

REVISED: MARCH 03, 2020

Filename: C-0000 COVER SHEET\_06TH.dwg  
Path: K:\NVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets



DEPARTMENT OF ENVIRONMENTAL SERVICES

Signal Systems and ITS  
Traffic Engineering and Operations Bureau  
2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201  
Phone: 703.228.3629 Fax: 703.228.3606 www.arlingtonva.us

Construction Drawings For:  
S. Carlin Springs Road  
Signal Upgrades  
Intersection of:

- S. Carlin Springs Road & 6th Road South

THIS PROJECT CONSISTS OF TRAFFIC SIGNAL MODIFICATIONS AT THE INTERSECTION OF S. CARLIN SPRINGS ROAD WITH WITH 6TH ROAD S. THE SIGNAL MODIFICATIONS INCLUDE REMOVING ALL EXISTING EQUIPMENT AND REPLACING WITH NEW EQUIPMENT, ACCESSIBLE PEDESTRIAN SIGNAL DEVICES, AND LIMITED SIDEWALK AND CURB AND GUTTER MODIFICATIONS.

SWM 20-0224

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.
- SL1 COBRA LIGHTING SHALL BE LED TYPE RFL-145W64LED4K-T-R2M-UNIV-DMG-PH8-PCD7-[USA-003]-BK. SL2 DECORATIVE POST-TOP LIGHTING SHALL BE HADCO DECORATIVE POST-TOP LUMINAIRE WITH RELUME LED KIT (UAZ XRE LED 57.69W).

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:  
2.1 TO REST IN PHASE 2 & 6 GREEN INTERVAL  
2.2 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 & STREETLIGHT 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 PIGTAIL 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 MOHIUDDIN, 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.

Location Map

Scale: 1" = 500'

Vicinity



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DESIGN CHARACTERISTICS			
ROAD CLASSIFICATION	ADT (2019)	PROJECT COMPLETION	DESIGN YEAR
ARTERIAL TYPE D SOUTH OF 5TH RD S	31,000 VPD	N/A	N/A

DESIGN SPEED = 30 M.P.H.

ALL TRAFFIC SIGNALS ARE OWNED, MAINTAINED AND OPERATED BY ARLINGTON COUNTY. TRAFFIC SIGNAL DESIGN SHALL BE IN ACCORDANCE WITH LATEST ARLINGTON COUNTY TRAFFIC SIGNAL STANDARDS AND SPECIFICATIONS.

I CERTIFY THAT THIS PROJECT WAS BUILT IN SUBSTANTIAL CONFORMANCE WITH THIS PLAN, UNLESS DULY NOTED IN THE ABOVE REVISION BLOCK.

PROJECT MANAGER	DATE
CONSTRUCTION MANAGER	DATE

CALL 48 HOURS BEFORE YOU DIG

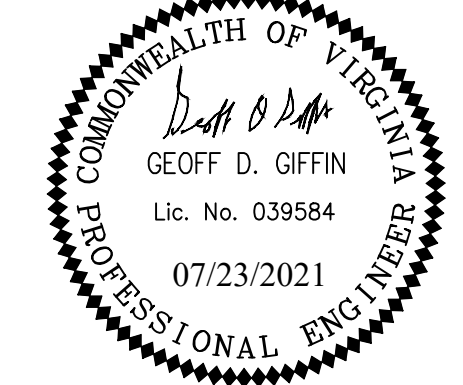
IT'S THE LAW! DIAL 811



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
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Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS DATE

	06/21/21
	06/21/21
	07.16.2021
	06/22/2021
	06/23/21

REVISIONS DATE


S. Carlin Springs Road  
Signal Upgrades

COVER SHEET

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
C-0000

S. Carlin Springs Road Signal Upgrades



# LEGEND AND SURVEY DATA

Symbols	
Existing	Proposed
Construction Notes	

STORM SEWER TABULATION:

#15243  
TOP = 260.75  
15" RCP INV. OUT (15411) = 257.55 (per plan info)

#15411  
TOP = 258.95  
15" RCP INV. IN (15243) = 255.80  
18" RCP INV. OUT (27544) = 255.62

#15415  
TOP = 258.26  
30" RCP INV. IN (15488) = 246.73

#15488  
TOP = 259.12  
24" RCP INV. IN (15495) = 250.66  
30" RCP INV. OUT (15415) = 250.49

#15495  
TOP = 258.67  
18" RCP INV. IN (15636) = 253.88  
24" RCP INV. OUT (15488) = 250.92

#15636  
TOP = 260.09  
18" RCP INV. IN (15676) = 256.30  
18" RCP INV. OUT (15495) = 256.25

#15685  
TOP = 260.85  
15" RCP INV. IN (15911) = 257.33

#15911  
TOP = 264.70  
STRUCTURE NOT ACCESSIBLE  
15" RCP INV. IN (15948) = 261.09 (PER PLAN INFO)  
15" RCP INV. IN (15929) = 260.93 (PER PLAN INFO)  
15" RCP INV. OUT (15685) = 260.86 (PER PLAN INFO)

#15948  
TOP = 265.20  
15" RCP INV. OUT (15911) = 261.48

#15929  
TOP = 264.72  
15" RCP INV. OUT (15911) = 260.90

#16337  
TOP = 249.15  
15" RCP INV. OUT (16357) = 245.94

#16357  
TOP = 247.64  
15" RCP INV. IN (16337) = 244.40  
15" RCP INV. IN (16316) = 243.90  
15" RCP INV. OUT (16431) = 243.14

#16316  
TOP = 249.56  
15" RCP INV. OUT (16357) = 245.01

#16431  
TOP = 235.47  
15" RCP INV. IN (16357) = 232.71  
15" RCP INV. OUT (16560) = 231.57

#16560  
TOP = 228.74  
15" RCP INV. IN (16431) = 223.00

#16383  
TOP = 249.55  
15" RCP INV. OUT (16428) = 246.85

#16428  
TOP = 246.65  
15" RCP INV. IN (16383) = 242.45  
15" RCP INV. IN (16445) = 239.17  
27" RCP INV. = 238.88  
27" RCP INV. OUT (16456) = 238.81

#16445  
TOP = 245.60  
15" RCP INV. OUT (16456) = 240.12

#16456  
TOP = 238.51  
27" RCP INV. IN (16428) = 234.97  
27" RCP INV. OUT (16472) = 234.79

#16472  
TOP = 235.90  
27" RCP INV. IN (16456) = 231.26  
27" RCP INV. OUT (16518) = 230.59

#16518  
TOP = 231.61  
27" RCP INV. IN (16472) = 224.96  
27" RCP INV. OUT (16604) = 224.46

#27541  
TOP = 259.37  
15" RCP INV. OUT (2744) = 255.63  
15" RCP INV. IN (27542) = 255.69

#27542  
TOP = 259.61  
15" RCP INV. OUT = 256.23

#27544  
TOP = 258.96  
18" RCP INV. IN (15411) = 255.05  
15" RCP INV. IN (27541) = 255.09  
18" RCP INV. OUT (15495) = 254.99

SANITARY SEWER TABULATION:

#1635  
TOP = 261.27  
C/L INV. = 252.42

#1636  
TOP = 259.38  
C/L INV. = 253.52

#1637  
TOP = 267.65  
C/L INV. = 259.27

#6388  
TOP = 259.29  
C/L INV. = 254.04

#9335  
TOP = 259.83  
NOT ACCESSIBLE  
C/L INV. = 254.43 (PER PLAN INFO)

#3853  
TOP = 261.20  
NOT ACCESSIBLE  
C/L INV. = 255.26 (PER PLAN INFO)

#6744  
TOP = 261.80  
C/L INV. = 255.31

#3854  
TOP = 265.18  
NOT ACCESSIBLE  
C/L INV. = 256.71 (PER PLAN INFO)

#3855  
TOP = 265.25  
C/L INV. = 258.21

#6183  
TOP = 265.66  
NOT ACCESSIBLE  
C/L INV. = 256.60 (PER PLAN)

#10706  
TOP = 262.36  
C/L INV. = 258.07

#8106  
TOP = 260.28  
C/L INV. = 257.48

#7924  
TOP = 262.69  
C/L INV. = 256.71

#7293  
TOP = 258.82  
C/L INV. = 254.89

#12290  
TOP = 251.77  
C/L INV. = 239.64

#12289  
TOP = 247.74  
C/L INV. = 234.27

#12287  
TOP = 245.55  
C/L INV. = 232.68

#12288  
TOP = 254.75  
C/L INV. = 243.91

#12286  
TOP = 234.97  
C/L INV. = 223.85

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
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Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

APPROVALS	DATE
	06/21/21
TRAFFIC SIGNAL ENGINEER	
	06/21/21
TRAFFIC ENGINEERING MANAGER	
	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
	06/22/2021
TE&O BUREAU CHIEF	
	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

LEGEND AND SURVEY DATA

ID #234

TE02

Designed: AS

Drawn: AS

Checked: GG

Miss Utility Transmittal #:

Plotted: July 23, 2021

Plotted by: Max.Gawthrop

Scale:

HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive, Suite 400

Reston, Virginia 20191

Sheet

C-0001



REVISID: MARCH 03, 2020

Filename: C-0002 GENERAL NOTES AND DETAILS\_6TH.dwg  
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# General Signal Notes

1. ALL WORK FOR TRAFFIC SIGNALS, TRAFFIC SIGNS, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE LATEST EDITION OF THE ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS, 2016 VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, 2016 VDOT ROAD AND BRIDGE STANDARDS, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PRODUCTION MANUAL, AND SPECIAL PROVISIONS IN EFFECT AT THE TIME OF ADVERTISEMENT.

2. FIVE WORKING DAYS PRIOR TO COMMENCING SIGNAL INSTALLATION/MODIFICATION WORK AT ANY LOCATION IN ARLINGTON COUNTY, VIRGINIA, SIGNAL CONTRACTORS MUST NOTIFY THE COUNTY ENGINEER IN WRITING WITH THE NAME, DAYTIME PHONE NUMBER, AND EMERGENCY PHONE NUMBERS OF THE CONTRACTOR.THIS NOTIFICATION IS TO INCLUDE LOCATION, ROUTE NUMBERS, TYPE, AND DETAILS OF CONSTRUCTION AND SCHEDULE OF WORK.

3. THE TRAFFIC SIGNAL CONSTRUCTION SHALL NOT BEGIN WITHOUT PRIOR NOTIFICATION AND APPROVAL FROM ARLINGTON COUNTY.

4. THE COUNTY ENGINEER, PRIOR TO CONSTRUCTION, SHALL VERIFY POLE(S) AND CONTROLLER CABINET LOCATIONS.

5. ALL CATALOG CUTS, POLE CALCULATIONS, FOUNDATION DESIGNS, SHOP DRAWINGS, ETC., SHALL BE SUBMITTED TO, AND APPROVED BY, ARLINGTON COUNTY PRIOR TO CONSTRUCTION.

6. OPERATION OF THE SIGNALIZED INTERSECTION IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TRAFFIC SIGNAL IS ACCEPTED BY ARLINGTON COUNTY.

7. ANY NOTES NOT MENTIONED IN THE NOTES SECTION OF THIS SIGNAL PLAN WILL REVERT TO THE ARLINGTON COUNTY STANDARDS.

8. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL COMMUNICATION THROUGHOUT THE PROJECT.

9. ALL NEW CONTROLLER CABINETS MUST BE FURNISHED WITH A BACKUP POWER BATTERY.
10. 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 UTILITY LATERALS ARE NOT LOCATED. CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITY LATERALS AND IS RESPONSIBLE FOR ANY DAMAGE TO PRIVATE UTILITY LATERALS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, PAVEMENT MARKINGS, CURB AND GUTTER, SIDEWALK, ETC. THAT ARE DAMAGED DURING CONSTRUCTION .

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SIGNING, DELINEATION, PAVEMENT MARKINGS AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY TO PERFORM THE WORK IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL TEMPORARY DEVICES.

13. THE CONTRACTOR SHALL SUBMIT "AS-BUILT" DRAWINGS TO ARLINGTON COUNTY UPON JOB COMPLETION AND FINAL INSPECTION .

14. EXISTING CONTROLLER AND CABINETS SPECIFIED TO BE REMOVED SHALL BE RETURNED TO ARLINGTON COUNTY.

15. CCTV LOCATIONS AND QUANTITIES ARE FOR PLANNING PURPOSES ONLY. THE FINAL LOCATIONS SHALL BE FIELD LOCATED.

16. CONTRACTOR SHALLL COORDINATE WITH UTILITY COMPANIES ON ADJUSTMENT OF OVERHEAD CABLES TO INSTALL MAST ARM SIGNAL POLES.

## GENERAL CONSTRUCTION NOTES

1. ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, THE ARLINGTON COUNTY PARK DESIGN STANDARDS, THE ARLINGTON COUNTY TRAFFIC SIGNAL AND STREETLIGHT 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.
3. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
5. 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, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
6. 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.
7. 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 TRENCHES) 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 AS DIRECTED BY OFFICER. 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.
8. 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.
9. 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.

## STORMWATER AND ENVIRONMENTAL PROTECTION

10. 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 DISTURBANCE (LOD).
11. THE CONTRACTOR SHALL PROTECT EXISTING DRAINAGE FACILITIES (TO INCLUDE CURB AND GUTTER) AND WATERWAYS FROM ADVERSE IMPACTS PER SECTION 01500 OF THE ARLINGTON COUNTY STANDARDS & SPECIFICATIONS.
12. 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

13. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD. NO TREES SHALL BE REMOVED OR OTHERWISE AFFECTED UNLESS CLEARLY MARKED ON THE APPROVED PLAN.

## TRAFFIC CONTROL

14. CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
15. THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
16. THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS.
17. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049
18. 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

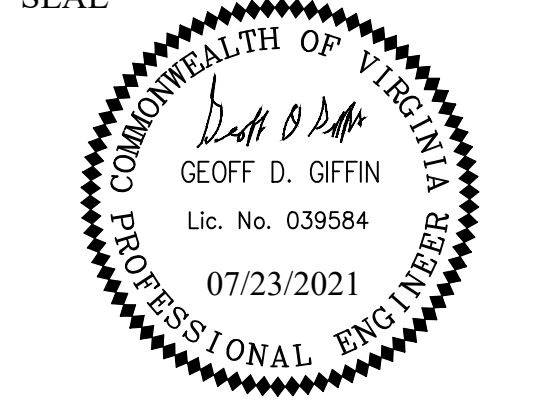
19. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS IN ADVANCE OF THE REQUIRED OPERATION.
20. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-5555 AND THE PROJECT OFFICER.



## DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

## SEAL



APPROVALS	DATE
	06/21/21
TRAFFIC SIGNAL ENGINEER	
	06/21/21
TRAFFIC ENGINEERING MANAGER	
	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
	06/22/2021
TE&O BUREAU CHIEF	
	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

GENERAL NOTES AND DETAILS

ID #234

TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
C-0002



MAPPING

1. EXISTING CONDITIONS MAPPING PROVIDED BY ARLINGTON COUNTY. BASIS FOR MAPPING IS FIELD SURVEY AND AS-BUILT INFORMATION.

GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND KEEP COPIES OF THE SAME ON SITE DURING CONSTRUCTION, EXCEPT AS PROVIDED BY ARLINGTON COUNTY.
2. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE, FREE FROM TRASH AND DEBRIS.
3. THE CONTRACTOR SHALL KEEP AND MAINTAIN A SET OF APPROVED PROJECT PLANS AND SPECIFICATIONS ON SITE AT ALL TIMES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, PAVEMENT MARKINGS, ETC. THAT MUST BE CUT OR REMOVED, OR THAT ARE DAMAGED DURING CONSTRUCTION.

COORDINATION

1. CONSTRUCTION WILL TAKE PLACE ADJACENT TO ONGOING TRAFFIC OPERATIONS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ARLINGTON COUNTY (AC).
2. THE CONTRACTOR SHALL SUBMIT A SCHEDULE FOR CONSTRUCTION TO AC IN ACCORDANCE WITH ARLINGTON COUNTY D.E.S. REQUIREMENTS.
3. PER THE CONTRACT DOCUMENTS, PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A MEETING WITH AC TO DISCUSS COORDINATION OF CONSTRUCTION ACTIVITIES AND RELATED PROJECTS. THE CONTRACTOR SHALL PARTICIPATE IN A CONTRACTOR LED BIWEEKLY PROGRESS MEETINGS WITH THE COUNTY AND SHALL SUBMIT SCHEDULE UPDATES AT THESE MEETINGS.
4. THE CONTRACTOR WILL ALSO BE REQUIRED TO CLOSELY COORDINATE WITH ADJACENT ONGOING AND PLANNED PROJECTS BEING CONSTRUCTED BY OTHERS, INCLUDING BUT NOT LIMITED TO THE COUNTY FIBER OPTIC INSTALLATION.

CLEARING AND GRUBBING/DEMOLITION

1. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY ARLINGTON COUNTY (AC).
2. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
3. DEMOLITION DETAILS AND NOTES ARE INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK AND ARE NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH AC AND APPROPRIATE UTILITY COMPANIES PRIOR TO WORK.
4. THE CONTRACTOR SHALL REMOVE OR ABANDON, AS SPECIFIED, EXISTING UTILITIES SUCH AS STORM DRAINAGE, SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE OR AS DIRECTED BY AC. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY AND AC TO COORDINATE ABANDONMENT OR REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
6. ALL MATERIALS REMOVED UNDER CLEARING WORK, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACES.
8. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.

UTILITIES

1. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, NONEXISTENCE, SIZE, TYPE, LOCATION, ALIGNMENT, OR DEPTH OF ANY UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE, INFORMATION SHOWN MAY BE FROM UTILITY OWNER'S RECORDS AND/OR ELECTRONIC LINE TRACING, THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM TEST EXCAVATIONS OR OTHER REINVESTIGATIONS AS NECESSARY TO VERIFY LOCATION AND CLEARANCES.
2. UNLESS OTHERWISE NOTED, UTILITIES LIDS, INCLUDING WATER VALVE LIDS, ARE TO BE ADJUSTED BY THE CONTRACTOR TO MATCH FINAL GRADE AND SLOPE.
3. STATE LAW MANDATES THE NOTIFICATION OF UTILITY OWNERS 48 HOURS IN ADVANCE OF EXCAVATION. FOR LOCATION OF UTILITIES CALL:
- | UTILITY OWNERS                | TELEPHONE    |
|-------------------------------|--------------|
| DOMINION VIRGINIA POWER (DVP) | 888-667-3000 |
| VERIZON COMMUNICATIONS        | 888-826-2355 |
| COMCAST                       | 888-683-1000 |
| JONES FIBER                   | 540-891-5545 |
| WASHINGTON GAS                | 703-750-1000 |
4. CONTRACTOR SHALL CONFORM TO THE "OVERHEAD HIGH VOLTAGE ACT" (EFFECTIVE JULY 1, 2003) AND SHALL CONTACT THE NECESSARY AUTHORITIES PRIOR TO START OF CONSTRUCTION.
5. ARLINGTON COUNTY'S UTILITY DEPARTMENT INSPECTOR SHALL BE NOTIFIED WHEN ANY IMPROVEMENT PERTINENT TO HIS INSPECTION DUTIES ARE BEING INSTALLED. SPECIFIC REQUIREMENTS ARE:
- A. SITE INSPECTOR OR AREA SUPERVISOR IS TO BE NOTIFIED AT LEAST 3 DAYS PRIOR TO START OF CONSTRUCTION.
- B. A MINIMUM OF 24 HOURS NOTICE IS REQUIRED WHEN REQUESTING COMPACTION TESTS.
6. STABLE SUBGRADE SHALL COMPRISE SOLID, WELL DRAINED, UNDISTURBED EARTH CAPABLE OF SUPPORTING STREET LOADING WITHOUT RESULTING IN ANY DAMAGING SETTLEMENT AS DETERMINED BY THE ENGINEER.
7. WHERE UNSUITABLE SUBGRADE, AS DETERMINED BY THE ENGINEER, IS ENCOUNTERED, IT SHALL BE MADE STABLE BY DRAINING, COMPACTING, AND/OR REPLACING AS REQUIRED, TO THE SATISFACTION OF THE ENGINEER.
8. ALL CONCRETE SHALL BE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) CLASS "A4" FOR PRECAST STRUCTURES AND VDOT CLASS "A3" FOR ALL OTHERS USES, UNLESS OTHERWISE SPECIFIED.
9. ALL ASPHALT PAVEMENT COURSES SHALL BE IN CONFORMANCE WITH VDOT SPECIFICATIONS.
10. EXISTING FIRE HYDRANTS MUST REMAIN ACTIVE UNTIL NEW HYDRANTS ARE AVAILABLE FOR PUBLIC USE. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS AND FIRE DEPARTMENT WHEN SERVICES TO PROPERTIES ARE INTERRUPTED.

WATER-SEWER CONSTRUCTION REQUIREMENTS

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS & SPECIFICATIONS AND SHALL BE APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES. UPON PHYSICAL INSPECTION, THE COUNTY RESERVES THE RIGHT TO REJECT THE USE OF ANY MATERIAL FOUND TO BE DEFECTIVE OR NOT CONFORMING TO THE STANDARDS AND SPECIFICATIONS.
2. BEFORE START OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE FOLLOWING INFORMATION AND/OR EVIDENCE OF COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND LAWS, TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES:
- THE NAME AND ADDRESS OF THE CONTRACTOR HIRED TO WORK ON THE PROJECT. THE CONTRACTOR SHALL BE REGISTERED IN THE COMMONWEALTH OF VIRGINIA. SATISFACTORY EVIDENCE SHALL BE FURNISHED OF THE CONTRACTOR'S PRIOR EXPERIENCE AS PRIME CONTRACTOR IN THE CONSTRUCTION OF WATER MAINS AND/OR SANITARY SEWER INSTALLATIONS. FURTHER, THE CONTRACTOR SHALL FURNISH A LETTER WITH A LIST OF MATERIALS AND SUPPLIERS FOR PROPOSED PROJECT.
  - A RIGHT-OF-WAY PERMIT IS REQUIRED TO WORK IN ARLINGTON COUNTY STREETS. IN INSTANCES OF EXCAVATIONS IN STATE RIGHT OF WAY, THE DATE AND NUMBER OF ALL PERMITS REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) SHALL BE FURNISHED.
  - IF ANY EASEMENTS ARE NEEDED, TWO (2) COPIES OF THE DESCRIPTION OF SUCH EASEMENT, AS ACTUALLY RECORDED, SHALL BE FURNISHED, INCLUDING THE PLACE, DATE AND REFERENCE OF SUCH RECORDATION PRIOR TO PLAN APPROVAL.
  - WRITTEN NOTICE OF TENTATIVE STARTING DATE OF CONSTRUCTION, WHICH SHALL BE A MINIMUM OF ONE (1) WEEK FOLLOWING THE DATE OF NOTICE. IN ADDITION, THE CONTRACTOR SHALL FURNISH THE NAMES AND TELEPHONE NUMBERS OF TWO (2) RESPONSIBLE PERSONS WHO CAN BE CONTACTED IN CASE OF EMERGENCY.
  - EXISTING WATER SERVICES MAY BE ALLOWED FOR CONSTRUCTION PURPOSES ONLY WITH PRIOR APPROVAL OF ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES. IN THESE CASES, INSTALLATION OF A WATER METER FOR "WATER ONLY" USE SHALL BE REQUESTED BY CALLING THE UTILITY SERVICES OFFICES AT (703) 228-6570. THE METER WILL NOT BE PROVIDED WITHOUT EVIDENCE THAT THE CONTRACTOR HAS INSTALLED AN ASSE-1013 APPROVED, REDUCED-PRESSURE, BACKFLOW PREVENTION (HIGH HAZARD) DEVICE PER THE ARLINGTON COUNTY PLUMBING CODE.
  - CONSTRUCTION SHALL NOT BEGIN UNTIL THE ABOVE ITEMS HAVE BEEN COMPLETED AND THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES HAS APPROVED THE STARTING DATE AND ARRANGEMENTS HAVE BEEN MADE FOR THE REQUIRED INSPECTION SERVICE.
3. ALL CONSTRUCTION SHALL BE ACCOMPLISHED FROM APPROVED PLANS, SPECIFICATIONS AND CUT SHEETS SUBMITTED BY A REGISTERED ENGINEER AND APPROVED BY THE COUNTY. TO AVOID CONSTRUCTION DELAYS ALL NECESSARY TEST HOLE INFORMATION SHALL BE OBTAINED PRIOR TO PLAN APPROVAL. WATER MAIN VALVES, METERS AND APPURTENANCES SHALL ONLY BE OPERATED BY ARLINGTON COUNTY WATER PERSONNEL.
4. NO EXISTING WATER MAINS, FIRE HYDRANTS, OR SANITARY SEWERS MAY BE TAKEN OUT OF SERVICE OR MADE INACCESSIBLE BY THE CONTRACTOR WITHOUT THE PRIOR APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
5. 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 SHALL BE OBTAINED FROM THE INSPECTION SERVICES DIVISION. ANY LATERALS ABANDONED WITH THE PROJECT SHALL BE CAPPED AT THE SEWER MAIN.
6. IN CASES WHERE A PROPOSED SANITARY SEWER IS TO BE CONNECTED TO AN EXISTING SANITARY MANHOLE, THE EXISTING MANHOLE SHALL BE RECONSTRUCTED OR REPLACED BY THE CONTRACTOR AS DIRECTED BY THE COUNTY TO MEET THE CURRENT STANDARDS. ALL NEW CONNECTIONS TO THE EXISTING MANHOLES SHALL BE CORE DRILLED WITH BOOT JUST ABOVE THE EXISTING BENCH AND THE FLOW CHANNELS RESHAPED AS NEEDED.
7. UPON COMPLETION OF CONSTRUCTION, ALL FINAL TESTS, AS REQUIRED, SHALL BE PERFORMED IN THE PRESENCE OF THE COUNTY'S REPRESENTATIVE. WATER AND SEWER SERVICE CONNECTIONS SHALL NOT BE MADE UNTIL THE WATER AND/OR SEWER MAINS AND APPURTENANCES HAVE BEEN APPROVED AND ACCEPTED BY ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR DECHLORINATING ALL CHLORINATED WATER, REGARDLESS OF THE CONCENTRATION. ALL SUPER CHLORINATED WATER REQUIRES A DECHLORINATION PLAN THAT SHALL BE SUBMITTED TO AND APPROVED BY ARLINGTON COUNTY. THIS PLAN SHALL DESCRIBE HOW AND WHERE THE WATER IS TO BE DISCHARGED.
8. THE CONTRACTOR SHALL MAINTAIN BACKFILL FOR UTILITY EXCAVATIONS UNTIL ARLINGTON COUNTY HAS FINALLY ACCEPTED THE PROPOSED WATER AND/OR SEWER MAIN. ALSO, ALL SURFACES OVER THE UTILITY EXCAVATIONS SHALL EITHER BE RESTORED TO THE ORIGINAL CONDITION OR FINISHED AS PER THE PROPOSED DESIGN BEFORE THE ACCEPTANCE OF THE PROJECT. PAVEMENT PATCHING FOR UTILITY CUTS IN THE PUBLIC STREETS SHALL BE PERFORMED IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS AND SPECIFICATIONS OR AS PER VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS DEPENDING UPON THE STREET OWNERSHIP. PRIOR TO FINAL PAVING, THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES AND SANITARY SEWER MANHOLE FRAME AND COVERS AS PER COUNTY STANDARDS, REMOVE ALL ABANDONED SANITARY MANHOLES AND VALVE BOXES OVER THE ABANDONED WATER MAINS, ABANDON ALL PIPES IN ACCORDANCE WITH COUNTY STANDARDS AND COMPLETE ALL NECESSARY WATER MAIN "CUT AND CAPS."
9. UPON COMPLETION, APPROVAL, AND ACCEPTANCE OF WATER AND/OR SEWER MAINS AND APPURTENANCES, THE CONTRACTOR SHALL SUBMIT A TELEVISION INSPECTION AND REPORT ON A DVD IN A COUNTY APPROVED FORMAT. PRIOR TO ANY BOND REDUCTION/RELEASE OR APPROVAL/ACCEPTANCE OF WATER AND/OR SEWER MAINS AND APPURTENANCES, THE CONTRACTOR'S REGISTERED ENGINEER SHALL SUBMIT TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, A SET OF MYLAR TRACINGS AND CD WITH PDF FILE FORMAT THAT SHOWS THE AS-BUILT CONDITIONS PER THE COUNTY STANDARDS AND A SIGNED STATEMENT CONFIRMING THAT THE WORK, AS INDICATED, IS ACCEPTABLE TO THE ENGINEER.
10. PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REQUEST TO THE UTILITY SERVICES IN WRITING FOR THE DISCONTINUATION OF ALL EXISTING WATER SERVICES (WHERE APPLICABLE) AT WHICH TIME THE COUNTY WILL REMOVE THE WATER METER AND ISSUE A FINAL BILL. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING METER BOXES RELATED TO THE SERVICES BEING DISCONTINUED AND DISCONNECTING EXISTING WATER SERVICES AT THE MAIN BY EXCAVATING, TURNING OFF THE CORPORATION STOP AND DISCONNECTING THE SERVICE FROM THE CORPORATION STOP.

DRAINAGE

1. THE LOCATIONS OF ALL DRAINAGE STRUCTURES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, WITH THE EXCEPTION OF STRUCTURES SHOWING SPECIFIC STATIONS. THE HEIGHT ("H") DIMENSIONS SHOWN ON THE PLANS FOR DROP INLETS AND JUNCTION BOXES AND THE LINEAR FOOT (LF) DIMENSIONS SHOWN FOR MANHOLES ARE APPROXIMATE.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY DRAINAGE STRUCTURES AND CONVEYANCE MEASURES TO PREVENT DAMAGE TO PRIVATE PROPERTY AND PUBLIC STREETS, OR AS DIRECTED BY AC.
3. IF PRECAST DRAINAGE STRUCTURES ARE USED, SHOP DRAWINGS MUST BE SUBMITTED.
4. ALL PROPOSED STORM DRAINAGE STRUCTURES SHALL UTILIZE INLET SHAPING WITH PAVED INVERTS, UNLESS OTHERWISE NOTED ON THE PLANS, FOR EACH STRUCTURE.
5. ALL PIPE CULVERTS (WATER, SEWER, AND STORM SEWER), LOCATED WITHIN RIGHT-OF-WAY EXCAVATION AREAS THAT ARE SUBJECT TO TRAFFIC LOADS SHALL BE BACKFILLED WITH A SELECT OR GRANULAR MATERIAL AND PLACED IN SIX (6) INCH LAYERS AND COMPACTED TO 95 PERCENT THEORETICAL AASHTO DENSITY IN ACCORDANCE WITH SECTION 302.03 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS (CURRENT EDITION).
6. RIPRAP MUST BE PROVIDED AT ALL ENDWALLS AND FLARED END SECTIONS AS REQUIRED BY AC INSPECTOR.
7. THE CONTRACTOR SHALL MAINTAIN ALL DRAINAGE, STORMWATER MANAGEMENT, AND BEST MANAGEMENT PRACTICES FACILITIES AND SYSTEMS TO ENSURE THAT THEY FUNCTION PROPERLY DURING CONSTRUCTION.
8. A WATERTIGHT CONNECTION SHALL BE MADE AT ALL PIPES ENTERING DRAINAGE STRUCTURES. IN ADDITION, WATERTIGHT CONNECTIONS SHALL BE MADE BETWEEN EACH SECTIONS OF PIPE.
9. LENGTHS OF PIPE SHOWN ON THE DRAWINGS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
10. TOP OF STRUCTURES SHALL BE SET TO MATCH CURB AND GUTTER, SIDEWALK AND/OR DITCH CONSTRUCTION.

CONSTRUCTION

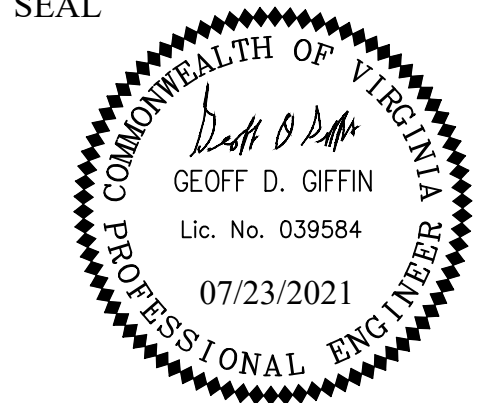
1. SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE PROVIDED TO AC FOR APPROVAL PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. EXISTING VEGETATION SURROUNDING THE CONSTRUCTION AREA SHALL REMAIN IN A NATURAL STATE. TREES NEAR THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH TREE PROTECTION DETAILS, PLANS, AND NOTES AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
3. THE CONTRACTOR SHALL STRIP TOPSOIL AND ANY ORGANIC LADEN SOIL AND STORE FOR USE IN BACKFILLING AND LANDSCAPING FOR SITE RESTORATION. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY EXCESS SOIL AFTER RESTORATION OF THE SITE.
4. WHEN MATERIALS WHICH ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR ROADWAY PURPOSES OCCUR WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE SUCH MATERIAL BELOW THE GRADE SHOWN ON THE PLANS. THE AREAS SO EXCAVATED SHALL BE BACKFILLED WITH APPROVED SUITABLE SELECT FILL MATERIAL.
5. ANY NECESSARY FILL UNDER PAVED AREAS SHALL BE PLACED IN 6-INCH LIFTS. ALL FILL SHALL BE COMPACTED 95% MDD STANDARD PROCTOR. SUBGRADE SHALL BE PROOF-ROLLED PER THE DIRECTION OF AC. AREAS THAT RUT SHALL BE UNDERCUT AND REPLACED WITH CONTROLLED FILL.
6. ALL UNPAVED SURFACES SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM PAVED AREAS AND TOWARD DRAINAGE STRUCTURES.
7. FOLLOWING FINAL COMPLETION, ALL DISTURBED GRASS AREAS SHALL BE PREPARED AND SODDED.
8. DISTURBED GRASS AREAS WITHIN THE PROJECT LIMITS THAT WILL REMAIN INACTIVE FOR A PERIOD OF 7 CALENDAR DAYS OR LONGER SHALL BE TEMPORARILY STABILIZED WITH SEED AND STRAW, MULCH, OR OTHER ACCEPTABLE GROUNDCOVER.
9. THE CONTRACTOR IS REQUIRED TO NOTIFY AC THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION AND SPECIFICALLY REQUEST INSPECTION BEFORE BEGINNING ANY OF THE FOLLOWING ACTIVITIES:
- A. INSTALLATION OF SILTATION AND EROSION CONTROL MEASURES
- B. CLEARING AND GRUBBING
- C. EARTHWORK
- D. BACKFILL OF ANY STORM DRAINAGE PIPE, CULVERTS, INLET, AND OTHER UTILITIES
- E. INSTALLATION OF ANY UNDERGROUND UTILITY, INCLUDING STORM PIPES, CULVERT, INLETS, DUCT BANKS, MANHOLE, ETC.
- F. PLACING SUBBASE, BASE OR PAVING SURFACE
- G. INSTALLATION OF ANY FORMS
- H. PLACING OF ANY CONCRETE
- I. BACKFILL OF ANY FOUNDATIONS OR WALLS
- J. INSTALLATION OF LANDSCAPING
- K. INSTALLATION MARKINGS OF LIGHTING
- L. STRIPING AND APPLICATION OF PAVEMENT MARKINGS
- M. ALTERATIONS TO BUS STOPS STRUCTURES AND SIGNAGE
10. CONTRACTOR TO MAINTAIN ALL PUBLIC AND PRIVATE ACCESS AT ALL TIMES.
11. CONTRACTOR TO MATCH ALL EXISTING STEPS, SIDEWALKS, RAMPS, ETC. IN ORDER TO MAINTAIN SAFE PEDESTRIAN AND ADA ACCESS.



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
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SEAL



APPROVALS DATE

	06/21/21
TRAFFIC SIGNAL ENGINEER	
	06/21/21
TRAFFIC ENGINEERING MANAGER	
	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
	06/22/2021
TE&O BUREAU CHIEF	
	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS DATE


Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**  
GENERAL NOTES AND DETAILS  
ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-0003**



File name: C-0002 GENERAL NOTES AND DETAILS\_6TH.dwg  
 Path: K:\NVA\_TPT0110614003 - Carlin Springs 2020\CAD\PlanSheets  
 REVISION: MARCH 03, 2020

EROSION AND SEDIMENT CONTROL

- TEMPORARY SILT FENCE SHALL BE CONSTRUCTED FOR SHEET RUN OFF AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
- WHEN WIRE SUPPORT IS USED, STANDARD STRENGTH FILTER CLOTH MAY BE USED. POSTS FOR THIS TYPE OF INSTALLATION SHALL BE PLACED A MAXIMUM OF 10 FEET APART. THE WIRE MESH FENCE MUST BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST ONE INCH LONG. THE WIRES OR HOG RINGS OF THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF TWO INCHES AND SHALL NOT EXTEND MORE THAN 34 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- WHEN WIRE SUPPORT IS NOT USED, EXTRA STRENGTH FILTER CLOTH SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE FILTER FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING ONE INCH LONG (MINIMUM) HEAVY DUTY WIRE STAPLES OR THE WIRES AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
- WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES. POSTS SHALL BE EITHER STEEL POSTS OR WOODEN STAKES AND HAVE A MINIMUM LENGTH OF 5 FEET.
- SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS NOTED IN TABLE 3.05-B OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION. THE SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0° TO 120°F.
- SILT FENCES SHALL BE INSPECTED AND CLEANED ON A WEEKLY BASIS AND ON A DAILY BASIS IMMEDIATELY FOLLOWING EACH RAIN STORM. ALL NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION (1992) AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE TEMPORARY EROSION AND SILTATION (E&S) CONTROL ITEMS SHOWN ON THE E&S CONTROL PLAN ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SILTATION WITHIN THE PROJECT LIMITS. THE E&S CONTROL PLAN IS BASED ON FIELD CONDITIONS AT THE TIME OF PLAN DEVELOPMENT AND AN ASSUMED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR, IN CONJUNCTION WITH THE AC PROJECT MANAGER AND/OR RLD, SHALL ADJUST THE LOCATION, QUANTITY AND TYPE OF EROSION AND SILTATION CONTROL ITEMS REQUIRED BASED ON THE ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE SELECTED SEQUENCE OF CONSTRUCTION.
- THE AREAS BEYOND THE PROJECT'S CONSTRUCTION AREA ARE TO BE PROTECTED FROM SILTATION. PERIMETER CONTROLS SUCH AS FILTER BARRIER, SILT FENCE, ETC. SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OPERATIONS.
- SILT REMOVAL AND SEDIMENT CLEAN-OUT FROM EROSION AND SILTATION CONTROL ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING:
  - TEMPORARY SEDIMENT BASINS AND SEDIMENT TRAPS – WHEN THE "WET" STORAGE VOLUME (PERMANENT POOL) HAS BEEN REDUCED BY 50%.
  - DEWATERING BASINS – WHEN THE EXCAVATED VOLUME HAS BEEN REDUCED BY 50%.
  - ALL OTHER EROSION AND SILTATION CONTROL ITEMS – WHEN THE CAPACITY, HEIGHT, OR DEPTH HAS BEEN REDUCED BY 50%.
- EXCEPT WHERE NOTED HEREON, TO THE BEST OF THE DESIGNER'S KNOWLEDGE, THE PROPOSED DEVELOPMENT OF THE SUBJECT PROPERTY CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS.
- LAND CONSERVATION NOTES – MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. HOWEVER, THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY AC.
- ADDITIONAL SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS DIRECTED BY ARLINGTON COUNTY INSPECTOR DURING FIELD REVIEW; COSTS ASSOCIATED WITH ADDITIONAL MEASURES SHALL BE ASSUMED BY THE CONTRACTOR.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- EROSION CONTROL MEASURES ARE TO BE REMOVED BY CONTRACTOR AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
  - NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
  - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
  - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED (EXAMPLE WOULD BE A SILT BAG) OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE (EXAMPLE WOULD BE A SEDIMENT TRAP) OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
  - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
  - RESTALLIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH STANDARDS 3.31 AND 3.32.
  - ALL TRENCHING SHALL BE IN ACCORDANCE WITH APPLICABLE SAFETY STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAR TRAVEL WAY AT ALL TIMES.

GENERAL LAND CONSERVATION NOTES

- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS OF BACKFILL.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ANY DISTURBED AREA NOT COVERED BY NOTE # 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MINIMUM STANDARDS REVIEW

- TEMPORARY AND PERMANENT STABILIZATION HAS BEEN ADDRESSED.
- THERE ARE NO STOCKPILES PROPOSED WITH THIS PLAN.
- MAINTENANCE OF PERMANENT STABILIZATION HAS BEEN ADDRESSED, SEE PERMANENT STABILIZATION.
- SEDIMENT TRAPPING FACILITIES ARE TO BE INSTALLED AS THE FIRST STEP IN LAND DISTURBING ACTIVATES. MAINTENANCE OF FACILITIES ARE DETAILED UNDER THE EROSION AND SEDIMENT CONTROL NOTES.
- THERE ARE NO EARTHEN STRUCTURE PROPOSED WITH THIS PROJECT.
- THERE ARE NO SEDIMENT BASINS PROPOSED WITH THIS PROJECT.
- THERE ARE NO CUT AND FILL SLOPES PROPOSED WITH THIS PROJECT.
- THERE ARE NO PAVED FLUMES, CHANNELS, OR SLOPE DRAINS PROPOSED WITH THIS PROJECT.
- THERE ARE NO WATER SHEEPS ANTICIPATED WITH THIS PROJECT.
- INLET PROTECTION IS PROVIDED ON INLETS DOWN GRADIENT FROM DISTURBED AREAS.
- ADEQUATE OUTLET PROTECTION EXIST AT ALL EXISTING OUTLETS. THERE ARE NO NEW OUTLETS PROPOSED.
- THERE ARE NO IN-STREAM CONSTRUCTION MEASURES PROPOSED WITH THIS PROJECT.
- THERE ARE NO STREAM CROSSINGS PROPOSED WITH THIS PROJECT.
- THERE ARE NO WATERCOURSES BEING CROSSED WITH THIS PROJECT.
- THERE ARE NO IMPACTS TO IN-STREAM IMPROVEMENTS PROPOSED WITH THIS PROJECT.
- UTILITY TRENCHING HAS BEEN ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.
- PREVENTING SOIL FROM BEING TRACKED ON THE STREETS IS ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.
- THE REMOVAL OF TEMPORARY PRACTICES HAS BEEN ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.
- THIS PROJECT REDUCES THE IMPERVIOUS AREA AND DECREASE THE RUNOFF FROM THE SITE AREA. DOWNSTREAM OUTFALL POINTS ARE ADEQUATELY PROTECTED AND ARE NOT ACTIVELY ERODING. OUTFALL POINTS HAVE BEEN ANALYZED AND FOUND TO BE ADEQUATE IN ACCORDANCE WITH THE STATE OUTFALL REQUIREMENTS.

MS4 NOTES

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS: WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATER; ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

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.

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION:  
 THIS PROJECT RECONSTRUCTS AN EXISTING INTERSECTION ALONG S CARLIN SPRINGS ROAD AT S CARLIN SPRINGS ROAD AT 6TH ROAD. ALL CONSTRUCTION WORK WILL BE FOR THE DURATION OF 80 TOTAL CALENDAR (60 WORK DAYS). WORK DAYS NOT TO INCLUDE ARLINGTON COUNTY PUBLIC HOLIDAYS.

TOTAL DISTURBED AREA (FOR ESC REQUIREMENTS): 9235.02 SF (0.21 AC)

PRE DEVELOPMENT IMPERVIOUS AREA (FOR SWM REQUIREMENTS): 2562.14 SF  
 POST DEVELOPMENT IMPERVIOUS AREA (FOR SWM REQUIREMENTS): 403.85 SF

POTOMAC RIVER-FOUR MILE RUN WATERSHED (HUC12: 020700100301, VAHU6: PL25) AND UPPER LONG BRANCH

EXISTING CONDITIONS:  
 THERE ARE NO OFF-SITE AREAS OR STOCKPILES ASSOCIATED WITH THIS PROJECT. OFFSITE AREAS DAMAGED BY THE CONTRACTOR OR ITS LACK OF EROSION CONTROLS SHALL BE REPAIRED BY THE CONTRACTOR, AT ITS EXPENSE, IN A TIMELY MANOR.

ADJACENT AREAS:  
 S CARLIN SPRINGS ROAD IS BOUND ON BOTH SIDES WITH A MIXTURE OF RESIDENTIAL DEVELOPMENTS, MEDICAL FACILITIES, AND A SCHOOL. THE CONTRACTOR SHALL PROVIDE TO THE ARLINGTON COUNTY INSPECTOR PHOTOGRAPHS OF IMMEDIATE ADJACENT AREAS TO DOCUMENT ADJACENT OFFSITE CONDITIONS PRIOR TO INSTALLING PERIMETER EROSION CONTROLS.

OFF-SITE AREAS:  
 THERE ARE NO OFF-SITE AREAS OR STOCKPILES ASSOCIATED WITH THIS PROJECT. OFFSITE AREAS DAMAGED BY THE CONTRACTOR OR ITS LACK OF EROSION CONTROLS SHALL BE REPAIRED BY THE CONTRACTOR, AT ITS EXPENSE, IN A TIMELY MANOR.

SOILS:  
 THE SOILS IN THE PROJECT AREA HAVE BEEN PRIMARILY MAPPED AS URBAN LAND – UDORTHERNTS COMPLEX WHICH ARE SOILS THAT HAVE BEEN PREVIOUSLY DISTURBED AND NOT CHARACTERIZED.

CRITICAL AREAS:  
 THERE ARE NO CRITICAL AREAS ASSOCIATED WITH THIS PROJECT. DISTURBANCE SHALL BE LIMITED TO SMALL AREAS AND THE CONTRACTOR SHALL PROTECT THOSE AREAS AS TO NOT CAUSE OR ALLOW FOR EROSION OF SOILS OUT OF THE PROJECT AREA.

