REVISED: MARCH 03, 2020

ARLINGTON
VIRGINIA

OWNER

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
Email: AKafle@arlingtonva.us

ENGINEER

Kimley-Horn & Associates, Inc.
11400 Commerce Park Drive, Suite 400, Reston VA 20191
Phone: 703.674.1300 Fax: 703.674.3500
Email: Geoff.Giffin@kimley-horn.com

Construction Drawings For:

Washington Boulevard Signal Upgrades

Intersections of:

1. Washington Boulevard & N. Glebe Road
2. Washington Boulevard & Patrick Henry Drive

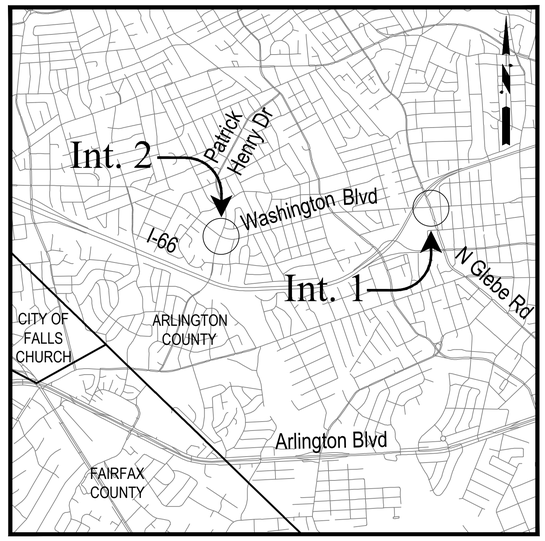
THIS PROJECT CONSISTS OF TRAFFIC SIGNAL MODIFICATIONS AT THE INTERSECTIONS OF WASHINGTON BOULEVARD WITH N. GLEBE ROAD AND WITH PATRICK HENRY DRIVE. THE SIGNAL MODIFICATIONS INCLUDE REMOVING ALL EXISTING EQUIPMENT AND REPLACING WITH NEW EQUIPMENT, ACCESSIBLE PEDESTRIAN SIGNAL DEVICES, AND LIMITED SIDEWALK AND CURB AND GUTTER MODIFICATIONS. TEMPORARY AND PERMANENT EASEMENTS ARE PROPOSED TO ENCOMPASS THE PROPOSED PEDESTRIAN IMPROVEMENTS AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONFIRM THE EXECUTION OF THE PROPOSED EASEMENTS PRIOR TO BEGINNING WORK.

STORM WATER MANAGEMENT # SWM 20-0106

Location Map

Scale: 1" = 2000'

Vicinity



FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
WASHINGTON BOULEVARD - MINOR ARTERIAL - SPEED LIMIT 30 MPH	
	WASHINGTON BOULEVARD (RTE 237)
AADT (2019)	12,000 VPD
AADT (DESIGN YR)	N/A
V DESIGN (mph)	30

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's Call below. before you dig.

Table of Contents:

C-0000		Cover Sheet
C-0001		Legend and Survey Data
C-0002 - C-0005		General Notes and Details
C-0100	C-0101	Existing Conditions Plan and Profile
C-0200	C-0201	Geometric Control Plan
C-0300	C-0301	Phase 1 Erosion Controls & Demolition Plan
C-0310	C-0311	Phase 2 Erosion Controls
C-0400	C-0401	Proposed Plan
C-0402	–	Waterline Plan and Profiles
C-0500	C-0501	Ramp Details
C-0600	C-0601	Curb Return Profiles
C-0700	C-0701	Pre Development Drainage Divides
C-0710	C-0711	Post Development Drainage Divides
C-0720		Drainage Calculations
C-0730		Impervious Area Calculation
C-0800	C-0801	Pavement Marking & Signing Plan
C-0900		Transportation Management Plan Notes
C-0901		Transportation Management Plan Details
C-0902	C-0903	Maintenance of Traffic Plan
C-1000		Traffic Signal Notes
C-1001		Traffic Signal Details
C-1100	C-1101	Traffic Signal Plan
C-1200	C-1201	Communications Plan

1. WASHINGTON BOULEVARD AND N. GLEBE ROAD
2. WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE

EXHIBIT A	AutoTURN - Patrick Henry Drive
EXHIBIT B	Streetlight Photometrics - N. Glebe Road
EXHIBIT C	Streetlight Photometrics - Patrick Henry Drive
EXHIBIT D	SWPPP

Signal Notes

A. POLES AND FOUNDATIONS

1. MAST ARM LENGTH IS TO BE AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY.
2. 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.
3. MAST ARM POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. ALL POLES SHALL HAVE A MINIMUM 6-BOLT PATTERN.
4. 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.
5. SIGNAL POLES AND MAST ARMS SHALL BE NON-ORNAMENTAL. COBRA LIGHTING SHALL BE LED.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING POLE FOUNDATION DESIGNS FOR ANY MAST ARM POLES. THE CONTRACTOR SHALL SUBMIT REQUIRED STRUCTURAL DRAWINGS AND CALCULATIONS FOR REVIEW PRIOR TO STARTING FORM WORK FOR THE FOUNDATIONS.

B. CONTROLLER AND FOUNDATION

1. NEW CONTROLLER CABINETS SHALL INCLUDE BATTERY BACKUP PER ARLINGTON COUNTY REQUIREMENTS.
2. 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
3. THE CONTROLLER CABINET AND FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS 66-01. 66-02, AND 70-01.
4. 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

1. ALL NEW VEHICULAR SIGNAL SECTIONS SHALL BE 12 INCHES IN DIAMETER CAST ALUMINUM WITH LED DISPLAYS.
2. PEDESTRIAN SIGNAL HEAD SECTIONS SHALL BE CAST ALUMINUM WITH LED DISPLAYS (COUNTDOWN).
3. ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR.
4. ALL SIGNAL HEADS SHALL BE INSTALLED WITH RETROREFLECTIVE BACKPLATES PER VDOT STANDARDS AND SPECIFICATIONS.

D. DETECTORS

1. ALL NEW PEDESTRIAN PUSH BUTTON STATIONS SHALL CONFORM TO ARLINGTON COUNTY'S SPECIFICATIONS FOR ACCESSIBLE SIGNAL DESIGN AND SHALL USE POLARA VIBRO-TACTILE/AUDIO PUSH BUTTON ASSEMBLIES UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL PROVIDE EXTENDER BRACKETS IF NEEDED TO MAKE PUSHBUTTONS ACCESSIBLE BY WHEELCHAIR. THE PUSHBUTTON ASSEMBLY SHALL CONTAIN A MOUNTING BRACKET TO ALLOW THE R10-3E SIGN TO BE MOUNTED DIRECTLY TO THE PUSHBUTTON.
2. NEW OVERHEAD VIDEO DETECTION SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS.
3. 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.
4. EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD. EVP SHALL INCLUDE CONFIRMATION LIGHTS.

E. CONDUIT, CONDUCTORS, AND ELECTRICAL

1. ALL JUNCTION BOXES SHALL HAVE THE WORDS "ARLINGTON COUNTY TRANSPORTATION" CAST IN THE LID. ALL JUNCTION BOXES SHALL BE INSTALLED PER STANDARDS 61-02, 61-03, AND 61-04.
2. 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.
3. CONDUIT SYSTEM SHALL BE ADDED TO CONNECT EXISTING COMMUNICATION CABLE PLANT TO THE NEW CONTROLLER CABINET LOCATION AS DIRECTED BY THE COUNTY ENGINEER.
4. 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.
5. 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.
6. CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES AT PROPOSED CONDUIT CROSSINGS PRIOR TO EXCAVATING CONDUIT TRENCHES OR BORING.
7. 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.
8. 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.

E. CONDUIT, CONDUCTORS, AND ELECTRICAL (CONT.)

7. 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.
8. CONTRACTOR TO VERIFY THE CONDUIT AND ⅝ FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
9. ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
10. REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES.

F. SIGNS

1. 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.
2. 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

1. 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.
2. ALL EXISTING SIGNAL POLE FOUNDATIONS SHALL BE DEMOLISHED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATIONS. ANY REQUIRED RESTORATION RESULTING FROM THE REMOVAL OF EXISTING SIGNAL INFRASTRUCTURE SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMEDY AND SHALL BE INCIDENTAL TO THE WORK.

H. COMMUNICATIONS

1. 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.
2. 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.
3. CONTACT ARLINGTON COUNTY DTS FOR FIBER OPTIC CABLE REMOVAL OR INSTALLATION AT LEAST 10 BUSINESS DAYS IN ADVANCE.
4. 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.
5. 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.

H. COMMUNICATIONS (CONT.)

6. 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.
7. DO NOT SPLICE TRACER WIRE.

I. INSPECTIONS

1. THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER FOR INSPECTIONS THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONSTRUCTION MANAGER.
2. 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.
3. THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER WITHIN 7 BUSINESS DAYS OF SIGNAL ACTIVATION. ALL POWER AND COMMUNICATIONS SHALL BE IN OPERATION AT THE TIME OF ACTIVATION UNLESS APPROVED BY THE COUNTY CONSTRUCTION MANAGER.

J. MAINTENANCE

1. ARLINGTON COUNTY SHALL HAVE MAINTENANCE RESPONSIBILITY FOR ALL ROADWAY INFRASTRUCTURE (SIDEWALK, ROAD ASPHALT, DRAINAGE, CURB/CURB & GUTTER, ETC.) WITHIN COUNTY RIGHT-OF-WAY. THE COUNTY WILL ALSO MAINTAIN ALL TRAFFIC SIGNAL INFRASTRUCTURE INDEPENDENT OF VDOT AND COUNTY RIGHT-OF-WAY BOUNDARIES. VDOT SHALL HAVE MAINTENANCE RESPONSIBILITY FOR ALL ROADWAY INFRASTRUCTURE (SIDEWALK, ROAD ASPHALT, DRAINAGE, CURB/CURB & GUTTER, ETC.) OUTSIDE OF THE TRAFFIC SIGNAL, WITHIN VDOT RIGHT-OF-WAY, RAMPS OR SIDEWALKS THAT ARE PARTIALLY WITHIN THE VDOT RIGHT-OF-WAY AND PARTIALLY WITHIN THE ARLINGTON COUNTY RIGHT-OF-WAY MUST BE MAINTAINED BY THE ARLINGTON COUNTY.

Prepared By:

Kimley»Horn

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.

11400 Commerce Park Drive, Suite 400
Reston, Virginia 20191
Phone: 703-674-1300
Fax: 703-674-1350

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 _____

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

COVER SHEET

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet C-0000

Filename: C-0000 COVER SHEET.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD Plan Sheets

REVISED: MARCH 03, 2020

Symbols

Existing		Proposed
1001	Storm Str. #	ST1
	Catch Basin	
	Sanitary Manhole	
2001	Sanitary Str. #	SA1
	Fire Hydrant	
	Watermain Reducer	
	Water – Valve	
	Blowoff Valve	
	Water – Cross	
	Water – Tee	
	Water – Typical Bend	
	Water Meter	
	Water Cap	
	Water – Manhole Cover	
	Siamese Connection	
	CableTV Pedestal	
	Electrical Box	
	Telephone Pedestal	
	Cobrahead Light	
	Carlyle Light	
	Ground Light	
	Light Pole	
	Utility Pole	
	Guy Wire	
	Utility Cover	
	Gas Valve	
	Gas Line Marker	
	Test Hole	
	Bollard	
	Mailbox	
	Parking Meter	
	Sign	
	Traffic Mast Arm Pole	
	Traffic Pedestrian Pole	
	Traffic Control Box	
	Traffic Electrical Box	
	Traffic Junction Box	
S	Traffic Service Meter	S
	Coniferous Tree	
	Deciduous Tree	
	Bush/Hedge/Shrub	
	Construction Notes	1
	Benchmark	
	Monument (GPS)	
	Monument	
	Iron Rod Found	
	Iron Pipe Found	
	Rebar Rod Found	
	P.K. Nail Found	
	Traverse	
	North Arrow	
C–2	Curb Transition	C–2R

LEGEND AND SURVEY DATA

N. GLEBE ROAD SURVEY DATA

SANITARY SEWER ELEVATIONS

#1190
TOP = 286.88
C/L INV. = 280.32

#1256
TOP = 286.92
C/L INV. = 281.36

#3779
TOP = 285.44
C/L INV. = 274.88

#3780
TOP = 284.56
C/L INV. = 275.38

#3781
TOP = 286.77
C/L INV. = 275.95

#3782
TOP = 288.26
C/L INV. = 277.96

#13823
TOP = 287.28
C/L INV. = 268.62

#13824
TOP = 285.94
C/L INV. = 267.18

STORM DRAIN INVERTS

#100
TOP = 285.36
18" RCP IN = 281.72 (8687)
24" RCP OUT = 281.47 (8721)

#8668
TOP = 287.34
15" RCP OUT = 281.84 (8692)

#8683
TOP = 287.35
15" RCP OUT = 282.33 (8692)

#8687
TOP = 285.78
18" RCP INV. = 281.56 (100)

#8692
TOP = 286.76
C/L INV. = 281.56

#8694
TOP = 284.36
15" RCP OUT = 279.33 (8726)

#8696
TOP = 285.17
15" RCP OUT = 282.57 (8710)

#8701
TOP = 285.03
18" RCP IN = 281.23 (8710)
24" RCP OUT = 280.90 (8721)

#8710
TOP = 285.02
15" RCP IN = 282.01 (8696)
18" RCP IN = 281.47 (8692)
18" RCP OUT = 281.36 (8701)

#8715
TOP = 284.28
18" RCP IN = 279.90 (30255)
24" RCP IN = 279.58 (8726)
24" RCP OUT = 279.46 (8716)

#8716
TOP = 284.23
24" RCP IN = 279.64 (8715)
24" RCP OUT = 280.32 (8721)

#8721
TOP=285.03
24" RCP IN = 280.66 (8716)
24" RCP OUT= 280.12 (8701)

#8726
TOP = 287.00
15" RCP IN = 278.31 (8694)
24" RCP IN = 277.90 (8715)
24" RCP OUT = 277.84 (8727)

#8727
TOP = 287.96
24" RCP IN = 277.07 (8726)
24" RCP OUT = 271.84

#8765
TOP = 284.24
CANNOT INVERT

#8775
TOP = 283.98
15" RCP IN = 284.06 (8765)
15" RCP OUT = 283.96 (8948)

#8927
TOP = 280.76
15" RCP INV. OUT = 277.30 (8935)

#8935
TOP = 280.51
15" RCP INV. IN = 276.58 (8944)
15" RCP INV. IN = 276.75 (8927)
15" RCP INV. OUT = 276.40

#8944
TOP = 280.45
15" RCP INV. IN = 277.27 (8948)
15" RCP INV. OUT = 277.20 (8935)

#8948
TOP = 280.80
15" RCP INV. IN = 277.64 (8775)
15" RCP INV. OUT = 277.55 (8944)

#30255
TOP = 284.40
18" RCP OUT = 279.83 (8715)

PATRICK HENRY SURVEY DATA

SANITARY SEWER

#4462
TOP = 297.96
C/L INV = 289.06

#4463
TOP = 295.24
C/L INV = 289.63

#4464
TOP = 294.15
C/L INV = 290.59

#4553
TOP = 297.37
C/L INV = 291.48

#4570
TOP = 277.70
C/L INV. = 269.37

#4571
TOP = 282.29
C/L INV. = 274.94

STORM SEWER

#9604
TOP = 278.83
15" RCP INV. IN = 273.60 (25553)

#25465
TOP = 295.11
15" RCP OUT = 288.87 (25466)

#25466
GRATE TOP = 292.97
15" RCP IN = 286.20 (25465)
15" RCP OUT = 286.14 (25467)

#25467
TOP = 292.99
15" RCP IN = 284.15 (25466)
15" RCP IN = 283.30 (25469)
15" RCP OUT = 283.27 (25468)

#25468
TOP = 284.75
15" RCP IN = 278.99 (25467)
15" RCP INV. OUT = 278.01 (25533)

#25469
TOP = 293.59
15" RCP OUT = 285.32 (25467)

#25553
TOP = 278.87
15" RCP INV. IN = 273.97 (25468)
15" RCP INV. OUT = 273.87 (9604)

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

LEGEND AND SURVEY DATA

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0001

Filename: C-0001 LEGEND AND SURVEY DATA.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

GENERAL NOTES

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
4. 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.
5. 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.
6. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE 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.
7. EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE VERIFIED FOR ADA COMPLIANCE AND 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.
8. 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

1. 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).

TREE PROTECTION

1. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

1. 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.
2. 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.
3. 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.
4. 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
5. 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

1. 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.
2. 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.

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.

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 LINE SAFETY 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 SATIFACTION 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.

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.
11. ENGINEER MAY APPROVE A MODIFICATION TO DESIGN TO FACILITATE PROPER DRAINAGE. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.

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.

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GENERAL NOTES AND DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0002

Filename: C-0002 GENERAL NOTES AND DETAILS.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

EROSION AND SEDIMENT CONTROL

1. TEMPORARY SILT FENCE SHALL BE CONSTRUCTED FOR SHEET RUNOFF AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.

2. 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, TIE WIRES OR HOG RINGS. 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.

3. 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 TIE WIRES AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.

4. 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.

5. 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°F TO 120°F.

6. 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.

14. 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.

15. 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.

16. 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.

17. SILT REMOVAL AND SEDIMENT CLEAN-OUT FROM EROSION AND SILTATION CONTROL ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING:
   A. TEMPORARY SEDIMENT BASINS AND SEDIMENT TRAPS - WHEN THE "WET" STORAGE VOLUME (PERMANENT POOL) HAS BEEN REDUCED BY 50%.
   B. DEWATERING BASINS - WHEN THE EXCAVATED VOLUME HAS BEEN REDUCED BY 50%.
   C. ALL OTHER EROSION AND SILTATION CONTROL ITEMS - WHEN THE CAPACITY, HEIGHT, OR DEPTH HAS BEEN REDUCED BY 50%.

18. 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.

19. 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.

20. 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.

21. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION.

22. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

23. 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.

24. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

25. 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.

26. EROSION CONTROL MEASURES ARE TO BE REMOVED BY CONTRACTOR AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.

27. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
   A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
   C. 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.
   D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH STANDARDS 3.31 AND 3.32.
   F. ALL TRENCHING SHALL BE IN ACCORDANCE WITH APPLICABLE SAFETY STANDARDS.

MINIMUM STANDARDS REVIEW

MS-1 TEMPORARY AND PERMANENT STABILIZATION HAS BEEN ADDRESSED.

MS-2 THERE ARE NO STOCKPILES PROPOSED WITH THIS PLAN.

MS-3 MAINTENANCE OF PERMANENT STABILIZATION HAS BEEN ADDRESSED, SEE PERMANENT STABILIZATION.

MS-4 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.

MS-5 THERE ARE NO EARTHEN STRUCTURE PROPOSED WITH THIS PROJECT.

MS-6 THERE ARE NO SEDIMENT BASINS PROPOSED WITH THIS PROJECT.

MS-7 THERE ARE NO CUT AND FILL SLOPES PROPOSED WITH THIS PROJECT.

MS-8 THERE ARE NO PAVED FLUMES, CHANNELS, OR SLOPE DRAINS PROPOSED WITH THIS PROJECT.

MS-9 THERE ARE NO WATER SEEPS ANTICIPATED WITH THIS PROJECT.

MS-10 INLET PROTECTION IS PROVIDED ON INLETS DOWN GRADIENT FROM DISTURBED AREAS.

MS-11 ADEQUATE OUTLET PROTECTION EXIST AT ALL EXISTING OUTLETS. THERE ARE NO NEW OUTLETS PROPOSED.

MS-12 THERE ARE NO IN-STREAM CONSTRUCTION MEASURES PROPOSED WITH THIS PROJECT.

MS-13 THERE ARE NO STREAM CROSSINGS PROPOSED WITH THIS PROJECT.

MS-14 THERE ARE NO WATERCOURSES BEING CROSSED WITH THIS PROJECT.

MS-15 THERE ARE NO IMPACTS TO WATERCOURSES PROPOSED WITH THIS PROJECT

MS-16 UTILITY TRENCHING HAS BEEN ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.

MS-17 PREVENTING SOIL FROM BEING TRACKED ON THE STREETS IS ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.

MS-18 THE REMOVAL OF TEMPORARY PRACTICES HAS BEEN ADDRESSED IN THE EROSION AND SEDIMENT CONTROL NOTES.

MS-19 THIS PROJECT DOES NOT SIGNIFICANTLY INCREASE THE IMPERVIOUS AREA OR THE RUNOFF FROM THE SITE AREA.

MS4 NOTES

1. 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.

2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (EG., 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.

3. 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.

GENERAL LAND CONSERVATION NOTES

1. NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.

2. 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.

3. 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.

4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS OF BACKFILL.

5. 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.

6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.

7. 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.

8. 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.

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION:
THIS PROJECT RECONSTRUCTS TRAFFIC SIGNALS AT THE INTERSECTIONS OF WASHINGTON BOULEVARD AT N. GLEBE ROAD AND WASHINGTON BOULEVARD AT PATRICK HENRY DRIVE. THIS PROJECT ALSO INCLUDES SIDEWALK AND CURB AND GUTTER MODIFICATIONS. ALL CONSTRUCTION WORK WILL BE FOR THE DURATION OF 110 TOTAL CALENDAR (80 WORK DAYS). WORK DAYS NOT TO INCLUDE ARLINGTON COUNTY PUBLIC HOLIDAYS.

EXISTING CONDITIONS:
WASHINGTON BOULEVARD IS A TWO-LANE ROAD WEST OF N. BUCHANAN STREET AND TRANSITIONS TO A FOUR-LANE ROAD EAST OF N. BUCHANAN STREET. OVERHEAD UTILITIES ARE LOCATED ALONG MOST THE ROAD WITHIN IN THE VICINITY OF PATRICK HENRY DRIVE. THE RIGHT OF WAY INCLUDES TREES, STORM DRAINAGE STRUCTURES AND PIPES, SANITARY SEWER MAINS, WATER MAINS, ELECTRIC LINES, COMMUNICATIONS LINES AND MASS TRANSIT STOP LOCATIONS. MINIMAL CHANGES TO THE EXISTING TOPOGRAPHY ARE PROPOSED. TEMPORARY CONSTRUCTION EASEMENTS ARE LOCATED OUTSIDE OF THE RIGHT-OF-WAY. MOST OF THE EXISTING VEGETATION WITHIN THE PROJECT LIMITS SHALL BE REPLACED.

ADJACENT AREAS:
AT N. GLEBE ROAD, WASHINGTON BOULEVARD IS BOUND ON BOTH SIDES BY RESIDENTIAL DEVELOPMENTS OF VARIABLE DENSITY AND LIMITED BUSINESS DEVELOPMENTS. AT PATRICK HENRY, WASHINGTON BOULEVARD IS BOUND ON BOTH SIDES BY RESIDENTIAL DEVELOPMENTS OF VARIABLE DENSITY, ARLINGTON COUNTY SCHOOL, AND CHURCH PROPERTY. 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:
IN THE VICINITY OF WASHINGTON BOULEVARD AT N. GLEBE ROAD, THE SOILS IN THE PROJECT AREA HAVE BEEN MAPPED AS URBAN LAND - UDORTHENTS COMPLEX WHICH ARE SOILS THAT HAVE BEEN PREVIOUSLY DISTURBED AND NOT CHARACTERIZED. IN THE VICINITY OF WASHINGTON BOULEVARD AT PATRICK HENRY DRIVE, THE SOILS IN THE PROJECT AREA HAVE BEEN MAPPED AS URBAN LAND - GLENELG COMPLEX AND GLENELG - URBAN LAND COMPLEX.

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:.
1. 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 THIS SHEET. 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.
2. 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 ROADWAY 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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. PERMANENT SODDING SHALL BE UTILIZED IN DISTURBED AREAS ADJACENT TO CURB RAMP MODIFICATIONS. SEEDING SHALL BE UTILIZED IN ALL OTHER DISTURBED AREAS WITHIN RIGHT-OF-WAY. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL DISTURBED ARES 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. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF ACHIEVING FINAL STABILIZATION OR WHEN THE MEASURES ARE NO LONGER NEEDED.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GENERAL NOTES AND DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0003

Filename: C-0002 GENERAL NOTES AND DETAILS.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals '3\CAD\PlanSheets

REVISED: MARCH 03, 2020

12/15/2021
date

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

Re: Erosion and Sediment Control Permit Application for:

Washington Boulevard and N. Glebe Road / Washington Boulevard and Patrick Henry Drive
street address

lot, block, section subdivision

LDA-20090
permit number

Dear Mrs. Li:

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

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

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

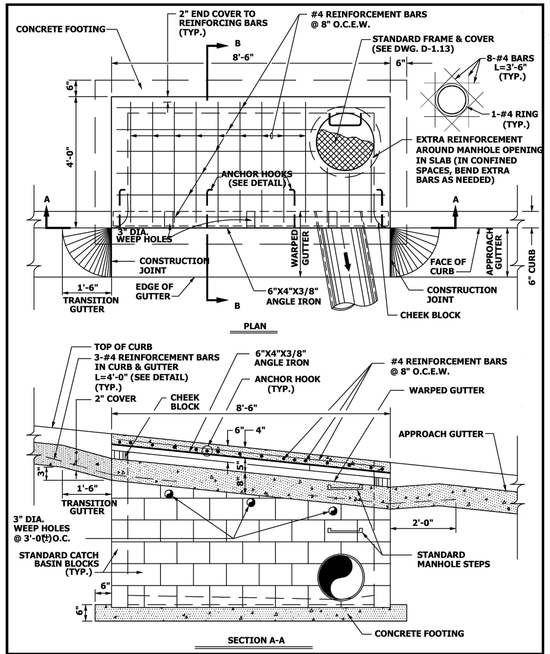
Sincerely,

signed

Anup Kafle
name printed

PE and 0402056432
professional registration (type and number)

GENERAL DETAILS



STANDARD CATCH BASIN, CB-2

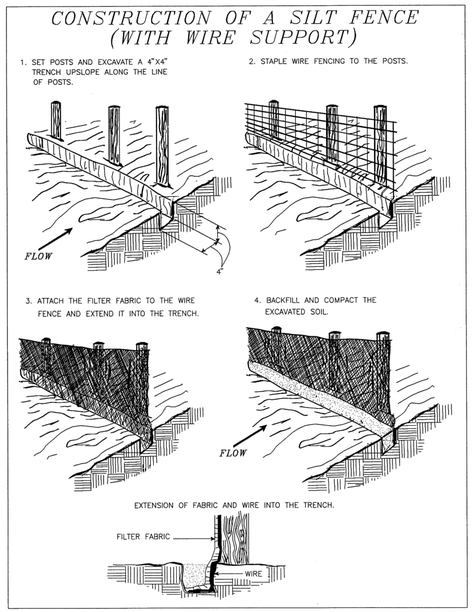
REVISION & DATE

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. **D-1.2** (1 OF 2)

1992 3.05

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

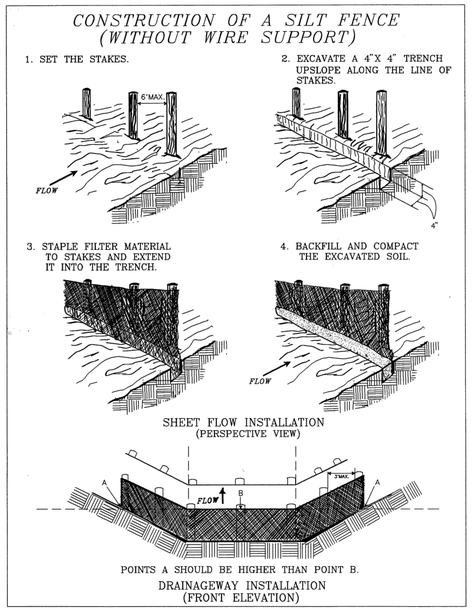


Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Plate 3.05-1

1992 3.05

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

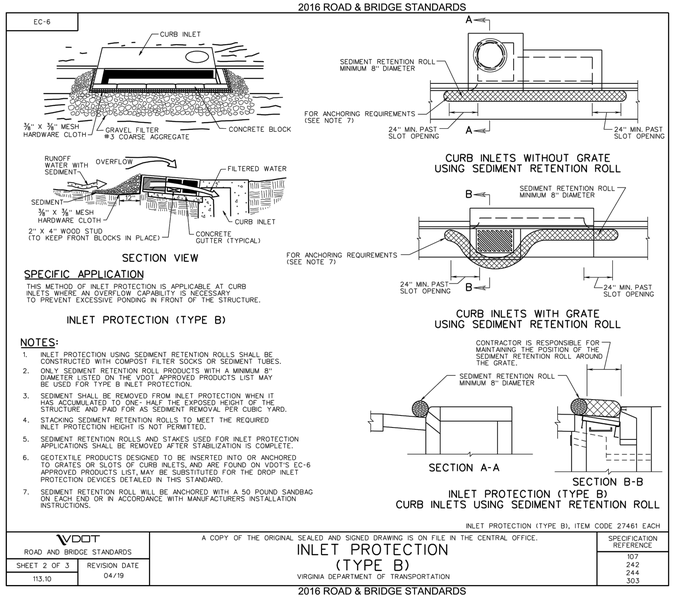


Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Plate 3.05-2

2016 ROAD & BRIDGE STANDARDS

EC-6



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

INLET PROTECTION (TYPE B)

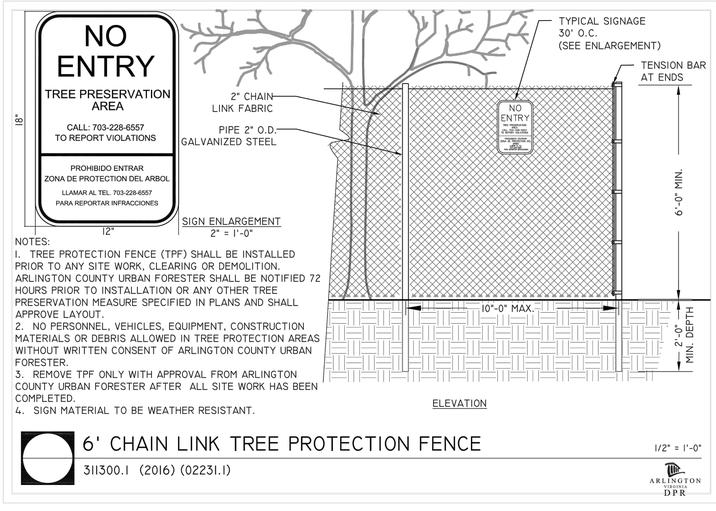
NOTES:

1. INLET PROTECTION USING SEDIMENT RETENTION ROLLS SHALL BE CONSTRUCTED WITH COMPOST FILTER SOCKS OR SEDIMENT TUBES.
2. ONLY SEDIMENT RETENTION ROLL PRODUCTS WITH A MINIMUM 8" DIAMETER LISTED ON THE VDOT APPROVED PRODUCTS LIST MAY BE USED FOR TYPE B INLET PROTECTION.
3. SEDIMENT SHALL BE REMOVED FROM INLET PROTECTION WHEN IT HAS ACCUMULATED TO ONE- HALF THE EXPOSED HEIGHT OF THE STRUCTURE AND PAID FOR AS SEDIMENT REMOVAL PER CUBIC YARD.
4. STACKING SEDIMENT RETENTION ROLLS TO MEET THE REQUIRED INLET PROTECTION HEIGHT IS NOT PERMITTED.
5. SEDIMENT RETENTION ROLLS AND STAKES USED FOR INLET PROTECTION APPLICATIONS SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
6. GEOTEXTILE PRODUCTS DESIGNED TO BE INSERTED INTO OR ANCHORED TO GRATES OR SLOTS OF CURB INLETS, AND ARE FOUND ON VDOT'S EC-6 APPROVED PRODUCTS LIST, MAY BE SUBSTITUTED FOR THE DROP INLET PROTECTION DEVICES DETAILED IN THIS STANDARD.
7. SEDIMENT RETENTION ROLL WILL BE ANCHORED WITH A 50 POUND SANDBAG ON EACH END OR IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

INLET PROTECTION (TYPE B), ITEM CODE 27461 EACH

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 2 OF 3	REVISION DATE	INLET PROTECTION (TYPE B)	107
113.10	04/19	VIRGINIA DEPARTMENT OF TRANSPORTATION	242, 244, 303

2016 ROAD & BRIDGE STANDARDS



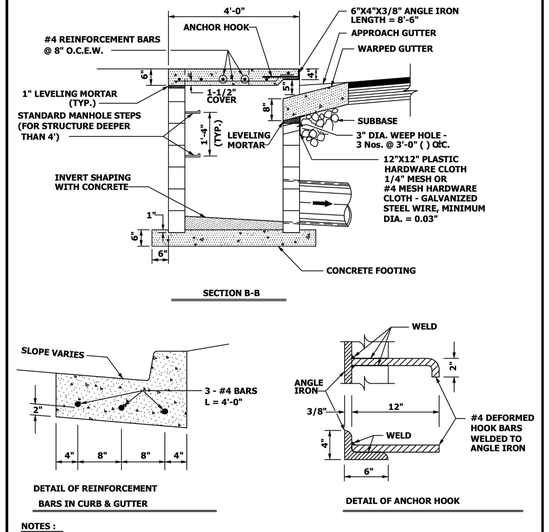
NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OR ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF ARLINGTON COUNTY URBAN FORESTER.
3. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

6' CHAIN LINK TREE PROTECTION FENCE

3I1300.1 (2016) (02231.1)

1/2" = 1'-0"

ARLINGTON COUNTY DPR



NOTES :

1. THE CROSS SLOPE ON THE TOP SLAB SHALL MATCH SLOPE ON THE ADJOINING EXISTING OR PROPOSED SIDEWALK.
2. ENSURE THE PROVISION OF AN EXPANSION JOINT THROUGH THE CURB & GUTTER AND SIDEWALK WITHIN 5'-0" MINIMUM TO 10'-0" MAXIMUM FROM THE OUTER FACE OF THE CATCH BASIN, ONE ON EACH SIDE (TOTAL 2 JOINTS).
3. FOR GENERAL NOTES RELATED TO STANDARD CATCH BASINS, SEE DRAWING NO. D-1.1.

STANDARD CATCH BASIN, CB-2

REVISION & DATE

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. **D-1.2** (2 OF 2)

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA — GEOFF D. GIFFIN — Lic. No. 039584 — 07/19/2022 — PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GENERAL NOTES AND DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0004

Filename: C-0002 GENERAL NOTES AND DETAILS.dwg
Path: K:\N\A_TPTO\110\4001 - Washington Blvd Signals\3\CAD\PlanSheets

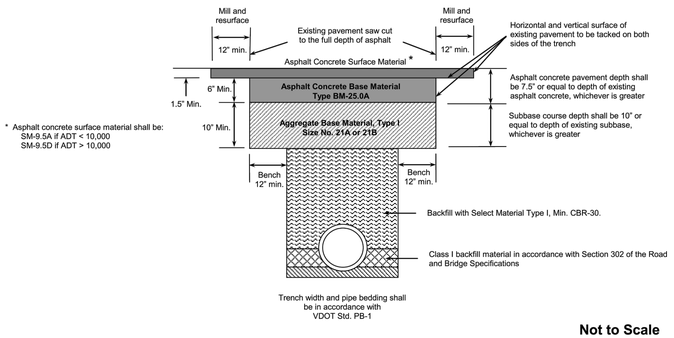
REVISED: MARCH 03, 2020

GENERAL DETAILS

Virginia Department of Transportation
NOVA District Materials Section

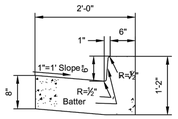
Detail: Asphalt Concrete Pavement Restoration of Generic Open Cut Utility Installation

Note: This detail is not applicable to Interstate pavement or any pavement which includes an open graded drainage layer or has base layers consisting of Cement Treated Aggregate and/or Soil Cement.

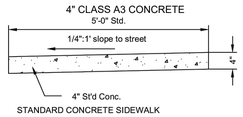


* Asphalt concrete surface material shall be:
SM-9.5A if ADT < 10,000
SM-9.5D if ADT > 10,000

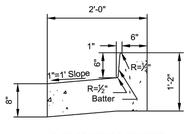
Not to Scale



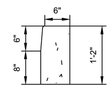
(C-2) STANDARD CURB & GUTTER



STANDARD CONCRETE SIDEWALK



(C-2R) STANDARD REVERSE PITCH CURB & GUTTER



(C-3) STANDARD HEADER CURB

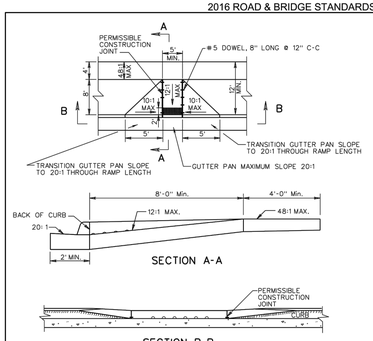
NOTES:

1. SECTION C-3 IS TO BE USED ONLY WITH RIGID TYPE PAVEMENT UNLESS OTHERWISE DIRECTED IN WRITING OR WHEN SHOWN ON APPROVED PLANS.
2. EXPANSION JOINTS IN HEADER CURB AND STANDARD CURB AND GUTTERSHALL BE 40' APART OR AT EXPANSION JOINTS IN CONCRETE PAVEMENT.
3. EXPANSION JOINTS MAY BE OMITTED IF 1/8" JOINTS ARE PLACED EVERY 10' OF LESS
4. EXPANSION JOINTS IN THE SIDEWALK SHALL BE 40' APART. IF ADJACENT TO CONCRETE CURB, EXPANSION JOINTS SHALL MATCH JOINT OF CURB. AN EXPANSION JOINT SHALL BE PLACED BETWEEN CURB AND SIDEWALK.
5. SEE DRAWING R-2.2 FOR DETAIL OF SIDEWALK STRESS COLUMN TO BE PLACED UNDER SIDEWALK WHEN PLACED ADJACENT TO BACK OF CURB.
6. SEE ARLINGTON COUNTY SPECIFICATION SECTIONS 02611 AND 03100 FOR MATERIAL SPECS.
7. PROVIDE 6" MINIMUN AGGREGATE BASE HAVING CBR-30 UNDER CURB AND GUTTER.
8. FOR CONCRETE SIDEWALK, PROVIDE 4" AGGREGATE MATERIAL, TYPE 1, SIZE 21B BENEATH 4" CLASS A3 CONCRETE, EXTENDED MIN. 4" BEYOND THE EDGES OF CONCRETE.

