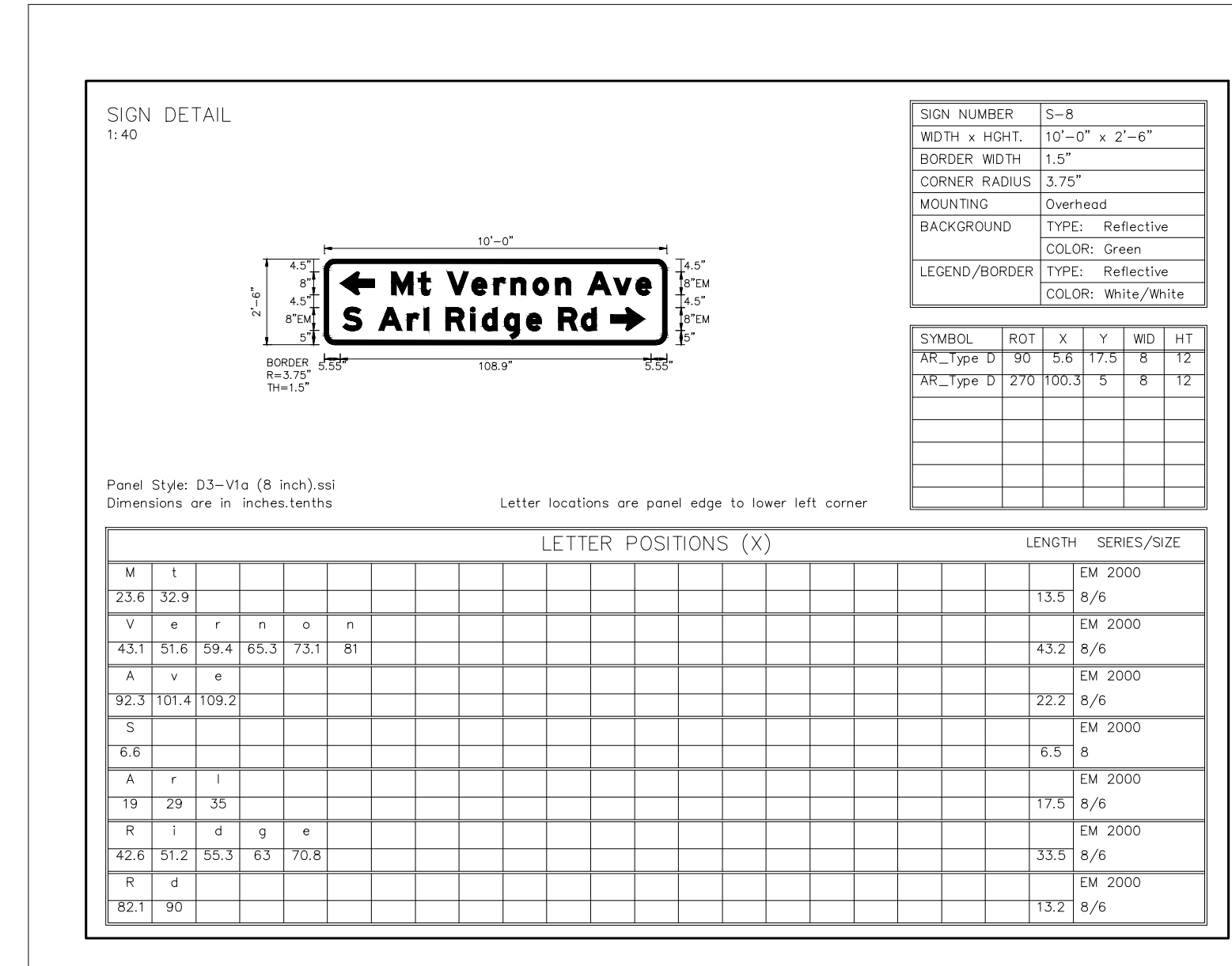
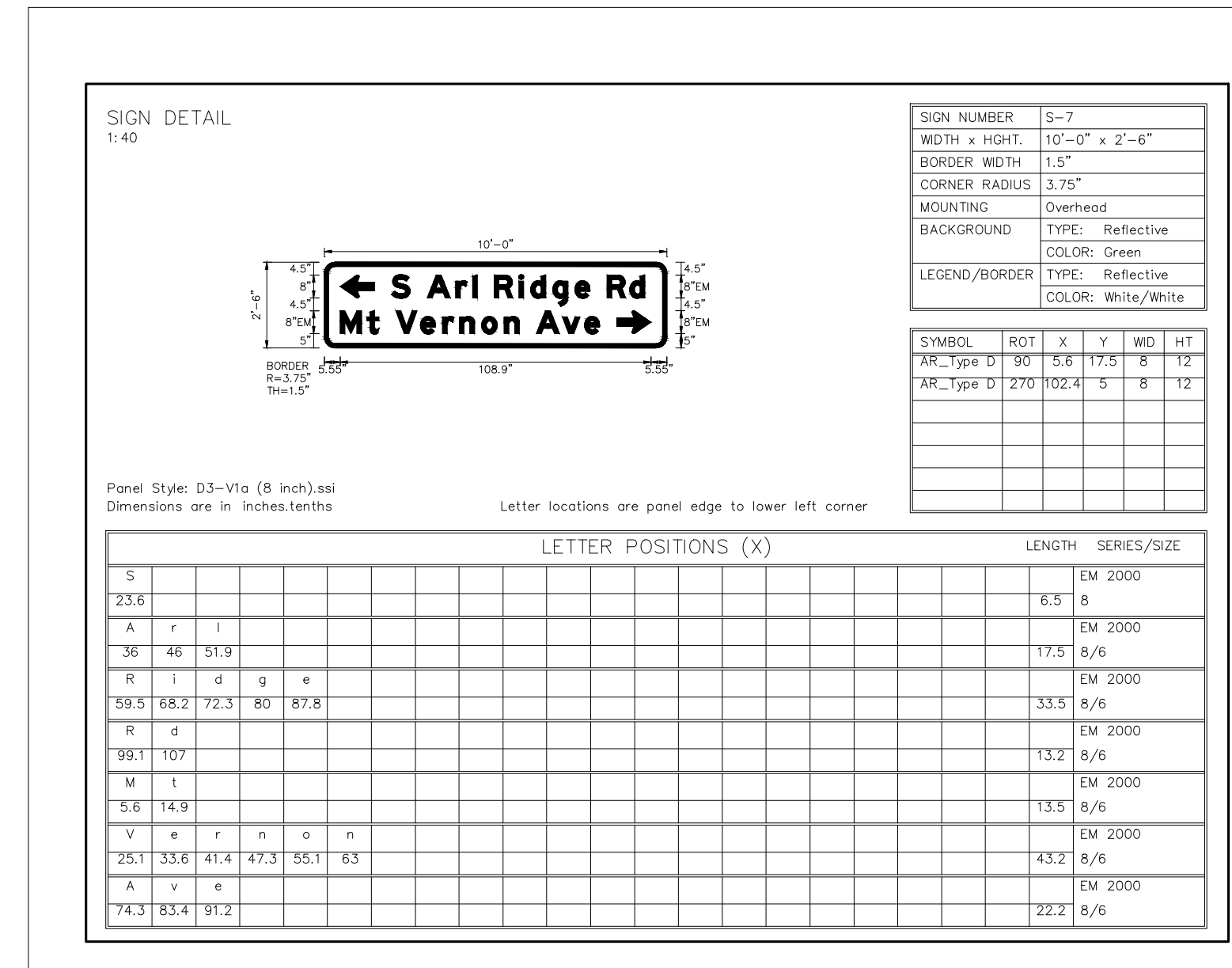
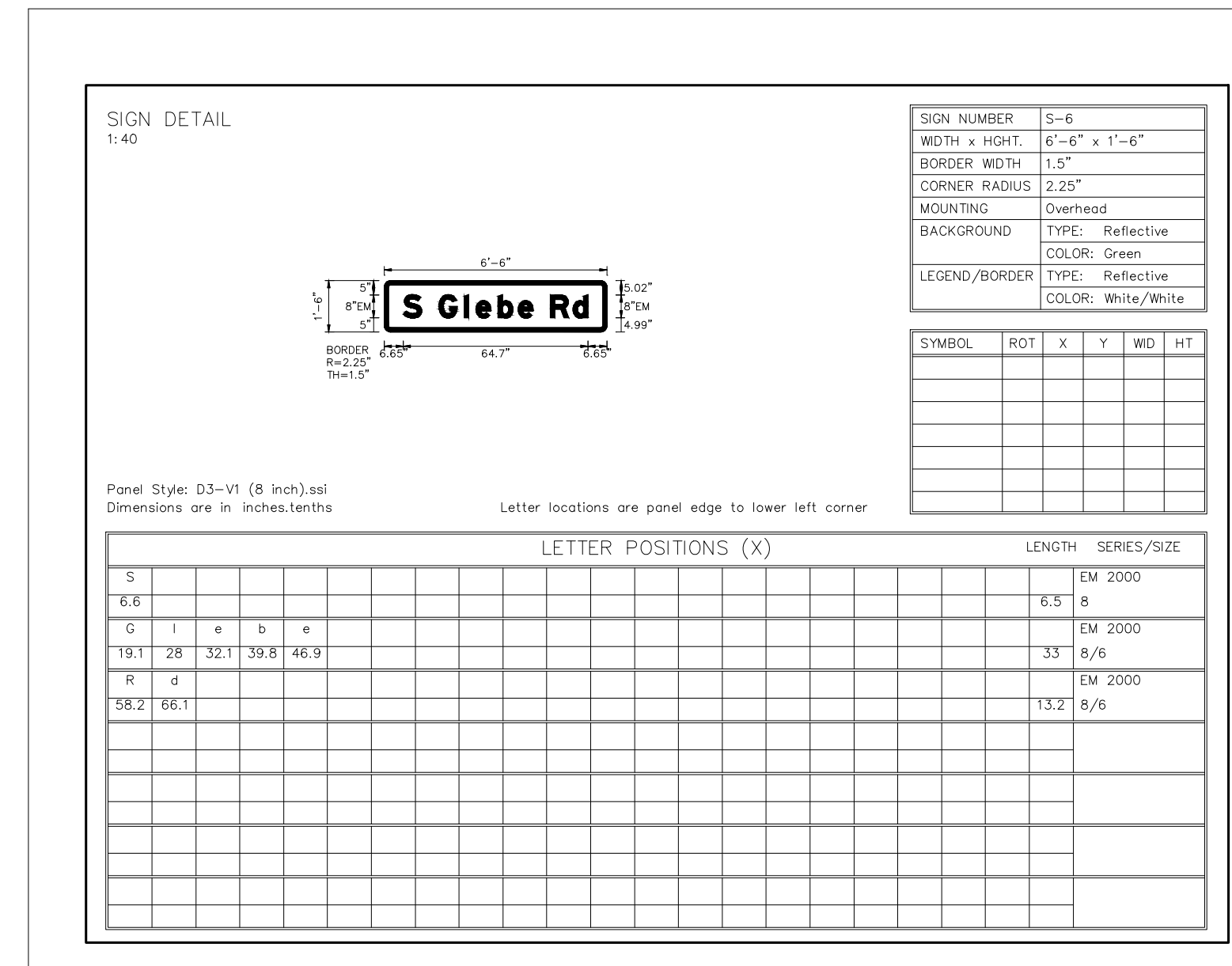
BOLT CIRCLE ORIENTATION DETAIL



ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

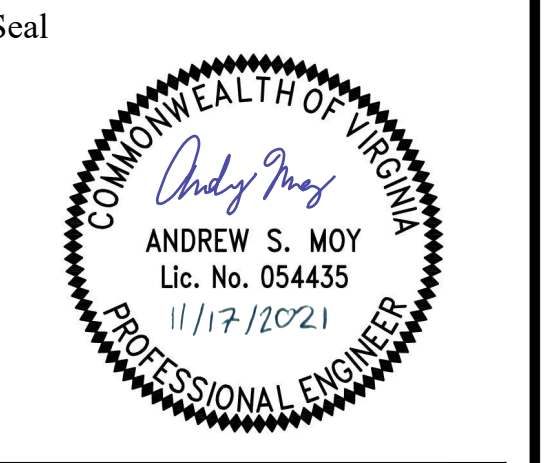
REVISION & DATE

DRAWING NO.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719



APPROVALS DATE

Andrew S. Moy 01/04/2022
TRAFFIC SIGNAL ENGINEER

John N. Nalle 01/12/2022
TRAFFIC ENGINEERING MANAGER

Colin... 02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF

... 01/07/2022
TE&O BUREAU CHIEF

Dennis W. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions Date

Project Name and Location
S. Glebe Road Intersection Improvements
TRAFFIC SIGNAL NOTES
S. Glebe Road at S. Arlington Ridge Road

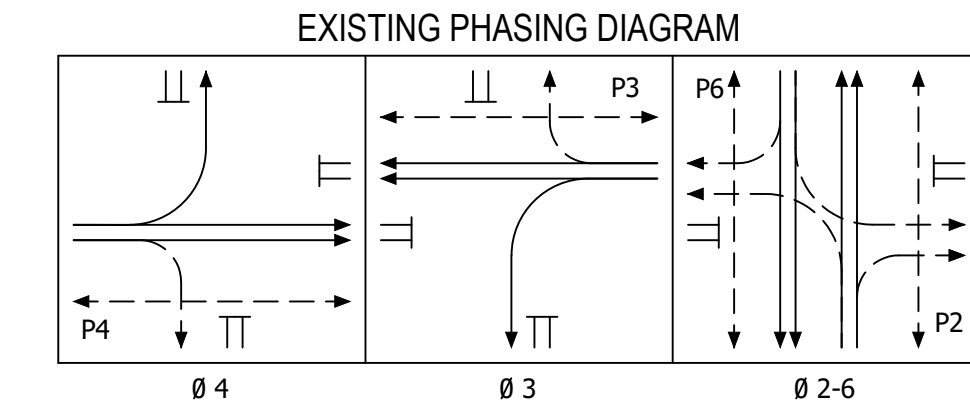
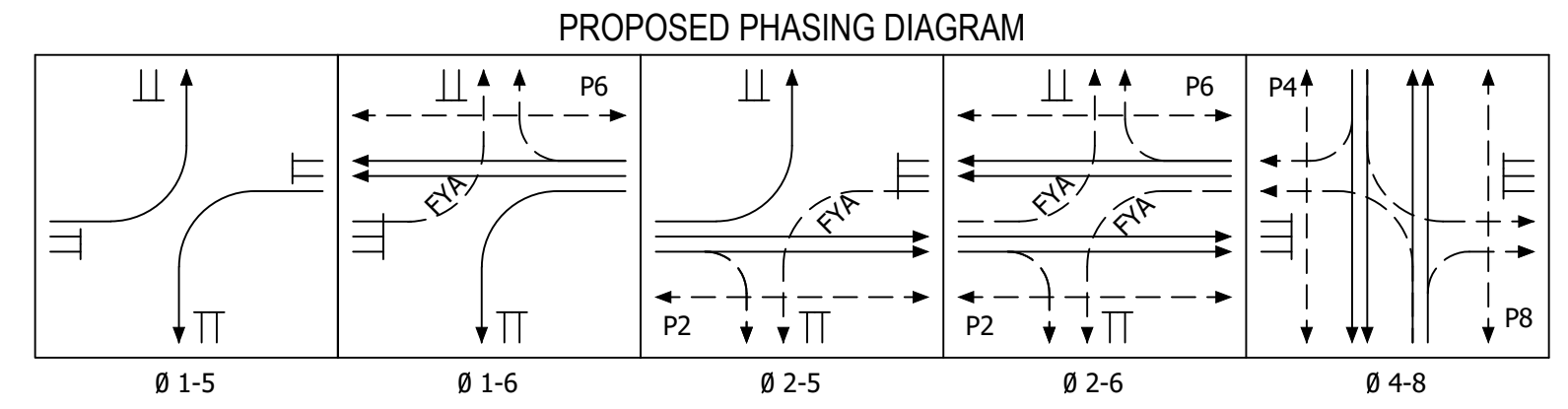
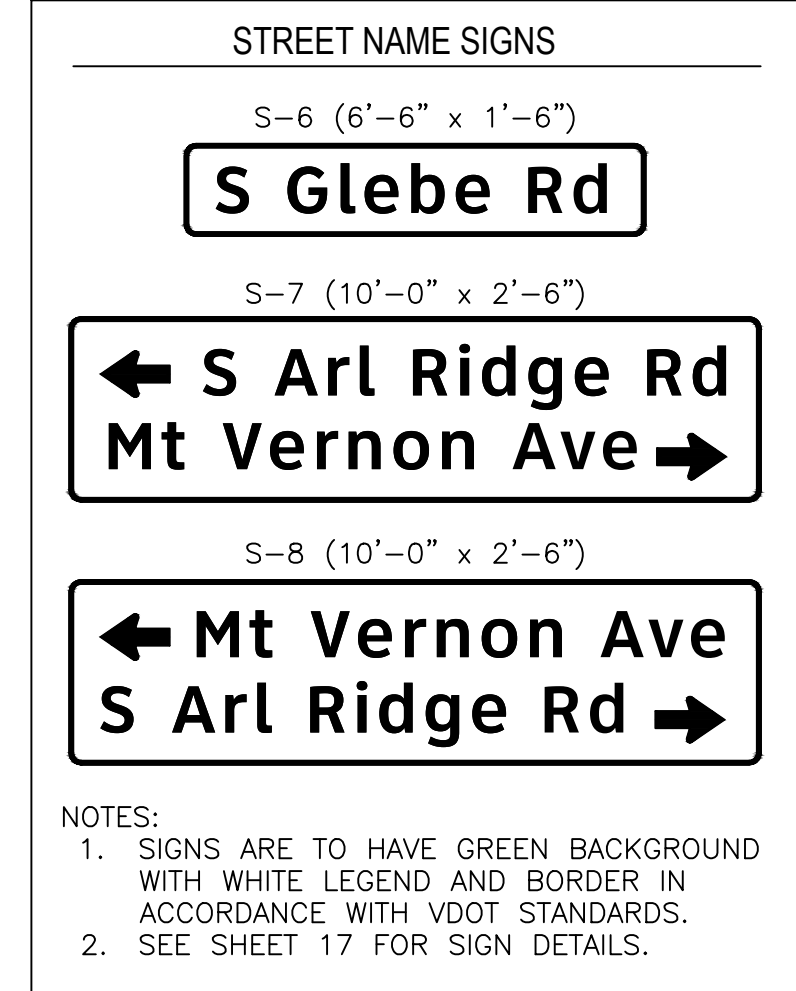
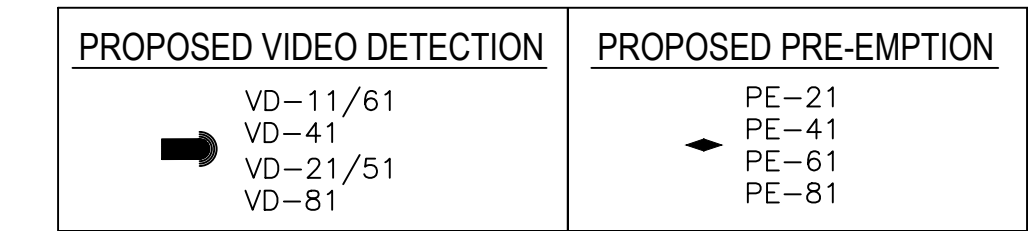
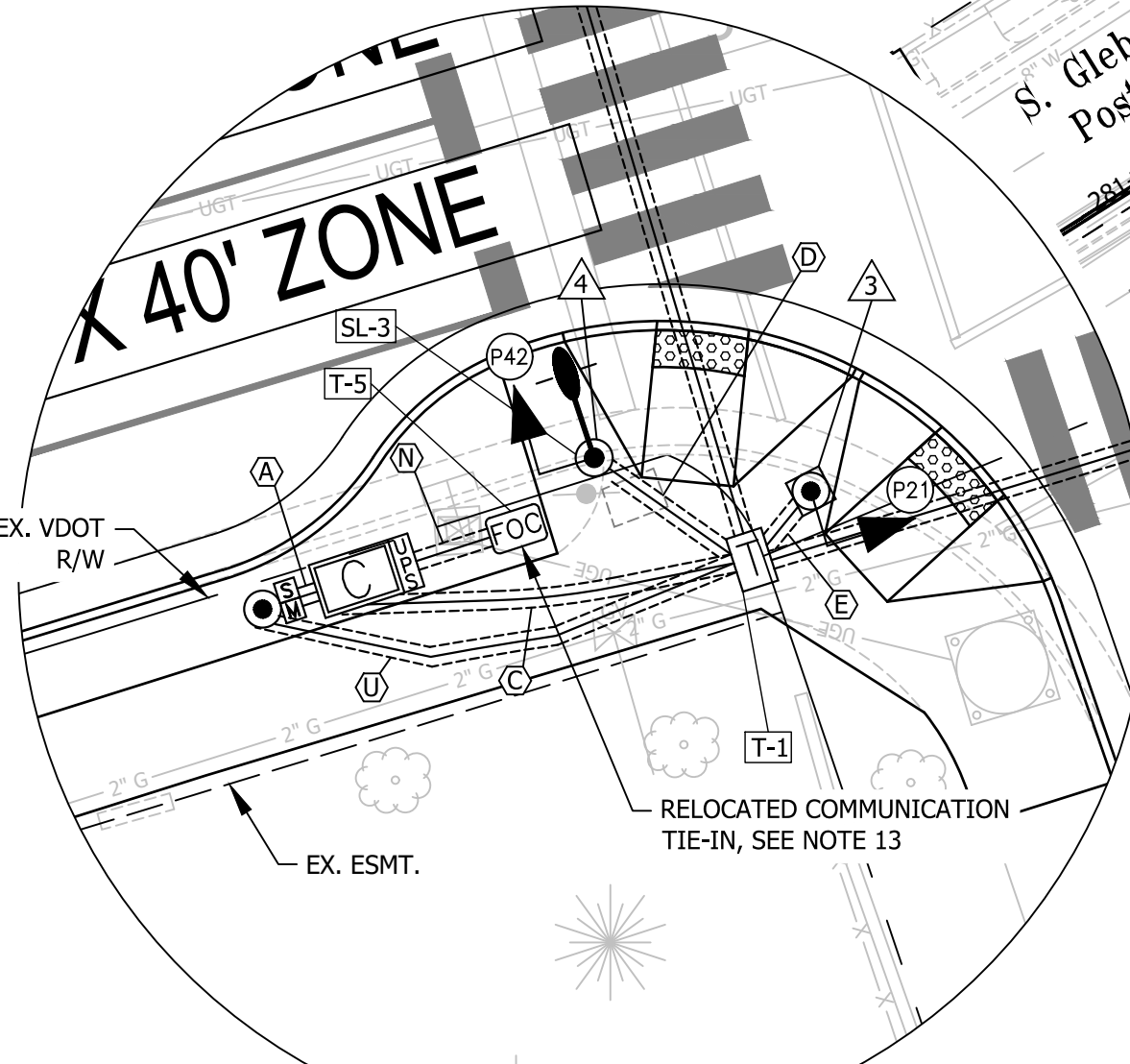
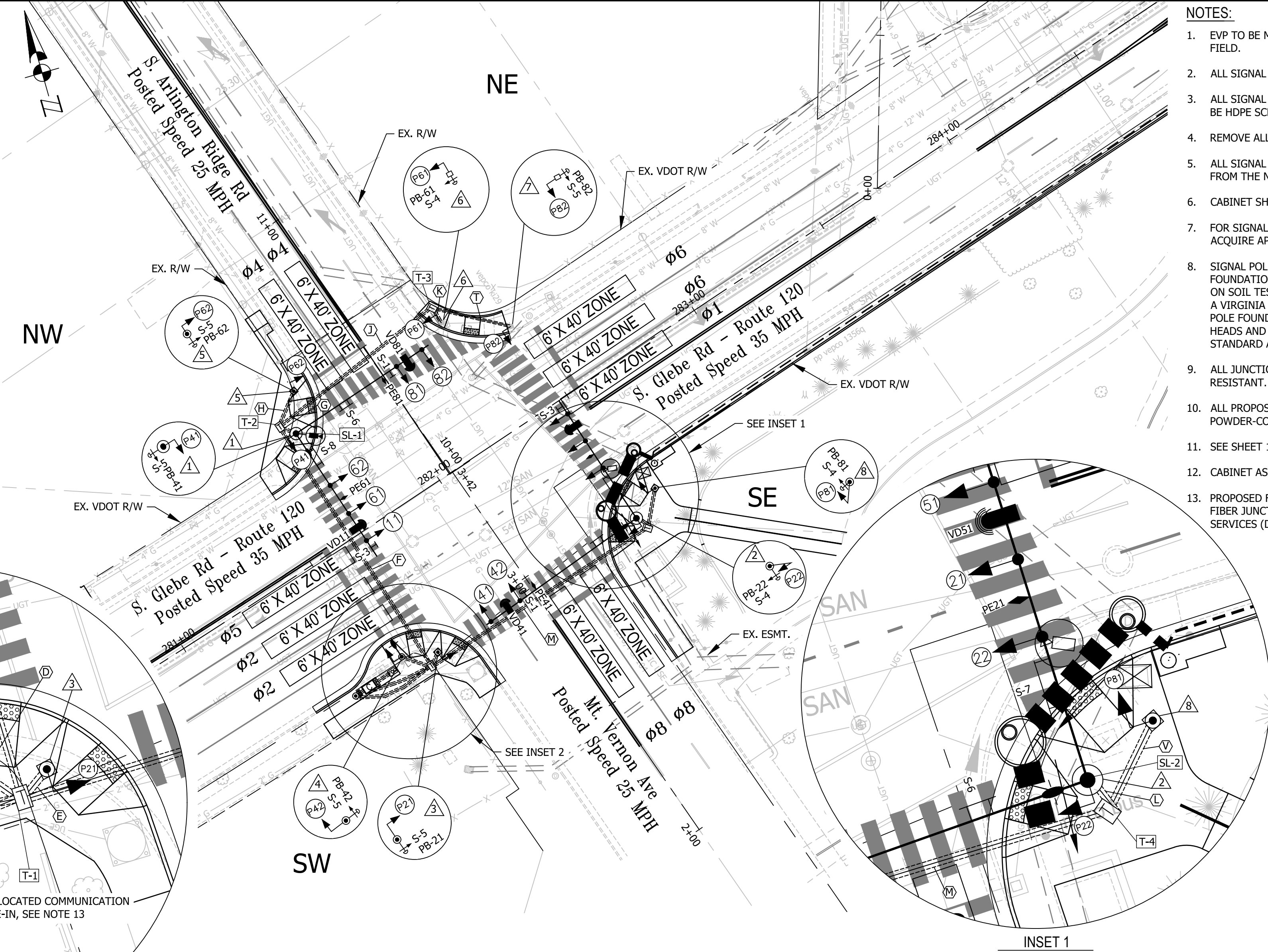
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Drawn: ABK
Checked: MJK
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Plotted: November 15, 2021
Plotted by: kmita

Scale: N.T.S.

Sheet 17

CABLE & CONDUIT RUNS

A	1-2" CONDUIT (TRENCH) 1-6/3C ELECTRICAL SERVICE CABLE 1-#6 AWG (EGC)	M	1-3" CONDUIT (DIRECT BORE) 3-14/7C SIGNAL HEAD 41, 42, 51, 21, 22 2-14/7C PEDESTRIAN SIGNAL P22, P81 2-14/3C PEDESTRIAN PUSH BUTTON PB-22, PB-81 1-12/2C LUMINAIRE (SL-2) 1-#6 AWG (EGC)
B	NOT USED	N	1-2" CONDUIT (TRENCH) 2-RG-59 FOR VIDEO DETECTION VD41, VD51 2-2-14/7C PEDESTRIAN SIGNAL P22, P81 1-#6 AWG (EGC)
C	1-3" CONDUIT (TRENCH) 6-14/7C SIGNAL HEADS 11, 61, 62, 41, 42, 51, 21, 22, 81, 82 4-RG-59 FOR VIDEO DETECTION VD11, VD41, VD51, VD81 1-#6 AWG (EGC)	P	1-3" CONDUIT (DIRECT BORE) 2-2-14/7C PEDESTRIAN SIGNAL P22, P81 2-2-14/3C PEDESTRIAN PUSH BUTTON PB-22, PB-81 1-#6 AWG (EGC)
D	1-3" CONDUIT (TRENCH) 8-14/7C PEDESTRIAN SIGNALS P81, P62, P61, P42, P41, P22, P21, P82 1-#6 AWG (EGC)	R	NOT USED
E	1-3" CONDUIT (TRENCH) 8-14/3C PEDESTRIAN PUSH BUTTON PB-81, PB-62, PB-61, PB-42, PB-41, PB-22, PB-21, PB-82 4-1-14/3C PEDESTRIAN PUSH BUTTON PB-61, PE41, PE21, PE81 1-#6 AWG (EGC)	S	NOT USED
F	1-2" CONDUIT (TRENCH) 1-CCTV LEAD-IN CABLE 1-#6 AWG (EGC)	T	1-2" CONDUIT (TRENCH) 1-14/7C PEDESTRIAN SIGNAL P82 1-14/3C PEDESTRIAN PUSH BUTTON PB-82 1-#6 AWG (EGC)
G	1-2" CONDUIT (TRENCH) 1-CCTV LEAD-IN CABLE 1-#6 AWG (EGC)	U	1-2" CONDUIT (TRENCH) TO METER 3-12/2C LUMINAIRE (SL-1, SL-2, SL-3) 1-#6 AWG (EGC)
H	1-3" CONDUIT (DIRECT BORE) 3-14/7C SIGNAL HEAD 11, 61, 62, 81, 82 4-14/7C PEDESTRIAN SIGNAL P62, P62, P61, P41 4-14/3C PEDESTRIAN PUSH BUTTON PB-62, PB-62, PB-61, PB-41 1-12/2C LUMINAIRE (SL-1) 1-#6 AWG (EGC)	V	1-2" CONDUIT (TRENCH) 1-14/7C PEDESTRIAN SIGNAL P81 1-14/3C PEDESTRIAN PUSH BUTTON PB-81 1-#6 AWG (EGC)
I	1-2" CONDUIT (DIRECT BORE) 2-RG-59 FOR VIDEO DETECTION VD11, VD41 2-2-14/7C PEDESTRIAN SIGNAL P41 1-CCTV LEAD-IN CABLE 1-#6 AWG (EGC)		
J	1-3" CONDUIT (TRENCH) 3-14/7C SIGNAL HEAD 11, 61, 62, 81, 82 1-14/7C PEDESTRIAN SIGNAL P41 1-14/3C PEDESTRIAN PUSH BUTTON PB-81 1-12/2C LUMINAIRE (SL-1) 1-#6 AWG (EGC)		
K	1-2" CONDUIT (TRENCH) 2-RG-59 FOR VIDEO DETECTION VD11, VD81 2-2-14/7C PEDESTRIAN SIGNAL P41 1-CCTV LEAD-IN CABLE 1-#6 AWG (EGC)		
L	1-3" CONDUIT (TRENCH) SPARE(S) FOR FUTURE USE		

