REVISED ON 01/07/2021

ARLINGTON
VIRGINIA

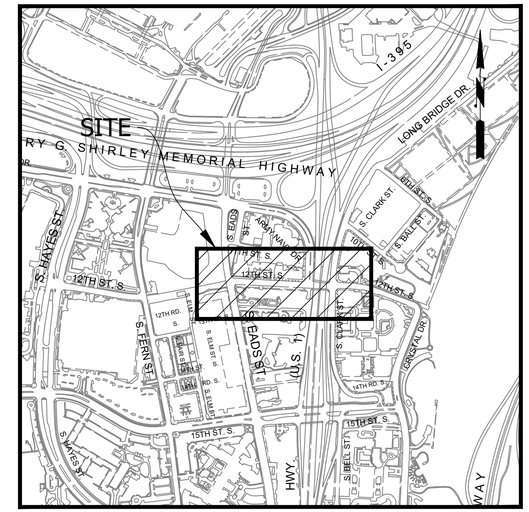
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629 FAX: 703.228.3606
WWW.ARLINGTONVA.US

OWNER
DES/OD/WSS

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



0 600 1200
GRAPHIC SCALE

CONSTRUCTION DRAWINGS FOR:

12TH STREET SOUTH
BETWEEN S. EADS ST. AND S. CLARK ST.

PROJECT NUMBER: CC16

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 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.
9. ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

10. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

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

TRAFFIC CONTROL

12. 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.
13. 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.
14. 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.
15. 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
16. 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

17. 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 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
18. 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.
19. THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

20. 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.
21. 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.
22. 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.

PROJECT DESCRIPTION:

THE PURPOSE OF THE 12TH STREET S PROJECT IS TO EXTEND THE TRANSITWAY FROM S. CLARK STREET TO S. EADS ST. AND PROVIDE PEDESTRIAN & STREETSCAPE IMPROVEMENTS AS SHOWN IN THE CRYSTAL CITY SECTOR PLAN. THE PROJECT WILL ALSO CONNECT TO THE CYCLE TRACK PROPOSED WITH THE ARMY NAVY DRIVE COMPLETE STREETS PROJECT AND IMPROVE BIKE CONNECTIVITY TO CRYSTAL CITY. IMPROVEMENTS INCLUDE CURB AND GUTTER, SIDEWALKS, TRAFFIC SIGNALS, BIKE LANES, AND STORM IMPROVEMENTS.

Sheet List

Sheet Number	Sheet Title
C000.1	Cover
C006.1	Legend
C002.1	Details
C004.1	Typical Sections
C011.1	Existing Conditions Plan
C011.2	Existing Conditions Plan
C011.3	Property Easement Exhibit
C011.4	Property Easement Exhibit
C021.1	Demolition Plan
C021.2	Demolition Plan
C031.1	Erosion and Sediment Control Plan Phase 1
C031.2	Erosion and Sediment Control Plan Phase 2
C032.1	Erosion and Sediment Control Notes
C032.2	Erosion and Sediment Control Notes and Details
C032.3	Erosion and Sediment Control Notes and Details
C032.4	Erosion and Sediment Control Notes and Details
C032.5	Sewershed and Soil Survey
C035.1	Stormwater Pollution Prevention Plan
C035.2	Stormwater Pollution Prevention Plan
C041.1	Plan and Profile
C041.2	Plan and Profile
C042.1	Ramp Details
C042.2	Ramp Details
C042.3	Driveway Details
C043.1	Edge of Pavement Profiles
C043.2	Edge of Pavement Profiles
C044.1	Cross Section Exhibit
C044.2	Cross Sections
C044.3	Cross Sections
C044.4	Cross Sections
C045.1	Geometric Control Plan
C051.1	Watermain Plan and Profile
C071.1	Storm Sewer Drainage Divides
C072.1	Storm Sewer Plan
C072.2	Storm Sewer Plan
C073.1	Storm Sewer Profiles
C075.1	Storm Computations
C081.1	SWM Drainage Area Map
C085.1	SWM Calculations
C091.1	Tree Removal Plan
C091.2	Landscape Plan
C092.1	Landscape Notes and Details
C101.1	Sign and Marking Plan
C101.2	Sign and Marking Plan
C102.1	Final Sign and Marking Plan
C102.2	Final Sign and Marking Plan
C111.1	Streetlight Plan
C111.2	Streetlight Plan
C120.1	Maintenance of Traffic - Transportation Management Plans
C120.2	Maintenance of Traffic - Transportation Management Plans
C121.1	Maintenance of Traffic - Phase 1
C122.1	Maintenance of Traffic - Phase 2A
C122.2	Maintenance of Traffic - Phase 2B
C123.1	Maintenance of Traffic - Phase 3
C124.1	Maintenance of Traffic - TTC Details
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C124.3	Maintenance of Traffic - TTC Details
T300.1	Index of Sheets Signal & Notes
T300.2	Signal Plan
T300.3	Signal Plan
T300.4	Signal Plan
T300.5	Signal Plan
T301.1	Signal Detail Plan
T302.1	Signal Communication Plan
T302.2	Signal Communication Plan
T303.1	Interim and Ultimate Plan
T303.2	Interim and Ultimate Plan

SWM#

SWM#: 20-0251

ADT

5300 - 12TH ST. S (FROM S. EADS ST. TO CRYSTAL DR) - 2017 - VDOT
6200 - 12TH ST. S (FROM S. EADS ST. TO ARMY NAVY DR) - 2020 - KITTLESON 12th Street Transitway Extension Traffic STudy

STREET CLASSIFICATION

12TH STREET SOUTH - TYPE B - PRIMARILY URBAN MIXED-USE ARTERIAL

POSTED SPEED

12TH STREET SOUTH- 25 MPH (DESIGN SPEED, NOT POSTED BUT OBTAINED FROM GIS DATA)

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

COVER

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

C000.1

FILENAME: CC16-200-COVER.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

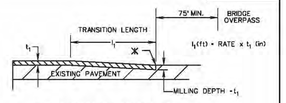
REVISED ON 01/07/2021

2016 ROAD & BRIDGE STANDARDS

ACOT-1

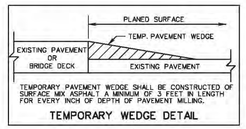
NOTES

1. TIE-IN REQUIREMENTS TO INTERSECTING ROADS OR STREETS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AT THE DIRECTION OF THE ENGINEER.
2. EXISTING PAVEMENT SURFACE SHALL BE PLANED TO TRANSITION THE TOP COURSE OF THE ASPHALT CONCRETE OVERLAY. ANY SUB-COURSE TERMINATION MAY BE NOTCHED INTO THE EXISTING PAVEMENT OR BLENDED WITH THE NEXT COURSE OF PAVEMENT.
3. WHEN THERE IS A SPECIAL PROVISION FOR RIDEABILITY INCLUDED IN THE CONTRACT, A DISTANCE OF 105 FEET (0.02 OF A MILE), MEASURED FROM THE LINE OF THE TIE-IN WILL BE EXEMPTED FROM PAY ADJUSTMENT.
4. TRANSITION SHALL BEGIN/END AT THE PROJECT LIMITS, AT BRIDGE APPROACH SLAB/ABUTMENT (OR AN INTERMEDIATE POINT DETERMINED BY THE ENGINEER), AND A MINIMUM OF 75 FEET FROM A VERTICAL PLANE OF THE NEAREST OUTER FACE OF THE BRIDGE OVERPASS.
5. NO OVERLAY OR MILLING SHALL BE PERMITTED ON THE BRIDGE DECK WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DISTRICT BRIDGE ENGINEER.



SINGLE COURSE OVERLAY TRANSITION GEOMETRY
(NOT TO SCALE)

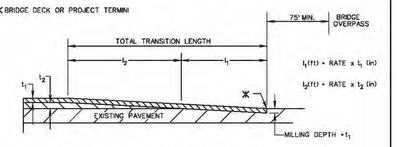
TRANSITION RATE						
	POSTED SPEED MPH					
	25	35	45	55	65	70
RATE (FT./INCH)	20	25	35	40	45	50



TEMPORARY PAVEMENT WEDGE SHALL BE CONSTRUCTED OF SURFACE MIX ASPHALT, A MINIMUM OF 3 FEET IN LENGTH FOR EVERY INCH OF DEPTH OF PAVEMENT MILLING.

TEMPORARY WEDGE DETAIL

✱ BRIDGE DECK OR PROJECT TERMINI



TWO COURSE OVERLAY TRANSITION GEOMETRY
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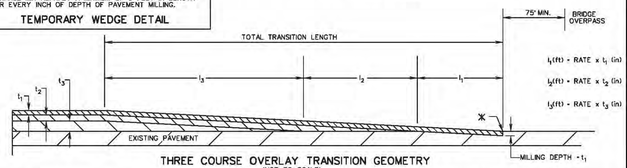


THREE COURSE OVERLAY TRANSITION GEOMETRY
(NOT TO SCALE)

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS	
210 315 515	ASPHALT CONCRETE OVERLAY TRANSITIONS VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 7/12	SHEET 1 OF 1 305.01

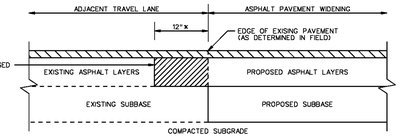
2016 ROAD & BRIDGE STANDARDS

ASPHALT CONCRETE OVERLAY TRANSITIONS

VDOT DETAIL N.T.S.

2016 ROAD & BRIDGE STANDARDS

WP-2



CONSTRUCTION JOINT DETAIL

REMOVE EXISTING ASPHALT LAYERS TO EXISTING SUBBASE AND REPLACE WITH PROPOSED ASPHALT WIDENING LAYERS

PROPOSED MINIMUM 1½ INCH THICK ASPHALT SURFACE COURSE (SEE NOTE 5)

✱ MINIMUM 12 INCHES, OR GREATER AS NECESSARY TO ABUT THE FULL THICKNESS OF EXISTING ASPHALT LAYERS AS DETERMINED BY CORES (SEE NOTE 3)

NOTES:

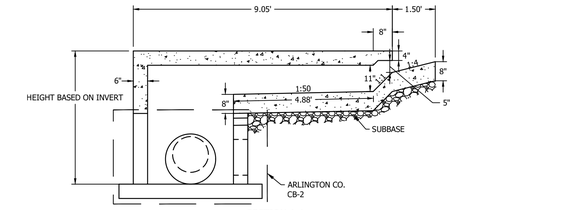
1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1½ INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS.

VDOT ROAD AND BRIDGE STANDARDS		ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE		315
303.02			

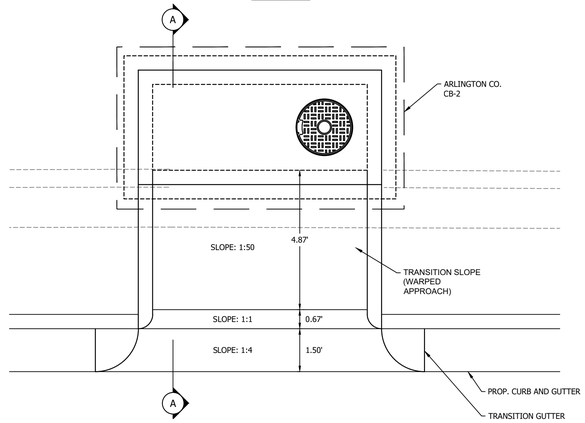
2016 ROAD & BRIDGE STANDARDS

ASPHALT PAVEMENT WIDENING

VDOT DETAIL N.T.S.



SECTION A:A



NOTES:
1. SEE SHEET C073.1 STORM SEWER PROFILES FOR STRUCTURE INVERT INFORMATION.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS SIGNED AND SEALED BY A VIRGINIA LICENSED STRUCTURAL ENGINEER.
3. SEE ARLINGTON COUNTY STANDARD DRAWING D-1.1 FOR GENERAL NOTES RELATED TO STANDARD CATCH BASINS.

EXTENDED THROAT DETAIL FOR PR. STR 15374

1"= 2.5'

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SEAL

COMMONWEALTH OF VIRGINIA
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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

DETAILS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

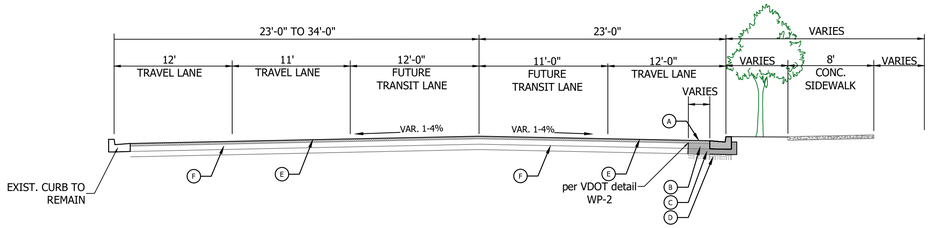
SCALE:

AS SHOWN

C002.1

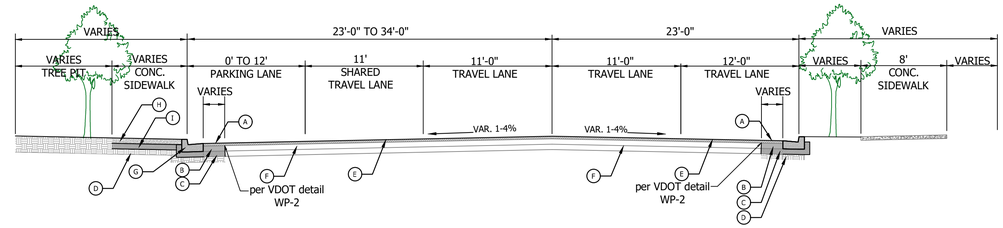
FILENAME: CC16-204-DETAILS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



12TH ST. SOUTH

TYPICAL SECTION
STA. 10+66 TO 11+60
SCALE: NTS



12TH ST. SOUTH

TYPICAL SECTION
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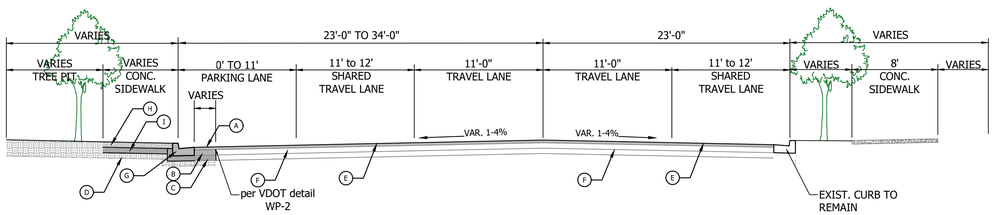
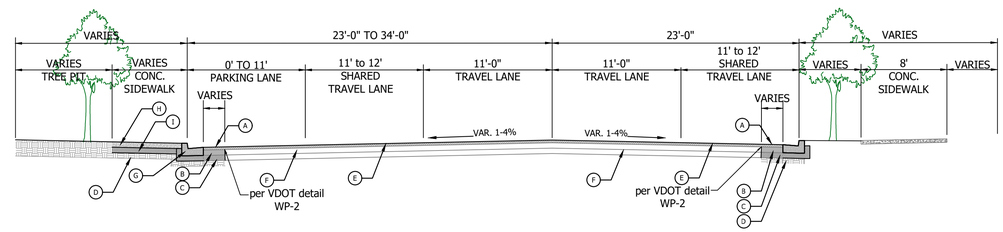


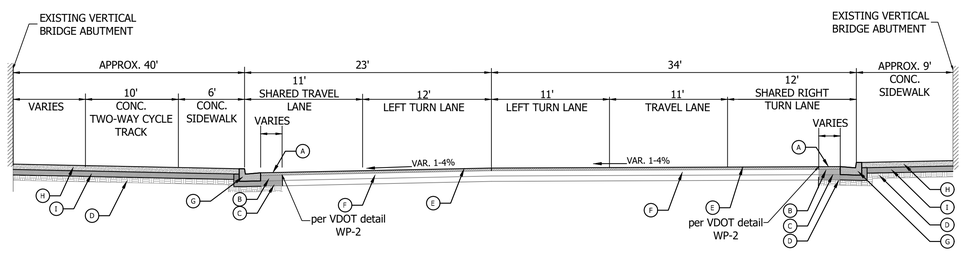
12TH ST. SOUTH

TYPICAL SECTION
STA. 12+50 TO 13+80
SCALE: NTS



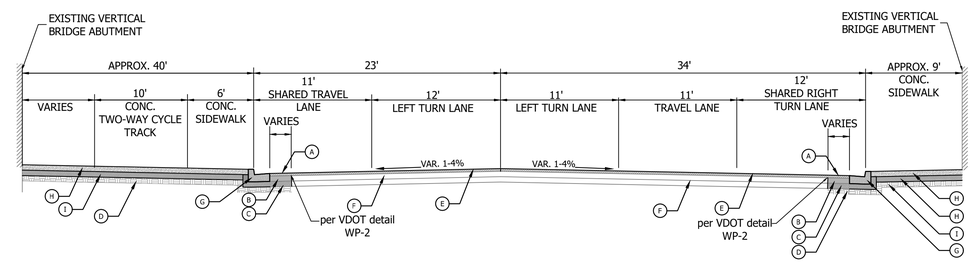
12TH ST. SOUTH

TYPICAL SECTION
STA. 13+82 TO 16+33
SCALE: NTS



12TH ST. SOUTH

TYPICAL SECTION
STA. 17+25 TO 17+75
SCALE: NTS



12TH ST. SOUTH

TYPICAL SECTION
STA. 17+75 TO 18+73
SCALE: NTS

A. PROP. SURFACE - 2" ASPHALT CONCRETE (TYPE SM-9.5A) ESTIMATED AT 236 LBS/SY OVER TACK COAT PER ARL SPECS

B. PROP. BASE - 6" ASPHALT CONCRETE (TYPE BM-25.0A) PER ARL STD DETAIL R1.4

C. PROP. COMPACTED SUBBASE - MIN 6" AGGREGATE BASE MATERIAL, TYPE I, SIZE 21B EXTENDED TO THE BOTTOM OF EXISTING GRAVEL/SUBBASE PER ARL SPECS

D. UNDISTURBED SUBGRADE OR BACKFILL & STANDARD COMPACTED REQUIRED PER ARL SPECS

E. EX. PAVEMENT MILL & OVERLAY 2" OVER TACK COAT PER ARL SPECS (TYPE SM-9.5D)

F. EX. ASPHALT PAVEMENT (BASE/SUBBASE)

G. PROP. C-2 CURB & GUTTER & AGGREGATE BASE PER ARL STD R-2.0

H. PROP. 4" STANDARD CONCRETE SIDEWALK PER ARL STD R-2.0

I. PROP. 3" MIN. AGGREGATE BASE MATERIAL (#21A) PER ARL STD R-2.0 UNDER SIDEWALK

J. PROP. TYP. 4"-6" TOPSOIL AND SEED OR MULCH PER ARL SPECS

K. EXISTING TO REMAIN

L. RAISED 6" CONCRETE MEDIAN WITH HEADER CURB CONSTRUCTED. VDOT MS-1A STD. DETAIL.

NOTE:
- SEE PLAN FOR PROPOSED ROAD/SIDEWALK AND PARKING PAVEMENT & LANDSCAPE RESTORATION LAYOUT, SEE CROSS SECTIONS SHEET FOR PROPOSED CROSS SLOPES, ELEVATIONS, AND ROW LIMITS
- ALL PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD WP-2
- FINAL LANE CONFIGURATION WILL BE CONFIRMED WHEN 12TH STREET S. CORRIDOR TRAFFIC AND OPERATIONS ANALYSIS IS COMPLETED.
- THE VERTICAL CLEARANCE FROM THE SIDEWALK TO THE BOTTOM OF ANY SIGN OR OVER HANGING VEGETATION (TREES) SHALL BE 7 FEET MINIMUM IN ACCORDANCE WITH THE MUTCD, PART 2 AND AASHTO'S GUIDE FOR THE PLANTING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES, RESPECTIVELY.

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

TYPICAL SECTIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

AS SHOWN

C004.1

FILENAME: CC16-210-TYPICAL_SECTIONS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

REVISED ON 01/07/2021

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING		
CENTERLINE / BASELINE		
COMMUNICATIONS CABLE	COM COM	COM COM
CONTOURS MAJOR; MINOR	250 250	
CRITICAL ROOT ZONE	CRZ CRZ	CRZ CRZ
EASEMENT		
ELECTRIC (UNDERGROUND)	UGE UGE	UGE UGE
FENCE (MATERIAL NOTED)	X X X X X	X X X X X
FIBER OPTIC	FO FO	FO FO
GAS LINE	GAS GAS	GAS GAS
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)		
GUARDRAIL		
HARDSCAPE FEATURE (MATERIAL NOTED)		
LIMITS OF DISTURBANCE	LOD LOD	LOD LOD
LIMITS OF WORK	LOW LOW	LOW LOW
OVERHEAD WIRES		
PAVEMENT MINI SKIP LINE		
PAVEMENT SKIP LINE		
PROPERTY LINE		
RIGHT-OF-WAY LINE		
ROOT PRUNING	RP RP	RP RP
SANITARY SEWER	SAN SAN	SAN SAN
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)		
SILT FENCE	X X X X X	X X X X X
STORM (SIZE NOTED)	STM STM	
STREAM		
STREET LIGHT CONDUIT	SL SL	SL SL
TELEPHONE (UNDERGROUND)	UGT UGT	UGT UGT
TREE LINE		
TREE PROTECTION FENCE	TP TP	TP TP
WALL		
WATER	6"w	
X" WATER (SIZE INCLUDED IF AVAILABLE)		

SYMBOL LEGEND

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

LABEL LEGEND

EXISTING	PROPOSED
EXISTING SANITARY STRUCTURE NUMBER XXXX	PROPOSED SANITARY SEWER STRUCTURE NUMBER XXXX
EXISTING STORM SEWER STRUCTURE NUMBER XXXX	PROPOSED STORM SEWER STRUCTURE NUMBER XXXX

HATCH LEGEND

PROP MILL & OVERLAY

PROP FULL DEPTH ASPHALT

PROP CONCRETE

REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES

DEMOLITION AREA

PROP MULCHING FOR TREE PLANTING BED

PROP SOD

UTILITY CONTACTS

COMCAST	MELVIN YERBY	MELVIN.YERBY@COMCAST.COM	804-221-8492
VERIZON	JAMES MCKENZIE	JAMES.G.MCKENZIE@VERIZON.COM	703-212-5271
WASHINGTON GAS	MARK TAJNAI	MTAJNAI@WASHGAS.COM	703-750-5667
ARL. CO FIBER	DAVID DUOLONG	DDOULONG@ARLINGTONVA.US	703-228-7585
ARL. WATER	REGAN CARVER	RCARVER@ARLINGTONVA.US	703-228-3602

ARLINGTON
VIRGINIA

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Amy Pflaum	04/26/21
CONSTRUCTION MANAGEMENT SUPERVISOR Kamal Taktak	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
TRANSPORTATION DIRECTOR Dennis M. Leach	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

LEGEND

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

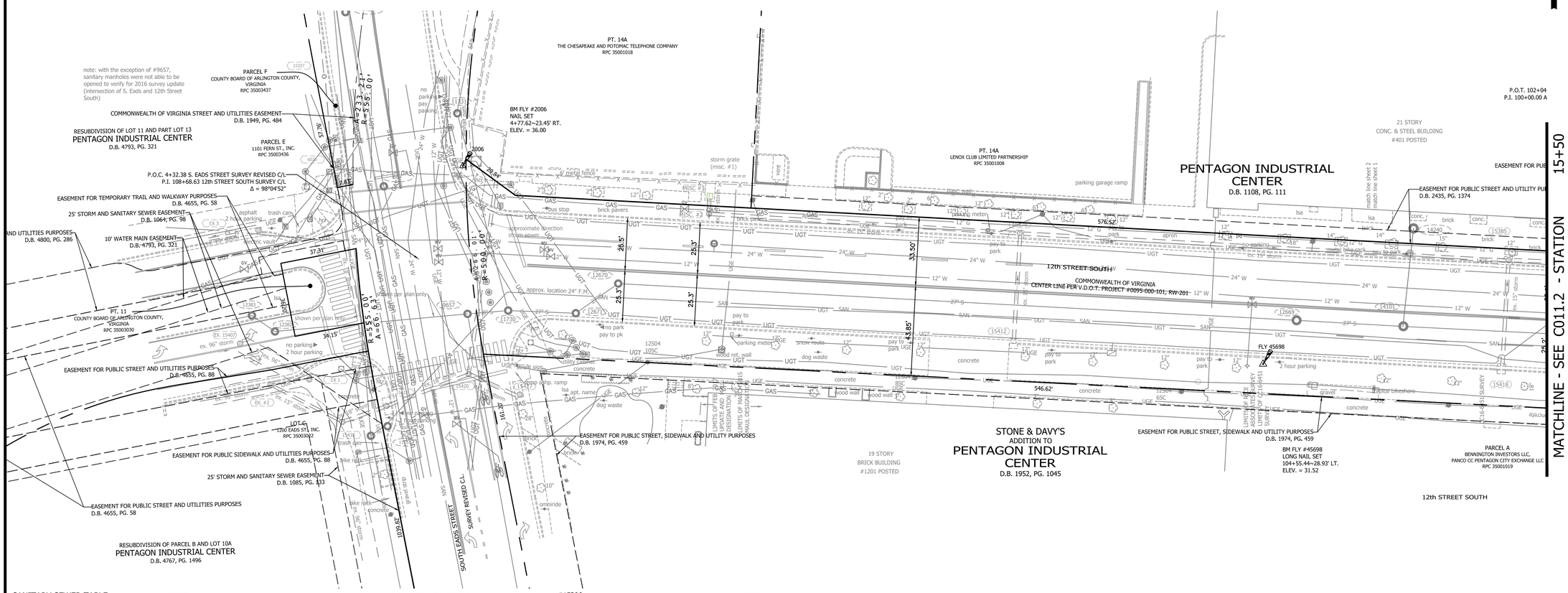
SCALE:

N/A

C006.1

FILENAME: CC16-202-LEGEND.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



SANITARY SEWER TABLE

#687
TOP = 35.97
C/L INV. = 32.26

#8425
TOP = 35.45
UNABLE TO OPEN

#9657
TOP = 36.20
C/L INV. = 18.49

#9658
TOP = 37.31
C/L INV. = 20.19

#11553
TOP = 36.51
C/L INV. = 26.19

#11554
TOP = 35.06
UNABLE TO OPEN

#11648
TOP = 28.62
C/L INV. = 16.57

#11730
NOT ABLE TO OPEN DURING 2016 UPDATE
TOP = 35.84
ADJACENT INVERT 24" F.M. = 27.64
C/L INV. = 12.74

#11731
TOP = 36.99
C/L INV. = 21.53

#12382
TOP = ?
UNABLE TO OPEN

#12383
TOP = ?
UNABLE TO OPEN

#12667
TOP = 28.68
C/L INV. = 9.1' PER PLAN
(STRUCTURE NOT ACCESSIBLE)

#12669
TOP = 31.46
ADJACENT INV. 24" F.M. = 23.4 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 11.3' PER PLAN (NOT ACCESSIBLE)

#12670
TOP = 34.67
ADJACENT INVERT 24" F.M. = 26.4 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 12.7 PER PLAN (NOT ACCESSIBLE)

#12671
TOP = 34.92
ADJACENT INVERT 24" F.M. = 26.5 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 12.8 PER PLAN (NOT ACCESSIBLE)

#12672
TOP = 36.34
C/L INV. = 26.34

#13005
TOP = 27.99
C/L INV. = 12.91

#13808
TOP = 37.92
C/L INV. = NOT ACCESSIBLE

#14034
TOP = 28.37
INV. IN = 13.96 (SOUTH)
C/L INV. = 13.06

#14240
TOP = 30.85
C/L INV. = NOT ACCESSIBLE

STORM SEWER TABLE

EX. #1
TOP = 36.35
C/L INV. = 15.22
96" RCP - NOT ACCESSIBLE

EX. #2
TOP = 35.79
15" RCP INV. OUT = 29.45 (15435)

MISC. #1 (STORM DRAIN INLET - NO GIS #)
TOP GRATE = 33.94
15" RCP INV. OUT = 30.62 (MISC #2)

MISC. #2 (STORM MANHOLE - NO GIS #)
TOP = 33.82
15" RCP INV. IN = 30.33 (MISC #1)
15" RCP INV. OUT = 29.35 (15374)

EX. #6026
TOP = 36.40
18" RCP INV. IN = 19.96 (15327)
18" RCP INV. OUT = 19.74 (SOUTH)

EX. #6137
TOP = 29.05
15" RCP INV. IN = 24.73 (15364)
21" RCP INV. IN = 24.76 (15306)
21" RCP INV. OUT = 24.70 (15373)

EX. #6150
TOP = 29.81
21" RCP INV. IN = 24.46 (15389)
21" RCP INV. OUT = 24.38 (15504)
NOTE: #15504 NOT VISIBLE, BURIED?