CURB AND GUTTER / CONCRETE SIDEWALK DETAIL

2016 ROAD & BRIDGE STANDARDS

CG-12



TYPICAL DESIGN

TYPE A WITH BUFFER STRIP

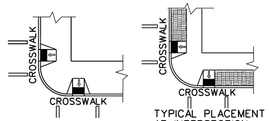
SECTION A-A

SECTION B-B

NOTES:

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

EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT

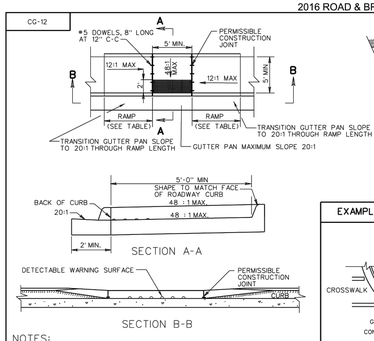


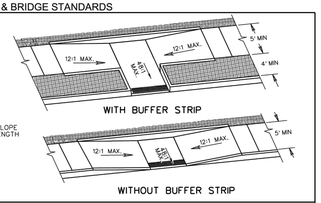
SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS
105 502 504	CG-12 DETECTABLE WARNING SURFACE TYPE A (PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 04/19 SHEET 2 OF 5 204.02

2016 ROAD & BRIDGE STANDARDS

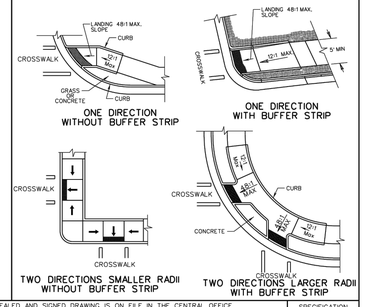
2016 ROAD & BRIDGE STANDARDS

CG-12





EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT



NOTES:

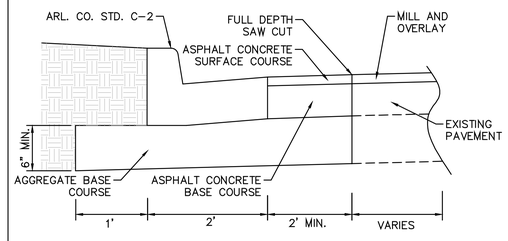
1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.
3. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
4. DIAGONAL PLACEMENT IS NOT PERMITTED.

TYPE B PARALLEL APPLICATION

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

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 3 OF 5 204.03	CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	105 502 504
REVISION DATE: 04/19		

2016 ROAD & BRIDGE STANDARDS



NOTE:

1. ALL PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD WP-2.
2. CURB AND/OR GUTTER SHALL FOLLOW ARLINGTON COUNTY STANDARD C-2 CURB AND GUTTER.
3. NEW PAVEMENT AREAS SHALL BE THE GREATER OF EXISTING PAVEMENT DEPTHS OR 2" SURFACE COURSE ASPHALT CONCRETE, TYPE SM-9.5D, ESTIMATED AT 238 LBS/SY, 8" BASE COURSE ASPHALT CONCRETE, TYPE BM-25.0A, AND MIN. 12" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B OR EXTENDED TO THE BOTTOM OF EXISTING AGGREGATE, WHICHEVER IS GREATER.
4. MILL AND OVERLAY OF THE EXISTING PAVEMENT SHALL BE 2" OF SURFACE COURSE ASPHALT CONCRETE, TYPE SM-9.5D.

CURB AND PAVEMENT SAW CUT DETAIL

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GENERAL NOTES AND DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

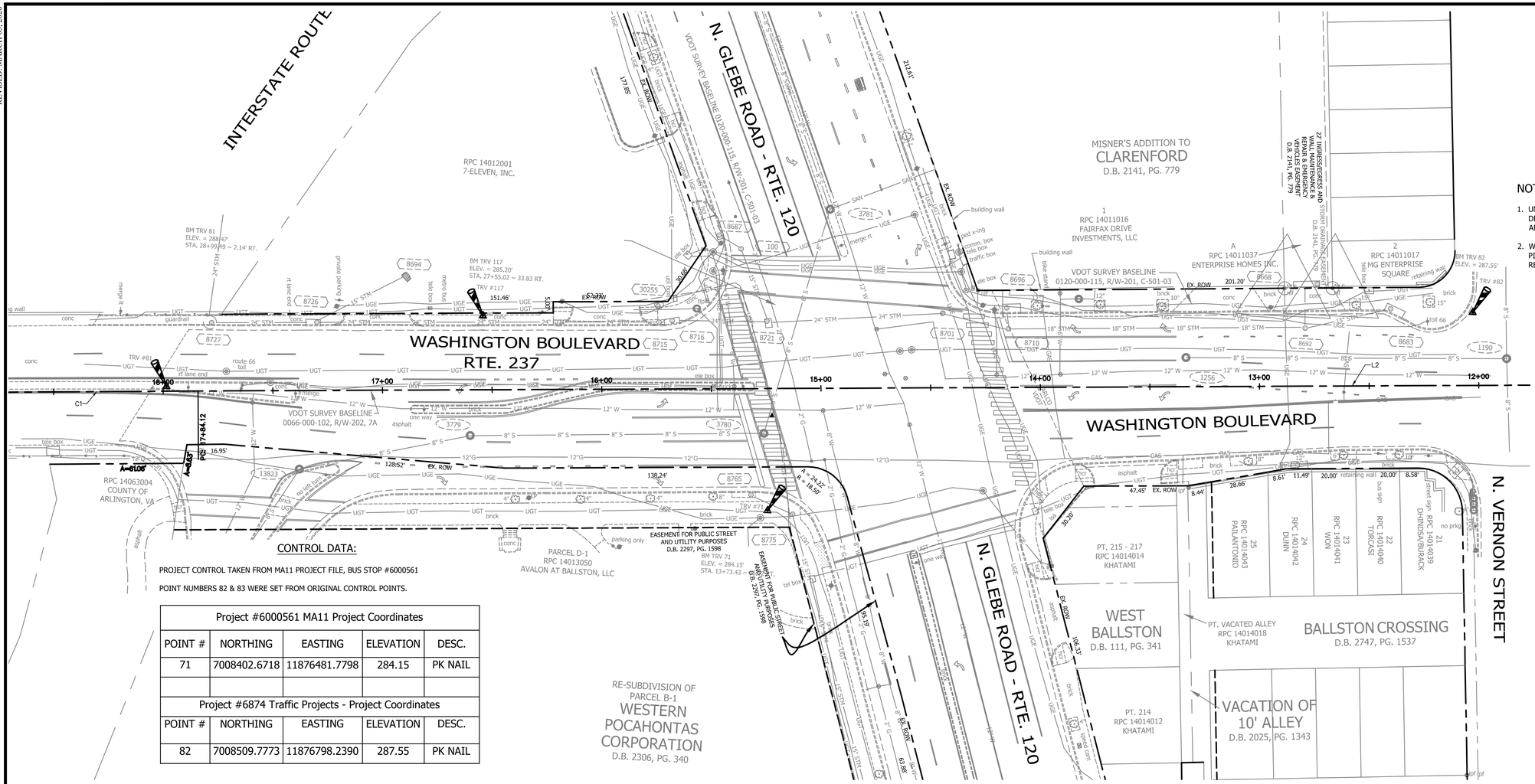
Plotted: July 19, 2022
Plotted by: patrick.husted

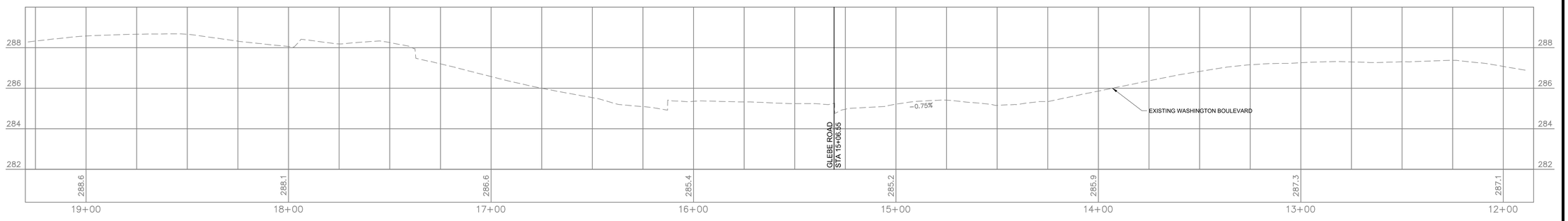
Scale:
HOR. N/A VERT. N/A

Sheet
C-0005

Filename: C-0002 GENERAL NOTES AND DETAILS.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020





NOTE:

1. UNDERGROUND UTILITIES WERE DESIGNATED ON 04/10/19 & LOCATED BY ARLINGTON COUNTY SURVEYORS ON 05/01/19.
2. WATER LINE, GAS LINE, AND SANITARY SEWER PIPE SIZES ARE PER ARLINGTON COUNTY RECORDS.

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF ROBERT L. FRANCA, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER HIS SUPERVISION; THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 04/2019 TO 05/2019; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

ALIGNMENT TABLE
WASHINGTON BLVD (ROUTE 237)

NO.	BEGIN STATION	END STATION	PI STATION	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING (START)	COORDINATES EASTING (START)	COORDINATES NORTHING (END)	COORDINATES EASTING (END)
C1	17+84.12	19+88.90	18+86.51	0°30'43"	0°15'00"	22918.310	102.391	204.780	7008443.5362	11876015.1220	7008431.0140	11876015.1220
L1	19+88.90	21+88.90						200.000	7008431.0140	11875815.5529	7008417.8923	11875815.5529
L2	10+00.00	17+84.12						784.120	7008487.9878	11876219.5181	7008443.5362	11876219.5181

HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983 - NORTH ZONE.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.

BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

EXISTING CONDITIONS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

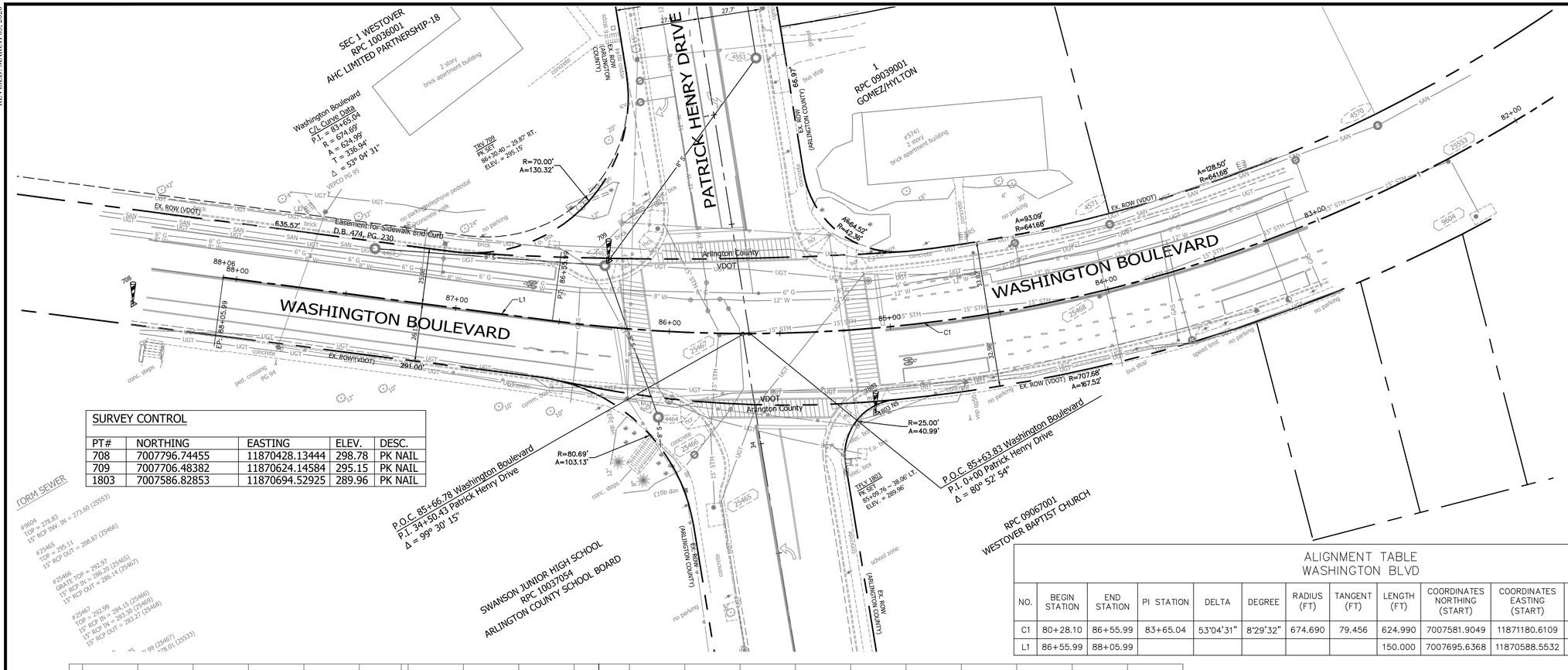
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0100

Filename: C-0100 EXISTING CONDITIONS.dwg
Path: K:\N\A_TPTO\110\4001 - Washington Blvd Signals 3\CAD\PlanSheets

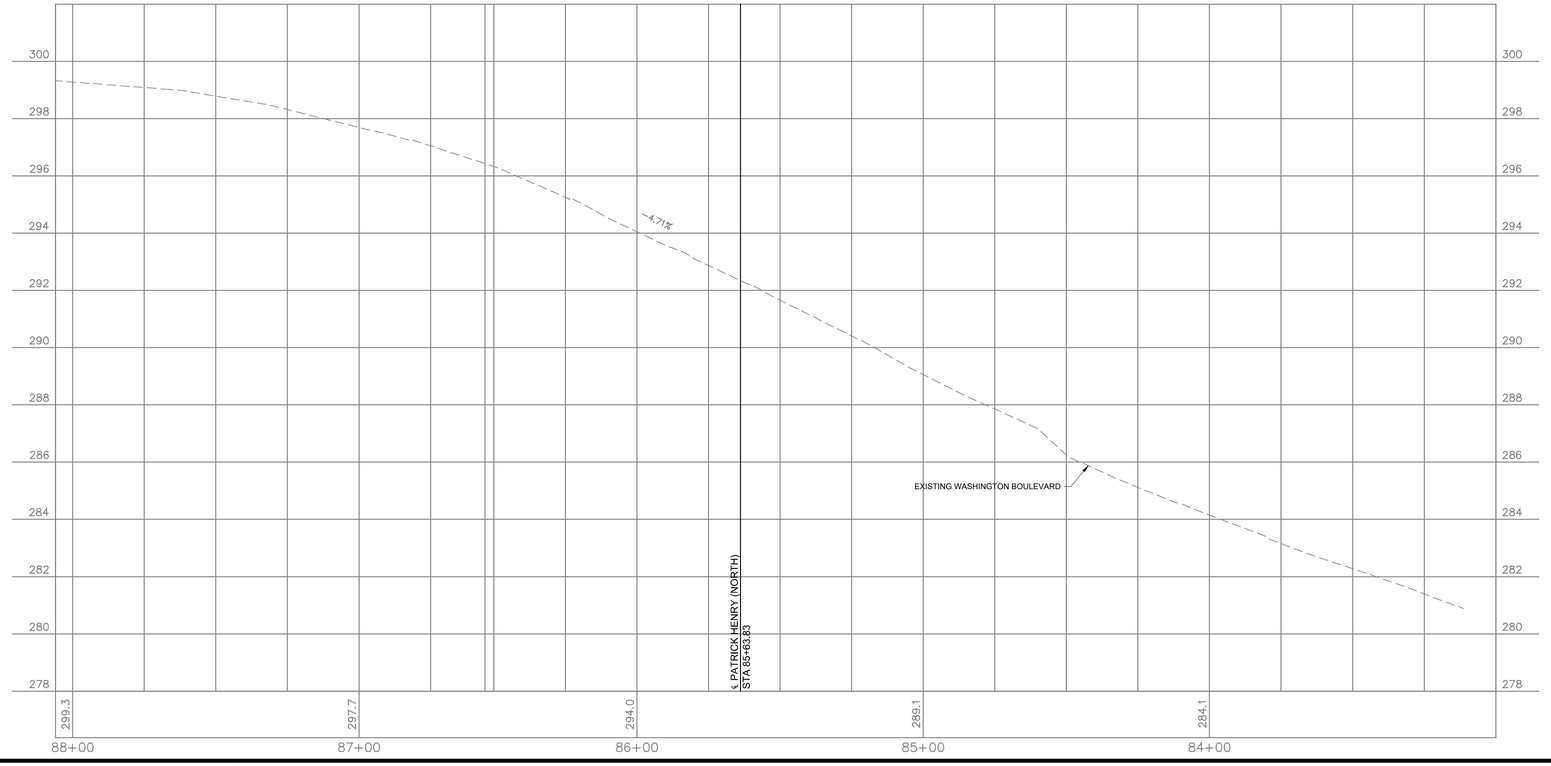
REVISED: MARCH 03, 2020



SURVEY CONTROL				
PT#	NORTHING	EASTING	ELEV.	DESC.
708	7007796.74455	11870428.13444	298.78	PK NAIL
709	7007706.48382	11870624.14584	295.15	PK NAIL
1803	7007586.82853	11870694.52925	289.96	PK NAIL

ALIGNMENT TABLE
WASHINGTON BLVD

NO.	BEGIN STATION	END STATION	PI STATION	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING (START)	COORDINATES EASTING (START)	COORDINATES NORTHING (END)	COORDINATES EASTING (END)
C1	80+28.10	86+55.99	83+65.04	53°04'31"	8°29'32"	674.690	79.456	624.990	7007581.9049	11871180.6109	7007695.6368	11870588.5532
L1	86+55.99	88+05.99						150.000	7007695.6368	11870588.5532	7007786.7669	11870469.4092



GRAPHIC SCALE IN FEET
0 12.5 25 50
HORIZONTAL

0 1.25 2.5 5
VERTICAL

NOTE:

CONTROL ORIGINALLY ESTABLISHED AS PART OF ARLINGTON COUNTY PROJECT Z197 AND PD96 IN NOVEMBER 2011.

UNDERGROUND UTILITIES WERE DESIGNATED MID-ATLANTIC UTILITY LOCATING ON 04/25/2019. UTILITY MARKS WERE LOCATED BY ARLINGTON COUNTY SURVEYORS ON 04/29/2019.

WATER LINE, GAS LINE, AND SANITARY SEWER PIPE SIZES ARE PER ARLINGTON COUNTY RECORDS.

BUILDINGS ARE SHOWN PER ARLINGTON COUNTY GIS.

ARLINGTON COUNTY "PATRICK HENRY DRIVE FROM WASHINGTON BLVD TO 16TH STREET NORTH" PROJECT WILL BE CONSTRUCTED BETWEEN THE TIME THIS SURVEY WAS COMPLETED AND THE START OF CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO CONFIRM CONDITIONS PRIOR TO CONSTRUCTION.

HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983 - NORTH ZONE.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.

BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JOSHUA M. BROCK, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER HIS SUPERVISION; THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 04/2019 TO 05/2019; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

EXISTING CONDITIONS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

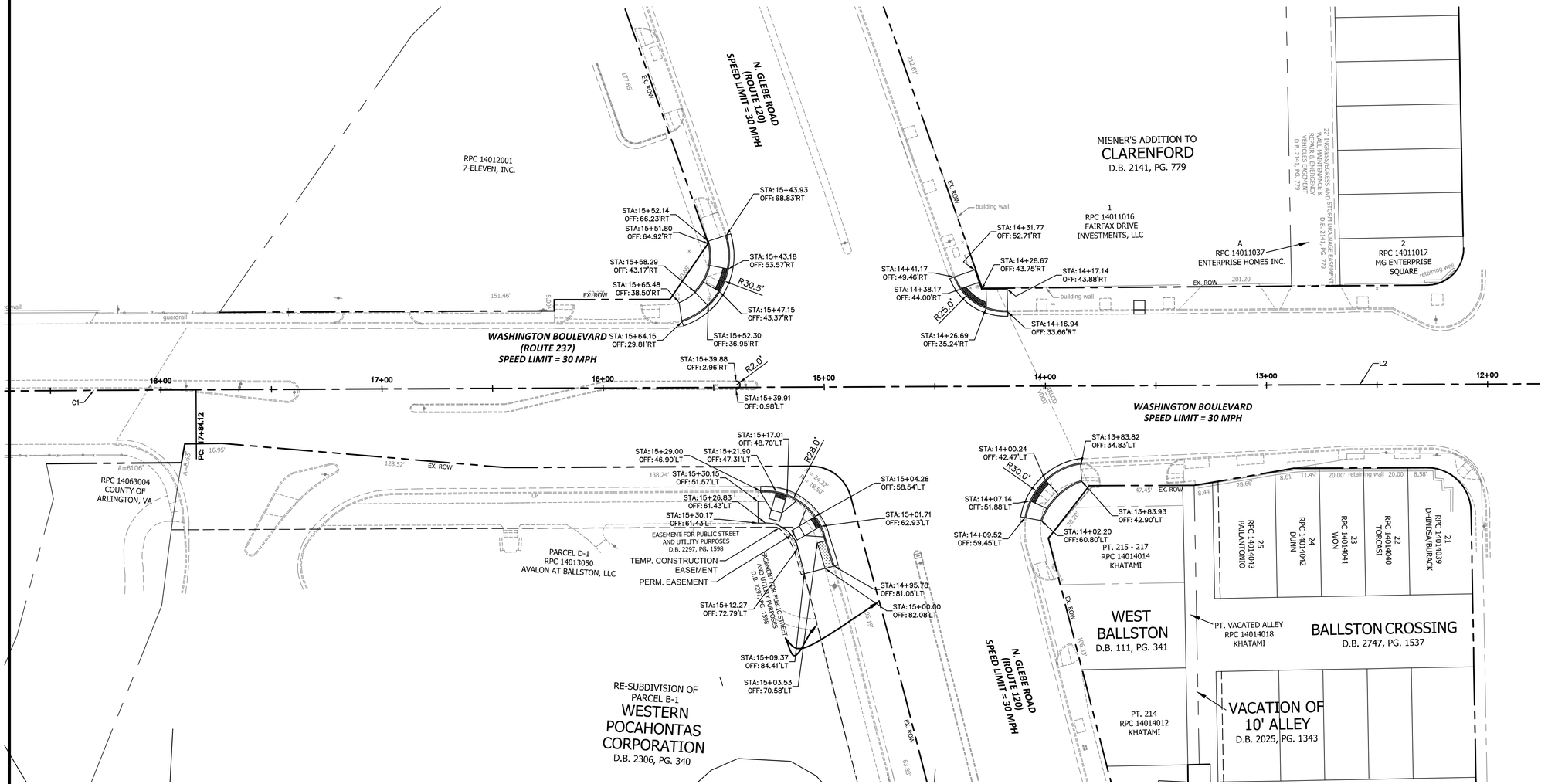
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0101

Filename: C-0101 EXISTING CONDITIONS.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



NOTES:
1. ALL LABELS AT FACE OF CURB UNLESS OTHERWISE STATED.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GEOMETRIC CONTROL PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

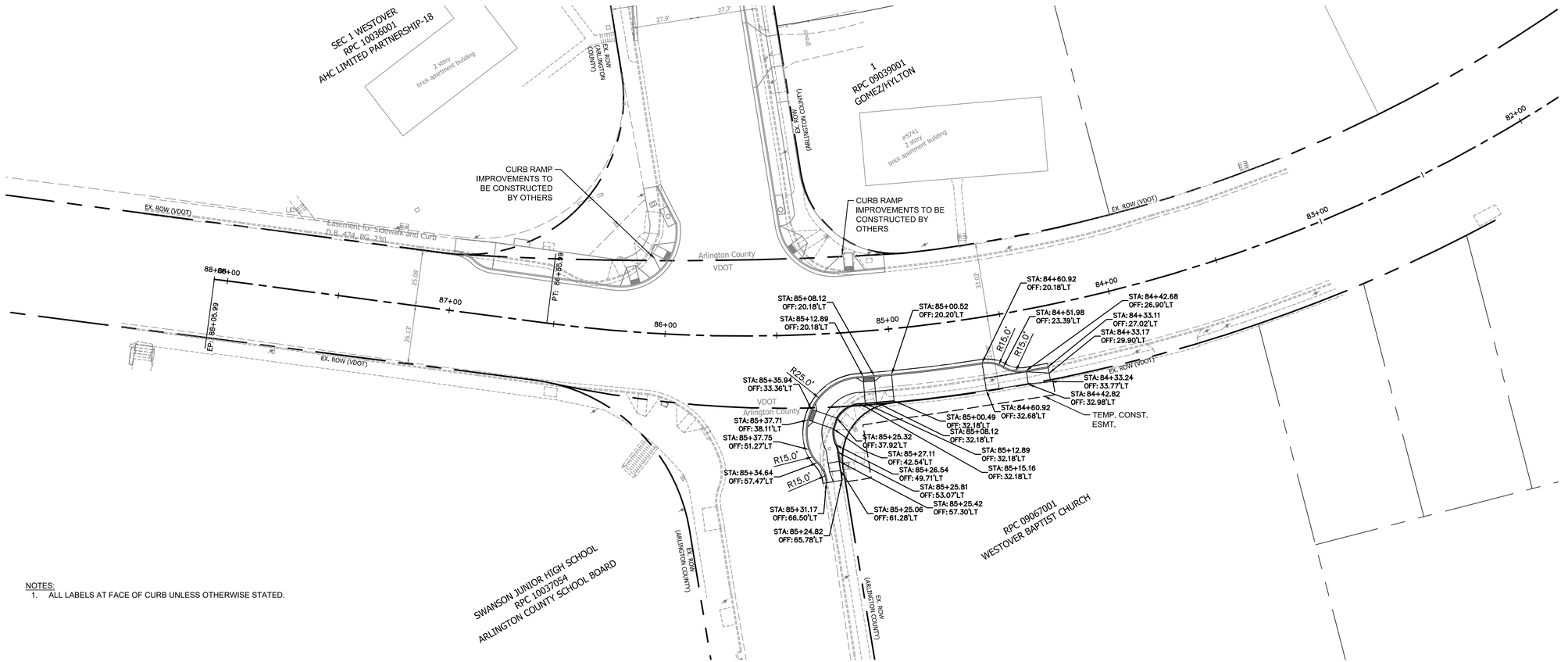
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0200

Filename: C-0200 GEOMETRIC CONTROL PLAN.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 12.5 25 50

NOTES:
1. ALL LABELS AT FACE OF CURB UNLESS OTHERWISE STATED.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

GEOMETRIC CONTROL PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

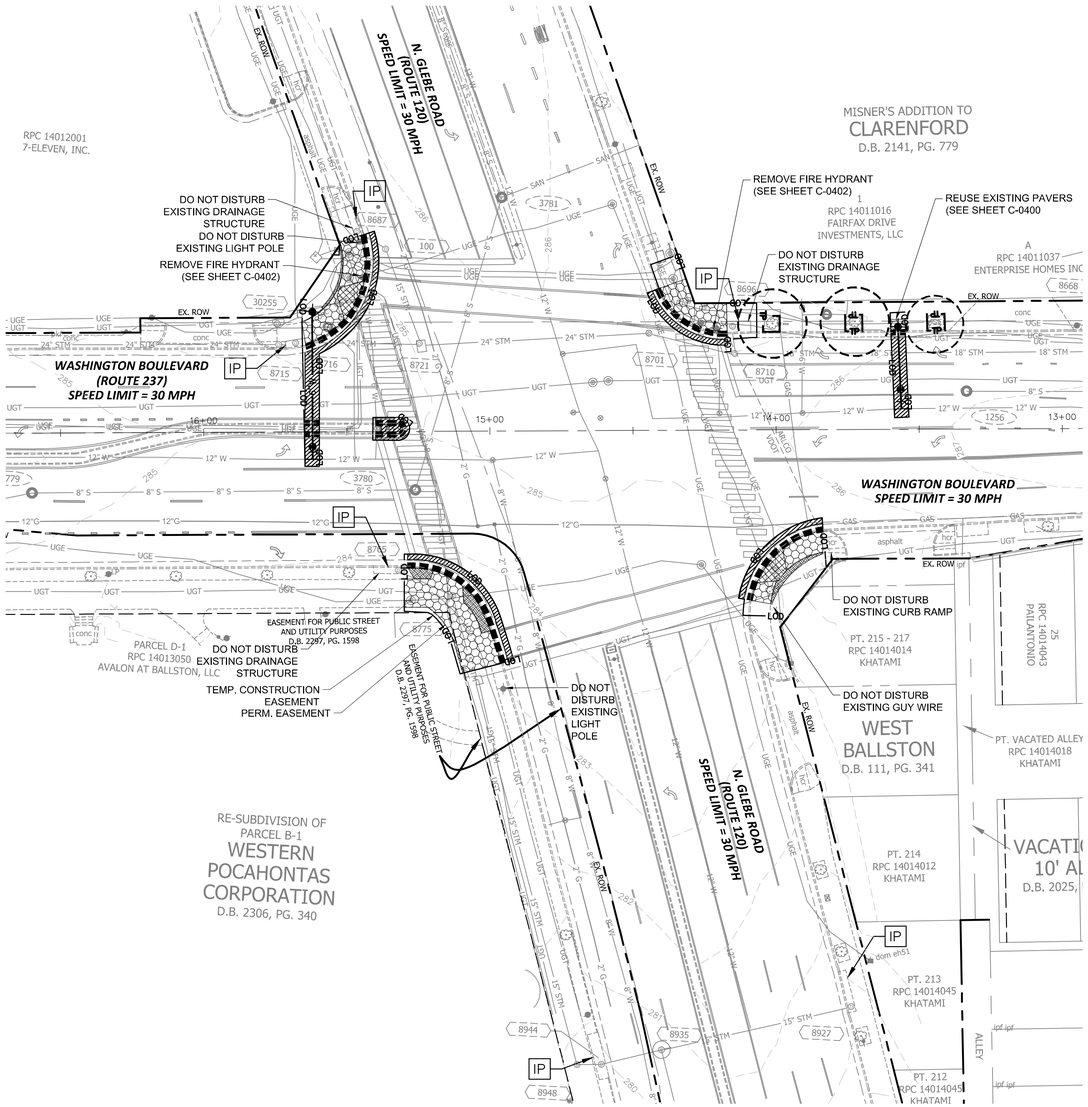
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet C-0201

Filename: C-0201 GEOMETRIC CONTROL PLAN.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD Plan\Sheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 12.5 25 50

LEGEND

- REMOVE FULL DEPTH BITUMINOUS SURFACE
- REMOVE CONCRETE RAMP
- REMOVE BRICK SIDEWALK
- REMOVE LANDSCAPED AREA
- REMOVE CONCRETE CURB OR CURB AND GUTTER
- IP — STORM SEWER STRUCTURE INLET PROTECTION TYPE B (VESCH STD & SPEC 3.07)
- TP TP TP — TREE PROTECTION (VESCH STD & SPEC 3.38)
- LOD — LIMITS OF DISTURBANCE
- 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 UPON CONCURRENCE FROM COUNTY E&S/SWPPP INSPECTOR.
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 CONSTRUCTION ACTIVITIES.
4. CONTRACTOR SHALL PROTECT AND RETAIN ALL EXISTING MANHOLE LIDS, VALVES, AND JUNCTION BOXES.
5. CONTRACTOR TO SALVAGE SIDEWALK PAVERS. CONTRACTOR TO COORDINATE WITH ADJACENT PROPERTY OWNERS FOR RETURN OF SIDEWALK PAVERS.
6. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESS 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 AT 703-228-3049. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
7. 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.
8. NO TREES ARE PROPOSED TO BE ADDED OR REMOVED AS PART OF THIS PLAN. TREE PROTECTION TABLE NOT INCLUDED.
9. E&S PROTECTION MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
10. WHERE EXISTING PAVEMENT (OR CURB AND GUTTER) IS TO BE REMOVED WITHIN THE CRITICAL ROOT ZONE OF A TREE, LEAVE PAVEMENT IN PLACE AS LONG AS POSSIBLE DURING CONSTRUCTION. REMOVE PAVEMENT WITH THE ROLLBACK TECHNIQUE, KEEP EQUIPMENT ON PAVING, AND LIMIT OVER-DIG. ONCE PAVEMENT HAS BEEN REMOVED, VEHICULAR TRAFFIC IS STRICTLY PROHIBITED UNTIL PAVING IS REPLACED. REPLACED PAVING SHOULD BE A BRIDGED, TREE-FRIENDLY DETAIL WITH NO COMPACTION BEYOND 85%. COORDINATE WITH URBAN FORESTER WHEN PROCESS OR CONSTRUCTION DETAILS CAN'T FOLLOW THIS SPECIFICATION.
11. FIRE HYDRANT CONNECTION PIT TO BE DUG BY HAND OR 12" BUCKET. CLEAN ALL ROOTS. DO NOT PULL OR TEAR.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PHASE 1 EROSION CONTROLS & DEMO PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

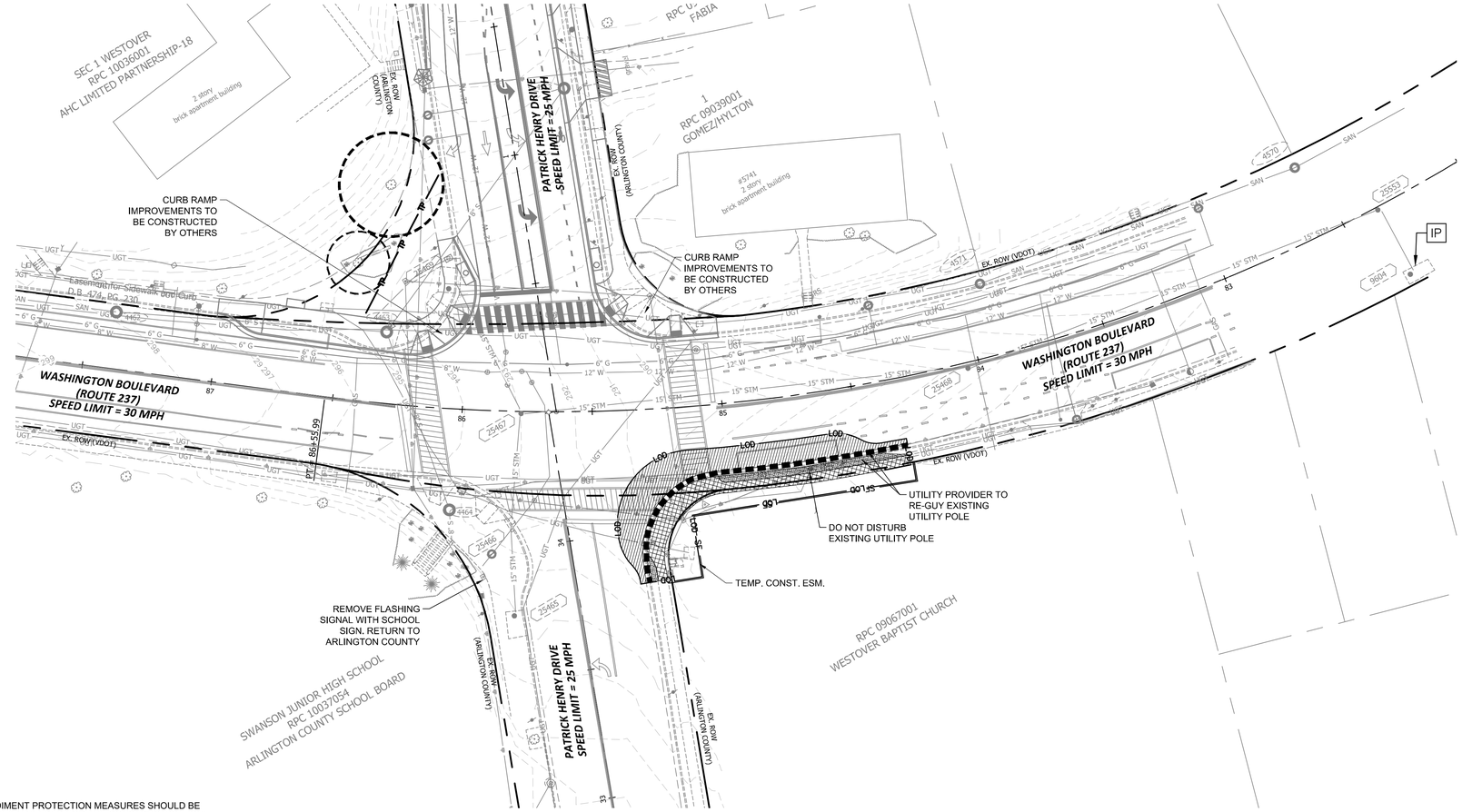
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0300

Filename: C-0300 PHASE 1 EROSION CONTROLS & DEMO PLAN.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD Plan\Sheets

REVISED: MARCH 03, 2020



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 UPON CONCURRENCE FROM COUNTY E&S/SWPPP INSPECTOR.
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 CONSTRUCTION ACTIVITES.
4. CONTRACTOR SHALL PROTECT AND RETAIN ALL EXISTING MANHOLE LIDS, VALVES, AND JUNCTION BOXES.
5. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESS 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 AT 703-228-3049. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
6. E&S PROTECTION MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
7. WHERE EXISTING PAVEMENT (OR CURB AND GUTTER) IS TO BE REMOVED WITHIN THE CRITICAL ROOT ZONE OF A TREE, LEAVE PAVEMENT IN PLACE AS LONG AS POSSIBLE DURING CONSTRUCTION. REMOVE PAVEMENT WITH THE ROLLBACK TECHNIQUE, KEEP EQUIPMENT ON PAVING, AND LIMIT OVER-DIG. ONCE PAVEMENT HAS BEEN REMOVED, VEHICULAR TRAFFIC IS STRICTLY PROHIBITED UNTIL PAVING IS REPLACED. REPLACED PAVING SHOULD BE A BRIDGED, TREE-FRIENDLY DETAIL WITH NO COMPACTION BEYOND 85%. COORDINATE WITH URBAN FORESTER WHEN PROCESS OR CONSTRUCTION DETAILS CAN'T FOLLOW THIS SPECIFICATION.