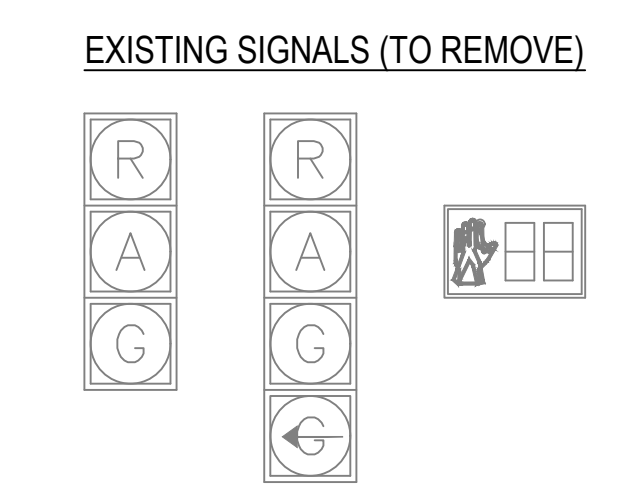
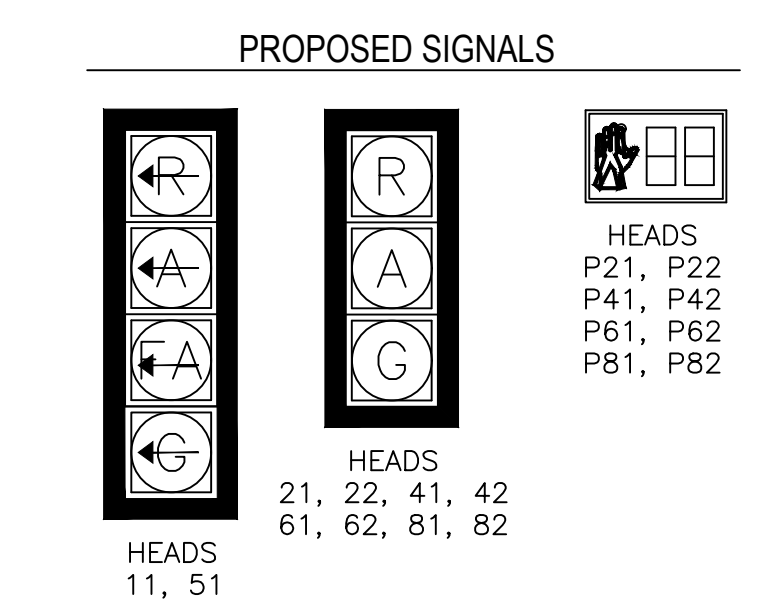
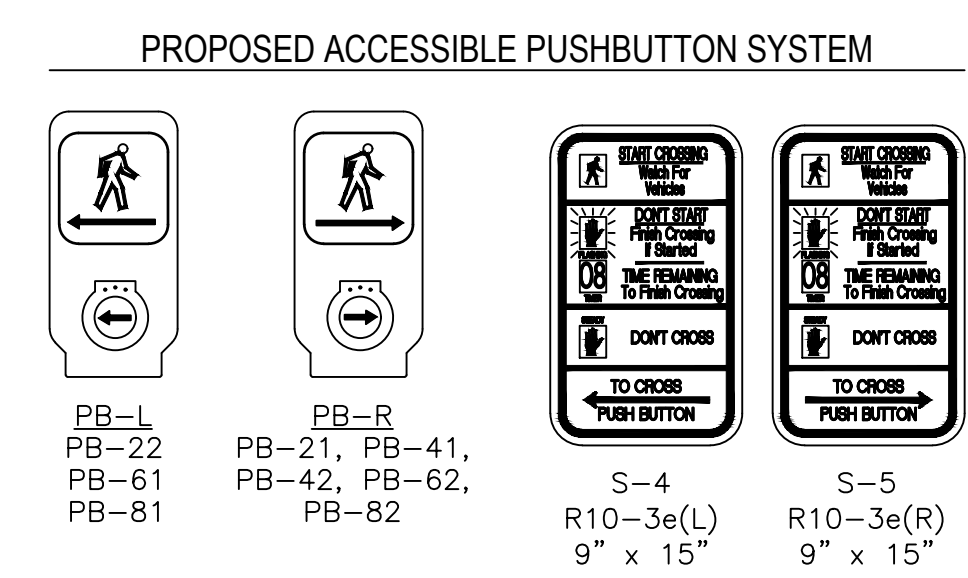
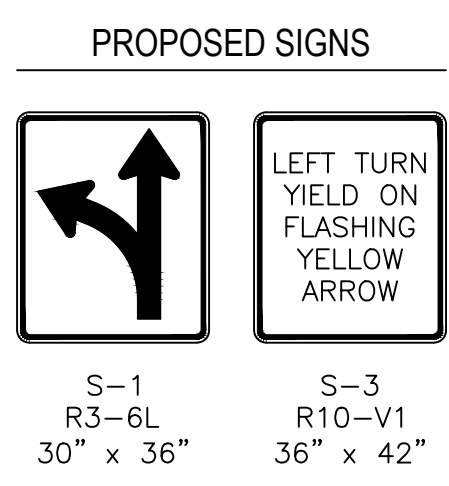
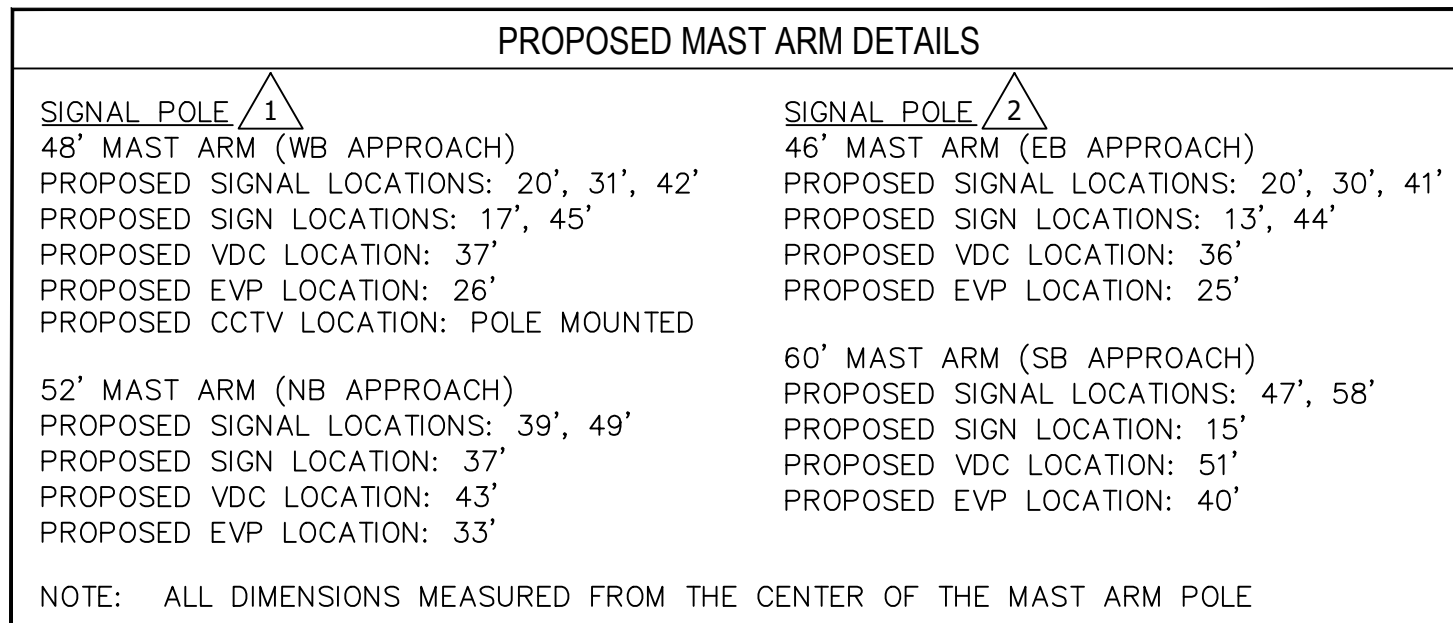


TRAFFIC SIGNAL JUNCTION BOX SCHEDULE

NO.	TYPE	BASELINE, STATION, OFFSET
T-1	61-04, TYPE 3	S. GLEBE ROAD, 281+64.26, 48.98' RT
T-2	61-04, TYPE 3	S. GLEBE ROAD, 281+66.27, 43.42' LT
T-3	61-04, TYPE 3	S. GLEBE ROAD, 282+29.11, 48.16' LT
T-4	61-04, TYPE 3	S. GLEBE ROAD, 282+47.86, 50.65' RT

FIBER COMMUNICATION JUNCTION BOX SCHEDULE

NO.	TYPE	BASELINE, STATION, OFFSET
T-5	61-04, TYPE 3	S. GLEBE ROAD, 281+52.73, 52.73' RT



LEGEND

	EXISTING	PROPOSED
CONTROL CABINET	☒	☑
UNINTERRUPTIBLE POWER SUPPLY (UPS)	☒	☑
SIGNAL JUNCTION BOX (61-04)	☒	☑
FIBER OPTIC JUNCTION BOX (61-04)	☒	☑
SERVICE JUNCTION BOX	☒	☑
MAST ARM POLE & FOUNDATION	☒	☑
PEDESTAL POLE & FOUNDATION	☒	☑
PEDESTRIAN PUSHBUTTON	☒	☑
PEDESTRIAN PUSHBUTTON PEDESTAL	☒	☑
CCTV	☒	☑
PRE-EMPTION	☒	☑
VIDEO DETECTOR	☒	☑
SERVICE METER	☒	☑
CONDUIT RUN	☒	☑

COLOR SEQUENCE CHART

PHASE	1	2	4	5	6	8	1+5	1+6	2+5	2+6	4+8	FLASH
SIGNAL R/W	←G						←G	←G	←FA	←FA	←A	
11		G							G	G	A	
21, 22												A
41, 42			G								G	R
51				←G			←G	←FA	←G	←FA	←A	
61, 62					G				G	G	A	
81, 82						G					G	R
P21, P22			W						W	W	BLANK	
P41, P42				W							W	BLANK
P61, P62					W				W	W	BLANK	
P81, P82						W					W	BLANK

NOTE: BLANK SPACES DENOTE RED INDICATIONS. WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL SERVICED. OTHERWISE "DON'T WALK" WILL BE DISPLAYED. FLASHING MODE OPERATION FOR SIGNAL HEADS 1, 5 SHALL BE ONLY FROM THE SIGNAL SECTION THAT DISPLAYS A STEADY LEFT-TURN YELLOW ARROW SIGNAL INDICATION DURING NORMAL OPERATIONS.

SIGNAL POLE LEGEND

NO.	ID	TYPE	SIGNAL M.A.	M.A. ORIENT.	FOUNDATION	LUMINAIRE			POLE SIGNAL MOUNTING				STREET NAME SIGN	BASELINE, STATION, OFFSET
						MA	LED	ORIENTATION	VEHICLE & PEDESTRIAN HEADS	PED PUSH BUTTON	SIGNS	VIDEO DETECTOR, PREEMPTION & CCTV		
1	149-MA-01-NW	DUAL MAST ARM POLE W/ LUMINAIRE 30'	52', 48'	180°, 270°	SEE NOTE 8	6'	145W	270°	11, 61, 62, 81, 82, P41	PB-41*	S-1, S-3, S-5	VD11, PE61, VD81, PE81	S-8, S-6	S. GLEBE ROAD, 281+69.44, 38.67' LT
2	149-MA-01-SE	DUAL MAST ARM POLE W/ LUMINAIRE 30'	60', 46'	180°, 270°	SEE NOTE 8	6'	145W	180°	51, 21, 22, 41, 42, P22	PB-22*	S-3, S-1, S-4	VD51, PE21, VD41, PE41	S-6, S-7	S. GLEBE ROAD, 282+46.62, 46.00' RT
3	149-PP-01-SW	PEDESTAL POLE 12'	-	-	66-04	-	-	-	P21	PB-21	S-5	-	-	S. GLEBE ROAD, 281+68.40, 46.45' RT
4	149-CB-01-SW	ARL. COUNTY OCTAFLUTE ALUMINUM POLE	-	-	14080-04	6'	145W	180°	P42	PB-42	S-5	-	-	S. GLEBE ROAD, 281+57.95, 41.12' RT
5	149-PP-01-NW	PEDESTAL POLE 12'	-	-	66-04	-	-	-	P62	PB-62	S-5	-	-	S. GLEBE ROAD, 281+76.53, 50.58' LT
6	-	EX. UTILITY POLE	-	-	-	-	-	-	P61	PB-61	S-4	-	-	-
7	-	EX. UTILITY POLE	-	-	-	-	-	-	P82	PB-82	S-5	-	-	-
8	149-PP-01-SE	PEDESTAL POLE 12'	-	-	66-04	-	-	-	P81	PB-81	S-4	-	-	S. GLEBE ROAD, 282+57.12, 41.20' RT

*INSTALL PUSHBUTTON WITH BLACK 12" MOUNTING EXTENDER

- NOTES:**
- EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD.
 - ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR AND EQUIPPED WITH LED TYPE LENS.
 - ALL SIGNAL AND ELECTRICAL CONDUITS SHALL BE HDPE SCHEDULE 40. COMMUNICATIONS CONDUIT SHALL BE HDPE SCHEDULE 80.
 - REMOVE ALL EXISTING UNUSED RISER, JUNCTION BOX, AND CABLE.
 - ALL SIGNAL HEADS MUST BE AT LEAST 8' APART. ALL MAST ARM MOUNTED SIGNS MUST BE AT LEAST 1' FROM THE NEAREST SIGNAL HEAD.
 - CABINET SHALL HAVE CONDUITS AS SHOWN ON STANDARD 66-01.
 - FOR SIGNALS MOUNTED TO DOMINION UTILITY POLE, CONTRACTOR SHALL COORDINATE WITH AND ACQUIRE APPROVAL FROM DOMINION VIRGINIA POWER.
 - SIGNAL POLE FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH COUNTY SIGNAL POLE FOUNDATION STANDARDS, SPECIAL PROVISION, INCLUDING MAXIMUM LOADING CONDITIONS, AND BASED ON SOIL TEST BORE FINDINGS. ALL TRAFFIC SIGNAL POLE FOUNDATIONS SHALL BE SIGNED AND SEALED BY A VIRGINIA LICENSED PROFESSIONAL ENGINEER AND APPROVED BY THE COUNTY. THE TOP OF ALL SIGNAL POLE FOUNDATIONS SHOULD BE INSTALLED SUCH THAT MINIMUM AND MAXIMUM CLEARANCES TO SIGNAL HEADS AND MAST ARM EQUIPMENT ARE MAINTAINED IN ACCORDANCE WITH THE MAST ARM SIGNAL POLE STANDARD AND THE MUTCD.
 - ALL JUNCTION BOX TOPS WITHIN THE PEDESTRIAN WALKWAYS SHALL BE ADA-COMPLIANT AND SLIP RESISTANT.
 - ALL PROPOSED PEDESTAL POLES, MAST ARMS, AND PEDESTRIAN PUSH BUTTON EXTENDERS SHALL BE POWDER-COATED BLACK.
 - SEE SHEET 17 FOR APS PUSHBUTTON MESSAGES.
 - CABINET ASSEMBLY SHALL INCLUDE 12" CABINET RISER BASE.
 - PROPOSED FIBER COMMUNICATION JUNCTION BOX TO INTERCEPT THE EXISTING FIBER LINE AND EXISTING FIBER JUNCTION BOX TO BE REMOVED. CONTACT ARLINGTON COUNTY DEPARTMENT OF TECHNOLOGY SERVICES (DTS) TO COORDINATE CONNECTION TO PROPOSED SIGNAL CABINET.

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719

Seal

 ANDREW S. MOY
 Lic. No. 054435
 12/22/21
 PROFESSIONAL ENGINEER

APPROVALS

Name	Date
Jay Kelle	01/04/2022
Debbie Nalle	01/12/2022
John Goffe	02/09/2022
John Goffe	01/07/2022
Dennis M. Leach	01/07/21

Revisions

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

TRAFFIC SIGNAL PLAN
 S. Glebe Road at S. Arlington Ridge Road
 Intersection ID: 149

Designed: JMK
 Drawn: JMK
 Checked: JMK
 Miss Utility Transmittal #:
 Filename: 149-15_Signal Plan.dwg
 Path: \\arlington.com\GIS\Projects\2011\149_Arrow\88\Task 1 - S. Glebe Road\149-15_Signal Plan.dwg
 Plotted: December 22, 2021
 Plotted by: jkiser
 Scale: 1"=25'

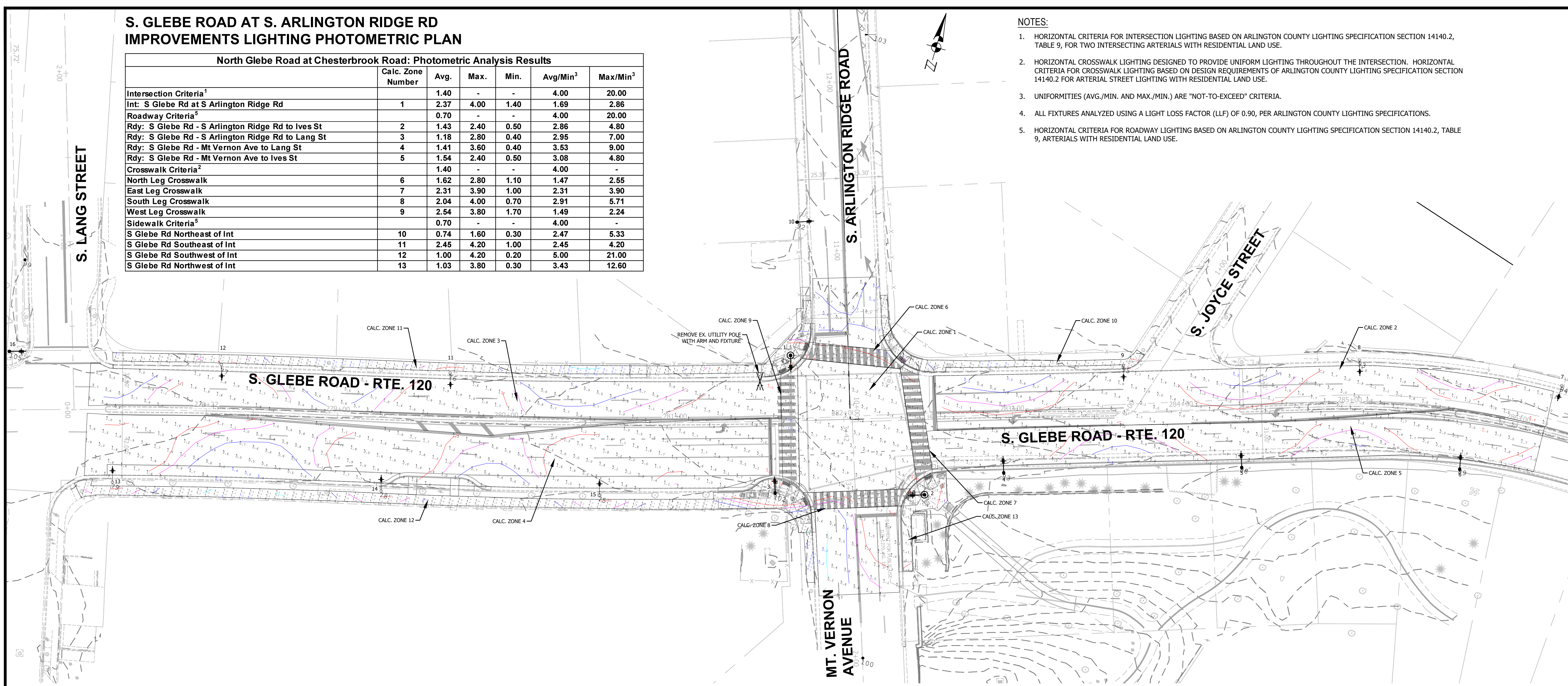
 GRAPHIC SCALE
 Sheet **17A**

**S. GLEBE ROAD AT S. ARLINGTON RIDGE RD
IMPROVEMENTS LIGHTING PHOTOMETRIC PLAN**

	Calc. Zone Number	Avg.	Max.	Min.	Avg/Min ²	Max/Min ²
Intersection Criteria¹						
Int: S Glebe Rd at S Arlington Ridge Rd	1	1.40	-	-	4.00	20.00
Roadway Criteria⁵						
Rdy: S Glebe Rd - S Arlington Ridge Rd to Ives St	2	1.43	2.40	0.50	2.86	4.80
Rdy: S Glebe Rd - S Arlington Ridge Rd to Lang St	3	1.18	2.80	0.40	2.95	7.00
Rdy: S Glebe Rd - Mt Vernon Ave to Lang St	4	1.41	3.60	0.40	3.53	9.00
Rdy: S Glebe Rd - Mt Vernon Ave to Ives St	5	1.54	2.40	0.50	3.08	4.80
Crosswalk Criteria²						
North Leg Crosswalk	6	1.62	2.80	1.10	1.47	2.55
East Leg Crosswalk	7	2.31	3.90	1.00	2.31	3.90
South Leg Crosswalk	8	2.04	4.00	0.70	2.91	5.71
West Leg Crosswalk	9	2.54	3.80	1.70	1.49	2.24
Sidewalk Criteria⁵						
S Glebe Rd Northeast of Int	10	0.74	1.60	0.30	2.47	5.33
S Glebe Rd Southeast of Int	11	2.45	4.20	1.00	2.45	4.20
S Glebe Rd Southwest of Int	12	1.00	4.20	0.20	5.00	21.00
S Glebe Rd Northwest of Int	13	1.03	3.80	0.30	3.43	12.60

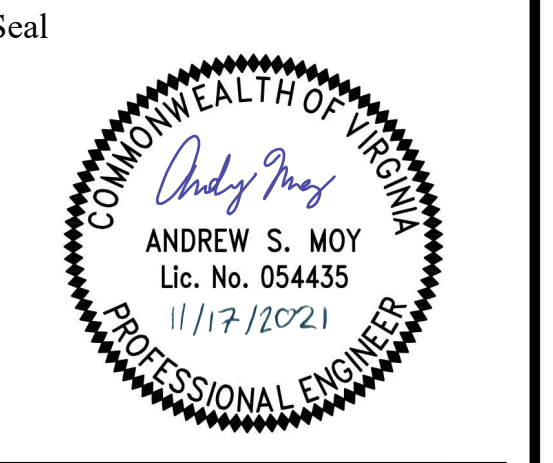
NOTES:

- HORIZONTAL CRITERIA FOR INTERSECTION LIGHTING BASED ON ARLINGTON COUNTY LIGHTING SPECIFICATION SECTION 14140.2, TABLE 9, FOR TWO INTERSECTING ARTERIALS WITH RESIDENTIAL LAND USE.
- HORIZONTAL CROSSWALK LIGHTING DESIGNED TO PROVIDE UNIFORM LIGHTING THROUGHOUT THE INTERSECTION. HORIZONTAL CRITERIA FOR CROSSWALK LIGHTING BASED ON DESIGN REQUIREMENTS OF ARLINGTON COUNTY LIGHTING SPECIFICATION SECTION 14140.2 FOR ARTERIAL STREET LIGHTING WITH RESIDENTIAL LAND USE.
- UNIFORMITIES (AVG./MIN. AND MAX./MIN.) ARE "NOT-TO-EXCEED" CRITERIA.
- ALL FIXTURES ANALYZED USING A LIGHT LOSS FACTOR (LLF) OF 0.90, PER ARLINGTON COUNTY LIGHTING SPECIFICATIONS.
- HORIZONTAL CRITERIA FOR ROADWAY LIGHTING BASED ON ARLINGTON COUNTY LIGHTING SPECIFICATION SECTION 14140.2, TABLE 9, ARTERIALS WITH RESIDENTIAL LAND USE.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
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Fax: 703.228.3719

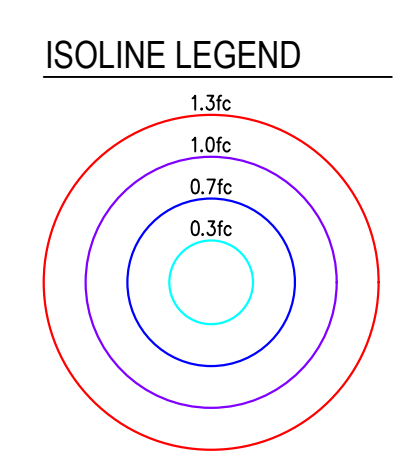


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<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Luminaire ID Number	Pole Type	Luminaire Wattage/Type	Light Loss Factor (LLF)	Mounting Height	Color Temperature	Distribution	Initial Lumens	Owners	Baseline, Station, Offset
1	Arl. Co. Mast Arm Pole	145W Cobrahead LED	0.90	30'	4000K	Type III	16,046	Arl. County	S Glebe Rd, 281+67.5, 28.92 LT
2	Arl. Co. Mast Arm Pole	145W Cobrahead LED	0.90	30'	4000K	Type III	16,046	Arl. County	S Glebe Rd, 282+48.4, 44.32 RT
3	Arl. Co. Octafit Aluminum Pole	145W Cobrahead LED	0.90	30'	4000K	Type III	16,046	Arl. County	S Glebe Rd, 281+70.65, 46.32 RT
4	Dominion Pole	150W Cobrahead LED	0.90	30'	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 282+95.20, 34.12 RT
5	Dominion Pole	150W Cobrahead LED	0.90	30'	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 284+35.98, 34.48 RT
6	Dominion Pole	150W Cobrahead LED	0.90	30'	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 285+69.33, 31.09 RT
7	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 286+18.56, 26.74 LT
8	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 285+27.54, 5.75 LT
9	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 283+65.86, 26.81 LT
10	Dominion Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Arl. Ridge Rd, 11+18.13, 26.12 LT
11	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 279+66.06, 27.81 LT
12	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 278+30.37, 27.98 LT
13	Ex. Dominion Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 277+32.93, 42.17 RT
14	Ex. Dominion Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 279+27.16, 42.83 RT
15	Ex. Utility Pole	150W Cobrahead LED	0.90	Ex. Mounting Height	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 280+56.12, 42.91 RT
16	Ex. Utility Pole	150W Cobrahead LED	0.90	30'	4000K	Type II	9,125	Dominion Virginia Power	S Glebe Rd, 280+56.12, 42.91 RT

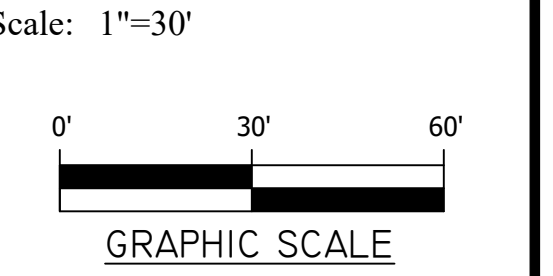
- LEGEND**
- PROPOSED MAST ARM POLE WITH COBRA FIXTURE
 - PROPOSED DECORATIVE POST TOP LED 16' POLE
 - PROPOSED DOMINION POLE WITH COBRA FIXTURE
 - EXISTING UTILITY POLE WITH COBRA FIXTURE, TO BE REMOVED
 - EXISTING UTILITY POLE WITH NEW COBRA FIXTURE LUMINAIRE
 - IDENTIFICATION NUMBER



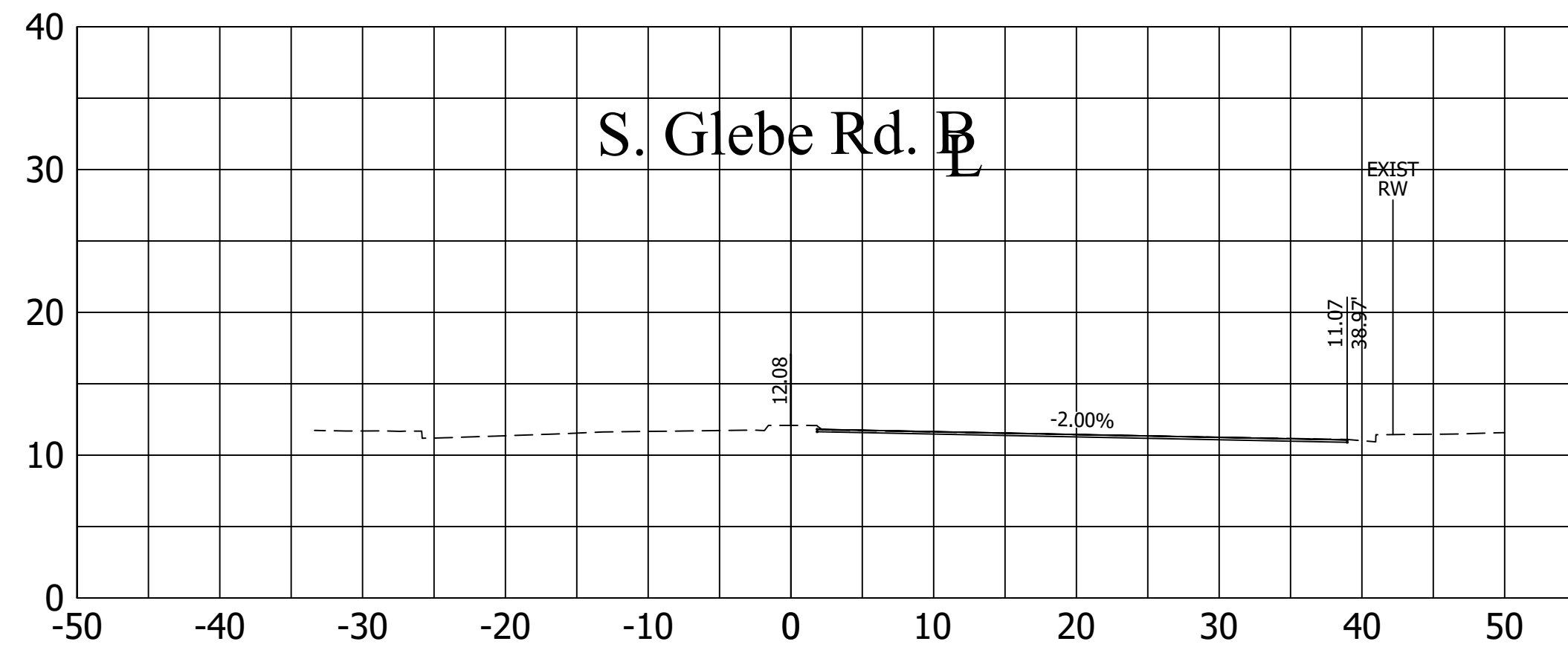
Project Name and Location
S. Glebe Road Intersection Improvements
PHOTOMETRIC PLAN
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: RSB
Drawn: RSB
Checked: ASM
Miss Utility Transmittal #:

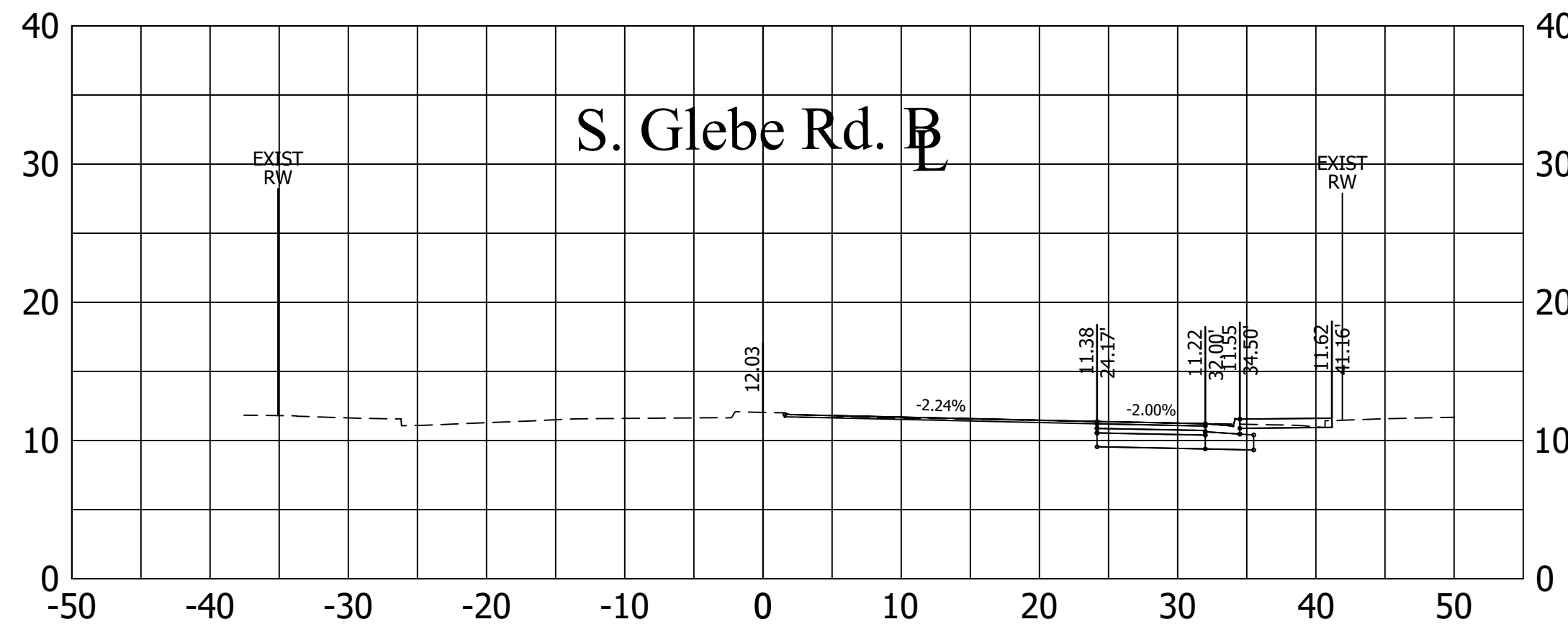
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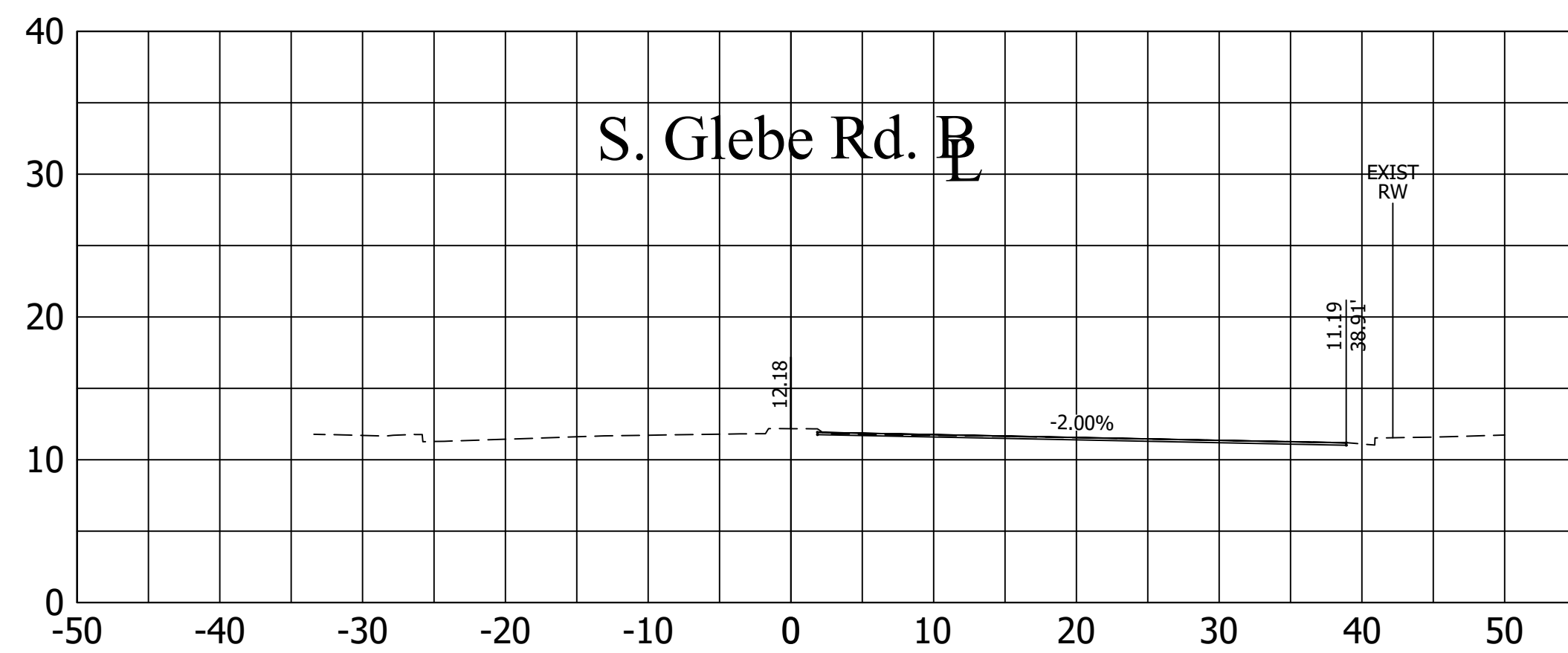
S. GLEBE ROAD SECTIONS