#15202
TOP = 25.97
15" RCP INV. IN = 19.29 (15347)

#15240
TOP = 36.58
15" RCP INV. IN = 32.83 (ORIGIN NOT KNOWN)
15" RCP INV. IN = 32.95 (15427)
18" RCP INV. IN = 24.86 (N.E. DIRECTION)
18" RCP INV. OUT = 24.70' (15423)

#15306
TOP = 30.97
21" RCP INV. OUT = 25.27 (15373)

#15327
TOP = 35.96
18" RCP INV. IN = 20.52 (15191)
18" RCP INV. OUT = 20.47 (6026)

#15347
TOP = 28.49
15" RCP INV. IN = 23.44 (15376)
15" RCP INV. OUT = 23.42 (15202)

#15364
TOP = 29.49
15" RCP INV. OUT = 25.41 (6137)

#15367
TOP = 28.83
15" RCP INV. IN = 25.53 (WEST)
15" RCP INV. OUT = 25.49 (15373)

#15373
TOP = 29.02
15" RCP INV. IN = 25.49 (15367)
21" RCP INV. IN = 24.69 (EX. 6137)
21" RCP INV. OUT = 24.64 (15389)

#15374
TOP = 32.37
15" RCP INV. IN = 28.16 (15412)
15" RCP INV. IN = 28.31 (MISC. #2)
15" RCP INV. OUT = 27.90 (15385)

#15376
TOP = 29.39
15" RCP INV. IN = 24.10 (15396)
15" RCP INV. OUT = 24.10 (15347)

#15377
TOP = 29.49
15" RCP INV. OUT = 26.19 (15389)

#15385
TOP = 30.58
15" RCP INV. IN = 26.21 (15374)
15" RCP INV. IN = 26.18 (15418)
15" RCP INV. OUT = 26.16 (15389)

#15389
TOP = 29.23
15" RCP INV. IN = NO ACCESS (15377)
15" RCP INV. IN = 24.69 (15385)
21" RCP INV. IN = 24.70 (15373)
21" RCP INV. OUT = NO ACCESS (EX. 6150)

#15391
TOP = 27.98
15" RCP INV. OUT = 24.79 (15417)

#15407
TOP = 36.07
C/L INV. = 18.47
96" RCP - NOT ACCESSIBLE

#15412
TOP GRATE = 31.90
15" RCP INV. OUT = 28.87 (15374)

#15413
TOP = 28.67
15" RCP INV. IN = NO ACCESS (15417)
15" RCP INV. OUT = NO ACCESS (15446)

#15417
TOP = 27.97
15" RCP INV. IN = NO ACCESS (15429)
15" RCP INV. IN = NO ACCESS (15391)
15" RCP INV. OUT = NO ACCESS (15413)

#15418
TOP = 30.21
15" RCP INV. OUT = NO ACCESS (15385)

#15420
TOP = 36.58
15" RCP INV. IN = 32.92 (15427)

#15423
TOP = 36.51
18" RCP INV. OUT = 33.54 (15435)

#15427
TOP = 36.50
15" RCP INV. OUT = 32.95 (15420)

#15429
TOP = 27.91
15" RCP INV. OUT = 24.41 (15417)

#15435
TOP = 36.69
15" RCP INV. IN = 29.34 (EX. #2)
18" RCP INV. IN = 33.40 (15423)
96" INV. NOT ACCESSIBLE

#15446
TOP = 29.31
15" RCP INV. IN = 21.97 (15413)
15" RCP INV. OUT = 21.92 (15470)

#15470
TOP = 29.51
15" RCP INV. IN = 21.49 (15446)
15" RCP INV. OUT = 21.44 (15471)

#15471
TOP = 29.62
15" RCP INV. IN = 21.02 (15470)
15" RCP INV. OUT = 20.79 (15548)

SURVEY CONTROL

PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
4077	7000720.346	11895183.598	31.036	FLY 4077
2004	7000513.360	11895171.506	30.490	TRV 2004
2006	7000643.52	11894581.83	36.00	TRV 2006

COMMONWEALTH OF VIRGINIA
NATHAN A. ORR
Lic. No. 3178
02/15/17
LAND SURVEYOR

THE CC16-6668 TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF NATHAN A. ORR, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 12/08/2017; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

GENERAL SURVEY NOTES:

1. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 11/2013 TO 02/2017; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
3. VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
4. CONTOUR INTERVAL: 1'
5. 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
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	04/26/21
CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EXISTING CONDITIONS PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

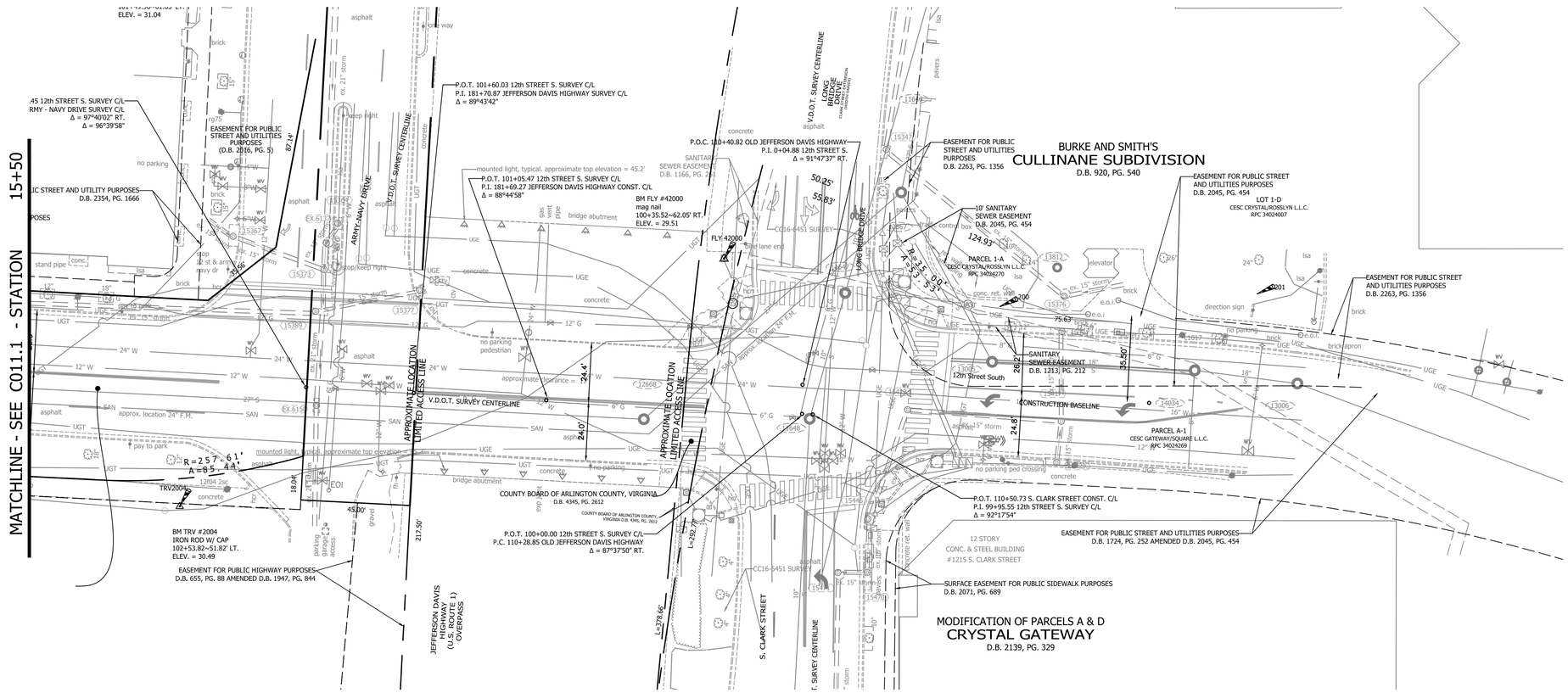
SCALE:

0 25 50
GRAPHIC SCALE

C011.1

FILENAME: CC16-214-EXISTING_CONDITIONS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLALLO

REVISED ON 01/07/2021



SANITARY SEWER TABLE

#687
TOP = 35.97
C/L INV. = 32.26

#8425
TOP = 35.45
UNABLE TO OPEN

#9657
TOP = 36.20
C/L INV. = 18.49

#9658
TOP = 37.31
C/L INV. = 20.19

#11553
TOP = 36.51
C/L INV. = 26.19

#11554
TOP = 35.06
UNABLE TO OPEN

#11648
TOP = 28.62
C/L INV. = 16.57

#11730
NOT ABLE TO OPEN DURING 2016 UPDATE
TOP = 35.84
ADJACENT INVERT 24" F.M. = 27.64
C/L INV. = 12.74

#11731
TOP = 36.99
C/L INV. = 21.53

#12382
TOP = ?
UNABLE TO OPEN

#12383
TOP = ?
UNABLE TO OPEN

#12667
TOP = 28.68
C/L INV. = 9.1' PER PLAN
(STRUCTURE NOT ACCESSIBLE)

#12669
TOP = 31.46
ADJACENT INV. 24" F.M. = 23.4 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 11.3' PER PLAN (NOT ACCESSIBLE)

#12670
TOP = 34.67
ADJACENT INVERT 24" F.M. = 26.4 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 12.7 PER PLAN (NOT ACCESSIBLE)

#12671
TOP = 34.92
ADJACENT INVERT 24" F.M. = 26.5 PER PLAN (NOT ACCESSIBLE)
C/L INV. = 12.8 PER PLAN (NOT ACCESSIBLE)

#12672
TOP = 36.34
C/L INV. = 26.34

#13005
TOP = 27.99
C/L INV. = 12.91

#13808
TOP = 37.92
C/L INV. = NOT ACCESSIBLE

#14034
TOP = 28.37
INV. IN = 13.96 (SOUTH)
C/L INV. = 13.06

#14240
TOP = 30.85
C/L INV. = NOT ACCESSIBLE

STORM SEWER TABLE

EX. #1
TOP = 36.35
C/L INV. = 15.22
96" RCP - NOT ACCESSIBLE

EX. #2
TOP = 35.79
15" RCP INV. OUT = 29.45 (15435)

MISC. #1 (STORM DRAIN INLET - NO GIS #)
TOP GRATE = 33.94
15" RCP INV. OUT = 30.62 (MISC #2)

MISC. #2 (STORM MANHOLE - NO GIS #)
TOP = 33.82
15" RCP INV. IN = 30.33 (MISC #1)
15" RCP INV. OUT = 29.35 (15374)

EX. #6026
TOP = 36.40
18" RCP INV. IN = 19.96 (15327)
18" RCP INV. OUT = 19.74 (SOUTH)

EX. #6137
TOP = 29.05
15" RCP INV. IN = 24.73 (15364)
21" RCP INV. IN = 24.76 (15306)
21" RCP INV. OUT = 24.70 (15373)

EX. #6150
TOP = 29.81
21" RCP INV. IN = 24.46 (15389)
21" RCP INV. OUT = 24.38 (15504)
NOTE: #15504 NOT VISIBLE, BURIED?

#15202
TOP = 25.97
15" RCP INV. IN = 19.29 (15347)

#15240
TOP = 36.58
15" RCP INV. IN = 32.83 (ORIGIN NOT KNOWN)
15" RCP INV. IN = 32.95 (15427)
18" RCP INV. IN = 24.86 (N.E. DIRECTION)
18" RCP INV. OUT = 24.70' (15423)

#15306
TOP = 30.97
21" RCP INV. OUT = 25.27 (15373)

#15327
TOP = 35.96
18" RCP INV. IN = 20.52 (15191)
18" RCP INV. OUT = 20.47 (6026)

#15347
TOP = 28.49
15" RCP INV. IN = 23.44 (15376)
15" RCP INV. OUT = 23.42 (15202)

#15364
TOP = 29.49
15" RCP INV. OUT = 25.41 (6137)

#15367
TOP = 28.83
15" RCP INV. IN = 25.53 (WEST)
15" RCP INV. OUT = 25.49 (15373)

#15373
TOP = 29.02
15" RCP INV. IN = 25.49 (15367)
21" RCP INV. IN = 24.69 (EX. 6137)
21" RCP INV. OUT = 24.64 (15389)

#15374
TOP = 32.37
15" RCP INV. IN = 28.16 (15412)
15" RCP INV. IN = 28.31 (MISC. #2)
15" RCP INV. OUT = 27.90 (15385)

#15376
TOP = 29.39
15" RCP INV. IN = 24.10 (15396)
15" RCP INV. OUT = 24.10 (15347)

#15377
TOP = 29.49
15" RCP INV. OUT = 26.19 (15389)

#15385
TOP = 30.58
15" RCP INV. IN = 26.21 (15374)
15" RCP INV. IN = 26.18 (15418)
15" RCP INV. OUT = 26.16 (15389)

#15389
TOP = 29.23
15" RCP INV. IN = NO ACCESS (15377)
15" RCP INV. IN = 24.69 (15385)
21" RCP INV. IN = 24.70 (15373)
21" RCP INV. OUT = NO ACCESS (EX. 6150)

#15391
TOP = 27.98
15" RCP INV. OUT = 24.79 (15417)

#15407
TOP = 36.07
C/L INV. = 18.47
96" RCP - NOT ACCESSIBLE

#15412
TOP GRATE = 31.90
15" RCP INV. OUT = 28.87 (15374)

#15413
TOP = 28.67
15" RCP INV. IN = NO ACCESS (15417)
15" RCP INV. OUT = NO ACCESS (15446)

#15417
TOP = 27.97
15" RCP INV. IN = NO ACCESS (15429)
15" RCP INV. IN = NO ACCESS (15391)
15" RCP INV. OUT = NO ACCESS (15413)

#15418
TOP = 30.21
15" RCP INV. OUT = NO ACCESS (15385)

#15420
TOP = 36.58
15" RCP INV. IN = 32.92 (15427)

#15423
TOP = 36.51
18" RCP INV. OUT = 33.54 (15435)

#15427
TOP = 36.50
15" RCP INV. OUT = 32.95 (15420)

#15429
TOP = 27.91
15" RCP INV. OUT = 24.41 (15417)

#15435
TOP = 36.69
15" RCP INV. IN = 29.34 (EX. #2)
18" RCP INV. IN = 33.40 (15423)
96" INV. NOT ACCESSIBLE

#15446
TOP = 29.31
15" RCP INV. IN = 21.97 (15413)
15" RCP INV. OUT = 21.92 (15470)

#15470
TOP = 29.51
15" RCP INV. IN = 21.49 (15446)
15" RCP INV. OUT = 21.44 (15471)

#15471
TOP = 29.62
15" RCP INV. IN = 21.02 (15470)
15" RCP INV. OUT = 20.79 (15548)

COMMONWEALTH OF VIRGINIA
NATHAN A. ORR
Lic. No. 3178
02/15/17
LAND SURVEYOR

THE CC16-6668 TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF NATHAN A. ORR, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 12/08/2017; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

GENERAL SURVEY NOTES:

1. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 11/2013 TO 02/2017; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
3. VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
4. CONTOUR INTERVAL: 1'
5. 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
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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FAX: 703.228.3606

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SEAL
COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EXISTING CONDITIONS PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

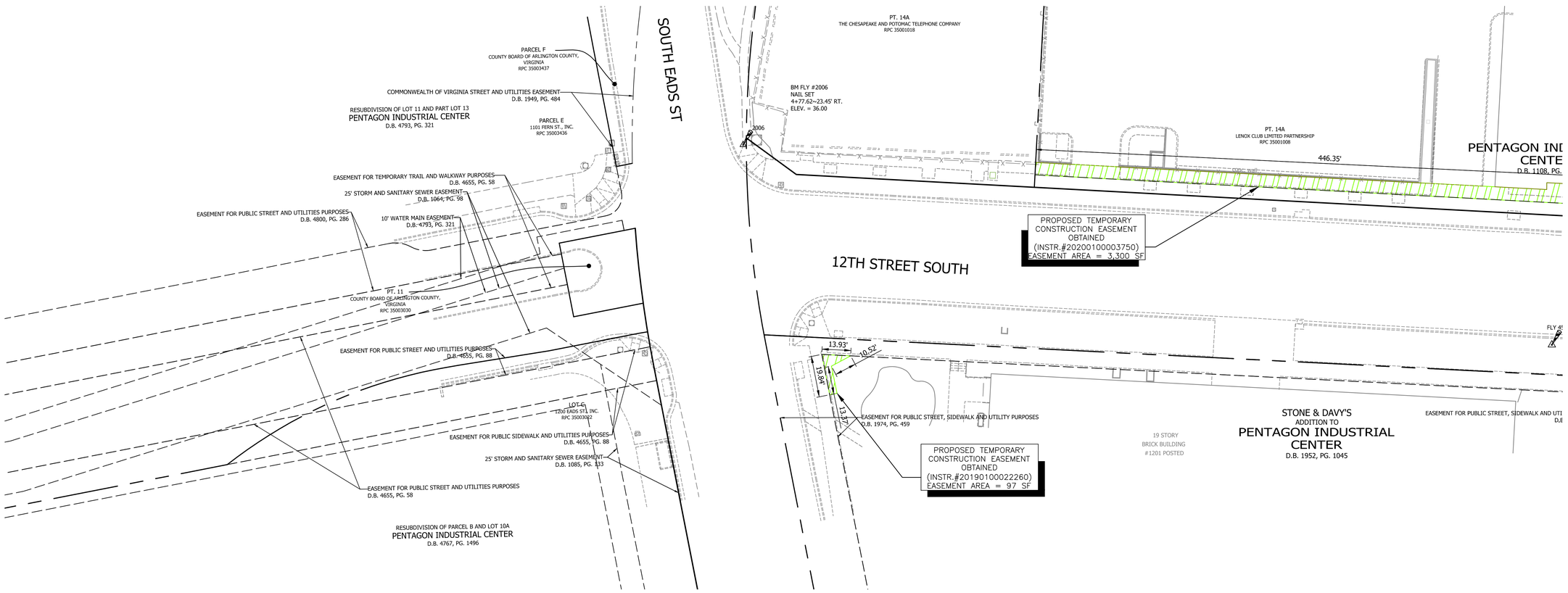
PLOTTED: MAY 17 2021

SCALE:
0 25 50
GRAPHIC SCALE

C011.2

FILENAME: CC16-214-EXISTING_CONDITIONS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLALLO

REVISED ON 01/07/2021



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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

PROPERTY EASEMENT EXHIBIT

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

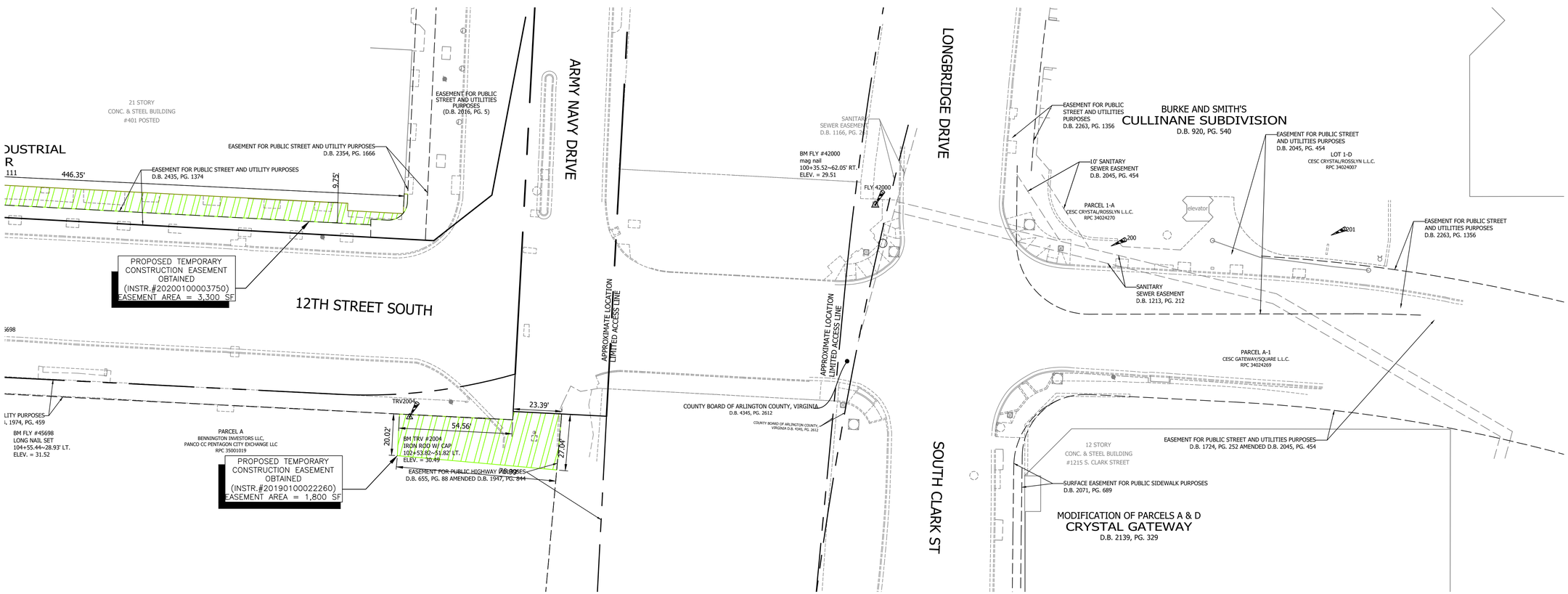
SCALE:

0 25 50
GRAPHIC SCALE

C011.3

FILENAME: CC16-215-PROPERTY_EASEMENT_EXHIBIT.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



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REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

PROPERTY EASEMENT EXHIBIT

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

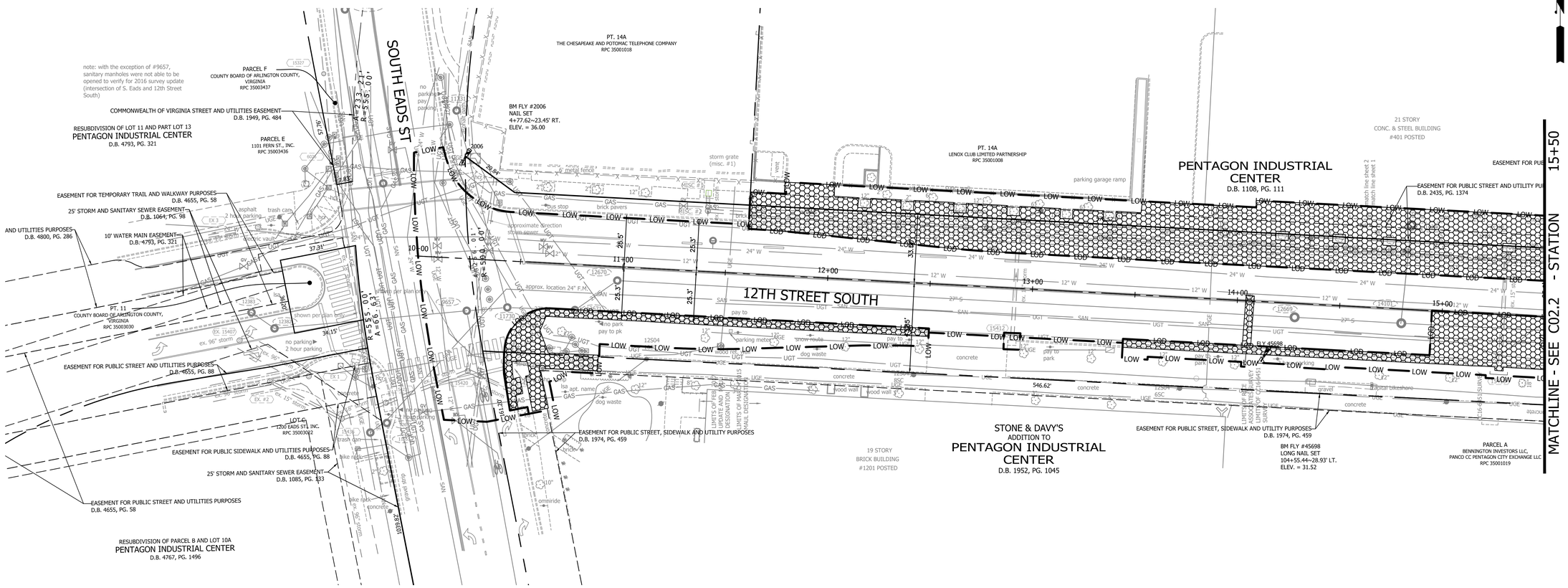
SCALE:

0 25 50
GRAPHIC SCALE

C011.4

FILENAME: CC16-215-PROPERTY_EASEMENT_EXHIBIT.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



DEMOLITION KEY NOTES:

CAUTION: POTENTIAL UNDERGROUND UTILITY CONFLICT. THE PROVIDED TEST HOLE DATA IS APPROXIMATE, CONTRACTOR, TO FIELD VERIFY (TEST PIT) EXACT LOCATION AND DEPTH OF EXISTING UTILITY.
USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF UNDERGROUND STRUCTURES.

A. CONTRACTOR SHALL MAKE A NEAT LINE SAWCUT EXISTING PAVEMENT (AT NEAREST JOINT WHERE POSSIBLE).

B. CONTRACTOR SHALL DEMOLISH/EXAVATE/REMOVE/DISPOSE EX. PAVEMENT, CURB & GUTTER, DRIVEWAY ENTRANCE AND CLEAR THE AREA.

C. CONTRACTOR SHALL REMOVE/DEMOLISH/DISPOSE EX. DRAINAGE STRUCTURE & PIPE.

D. CONTRACTOR TO COORDINATE WITH ARLINGTON COUNTY FOR THE REMOVAL / DISPOSAL OF EXISTING STREETLIGHT POLE. DEMOLISH / DISPOSE OF THE REMAINING FOUNDATION AND ASSOCIATED FIXTURES. REFER TO SHEET C111.1-C111.2 FOR ADDITIONAL INFORMATION.

E. CONTRACTOR SHALL REMOVE EX. TREE/TREE STUMPS & TREE EDGING. REFER TO SHEET C091.1 FOR ADDITIONAL INFORMATION.

DEMOLITION GENERAL NOTES:

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2. EXISTING UNDERGROUND UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST ALL STRUCTURES TOP TO NEW GRADES PER ARLINGTON COUNTY DETAILS & SPECIFICATIONS AND IN COORDINATION WITH UTILITY OWNERS.
3. EXISTING STAND PIPE/FIRE HYDRANT TO REMAIN IN SERVICE. THE CONTRACTOR SHALL MAINTAIN UNIMPEDED ACCESS TO THE STAND PIPE/FIRE HYDRANT DURING CONSTRUCTION. THE CONTRACTOR SHALL ERECT SIGN(S) THAT CLEARLY IDENTIFY THE LOCATION OF THE STAND PIPE/FIRE HYDRANT.
4. EXISTING TREE REMOVAL AND PROTECTION SHALL COMPLY WITH E&S CONTROL PLAN.
5. EXISTING TRAFFIC SIGNALS SHALL BE PROTECTED DURING PROJECT CONSTRUCTION. EXISTING TRAFFIC SIGNAL POLES AND FOUNDATIONS SHALL BE REMOVED ONLY AFTER NEW INSTALLED TRAFFIC SIGNALS ACTIVATION PER SIGNAL TRAFFIC PLAN.
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7. SIDEWALK PAVEMENT AND LANDSCAPING WITHIN PROPOSED AND REMOVED TRAFFIC SIGNAL STRUCTURES AND UTILITY CUTS SHALL BE RESTORED TO COMPLY WITH EXISTING CONDITIONS OR PROPOSED PAVEMENT/LANDSCAPING.
8. EXISTING STREET SIGNS REMOVAL, PAVEMENT MARKING ERADICATION AND RESTORATION SHALL BE PERFORMED PER PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN, SEE SHEETS C101.1-C101.2
9. SEE TRAFFIC SIGNAL PLANS FOR ADDITIONAL ITEMS TO BE REMOVED/DEMOLISED/DISPOSED OF DURING CONSTRUCTION.
10. ALL CONSTRUCTION AND DEMOLITION DEBRIS WITHIN THE SHOWN LIMITS INCLUDING ASPHALT MILLING AND TRAFFIC SIGNAL RENOVATION SHALL BE REMOVED AND HAULED TO WASTE UNLESS OTHERWISE NOTED.