LEGEND

- REMOVE FULL DEPTH BITUMINOUS SURFACE
- REMOVE FULL DEPTH CONCRETE SURFACE
- REMOVE LANDSCAPED AREA
- REMOVE CONCRETE CURB AND GUTTER
- IP — STORM SEWER STRUCTURE INLET PROTECTION TYPE B (VESCH STD & SPEC 3.07)
- SF — EROSION CONTROL FENCE (SILT FENCE) (VESCH STD & SPEC 3.03)
- LOD — LIMITS OF DISTURBANCE
- TP — TREE PROTECTION (VESCH STD & SPEC 3.38)
- CRITICAL ROOT ZONE

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PHASE 1 EROSION CONTROLS & DEMO PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

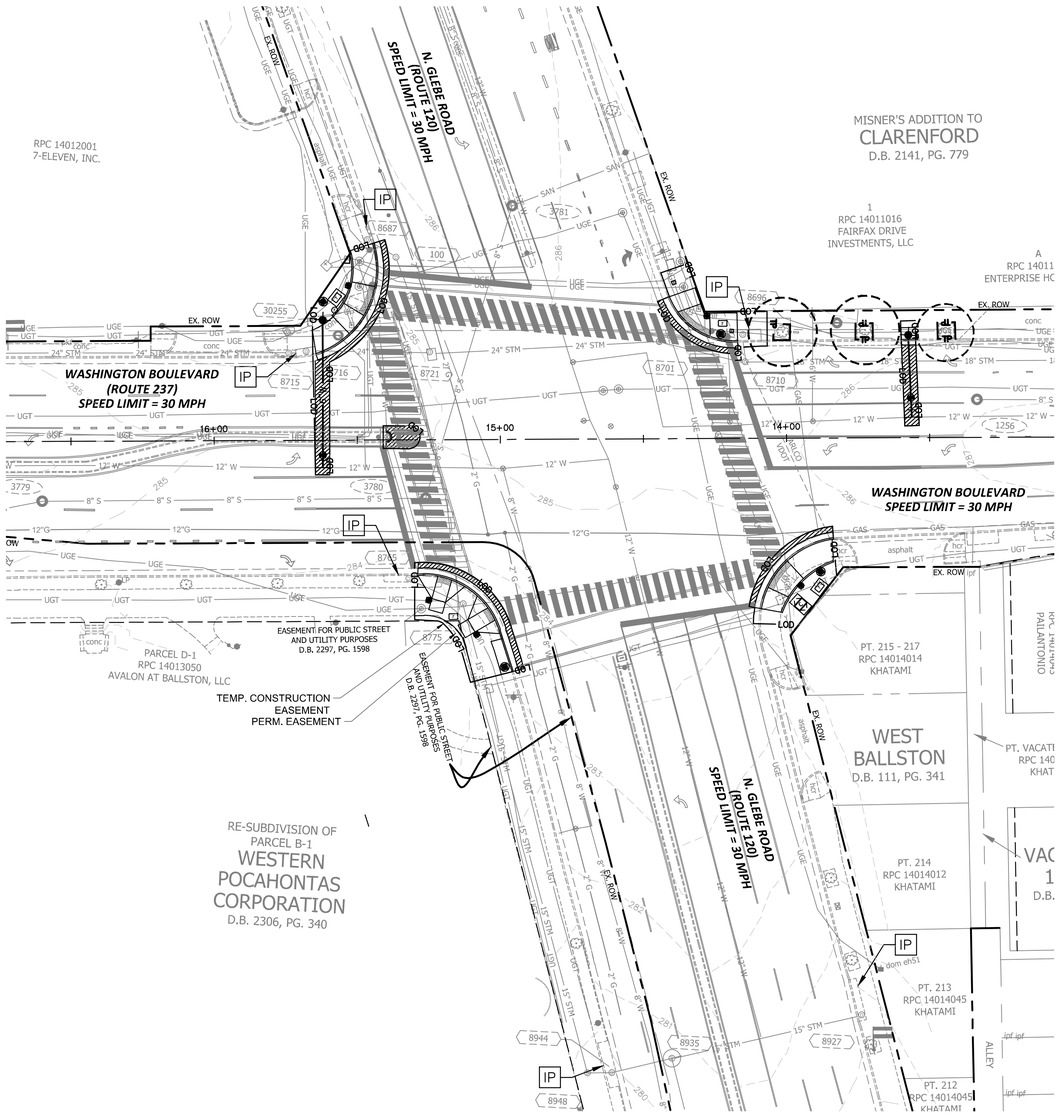
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0301

Filename: C-0301 PHASE 1 EROSION CONTROLS & DEMO PLAN.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



LEGEND

- SODDING
- IP — STORM SEWER STRUCTURE INLET PROTECTION TYPE B (VESCH STD & SPEC 3.07)
- TP — TREE PROTECTION (VESCH STD & SPEC 3.38)
- LOD — LIMITS OF DISTURBANCE
- CRITICAL ROOT ZONE

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PHASE 2 EROSION CONTROLS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

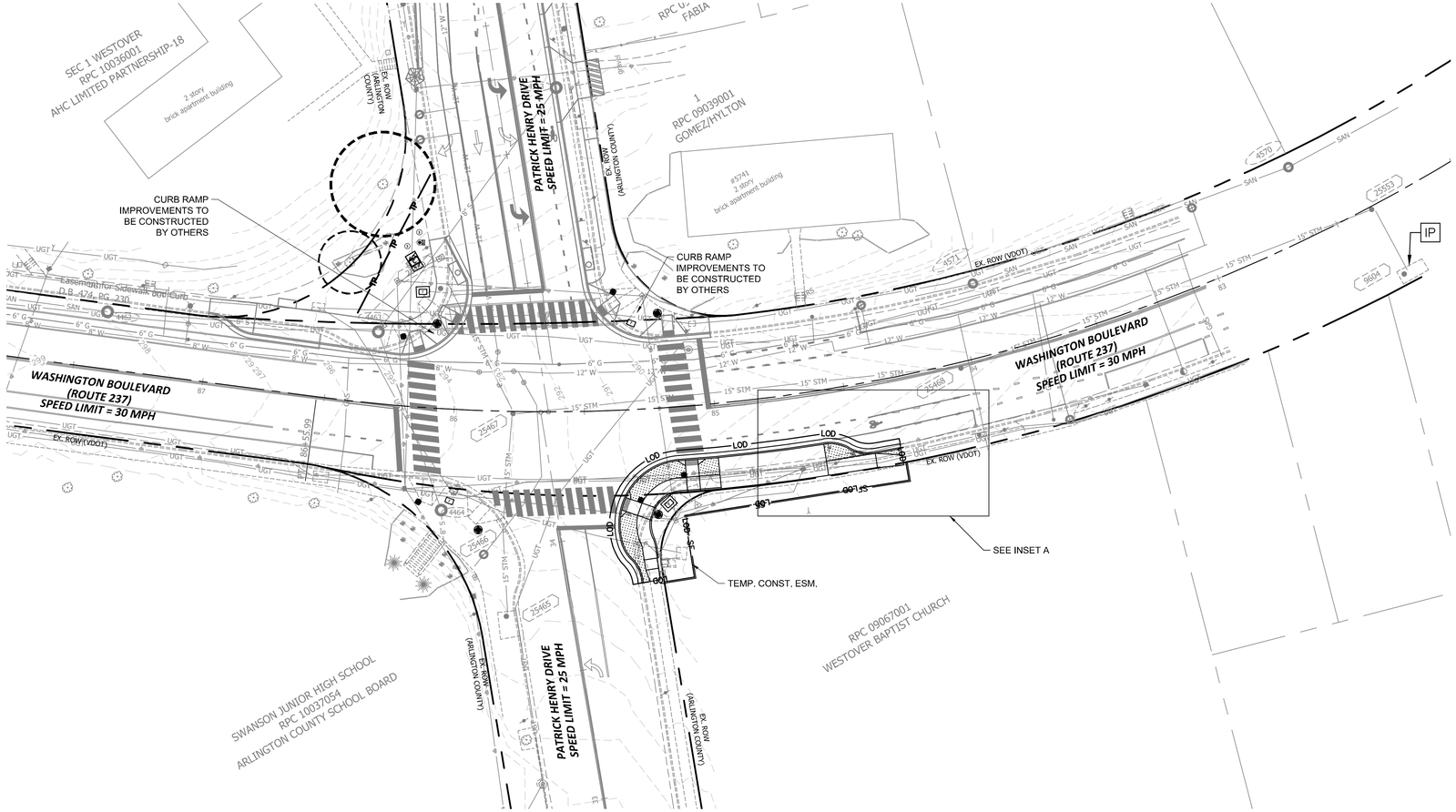
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0310

Filename: C-0300 PHASE 1 EROSION CONTROLS & DEMO PLAN.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

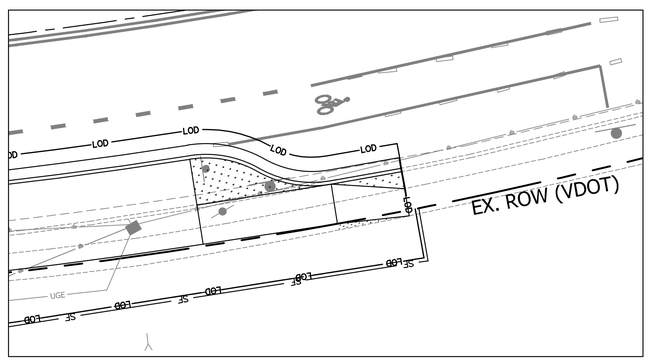


GRAPHIC SCALE IN FEET
0 12.5 25 50

LEGEND

	SODDING
IP	STORM SEWER STRUCTURE INLET PROTECTION TYPE B (VESCH STD & SPEC 3.07)
SF	EROSION CONTROL FENCE (SILT FENCE) (VESCH STD & SPEC 3.03)
LOD	LIMITS OF DISTURBANCE
TP TP TP	TREE PROTECTION (VESCH STD & SPEC 3.38)
	CRITICAL ROOT ZONE

INSET A
1" = 10'



ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PHASE 2 EROSION CONTROLS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

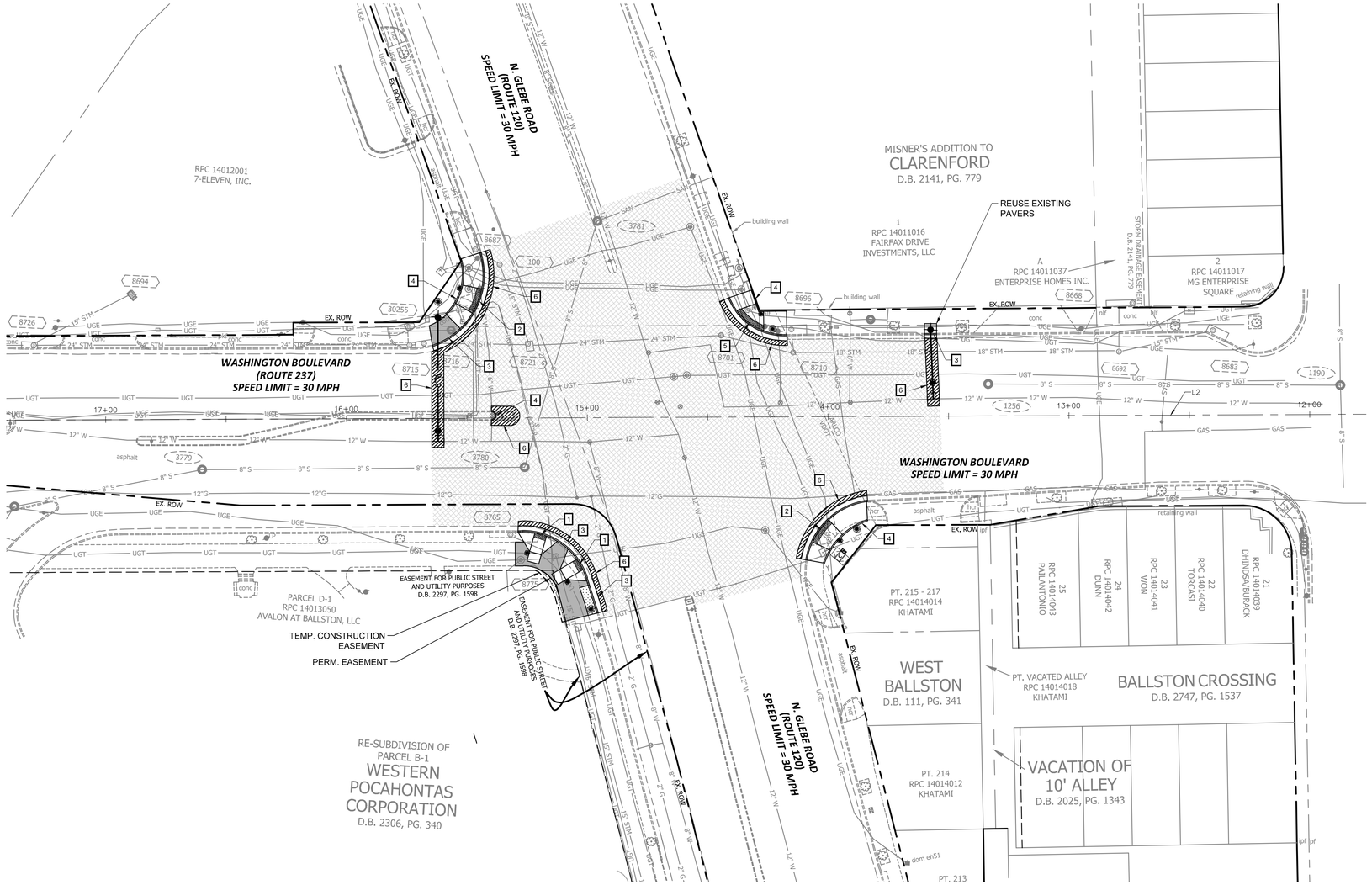
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0311

Filename: C-0301 PHASE 1 EROSION CONTROLS & DEMO PLAN.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



LEGEND

1. VDOT CG-12 TYPE A PEDESTRIAN CURB RAMP
2. VDOT CG-12 TYPE B PEDESTRIAN CURB RAMP
3. ARL. CO. STD. C-2 CURB AND GUTTER
4. ARL. CO. STD. C-3 HEADER CURB
5. VDOT CG-12 TYPE B MODIFIED PEDESTRIAN CURB RAMP
6. FULL DEPTH SAWCUT

MILL & OVERLAY
ARL. CO. STD. CONCRETE SIDEWALK
FULL DEPTH ASPHALT PAVEMENT
SODDING

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PROPOSED PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0400

Filename: C-0400 PROPOSED PLAN AND PROFILE.dwg
Path: K:\NVA_TPTO\110\1401 - Washington Blvd Signals 3\CAD\PlanSheets

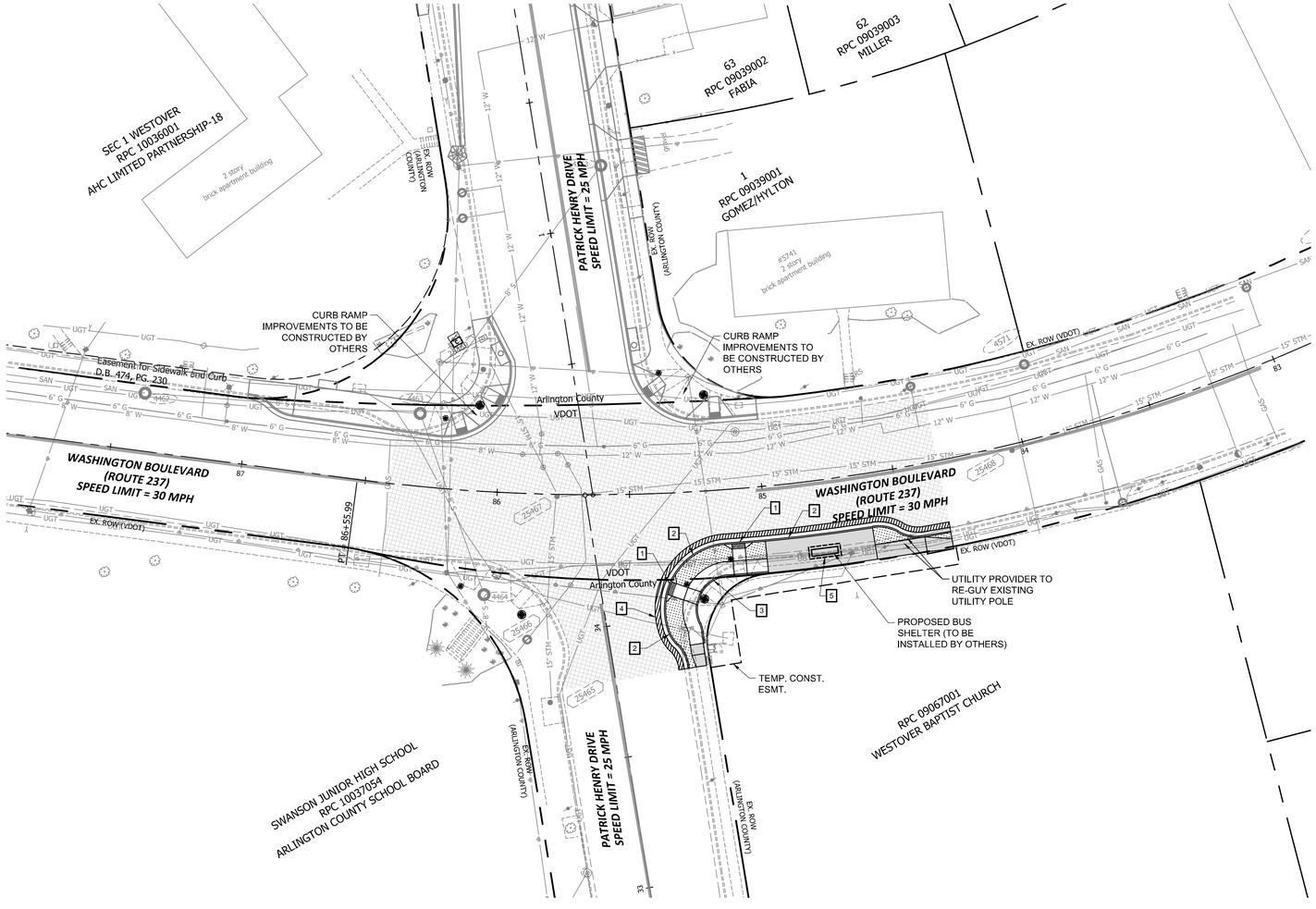
REVISED: MARCH 03, 2020

LEGEND

1. VDOT CG-12 TYPE C CURB RAMP
2. ARL. CO. STD. C-2 CURB AND GUTTER
3. ARL. CO. STD. C-3 HEADER CURB
4. ARL. CO. CANTILEVER BUS SHELTER PAD
5. FULL DEPTH SAWCUT

MILL & OVERLAY
ARL. CO. STD. CONCRETE SIDEWALK
FULL DEPTH ASPHALT PAVEMENT
SODDING

GRAPHIC SCALE IN FEET
0 12.5 25 50



ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PROPOSED PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

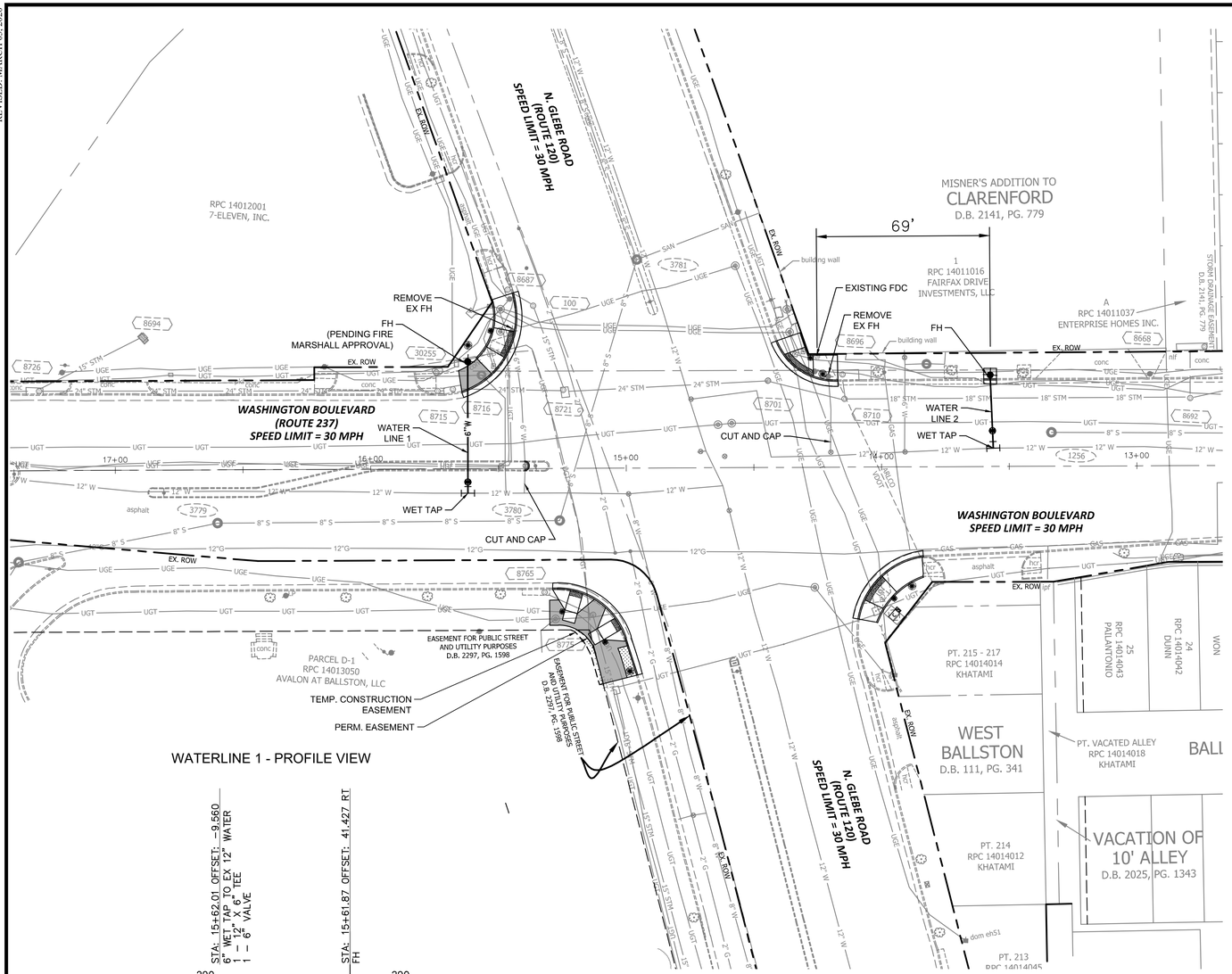
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

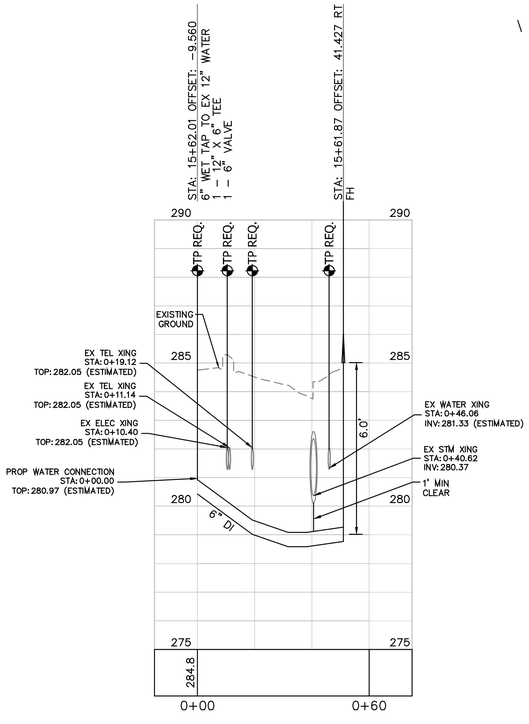
Sheet
C-0401

Filename: C-0401 PROPOSED PLAN AND PROFILE.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



WATERLINE 1 - PROFILE VIEW

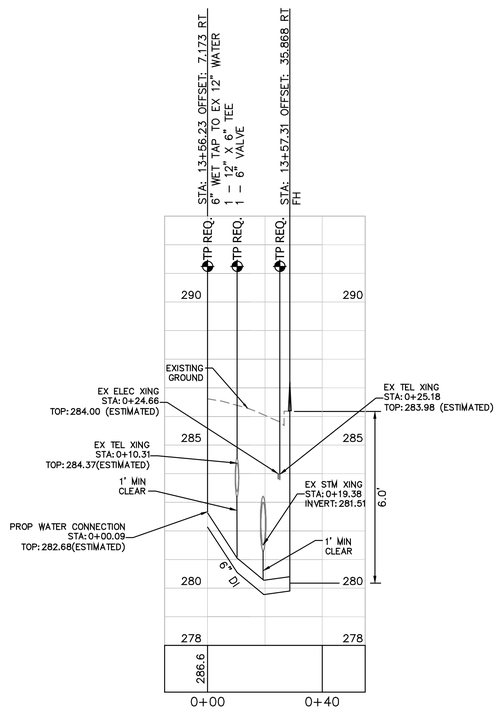


NOTE:

1. EXISTING FIRE HYDRANTS TO REMAIN IN SERVICE UNTIL NEW HYDRANTS IN SERVICE.
2. PROFILE VIEW STATIONING ALONG CENTERLINE OF PIPE.
3. PROFILE VIEW STATION AND OFFSET IN REFERENCE TO WASHINGTON BOULEVARD ROAD ALIGNMENT.
4. TEST PITS ARE REQUIRED TO VERIFY PROPOSED WATERLINE LOCATION. TEST PIT LOCATIONS ARE NOTED IN WATERLINE 1 AND WATERLINE 2 PROFILES.

GRAPHIC SCALE IN FEET
0 12.5 25 50

WATERLINE 2 - PROFILE VIEW



ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

WATERLINE PLAN AND PROFILES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

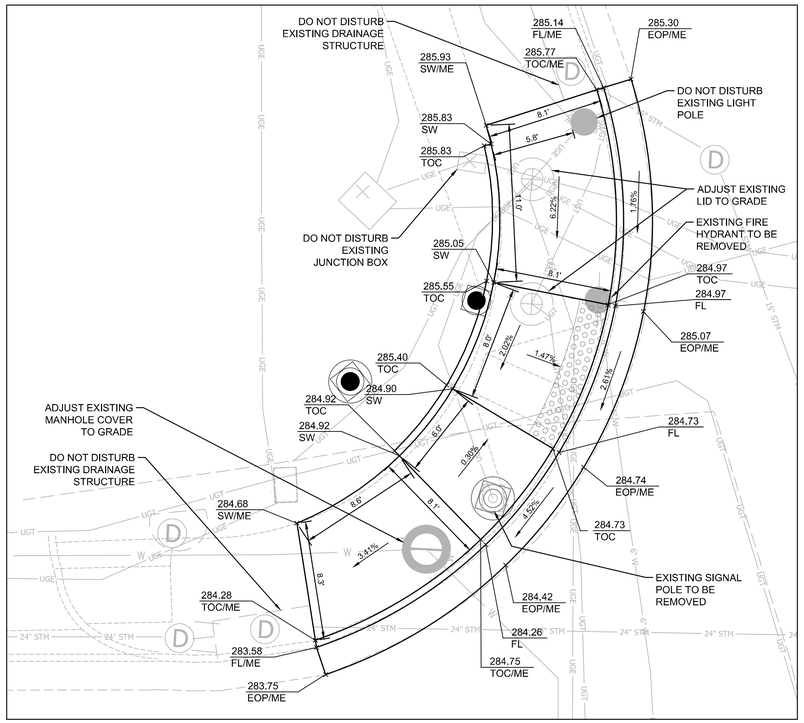
Scale:
HOR. N/A VERT. N/A

Sheet
C-0402

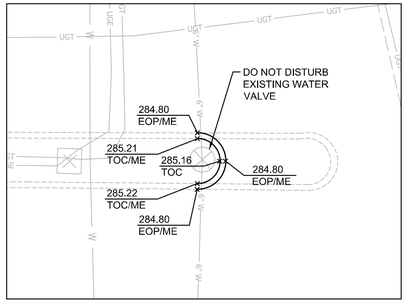
Filename: C-0400 PROPOSED PLAN AND PROFILE.dwg
Path: K:\NVA_TPTO\110\04\401 - Washington Blvd Signals \CAD\PlanSheets

REVISED: MARCH 03, 2020

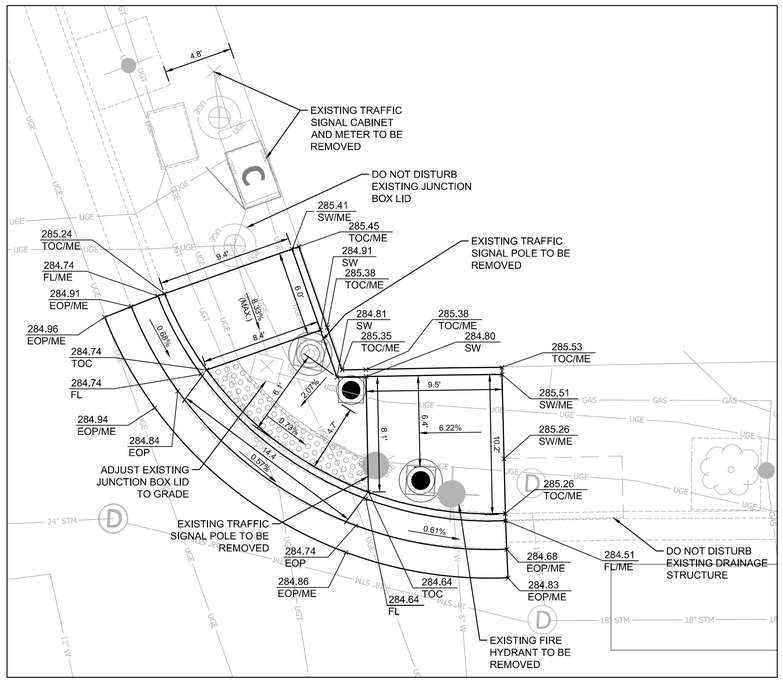
GRADING DETAIL - N. GLEBE RD - NW CORNER



GRADING DETAIL - N. GLEBE RD - WEST MEDIAN

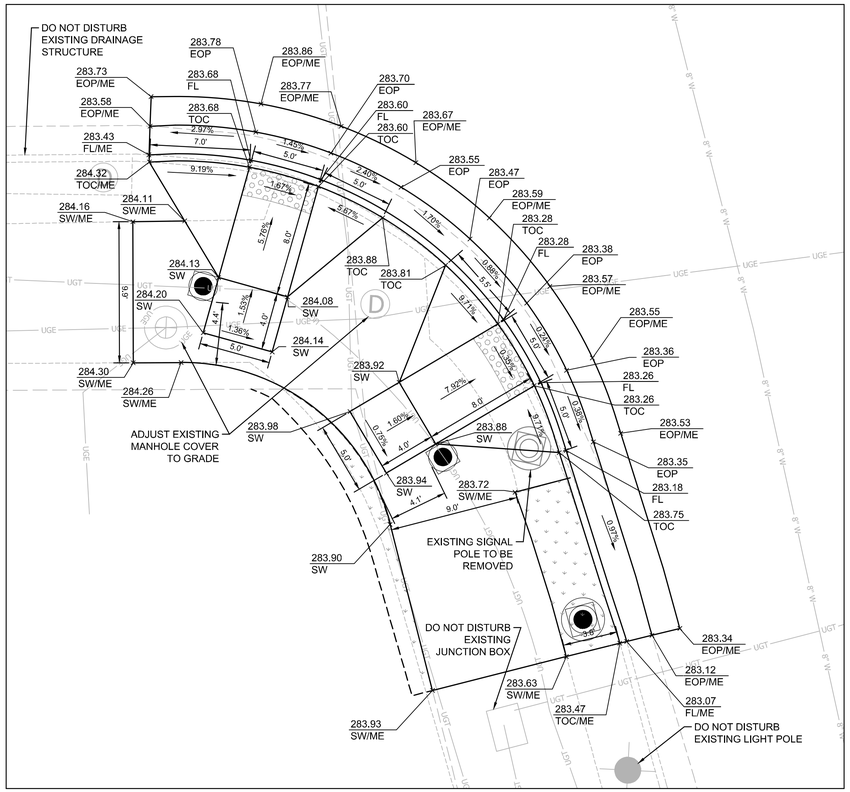


GRADING DETAIL - N. GLEBE RD - NE CORNER

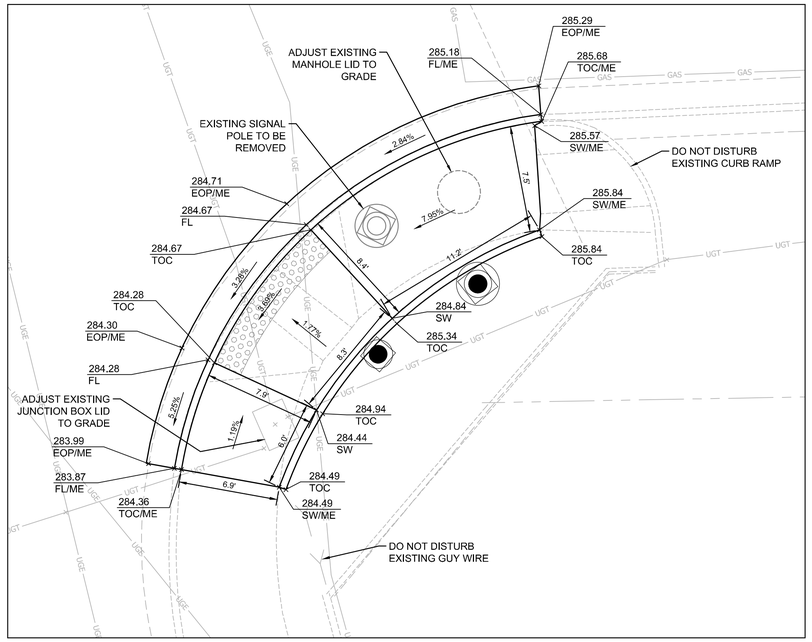


GRAPHIC SCALE IN FEET
0 2.5 5 10

GRADING DETAIL - N. GLEBE RD - SW CORNER



GRADING DETAIL - N. GLEBE RD - SE CORNER



GRADING LEGEND

EOP = EDGE OF PAVEMENT

FL = FLOWLINE

ME = MATCH EXISTING

SW = SIDEWALK

TOC = TOP OF CURB

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

RAMP DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0500

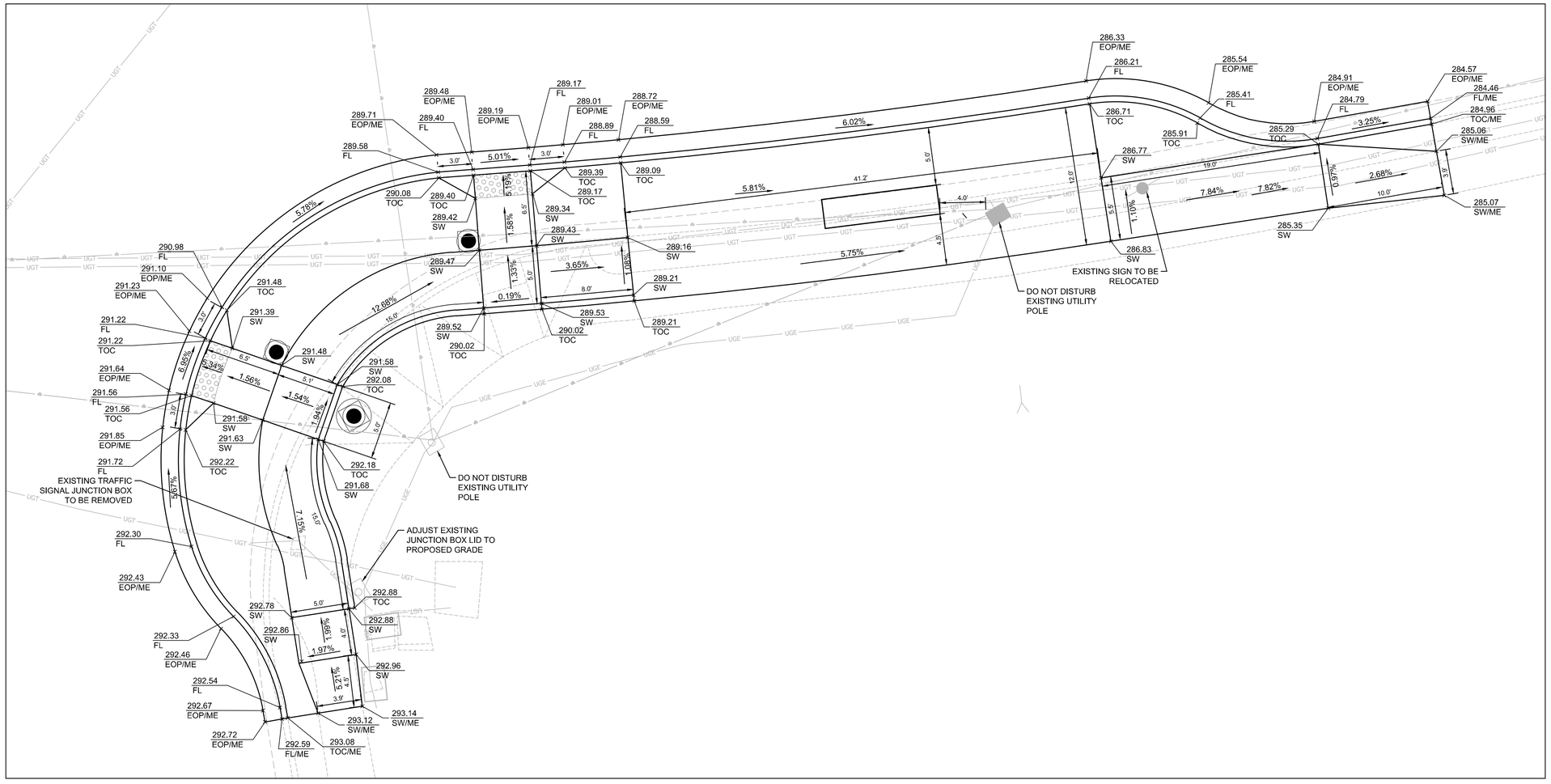
Filename: C-0500 RAMP DETAILS.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

Washington Boulevard Signal Upgrades (TR08)

REVISED: MARCH 03, 2020

GRAPHIC SCALE IN FEET
0 2.5 5 10

GRADING DETAIL - PATRICK HENRY DR - SE CORNER



GRADING LEGEND
EOP = EDGE OF PAVEMENT
FL = FLOWLINE
ME = MATCH EXISTING
SW = SIDEWALK
TOC = TOP OF CURB

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

RAMP DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 20, 2022
Plotted by: Patrick.Husted

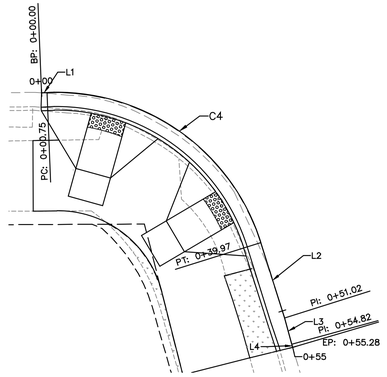
Scale:
HOR. N/A VERT. N/A

Sheet
C-0501

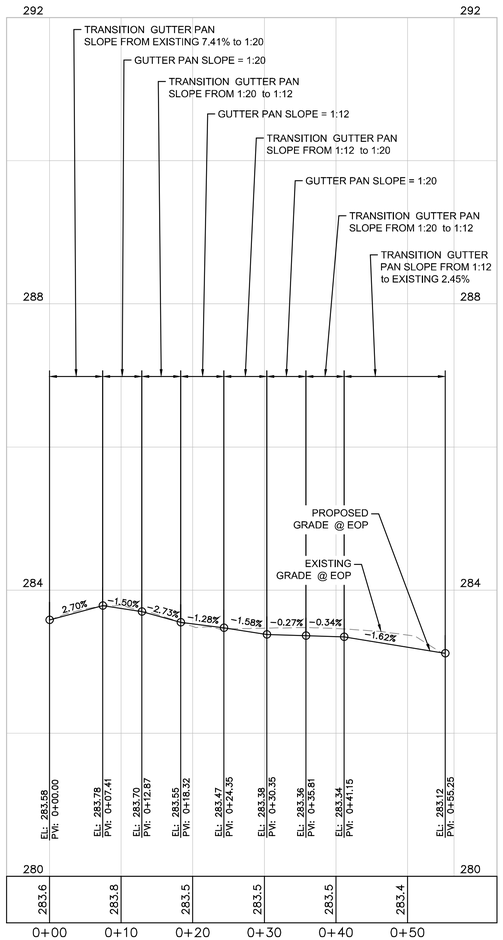
Filename: C-0501 RAMP DETAILS.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