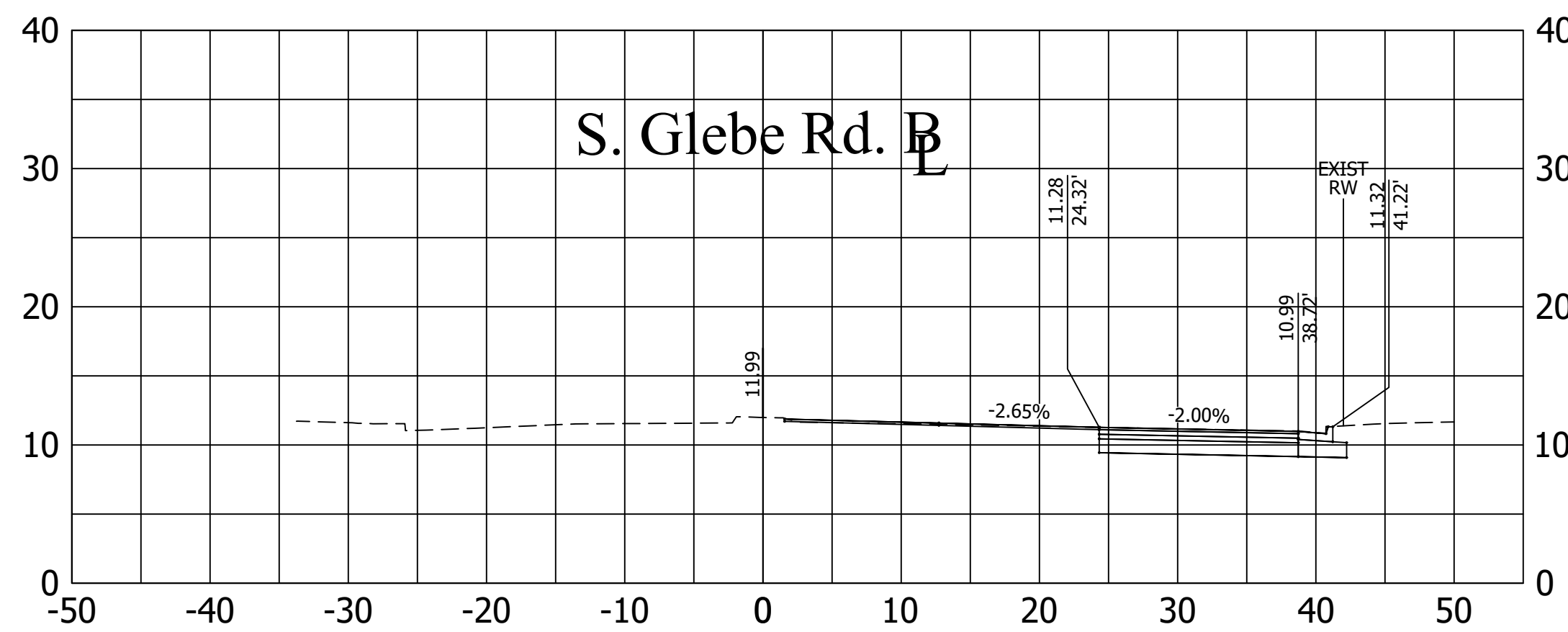
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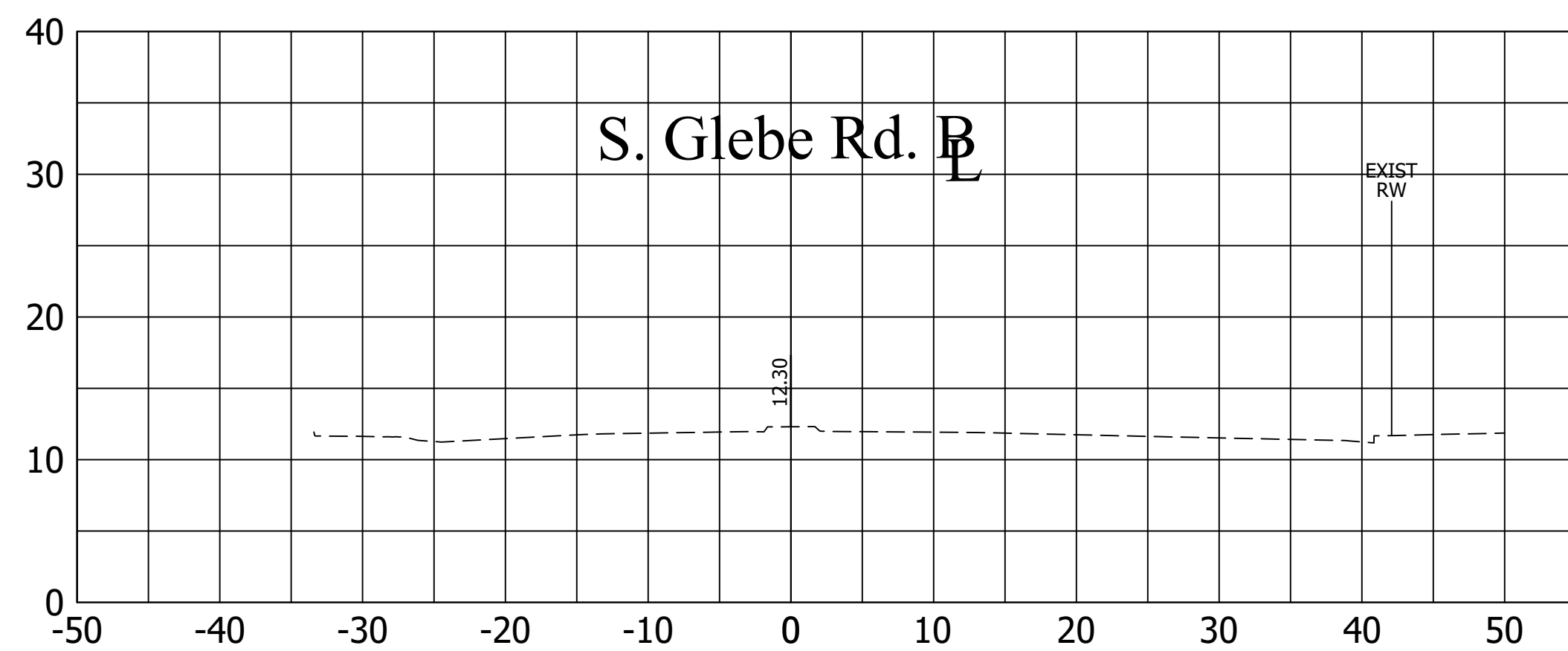
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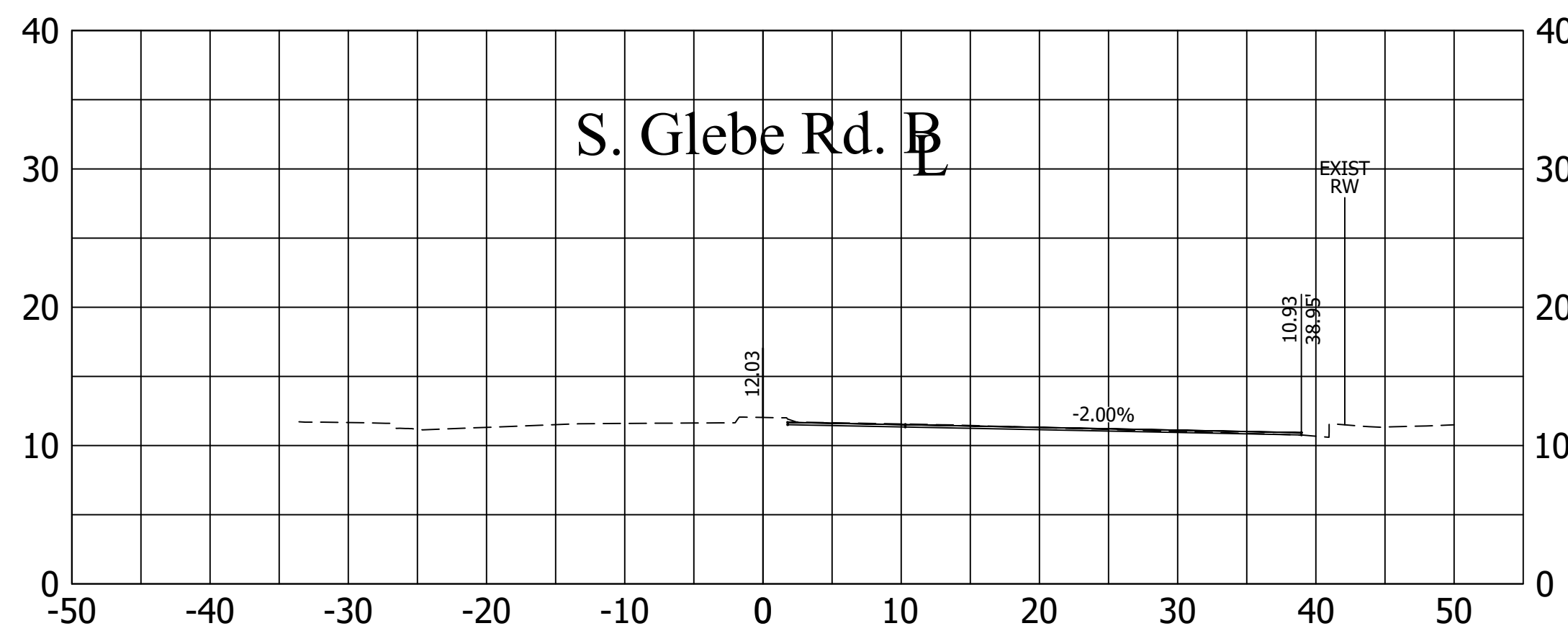
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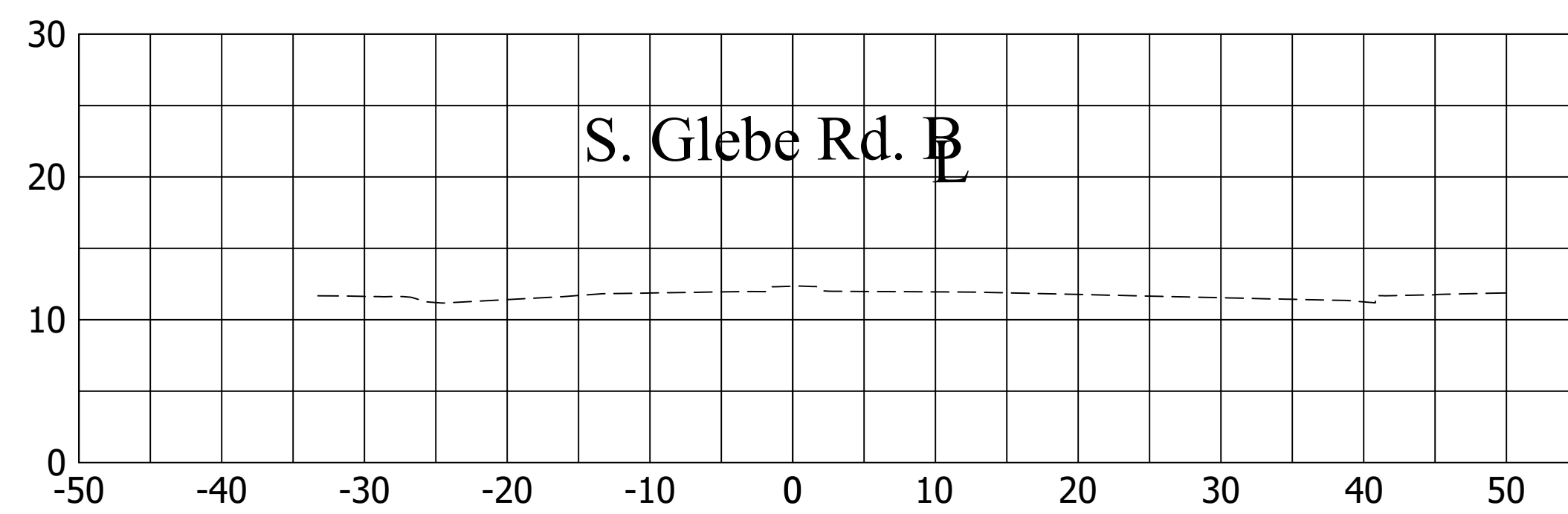
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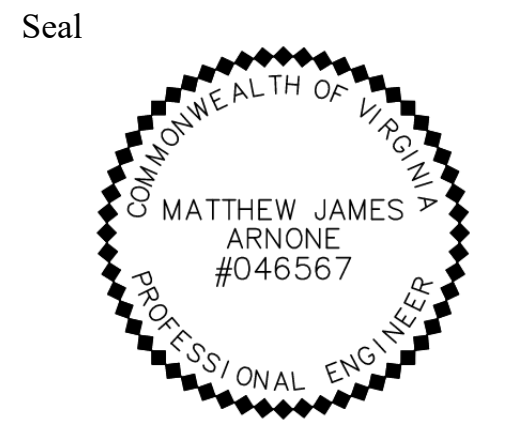


278+22.08



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APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

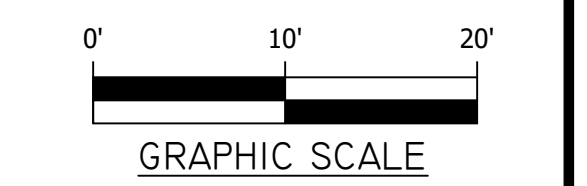
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road

TE07

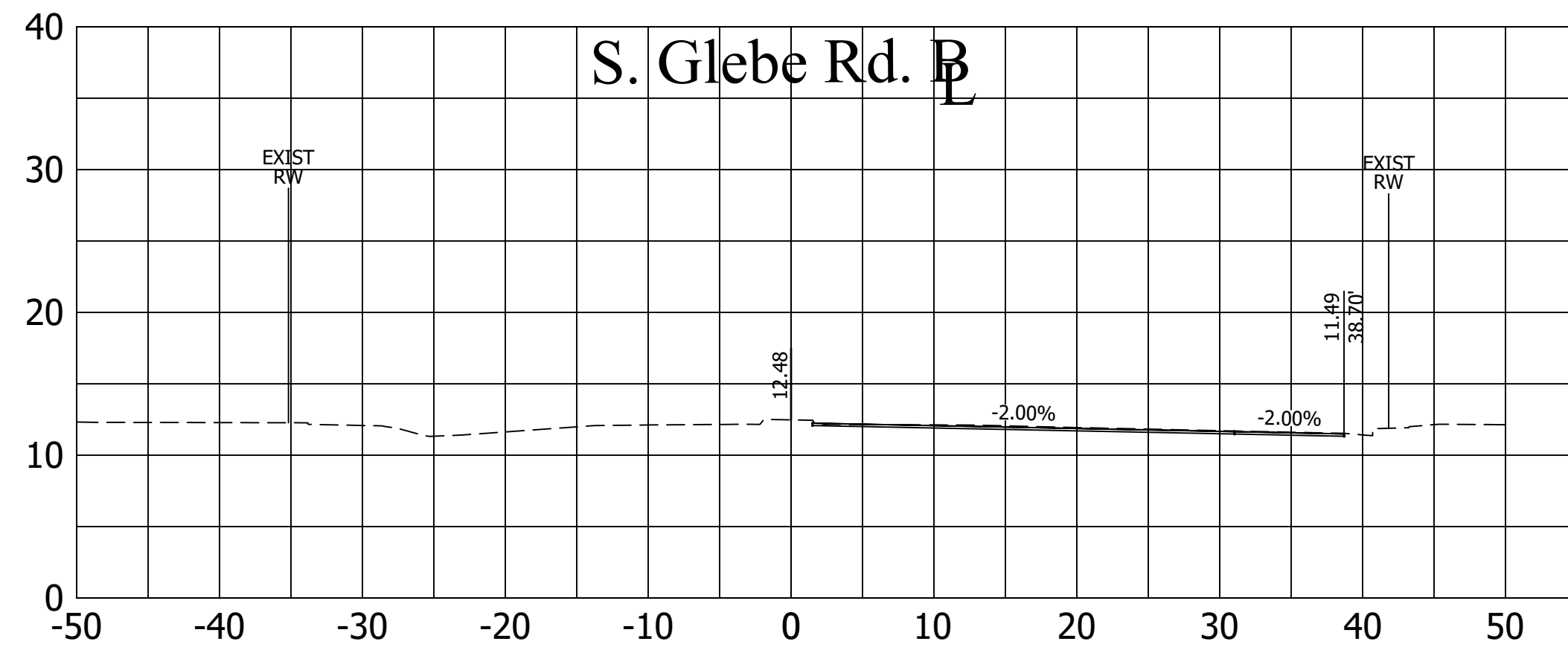
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Drawn: JMK
Checked: MJA
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Plotted by: kmita

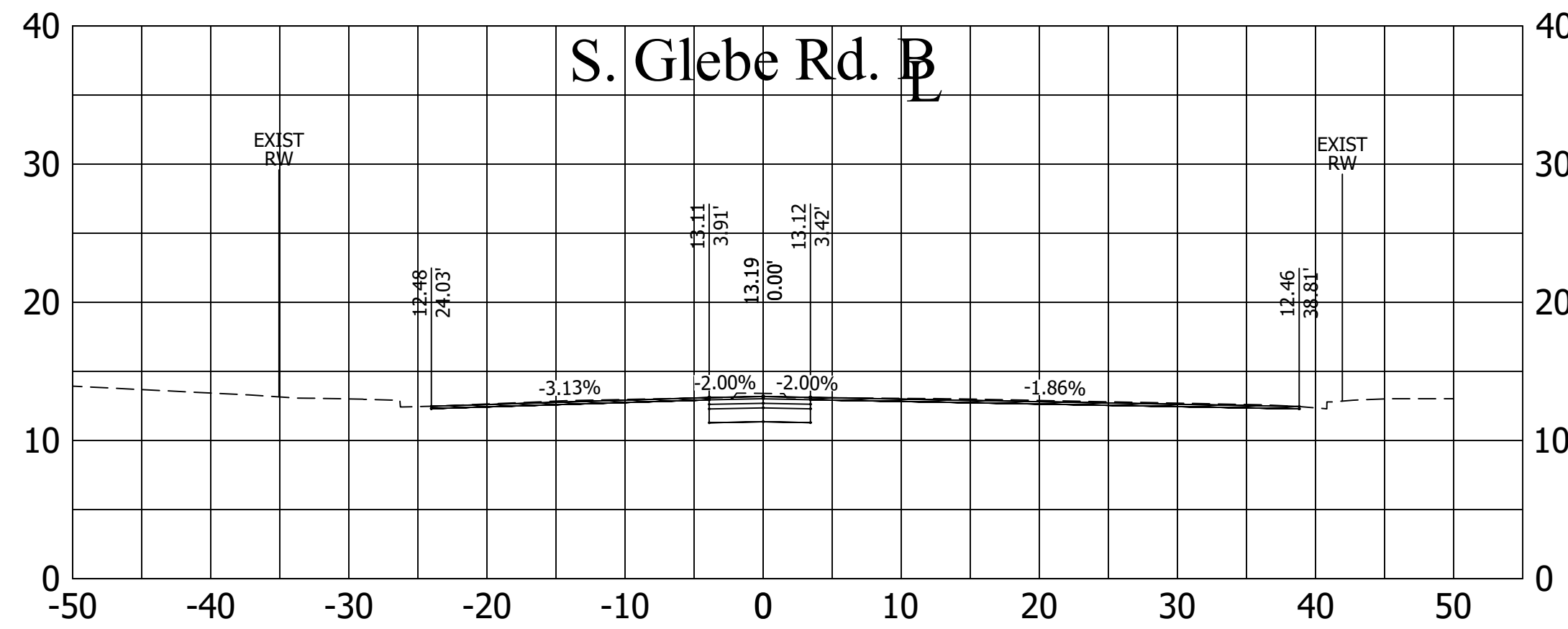
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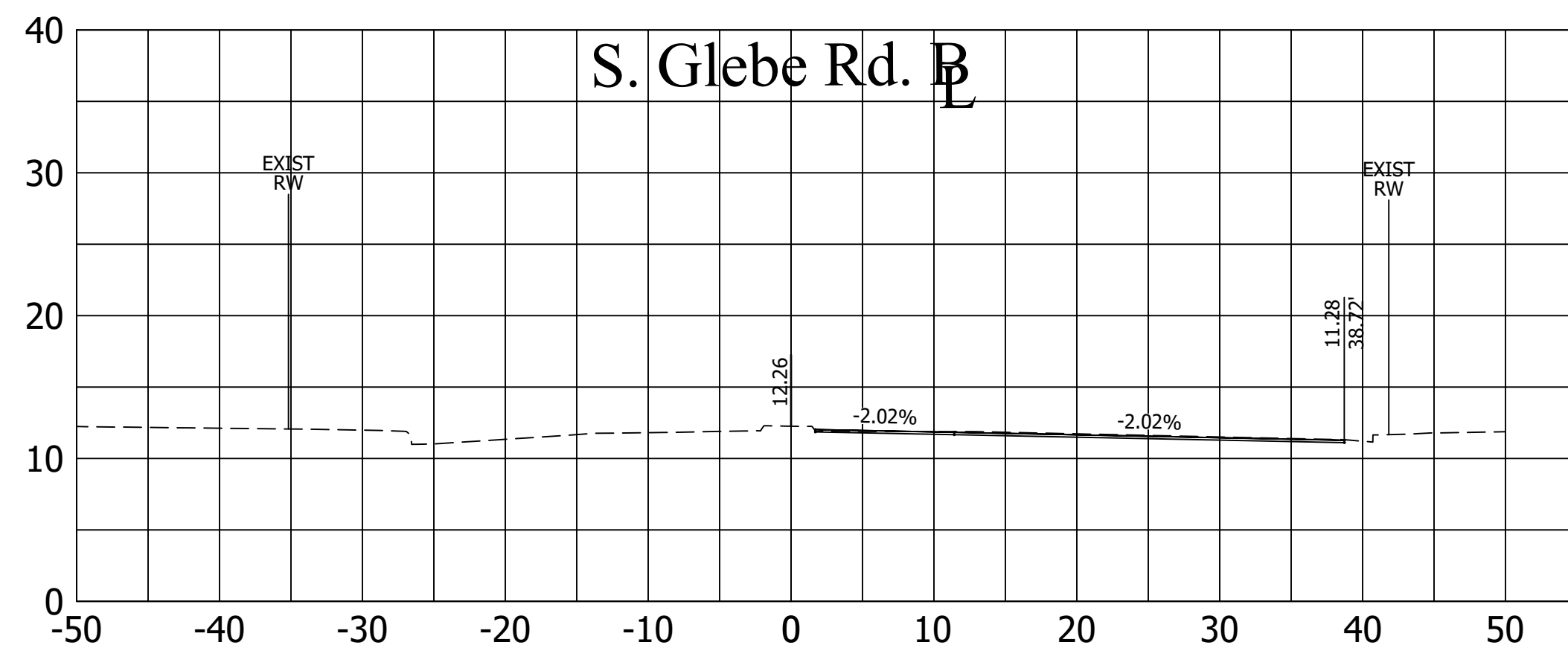
S. GLEBE ROAD SECTIONS



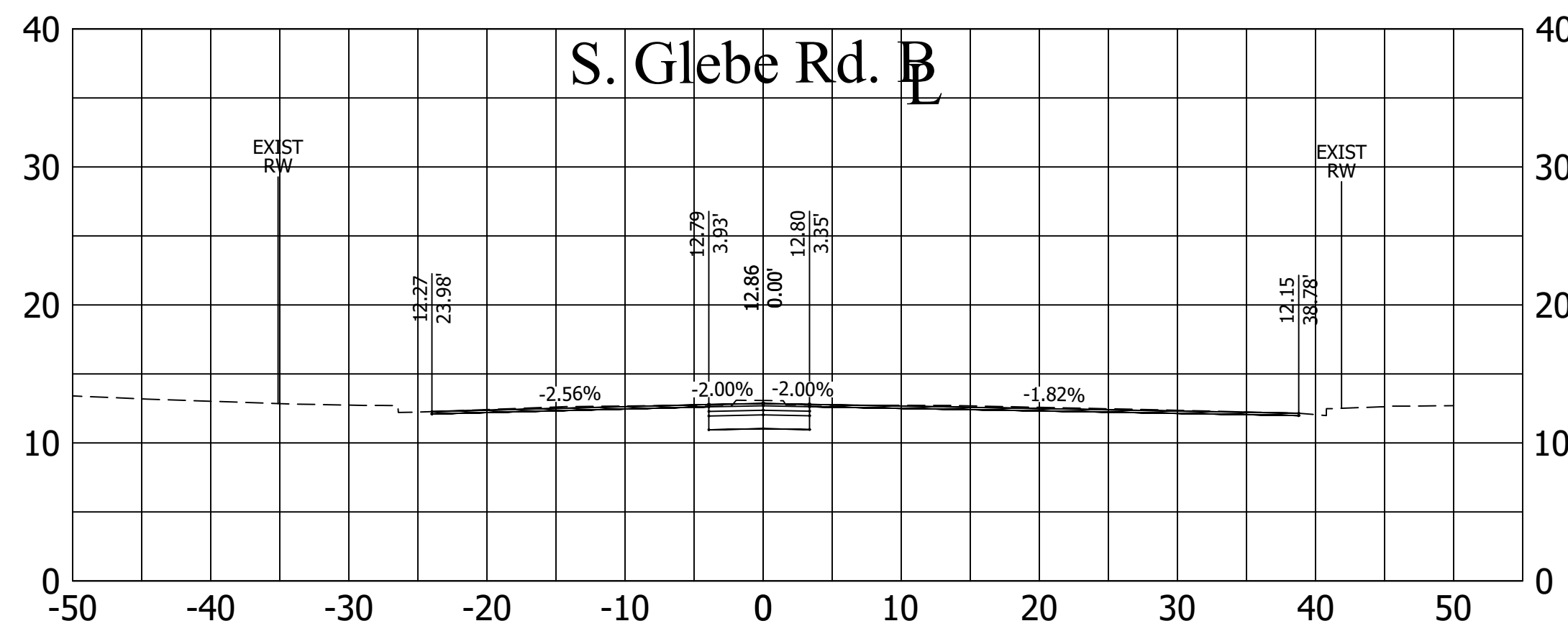
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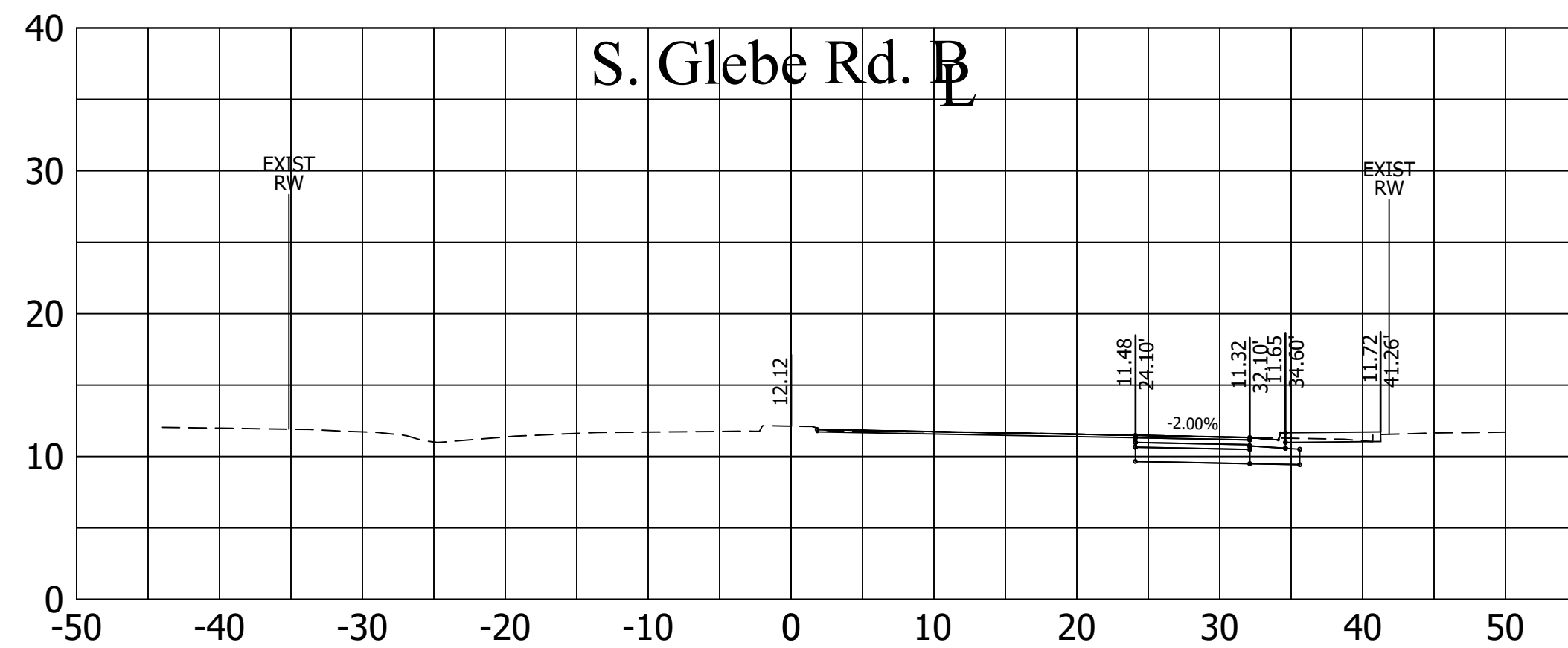
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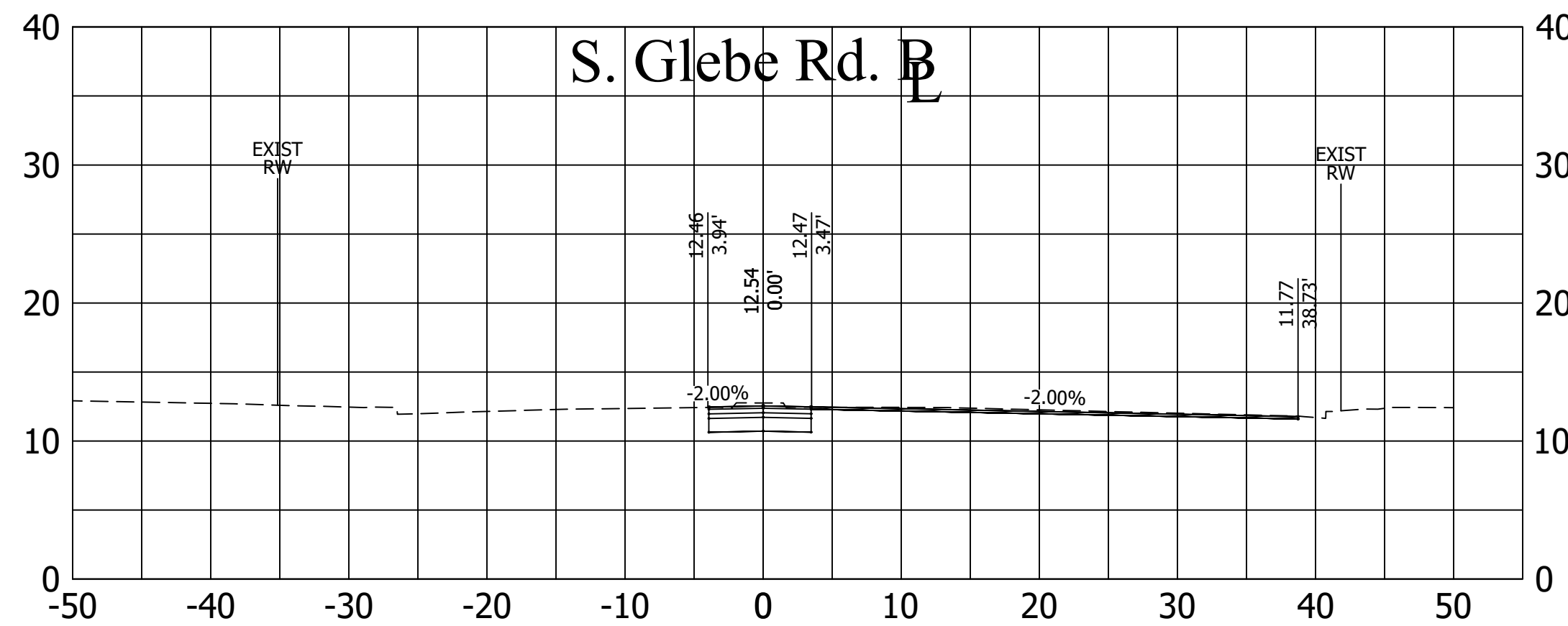
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280+75.00



279+75.00



280+50.00



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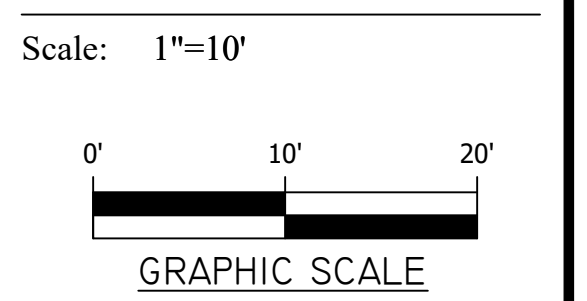
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<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