EROSION AND SEDIMENT CONTROL MEASURES:  
 THE FOLLOWING EROSION CONTROLS SHALL BE USED DURING THIS PROJECT:
 

- STD. 3.05 SILT FENCE – SILT FENCE AND SUPER SILT FENCE SHALL BE USED IN ACCORDANCE WITH THIS STANDARD AND AS SPECIFIED BY ARLINGTON COUNTY. SEE DETAIL SHEET C-0005. SILT FENCE OR SUPER SILT FENCE SHALL BE USED DOWN GRADIENT FROM DISTURBED AREAS AS SHOWN ON THE PLANS AND AS NEEDED TO PREVENT THE TRANSPORTATION OF SEDIMENT BEYOND THE PROJECT LIMITS. IT SHALL BE INSTALLED PRIOR TO STARTING LAND DISTURBANCE AND SHALL BE REMOVED AFTER THE DISTURBED AREA HAS HAD TEMPORARY OR PERMANENT STABILIZATION ESTABLISHED. COORDINATE REMOVAL WITH THE ARLINGTON COUNTY INSPECTOR.
- STD. 3.07 STORM DRAIN INLET PROTECTION – STORM DRAINAGE INLETS SHALL BE PROTECTED IN ACCORDANCE WITH THIS STANDARD. INLETS DOWN GRADIENT FROM LAND DISTURBING ACTIVITIES SHALL HAVE INLET PROTECTION INSTALLED PRIOR TO STARTING LAND DISTURBANCE. CARE SHALL BE TAKEN AS TO NOT INTERFERE WITH TRAFFIC ON S CARLIN SPRINGS ROAD WHEN SELECTING THE TYPE OF INLET PROTECTION TO BE USED. THE CONTRACTOR IS TO REMOVE SILT BUILDUP PROMPTLY SO THAT SILT IS NOT TRACKED ALONG THE ROAD. REMOVAL OF THE INLET PROTECTION SHALL OCCUR ONCE DISTURBED AREA UP GRADIENT OF THE INLET HAVE BEEN STABILIZED AND IN COORDINATION WITH THE ARLINGTON COUNTY INSPECTOR.
- STD. 3.26 DEWATERING STRUCTURE – ALL DISCHARGES FROM DEWATERING OPERATIONS SHALL BE IN ACCORDANCE WITH THIS STANDARD. DEWATERING CONTROLS SHALL BE USED AT ALL DEWATERING DISCHARGES. THE CONTRACTOR IS TO NOTIFY THE ARLINGTON COUNTY INSPECTOR PRIOR TO DISCHARGING DEWATERING EFFLUENT OF THE LOCATION AND TYPE OF FILTER OR CONTROL THAT IS TO BE USED AND FOR HOW LONG IT WILL BE USED.
- STD. 3.31 TEMPORARY SEEDING – TEMPORARY SEEDING SHALL BE APPLIED IN ACCORDANCE WITH THIS STANDARD. TEMPORARY STABILIZATION IS REQUIRED WHEN AN AREA IS NOT TO BE WORKED WITHIN A 7 DAY PERIOD. THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE IN ORDER TO ESTABLISH A SURFACE PROTECTION TO EROSION. TEMPORARY SEEDING SHALL BE CARED FOR AS NECESSARY IN ORDER TO GENERATE A DENSE, HEALTHY STAND OF VEGETATION THAT WILL RESIST EROSION.
- THE CONTRACTOR SHALL USE APPROPRIATE METHODS TO ESTABLISH PERMANENT STABILIZATION THAT ARE SIMILAR TO THE CONDITION THAT WAS PRESENT PRIOR TO STARTING LAND DISTURBANCE ACTIVITIES.
- STD. 3.33 SODDING – ALL SODDING SHALL BE IN ACCORDANCE WITH THIS STANDARD. SODDED AREAS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE SOD HAS BEEN ESTABLISHED AND HAD TWO MOWING CYCLES. THE CONTRACTOR SHALL COORDINATE THE RELEASE OF MAINTENANCE OF SODDED AREAS WITH THE ARLINGTON COUNTY INSPECTOR AND THE LAND OWNER.
- STD. 3.38 TREE PRESERVATION AND PROTECTION – TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH THIS STANDARD AND ARLINGTON COUNTY'S TREE PROTECTION FENCE, PLAN. SEE THIS SHEET FOR DETAIL. TREE PROTECTION SHALL BE USED ALONG THE LIMITS OF DISTURBANCE WHERE AN OFFSITE TREE OR LANDSCAPED AREA MAY HAVE A CRITICAL ROOT ZONE THAT EXTENDS INTO THE LIMITS OF THIS PROJECT. THE ARLINGTON COUNTY URBAN FORESTER MAY REQUIRE ADDITIONAL TREE PRESERVATION AND PROTECTION BE INSTALLED PRIOR TO STARTING LAND DISTURBING ACTIVITIES. TREE PRESERVATION AND PROTECTION SHALL ONLY BE REMOVED WITH THE APPROVAL OF THE ARLINGTON COUNTY URBAN FORESTER.

PERMANENT STABILIZATION:  
 ALL DISTURBED AREAS BY THIS PROJECT SHALL BE STABILIZED WITH PERMANENT GROUND COVER UTILIZING STD. 3.33. SODDING IS THE REQUIRED GROUND COVER FOR AREAS THAT ARE CURRENTLY GRASS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL DISTURBED AREAS UNTIL FINAL ACCEPTANCE BY ARLINGTON COUNTY AND/OR LAND OWNER. THIS SHALL INCLUDE CUTTING THE GRASS TO MAINTAIN THE SAME APPEARANCE AS THE ADJOINING PROPERTY.

STORMWATER RUNOFF CONSIDERATIONS:  
 THIS PROJECT REDUCES THE OVERALL IMPERVIOUSNESS OF THE SITE AREA AND DOES NOT INCREASE SURFACE RUNOFF PATTERNS OR VOLUMES. NO FLOODING OR CHANNEL DEGRADATION IS ANTICIPATED DOWNSTREAM OF THE PROJECT DUE TO THE PROPOSED REDUCTION IN RUNOFF.

CALCULATIONS:  
 DETAILED CALCULATIONS SHOWING PRE AND POST DEVELOPMENT DRAINAGE AREAS, INLET COMPUTATIONS, PIPE CAPACITIES AND FLOWS ARE INCLUDED IN THIS SET OF PLANS.

1992 3.32

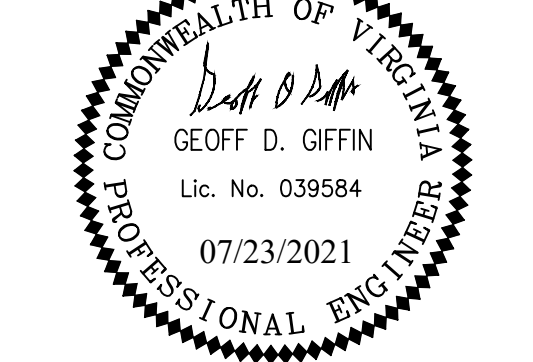
TABLE 3.32-D SITE SPECIFIC SEEDING MIXTURES FOR PIEDMONT AREA	
Minimum Care Lawn	Total Lbs. Per Acre
- Commercial or Residential	175-200 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	95-100%
- Improved Perennial Ryegrass	0-5%
- Kentucky Bluegrass	0-5%
High-Maintenance Lawn	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	100%
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
- Crownvetch **	20 lbs.
	150 lbs.
* Use seasonal nurse crop in accordance with seeding dates as stated below:	
February 16th through April	Annual Rye
May 1st through August 15th	Forstall Millet
August 16th through October	Annual Rye
November through February 15th	Winter Rye
** Substitute Sericea lespedeza for Crownvetch east of Farmville, Va. (May through September use hullied Sericea, all other periods, use unhulled Sericea). If Platpea is used in lieu of Crownvetch, increase rate to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in mixes.	



DEPARTMENT OF  
 ENVIRONMENTAL SERVICES

Transportation Division  
 Transportation Planning Bureau  
 2100 Clarendon Boulevard, Suite 900  
 Arlington, VA 22201  
 Phone: 703.228.3629  
 Fax: 703.228.3606

SEAL



APPROVALS DATE

<i>Jeff Giffin</i>	06/21/21
TRAFFIC SIGNAL ENGINEER	
<i>John Nicks</i>	06/21/21
TRAFFIC ENGINEERING MANAGER	
<i>Jeff Giffin</i>	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>John Nicks</i>	06/22/2021
TE&O BUREAU CHIEF	
<i>Dennis M. Leach</i>	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS DATE


Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

GENERAL NOTES AND DETAILS  
 ID #234  
 TE02

Designed: AS  
 Drawn: AS  
 Checked: GG  
 Miss Utility Transmittal #:

Plotted: July 23, 2021  
 Plotted by: Max.Gawthrop

Scale:  
 HOR. 1" = 25' VERT. N/A

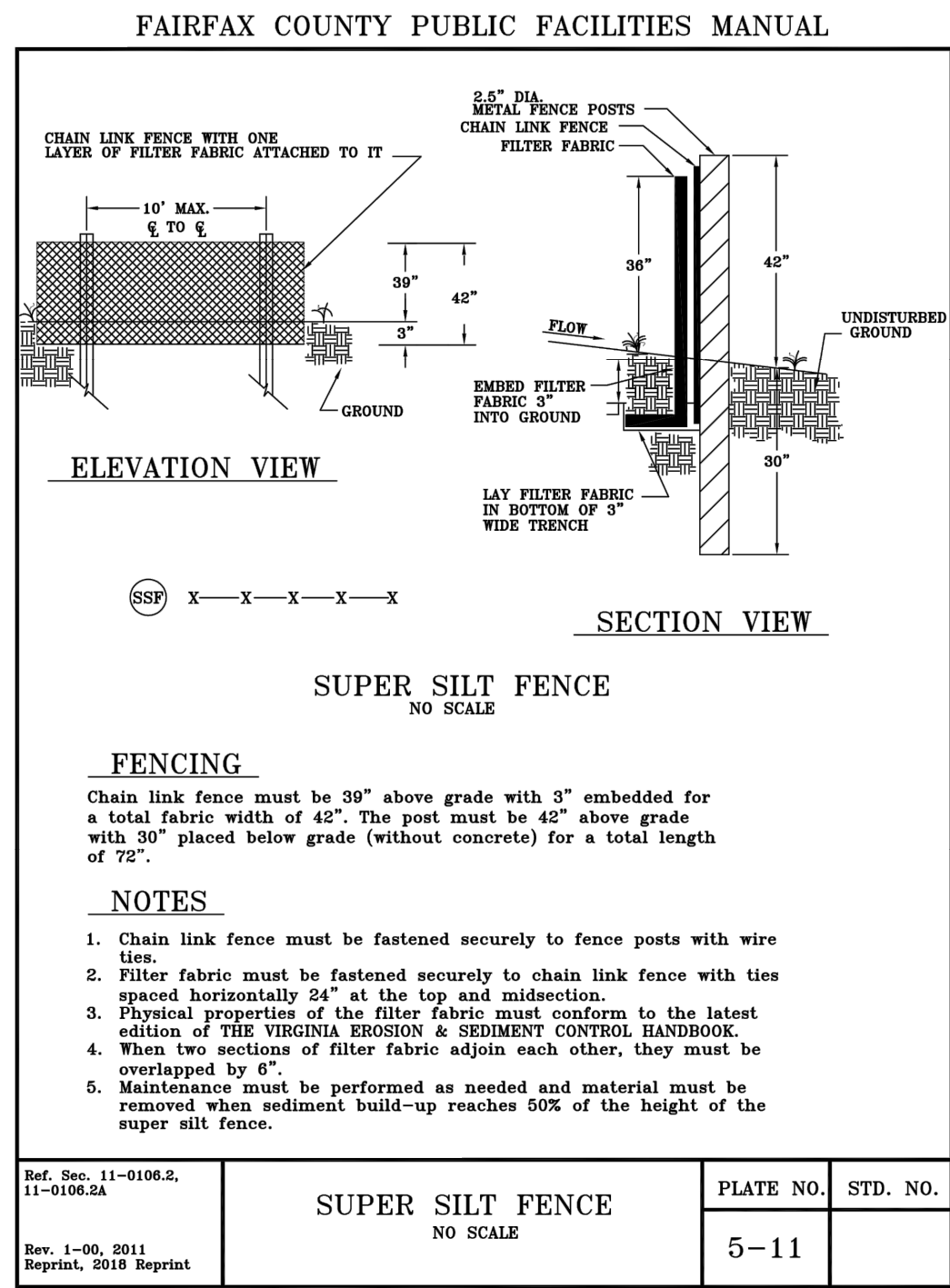
KIMLEY-HORN AND ASSOCIATES, INC.  
 11400 Commerce Park Drive, Suite 400  
 Reston, Virginia 20191

Sheet  
 C-0004

S. Carlin Springs Road Signal Upgrades



# GENERAL DETAILS



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:

Carlin Springs Road and 3rd Street / Carlin Springs Road and 6th Road  
 street address

lot, block, section subdivision

LDA-20434

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:

- Reviewing the erosion and sedimentation (E&S) plan for the project.
- Walking the site prior to construction to identify critical areas.
- 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.
- 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.
- Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
- 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.
- Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-7050 with questions about this plan or my execution of the duties of  
 telephone number

Responsible Land Disturber.

Sincerely,

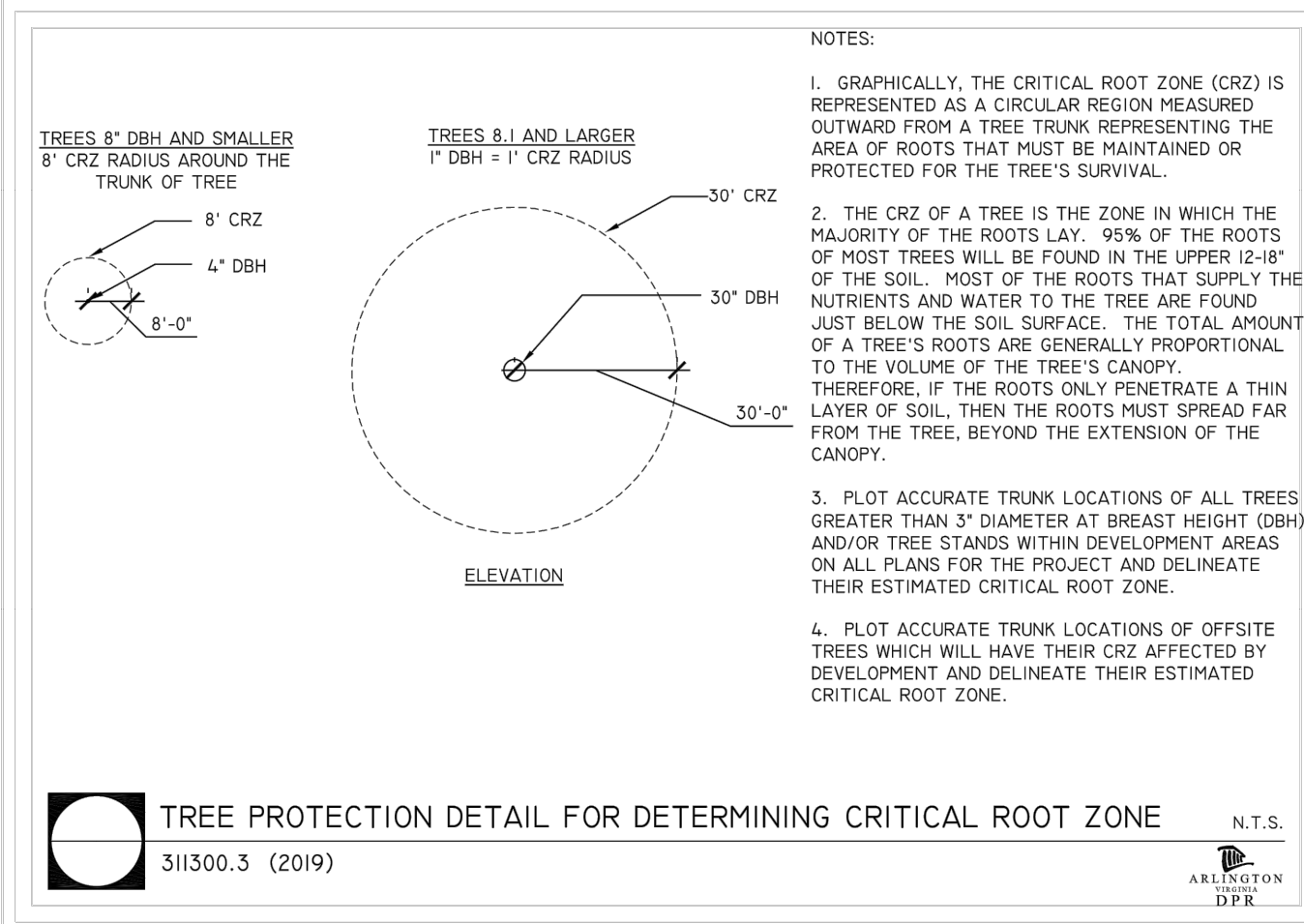
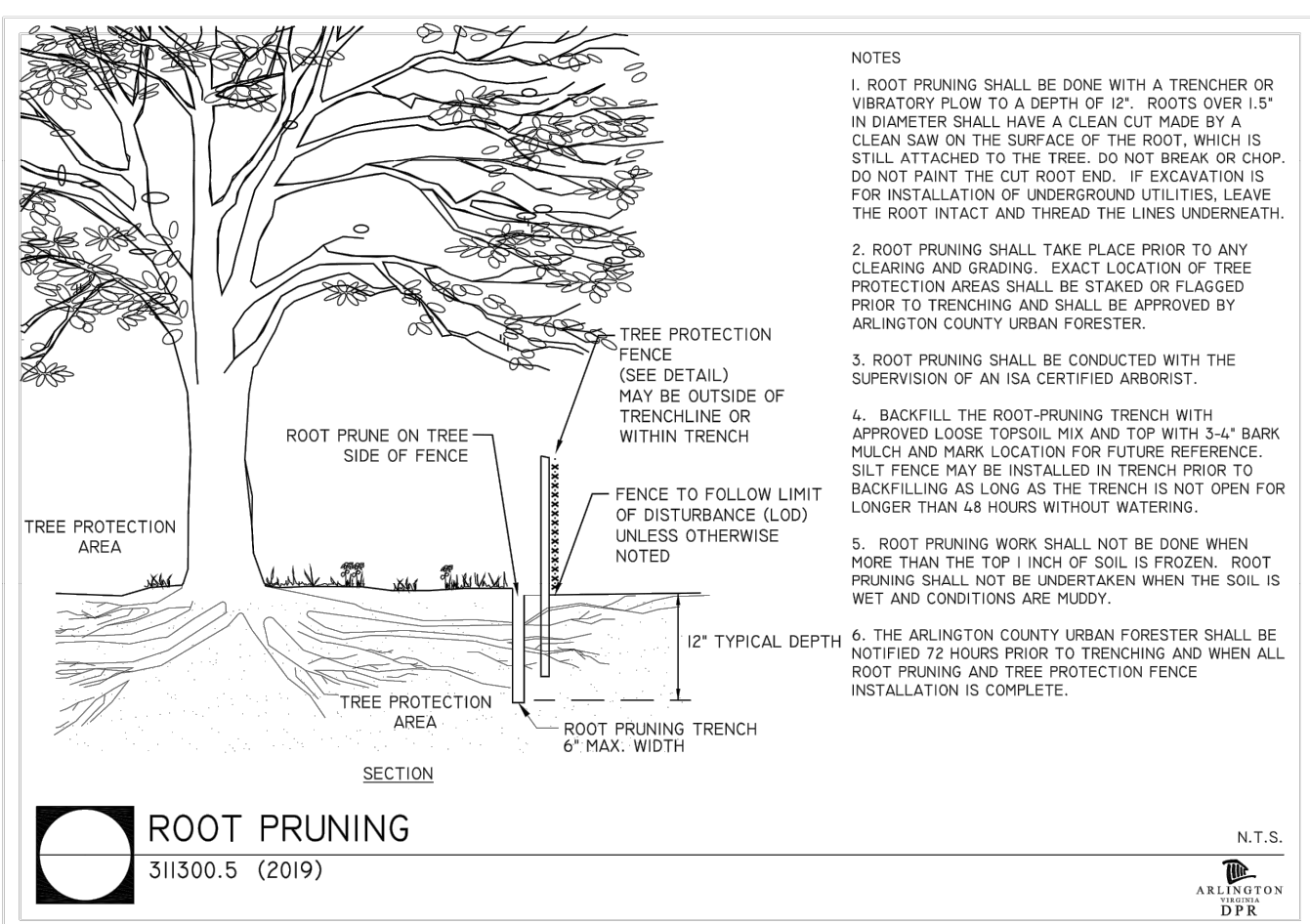
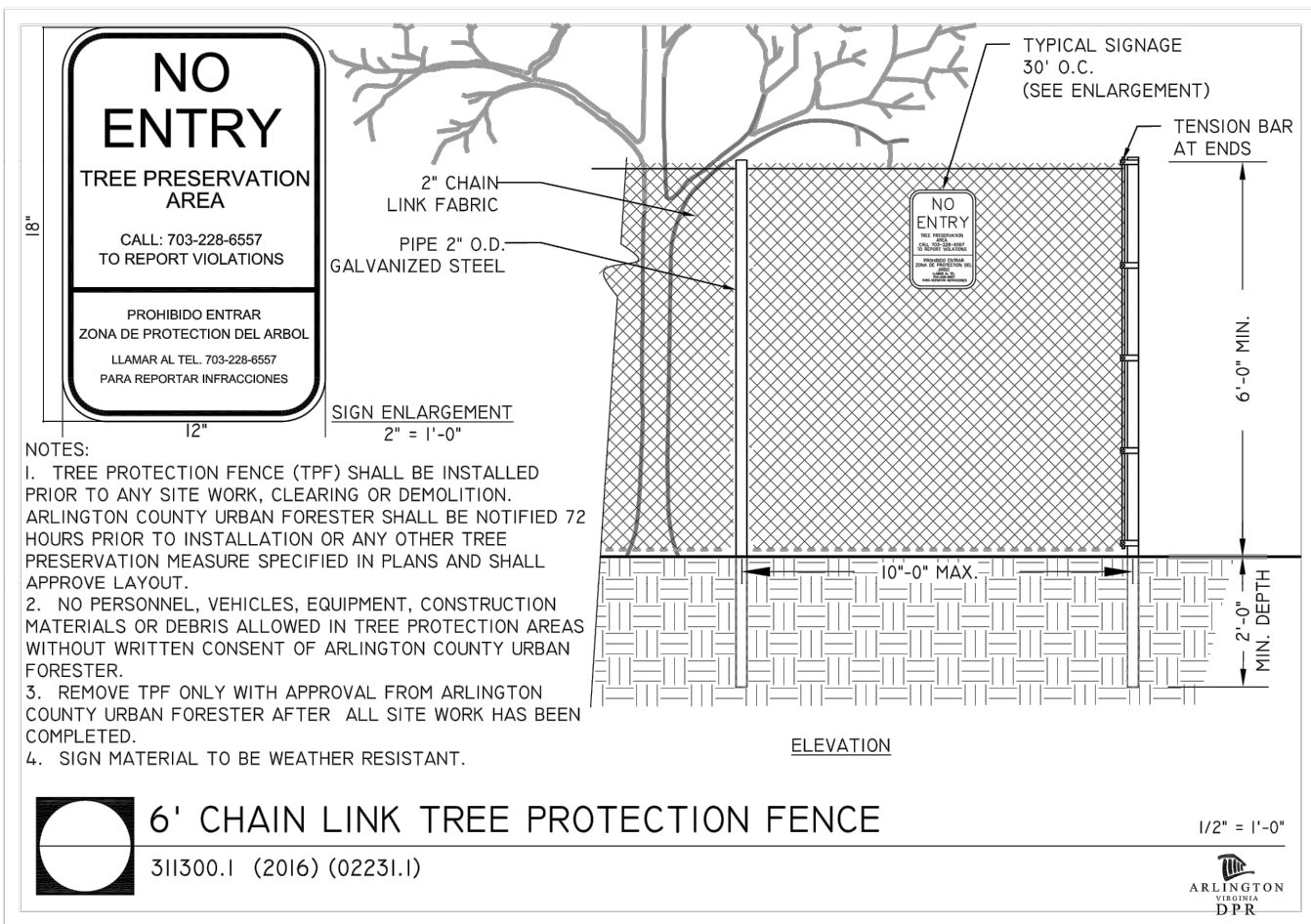
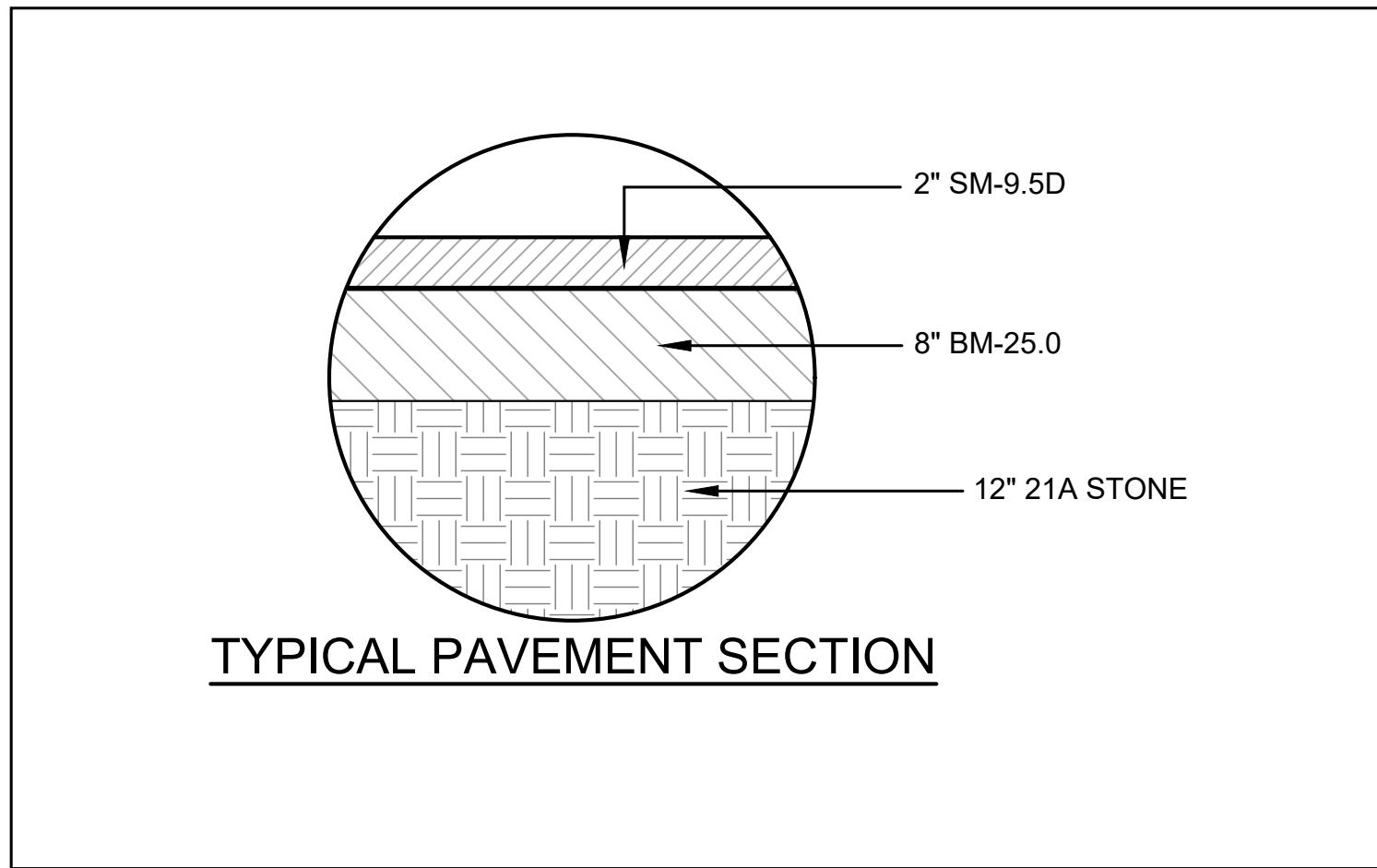
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Anup Kalle

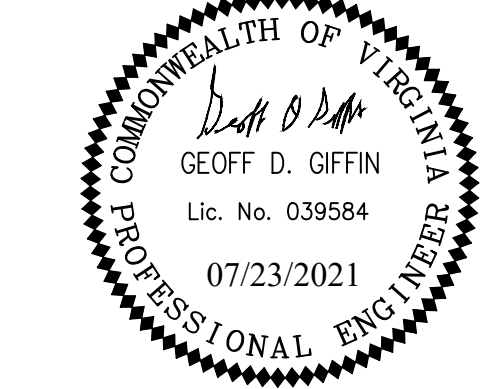
name printed

PE and 0402056432

professional registration (type and number)



SEAL



APPROVALS DATE

TRAFFIC SIGNAL ENGINEER 06/21/21

TRAFFIC ENGINEERING MANAGER 06/21/21

WATER, SEWER, STREETS BUREAU CHIEF 07.16.2021

TE&O BUREAU CHIEF 06/22/2021

TRANSPORTATION DIRECTOR 06/23/21

REVISIONS DATE

REVISIONS DATE

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REVISIONS DATE

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REVISIONS DATE

REVISIONS DATE

REVISIONS DATE

REVISIONS DATE

REVISIONS DATE

Designed: AS  
 Drawn: AS  
 Checked: GG  
 Miss Utility Transmittal #:

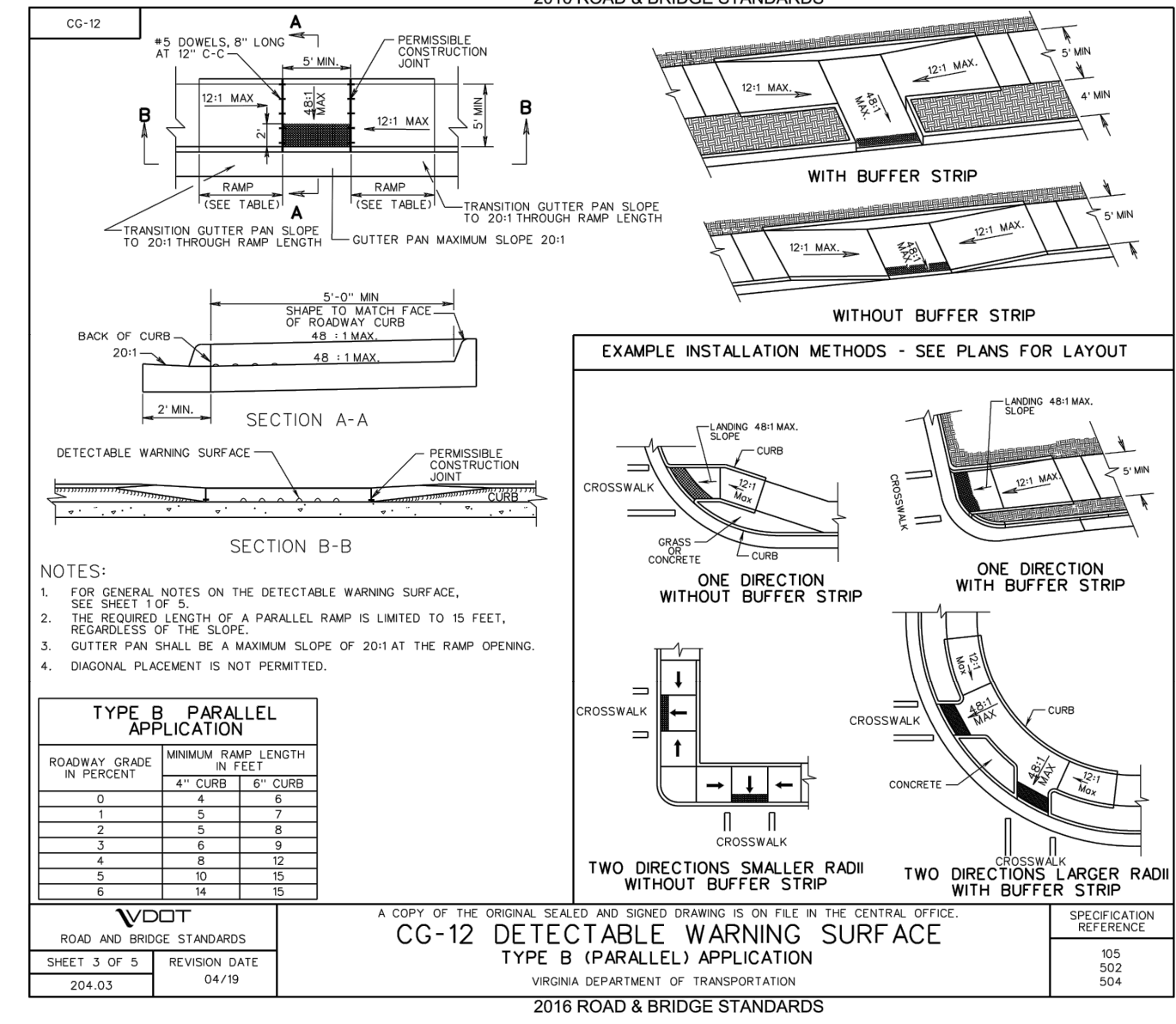
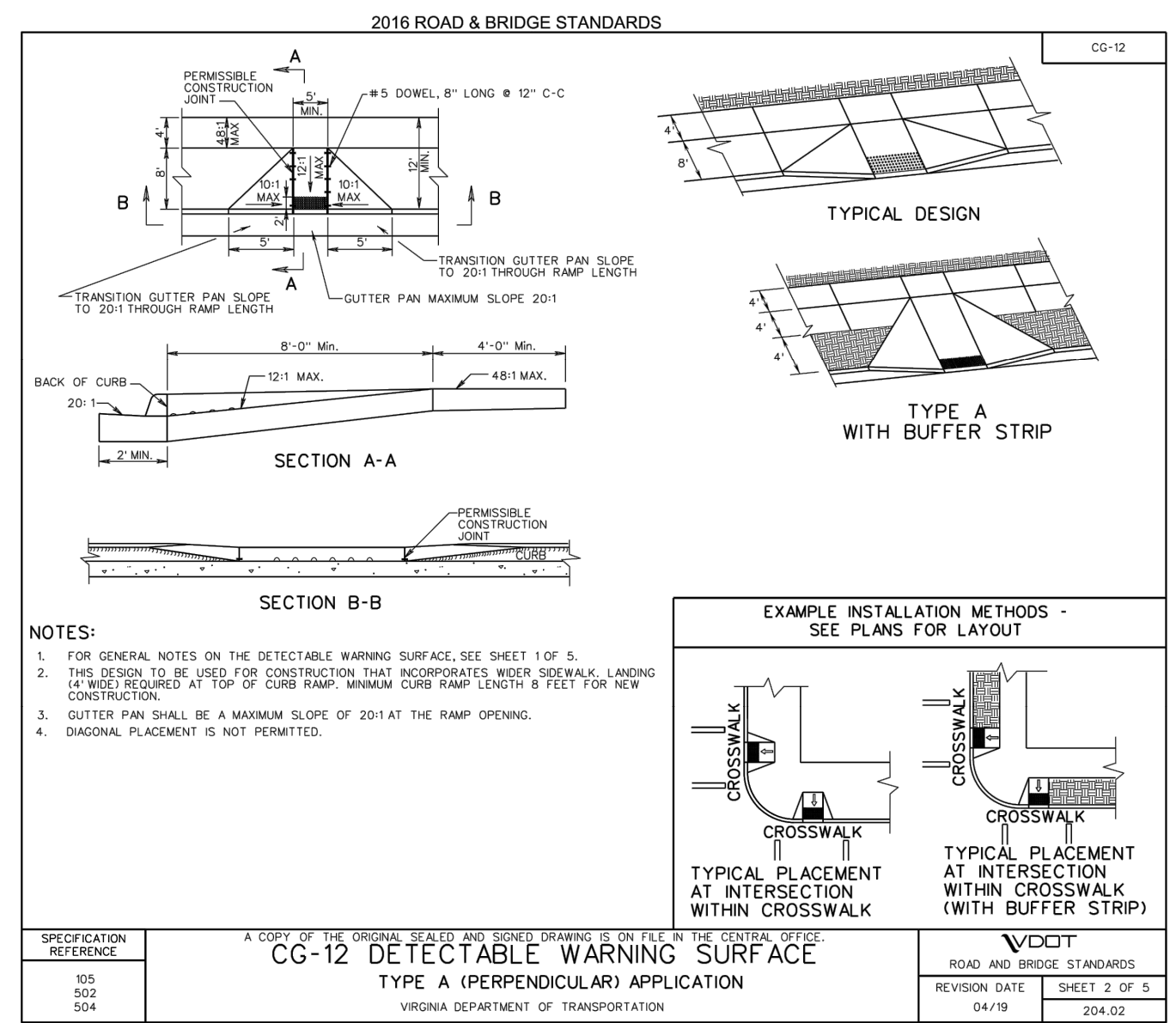
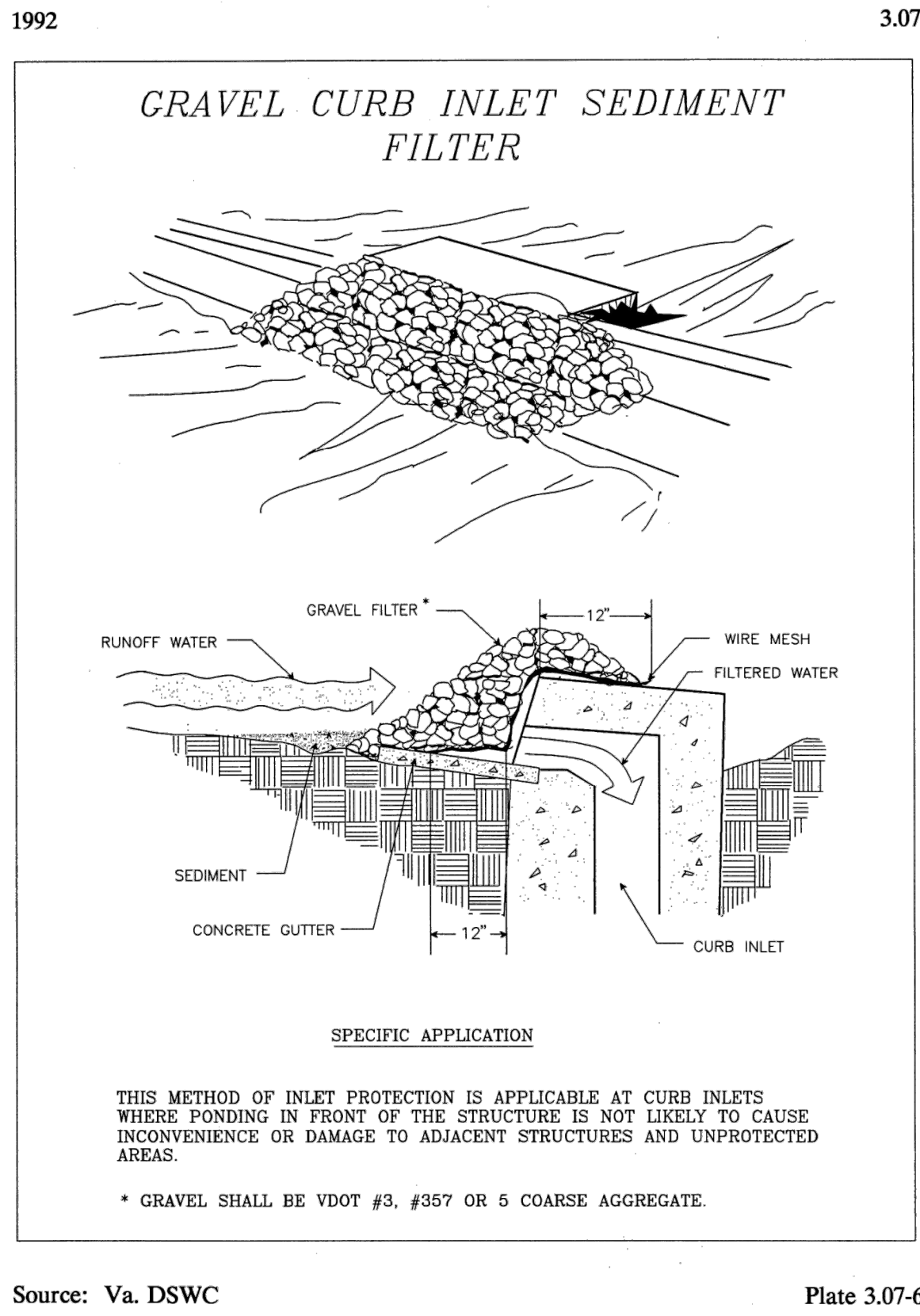
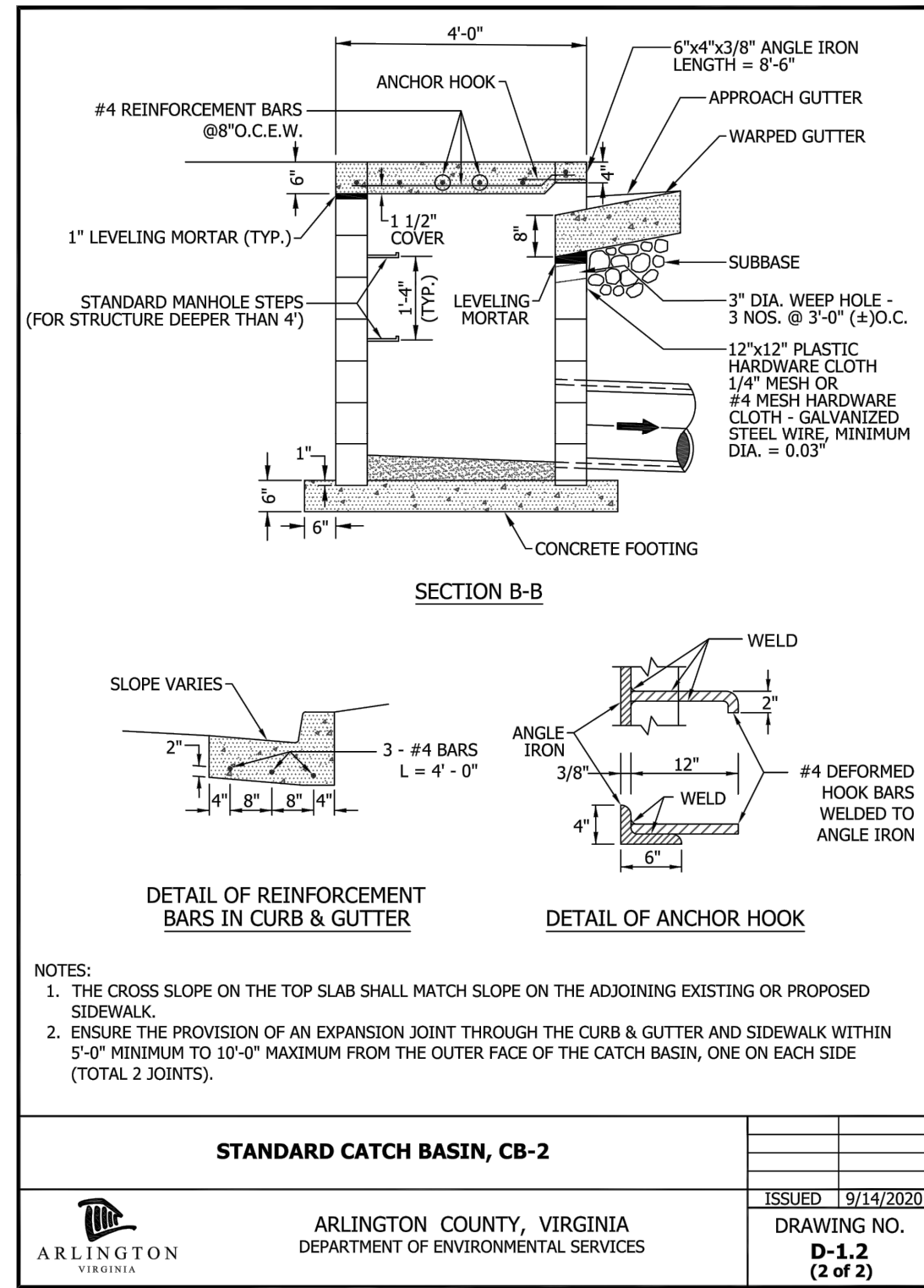
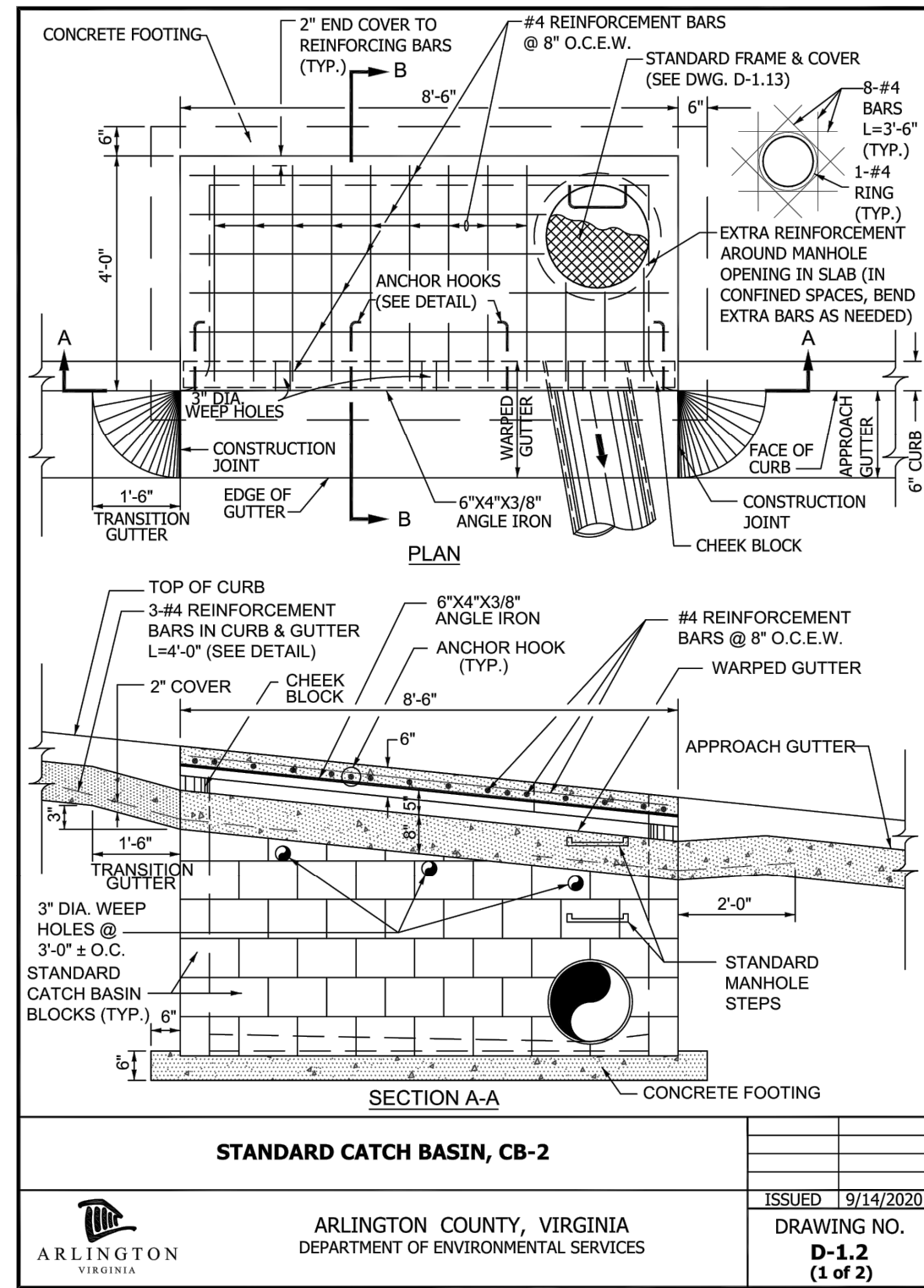
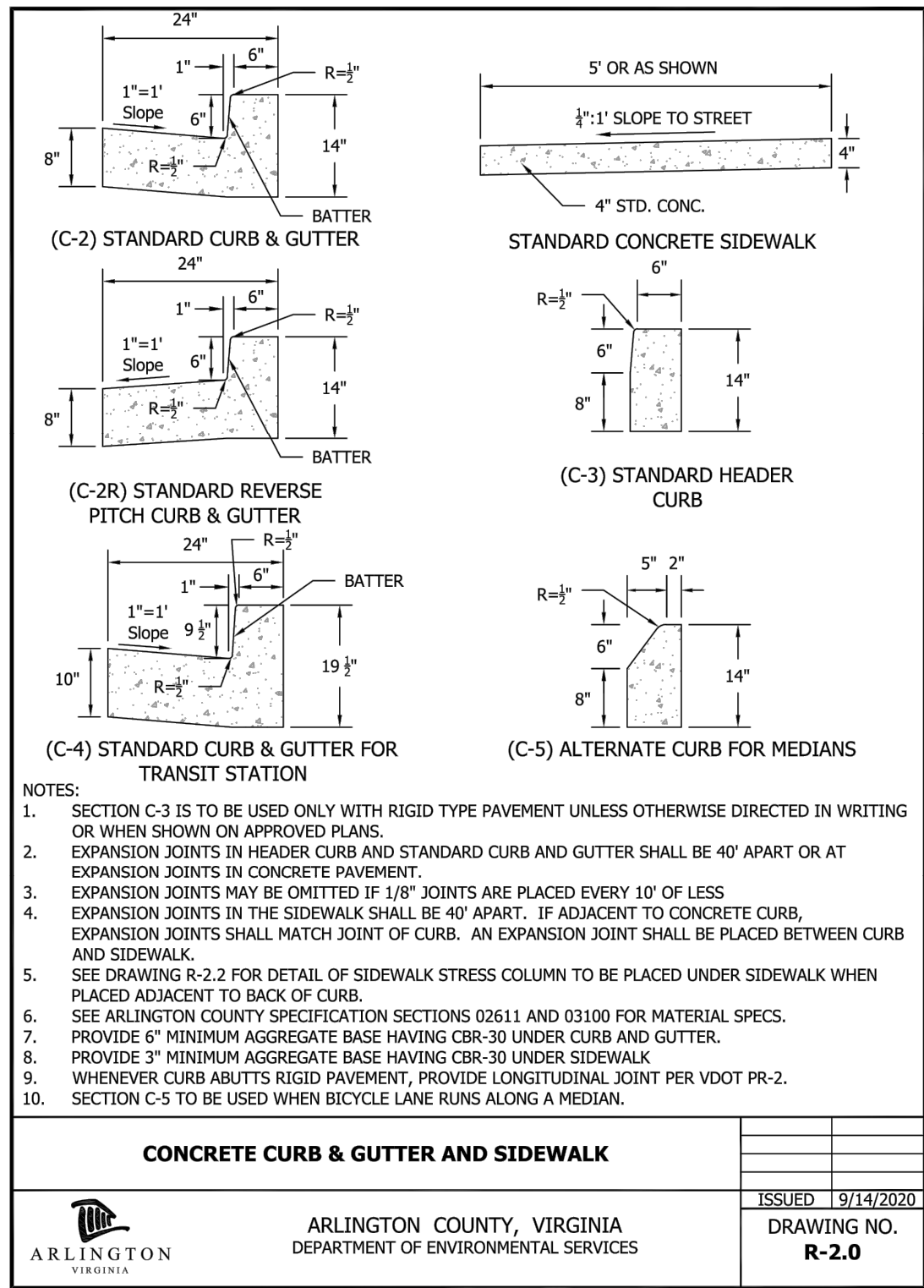
Plotted: July 23, 2021  
 Plotted by: Max.Gawthrop

Scale:  
 HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
 11400 Commerce Park Drive, Suite 400  
 Reston, Virginia 20191

Sheet  
 C-0005





ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA  
GEOFF D. GIFFIN  
Lic. No. 039584  
07/23/2021  
PROFESSIONAL ENGINEER

APPROVALS

DATE

TRAFFIC SIGNAL ENGINEER  
06/21/21

TRAFFIC ENGINEERING MANAGER  
06/21/21

WATER, SEWER, STREETS BUREAU CHIEF  
07.16.2021

TE&O BUREAU CHIEF  
06/22/2021

Dennis M. Leach  
TRANSPORTATION DIRECTOR  
06/23/21

REVISIONS

DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

GENERAL NOTES AND DETAILS

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

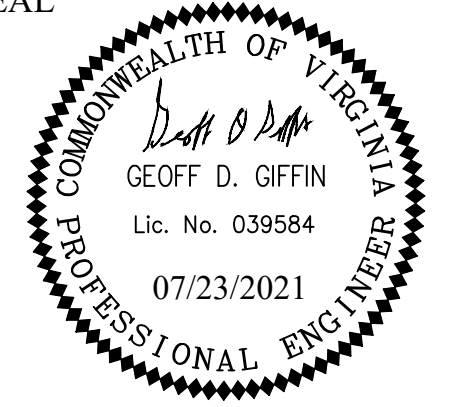
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**C-0006**






S. Carlin Springs Road Signal Upgrades



[illegible][illegible]

SEAL



APPROVALS	DATE
 TRAFFIC SIGNAL ENGINEER	06/21/21
 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 TE & BUREAU CHIEF	06/22/202
 TRANSPORTATION DIRECTOR	06/23/21

REVISEONS	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

SIGN DETAILS

ID #234

TF02

Designed: AS  
 Drawn: AS  
 Checked: GG  
 Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet C-0007



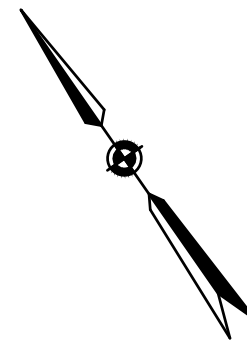
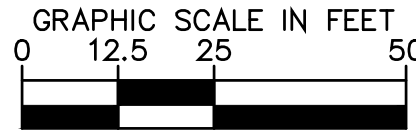
REVISED: MARCH 03, 2020

Filename: C-0110 EXISTING CONDITIONS PLAN AND PROFILE.dwg  
Path: K:\NVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets

NOTE: EXISTING PAVEMENT WAS RESURFACED AND NEW MARKINGS WERE INSTALLED SINCE SURVEY WAS COMPLETED.