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TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

DEMOLITION PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

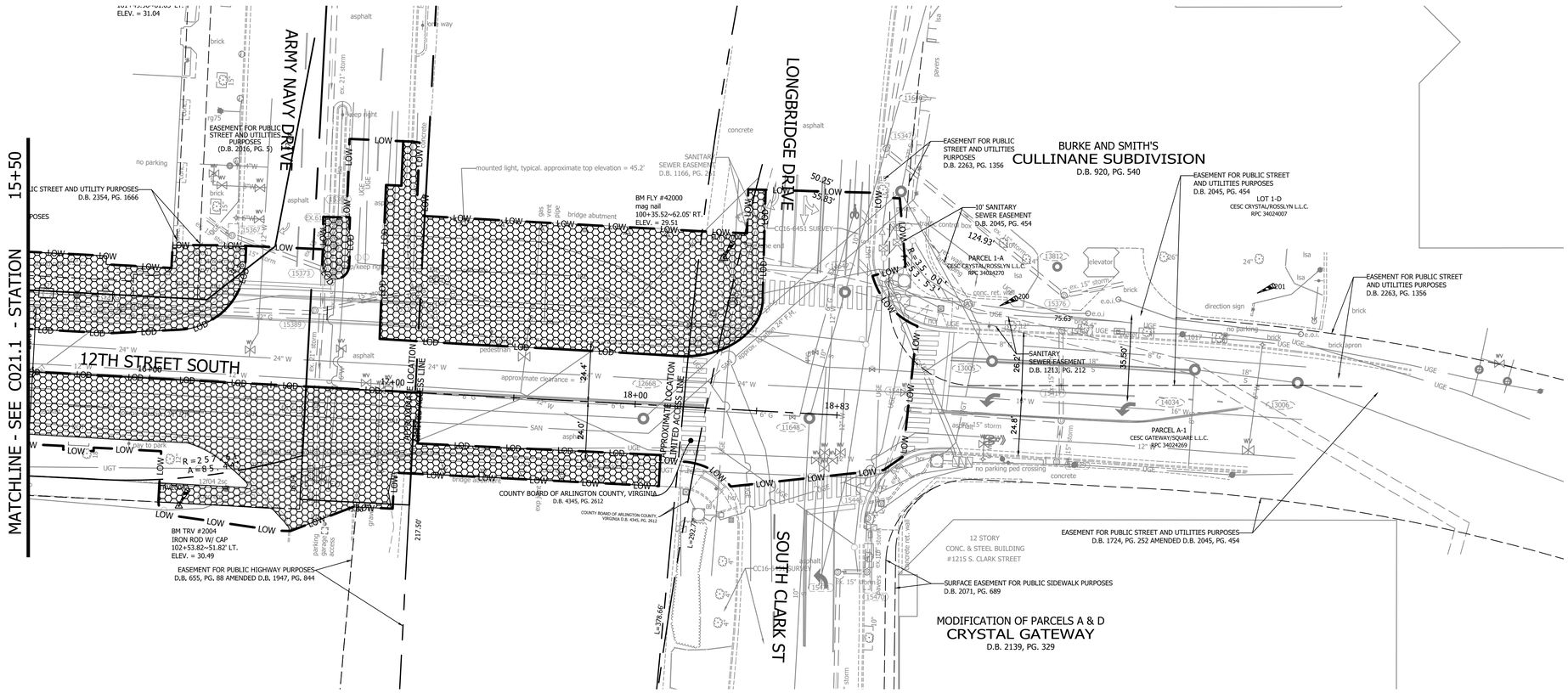
SCALE:

0 25 50
GRAPHIC SCALE

C021.1

FILENAME: CC16-228-DEMOLITION_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

REVISED ON 01/07/2021



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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	04/26/21
CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

DEMOLITION PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

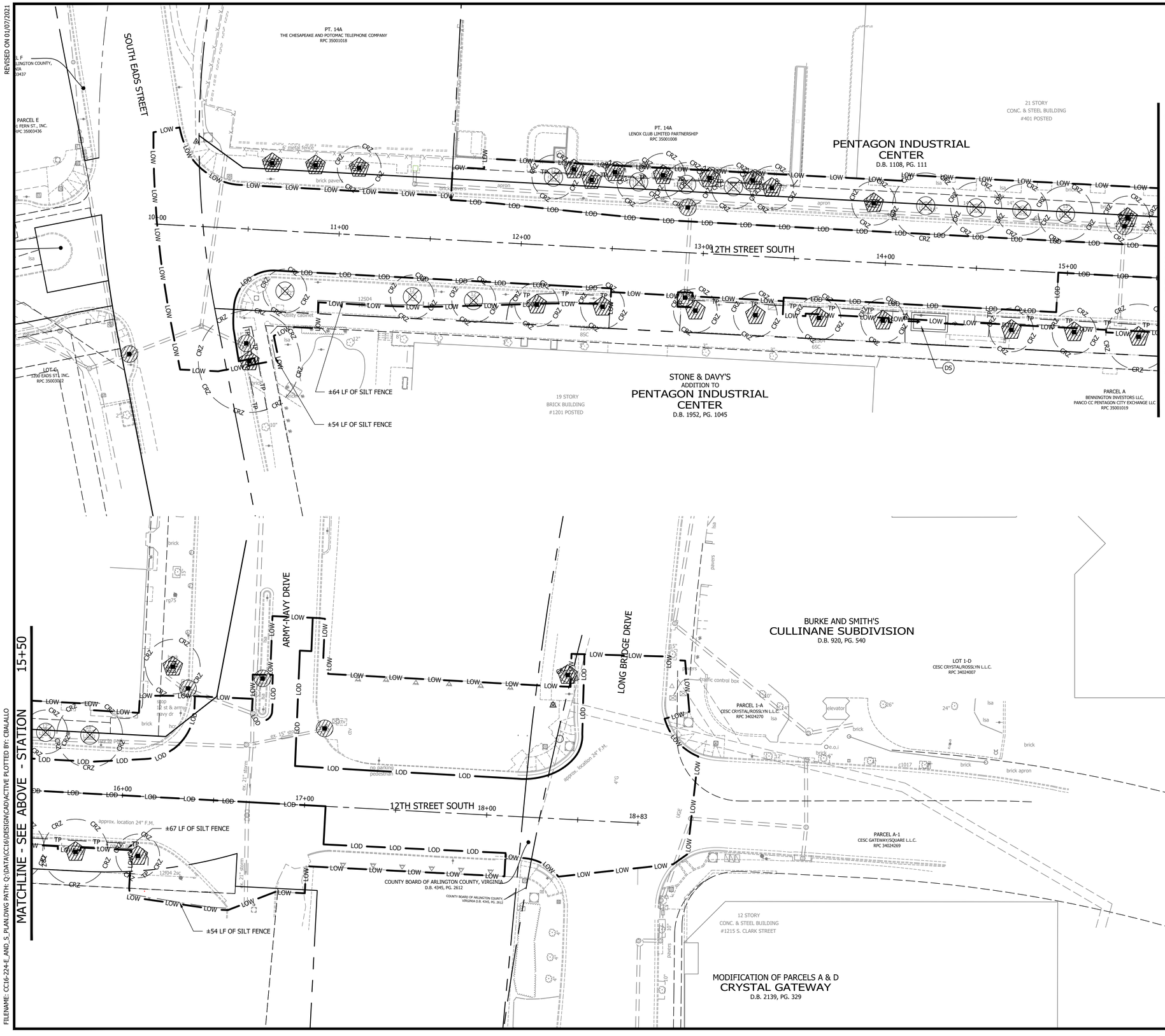
SCALE:

0 25 50
GRAPHIC SCALE

C021.2

FILENAME: CC16-228-DEMOLITION_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



EROSION AND SEDIMENT CONTROL LEGEND

3.02	TEMPORARY CONSTRUCTION ENTRANCE	CE	
3.05	TEMPORARY SILT FENCE	SF	
3.09	TEMPORARY DIVERSION DIKE	DD	
3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP
3.30	TOPSOILING - STOCKPILE	TO	
3.31	TEMPORARY SEEDING	TS	
3.36	EROSION CONTROL BLANKET	B\M	
3.39	DUST CONTROL	DC	
3.32	PERMANENT SEEDING	PS	
3.33	SODDING	SO	
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW
	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ
	TREE TO BE REMOVED		

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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EROSION AND SEDIMENT CONTROL PLAN PHASE 1

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C031.1

FILENAME: CC16-224-E_AND_S_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

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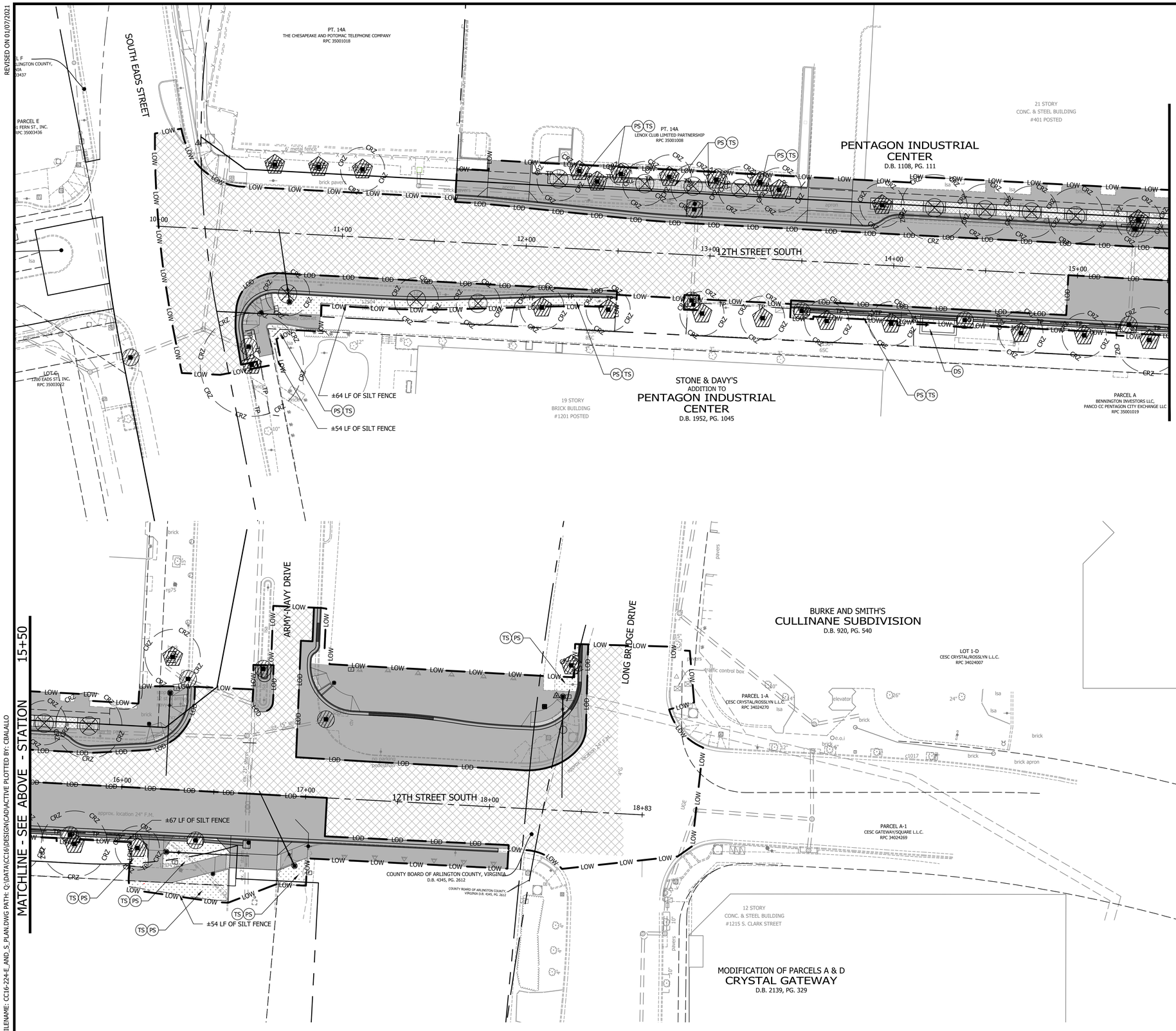

EROSION AND SEDIMENT CONTROL LEGEND

3.05	TEMPORARY SILT FENCE	SF	
3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP
3.31	TEMPORARY SEEDING	TS	
3.32	PERMANENT SEEDING	PS	
3.33	SODDING	SO	
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW
	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ
	TREE TO BE REMOVED		

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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EROSION AND SEDIMENT CONTROL PLAN PHASE 2

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C031.2

FILENAME: CC16-224-E_AND_S_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:
THE PROJECT SITE IS LOCATED AT 12TH STREET SOUTH BETWEEN S. EADS ST AND LONG BRIDGE DRIVE, ARLINGTON, VA. THE PURPOSE OF THE LAND DISTURBING ACTIVITY IS TO REMOVE AND REPLACE CURB, GUTTER, AND SIDEWALKS; INSTALL ADA COMPLIANT CURB CUT RAMPS; REMOVE AND REPLACE EXISTING STREETLIGHTS AND TRAFFIC SIGNALS; MILL AND PAVE ASPHALT ROADWAY, AND INSTALL PAVEMENT MARKINGS AND SIGNAGES. THE PURPOSE OF THE PROJECT IS TO PROVIDE A DEDICATED TRANSIT LANE.

EXISTING SITE CONDITIONS:
THE PROJECT SITE IS AT 12TH STREET SOUTH BETWEEN S. EADS ST ADN LONG BRIDGE DRIVE. IT IS LOCATED ON A HEAVILY URBANIZED ENVIRONMENT. 12TH STREET SOUTH IS A 2 LANE STREET WITH STREET PARKING ON EACH SIDE OF THE ROAD.

ADJACENT PROPERTIES:
THE PROPERTIES LOCATED TO THE NORTH AND SOUTH ARE PRIVATELY OWNED AND USED MAINLY AS RETAIL BUSINESS, AND HIGH RISE APARTMENT BUILDINGS.

OFF-SITE AREAS:
INLET PROTECTION IS REQUIRED OUTSIDE TH EPROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.
CONTRACTOR MATERIAL STORAGE/LAYDOWN AND PARKING AREAS ARE NOT PROVIDED FOR THIS PROJECT.

CRITICAL AREAS:
THERE ARE NO STEEP SLOPES WITHIN THE LIMITS OF DISTURBANCE. 12TH STREET SOUTH BETWEEN ARMY NAVY DRIVE AND LONG BRIDGE DRIVE IS LOCATED UNDERNEATH A VDOT BRIDGE STRUCTURE. THE BRIDGE SHALL NOT BE DISTURBED DURING CONSTRUCTION OF THE PROJECT.

EROSION AND SEDIMENT CONTROL MEASURES:
THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:
NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

PROJECT TOTAL LIMIT OF WORK (LOW) = 76,757 SQFT (1.7621 ACRES)

TOTAL LAND DISTURBANCE.......................= 37,803 SQFT (0.8678 ACRES)
PRE-IMPROVEMENT IMPERVIOUS AREA......= 32,152 SQFT (0.7381 ACRES)
POST-IMPROVEMENT IMPERVIOUS AREA....= 31,640 SQFT (0.7264 ACRES)
INCREASED IMPERVIOUS AREA..................= 512 SQFT (-0.0118 ACRES)

SOILS INFORMATION:
THE FOLLOWING SOILS ARE FOUND ON SITE

SOIL#:	SOIL NAME:	HYDROLOGIC GROUP:	ERODABILITY:
12	URBAN LAND-UDORTHENTS	VARIES	N/A

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):
THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE. FLOOD ZONE X PER FIRM MAP 51013C0081C EFF. DATE 8/19/2013.

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.

b. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.

c. INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.

d. PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF), AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.

e. SEED AND MULCH ALL EARTHEN CONTROLS.

f. CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.

g. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

a. BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.

b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.

c. ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS

d. THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES
UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

1. STRUCTURAL PRACTICES

a. SILT FENCE - VESCH 3.05

a.a. SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
a.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
a.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
a.d. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
a.e. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
a.f. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.

b. STORM DRAIN INLET PROTECTION - VESCH 3.07

b.a. ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
b.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
b.c. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

c. DEWATERING STRUCTURE - VESCH 3.26

c.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
c.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
c.c. THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.

d. TREE PROTECTION - VESCH 3.38

d.a. ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
d.a.a. SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.
d.a.b. REPAIR OF DAMAGE:
d.a.A.a. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
d.a.A.b. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
d.a.A.c. DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
d.a.A.d. TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
d.a.A.e. ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
d.a.A.f. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.

d.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
d.b.a. TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
d.b.b. FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
d.b.c. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
d.b.d. FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

a. TOPSOILING (STOCKPILE) - VESCH 3.30

a.a. TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.

b. TEMPORARY SEEDING - VESCH 3.31

b.a. ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
b.b. SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.

c. PERMANENT SEEDING - VESCH 3.32

c.a. SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.

d. SODDING - VESCH 3.33

d.a. SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES
PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

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 100 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 AFTER BACKFILLING.
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.
7. ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:
1. THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
2. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
3. ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
   a. CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
   b. FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
   c. CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
4. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
6. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
7. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES
1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
7. 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.
8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
9. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY 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.
10. ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:
PER GENERAL EROSION AND SEDIMENT CONTROL 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 EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL 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.

1. PERIMETER CONTROLS
   a. SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
   b. WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
   c. SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
   d. HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
2. EXPOSED SLOPES AND SOIL
   a. 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.
   b. 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.
   c. 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.
   d. 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.
3. STOCKPILES
   a. 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 SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
4. INLET PROTECTION
   a. 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.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)
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:
   a. 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 FIREFIGHTING; 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 (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
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.

UTILITY INSTALLATION:
UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
1. NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
5. STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
9. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND 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.
10. 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.

MAINTENANCE PROGRAM:
THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:
1. THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
2. ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
4. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
5. AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.

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4/23/2021
PROFESSIONAL ENGINEER

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CONSTRUCTION MANAGEMENT SUPERVISOR	
[signature]	05.10.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	05/17/21
TRANSPORTATION DIRECTOR	
[signature]	4/26/21
PROJECT MANAGER	

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EROSION AND SEDIMENT CONTROL NOTES

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE: N/A

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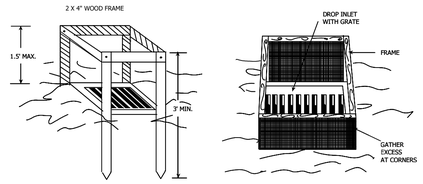
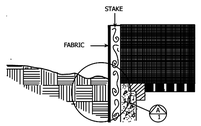
FILENAME: CC16-220-E_AND_S_NOTES_SWPP.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021

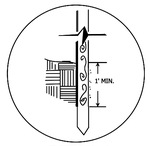
SILT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS



ELEVATION OF STAKE AND FABRIC ORIENTATION



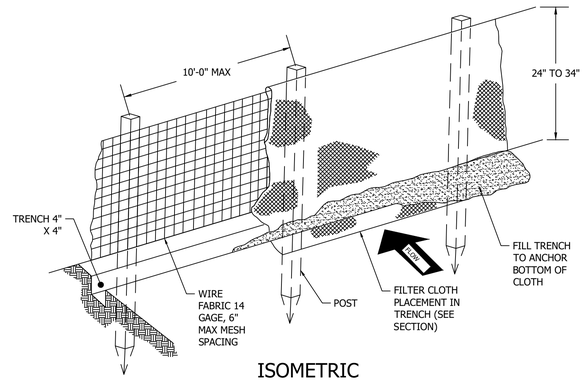
DETAIL A

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

SOURCE: N.C. Erosion and Sediment Control Planning and Design Manual, 1988

PLATE 3.07-1



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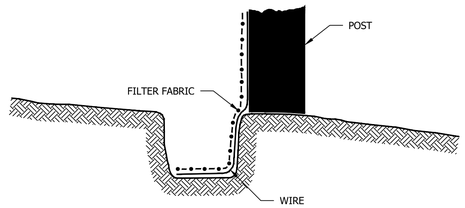
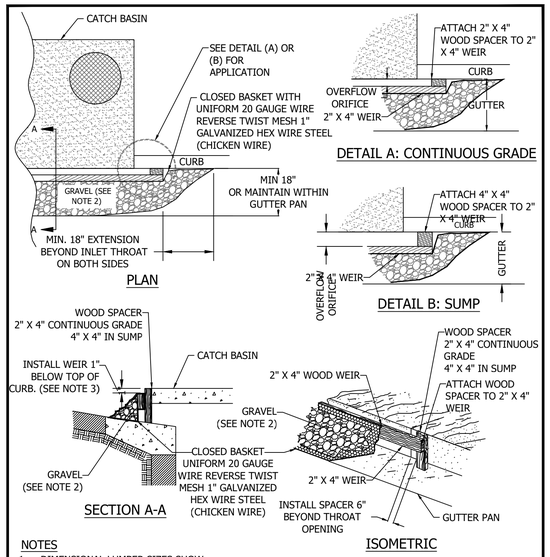


SECTION

MODIFIED-VESCH 3.05

SILT FENCE

NOT TO SCALE



NOTES

1. DIMENSIONAL LUMBER SIZES SHOW.
2. GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, # 357 OR #5.
3. WEIR HEIGHT MAY BE ADJUSTED BY PROJECT OFFICER OR INSPECTOR IN FLOOD PRONE AREAS.
4. PAINT 2"X4" WEIR, CLOSED BASKET, AND GUTTER WITH HIGH VISIBILITY INCANDESCENT ORANGE PAINT.
5. REMOVE SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE THE PROTECTION.

CURB INLET PROTECTION

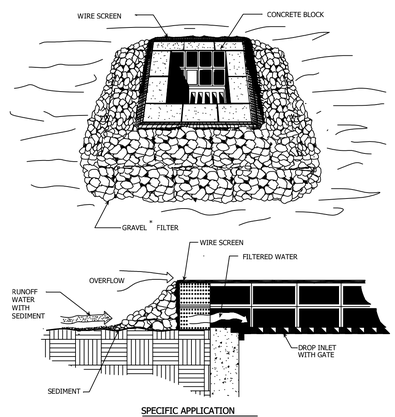
REVISION & DATE

ARLINGTON VIRGINIA

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. 3.07-7 (ACG)

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

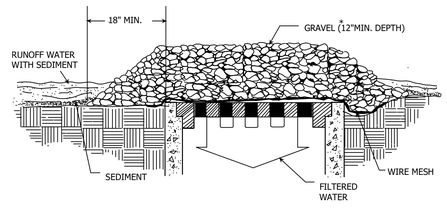
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

SOURCE: VA. DSWC

PLATE. 3.07-3

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

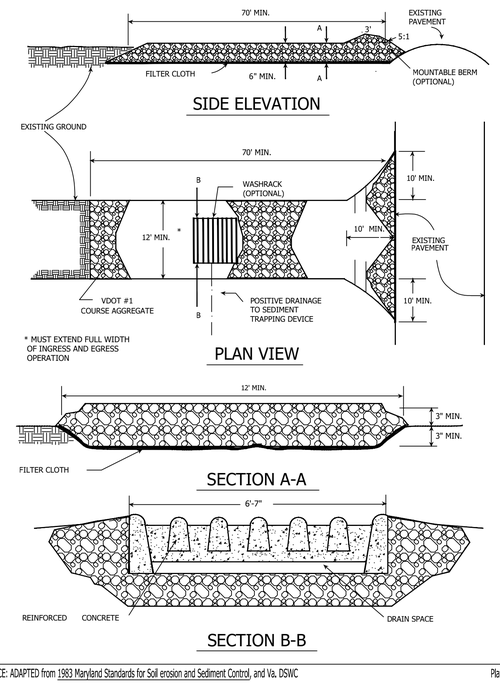
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

SOURCE: VA. DSWC

PLATE. 3.07-2

STONE CONSTRUCTION ENTRANCE



SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC

Plate 3.02-1

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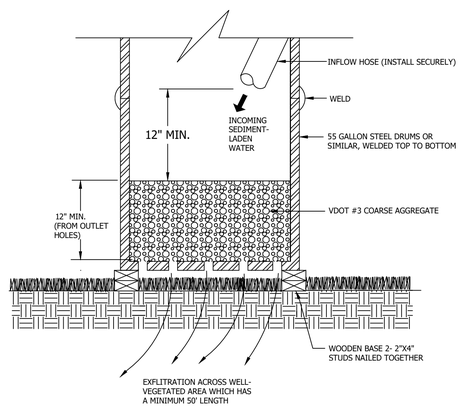
FILTER BOX

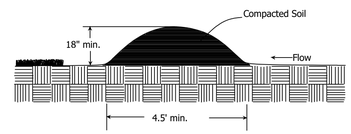


ELEVATION VIEW

SOURCE: VA. DSWC

PLATE: 3.26-2

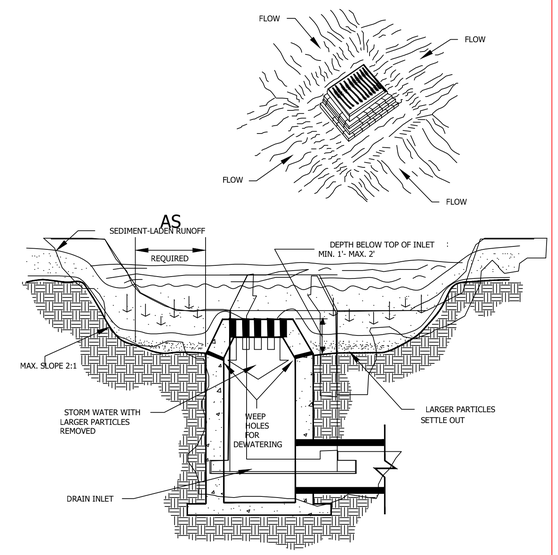
TEMPORARY DIVERSION DIKE



SOURCE: VA. DSWC

PLATE 3.09-1

EXCAVATED DROP INLET SEDIMENT TRAP



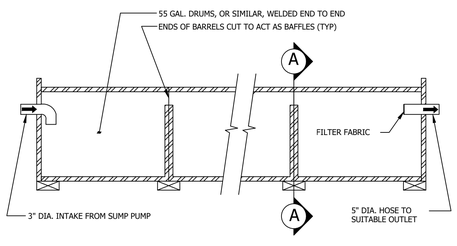
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPABILITY AND EASE OF MAINTENANCE ARE DESIRABLE.

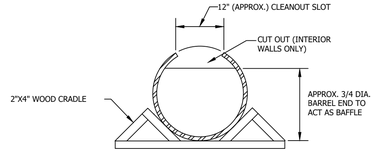
SOURCE: MICHIGAN SOIL EROSION AND SEDIMENT CONTROL GUIDEBOOK, 1975, AND USDA-SCS

PLATE 3.07-4

PORTABLE SEDIMENT TANK



ELEVATION

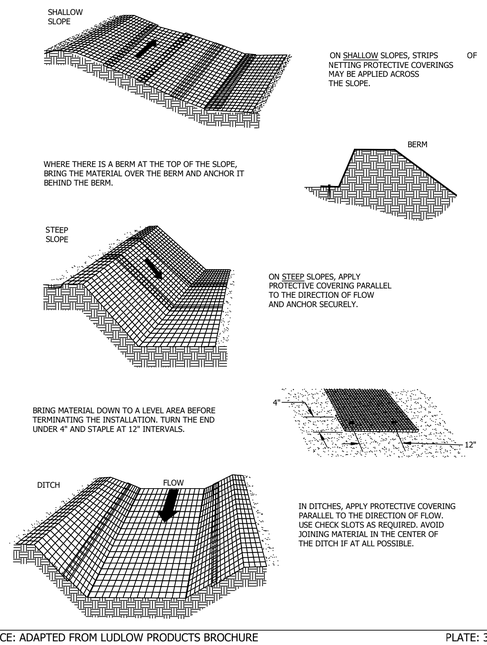


CROSS-SECTION A-A

SOURCE: USDA - SCS

PLATE: 3.26-1

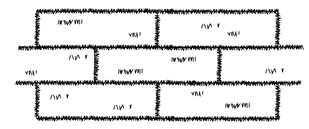
TYPICAL ORIENTATION OF TREATMENT - 1 (SOIL STABILIZATION BLANKET)



SOURCE: ADAPTED FROM LUDLOW PRODUCTS BROCHURE

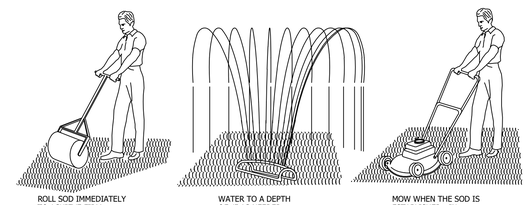
PLATE: 3.36-1

SODDING



LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING - ANGLED ENDS CAUSED BY THE AUTO-MATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

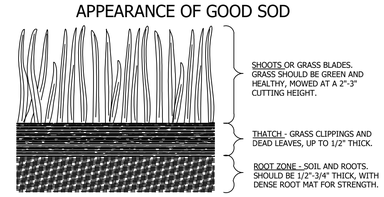


ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

APPEARANCE OF GOOD SOD



SHOOTS OR GRASS BLADES. GRASS SHOULD BE GREEN AND HEALTHY, MOWED AT A 2"-3" CUTTING HEIGHT.

THATCH - GRASS CLIPPINGS AND DEAD LEAVES, UP TO 1/2" THICK.

ROOT ZONE - SOIL AND ROOTS. SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH.

SOURCE: VA. DSWC

PLATE: 3.33-1

ARLINGTON
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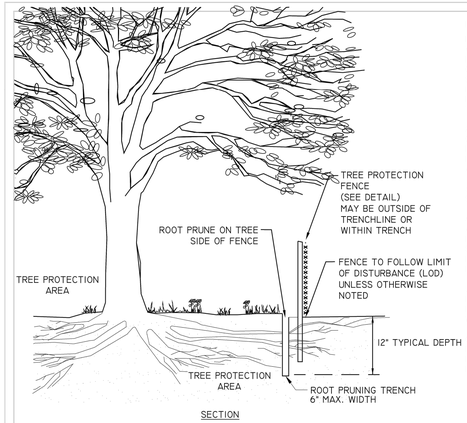


SECTION

NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.

2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.

3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.

4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.

5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.

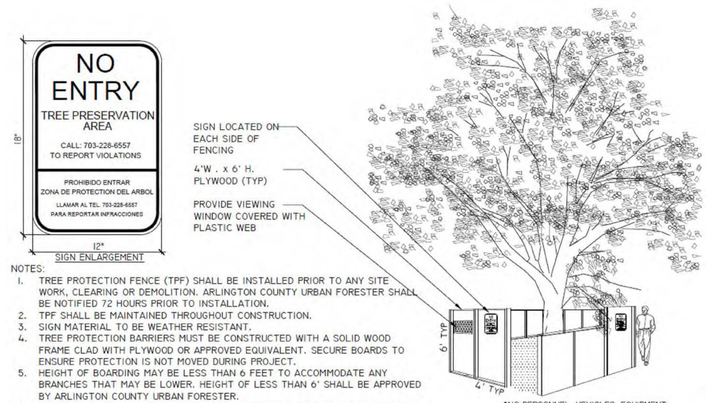
6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.

ROOT PRUNING

N.T.S.

311300.5 (2019)

ARLINGTON VIRGINIA DPR



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.
2. TPF SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. SIGN MATERIAL TO BE WEATHER RESISTANT.
4. TREE PROTECTION BARRIERS MUST BE CONSTRUCTED WITH A SOLID WOOD FRAME CLAD WITH PLYWOOD OR APPROVED EQUIVALENT. SECURE BOARDS TO ENSURE PROTECTION IS NOT MOVED DURING PROJECT.
5. HEIGHT OF BOARDING MAY BE LESS THAN 6 FEET TO ACCOMMODATE ANY BRANCHES THAT MAY BE LOWER. HEIGHT OF LESS THAN 6' SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
6. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
7. PROVIDE 12"(WIDTH) X4"(HEIGHT) CUT-OUTS ALONG PANELS FACING PAVED SURFACES SUCH AS SIDEWALKS, TWO CUT-OUTS PER FENCE PANEL.

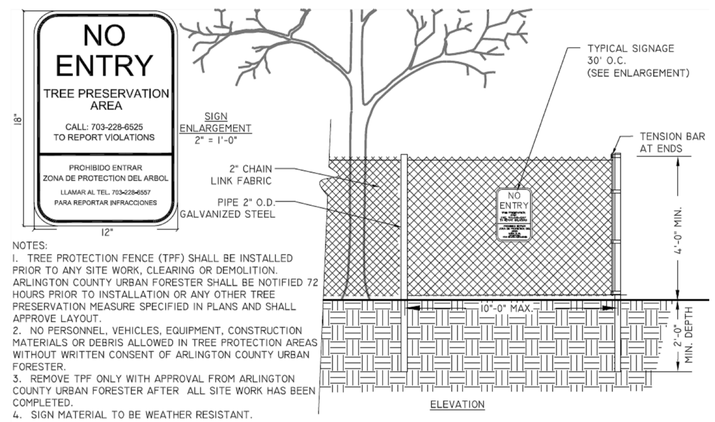
*NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF ARLINGTON COUNTY URBAN FORESTER.

TREE PROTECTION BARRIERS FOR RESTRICTED SPACE AND TREE PITS

N.T.S.

311300.14NS (2019)

ARLINGTON VIRGINIA DPR



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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.