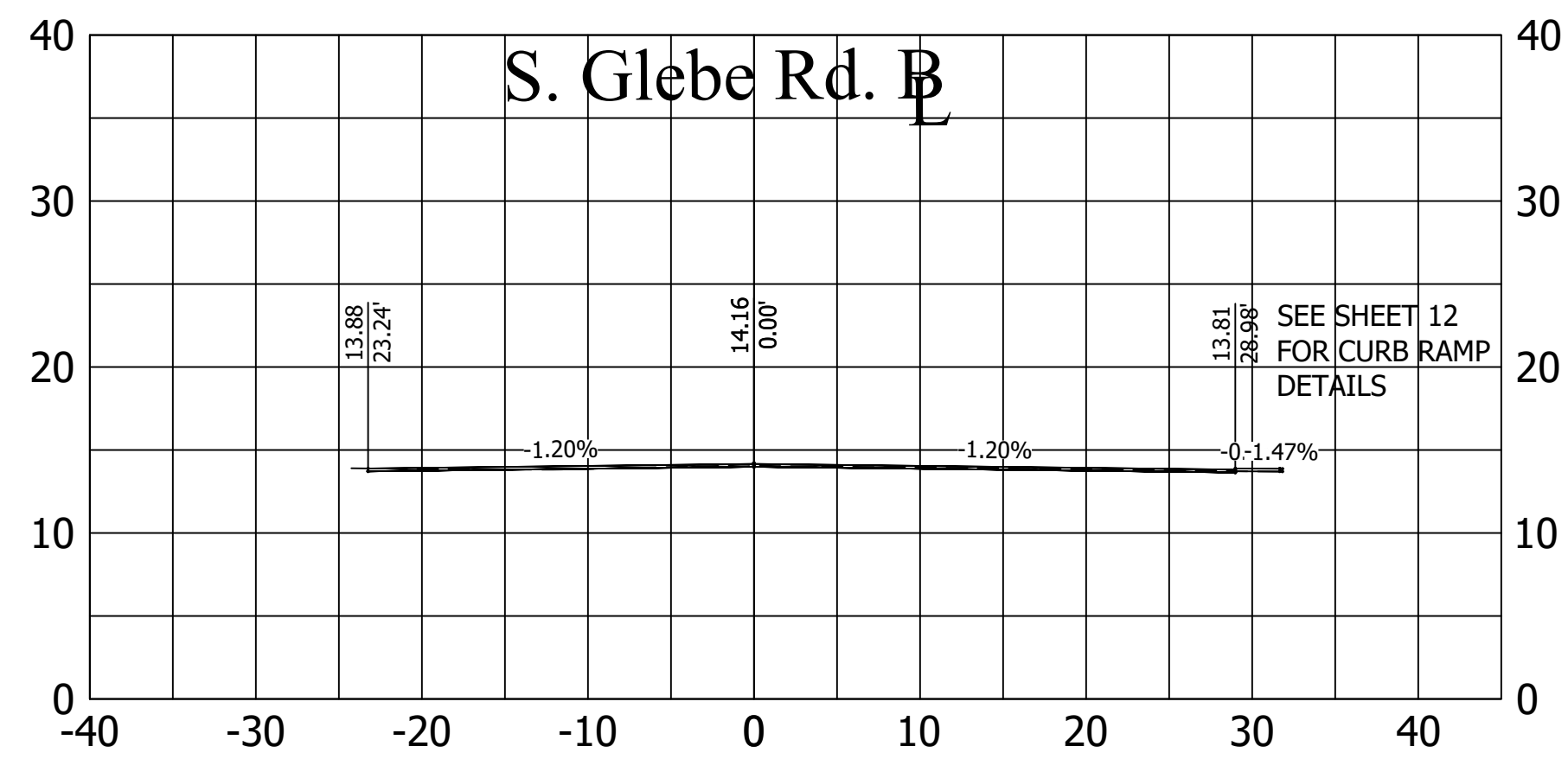
Project Name and Location
S. Glebe Road Intersection Improvements
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road

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Miss Utility Transmittal #:

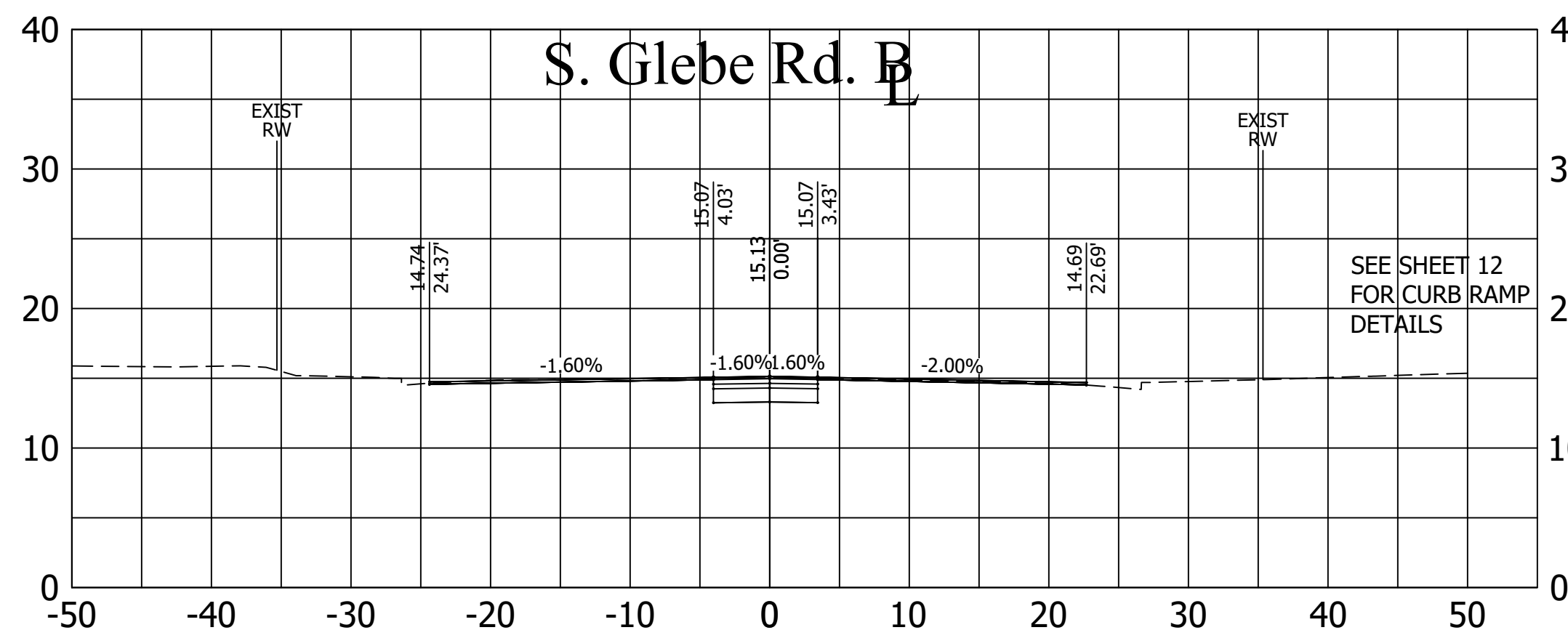
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Plotted by: kmita



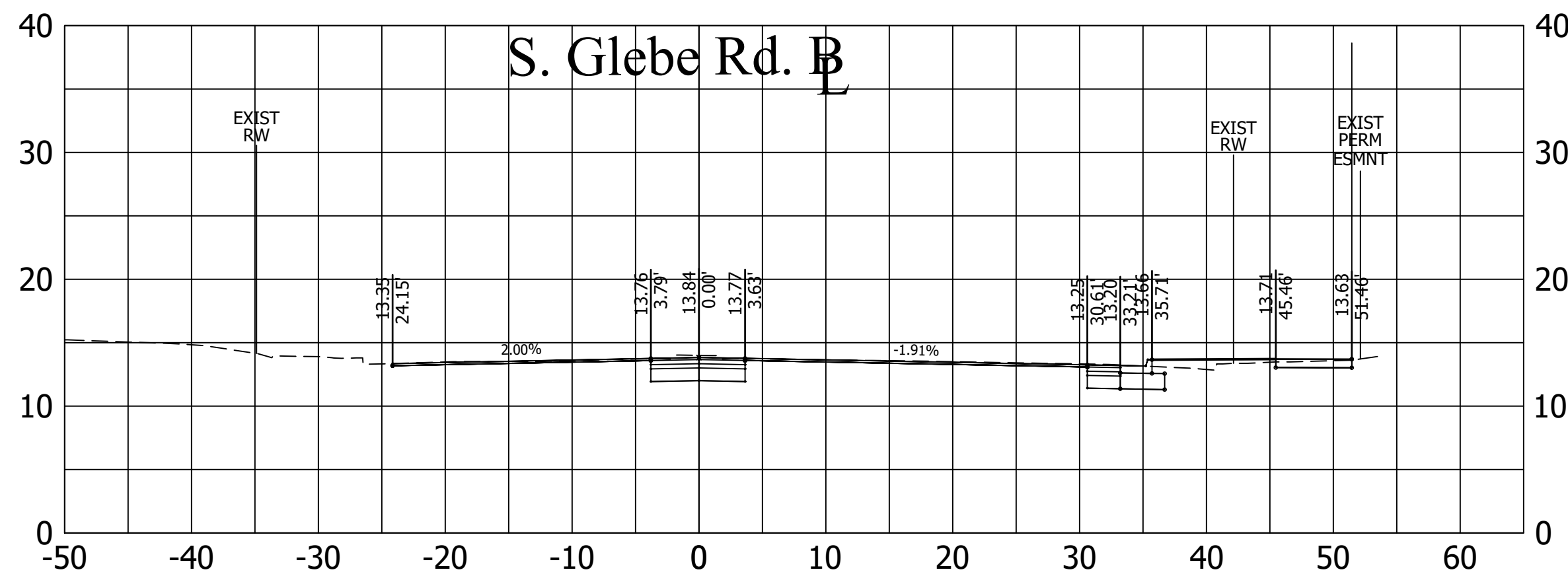
S. GLEBE ROAD SECTIONS



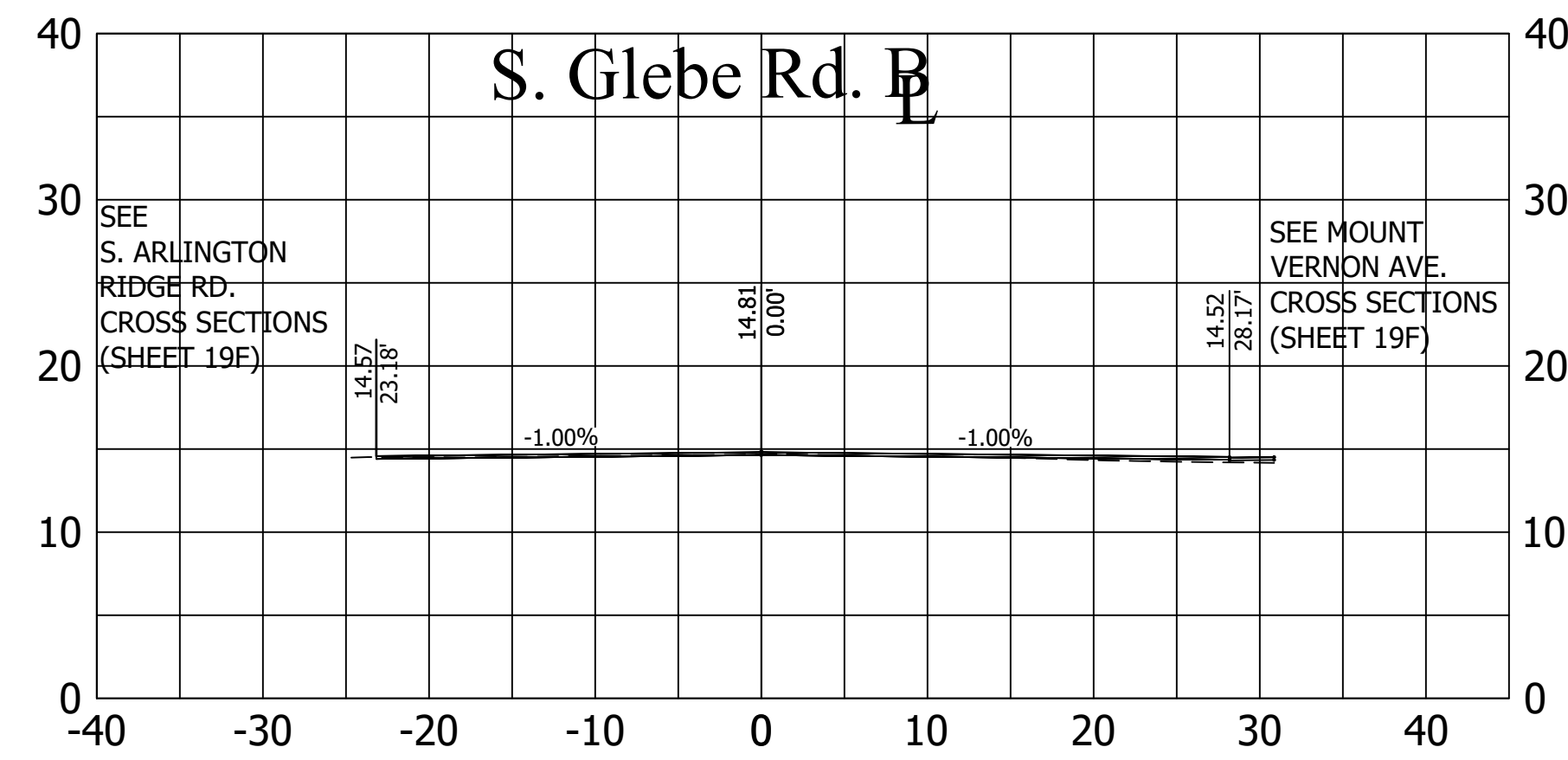
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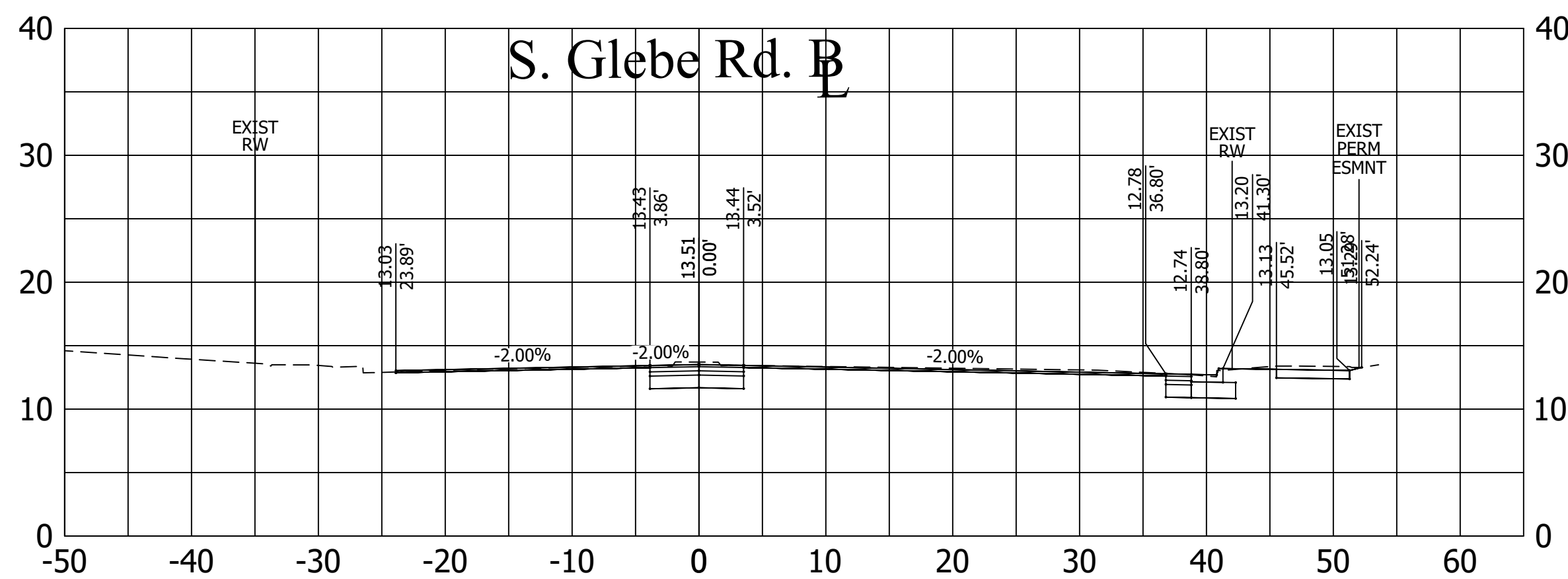
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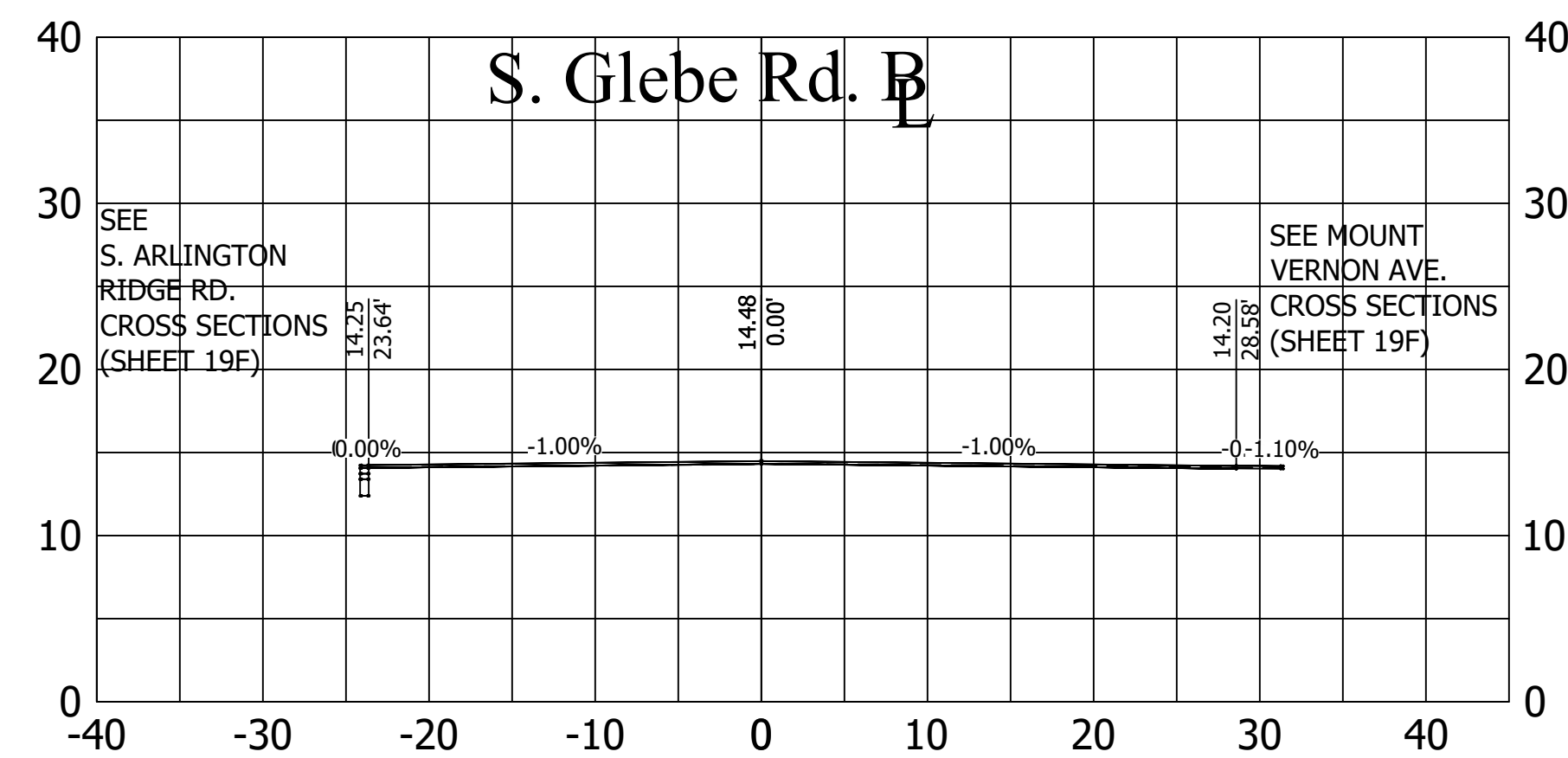
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282+25.00



281+25.00



282+00.00



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APPROVALS	DATE
<i>[Signature]</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
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TE&O BUREAU CHIEF	
<i>[Signature]</i>	01/07/21
TRANSPORTATION DIRECTOR	

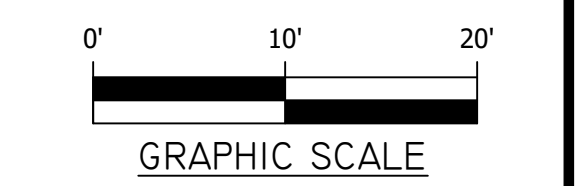
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road
TE07

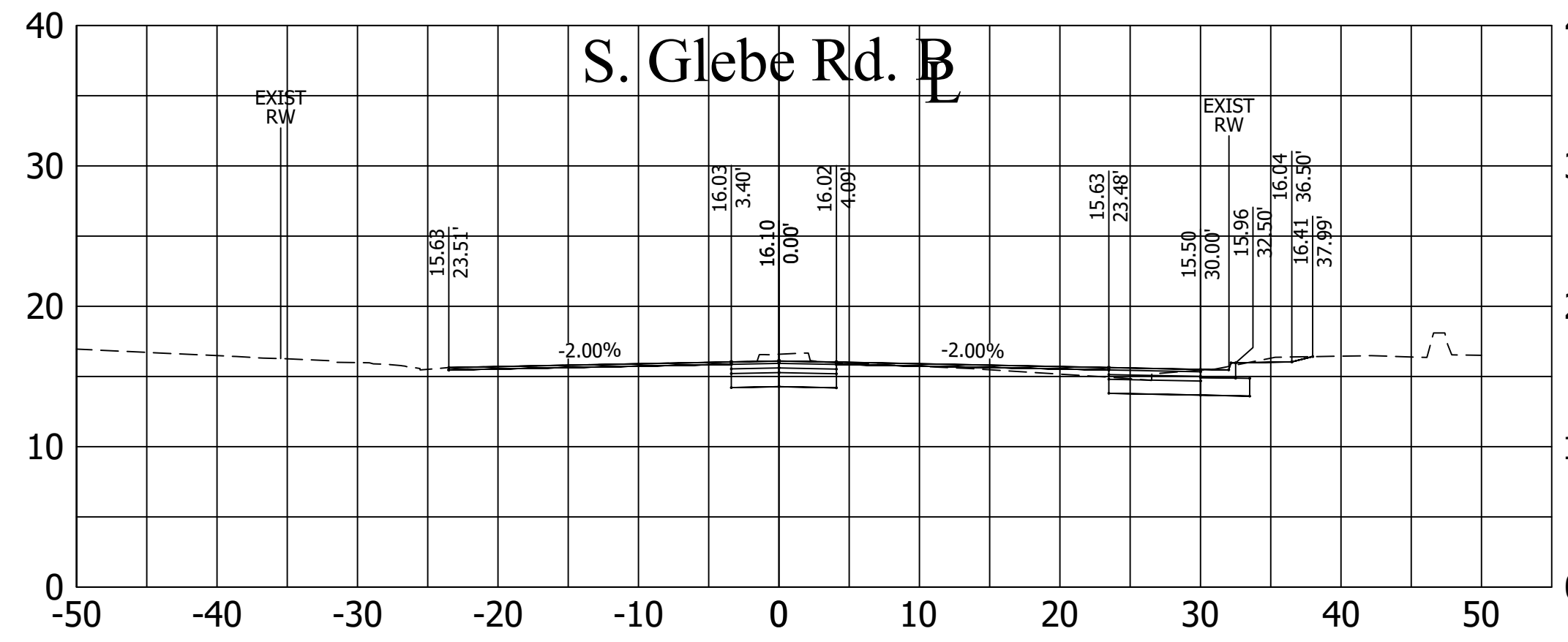
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Plotted by: kmita

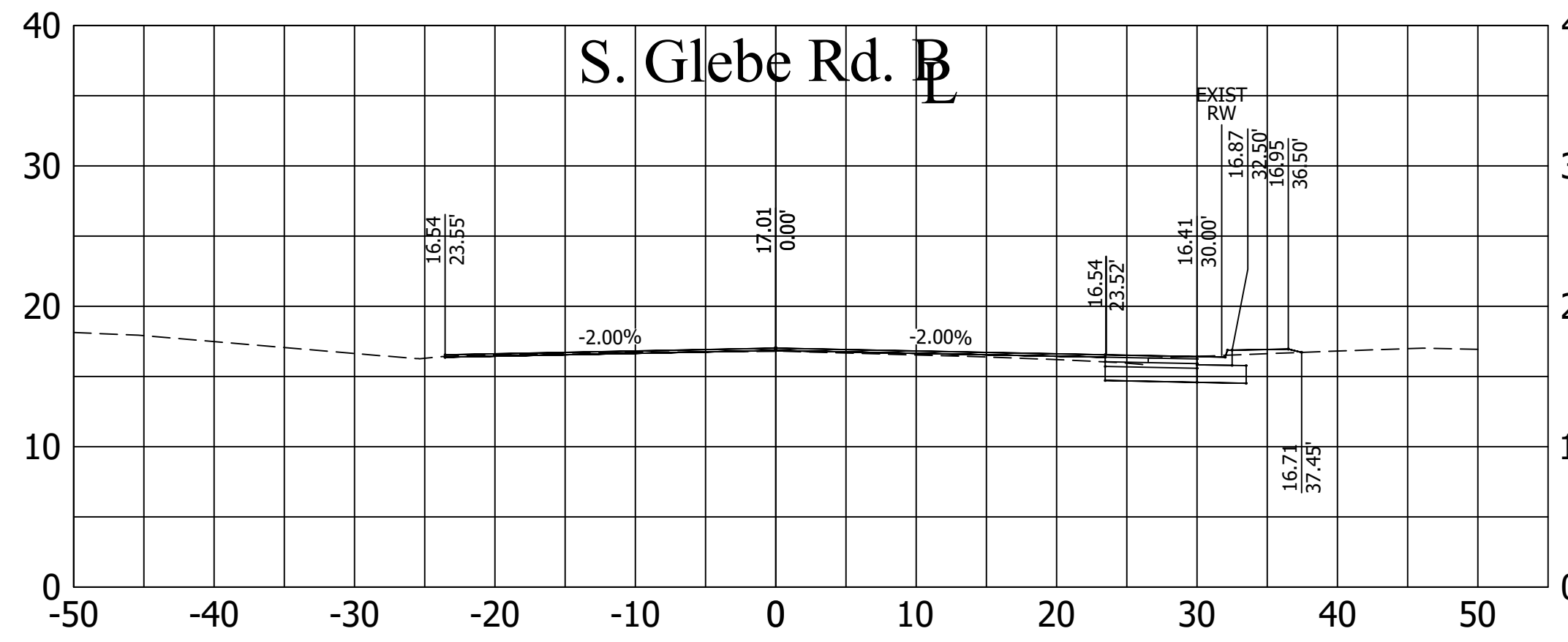
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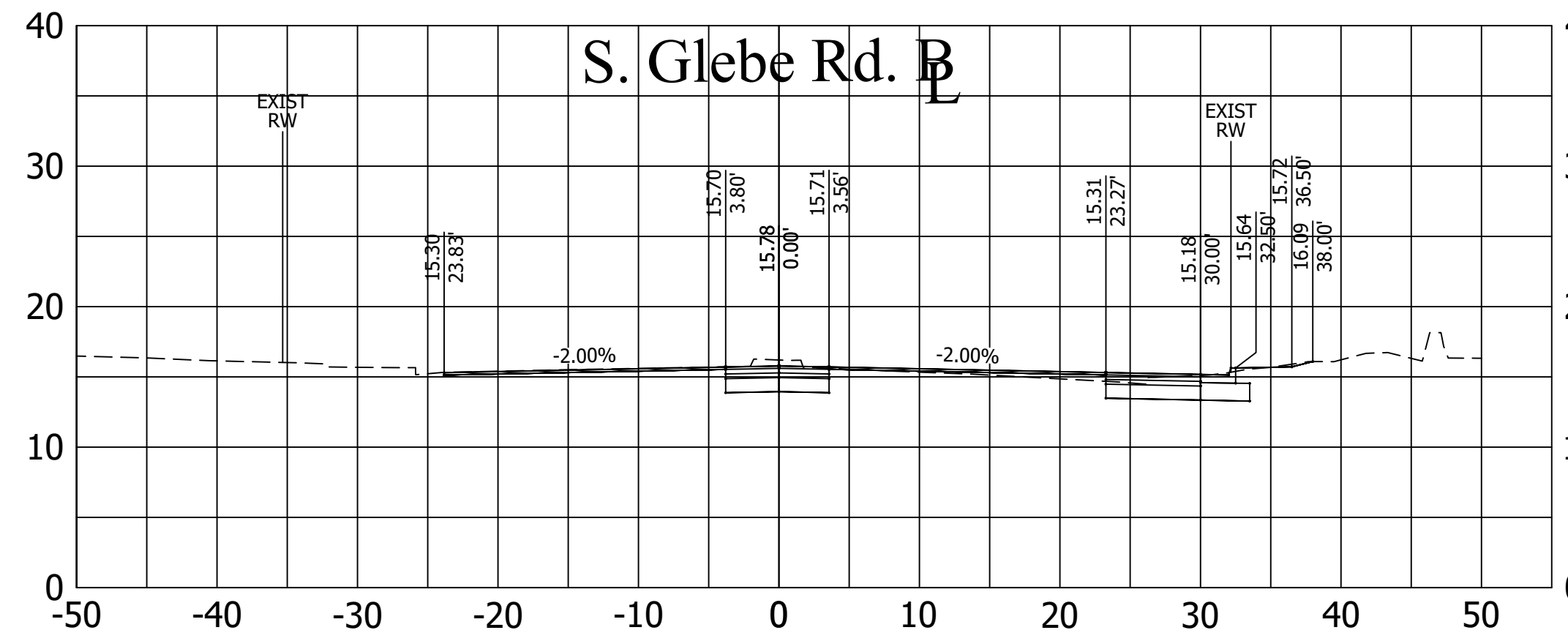
S. GLEBE ROAD SECTIONS