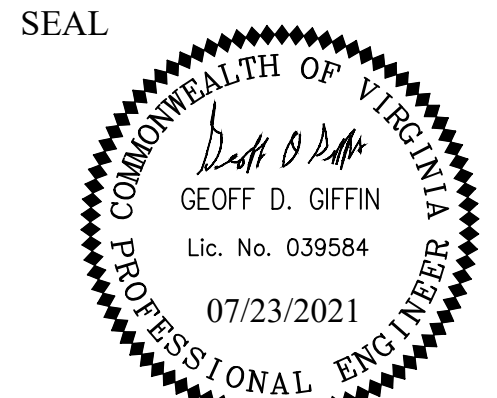
PARCEL A  
RPC 21028097  
VIRGINIA HOSPITAL CENTER  
ARLINGTON HEALTH

SUBDIVISION OF THE PROPERTY OF  
**NORTHERN VIRGINIA DOCTORS  
HOSPITAL CORPORATION &  
NVDH CORPORATION**  
D.B. 2022, Pg. 739



DEPARTMENT OF  
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Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
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Fax: 703.228.3606



APPROVALS	DATE
 TRAFFIC SIGNAL ENGINEER	06/21/21
 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 TE&O BUREAU CHIEF	06/22/2021
 TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

EXISTING CONDITIONS PLAN AND  
PROFILE

6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

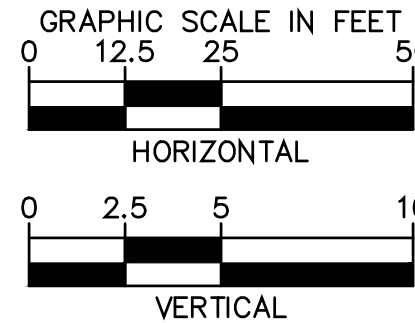
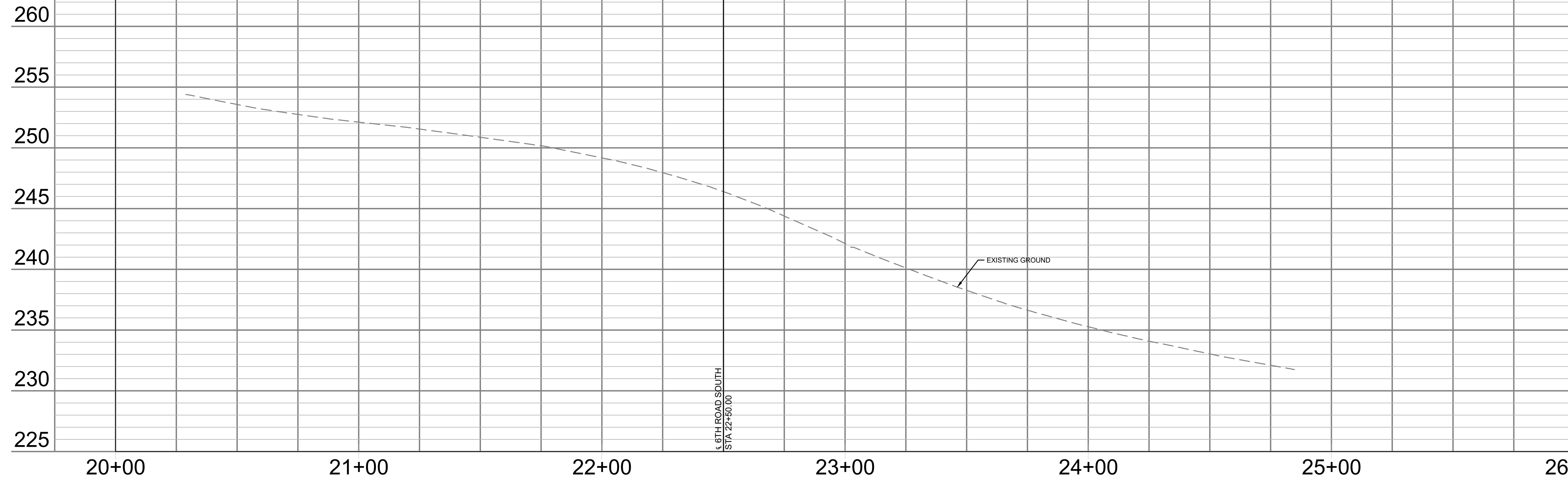
Designed: JGJ  
Drawn: JGJ  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

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

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-0110**

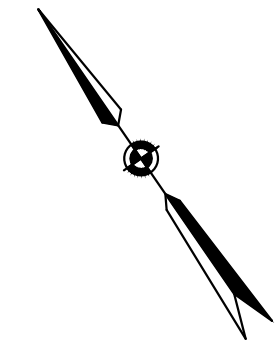
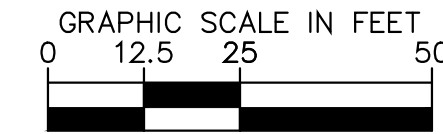
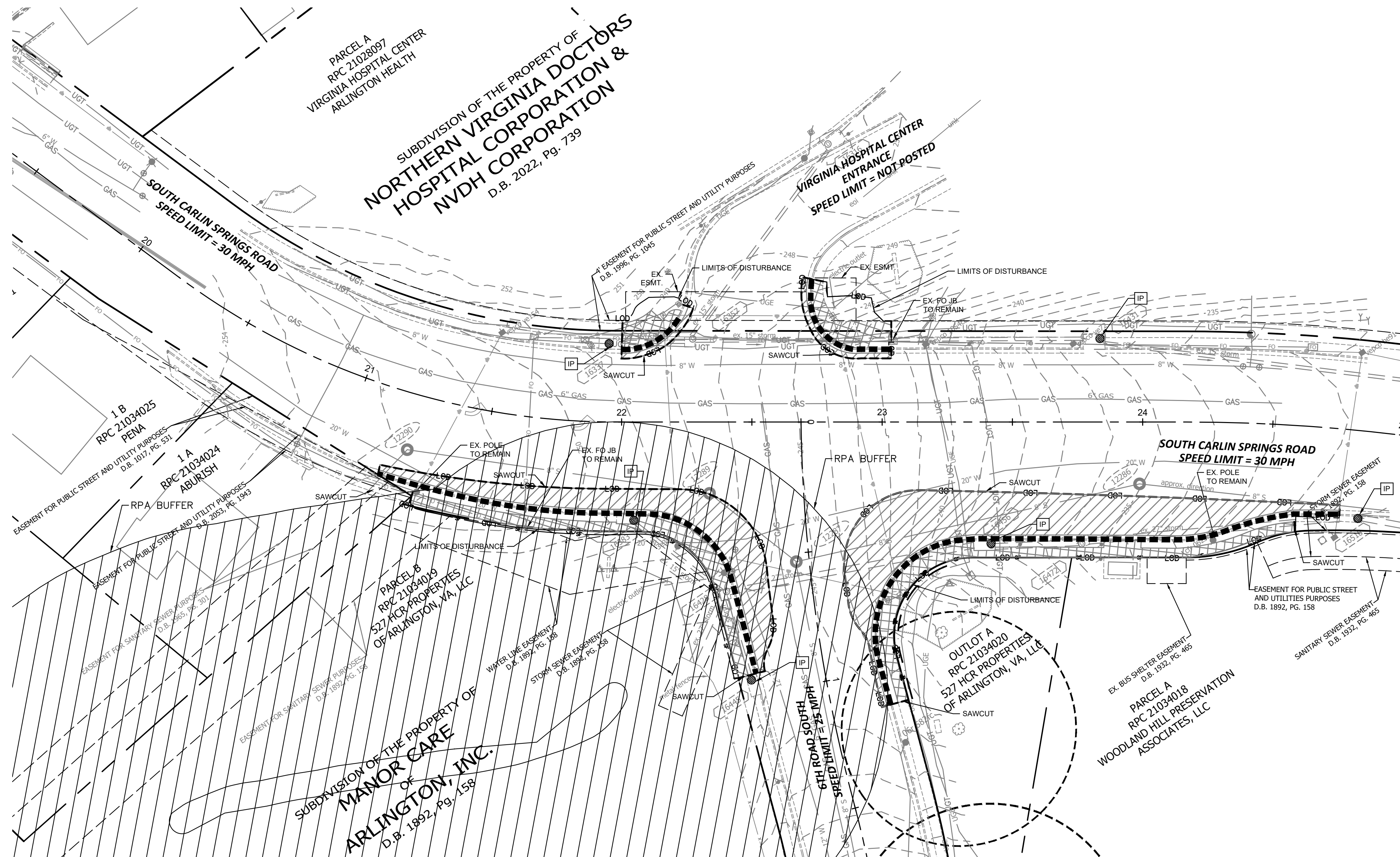


HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM  
1983 NORTH ZONE










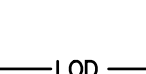
VERTICAL DATUM: NORTH AMERICAN VERTICAL  
DATUM 1988

THIS TOPOGRAPHIC SURVEY WAS COMPLETED  
UNDER THE DIRECT AND RESPONSIBLE CHARGE  
OF NATHAN A. ORR, L.S. FROM AN ACTUAL  
GROUND SURVEY MADE UNDER HIS SUPERVISION;  
THE IMAGERY AND/OR ORIGINAL DATA WAS  
OBTAINED FROM 10/05/2015 TO 11/09/2015; AND  
THIS PLAN, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING  
METADATA MEETS MINIMUM ACCURACY STANDARDS  
UNLESS OTHERWISE NOTED.





LEGEND

- |   |   |
|---|---|
|  | REMOVE FULL DEPTH BITUMINOUS SURFACE                              |
|  | REMOVE FULL DEPTH CONCRETE SURFACE                                |
|  | REMOVE CONCRETE CURB<br>AND GUTTER                                |
|  | REMOVE FENCE OR WALL  |
|  | STORM SEWER STRUCTURE INLET<br>PROTECTION (VESCH STD & SPEC 3.07) |
|  | EROSION CONTROL FENCE (SILT FENCE)<br>(VESCH STD & SPEC 3.05)     |
|  | LIMITS OF DISTURBANCE   |
|  | TREE PROTECTION   |
|  | ROOT PRUNING LINE   |
|  | CRITICAL ROOT ZONE  |

NOTES:

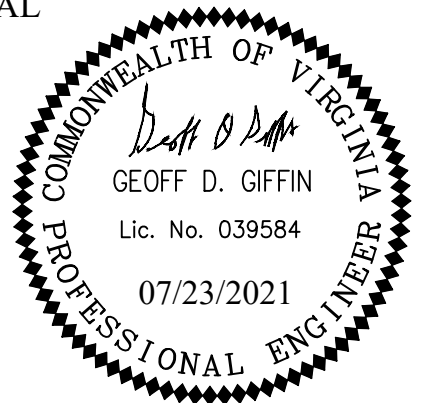
1. EROSION AND SEDIMENT PROTECTION MEASURES SHOULD BE INSTALLED ONLY WHEN NEEDED FOR THE CONSTRUCTION ZONE. IF A PROTECTION MEASURE IS NOT IMPACTED BY THE CONSTRUCTION THEN IT SHOULD BE REMOVED.
2. SEE TRAFFIC SIGNALS PLAN FOR DEMOLITION OF TRAFFIC SIGNALS
3. SEE SIGNING AND MARKING PLAN FOR LOCATIONS OF SIGNS TO BE REMOVED OR RELOCATED. COORDINATE RELOCATIONS WITH MOT AND ACTUAL CONSTRUCTION.
4. CONTRACTOR MUST PROTECT AND RETAIN ALL EXISTING MANHOLE LIDS, VALVES, AND JUNCTION BOXES.
5. TREE PROTECTION FENCE SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING, OR DEMOLITION. CONTACT THE COUNTY URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE THE START OF CONSTRUCTION, TO COORDINATE AND INSPECT TREE PROTECTION. TREE PROTECTION IS TYPICALLY INSTALLED AT THE LIMIT OF DISTURBANCE LINES.
6. NO TREES ARE PROPOSED TO BE ADDED OR REMOVED AS PART OF THIS PLAN. TREE PROTECTION TABLE NOT INCLUDED.
7. REMOVE EXISTING FENCE AND REPLACE FENCE AS SHOWN WITH NEW MATERIAL MATCHING THE ORIGINAL FENCE.



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

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Fax: 703.228.3606

SEAL



APPROVALS	DATE
-----------	------

<i>Jim Kettle</i>	06/21/21
TRAFFIC SIGNAL ENGINEER	
<i>John Nichols</i>	06/21/21
TRAFFIC ENGINEERING MANAGER	
<i>John F.</i>	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Harry</i>	06/22/2021
TE&O BUREAU CHIEF	
<i>Dennis W. Leach</i>	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS	DATE
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Project Name and Location	S. Carlin Springs Road Signal Upgrades
	PHASE I EROSION CONTROLS AND DEMOLITION PLAN
	67TH ROAD S. AND S. CARLIN SPRINGS ROAD
	ID #234
	TE02

Designed: TEC  
Drawn: TEC  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

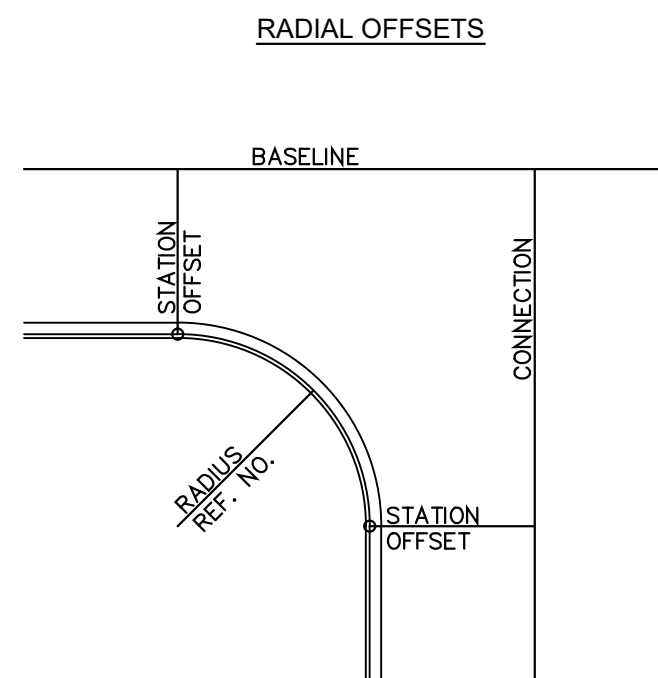
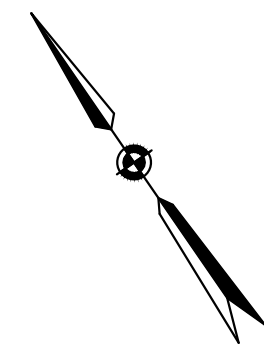
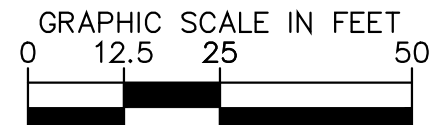
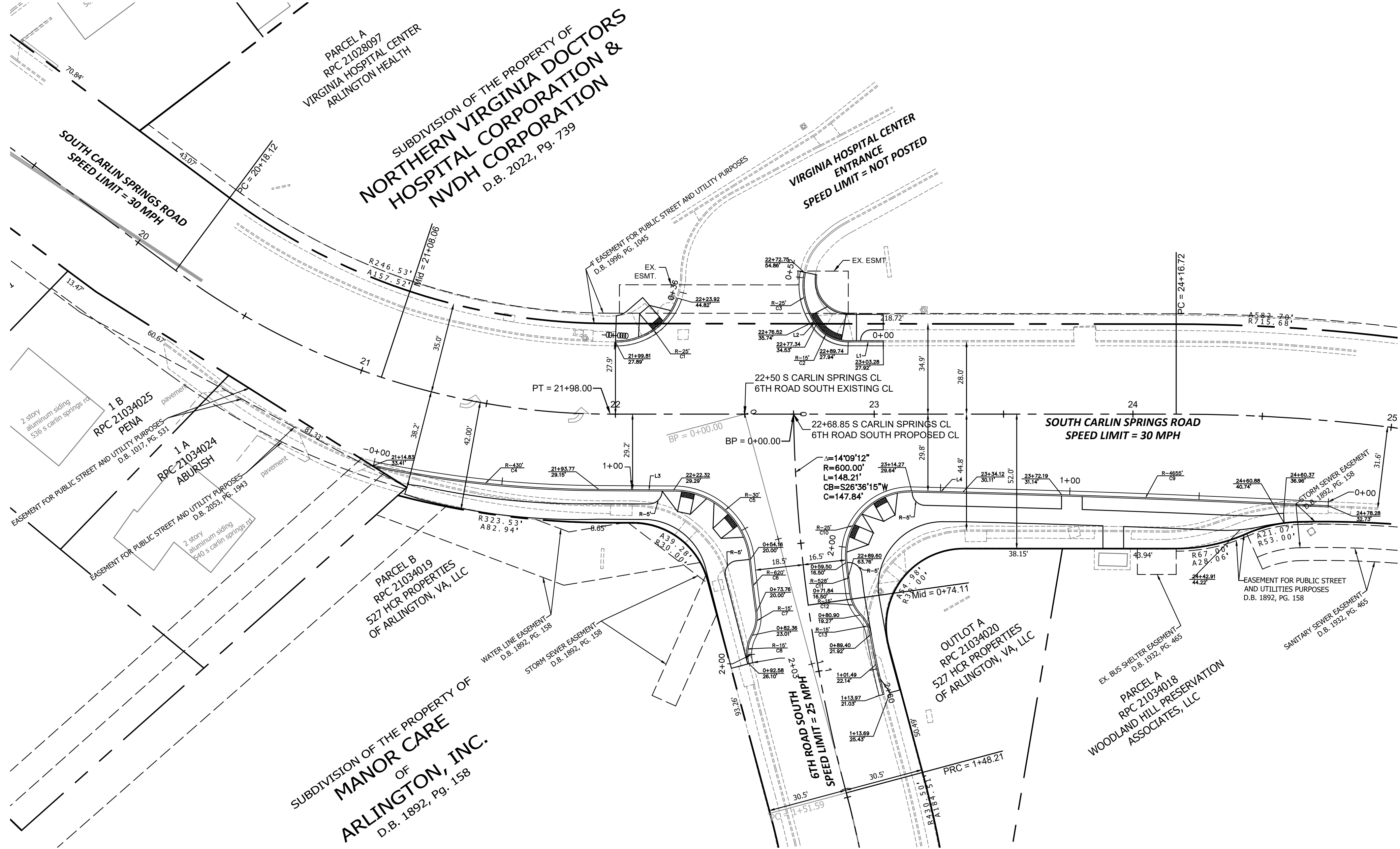
KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet C-0210



REVISED: MARCH 03, 2020

Filename: C-0310 GEOMETRY PLAN.dwg  
Path: K:\NVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets



6TH RD - NE - FOC					
NO.	DELTA OR BRG	RADIUS	LENGTH	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C1	$\Delta=72^{\circ} 41' 50''$	24.8'	31.47'	6999389.8640, 11873459.4857	6999390.2055, 11873488.8806

6TH RD - SE - FOC					
NO.	DELTA OR BRG	RADIUS	LENGTH	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C2	$\Delta=55^{\circ} 51' 09''$	15.0'	14.61'	6999338.9378, 11873533.5922	6999351.3930, 11873527.1109
C3	$\Delta=45^{\circ} 22' 08''$	25.0'	19.79'	6999352.8503, 11873527.1220	6999370.5773, 11873534.6903
L1	N $55^{\circ} 25' 03''$ W		13.54'	6999331.2519, 11873544.7407	6999338.9378, 11873533.5922
L2	N $0^{\circ} 26' 06''$ E		1.46'	6999351.3930, 11873527.1109	6999352.8503, 11873527.1220

6TH RD - NW - FOC					
NO.	DELTA OR BRG	RADIUS	LENGTH	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C4	$\Delta=11^{\circ} 41' 46''$	429.5'	87.68'	6999403.5200, 11873355.3908	6999346.5442, 11873421.8337
C5	$\Delta=83^{\circ} 39' 10''$	30.0'	43.79'	6999329.9923, 11873445.5989	6999291.0688, 11873454.8125
C6	$\Delta=1^{\circ} 52' 18''$	620.0'	20.25'	6999291.0688, 11873454.8125	6999273.1160, 11873445.4377
C7	$\Delta=36^{\circ} 32' 23''$	15.0'	9.56'	6999273.1160, 11873445.4377	6999266.4595, 11873438.8027
C8	$\Delta=42^{\circ} 39' 23''$	15.2'	11.34'	6999266.4595, 11873438.8027	6999258.1647, 11873431.4569
L3	S $55^{\circ} 08' 37''$ E		28.96'	6999346.5442, 11873421.8337	6999329.9923, 11873445.5989

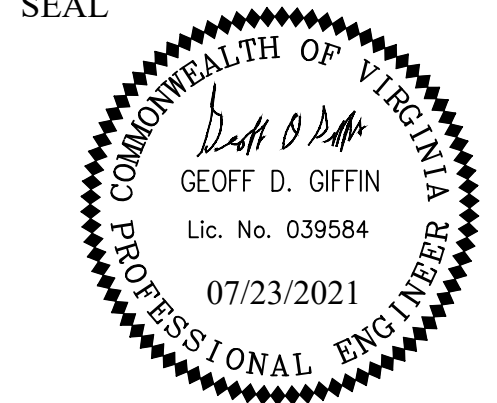
6TH RD - SW - FOC					
NO.	DELTA OR BRG	RADIUS	LENGTH	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C9	$\Delta=1^{\circ} 44' 17''$	4655.4'	141.22'	6999181.6068, 11873650.4978	6999265.9509, 11873537.2381
C10	$\Delta=97^{\circ} 51' 54''$	25.0'	42.68'	6999277.5812, 11873521.1501	6999269.0606, 11873484.4443
C11	$\Delta=1^{\circ} 18' 11''$	527.7'	12.00'	6999269.0606, 11873484.4443	6999258.4120, 11873478.9110
C12	$\Delta=35^{\circ} 45' 58''$	15.0'	9.36'	6999258.4120, 11873478.9110	6999249.3097, 11873477.4913
C13	$\Delta=33^{\circ} 25' 46''$	15.0'	8.75'	6999249.3097, 11873477.4913	6999240.7593, 11873476.3357
L4	N $54^{\circ} 08' 10''$ W		19.85'	6999265.9509, 11873537.2381	6999277.5812, 11873521.1501



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
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Fax: 703.228.3606

SEAL



APPROVALS DATE

	06/21/21
	06/21/21
	07.16.2021
	06/22/2021
	06/23/21

REVISIONS DATE

NO.	DESCRIPTION	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

GEOMETRY PLAN  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234  
TE02

Designed: KF  
Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

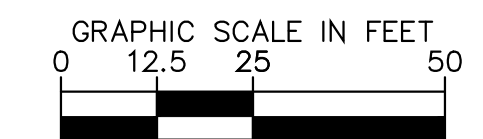
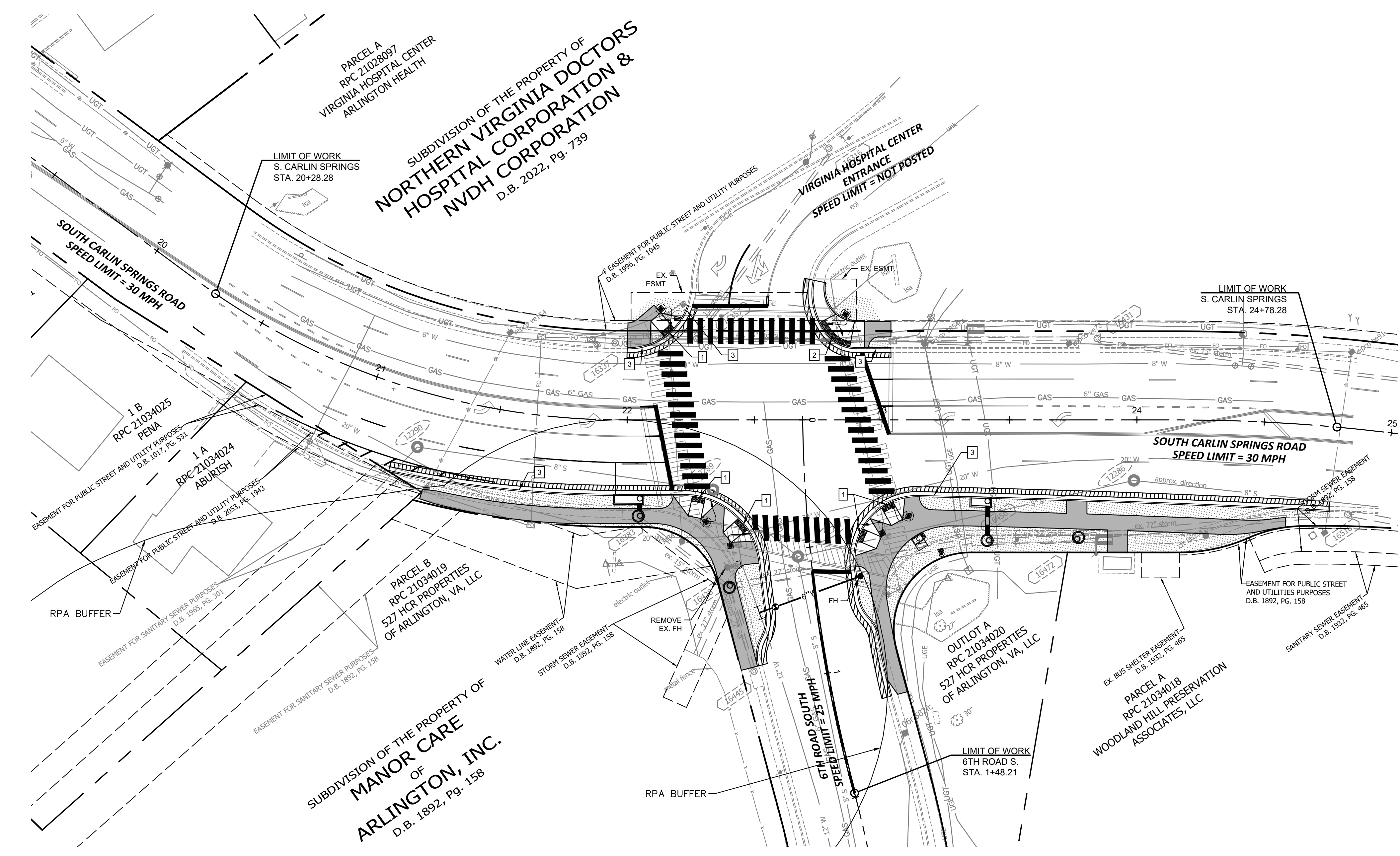
Sheet  
**C-0310**

S. Carlin Springs Road Signal Upgrades



REVISED: MARCH 03, 2020

Filename: C-0410 PROPOSED PLAN AND PROFILE.dwg  
Path: K:\NVA\_TPT\110614003 - Carlin Springs 2020\CAD\PlanSheets



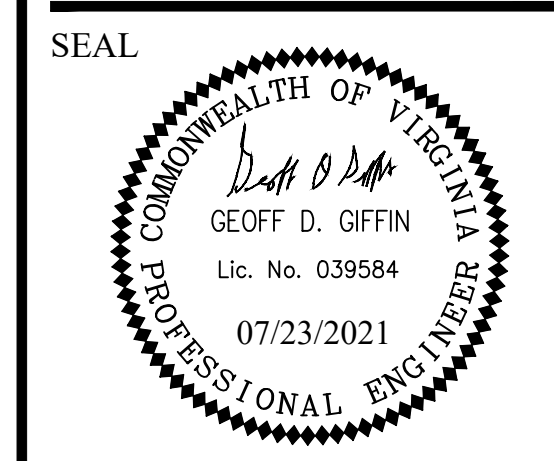
NOTE: TOPOGRAPHIC SURVEY WAS OBTAINED FROM 10/05/2015 TO 11/09/2015 BY ARLINGTON COUNTY. SEE SHEET C-0110 FOR EXISTING CONDITIONS.

- LEGEND
- 1 TYPE A PEDESTRIAN CURB RAMP
  - 2 TYPE B PEDESTRIAN CURB RAMP
  - 3 ARL. CO. STD. C-2 CURB AND GUTTER
  - FULL DEPTH ASPHALT PAVEMENT
  - FULL DEPTH CONCRETE PAVEMENT
  - ARL. CO. STD. CONCRETE SIDEWALK
  - LANDSCAPE AREA



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APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	06/21/21
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	06/21/21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
<i>[Signature]</i> TE&O BUREAU CHIEF	06/22/2021
<i>[Signature]</i> TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

PROPOSED PLAN AND PROFILE  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

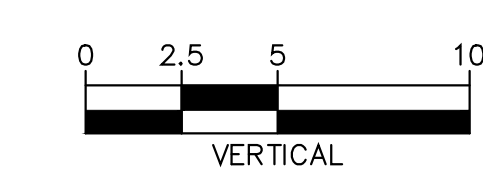
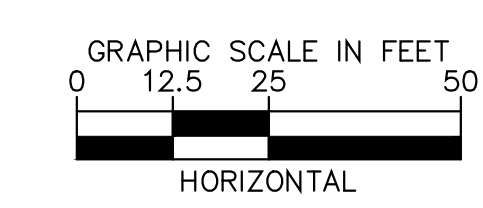
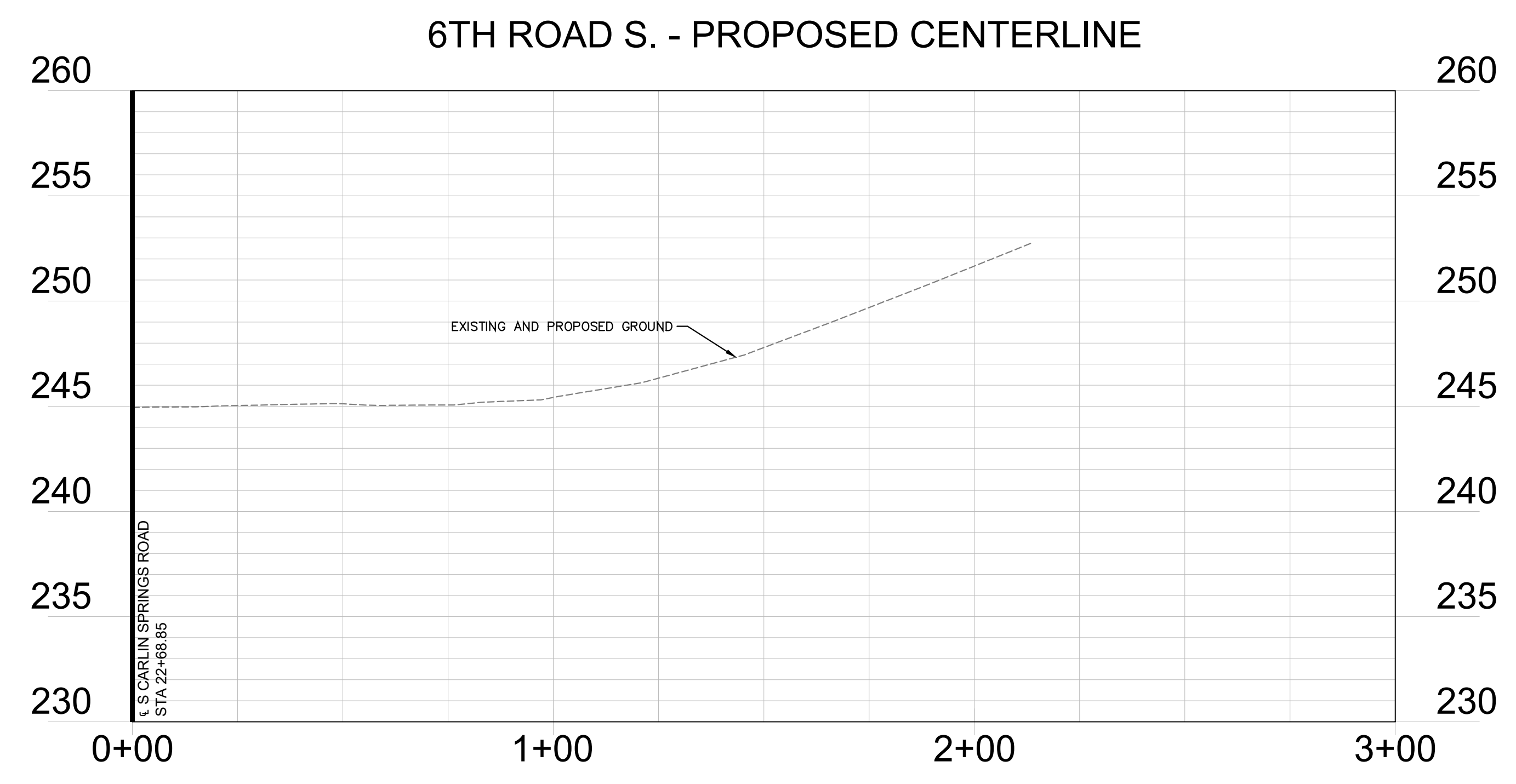
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Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

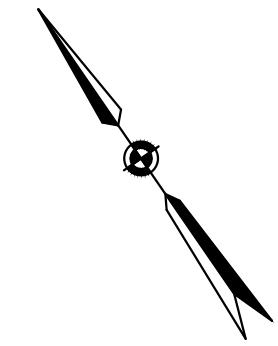
Scale:  
HOR. 1" = 25' VERT. 1" = 5'

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-0410**







ME = MATCH EXISTING

TOC = TOP OF CURB

EOP = EDGE OF PAVEMENT

FL = FLOW LINE

SW = SIDEWALK

DW = DRIVEWAY

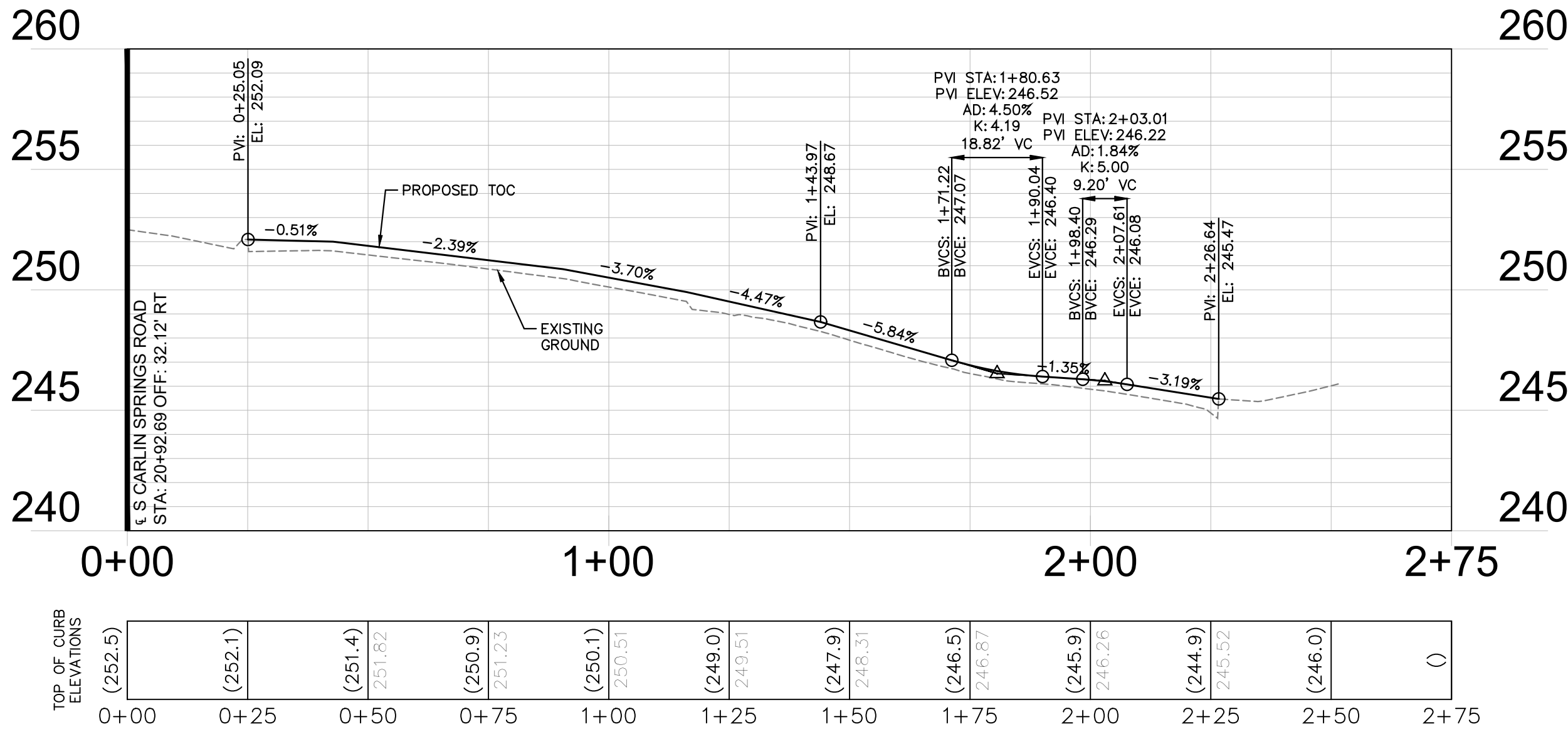
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RAMP DETAILS  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

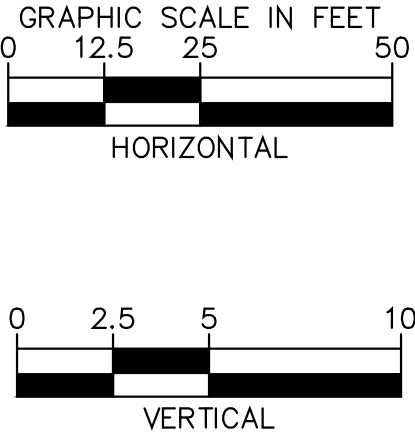
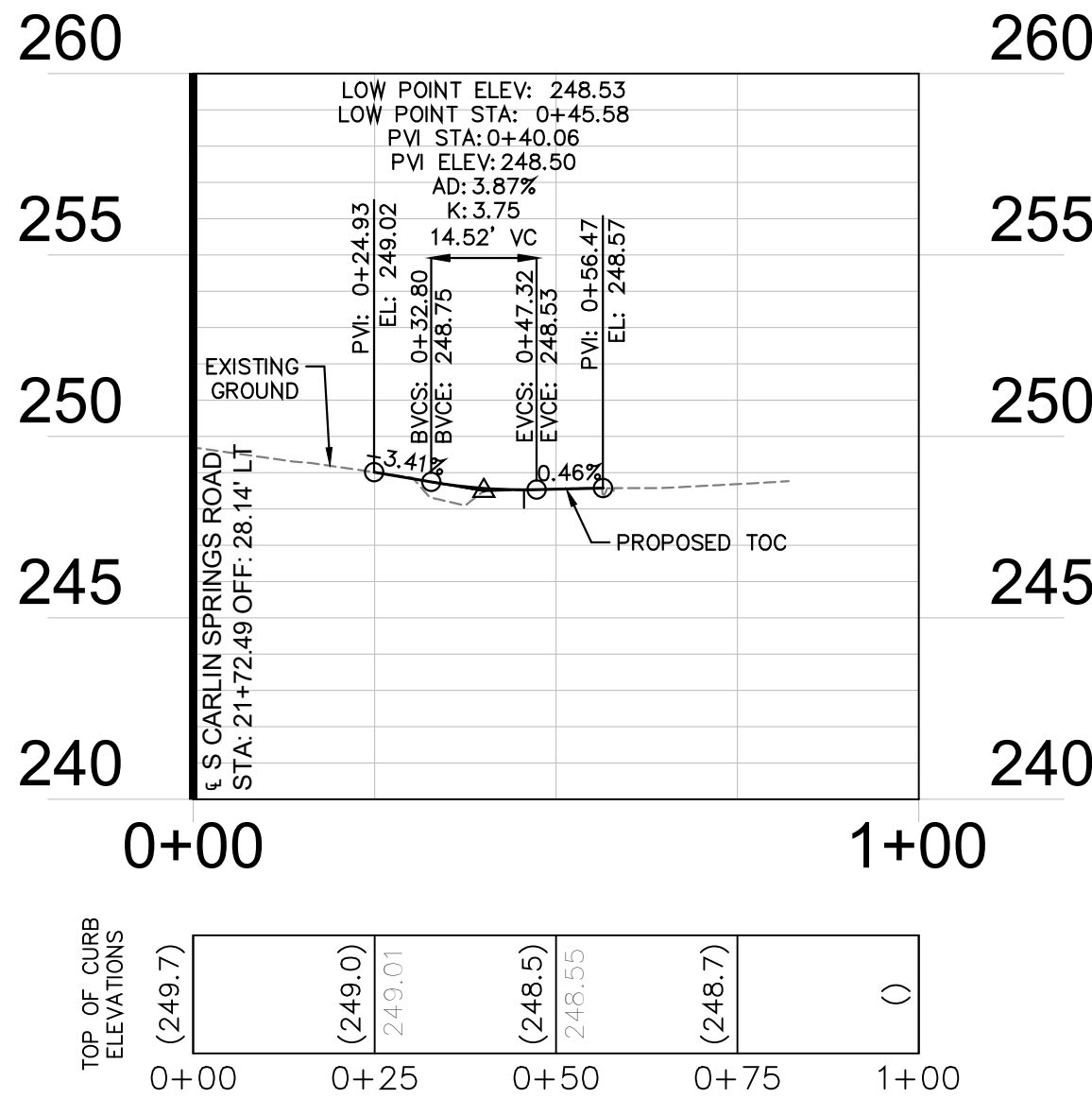
Sheet C-0510