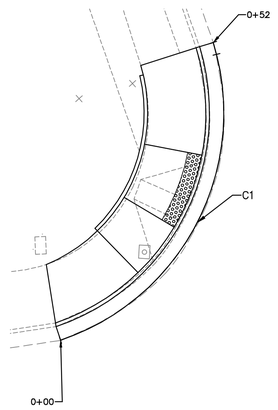
N. GLEBE RD
SW CORNER



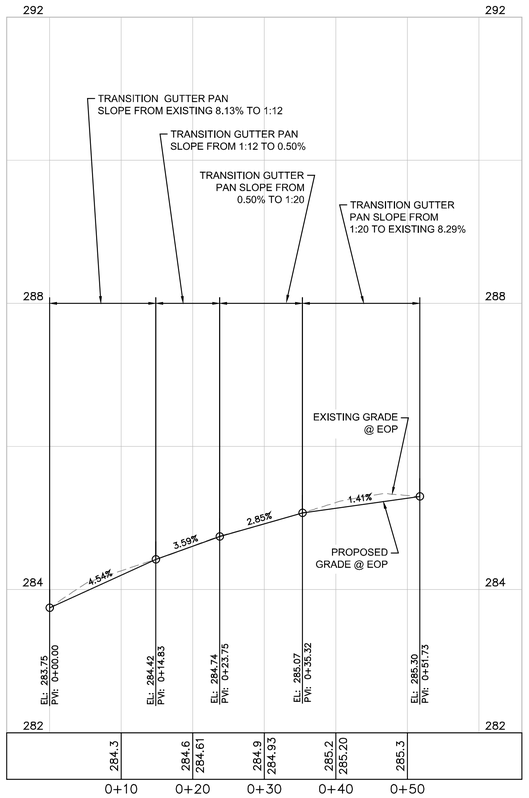
N. Glebe Rd – SW – EOP						
NO.	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA OR BRG	TANGENT
C4	30.0'	39.22'	S57° 56' 30.41"E	36.48	Δ=74° 54' 06"	22.98
L1		0.75'			N 84°36'27" E	
L2		11.05'			S 20°29'27" E	
L3		3.80'			S 18°19'07" E	
L4		0.45'			S 19°28'55" E	



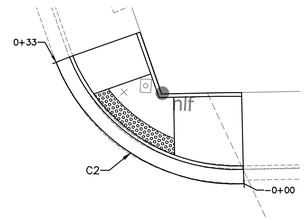
N. GLEBE RD
NW CORNER



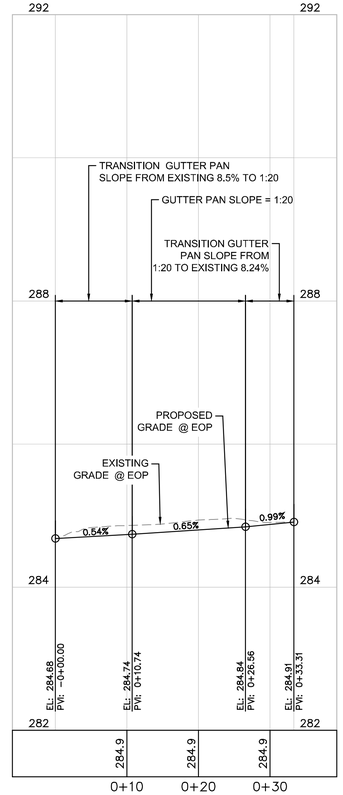
N. Glebe Rd – NW – EOP						
NO.	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA OR BRG	TANGENT
C1	33.5'	51.73'	N24° 08' 53.80"E	46.74	Δ=88° 28' 10"	32.62



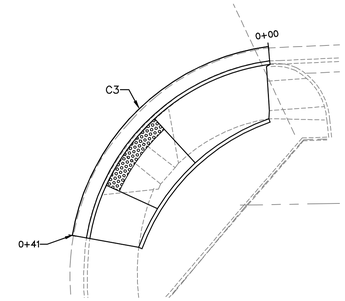
N. GLEBE RD
NE CORNER



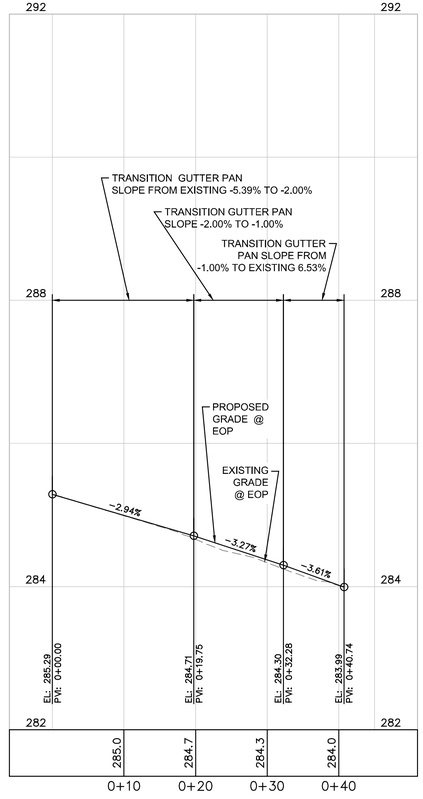
N. Glebe Rd – NE – EOP						
NO.	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA OR BRG	TANGENT
C2	27.0'	33.31'	N60° 08' 09.55"W	31.24	Δ=70° 41' 18"	19.15

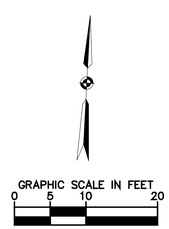


N. GLEBE RD
SE CORNER



N. Glebe Rd – SE – EOP						
NO.	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA OR BRG	TANGENT
C3	32.0'	40.74'	S43° 06' 50.37"W	38.05	Δ=72° 56' 55"	23.66





ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

CURB RETURN PROFILES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

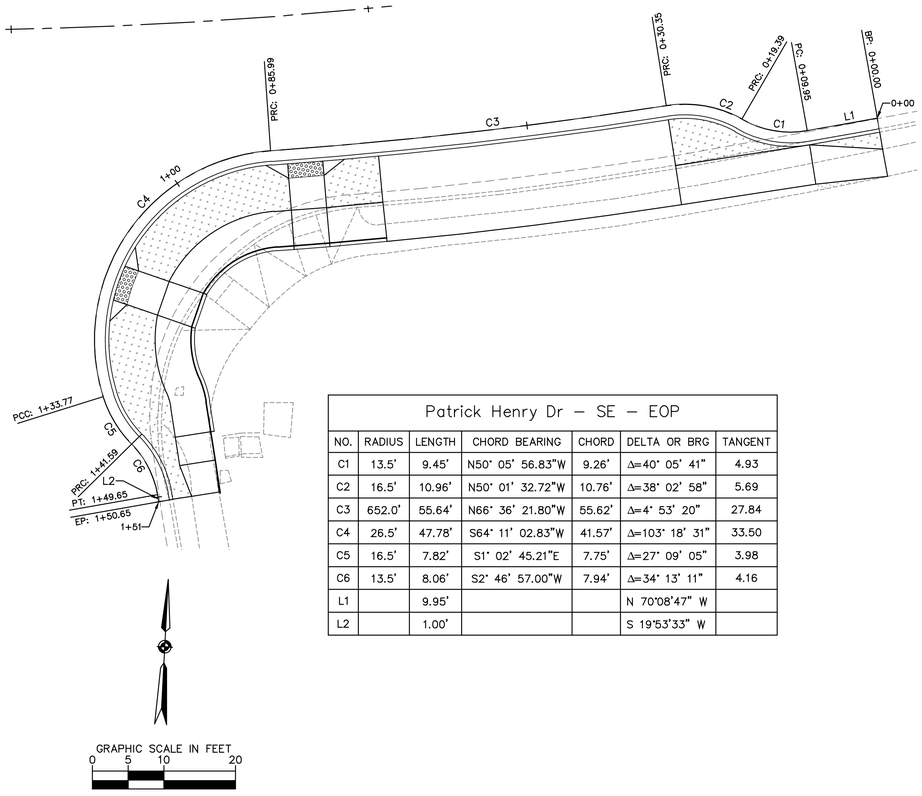
Scale:
HOR. N/A VERT. N/A

Sheet
C-0600

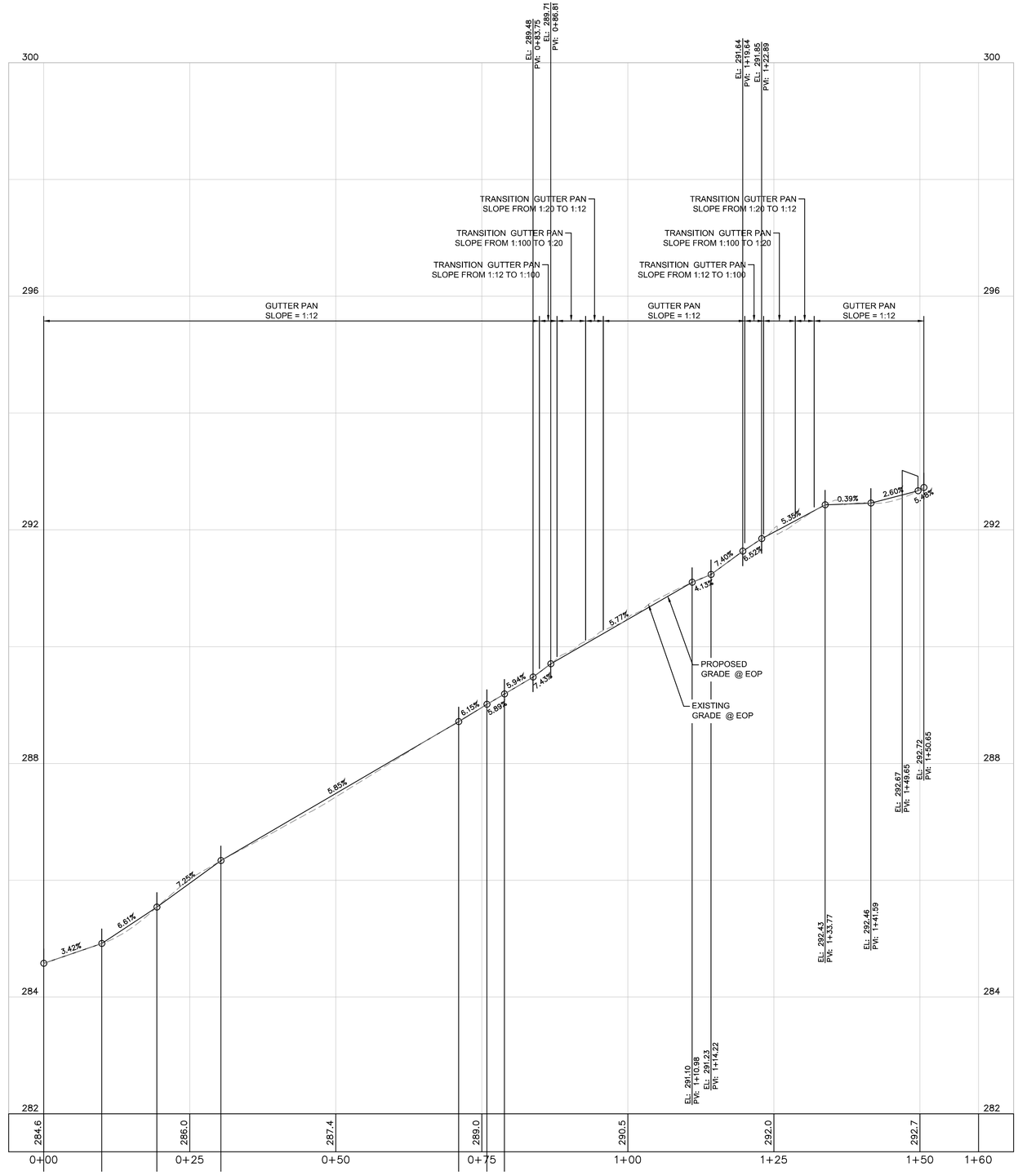
Filename: C-0600 CURB RETURN PROFILES.dwg
Path: K:\NVA_TPTO\110\04001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

PATRICK HENRY DRIVE
SE CORNER



Patrick Henry Dr – SE – EOP						
NO.	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA OR BRG	TANGENT
C1	13.5'	9.45'	N50° 05' 56.83"W	9.26'	Δ=40° 05' 41"	4.93
C2	16.5'	10.96'	N50° 01' 32.72"W	10.76'	Δ=38° 02' 58"	5.69
C3	652.0'	55.64'	N66° 36' 21.80"W	55.62'	Δ=4° 53' 20"	27.84
C4	26.5'	47.78'	S64° 11' 02.83"W	41.57'	Δ=103° 18' 31"	33.50
C5	16.5'	7.82'	S1° 02' 45.21"E	7.75'	Δ=27° 09' 05"	3.98
C6	13.5'	8.06'	S2° 46' 57.00"W	7.94'	Δ=34° 13' 11"	4.16
L1		9.95'			N 70°08'47" W	
L2		1.00'			S 19°53'33" W	



ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

CURB RETURN PROFILES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

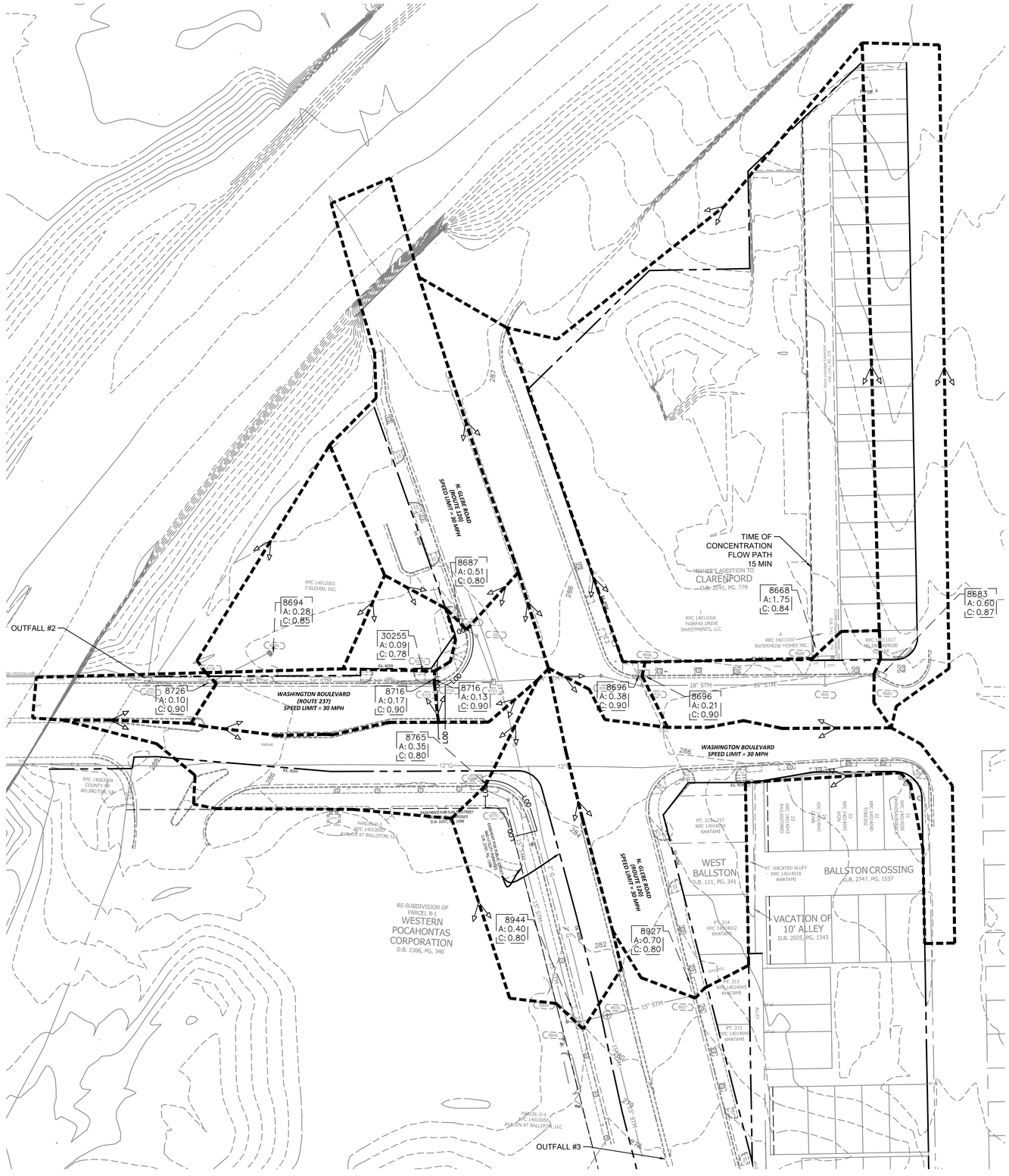
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0601

Filename: C-0601 CURB RETURN PROFILES.dwg
Path: K:\NVA_TPTO\106\4001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

DRAINAGE AREA BOUNDARY

FLOW PATH

STRUCTURE
AREA (AC)
RUNOFF COEFFICIENT

DRAINAGE AREA LABEL

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PRE DEVELOPMENT DRAINAGE DIVIDES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: DD
Drawn: NM
Checked: GG
Miss Utility Transmittal #:

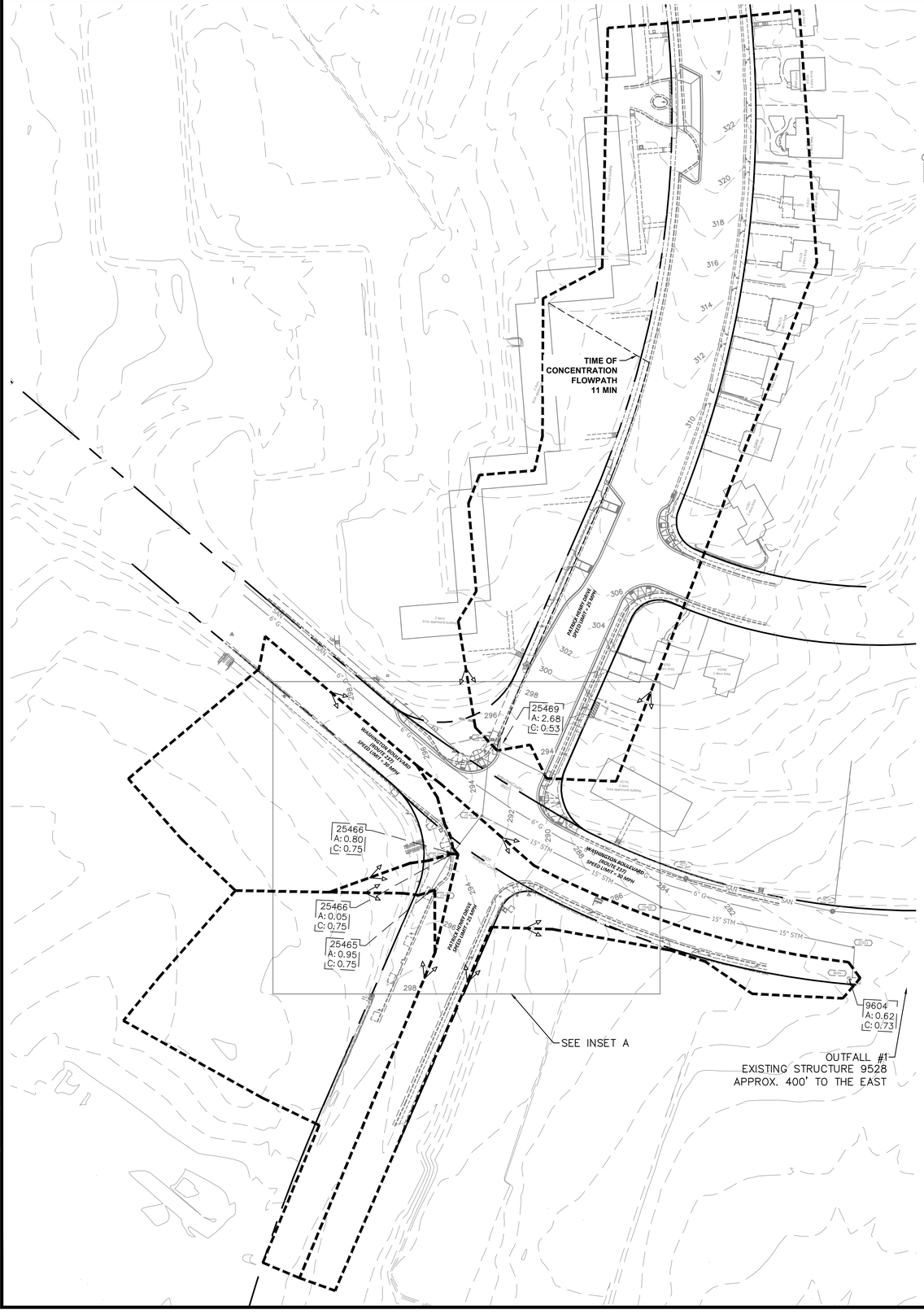
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0700

Filename: C-0700 STORMWATER.dwg
Path: K:\NVA_TPTO\110514001 - Washington Blvd Signals 3\CAD Plan Sheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 25 50 100

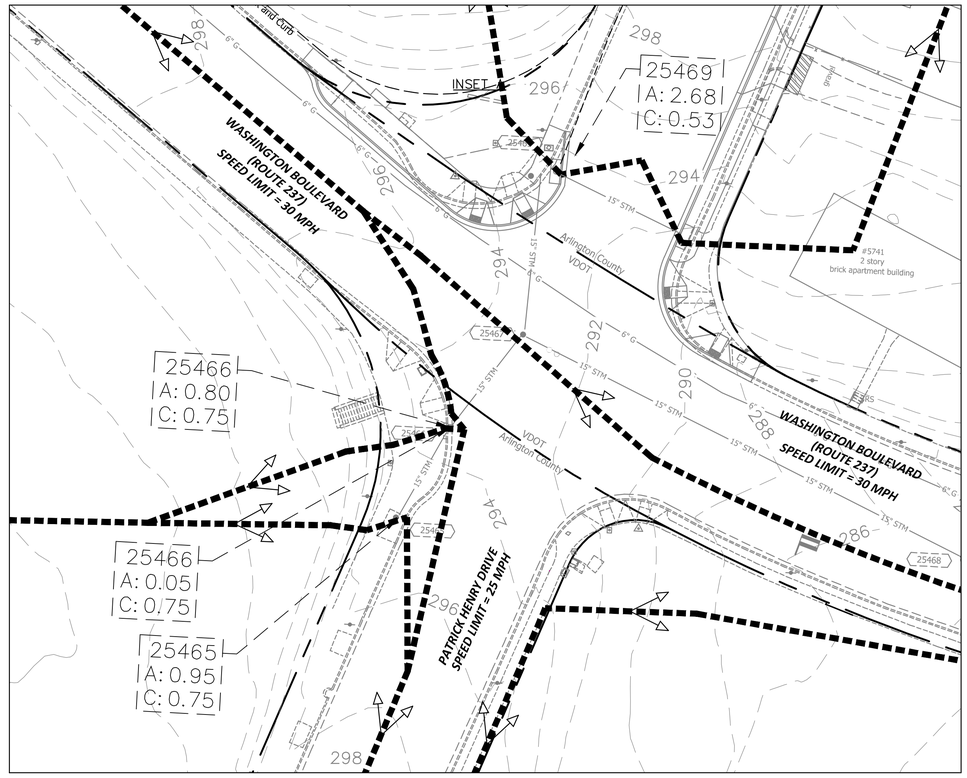
LEGEND

DRAINAGE AREA BOUNDARY

FLOW PATH

STRUCTURE
AREA (AC)
RUNOFF COEFFICIENT

DRAINAGE AREA LABEL



GRAPHIC SCALE IN FEET
0 12.5 25 50

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PRE DEVELOPMENT DRAINAGE DIVIDES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: DD
Drawn: NM
Checked: GG
Miss Utility Transmittal #:

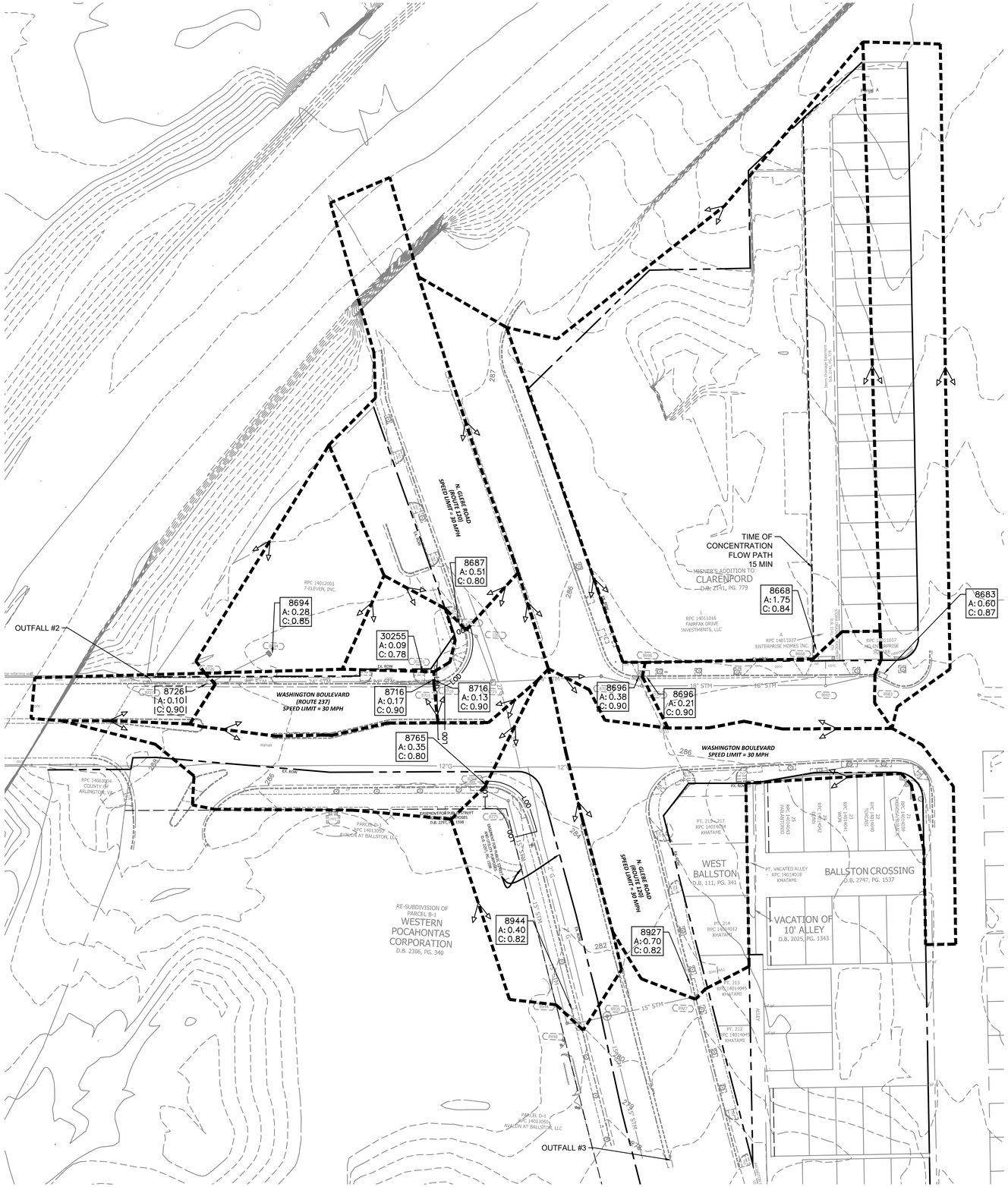
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

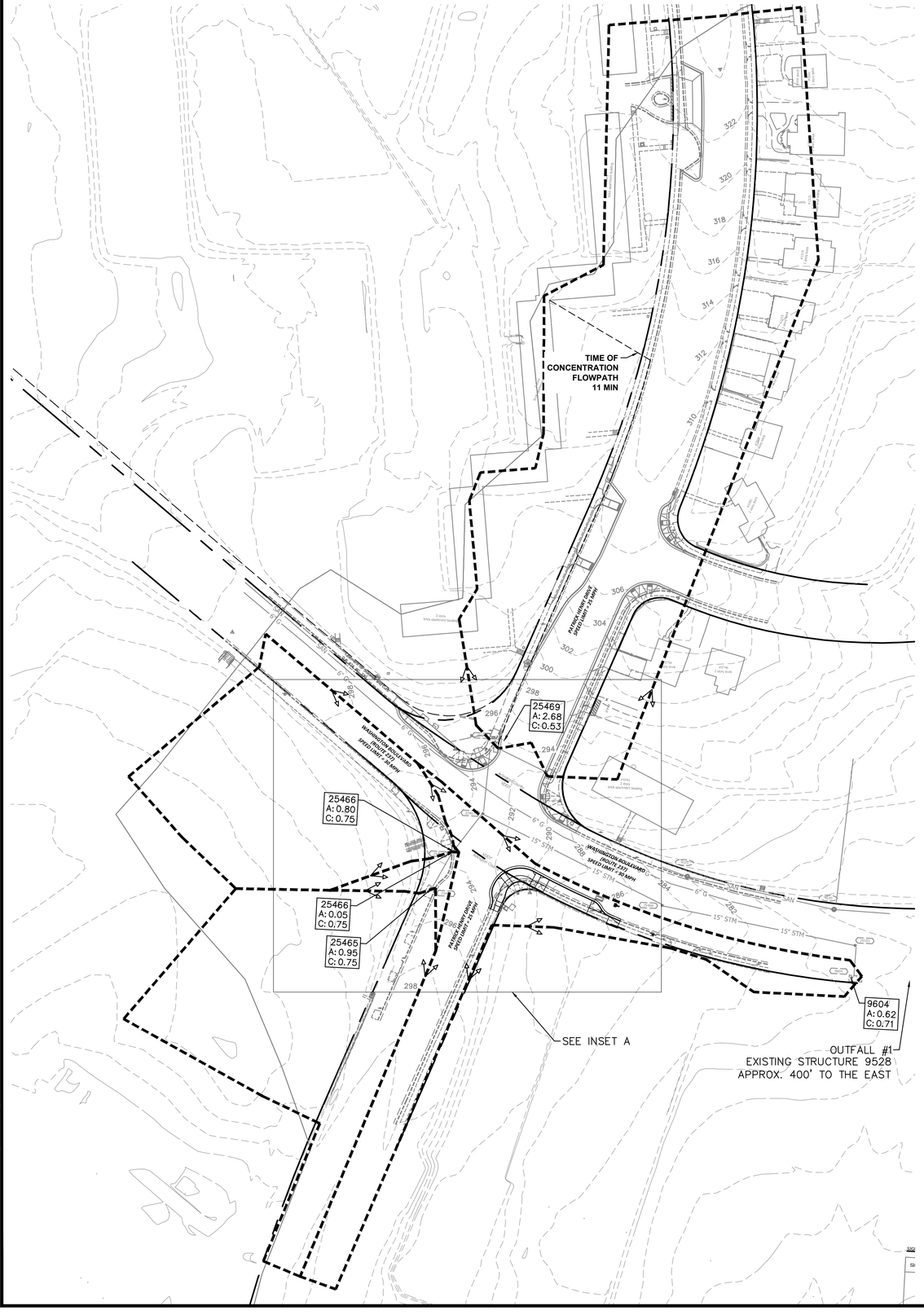
Sheet
C-0701

Filename: C-0701 STORMWATER.dwg
Path: K:\NVA_TPTO\110\14001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020


N GLEBE ROAD
(ROUTE 120)
SPEED LIMIT = 30 MPH
WASHINGTON BOULEVARD
(ROUTE 237)
SPEED LIMIT = 30 MPH
WASHINGTON BOULEVARD
SPEED LIMIT = 30 MPH
OUTFALL #2
OUTFALL #3
TIME OF CONCENTRATION FLOW PATH 15 MIN
8687
A: 0.51
C: 0.80
8694
A: 0.28
C: 0.85
30255
A: 0.09
C: 0.78
8726
A: 0.10
C: 0.90
8716
A: 0.17
C: 0.90
8716
A: 0.13
C: 0.90
8765
A: 0.35
C: 0.80
8696
A: 0.38
C: 0.90
8696
A: 0.21
C: 0.90
8668
A: 1.75
C: 0.84
8683
A: 0.60
C: 0.87
8944
A: 0.40
C: 0.82
8927
A: 0.70
C: 0.82
MISNER'S ADDITION TO CLARENDON
D.B. 2141, PG. 779
RPC 14012001
7-ELEVEN, INC.
RPC 14011016
FAIRFAX DRIVE INVESTMENTS, LLC
RPC 14011037
ENTERPRISE HOMES INC.
RPC 14063004
COUNTY OF ARLINGTON, VA
PARCEL D-1
RPC 14011029
AVALON AT BALLSTON, LLC
RE-SUBDIVISION OF PARCEL B-1
WESTERN POCAHONTAS CORPORATION
D.B. 2306, PG. 340
PARCEL D-1
RPC 14013050
AVALON AT BALLSTON, LLC
WEST BALLSTON
D.B. 111, PG. 341
BALLSTON CROSSING
D.B. 2747, PG. 1537
VACATION OF 10' ALLEY
D.B. 2025, PG. 1343
PT. VACATED ALLEY
RPC 14014018
KHATAMI
PT. 214
RPC 14014012
KHATAMI
PT. 213
RPC 14014045
KHATAMI
PT. 212
RPC 14014045
KHATAMI
PT. 217
RPC 14014054
KHATAMI
EASEMENT FOR PUBLIC STREET PURPOSES
D.B. 2747, PG. 1500
EASEMENT FOR PUBLIC STREET PURPOSES
INSTRUMENT #080021301
EX. ROW
EX. 12" WTR
EX. 8" WTR
EX. 15" STM
EX. 10" STM
EX. 8" SAN
EX. 6" SAN
EX. 4" GAS
EX. UGE
EX. OHE
EX. UGT
EX. UGC
EX. TEL
EX. CATV
EX. FIBER OPTIC
EX. CURB
EX. SIDEWALK
EX. ASPHALT
EX. CONCRETE
EX. BUILDING
EX. TREE
EX. CONTOUR
EX. SPOT ELEVATION
EX. MANHOLE
EX. INLET
EX. CATCH BASIN
EX. UTILITY POLE
EX. GUY WIRE
EX. LIGHT POLE
EX. TRAFFIC SIGNAL
EX. TRAFFIC SIGNAL CONTROLLER
EX. TRAFFIC SIGNAL CABINET
EX. TRAFFIC SIGNAL JUNCTION BOX
EX. TRAFFIC SIGNAL HANDHOLE
EX. TRAFFIC SIGNAL POLE
EX. TRAFFIC SIGNAL MAST ARM
EX. TRAFFIC SIGNAL SPAN WIRE
EX. TRAFFIC SIGNAL PEDESTRIAN HEAD
EX. TRAFFIC SIGNAL VEHICULAR HEAD
EX. TRAFFIC SIGNAL BACKPLATE
EX. TRAFFIC SIGNAL PEDESTRIAN PUSH BUTTON
EX. TRAFFIC SIGNAL VIDEO DETECTION CAMERA
EX. TRAFFIC SIGNAL VIDEO DETECTION ZONE
EX. TRAFFIC SIGNAL LOOP DETECTOR
EX. TRAFFIC SIGNAL PEDESTRIAN DETECTOR
EX. TRAFFIC SIGNAL EMERGENCY VEHICLE PREEMPTION DETECTOR
EX. TRAFFIC SIGNAL EMERGENCY VEHICLE PREEMPTION EMITTER
EX. TRAFFIC SIGNAL TRANSIT VEHICLE PRIORITY DETECTOR
EX. TRAFFIC SIGNAL TRANSIT VEHICLE PRIORITY EMITTER
EX. TRAFFIC SIGNAL INTERCONNECT
EX. TRAFFIC SIGNAL FIBER OPTIC
EX. TRAFFIC SIGNAL COPPER
EX. TRAFFIC SIGNAL WIRELESS
EX. TRAFFIC SIGNAL ETHERNET
EX. TRAFFIC SIGNAL POWER
EX. TRAFFIC SIGNAL GROUND
EX. TRAFFIC SIGNAL CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND FIBER OPTIC
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND COPPER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND WIRELESS
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND ETHERNET
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND POWER
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND GROUND
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT AND CONDUIT BANK WITH INNERDUCT
EX. TRAFFIC SIGNAL CONDUIT BANK WITH INNERDUCT AND

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

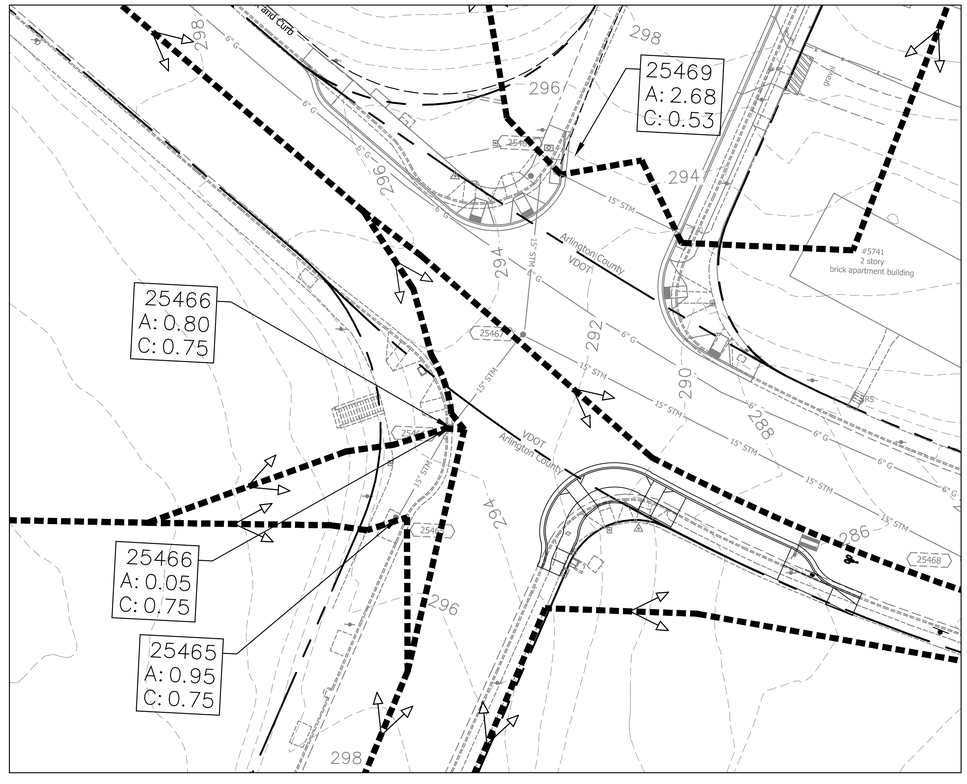
DRAINAGE AREA BOUNDARY

FLOW PATH

STRUCTURE
AREA (AC)
RUNOFF COEFFICIENT

DRAINAGE AREA LABEL

INSET A



GRAPHIC SCALE IN FEET
0 12.5 25 50

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades
POST DEVELOPMENT DRAINAGE DIVIDES
ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: DD
Drawn: NM
Checked: GG
Miss Utility Transmittal #:

Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0711

Filename: C-0701 STORMWATER.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

Project: Washington Boulevard Signal Improvements
Locality: Arlington County
Pre-development Storm Drain Design Calculations **Date:** 12/13/2021
VDOT LD-229 **Project No.:** 110614001
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.