4' CHAIN LINK TREE PROTECTION FENCE (RESIDENTIAL)

1/2" = 1'-0"

311300.2 (2016) (02231.2)

ARLINGTON VIRGINIA DPR

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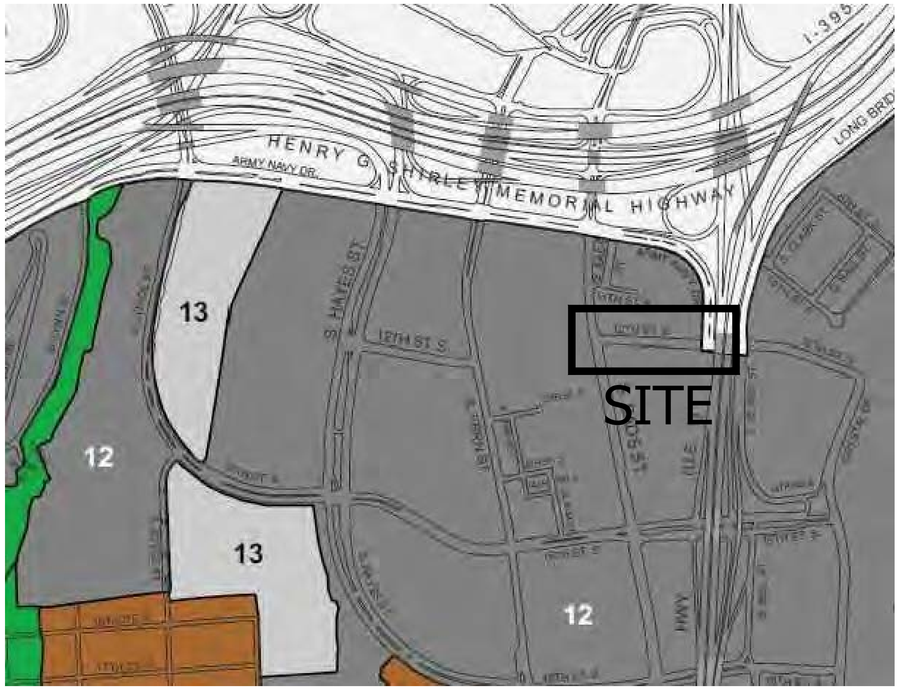
FILENAME: CC16-220-E_AND_S_NOTES_SWPP.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

SOIL SURVEY AND TYPES



13 Udorthents, loamy
These soils are in areas that have been reworked by machinery and consist of mostly loamy materials placed over various drainage classes on terraces and floodplains occurring along perennial streams in the Piedmont and Coastal Plain. Slope varies but is generally less than 10 percent.

The source of fill material in this unit is variable, consisting of sandy, gravelly, clayey, silty,and micaceous soil material. These reworked areas were created to provide sites for buildings, roads, recreational facilities and flood control. The thickness of the fill is quite variable, but is generally more than 2 feet.

Included with these soils in mapping are soils that are often shaped to some extent but otherwise resemble undisturbed soils surrounding the unit. Also included are some filled areas that have non-soil materials such as concrete rubble in addition to the soil material.

Permeability and available water capacity are quite variable. Internal drainage is highly variable and the probability of ponding and excessive runoff is possible after heavy rainfall.

Most areas have been stabilized and are used for building sites, roads, and recreational development. Some areas are completely covered with buildings and other impervious surfaces. Remaining open areas are generally used for ornamental planting and recreational fields.

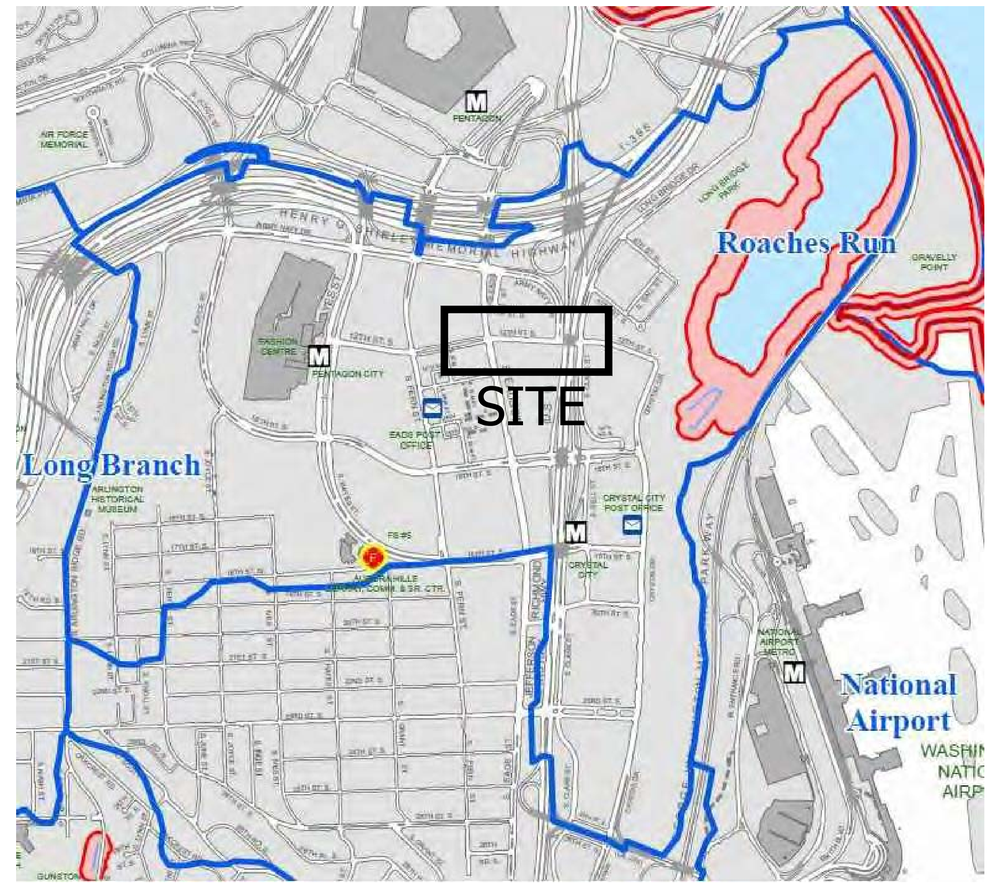
12 Urban land-Udorthents complex, 2 to 15 percent slopes
This mapping unit consists of areas where more than 85 percent of the surface is Urban land, covered by buildings, asphalt, concrete, or other impervious materials. The other 15 percent consists of areas of deep to very deep, nearly level to moderately sloping, well and moderately well drained soils. The Urban land and Udorthents are so intermingled it was not practical to map them separately. This complex occurs throughout the survey area but is largely located in the Rosslyn-Ballston and Crystal City areas. This unit is about 85 percent Urban land, 10 percent Udorthents, and 5 percent other soils.

The Udorthents consist of material that has been graded, cut, filled, or otherwise disturbed during urbanization. The disturbed material is loamy and generally reflects the soils in the adjacent area.

Included in this mapping unit are small areas of soils that have not been disturbed. Also included are moderately steep and steep slopes.

It is not pratical to examine nor attempt to identify the soil or soil-like material of this unit.

ROACHES RUN STORM SEWERSHED



ARLINGTON
VIRGINIA

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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

SEWERSHED AND SOIL SURVEY

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

N/A

C032.5

REVISED ON 01/07/2021
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STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COVER PAGE

For Construction Activities At:

CC16 12th Street South
12th Street South between S. Eads St. and S. Clark St.
Arlington, VA 22202

Latitude: 38.86224 N (decimal degrees)

Longitude: -77.051966 W (decimal degrees)

Construction Activity Operator:

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

SWPPP Preparation Date:

November 17, 2020

CERTIFICATION

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

Operator Name: _____

Title: _____

Signature: _____

Date: _____

1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	☐ Yes	☐ NA
Notice of Coverage Letter	☐ Yes	☐ NA
Construction General Permit	☐ Yes	☐ NA
Pollution Prevention Plan	☒ Yes	☐ NA
Erosion & Sediment Control Plan (or agreement in lieu of)	☒ Yes	☐ NA
Stormwater Management Plan	☐ Yes	☐ NA

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

3.0 Pollution Prevention Awareness

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

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
☐	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page of this SWPPP)
☒	Silt Fence (Std. & Spec. 3.05)			
☐	Culvert Inlet Protection (Std. & Spec. 3.08)			
☐	Outlet Protection (Std. & Spec. 3.18)		NA	
☒	Temporary Seeding (Std. & Spec. 3.31)	As required by 3.31	NA	
☒	Permanent Seeding (Std. & Spec. 3.32)		NA	
☐	Sodding (Std. & Spec. 3.33)		NA	
☐	Mulching (Std. & Spec. 3.35)		NA	
☐	Safety Fence (Std. & Spec 3.01)			
☒	Storm Drain Inlet Protection (Std. & Spec 3.08)			

☒	Dewatering (Std. & Spec 3.26)			
☐	Turbidity Curtain (Std. & Spec 3.27)			
☒	Tree Protection (Arlington County Std. & Spec.)			
☐	Others [describe]			

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Pollutants: Likely Present at your Project Site?	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.

(11) **Others** – If applicable, describe your Pollution Prevention Practice.

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
☐	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
☐	Rooftop Disconnection	Insert Date	Construction Activity Operator (See Cover Page of this SWPPP)
☐	Sheet flow to Vegetated Filter (1 or 2)	Insert Date	
☐	Grass Channel	Insert Date	
☐	Rainwater Harvesting	Insert Date	
☐	Permeable Pavement (1 or 2)	Insert Date	

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
☐	Infiltration (1 or 2)	Insert Date	Construction Activity Operator (See Cover Page of this SWPPP)
☐	Bioretention (1 or 2)	Insert Date	
☐	Others [describe]	Insert Date	
☐	Exempted	NA	NA

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

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORMWATER POLLUTION PREVENTION PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

N/A

C035.1

REVISED ON 01/07/2021
FILENAME: CC16-220-E_AND_S_NOTES_SWPP.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

November 17, 2020
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:

CC16 - 12TH ST. SOUTH
street address
between S Eads St and Long Bridge Dr
lot, block, section subdivision

permit number

Dear Mrs. Li:

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

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. 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 703-228-0596 with questions about this plan or my execution of the duties of
telephone number
Responsible Land Disturber.

Sincerely,

signed

Trevor Lantzy, P.E.
name printed

P.E.# 0402050508
professional registration (type and number)

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

Qualified Inspector

Company/Organization:
Name:
Telephone Number:
Qualifications:

Inspection Schedule

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

☒ Once every 4 business days.

Inspection Date:

Type of Inspection: ☐ Regular ☐ Pre-storm event ☐ During storm event ☐ Post-storm event

Phase of construction: ☐ Pre-Con ☐ DEMO ☐ Clearing ☐ Building ☐ Grading ☐ Final Stabilization

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

Are there any discharges at the time of this inspection? ☐ Yes ☐ No If yes, describe:

Have any discharge occurred since the last inspection? ☐ Yes ☐ No If yes, describe:

Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed; Responsible Party & Notes	Date Corrective Action Taken
Are all construction exits preventing sediment from being tracked onto the adjacent streets?	☐ Yes ☐ No ☐ NA		
Are perimeter controls and sediment barriers adequately installed and maintained?	☐ Yes ☐ No ☐ NA		
Are storm drain inlets properly protected? (on-site and adjacent)	☐ Yes ☐ No ☐ NA		
Are discharge points and receiving waters free of any sediment deposits?	☐ Yes ☐ No ☐ NA		

Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed; Responsible Party & Notes	Date Corrective Action Taken
Are all slopes and disturbed areas not actively being worked properly stabilized?	☐ Yes ☐ No ☐ NA		
Are washout facilities (e.g., concrete, paint, stucco) available, clearly marked and maintained?	☐ Yes ☐ No ☐ NA		
Is trash/litter from work areas collected and contained in dumpsters?	☐ Yes ☐ No ☐ NA		
Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	☐ Yes ☐ No ☐ NA		
Are natural resources (e.g., streams, wetlands, mature trees) area protected with barriers or similar BMPs?	☐ Yes ☐ No ☐ NA		
Are vehicle and equipment fueling, cleaning and maintenance areas free of spills, leaks, or other deleterious material?	☐ Yes ☐ No ☐ NA		
Are materials that are potential stormwater contaminants stored inside or under cover?	☐ Yes ☐ No ☐ NA		
Are disturbed areas stabilized within 7 days, if areas denuded will remain undisturbed for 14 days?	☐ Yes ☐ No ☐ NA		

Non – Compliance
Describe any incidents of non-compliance not described above (use another page is necessary)

Certification

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

Operator or Assigned Qualified Personnel Name: _____

Signature: _____

Date: _____

9.0 Grading & Stabilization Activities Log

Date Grading Activity Initiated	Description of the Grading Activity (including location)	Date Grading Activity Ceased	Date Stabilization Measures Initiated	Description of the Stabilization Measure (including location)

10.0 SWPPP Modification & Update Log

Modification Date	Description of the Modification / Update (name & title that request the modification)	Modification Prepared By (name & title)

INSTRUCTIONS for COMPLETING the
SINGLE FAMILY RESIDENCE, COMMON PLAN of DEVELOPMENT or SALE
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

General
A Stormwater Pollution Prevention Plan (SWPPP) must be developed prior to obtaining locality (e.g., City, County, Town) authorization to commence land disturbance.

SWPPP Cover Page
For a construction activity, enter the project/site name and physical address (if available), including city (or town), state and zip code. Enter the latitude and longitude in decimal degrees of the construction activity.

Enter the Construction Activity Operator's company/organization name, the Operator's name and mailing address, including city (or town), state, and zip code, telephone number, email address (if available), and a 24-hour emergency contact.

Enter the SWPPP preparation date.

The Construction Activity Operator identified on the cover page of the SWPPP is responsible for certifying the information contained therein. Please sign the certification in INK. Please note that state statues require the SWPPP to be signed as follows:
(1) For a corporation: by a responsible corporate officer;
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
(3) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

Section 1.0 SWPPP Documents Located Onsite & Available for Review
Utilize the provided checklist to ensure that the required SWPPP documents are located onsite and are available for review, if applicable.

Section 2.0 Authorized Non-Stormwater Discharges
Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Section 3.0 Pollution Prevention Awareness
Provide employees with a "walk through" of the project site and identify areas of possible pollution, erosion and sediment controls, and pollution prevention practices which are applicable to their assigned job duties. Conduct refresher meetings and perform additional "walk throughs" on an as needed basis.

Section 4.0 Erosion & Sediment Controls
Identify the erosion and sediment controls to be implemented at the project site. For each erosion and sediment control, enter the estimated installation date and estimated removal date. If an unlisted erosion and sediment control will be implemented at the project site, provide the applicable information here.

Section 5.0 Potential Sources of Pollution & Pollution Prevention Practices
Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Section 6.0 Stormwater Management Controls
Identify the stormwater management controls to be implemented at the project site, if applicable. For each stormwater management control, enter the estimated installation date. If an unlisted stormwater management control will be implemented at the project site, provide the applicable information here.

Section 7.0 Spill Prevention & Response
Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Section 8.0 Inspections & Corrective Action Log
Enter the qualified inspector's company/organization name, the inspector's name, telephone number, and qualifications. Select the applicable inspection type, enter the construction activity inspection date, and enter the date and rainfall amount of the last measurable storm event (if applicable). Identify if the implemented best management practices are in compliance with the SWPPP. Enter corrective actions needed; the party responsible for implementing the corrective actions, and the date corrective actions were taken, if applicable. Make additional copies of the inspection and corrective action log as necessary.

Section 9.0 Grading & Stabilization Activities Log
Enter the date grading activities were initiated, a description of the grading activities including location, the date grading activities ceased, the date stabilization measures were initiated, and a description of the stabilization measures including location.

Section 10.0 SWPPP Modification & Update Log
Enter the SWPPP modification date, description of the SWPPP modification/update, and the name and title of the SWPPP modification preparer, if applicable.

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REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORMWATER POLLUTION PREVENTION PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

N/A

C035.2

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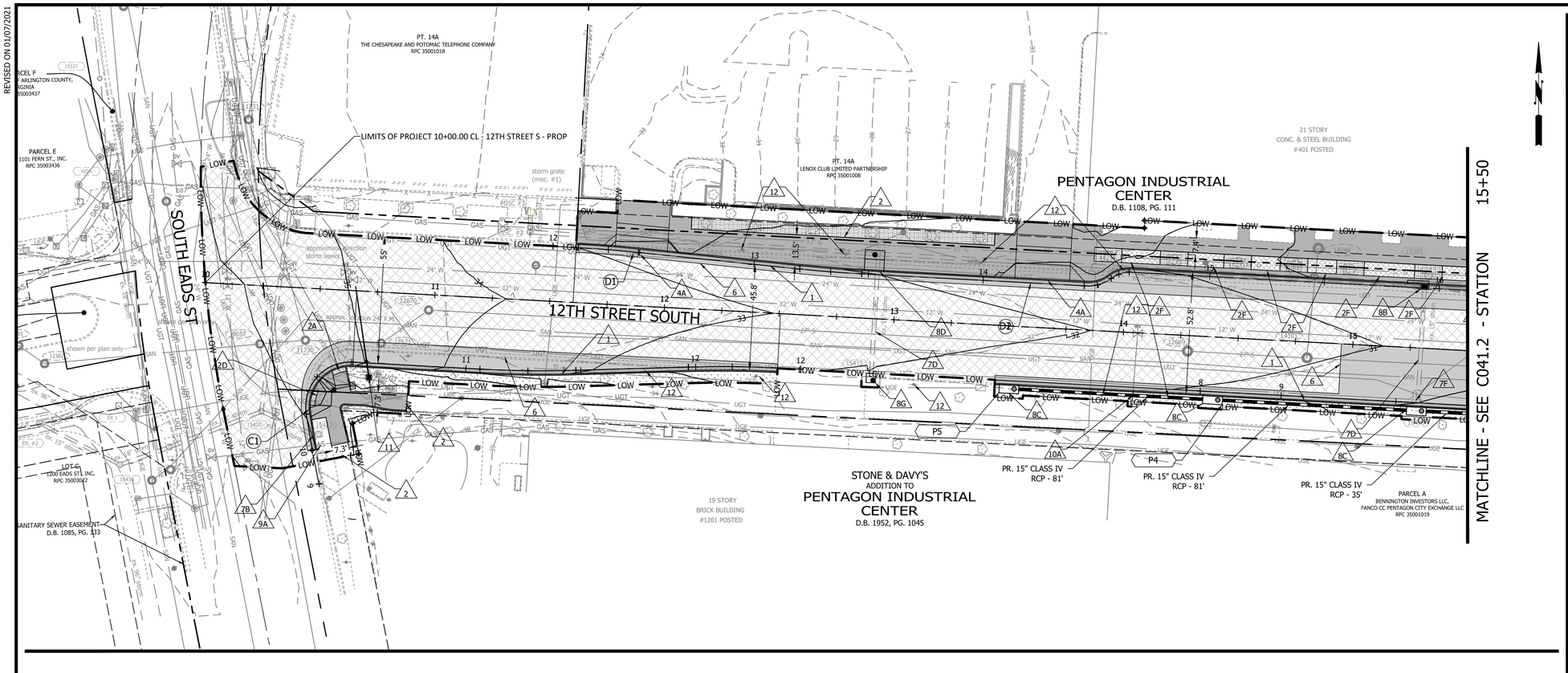
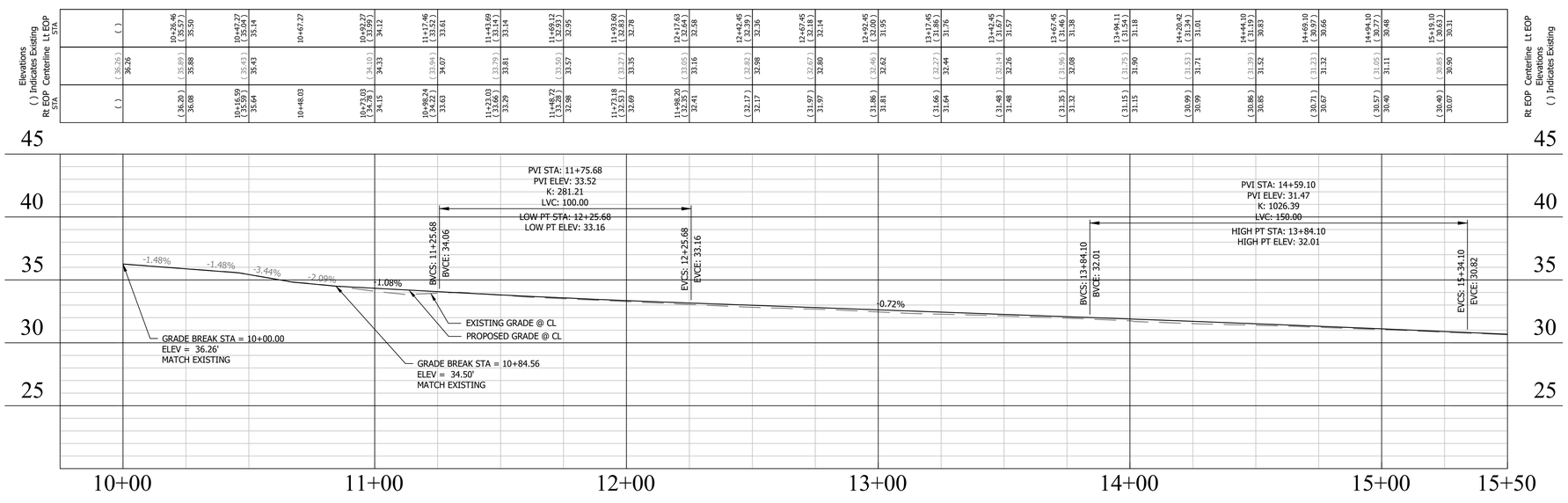
REVISED ON 01/07/2021





CONSTRUCTION NOTES

1. PROP CURB AND GUTTER (C-2) ARL STD (R-2.0)
1A. PROP HEADER CURB (C-3) ARL STD (R-2.0)
1B. PROP REVERSE CURB AND GUTTER (C-2R) ARL STD (R-2.0)
2. PROP SIDEWALK ARL STD (R-2.0)
2A. PROP MODIFIED RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204.02)
2B. PROP MODIFIED RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204.03)
2D. PROP RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204.02)
2E. PROP RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204.03)
2F. PROP ARLINGTON COUNTY DPR STANDARD CONTINUOUS SOIL PANEL (329300.11A, 329300.11B, AND 329300.11C)
4A. PROP COMMERCIAL CONCRETE DRIVEWAY ENTRANCE (STANDARD) ARL STD (R-2.4A)
6. INSTALL FULL DEPTH ASPHALT PER VDOT ROAD & BRIDGE DETAIL (WP-2). SEE TYPICAL SECTIONS FOR DETAILS.
7B. ADJUST EXISTING CATCH BASIN TOP TO PROPOSED GRADE PER ARL CONSTR SPEC 02500 - 3.4
7C. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE PER ARL CONSTR SPEC 02505
7D. ABANDON EXISTING PIPE PER ARL CONSTR SPEC 02500 3.5
7E. ABANDON EXISTING STRUCTURE PER ARL CONSTR SPEC 02500 - 3.5
7F. REMOVE EXISTING STRUCTURE
8A. PROP STANDARD CATCH BASIN WITH EXTENDED THROATS FOR SAGS, CB-2A PER ARL STD (D-1.3)
8B. REPLACE EXISTING STRUCTURE TOP WITH PROP VDOT STANDARD CURB DROP INLET TOP, PER VDOT STANDARD DI-2B
8C. PROP PRECAST CATCH BASIN PCB-2 PER ARL STD (D-1.5) (D-1.6)
8D. REPLACE EXISTING CATCH BASIN TOP WITH MODIFIED STRUCTURE TOP TO EXTEND THROAT TO PROP. CURB
8F. PROP STANDARD MANHOLE, MH-2 PER ARL STD (D-3.0)
8G. REPLACE EXISTING STRUCTURE TOP WITH PROP VDOT STANDARD MANHOLE FRAME AND COVER, PER VDOT STANDARD MH-1
9. RELOCATE EX. ARLINGTON COUNTY FIBER LINE. (BY OTHERS)
9A. EX. 6" GAS LINE TO REMAIN. WASHINGTON GAS TO PROVIDE PROTECTIVE MEASURES FOR SHALLOW GROUND COVER.
9B. EX. 6" GAS LINE TO BE RELOCATED BY WASHINGTON GAS TO AVOID PROPOSED MANHOLE.
10A. EX. WATERMAIN TO BE VERTICALLY RELOCATED TO CLEAR PROP. 15" CLASS IV RCP.
10B. REMOVE EXISTING FIRE HYDRANT
10C. CONNECT TO EX. 12" WATERMAIN. INSTALL NEW FIRE HYDRANT AND 12" WATER SERVICE LINE.
11. NEW PROPOSED TRAFFIC SIGNAL POLE AND MAST ARM
12. REMOVE EXISTING SIGN

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

PLAN AND PROFILE

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 25 50
HORIZ. SCALE

C041.1

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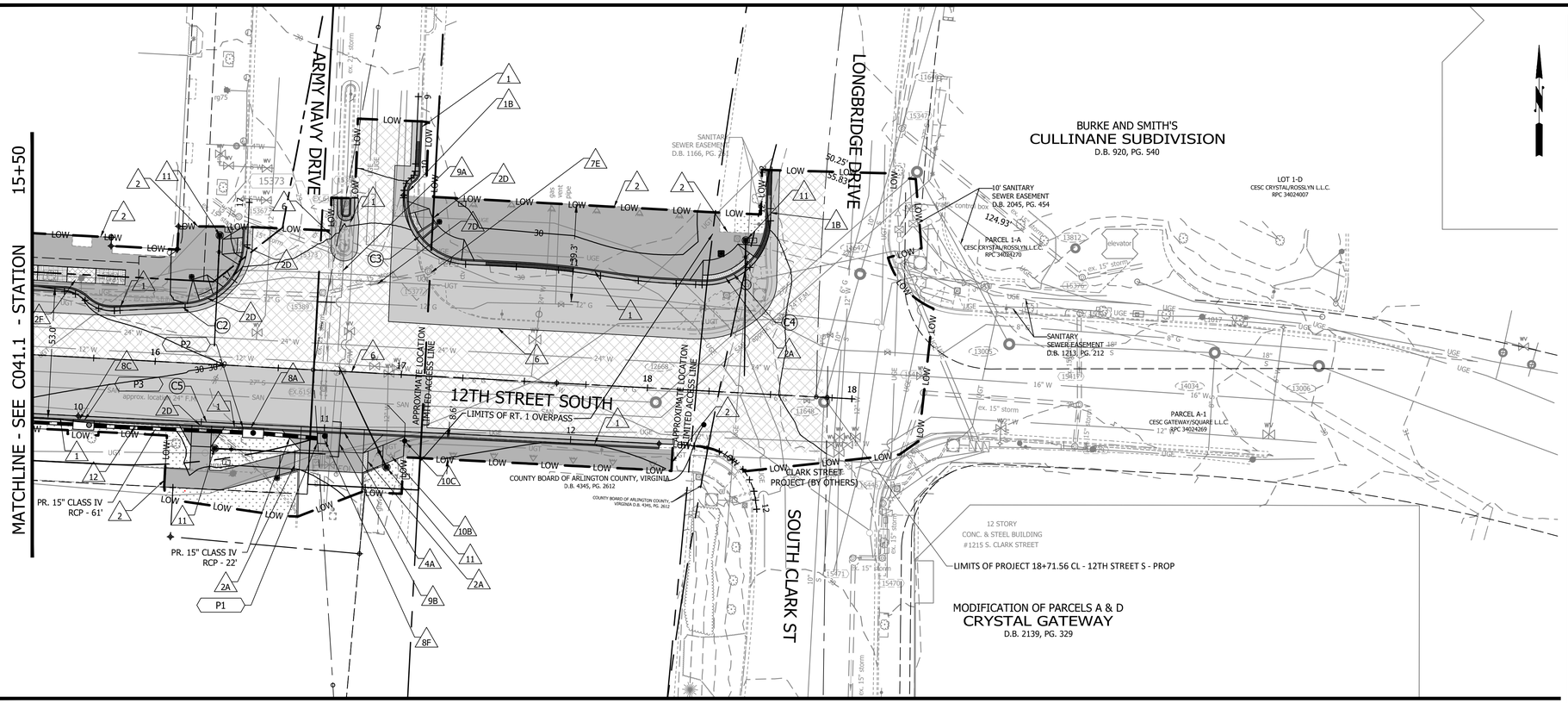

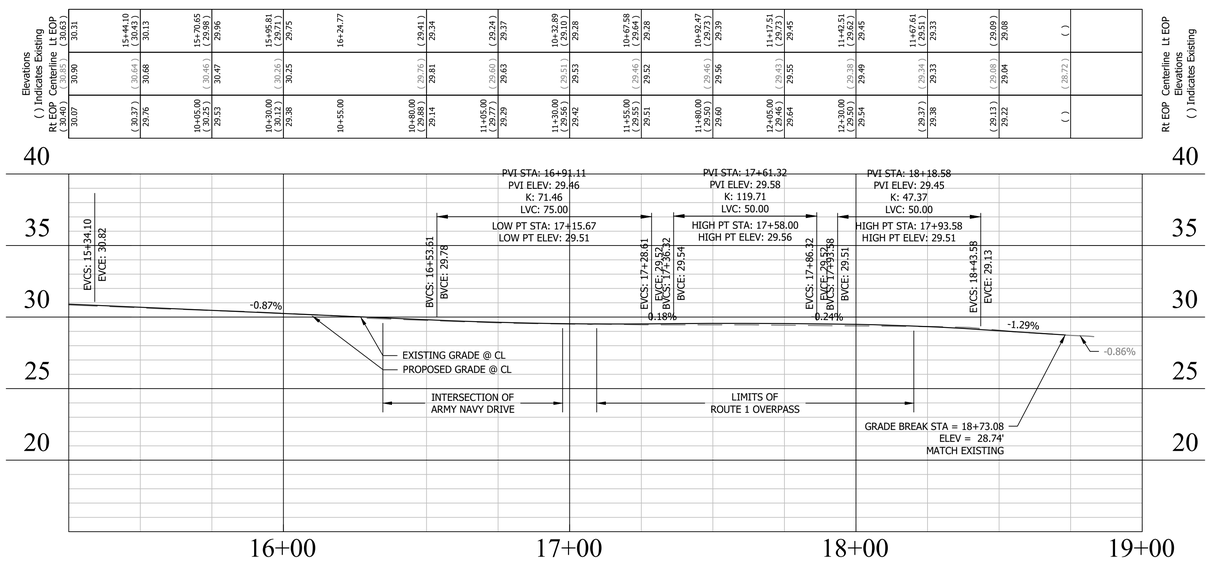

CONSTRUCTION NOTES

1. PROP CURB AND GUTTER (C-2) ARL STD (R-2.0)
1A. PROP HEADER CURB (C-3) ARL STD (R-2.0)
1B. PROP REVERSE CURB AND GUTTER (C-2R) ARL STD (R-2.0)
2. PROP SIDEWALK ARL STD (R-2.0)
2A. PROP MODIFIED RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204.02)
2B. PROP MODIFIED RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204.03)
2D. PROP RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204.02)
2E. PROP RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204.03)
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PROJECT MANAGER	4/26/21