6TH ROAD S. - NW CORNER



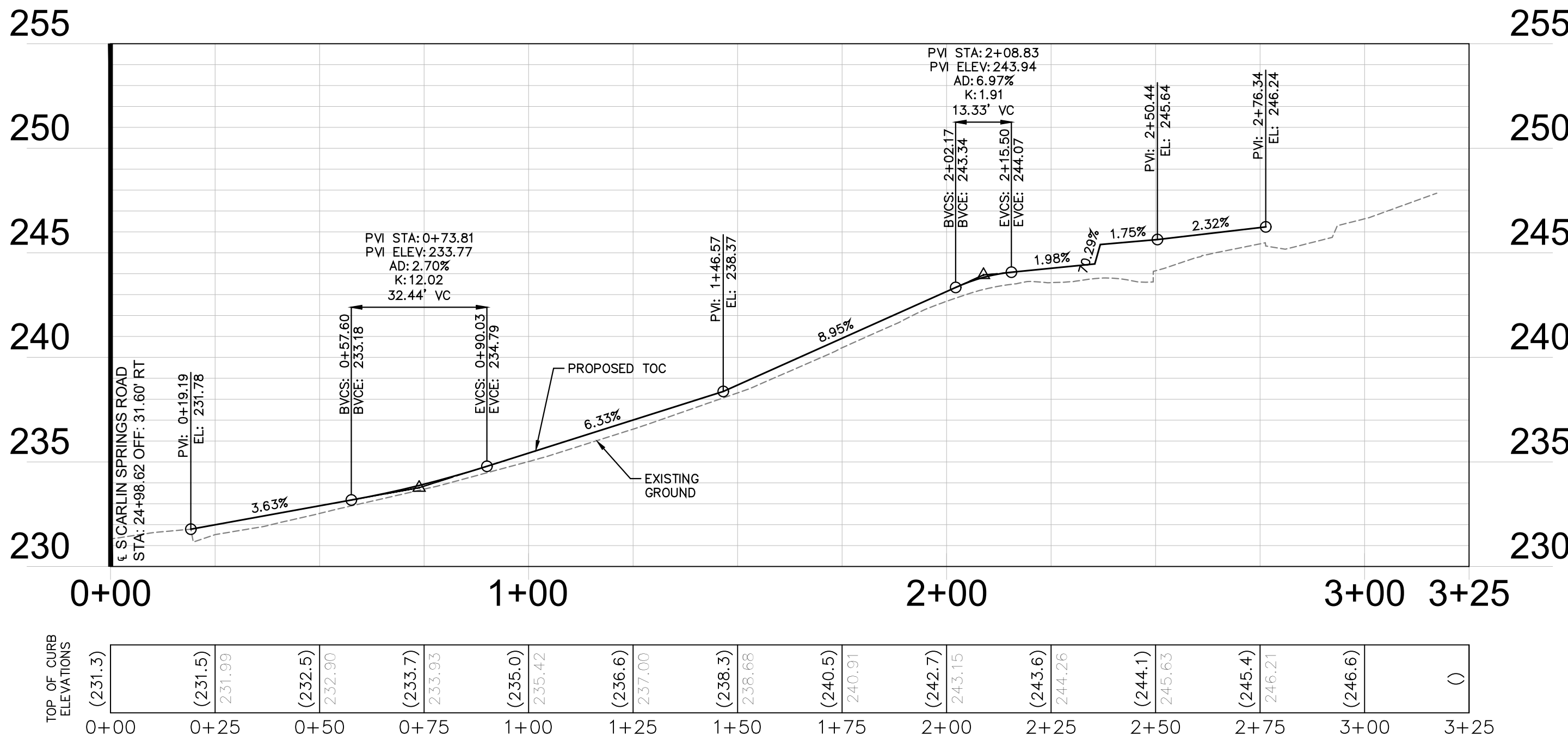
6TH ROAD S. - NE CORNER



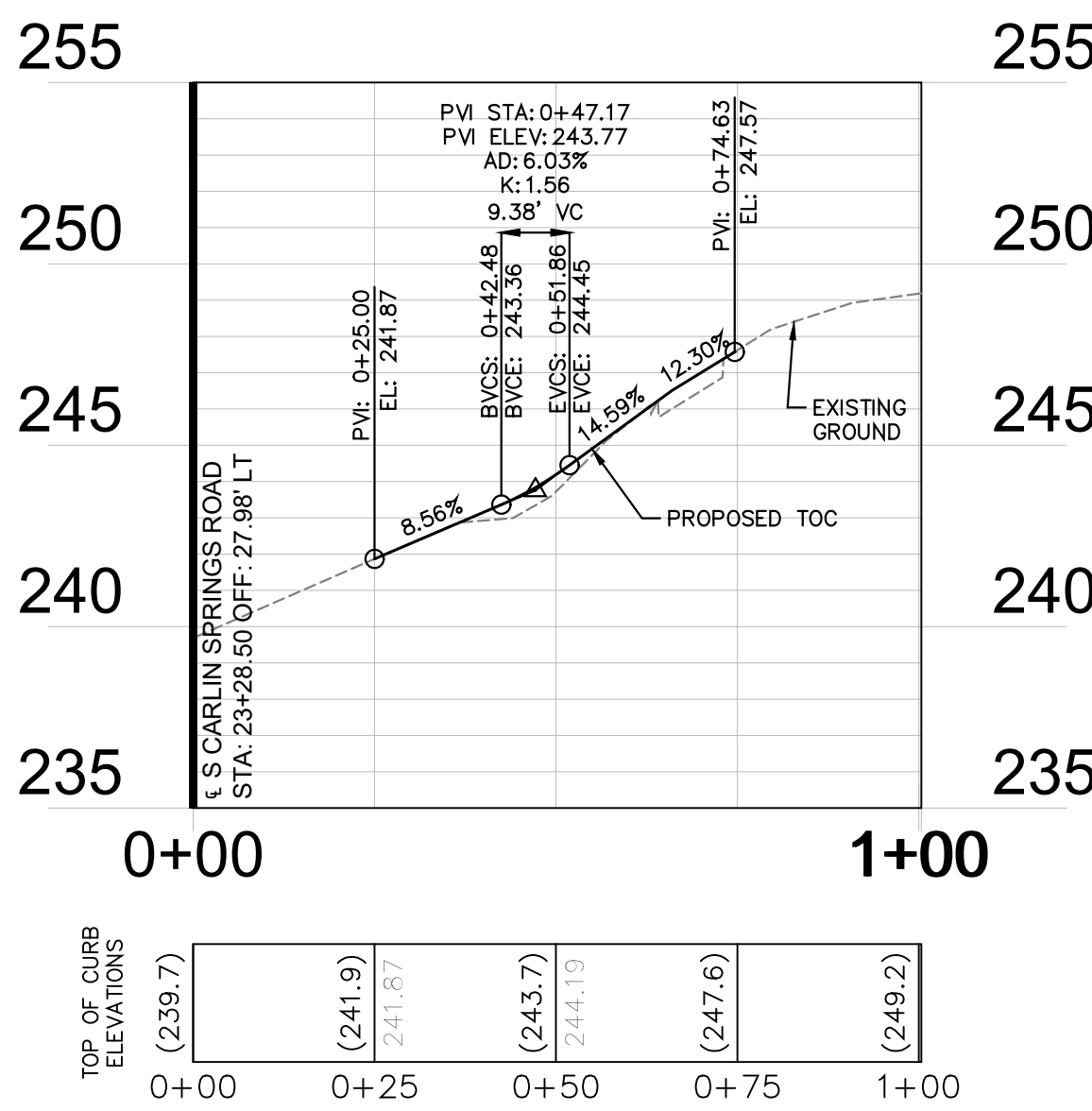
NOTE

1. BASELINE (HORIZONTAL) STATIONING IS TAKEN AT THE PROPOSED FACE OF CURB.
2. PROPOSED GRADES SHOW TOP OF CURB.
3. EXISTING GRADES SHOW EXISTING GROUND ALONG THE PROPOSED FACE OF CURB.

6TH ROAD S. - SW CORNER



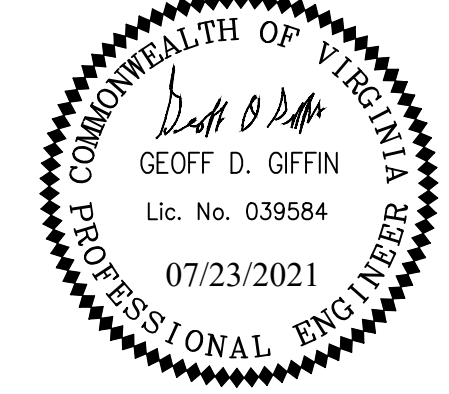
6TH ROAD S. - SE CORNER



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Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	06/21/21
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	06/21/21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
<i>[Signature]</i> TE&O BUREAU CHIEF	06/22/2021
<i>[Signature]</i> TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

CURB RETURN PROFILES  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

Designed: KF  
Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

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

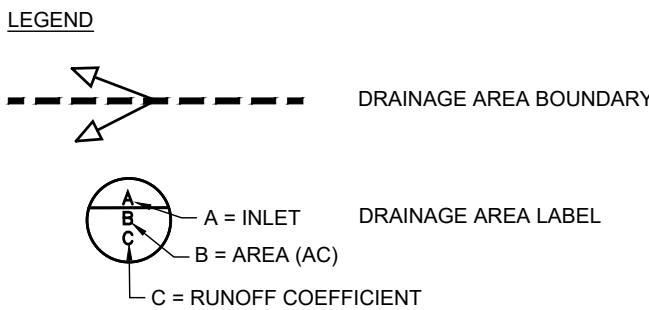
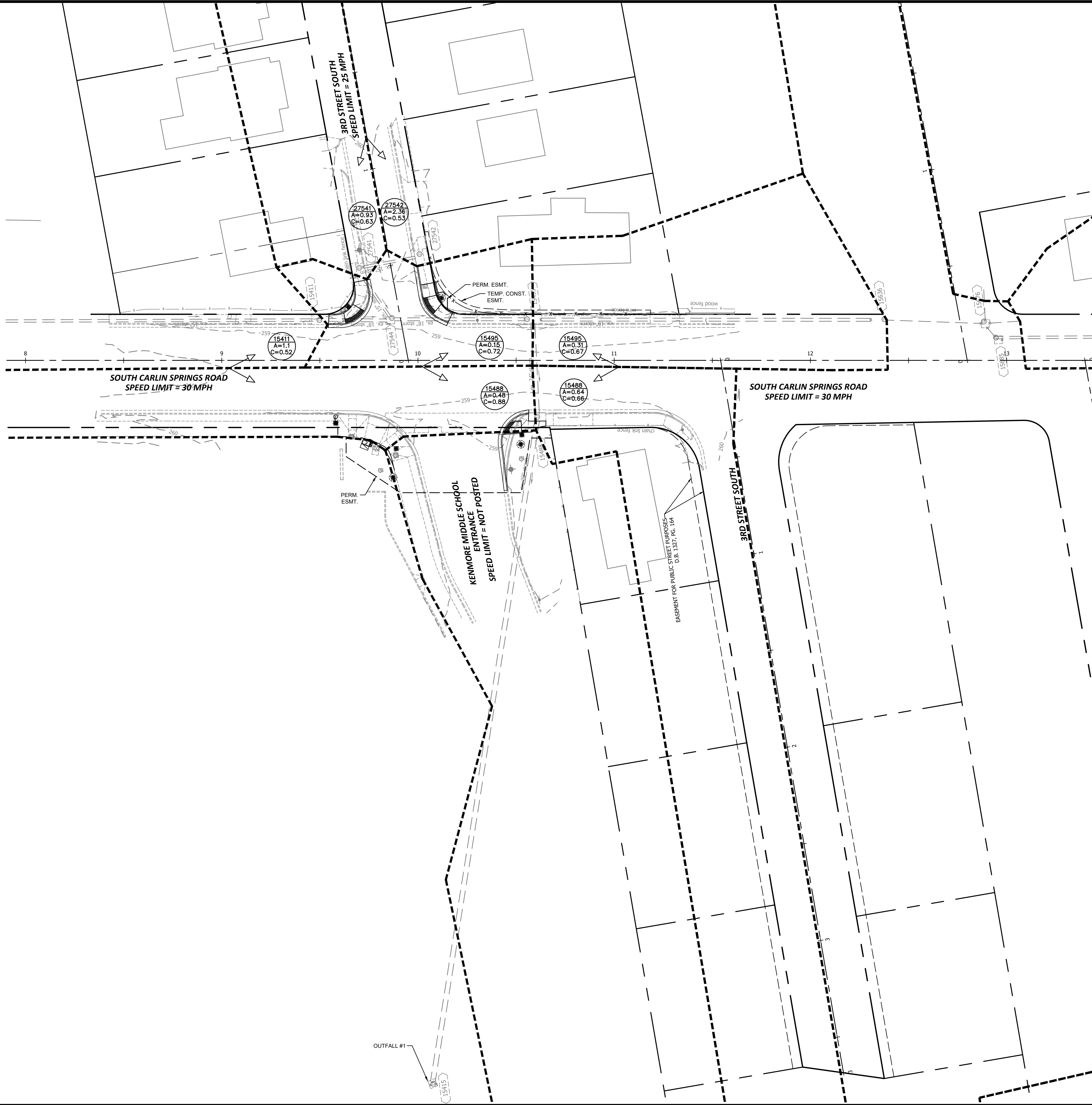
KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-0610**



File name: C-0700 DRAINAGE AREA PLAN 6th.dwg  
Path: K:\NVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets

REVISED: MARCH 03, 2020



ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

APPROVALS	DATE
	06/21/21
	06/21/21
	07.16.2021
	06/22/2021
	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**

**Signal Upgrades**

DRAINAGE AREA PLAN

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

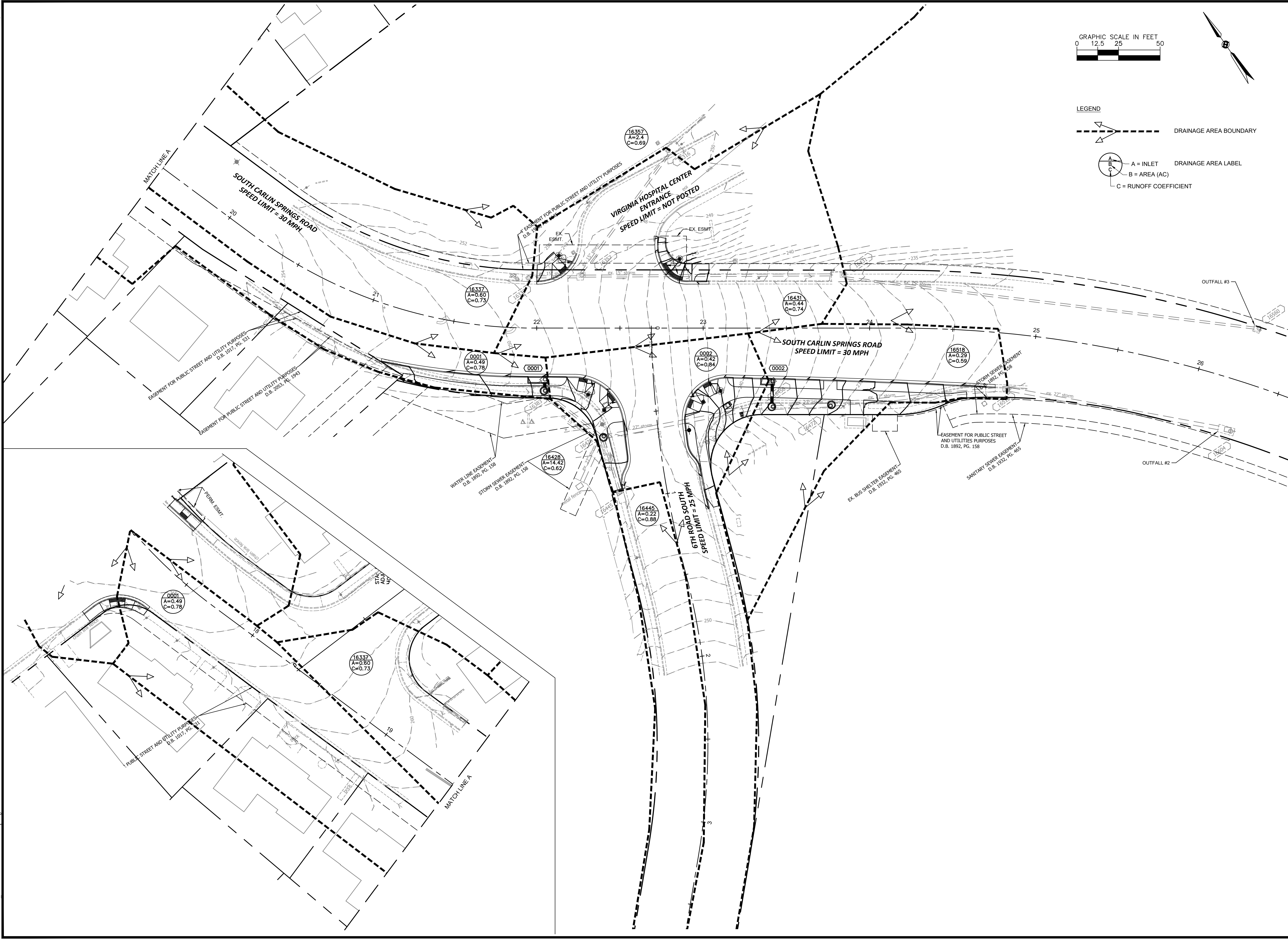
Sheet  
**C-0700**

S. Carlin Springs Road Signal Upgrades



REVISID: MARCH 03, 2020

Filename: C-0710 DRAINAGE AREA PLAN 6th.dwg  
Path: K:\NVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets



GRAPHIC SCALE IN FEET  
0 12.5 25 50

LEGEND

---> DRAINAGE AREA BOUNDARY

A = INLET  
B = AREA (AC)  
C = RUNOFF COEFFICIENT

DRAINAGE AREA LABEL

ARLINGTON VIRGINIA

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Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

APPROVALS	DATE
 TRAFFIC SIGNAL ENGINEER	06/21/21
 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 TE&O BUREAU CHIEF	06/22/2021
 TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**

**Signal Upgrades**

DRAINAGE AREA PLAN

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

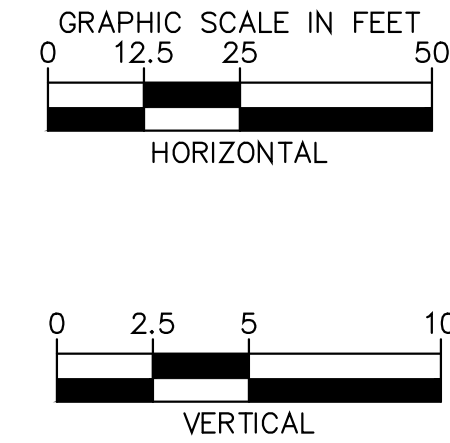
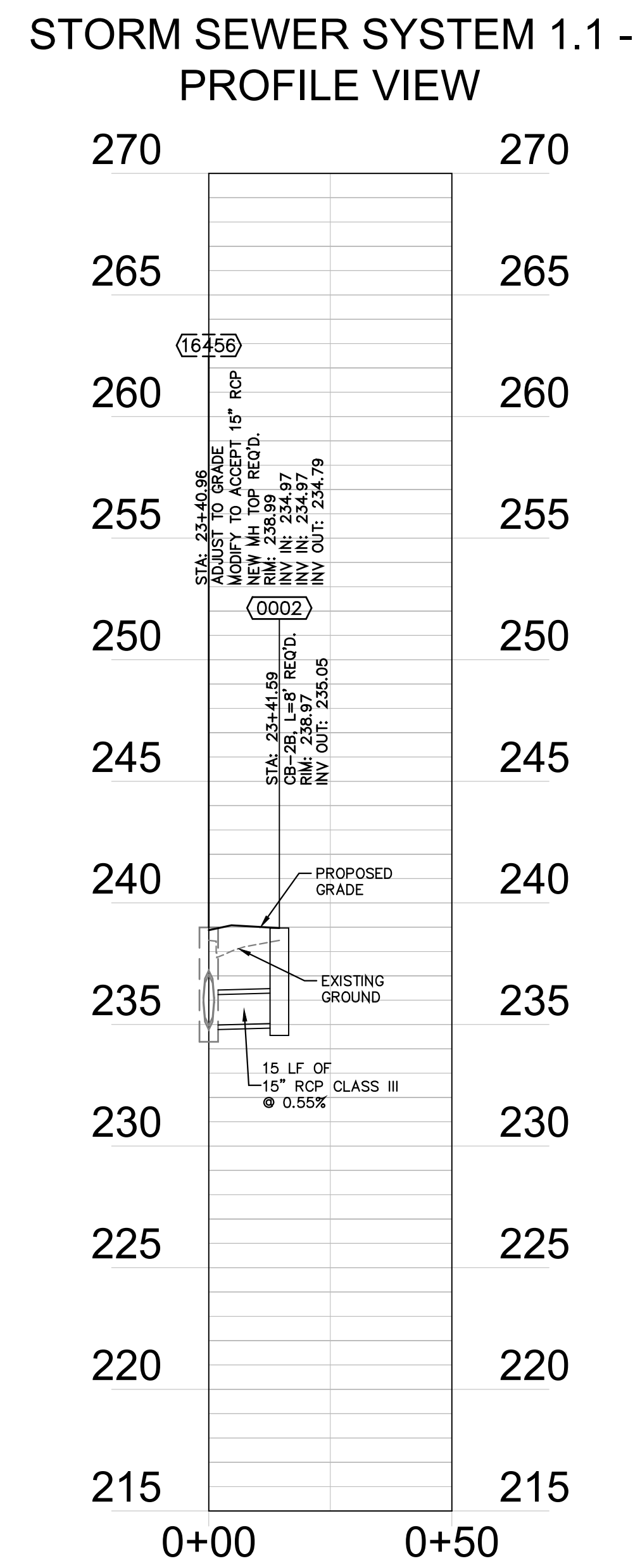
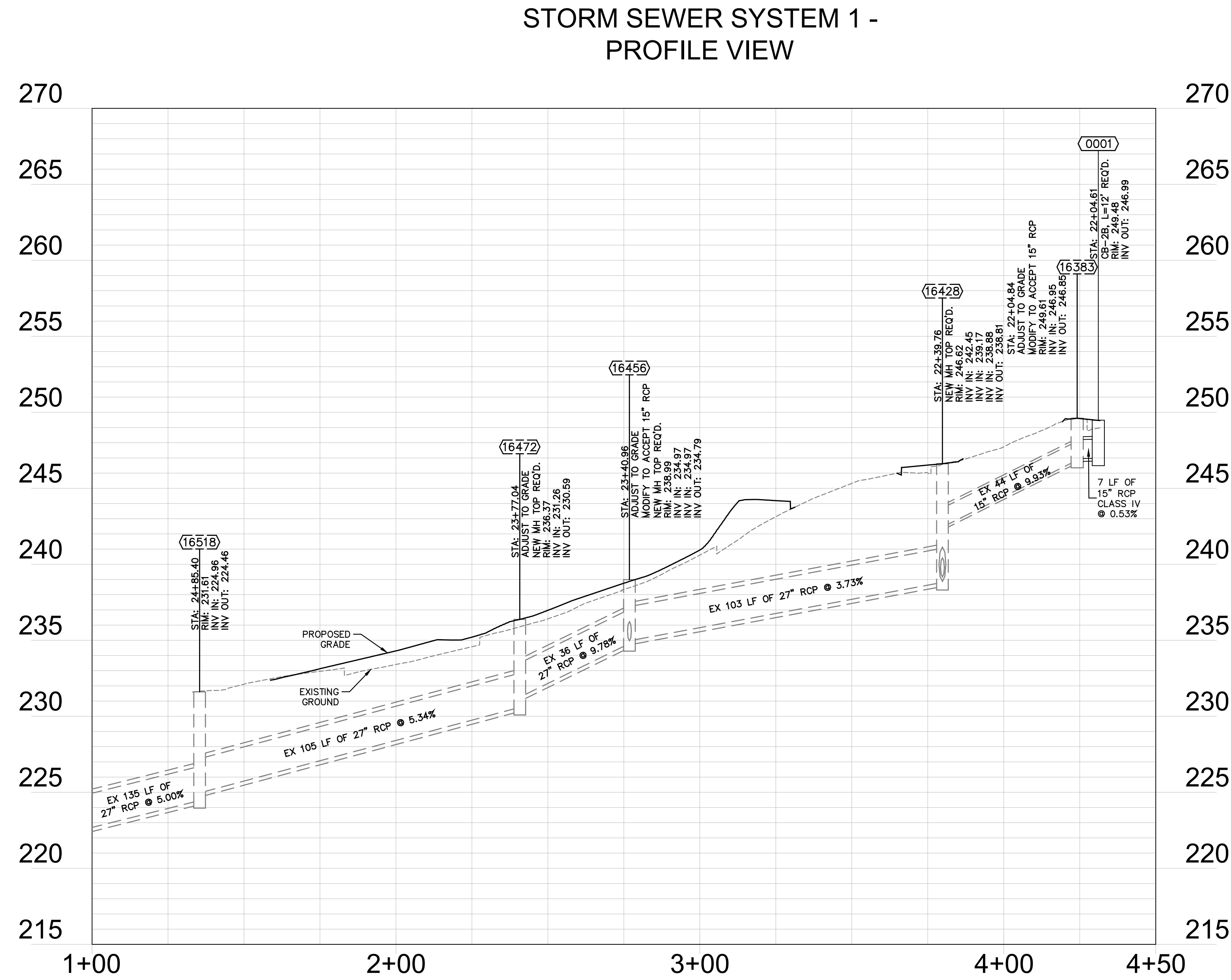
Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet

**C-0710**





ARLINGTON  
VIRGINIA

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SEAL

APPROVALS	DATE
	06/21/21
	06/21/21
	07.16.2021
	06/22/2021
	06/23/21

REVISIONS	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

DRAINAGE PROFILES

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
C-0711



Project: South Carlin Springs Road																		
Locality: Arlington County																		
Date: 2/22/2021																		
Post-development Storm Drain Design Calculations																		
VDOT LD-229																		
Project No.: 110614003																		
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.																		
FROM POINT	TO POINT	DRAINAGE AREA acres	RUNOFF COEFFICIENT C	CA		INLET TIME min	RAINFALL in/hr	RUNOFF cfs	INVERT ELEVATIONS		LENGTH ft	SLOPE %	SIZE in	PIPE CAPACITY cfs	Q / Q <sub>c</sub> %	VELOCITY fps	FLOW TIME	
				inlet	accum				upper end	lower end							incr	accum
S. Carlin Springs Road and 6th Road South (Outfall #3)																		
16337	16357	0.60	0.73	0.44	0.44	5.00	6.79	3.00	245.94	243.14	32	8.80%	15	19.11	16%	11.34	0.05	5.00
16357	16431	2.40	0.69	1.66	2.09	14.00	4.77	10.07	243.14	231.57	157	7.40%	15	17.54	57%	14.78	0.18	14.00
16431	16560	0.44	0.74	0.33	2.42	5.00	4.75	11.58	231.57	223.00	251	3.40%	15	11.94	97%	11.08	0.38	14.18
S. Carlin Springs Road and 3rd Street South (Outfall #1)																		
15411	27544	1.10	0.52	0.57	0.57	5.00	6.79	3.91	255.62	255.05	37	1.50%	18	13.03	30%	6.45	0.10	5.00
27542	27541	2.36	0.53	1.25	1.25	15.00	4.63	5.84	256.23	255.69	31	1.70%	15	8.51	69%	4.76	0.08	15.00
27541	27544	0.93	0.63	0.59	1.84	5.00	4.62	8.54	255.63	255.09	31	1.80%	15	8.60	99%	6.96	0.07	15.11
27544	15495	(N/A)	(N/A)	0.00	2.41	0.00	4.61	11.18	254.99	253.88	72	1.50%	18	13.07	86%	8.31	0.14	15.18
15495	15488	0.46	(N/A)	0.00	2.72	5.00	4.59	12.59	250.92	250.66	50	0.50%	24	16.35	77%	5.74	0.14	15.33
15488	15415	1.12	(N/A)	0.00	3.57	5.00	4.57	16.43	250.49	246.73	343	1.10%	30	42.93	38%	8.16	0.70	15.47
S. Carlin Springs Road and 6th Road South (Outfall #2)																		
BMP	16428	14.62	0.62	9.06	9.06	20.00	4.05	36.96	239.53	238.88	33	2.00%	27	43.77	84%	9.30	0.05	20.00
16445	16428	0.22	0.88	0.19	0.19	5.00	6.79	1.32	240.12	239.17	35	2.80%	15	10.72	12%	1.08	0.07	5.00
0001	16383	0.49	0.78	0.38	0.38	5.00	6.79	2.62	246.99	246.95	8	0.50%	15	4.72	56%	3.95	0.03	5.00
16383	16428	(N/A)	(N/A)	0.00	0.38	0.00	6.78	2.61	246.85	242.45	45	9.90%	15	20.30	13%	11.38	0.07	5.03
16428	16456	(N/A)	(N/A)	0.00	9.64	0.00	4.04	39.25	238.81	234.97	103	3.70%	27	59.77	66%	16.04	0.11	20.06
0002	16456	0.42	0.84	0.35	0.35	5.00	6.79	2.41	235.05	234.97	15	0.60%	15	4.80	50%	1.97	0.06	5.00
16456	16472	(N/A)	(N/A)	0.00	9.99	0.00	4.03	40.58	234.79	231.26	36	9.70%	27	96.63	42%	23.24	0.03	20.17
16472	16518	(N/A)	(N/A)	0.00	9.99	0.00	4.03	40.56	230.59	224.96	106	5.30%	27	71.54	57%	18.56	0.10	20.19
16518	16604	0.29	0.59	0.17	10.16	5.00	4.02	41.16	224.46	217.69	136	5.00%	27	69.21	59%	18.16	0.12	20.29

Project: South Carlin Springs Road																						
Locality: Arlington County																						
Date: 2/22/2021																						
Project #: 110614003																						
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.																						
INLET	DESIGN OUTLET WSE	D <sub>o</sub>	Q <sub>o</sub>	L <sub>o</sub>	S <sub>fo</sub>	H <sub>i</sub>	JUNCTION LOSS										FINAL H	INLET WSE	RIM ELEV	AVAILABLE FREEBOARD		
							V <sub>o</sub>	H <sub>o</sub>	Q <sub>i</sub>	V <sub>i</sub>	Q <sub>o</sub> /V <sub>i</sub>	$\frac{V_o^2}{2g}$	H <sub>i</sub>	Angle	H <sub>o</sub>	H <sub>t</sub>					1.3 H <sub>t</sub>	0.5 H <sub>t</sub>
							(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)					(17)	(18)
S. Carlin Springs Road and 3rd Street South (Outfall #1)																						
15488	248.73	30	16.43	343	0.010	3.43	8.16	0.26	12.59	5.25	66.10	0.43	0.15	11.67	0.06	0.47	0.61	0.31	3.74	252.47	259.12	6.65
15495	252.47	24	12.59	50	0.005	0.25	5.74	0.13	11.18	6.33	70.77	0.62	0.22	86.73	0.43	0.77	1.01	0.50	0.75	253.22	258.67	5.45
27544	255.08	18	11.18	72	0.014	1.00	8.31	0.27	8.54	6.96	59.44	0.75	0.26	56.54	0.41	0.94	0.94	0.47	1.47	256.55	258.96	2.41
15411	256.55	18	3.91	37	0.001	0.04	6.45	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.25	0.13	0.16	256.72	258.95	2.23	
27541	256.55	15	8.54	31	0.017	0.52	6.96	0.19	5.84	4.76	27.80	0.35	0.12	111.93	0.28	0.59	0.76	0.38	0.90	257.45	259.37	1.92
27542	257.45	15	5.84	31	0.008	0.25	4.76	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.14	0.07	0.32	257.77	259.61	1.84	
S. Carlin Springs Road and 6th Road South (Outfall #2)																						
16518	219.49	27	41.16	136	0.034	4.61	18.16	1.28	40.56	10.20	413.71	1.62	0.57	15.79	0.32	2.17	2.17	1.08	5.69	225.18	231.61	6.43
16472	226.76	27	40.56	106	0.053	5.59	18.56	1.34	40.58	10.80	438.26	1.81	0.63	4.84	0.11	2.08	2.08	1.04	6.63	233.39	236.38	2.99
16456	233.39	27	40.58	36	0.033	1.20	23.24	2.10	39.25	9.87	387.40	1.51	0.53	10.27	0.20	2.82	2.82	1.41	2.61	236.00	238.88	2.88
16428	236.77	27	39.25	103	0.034	3.51	16.04	1.00	36.96	9.30	343.73	1.34	0.47	48.75	0.66	2.13	2.13	1.06	4.57	241.34	246.62	5.28
16383	243.45	15	2.61	45	0.067	2.98	11.38	0.50	2.62	3.85	10.09	0.23	0.08	50.03	0.12	0.70	0.70	0.35	3.33	246.78	249.61	2.83
0001	247.95	15	2.62	8	0.005	0.04	3.95	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.09	0.05	0.08	248.03	249.48	1.45	
0002	236.00	15	2.41	15	0.001	0.01	1.97	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.03	0.03	236.03	238.97	2.94	
16445	241.34	15	1.32	35	0.000	0.00	1.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	241.34	245.60	4.26
BMP	241.34	27	36.96	33	0.014	0.46	9.30	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.52	0.26	0.72	242.06	245.20	3.14
S. Carlin Springs Road and 6th Road South (Outfall #3)																						
16431	224.00	15	11.58	251	0.033	8.28	11.08	0.48	10.07	8.21	82.67	1.05	0.37	9.62	0.13	0.97	1.26	0.63	8.91	232.91	235.47	2.56
16357	232.91	15	10.07	157	0.070	10.99	14.78	0.85	3.00	2.44	7.32	0.09	0.03	4.38	0.01	0.89	1.15	0.58	11.57	244.48	247.64	3.16
16337	244.48	15	3.00	32	0.072	2.30	11.34	0.60	0.00	0.00	0.00	0.00	0.00	0	0.00	0.60	0.78	0.39	2.69	247.17	249.15	1.98

Appendix 9B-1 LD-204 Stormwater Inlet Computations																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
LD-204		Rev. 6-85		PPMS#		110614003		PROJ		Carlin Springs Road		DATE		February 21, 2021		SHEET		OF																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										



Project Name: S. Carlin Springs Road Signal Upgrades

Date: 12/21/2020

Linear Development Project? Yes

CLEAR ALL  
(Ctrl+Shift+R)

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 0.0722

Maximum reduction required: 20%

The site's net increase in impervious cover (acres) is: 0.0000

Post-Development TP Load Reduction for Site (lb/yr): -0.0508

Check:  
BMP Design Specifications List: 2013 Draft Stds & Specs

Linear project? Yes

Land cover areas entered correctly? ✓

Total disturbed area entered? ✓

TP LOAD REDUCTION NOT REQUIRED

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.0116	0.0116
Impervious Cover (acres)				0.0607	0.0607
					0.0723

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.0607	0.0607
Impervious Cover (acres)				0.0116	0.0116
Area Check	OK.	OK.	OK.	OK.	0.0723

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.25
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-ReDevelopment	Listed	Adjusted <sup>1</sup>
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.0116	0.0116
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	16%	16%
Impervious Cover (acres)	0.0607	0.0607
Rv(impervious)	0.9500	0.9500
% Impervious	84%	84%
Total Site Area (acres)	0.0723	0.0723
Site Rv	0.8377	0.8377

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0050	0.0050
Pre-ReDevelopment Treatment Volume (cubic feet)	219.8510	219.8510
Pre-ReDevelopment TP Load (lb/yr)	0.1381	0.1381
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.9100	1.9100
Baseline TP Load (lb/yr) (0.41 lb/acre/yr applied to pre-redevelopment area excluding previous land proposed for new impervious cover)		0.0296

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)		Land Cover Summary-Post		Land Cover Summary-Post	
Post ReDev. & New Impervious		Post-ReDevelopment		Post-Development New Impervious	
Forest/Open Space Cover (acres)	0.0000	Forest/Open Space Cover (acres)	0.0000		
Weighted Rv(forest)	0.0000	Weighted Rv(forest)	0.0000		
% Forest	0%	% Forest	0%		
Managed Turf Cover (acres)	0.0607	Managed Turf Cover (acres)	0.0607		
Weighted Rv (turf)	0.2500	Weighted Rv (turf)	0.2500		
% Managed Turf	84%	% Managed Turf	84%		
Impervious Cover (acres)	0.0116	ReDev. Impervious Cover (acres)	0.0116	New Impervious Cover (acres)	0.0000
Rv(impervious)	0.9500	Rv(impervious)	0.9500	Rv(impervious)	--
% Impervious	16%	% Impervious	16%		
Final Site Area (acres)	0.0723	Total ReDev. Site Area (acres)	0.0723		
Final Post Dev Site Rv	0.3623	ReDev Site Rv	0.3623		

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0022	Post-ReDevelopment Treatment Volume (acre-ft)	0.0022	Post-Development Treatment Volume (acre-ft)	--
Final Post-Development Treatment Volume (cubic feet)	95.0879	Post-ReDevelopment Treatment Volume (cubic feet)	95.0879	Post-Development Treatment Volume (cubic feet)	--
Final Post-Development TP Load (lb/yr)	0.0597	Post-ReDevelopment Load (TP) (lb/yr)*	0.0597	Post-Development TP Load (lb/yr)	--
Final Post-Development TP Load per acre (lb/acre/yr)	0.8300	Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.8300		
		Max. Reduction Required (Below Pre-ReDevelopment Load)	20%		
		TP Load Reduction Required for Redeveloped Area (lb/yr)	-0.0508	TP Load Reduction Required for New Impervious Area (lb/yr)	0

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	-0.0508	**	TP LOAD REDUCTION NOT REQUIRED
Linear Project TP Load Reduction Required (lb/yr):	-0.0000	**	TP LOAD REDUCTION NOT REQUIRED

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	0.9882	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	0.4274
-----------------------------------	--------	--	--------

<h1>Runoff Curve Number &amp; Subarea</h1>				
Project: South Carlin Springs Road		By: NLM	Date: 2/19/21	
Location: Arlington County		Checked: DCD	Date: 2/19/21	
Check One: <input checked="" type="checkbox"/> Present	Developed		Basin: <b>27542</b>	
Check One: <input checked="" type="checkbox"/> Tc	Tt through subarea			
<p>Notes: Space for as many as two segments per flow type can be used for each worksheet.            Include a map, schematic, or description of flow segments.</p>				
		Segment ID		
1. Surface description (table 3-1) 2. Mannings roughness coefficient, n (table 3-1) 3. Flow Length, L (total L ≤ 300 ft) 4. Two-year 24-hour rainfall, P <sub>2</sub> 5. Land Slope, 6. $T_t = \frac{0.007 (nL)^{0.6}}{P_2^{0.5} S^{0.4}}$ Compute T <sub>t</sub> =				
			SF-1	
			Grass	
			0.2	
		ft	100	
			3.16	
	ft/ft	0.02		
	hr	0.207	Total 0.21	
		Segment ID		
7. Surface description (paved or unpaved) 8. Flow length, L 9. Watercourse slope, s 10. Two-year velocity, V (figure 3-1) 11. $T_t = \frac{L}{3600 V}$ Compute T <sub>t</sub> =				
		SCF-1	SCF-2	
		Unpaved	Paved	
		331	24	
		ft/ft	0.02	0.01
		ft/s	2.2	2
	hr	0.04	0.00	Total 0.05
		Segment ID		
12. Cross sectional flow area, a 13. Wetted perimeter, pw 14. Hydraulic radius, r = a / pw Compute r 15. Channel slope, s 16. Manning's roughness coefficient, n 17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V = 18. Flow length, L 19. $T_t = \frac{L}{3600 V}$ Compute T <sub>t</sub> =				
		CF-1	CF-2	
		ft <sup>2</sup>		
		ft		
	ft/ft			
	ft/s			
	hr		Total 0.00	
			0.25	
20. Watershed or subarea T <sub>c</sub> or T <sub>t</sub> (add T <sub>t</sub> in steps 6, 11, and 19)				

<b>Runnoff Curve Number &amp; Shutoff</b>			<b>By: NLM</b>		<b>Date: 2/22/21</b>	
Project: South Carlin Springs Road			Checked: DCD		Date: 2/22/21	
Location: Arlington County			Basin:		<b>16357</b>	
Check One: <input checked="" type="checkbox"/> Present		Developed				
Check One: <input checked="" type="checkbox"/> Tc		Tt through subarea				

Notes: Space for as many as two segments per flow type can be used for each worksheet.  
Include a map, schematic, or description of flow segments.

<p>1. Surface description (table 3-1)</p> <p>2. Mannings roughness coefficient, n (table 3-1)</p> <p>3. Flow Length, L (total L ≤ 300 ft)</p> <p>4. Two-year 24-hour rainfall, P<sub>2</sub></p> <p>5. Land Slope</p> <p>6. <math>T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} S^{0.4}}</math> Compute T<sub>t</sub></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">SF-1</td><td></td></tr> <tr><td style="text-align: center;">Grass</td><td></td></tr> <tr><td style="text-align: center;">0.2</td><td></td></tr> <tr><td style="text-align: center;">100</td><td></td></tr> <tr><td style="text-align: center;">3.16</td><td></td></tr> <tr><td style="text-align: center;">0.02</td><td></td></tr> <tr><td style="text-align: center;">0.207</td><td></td></tr> </table>	SF-1		Grass		0.2		100		3.16		0.02		0.207	
SF-1															
Grass															
0.2															
100															
3.16															
0.02															
0.207															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Total</td><td></td></tr> <tr><td style="text-align: right;">0.21</td><td></td></tr> </table>	Total		0.21											
Total															
0.21															

<p>7. Surface description (paved or unpaved)</p> <p>8. Flow length, L</p> <p>9. Watercourse slope, s</p> <p>10. Average velocity, V (figure 3-1)</p> <p>11. <math>T_t = \frac{L}{3600 V}</math> Compute T<sub>t</sub></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">SCF-1</td><td></td></tr> <tr><td style="text-align: center;">Paved</td><td></td></tr> <tr><td style="text-align: center;">224</td><td></td></tr> <tr><td style="text-align: center;">0.02</td><td></td></tr> <tr><td style="text-align: center;">2.8</td><td></td></tr> <tr><td style="text-align: center;">0.02</td><td></td></tr> </table>	SCF-1		Paved		224		0.02		2.8		0.02	
SCF-1													
Paved													
224													
0.02													
2.8													
0.02													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Total</td><td></td></tr> <tr><td style="text-align: right;">0.02</td><td></td></tr> </table>	Total		0.02									
Total													
0.02													

<p>12. Cross sectional flow area, a</p> <p>13. Wetted perimeter, pw</p> <p>14. Hydraulic radius, r = a / pw Compute r</p> <p>15. Channel slope, s</p> <p>16. Manning's roughness coefficient, n</p> <p>17. <math>V = \frac{1.49 r^{2/3} s^{1/2}}{n}</math> Compute V</p> <p>18. Flow length, L</p> <p>19. <math>T_t = \frac{L}{3600 V}</math> Compute T<sub>t</sub></p> <p>20. Watershed or subarea T<sub>c</sub> or T<sub>t</sub> (add T<sub>t</sub> in steps 6,11, and 19)</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">CF-1</td><td></td></tr> <tr><td style="text-align: center;">1.23</td><td></td></tr> <tr><td style="text-align: center;">3.93</td><td></td></tr> <tr><td style="text-align: center;">0.313</td><td></td></tr> <tr><td style="text-align: center;">0.01</td><td></td></tr> <tr><td style="text-align: center;">0.013</td><td></td></tr> <tr><td style="text-align: center;">5.28</td><td></td></tr> <tr><td style="text-align: center;">90</td><td></td></tr> <tr><td style="text-align: center;">0.00</td><td></td></tr> </table>	CF-1		1.23		3.93		0.313		0.01		0.013		5.28		90		0.00	
CF-1																			
1.23																			
3.93																			
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	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Total</td><td></td></tr> <tr><td style="text-align: right;">0.23</td><td></td></tr> </table>	Total		0.23															
Total																			
0.23																			

## Runoff Curve Number & Runoff

Project: South Carlin Springs Road		By: NLM	Date: 2/21/21
Location: Arlington County		Checked: DCD	Date:
Check One: <input checked="" type="checkbox"/> Present	<input type="checkbox"/> Developed	Basin: <b>16428</b>	
Check One: <input checked="" type="checkbox"/> Tc	Tt through subarea		

Notes: Use as many as two segments per flow type can be used for each worksheet.  
Include a map, schematic, or description of flow segments.