FROM POINT	TO POINT	DRAINAGE AREA	RUNOFF COEFFICIENT	CA		INLET TIME	RAINFALL	RUNOFF	INVERT ELEVATIONS		LENGTH	SLOPE	SIZE	PIPE CAPACITY	Q / Q_f	VELOCITY	FLOW TIME	
				inlet	accum				upper end	lower end							incr	accum
		acres	C			min	in/hr	cfs	ft	ft	ft	%	in	cfs	%	fps	min	
9604	9528	0.62	0.73	0.45	3.22	5.00	5.18	16.82	273.50	270.50	135	2.20%	15	9.63	175%	13.71	0.16	11.52
25553	9604	(N/A)	(N/A)	0.00	2.77	0.00	5.18	14.48	273.87	273.60	27	1.00%	15	6.48	223%	11.80	0.09	11.48
25468	25553	(N/A)	(N/A)	0.00	2.77	0.00	5.23	14.60	278.01	273.97	169	2.40%	15	9.99	146%	11.89	0.35	11.24
25467	25468	2.68	0.53	1.42	2.77	11.00	5.27	14.72	283.27	278.99	173	2.50%	15	10.17	145%	12.00	0.35	11.00
25466	25467	1.80	(N/A)	0.00	1.35	5.00	6.79	9.24	286.14	284.15	41	4.80%	15	14.18	65%	7.53	0.06	5.00
8726	8727	0.38	(N/A)	0.00	3.60	5.00	4.54	16.45	277.84	277.07	46	1.70%	24	29.35	56%	9.61	0.08	15.71
8715	8726	0.09	0.78	0.07	3.27	5.00	4.58	15.10	279.58	277.90	158	1.10%	24	23.31	65%	7.89	0.33	15.38
8716	8715	0.30	(N/A)	0.00	3.20	5.00	4.58	14.78	279.64	279.46	6	3.00%	24	39.37	38%	11.64	0.01	15.37
8721	8716	0.51	0.80	0.41	2.93	5.00	4.59	13.57	280.66	280.32	44	0.80%	24	20.01	68%	6.84	0.11	15.26
8701	8721	(N/A)	(N/A)	0.00	2.52	0.00	4.62	11.75	280.90	280.12	80	1.00%	24	22.32	53%	7.20	0.19	15.08
8710	8701	2.35	(N/A)	0.00	2.52	15.00	4.63	11.77	281.36	281.23	31	0.40%	18	6.81	173%	6.66	0.08	15.00
8696	8710	0.59	(N/A)	0.00	0.53	5.00	6.79	3.63	282.57	282.01	10	5.70%	15	15.47	23%	10.30	0.02	5.00
8935	9093	(N/A)	(N/A)	0.00	1.16	0.00	6.71	7.85	276.40	272.50	151	2.60%	15	10.38	76%	9.30	0.27	5.22
8927	8935	0.70	0.80	0.56	0.56	5.00	6.79	3.83	277.30	276.75	68	0.80%	15	5.81	66%	5.05	0.22	5.00
8944	8935	0.40	0.80	0.32	0.60	5.00	6.78	4.10	277.20	276.58	22	2.90%	15	10.94	37%	8.28	0.04	5.02

Project: Washington Boulevard Signal Improvements
Locality: Arlington County
Pre-development Hydraulic Grade Line Calculations **Date:** 12/13/2021
VDOT LD-347 **Project #:** 110614001
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.

INLET	0.8D + INV (OUT)	ACTUAL OUTLET WSE	DESIGN OUTLET WSE	D_o	Q_o	L_o	S_{fo}	H_f	JUNCTION LOSS												FINAL H	INLET WSE	RIM ELEV	AVAILABLE FREEBOARD
									V_o	H_o	Q_i	V_i	Q_iV_i	$\frac{V_i^2}{2g}$	H_i	Angle	H_b	H_t	1.3 H_t	0.5 H_t				
(1)			(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
9604	271.50	271.50	271.50	15	16.82	135	0.068	9.18	13.71	0.73	14.48	11.80	170.86	2.16	0.76	93.99	1.55	3.03	3.94	1.97	11.15	278.83	278.83	0.00
25553	274.60	278.83	278.83	15	14.48	27	0.050	1.34	11.80	0.54	14.60	11.89	173.59	2.20	0.77	80.67	1.46	2.76	2.76	1.38	2.72	278.87	278.87	0.00
25468	274.97	278.87	278.87	15	14.60	169	0.051	8.62	11.89	0.55	14.72	12.00	176.64	2.24	0.78	15.36	0.43	1.77	1.77	0.88	9.50	284.75	284.75	0.00
25467	279.99	284.75	284.75	15	14.72	173	0.052	8.99	12.00	0.56	9.24	7.53	69.58	0.88	0.31	79.10	0.58	1.44	1.88	0.94	9.92	292.99	292.99	0.00
25466	285.15	292.99	292.99	15	9.24	41	0.020	0.83	7.53	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.34	0.17	1.00	292.97	292.97	0.00
8726	278.67	278.67	278.67	24	16.45	46	0.016	0.73	9.61	0.36	15.10	5.53	83.50	0.47	0.17	0.36	0.00	0.53	0.69	0.34	1.07	279.74	287.00	7.26
8715	279.50	0.00	279.50	24	15.10	158	0.010	1.58	7.89	0.24	14.78	5.22	77.15	0.42	0.15	5.46	0.03	0.42	0.42	0.21	1.79	281.29	286.41	5.12
8716	281.06	281.29	281.29	24	14.78	6	0.014	0.08	11.64	0.53	13.57	7.88	106.93	0.96	0.34	6.22	0.08	0.94	1.22	0.61	0.69	281.99	284.24	2.25
8721	281.92	281.99	281.99	24	13.57	44	0.007	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	282.29	285.03	2.74
8701	281.72	282.29	282.29	24	11.75	80	0.004	0.32	7.20	0.20	11.77	7.66	90.16	0.91	0.32	16.28	0.19	0.71	0.71	0.35	0.67	282.96	285.03	2.07
8710	282.43	282.96	282.96	18	11.77	31	0.012	0.37	6.66	0.17	3.63	2.97	10.78	0.14	0.05	108.56	0.11	0.33	0.42	0.21	0.58	283.55	285.11	1.56
8696	283.01	283.55	283.55	15	3.63	10	0.030	0.29	10.30	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.64	0.32	0.62	284.16	285.67	1.51
8935	273.50	273.50	273.50	15	7.85	151	0.024	3.62	9.30	0.34	3.83	3.77	14.44	0.22	0.08	90.93	0.16	0.57	0.57	0.28	3.91	277.41	280.51	3.10
8944	277.58	277.41	277.58	15	4.10	22	0.022	0.48	8.28	0.27	1.92	2.21	4.24	0.08	0.03	13.00	0.01	0.31	0.40	0.20	0.67	278.25	280.45	2.20
8948	278.27	278.25	278.27	15	1.92	9	0.016	0.14	7.04	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.30	0.15	0.29	278.56	280.80	2.24	
8927	277.75	277.41	277.75	15	3.83	68	0.007	0.48	5.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.15	0.08	0.55	278.30	280.76	2.46	

Project: Washington Boulevard Signal Improvements
Locality: Arlington County
Post-development Storm Drain Design Calculations **Date:** 12/13/2021
VDOT LD-229 **Project No.:** 110614001
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.

FROM POINT	TO POINT	DRAINAGE AREA	RUNOFF COEFFICIENT	CA		INLET TIME	RAINFALL	RUNOFF	INVERT ELEVATIONS		LENGTH	SLOPE	SIZE	PIPE CAPACITY	Q / Q_f	VELOCITY	FLOW TIME	
				inlet	accum				upper end	lower end							incr	accum
		acres	C			min	in/hr	cfs	ft	ft	ft	%	in	cfs	%	fps	min	
9604	9528	0.62	0.71	0.44	3.21	5.00	5.18	16.75	273.50	270.50	135	2.20%	15	9.63	174%	13.65	0.17	11.52
25553	9604	(N/A)	(N/A)	0.00	2.77	0.00	5.18	14.48	273.87	273.60	27	1.00%	15	6.48	223%	11.80	0.09	11.48
25468	25553	(N/A)	(N/A)	0.00	2.77	0.00	5.23	14.60	278.01	273.97	169	2.40%	15	9.99	146%	11.89	0.35	11.24
25467	25468	2.68	0.53	1.42	2.77	11.00	5.27	14.72	283.27	278.99	173	2.50%	15	10.17	145%	12.00	0.35	11.00
25466	25467	1.80	(N/A)	0.00	1.35	5.00	6.79	9.24	286.14	284.15	41	4.80%	15	14.18	65%	7.53	0.06	5.00
8726	8727	0.38	(N/A)	0.00	3.60	5.00	4.54	16.45	277.84	277.07	46	1.70%	24	29.35	56%	9.61	0.08	15.71
8715	8726	0.09	0.78	0.07	3.27	5.00	4.58	15.10	279.58	277.90	158	1.10%	24	23.31	65%	7.89	0.33	15.38
8716	8715	0.30	(N/A)	0.00	3.20	5.00	4.58	14.78	279.64	279.46	6	3.00%	24	39.37	38%	11.64	0.01	15.37
8721	8716	0.51	0.80	0.41	2.93	5.00	4.59	13.57	280.66	280.32	44	0.80%	24	20.01	68%	6.84	0.11	15.26
8701	8721	(N/A)	(N/A)	0.00	2.52	0.00	4.62	11.75	280.90	280.12	80	1.00%	24	22.32	53%	7.20	0.19	15.08
8710	8701	2.35	(N/A)	0.00	2.52	15.00	4.63	11.77	281.36	281.23	31	0.40%	18	6.81	173%	6.66	0.08	15.00
8696	8710	0.59	(N/A)	0.00	0.53	5.00	6.79	3.63	282.57	282.01	10	5.70%	15	15.47	23%	10.30	0.02	5.00
8935	9093	(N/A)	(N/A)	0.00	1.18	0.00	6.71	8.00	276.40	272.50	151	2.60%	15	10.38	77%	9.33	0.27	5.22
8927	8935	0.70	0.82	0.57	0.57	5.00	6.79	3.93	277.30	276.75	68	0.80%	15	5.81	68%	5.08	0.22	5.00
8944	8935	0.40	0.82	0.33	0.61	5.00	6.78	4.16	277.20	276.58	22	2.90%	15	10.94	38%	8.31	0.04	5.02
8948	8944	0.35	0.80	0.28	0.28	5.00	6.79	1.92	277.55	277.27	9	3.30%	15	11.72	16%	7.04	0.02	5.00

Project: Washington Boulevard Signal Improvements
Locality: Arlington County
Post-development Hydraulic Grade Line Calculations **Date:** 12/13/2021
VDOT LD-347 **Project #:** 110614001
Designed By/Checked: Nicole McVey, P.E. / Derik Doughty, P.E.

INLET	0.8D + INV (OUT)	ACTUAL OUTLET WSE	DESIGN OUTLET WSE	D_o	Q_o	L_o	S_{fo}	H_f	JUNCTION LOSS												FINAL H	INLET WSE	RIM ELEV	AVAILABLE FREEBOARD
									V_o	H_o	Q_i	V_i	Q_iV_i	$\frac{V_i^2}{2g}$	H_i	Angle	H_b	H_t	1.3 H_t	0.5 H_t				
(1)			(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
9604	271.50	271.50	271.50	15	16.75	135	0.067	9.05	13.65	0.72	14.48	11.80	170.86	2.16	0.76	93.99	1.55	3.03	3.94	1.97	11.01	278.83	278.83	0.00
25553	274.60	278.83	278.83	15	14.48	27	0.050	1.34	11.80	0.54	14.60	11.89	173.59	2.20	0.77	80.67	1.46	2.76	2.76	1.38	2.72	278.87	278.87	0.00
25468	274.97	278.87	278.87	15	14.60	169	0.051	8.62	11.89	0.55	14.72	12.00	176.64	2.24	0.78	15.36	0.43	1.77	1.77	0.88	9.50	284.75	284.75	0.00
25467	279.99	284.75	284.75	15	14.72	173	0.052	8.99	12.00	0.56	9.24	7.53	69.58	0.88	0.31	79.10	0.58	1.44	1.88	0.94	9.92	292.99	292.99	0.00
25466	285.15	292.99	292.99	15	9.24	41	0.020	0.83	7.53	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.34	0.17	1.00	292.97	292.97	0.00
8726	278.67	278.67	278.67	24	16.45	46	0.016	0.73	9.61	0.36	15.10	5.53	83.50	0.47	0.17	0.36	0.00	0.53	0.69	0.34	1.07	279.74	287.00	7.26
8715	279.50	279.74	279.74	24	15.10	158	0.010	1.58	7.89	0.24	14.78	5.22	77.15	0.42	0.15	5.46	0.03	0.42	0.42	0.21	1.79	281.54	286.41	4.87
8716	281.06	281.54	281.54	24	14.78	6	0.014	0.08	11.64	0.53	13.57	7.88	106.93	0.96	0.34	6.22	0.08	0.94	1.22	0.61	0.69	282.23	284.24	2.01
8721	281.92	282.23	282.23	24	13.57	44	0.007	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	282.53	285.03	2.50
8701	281.72	282.53	282.53	24	11.75	80	0.004	0.32	7.20	0.20	11.77	7.66	90.16	0.91	0.32	16.28	0.19	0.71	0.71	0.35	0.67	283.21	285.03	1.82
8710	282.43	283.21	283.21	18	11.77	31	0.012	0.37	6.66	0.17	3.63	2.97	10.78	0.14	0.05	108.56	0.11	0.33	0.42	0.21	0.58	283.79	285.11	1.32
8696	283.01	283.79	283.79	15	3.63	10	0.030	0.29	10.30	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.64	0.32	0.62	284.41	285.67	1.26	
8935	273.50	273.50	273.50	15	8.00	151	0.024	3.62	9.33	0.34	3.93	3.82	15.01	0.23	0.08	90.93	0.16	0.58	0.58	0.29	3.91	277.41	280.51	3.10
8944	277.58	277.41	277.58	15	4.16	22	0.022	0.48	8.31	0.27	1.92	2.19	4.20	0.07	0.03	13.00	0.01	0.31	0.40	0.20	0.67	278.25	280.45	2.20
8948	278.27	278.25	278.27	15	1.92	9	0.015	0.13	7.04	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.30	0.15	0.28	278.55	280.80	2.25	
8927	277.75	277.41	277.75	15	3.93	68	0.007	0.48	5.08	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.16	0.08	0.55	278.30	280.76	2.46	

Time of Concentration

Project: Washington Boulevard		By: NLM	Date: 2/26/20
Location: Arlington County		Checked: DCD	Date: 2/26/20
Scenario: X Pre-development X Post-development		Basin:	EX 8668
Check One: X Tc	Tt through subarea		

	Segment ID			
1. Surface description (table 3-1)		SF-1		
2. Mannings roughness coefficient, n (table 3-1)		Asphalt		
3. Flow Length, L (total $L \leq 100$ ft)	ft	0.011		
4. Two-year 24-hour rainfall, P_2	in	460		
5. Land Slope,	ft/ft	3.17		
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,S^{0.4}}$ Compute T_t	hr	0.003		Total
		0.147		0.15
7. Surface description (paved or unpaved)		SCF-1		
8. Flow length, L	ft	Paved		
9. Watercourse slope, s	ft/ft	0		
10. Average velocity, V (figure 3-1)	ft/s	0.06		
11. $T_t = \frac{L}{3600\,V}$ Compute T_t	hr	4		Total
		0.00		0.00
12. Cross sectional flow area, a	ft^2	CF-1		
13. Wetted perimeter, pw	ft	1.77		
14. Hydraulic radius, r = a / pw Compute r	ft	4.71		
15. Channel slope, s	ft/ft	0.376		
16. Manning's roughness coefficient, n		0.0003		
17. $V = \frac{1.49\,r^{2/3}\,s^{1/2}}{n}$ Compute V	ft/s	0.013		
18. Flow length, L	ft	1.03		
19. $T_t = \frac{L}{3600\,V}$ Compute T_t	hr	333		
		0.09		Total
20. Watershed or subarea T_c or T_t (add T_t in steps 6,11, and 19)				0.09
				Hr. 0.24
				Min. 14.18
				Design (min.) 15

Time of Concentration

Project: Washington Boulevard		By: NLM	Date: 2/26/20
Location: Arlington County		Checked: DCD	Date: 2/26/20
Scenario: X Pre-development X Post-development		Basin:	EX 25469
Check One: X Tc	Tt through subarea		

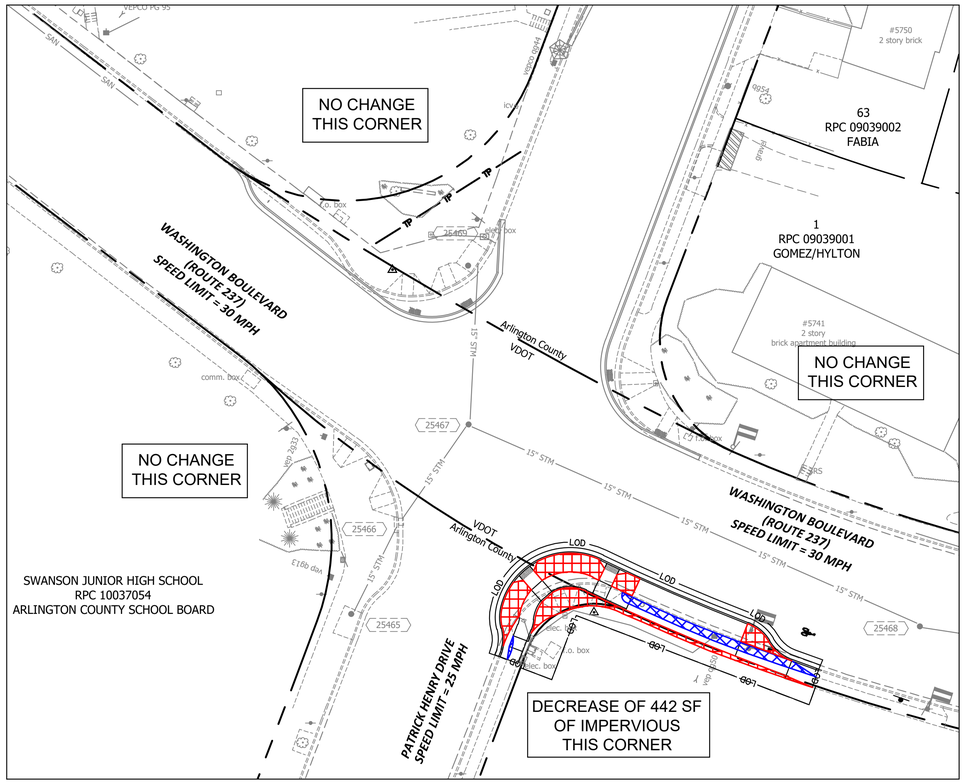
	Segment ID			
1. Surface description (table 3-1)		SF-1		
2. Mannings roughness coefficient, n (table 3-1)		Grass		
3. Flow Length, L (total $L \leq 100$ ft)	ft	0.2		
4. Two-year 24-hour rainfall, P_2	in	100		
5. Land Slope,	ft/ft	3.17		
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,S^{0.4}}$ Compute T_t	hr	0.04		Total
		0.157		0.16
7. Surface description (paved or unpaved)		SCF-1		
8. Flow length, L	ft	Paved		
9. Watercourse slope, s	ft/ft	102		
10. Average velocity, V (figure 3-1)	ft/s	0.02		
11. $T_t = \frac{L}{3600\,V}$ Compute T_t	hr	4		Total
		0.01		0.01
12. Cross sectional flow area, a	ft^2	CF-1		
13. Wetted perimeter, pw	ft	1.23		
14. Hydraulic radius, r = a / pw Compute r	ft	3.93		
15. Channel slope, s	ft/ft	0.313		
16. Manning's roughness coefficient, n		0.06		
17. $V = \frac{1.49\,r^{2/3}\,s^{1/2}}{n}$ Compute V	ft/s	0.013		
18. Flow length, L	ft	12.94		
19. $T_t = \frac{L}{3600\,V}$ Compute T_t	hr	252		
		0.01		Total
20. Watershed or subarea T_c or T_t (add T_t in steps 6,11, and 19)				0.01
				Hr. 0.17
				Min. 10.14
				Design (min.) 11

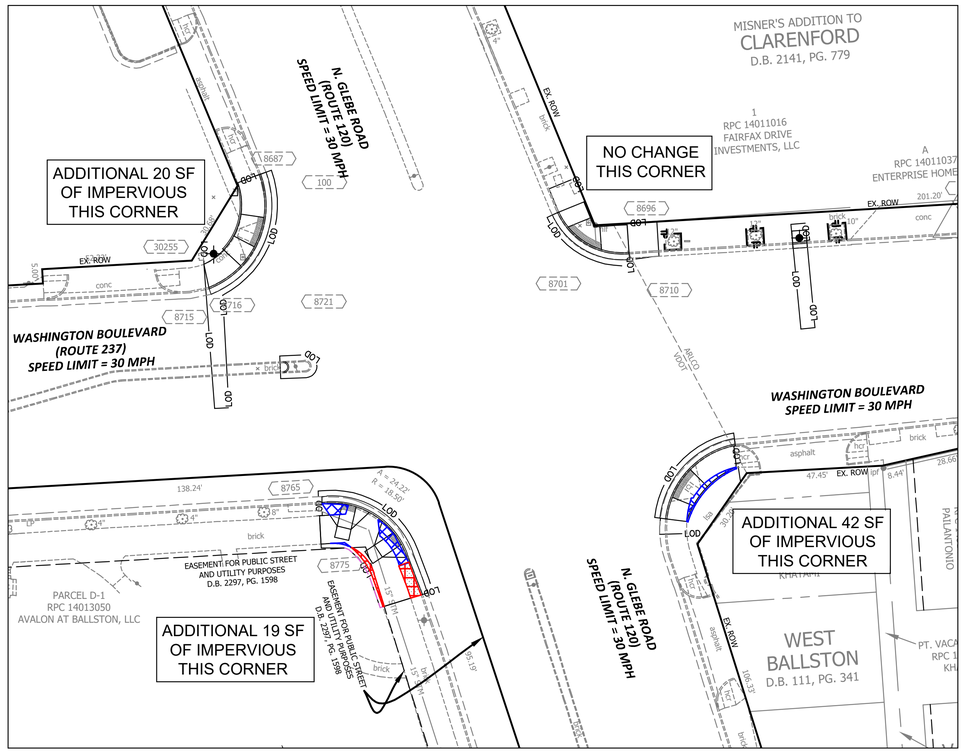
LD-204 Stormwater Inlet Computations

LD-204 Rev. 6-85 — PROJ # 110614001.00 — PROJ Washington Boulevard Signal Improvements — DATE December 9, 2021 — SHEET 1 OF 1
DESIGNED/CHECKED Derik Doughty, P.E./Mike Albright, P.E

INLET																								Sag Inlets Only		
NUMBER	TYPE	LENGTH (FT)	STATION	DRAINAGE AREA (AC)	C	CA	sum CA	I (IN/HR)	Q INCR (CFS)	Q_a, CARRYOVER (CFS)	Q_T, GUTTER FLOW (CFS)	S, GUTTER SLOPE (FT/FT)	S_X, CROSS SLOPE (FT/FT)	T, SPREAD (FT)	W (FT)	W/T	S_W, (FT/FT)	S_W/S_X	E_o	a = 12W(S_W - S_X)+Local Depression	S_W = a/(12w)	S_e = S_X + S_W(E/S_i), (FT/FT)	COMPUTED LENGTH, L_T (FT)	L, SPECIFIED LENGTH (FT)	L/L_T	E	Q_i, INTERCEPTED (CFS)	Q_b, CARRYOVER (CFS)	d (FT)	h (FT)	d/h	T, SPREAD @ SAG (FT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
EXISTING - ON GRADE																																
9604	EXISTING CB	10	82+36	0.62	0.73	0.453	0.453	4.0	1.810	0.000	1.810	0.0279	0.1400	2.73	2	0.73	0.0833	0.60	0.95	0.64	0.027	0.165	10	10	1.00	1.00	1.81	0.000	0.269			
8944	EXISTING CB	16	14+62	0.40	0.80	0.320	0.320	4.0	1.280	0.000	1.280	0.0311	0.0285	3.53	2	0.57	0.0833	2.92	0.96	3.32	0.138	0.161	9	16	1.78	1.00	1.28	0.000	0.210			
8927	EXISTING CB	14	13+75	0.70	0.80	0.560	0.560	4.0	2.240	0.000	2.240	0.0220	0.0409	4.56	2	0.44	0.0833	2.04	0.85	3.02	0.126	0.148	11	14	1.27	1.00	2.24	0.000	0.272			
PROPOSED - ON GRADE																																
9604	EXISTING CB	10	82+36	0.62	0.71	0.440	0.440	4.0	1.761	0.000	1.761	0.0279	0.1400	2.57	2	0.78	0.0833	0.60	0.97	0.64	0.027	0.166	10	10	1.00	1.00	1.76	0.000	0.246			
8944	PROPOSED CB	16	85+77	0.40	0.82	0.328	0.328	4.0	1.312	0.000	1.312	0.0311	0.0285	3.59	2	0.56	0.0833	2.92	0.95	3.32	0.138	0.160	9	16	1.78	1.00	1.31	0.000	0.212			
8927	EXISTING CB	14	14+62	0.70	0.82	0.574	0.574	4.0	2.296	0.000	2.296	0.0220	0.0409	4.62	2	0.43	0.0833	2.04	0.85	3.02	0.126	0.147	11	14	1.27	1.00	2.30	0.000	0.274			
EXISTING - IN SAG																																
25466	EXISTING CB	6	85+80	0.80	0.75	0.600	0.600	4.0	2.400	0.000	2.400	0.0010	0.0833	6.15	2	0.33	0.0833	1.00	0.65	2.00	0.083	0.137	5.63	6	1.07	1.00	2.40	0.000	0.237	0.450	0.527	2.847
25466	EXISTING CB	6	85+80	0.05	0.75	0.038	0.038	4.0	0.150	0.000	0.150	0.0010	0.0833	6.15	2	0.33	0.0833	1.00	1.00	2.00	0.083	0.167	1.53	6	3.92	1.00	0.15	0.000				
8716	EXISTING CB	7	15+68	0.13	0.90	0.117	0.117	4.0	0.468	0.000	0.468	0.0010	0.0770	3.81	2	0.53	0.0833	1.08	0.91	2.15	0.090	0.158	2.59	7	2.70	1.00	0.47	0.000	0.125	0.450	0.278	1.626
8716	EXISTING CB	7	15+68	0.17	0.90	0.153	0.153	4.0	0.612	0.000	0.612	0.0010	0.0770	3.81	2	0.53	0.0833	1.08	0.87	2.15	0.090	0.155	2.95	7	2.37	1.00	0.61	0.000				
8696	EXISTING CB	8	14+15	0.38	0.90	0.342	0.342	4.0	1.368	0.000	1.368	0.0010	0.0564	6.11	2	0.33	0.0833	1.48	0.69	2.65	0.110	0.132	4.63	8	1.73	1.00	1.37	0.000	0.185	0.450	0.411	3.281
8696	EXISTING CB	8	14+15	0.21	0.90	0.189	0.189	4.0	0.756	0.000	0.756	0.0010	0.0564	6.11	2	0.33	0.0833	1.48	0.80	2.65	0.110	0.144	3.41	8	2.34	1.00	0.76	0.000				
PROPOSED - IN SAG																																
25466	EXISTING CB	6	85+80	0.80	0.75	0.600	0.600	4.0	2.400	0.000	2.400	0.0010	0.0833	2.85	2	0.70	0.0833	1.00	1.00	2.00	0.083	0.167	4.90	6	1.23	1.00	2.40	0.000	0.237	0.450	0.527	2.847
25466	EXISTING CB	6	85+80	0.05	0.75	0.038	0.038	4.0	0.150	0.000	0.150	0.0010	0.0833	2.85	2	0.70	0.0833	1.00	1.00	2.00	0.083	0.167	1.53	6	3.92	1.00	0.15	0.000				
8716	EXISTING CB	7	15+68	0.13	0.90	0.117	0.117	4.0	0.468	0.000	0.468	0.0010	0.0770	3.81	2	0.53	0.0833	1.08	0.91	2.15	0.090	0.158	2.59	7	2.70	1.00	0.47	0.000	0.125	0.450	0.278	1.626
8716	EXISTING CB	7	15+68	0.17	0.90	0.153	0.153	4.0	0.612	0.000	0.612	0.0010	0.0770	3.81	2	0.53	0.0833	1.08	0.87	2.15	0.090	0.155	2.95	7	2.37	1.00	0.61	0.000				
8696	EXISTING CB	8	14+15	0.38	0.90	0.342	0.

REVISED: MARCH 03, 2020





GRAPHIC SCALE IN FEET
0 12.5 25 50

GRAPHIC SCALE IN FEET
0 12.5 25 50

LEGEND

- EXISTING PERVIOUS AREA
- PROPOSED PERVIOUS AREA
- LIMITS OF DISTURBANCE

TABLE OF AREAS

INTERSECTION	TOTAL DISTURBED AREA (FOR ESC REQUIREMENTS)	TOTAL DISTURBED AREA (FOR SWM REQUIREMENTS)	EXISTING IMPERVIOUS	PROPOSED IMPERVIOUS
WASHINGTON BLVD AT N. GLEBE RD	3403 FT^2	208 FT^2	2867 FT^2	2947 FT^2
WASHINGTON BLVD AT PATRICK HENRY DR	3083 FT^2	816 FT^2	2097 FT^2	1655 FT^2
TOTAL	6486 FT^2	1024 FT^2	4964 FT^2	4602 FT^2

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

IMPERVIOUS AREA CALCULATION

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: DD
Drawn: NM
Checked: GG
Miss Utility Transmittal #:

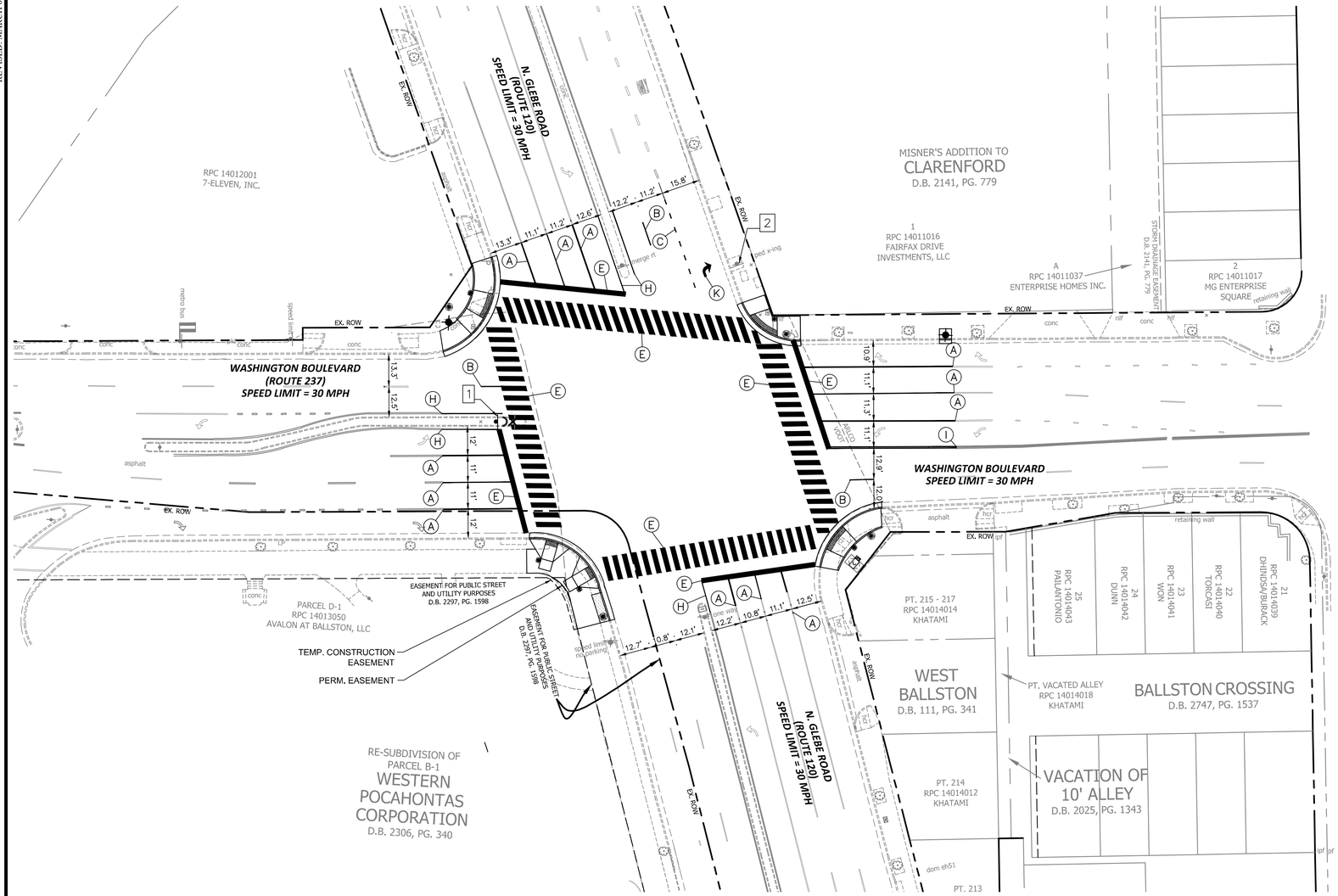
Plotted: July 20, 2022
Plotted by: Patrick.Husted

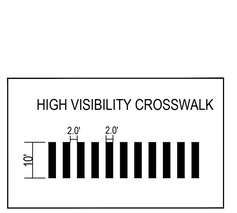
Scale:
HOR. N/A VERT. N/A

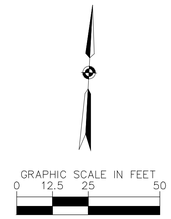
Sheet
C-0730

Filename: C-0701 STORMWATER.dwg
Path: K:\NVA_TPTO\106\4001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020







SIGN AND PAVEMENT MARKING NOTES:

1. STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING .
2. 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.
3. 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.
   C) VDOT ROAD AND BRIDGE CONSTRUCTION STANDARDS
4. ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
5. 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.
6. CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
7. LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.

STANDARD PAVEMENT MARKING LEGEND:

(A) TYPE B CLASS 1.....WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES, TURN LANES
(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	HIGH VISIBILITY CROSS WALKS, VDOT STOP BARS
(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
(Q) TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
(R) TYPE B CLASS 1.....WHITE 8" WIDTH, 3' LONG, 9' SPACING	TURN LANES

SIGNING AND MARKING LEGEND

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

SIGN SCHEDULE

SIGN NUMBER	1	2
SIGN		AHEAD
NO.	R4-7	W16-9P
DIMENSION	24" x 30"	24" x 12"

SIGN REMOVAL AND RELOCATION LEGEND

EXISTING SIGN TO REMAIN OR TO BE RELOCATED

EXISTING SIGN TO BE REMOVED

SIGN LABELS

PROPOSED SIGN — 3 — NEW LOCATION

EXISTING SIGN TO BE RELOCATED — [3] — NEW LOCATION / EXISTING LOCATION

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

PAVEMENT MARKING AND SIGNING PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

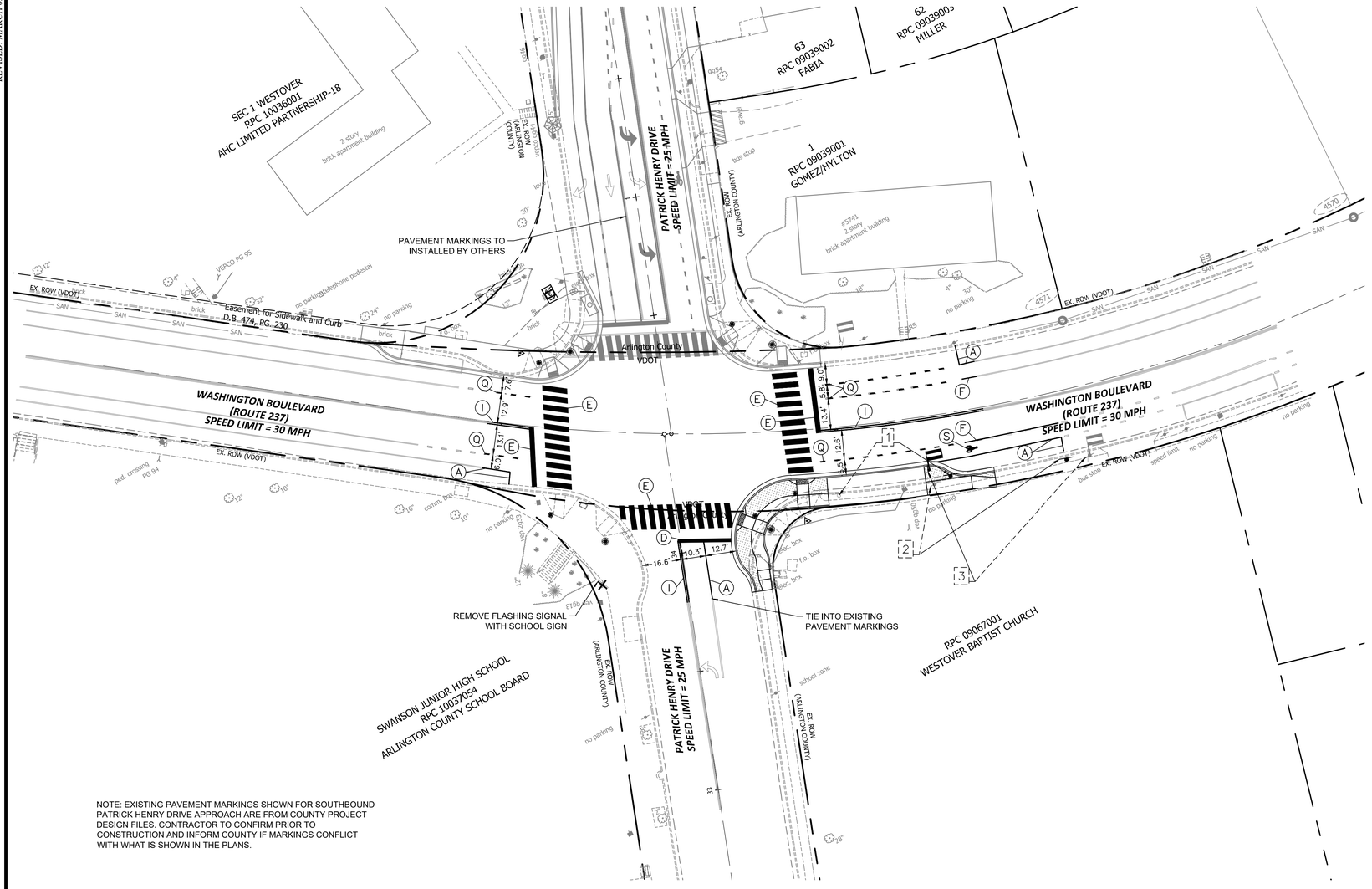
Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet C-0800

Filename: C-0800 PAVEMENT MARKING AND SIGNING PLAN.dwg
Path: K:\NVA_TPTO\110\14041 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



REVISED: MARCH 03, 2020

TRANSPORTATION MANAGEMENT PLAN AND SEQUENCE OF CONSTRUCTION (TMP/SOC)

TEMPORARY TRAFFIC CONTROL PLAN

1. TMP/SOC TYPE A PROJECT INFORMATION:

   A. IDENTIFY THE PROJECT'S TMP TYPE:
   THIS PROJECT'S TMP/SOC PLAN HAS BEEN DESIGNED IN CONFORMANCE WITH A TYPE A TMP/SOC PLAN,

   B. IDENTIFY THE WORK ZONE LOCATION, LENGTH, AND WIDTHS:
   THE PROJECT LOCATION IS SHOWN ON THE TITLE SHEET.
   THE WORK ZONE AREAS HAVE BEEN DELINEATED AS SHOWN ON THE TEMPORARY TRAFFIC CONTROL SHEETS.
   THE WORK ZONE LENGTHS AND WIDTHS VARY BY LOCATION AS SHOWN ON THE TEMPORARY TRAFFIC CONTROL SHEETS.