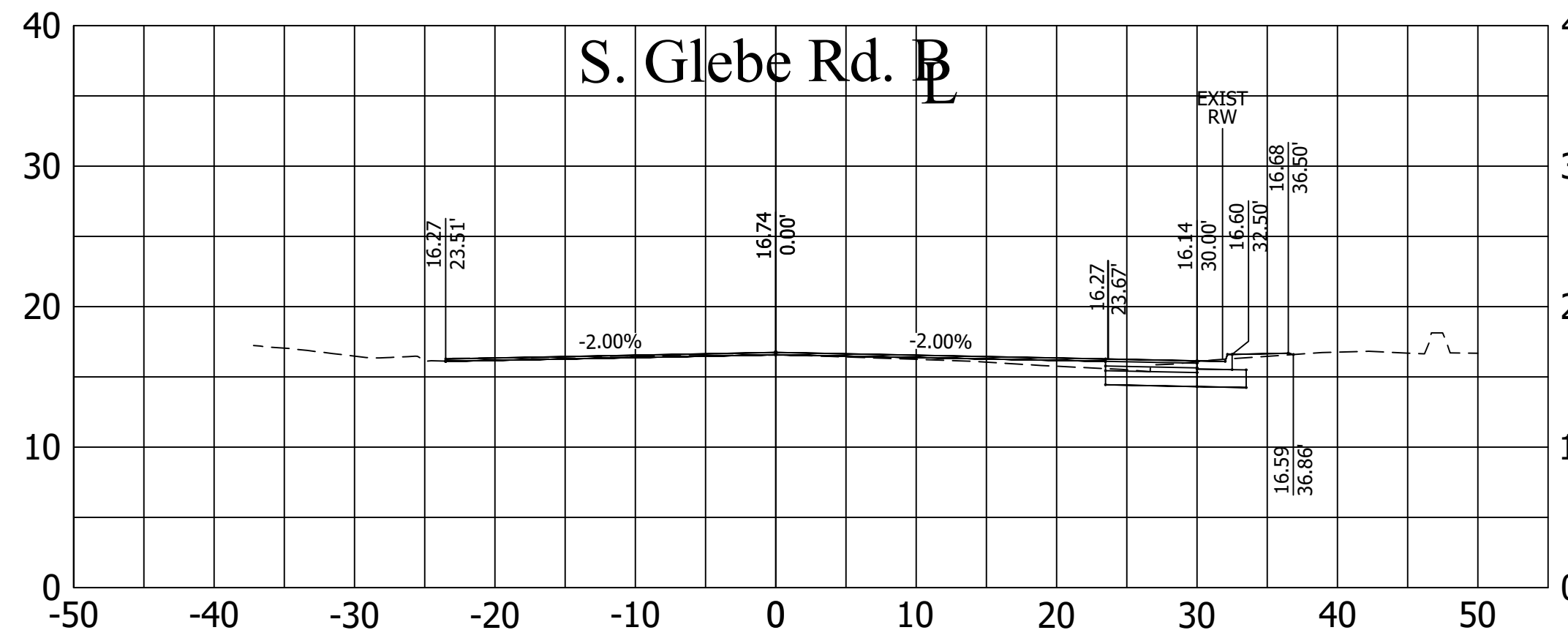
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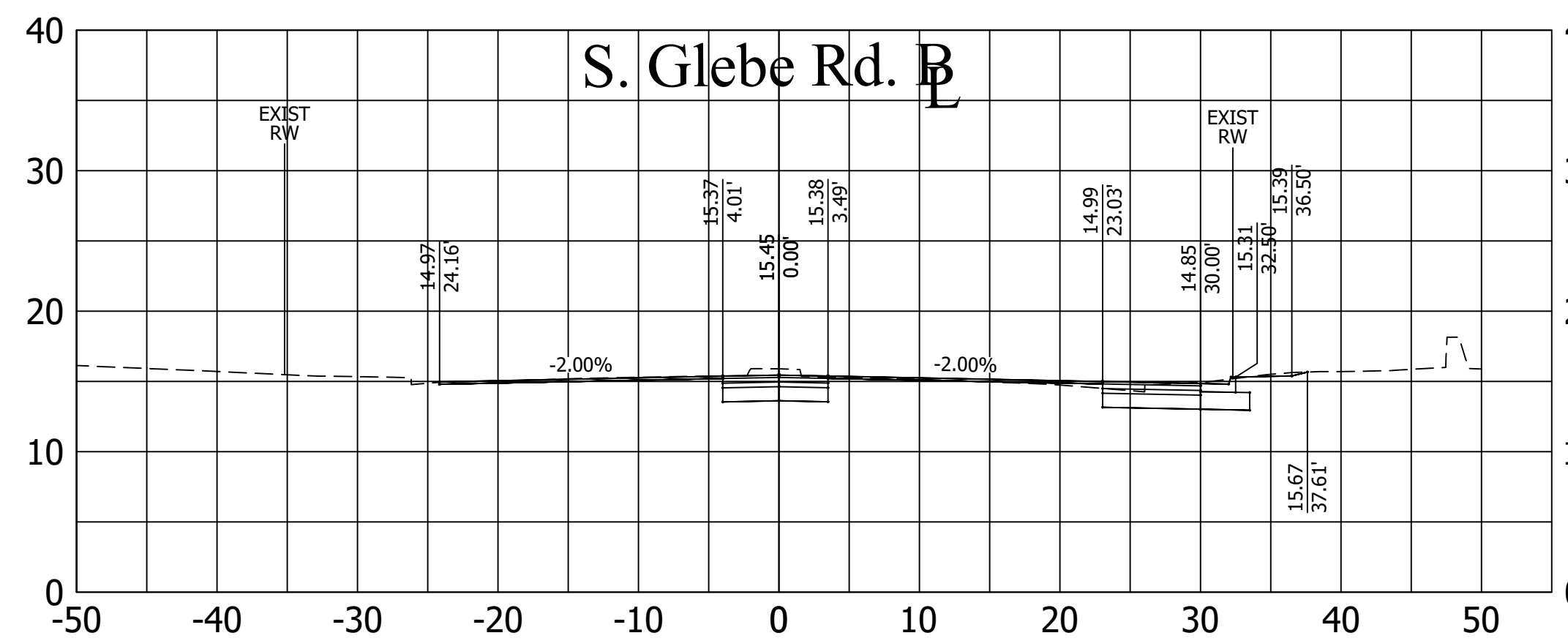
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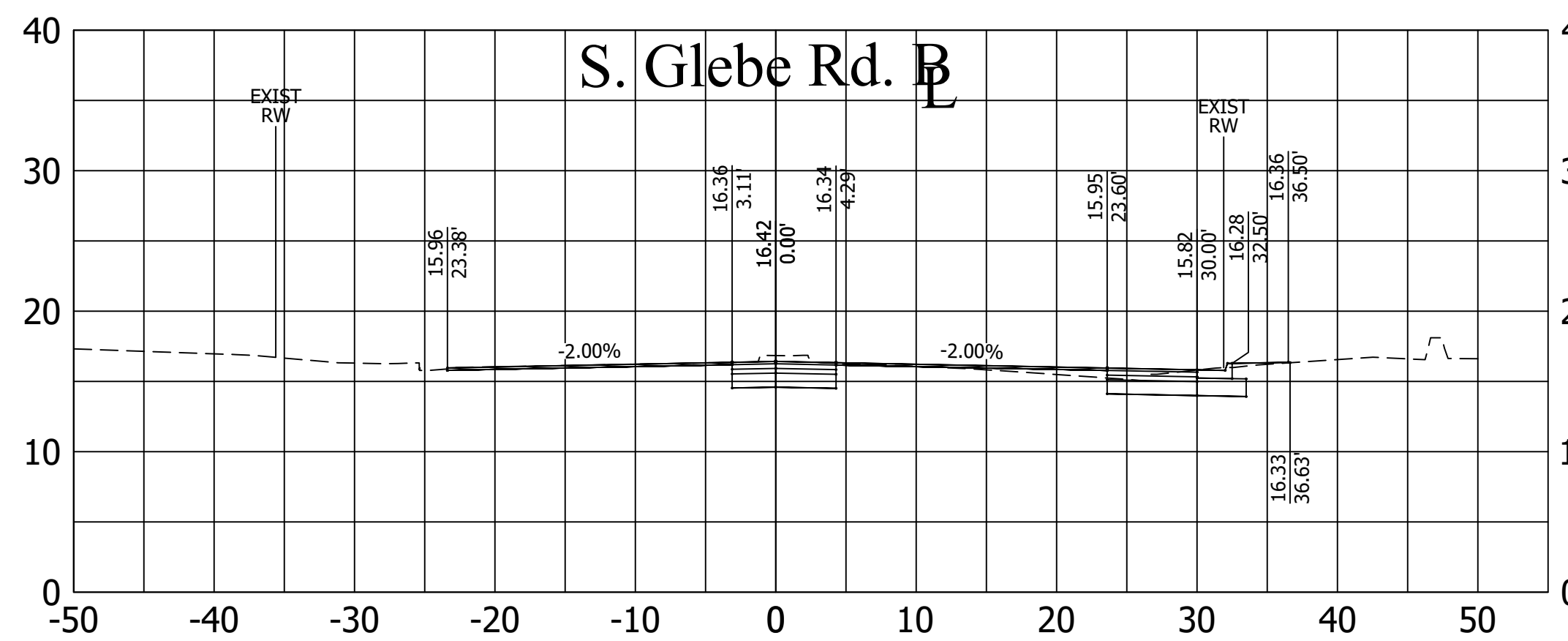
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282+75.00



283+50.00



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APPROVALS	DATE
<i>[Signature]</i> TRAFFIC ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

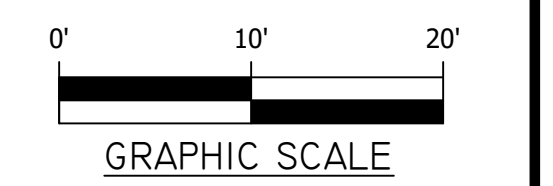
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road

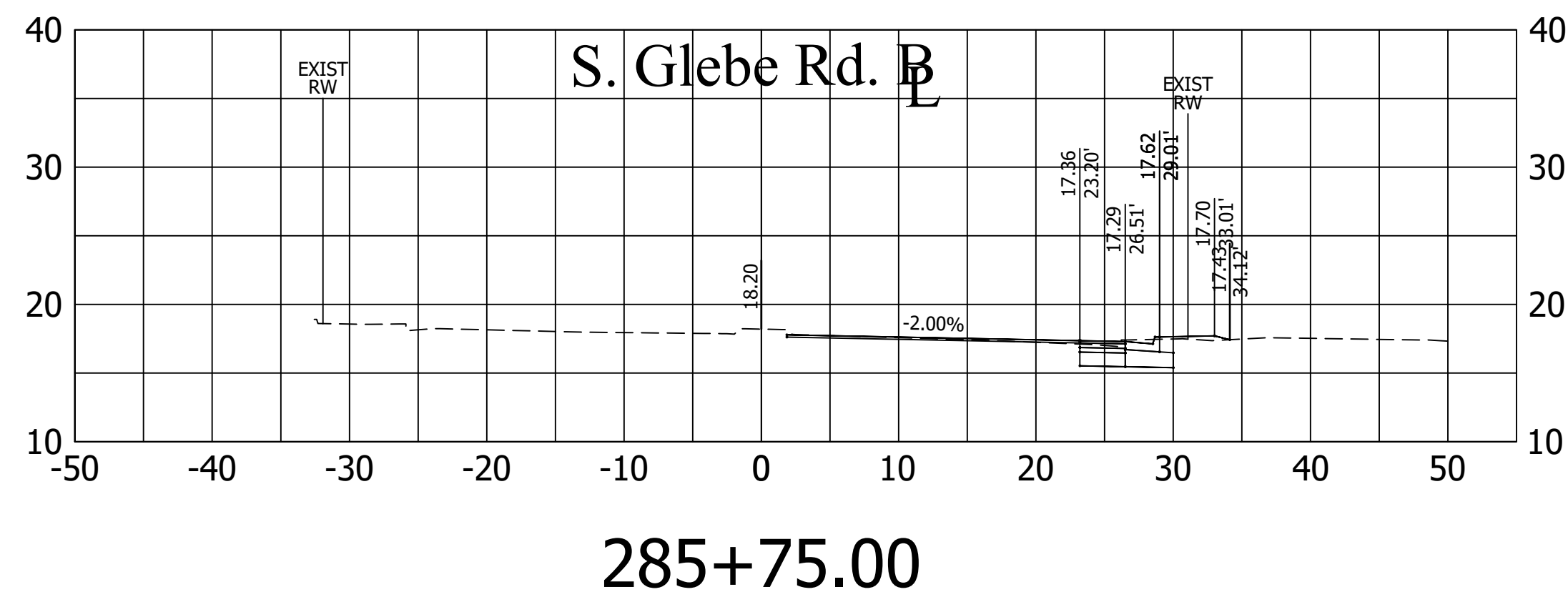
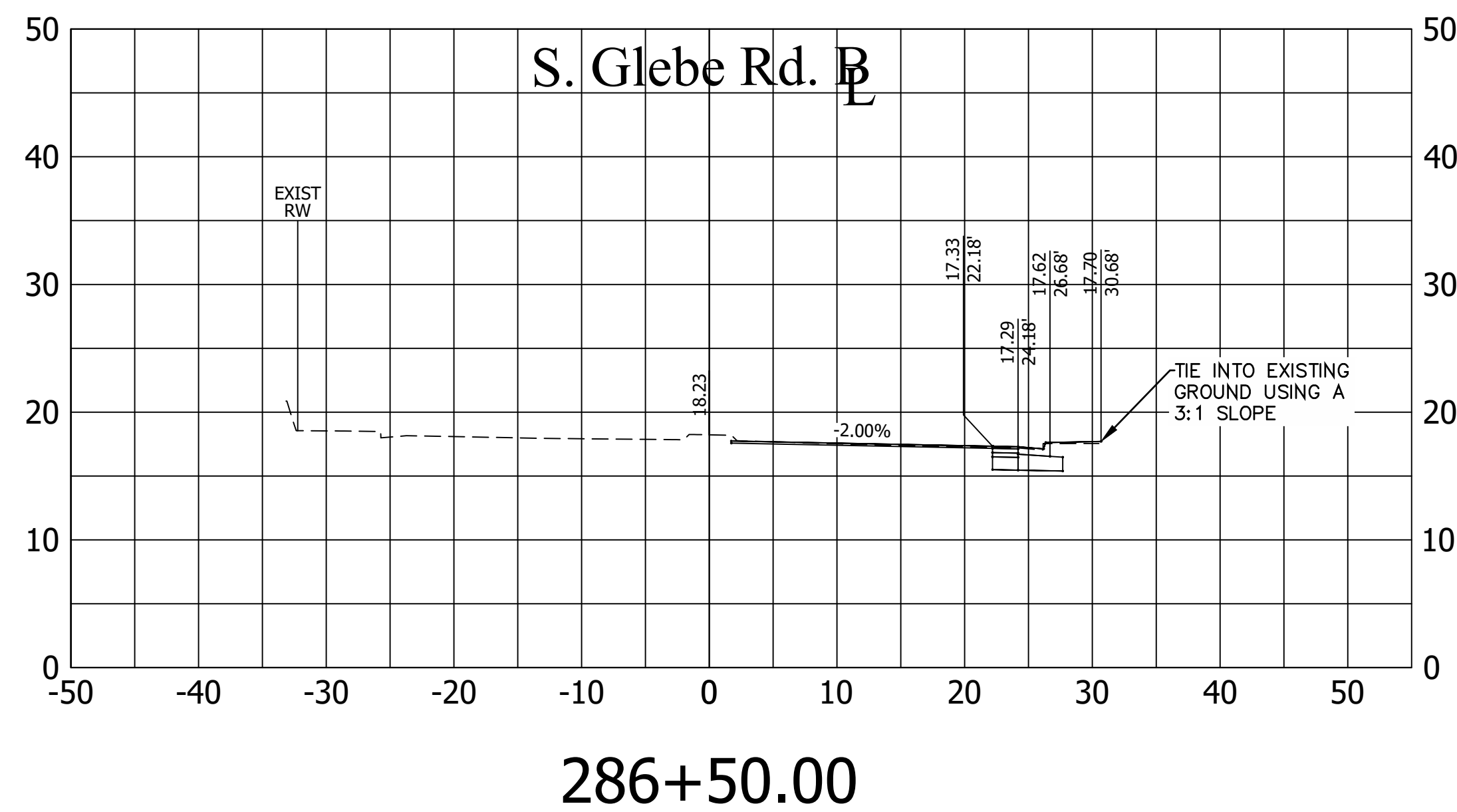
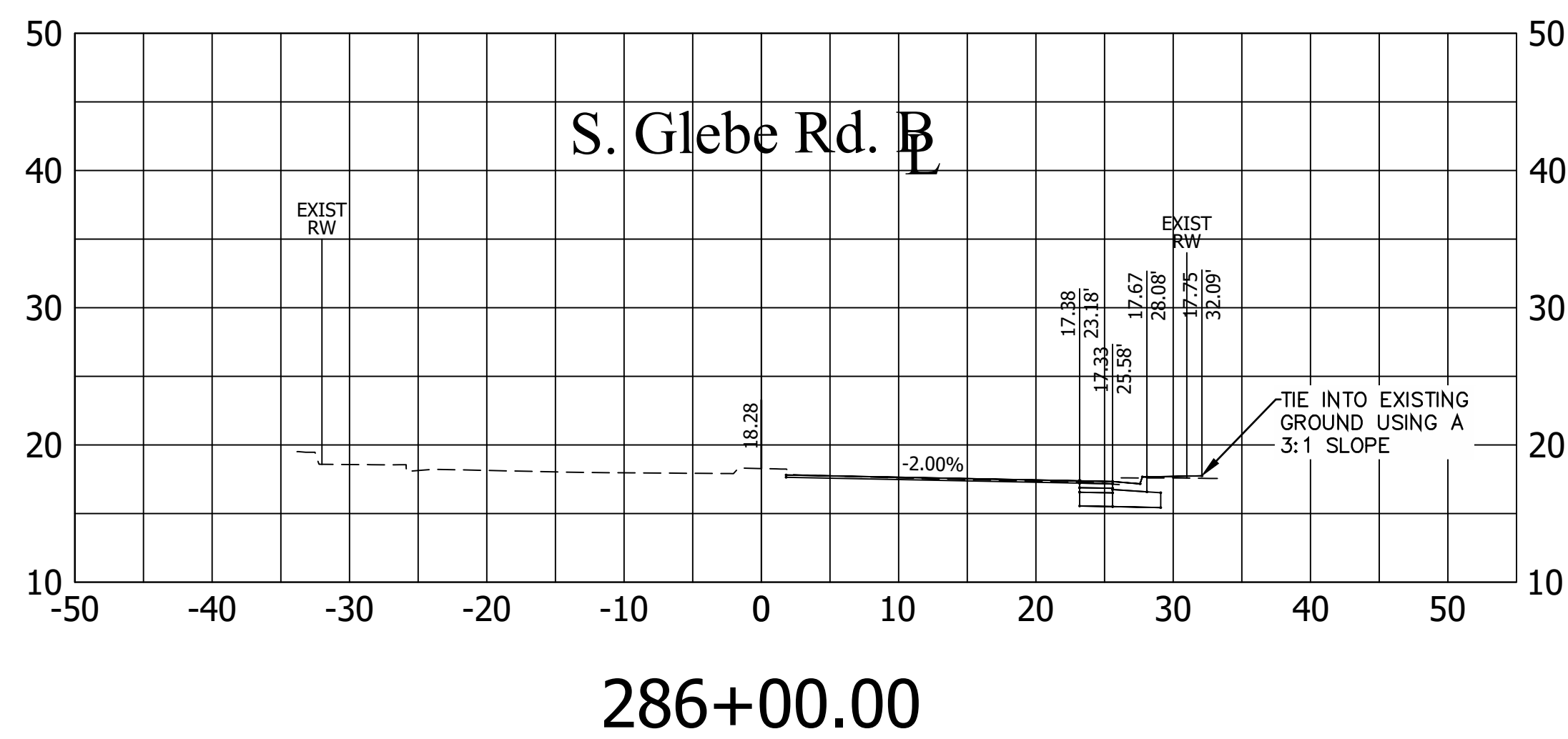
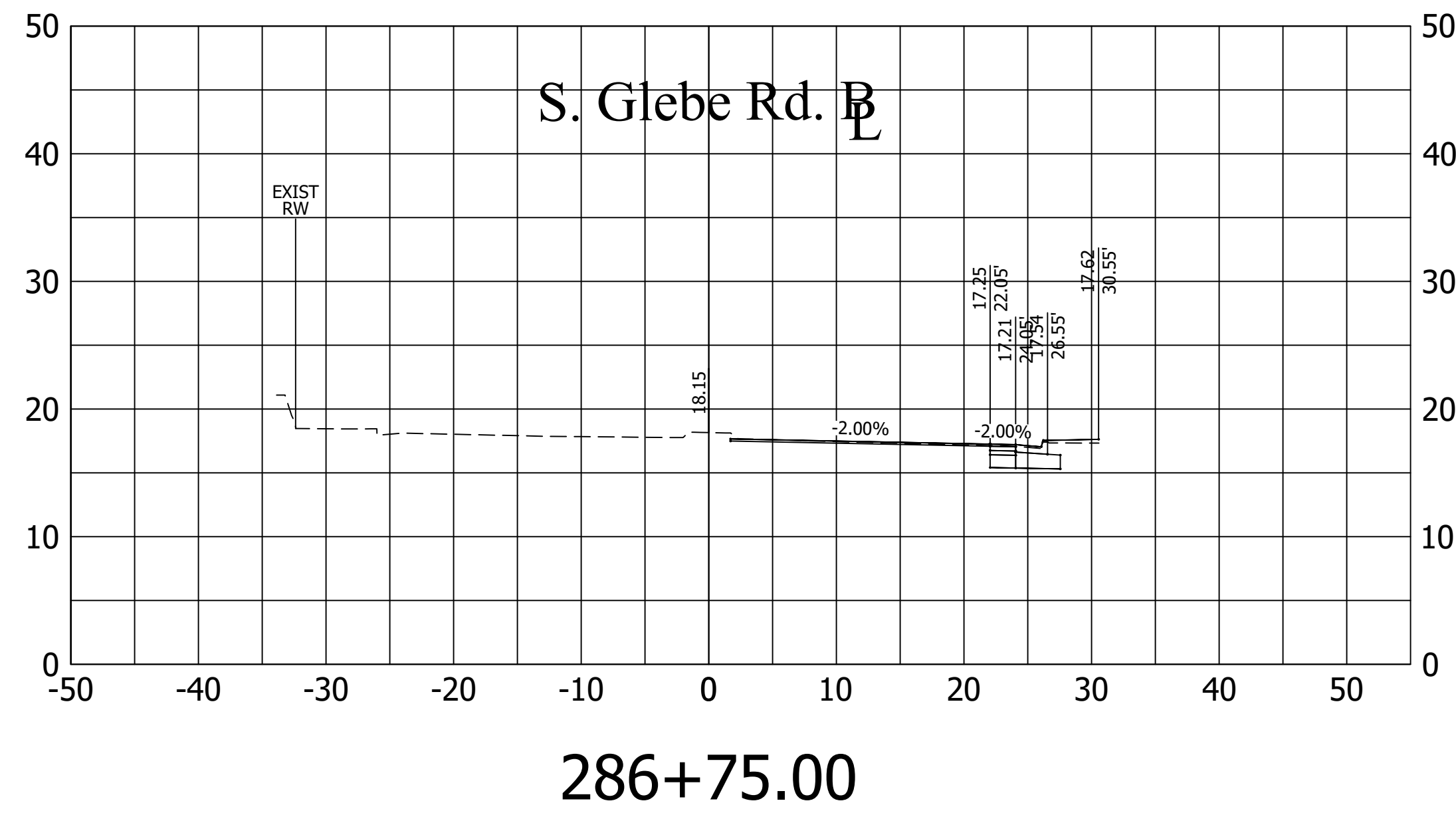
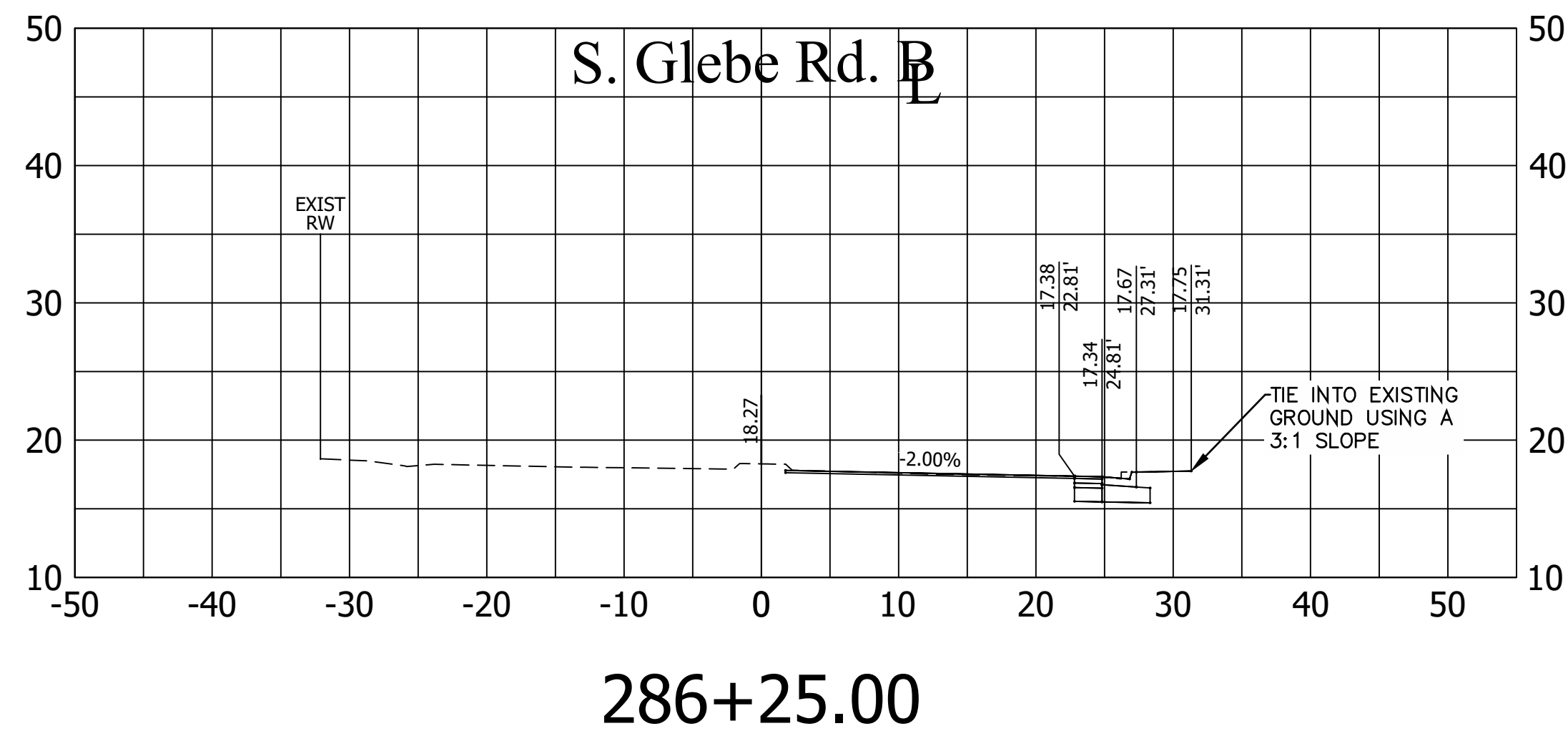
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Plotted by: kmita

Scale: 1"=10'



S. GLEBE ROAD SECTIONS



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Phone: 703.228.3344
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APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
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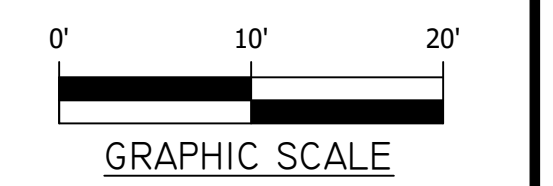
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road
TE07

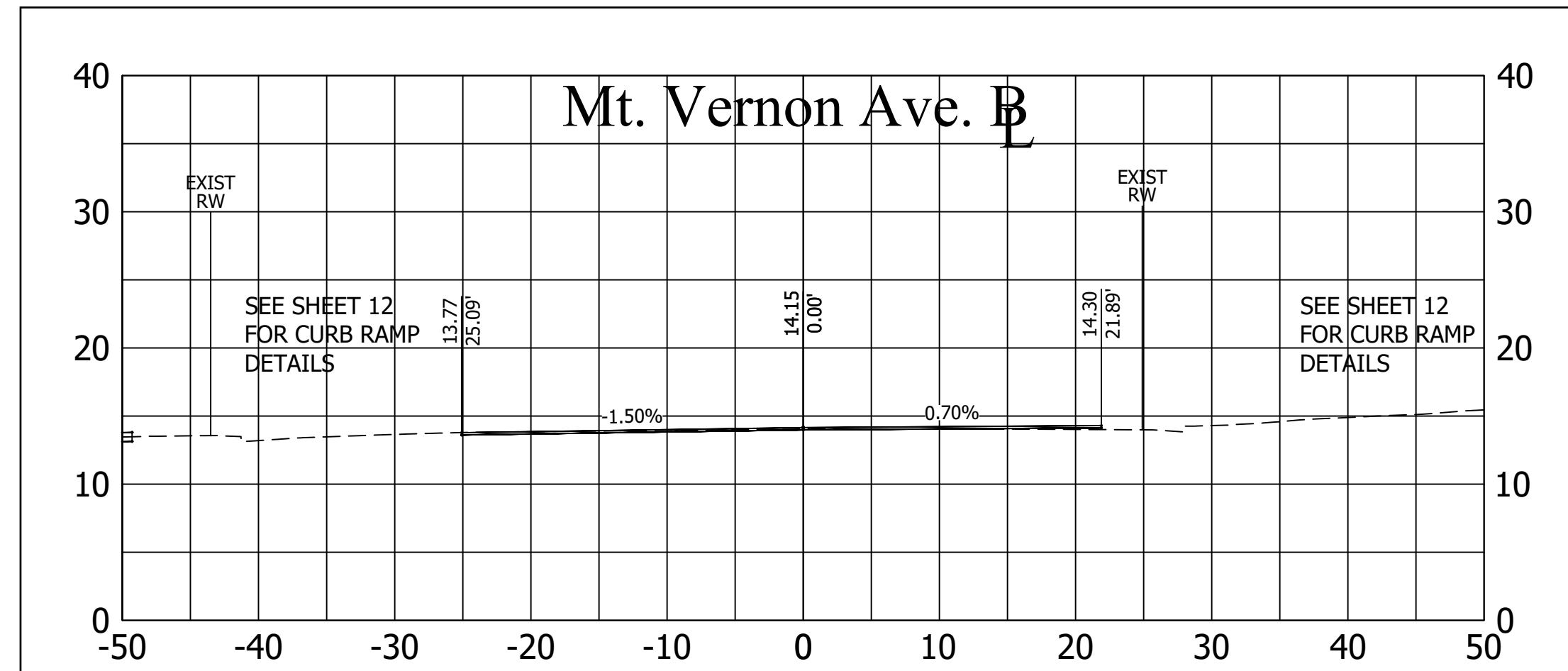
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Plotted by: kmita

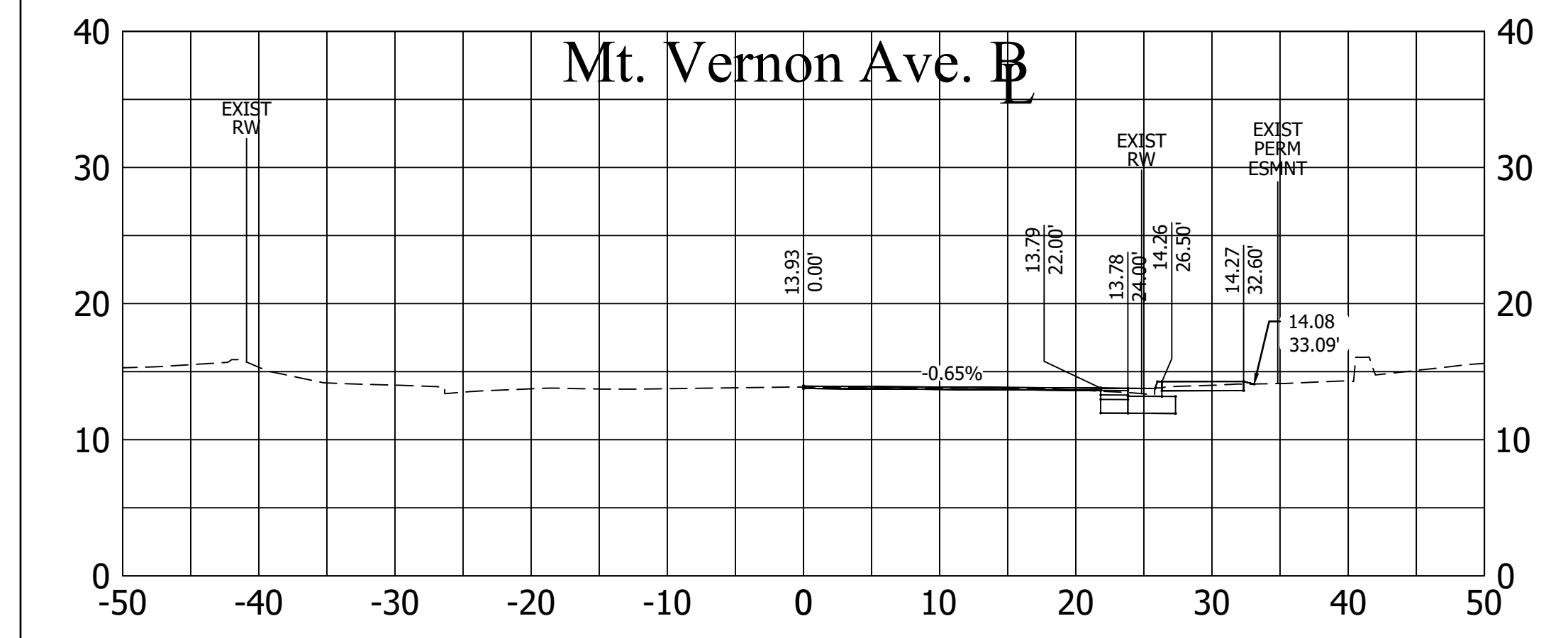
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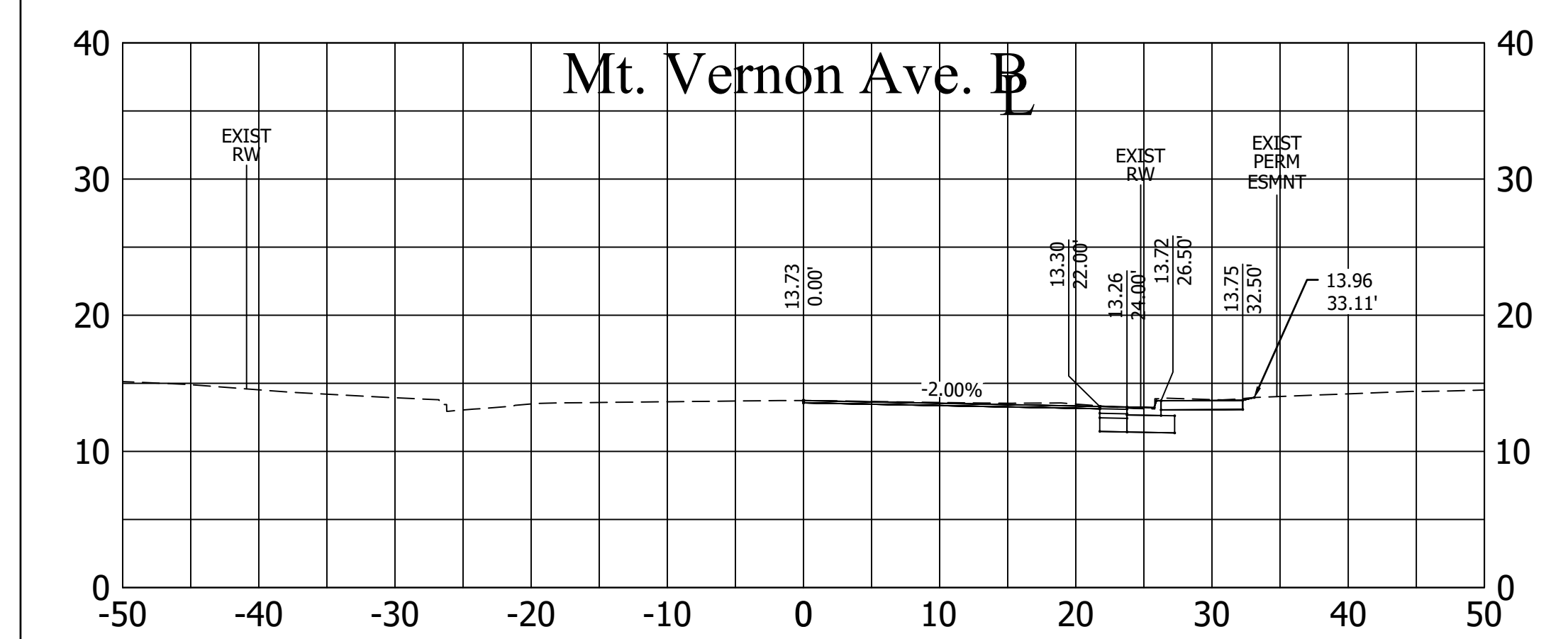
MT. VERNON AVENUE SECTIONS