**Segment ID**

- Surface description (table 3-1)
- Mannings roughness coefficient,  $n$  (table 3-1)
- Flow Length,  $L$  (total  $L \leq 300$  ft)
- Two-year 24-hour rainfall,  $P_2$
- Land Slope,
- $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} S^{0.4}}$  Compute  $T_t$

ft  
in  
ft/ft  
hr

SF-1	
Grass	
0.2	
201	
3.16	
0.05	
0.251	

Total

0.25

**Segment ID**

- Surface description (paved or unpaved)
- Flow length,  $L$
- Watercourse slope,  $s$
- Average velocity,  $V$  (figure 3-1)
- $T_t = \frac{L}{3600 V}$  Compute  $T_t$

ft  
ft/ft  
ft/s  
hr

SCF-1	
Paved	
568	
0.05	
4.5	
0.04	

Total

0.04

**Segment ID**

- Cross sectional flow area,  $a$
- Wetted perimeter,  $pw$
- Hydraulic radius,  $r = a / pw$  Compute  $r$
- Channel slope,  $s$
- Mannings's roughness coefficient,  $n$
- $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$  Compute  $V$
- Flow length,  $L$
- $T_t = \frac{L}{3600 V}$  Compute  $T_t$

ft<sup>2</sup>  
ft  
ft  
ft/ft  
ft/s  
ft  
hr

CF-1	CF-2
1.76	140
4	74
0.440	1.892
0.02	0.01
0.013	0.10
9.38	2.28
908	173
0.03	0.02

Total

0.05  
0.33

Hr

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 EACH OF ADDITIONAL 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  
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Transportation Division  
Transportation Planning Bureau  
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Fax: 703.228.3606

SEAL



## APPROVALS

DATE \_\_\_\_\_

*Amey Kesh*  
TRAFFIC SIGNAL ENGINEER

20/01/01

John Nichols  
TRAFFIC ENGINEERING MANAGER

06/21/21

07.16.20  
WATER, SEWER, STREETS BUREAU CHIEF

16.2021

TE&O BUREAU CHIEF 06/22/

06/22/20

*Dennis M. Leach* 06/23/2010  
TRANSPORTATION DIRECTOR

06/23/25

REVISIONS

DATE \_\_\_\_\_

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Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

## DRAINAGE CALCULATIONS

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

D #234

1100

Designed: AS

Drawn: AS

Checked: GG

Miss Utility Transmittal #

Plotted: July 23, 2021

Plotted by: Max.Gawthrop

Scale:

HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet

C-0713

## S. Carlin Springs Road Signal Upgrades



2.4 POLLUTION PREVENTION PLAN:

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS: WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING, FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Landscape irrigation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Others [describe]	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

STORMWATER POLLUTION PREVENTION PLAN  
S. CARLIN SPRINGS ROAD SIGNAL UPGRADES

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		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X		X		(2)	
Concrete washout and cement waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X		(3)	
Structure construction, stucco, painting, and cleaning	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X	X	(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X						X		(5)	
Material delivery and storage	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X	X	X	X		X		X	X	(6)	
Material use during building process	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X	X		X		X	X	(7)	
Solid waste disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								X	X	(8)	
Sanitary waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X		X		X				(9)	
Landscaping operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X			X			X	X	(10)	
Others [describe]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>									(11)	

POLLUTION PREVENTION PRACTICES:

- CLEARING, GRADING, EXCAVATING AND UN-STABILIZED AREAS** - UTILIZE EROSION AND SEDIMENT CONTROLS TO PREVENT SEDIMENT LADEN OR TURBID RUNOFF FROM LEAVING THE CONSTRUCTION SITE - DISPOSE OF CLEARING DEBRIS AT ACCEPTABLE DISPOSAL SITES. APPLY PERMANENT OR TEMPORARY STABILIZATION, SODDING AND/OR MULCHING TO DENUDDED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL SPECIFICATIONS AND THE GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES.
- PAVING OPERATIONS** - COVER STORM DRAIN INLETS DURING PAVING OPERATIONS AND UTILIZE 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.
- CONCRETE 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.
- STRUCTURE CONSTRUCTION, STUCCO, PAINTING AND CLEANING** - ENCLOSE, COVER OR BERM BUILDING MATERIAL STORAGE AREAS IF SUSCEPTIBLE TO CONTAMINATED STORMWATER RUNOFF. CONDUCT PAINTING OPERATIONS CONSISTENT WITH LOCAL AIR QUALITY AND OSHA REGULATIONS. MIX PAINT IndoORS, IN A CONTAINMENT AREA OR IN A FLAT UNPAVED AREA. PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS AND WASH WATER FROM CONSTRUCTION MATERIALS, INCLUDING THE CLEAN-UP OF STUCCO PAINT, FORM RELEASE OILS AND CURING COMPOUNDS.
- DEWATERING OPERATIONS** - CONSTRUCTION SITE DEWATERING FROM BUILDING FOOTINGS OR OTHER SOURCES MAY NOT BE DISCHARGED WITHOUT TREATMENT. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
- MATERIAL DELIVERY AND STORAGE** - DESIGNATE AREAS OF THE CONSTRUCTION SITE FOR MATERIAL DELIVERY AND STORAGE. PLACE NEAR CONSTRUCTION ENTRANCES, AWAY FROM WATERWAYS, AND AVOID TRANSPORT NEAR DRAINAGE PATHS OR WATERWAYS.
- MATERIAL USE DURING BUILDING PROCESS** - USE MATERIALS ONLY WHERE AND WHEN NEEDED TO COMPLETE THE CONSTRUCTION ACTIVITY. FOLLOW MANUFACTURER'S INSTRUCTIONS REGARDING USES, PROTECTIVE EQUIPMENT, VENTILATION, FLAMMABILITY AND MIXING OF CHEMICALS.
- SOLID WASTE 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 CONTAINERS HAVE LIDS SO THEY CAN BE COVERED BEFORE PERIODS OF RAIN, AND KEEP CONTAINERS IN A COVERED AREA WHENEVER POSSIBLE. SCHEDULE WASTE COLLECTION TO PREVENT THE CONTAINERS FROM OVERFILLING.
- SANITARY WASTE** - PREVENT THE DISCHARGE OF SANITARY WASTE BY PROVIDING CONVENIENT AND WELL-MAINTAINED PORTABLE SANITARY FACILITIES. LOCATE SANITARY FACILITIES IN A CONVENIENT LOCATION AWAY FROM WATERWAYS.
- LANDSCAPING OPERATIONS** - MAINTAIN AS MUCH EXISTING VEGETATION AS PRACTICABLE. APPLY PERMANENT OR TEMPORARY STABILIZATION, SODDING AND/OR MULCHING TO DENUDDED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL SPECIFICATIONS AND THE GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES. APPLY NUTRIENTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NOT DURING RAINFALL EVENTS.

7.0 Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at this location.

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

- 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.
- Make Sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
- Stop the spill source.
- Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
- If possible, stop spill from entering drains (use absorbent or other material as necessary).
- Stop spill from spreading (use absorbent or other material)
- If spilled material has entered a storm sewer, contact locality's storm water department.
- Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
- Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Normal Working Hours

DEQ Northern Regional Office 703-583-3800

Nights, Holidays & Weekends

VA Dept. of Emergency Management 804-674-2400  
24 Hour Reporting Service

Local Contacts

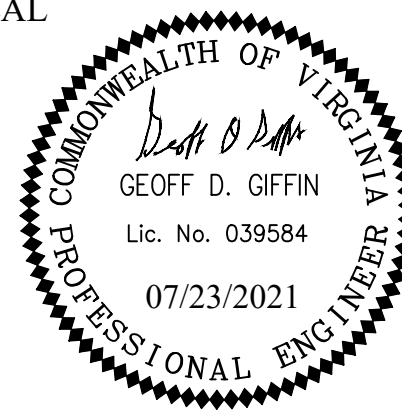
Arlington County Fire & Police 703-558-2222  
DES Water, Sewer, Streets 24-Hour Emergency 703-228-6565  
Washington Gas Emergency 703-750-1400



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS

DATE

*Jeffrey*  
TRAFFIC SIGNAL ENGINEER 06/21/21

*John Nicks*  
TRAFFIC ENGINEERING MANAGER 06/21/21

*Jeffrey*  
WATER, SEWER, STREETS BUREAU CHIEF 07/16/2021

*Harvey*  
TE&O BUREAU CHIEF 06/22/2021

*Dennis M. Leach*  
TRANSPORTATION DIRECTOR 06/23/21

REVISIONS

DATE


Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

SWPPP  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

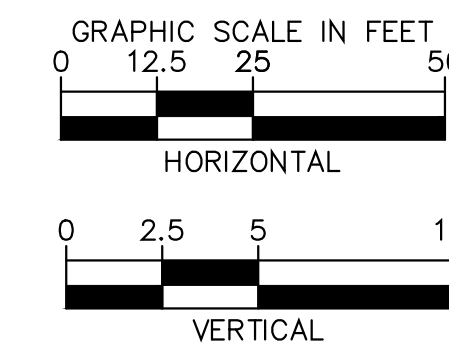
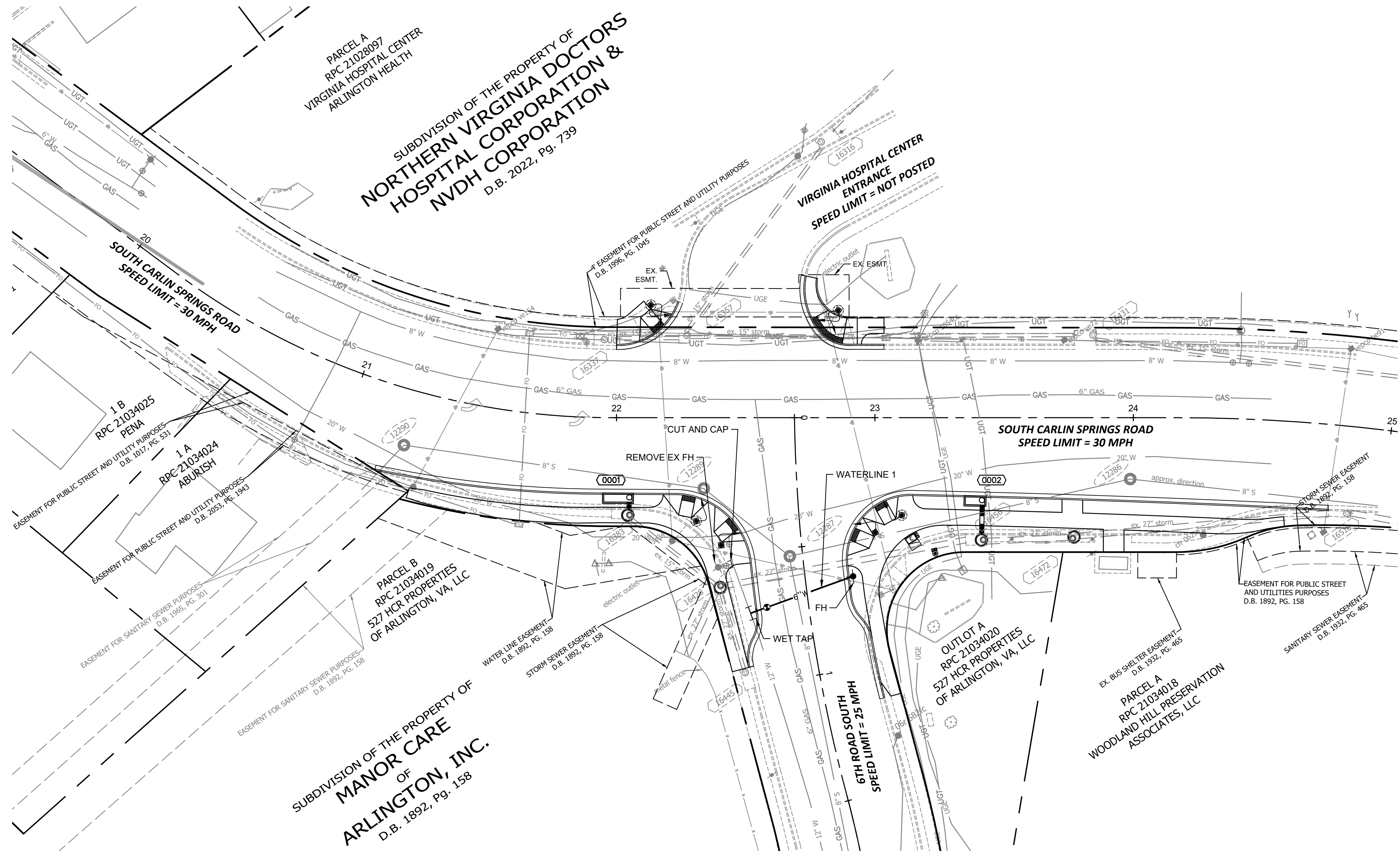
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C-0714



REVISD: MARCH 03, 2020

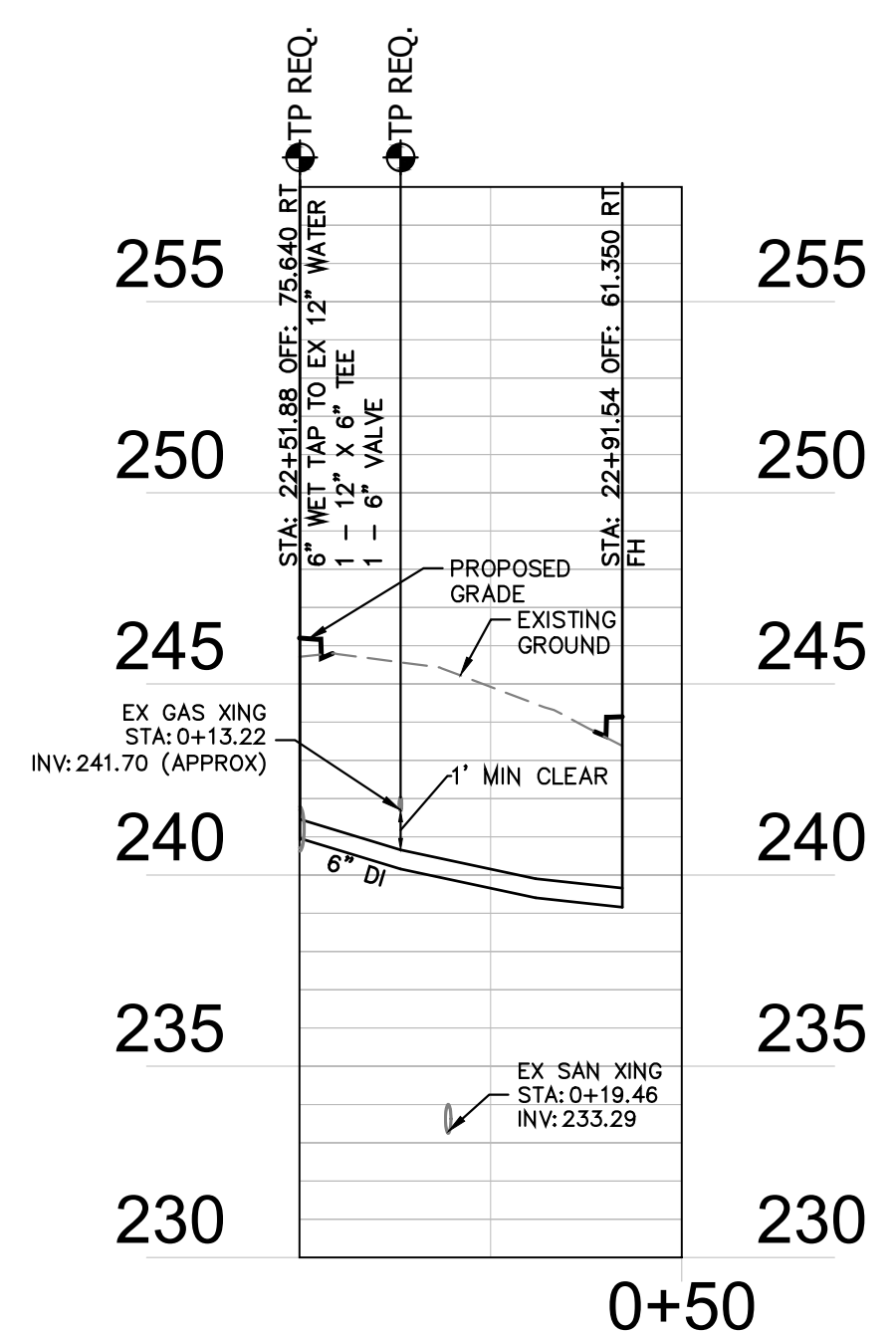
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NOTE

1. EXISTING FIRE HYDRANT TO REMAIN IN SERVICE UNTIL NEW HYDRANT IN SERVICE
2. PROFILE VIEW STATIONING ALONG CENTERLINE OF PIPE.
3. PROFILE VIEW STATION AND OFFSET IN REFERENCE TO S. CARLIN SPRINGS ROAD ALIGNMENT.

WATERLINE 1 - PROFILE VIEW



DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

APPROVALS	DATE
	06/21/21
	06/21/21
	07.16.2021
	06/22/2021
	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

WATERLINE PLAN AND PROFILE  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234  
TE02

Designed: KF  
Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

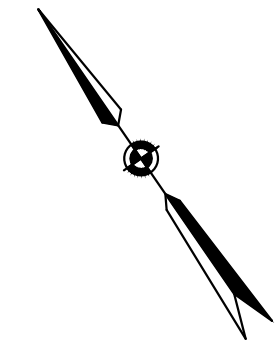
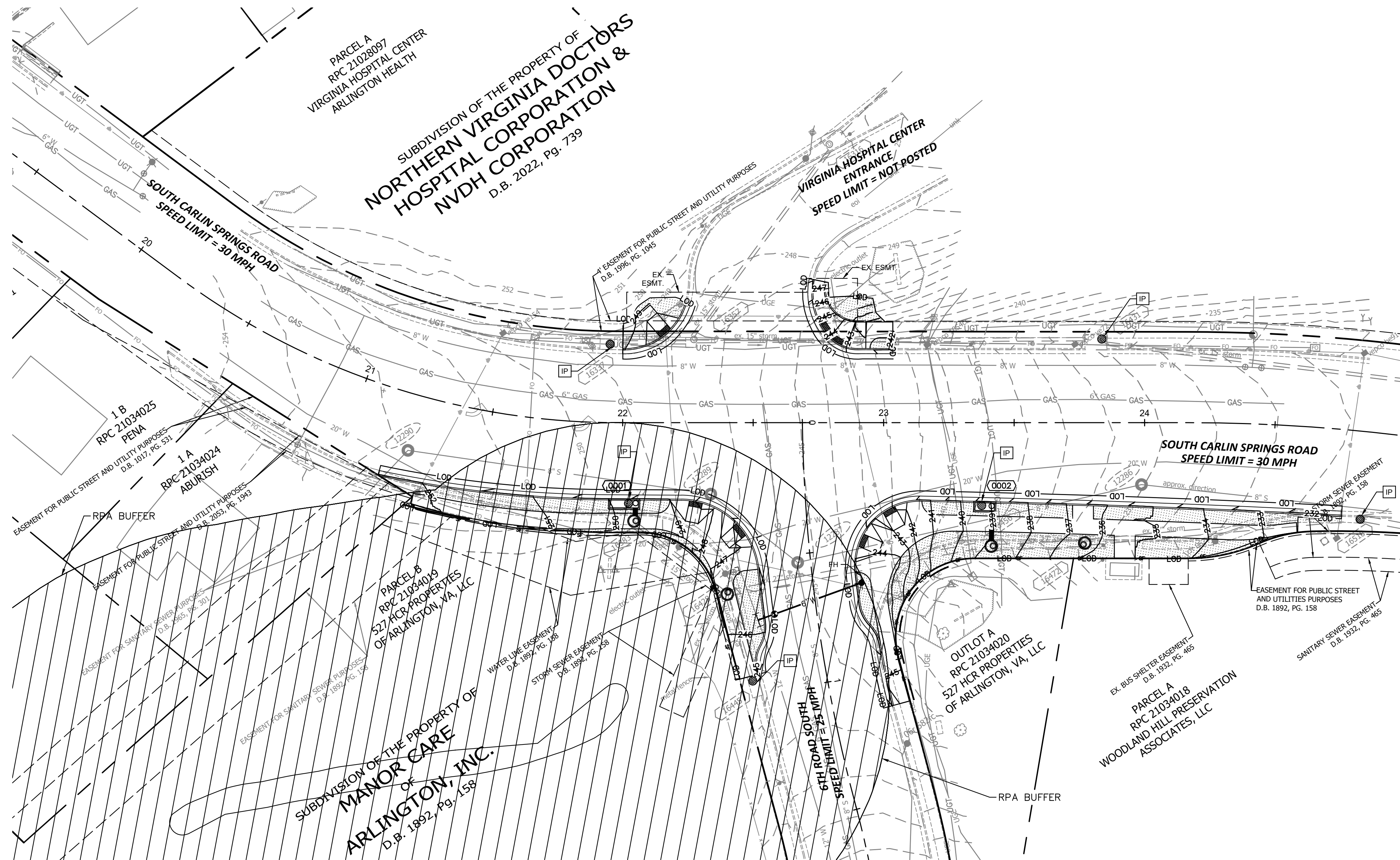
Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-0810**



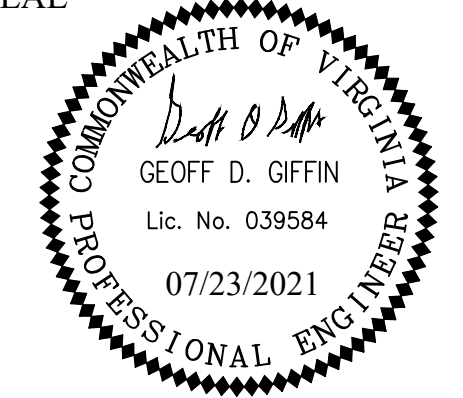







ARLINGTON  
VIRGINIA

DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS	DATE
 TRAFFIC SIGNAL ENGINEER	06/21/21
 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 T&E BUREAU CHIEF	06/22/2021
 TRANSPORTATION DIRECTOR	06/23/21

[illegible]

Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

## PHASE 2 EROSION CONTROLS

ID #234

ID #234

TE02

Designed: AS  
 Drawn: AS  
 Checked: GG  
 Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

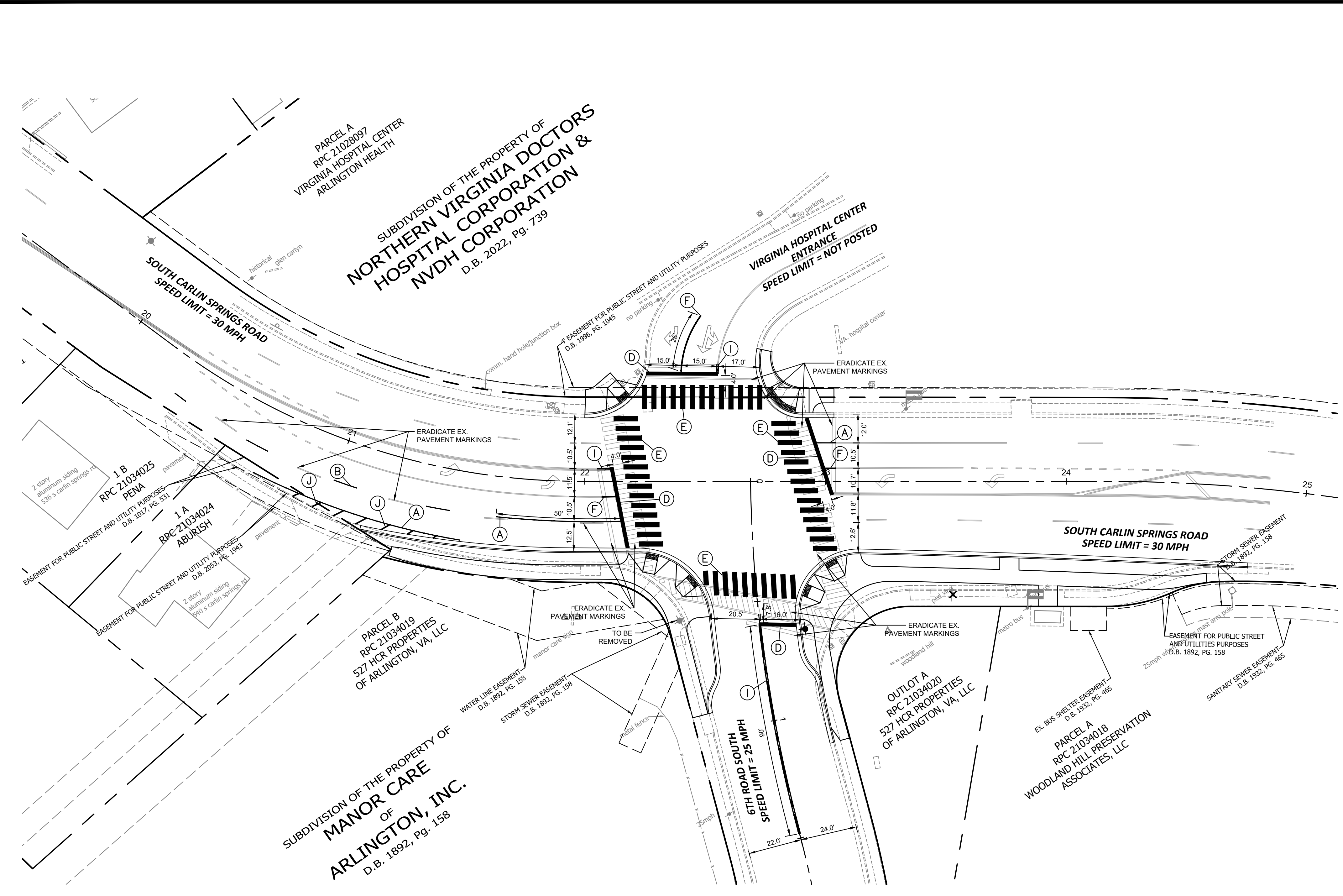
KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet C-0910



REVISED: MARCH 03, 2020

Filename: C-1010 PAVEMENT MARKING AND SIGNING PLAN.dwg  
Path: K:\NSVA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets



- SIGN AND PAVEMENT MARKING NOTES:**
- STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
  - CONTACT DENNIS HOWELL OR HIS DESIGNEE AT 703-228-6598 OR (571) 437-1077 TO APPROVE MARKING LAYOUT 48 HRS. PRIOR TO INSTALLATION OF MARKINGS.
  - PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS HERE TO:  
A.) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.  
B.) ARLINGTON COUNTY MARKING STANDARDS.
  - ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
  - STOP BARS SHALL BE A MINIMUM OF 4' IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHALL BE NO MORE THAN 30' FROM THE NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.
  - CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
  - LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.
  - ON-STREET PARKING LANE IS 7' WIDE (UNLESS OTHERWISE NOTED) AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT NUBS OR WHERE OTHERWISE INDICATED.

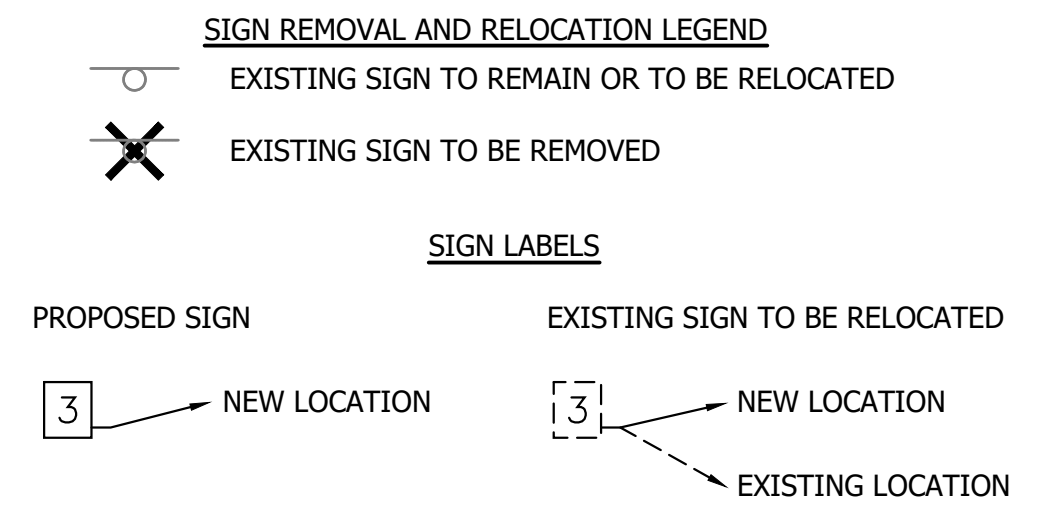
**STANDARD PAVEMENT MARKING LEGEND:**

(A) TYPE B CLASS 1.....WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
(B) TYPE B CLASS 1.....WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C) TYPE B CLASS 1.....WHITE 4" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(D) TYPE B CLASS 1.....WHITE 18" WIDTH	STOP BARS
(E) TYPE B CLASS 1.....WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(F) TYPE B CLASS 1.....WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSSWALKS, BIKE LANES
(G) TYPE B CLASS 1.....YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
(H) TYPE B CLASS 1.....YELLOW 4" WIDTH	EDGE LINES
(I) TYPE B CLASS 1.....YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
(J) TYPE B CLASS 1.....WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
(K) TYPE B CLASS 1.....WHITE SINGLE ARROW	TURN LANES
(L) TYPE B CLASS 1.....WHITE COMBINATION ARROW	TURN LANES
(M) TYPE B CLASS 1.....WHITE 8" LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY etc.)
(N) TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(O) TYPE B CLASS 1.....WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
(P) TYPE B CLASS 1.....YELLOW 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS

**SIGNING AND MARKING LEGEND**

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	SIGN	
(A)	MARKING	(A)

**HIGH VISIBILITY CROSSWALK**



NO SIGN RELOCATION REQUIRED AT THIS INTERSECTION

ARLINGTON VIRGINIA

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APPROVALS

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06/21/21

TRAFFIC SIGNAL ENGINEER

06/21/21

TRAFFIC ENGINEERING MANAGER

07.16.2021

WATER, SEWER, STREETS BUREAU CHIEF

06/22/2021

TE&O BUREAU CHIEF

06/23/21

TRANSPORTATION DIRECTOR

REVISIONS

DATE


Project Name and Location

**S. Carlin Springs Road**

**Signal Upgrades**

PLAN

PAVEMENT MARKING AND SIGNING

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: KF

Drawn: KF

Checked: GG

Miss Utility Transmittal #:

Plotted: July 23, 2021

Plotted by: Max.Gawthrop

Scale:

HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive, Suite 400

Reston, Virginia 20191

Sheet

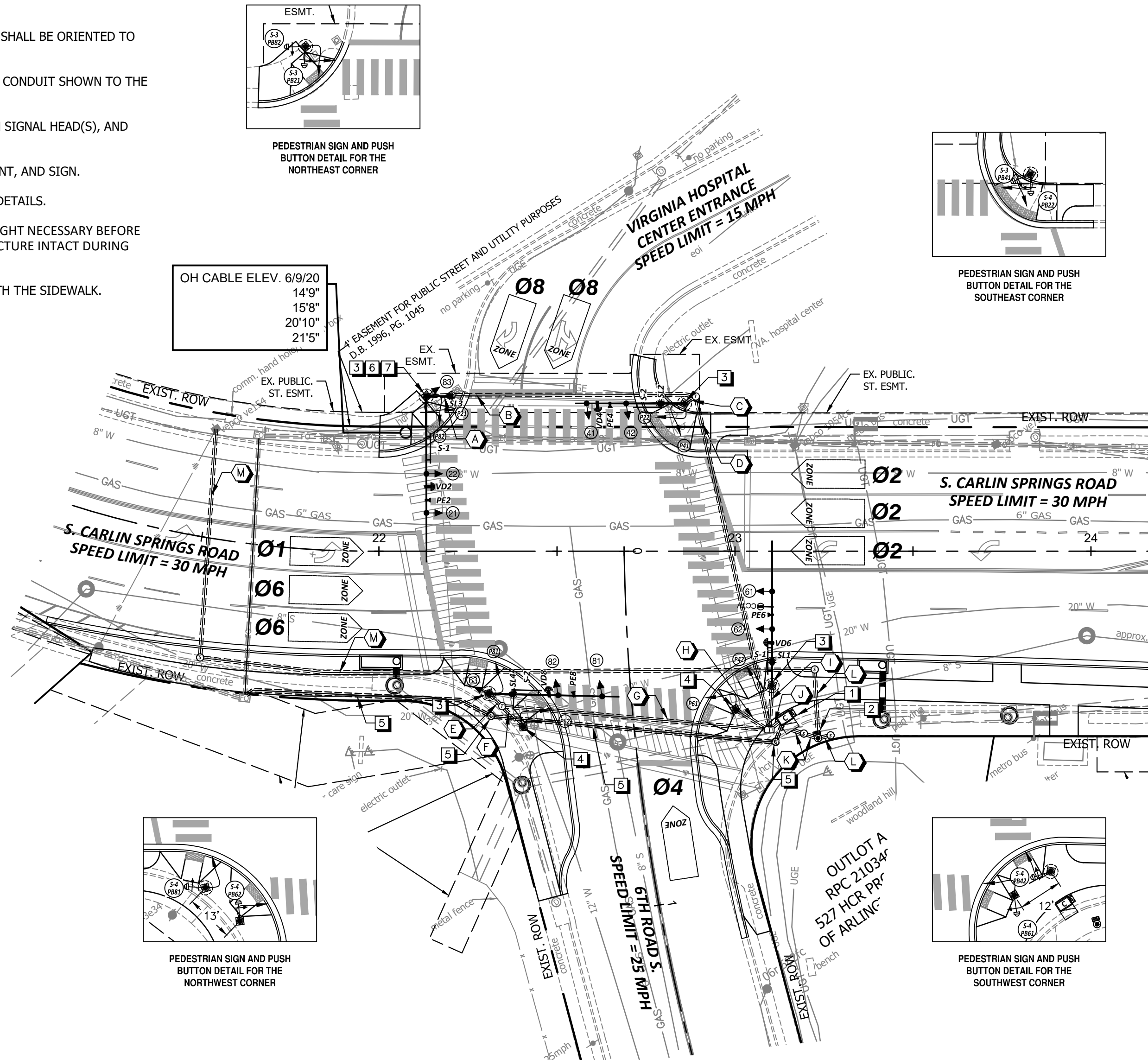
**C-1010**



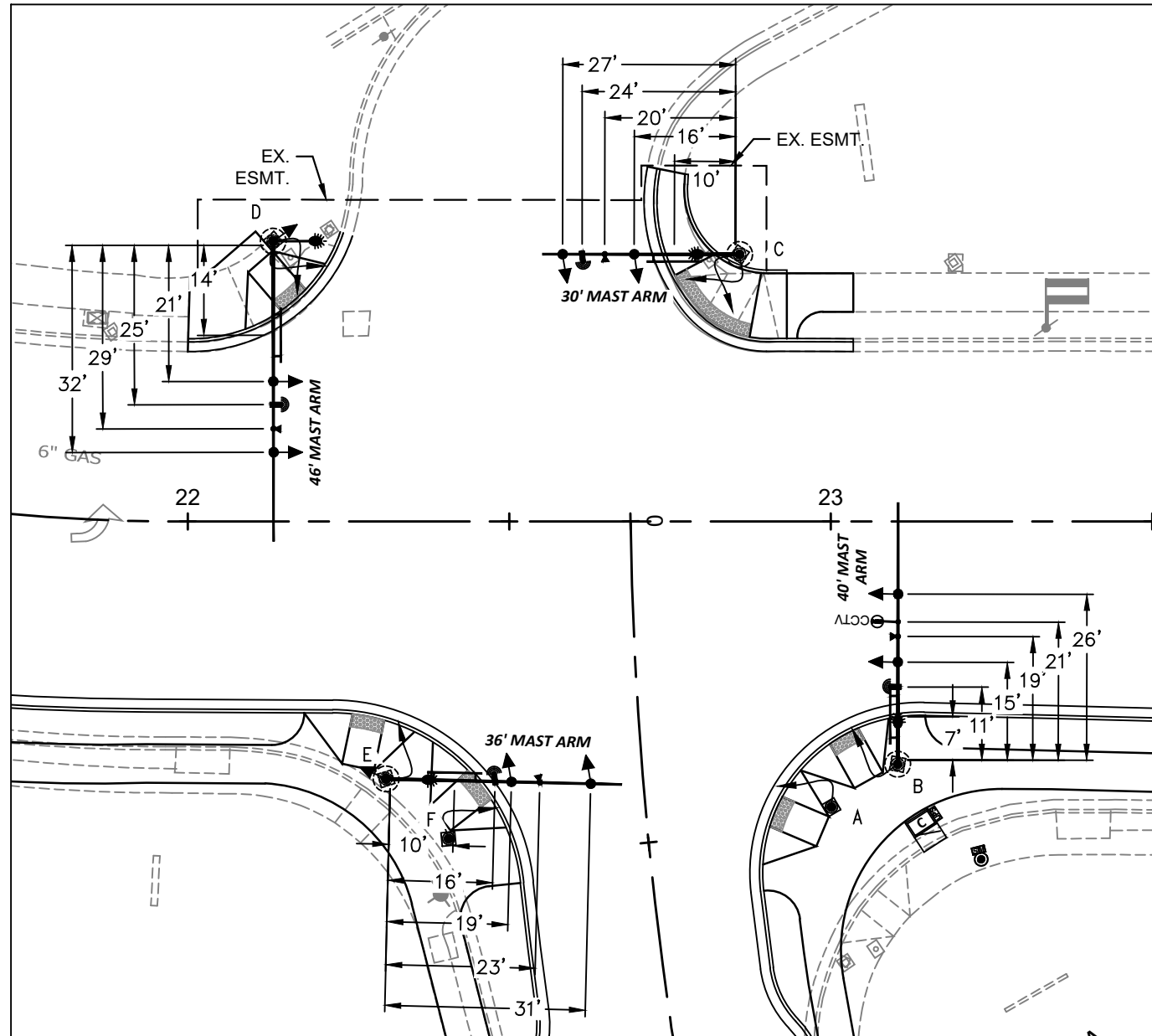
REVISED: MARCH 03, 2020  
Filename: C-1110 TRAFFIC SIGNAL DESIGN PLAN.dwg  
Path: K:\NVA\_TPT0110614003 - Carlin Springs 2020 CAD Plan Sheets

### CONSTRUCTION NOTES

- EXISTING CONTROLLER AND CABINET TO BE REPLACED WITH NEW CONTROLLER AND CABINET ON A NEW FOUNDATION. ALL OTHER EXISTING EQUIPMENT TO BE REMOVED INCLUDING UNUSED WIRING, CONDUIT, AND JUNCTION BOXES, UNLESS OTHERWISE SPECIFIED. EXISTING CONTROLLER AND CABINET SHALL BE RETURNED TO ARLINGTON COUNTY.
1. INSTALL SIGNAL CONTROLLER CABINET WITH UPS AND CONCRETE STOOP. CABINET SHALL BE ORIENTED TO PROVIDE TECHNICIAN VIEW OF SIGNAL DISPLAYS.
  2. INSTALL UNDERGROUND ELECTRIC SERVICE WITH PEDESTAL METERPAN. PROPOSED CONDUIT SHOWN TO THE APPROXIMATE LOCATION OF POWER SOURCE.
  3. INSTALL NON-ORNAMENTAL MAST ARM SIGNAL POLE WITH LUMINAIRE, PEDESTRIAN SIGNAL HEAD(S), AND POLARA PEDESTRIAN EQUIPMENT.
  4. INSTALL PEDESTAL POLE WITH PEDESTRIAN SIGNAL, POLARA PEDESTRIAN EQUIPMENT, AND SIGN.
  5. SEE COMMUNICATION PLAN ON SHEET C-1111 FOR COMMUNICATION CONNECTION DETAILS.
  6. MAST ARM HEIGHT SHOULD BE AT 18'. CONTRACTOR SHALL VERIFY MAST ARM HEIGHT NECESSARY BEFORE ORDERING POLE AND SHALL PROTECT AND MAINTAIN EXISTING SPAN WIRES STRUCTURE INTACT DURING CONSTRUCTION.
  7. INSTALL SIGNAL POLE FOUNDATION SUCH THAT TOP OF FOUNDATION IS FLUSH WITH THE SIDEWALK.



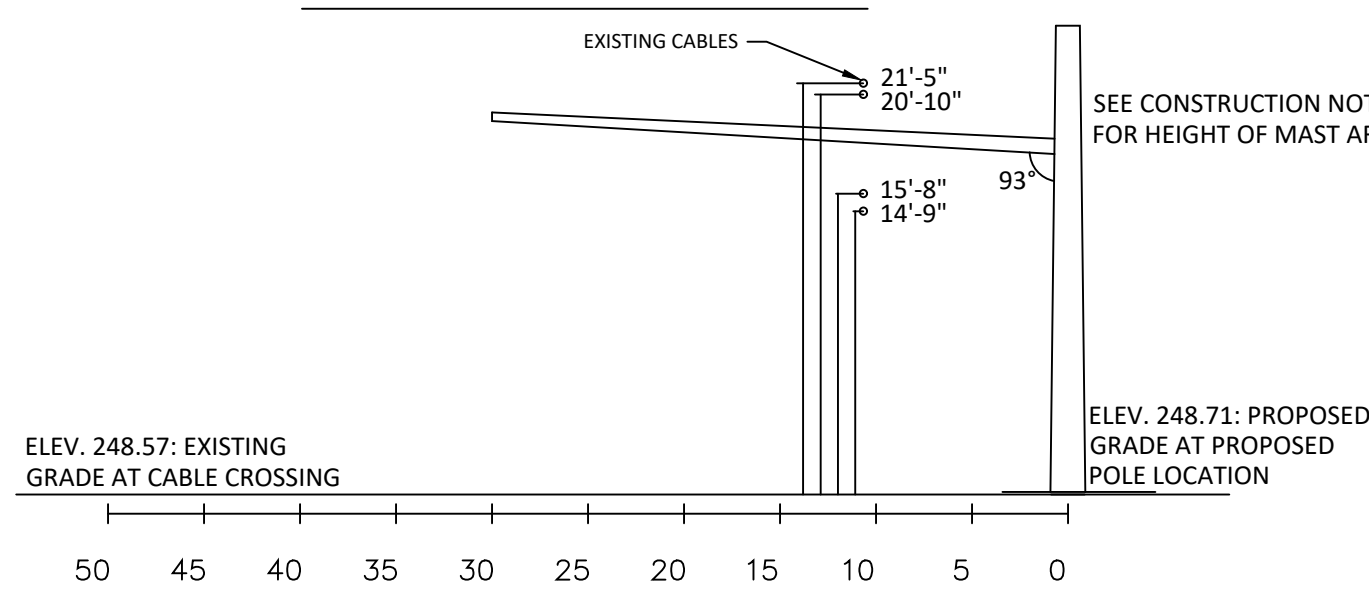
### POLE LOCATION DETAIL (SCALE: 1"=25')



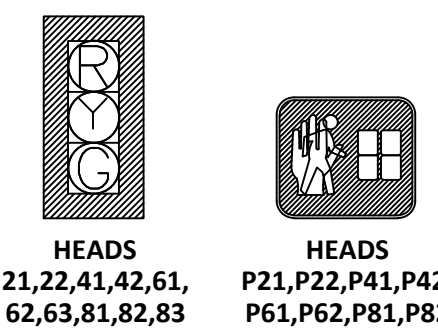
### POLE LOCATION SCHEDULE

POLE ID	STATION	OFFSET	UMC DESIGN NUMBER	MAST ARM LENGTH	POLE TYPE
234-MA-01-S	23+10.40	37.72' RT	50700-B1991-Y1	40'	-
234-MA-02-E	22+85.82	41.50' LT	50700-B1991-Y1	30'	-
234-MA-03-N	22+13.28	43.56' LT	50700-B1991-Y3	46'	-
234-MA-04-W	22+30.85	40.00' RT	50700-B1991-Y1	36'	-
-	22+40.54	49.34' RT	-	-	67-01 (12')

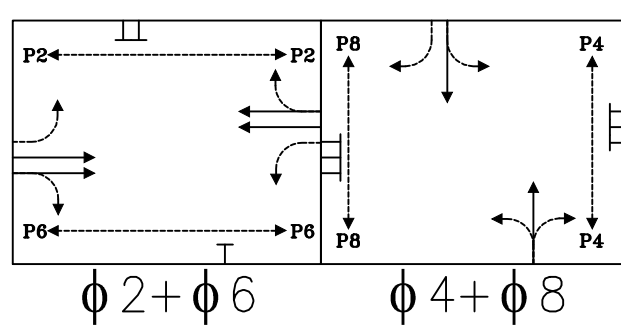
### POLE D MAST ARM DETAIL



### PROPOSED SIGNALS



### EXISTING/PROPOSED PHASING DIAGRAM



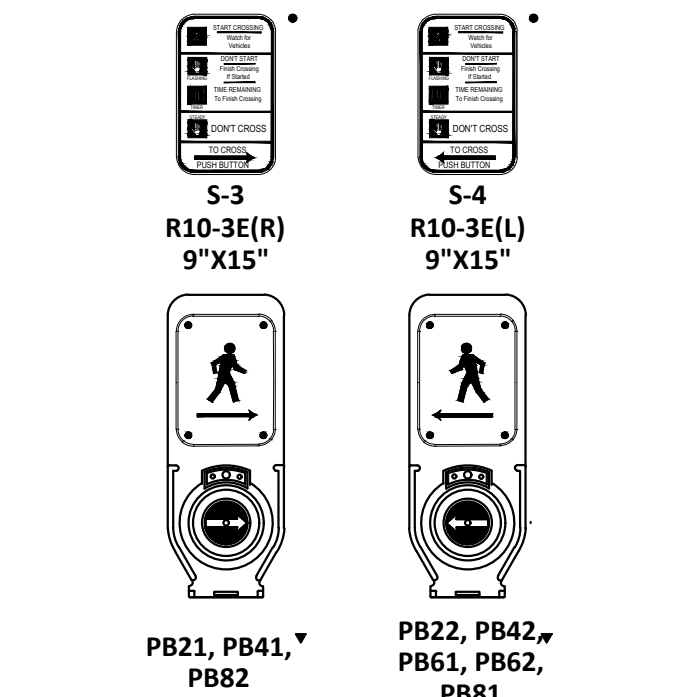
### POLE SIGNAL MOUNTING

No.	STANDARD			POLE SIGNAL MOUNTING				STREET NAME SIGN
	TYPE	SIG. M.A.	LUM. M.A.	VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS	VIDEO DETECTOR PREEMPTION & CCTV	
1	PEDESTAL POLE 12'			P61	S-4			
2	MAST ARM POLE 30'	40'	6'	61,62,P42	S-4		VD6,PE6,CCTV	S-1
3	MAST ARM POLE 30'	30'	6'	41,42,P22,P41	S-3,S-4		VD4,PE4	S-2
4	MAST ARM POLE 30'	46'	6'	21,22,83,P21,P82	S-3,S-3		VD2,PE2	S-1
5	MAST ARM POLE 30'	36'	6'	63,81,82,P81	S-4		VD8,PE8	S-2
6	PEDESTAL POLE 12'			P62	S-4			

### CONDUIT & CABLE

- 1-3" CONDUIT PVC**  
2-14/7C FOR SIGNAL HEADS 21, 22, AND 83  
2-14/7C FOR PED HEADS P21 AND P82  
2-14/3C FOR PED PUSH BUTTONS P21 AND P82  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD2  
1-12/2C FOR LUMINAIRE SL3  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-PREEMPTION CABLE FOR PE2  
1-#6 AWG (EGC)
- 1-4" CONDUIT (BORED) HDPE**  
2-14/7C FOR SIGNAL HEADS 21, 22, AND 83  
2-14/7C FOR PED HEADS P21 AND P82  
2-14/3C FOR PED PUSH BUTTONS P21 AND P82  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD2  
1-12/2C FOR LUMINAIRE SL3  
1-#6 AWG (EGC)
- 1-3" CONDUIT (BORED) HDPE**  
1-PREEMPTION CABLE FOR PE2  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-14/7C FOR SIGNAL HEADS 41 AND 42  
2-14/7C FOR PED HEADS P22 AND P41  
2-14/3C FOR PED PUSH BUTTONS P22 AND P41  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD4  
1-12/2C FOR LUMINAIRE SL2  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-PREEMPTION CABLE FOR PE4  
1-#6 AWG (EGC)
- 1-4" CONDUIT (BORED) HDPE**  
3-14/7C FOR SIGNAL HEADS 21, 22, 41, 42, AND 83  
4-14/7C FOR PED HEADS P21, P22, P41, AND P82  
4-14/3C FOR PED PUSH BUTTONS P21, P22, P41, AND P82  
2-LEAD IN CABLES FOR THERMAL VEHICLE DETECTION VD2 AND VD4  
2-12/2C FOR LUMINAIRES SL2 AND SL3  
1-#6 AWG (EGC)
- 1-3" CONDUIT (BORED) HDPE**  
2-PREEMPTION CABLES FOR PE2 AND PE4  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
2-14/7C FOR SIGNAL HEADS 63, 81, AND 82  
1-14/7C FOR PED HEAD P81  
1-14/3C FOR PED PUSH BUTTON P81  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD8  
1-12/2C FOR LUMINAIRE SL4  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-PREEMPTION CABLE FOR PE8  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-14/7C FOR PED HEAD P62  
1-14/3C FOR PED PUSH BUTTON P62  
1-#6 AWG (EGC)
- 1-4" CONDUIT (BORED) HDPE**  
2-14/7C FOR SIGNAL HEADS 63, 81, AND 82  
2-14/7C FOR PED HEAD P61  
2-14/3C FOR PED PUSH BUTTON P61  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD6  
1-12/2C FOR LUMINAIRE SL1  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-14/7C FOR SIGNAL HEADS 61 AND 62  
1-14/7C FOR PED HEAD P42  
1-14/3C FOR PED PUSH BUTTON P42  
1-LEAD IN CABLE FOR THERMAL VEHICLE DETECTION VD6  
1-12/2C FOR LUMINAIRE SL1  
1-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
1-PREEMPTION CABLE FOR PE6  
1-#6 AWG (EGC)
- 4-3" CONDUIT PVC**  
6-14/7C FOR SIGNAL HEADS 21, 22, 41, 42, 61, 62, 63, 81, 82, AND 83  
8-14/7C FOR PED HEADS P21, P22, P41, P42, P61, P62, P81, AND P82  
8-14/3C FOR PED PUSH BUTTONS P21, P22, P41, P42, P61, P62, P81, AND P82  
4-LEAD IN CABLES FOR THERMAL VEHICLE DETECTION VD2, VD4, VD6, AND VD8  
1-CCTV LEAD IN CABLE  
4-12/2C FOR LUMINAIRES SL1, SL2, SL3, AND SL4  
4-#6 AWG (EGC)
- 1-3" CONDUIT PVC**  
4-PREEMPTION CABLES FOR PE2, PE4, PE6, AND PE8  
1-#6 AWG (EGC)
- 1-2" CONDUIT METAL**  
2-12/2C FOR ELECTRICAL SERVICE  
1-#6/4C AWG FOR ELECTRICAL SERVICE
- 1-2" CONDUIT METAL**  
1-#6/4C AWG FOR ELECTRICAL SERVICE
- 1-2" (BORED) CONDUIT METAL**  
1-#6/4C AWG FOR ELECTRICAL SERVICE
- EGC - ELECTRICAL GROUNDING CONDUCTOR  
HDPE - HIGH DENSITY POLYETHYLENE CONDUIT

### PROPOSED ACCESSIBLE PEDESTRIAN PUSHBUTTONS



PUSHBUTTON	WALK MESSAGE
PB41, PB42, PB81, PB82	"SOUTH CARLIN SPRINGS ROAD, WALK SIGN IS ON TO CROSS SOUTH CARLIN SPRINGS ROAD."
PB21, PB22, PB61, PB62	"6TH ROAD SOUTH, WALK SIGN IS ON TO CROSS 6TH ROAD SOUTH."

\* PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.  
\* ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATION AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.

### PROPOSED SIGNS



\*NOTE: SEE SHEET C-0007 FOR DETAILED STREET NAME SIGN LAYOUT

### LEGEND

	EXISTING	PROPOSED
Control Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04, TYPE-3)		
Electrical Junction Box (LT-16)		
Comm. Junction Box		
Service Junction Box		
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation		
Carlyle Lighting Pole & Foundation		
Service Meter		
Battery Backup (UPS)		
Vehicle Signal Head (LED)		
Pedestrian Push Button		
FLIR Video Detection		
Emergency Vehicle Preemption		
CCTV Vehicle Camera		
Overhead Light (LED)		
Conduit Run		

### COLOR SEQUENCE CHART

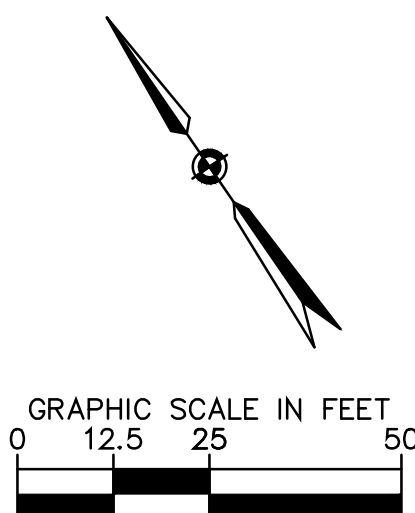
PHASE	2	4	6	8	2+6	4+8	FLASH
21,22	G				G		Y
41,42		G				G	R
61,62,63			G		G		Y
81,82,83				G	G	R	
P21,P22	W*				W*		DARK
P41,P42		W*				W*	DARK
P61,P62			W*		W*		DARK
P81,P82				W*		W*	DARK

NOTE: BLANK SPACES IN THIS CHART REPRESENT A "RED" SIGNAL INDICATION.  
\*WALK INDICATION IS DISPLAYED WHEN PEDESTRIAN CALL IS SERVICED; WALK INDICATION IS DISPLAYED UNTIL IT IS TIMED OUT. OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

### INITIAL TIMING CHART\*

PHASE	1	2	3	4	5	6	7	8
MOVEMENT		NB S CARLIN SPRINGS RD THRU		EB 6TH RD S		SB S CARLIN SPRINGS RD		NB VIRGINIA HOSPITAL CENTER ENTRANCE
PHASE ON		X		X		X		X
PHASE OFF	X		X		X		X	
INTERVAL	PHASE TIMINGS							
MIN GR	-	5.0	-	5.0	-	5.0	-	5.0
PASSAGE	-	0.0	-	2.0	-	0.0	-	2.0
YELLOW	-	4.1	-	3.8	-	4.1	-	3.8
RED	-	1.8	-	2.9	-	1.8	-	2.9
MAX 1	-	45.0	-	35.0	-	45.0	-	35.0
MAX 2	-	-	-	-	-	-	-	-
MIN GAP	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION TO REDUCE	-	-	-	-	-	-	-	-
PED WALK	-	7.0	-	7.0	-	7.0	-	7.0
PED FLASH	-	14.0	-	17.0	-	14.0	-	17.0
DON'T WALK	-	MAX	-	NON-LOCK	-	MAX	-	NON-LOCK
MODE	-	RECALL	-	NON-LOCK	-	RECALL	-	NON-LOCK

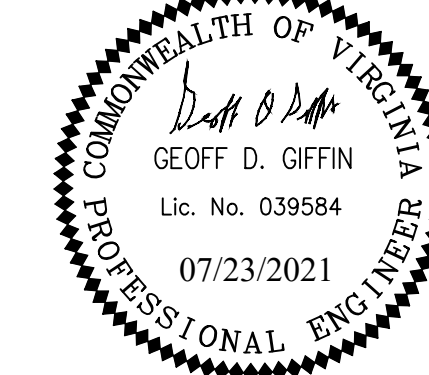
\*SIGNAL TIMING INFORMATION PROVIDED BY ARLINGTON COUNTY. UPDATED TIMING INFORMATION TO BE DEVELOPED AND IMPLEMENTED BY ARLINGTON COUNTY ACCOUNTING FOR MODIFIED INTERSECTION GEOMETRY.



### DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



### APPROVALS

### DATE

	06/21/21
TRAFFIC SIGNAL ENGINEER	
	06/21/21
TRAFFIC ENGINEERING MANAGER	
	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
	06/22/2021
TE&O BUREAU CHIEF	
	06/23/21
TRANSPORTATION DIRECTOR	

### REVISIONS

### DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

TRAFFIC SIGNAL DESIGN PLAN

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

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11400 Commerce Park Drive, Suite 400  
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Sheet

C-1110

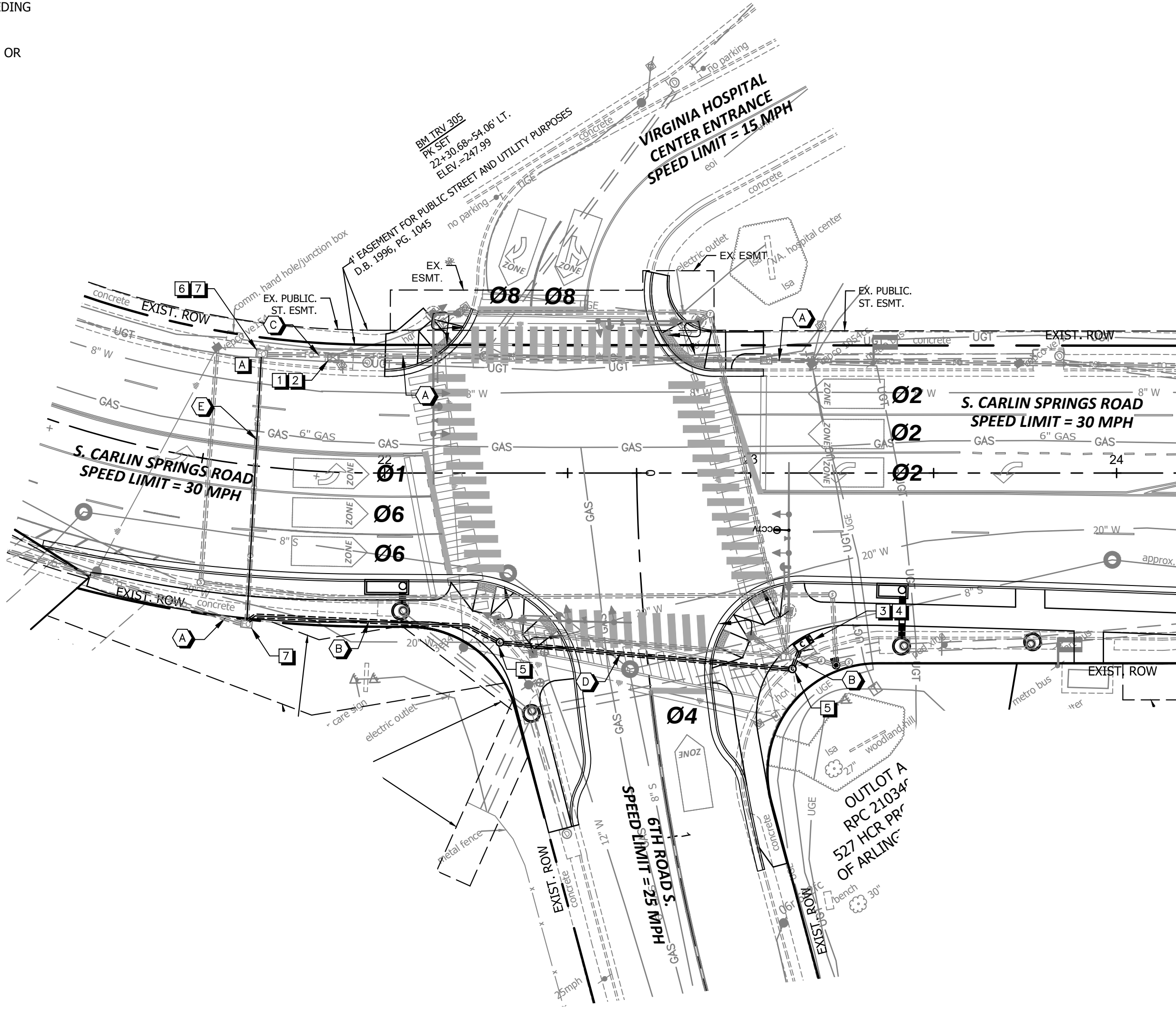
S. Carlin Springs Road Signal Upgrades



REVISED: MARCH 03, 2020  
Filename: C-1111 COMMUNICATION DESIGN PLAN.dwg  
Path: K:\NSA\_TPT\0110614003 - Carlin Springs 2020\CAD\PlanSheets

GENERAL NOTES

1. CONTRACTOR SHALL SUBMIT SPLICE ENCLOSURES FOR ENGINEER APPROVAL.
2. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO CUTTING OR DISCONNECTING ANY FIBER CABLE. CONTRACTOR SHALL NOT PROCEED WITH FIBER CUTTING UNLESS ENGINEER IS ON-SITE.
3. CONTRACTOR SHALL RE-SPLICE ALL FIBERS TO LIKE COLORED FIBERS AND SHALL MATCH LIKE COLORED BUFFER TUBES WITH LIKE COLORED BUFFER TUBES.
4. CONTRACTOR SHALL PERFORM BI-DIRECTIONAL OTDR TESTING ON ALL OF THE 144 FIBER OPTIC CABLES AND THE 12 FIBER CABLE FROM THEIR TERMINATION POINTS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO GAIN ACCESS TO THE NEAREST FIBER TERMINATION POINTS FOR THE ITS AND DTS 144 FIBER OPTIC CABLES TO PERFORM TESTING.
5. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH BI-DIRECTIONAL OTDR TEST RESULTS IN PDF FORMAT FOR APPROVAL. NO WORK SHALL BE ACCEPTED IF THE FOLLOWING REQUIREMENTS ARE NOT MET:
  - EACH FUSION SPLICE LOSS DOES NOT EXCEED 0.05 DB, BI-DIRECTIONALLY AVERAGED
  - CABLE ATTENUATION MAY NOT EXCEED 0.30 DB/KM AT 1550 NM AND 0.40 DB/KM AT 1310 NM.IF ANY OF THE ABOVE CONDITIONS ARE NOT MET, THEN TAKE APPROVED CORRECTIVE ACTION, INCLUDING REMAKING SPLICES OR REPLACING COMPLETE SEGMENTS OF FIBER OPTIC CABLE, AS REQUIRED. CORRECTIVE ACTION WILL BE AT NO ADDITIONAL COST TO THE COUNTY.
6. THE CONTRACTOR SHALL NOT CUT OR DAMAGE EXISTING FIBER OPTIC CABLES OR FIBER OPTIC SPLICE ENCLOSURES. WHEN HANDLING THE EXISTING FIBER OPTIC CABLES, THE CONTRACTOR SHALL PROTECT THE CABLES FROM EXCEEDING THE MINIMUM BEND RADIUS OF 14 INCHES.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIR AND COSTS ASSOCIATED WITH DAMAGED FIBER OPTIC CABLES OR SPLICE ENCLOSURES DUE TO CONSTRUCTION ACTIVITIES.
8. ALL CABLING AND SPLICE ENCLOSURES IN JUNCTION BOXES SHALL BE NEATLY ARRANGED.

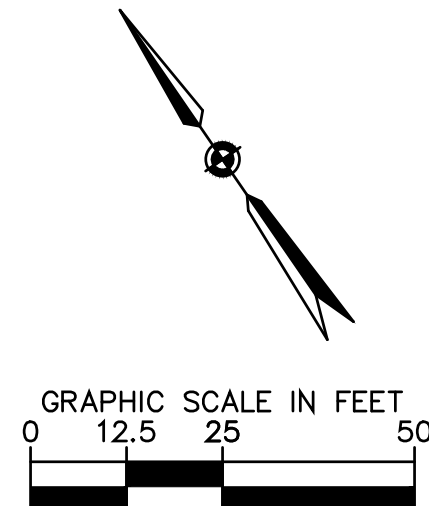


CONSTRUCTION NOTES

1. CONTRACTOR SHALL REMOVE ALL COMMUNICATION EQUIPMENT TO INCLUDE: 12 FIBER PATCH PANEL AND FIBER CABLE, ETHERNET SWITCH AND JUMPER CABLES FROM EXISTING CONTROLLER CABINET. 12 FIBER PATCH PANEL AND FIBER CABLE TO BE DISCARDED. ETHERNET SWITCH AND JUMPER CABLES SHALL BE RELOCATED TO PROPOSED CONTROLLER CABINET.
2. EXISTING CONTROLLER LOCATION
3. PROPOSED CONTROLLER LOCATION
4. CONTRACTOR SHALL INSTALL RELOCATED ETHERNET SWITCH AND JUMPER CABLES IN PROPOSED CONTROLLER CABINET. CONTRACTOR SHALL ALSO INSTALL NEW PRE-TERMINATED 12 FIBER PATCH PANEL WITH SUFFICIENT LENGTH OF SPUR FIBER CABLE TO REACH EXISTING SPLICE ENCLOSURE AT LOCATION A. INSTALL SPUR FIBER CABLE IN PROPOSED CONDUIT.
5. INSTALL JUNCTION BOX (61-02) WITH COUNTY APPROVED LABELING ON JUNCTION BOX LID.
6. WITHIN EXISTING FIBER SPLICE ENCLOSURE, DISCONNECT EXISTING SPUR FIBER CABLE. INSTALL NEW SPUR FIBER CABLE FROM PROPOSED CONTROLLER CABINET TO EXISTING SPLICE ENCLOSURE, AND CONNECT TO THE SAME FIBERS CONNECTED TO ORIGINAL SPUR FIBER CABLE. CONTRACTOR SHALL PROVIDE 50' OF COILED SPUR FIBER CABLE IN JUNCTION BOX.
7. RE-ENTER EXISTING JUNCTION BOX WITH NEW CONDUIT.
- A. LOCATION A

CONDUIT & CABLE

- A. 4-2" CONDUIT (EXISTING)  
2-144 FIBER CABLES (EXISTING)
- B. 1-2" CONDUIT PVC (NEW)  
1-12 FIBER CABLE (NEW)
- C. 1-2" CONDUIT (EXISTING)  
1-12 FIBER CABLE (TO BE REMOVED)
- D. 1-2" CONDUIT (BORED) HDPE (NEW)  
1-12 FIBER CABLE (NEW)
- E. 4-2" CONDUIT (EXISTING)  
2-144 FIBER CABLES (EXISTING)  
1-12 FIBER CABLE (NEW)



LEGEND

	EXISTING	PROPOSED
Control Cabinet		
Comm. Junction Box (61-02)		
Comm. Junction Box (61-04, TYPE-3)		
Battery Backup (UPS)		
Conduit Run		

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL

APPROVALS	DATE
 TRAFFIC SIGNAL ENGINEER	06/21/21
 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 TE&O BUREAU CHIEF	06/22/2021
 TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

COMMUNICATION DESIGN PLAN  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

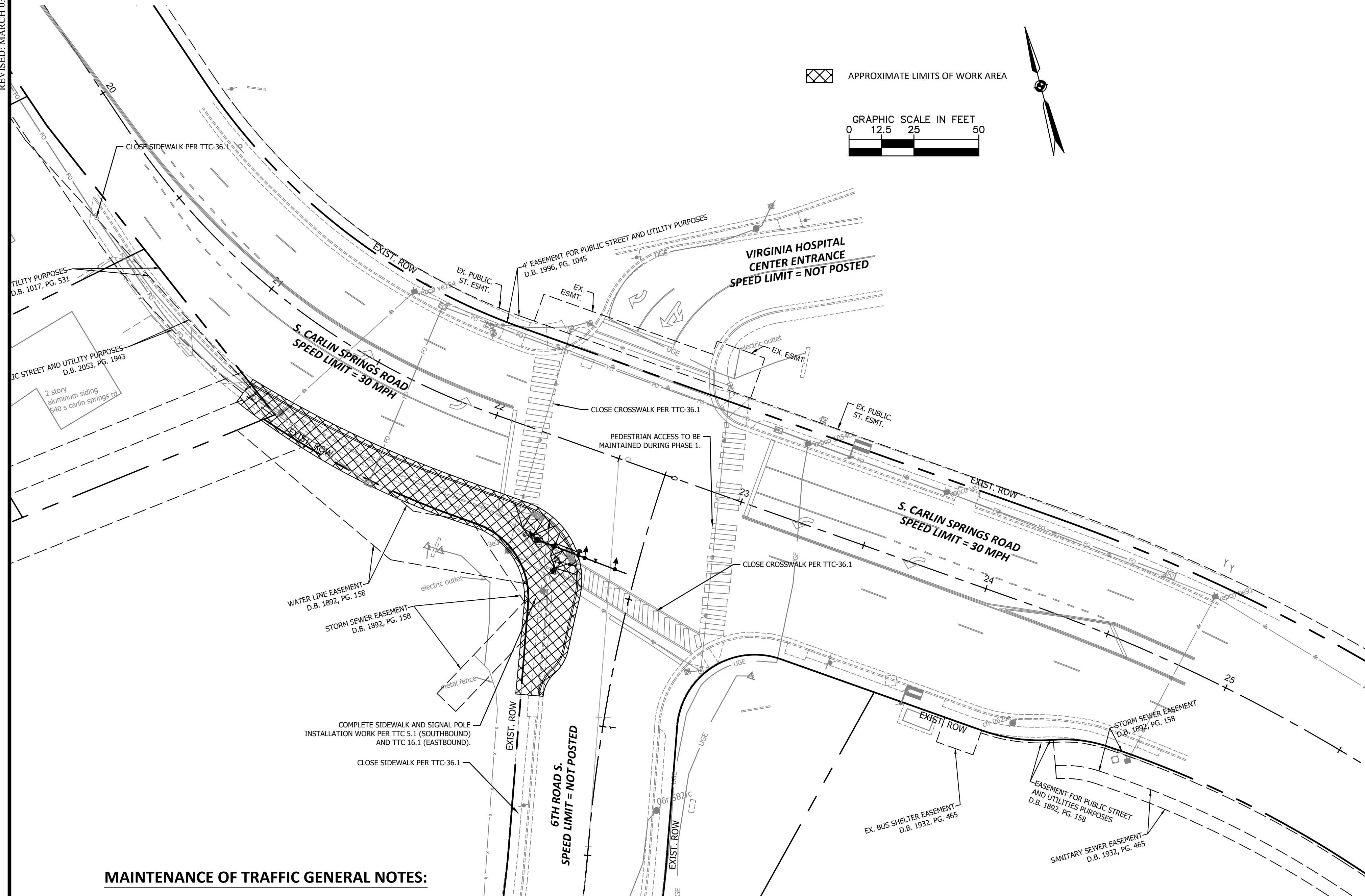
KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-1111**



REVISION: MARCH 03, 2020  
Filename: C-1210 MAINTENANCE OF TRAFFIC PLAN.dwg  
Path: K:\NVA\_TPT0110614003 - Carlin Springs 2020\CAD\PlanSheets

MAINTENANCE OF TRAFFIC PHASE 1 - NORTHWEST CORNER - ESTIMATED DURATION 15 DAYS



MAINTENANCE OF TRAFFIC GENERAL NOTES:

- TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, THIS MAINTENANCE OF TRAFFIC PLAN, AND/OR AS DIRECTED BY THE ARLINGTON COUNTY TRAFFIC ENGINEER.
- 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.
- 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 MINIMUM LANE WIDTH SHOULD BE 10 FEET.
- THE CONTRACTOR SHALL MINIMIZE THE DURATION OF AN BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE AFFECTED PROPERTY OWNER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE OF SUCH ACTIVITIES, AND THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
- ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER 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 ENGINEER.
- ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT TIME HOURS.
- PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS.
- PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH THE 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 MIDBLOCK 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.
- NORMAL WORKING HOURS SHALL BE 9:00 AM TO 4:00 PM MONDAY THROUGH FRIDAY WITHIN ARLINGTON COUNTY RIGHT-OF-WAY AND 9:30 AM TO 3:00 PM MONDAY THROUGH THURSDAY AND 9:30 AM TO 2:00 PM ON FRIDAY WITHIN VDOT RIGHT-OF-WAY.
- COUNTY WILL COORDINATE WITH TRANSIT BUREAU FOR WORK THAT WILL EFFECT TRANSIT STOPS.
- PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT-OF-WAY PERMIT. CONTRACT DES-PERMITTING SECTION, 703-228-4798 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.

CONSTRUCTION PHASE SPECIFIC NOTES:

- CONTRACTOR SHALL MINIMIZE THE NUMBER OF PARKING SPACES IMPACTED BY CONSTRUCTION ALONG THE NORTH SIDE OF 6TH ROAD SOUTH.

Page 68-16

Typical Traffic Control  
Shoulder Operation with Minor Encroachment  
(Figure TTC-5.1)

- NOTES
1. Required sign assemblies for multi-lane roadways see Note 1, TTC-5.1.
  2. Sign spacing should be 1200'-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.
  3. 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. When the lane encroachment ending 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:
4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers concerned from that roadway will encounter another advance warning sign prior to the activity area.
- Standard:
5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [W] oscillating light shall be parked 80' - 120' in advance of the first work crew.
  6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [W] oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, [W] oscillating lights.
  7. Taper length (L) and channelizing device spacing shall be at the following:
- | Speed Limit (mph) | Lane Width (Feet) |     |     |     | Speed Limit (mph)  |                    |      |
|-------------------|-------------------|-----|-----|-----|--|--------------------|------|
|                   | 9                 | 10  | 11  | 12  |  |                    |      |
| 25                | 95                | 105 | 115 | 125 | Transition Spacing   | 20'                | 40'  |
| 30                | 135               | 150 | 165 | 180 |  | Transition Spacing | 40'  |
| 35                | 185               | 205 | 225 | 245 | Construction Access*   | 80'                | 120' |
| 40                | 240               | 270 | 295 | 320 | *Spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.  |                    |      |
| 45                | 405               | 450 | 495 | 540 | 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. |                    |      |
| 50                | 450               | 500 | 550 | 600 |  |                    |      |
| 55                | 495               | 550 | 605 | 660 |  |                    |      |
| 60                | 540               | 600 | 660 | 720 |  |                    |      |
| 65                | 585               | 650 | 715 | 780 |  |                    |      |
| 70                | 630               | 700 | 770 | 840 |  |                    |      |
- Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum
8. The buffer space length shall be as shown in Table 685-5 on Page 685-5 for the posted speed limit.
9. 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.
10. 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 - 4/12/15

Page 68-16

Typical Traffic Control  
Outside Lane Closure Operation on a Four-Lane Roadway  
(Figure TTC-16.1)

- NOTES
1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
  2. Sign spacing should be 1200'-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.
  3. 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 685-1. For Limited Access highways a minimum of 1200' is desired.
  4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.
- Standard:
5. Taper Length (L) and Channelizing Device Spacing shall be:
- | Speed Limit (mph) | Lane Width (Feet) |     |     |     | Speed Limit (mph)  |                    |      |
|-------------------|-------------------|-----|-----|-----|--|--------------------|------|
|                   | 9                 | 10  | 11  | 12  |  |                    |      |
| 25                | 95                | 105 | 115 | 125 | Transition Spacing   | 20'                | 40'  |
| 30                | 135               | 150 | 165 | 180 |  | Transition Spacing | 40'  |
| 35                | 185               | 205 | 225 | 245 | Construction Access*   | 80'                | 120' |
| 40                | 240               | 270 | 295 | 320 | *Spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.  |                    |      |
| 45                | 405               | 450 | 495 | 540 | 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. |                    |      |
| 50                | 450               | 500 | 550 | 600 |  |                    |      |
| 55                | 495               | 550 | 605 | 660 |  |                    |      |
| 60                | 540               | 600 | 660 | 720 |  |                    |      |
| 65                | 585               | 650 | 715 | 780 |  |                    |      |
| 70                | 630               | 700 | 770 | 840 |  |                    |      |
- Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum
6. 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).
  7. The buffer space length shall be as shown in Table 685-5 on Page 685-5 for the posted speed limit.
  8. 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, [W] 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.
  9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [W] oscillating lights but can be used to supplement the amber rotating, flashing, [W] oscillating lights.
  10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.
- 1: Revision 1 - 4/12/15

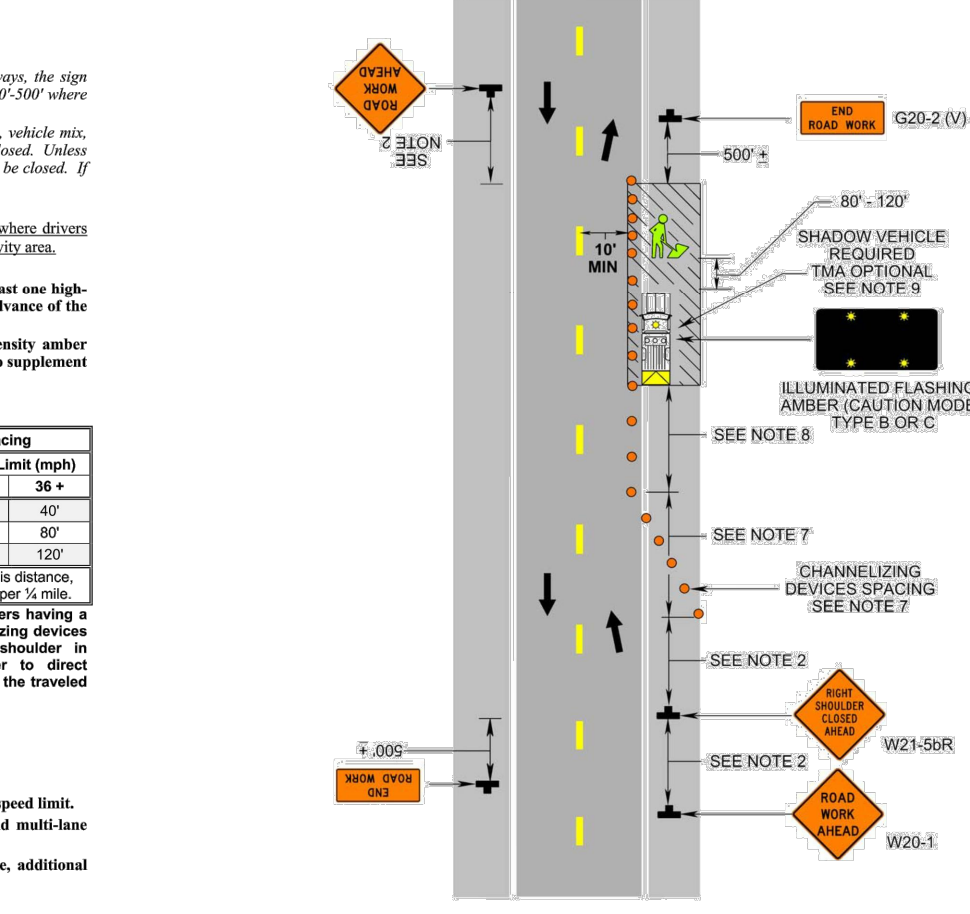
Page 68-16

Typical Traffic Control  
Crosswalk Closure and Pedestrian Detour Operation  
(Figure TTC-36.1)

- NOTES
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 crosswalks occur cause inadequate communication to be provided to pedestrians who have visual disabilities.
  4. Pedestrian traffic signal display 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 AHEAD (W20-1) signs, may be used to control vehicular traffic.
  7. For midblock closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks.
  8. In order to maintain the systematic use of the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs in a jurisdiction, the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs may be used in TTC zones.
- Standard:
9. All sidewalk closures shall be closed with Type 3 Barricades.
- Support:
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD for minimum lane, yield line and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.
- 1: Revision 1 - 4/12/15

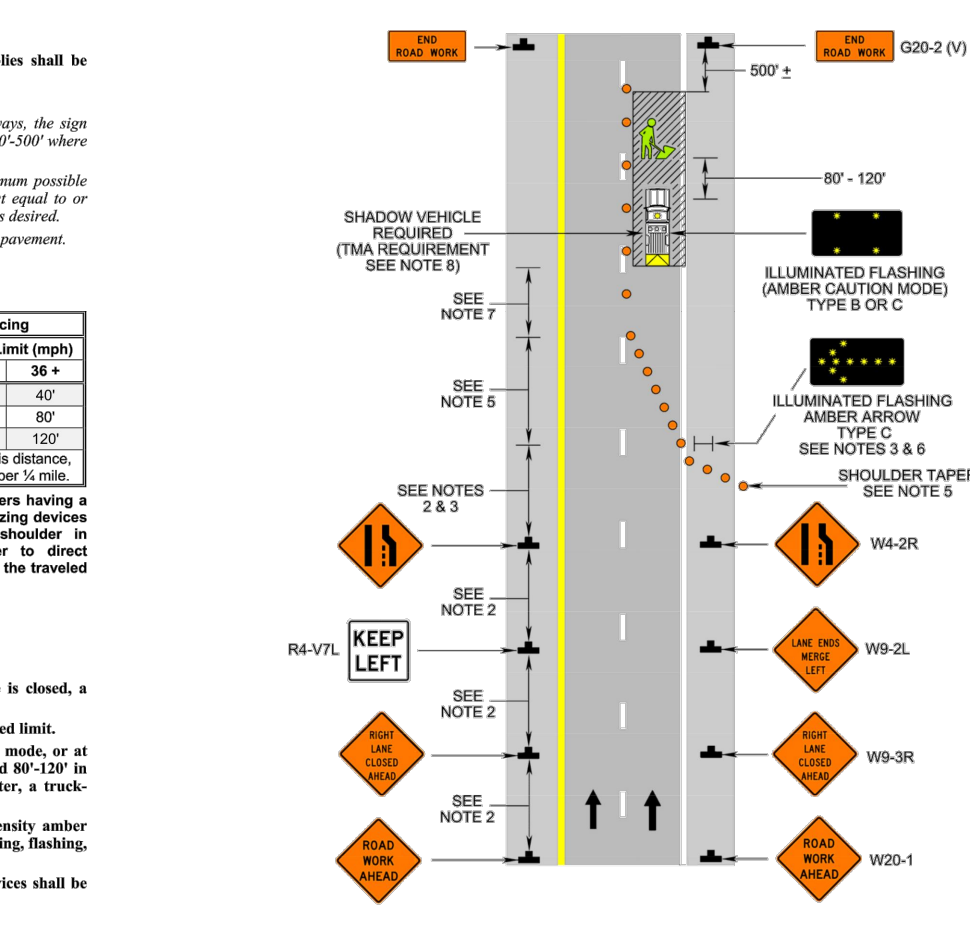
April 2015

Shoulder Operation with Minor Encroachment  
(Figure TTC-5.1)



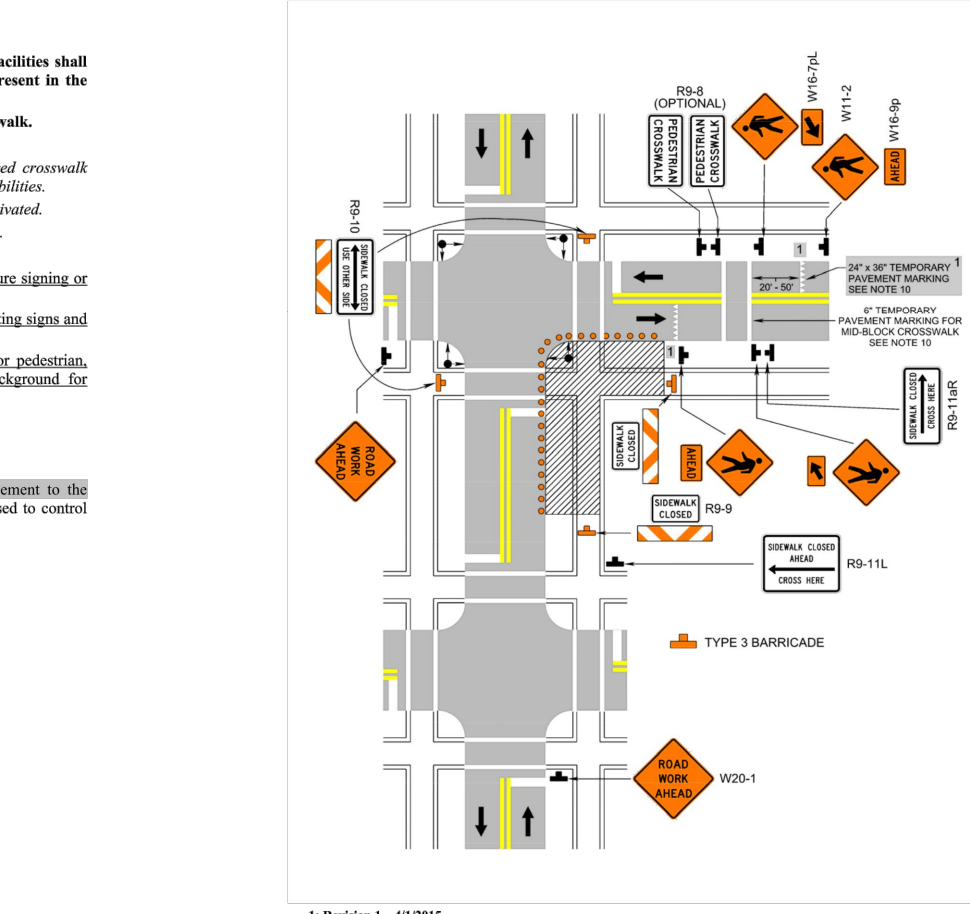
April 2015

Outside Lane Closure Operation on a Four-Lane Roadway  
(Figure TTC-16.1)



April 2015

Crosswalk Closure and Pedestrian Detour Operation  
(Figure TTC-36.1)



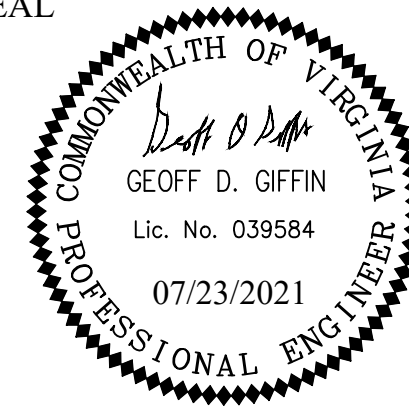
1: Revision 1 - 4/12/15



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS

DATE

TRAFFIC SIGNAL ENGINEER  
TRAFFIC ENGINEERING MANAGER  
WATER, SEWER, STREETS BUREAU CHIEF  
TE&O BUREAU CHIEF  
TRANSPORTATION DIRECTOR

REVISIONS

DATE

Project Name and Location  
S. Carlin Springs Road  
Signal Upgrades

MAINTENANCE OF TRAFFIC PLAN  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

Designed: DM  
Drawn: DM  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet

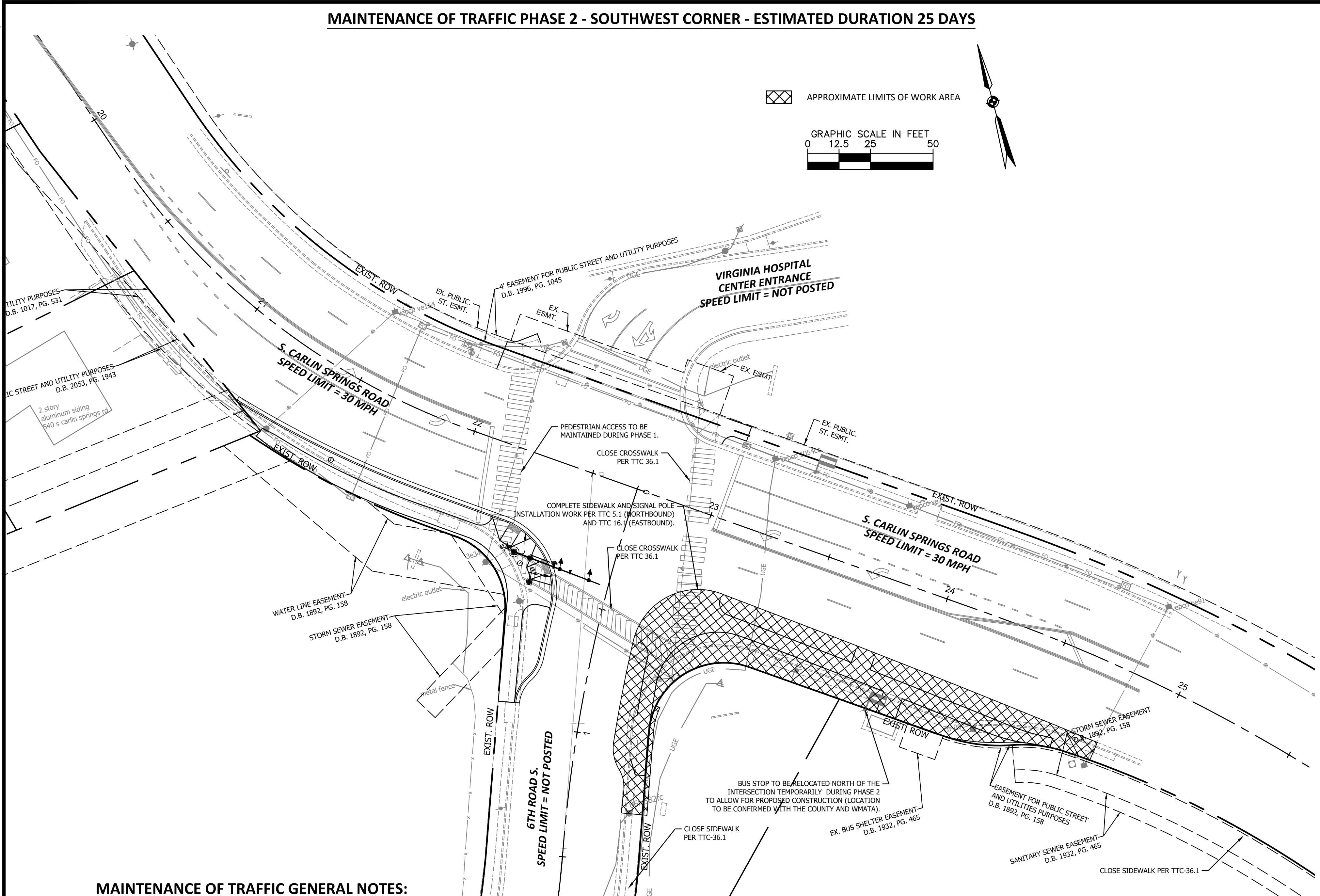
C-1210

S. Carlin Springs Road Signal Upgrades



File name: C-1210 MAINTENANCE OF TRAFFIC PLAN.dwg  
Path: K:\NVA\_TPT0110614003 - Carlin Springs 2020 CAD\Plan Sheets

REVISED: MARCH 03, 2020



### MAINTENANCE OF TRAFFIC GENERAL NOTES:

1. TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, THIS MAINTENANCE OF TRAFFIC PLAN, AND/OR AS DIRECTED BY THE ARLINGTON COUNTY TRAFFIC ENGINEER.
2. 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.
3. 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 MINIMUM LANE WIDTH SHOULD BE 10 FEET.
4. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF AN BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE AFFECTED PROPERTY OWNER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE OF SUCH ACTIVITIES, AND THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
5. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER 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 ENGINEER.
6. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT TIME HOURS.
7. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS.
8. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH THE MUTCD.
9. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
10. 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 MIDBLOCK WORK SITES.
11. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
12. 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.
13. 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.
14. 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.
15. NORMAL WORKING HOURS SHALL BE 9:00 AM TO 4:00 PM MONDAY THROUGH FRIDAY WITHIN ARLINGTON COUNTY RIGHT-OF-WAY AND 9:30 AM TO 3:00 PM MONDAY THROUGH THURSDAY AND 9:30 AM TO 2:00 PM ON FRIDAY WITHIN VDOT RIGHT-OF-WAY.
16. COUNTY WILL COORDINATE WITH TRANSIT BUREAU FOR WORK THAT WILL EFFECT TRANSIT STOPS.
17. PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT-OF-WAY PERMIT. CONTRACT DES-PERMITTING SECTION, 703-228-4798 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.

### CONSTRUCTION PHASE SPECIFIC NOTES:

1. CONTRACTOR SHALL MINIMIZE THE NUMBER OF PARKING SPACES IMPACTED BY CONSTRUCTION ALONG THE NORTH SIDE OF 6TH ROAD SOUTH.

Page 681-16

April 2015

Typical Traffic Control  
Shoulder Operation with Minor Encroachment  
(Figure TTC-5.1)

NOTES

Standard:

1. All required sign assemblies for multi-lane roadways see Note 1, TTC-1.
2. Sign spacing should be 1200'-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.
3. 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. When 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:

4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers converge from that direction will encounter another advance warning sign prior to the activity area.

Standard:

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [W] oscillating light shall be parked 80' - 120' in advance of the first work crew.
6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [W] oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, [W] oscillating lights.
7. Taper length (L) and channelizing device spacing shall be at the following:

Speed Limit (mph)	Lane Width (Feet)					Speed Limit (mph)
	9	10	11	12	30 +	
25	95	105	115	125	20'	40'
30	135	150	165	180	40'	80'
35	185	205	225	245	80'	120'
40	240	270	295	320		
45	405	450	495	540		
50	450	500	550	600		
55	495	550	605	660		
60	540	600	660	720		
65	585	650	715	780		
70	630	700	770	840		

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/2 L Minimum

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.

6. The buffer space length shall be as shown in Table 681-5 on Page 681-5 for the posted speed limit.

9. 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.

10. 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

Page 681-17

April 2015

Shoulder Operation with Minor Encroachment  
(Figure TTC-5.1)

NOTES

Standard:

1. All required sign assemblies for multi-lane roadways see Note 1, TTC-1.
2. Sign spacing should be 1200'-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.
3. 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. When 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:

4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers converge from that direction will encounter another advance warning sign prior to the activity area.

Standard:

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [W] oscillating light shall be parked 80' - 120' in advance of the first work crew.
6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [W] oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, [W] oscillating lights.
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35	185	205	225	245	80'	120'
40	240	270	295	320		
45	405	450	495	540		
50	450	500	550	600		
55	495	550	605	660		
60	540	600	660	720		
65	585	650	715	780		
70	630	700	770	840		

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/2 L Minimum

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.

6. The buffer space length shall be as shown in Table 681-5 on Page 681-5 for the posted speed limit.

9. 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.

10. 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

Page 681-18

April 2015

Typical Traffic Control  
Outside Lane Closure Operation on a Four-Lane Roadway  
(Figure TTC-16.1)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
2. Sign spacing should be 1200'-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.
3. 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 681-2. For Limited Access highways a minimum of 1200' is desired.
4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Option:

5. Taper Length (L) and Channelizing Device Spacing shall be:

Speed Limit (mph)	Lane Width (Feet)					Speed Limit (mph)
	9	10	11	12	30 +	
25	95	105	115	125	20'	40'
30	135	150	165	180	40'	80'
35	185	205	225	245	80'	120'
40	240	270	295	320		
45	405	450	495	540		
50	450	500	550	600		
55	495	550	605	660		
60	540	600	660	720		
65	585	650	715	780		
70	630	700	770	840		

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/2 L Minimum

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.

6. 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).

7. The buffer space length shall be as shown in Table 681-3 on Page 681-3 for the posted speed limit.

8. 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, [W] 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.

9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [W] oscillating lights but can be used to supplement the amber rotating, flashing, [W] oscillating lights.

10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

1: Revision 1 - 4/1/2015

Page 681-19

April 2015

Typical Traffic Control  
Crosswalk Closure and Pedestrian Detour Operation  
(Figure TTC-36.1)

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.
2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

Option:

3. Audible information devices should be considered where midblock closings and changed crosswalks occur cause inadequate communication to be provided to pedestrians who have visual disabilities.
4. Pedestrian traffic signal display 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 AHEAD (W20-1) signs, may be used to control vehicular traffic.
7. For midblock closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidebars.
8. In order to maintain the systematic use of the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs in a jurisdiction, the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs may be used in TTC zones.