   C. NOTE THE HOURS THE CONSTRUCTION AREA WILL BE ACTIVE:
   CONSTRUCTION AREA SHALL BE CONSIDERED ACTIVE WHEN ANY IMPACT TO TRAFFIC OCCURS (1ST CONE IN ROAD)
   CONSTRUCTION AREA HOURS HAVE THE FOLLOWING LIMITATIONS:

	LANE CLOSURES (NON MAJOR ARTERIAL)			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY	SUNDAY
DAY TIME	9:30AM to 3:00PM	9:30AM to 2:00PM	*NOT ALLOWED	*NOT ALLOWED
NIGHT TIME	*NOT ALLOWED	*NOT ALLOWED	*NOT ALLOWED	*NOT ALLOWED

   * NIGHT TIME AND WEEKEND WORK SHALL NOT BE ALLOWED UNLESS APPROVED BY VDOT.
   NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY.
   HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.

   DESIGNATION OF PEAK HOUR TIMES:
   PEAK HOURS ARE 6:00AM THROUGH 9:00AM AND 3:30PM THROUGH 6:30PM.

   D. THE CONSTRUCTION ZONE HAS BEEN SHOWN ON THE TEMPORARY TRAFFIC CONTROL SHEETS FOR POTENTIAL LOCATIONS FOR CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE WITHIN THE RIGHT OF WAY. THE CONTRACTOR IS TO PROVIDE ADEQUATE PROTECTION FOR CONSTRUCTION ELEMENTS WITHIN THE CLEAR ZONE.

   E. THE TMP/SOC PLAN, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WT1H SECTIONS 512, 701, 703 & 704 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, DATED 2020; THE VIRGINIA WORK AREA PROTECTION MANUAL DATED AUGUST 2011 AND UPDATED NOVEMBER 2020; THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), DATED 2009; THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, DATED 2011; AND IIM-LD-241.7 OF THE INSTRUCTIONAL AND INFORMATIONAL MEMORANDA.

   F. NOTE ANY EXISTING ENTRANCES, EXISTING INTERSECTIONS, OR EXISTING PEDESTRIAN ACCESS POINTS THAT WILL BE AFFECTED BY THE CONSTRUCTION AREA OR BY THE TRAFFIC CONTROL DEVICES:

   WASHINGTON BOULEVARD AND N. GLEBE ROAD:

   EXISTING ENTRANCES: THERE ARE TEN (10) EXISTING ENTRANCES WITHIN THE PROJECT LIMITS. ALL ENTRANCES ARE TO REMAIN OPEN AND FUNCTIONAL DURING CONSTRUCTION. IF DRIVEWAY RECONSTRUCTION IS NECESSARY. THE CONTRACTOR IS TO WORK WITH THE PROPERTY OWNER TO ESTABLISH A MUTUALLY AGREEABLE SCHEDULE TO CLOSE THE ENTRANCE.

   EXISTING INTERSECTIONS: THE WASHINGTON BOULEVARD AND N. GLEBE ROAD INTERSECTION IS AT APPROXIMATE WASHINGTON BOULEVARD STATION 15+30. ALL EXISTING INTERSECTIONS ARE TO REMAIN OPEN AND FUNCTIONAL DURING CONSTRUCTION.

   EXISTING PEDESTRIAN ACCESS POINTS: THERE ARE FOUR (4) EXISTING PEDESTRIAN POINTS WITHIN THE PROJECT LIMITS OF EACH INTERSECTION. THESE INCLUDE THE NORTHWEST, NORTHEAST, SOUTHWEST, AND SOUTHEAST CORNERS OF THE WASHINGTON BOULEVARD AND N. GLEBE ROAD INTERSECTION. PEDESTRIANS ARE TO BE DIVERTED AWAY FROM THE CONSTRUCTION ZONE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PEDESTRIAN CIRCULATION AT ALL TIMES. SEE CONSTRUCTION NARRATIVE FOR DETAILS.

   EXISTING BUS STOPS: THERE ARE NO EXISTING BUS STOPS WITHIN THE PROJECT LIMITS.

   WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE:

   EXISTING ENTRANCES: THERE IS ONE (1) EXISTING ENTRANCE WITHIN THE PROJECT LIMITS. ALL ENTRANCES ARE TO REMAIN OPEN AND FUNCTIONAL DURING CONSTRUCTION. IF DRIVEWAY RECONSTRUCTION IS NECESSARY. THE CONTRACTOR IS TO WORK WITH THE PROPERTY OWNER TO ESTABLISH A MUTUALLY AGREEABLE SCHEDULE TO CLOSE THE ENTRANCE.

   EXISTING INTERSECTIONS: THE WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE IS AT APPROXIMATE WASHINGTON BOULEVARD STATION 85+65. ALL EXISTING INTERSECTIONS ARE TO REMAIN OPEN AND FUNCTIONAL DURING CONSTRUCTION.

   EXISTING PEDESTRIAN ACCESS POINTS: THERE ARE FOUR (4) EXISTING PEDESTRIAN POINTS WITHIN THE PROJECT LIMITS OF EACH INTERSECTION. THESE INCLUDE THE NORTHWEST, NORTHEAST, SOUTHWEST, AND SOUTHEAST CORNERS OF THE WASHINGTON BOULEVARD AND N. GLEBE ROAD INTERSECTION. PEDESTRIANS ARE TO BE DIVERTED AWAY FROM THE CONSTRUCTION ZONE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PEDESTRIAN CIRCULATION AT ALL TIMES. SEE CONSTRUCTION NARRATIVE FOR DETAILS.

   EXISTING BUS STOPS: THERE ARE TWO (2) EXISTING BUS STOPS WITHIN THE PROJECT LIMITS ALONG WASHINGTON BOULEVARD, ONE ON THE WEST SIDE OF THE INTERSECTION AND ONE ON THE EAST SIDE OF THE INTERSECTION. COUNTY WILL COORDINATE WITH TRANSIT BUREAU FOR WORK THAT WILL AFFECT TRANSIT STOPS. TRANSIT STOP ACCESS SHALL BE MAINTAINED FOR ALL OPERATIONAL HOURS. THE CONTRACTOR SHALL PRESERVE ALL BUS STOP, INCLUDING MAINTAINING ADEQUATE ACCESS 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 ADVANCED NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR AT 703-228-3049. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11'WIDE.

   G. IDENTIFY THE MAJOR TYPES OF TRAVELERS:

   WASHINGTON BOULEVARD AND N. GLEBE ROAD: THE TRAFFIC ON THE ROADWAY CONSISTS PRIMARILY OF COMMUTER TRAFFIC WITH TRANSIT BUSES, BIKES, AND PEDESTRIANS. THE SURROUNDING AREA IS MOSTLY RESIDENTIAL WITH SOME COMMERCIAL BUSINESSES.

   WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE: THE TRAFFIC ON THE ROADWAY CONSISTS PRIMARILY OF COMMUTER TRAFFIC WITH TRANSIT BUSES, BIKES, AND PEDESTRIANS. THE SURROUNDING AREA IS MOSTLY RESIDENTIAL WITH A SCHOOL AND CHURCH.

   H. THE CONTRACTOR SHALL:

   DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION INSPECTOR FOR THE DURATION OF CONSTRUCTION.

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

   INFORM THE ENGINEER OF ANY WORK REQUIRING LANE SHIFTS, LANE CLOSURES, AND/OR PHASE CHANGES A MINIMUM OF TWO WORKING DAYS PRIOR TO IMPLEMENTING THIS ACTIVITY.

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

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

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

2. THIS TMP/SOC PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. IF THE CONTRACTOR TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

3. CONTRACTOR SHALL MAINTAIN AT LEAST ONE (1) LANE OF TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION OF THIS PROJECT AND PROVIDE A MINIMUM OF 11 FOOT WIDE LANES AT ALL TIMES DURING CONSTRUCTION, UNLESS APPROVED BY THE ENGINEER.

4. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED TO FORM AN APPROXIMATE 6:1 WEDGE AGAINST THE EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.

5. EACH PHASE OF CONSTRUCTION SHALL BE COMPLETED TO THE INSTALLATION OF INTERMEDIATE COURSE ASPHALT PRIOR TO THE START OF THE NEXT PHASE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

6. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION. THE COST SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

7. UNLESS SPECIFIED ON THE PLANS, ALL EXISTING TURN LANES SHALL BE MAINTAINED AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.

8. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AREA AS DEFINED IN THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM) IS TO BE MAINTAINED.

9. THE CONTRACTOR IS TO COORDINATE WITH ARLINGTON COUNTY FOR LOCATION(S) OF THE CONSTRUCTION STAGING AREA. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AS NECESSARY.

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

11. EVALUATION OF THE TRANSPORTATION MANAGEMENT PLAN
A PERFORMANCE ASSESSMENT OF THE TMP INCLUDING AREA-WIDE IMPACTS ON ADJACENT ROADWAYS SHALL BE PERFORMED BY ARLINGTON COUNTY WITH COORDINATION FROM THE ENGINEER DURING CONSTRUCTION. AS CIRCUMSTANCES DICTATE, A REVIEW OF THE OVERALL EFFECTIVENESS OF THE PROJECT'S TMP SHALL BE COMPLETED DURING THE POST CONSTRUCTION MEETING AND INCLUDED WITH THE POST CONSTRUCTION REPORT. A COPY OF THE SPECIFIC INFORMATION ON THE EFFECTIVENESS OF THE TMP WILL BE FORWARDED TO ARLINGTON COUNTY FOR REVIEW. A COPY OF THE TMP INTERIM/POST CONSTRUCTION REPORT FORM CAN BE OBTAINED FROM ARLINGTON COUNTY.

12. PUBLIC COMMUNICATIONS PLAN
THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

   A. SUBMITTING A DETAILED SCHEDULE WHICH INDICATES THE START AND FINISH DATES FOR THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE CLOSURES (INCLUDING BICYCLE LANES), CROSSWALK CLOSURES, AND STREET PARKING RESTRICTIONS.

   B. NOTIFYING THE PROJECT MANAGER AND CONSTRUCTION INSPECTOR TWO WEEKS IN ADVANCE OF ANY SCHEDULED WORK PLANS AND TRAFFIC DELAYS.

   C. NOTIFYING THE PROJECT MANAGER, CONSTRUCTION INSPECTOR, AND CORRESPONDING ENGINEER OF ANY UNSCHEDULED TRAFFIC DELAYS

14. TRANSPORTATION OPERATIONS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:

   A. NOTIFY THE REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) ONE WEEK IN ADVANCE TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA-TRAFFIC.

   B. POST A LIST OF LOCAL EMERGENCY RESPONSE AGENCIES INSIDE THE PROJECT'S CONSTRUCTION OFFICE/TRAILER.

   C. IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.

   D. NOTIFY THE PROJECT CONSTRUCTION INSPECTOR AND CORRESPONDING ENGINEER OF ANY NEW INCIDENTS AND EXPECTED TRAFFIC DELAYS.

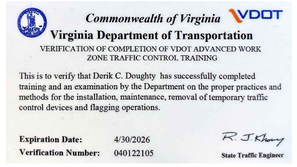
   E. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE COMPLETED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE INCIDENTS.

CONTACT NUMBERS:

COUNTY PROJECT MANAGER	ANUP KAFLE (703) 228-7050
COUNTY CONSTRUCTION MANAGER	TBD
COUNTY CONSTRUCTION INSPECTOR	TBD
EMERGENCY CALL	911
NON-EMERGENCY NUMBERS:	
ARLINGTON COUNTY POLICE	(703) 558-2222
ARLINGTON COUNTY FIRE & RESCUE	(703) 558-3362

NOTE:

THE DESIGNER, DERIK DOUGHTY, P.E. HAS COMPLETED THE VDOT ADVANCED WORK ZONE TRAINING. VERIFICATION NUMBER 040122105. EXPIRATION DATE 4/30/2026.


Commonwealth of Virginia VDOT
Virginia Department of Transportation
VERIFICATION OF COMPLETION OF VDOT ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING
This is to verify that Derik C. Doughty has successfully completed training and an examination by the Department on the proper practices and methods for the installation, maintenance, removal of temporary traffic control devices and flagging operations.
Expiration Date: 4/30/2026
Verification Number: 040122105
R. J. Khoury
State Traffic Engineer

Virginia Department of Transportation
REVIEW OF WORKING DRAWINGS
Working drawings have been reviewed in accordance with Section 105.10 2016 VDOT Road & Bridge Specifications
X REVIEW COMPLETED
____ CORRECT & RESUBMIT
____ REJECTED - SEE REMARKS
Reviewed by:_____ Date:_____
REVIEWED
By Brian E. Fry at 2:29 pm, May 24, 2022

GENERAL CONSTRUCTION NOTES AND SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS DURING BOTH WORK AND NON-WORK HOURS TO ENSURE THE PROTECTION AND SAFETY OF THE ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC, AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT, AND THE CONSTRUCTION SITE ITSELF. TEMPORARY SIGNS AND BARRIERS ARE NOT TO BE PLACED WHERE THEY WILL OBSTRUCT PEDESTRIAN TRAFFIC ON SIDEWALKS, UNLESS SUCH SIGN OR BARRIER IS SPECIFICALLY INTENDED TO CLOSE ACCESS TO THE SPECIFIC SECTION OF SIDEWALK.

2. TEMPORARY CLOSURES OF PEDESTRIAN ACCESS SHALL BE LIMITED AND ADMINISTERED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL WORK ON ONE CORNER PER INTERSECTION AT A TIME IN ORDER TO MINIMIZE THE FREQUENCY AND DURATION OF CROSSWALK CLOSURES.

3. BUFFER AND TAPER SPACES SHOWN ON THE TEMPORARY TRAFFIC CONTROL SHEETS ARE NOT TO SCALE. SEE THE VIRGINIA WORK AREA PROTECTION MANUAL FOR BUFFER AND TAPER PLACEMENT.

4. 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.

5. 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.

6. 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.

UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF CONSTRUCTION:

WASHINGTON BOULEVARD AND N. GLEBE ROAD:

PHASE 1:
1. INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES IN ACCORDANCE WITH TTC-53.0.
2. CONSTRUCT PROPOSED IMPROVEMENTS WITHIN THE CONSTRUCTION ZONE SHOWN ON SHEET C-0902 IN ACCORDANCE WITH TTC-30.2, TTC-35.1, TTC-36.2, AND TTC-50.2.
3. CONSTRUCTION SHALL BE PHASED ON THE FOUR CORNERS OF THE INTERSECTION TO ALLOW ADEQUATE PEDESTRIAN ACCESS IN ACCORDANCE WITH TTC-35.1 AND 36.2. CONTRACTOR SHALL CONCENTRATE WORK ON ONE CORNER AT A TIME. PEDESTRIANS SHOULD BE DIVERTED AROUND THE CONSTRUCTION ZONE AT THE NEAREST CROSSING LOCATION. AN ADEQUATE PEDESTRIAN DIVERSION SHOULD BE IMPLEMENTED WHERE A DETOUR IS NOT FEASIBLE AT THE CONCLUSION OF WORK EACH DAY. CONSTRUCTION ACTIVITIES SHALL NOT CLOSE MORE THAN ONE CROSSWALK AT ANY TIME.
4. CONSTRUCTION ACTIVITIES IN THIS PHASE INCLUDE: CONSTRUCTION OF WATERLINES AND FIRE HYDRANTS, SAW CUT EXISTING PAVEMENT, CONSTRUCTION OF PROPOSED CURB AND GUTTER, CONSTRUCTION OF SIDEWALK.

PHASE 2:
1. CONSTRUCT PROPOSED IMPROVEMENTS WITHIN THE CONSTRUCTION ZONE SHOWN ON SHEET C-0902 IN ACCORDANCE WITH TTC-26.2, TTC-29.2, TTC-35.1, AND TTC-36.2.
2. CONSTRUCTION SHALL BE PHASED ON THE FOUR CORNERS OF THE INTERSECTION TO ALLOW ADEQUATE PEDESTRIAN ACCESS IN ACCORDANCE WITH TTC-35.1 AND 36.2. CONTRACTOR SHALL CONCENTRATE WORK ON ONE CORNER AT A TIME. PEDESTRIANS SHOULD BE DIVERTED AROUND THE CONSTRUCTION ZONE AT THE NEAREST CROSSING LOCATION. AN ADEQUATE PEDESTRIAN DIVERSION SHOULD BE IMPLEMENTED WHERE A DETOUR IS NOT FEASIBLE AT THE CONCLUSION OF WORK EACH DAY. CONSTRUCTION ACTIVITIES SHALL NOT CLOSE MORE THAN ONE CROSSWALK AT ANY TIME.
3. CONSTRUCTION ACTIVITIES IN THIS PHASE INCLUDE: SAW CUT EXISTING PAVEMENT, CONSTRUCTION OF PROPOSED CURB AND GUTTER AND CURB RAMPS ON THE CORNERS, CONSTRUCTION OF SIDEWALK, GRADING, INSTALLATION OF TRAFFIC AND PEDESTRIAN SIGNAL EQUIPMENT.
4. THE PROPOSED SIGNAL SHALL BE FULLY CONSTRUCTED AND OPERATIONAL BEFORE CONSTRUCTION OF PHASE 3.

PHASE 3 (NOT SHOWN):
1. MILL AND OVERLAY AREAS SHOWN ON THE PLANS IN ACCORDANCE WITH TTC-57.2.
2. INSTALL ALL PERMANENT PAVEMENT MARKINGS AND SIGNS AS SHOWN ON THE SIGNING AND STRIPING PLAN.
3. REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES.

WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE:

PHASE 1:
1. INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES IN ACCORDANCE WITH TTC-53.0.
2. CONSTRUCT PROPOSED IMPROVEMENTS WITHIN THE CONSTRUCTION ZONE SHOWN ON SHEET C-0903 IN ACCORDANCE WITH TTC-4.2, TTC-29.2, TTC-35.1, AND TTC-36.2.
2. CONSTRUCTION SHALL BE PHASED ON THE FOUR CORNERS OF THE INTERSECTION TO ALLOW ADEQUATE PEDESTRIAN ACCESS IN ACCORDANCE WITH TTC-35.1 AND 36.2. CONTRACTOR SHALL CONCENTRATE WORK ON ONE CORNER AT A TIME. PEDESTRIANS SHOULD BE DIVERTED AROUND THE CONSTRUCTION ZONE AT THE NEAREST CROSSING LOCATION. AN ADEQUATE PEDESTRIAN DIVERSION SHOULD BE IMPLEMENTED WHERE A DETOUR IS NOT FEASIBLE AT THE CONCLUSION OF WORK EACH DAY. CONSTRUCTION ACTIVITIES SHALL NOT CLOSE MORE THAN ONE CROSSWALK AT ANY TIME.
3. THIS PHASE REQUIRES THE EASTBOUND BIKE LANE ON WASHINGTON BOULEVARD TO BE PARTIALLY CLOSED. CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES WHEN BIKE LANE IS CLOSED IN ACCORDANCE WITH DETAIL "EXAMPLE OF A BICYCLE LANE CLOSURE" ON PAGE 21 OF THE VDOT WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (JANUARY 2016).
4. CONSTRUCTION ACTIVITIES IN THIS PHASE INCLUDE: SAW CUT EXISTING PAVEMENT, CONSTRUCTION OF PROPOSED CURB AND GUTTER AND CURB RAMPS ON THE SOUTHEAST CORNER, CONSTRUCTION OF SIDEWALK AND GRADING ON THE SOUTHEAST CORNER, INSTALLATION OF TRAFFIC AND PEDESTRIAN SIGNAL EQUIPMENT ON ALL FOUR CORNERS.
5. THE PROPOSED SIGNAL SHALL BE FULLY CONSTRUCTED AND OPERATIONAL BEFORE CONSTRUCTION OF PHASE 2.

PHASE 2 (NOT SHOWN):
1. MILL AND OVERLAY AREAS SHOWN ON THE PLANS IN ACCORDANCE WITH TTC-57.2.
2. INSTALL ALL PERMANENT PAVEMENT MARKINGS AND SIGNS AS SHOWN ON THE SIGNING AND STRIPING PLAN.
3. REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES.

ARLINGTON VIRGINIA

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

SEAL NOT FOR CONSTUCTION
COMMONWEALTH OF VIRGINIA
DERIK DOUGHTY
Lic. No. 0402055074
05/10/2022
PROFESSIONAL ENGINEER
100% DESIGN PLANS

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
Washington Boulevard Signal Upgrades
TRANSPORTATION MANAGEMENT PLAN NOTES
ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: NM
Drawn: PH
Checked: DD
Miss Utility Transmittal #:

Plotted: May 10, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0900

Filename: C-0902-TMP NOTES.dwg
Path: K:\NVA_TPTO\116149\01 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

Typical Traffic Control
Stationary Operation on a Shoulder
(Figure TTC-4.2)
NOTES

Standard

1. **For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR), RIGHT SHOULDER CLOSED (W21-5aR)), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed.**

Guidance

2. *Sign spacing should be 1500'-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.*

Option:

3. The SHOULDER WORK (W21-5) 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.
4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

Standard:

5. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or[1] oscillating, lights.**
6. **Taper length (L) shall be at the following:**

Taper Length L

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

Limited Access highways shall use a 1000' merging taper regardless of the posted speed, for shifting taper see Table 6H.2[1]

Shoulder Taper = ½ L Minimum

7. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing

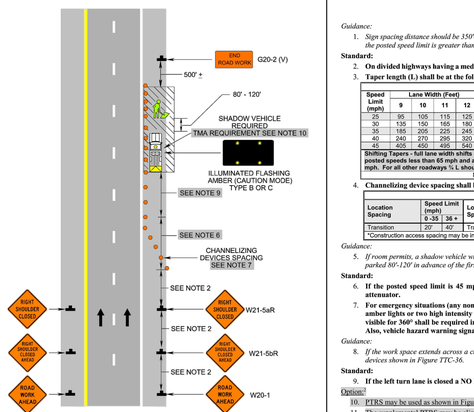
Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35	36 +
Transition	20'	40'	Taperway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

8. **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.**
9. **The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.**
11. **When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.**

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

Stationary Operation on a Shoulder
(Figure TTC-4.2)



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

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

Guidance:

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

Standard:

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

Taper Length L

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

Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways ½ L should be used.[1]

Shoulder Taper = ½ L Minimum

4. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing

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

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

Guidance:

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

Standard:

6. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or two high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

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

Standard:

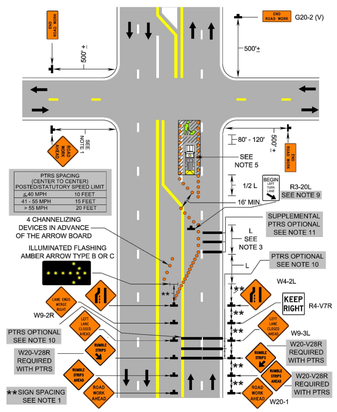
9. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**

Option:

10. PTRS may be used as shown in Figure TTC-17 and in accordances with Section 6F-99.7
11. The supplemental PTRS may be eliminated.[2]

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

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



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

Typical Traffic Control
Turn Lane Closure Operation
(Figure TTC-29.2)
NOTES

Guidance:

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

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **To prevent accidental intrusion into the work area, channelizing device spacing shall not exceed 10' on centers or as directed by the Engineer.[1]**

Option:

4. This layout may be used for either right or left turn lane closures.
5. For a high volume of turning movements, additional traffic control devices, such as signs (graphic NO LEFT TURN (R3-2) or LEFT LANE MUST TURN LEFT (R3-7L)), channelizing devices and vehicles may be used.

Standard:

6. **Taper length (L) shall be at the following:**

Taper Length L

Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks	Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks
25	95	105	115	125	L=S*W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S*W/60	55	495	550	605	660	L= SW
30	185	205	225	245	L=S*W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S*W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW

Shoulder Taper = ½ L Minimum

7. **Length of the Longitudinal Buffer spacing shall be at the following:**

Posted Speed Limit (mph)	Distance (Feet)	Posted Speed Limit (mph)	Distance (Feet)
≤ 20	115 – 120	50	425 – 445
25	155 – 165	55	500 – 530
30	200 – 210	60	570 – 600
35	250 – 260	65	645 – 675
40	305 – 325	70	730 – 760
45	360 – 380		

Guidance:

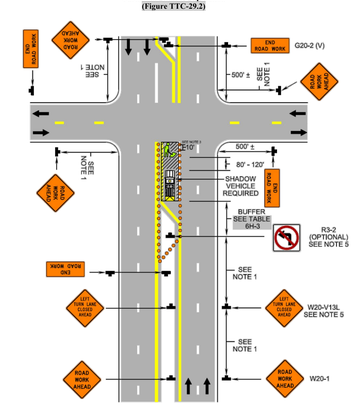
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Support:

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

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

Turn Lane Closure Operation
(Figure TTC-29.2)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Flagging Operation at a Signalized Intersection
(Figure TTC-30.2)
NOTES

Guidance:

1. *The control of traffic through the intersection in order of preference should be:*
   a. *Obtain the services of law enforcement personnel with the approved signing as shown[2].*
   b. *Divert the effective routes to other roads and streets as approved and directed by the District[2] Traffic Engineer.*
   c. *Place a state certified flagger on each leg of the intersection with the approved signing as shown.*
2. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph. For urban streets sign spacing distance should be 225'-275' where the posted speed limit is 30 to 35 mph, and 100'-200' where the posted speed is 25 mph or less.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.[1]*
4. *When law enforcement officers or flaggers are used to control movement at the signalize intersection, portable temporary rumble strips and signing as shown[2] should be used when the expected operation will last longer than 3 hours.[1]*

Standard:

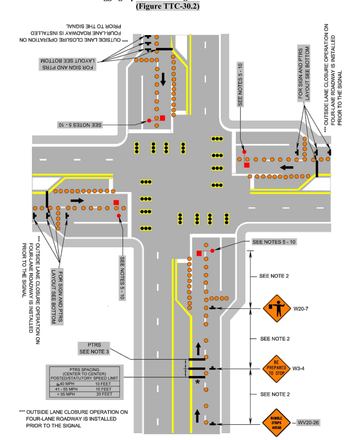
5. **For flagging operations,[1] a stationary lane closure shall be installed in advance of the signalized intersection for all approaches with two or more lanes for through traffic.**
6. **For flagging operations,[1] all turn lanes at the intersection shall be closed.**
7. **Electrical power supply to signals shall be turned off while flaggers are controlling traffic through the intersection.**
8. **To prevent accidental intrusion into the flagger station, cone spacing shall not exceed 10' on centers from the graphic flagger sign to the flagger station. Cones shall be installed in the closed lane, perpendicular to traffic, prior to the flagging station.**
9. **A lead flagger shall be assigned to control all flagger operations. One flagger shall be stationed to control each approach of the intersection. Flaggers shall alternate right-of-way to traffic such that traffic moves through the intersection one approach at a time.**
10. **Flagger stations shall be illuminated during planned night time work operations with a minimum of horizontal luminance of 5-foot candles (50 lux) (see Section 6E.08).**
11. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Option:

12. PTRS may be incorporated into the advanced warning area of lane closures on multi-lane roadways, see Section 6F-99 and TTC-16.[2]
13. RIGHT TURN LANE CLOSED AHEAD (W20-V13R) and/or LEFT TURN LANE CLOSED AHEAD (W20-V13L) sign(s) may be used when closing the turn lanes.
14. For a high volume of turning movements, additional traffic control devices, such as signs (graphic NO LEFT TURN (R3-2), NO RIGHT TURN (R3-1), RIGHT TURN LANE CLOSED AHEAD (W20-V13R) and/or LEFT TURN LANE CLOSED AHEAD (W20-V13L)), cones and vehicles may be used.
15. Traffic signals may be on the flash mode when traffic through the intersection when controlled by a law enforcement officer.[1]
16. Travel and turn lanes may remain open if a law enforcement officer is controlling traffic through the intersection.[1]

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

Flagging Operation at a Signalized Intersection
(Figure TTC-30.2)



2: Revision 2 – 9/1/2019

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

Standard:

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

Guidance:

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

Option:

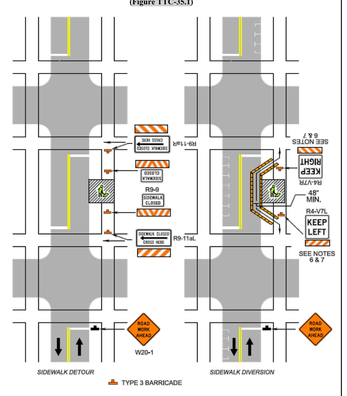
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7.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

Standard:

8. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.[1]**

2: Revision 2 – 9/1/2019

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



2: Revision 2 – 9/1/2019

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

Standard:

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

Guidance:

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

Option:

6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

Standard:

8. **In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.[2]**
9. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.[1]**

Support:

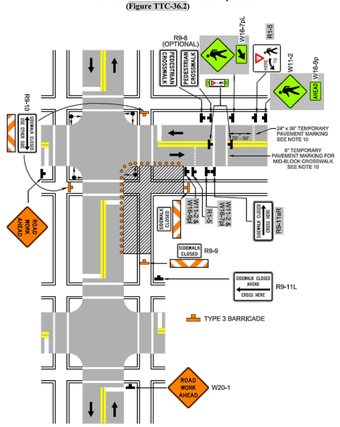
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD[1] for crosswalk[1] lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:

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

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

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



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

Typical Traffic Control
Disruption Operation on a Multi-Lane Roadway
(Figure TTC-50.2)
NOTES

Support:

1. Conditions represented are a planned closure not exceeding 15[2] minutes.

Guidance:

2. *On Limited Access highways, the sign spacing distance and flagger distance should be 1300'-1500'. For all other roadways, the distance between the advance warning signs and between the flagger should be 500'-800' 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 6H-3. For Limited Access highways a minimum of 1000' is desired.*
4. *The buffer space length should be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.*

Standard:

5. **When work is on an undivided highway with a center turn lane the center turn lane shall be closed using channelizing devices spaced at 20 foot intervals.[2]**
6. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
7. **Flagging stations shall be located far enough in advance of the operation to permit approaching traffic to reduce speed and/or stop before passing into the operation.**
8. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties and shall follow the procedures noted in Sections 6E.04 and 6E.05.**
9. **At night, flagger stations shall be illuminated, see Section 6E.08.[1]**
10. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

Guidance:

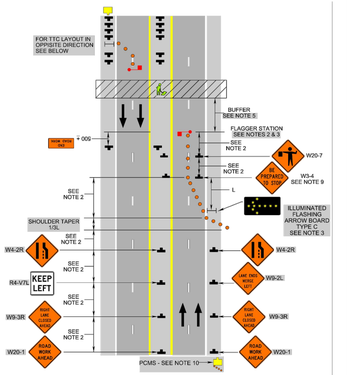
11. *A Portable Changeable Message Sign (PCMS) should be used on Limited Access highways and placed a minimum of one mile in advance of the warning signs warning of the operation ahead (UTILITY WORK AHEAD) and advising of the action required (BE PREPARED TO STOP).*
12. *Disruptions to traffic should be coordinated with all entities involved in advance and performed during off-peak hours to minimize the impact on the motoring public. On Limited Access highways, State Police should assist with the stoppage of traffic.*

Option:

13. A uniformed law enforcement officer may be used for this application in place of the flagger.
14. The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as UTILITY WORK AHEAD (W21-7).