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CC16
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PLAN AND PROFILE

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CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 25 50
HORIZ. SCALE

C041.2

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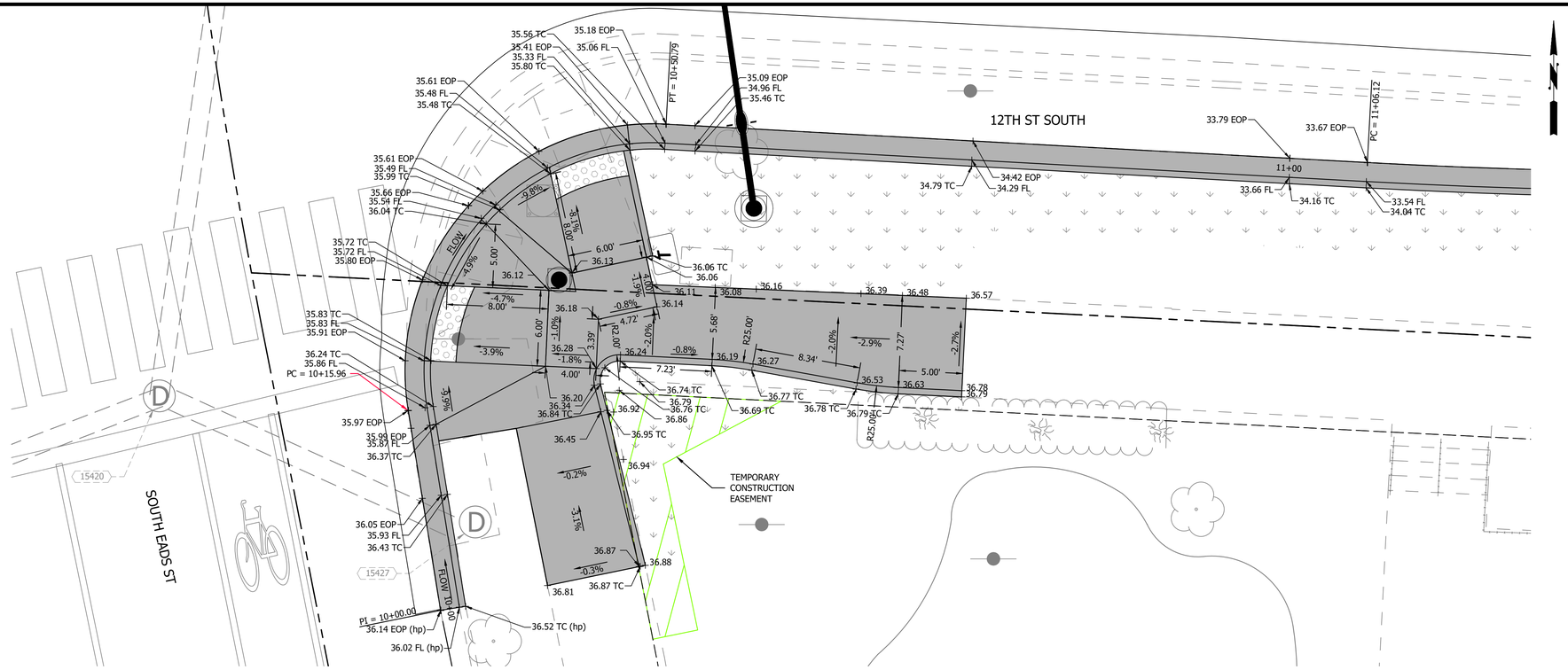
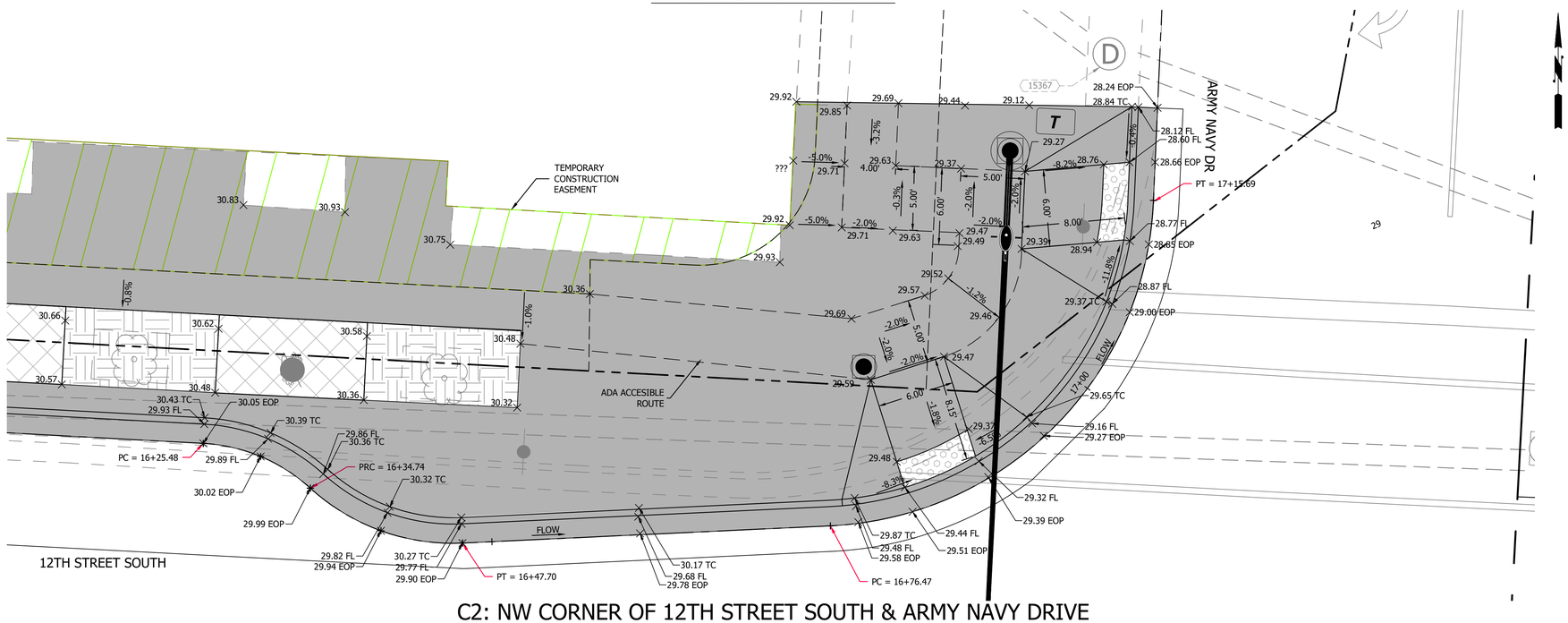


C1: SE CORNER OF 12TH STREET SOUTH & SOUTH EADS STREET
Baseline: EOP - SOUTH - S EADS ST TO ARMY NAVY DRIVE
Station: 10+00 to 11+70



C2: NW CORNER OF 12TH STREET SOUTH & ARMY NAVY DRIVE
Baseline: EOP - NORTH - S EADS ST TO ARMY NAVY DRIVE
Station: 16+25 to 17+20

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PROJECT MANAGER	4/26/21

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12TH STREET SOUTH
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BETWEEN S. EADS ST. AND S. CLARK ST.

RAMP DETAILS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

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GRAPHIC SCALE

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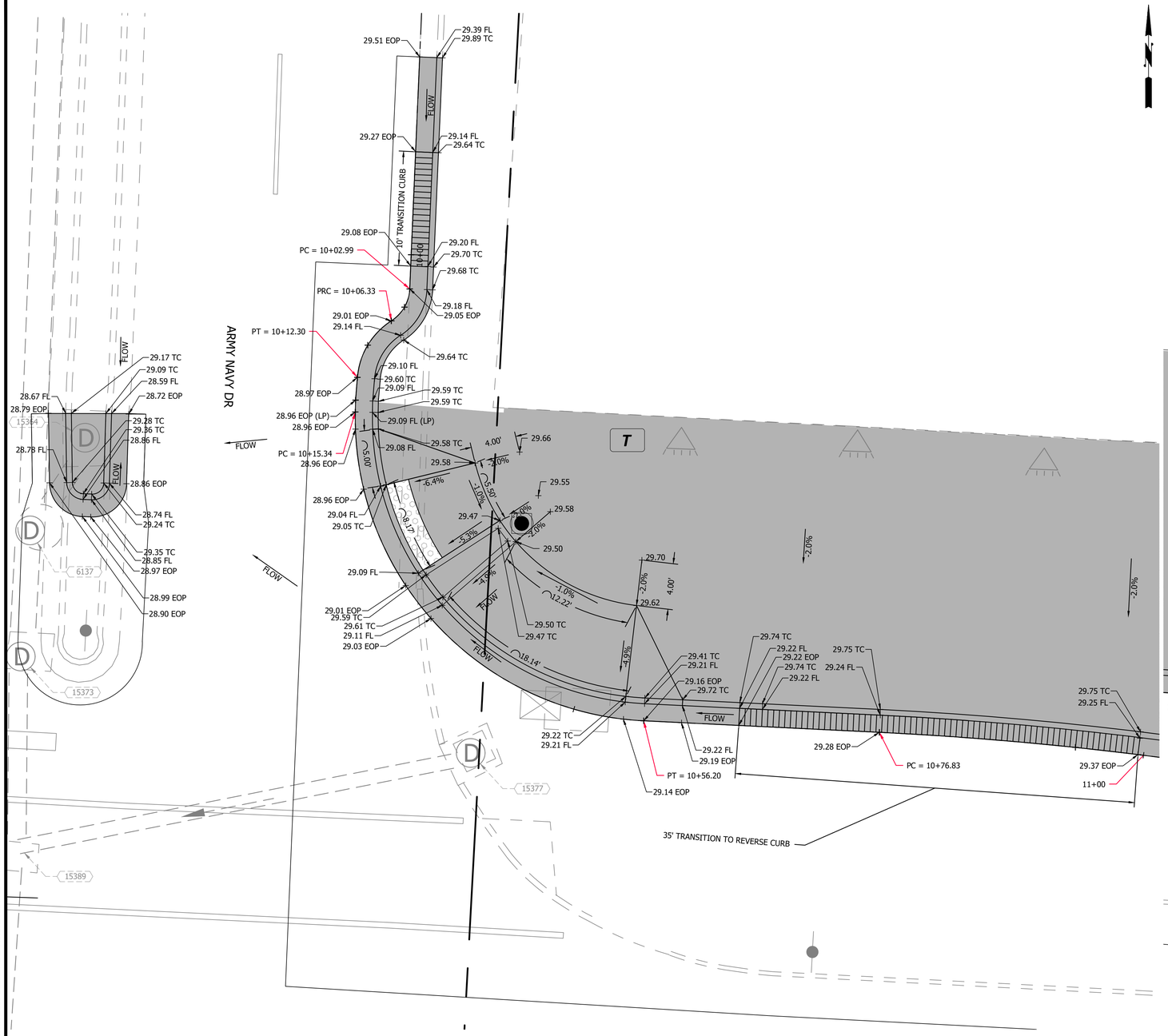
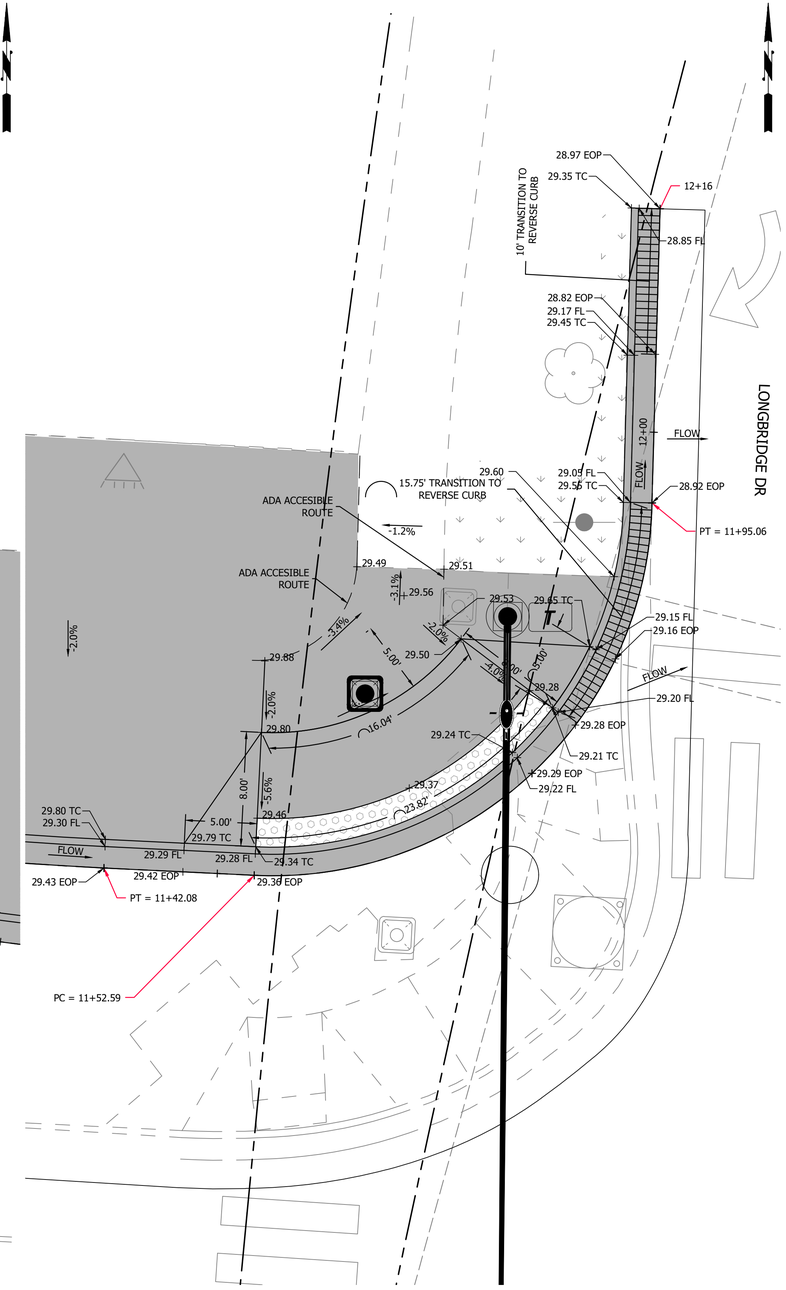


C3: NW CORNER OF 12TH STREET SOUTH & LONG BRIDGE DRIVE
Baseline: EOP - NORTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE
Station: 10+00 to 11+00



C4: NW CORNER OF 12TH STREET SOUTH & LONG BRIDGE DRIVE
Baseline: EOP - NORTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE
Station: 11+40 to 12+15

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RAMP DETAILS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 5 10
GRAPHIC SCALE

C042.2

FILENAME: CC16-208-RAMP_DETAILS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

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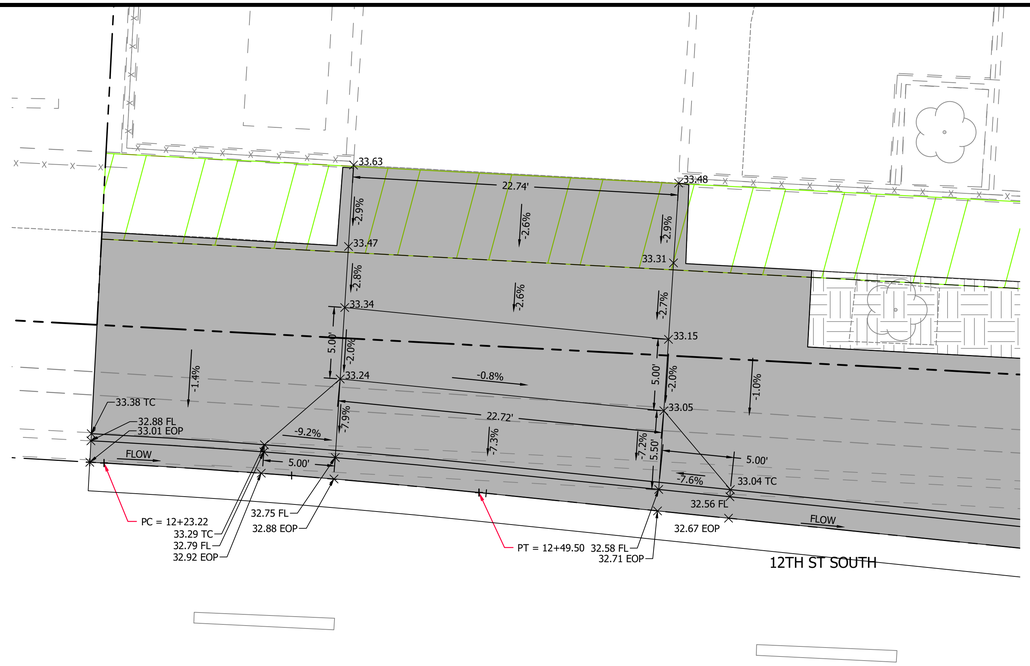
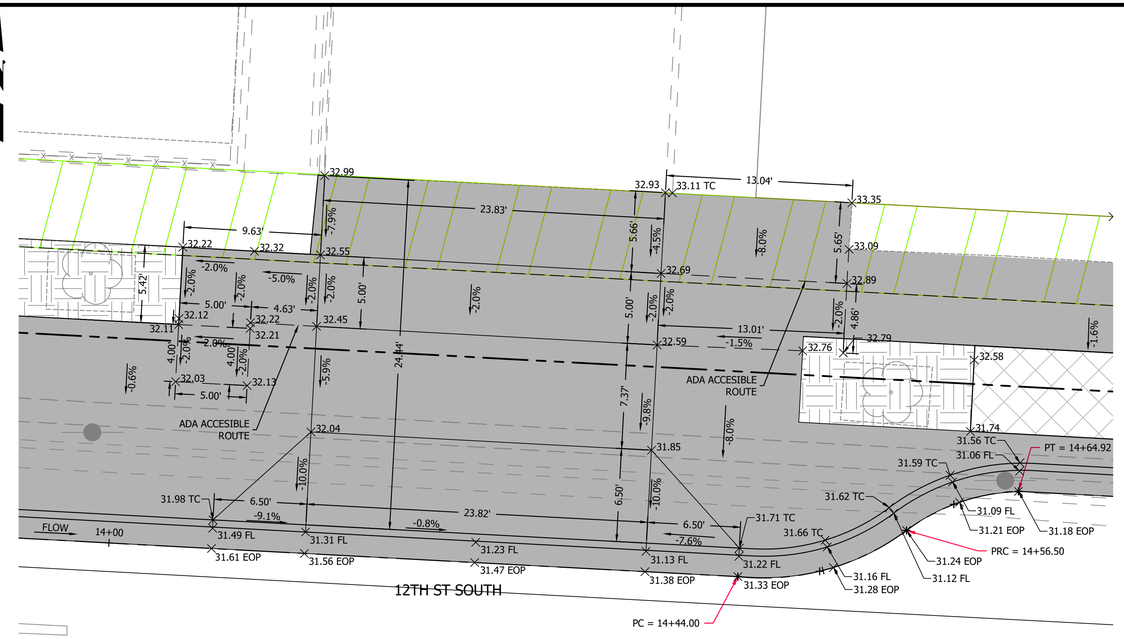
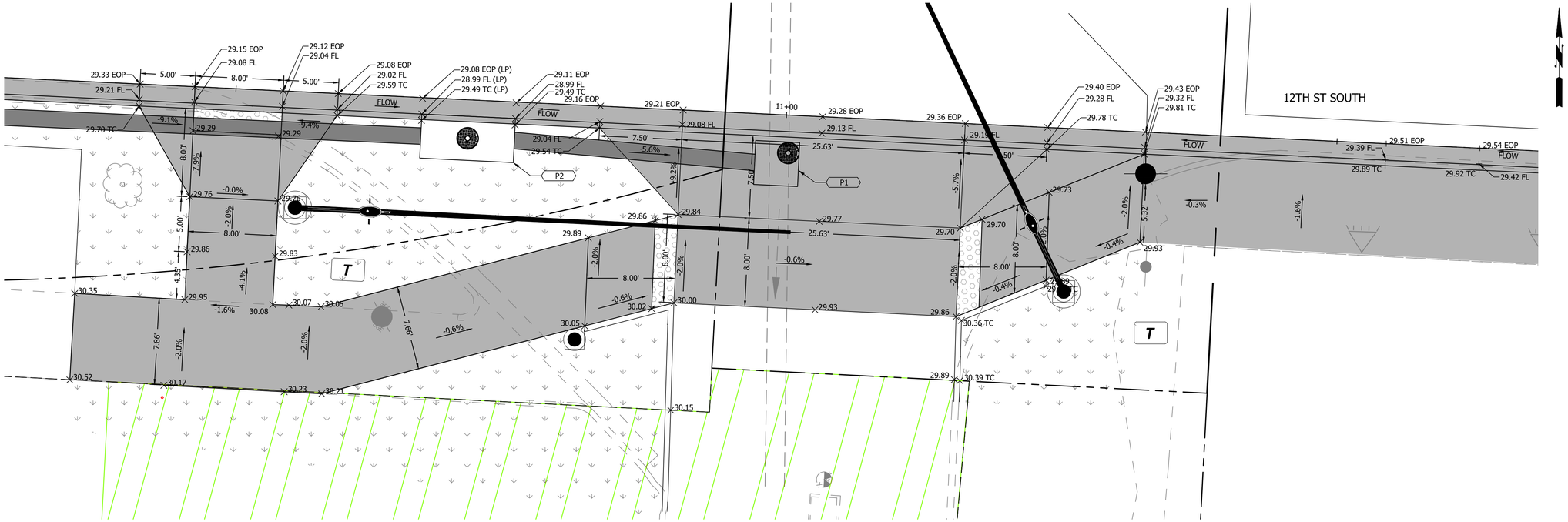


D1: NORTH OF 12TH STREET SOUTH
Baseline: EOP - NORTH - S EADS ST TO ARMY NAVY DRIVE
Station: 11+47 to 12+17



D2: NORTH OF 12TH STREET SOUTH
Baseline: EOP - NORTH - S EADS ST TO ARMY NAVY DRIVE
Station: 13+24 to 14+00



C5: SOUTH OF 12TH STREET SOUTH & ARMY NAVY DRIVE
Baseline: EOP - SOUTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE
Station: 10+28 to 11+68

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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

DRIVEWAY DETAILS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

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GRAPHIC SCALE

C042.3

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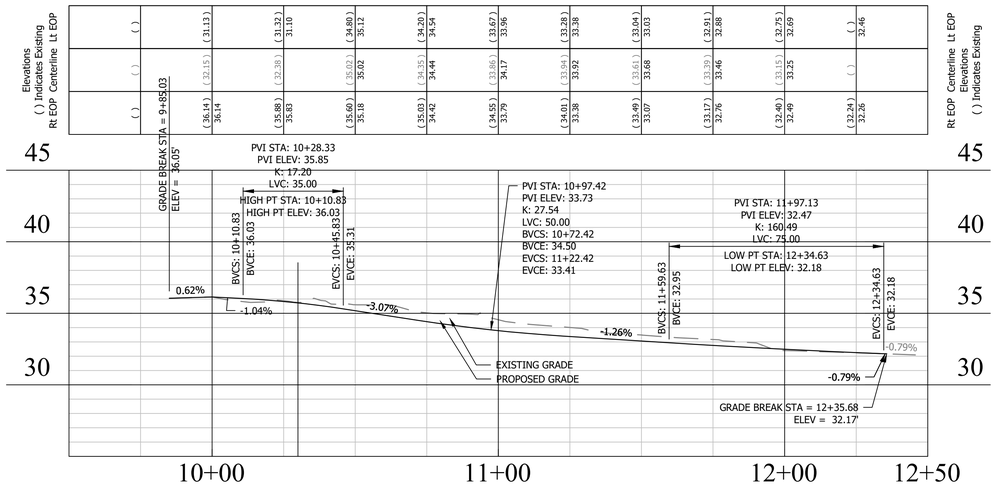
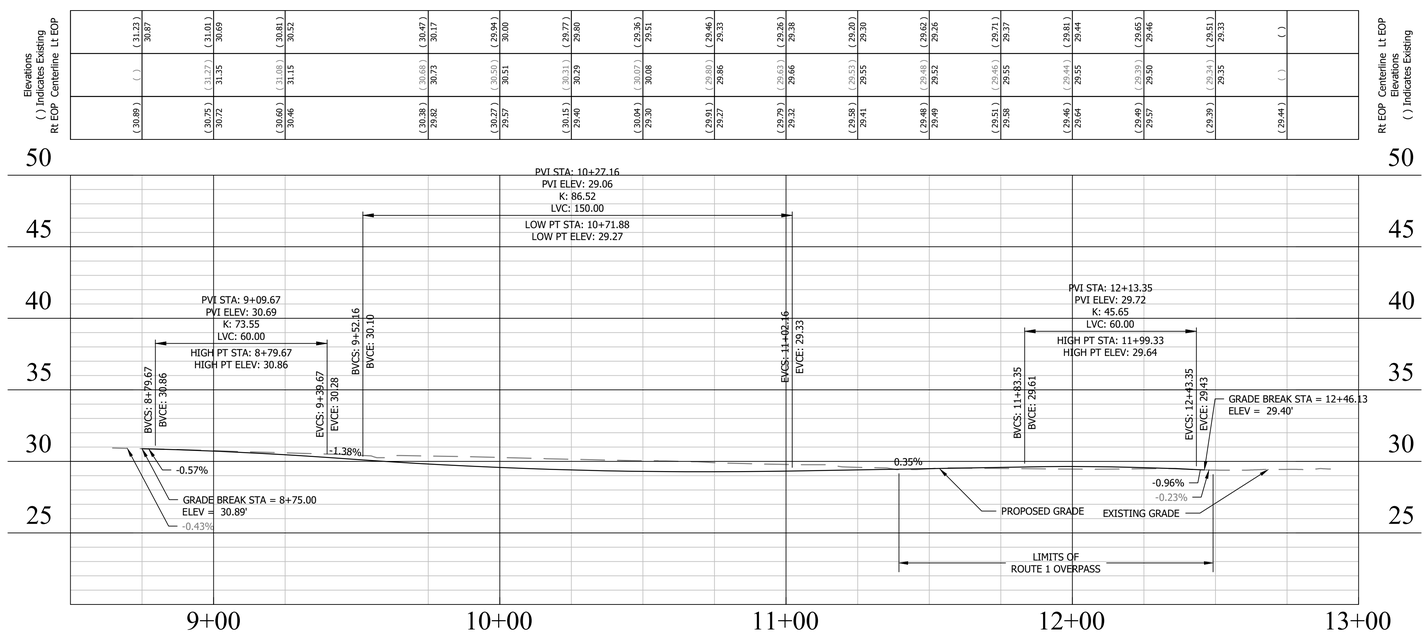


EOP-1 PROFILE

EOP - SOUTH - S EADS ST TO ARMY NAVY DR

HOR. SCALE: 1" = 25'

VER. SCALE: 1" = 5'



EOP-2 PROFILE

EOP - SOUTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE

HOR. SCALE: 1" = 25'

VER. SCALE: 1" = 5'

NOTE: FOR EDGE OF PAVEMENT ALIGNMENT LOCATIONS, SEE SHEET C045.1 GEOMETRIC CONTROL PLAN.