Standard:

9. All sidewalk closures shall be closed with Type 3 Barricades.

Option:

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

1: Revision 1 - 4/1/2015

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
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SEAL

APPROVALS

DATE

TRAFFIC SIGNAL ENGINEER 06/21/21

TRAFFIC ENGINEERING MANAGER 06/21/21

WATER, SEWER, STREETS BUREAU CHIEF 07.16.2021

TE&O BUREAU CHIEF 06/22/2021

Dennis M. Leach 06/23/21

TRANSPORTATION DIRECTOR

REVISIONS

DATE

NO.	DESCRIPTION	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

MAINTENANCE OF TRAFFIC PLAN

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: DM

Drawn: DM

Checked: GG

Miss Utility Transmittal #:

Plotted: July 23, 2021

Plotted by: Max.Gawthrop

Scale:

HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive, Suite 400

Reston, Virginia 20191

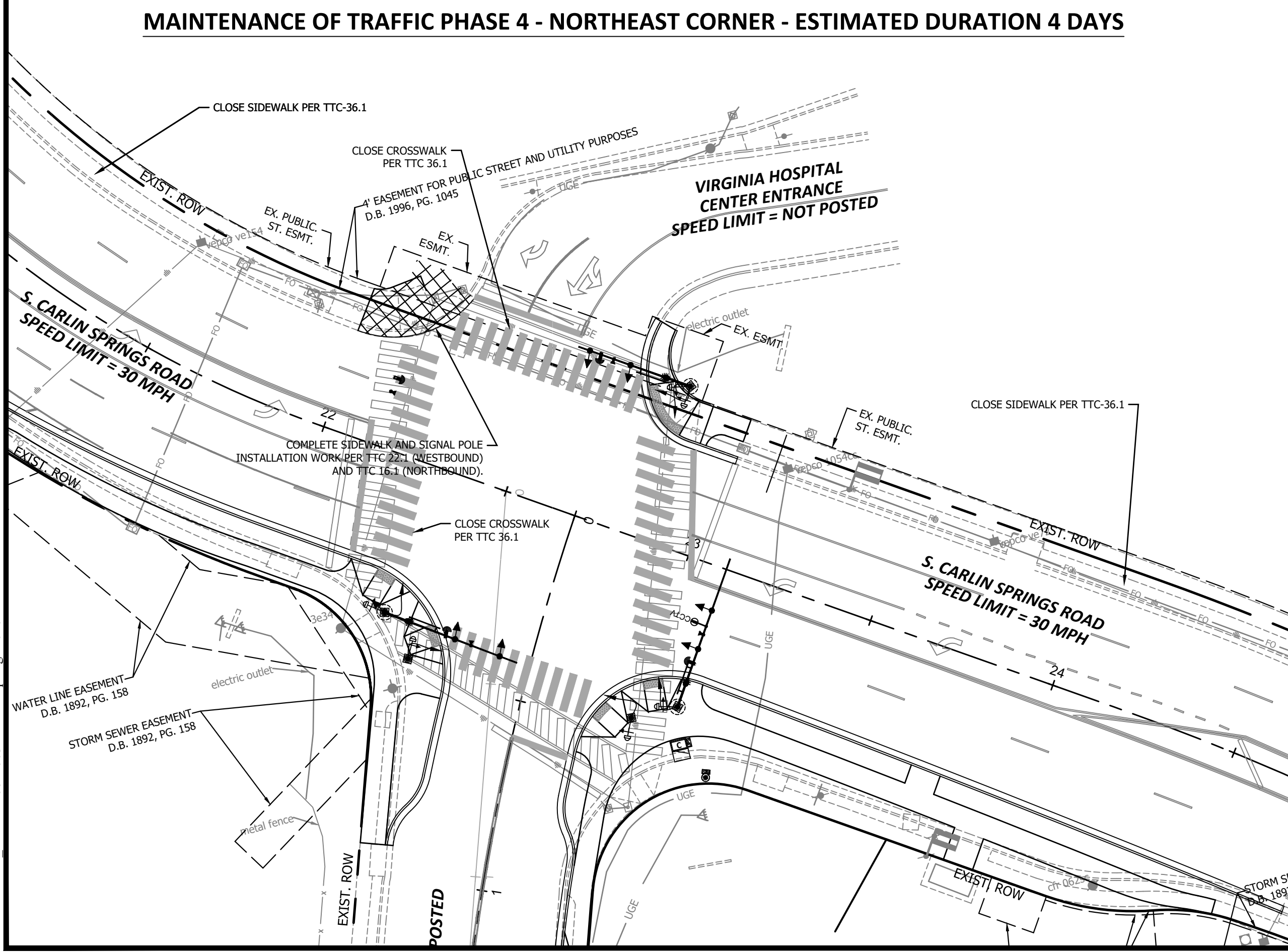
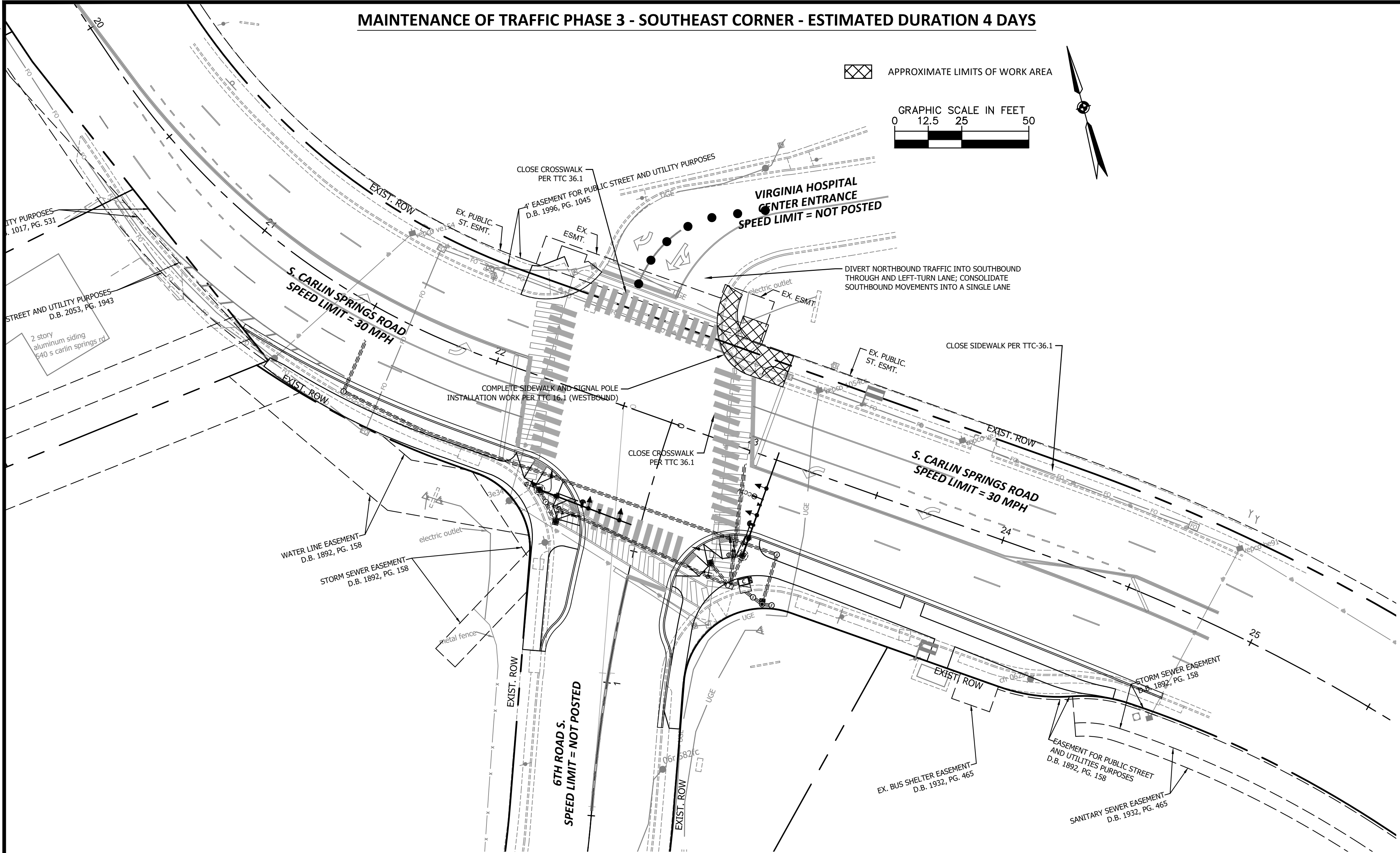
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C-1211



REVISD: MARCH 03, 2020

Filename: C-1210 MAINTENANCE OF TRAFFIC PLAN.dwg  
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- ### MAINTENANCE OF TRAFFIC GENERAL NOTES:
- TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, THIS MAINTENANCE OF TRAFFIC PLAN, AND/OR AS DIRECTED BY THE ARLINGTON COUNTY TRAFFIC ENGINEER.
  - 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.
  - 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 MINIMUM LANE WIDTH SHOULD BE 10 FEET.
  - THE CONTRACTOR SHALL MINIMIZE THE DURATION OF AN OBSTRUCTION TO PRIVATE ENTRANCES AND DRIVEWAYS. THE AFFECTED PROPERTY OWNER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE OF SUCH ACTIVITIES, AND THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
  - ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER 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 ENGINEER.
  - ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT TIME HOURS.
  - PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS.
  - PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH THE 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 MIDBLOCK 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.
  - NORMAL WORKING HOURS SHALL BE 9:00 AM TO 4:00 PM MONDAY THROUGH FRIDAY WITHIN ARLINGTON COUNTY RIGHT-OF-WAY AND 9:30 AM TO 3:00 PM MONDAY THROUGH THURSDAY AND 9:30 AM TO 2:00 PM ON FRIDAY WITHIN VDOT RIGHT-OF-WAY.
  - COUNTY WILL COORDINATE WITH TRANSIT BUREAU FOR WORK THAT WILL EFFECT TRANSIT STOPS.
  - PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT-OF-WAY PERMIT. CONTRACT DES-PERMITTING SECTION, 703-228-4798 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.

Page 68-16

Typical Traffic Control  
Shoulder Operation with Minor Encroachment  
(Figure TTC-6.1)

NOTES

Standard:

1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 300'-500' where the posted speed limit is greater than 45 mph, and 500'-1000' where the posted speed limit is 45 mph or less.

3. When work takes place on a high volume roadway, vehicular traffic volumes, vehicle mix, speed and capacity should be evaluated to determine whether the affected lane should be closed. Unless the lane encroachment existing 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:

4. 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:

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [illuminated] light shall be parked 80'-120' in advance of the first work crew.

6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [illuminated] light. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, [illuminated] lights.

7. Taper length (L) and channelizing device spacing shall be at the following:

Taper Length (L)				
Speed Limit (mph)	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	485	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum

Channelizing Device Spacing			
Location	Speed Limit (mph)	0-35	36+
Transition Spacing		20'	40'
Traveway Spacing		40'	80'
Construction Access*		40'	120'

\* Spacing may be increased to the 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.

8. The buffer space length shall be as shown in Table 683-3 on Page 68-5 for the posted speed limit.

9. 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.

10. 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

Page 68-17

Shoulder Operation with Minor Encroachment  
(Figure TTC-6.1)

NOTES

Standard:

1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 300'-500' where the posted speed limit is greater than 45 mph, and 500'-1000' where the posted speed limit is 45 mph or less.

3. When work takes place on a high volume roadway, vehicular traffic volumes, vehicle mix, speed and capacity should be evaluated to determine whether the affected lane should be closed. Unless the lane encroachment existing 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:

4. 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:

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [illuminated] light shall be parked 80'-120' in advance of the first work crew.

6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [illuminated] light. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, [illuminated] lights.

7. Taper length (L) and channelizing device spacing shall be at the following:

Taper Length (L)				
Speed Limit (mph)	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	485	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum

Channelizing Device Spacing			
Location	Speed Limit (mph)	0-35	36+
Transition Spacing		20'	40'
Traveway Spacing		40'	80'
Construction Access*		40'	120'

\* Spacing may be increased to the 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.

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9. 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.

10. 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

Page 68-18

Typical Traffic Control  
Outside Lane Closure Operation on a Four-Lane Roadway  
(Figure TTC-6.1)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 300'-500' where the posted speed limit is greater than 45 mph, and 500'-1000' where the posted speed limit is 45 mph or less.

3. 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 683-3. For Limited Access highways a minimum of 1000' is desired.

4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

5. Taper Length (L) and Channelizing Device Spacing shall be:

Taper Length (L)				
Speed Limit (mph)	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	485	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum

Channelizing Device Spacing			
Location	Speed Limit (mph)	0-35	36+
Transition Spacing		20'	40'
Traveway Spacing		40'	80'
Construction Access*		40'	120'

\* Spacing may be increased to the 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.

6. 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-15).

7. The buffer space length shall be as shown in Table 683-3 on Page 68-5 for the posted speed limit.

8. A shadow vehicle with either a Type 1 or 2 arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [illuminated] 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.

9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [illuminated] light but can be used to supplement the amber rotating, flashing, [illuminated] lights.

10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

1: Revision 1 - 4/1/2015

Page 68-19

Outside Lane Closure Operation on a Four-Lane Roadway  
(Figure TTC-6.1)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 300'-500' where the posted speed limit is greater than 45 mph, and 500'-1000' where the posted speed limit is 45 mph or less.

3. 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 683-3. For Limited Access highways a minimum of 1000' is desired.

4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

5. Taper Length (L) and Channelizing Device Spacing shall be:

Taper Length (L)				
Speed Limit (mph)	9	10	11	12
25	95	105	115	125
30	135	150	165	180
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40	240	270	295	320
45	405	450	485	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
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70	630	700	770	840

Minimum taper lengths for Limited Access highways shall be 1000 feet.  
Shoulder Taper = 1/4 L Minimum

Channelizing Device Spacing			
Location	Speed Limit (mph)	0-35	36+
Transition Spacing		20'	40'
Traveway Spacing		40'	80'
Construction Access*		40'	120'

\* Spacing may be increased to the 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.

6. 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-15).

7. The buffer space length shall be as shown in Table 683-3 on Page 68-5 for the posted speed limit.

8. A shadow vehicle with either a Type 1 or 2 arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, [illuminated] 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.

9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, [illuminated] light but can be used to supplement the amber rotating, flashing, [illuminated] lights.

10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

1: Revision 1 - 4/1/2015

Page 68-20

Typical Traffic Control  
Crosswalk Closure and Pedestrian Detour Operation  
(Figure TTC-36.1)

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.

2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

Guidance:

3. Available information devices should be considered where midblock crossings 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 WORK AHEAD (W20-1) 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.

8. In order to maintain the systematic use of the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs, in a jurisdiction, the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs may be used in TTC zones.

Standard:

9. All sidewalk closures shall be closed with Type 3 Barricades.

Support:

10. Refer to Sections 18-16 through 18-19 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.

1: Revision 1 - 4/1/2015

DEPARTMENT OF ENVIRONMENTAL SERVICES

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SEAL

APPROVALS

DATE

TRAFFIC SIGNAL ENGINEER 06/21/21

TRAFFIC ENGINEERING MANAGER 06/21/21

WATER, SEWER, STREETS BUREAU CHIEF 07/16/2021

TE&O BUREAU CHIEF 06/22/2021

TRANSPORTATION DIRECTOR 06/23/21

REVISIONS

DATE

NO.	DESCRIPTION	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

MAINTENANCE OF TRAFFIC PLAN

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: DM

Drawn: DM

Checked: GG

Miss Utility Transmittal #:

Plotted: July 23, 2021

Plotted by: Max.Gawthrop

Scale:

HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive, Suite 400

Reston, Virginia 20191

Sheet

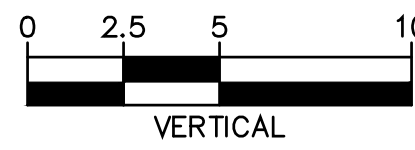
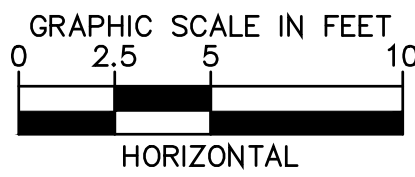
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REVISID: MARCH 03, 2020

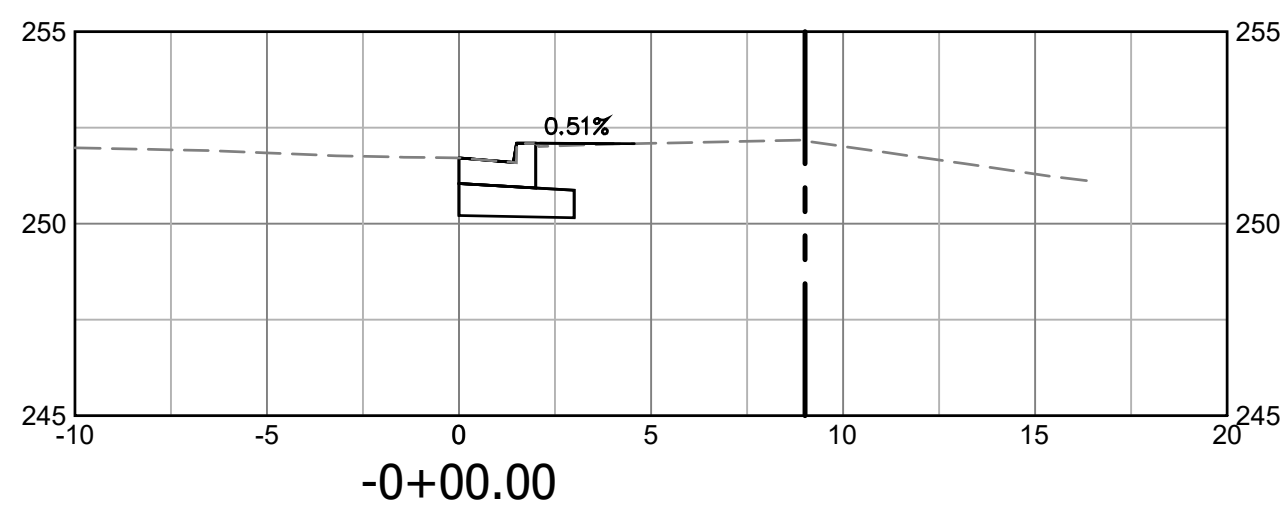
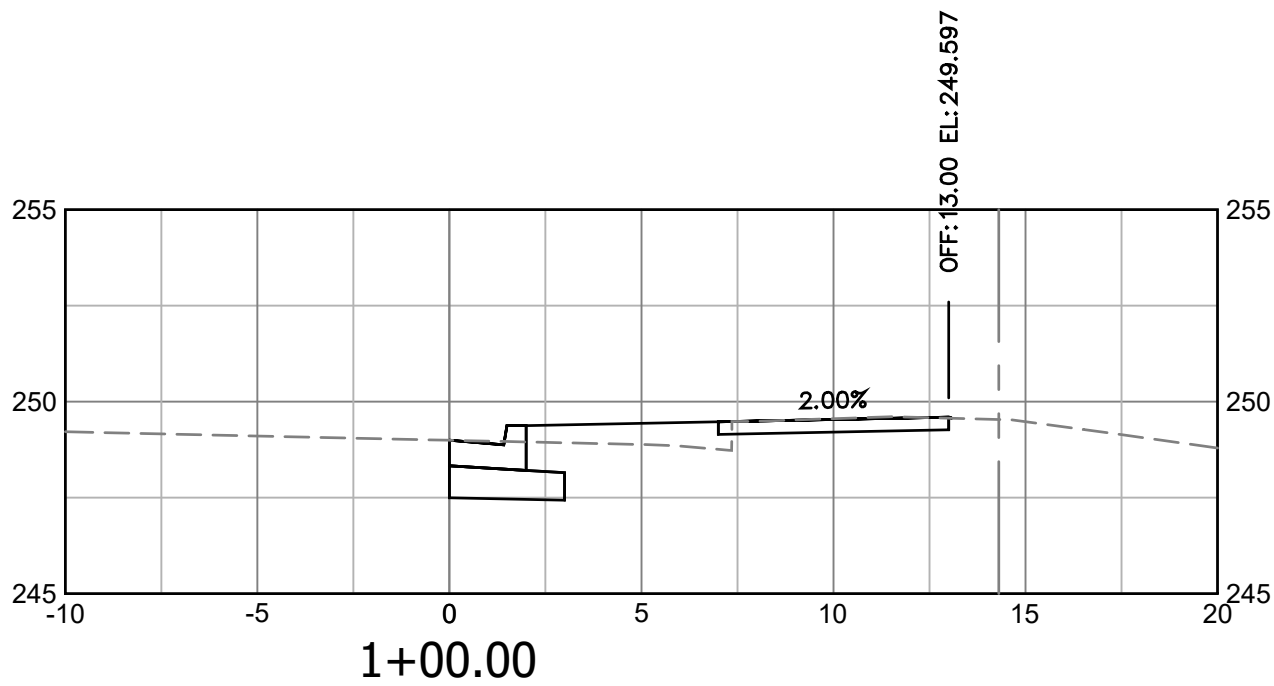
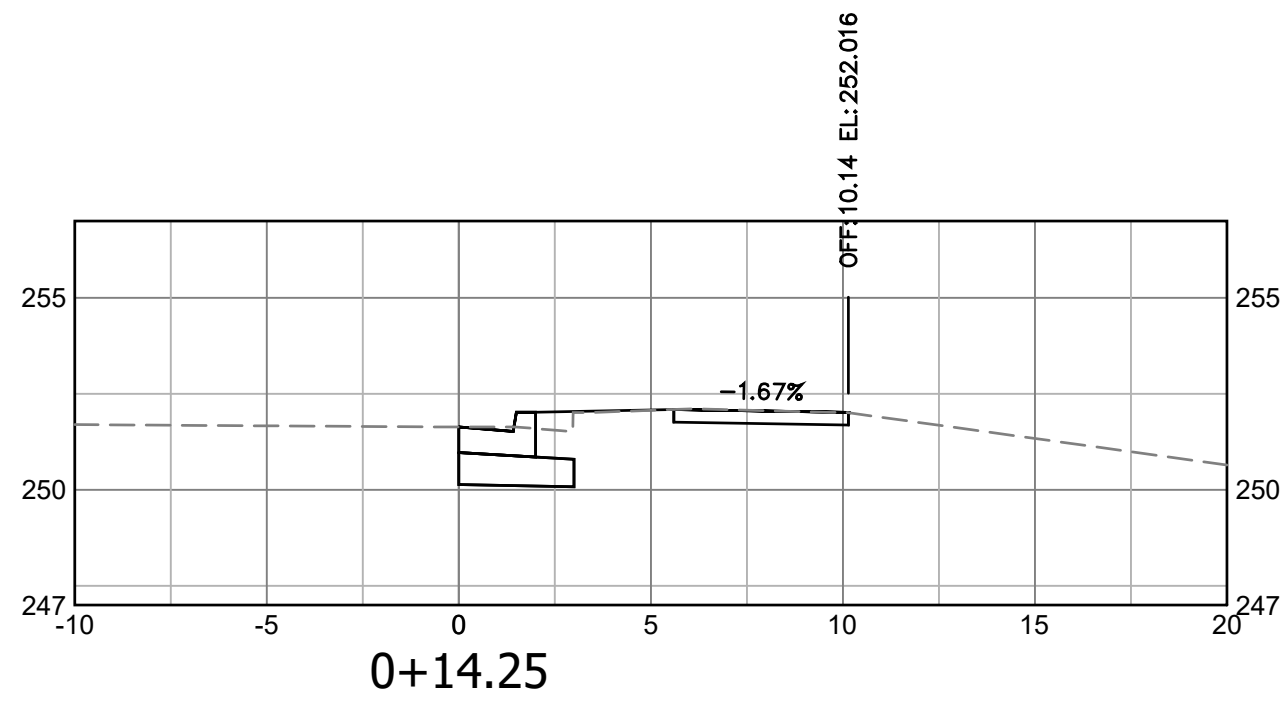
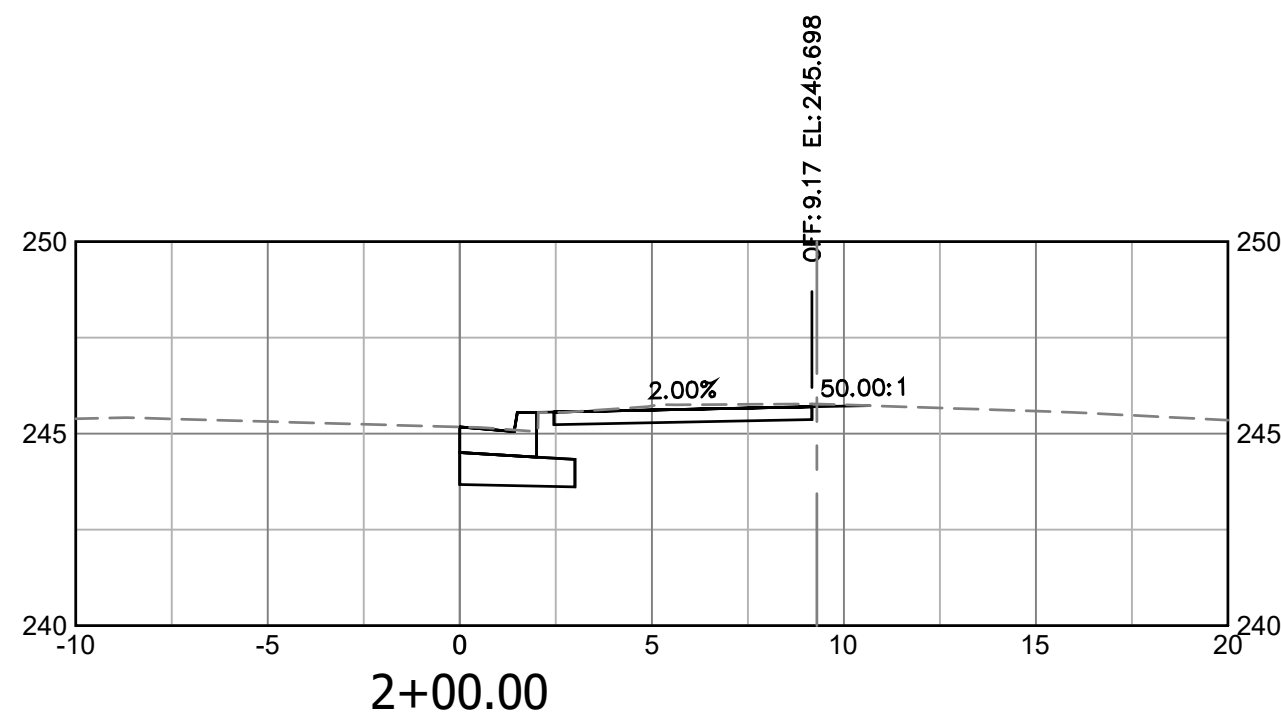
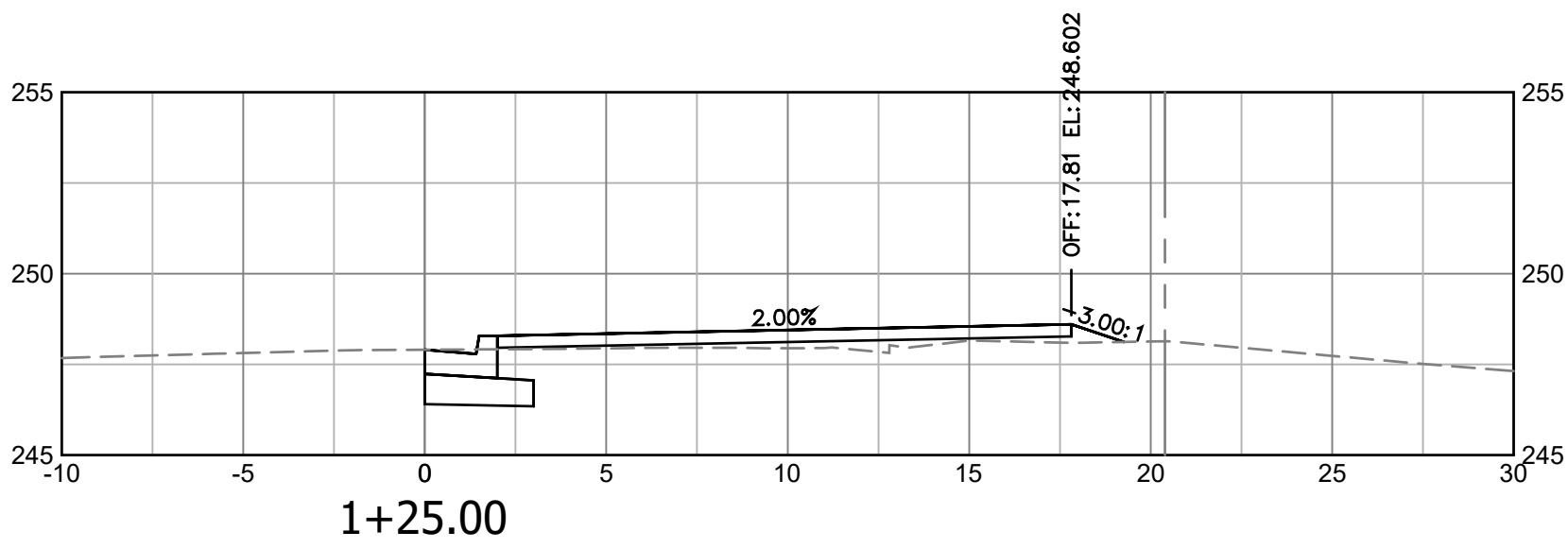
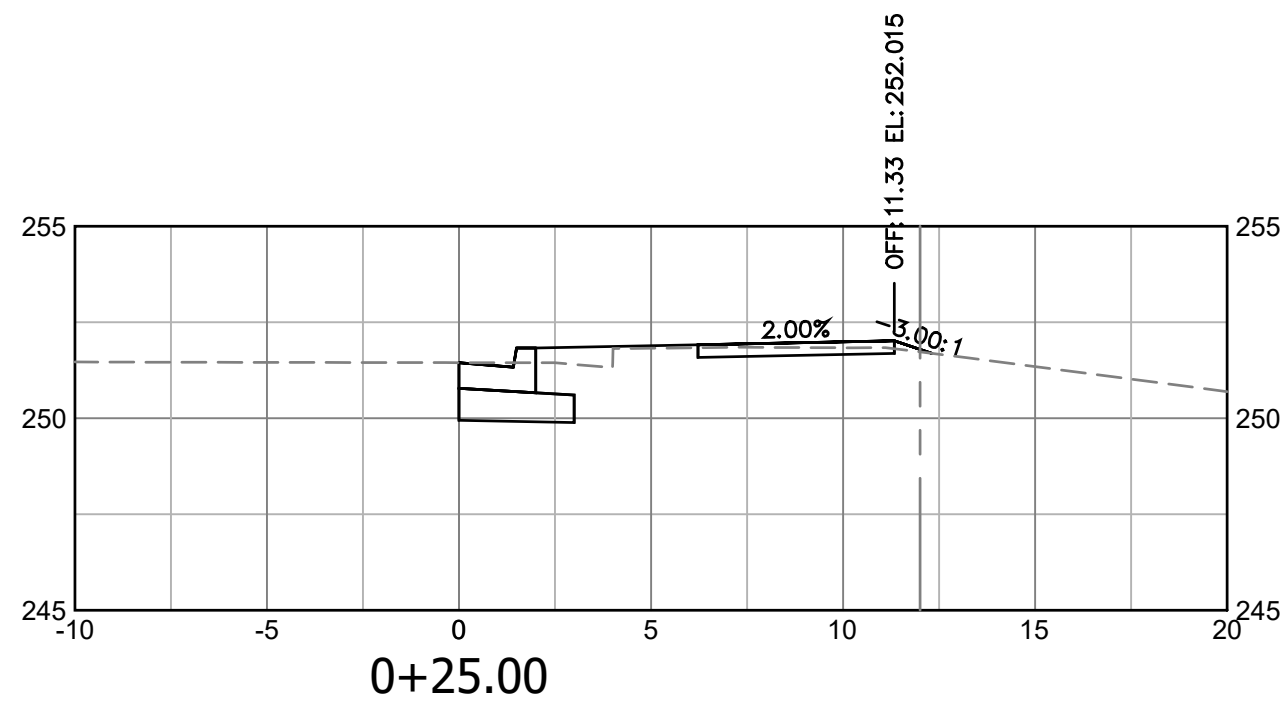
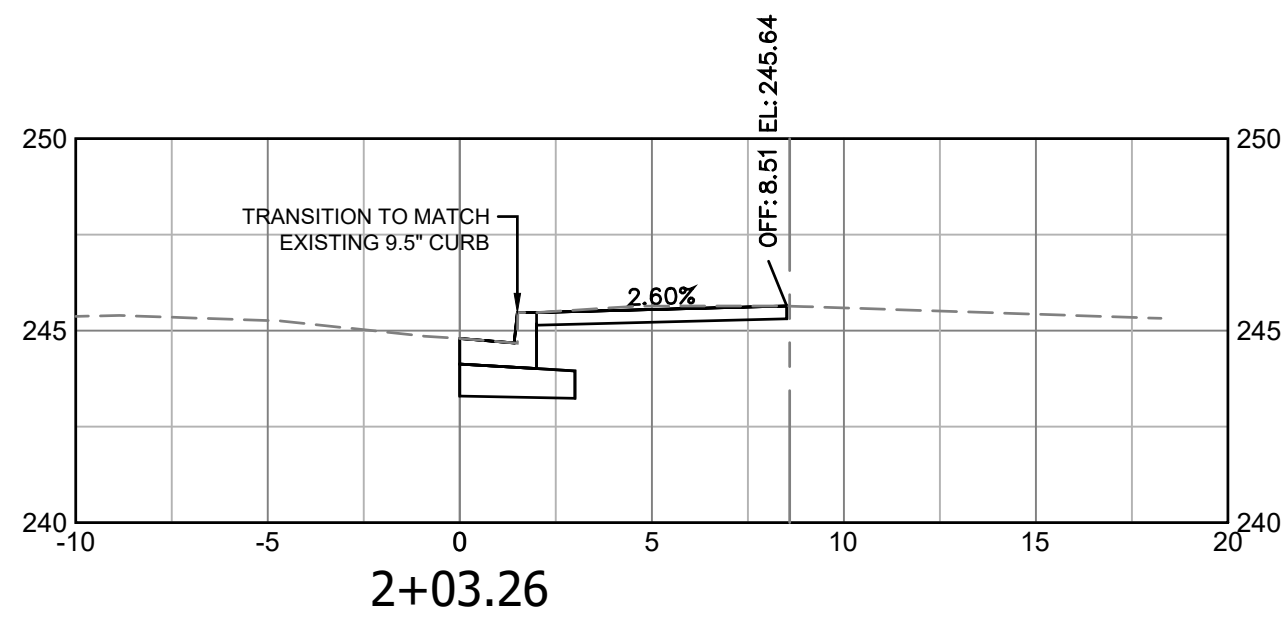
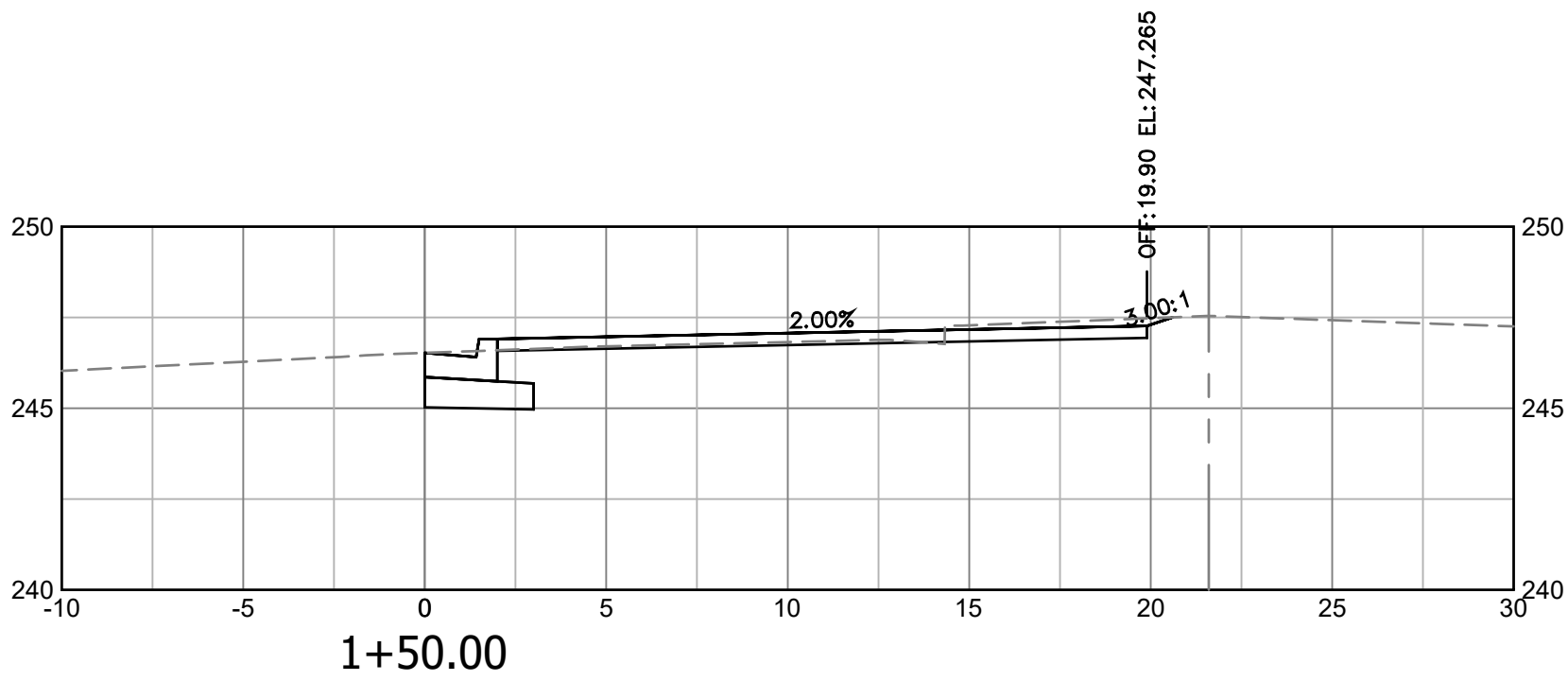
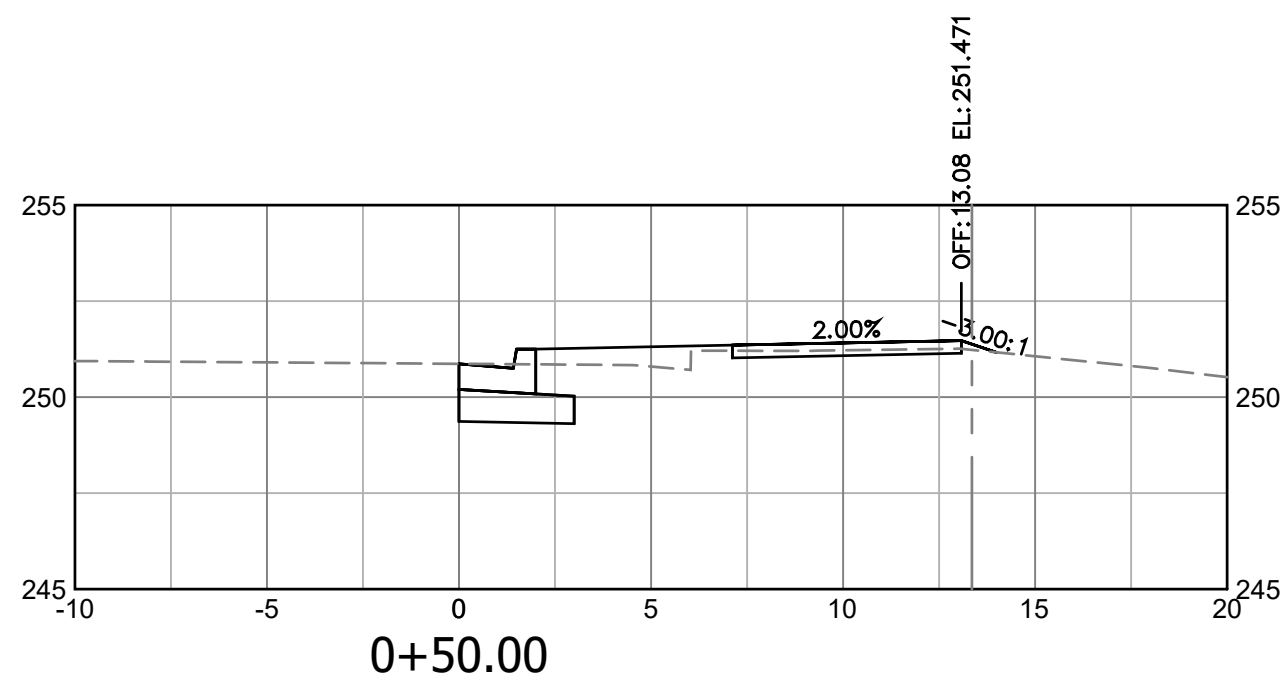
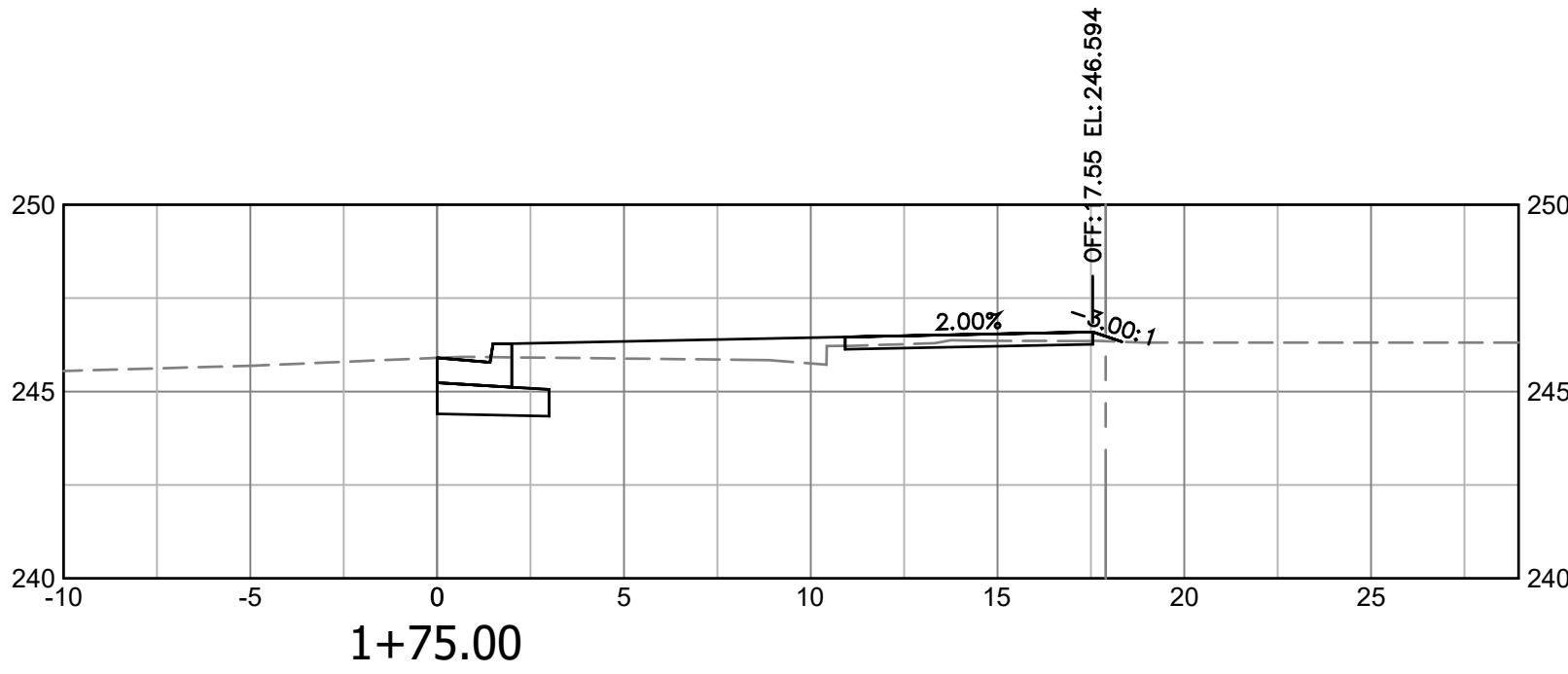
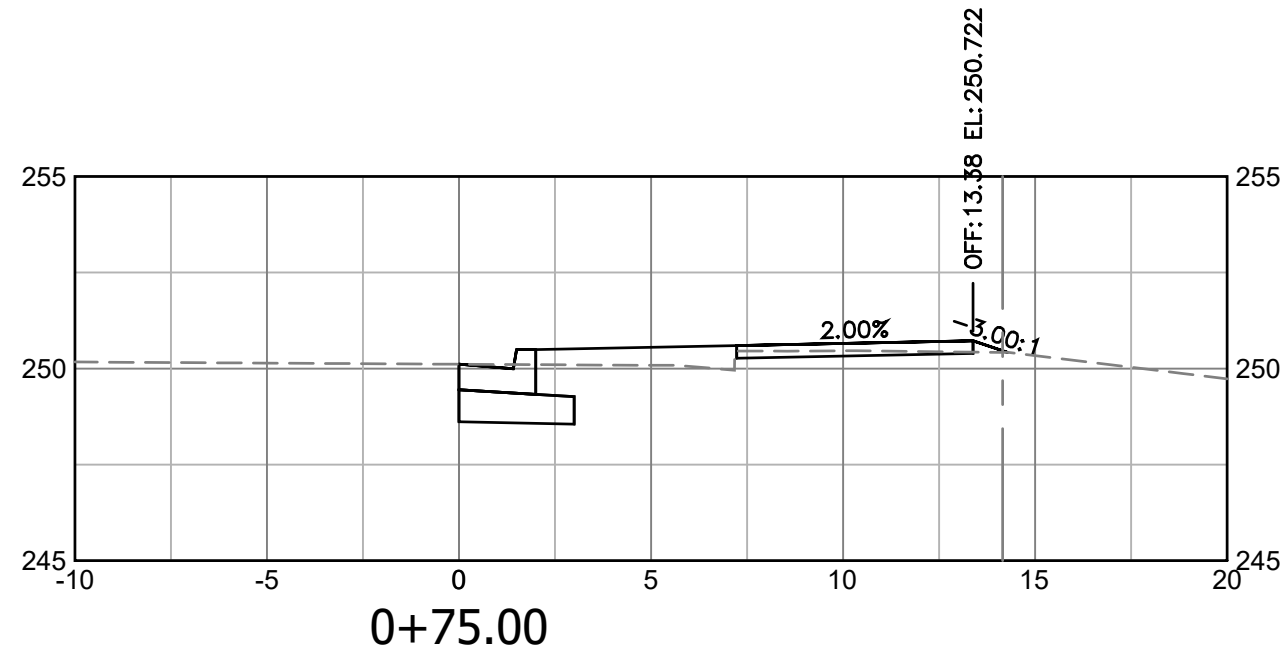
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6TH ROAD S. - NW CORNER



LEGEND

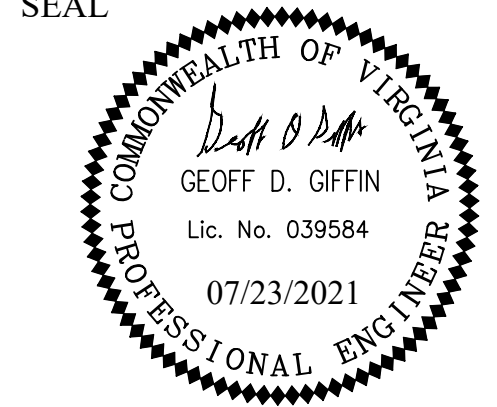
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- PROP. PERMANENT EASEMENT



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2100 Clarendon Boulevard, Suite 900  
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Phone: 703.228.3629  
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SEAL



APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	06/21/21
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	06/21/21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
<i>[Signature]</i> TE&O BUREAU CHIEF	06/22/2021
<i>[Signature]</i> TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

CROSS SECTIONS

ID #234  
TE02

Designed: KF  
Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
Plotted by: Max.Gawthrop