2: Revision 2 – 9/1/2019

Disruption Operation on a Multi-Lane Roadway
(Figure TTC-50.2)



2: Revision 2 – 9/1/2019
3: Revision 2.1 -11/1/2020

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

Support:

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

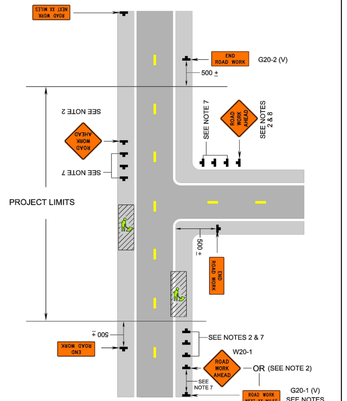
Standard:

2. **The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.**
3. **The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.**
4. **The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

6. *For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.*
7. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 300'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

Signing for Project Limits
(Figure TTC-53.0)



2: Revision 2 – 9/1/2019

Typical Traffic Control
End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway
(Figure TTC-57.2)
NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.**
2. **The maximum pavement edge drop-off between traffic lanes shall be 2 inches or less.**
3. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
4. **A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**
5. **A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.[1]**
6. **The District[2] Traffic Engineer shall determine speed reductions.**
7. **The UNEVEN LANES (W8-11), STAY IN LANE (R4-9), and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Additional UNEVEN LANES signs shall be installed every 2 miles and on entrance ramps.**
8. **Where conditions warrant, ROUGH ROAD (W8-8) and BUMP signs shall be installed 500' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.**
9. **All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

10. *Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 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.*

Option:

11. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
12. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

14. **If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.**
15. **The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

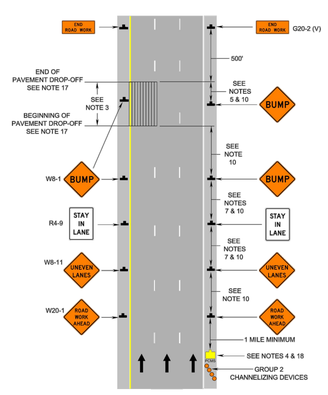
16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:

17. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**
18. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

1: Revision 1 – 4/1/2015; 2: Revision 2 – 9/1/2019

End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway
(Figure TTC-57.2)



ARLINGTON VIRGINIA
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

SEAL

COMMONWEALTH OF VIRGINIA
DERIK DOUGHTY
Lic. No. 0402055074
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS DATE

TRAFFIC SIGNAL ENGINEER 06/30/2022

TRAFFIC ENGINEERING MANAGER 06/30/2022

WATER SEWER, STREETS BUREAU CHIEF 7/18/22

TE&O BUREAU CHIEF 06/30/2022

TRANSPORTATION DIRECTOR Dennis M. Leach 07/13/22

REVISIONS DATE

Project Name and Location
Washington Boulevard Signal Upgrades
TRANSPORTATION MANAGEMENT PLAN DETAILS
ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: NM
Drawn: PH
Checked: DD
Miss Utility Transmittal #:

Plotted: July 19, 2022
Plotted by: patrick.husted

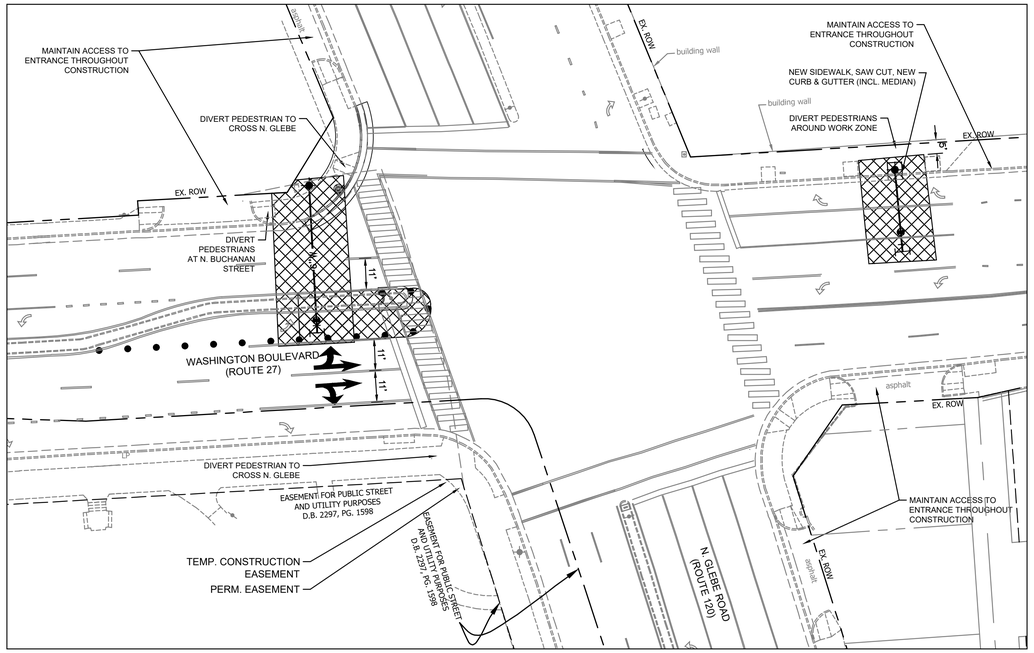
Scale:
HOR. N/A VERT. N/A

Sheet C-0901

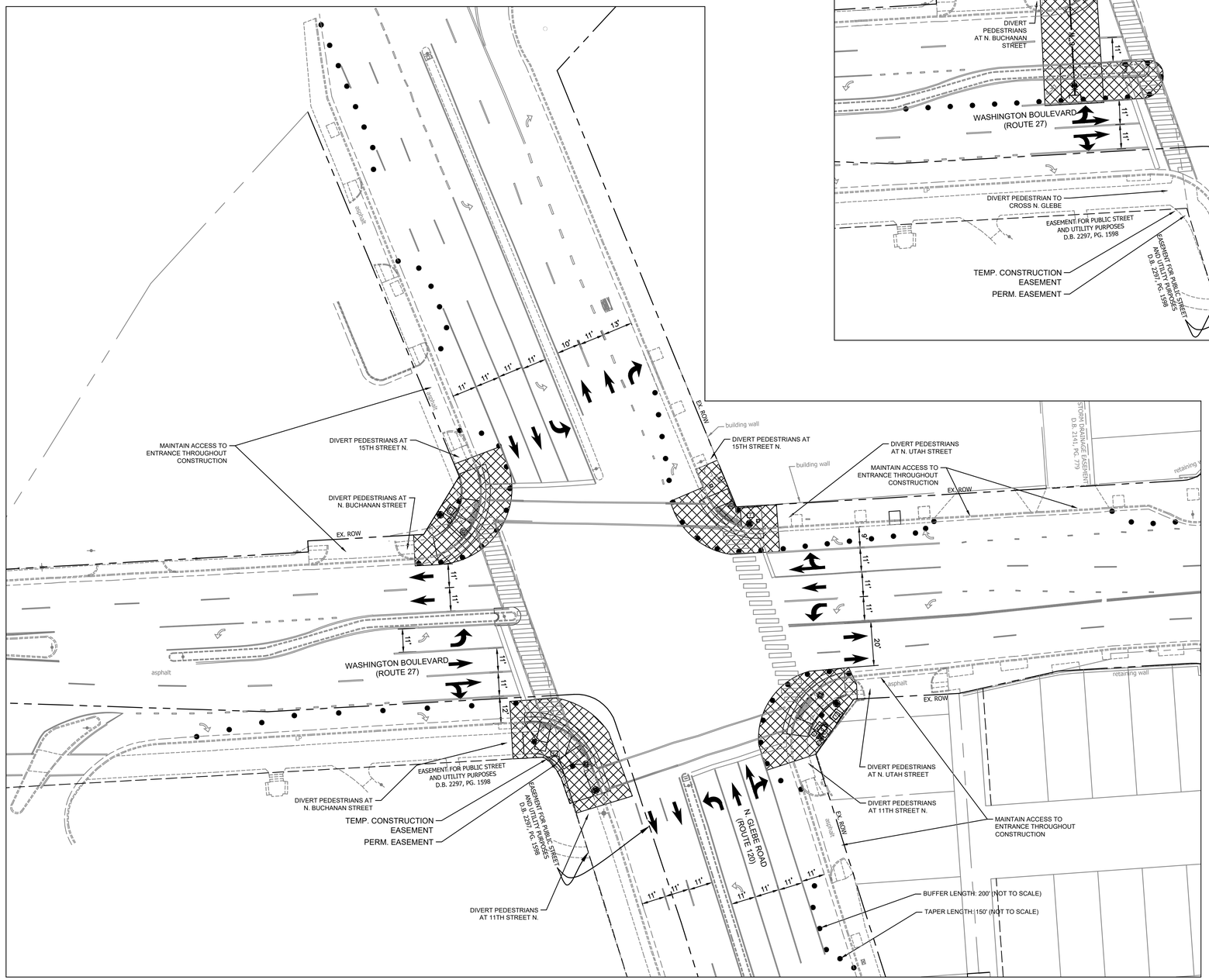
Filename: C-0903-TMP DETAILS.dwg
Path: K:\NVA_TPTO\110\6\401 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

MAINTENANCE OF TRAFFIC PHASE 1:
WATER LINE AND FIRE HYDRANT INSTALLATION



MAINTENANCE OF TRAFFIC PHASE 2:
SIDEWALK SITE WORK AND TRAFFIC SIGNAL INSTALLATION



NOTES:

1. REFER TO TRANSPORTATION MANAGEMENT PLAN AND SEQUENCE OF CONSTRUCTION ON SHEET C-0900.
2. WORK IS SHOWN IN THIS PLAN ON ALL FOUR CORNERS OF THE INTERSECTION. CONTRACTOR SHALL CONCENTRATE WORK ON ONE CORNER AT A TIME IN ORDER TO MINIMIZE THE FREQUENCY AND DURATION OF CROSSWALK CLOSURES.

GRAPHIC SCALE IN FEET
0 12.5 25 50

LEGEND

- APPROXIMATE LIMITS OF WORK AREA
- APPROXIMATE LOCATION OF CHANNELIZING DEVICES

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
DERIK DOUGHTY
Lic. No. 0402055074
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

WASHINGTON BOULEVARD AND N. GLEBE ROAD
MAINTENANCE OF TRAFFIC PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: TC
Drawn: TC
Checked: MA
Miss Utility Transmittal #:

Plotted: July 19, 2022
Plotted by: patrick.husted

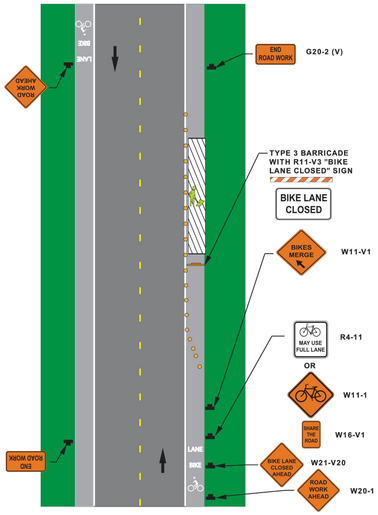
Scale:
HOR. N/A VERT. N/A

Sheet
C-0902

Filename: C-0900-MAINTENANCE OF TRAFFIC-Glebe.dwg
Path: K:\NVA_TPTO\1061\4001 - Washington Blvd Signals 3\CAD\PlanSheets

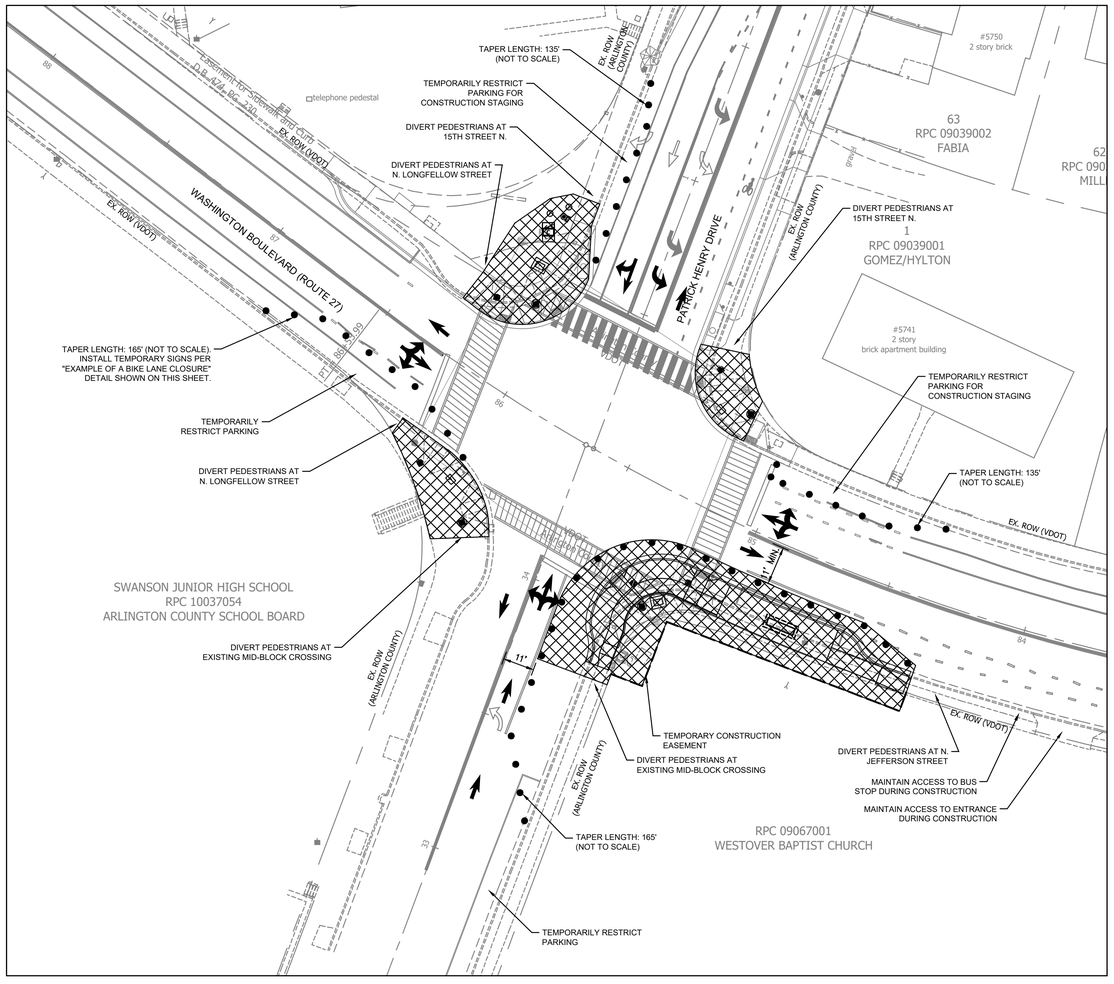
REVISED: MARCH 03, 2020

MAINTENANCE OF TRAFFIC
CURB EXTENSION SITE WORK AND TRAFFIC SIGNAL INSTALLATION



EXAMPLE OF A BICYCLE LANE CLOSURE

NOTE: REFER TO VDOT WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (JANUARY 2016) FOR MORE DETAIL.



NOTES:

1. REFER TO TRANSPORTATION MANAGEMENT PLAN AND SEQUENCE OF CONSTRUCTION ON SHEET C-0900.
2. WORK IS SHOWN IN THIS PLAN ON ALL FOUR CORNERS OF THE INTERSECTION. CONTRACTOR SHALL CONCENTRATE WORK ON ONE CORNER AT A TIME IN ORDER TO MINIMIZE THE FREQUENCY AND DURATION OF CROSSWALK CLOSURES.

GRAPHIC SCALE IN FEET
0 12.5 25 50

LEGEND

APPROXIMATE LIMITS OF WORK AREA

APPROXIMATE LOCATION OF CHANNELIZING DEVICES

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
DERIK DOUGHTY
Lic. No. 0402055074
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE MAINTENANCE OF TRAFFIC PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: TC
Drawn: TC
Checked: MA
Miss Utility Transmittal #:

Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-0903

Filename: C-0901-MAINTENANCE OF TRAFFIC-Patrick Henry.dwg
Path: K:\NVA_TPTO\1061401 - Washington Blvd Signals 3\CAD Files\Sheets

REVISED: MARCH 03, 2020

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, 2020 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.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

SIGNAL NOTES

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

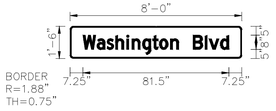
Scale:
HOR. N/A VERT. N/A

Sheet
C-1000

Filename: C-0002 GENERAL NOTES AND DETAILS.dwg
Path: K:\NVA_TPTO\110\4401 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

SIGN DETAIL



SIGN NUMBER	Washington Blvd
WIDTH x HGHT.	8'-0" x 1'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	1.88"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

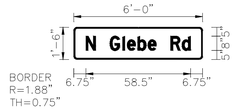
SYMBOL	ROT	X	Y	WID	HT

Panel Style: Arlington Street Name.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
W	a	s	h	i	n	g	t	o	n		B	l	v	d							D 2000
7.2	15	20.6	25.4	31.6	34.5	40.4	46.1	49.9	56	60.8	68.8	75.4	77.6	84						81.5	8/6

SIGN DETAIL



SIGN NUMBER	Glebe Rd
WIDTH x HGHT.	6'-0" x 1'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	1.88"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

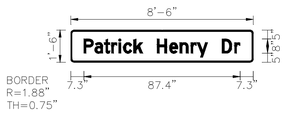
SYMBOL	ROT	X	Y	WID	HT

Panel Style: Arlington Street Name.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
N		G	l	e	b	e		R	d												D 2000
6.8	12.2	20.2	27.2	29.8	35.6	41.4	46.1	54.1	60.4											58.5	8/6

SIGN DETAIL



SIGN NUMBER	Patrick Henry Dr
WIDTH x HGHT.	8'-6" x 1'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	1.88"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Panel Style: Arlington Street Name.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
P	a	t	r	i	c	k		H	e	n	r	y		D	r						D 2000
7.3	13.4	18.8	22.8	26.8	29.4	35.2	40.3	48.3	55.2	61	67.2	70.6	76.6	84.6	91.6					87.4	8/6

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

SIGNAL DETAILS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-1001

Filename: C-1001 SIGNAL DETAILS.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

CONDUIT & CABLE RUNS

A
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c PEDESTRIAN SIGNALS P42, P61
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB42, PB61
- 1-#6 BARE COPPER GROUNDING WIRE

B
- 1-3" CONDUIT (TRENCHED) PVC
- 3-14/7c SIGNAL HEADS 41, 42, 43, 71
- 1-THERMAL DETECTION LEAD-IN CABLE VD4
- 1-12/2c CABLE FOR LUMINAIRE SL1
- 1-CCTV LEAD-IN CABLE
- 1-#6 BARE COPPER GROUNDING WIRE

C
- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE4
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-4" CONDUIT (BORED) HDPE
- 3-14/7c SIGNAL HEADS 41, 42, 43, 71
- 2-14/7c PEDESTRIAN SIGNALS P42, P61
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB42, PB61
- 1-THERMAL DETECTION LEAD-IN CABLE VD4
- 1-12/2c CABLE FOR LUMINAIRE SL1
- 1-CCTV LEAD-IN CABLE
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (BORED) HDPE
- 1-OPTICOM CABLE PE4
- 1-#6 BARE COPPER GROUNDING WIRE

D
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P62
- 1-14/3c PEDESTRIAN PUSH BUTTON PB62
- 1-12/2c CABLE FOR LUMINAIRE SL6
- 1-#6 BARE COPPER GROUNDING WIRE

E
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P81
- 1-14/3c PEDESTRIAN PUSH BUTTON PB81
- 1-#6 BARE COPPER GROUNDING WIRE

F
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 11, 61, 62, 63
- 1-THERMAL DETECTION LEAD-IN CABLE VD6
- 1-12/2c CABLE FOR LUMINAIRE SL4
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE6
- 1-#6 BARE COPPER GROUNDING WIRE

G
- 1-4" CONDUIT (BORED) HDPE
- 5-14/7c SIGNAL HEADS 11, 41, 42, 43, 61, 62, 63, 71
- 4-14/7c PEDESTRIAN SIGNALS P42, P61, P62, P81
- 4-14/3c PEDESTRIAN PUSH BUTTONS PB42, PB61, PB62, PB81
- 2-THERMAL DETECTION LEAD-IN CABLES VD4, VD6
- 3-12/2c CABLE FOR LUMINAIRES SL1, SL4, SL6
- 1-CCTV LEAD-IN CABLE
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (BORED) HDPE
- 2-OPTICOM CABLES PE4, PE6
- 1-#6 BARE COPPER GROUNDING WIRE

H
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c PEDESTRIAN SIGNALS P22, P41
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB22, PB41
- 1-#6 BARE COPPER GROUNDING WIRE

I
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 21, 22, 23, 51
- 1-THERMAL DETECTION LEAD-IN CABLE VD2
- 1-12/2c CABLE FOR LUMINAIRE SL2
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE2
- 1-#6 BARE COPPER GROUNDING WIRE

J
- 1-4" CONDUIT (BORED) HDPE
- 2-14/7c SIGNAL HEADS 21, 22, 23, 51
- 2-14/7c PEDESTRIAN SIGNALS P22, P41
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB22, PB41
- 1-THERMAL DETECTION LEAD-IN CABLE VD2
- 1-12/2c CABLE FOR LUMINAIRES SL2
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (BORED) HDPE
- 1-OPTICOM CABLES PE2
- 1-#6 BARE COPPER GROUNDING WIRE

K
- 1-3" CONDUIT (TRENCHED) PVC
- 3-14/7c SIGNAL HEADS 31, 81, 82, 83
- 1-THERMAL DETECTION LEAD-IN CABLE VD8
- 1-12/2c CABLE FOR LUMINAIRE SL3
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE8
- 1-#6 BARE COPPER GROUNDING WIRE

L
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c PEDESTRIAN SIGNALS P21, P82
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB21, PB82
- 1-12/2c CABLE FOR LUMINAIRE SL5
- 1-#6 BARE COPPER GROUNDING WIRE

M
- 4-3" CONDUIT (TRENCHED) PVC
- 10-14/7c SIGNAL HEADS 11, 21, 22, 23, 31, 41, 42, 43, 51, 61, 62, 63, 71, 81, 82, 83
- 8-14/7c PEDESTRIAN SIGNALS P21, P22, P41, P42, P61, P62, P81, P82
- 8-14/3c PEDESTRIAN PUSH BUTTONS PB21, PB22, PB41, PB42, PB61, PB62, PB81, PB82
- 4-THERMAL DETECTION LEAD-IN CABLES VD2, VD4, VD6, VD8
- 1-CCTV LEAD-IN CABLE
- 4-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 4-OPTICOM CABLES PE2, PE4, PE6, PE8
- 1-#6 BARE COPPER GROUNDING WIRE

N
- 1-2" CONDUIT (TRENCHED) METAL
- 3-#6 AWG FOR ELECTRICAL SERVICE

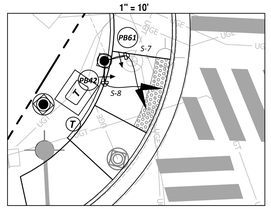
O
- 1-2" CONDUIT (TRENCHED) METAL
- 3-#6 AWG FOR ELECTRICAL SERVICE

P
- 1-2" CONDUIT (TRENCHED) METAL
- 1-#6 AWG FOR SYSTEM GROUNDING

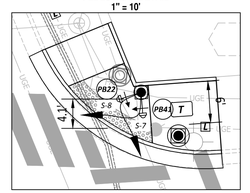
Q
- 1-3" CONDUIT (TRENCHED) PVC
- 6-12/2c CABLES FOR LUMINAIRES SL1, SL2, SL3, SL4, SL5, SL6
- 1-#6 AWG FOR SYSTEM GROUNDING

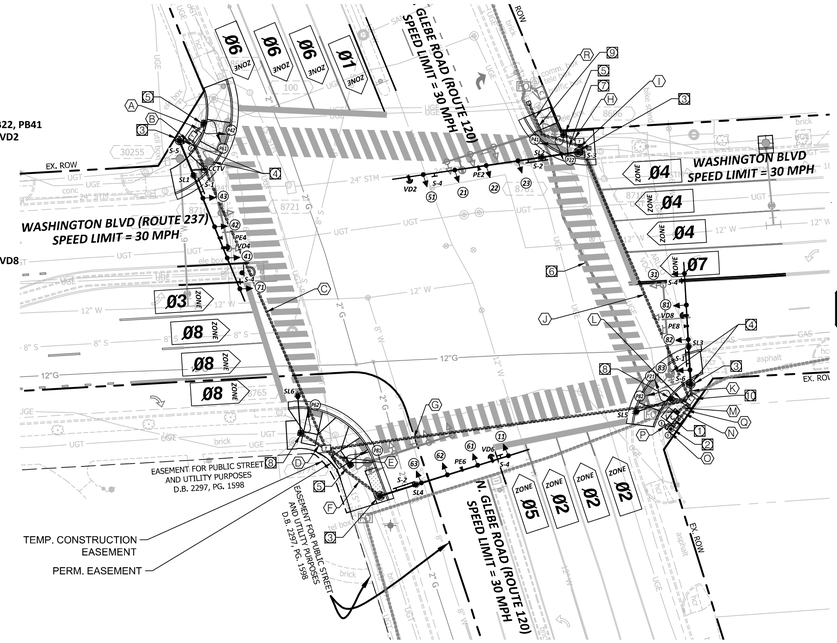
R
- 1-2" CONDUIT (TRENCHED) PVC
- STREET LIGHT WIRING (SEE NOTE 9)
- 1-#6 AWG FOR SYSTEM GROUNDING

NORTHWEST CORNER PEDESTRIAN DETAIL
1" = 10'

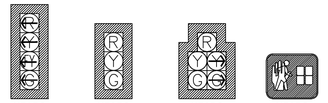


NORTHEAST CORNER PEDESTRIAN DETAIL
1" = 10'



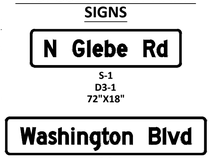


PROPOSED SIGNALS



HEADS 11,31,51,71 | HEADS 21,22,23,41,42, 61,62,63,81,82 | HEADS 43,83 | HEADS P21,P22,P41,P42 P61,P62,P81,P82

PROPOSED STREET NAME SIGNS



S-1
D3-1
72"X18"

S-2
D3-1
96"X18"

PROPOSED SIGNS

S-3
M4-5 I
24"X12"
M3-2 I
24"X12"
M1-1
24"X24"
M6-1 I(R)
21"X15"

S-4
R10-V1
36"X36"

EXISTING SIGNS TO BE RELOCATED

S-5 | S-6

PROPOSED ACCESSIBLE PEDESTRIAN PUSHBUTTON

S-7
R10-3E(L)
9"X15"

S-8
R10-3E(R)
9"X15"

PB21, PB41* PB61, PB81

PB22, PB42* PB62, PB82

PUSHBUTTON	WALK MESSAGE
PB41, PB42 PB81, PB82	*N. GLEBE ROAD, WALK SIGN IS ON TO CROSS N. GLEBE ROAD.*
PB21, PB22 PB61, PB62	*WASHINGTON BLVD, WALK SIGN IS ON TO CROSS WASHINGTON BLVD.*

* PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.

*** ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATIONS AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.**

SOUTHWEST CORNER PEDESTRIAN DETAIL
1" = 10'

SOUTHEAST CORNER PEDESTRIAN DETAIL
1" = 10'

CONSTRUCTION NOTES

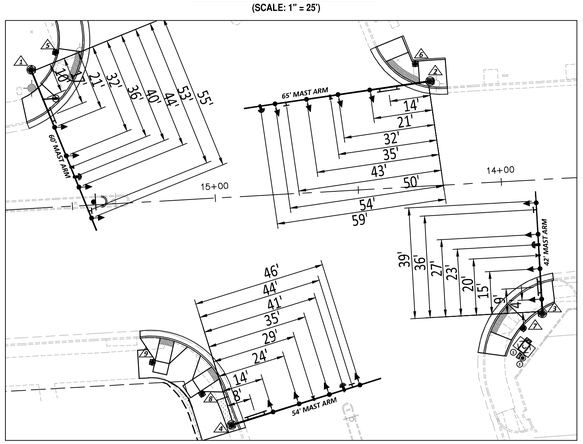
EXISTING CONTROLLER AND CABINET TO BE REPLACED WITH NEW CONTROLLER AND CABINET ON A NEW FOUNDATION. ALL OTHER EXISTING EQUIPMENT TO BE REMOVED INCLUDING UNUSED WIRING, CONDUIT, AND JUNCTION BOXES, UNLESS OTHERWISE SPECIFIED. EXISTING CONTROLLER AND CABINET SHALL BE RETURNED TO ARLINGTON COUNTY.

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. TO BE FINALIZED BASED UPON ONGOING DVP COORDINATION.
3. INSTALL NON-ORNAMENTAL MAST ARM SIGNAL POLE WITH LUMINAIRE AND POLE IDENTIFICATION STICKER.
4. RELOCATE PARKING WAYFINDING SIGN FROM EXISTING SIGNAL POLE TO PROPOSED SIGNAL POLE
5. INSTALL PEDESTAL POLE WITH PEDESTRIAN SIGNAL, POLARA PEDESTRIAN EQUIPMENT, SIGN, AND POLE IDENTIFICATION STICKER.
6. SEE COMMUNICATION PLAN ON SHEET C-1200 FOR COMMUNICATION CONNECTION DETAILS.
7. REMOVE EXISTING STREETLIGHT POLE.
8. INSTALL COBRA POLE WITH PEDESTRIAN SIGNAL, POLARA PEDESTRIAN EQUIPMENT, SIGN, LUMINAIRE, AND POLE IDENTIFICATION STICKER.
9. CONTRACTOR TO INSTALL NEW CABLES MATCHING EXISTING STREET LIGHT CABLES' MATERIAL, QUANTITY, AND SIZE. CONTRACTOR TO CONNECT NEW CABLES TO EXISTING CABLES AT PROPOSED JUNCTION BOXES ON EITHER END OF PROPOSED CONDUIT RUN R TO MAINTAIN EXISTING STREET LIGHT CIRCUIT.
10. INSTALL 61-04 TYPE 5 JUNCTION BOX.

INITIAL TIMING CHART								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT	SB GLEBE RD LEFT	NB GLEBE RD THRU	EB WASH BLVD LEFT	WB WASH BLVD THRU	NB GLEBE RD LEFT	SB GLEBE RD THRU	WB WASH BLVD LEFT	EB WASH BLVD THRU
PHASE ON	X	X	X	X	X	X	X	X
PHASE OFF								
PHASE TIMINGS								
MIN GR	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PASSAGE	3.0	2.0	2.0	3.0	3.0	2.0	2.0	3.0
YELLOW	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
RED	3.7	3.7	2.8	2.8	3.7	3.7	2.8	2.8
MAX 1	15.0	45.0	15.0	30.0	30.0	30.0	15.0	30.0
MAX 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIME BEFORE REDUCTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIME TO REDUCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PED WALK	0.0	7.0	0.0	7.0	0.0	7.0	0.0	7.0
PED CLEARANCE	0.0	26.0	0.0	33.0	0.0	29.0	0.0	29.0
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK

POLE LOCATION DETAIL

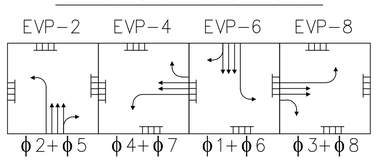
(SCALE: 1" = 25')



COLOR SEQUENCE CHART																	
PHASE	1	2	3	4	5	6	7	8	1+5	1+6	2+5	2+6	3+7	3+8	4+7	4+8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	
11	~~G~~	~~Y~~							~~G~~	~~G~~	~~Y~~	~~Y~~					~~R~~
21,22,23		G									G	G					Y
31			~~G~~	~~Y~~									~~G~~	~~G~~	~~Y~~	~~Y~~	~~R~~
41,42				G											G	G	R
43	~~G~~			G					~~G~~	~~G~~					G	G	R
51					~~G~~	~~Y~~			~~G~~	~~Y~~	~~G~~	~~Y~~					~~R~~
61,62,63						G				G		G					Y
71							~~G~~	~~Y~~					~~G~~	~~Y~~	~~G~~	~~Y~~	~~R~~
81,82								G						G		G	R
83					~~G~~			G	~~G~~		~~G~~			G		G	R
P21,P22		W*									W*	W*					DARK
P41,P42				W*											W*	W*	DARK
P61,P62						W*				W*		W*					DARK
P81,P82								W*						W*		W*	DARK

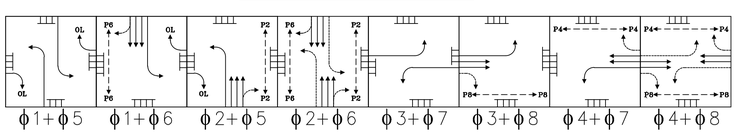
NOTE: BLANK SPACES IN THIS CHART REPRESENT A "RED" SIGNAL INDICATION.
*WALK INDICATION IS DISPLAYED WHEN PEDESTRIAN CALL IS SERVICED; WALK INDICATION IS DISPLAYED UNTIL IT IS TIMED OUT. OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

PREEMPTION PHASING DIAGRAM

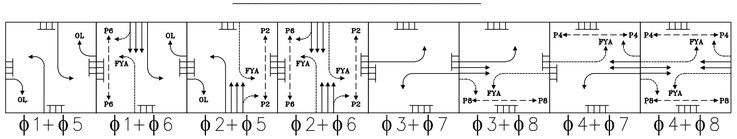


GRAPHIC SCALE IN FEET
0 12.5 25 50

EXISTING PHASING DIAGRAM



PROPOSED PHASING DIAGRAM



LEGEND

	EXISTING	PROPOSED
Controller Cabinet	C	C
Signal Junction Box (61-02)		
Signal Junction Box (61-04 Type 3 Unless Noted)		
Signal Junction Box (61-04) & Collar in Grass		
Comm. Junction Box		
Service Junction Box		
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation	PM	PM
Cobra Pole & Foundation	SL#	SL#
Service Meter		
Battery Backup (UPS)		
Vehicle Signal Head (LED)		
Pedestrian Push Button	PB#	PB#
FLIR Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Street Lighting Junction Box (14040-01)		

POLE SCHEDULE

No.	STATION	OFFSET	POLE IDENTIFICATION	STANDARD TYPE	STANDARD SIG. M.A. ORIENT.	STANDARD SIG. M.A.	STANDARD LUM. M.A. ORIENT.	STANDARD LUM. M.A. (TYPE)	LUM. LED (4)	POLE SIGNAL MOUNTING VEHICLE & PED. HEADS	POLE SIGNAL MOUNTING PED. PUSH BUTTONS	POLE SIGNAL MOUNTING SIGNS	POLE SIGNAL MOUNTING VIDEO DETECTOR PREEMPTION & CCTV	STREET NAME SIGN
1	15+61.72	48.38'RT	113-MA-01-NW	MAST ARM POLE 30'	180°	60'	180°	6' (UPSWEEP)	145W	41,42,43,71	-	S-4	VD4,PE4,CCTV	S-1
2	14+18.70	37.54'RT	113-MA-01-NE	MAST ARM POLE 30'	180°	65'	180°	6' (UPSWEEP)	145W	21,22,23,51	-	S-3,S-4	VD2,PE2	S-2
3	13+88.27	46.67'LT	113-MA-01-SE	MAST ARM POLE 30'	180°	42'	180°	6' (UPSWEEP)	145W	31,81,82,83	-	S-4,S-6	VD8,PE8	S-1
4	14+98.84	79.50'LT	113-MA-01-SW	MAST ARM POLE 30'	180°	54'	180°	6' (UPSWEEP)	145W	11,61,62,63	-	S-4	VD6,PE6	S-2
5	15+52.74	54.02'RT	113-PP-01-NW	PEDESTAL POLE 12'	-	-	-	-	-	P42,P61	PB42,PB61	S-7,S-8	-	-
6	14+27.69	42.83'RT	113-PP-01-NE	PEDESTAL POLE 12'	-	-	-	-	-	P22,P41	PB22,PB41	S-7,S-8	-	-
7	13+95.26	51.55'LT	113-CB-01-SE	COBRA POLE 30'	-	-	-	6' (UPSWEEP)	145W	P21,P82	PB21,PB82	S-7,S-8	-	-
8	15+09.38	68.39'LT	113-PP-01-SW	PEDESTAL POLE 12'	-	-	-	-	-	P81	PB81	S-7	-	-
9	15+25.26	56.10'LT	113-CB-01-SW	COBRA POLE 30'	-	-	-	6' (UPSWEEP)	145W	P62	PB62	S-8	-	-

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

TRAFFIC SIGNAL PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-1100

Filename: C-1100 TRAFFIC SIGNAL PLAN-Glebe.dwg
Path: \\kimley-horn.com\AT_NVA2\NVA_TPTO\110614001 - Washington Blvd Signals 2\CAD\PlanSheets

REVISED: MARCH 03, 2020

CONDUIT & CABLE RUNS

A
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P22
- 1-14/3c PEDESTRIAN PUSH BUTTON PB22
- 1-#6 BARE COPPER GROUNDING WIRE

B
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 21, 22 (1 SPARE)
- 1-THERMAL DETECTION LEAD-IN CABLE VD2
- 1-12/2c CABLE FOR LUMINAIRE SL3
- 1-#6 BARE COPPER GROUNDING WIRE

C
- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE2
- 1-#6 BARE COPPER GROUNDING WIRE

D
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P81
- 1-14/3c PEDESTRIAN PUSH BUTTON PB81
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-4" CONDUIT (BORED) HDPE
- 2-14/7c SIGNAL HEADS 21, 22 (1 SPARE)
- 2-14/7c PEDESTRIAN SIGNALS P22, P81
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB22, PB81
- 1-THERMAL DETECTION LEAD-IN CABLE VD2
- 1-12/2c CABLE FOR LUMINAIRE SL3
- 1-#6 BARE COPPER GROUNDING WIRE

E
- 1-2" CONDUIT (BORED) HDPE
- 1-OPTICOM CABLE PE2
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 81, 82 (1 SPARE)
- 1-14/7c PEDESTRIAN SIGNAL P82
- 1-14/3c PEDESTRIAN PUSH BUTTONS PB82
- 1-THERMAL DETECTION LEAD-IN CABLE VD8
- 1-12/2c CABLE FOR LUMINAIRE SL2
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE8
- 1-#6 BARE COPPER GROUNDING WIRE

F
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P61
- 1-14/3c PEDESTRIAN PUSH BUTTON PB61
- 1-#6 BARE COPPER GROUNDING WIRE

G
- 1-4" CONDUIT (BORED) HDPE
- 4-14/7c SIGNAL HEADS 21, 22, 81, 82 (2 SPARE)
- 4-14/7c PEDESTRIAN SIGNALS P22, P61, P81, P82
- 4-14/3c PEDESTRIAN PUSH BUTTONS PB22, PB61, PB81, PB82
- 2-THERMAL DETECTION LEAD-IN CABLE VD2, VD8
- 2-12/2c CABLE FOR LUMINAIRE SL2, SL3
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (BORED) HDPE
- 2-OPTICOM CABLE PE2, PE8
- 1-#6 BARE COPPER GROUNDING WIRE

H
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 41, 42 (1 SPARE)
- 1-14/7c PEDESTRIAN SIGNAL P21
- 1-14/3c PEDESTRIAN PUSH BUTTON PB21
- 1-THERMAL DETECTION LEAD-IN CABLE VD4
- 1-12/2c CABLE FOR LUMINAIRE SL4
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE4
- 1-#6 BARE COPPER GROUNDING WIRE

I
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P42
- 1-14/3c PEDESTRIAN PUSH BUTTON PB42
- 1-#6 BARE COPPER GROUNDING WIRE

J
- 1-4" CONDUIT (BORED) HDPE
- 2-14/7c SIGNAL HEADS 21, 22 (1 SPARE)
- 2-14/7c PEDESTRIAN SIGNALS P22, P81
- 2-14/3c PEDESTRIAN PUSH BUTTONS PB22, PB81
- 1-THERMAL DETECTION LEAD-IN CABLE VD2
- 1-12/2c CABLE FOR LUMINAIRE SL3
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (BORED) HDPE
- 1-OPTICOM CABLE PE2
- 1-#6 BARE COPPER GROUNDING WIRE

K
- 1-3" CONDUIT (TRENCHED) PVC
- 1-14/7c PEDESTRIAN SIGNAL P41
- 1-14/3c PEDESTRIAN PUSH BUTTON PB41
- 1-#6 BARE COPPER GROUNDING WIRE

L
- 1-3" CONDUIT (TRENCHED) PVC
- 2-14/7c SIGNAL HEADS 61, 62 (1 SPARE)
- 1-14/7c PEDESTRIAN SIGNAL P62
- 1-14/3c PEDESTRIAN PUSH BUTTON PB62
- 1-THERMAL DETECTION LEAD-IN CABLE VD6
- 1-12/2c CABLE FOR LUMINAIRE SL1
- 1-CCTV LEAD-IN CABLE
- 1-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 1-OPTICOM CABLE PE6
- 1-#6 BARE COPPER GROUNDING WIRE

M
- 4-3" CONDUIT (TRENCHED) PVC
- 8-14/7c SIGNAL HEADS 21, 22, 41, 41, 61, 62, 81, 82 (4 SPARE)
- 8-14/7c PEDESTRIAN SIGNALS P21, P22, P41, P42, P61, P62, P81, P82
- 8-14/3c PEDESTRIAN PUSH BUTTONS PB21, PB22 PB41, PB42, PB61, PB62, PB81, PB82
- 4-THERMAL DETECTION LEAD-IN CABLES VD2, VD4, VD6, VD8
- 1-CCTV LEAD-IN CABLE
- 4-#6 BARE COPPER GROUNDING WIRE

- 1-2" CONDUIT (TRENCHED) PVC
- 4-OPTICOM CABLES PE2, PE4, PE6, PE8
- 1-#6 BARE COPPER GROUNDING WIRE

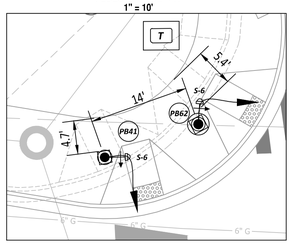
N
- 1-2" CONDUIT (TRENCHED) METAL
- 3-#6 AWG FOR ELECTRICAL SERVICE

O
- 1-2" CONDUIT (TRENCHED) METAL
- 3-#6 AWG FOR ELECTRICAL SERVICE

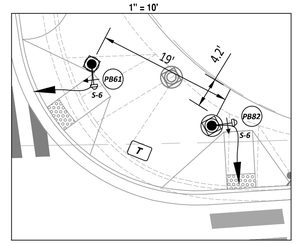
P
- 1-2" CONDUIT (TRENCHED) METAL
- 1-#6 AWG FOR SYSTEM GROUNDING

Q
- 1-3" CONDUIT (TRENCHED) PVC
- 4-12/2c CABLE FOR LUMINAIRES SL1, SL2, SL3, SL4
- 1-#6 AWG FOR SYSTEM GROUNDING

NORTHWEST CORNER PEDESTRIAN DETAIL
1" = 10'



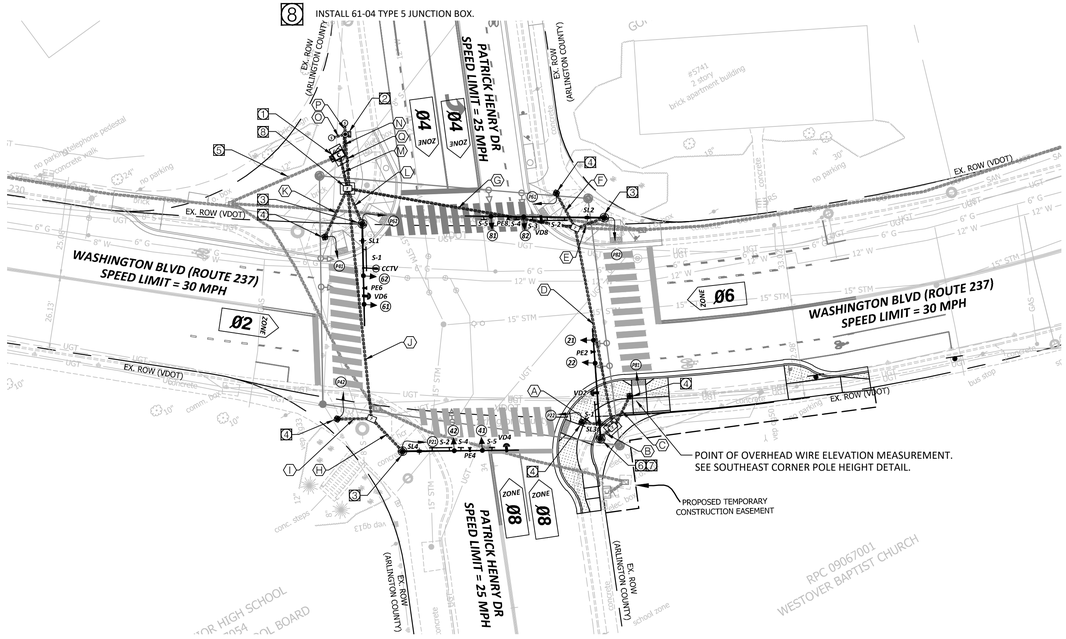
NORTHEAST CORNER PEDESTRIAN DETAIL
1" = 10'



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. TO BE FINALIZED BASED UPON ONGOING DVP COORDINATION.
3. INSTALL NON-ORNAMENTAL MAST ARM SIGNAL POLE WITH LUMINAIRE, PEDESTRIAN SIGNAL HEAD(S), POLARA PEDESTRIAN EQUIPMENT, AND POLE IDENTIFICATION STICKER.
4. INSTALL PEDESTAL POLE WITH PEDESTRIAN SIGNAL, POLARA PEDESTRIAN EQUIPMENT, SIGN, AND POLE IDENTIFICATION STICKER.
5. SEE COMMUNICATION PLAN ON SHEET C-1201 FOR COMMUNICATION CONNECTION DETAILS.
6. MAST ARM SHOULD BE MOUNTED AT 19.5' ABOVE THE PROPOSED ELEVATION. CONTRACTOR SHALL VERIFY MAST ARM HEIGHT NECESSARY BEFORE ORDERING POLE AND SHALL PROTECT AND MAINTAIN EXISTING SPAN WIRES STRUCTURE INTACT DURING CONSTRUCTION. REFER TO SOUTHEAST CORNER POLE HEIGHT DETAIL ON THIS SHEET.
7. INSTALL NON-ORNAMENTAL MAST ARM SIGNAL POLE WITH LUMINAIRE AND POLE IDENTIFICATION STICKER.
8. INSTALL 61-04 TYPE 5 JUNCTION BOX.