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12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

EDGE OF PAVEMENT PROFILES

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
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HORIZ. SCALE

C043.1

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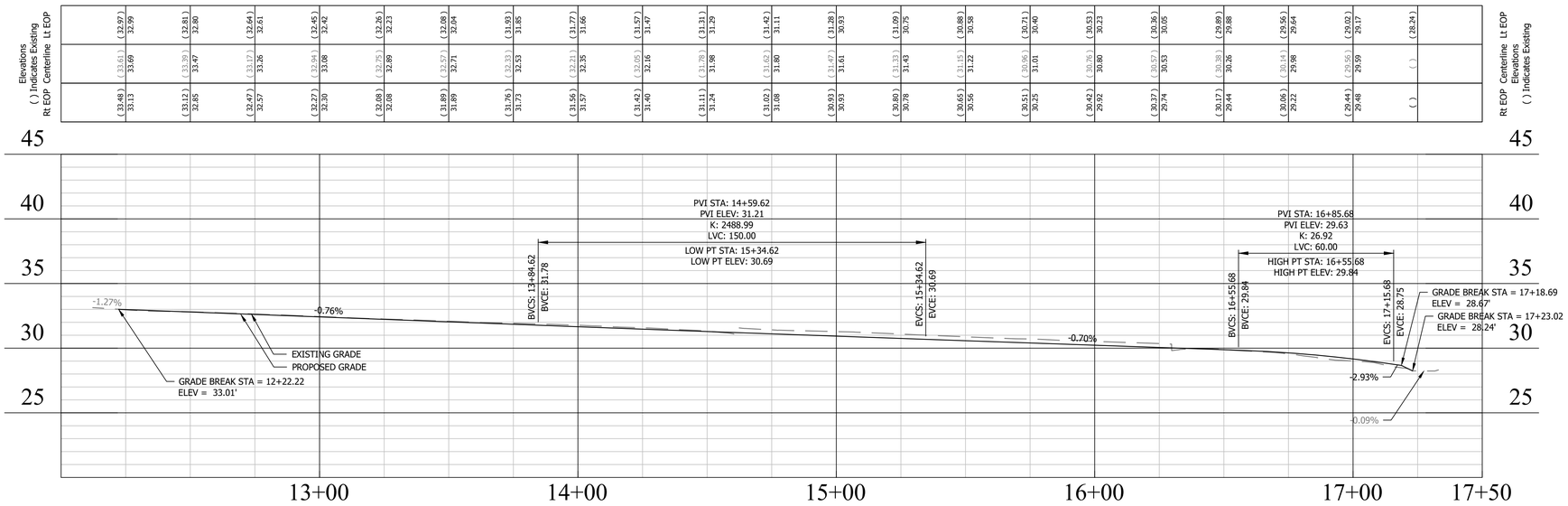
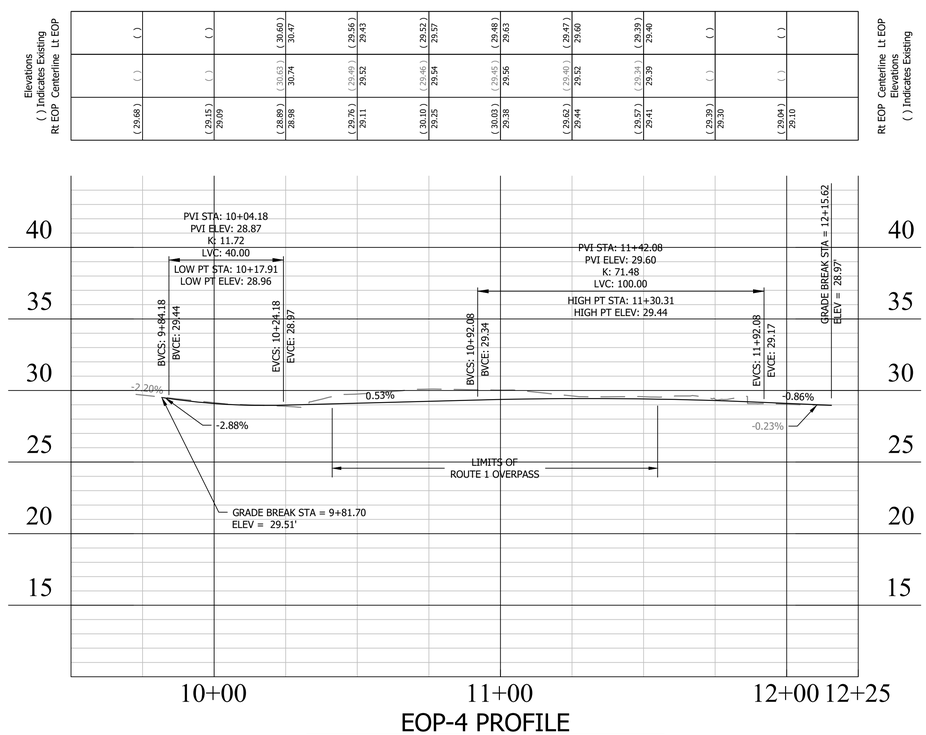


EOP-3 PROFILE

EOP - NORTH - S EADS ST TO ARMY NAVY DRIVE

HOR. SCALE: 1" = 25'

VER. SCALE: 1" = 5'



EOP-4 PROFILE

EOP - NORTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE

HOR. SCALE: 1" = 25'

VER. SCALE: 1" = 5'

NOTE: FOR EDGE OF PAVEMENT ALIGNMENT LOCATIONS, SEE SHEET C045.1 GEOMETRIC CONTROL PLAN.

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EDGE OF PAVEMENT PROFILES

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DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

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0 5 10
VERT. SCALE
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HORIZ. SCALE

C043.2

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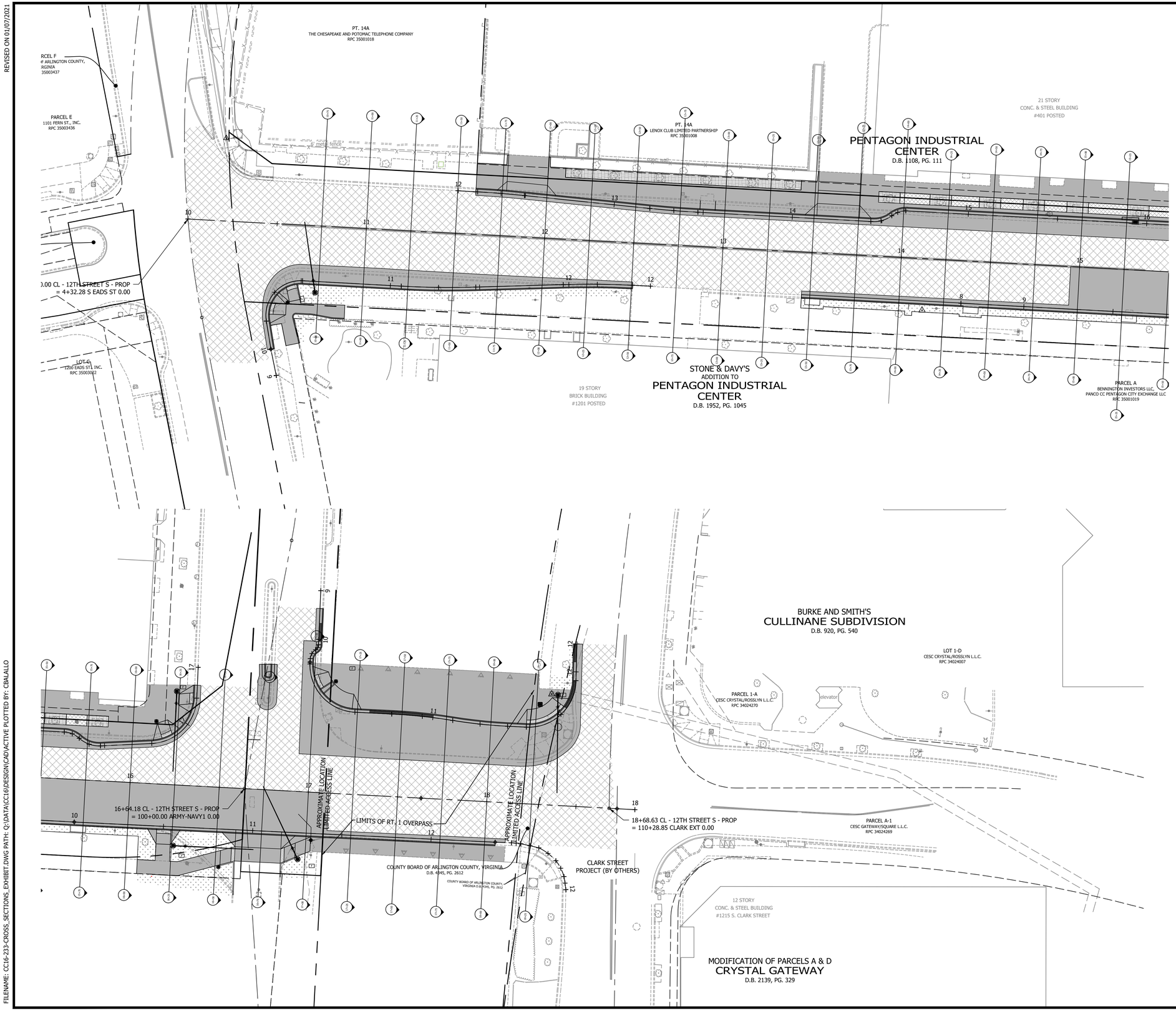

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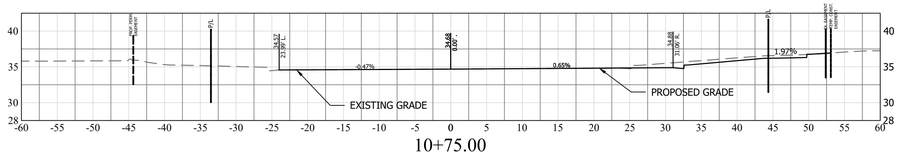
HORIZ. SCALE

C044.1

12TH STREET SOUTH



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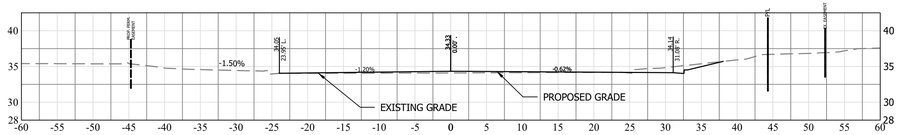

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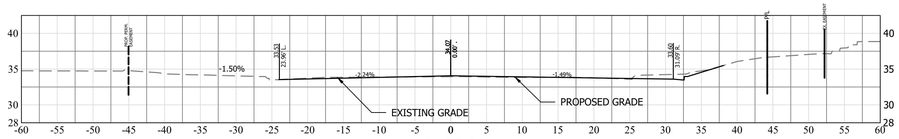

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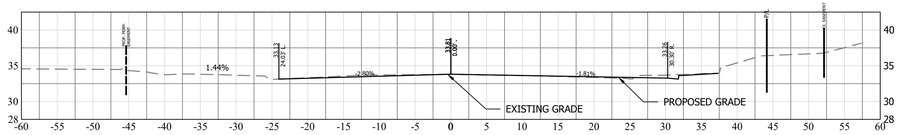

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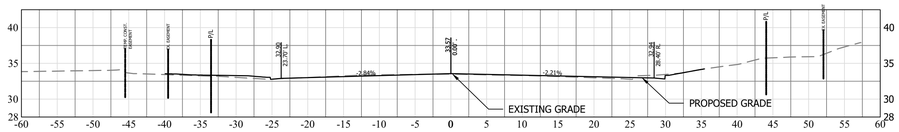

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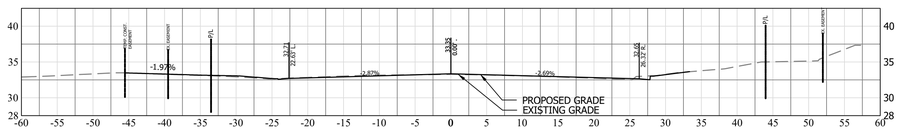

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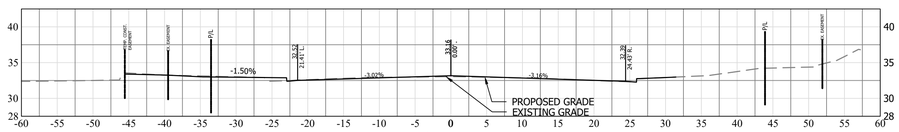

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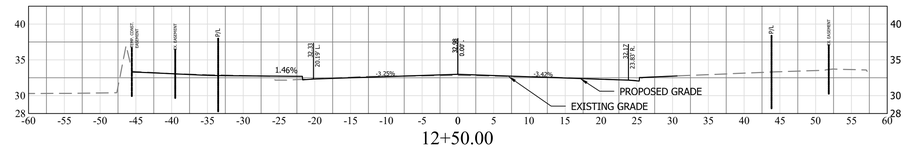

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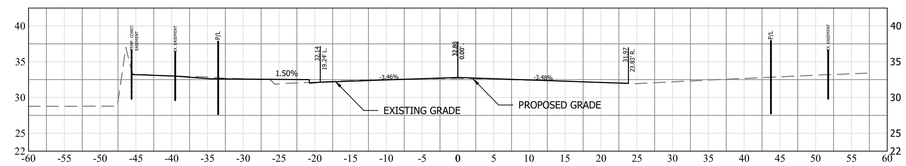

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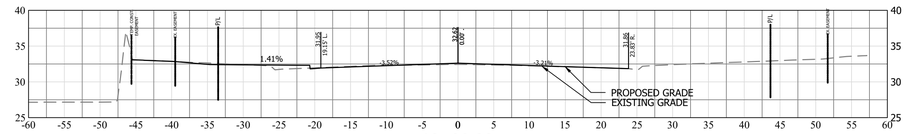

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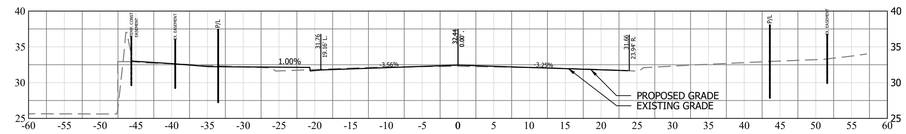

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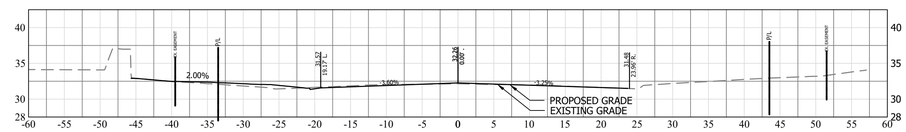

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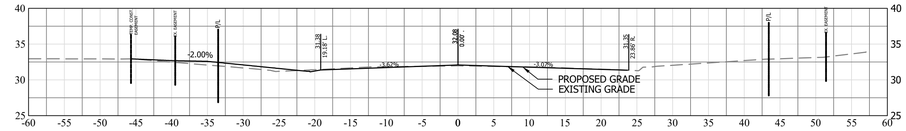

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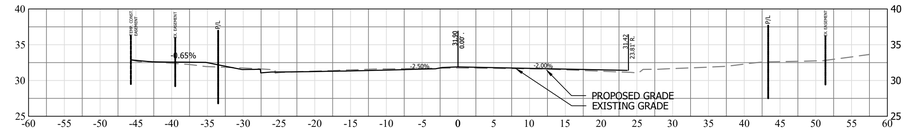

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ARLINGTON
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DEPARTMENT OF
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

CROSS SECTIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

C044.2

REVISED ON 01/07/2021

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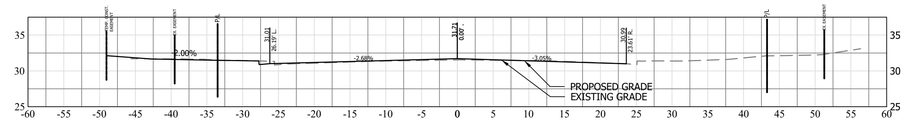
12TH STREET SOUTH



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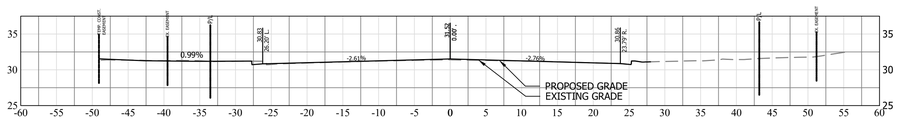

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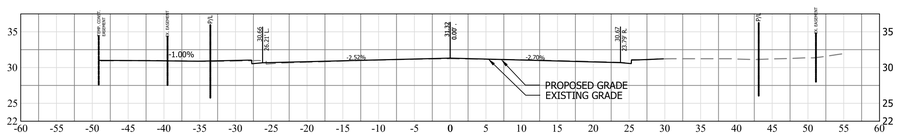

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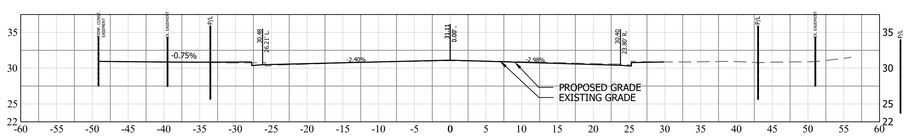

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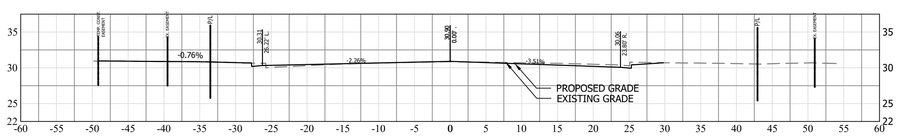

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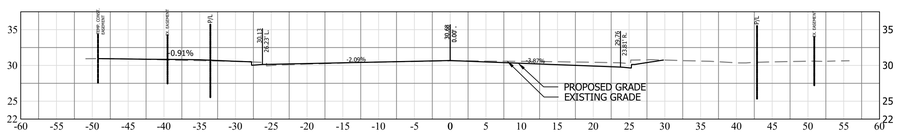

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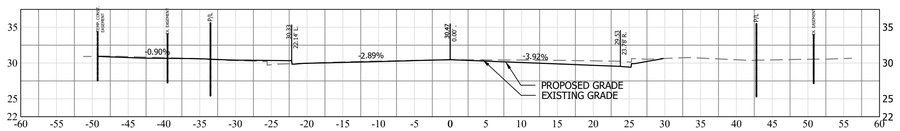

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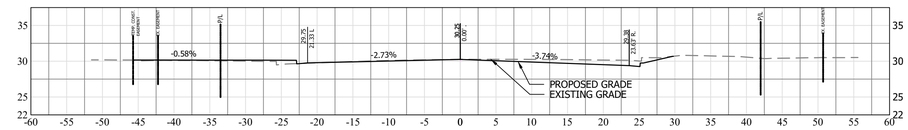

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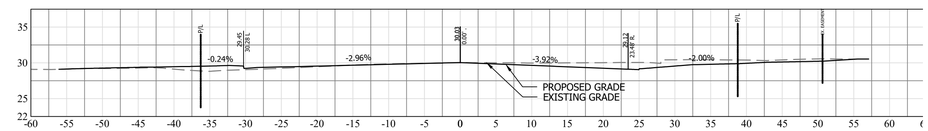

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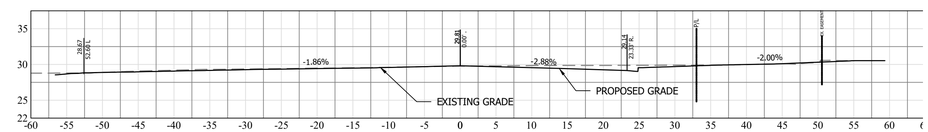

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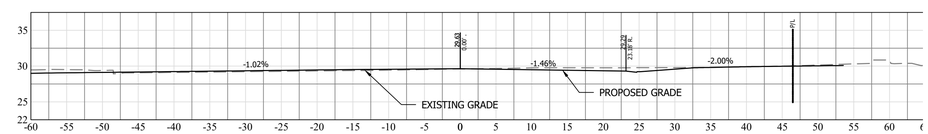

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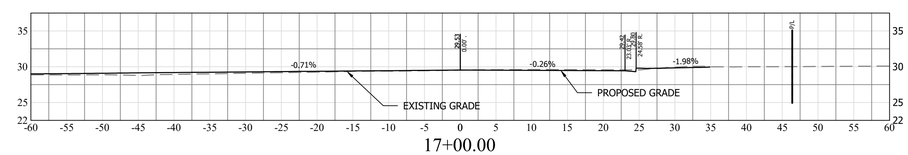

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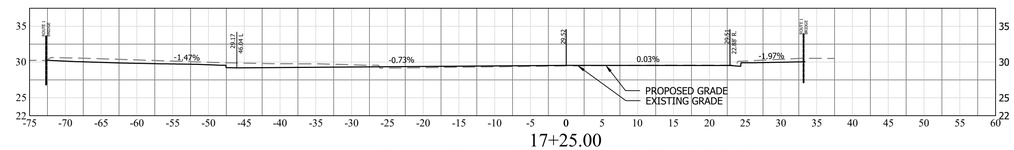

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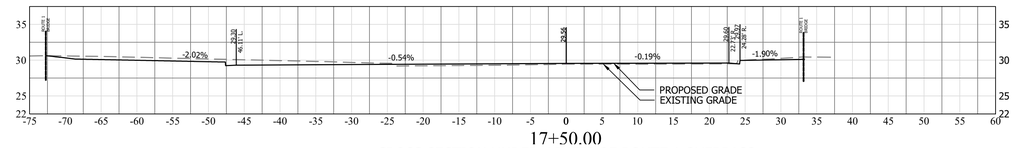

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CROSS SECTION UNDER LIMITS OF ROUTE 1 OVERPASS

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TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

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Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

CROSS SECTIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

C044.3

REVISED ON 01/07/2021

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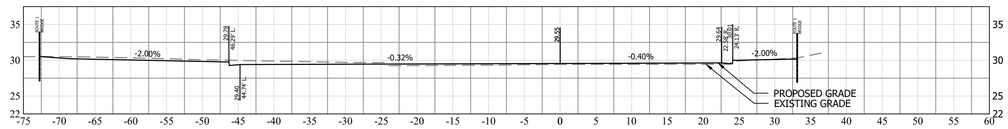
12TH STREET SOUTH



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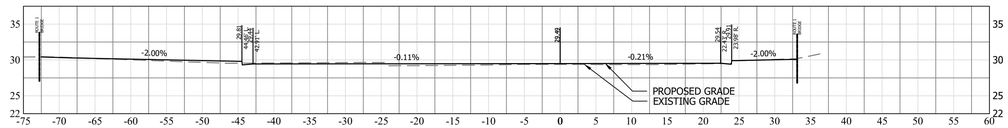

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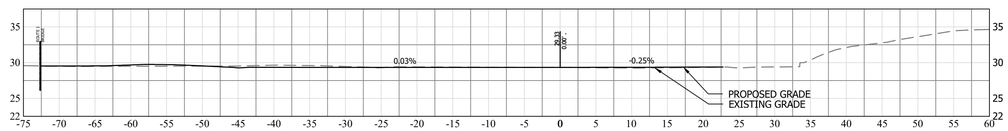

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REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

CROSS SECTIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

C044.4

REVISED ON 01/07/2021

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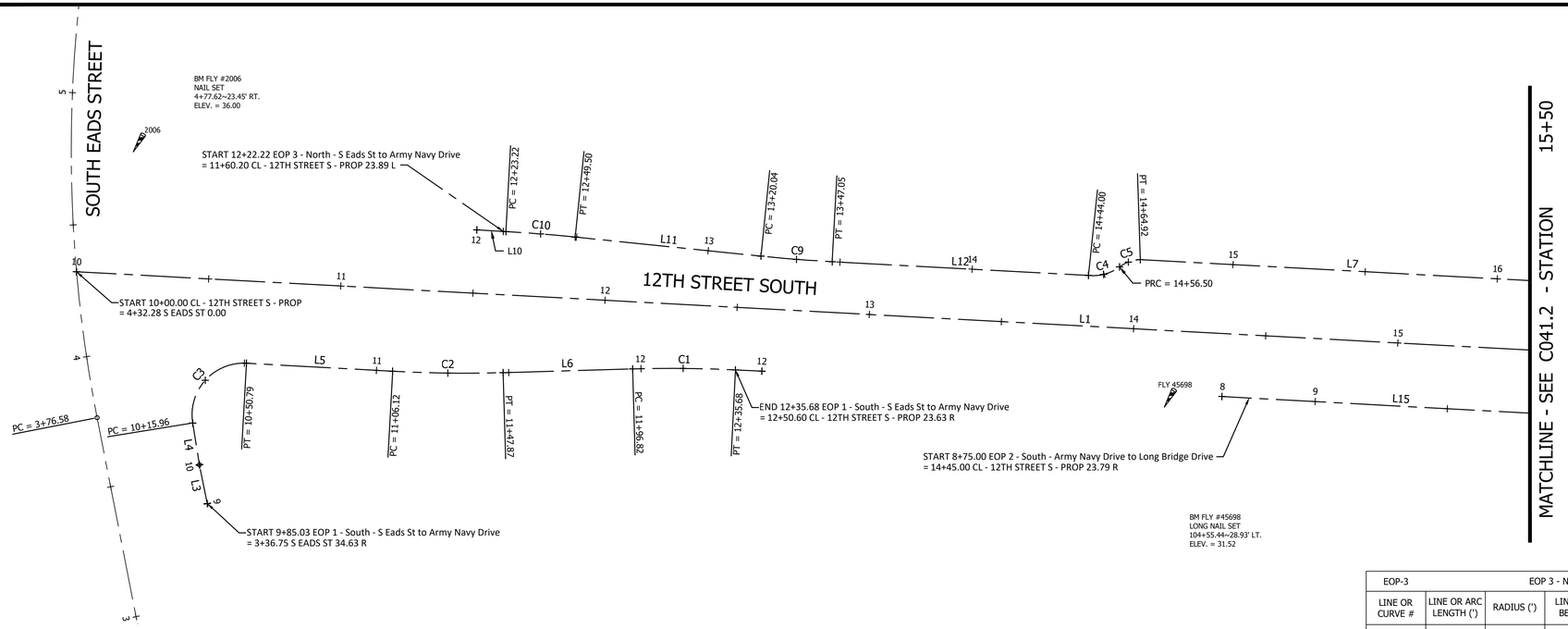
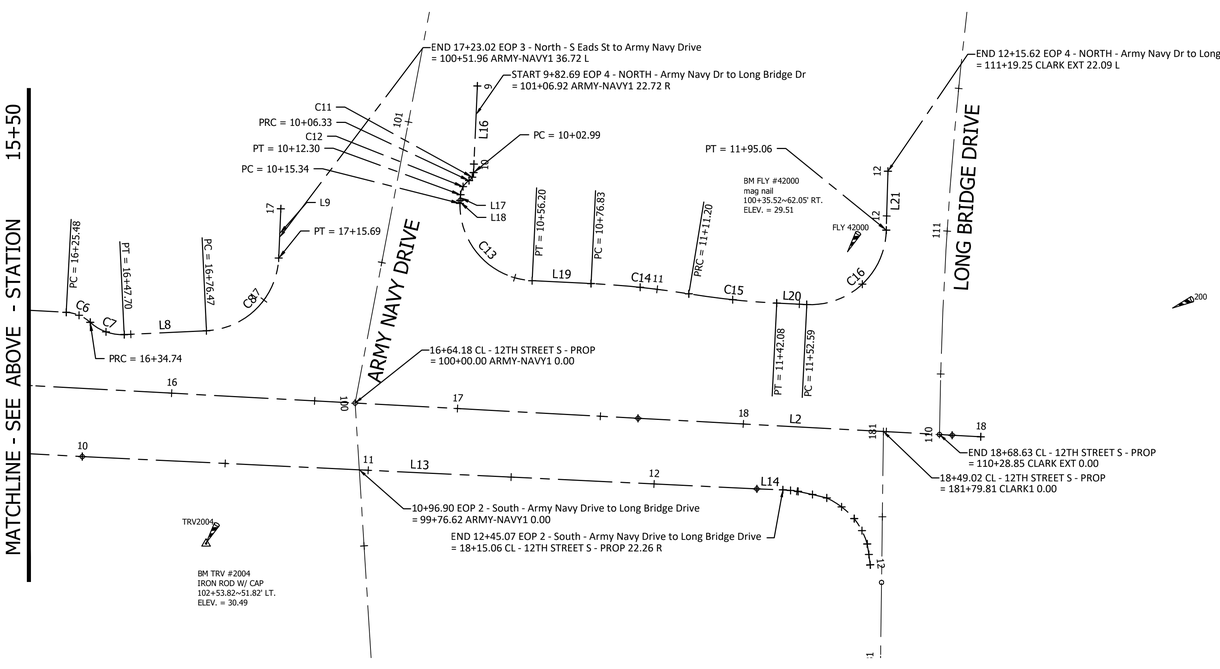
REVISED ON 01/07/2021





EOP-3			EOP 3 - NORTH - S EADS ST TO ARMY NAVY DRIVE			SEE EOP-3 PROFILE ON C043.1	
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA OR PC	END STA OR PT
L10	11.00		S86° 41' 18.75"E			12+12.22	12+23.22
C10	26.28	548.50	S85° 30' 03.22"E	26.28	2° 44' 42"	12+23.22	12+49.50
L11	70.54		S84° 07' 42.13"E			12+49.50	13+20.04
C9	27.01	551.50	S85° 31' 52.47"E	27.00	2° 48' 21"	13+20.04	13+47.05
L12	96.95		S86° 55' 59.48"E			13+47.05	14+44.00
C4	12.51	16.75	N74° 41' 19.93"E	12.22	42° 47' 06"	14+44.00	14+56.50
C5	8.42	13.84	N70° 44' 31.53"E	8.29	34° 50' 19"	14+56.50	14+64.92
L7	160.56		S86° 56' 04.81"E			14+64.92	16+25.48
C6	9.25	13.50	S67° 18' 01.05"E	9.07	39° 16' 04"	16+25.48	16+34.74
C7	12.96	16.50	S70° 10' 28.63"E	12.63	45° 00' 59"	16+34.74	16+47.70
L8	28.77		N87° 19' 02.04"E			16+47.70	16+76.47
C8	39.22	26.50	N44° 54' 51.01"E	35.74	84° 48' 22"	16+76.47	17+15.69
L9	17.33		N2° 30' 39.97"E			17+15.69	17+33.02

EOP-4			EOP 4 - NORTH - ARMY NAVY DR TO LONG BRIDGE DR			SEE EOP-4 PROFILE ON C043.2	
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA OR PC	END STA OR PT
L16	30.30		S2° 27' 22.13"W			9+72.69	10+02.99
C11	3.35	3.50	S29° 52' 10.34"W	3.22	54° 49' 36"	10+02.99	10+06.33
C12	5.97	6.50	S30° 58' 50.17"W	5.76	52° 36' 11"	10+06.33	10+12.30
L17	2.00		S4° 46' 06.55"W			10+12.30	10+14.30
L18	1.04		S1° 08' 49.46"W			10+14.30	10+15.34
C13	40.86	26.50	S43° 01' 47.48"E	36.93	88° 21' 14"	10+15.34	10+56.20
L19	20.62		S87° 12' 24.41"E			10+56.20	10+76.83
C14	34.37	305.50	S83° 59' 01.66"E	34.35	6° 26' 45"	10+76.83	11+11.20
C15	30.88	274.50	S83° 59' 01.66"E	30.87	6° 26' 45"	11+11.20	11+42.08
L20	10.51		S87° 12' 24.41"E			11+42.08	11+52.59
C16	42.47	26.50	N46° 52' 43.13"E	38.07	91° 49' 45"	11+52.59	11+95.06
L21	20.56		N1° 34' 36.32"E			11+95.06	12+15.62

CL - 12TH STREET S - PROP							
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA OR PC	END STA OR PT
L1	763.16		S86° 55' 02.00"E			10+00.00	17+63.16
L2	109.92		S86° 55' 02.00"E			17+63.16	18+73.08

EOP-1			EOP 1 - SOUTH - S EADS ST TO ARMY NAVY DRIVE			SEE EOP-1 PROFILE ON C043.1	
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA OR PC	END STA OR PT
L3	14.97		N11° 30' 35.65"W			9+85.03	10+00.00
L4	15.96		N9° 11' 32.60"W			10+00.00	10+15.96
C3	34.83	19.50	N41° 58' 21.25"E	30.38	102° 19' 48"	10+15.96	10+50.79
L5	55.33		S86° 51' 44.90"E			10+50.79	11+06.12
C2	41.75	498.50	S89° 15' 42.64"E	41.74	4° 47' 55"	11+06.12	11+47.87
L6	48.95		N88° 20' 19.61"E			11+47.87	11+96.82
C1	38.86	501.76	S89° 26' 31.93"E	38.85	4° 26' 13"	11+96.82	12+35.68

EOP-2			EOP 2 - SOUTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE			SEE EOP-2 PROFILE ON C043.1	
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA OR PC	END STA OR PT
L15	135.28		S86° 54' 32.72"E			8+64.72	10+00.00
L13	235.95		S87° 15' 37.01"E			10+00.00	12+35.95
L14	9.12		S87° 45' 22.35"E			12+35.95	12+45.07

BENCHMARK TABLE		
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2006	7000643.5179	11894581.8270
42000	7000615.3688	11895395.6149

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VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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FAX: 703.228.3606

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

GEOMETRIC CONTROL PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

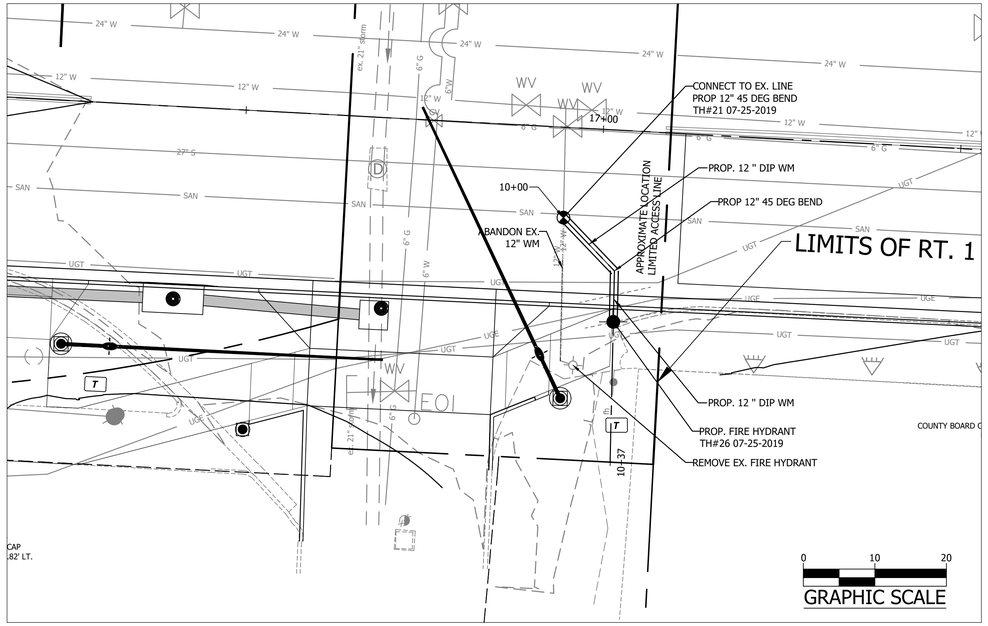
PLOTTED: MAY 17 2021

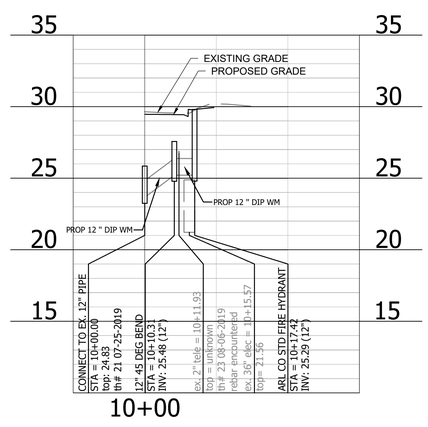
SCALE:

0 25 50
GRAPHIC SCALE

C045.1

FILENAME: CC16-216-GEOMETRIC_CONTROL_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO





0 5 10
VERT. SCALE

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HORIZ. SCALE

WATERMAIN CONSTRUCTION NOTES:

1. // // // INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
2. SEE ARLINGTON COUNTY DETAIL M-6.0 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
3. ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN THE COUNTY RIGHT OF WAY.
4. DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
5. ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
6. TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
7. REFER PROFILE VIEW FOR ELEVATION INFORMATION.
8. TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND INVERTS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
9. ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED USING "MEGALUG", "TR-FLEX PIPE", OR APPROVED EQUAL. THE CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI PRIOR TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON THE PLANS.