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

KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet

C-1310

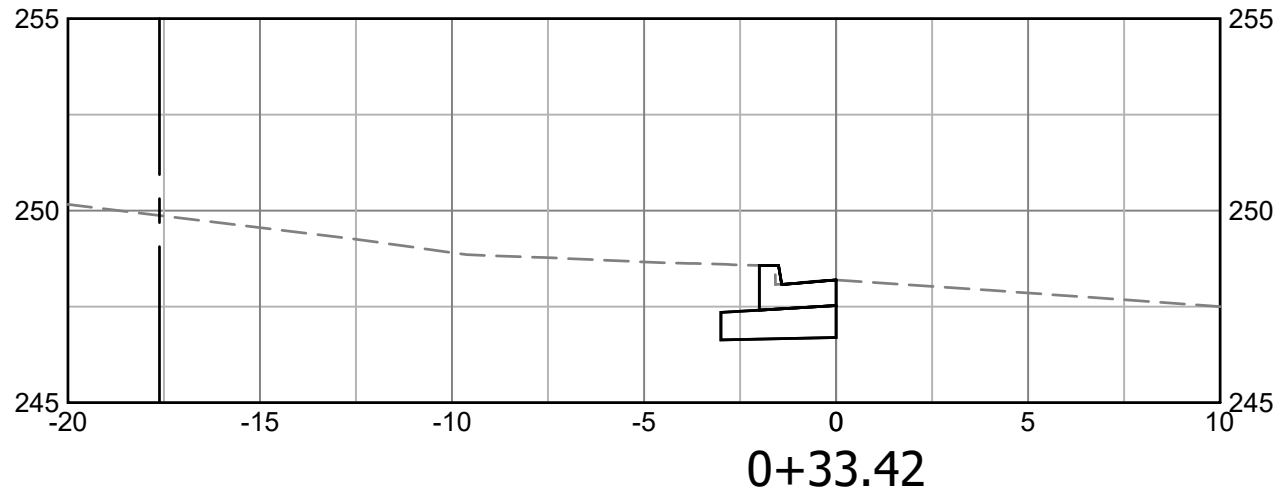
S. Carlin Springs Road Signal Upgrades



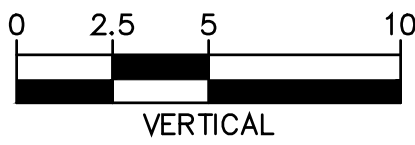
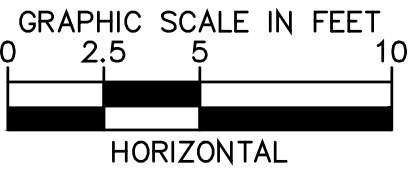
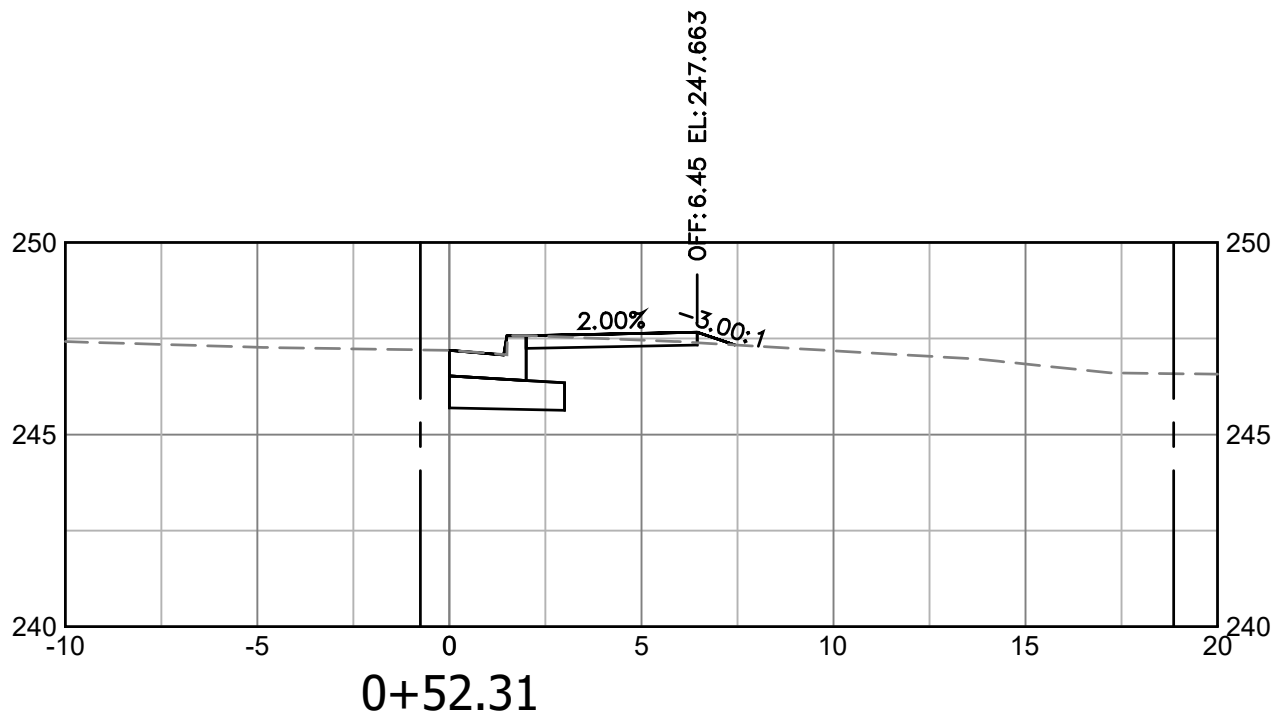
REVISD: MARCH 03, 2020

Filename: C-1310 CROSS SECTIONS.dwg  
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6TH ROAD S. - NE CORNER



6TH ROAD S. - SE CORNER



LEGEND

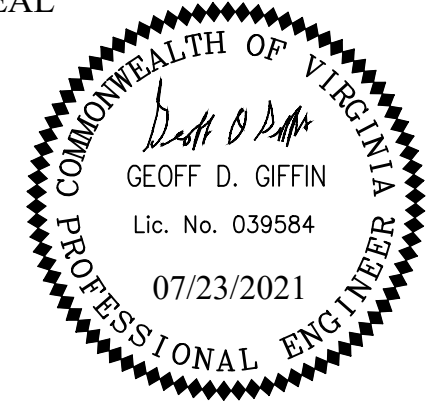
- EXIST. RIGHT OF WAY
- PROP. PERMANENT EASEMENT
- EXIST. PERMANENT EASEMENT



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS	DATE
<i>[Signature]</i> TRAFFIC SIGNAL ENGINEER	06/21/21
<i>[Signature]</i> TRAFFIC ENGINEERING MANAGER	06/21/21
<i>[Signature]</i> WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
<i>[Signature]</i> TE&O BUREAU CHIEF	06/22/2021
<i>[Signature]</i> TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

CROSS SECTIONS

ID #234  
TE02

Designed: KF  
Drawn: KF  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 23, 2021  
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Scale:  
HOR. 1" = 5' VERT. 1" = 5'

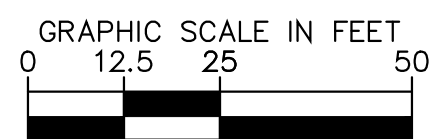
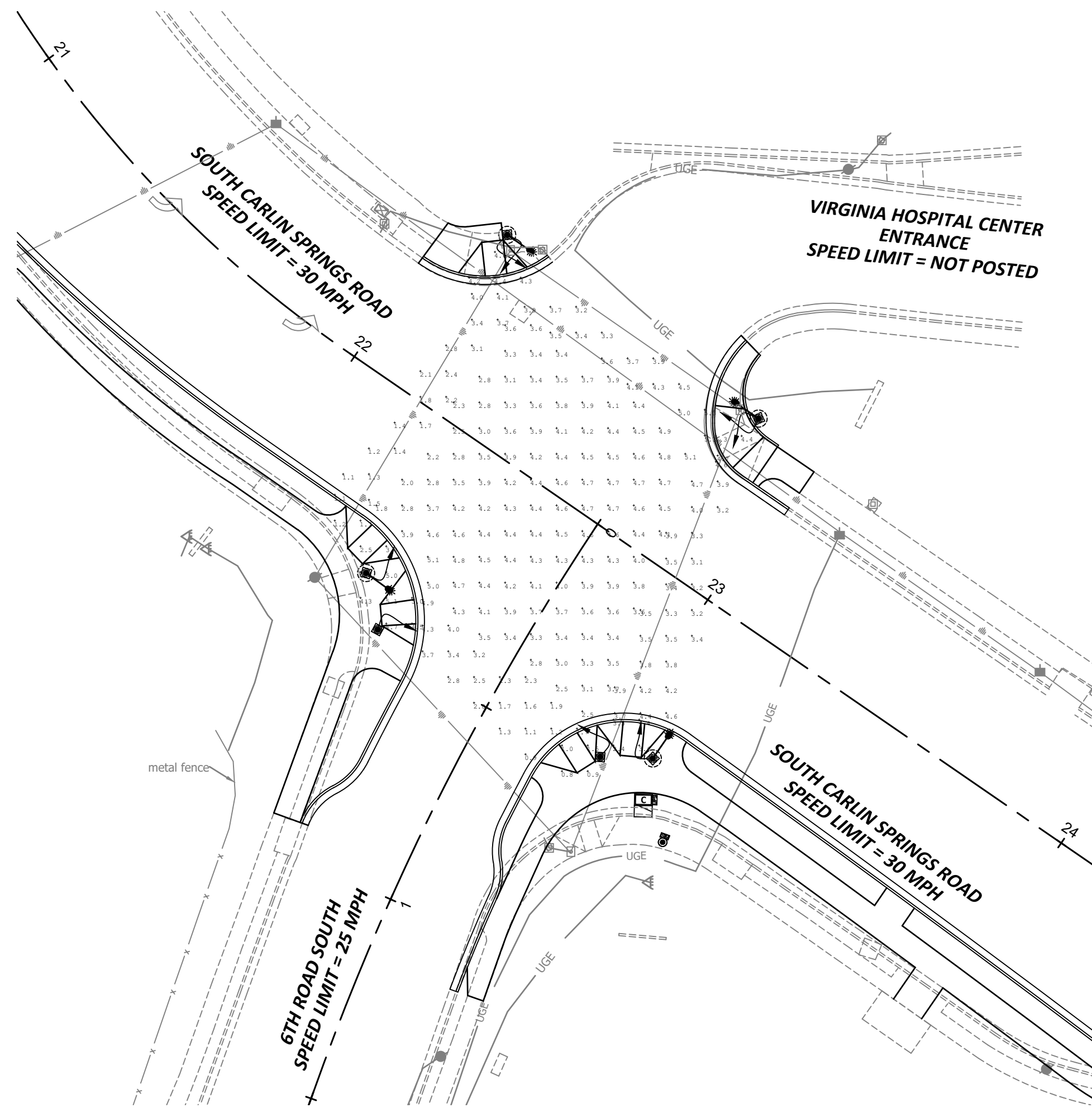
KIMLEY-HORN AND ASSOCIATES, INC.  
11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**C-1311**










**ARLINGTON**  
VIRGINIA






DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



COMMONWEALTH OF VIRGINIA  
GEOFF D. GIFFIN  
Lic. No. 039584  
07/26/2021  
PROFESSIONAL ENGINEER

APPROVALS	DATE
	06/21/21
TRAFFIC SIGNAL ENGINEER	
	06/21/21
TRAFFIC ENGINEERING MANAGER	
	07.16.2021
WATER, SEWER, STREETS BUREAU CHIEF	
	06/22/2021
TE&O BUREAU CHIEF	
	06/23/21
TRANSPORTATION DIRECTOR	

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road**  
**Signal Upgrades**

STREETLIGHT PHOTOMETRICS EXHIBIT  
6TH ROAD S. AND S. CARLIN SPRINGS ROAD  
ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

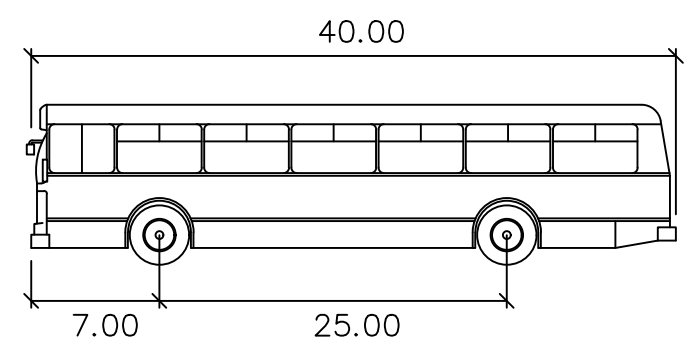
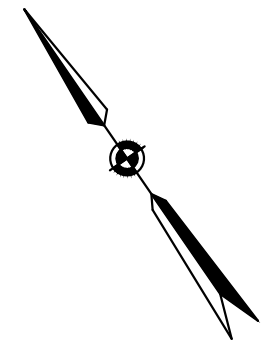
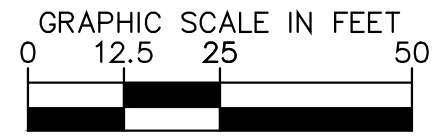
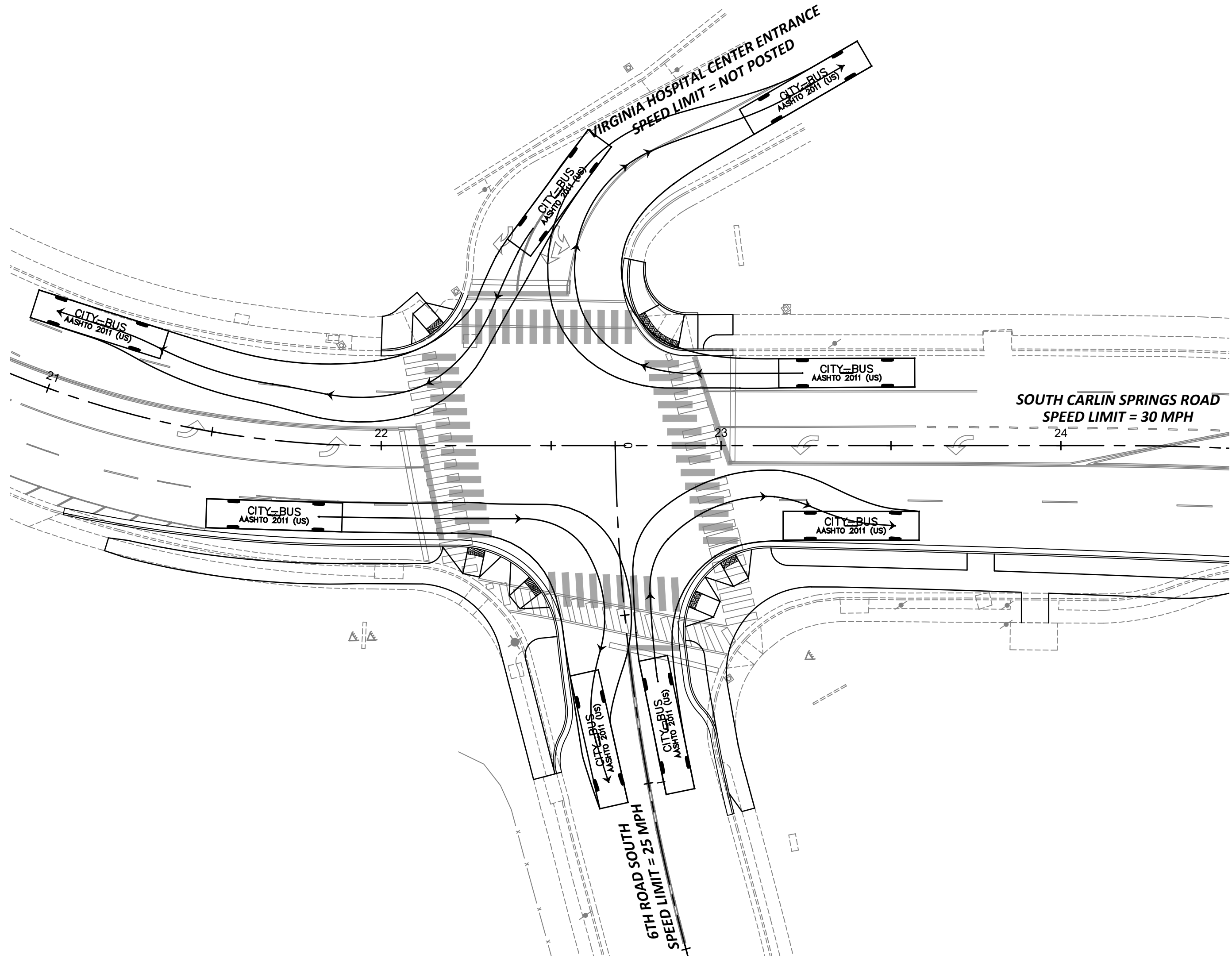
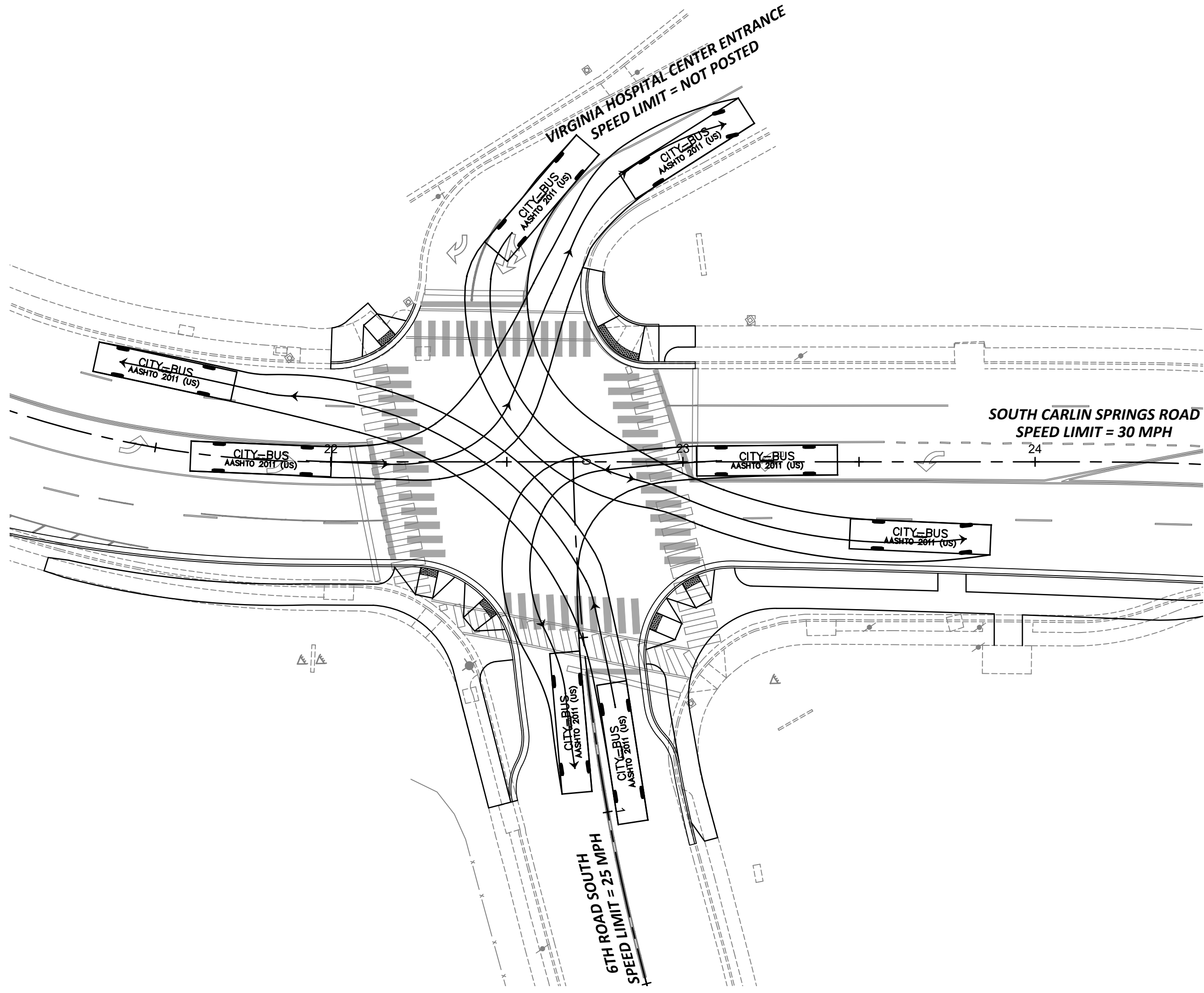
Plotted: July 26, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

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11400 Commerce Park Drive, Suite 400  
Reston, Virginia 20191

Sheet  
**EXHIBIT A**



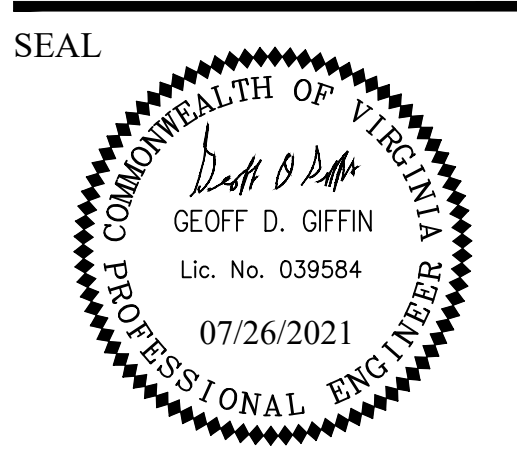


CITY-BUS	
feet	
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 41.4



DEPARTMENT OF  
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Fax: 703.228.3606



APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/21/21
TRAFFIC ENGINEERING MANAGER	06/21/21
WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
TE&O BUREAU CHIEF	06/22/2021
TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location

S. Carlin Springs Road

Signal Upgrades

AUTOTURN EXHIBIT

6TH ROAD S. AND S. CARLIN SPRINGS ROAD

ID #234

TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

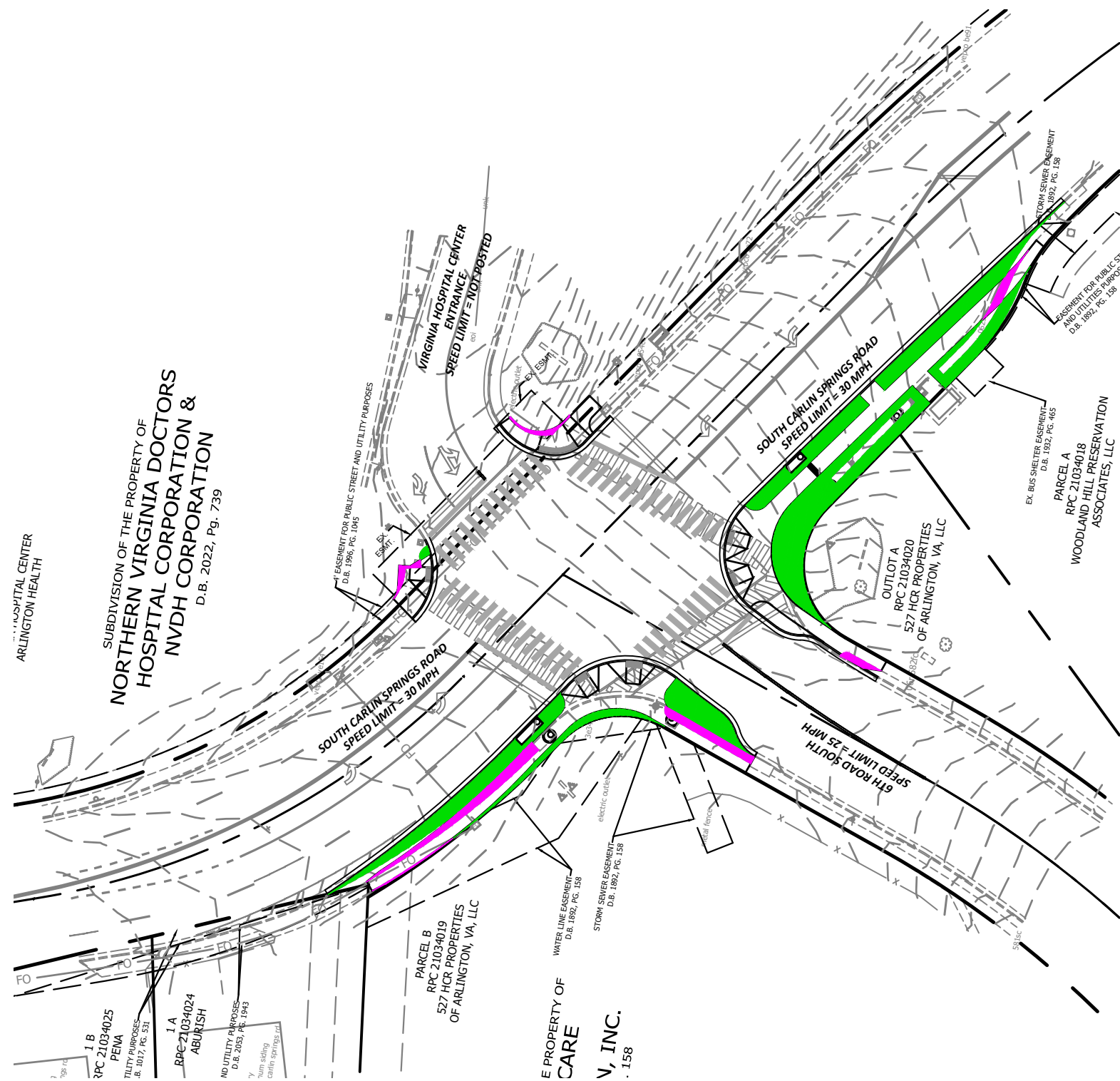
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Plotted by: Max.Gawthrop

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HOR. 1" = 25' VERT. N/A

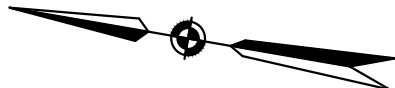
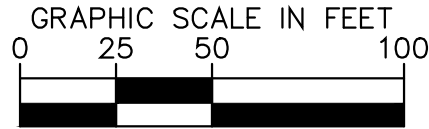
KIMLEY-HORN AND ASSOCIATES, INC.  
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Reston, Virginia 20191

Sheet  
EXHIBIT B



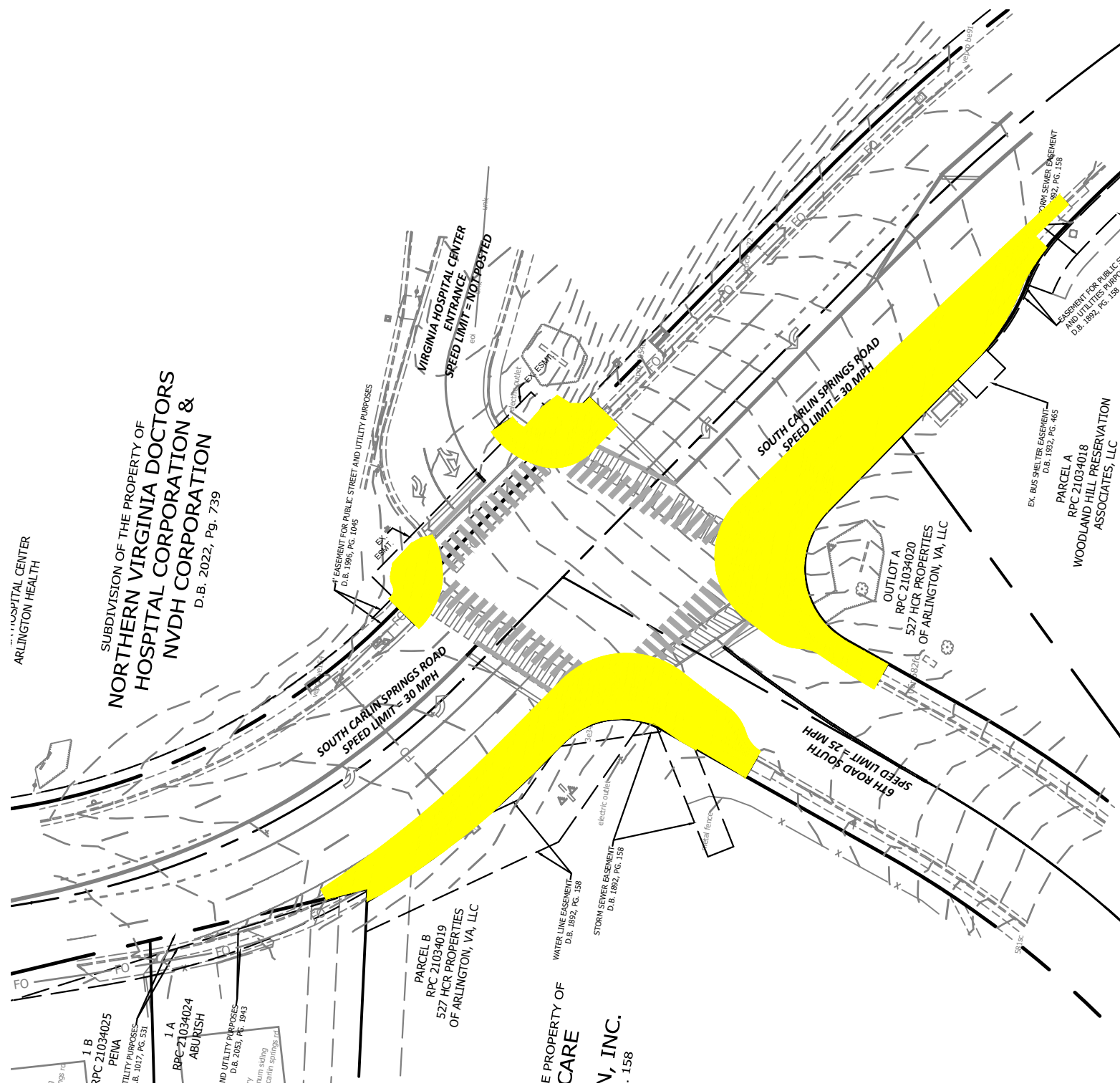


DISTURBED AREA FOR STORMWATER MANAGEMENT



DISTURBED AREA FOR STORMWATER MANAGEMENT					
INTERSECTION	TOTAL	EXISTING IMPERVIOUS	EXISTING PERVIOUS	PROPOSED IMPERVIOUS	PROPOSED PERVIOUS
6TH ROAD S AND S CARLIN SPRINGS ROAD	2965.99 SF	2562.14 SF	403.85 SF	403.85 SF	2562.14 SF


DISTURBED AREA FOR EROSION AND SEDIMENT CONTROL



DISTURBED AREA FOR EROSION AND SEDIMENT CONTROL	
INTERSECTION	TOTAL
6TH ROAD S AND S CARLIN SPRINGS ROAD	9235.02 SF

LEGEND

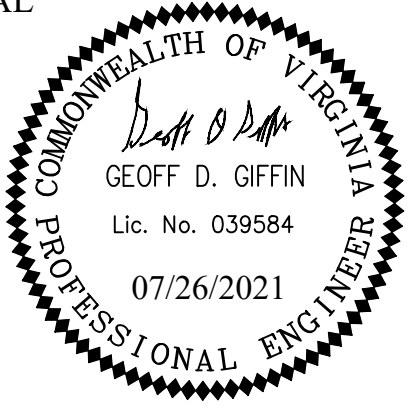
- PERVIOUS TO IMPERVIOUS AREA
- IMPERVIOUS TO PERVIOUS AREA
- LIMITS OF DISTURBANCE




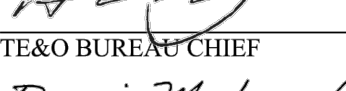



DEPARTMENT OF ENVIRONMENTAL SERVICES

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SEAL



APPROVALS	DATE
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 TRAFFIC ENGINEERING MANAGER	06/21/21
 WATER, SEWER, STREETS BUREAU CHIEF	07.16.2021
 TE&O BUREAU CHIEF	06/22/2021
 TRANSPORTATION DIRECTOR	06/23/21

REVISIONS	DATE

Project Name and Location  
**S. Carlin Springs Road  
Signal Upgrades**

IMPERVIOUS AREA

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

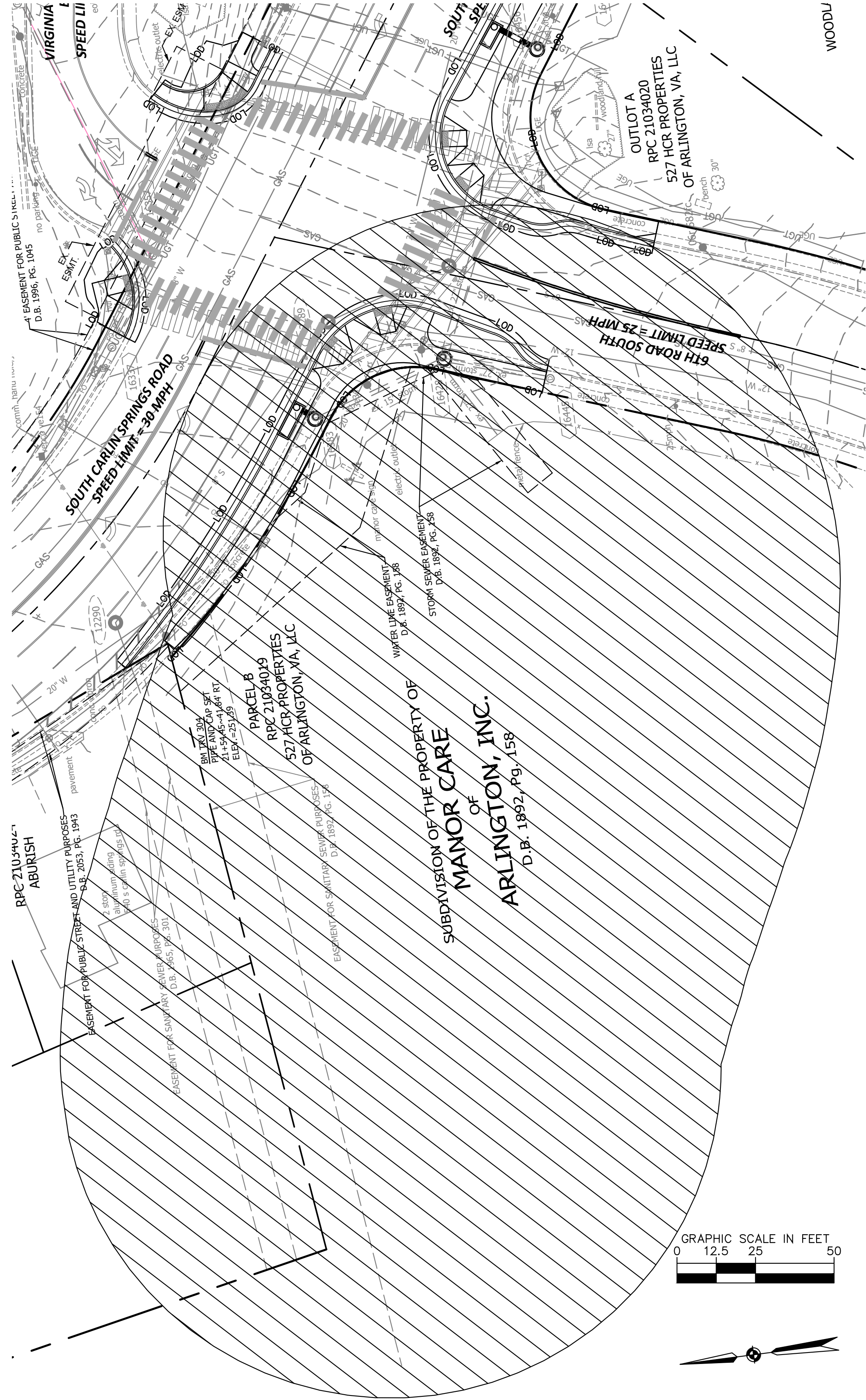
Plotted: July 26, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

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Sheet  
**EXHIBIT C**





## WATER QUALITY IMPACT ASSESSMENT (WQIA) NARRATIVE

THIS PROJECT IS AN INTERSECTION IMPROVEMENT FOR THE INTERSECTIONS OF SOUTH CARLIN SPRINGS ROAD AND 3RD STREET SOUTH AS WELL AS SOUTH CARLIN SPRINGS ROAD AND 6TH ROAD SOUTH. THE SITE AREA IS DEFINED BY THE LIMITS OF DISTURBANCE. A RPA WAS DETERMINED USING GIS SURVEY DATA. THAT DELINEATION IS USED FOR IMPACTS HEREIN.

**EXISTING CONDITIONS**  
THE PROJECT SITE IS LOCATED ADJACENT TO A RPA THAT DRAINS TO THE UPPER LONG BRANCH AND FOUR MILE RUN WATERSHED. THE SITE TOPOGRAPHY IS RELATIVELY FLAT AND IS WITHIN THE RIGHT OF WAY OF A DENSELY DEVELOPED URBAN AREA. THE MAJORITY OF SITE COVER IS IMPERVIOUS. WITHIN SITE AREA, THE ROAD HAS CURB AND GUTTER AND ROADWAY RUNOFF DRAINS TO STORM SEWER.

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

**PROPOSED IMPROVEMENTS**  
THIS PROJECT CONSISTS OF TRAFFIC SIGNAL MODIFICATIONS AT THE INTERSECTIONS OF S. CARLIN SPRINGS ROAD WITH 3RD STREET S AND S. CARLIN SPRINGS ROAD WITH 6TH ROAD S. THE SIGNAL MODIFICATIONS INCLUDE REMOVING ALL EXISTING EQUIPMENT AND REPLACING WITH NEW EQUIPMENT, ACCESSIBLE PEDESTRIAN SIGNAL DEVICES, AND LIMITED SIDEWALK AND CURB AND GUTTER MODIFICATIONS. PERMANENT AND TEMPORARY EASEMENTS ARE PROPOSED TO ENCOMPASS THE PROPOSED SIGNAL EQUIPMENT AND PEDESTRIAN IMPROVEMENTS. THE CONTRACTOR SHALL CONFIRM THE EXECUTION OF THE PROPOSED EASEMENTS PRIOR TO BEGINNING WORK.

**TREE/VEGETATION IMPACTS**  
THE CONTRACTOR WILL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION. NO TREES ARE PROPOSED TO BE IMPACTED.

**PERMANENT STABILIZATION**  
ALL DISTURBED AREAS BY THIS PROJECT SHALL BE STABILIZED WITH PERMANENT GROUND COVER UTILIZING STD. 3.33. SODDING IS THE REQUIRED GROUND COVER FOR AREAS THAT ARE CURRENTLY GRASS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL DISTURBED AREAS UNTIL FINAL ACCEPTANCE BY ARLINGTON COUNTY AND/OR LAND OWNER. THIS SHALL INCLUDE CUTTING THE GRASS TO MAINTAIN THE SAME APPEARANCE AS THE ADJOINING PROPERTY.

**SOILS**  
THE SOILS IN THE PROJECT AREA HAVE BEEN PRIMARILY MAPPED AS URBAN LAND — UDORTHERTS COMPLEX WHICH ARE SOILS THAT HAVE BEEN PREVIOUSLY DISTURBED AND NOT CHARACTERIZED.

- EROSION AND SEDIMENT CONTROL MEASURES**  
THE FOLLOWING EROSION CONTROLS SHALL BE USED DURING THIS PROJECT:
- STD. 3.05 SILT FENCE — SILT FENCE AND SUPER SILT FENCE SHALL BE USED IN ACCORDANCE WITH THIS STANDARD AND AS SPECIFIED BY ARLINGTON COUNTY. SEE DETAIL SHEET C-0005. SILT FENCE OR SUPER SILT FENCE SHALL BE USED DOWN GRADIENT FROM DISTURBED AREAS AS SHOWN ON THE PLANS AND AS NEEDED TO PREVENT THE TRANSPORTATION OF SEDIMENT BEYOND THE PROJECT LIMITS. IT SHALL BE INSTALLED PRIOR TO STARTING LAND DISTURBANCE AND SHALL BE REMOVED AFTER THE DISTURBED AREA HAS HAD TEMPORARY OR PERMANENT STABILIZATION ESTABLISHED. COORDINATE REMOVAL WITH THE ARLINGTON COUNTY INSPECTOR.
  - STD. 3.07 STORM DRAIN INLET PROTECTION — STORM DRAINAGE INLETS SHALL BE PROTECTED IN ACCORDANCE WITH THIS STANDARD. INLETS DOWN GRADIENT FROM LAND DISTURBING ACTIVITIES SHALL HAVE INLET PROTECTION INSTALLED PRIOR TO STARTING LAND DISTURBANCE. CARE SHALL BE TAKEN AS TO NOT INTERFERE WITH TRAFFIC ON S CARLIN SPRINGS ROAD WHEN SELECTING THE TYPE OF INLET PROTECTION TO BE USED. THE CONTRACTOR IS TO REMOVE SILT BUILDUP PROMPTLY SO THAT SILT IS NOT TRACKED ALONG THE ROAD. REMOVAL OF THE INLET PROTECTION SHALL OCCUR ONCE DISTURBED AREA UP GRADIENT OF THE INLET HAVE BEEN STABILIZED AND IN COORDINATION WITH THE ARLINGTON COUNTY INSPECTOR.
  - STD. 3.26 DEWATERING STRUCTURE — ALL DISCHARGES FROM DEWATERING OPERATIONS SHALL BE IN ACCORDANCE WITH THIS STANDARD. DEWATERING CONTROLS SHALL BE USED AT ALL DEWATERING DISCHARGES. THE CONTRACTOR IS TO NOTIFY THE ARLINGTON COUNTY INSPECTOR PRIOR TO DISCHARGING DEWATERING EFFLUENT OF THE LOCATION AND TYPE OF FILTER OR CONTROL THAT IS TO BE USED AND FOR HOW LONG IT WILL BE USED.
  - STD. 3.31 TEMPORARY SEEDING — TEMPORARY SEEDING SHALL BE APPLIED IN ACCORDANCE WITH THIS STANDARD. TEMPORARY STABILIZATION IS REQUIRED WHEN AN AREA IS NOT TO BE WORKED WITHIN A 7 DAY PERIOD. THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE IN ORDER TO ESTABLISH A SURFACE PROTECTION TO EROSION. TEMPORARY SEEDING SHALL BE CARED FOR AS NECESSARY IN ORDER TO GENERATE A DENSE, HEALTHY STAND OF VEGETATION THAT WILL RESIST EROSION.
  - THE CONTRACTOR SHALL USE APPROPRIATE METHODS TO ESTABLISH PERMANENT STABILIZATION THAT ARE SIMILAR TO THE CONDITION THAT WAS PRESENT PRIOR TO STARTING LAND DISTURBANCE ACTIVITIES.
  - STD. 3.33 SODDING — ALL SODDING SHALL BE IN ACCORDANCE WITH THIS STANDARD. SODDED AREAS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE SOD HAS BEEN ESTABLISHED AND HAD TWO MOWING CYCLES. THE CONTRACTOR SHALL COORDINATE THE RELEASE OF MAINTENANCE OF SODDED AREAS WITH THE ARLINGTON COUNTY INSPECTOR AND THE LAND OWNER.
  - STD. 3.38 TREE PRESERVATION AND PROTECTION — TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH THIS STANDARD AND ARLINGTON COUNTY'S TREE PROTECTION FENCE, PLAN. SEE THIS SHEET FOR DETAIL. TREE PROTECTION SHALL BE USED ALONG THE LIMITS OF DISTURBANCE WHERE AN OFFSITE TREE OR LANDSCAPED AREA MAY HAVE A CRITICAL ROOT ZONE THAT EXTENDS INTO THE LIMITS OF THIS PROJECT. THE ARLINGTON COUNTY URBAN FORESTER MAY REQUIRE ADDITIONAL TREE PRESERVATION AND PROTECTION BE INSTALLED PRIOR TO STARTING LAND DISTURBING ACTIVITIES. TREE PRESERVATION AND PROTECTION SHALL ONLY BE REMOVED WITH THE APPROVAL OF THE ARLINGTON COUNTY URBAN FORESTER.

ADDITIONAL EROSION AND SEDIMENT MEASURES WILL BE PLACED BY THE CONTRACTOR AS NECESSARY AND IN ACCORDANCE WITH DEQ EROSION AND SEDIMENT CONTROL REQUIREMENTS.

**STORMWATER RUNOFF CONSIDERATIONS**  
THIS PROJECT REDUCES THE OVERALL IMPERVIOUSNESS OF THE SITE AREA AND DOES NOT INCREASE SURFACE RUNOFF PATTERNS OR VOLUMES. NO FLOODING OR CHANNEL DEGRADATION IS ANTICIPATED DOWNSTREAM OF THE PROJECT DUE TO THE PROPOSED REDUCTION IN RUNOFF.

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

### Appendix C. Water Quality Impact Assessment Data Sheet

Project Address 3RD STREET S. AT CARLIN SPRINGS ROAD S.	Date: JUNE 1ST, 2021
Applicant Name/Affiliation: ANUP KALFE	Applicant Contact Information (phone and email): 703-228-7050
Owner/Client Name: ARLINGTON COUNTY DES	Owner/Client Contact Information (phone and email): 703-228-7050

#### Section 1: Type of activity proposed

Activity type (check all that apply): <input type="checkbox"/> New construction (residential, commercial, public, etc.) <input type="checkbox"/> Alteration of non-residential structure <input type="checkbox"/> Residential addition <input type="checkbox"/> Detached residential structure	<input type="checkbox"/> Deck, patio, or retaining wall <input type="checkbox"/> Landscaping (includes tree removal) <input type="checkbox"/> Utility work <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)	8,078.54 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)	3,403.87 Includes removal of trees $\geq 3'$ 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 along 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 Middle third of parcel or site Right third of parcel or site	95 58 43	95 61 43	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.
Total development footprint in RPA (sf)	11,802.17	11,034.01	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, regraded area behind a retaining wall, etc.	
Impervious footprint in RPA (sf)	11,258.52	9,934.27	Total area of impervious surfaces within the RPA (rooftops, pavement, etc.)	

#### STAFF USE ONLY

Building/demolition/LDA/Fence permit number(s):
Major WQIA required? <input type="checkbox"/> Yes <input type="checkbox"/> 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	C-0200, C-0210, C-0900, C-0910 C-0100, C-0110, C-0410
LIMITS OF DISTURBANCE	C-0200, C-0210, C-0900, C-0910
EXISTING CONDITIONS	C-0100, C-0110
IMPERVIOUS COVER	EXHIBIT E AND F
UTILITY PLAN	C-1101, C-1111
SIGNAL PLAN	C-1100, C-1110
DOWNSPOUT LOCATIONS	N/A
EROSION AND SEDIMENT CONTROLS	C-0200, C-0210, C-0900, C-0910
TREE PROTECTION	N/A
LANDSCAPE PLAN	N/A
PLANT LIST	N/A

#### Additional Water Quality Impact Assessment Information

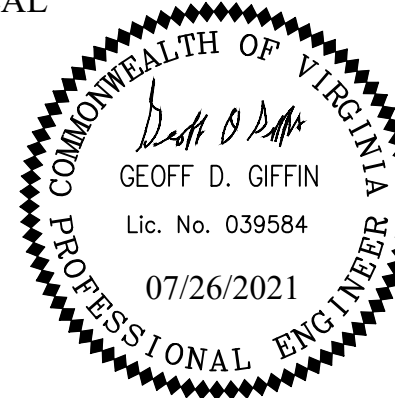
The information supplied on this form satisfies the minimum requirements for a Minor Water Quality Impact Assessment. For projects that disturb over 2500 square feet, elements of a Major Water Quality Impact Assessment may also be required, depending on the nature and extent of the proposed RPA encroachment,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



DEPARTMENT OF  
ENVIRONMENTAL SERVICES

Transportation Division  
Transportation Planning Bureau  
2100 Clarendon Boulevard, Suite 900  
Arlington, VA 22201  
Phone: 703.228.3629  
Fax: 703.228.3606

SEAL



APPROVALS

DATE

*Jeffrey* 06/21/21  
TRAFFIC SIGNAL ENGINEER  
*John Nicks* 06/21/21  
TRAFFIC ENGINEERING MANAGER  
*Shirley* 07.16.2021  
WATER, SEWER, STREETS BUREAU CHIEF  
*TEO BUREAU CHIEF* 06/22/2021  
*Dennis M. Leach* 06/23/21  
TRANSPORTATION DIRECTOR

REVISIONS

DATE

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Project Name and Location  
S. Carlin Springs Road

Signal Upgrades

WQIA PLAN AND NARRATIVE

ID #234  
TE02

Designed: AS  
Drawn: AS  
Checked: GG  
Miss Utility Transmittal #:

Plotted: July 26, 2021  
Plotted by: Max.Gawthrop

Scale:  
HOR. 1" = 25' VERT. N/A

KIMLEY-HORN AND ASSOCIATES, INC.  
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Reston, Virginia 20191

Sheet

EXHIBIT D