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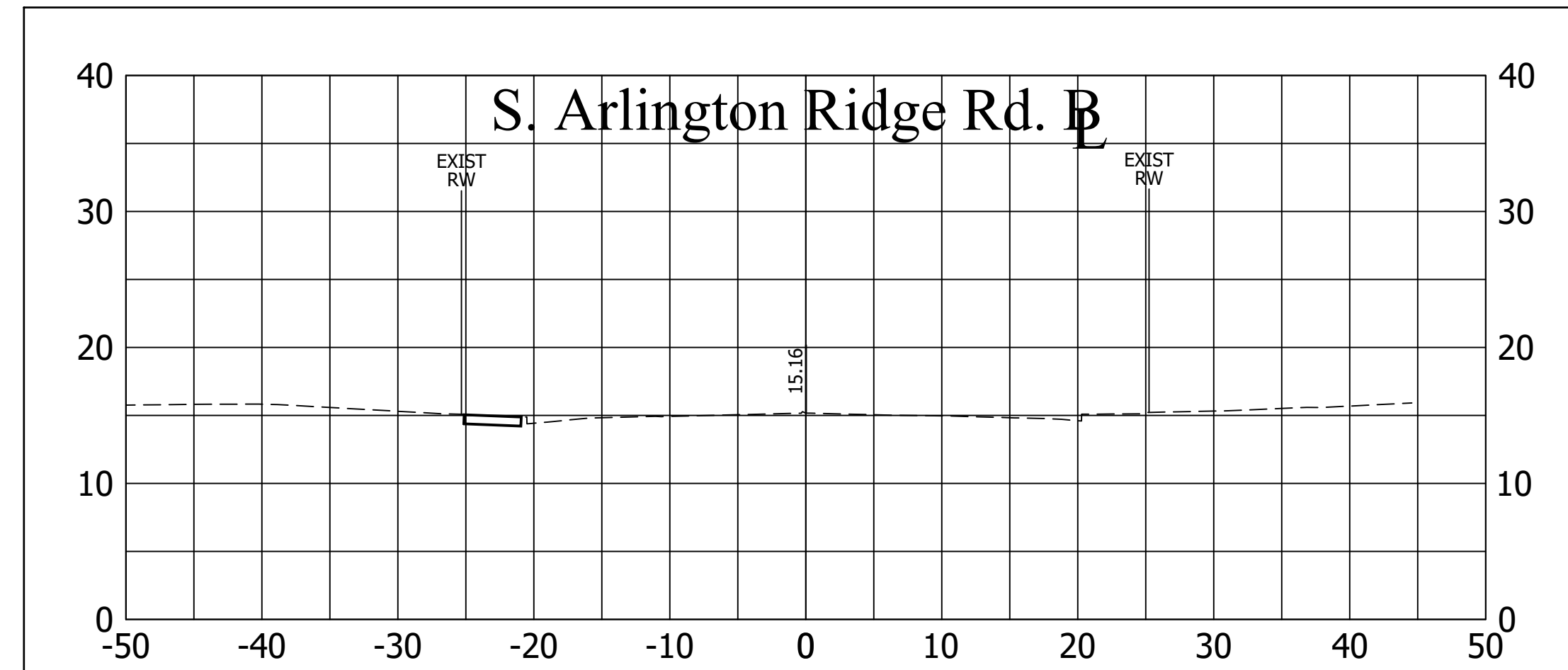


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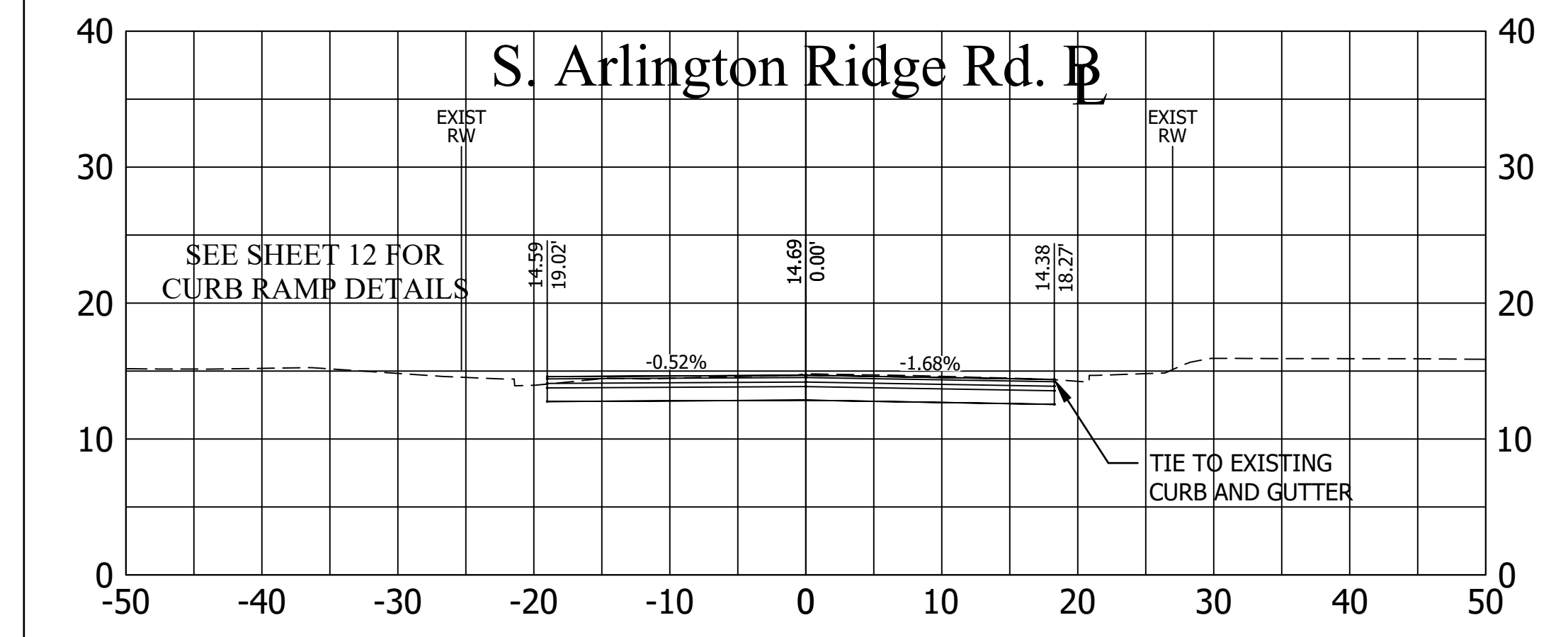


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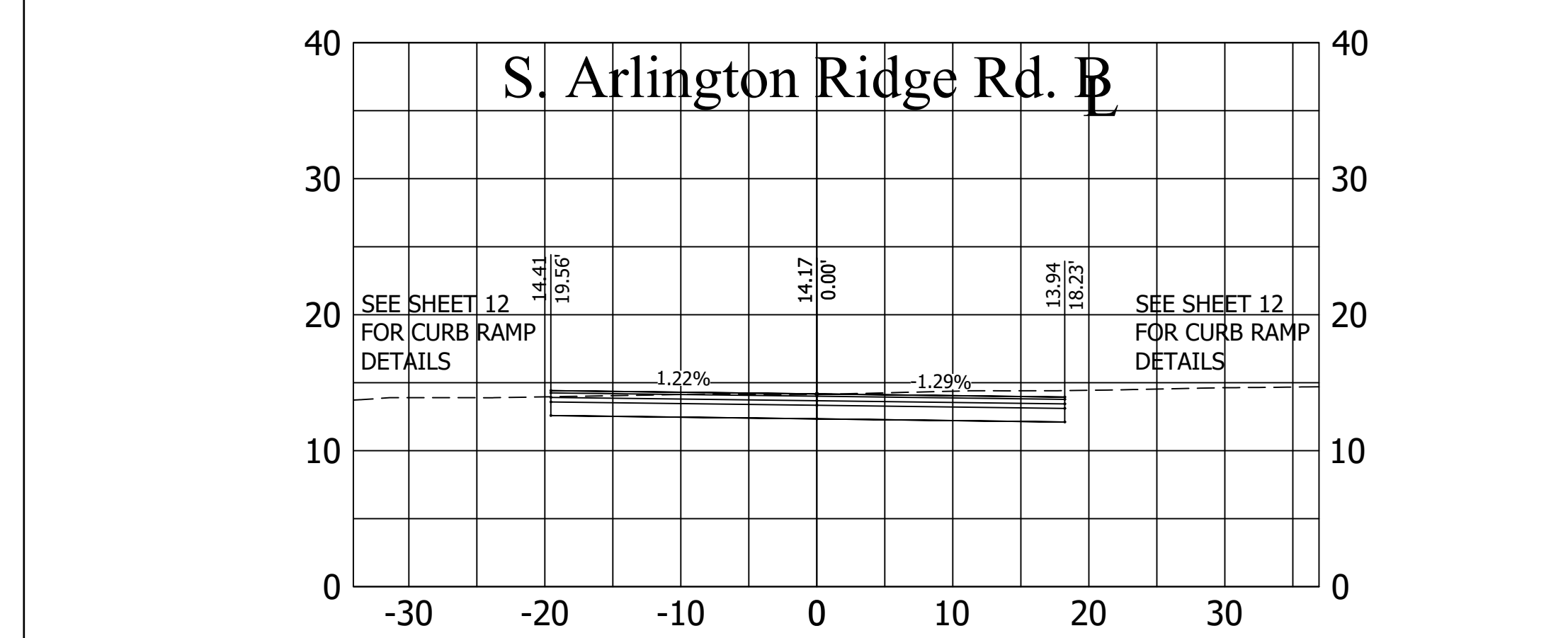
S. ARLINGTON RIDGE ROAD SECTIONS



10+75.00



10+50.00



10+25.00



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Fax: 703.228.3719

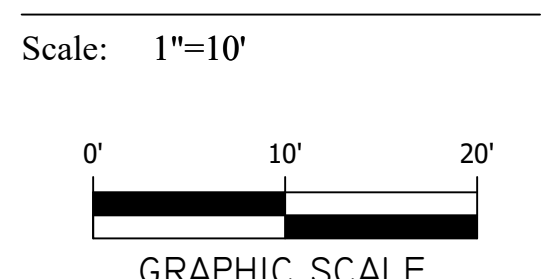


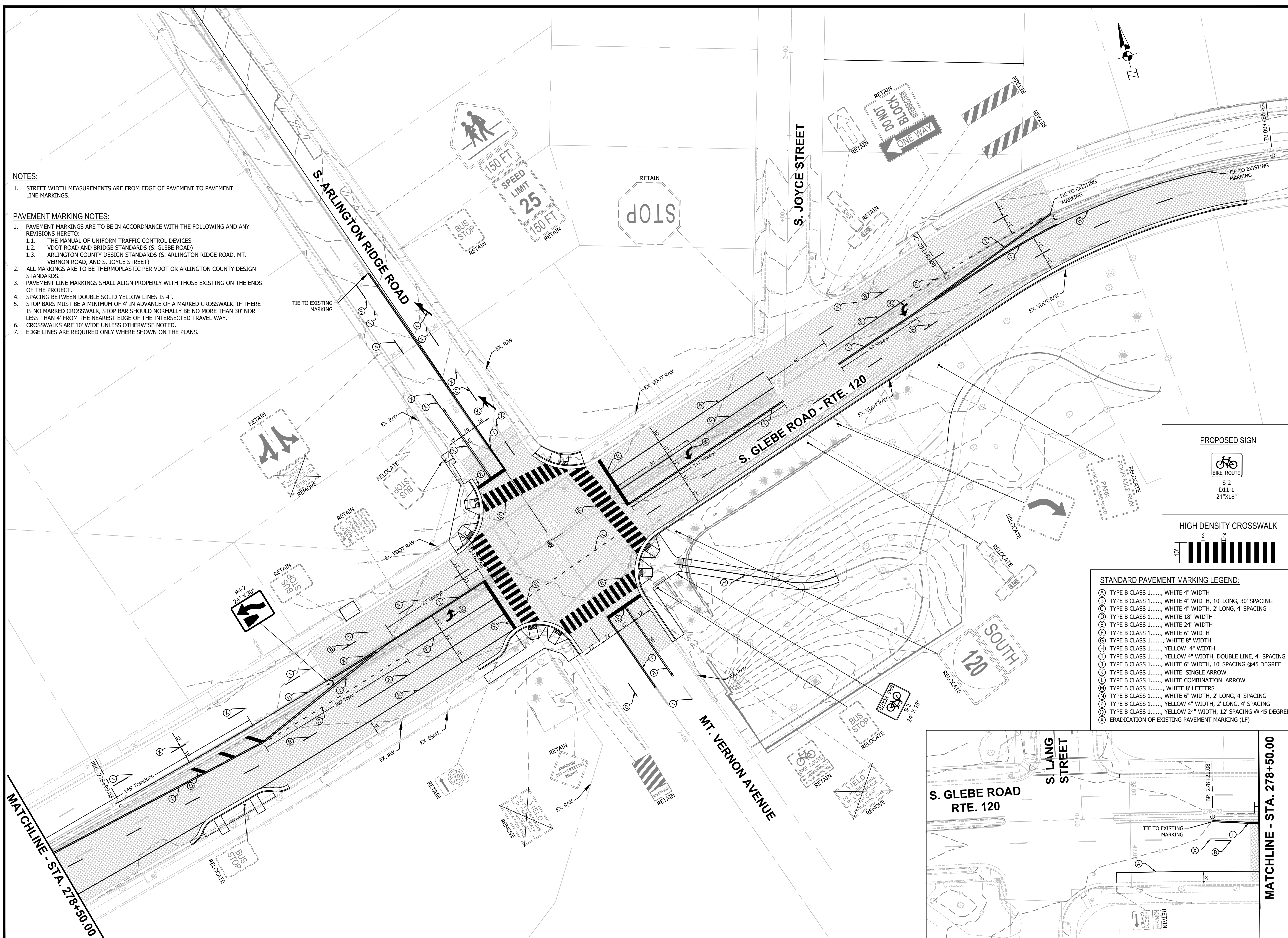
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<i>[Signature]</i> TE&O BUREAU CHIEF	01/07/2022
<i>[Signature]</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
CROSS SECTIONS
S. Glebe Road at S. Arlington Ridge Road

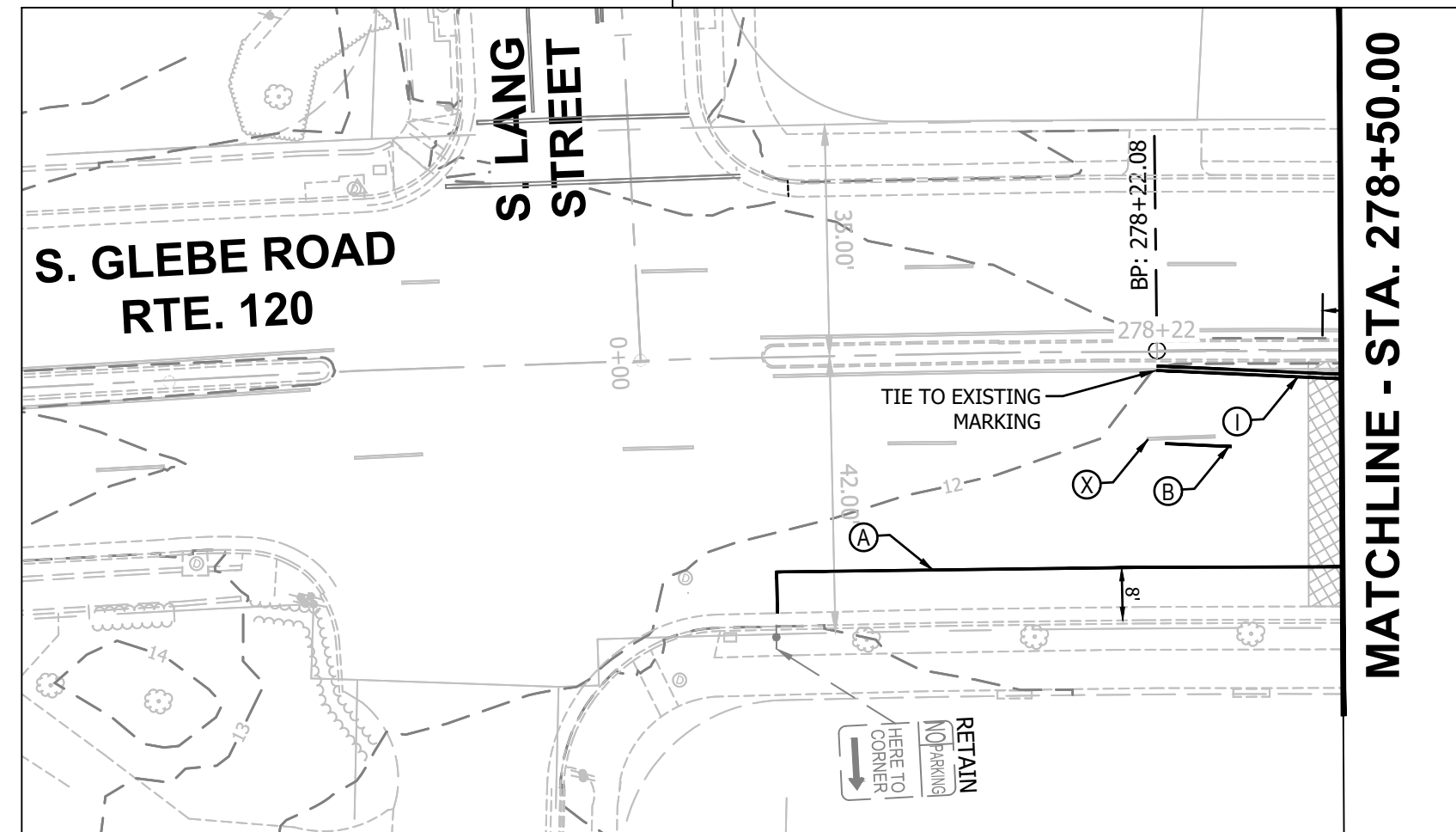
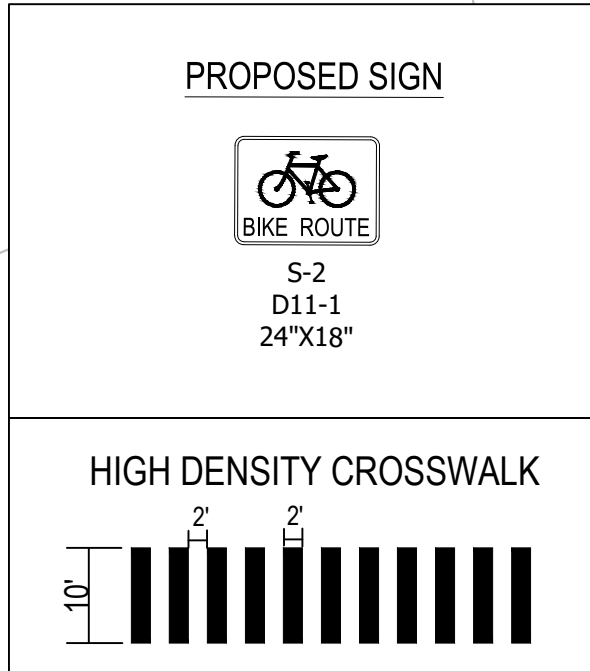
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Plotted by: kmita





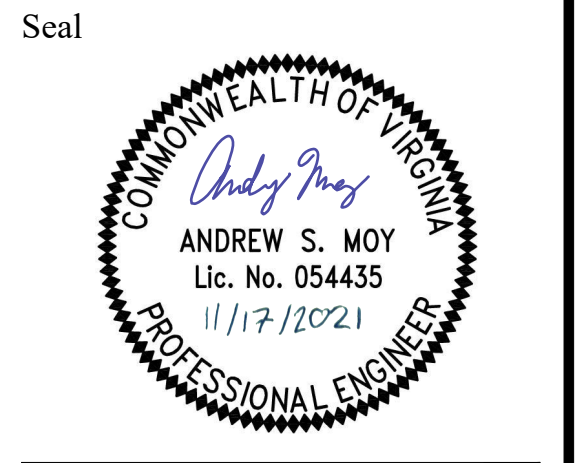
- NOTES:**
- STREET WIDTH MEASUREMENTS ARE FROM EDGE OF PAVEMENT TO PAVEMENT LINE MARKINGS.
- PAVEMENT MARKING NOTES:**
- PAVEMENT MARKINGS ARE TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS HERETO:
 - THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
 - VDOT ROAD AND BRIDGE STANDARDS (S. GLEBE ROAD)
 - ARLINGTON COUNTY DESIGN STANDARDS (S. ARLINGTON RIDGE ROAD, MT. VERNON ROAD, AND S. JOYCE STREET)
 - ALL MARKINGS ARE TO BE THERMOPLASTIC PER VDOT OR ARLINGTON COUNTY DESIGN STANDARDS.
 - PAVEMENT LINE MARKINGS SHALL ALIGN PROPERLY WITH THOSE EXISTING ON THE ENDS OF THE PROJECT.
 - SPACING BETWEEN DOUBLE SOLID YELLOW LINES IS 4".
 - STOP BARS MUST BE A MINIMUM OF 4" IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHOULD NORMALLY BE NO MORE THAN 30' NOR LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTED TRAVEL WAY.
 - CROSSWALKS ARE 10' WIDE UNLESS OTHERWISE NOTED.
 - EDGE LINES ARE REQUIRED ONLY WHERE SHOWN ON THE PLANS.

- STANDARD PAVEMENT MARKING LEGEND:**
- (A) TYPE B CLASS 1....., WHITE 4" WIDTH
 - (B) TYPE B CLASS 1....., WHITE 4" WIDTH, 10' LONG, 30' SPACING
 - (C) TYPE B CLASS 1....., WHITE 4" WIDTH, 2' LONG, 4' SPACING
 - (D) TYPE B CLASS 1....., WHITE 18" WIDTH
 - (E) TYPE B CLASS 1....., WHITE 24" WIDTH
 - (F) TYPE B CLASS 1....., WHITE 6" WIDTH
 - (G) TYPE B CLASS 1....., WHITE 8" WIDTH
 - (H) TYPE B CLASS 1....., YELLOW 4" WIDTH
 - (I) TYPE B CLASS 1....., YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING
 - (J) TYPE B CLASS 1....., WHITE 6" WIDTH, 10' SPACING @45 DEGREE
 - (K) TYPE B CLASS 1....., WHITE SINGLE ARROW
 - (L) TYPE B CLASS 1....., WHITE COMBINATION ARROW
 - (M) TYPE B CLASS 1....., WHITE 8" LETTERS
 - (N) TYPE B CLASS 1....., WHITE 6" WIDTH, 2' LONG, 4' SPACING
 - (O) TYPE B CLASS 1....., YELLOW 4" WIDTH, 2' LONG, 4' SPACING
 - (P) TYPE B CLASS 1....., YELLOW 24" WIDTH, 12' SPACING @ 45 DEGREE
 - (X) ERADICATION OF EXISTING PAVEMENT MARKING (LF)



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
 2100 Clarendon Boulevard, Suite 900
 Arlington, VA 22201
 Phone: 703.228.3344
 Fax: 703.228.3719



APPROVALS

Name	Date
<i>Jung Kelle</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>John Nabele</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>Chad...</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>...</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>Dennis W. Leach</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions

Revisions	Date

S. Glebe Road Intersection Improvements

SIGNING & PAVEMENT MARKING PLAN

S. Glebe Road at S. Arlington Ridge Road

Project Name and Location

Designed: JMK
 Drawn: JMK
 Checked: JMK
 Miss Utility Transmittal #:
 Filename: REP_02_Signing & Pavement Marking Plan.dwg
 Path: \\net.hk.com\Cad\Projects\20111112_Arlington\Task 1 - S. Glebe Road\GIS\Plan.dwg
 Plotted: November 15, 2021
 Plotted by: kmitta
 Scale: 1"=25'
 GRAPHIC SCALE

TEMPORARY TRAFFIC CONTROL PLAN

GENERAL NOTES:

1. TMP/SOC TYPE A PROJECT INFORMATION:

- A. THIS PROJECTS TMP/SOC PLAN HAS BEEN DESIGNED IN CONFORMANCE WITH A TYPE A TMP/SOC PLAN.
- B. THE PROJECT LOCATION IS AS SHOWN ON SHEET 1.
- C. CONSTRUCTION AREA SHALL BE CONSIDERED ACTIVE WHEN ANY IMPACT TO TRAFFIC OCCURS. (1ST CONE IN ROAD)
- D. THE TMP/SOC PLAN, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THEREOF: SECTIONS 512, 701, 703 & 704 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, DATED 2020, THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL (WAPM), REVISION 2, SEPTEMBER 1, 2019, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION, AND THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION.
- E. THE CONTRACTOR SHALL: DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION INSPECTOR FOR THE DURATION OF CONSTRUCTION.

ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.

INFORM THE ENGINEER OF ANY WORK REQUIRING LANE SHIFTS, LANE CLOSURES, AND/OR PHASE CHANGES A MINIMUM OF ONE WEEK PRIOR TO IMPLEMENTING THIS ACTIVITY. ANY REQUEST FOR DEVIATION FROM THE ALLOWABLE LANE CLOSURE HOURS MUST BE SUBMITTED TO VDOT NRO FOR REVIEW A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WORK.

PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. CONTRACTOR SHALL MAINTAIN A COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.

COORDINATE WITH ARLINGTON COUNTY POLICE DEPARTMENT AND ARLINGTON COUNTY FIRE/RESCUE DEPARTMENT FOR ANY LANE CLOSURES AND ANY DETOURS OF ANY NATURE.

SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT WATER, SANITARY SEWER, CABLE, FIBER CABLE/OPTIC CABLE, ANY OVERHANGING UTILITIES, AND ANY UNDERGROUND UTILITIES SERVICES WILL NOT BE INTERRUPTED.

- 2. CONTRACTOR SHALL MAINTAIN ACCESS (INCLUDING EMERGENCY VEHICLES) TO ALL ROADWAYS, DRIVEWAYS, AND PROPERTIES WITHIN AND ADJACENT TO THE WORK ZONE AT ALL TIMES THROUGHOUT THE DURATION OF THE WORK. ACCESS SHALL BE COORDINATED WITH PROPERTY OWNERS THROUGHOUT CONSTRUCTION.
- 3. CONTRACTOR SHALL COORDINATE WITH IMPACTED TRAIL OWNERS AND OPERATORS TO ENSURE THEIR CLOSURE WHEN REQUIRED BY THE WORK.
- 4. IF ANY DEVIATIONS FROM THIS TMP/SOC ARE MADE THE CONTRACTOR SHALL SUBMIT A REVISED PLAN FOR REVIEW AND APPROVAL.
- 5. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED TO FORM ON APPROXIMATE 6:1 WEDGE AGAINST THE EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.
- 6. TRAFFIC BARRIER SERVICE IS NOT PROPOSED FOR THE CONSTRUCTION OF THIS PROJECT.
- 7. IF A GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED FOR THE PROJECT, THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL RECOMMENDATIONS PROVIDED BY THE COUNTY.
- 8. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.
- 9. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AREA AS DEFINED IN THE WAPM IS TO BE MAINTAINED.
- 10. THE CONTRACTOR IS TO COORDINATE WITH ARLINGTON COUNTY FOR LOCATION(S) OF THE CONSTRUCTION STAGING AREA(S). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND/OR EASEMENTS FOR THE STAGING AREA(S).
- 11. LANE AND/OR SHOULDER CLOSURES SHALL NOT BEGIN IF HEAVY TRAFFIC OR SIGNIFICANT QUEUING AND BACKUPS ARE ALREADY PRESENT ALONG THE ROADWAY(S).
- 12. THE CONTRACTOR SHALL CONTINUOUSLY MONITOR ALL LANE CLOSURE(S) AND DETOUR ROUTE(S) AND MAKE SPOT ADJUSTMENTS AS NEEDED/AVAILABLE TO EASE UNDUE BACKUPS, DELAYS, OR QUEUING AND REOPEN AVAILABLE LANES IMMEDIATELY, IF NECESSARY.
- 13. LANE AND SHOULDER CLOSURE HOURS OF OPERATION MAY BE ADJUSTED BY VDOT NRO AT ANY TIME, AS NECESSARY, IF SIGNIFICANT TRAFFIC IMPACTS ROUTINELY DEVELOP AS A RESULT OF THE PROJECT OR CITIZEN COMPLAINTS ARE RECEIVED.
- 14. THE CONTRACTOR SHALL NOTIFY THE VIRGINIA STATE POLICE (VSP) AND THE VARIOUS LOCAL AREA LAW ENFORCEMENT AND EMERGENCY SERVICES OF ALL CLOSURES AND TIMES FOR SITUATIONAL AWARENESS.
- 15. DEPENDING ON THE TIME OF YEAR, THE CONTRACTOR MUST NOTIFY AND/OR COORDINATE WITH THE LOCAL SCHOOLS OF ALL CLOSURES AND TIMES TO AVOID IMPACT TO BUS SCHEDULES/ROUTES AND/OR SCHOOL BUILDING ACCESS.
- 16. ALL LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE APPLICABLE ALLOWABLE HOURS AS LISTED IN THE LANE CLOSURE IN NOVA DISTRICT MEMORANDUM, DATED SEPTEMBER 29TH, 2016 AND ALL LANE AND/OR SHOULDER CLOSURES SHALL BE COMPLETELY REMOVED ON A DAILY/NIGHTLY BASIS WITH LANES BEING FULLY OPEN TO TRAFFIC AT ALL TIMES BEYOND THE ALLOWABLE AND/OR APPROVED LANE CLOSURE HOURS.

17. IMPLEMENTING THE TRANSPORTATION MANAGEMENT PLAN:

DURING THE FIRST DAY OF THE NEW WORK ZONE TRAFFIC PATTERN, THE PROJECT'S MANAGER AND PROJECT'S CONSTRUCTION INSPECTOR SHALL INSPECT THE WORK ZONE TO ENSURE COMPLIANCE WITH THE TMP. ON THE THIRD TO FOURTH DAY OF THE IMPLEMENTATION OF THE TMP'S NEW WORK ZONE TRAFFIC PATTERN, THE CONSTRUCTION INSPECTOR SHALL CONDUCT AN ON-SITE REVIEW OF THE WORK ZONE'S PERFORMANCE IN COORDINATION WITH THE ENGINEER AND RECOMMEND TO THE CONTRACTOR ANY REQUIRED CHANGES TO THE TMP TO ENHANCE THE WORK ZONE'S SAFETY AND MOBILITY. ALL SUCH CHANGES SHALL BE DOCUMENTED. AN ON-SITE REVIEW OF THE PROJECT'S WORK ZONE TRAFFIC CONTROL BY THE COUNTY'S CONSTRUCTION INSPECTOR AND THE CONTRACTOR SHALL BE CONDUCTED WITHIN 48 HOURS OF ANY FATAL INCIDENT/CRASH WITHIN THE WORK ZONE.

18. EVALUATION OF THE TRANSPORTATION MANAGEMENT PLAN:

A PERFORMANCE ASSESSMENT OF THE TMP INCLUDING AREA WIDE IMPACTS ON ADJACENT ROADWAYS SHALL BE PERFORMED BY ARLINGTON COUNTY, IF REQUESTED BY VDOT.

19. PUBLIC COMMUNICATIONS PLAN:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

- A. NOTIFYING THE PROJECT MANAGER AND CONSTRUCTION INSPECTOR TWO WEEKS IN ADVANCE OF ANY SCHEDULED WORK PLANS AND TRAFFIC DELAYS.
- B. NOTIFYING THE PROJECT MANAGER, CONSTRUCTION INSPECTOR, AND CORRESPONDING ENGINEER OF ANY UNSCHEDULED TRAFFIC DELAYS.

20. TRANSPORTATION OPERATIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROJECT LANE CLOSURE INFORMATION OR ANY WORK WITHIN VDOT RIGHT-OF-WAY ON LCAMS AND VATRAFFIC THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH IIM-OD-16-03, DATED DECEMBER 16, 2016.
- B. POST A LIST OF LOCAL EMERGENCY RESPONSE AGENCIES INSIDE THE PROJECT'S CONSTRUCTION OFFICE/TRAILER.
- C. IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.
- D. NOTIFY THE PROJECT'S CONSTRUCTION INSPECTOR AND CORRESPONDING ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.
- E. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE COMPLETED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE INCIDENTS.

CONTACT NUMBERS

COUNTY PROJECT MANAGER - MR. ANUP KAFLE - (703) 228-7050
 COUNTY CONSTRUCTION MANAGER - MR. KAMAL (NICK) TAKTAK - (703) 228-7527
 COUNTY CONSTRUCTION INSPECTOR - TBD
 POLICE/AMBULANCE/FIRE SAFETY/HAZMAT SPILLS - 911
 VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER - (800) 367-7623
 VIRGINIA STATE POLICE - (703) 803-8660
 VDOT NOVA DISTRICT OFFICE - (703) 877-3401 (8:15 AM - 04:00 PM)
 ARLINGTON COUNTY DEPT. OF ENV. SERVICES - (703) 228-3681
 NON-EMERGENCY NUMBERS:
 ARLINGTON COUNTY POLICE - (703) 558-2222
 ARLINGTON COUNTY FIRE - (703) 228-3362

- F. ALL LANE AND/OR SHOULDER CLOSURES SHALL BE ENTERED INTO LCAMS AT LEAST TEN (10) DAYS IN ADVANCE OF THE PROPOSED LANE AND/OR SHOULDER CLOSURE(S) AND NO LATER THAN CLOSE OF BUSINESS WEDNESDAY THE WEEK PRIOR TO THE CLOSURE STATING THE LOCATION, PURPOSE, SPECIFIC LANE(S) TO BE CLOSED, TIME AND DURATION OF CLOSURE. ANY CONFLICTS GENERATED FROM LCAMS SHALL BE RESOLVED NO LATER THAN CLOSE OF BUSINESS THURSDAY THE WEEK PRIOR TO THE CLOSURE.
- G. THE CONTRACTOR MUST CONTACT THE VDOT NORTHERN REGION TRANSPORTATION OPERATIONS CENTER/TOC (703-877-3449) 15 - 45 MINUTES PRIOR TO EXECUTING ALL LANE AND/OR SHOULDER CLOSURES AND CONTACT TOC ONCE WORK HAS BEEN COMPLETED AND LANE AND/OR SHOULDER CLOSURES HAVE BEEN REMOVED.