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Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

WATERMAIN PLAN AND PROFILE

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

AS SHOWN

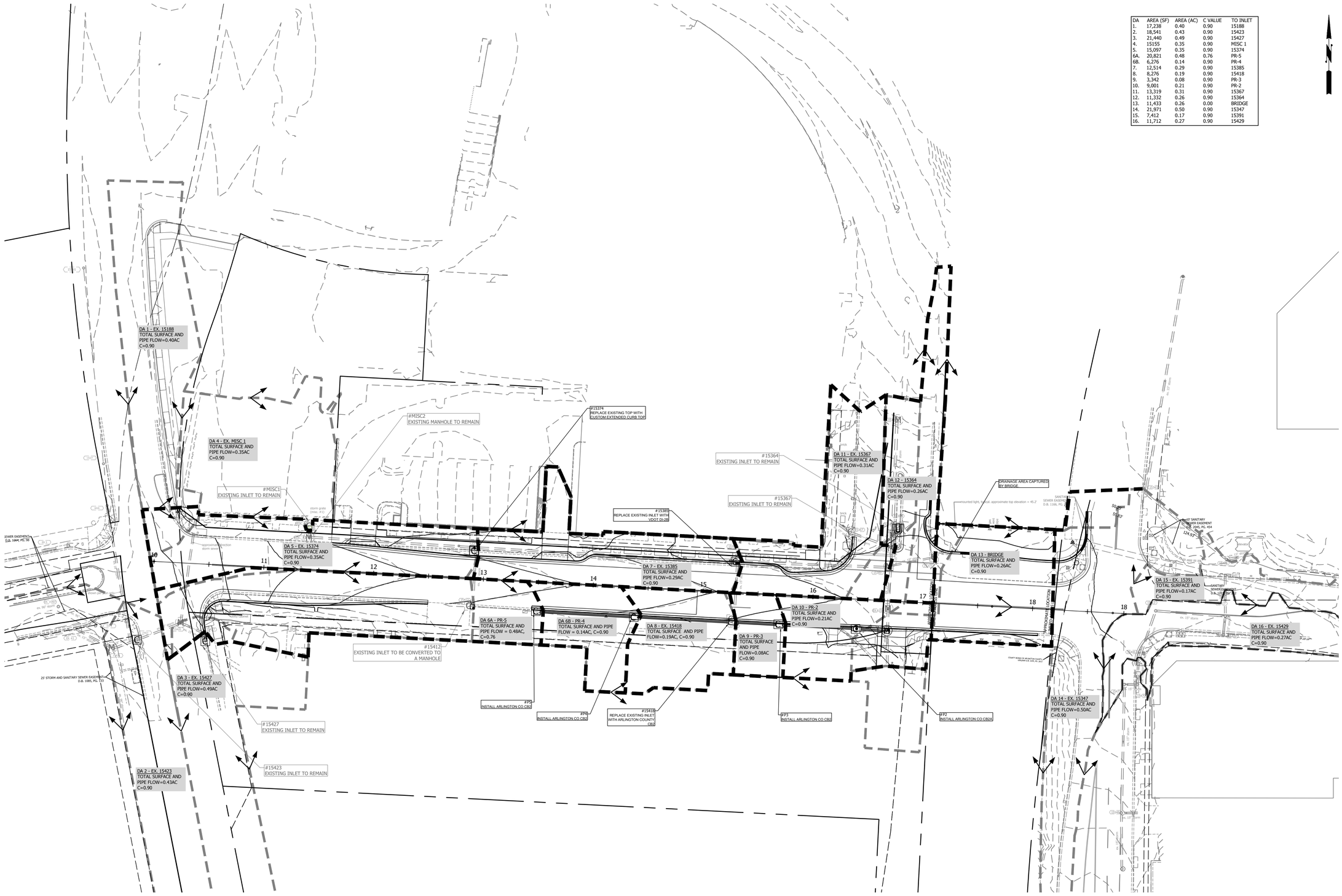
C051.1

REVISED ON 01/07/2021

FILENAME: CC16-240-WATERMAIN PLAN_PROFILES.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021

DA	AREA (SF)	AREA (AC)	C VALUE	TO INLET
1.	17,238	0.40	0.90	15188
2.	18,541	0.43	0.90	15423
3.	21,440	0.49	0.90	15427
4.	15155	0.35	0.90	MISC 1
5.	15,097	0.35	0.90	15374
6A.	20,821	0.48	0.76	PR-5
6B.	6,276	0.14	0.90	PR-4
7.	12,514	0.29	0.90	15385
8.	8,276	0.19	0.90	15418
9.	3,342	0.08	0.90	PR-3
10.	9,001	0.21	0.90	PR-2
11.	13,319	0.31	0.90	15367
12.	11,332	0.26	0.90	15364
13.	11,433	0.26	0.00	BRIDGE
14.	21,971	0.50	0.90	15347
15.	7,412	0.17	0.90	15391
16.	11,712	0.27	0.90	15429



NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY

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[illegible] WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
[illegible] PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORM SEWER DRAINAGE DIVIDES

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C071.1

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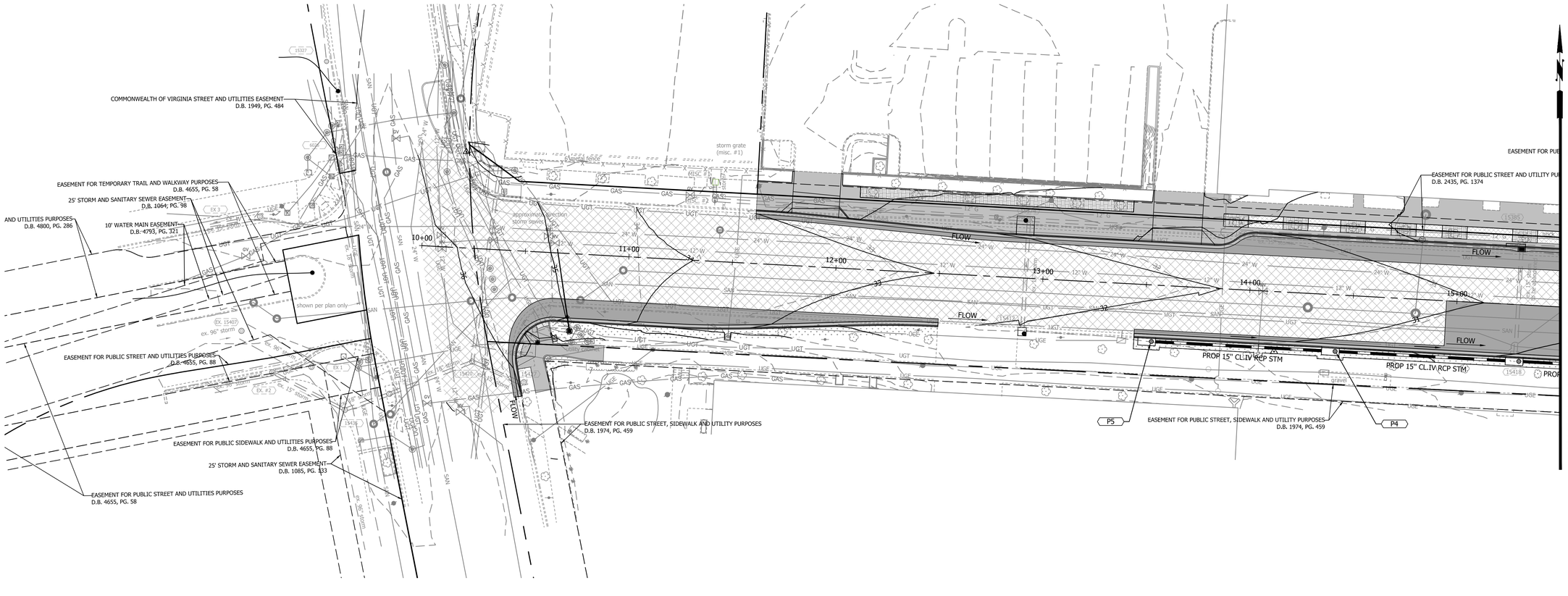
REVISED ON 01/07/2021



Storm Tabulation

Structure #	Data
15374	catch basin REPLACE TOP WITH STD ARL CB-2 L-10' W/ EXTENDED THROAT TOP = 32.44 INV. IN = 28.16 (15" RCP) FROM 15412 INV. IN = 28.31 (15" RCP) FROM MISC #2 INV. OUT = 27.90 (15" RCP) TO 15385
15385	catch basin CONVERT EX. TOP TO VDOT DI-2B L-10' TOP = 30.65 INV. IN = 26.21 (15" RCP) FROM 15374 INV. IN = 26.18 (15" RCP) FROM 15418 TO BE ABANDONED INV. OUT = 26.16 (15" RCP) TO 15389
15412	catch basin REPLACE TOP WITH STD ARL MH-1 TOP = 31.81 INV. OUT = 28.87 (15" RCP) TO 15374

Storm Tabulation

Structure #	Data
15418	STD ARL PCB-2 L-8' TOP = 30.49 INV. IN = 25.97 (15" RCP) FROM P4 INV. OUT = 27.55 (15" RCP) TO 15385 TO BE ABANDONED INV. OUT = 25.89 (15" RCP) TO P3
15420	MH-adjusted TOP = 36.58 INV. IN = 32.92 (15") FROM 15427
15427	Catch Basin CB2 TOP = 36.50 INV. OUT = 32.95 (15") TO 15420

Storm Tabulation

Structure #	Data
MISC #1	Yard Inlet TOP = 33.94
MISC #2	MH-1 TOP = 33.83 INV. OUT = 29.35 (15" RCP) TO 15374
P4	STD ARL PCB-2 L-8' TOP = 31.14 INV. IN = 26.94 (15" RCP) FROM P5 INV. OUT = 26.86 (15" RCP) TO 15418

Storm Tabulation

Structure #	Data
P5	STD ARL PCB-2 L-8' TOP = 31.99 INV. OUT = 27.83 (15" RCP) TO P4

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12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORM SEWER PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C072.1

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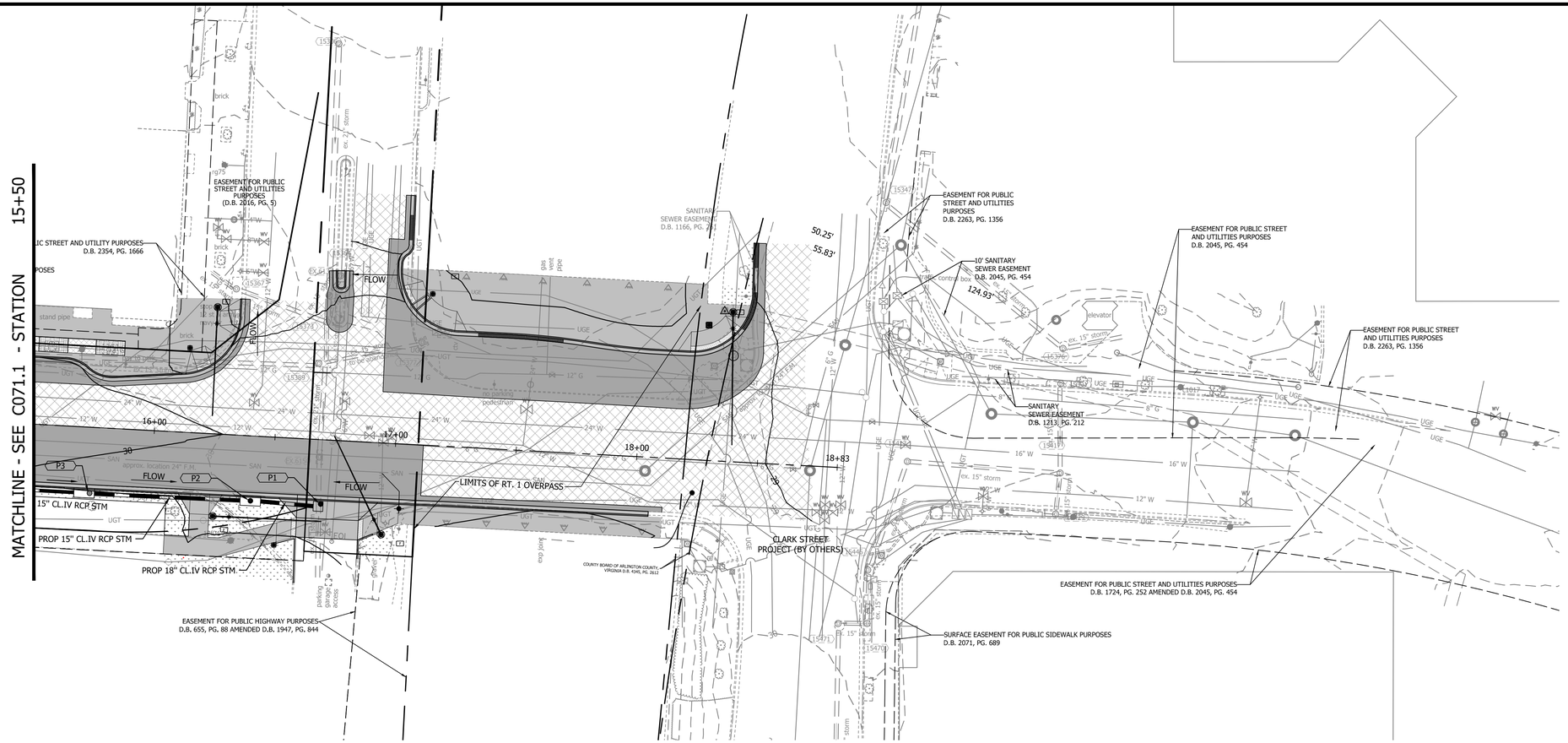

Storm Tabulation

Structure #	Data
6150	MH-1 TOP = 29.56 INV. IN = 24.46 (21" RCP) FROM 15389 INV. OUT = 24.44 (21" RCP) TO P1
15306	MH-1 TOP = 30.97 INV. OUT = 25.27 (21") TO EX.6137
15347	MH-1 TOP = 28.49 INV. IN = 23.44 (15") FROM 15376 INV. OUT = 23.42 (15") TO 15202

Storm Tabulation

Structure #	Data
15364	MH-1 TOP = 29.49 INV. OUT = 25.41 (15") TO EX.6137
15367	CB-2A TOP = 28.83 INV. IN = 25.53 (15") FROM INV. OUT = 25.49 (15") TO 15373
15373	MH-1 TOP = 29.02 INV. IN = 24.96 (15") FROM 15367 INV. IN = 24.69 (21") FROM EX.6137 INV. OUT = 24.64 (15") TO

Storm Tabulation

Structure #	Data
15376	MH-1 TOP = 29.39 INV. IN = 24.10 (15") FROM INV. OUT = 24.10 (15") TO 15347
15377	Catch Basin CB2 to be removed TOP = 29.49
15389	mh TOP = 29.30 INV. IN = 24.69 (15" RCP) FROM 15385 TO BE REMOVED INV. OUT = 24.69 (21" RCP) TO 6150

Storm Tabulation

Structure #	Data
15391	CB-2A TOP = 27.98 INV. OUT = 24.79 (15") TO 15417
15413	MH-1 TOP = 28.67 INV. IN = 25.00 (15") FROM 15417 INV. OUT = 25.00 (15") TO 15446
15417	MH-1 TOP = 27.97 INV. IN = 24.00 (15") FROM 15391 INV. IN = 24.00 (15") FROM 15429 INV. OUT = 24.00 (15") TO 15413

Storm Tabulation

Structure #	Data
15418	STD ARL PCB-2 L-8' TOP = 30.49 INV. IN = 25.97 (15" RCP) FROM P4 INV. OUT = 27.55 (15" RCP) TO 15385 INV. OUT = 25.89 (15" RCP) TO P3
15446	MH-1 TOP = 29.31 INV. IN = 21.97 (15") FROM 15413 INV. OUT = 21.92 (15") TO 15470
15470	CB-2 TOP = 29.51 INV. IN = 21.49 (15") FROM 15446 INV. OUT = 21.44 (15") TO 15471

Storm Tabulation

Structure #	Data
15471	MH-1 TOP = 29.62 INV. IN = 21.02 (15") FROM 15470 INV. OUT = 20.79 (15") TO 15548
EX.6137	MH-1 TOP = 29.05 INV. IN = 24.76 (21") FROM 15306 INV. IN = 24.73 (15") FROM 15364 INV. OUT = 24.70 (21") TO 15373
P1	STD ARL MH-2 TOP = 29.31 INV. IN = 24.34 (21" RCP) FROM 6150 INV. IN = 24.34 (18" RCP) FROM P2 INV. OUT = 24.32 (21" RCP) TO

Storm Tabulation

Structure #	Data
P2	STD ARL CB-2A L-8' TOP = 29.54 INV. IN = 24.71 (15" RCP) FROM P3 INV. OUT = 24.63 (18" RCP) TO P1
P3	STD ARL PCB-2 L-8' TOP = 30.18 INV. IN = 25.46 (15" RCP) FROM 15418 INV. OUT = 25.38 (15" RCP) TO P2

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12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORM SEWER PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C072.2

REVISED ON 01/07/2021

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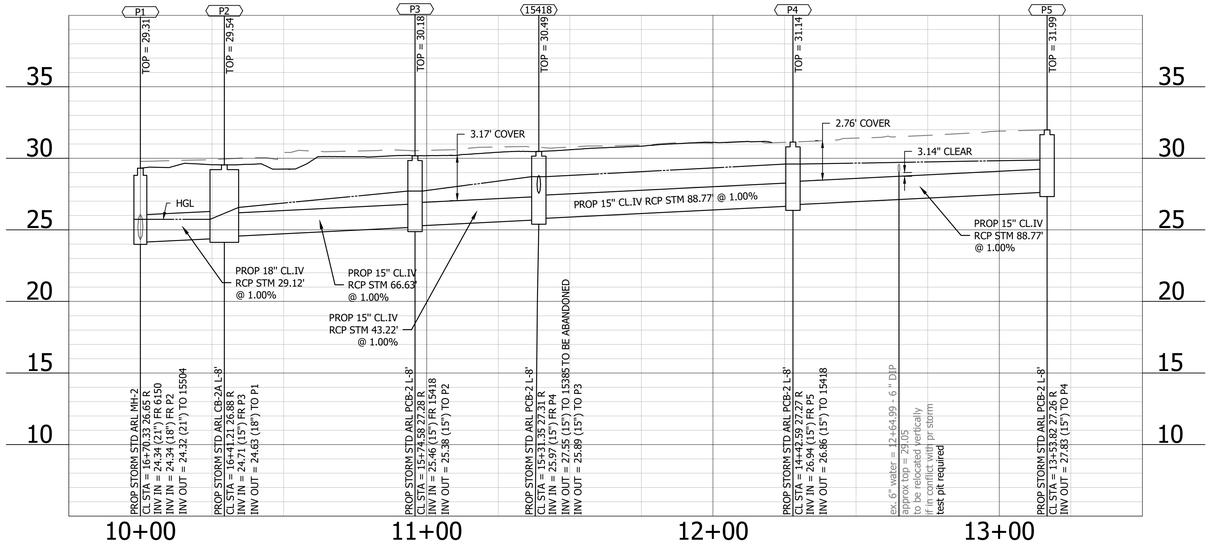

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12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORM SEWER PROFILES

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 5 10
VERT. SCALE
0 25 50
HORIZ. SCALE

C073.1

REVISED ON 01/07/2021

FILENAME: CC16-252-STORM_SEWER_PROFILES.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

Storm Inlet Computations

Inlet				Flow						Curb Inlet													Operation			Inlets Only			
Number	Type	Length (ft)	Station	Drainage Area (acres)	C	CA	i (in/hr)	Q Incr (ft^3/s)	Q Carryover (ft^3/s)	Q_T (ft^3/s)	S Gutter Slope (ft/ft)	Sx Crossslope (ft/ft)	T Spread (ft)	W (ft)	W/T	Sw (ft/ft)	Sw/Sx	E_S	a (in)	S'w	Se (ft/ft)	L_T Computed Length (ft)	L/L_T	E (%)	Q_i Intercepted (ft^3/s)	Q_b Carryover (ft^3/s)	d (ft)	h (ft)	d/h	T Spread @ Sag (ft)
15364	DI-2C	4		0.26	0.90	0.234	4.00	0.94	0.00	0.938		0.01370		2.00		0.0833											0.24	0.46	0.00	7.22 *
15367	CB-2A	8		0.31	0.90	0.275	4.00	1.10	0.00	1.101		0.03540		2.00		0.0833											0.21	0.42	0.00	3.28
15374	CB-2	8		0.35	0.90	0.312	4.00	1.25	0.00	1.248	0.0124	0.02650	5.47	1.50	0.27	0.0833	3.14	0.693	4.02	0.22	0.18	6.11	1.31	100%	1.25	0.000	0.23			
15385	DI-2A	8		0.29	0.90	0.259	4.00	1.03	0.00	1.034	0.0069	0.02700	5.69	1.50	0.26	0.0833	3.09	0.671	4.01	0.22	0.18	4.81	1.66	100%	1.03	0.000	0.24			
15418	CB-2	8		0.19	0.90	0.171	4.00	0.68	0.00	0.684	0.0117	0.02130	4.61	1.50	0.33	0.0833	3.91	0.803	4.12	0.23	0.20	4.33	1.85	100%	0.68	0.000	0.19			
PR3	CB-2	8		0.08	0.90	0.069	4.00	0.28	0.00	0.276	0.0114	0.02130	2.43	1.50	0.62	0.0833	3.91	0.981	4.12	0.23	0.25	2.63	3.04	100%	0.28	0.000	0.14			
PR2	CB-2A	8		0.21	0.90	0.189	4.00	0.76	0.00	0.756		0.03390		1.50		0.0833											0.21	0.42	0.00	4.01
15347	CB-2A	8		0.50	0.90	0.454	4.00	1.82	0.00	1.816		0.03060		1.50		0.0833											0.22	0.42	0.00	4.56
PR4	CB-2	8		0.14	0.90	0.126	4.00	0.50	0.00	0.504	0.0086	0.02083	4.22	1.50	0.35	0.0833	4.00	0.838	4.13	0.23	0.21	3.40	2.36	100%	0.50	0.000	0.18			
PR5	CB-2	8		0.48	0.76	0.363	4.00	1.45	0.00	1.453	0.0086	0.03130	5.80	1.50	0.26	0.0833	2.67	0.642	3.94	0.22	0.17	6.03	1.33	100%	1.45	0.000	0.26			

* INLET 15364 IS TO BE REMOVED WITH ARLINGTON COUNTY PROJECT CP01 ARMY NAVY DRIVE COMPLETE STREETS.