PROPOSED SIGNALS

HEADS 21,22,41,42, 61,62,81,82

HEADS P21,P22,P41,P42 P61,P62,P81,P82

PROPOSED STREET NAME SIGNS

S-1
D3-1
102"X18"

S-2
D3-1
96"X18"

PROPOSED SIGNS

S-3
R10-11a (MOD)
30"X48"

S-4
R3-6(R)
30"X36"

S-5
R3-5
30"X36"

PROPOSED ACCESSIBLE PEDESTRIAN PUSHBUTTON

S-6
R10-3E(L)
9"X15"

S-7
R10-3E(R)
9"X15"

PB21, PB22, PB41, PB61, PB62, PB82

PB81, PB42

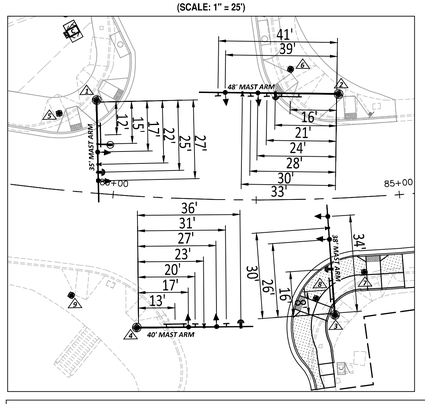
PUSHBUTTON	WALK MESSAGE
PB41, PB42 PB81, PB82	"WASHINGTON BLVD, WALK SIGN IS ON TO CROSS WASHINGTON BLVD."
PB21, PB22 PB61, PB62	"PATRICK HENRY DR, WALK SIGN IS ON TO CROSS PATRICK HENRY DR."

* PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.

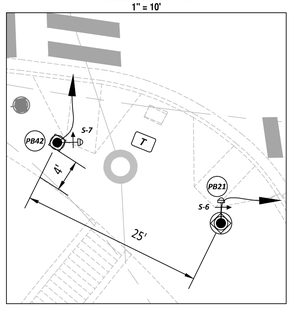
*** ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATIONS AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.**

POLE LOCATION DETAIL

(SCALE: 1" = 25')

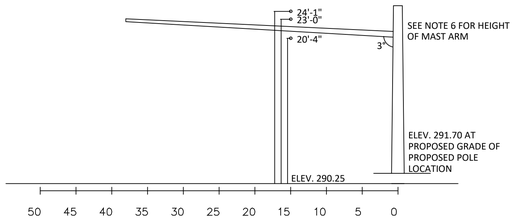


SOUTHWEST CORNER PEDESTRIAN DETAIL
1" = 10'

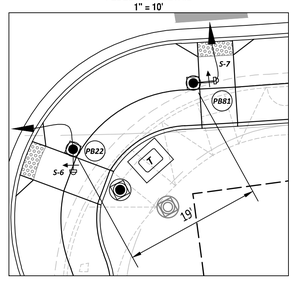


SOUTHEAST CORNER POLE HEIGHT DETAIL

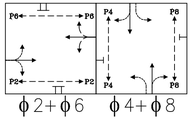
N.T.S.



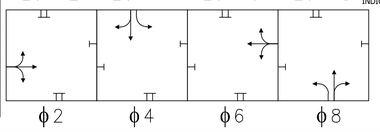
SOUTHEAST CORNER PEDESTRIAN DETAIL
1" = 10'



EXISTING/PROPOSED PHASING DIAGRAM



PREEMPTION PHASING DIAGRAM



COLOR SEQUENCE CHART

PHASE	2	4	6	8	2+6	4+8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	
21,22	G				G		Y
41,42		G				G	R
61,62			G		G		Y
81,82				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.

GRAPHIC SCALE IN FEET
0 12.5 25 50

INITIAL TIMING CHART

PHASE	1	2	3	4	5	6	7	8
MOVEMENT		EB WASH BLVD THRU		SB PATRICK HENRY DR THRU		WB WASH BLVD THRU		NB PATRICK HENRY DR THRU
PHASE ON		X		X		X		X
PHASE OFF	X		X		X		X	
PHASE TIMINGS								
MIN GR	NOT USED	5.0	NOT USED	5.0	NOT USED	5.0	NOT USED	5.0
PASSAGE		2.0		2.0		2.0		2.0
YELLOW		3.9		4.0		3.9		4.0
RED		2.5		1.8		2.5		1.8
MAX 1		45.0		30.0		45.0		30.0
MAX 2		0.0		0.0		0.0		0.0
MIN GAP		0.0		0.0		0.0		0.0
TIME BEFORE REDUCTION		0.0		0.0		0.0		0.0
TIME TO REDUCE		0.0		0.0		0.0		0.0
PED WALK		7.0		7.0		7.0		7.0
PED CLEARANCE		16.0		15.0		15.0		14.0
MODE		MIN RECALL		NON LOCK		MIN RECALL		NON LOCK

POLE SCHEDULE

No.	STATION	OFFSET	POLE IDENTIFICATION	STANDARD TYPE	SIG. M.A. ORIENT.	SIG. M.A.	LUM. M.A. ORIENT.	LUM. M.A. (TYPE)	LUM. LED (4)	POLE SIGNAL MOUNTING VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS	VIDEO DETECTOR PREEMPTION & CCTV	STREET NAME SIGN
1	86+08.67	32.41'RT	110-MA-01-NW	MAST ARM POLE 30'	180°	35'	180°	6' (UPSWEEP)	145W	61,62,P62	PB62	S-6	VD6,PE6,CCTV	S-1
2	85+19.65	36.35'RT	110-MA-01-NE	MAST ARM POLE 30'	180°	48'	180°	6' (UPSWEEP)	145W	81,82,P82	PB82	S-3,S-4,S-5,S-6	VD8,PE8	S-2
3*	85+24.11	40.73'LT	110-MA-01-SE	MAST ARM POLE 30'	180°	38'	180°	6' (UPSWEEP)	145W	21,22	-	-	VD2,PE2	S-1
4	85+89.12	45.80'LT	110-MA-01-SW	MAST ARM POLE 30'	180°	40'	180°	6' (UPSWEEP)	145W	41,42,P21	PB21	S-4,S-5,S-6	VD4,PE4	S-2
5	86+21.81	26.57'RT	110-PP-01-NW	PEDESTAL POLE 12'	-	-	-	-	-	P41	PB41	S-6	-	-
6	85+37.17	45.49'RT	110-PP-01-NE	PEDESTAL POLE 12'	-	-	-	-	-	P61	PB61	S-6	-	-
7	85+13.73	26.30'LT	110-PP-01-SE	PEDESTAL POLE 12'	-	-	-	-	-	P81	PB81	S-7	-	-
8	85+30.15	34.83'LT	110-PP-02-SE	PEDESTAL POLE 12'	-	-	-	-	-	P22	PB22	S-6	-	-
9	86+11.31	36.26'LT	110-PP-01-SW	PEDESTAL POLE 12'	-	-	-	-	-	P42	PB42	S-7	-	-

*SEE CONSTRUCTION NOTE 6 FOR MAST ARM HEIGHT

LEGEND

	EXISTING	PROPOSED
Controller Cabinet	C	C
Signal Junction Box (61-02)	J	J
Signal Junction Box (61-04 Type 3 Unless Noted)	J	J
Signal Junction Box (61-04) & Collar in Grass	J	J
Comm. Junction Box	J	J
Service Junction Box	J	J
Mast Arm Pole & Foundation	PM	PM
Pedestrian Pedestal Pole & Foundation	PM	PM
Cobra Pole & Foundation	SL#	SL#
Service Meter	M	M
Battery Backup (UPS)	BB	BB
Vehicle Signal Head (LED)	VH	VH
Pedestrian Push Button	PB#	PB#
FLIR Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

TRAFFIC SIGNAL PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-1101

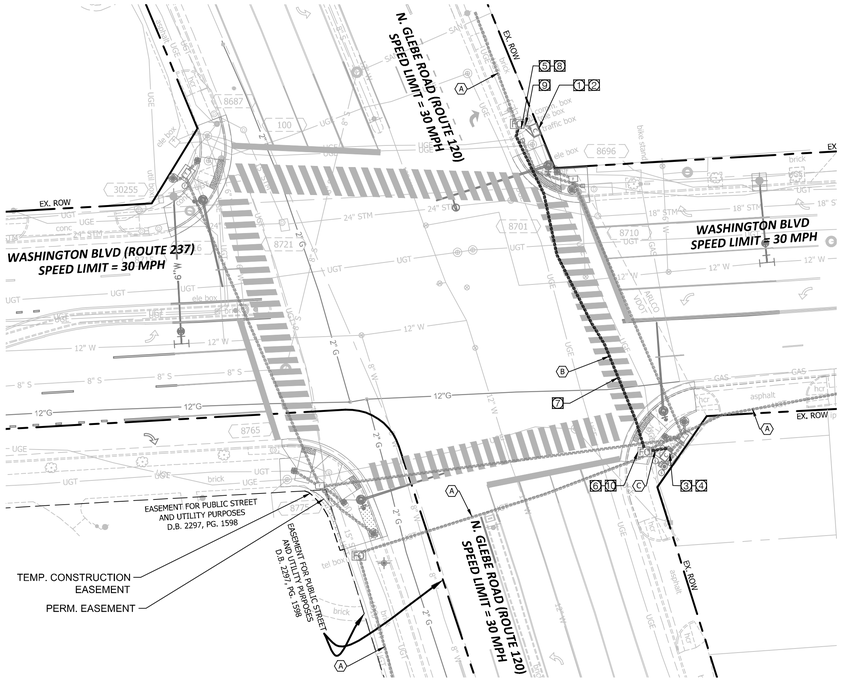
Filename: C-1101 TRAFFIC SIGNAL PLAN-Patrick Henry.dwg
Path: K:\NVA_TPTO\110\4001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

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 250' OF SPUR FIBER CABLE TO REACH EXISTING SPLICE ENCLOSURE AT LOCATION A. PRE-TERMINATED PATCH PANEL TO BE INSTALLED VERTICALLY IN CONTROLLER CABINET. INSTALL SPUR FIBER CABLE IN PROPOSED CONDUIT.
5. 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.
6. RE-ENTER EXISTING JUNCTION BOX WITH NEW CONDUIT.
7. PROPOSED CABLING TO RUN THROUGH EXISTING FIBER CONDUIT.
8. LOCATION A
9. CAP AND ABANDON EXISTING FIBER CONDUIT.
10. COIL 50' OF SPUR FIBER CABLE.

CONDUIT & CABLE

- A: 4-2" CONDUIT (EXISTING)
  2-144 FIBER CABLES (EXISTING)
- B: 4-2" CONDUIT (EXISTING)
  2-144 FIBER CABLES (EXISTING)
  1-12 FIBER CABLE (NEW)
- C: **1-2" CONDUIT PVC (NEW)**
  1-12 FIBER CABLE (NEW)

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box		
Service Junction Box		
Conduit Run		

GRAPHIC SCALE IN FEET
0 12.5 25 50

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/19/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

COMMUNICATIONS PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: NM
Drawn: PK
Checked: GG
Miss Utility Transmittal #:

Plotted: July 19, 2022
Plotted by: patrick.husted

Scale:
HOR. N/A VERT. N/A

Sheet
C-1200

Filename: C-1200 COMMUNICATIONS PLAN-Glebe.dwg
Path: K:\NVA_TPTO\110614001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020

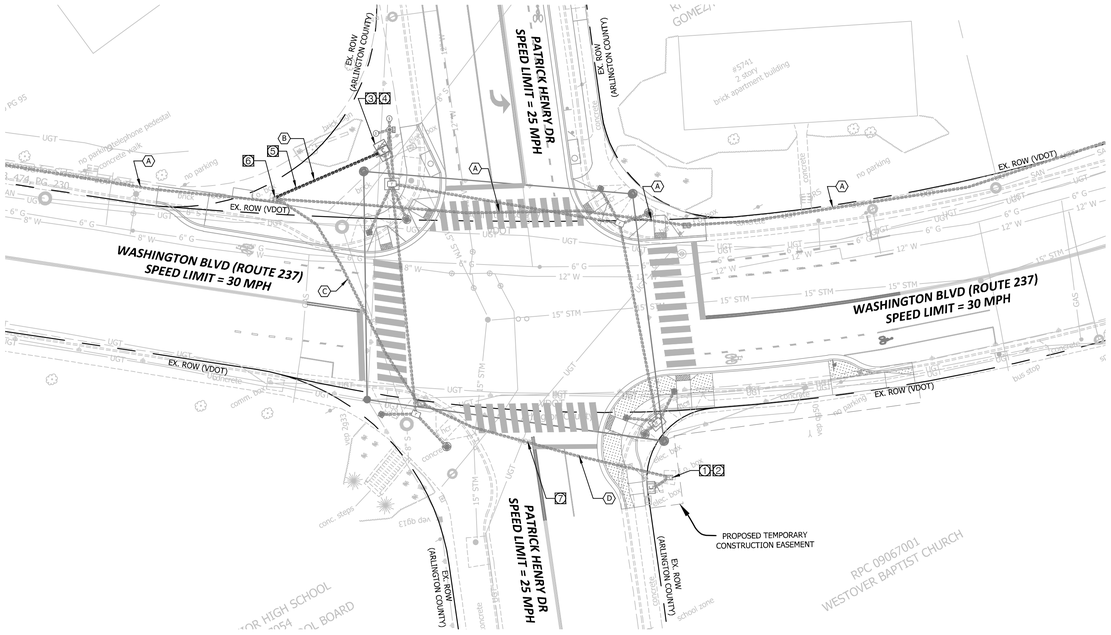
GENERAL NOTES

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, 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 12 PATCH PANEL AND FIBER CABLE, ETHERNET SWITCH, AND JUMPER CABLES IN PROPOSED CONTROLLER CABINET.
5. INSTALL EXISTING 12 FIBER CABLE IN PROPOSED CONDUIT. CONTRACTOR SHALL NOTIFY COUNTY IF A SUFFICIENT LENGTH OF FIBER IS NOT AVAILABLE TO REROUTE TO NEW CONTROLLER.
6. RE-ENTER EXISTING JUNCTION BOX WITH NEW CONDUIT.
7. CAP AND ABANDON EXISTING FIBER CONDUIT.



CONDUIT & CABLE

- A — 4-2" CONDUIT (EXISTING)
  2-144 FIBER CABLES (EXISTING)
- B — **1-2" CONDUIT PVC (NEW)**
  1-12 FIBER CABLE (EXISTING, RELOCATED)
- C — 1-2" CONDUIT (EXISTING)
  1-12 FIBER CABLE (TO BE RELOCATED)
  DTS FIBER CABLE (TO REMAIN)
- D — 1-2" CONDUIT (EXISTING)
  1-12 FIBER CABLE (TO BE RELOCATED)

LEGEND

	EXISTING	PROPOSED
Controller Cabinet	⊠	⊠
Signal Junction Box (61-02)	⊙	⊙
Signal Junction Box (61-04)	▭	▭
Comm. Junction Box	⊙	⊙
Service Junction Box	⊠	⊠
Conduit Run	==========	==========

GRAPHIC SCALE IN FEET
0 12.5 25 50

ARLINGTON VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

COMMUNICATIONS PLAN

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

Designed: NM
Drawn: PK
Checked: GG
Miss Utility Transmittal #:

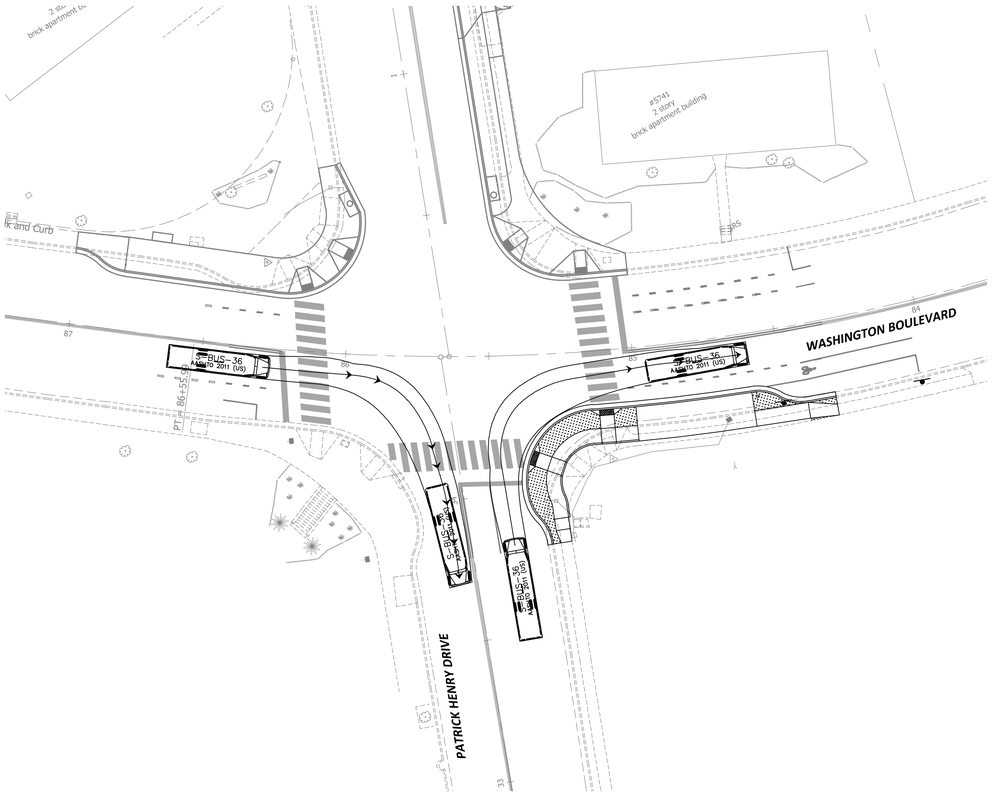
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

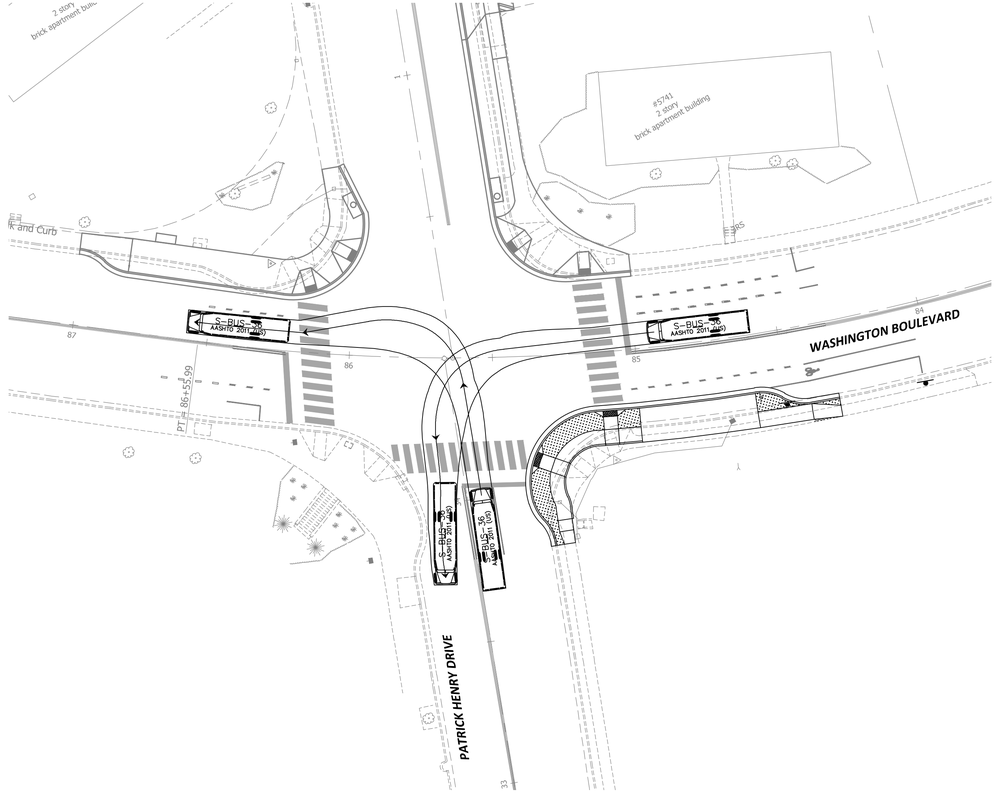
Sheet
C-1201

Filename: C-1201 COMMUNICATIONS PLAN-Patrick Henry.dwg
Path: K:\NVA_TPTO\106\4401 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



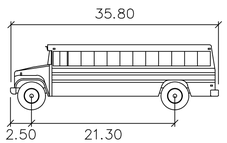
EASTBOUND RIGHT TURN AND NORTHBOUND RIGHT TURN



NORTHBOUND LEFT TURN AND WESTBOUND LEFT TURN

GRAPHIC SCALE IN FEET
0 12.5 25 50

DESIGN VEHICLE



S-BUS-36

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 37.6

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

AUTOTURN EXHIBIT

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

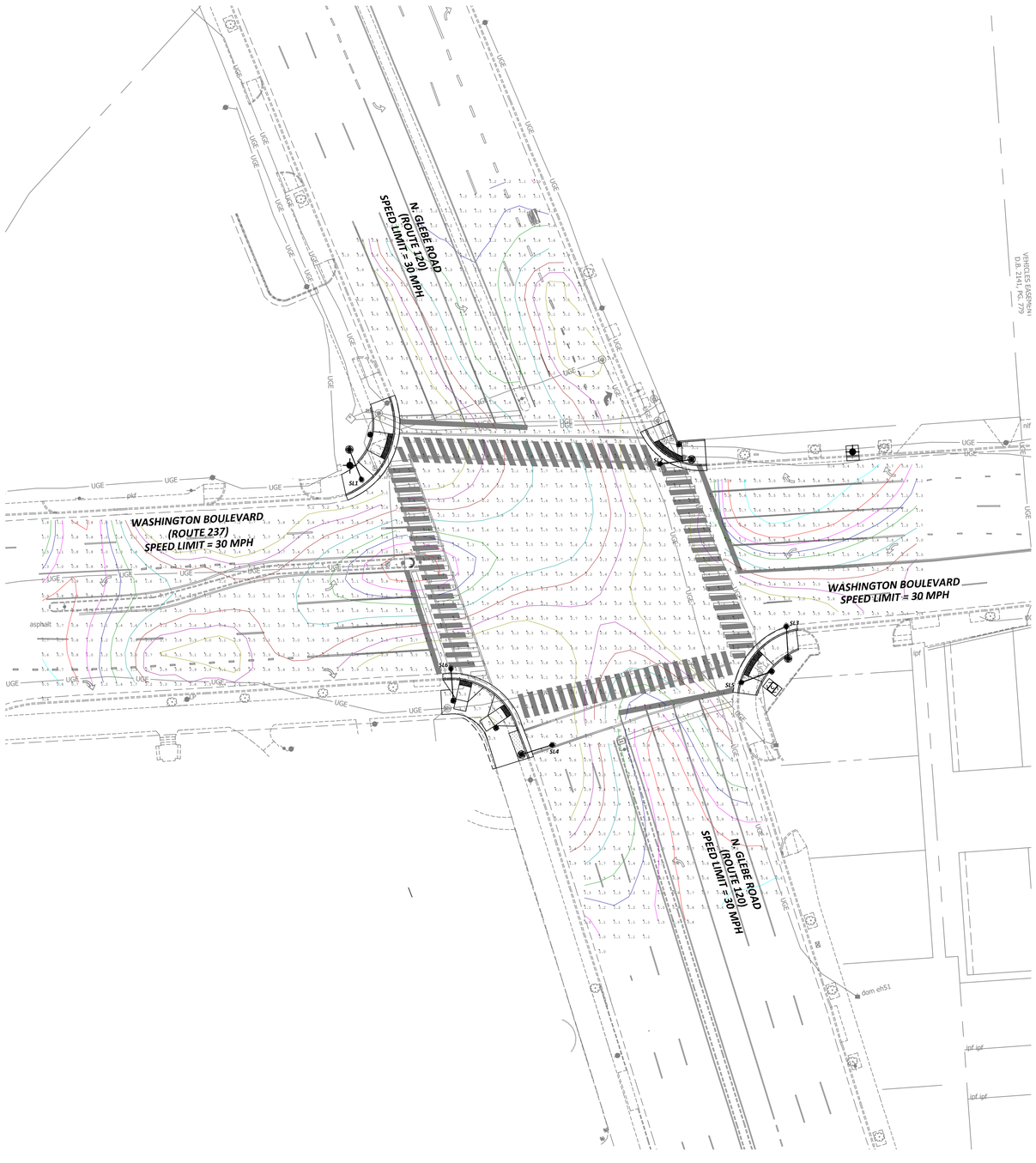
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
EXHIBIT A

Filename: AUTOTURN EXHIBIT.dwg
Path: K:\NVA_TPTO\110\6140\1 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 12.5 25 50

Glebe and Washington Boulevard							
Facility	Target			Proposed			Requirements Met?
	Avg	Avg/Min	Max/Min	Avg	Avg/Min	Max/Min	
Intersection	2.8	4	20	2.8	4.0	10.0	Yes
N Glebe Roadway North	1.4	4	20	2.2	2.2	6.2	Yes
N Glebe Roadway South	1.4	4	20	1.4	2.3	8.3	Yes
NE Ramp	1.4	4	20	4.0	1.3	1.5	Yes
NW Ramp	1.4	4	20	4.0	0.2	1.6	Yes
SE Ramp	1.4	4	20	5.4	1.3	1.6	Yes
SW Ramp	1.4	4	20	4.2	1.7	2.2	Yes
Wash Blvd Roadway East	1.4	4	20	1.7	4.0	17.0	Yes
Wash Blvd Roadway West	1.4	4	20	2.2	3.7	12.2	Yes
Crosswalk - East	2.2	4	20	4.1	1.9	3.2	Yes
Crosswalk - North	2.2	4	20	3.1	1.9	3.1	Yes
Crosswalk - South	2.2	4	20	3.0	2.5	4.7	Yes
Crosswalk - West	2.2	4	20	2.5	3.6	7.0	Yes

PHOTOMETRIC LEGEND

VALUE (FC)	COLOR	VALUE (FC)	COLOR
0.2		1.2	
0.3		1.4	
0.4		1.8	
0.6		2.2	
0.8		2.6	
1.0		3.0	

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

WASHINGTON BOULEVARD AND N. GLEBE ROAD STREETLIGHT PHOTOMETRICS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

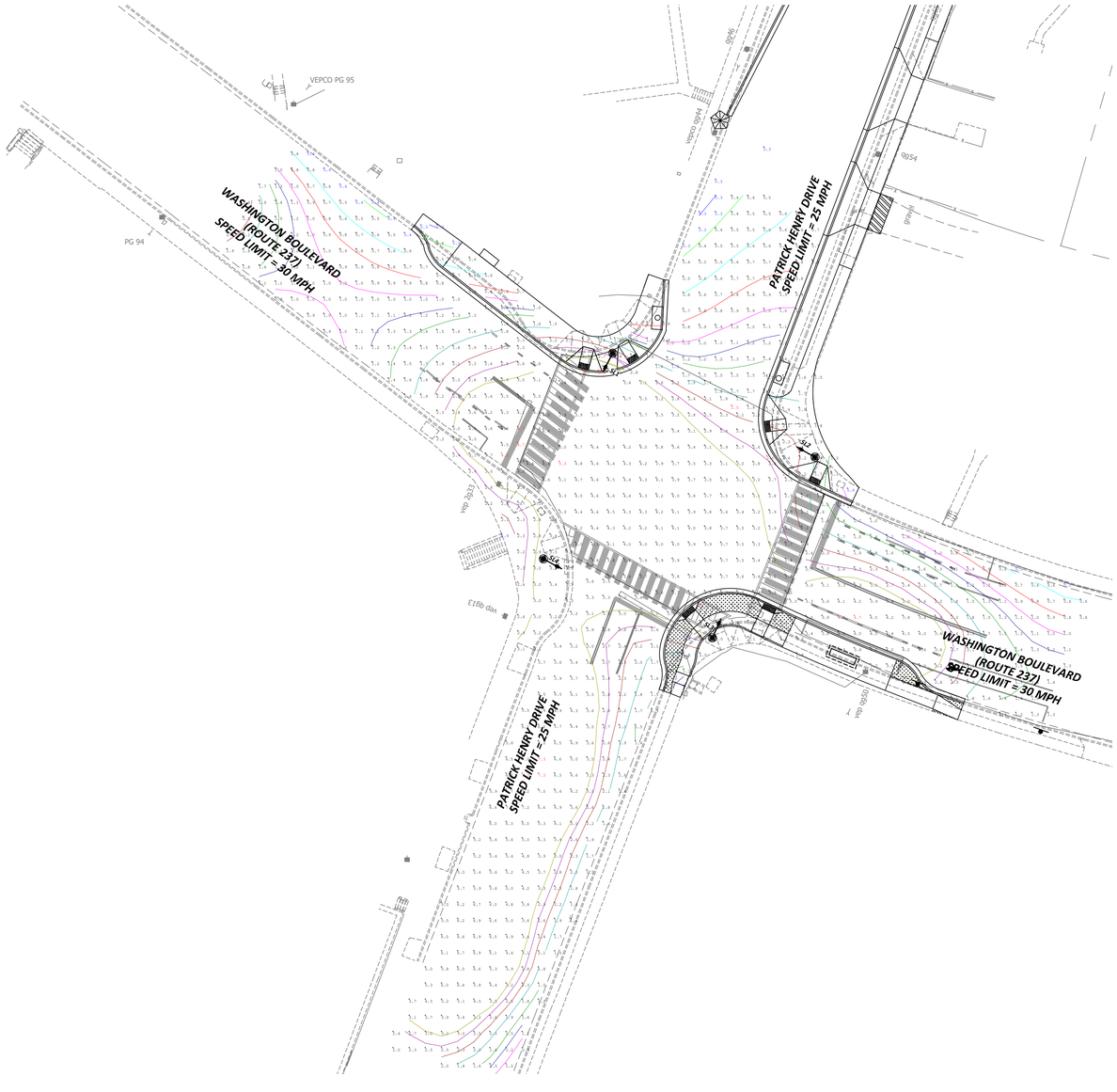
Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
EXHIBIT B

Filename: PHOTOMETRICS EXHIBIT.dwg
Path: K:\NVA_TPTO\1166\4001 - Washington Blvd Signals 3\CAD\PlanSheets

REVISED: MARCH 03, 2020



GRAPHIC SCALE IN FEET
0 12.5 25 50

Patrick Henry and Washington Boulevard							
Facility	Target			Proposed			Requirements Met?
	Avg	Avg/Min	Max/Min	Avg	Avg/Min	Max/Min	
Intersection	2.1	4	20	3.6	2.4	3.5	Yes
NE Ramp	1.4	4	20	1.8	2.0	2.9	Yes
NW Ramp and Sidewalk	1.4	4	20	1.5	5.0	11.3	No
Patrick Henry_Roadway North	0.7	4	20	0.9	3.0	6.7	Yes
Patrick Henry_Roadway South	0.7	4	20	3.8	0.2	9.1	Yes
SE Ramp	1.4	4	20	2.8	2.5	3.4	Yes
SW Ramp	1.4	4	20	3.0	1.6	2.2	Yes
Washington Blvd_Roadway East	1.4	4	20	2.2	4.0	9.4	Yes
Washington Blvd_Roadway West	1.4	4	20	1.6	4.0	11.8	Yes
Crosswalk East	2.2	4	20	2.6	1.6	2.1	Yes
Crosswalk North	2.2	4	20	2.2	1.5	1.9	Yes
Crosswalk South	2.2	4	20	3.7	1.1	1.2	Yes
Crosswalk_West	2.2	4	20	4.2	1.3	1.5	Yes

PHOTOMETRIC LEGEND

VALUE (FC)	COLOR	VALUE (FC)	COLOR
0.2		1.2	
0.3		1.4	
0.4		1.8	
0.6		2.2	
0.8		2.6	
1.0		3.0	

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
TRAFFIC SIGNAL ENGINEER	06/30/2022
TRAFFIC ENGINEERING MANAGER	06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF	7/18/22
TE&O BUREAU CHIEF	06/30/2022
TRANSPORTATION DIRECTOR	07/13/22

REVISIONS	DATE

Project Name and Location
Washington Boulevard Signal Upgrades

WASHINGTON BOULEVARD AND PATRICK HENRY DRIVE STREETLIGHT PHOTOMETRICS

ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
EXHIBIT C

Filename: PHOTOMETRICS EXHIBIT.dwg
Path: K:\NVA_TPTO\106\4001 - Washington Blvd Signals 3\CAD\PlanSheets

2.4 POLLUTION PREVENTION PLAN:

1. 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.

2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (EG., 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.

3. 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	☐ Yes	☒ No
Uncontaminated foundation or footing drains	☐ Yes	☒ No
Uncontaminated excavation dewatering	☐ Yes	☒ No
Landscape irrigation	☐ Yes	☒ No
Others [describe]	☐ Yes	☒ No

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants: Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party
Clearing, grading, excavating, and un-stabilized areas	☒ Yes ☐ No	X							X		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	☒ Yes ☐ No	X					X		X		(2)	
Concrete washout and cement waste	☐ Yes ☒ No			X	X				X		(3)	
Structure construction, stucco, painting, and cleaning	☐ Yes ☒ No			X	X				X	X	(4)	
Dewatering operations	☒ Yes ☐ No	X	X						X		(5)	
Material delivery and storage	☐ Yes ☒ No	X	X	X	X		X		X	X	(6)	
Material use during building process	☐ Yes ☒ No		X	X	X		X		X	X	(7)	
Solid waste disposal	☒ Yes ☐ No								X	X	(8)	
Sanitary waste	☐ Yes ☒ No		X		X			X			(9)	
Landscaping operations	☒ Yes ☐ No	X	X			X			X	X	(10)	
Others [describe]	☐ Yes ☒ No	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	(11)	

Pollution Prevention Practices:

(1) **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 denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.

(2) **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.

(3) **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.

(4) **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.

(5) **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.

(6) **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.

(7) **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.

(8) **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.

(9) **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.

(10) **Landscaping operations** – Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. 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.

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

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. 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.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from entering drains (use absorbent or other material as necessary).
6. Stop spill from spreading (use absorbent or other material)
7. If spilled material has entered a storm sewer; contact locality's storm water department.
8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
9. 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 24 Hour Reporting Service	804-674-2400

Local Contacts

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

Pre-Storm Erosion and Sediment Control Checklist

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

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

Perimeter controls

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

Exposed slopes and soil

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

Stockpiles

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

Inlet protection

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

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

ARLINGTON VIRGINIA

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

SEAL
COMMONWEALTH OF VIRGINIA
GEOFF D. GIFFIN
Lic. No. 039584
07/20/2022
PROFESSIONAL ENGINEER

APPROVALS DATE
TRAFFIC SIGNAL ENGINEER 06/30/2022
TRAFFIC ENGINEERING MANAGER 06/30/2022
WATER, SEWER, STREETS BUREAU CHIEF 7/18/22
TE&O BUREAU CHIEF 06/30/2022
TRANSPORTATION DIRECTOR Dennis M. Leach 07/13/22

REVISIONS DATE

Project Name and Location
Washington Boulevard Signal Upgrades
SWPPP
ID #110 & #113
ARLINGTON COUNTY, VIRGINIA

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

Plotted: July 20, 2022
Plotted by: Patrick.Husted

Scale:
HOR. N/A VERT. N/A

Sheet
EXHIBIT D

Washington Boulevard Signal Upgrades (TR08)

REVISED: MARCH 03, 2020

Filename: SWPPP EXHIBIT.dwg
Path: K:\NVA_TPTO\110\04001 - Washington Blvd Signals 3\CAD\PlanSheets