GENERAL CONSTRUCTION NOTES:

NOTE: WAPM - VIRGINIA WORK AREA PROTECTION MANUAL (2011), REVISION 2, SEPTEMBER 1, 2019 OR MOST CURRENT EDITION

- 1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL PROJECT LIMIT SIGNAGE IN ACCORDANCE WITH VA WAPM TTC-53.0 (NOT GRAPHICALLY SHOWN ON THE PLANS). FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL ENSURE THIS SIGNAGE REMAINS IN COMPLIANCE IF THE PROJECT LIMITS CHANGE.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER DRAINAGE FOR THE DURATION OF ALL PHASES AND INSTALLING ANY NECESSARY MEASURES TO FACILITATE PROPER DRAINAGE.
- 3. THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS DURING BOTH WORK AND NON-WORK HOURS TO ENSURE THE PROTECTION AND SAFETY OF THE ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT AND THE CONSTRUCTION SITE ITSELF.
- 4. THE CONTRACTOR WILL DEVELOP TRAFFIC CONTROL PLANS AT NO COST TO THE COUNTY. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SAFE TRAVEL ON THE ROADWAYS WITHIN THE WORK ZONE.

- 5. THE PUBLIC SHALL BE NOTIFIED OF THE EXPECTED CONSTRUCTION SCHEDULE ON THE COUNTY'S WEB SITE FOR THIS PROJECT. INFORMATION OF THE POTENTIAL FOR BACK-UPS DURING THE PEAK HOURS OF OPERATION IS PROVIDED BY THE VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER (TOC). THE ENGINEER NEEDS TO COORDINATE WITH VDOT.
- 6. THE VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER (TOC) SHALL BE NOTIFIED OF LANE AND ROADWAY CLOSURE INFORMATION FOR DISTRIBUTION ON THE 511 SYSTEM AND VIRGINIA OPERATIONS INFORMATION SYSTEM (VOIS). EMERGENCY RESPONSE PROFESSIONALS SHALL RESPOND TO TRAFFIC INCIDENTS IN THE WORK ZONE AS SOON AS POSSIBLE.
- 7. THE APPROPRIATE CLEAR ZONE SHALL BE MAINTAINED FREE OF PARKED EQUIPMENT AND STORED MATERIAL OR PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THE WORK AREA PROTECTION MANUAL. EQUIPMENT AND MATERIAL SHALL NOT BE STORED WITHIN THE ESTABLISHED. CLEAR ZONE AND/OR DEFLECTION ZONE OF PHYSICAL BARRIERS IN ACCORDANCE WITH THE WORK AREA PROTECTION MANUAL.
- 8. CONTRACTOR SHALL REQUIRE THE APPROVAL OF THE ENGINEER FOR SELECTED LOCATIONS OF ANY STAGING AREA FOR STAGING ARE FOR MATERIALS OR EQUIPMENT STORAGE.
- 9. ACCESS TO PRIVATE AND COMMERCIAL DRIVEWAYS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES.
- 10. THE USE OF STEEL PLATES TO PROVIDE A TEMPORARY RIDING SURFACE WILL NOT BE ALLOWED BETWEEN NOVEMBER 1 AND APRIL 1. THE USE OF STEEL PLATES BETWEEN APRIL 2 AND OCTOBER 31 SHALL BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

CONSTRUCTION NARRATIVE:

- 1. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROLS AS APPROPRIATE PRIOR TO STARTING WORK.
- 2. WHEN CONSTRUCTION OF A WORK ZONE IS COMPLETE, THE CONTRACTOR SHALL REMOVE TEMPORARY CONTROL DEVICES AND CONSTRUCTION SIGNS AND RESTORE TRAFFIC TO NORMAL CONDITIONS.

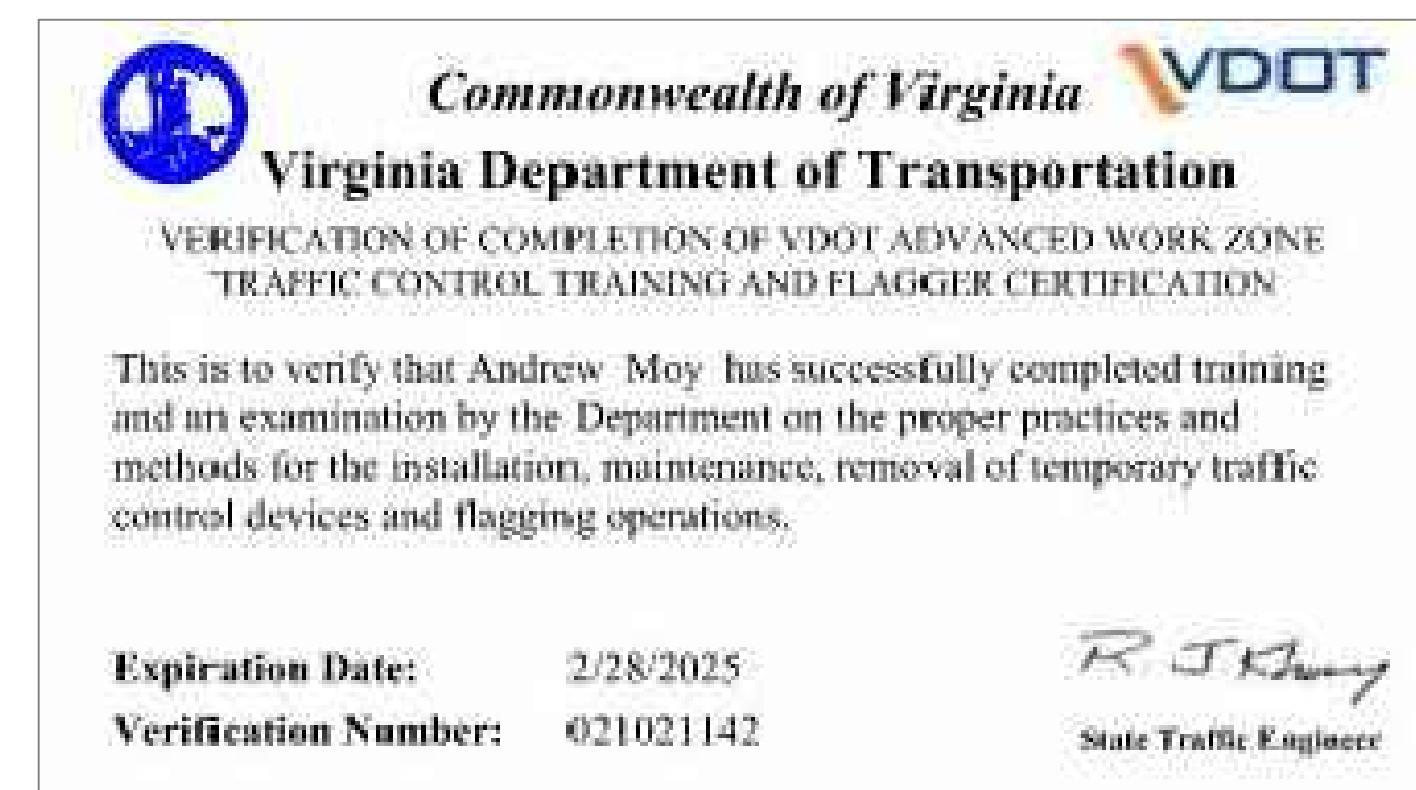
CONSTRUCTION PAVEMENT MARKING GENERAL NOTES:

(DURING CONSTRUCTION ONLY)

- 1. ALL CONSTRUCTION PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THEREOF:
 - A. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009
 - B. THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2011
 - C. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, 2020
 - D. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, 2016
- 2. ALL CONSTRUCTION PAVEMENT MARKINGS SHALL BE TYPE A OR TYPE D, CLASS II, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DURING CONSTRUCTION ANY PAVEMENT MARKINGS WHICH WILL CONFLICT WITH THOSE SHOWN ON THE TMP/SOC PLANS, OR AS DIRECTED BY THE ENGINEER, SHALL BE COVERED WITH TYPE E, NON-REFLECTIVE BLACK TAPE (OR ERADICATED AT THE DIRECTION OF THE ENGINEER).
- 3. ELONGATED ARROWS SHALL BE IN ACCORDANCE WITH MUTCD AND VDOT ROAD AND BRIDGE STANDARD.

TRANSPORTATION OPERATION PLAN:

THE PUBLIC AFFAIRS SECTION AND THE TRANSPORTATION OPERATIONS CENTER SHALL BE NOTIFIED BY THE CONSTRUCTION PROJECT MANAGER OF LANE CLOSURE INFORMATION FOR DISTRIBUTION ON THE 511 SYSTEM AND VIRGINIA OPERATIONS INFORMATION SYSTEM (VOIS). THE CONTRACTOR SHALL GET APPROVAL FROM VDOT 4 WEEKS PRIOR TO CONSTRUCTION. FOLLOWING ANY TRAFFIC INCIDENTS, THE CONTRACTOR SHALL CLEAN AND RESTORE THE SITE FOR NORMAL OPERATIONS AS SOON AS POSSIBLE.

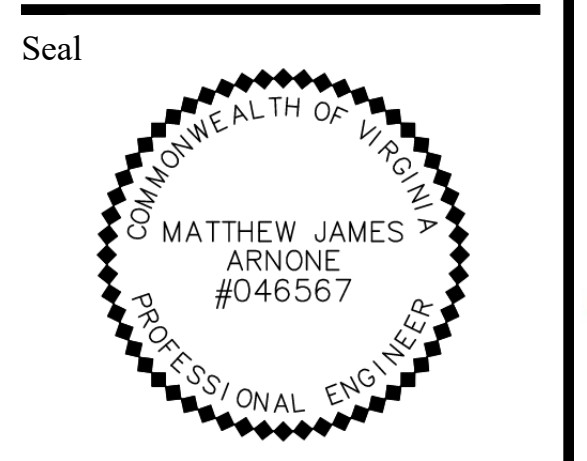


* TEXT HAS BEEN DIGITALLY LAID OVER FOR CLARITY



DEPARTMENT OF ENVIRONMENTAL SERVICES

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APPROVALS	DATE
<i>Joseph Kelle</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>John Nalle</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>John Nalle</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>John Nalle</i> TE&O BUREAU CHIEF	01/07/2022
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	01/07/21

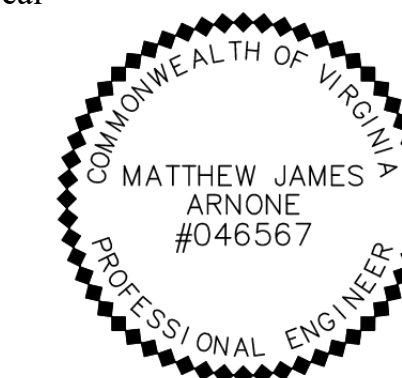
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
 MAINTENANCE OF TRAFFIC TRANSPORTATION MANAGEMENT PLAN
 S. Glebe Road at S. Arlington Ridge Road

Designed: KWB
 Drawn: KWB
 Checked: SMS
 Miss Utility Transmittal #:
 Filename: 101721_MOT_Plans.dwg
 Path: \\s:\n\c\proj\101721\101721_Arnp\101721-1-5.dwg
 Plotted: November 15, 2021
 Plotted by: kmita

Scale: N.T.S.

Seal



Matthew J. Arnone
11-13-21

MOT GENERAL NOTES:

- IT IS NOT THE INTENT OF THE MAINTENANCE OF TRAFFIC PLAN TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN CONSTRUCTION, BUT ONLY TO SHOW THE GENERAL HANDLING OF TRAFFIC. UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THIS TEMPORARY TRAFFIC CONTROL PLAN.
- TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
- THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
- THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY PROJECT OFFICER SHALL RESTRICT PARKING BY CONTACTING DES - PERMITTING SECTION, 703-228-4798.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.
- THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE PROJECT OFFICER. THE PROJECT OFFICER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
- ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE PROJECT OFFICER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND AS APPROVED BY THE PROJECT OFFICER.
- PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
- PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
- ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
- WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDDLEBLOCK WORK SITES.
- PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
- ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049 AT LEAST 4 WEEKS PRIOR TO COMMENCEMENT OF WORK IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO TRANSIT STOPS OR ROUTES.
 - ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
- AT SIGNALIZED INTERSECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT. TRAFFIC SENSORS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF THIS PROJECT.
- WORK HOURS ARE RESTRICTED TO 9:00 AM TO 4:00 PM, MONDAY-FRIDAY, UNLESS APPROVED BY THE COUNTY PROJECT OFFICER IN WRITING.
- CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THE MOT PLAN.
- CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.
- CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
- CONTRACTOR SHALL CONTACT ARLINGTON COUNTY DOT 3 BUSINESS DAYS PRIOR TO INSTALLATION OF PERMANENT PAVEMENT MARKINGS.
- CONTRACTOR SHALL NOT DISTURB OR REMOVE ANY TRAFFIC CONTROL SIGNS, PARKING METERS OR COVER ANY OTHER TRAFFIC CONTROL DEVICE UNLESS SPECIFIED ON THE PLANS OR APPROVED BY THE COUNTY PROJECT OFFICER IN WRITING.

NOTES:

- SEE SHEETS 2C, 2D, & 2E FOR TTC TYPICAL APPLICATIONS PER THE VIRGINIA WORK AREA PROTECTION MANUAL
- THE DURATIONS SHOWN WERE DEVELOPED FOR PLANNING AND ESTIMATION PURPOSES ONLY. THE DURATIONS IN NO WAY ALTER THE CONTRACT TIME FOR COMPLETION, OR INFRINGE ON THE CONTRACTORS MEANS AND METHODS. THE CONTRACTOR'S SUBMITTED SCHEDULE SUPERSEDES THE ESTIMATED DURATIONS SHOWN.
- TEMPORARY SIGNS AND BARRIERS SHOULD NOT OBSTRUCT PEDESTRIAN PASSAGE ON SIDEWALKS UNLESS SUCH SIGNS OR BARRIERS ARE SPECIFICALLY INTENDED TO CLOSE SUCH SIDEWALK
- CONTRACTOR SHALL CONSTRUCT ONLY ONE CORNER PER PHASE TO MINIMIZE PEDESTRIAN MOVEMENT DISRUPTION
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TEMPORARY WALKING PATH OR COORDINATE CONSTRUCTION TO PROVIDE A PORTION OF SIDEWALK TO MAINTAIN PEDESTRIAN CONNECTIVITY
- PRIOR TO CONSTRUCTION, CONTRACTOR MUST COORDINATE WITH TRANSIT BUS STOP MANAGER REGARDING PROPOSED TEMPORARY BUS STOP RELOCATIONS AND CLOSURES
 - PROVIDE TRANSIT WITH TIMELINE FOR LANE AND BUS STOP CLOSURES
 - ALL BUS STOP RELOCATIONS TO BE PERFORMED BY CONTRACTOR
 - ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE

Work Zone Table			
Zone	TTC #	Comments	Duration
Zone A	TTC 17.2	UTILIZE TTC-17.2 ALONG WB & EB S. GLEBE RD.	Three Weeks
	TTC 53.0	UTILIZE TTC-53.0 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
Zone B	TTC 5.2	UTILIZE TTC-5.2 ALONG WB S. GLEBE RD.	Two Weeks
	TTC 16.2	UTILIZE TTC-16.2 ALONG SB S. ARLINGTON RIDGE RD.	
	TTC 26.2	UTILIZE TTC-26.2 ALONG SB S. ARLINGTON RIDGE RD.	
	TTC 35.1	UTILIZE TTC-35.1 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
	TTC 36.2	UTILIZE TTC-36.2 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
Zone C	TTC 53.0	UTILIZE TTC-53.0 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	Two Weeks
	TTC 5.2	UTILIZE TTC-5.2 ALONG WB S. GLEBE RD.	
	TTC 16.2	UTILIZE TTC-16.2 ALONG NB MT. VERNON AVE. & NB S. ARLINGTON RIDGE RD.	
	TTC 26.2	UTILIZE TTC-26.2 ALONG NB MT. VERNON AVE. & NB S. ARLINGTON RIDGE RD.	
	TTC 35.1	UTILIZE TTC-35.1 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
Zone D	TTC 36.2	UTILIZE TTC-36.2 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	Five Weeks
	TTC 53.0	UTILIZE TTC-53.0 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
	TTC 5.2	UTILIZE TTC-5.2 ALONG EB S. GLEBE RD.	
	TTC 16.2	UTILIZE TTC-16.2 ALONG EB S. GLEBE RD & NB MT. VERNON AVE.	
Zone E	TTC 35.1	UTILIZE TTC-35.1 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	Four Weeks
	TTC 36.2	UTILIZE TTC-36.2 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
	TTC 53.0	UTILIZE TTC-53.0 AT THE INTERSECTION OF S. GLEBE RD., S. ARLINGTON RIDGE RD., & MT. VERNON AVE.	
	TTC 5.2	UTILIZE TTC-5.2 ALONG EB S. GLEBE RD.	
	TTC 16.2	UTILIZE TTC-16.2 ALONG EB S. GLEBE RD & SB S. ARLINGTON RIDGE RD.	

NOTE:
THE DURATIONS SHOWN WERE DEVELOPED FOR PLANNING AND ESTIMATION PURPOSES ONLY. THE DURATIONS IN NO WAY ALTER THE CONTRACT TIME FOR COMPLETION, OR INFRINGE ON THE CONTRACTORS MEANS AND METHODS. THE CONTRACTOR'S SUBMITTED SCHEDULE SUPERSEDES THE ESTIMATED DURATIONS SHOWN.

APPROVALS DATE

J. K. Kettle 01/04/2022
TRAFFIC SIGNAL ENGINEER

John Nalle 01/12/2022
TRAFFIC ENGINEERING MANAGER

Edgardo 02/09/2022
WATER, SEWER, STREETS BUREAU CHIEF

Henry 01/07/2022
TE&O BUREAU CHIEF

Dennis W. Leach 01/07/21
TRANSPORTATION DIRECTOR

Revisions Date

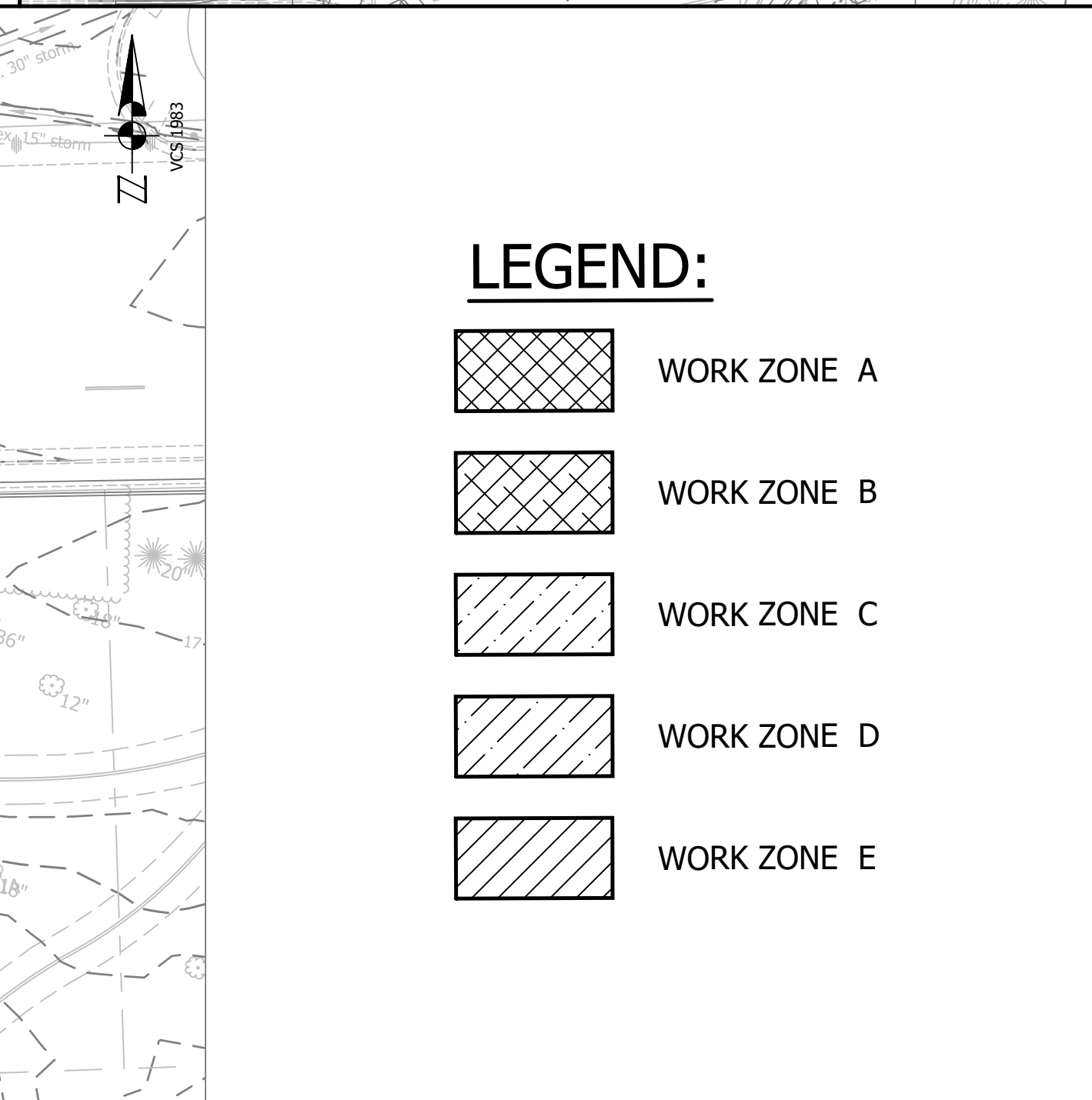
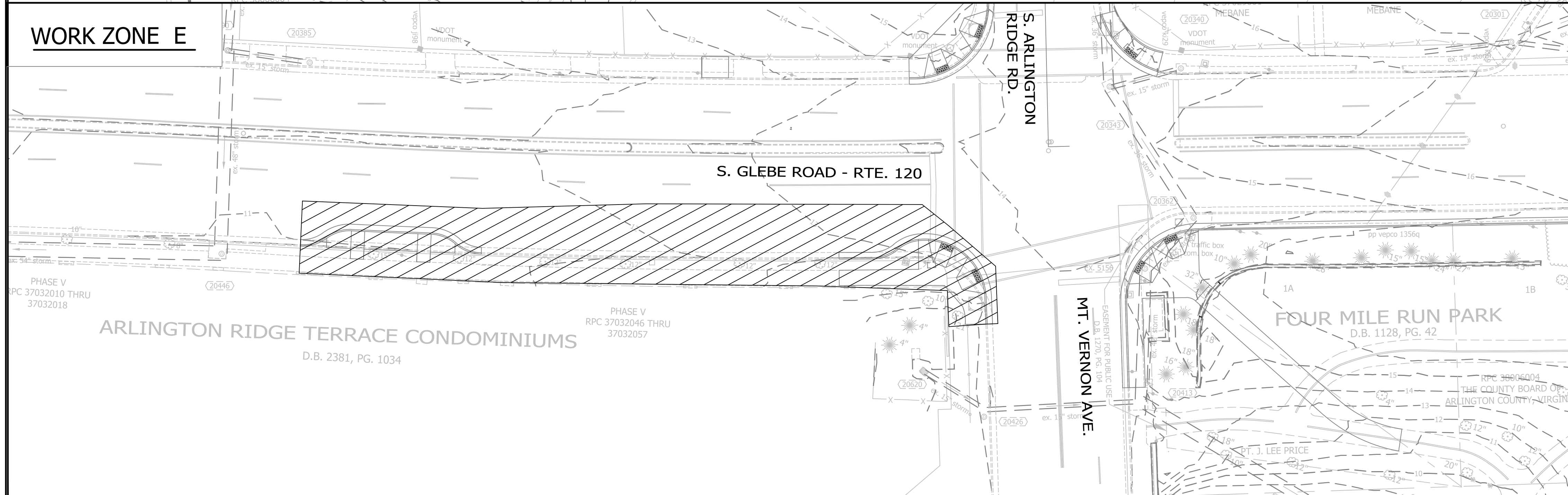
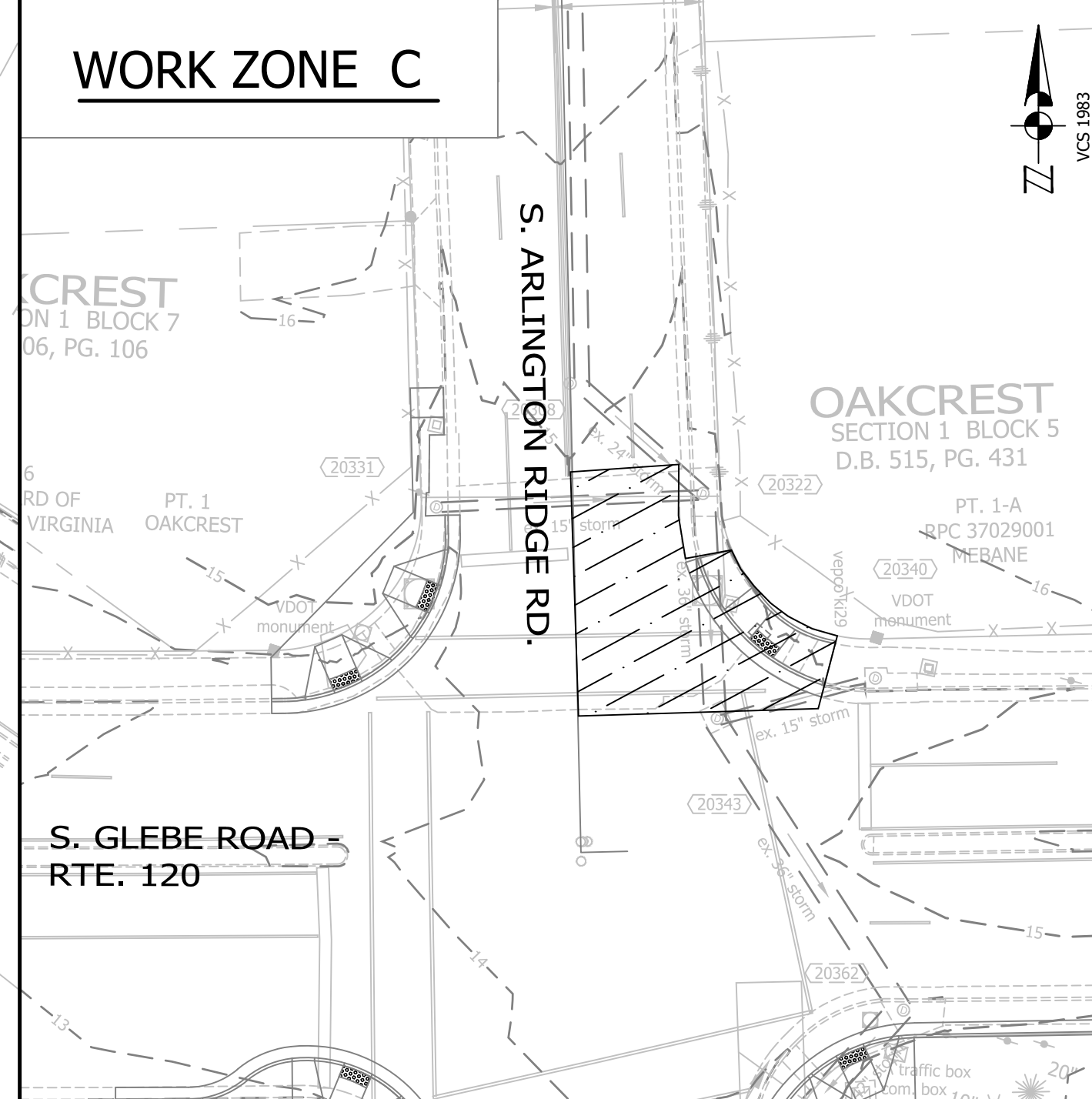
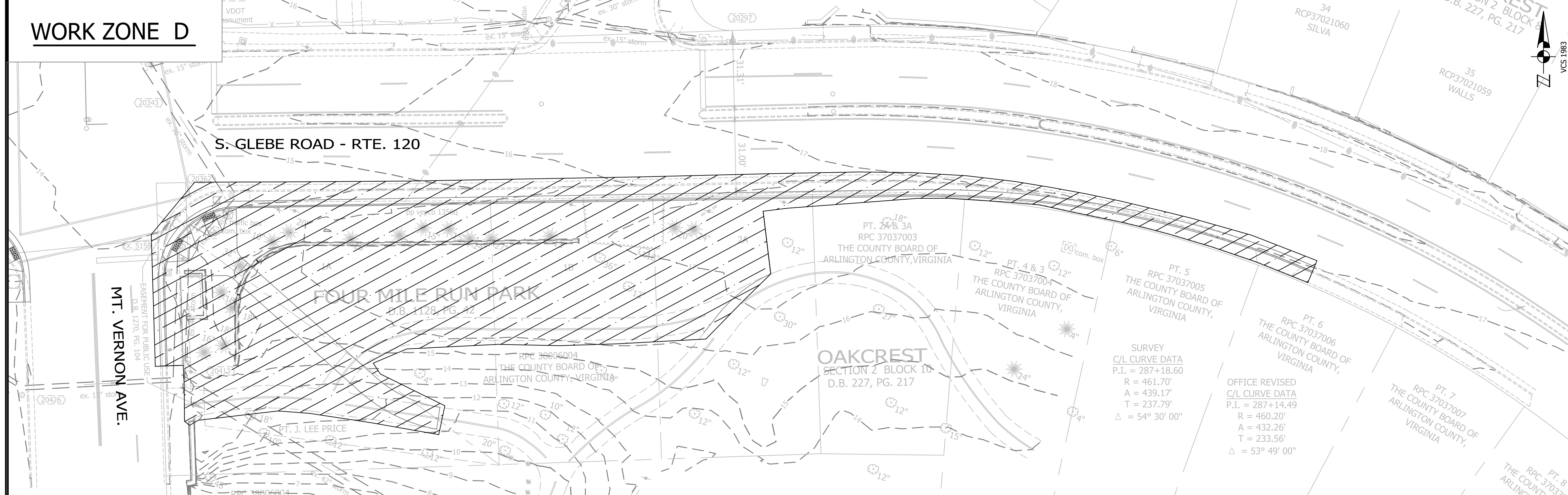
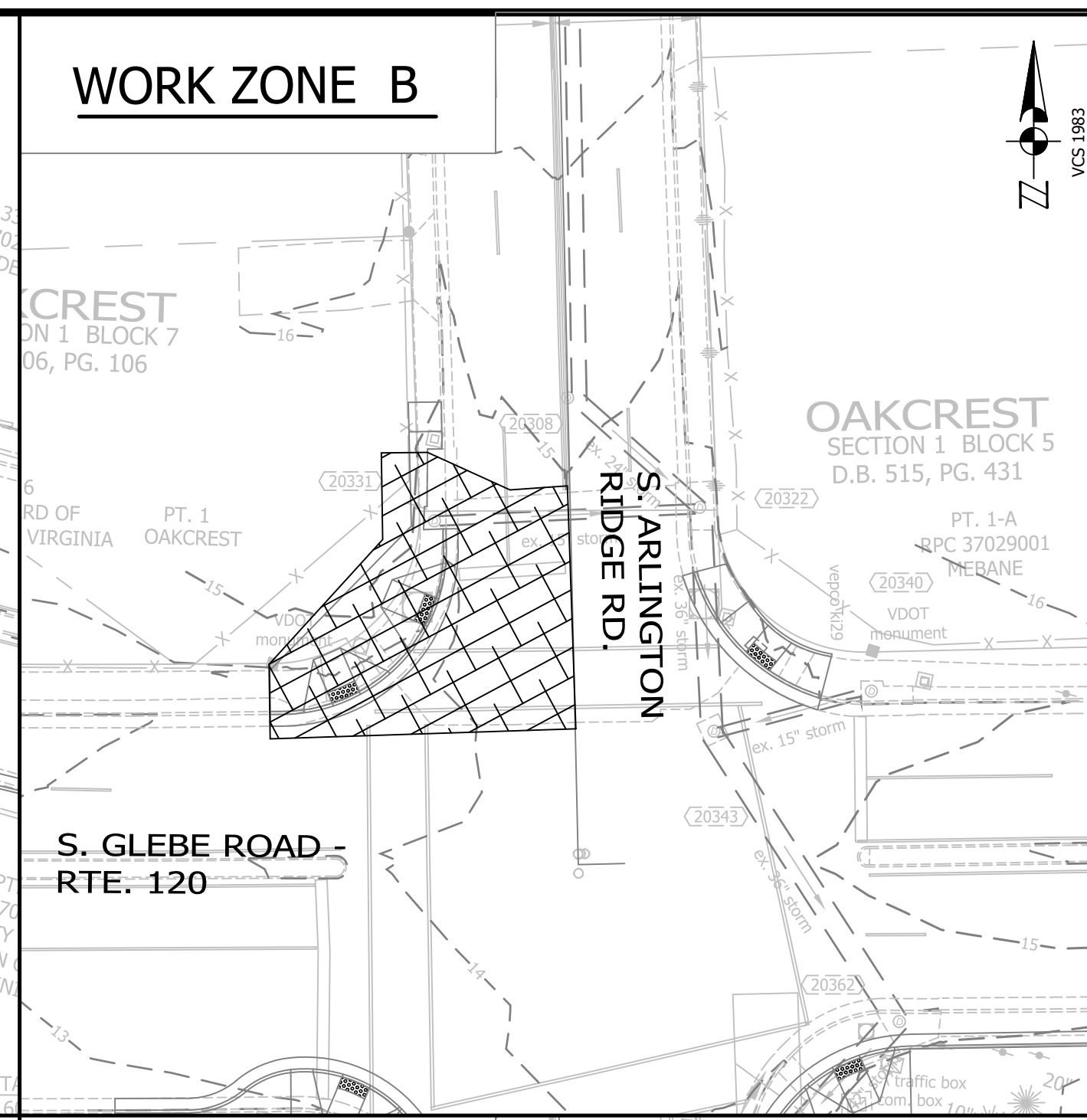
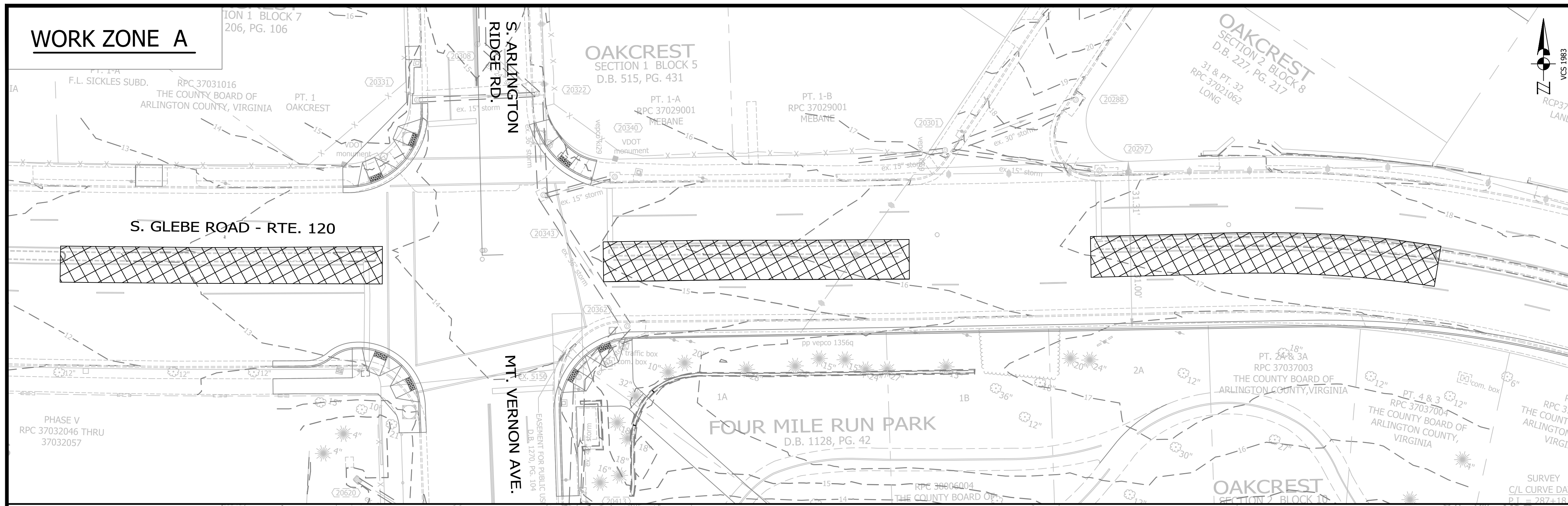
Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements

MAINTENANCE OF TRAFFIC PLAN NOTES
S. Glebe Road at S. Arlington Ridge Road

TE07

Designed: KWB
Drawn: KWB
Checked: SMS
Miss Utility Transmittal #:
Filename: REF21_MOT Plans.dwg
Path: \\ar\ms\corp\csoff\ppl\2021\1110_Arnpge08\Fig 1 - S. Glebe Road\REF21.dwg
Plotted: November 15, 2021
Plotted by: kmita
Scale: N.T.S.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
Fax: 703.228.3719



APPROVALS	DATE
<i>Judy Kelle</i> TRAFFIC SIGNAL ENGINEER	01/04/2022
<i>John Nallo</i> TRAFFIC ENGINEERING MANAGER	01/12/2022
<i>Colin...</i> WATER, SEWER, STREETS BUREAU CHIEF	02.09.2022
<i>...</i> TE&O BUREAU CHIEF	01/07/2022
<i>Dennis W. Leach</i> TRANSPORTATION DIRECTOR	01/07/21

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
MAINTENANCE OF TRAFFIC PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: KJY
Drawn: KWB
Checked: SMS
Miss Utility Transmittal #:

Filename: REF21_MOT_Plan.dwg
Path: \\s:\net\cadd\cadd\projects\20211110_Arlington\REF21 - S. Glebe Road\REF21.dwg
Plotted: November 15, 2021
Plotted by: kmita

Scale: 1" = 50'
GRAPHIC SCALE

Sheet **21B**

PLANTING LIST

ID	LATIN NAME	COMMON NAME	SIZE	TYPICAL SPACING	TOTAL
TREES					
QC	QUERCUS COCCINEA	SCARLET OAK	2-2.5" CAL	AS SHOWN	3

S. GLEBE ROAD - RTE. 120

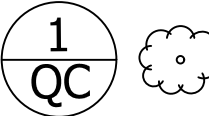





FOUR MILE RUN PARK

D.B. 1128, PG. 42

THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA

RPC 38006004
THE COUNTY BOARD OF ARLINGTON COUNTY VIRGINIA

LANDSCAPE PLAN LEGEND

- SCARLET OAK (SEE PLANTING LIST THIS SHEET) 
- SOIL RESTORATION (SEE SOIL PROFILE REBUILDING, SHEET 22A) 
- LIMIT OF DISTURBANCE 
- LIMIT OF WORK 
- CRITICAL ROOT ZONE 
- EXISTING TREE # (SEE EXISTING TREE INVENTORY, SHEET 6) 

NOTES

- CONTRACTOR TO CONTACT THE ARLINGTON FORESTER TO SCHEDULE A PRE-CONSTRUCTION INSPECTION OF TREE PROTECTION MEASURES BEFORE ANY WORK NEAR THE CRITICAL ROOT ZONES OF TREES. TO SCHEDULE THE PRE-CONSTRUCTION MEETING CALL 703-228-1863.
- CONTRACTOR TO PROTECT TREES PER THE EROSION AND SEDIMENT CONTROL PLAN AND ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAILS: 02231.1.
- DO NOT PERFORM SOIL REMEDIATION WHERE IT WOULD ADVERSELY IMPACT EXISTING TREES.



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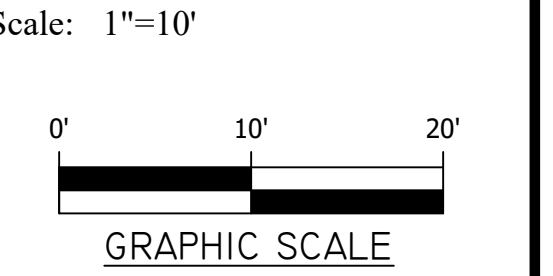


APPROVALS	DATE
<i>J. K. [Signature]</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>[Signature]</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>[Signature]</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>[Signature]</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions	Date

Project Name and Location
S. Glebe Road Intersection Improvements
LANDSCAPE PLAN
S. Glebe Road at S. Arlington Ridge Road

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:
Filename: REF22_Landscape Plan.dwg
Path: \\ar\ms\env\proj\2021\1112_Arlington\Task 1 - S. Glebe Road\REF22.dwg
Plotted: November 15, 2021
Plotted by: kmita



Sheet **22**

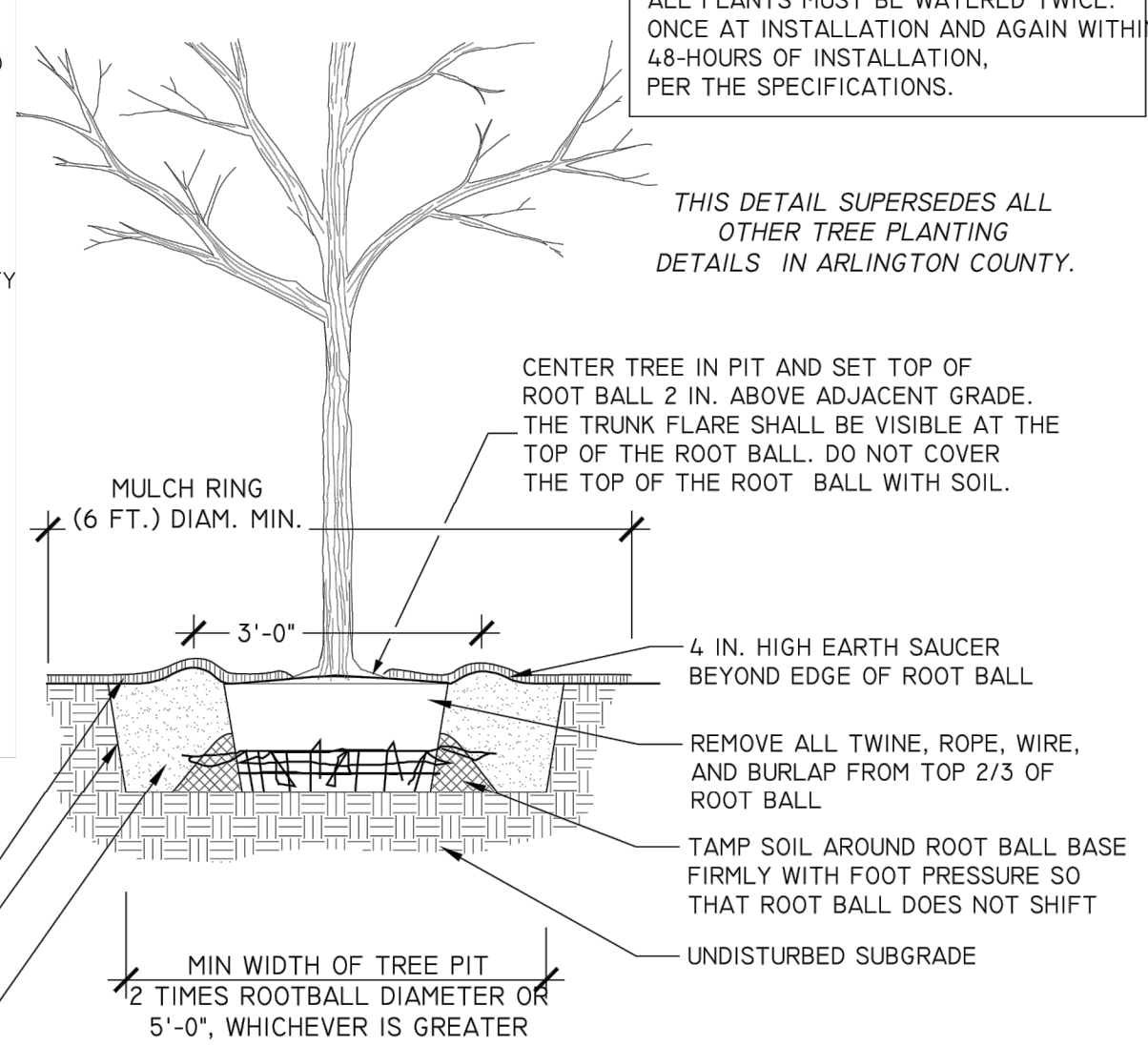
NOTES

1. NOTIFY THE DPR URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE SCHEDULED INSTALLATION OF TREE PITS AND PLANTING OF ANY STREET TREES FOR INSPECTION.
2. A PERMIT IS REQUIRED WHEN TREES ARE PLANTED IN PUBLIC RIGHT-OF-WAY OR IN A PUBLIC EASEMENT. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL ISSUE THE PERMIT ACCORDING TO THE PROVISIONS OF THE CURRENT ARLINGTON COUNTY ADMINISTRATIVE REGULATION 4.3.
3. TREE SPECIES SHALL BE SELECTED FROM THE "ARLINGTON COUNTY STREET TREE LIST" OR PER SECTOR PLAN REQUIREMENTS.
4. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.
5. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
6. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
7. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS: SEE PLAN
8. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.
9. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES.

10. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL, CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED).
11. IF THE QUANTITY OF ACCEPTABLE EXISTING SOIL IS INSUFFICIENT FOR THE PLANTING REQUIREMENTS, THE CONTRACTOR MAY USE TOPSOIL. SOIL TEST REPORT RESULTS FOR THE TOPSOIL WILL BE MADE AVAILABLE TO THE COUNTY URBAN FORESTER UPON REQUEST. CONTRACTOR SHALL SUBMIT TOPSOIL FOR APPROVAL TO COUNTY URBAN FORESTER THAT MEETS THE FOLLOWING SPECIFICATIONS:
 - (A.) TOPSOIL CONSISTS OF A SANDY LOAM WITH UNIFORM COMPOSITION AND IS FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER 1/2" IN LENGTH.
 - (B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF 1.0% ORGANIC MATTER
 - (C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIOHMS PER CENTIMETER.
12. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
13. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.
14. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLODS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.
15. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST OF 20 GALLONS PER TREE.
16. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.
3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL, CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).
4. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.
5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
6. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO STAKING DETAILS.



TREE PLANTING DETAIL
FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.1 (2019)

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.

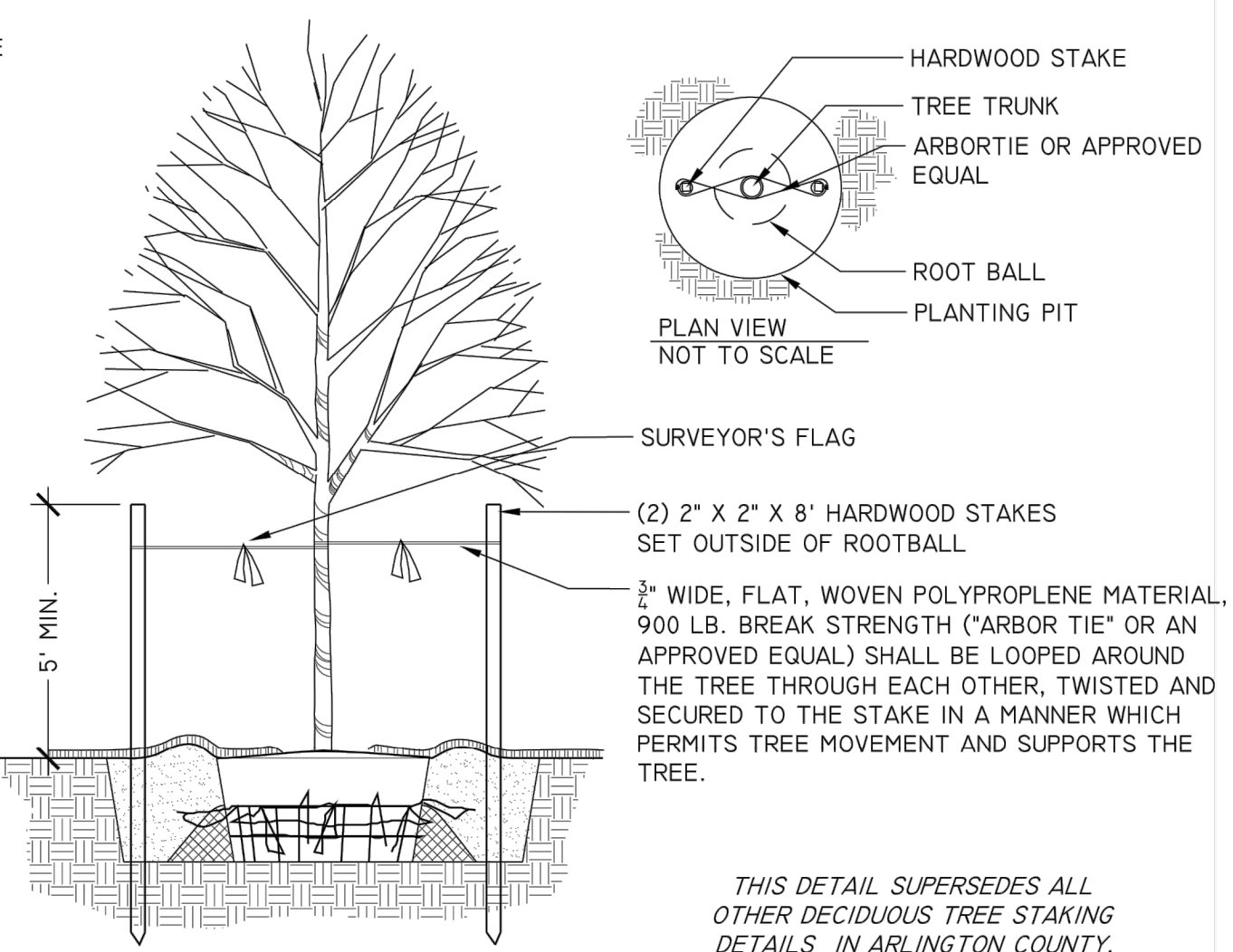
THIS DETAIL SUPERSEDES ALL OTHER TREE PLANTING DETAILS IN ARLINGTON COUNTY.

NOT TO SCALE



NOTES

1. STAKING AND GUYING MAY ONLY BE IMPLEMENTED WHERE SITE CONDITIONS WARRANT THEIR USE. PLANTED TREES WILL BE ASSESSED INDIVIDUALLY BY ARLINGTON COUNTY URBAN FORESTER. STAKING AND GUYING WILL BE INSTALLED ONLY IF REQUIRED BY ARLINGTON COUNTY URBAN FORESTER. CONDITIONS WHERE STAKING AND GUYING MAY BE NECESSARY TO ENSURE STABILITY INCLUDE: WINDY LOCATIONS, STEEP SLOPES, OR WHERE VANDALISM MAY BE A CONCERN.
2. STAKES OR GUYS WILL BE INSTALLED USING ACCEPTED ARBORICULTURE PRACTICES. TREES SHALL STAND PLUMB AFTER STAKING.
3. INSTALLATION WILL INCLUDE THE REMOVAL OF ALL STAKING AND GUYING MATERIAL ONE YEAR AFTER INSTALLATION. ANY HOLES LEFT BY REMOVING STAKING SHALL BE FILLED WITH APPROVED TOPSOIL/BACKFILL MIXTURE.
4. REFER TO DETAILS FOR TREE PLANTING INFORMATION.



DECIDUOUS TREE STAKING
ELEVATION 329300.6 (2016) (02930.6)

NOT TO SCALE



GENERAL NOTES FOR STREET TREE PLANTINGS

FOR TREES PLANTED IN RIGHT-OF-WAY
329300.5 (2020)



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.3344
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Seal



APPROVALS DATE

<i>J. K. Kelle</i>	01/04/2022
TRAFFIC SIGNAL ENGINEER	
<i>John Nallo</i>	01/12/2022
TRAFFIC ENGINEERING MANAGER	
<i>Edgardo</i>	02.09.2022
WATER, SEWER, STREETS BUREAU CHIEF	
<i>H. J. ...</i>	01/07/2022
TE&O BUREAU CHIEF	
<i>Dennis W. Leach</i>	01/07/21
TRANSPORTATION DIRECTOR	

Revisions Date

Project Name and Location
S. Glebe Road Intersection Improvements
LANDSCAPE DETAILS
S. Glebe Road at S. Arlington Ridge Road
TE07

Designed: TIS
Drawn: TIS
Checked: MJA
Miss Utility Transmittal #:

Filename: REF22_Landscape Planting
Path: \\s:\ms\conf\proj\p02111110_Arnone\REF22-1-5_046567.dwg
Plotted: November 15, 2021
Plotted by: kmita

Scale:

SOIL PROFILE REBUILDING
SPECIFICATION FOR RESTORATION OF GRADED AND COMPACTED SOILS THAT WILL BE VEGETATED

CSI DIV 2
CSICODE-02910-PLANT PREPARATION-SOIL PREPARATION

- CONTENTS**
1. PURPOSE AND DESCRIPTION
 2. PROCEDURE
 3. DEFINITIONS
 4. SUBMITTALS

REFERENCES & PERMISSIONS

1. PURPOSE AND DESCRIPTION
 - 1.1. PURPOSE
SOIL PROFILE REBUILDING IS AN APPROPRIATE SOIL RESTORATION TECHNIQUE FOR SITES WHERE TOPSOIL HAS BEEN COMPLETELY OR PARTIALLY REMOVED AND SUBSOIL LAYERS HAVE BEEN COMPACTED (GRADED AND/OR TRAFFICKED BY EQUIPMENT). IT MAY ALSO BE USED WITH SOME MODIFICATIONS IF TOPSOIL IS PRESENT. THIS IS NOT AN APPROPRIATE TECHNIQUE IN SITES WITH SURFACE COMPACTION ONLY (6 INCHES OR LESS), ALTHOUGH THIS SITUATION IS RARE ON CONSTRUCTION SITES. THIS TECHNIQUE IS NOT APPROPRIATE WITHIN THE ROOT ZONES OF TREES THAT ARE TO BE PROTECTED. SOIL PROFILE REBUILDING CAN IMPROVE PHYSICAL AND BIOLOGICAL CHARACTERISTICS OF SOIL TO ALLOW FOR REVEGETATION. SOIL CHEMICAL PROBLEMS, SOIL CONTAMINATION FROM HEAVY METALS, PATHOGENS, OR EXCESSIVE DEBRIS OR GRAVEL SHALL BE ADDRESSED SEPARATELY.
 - 1.2. DESCRIPTION OF PROCEDURE
THE PROCEDURE INCLUDES A SUBSOILING PROCEDURE, ADDITION OF ORGANIC MATTER IN THE FORM OF COMPOST, REPLACEMENT OR ADDITION OF TOPSOIL, AND SUBSEQUENT PLANTING WITH WOODY PLANTS. THE SOIL PREPARATION PORTION OF SOIL PROFILE REBUILDING PUTS THE COMPONENTS IN PLACE FOR RESTORATION TO CHARACTERISTICS SIMILAR TO UNDISTURBED SOILS. HOWEVER, THE COMPLETE RESTORATION PROCESS REQUIRES ROOT ACTIVITY AND OCCURS OVER MANY YEARS. THIS TECHNIQUE MAY BE APPROPRIATE FOR RESTORATION OF DISTURBED SOILS AS DEFINED BY SITES™.
 - 1.3. EXPECTED OUTCOMES
SOIL PROFILE REBUILDING MAY IMPROVE VEGETATION ESTABLISHMENT, INCREASE TREE GROWTH RATES, INCREASE SOIL PERMEABILITY, ENHANCE FORMATION OF AGGREGATES IN THE SUBSOIL, AND ENHANCE LONG-TERM SOIL CARBON STORAGE.
2. PROCEDURE
 - 2.1. LOCATION
PROFILE REBUILDING SHALL OCCUR ON ALL SOIL AREAS THAT ARE TO BE VEGETATED THAT HAVE BEEN DISTURBED BY TRAFFICKING OR GRADING DURING CONSTRUCTION OR PRIOR TO CONSTRUCTION. SOIL AREAS THAT ARE NOT TO BE TREATED SHOULD BE PROTECTED BY PERMANENT FENCING DURING THE CONSTRUCTION PERIOD AND ALL ACCESS TO THESE AREAS PROHIBITED. A SOIL MAP DELINEATING PROTECTED AREAS AND AREAS TO BE TREATED SHALL BE APPROVED BY THE OWNER, ARBORIST, OR LANDSCAPE ARCHITECT BEFORE GRADING OR CONSTRUCTION BEGINS.
 - 2.2. SEQUENCING
PROFILE REBUILDING SHALL OCCUR AFTER SITE DISTURBANCE IS COMPLETE, INCLUDING ALL VEHICLE AND EQUIPMENT TRAFFICKING, BUT BEFORE REPLACEMENT OF TOPSOIL. ONCE PROFILE REBUILDING IS COMPLETE, ALL TRAFFIC AND EQUIPMENT OR MATERIALS STORAGE ON TREATED AREAS IS PROHIBITED WITH THE EXCEPTION OF FOOT TRAFFIC FOR THE PURPOSES OF PLANTING OR MULCHING.
IF TOPSOIL IS ALREADY PRESENT AND IS 4 INCHES OR GREATER IN DEPTH, USE THE "MODIFICATIONS FOR PREEXISTING TOPSOIL."
 - 2.3. REMOVE FOREIGN MATERIALS
REMOVE ALL FOREIGN MATERIALS RESULTING FROM CONSTRUCTION OPERATIONS, INCLUDING OIL DRUMS, STONE, GRAVEL, AND OTHER CONSTRUCTION MATERIALS FROM THE EXISTING SOIL SURFACE.

2.4. APPLICATION OF COMPOST
SPREAD MATURE, STABLE COMPOST (SEE SECTION 3. DEFINITIONS FOR DEFINITION OF COMPOST) TO A 4 INCH DEPTH OVER COMPACTED SUBSOIL.

2.5. SUBSOILING
SUBSOILING MAY BE PERFORMED WHEN SOIL IS NEITHER WET NOR DRY. IF A SHOVEL CANNOT BE FORCED INTO THE SOIL, IT IS TOO DRY. IF THE SURFACE IS STICKY OR MUDDY, IT IS TOO WET. USE A BACKHOE REARBUCKET OR SIMILAR EQUIPMENT WITH A TINED BUCKET TO BREAK UP THE COMPACTED SOIL AND INCORPORATE THE COMPOST. WORK BACKWARDS AWAY FROM EXCAVATED SOILS SO THAT TREATED SOIL IS NOT TRAFFICKED BY THE EQUIPMENT. INSERT THE BUCKET THROUGH THE COMPOST LAYER AND INTO THE SUBSOIL TO A DEPTH OF 24 INCHES AND RAISE A BUCKET OF SOIL AT LEAST 24 INCHES ABOVE THE SOIL SURFACE. TIP THE BUCKET AND ALLOW SOIL TO FALL. REPEAT THIS PROCEDURE UNTIL NO CLUMPS OF COMPACTED SOIL LARGER THAN 12 INCHES IN DIAMETER REMAIN. THE TINES OF THE BUCKET CAN BE USED TO BREAK APART LARGER CLUMPS IF NECESSARY. 50% OF THE SOIL SHALL BE IN CLUMPS 6 INCHES OR SMALLER. NO CLUMPS SHALL BE GREATER THAN 18" IN DIAMETER. THE SUBSOILING IS NOT INTENDED TO HOMOGENIZE THE COMPOST AND SOIL, BUT RATHER LOOSEN THE SOIL TO A 24-INCH DEPTH AND CREATE VEINS OF COMPOST DOWN TO THAT DEPTH AS WELL. TO ENSURE THAT SUBSOILING REACHED THE APPROPRIATE DEPTH, A PUSH TUBE SOIL SAMPLER SHALL BE USED TO VERIFY COMPOST IS PRESENT AT 24 INCH DEPTH.

2.6. REPLACEMENT OF TOPSOIL

- 2.6.1. STANDARD PROCEDURE
STOCKPILED TOPSOIL, OR ADDITIONAL TOPSOIL IF NONE IS AVAILABLE FROM THE SITE, SHALL BE RETURNED TO THE SITE TO A 4 INCH MINIMUM DEPTH (SEE SECTION 3.3 DEFINITIONS FOR DEFINITION OF TOPSOIL). IF SOIL WAS SEVERELY DISTURBED (SEE DEFINITIONS), A 6-8 INCH MINIMUM SHALL BE REPLACED.
- 2.6.2. MODIFICATION IF SIGNIFICANT TOPSOIL IS ALREADY PRESENT BEFORE PROFILE REBUILDING IS INITIATED

CASE 1:
AT LEAST FOUR INCHES OF TOPSOIL IS PRESENT ON THE SITE AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED AND SOIL IS NOT SEVERELY DISTURBED (SEE SECTION 3.3 DEFINITIONS FOR DESCRIPTION OF SEVERELY DISTURBED).

CASE 2:
LESS THAN 4 INCHES OF TOPSOIL IS PRESENT ON SITE AFTER CONSTRUCTION ACTIVITIES WERE COMPLETED BUT BEFORE PROFILE REBUILDING IS INITIATED, OR SOIL IS SEVERELY DISTURBED (SEE SECTION 3.3 DEFINITIONS FOR DESCRIPTION OF SEVERELY DISTURBED).

FOR CASE 1: A MINIMUM OF 3 INCHES ADDITIONAL TOPSOIL SHALL BE PLACED OVER THE SUBSOILED LAYER BEFORE TILLING.

FOR CASE 2: FOLLOW SECTION 2.6.1 STANDARD PROCEDURE, AS IF NO TOPSOIL HAD BEEN PRESENT.

2.7. TILLING
ROTTOTILL TOPSOIL TO A DEPTH OF 6-8 INCHES WHEN SOIL IS NEITHER DRY NOR VERY MOIST. ROTTOTILLING DEPTH SHOULD CROSS THE INTERFACE WITH THE SUBSOILED LAYER BY A MINIMUM OF 1 INCH AND CAN BE VERIFIED WITH A RANDOM SAMPLING WITH A PUSH TUBE SOIL SAMPLER.

2.8. PLANTING
PLANT THE SITE WITH WOODY PLANTS, TREES OR SHRUBS, AT A DENSITY THAT INSURE A MINIMUM OF 50% OF THE SITE WILL BE OCCUPIED WITH ROOTS WITHIN 10 YEARS. PLANTING OF AT LEAST ONE LARGE STATURE TREE (E.G., ONE THAT WILL MATURE AT APPROXIMATELY 60-70 FEET IN HEIGHT) OR 20 MEDIUM STATURE SHRUBS PER 5,000 SQ. SHALL BE CONSIDERED TO ACHIEVE THIS.

DEFINITIONS

3.1. TOPSOIL
SOIL CAN BE CONSIDERED TOPSOIL IF IT ORIGINATES FROM AN A HORIZON OF A NATURAL SOIL OR IS A MINERAL SOIL WITH 3% OR GREATER ORGANIC MATTER CONTENT AND A NRC TEXTURAL CLASS SIMILAR TO PRE-DEVELOPMENT A HORIZON SOILS FOR THE SITE OR AS SPECIFIED BY THE OWNER, ARBORIST, OR LANDSCAPE ARCHITECT. BLENDED SOILS SHALL NOT BE USED UNLESS SPECIFIED BY THE OWNER,

- ARBORIST, OR LANDSCAPE ARCHITECT. IN ADDITION TOPSOIL SHALL:
1. BE FRIABLE AND WELL DRAINED
 2. HAVE A PH BETWEEN 5.2 AND 7.5 (A NARROWER RANGE MAY BE SPECIFIED FOR PARTICULAR PLANT MATERIAL)
 3. HAVE AN ORGANIC MATTER CONTENT NOT LESS THAN 3%
 4. HAVE LOW SALINITY AS INDICATED BY AN ELECTRICAL CONDUCTIVITY OF LESS THAN 4.0 MMHOS/CM
 5. BE FREE OF DEBRIS, STONES, GRAVEL, TRASH, LARGE STICKS, HEAVY METALS, AND OTHER DELETERIOUS CONTAMINANTS. (IF SCREENING IS USED TO REMOVE DEBRIS, SCREEN SIZE MUST BE 3/4 INCH OR LARGER)
 6. HAVE A NUTRIENT PROFILE SUCH THAT IT IS ABLE TO SUPPORT PLANT GROWTH
 7. BE FREE OF NOXIOUS WEED SEEDS

3.2. COMPOST
COMPOST FEEDSTOCK SHALL BE LEAVES, YARDWASTE, OR FOODWASTE. BIOSOLID-BASED COMPOSTS SHALL NOT BE A COMPOST SAMPLE WITH ANALYSIS SHALL BE SUBMITTED FOR APPROVAL TO THE CLIENT BEFORE APPLICATION.

STABILITY REFERS TO THE RATE OF BIOLOGICAL BREAKDOWN, MEASURED BY CARBON DIOXIDE RELEASE. MATURITY REFERS TO COMPLETENESS OF THE AEROBIC COMPOSTING PROCESS AND SUITABILITY (LACK OF PLANT TOXICITY) AS A PLANT GROWTH MEDIA, OFTEN MEASURED BY AMMONIA RELEASE AND BY PLANT GROWTH TESTS. COMPOST MANUFACTURERS THAT SUBSCRIBE TO THE US COMPOSTING COUNCIL'S TESTING PROGRAM MAY DOCUMENT STABILITY AS COMPOST TESTING 7 OR BELOW IN ACCORDANCE WITH TMECC 05.08-B. "CARBON DIOXIDE EVOLUTION RATE"; MATURITY (SUITABILITY FOR PLANT GROWTH) MAY BE DOCUMENTED AS COMPOST TESTING GREATER THAN 80% IN ACCORDANCE WITH TMECC 05.05-A. "GERMINATION AND VIGOR". COMPOST IS CONSIDERED MATURE AND STABLE IF IT TESTS AT 6.0 OR HIGHER ON THE SOLVITA COMPOST MATURITY INDEX RATING, WHICH IS A COMBINATION OF CARBON DIOXIDE AND AMMONIA MATURITY TESTS (TEST INFORMATION AND EQUIPMENT AVAILABLE AT WWW.SOLVITA.COM).

COMPOST SHALL ALSO:

1. FREE OF WEED SEEDS
2. FREE OF HEAVY METALS OR OTHER DELETERIOUS CONTAMINANTS
3. HAVE AN EC OF LESS THAN 4.0 MMHOS/CM

3.3. SEVERELY DISTURBED SOIL
SOIL SHALL BE CONSIDERED SEVERELY DISTURBED IF GRADE WAS LOWERED MORE THAN 14 INCHES OR SOIL WAS COMPACTED IN LIFTS REGARDLESS OF THE FINAL GRADE.

SUBMITTALS

- 1.1. SOIL MAP
A SOIL MAP INDICATING SOIL AREAS TO BE PROTECTED AND THOSE TO BE RESTORED VIA SOIL PROFILE REBUILDING SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE OWNER, ARBORIST, OR LANDSCAPE ARCHITECT BEFORE CONSTRUCTION BEGINS.
- 1.2. COMPOST
A COMPOST SAMPLE WITH ANALYSIS CERTIFYING IT IS STABLE, MATURE, FROM ACCEPTABLE FEEDSTOCKS AND FREE OF CONTAMINANTS AND WEED SEEDS SHALL BE SUBMITTED FOR APPROVAL TO THE LANDSCAPE ARCHITECT OR OWNER BEFORE COMPOST IS APPLIED TO THE SOIL.
- 1.3. TOPSOIL
A TOPSOIL SAMPLE WITH ANALYSIS FROM A CERTIFIED TESTING LABORATORY AND VERIFICATION OF SOURCE SHALL BE SUBMITTED FOR APPROVAL TO THE LANDSCAPE ARCHITECT OR OWNER BEFORE APPLICATION. SEPARATE DOCUMENTATION IS REQUIRED FOR EACH 100 CUBIC YARDS OF TOPSOIL UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER.

REFERENCES & PERMISSIONS
USE OF THIS SPECIFICATION HAS BEEN DOCUMENTED TO INCREASE TREE CANOPY AND SOIL CARBON STORES COMPARED WITH TYPICAL PRACTICES. SEE WWW.URBANFORESTRY.FREC.VT.EDU/SRES FOR MORE INFORMATION.

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