Storm Drain Design Computations

From Point	To Point	Drainage Area Acres	Runoff Coefficient C	CA Incr.	CA Piped In	CA Accum.	Inlet Time min	Time of Conc. min	Rainfall in/hr	Runoff Q cfs	Invert Elevations Upper End	Invert Elevations Lower End	Length ft	Slope %	Diameter in	Capacity cfs	Velocity fps	Flow Time min	Remarks
MISC 1	MISC 2	0.35	0.90	0.31	0.00	0.31	5.00	5.00	6.79	2.13	30.62	30.33	7.38	3.93%	15	12.81	7.73	0.02	
MISC 2	15374	0.00	0.00	0.00	0.00	0.31	5.00	5.02	6.78	2.12	29.35	28.31	151.64	0.69%	15	5.35	4.11	0.62	
15374	15385	0.35	0.90	0.31	0.00	0.63	5.00	5.63	6.58	4.11	27.90	26.21	235.13	0.72%	15	5.48	4.90	0.80	
15385	15389	0.29	0.90	0.26	0.00	0.88	5.00	6.43	6.34	5.60	26.16	24.69	133.42	1.10%	15	6.78	6.17	0.36	
15412	15374	0.00	0.00	0.00	0.00	0.00	5.00	5.00	6.79	0.00	28.87	28.16	50.35	1.41%	15	7.67	-	0.00	No Flow
PR5	PR4	0.48	0.76	0.36	0.00	0.36	5.00	5.00	6.79	2.47	27.83	26.94	88.77	1.00%	15	6.47	4.92	0.30	
PR4	15418	0.14	0.90	0.13	0.00	0.49	5.00	5.30	6.69	3.27	26.86	25.97	88.77	1.00%	15	6.47	5.29	0.28	
15418	PR3	0.19	0.90	0.17	0.09	0.75	5.00	5.58	6.60	4.93	25.89	25.46	43.22	1.00%	15	6.44	5.78	0.12	
PR3	PR2	0.08	0.90	0.07	0.00	0.82	5.00	5.71	6.56	5.35	25.38	24.71	66.63	1.01%	15	6.48	5.90	0.19	
PR2	PR1	0.21	0.90	0.19	0.00	1.01	5.00	5.89	6.50	6.53	24.63	24.34	29.12	1.00%	18	10.48	6.25	0.08	
15367	15373	0.31	0.90	0.28	0.00	0.28	5.00	5.00	6.79	1.87	25.49	24.96	37.58	1.41%	15	7.67	5.16	0.12	
15364	6137	0.26	0.90	0.23	0.00	0.23	5.00	5.00	6.79	1.59	25.41	24.73	8.55	7.95%	15	18.22	9.13	0.02	

END OF TABLE - DO NOT DELETE THIS LINE

Hydraulic Grade Line Computations

Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (ft)	D_o (in)	Q_o (cfs)	L_o (ft)	Sf_o (%)	H_f (Ft)	V_o (ft/s)	H_v (ft)	Q_i	V_i (ft/s)	Q_iV_i	Junction Loss $V_i^2/2g$ (ft)	H_j (ft)	Angle (°)	H_A (ft)	H_t (ft)	1.3 H_t (ft)	0.5 H_t (ft)	Final H (ft)	Inlet Water Surface Elev. (ft)	Rim Elev. (ft)
PR1		Outlet Pipe Dia. =	21.00					Outlet Pipe Inv. =		24.34	0.8xDia + Pipe Inv. =		25.74	Outlet WSEL =						Starting WSEL =	25.74	
6150		25.74	21	8.65	20.49	0.2977%	0.06	5.09	0.10					0.18		0.35	0.63	0.00		0.69	26.43	29.52
	15389									8.69	5.71	49.60	0.51	0.18	90	0.35						
15389		26.43	21	8.69	35.39	0.3005%	0.11	5.71	0.13					0.21		0.41	0.75	0.00		0.85	27.29	29.34
	15385									5.60	6.17	34.57	0.59	0.21	90	0.41						
	15373									3.39	3.82	12.93	0.23	0.08	90	0.16						
15385		27.29	15	5.60	133.42	0.7514%	1.00	6.17	0.15					0.13		0.26	0.54	0.70		1.70	28.99	30.52
	15374									4.11	4.90	20.15	0.37	0.13	90	0.26						
15374		28.99	15	4.11	235.13	0.4054%	0.95	4.90	0.09					0.09		0.18	0.37	0.48		1.43	30.42	32.37
	MISC 2									2.12	4.11	8.73	0.26	0.09	90	0.18						
	15412									0.00	0.00	0.00	0.00	0.00	90	0.00						
MISC 2		30.42	15	2.12	151.64	0.1081%	0.16	4.11	0.07					0.32		0.65	1.04	0.00		1.20	31.63	33.83
	MISC 1									2.13	7.73	16.43	0.93	0.32	90	0.65						
MISC 1		31.63	15	2.13	7.38	0.1083%	0.01	7.73	0.28								0.28	0.36		0.37	32.00	33.94
PR2		25.74	18	6.53	29.12	0.3867%	0.11	6.25	0.15					0.19		0.38	0.72	0.00		0.83	26.57	29.60
	PR3									5.35	5.90	31.56	0.54	0.19	90	0.38						
PR3		26.57	15	5.35	66.63	0.6863%	0.46	5.90	0.14					0.18		0.36	0.68	0.00		1.14	27.71	30.11
	15418									4.93	5.78	28.51	0.52	0.18	90	0.36						
15418		27.71	15	4.93	43.22	0.5821%	0.25	5.78	0.13					0.15		0.30	0.59	0.76		1.01	28.72	30.49
	PR4									3.27	5.29	17.30	0.43	0.15	90	0.30						
PR4		28.72	15	3.27	88.77	0.2566%	0.23	5.29	0.11					0.13		0.26	0.50	0.65		0.88	29.60	31.14
	PR5									2.47	4.92	12.12	0.38	0.13	90	0.26						
PR5		29.60	15	2.47	88.77	0.1458%	0.13	4.92	0.11								0.11	0.15		0.28	29.88	31.99
15373		27.29	21	3.39	14.38	0.0457%	0.01	3.82	0.06					0.14		0.29	0.49	0.00		0.50	27.78	29.06
	6137									1.56	2.08	3.25	0.07	0.02	90	0.05						
	15367									1.87	5.16	9.64	0.41	0.14	90	0.29						
6137		27.78	21	1.56	7.14	0.0097%	0.00	2.08	0.02					0.11		0.91	1.03	0.00		1.03	28.82	29.11
	15306									4.70	4.46	20.98	0.31	0.11	90	0.22						
	15364									1.59	9.13	14.53	1.29	0.45	90	0.91						
15412		30.42	15	0.00	50.35	0.0000%	0.00	0.00	0.00								0.00	0.00		0.00	30.42	32.35
15367		27.78	15	1.87	37.58	0.0837%	0.03	5.16	0.12								0.12	0.16		0.19	27.98	28.83
15364		28.82	15	1.59	8.55	0.0607%	0.01	9.13	0.39								0.39	0.50		0.51	29.33	29.49

STORM WATER CALCULATION NOTES

1. THIS PROJECT CONSISTS OF THE ROAD IMPROVEMENTS ALONG 12th STREET S BETWEEN S EADS ST AND LONG BRIDGE DRIVE. THE PROJECT INCLUDES NEW LANE CONFIGURATION, MILL AND OVERLAY, PAVEMENT REPLACEMENT, AND MINOR STORMWATER MODIFICATIONS. THE PROJECT IS DECREASING THE IMPERVIOUS AREA WITHIN THE PROJECT AREA BY APPROXIMATELY 0.01 ACRES.
2. DUE TO THE MODIFICATIONS TO THE EXISTING ROAD NEW INLETS HAVE BEEN PROPOSED THROUGHOUT THE PROJECT AREA. THE PROPOSED INLETS WILL BE CONNECTED TO THE EXISTING DRAINAGE NETWORK.
3. DUE TO THE SCOPE OF THE PROJECT, NO EXISTING PIPES 21" AND LARGER WERE UPSIZED WITH THIS PROJECT. PER COORDINATION WITH THE OFFICE OF SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT (OSEM), THERE HAVE BEEN NO FLOODING ISSUES REPORTED WITHIN THE PROJECT AREA. THEREFORE, OSEM IS NOT PLANNING TO UPSIZE THE PIPES WITHIN THE PROJECT AREA AT THIS TIME.
4. WITH A NET IMPERVIOUS AREA DECREASE OF APPROXIMATELY 0.01 ACRES, THE PROJECT WILL BE IMPROVING THE OVERALL STORM SEWER SYSTEM BY DECREASING THE AMOUNT OF FLOW (CFS) CREATED WITHIN THE PROJECT AREA.
5. ALL PROPOSED PIPES AND INLETS WITHIN THE PROJECT AREA HAVE BEEN DESIGNED IN ORDER TO ADEQUATELY CONVEY THE 10-YEAR STORM EVENT.
6. THE MAXIMUM ALLOWABLE SPREAD AND PONDING DEPTH FOR THE TRAVEL LANES IS BASED ON VDM 9.3.1.
7. ALL INLETS ADJACENT TO VEHICLE TRAVEL LANES ARE TO BE UNDER ½ THE TRAVEL LANE. ALL INLETS ADJACENT TO PARKING FACILITIES ARE TO HAVE THE SPREAD UNDER ½ THE TRAVEL LANE. (12' TRAVEL LANES SHALL HAVE <6' OF SPREAD).

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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STORM COMPUTATIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

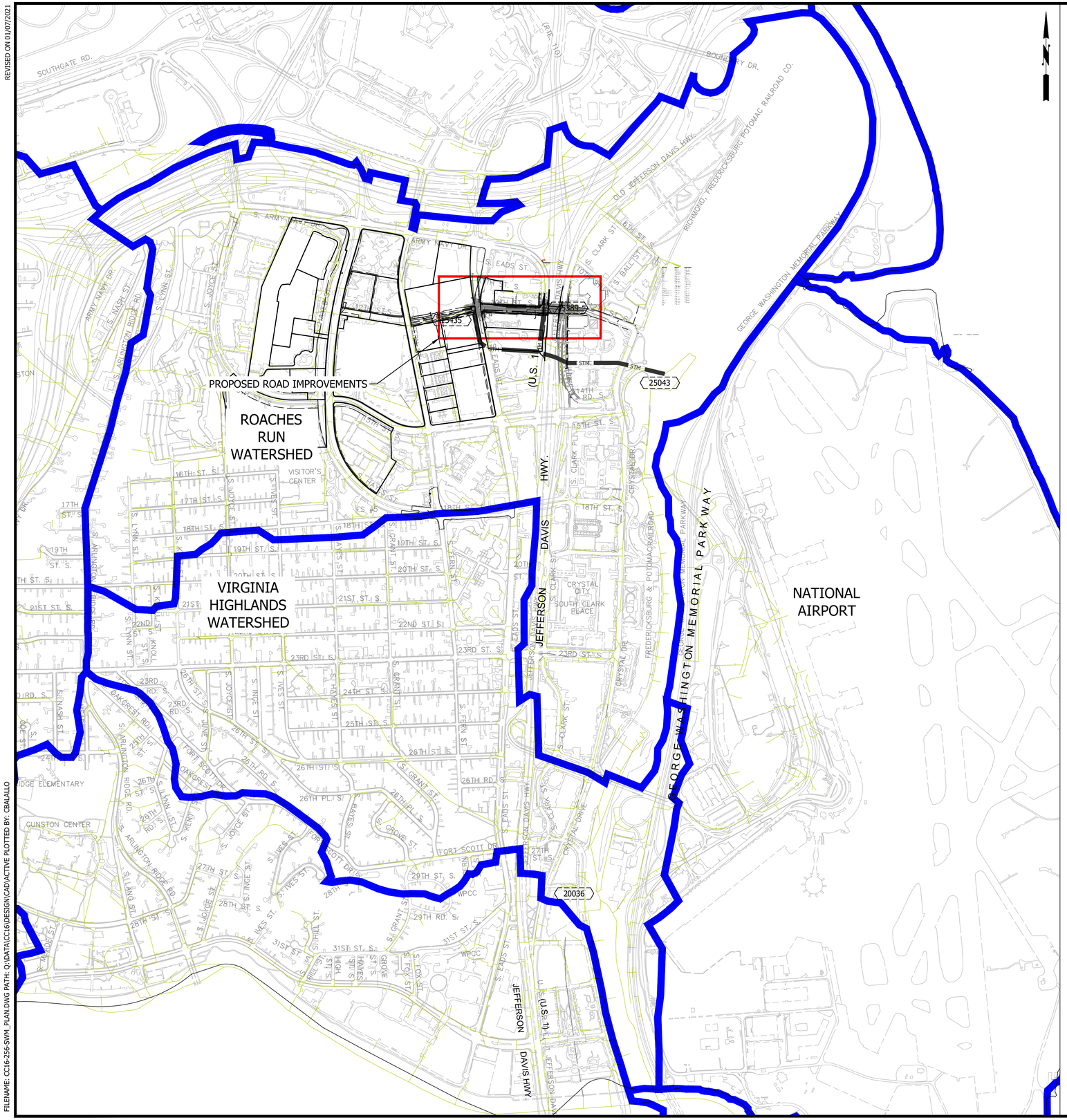
N/A

C075.1

REVISED ON 01/07/2021

FILENAME: CC16-252-STORM_SEWER_PROFILES.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

REVISED ON 01/07/2021



STORMWATER MANAGEMENT PLAN (CHANNEL AND FLOOD PROTECTION)

OUTFALL #1 (ROACHES RUN WATERSHED)

CHANNEL PROTECTION
THE CHANNEL PROTECTION ANALYSIS FOR THE OUTFALL WAS PERFORMED TO THE 1% BASED ON THE PROPOSED LIMITS OF DISTURBANCE (LOD).

PROPOSED PROJECT LOD (OUTFALL #1) = 0.8678 ACRES
TOTAL DRAINAGE AREA TO STR 25043 = 461.00 ACRES

SINCE 0.855 AC / 461.00 AC < 1%, THE ANALYSIS COMPLIES WITH THE 1% RULE.

GIVEN THAT THE 1% POINT IS LOCATED WITHIN A PIPE SYSTEM, NO EROSION WILL OCCUR AT THIS POINT. THEREFORE, THE CHANNEL PROTECTION REQUIREMENT HAS BEEN SATISFIED.

FLOOD PROTECTION
THERE IS CURRENTLY NO DATA TO DETERMINE IF THIS AREA CONTAINS LOCALIZED FLOODING. THEREFORE, LOCALIZED FLOODING IN THIS AREA IS UNKNOWN. BASED ON THIS INFORMATION, THE FLOOD PROTECTION CRITERIA HAS BEEN SATISFIED.

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY

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PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

SWM DRAINAGE AREA MAP

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:
0 500 1000
GRAPHIC SCALE

C081.1

FILENAME: CC16-256-SWM_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021

RUNOFF REDUCTION NOTES:

1. THE RUNOFF REDUCTION SPREADSHEET ON THIS PLAN IS FOR DATA TRACKING PURPOSES TO DOCUMENT THE AREA OF LAND DISTURBANCE AND TO CHARACTERIZE PRE- AND POST- DEVELOPMENT LAND USE CONDITIONS.
2. IN ACCORDANCE WITH ARLINGTON COUNTY'S CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN, APPROVED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) ON SEPTEMBER 1, 2015, LINEAR DEVELOPMENT PROJECTS CONDUCTED BY THE COUNTY ARE ADMINISTERED AND TRACKS AS FOLLOWS CONSISTENT WITH 9VAC25-870-69.A.4, 9VAC25-870-76, AND 9VAC25-870-92:
3. POLLUTANT LOAD CHANGES WILL BE COMPUTED AS DESCRIBED IN SECTION 3.A OF THE ACTION PLAN.
4. RETROFIT OPPORTUNITIES WILL BE EVALUATED FOR EACH PROJECT, USING THE SCREENING AND SELECTION CRITERIA APPLIED AND DESCRIBED IN THE ADOPTED STORMWATER MASTER PLAN.
5. RETROFIT PROJECTS THAT MEET THE SCREENING CRITERIA AND ARE DETERMINED BY ARLINGTON TO BE FEASIBLE AND COST-EFFECTIVE WILL BE IMPLEMENTED WITH SPECIFIED LINEAR DEVELOPMENT PROJECTS. POLLUTANT LOAD REDUCTIONS FROM RETROFIT PROJECTS WILL BE COMPUTED AS DESCRIBED IN SECTION 5 OF THE ACTION PLAN.
6. IN CASES WHERE RETROFIT PROJECTS ARE NOT FEASIBLE AND COST-EFFECTIVE FOR A PARTICULAR LINEAR PROJECT, ANY POC LOAD INCREASES THAT MIGHT OCCUR FOR THAT PROJECT WILL BE ADDRESSED BY LARGER OVERALL POC LOAD REDUCTIONS IN PLACE OR ADDED THROUGH TMDL ACTION PLAN IMPLEMENTATION.
7. IN THE ABOVE MANNER ARLINGTON, AS THE MS4 OPERATOR AND THE CONSTRUCTION SITE OPERATOR FOR ITS LINEAR DEVELOPMENT PROJECTS, IMPLEMENTS LINEAR PROJECTS AND RETROFIT PROJECTS IN A MANNER THAT ACHIEVED THE MOST TMDL POC REDUCTION FOR THE LEAST COST, WHILE FULLY ACCOUNTING FOR LOAD CHANGES THAT OCCUR WITH LINEAR DEVELOPMENT PROJECT ACTIVITY CONSISTENT WITH THE DEQ CHESAPEAKE BAY TMDL SPECIAL CONDITION GUIDANCE.

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

☐ 2011 BMP Standards and Specifications ☒ 2013 Draft BMP Standards and Specifications

Project Name:	CC16 12th Street South Road Improvements
Date:	9/9/2020
Linear Development Project?	Yes

CLEAR ALL (Ctrl+Shift+R)

data input cells | constant values | calculation cells | final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.8678

Maximum reduction required:	*20%*
The site's net increase in impervious cover (acres) is:	*0.0000*
Post-Development TP Load Reduction for Site (lb/yr):	*0.3159*

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? Yes
Land cover areas entered correctly? ✔
Total disturbed area entered? ✔

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed forest/open space					0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed				0.1297	0.1297
Impervious Cover (acres)				0.7381	0.7381
					0.8678

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested land					0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be mowed/managed				0.1414	0.1414
Impervious Cover (acres)				0.7264	0.7264
Area Check	OK.	OK.	OK.	OK.	0.8678

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.1297	0.1297
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	15%	15%
Impervious Cover (acres)	0.7381	0.7381
Rv(impervious)	0.9500	0.9500
% Impervious	85%	85%
Total Site Area (acres)	**0.8678**	**0.8678**
Site Rv	**0.8454**	**0.8454**

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0611	0.0611
Pre-ReDevelopment Treatment Volume (cubic feet)	2,663.0774	2,663.0774
Pre-ReDevelopment TP Load (lb/yr)	**1.6732**	**1.6732**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.9300	1.9300
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.3558*

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.1414
Weighted Rv (turf)	0.2500
% Managed Turf	16%
Impervious Cover (acres)	0.7264
Rv(impervious)	0.9500
% Impervious	84%
Final Site Area (acres)	**0.8678**
Final Post Dev Site Rv	**0.8359**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.1414
Weighted Rv (turf)	0.2500
% Managed Turf	16%
ReDev. Impervious Cover (acres)	0.7264
Rv(impervious)	0.9500
% Impervious	84%
Total ReDev. Site Area (acres)	**0.8678**
ReDev Site Rv	**0.8359**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.0000
Rv(impervious)	---

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0605
Final Post-Development Treatment Volume (cubic feet)	2,633.3109
Final Post-Development TP Load (lb/yr)	**1.6545**
Final Post-Development TP Load per acre (lb/acre/yr)	1.9100

Post-ReDevelopment Treatment Volume (acre-ft)	0.0605
Post-ReDevelopment Treatment Volume (cubic feet)	2,633.3109
Post-ReDevelopment Load (TP) (lb/yr)*	**1.6545**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.9100
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.3159**

Post-Development Treatment Volume (acre-ft)	---
Post-Development Treatment Volume (cubic feet)	---
Post-Development TP Load (lb/yr)	---
TP Load Reduction Required for New Impervious Area (lb/yr)	**0**

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.3159**
Linear Project TP Load Reduction Required (lb/yr):	**0.3159**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	11.9699
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	11.8361

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4/23/2021
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Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

SWM CALCULATIONS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

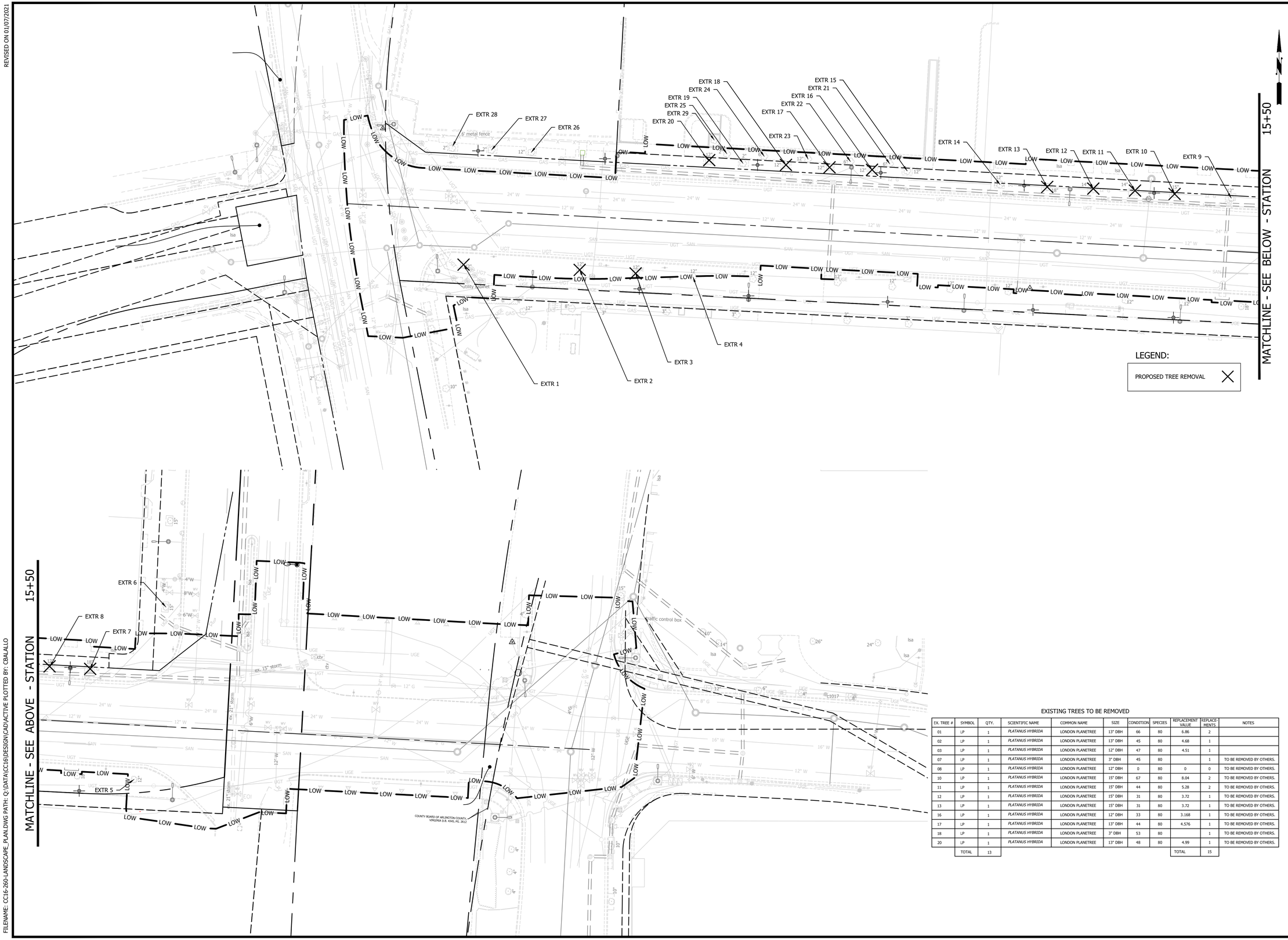
SCALE:

N/A

C085.1

FILENAME: CC16-254-SWM_DIVIDES_AND_COMPS.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



EXISTING TREES TO BE REMOVED

EX. TREE #	SYMBOL	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPECIES	REPLACEMENT VALUE	REPLACE-MENTS	NOTES
01	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	13" DBH	66	80	6.86	2	
02	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	13" DBH	45	80	4.68	1	
03	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	12" DBH	47	80	4.51	1	
07	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	3" DBH	45	80		1	TO BE REMOVED BY OTHERS.
08	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	12" DBH	0	80	0	0	TO BE REMOVED BY OTHERS.
10	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	15" DBH	67	80	8.04	2	TO BE REMOVED BY OTHERS.
11	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	15" DBH	44	80	5.28	2	TO BE REMOVED BY OTHERS.
12	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	15" DBH	31	80	3.72	1	TO BE REMOVED BY OTHERS.
13	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	15" DBH	31	80	3.72	1	TO BE REMOVED BY OTHERS.
16	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	12" DBH	33	80	3.168	1	TO BE REMOVED BY OTHERS.
17	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	13" DBH	44	80	4.576	1	TO BE REMOVED BY OTHERS.
18	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	3" DBH	53	80		1	TO BE REMOVED BY OTHERS.
20	LP	1	*PLATANUS HYBRIDA*	LONDON PLANETREE	13" DBH	48	80	4.99	1	TO BE REMOVED BY OTHERS.
	TOTAL	13						TOTAL	15	

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Dennis M. Leach TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

TREE REMOVAL PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

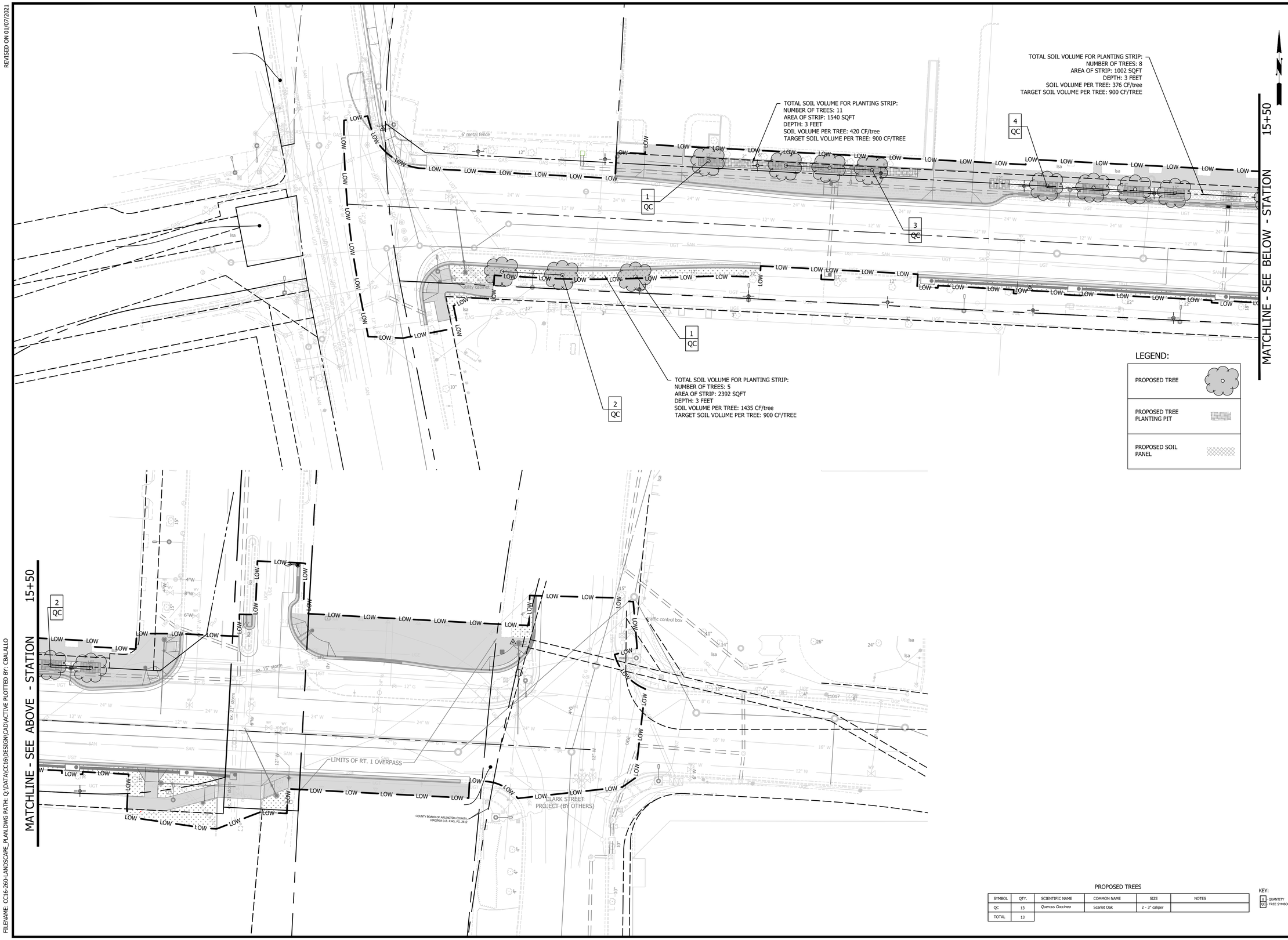
SCALE:

0 25 50
GRAPHIC SCALE

C091.1

FILENAME: CC16-260-LANDSCAPE_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

REVISED ON 01/07/2021



PROPOSED TREES

SYMBOL	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	NOTES
QC	13	*Quercus Coccinea*	Scarlet Oak	2 - 3" caliper	
TOTAL	13				

KEY:
8 - QUANTITY
QC - TREE SYMBOL

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

LANDSCAPE PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
GRAPHIC SCALE

C091.2

FILENAME: CC16-260-LANDSCAPE_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

REVISED ON 01/07/2021

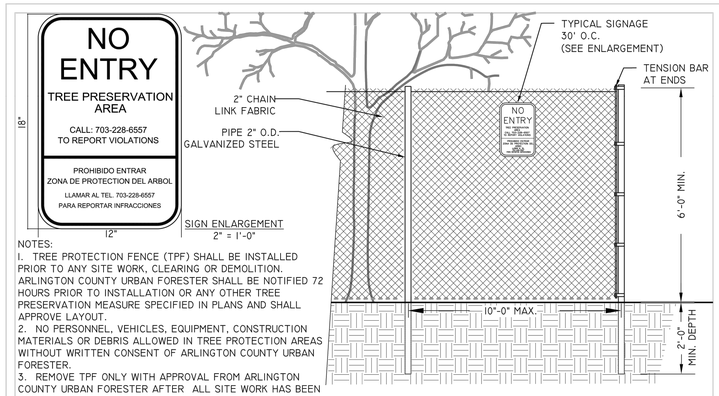
Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SCRZ (Minimum Critical Root Zone radius in feet)	CRZ (Critical Root Zone radius in feet)	Priority (1-4)	Comments	Additional Notes	Condition Notes
1	13	planetree, London	Platanus hybrida	66	Fair	16	18	1	7.0	20	3		Topped several years ago.	Full Crown, Large DW (3"+), Small DW (1-2"), Trunk Decay, Branch Decay, Insect/Disease Problem
2	13	planetree, London	Platanus hybrida	45	Poor	9	25	1	7.0	20	4		Recently topped. Gradually dying.	Large DW (3"+), Small DW (1-2"), Basal Decay, Suppressed, Stressed, Mechanical Damage, Serious Decline
3	12	planetree, London	Platanus hybrida	47	Poor	9	20	1	7.0	18	4		Recently topped. Gradually dying.	Large DW (3"+), Small DW (1-2"), Basal Decay, Branch Decay, Suppressed, Stressed, Mechanical Damage, Serious Decline
4	12	planetree, London	Platanus hybrida	39	Poor	9	30	1	7.0	18	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Basal Decay, Branch Decay, Stressed, Serious Decline
5	12	planetree, London	Platanus hybrida	39	Poor	9	30	1	7.0	18	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Basal Decay, Branch Decay, Stressed, Serious Decline
6	15	planetree, London	Platanus hybrida	0	Dead	0	30	1	8.0	23	4			Full Crown
7	3	planetree, London	Platanus hybrida	45	Poor	4	10	1	2.0	5	3		Stressed	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Stressed, Mechanical Damage
8	12	planetree, London	Platanus hybrida	0	Dead	0	30	1	7.0	18	4			Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
9	3	planetree, London	Platanus hybrida	73	Good	7	14	1	2.0	5	3			Full Crown
10	15	planetree, London	Platanus hybrida	67	Fair	13	40	1	8.0	23	3			Full Crown, Large DW (3"+), Small DW (1-2"), Branch Decay
11	15	planetree, London	Platanus hybrida	44	Poor	8	35	1	8.0	23	4		Gradually dying.	Full Crown, Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
12	15	planetree, London	Platanus hybrida	31	Poor	5	35	1	8.0	23	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
13	15	planetree, London	Platanus hybrida	31	Poor	5	35	1	8.0	23	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
14	3	planetree, London	Platanus hybrida	75	Good	8	16	1	2.0	5	2			Full Crown
15	14	planetree, London	Platanus hybrida	75	Good	14	35	1	7.0	21	2			Full Crown
16	12	planetree, London	Platanus hybrida	33	Poor	3	30	1	7.0	18	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
17	13	planetree, London	Platanus hybrida	44	Poor	6	25	1	7.0	20	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
18	3	planetree, London	Platanus hybrida	53	Fair	5	14	1	2.0	5	3		Stressed	Full Crown, Stressed
19	8	planetree, London	Platanus hybrida	73	Good	8	30	1	3.0	8	2			Full Crown, Small DW (1-2")
20	13	planetree, London	Platanus hybrida	48	Poor	15	35	1	7.0	20	4		Gradually dying.	Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
21	2	dogwood, flowering	Cornus florida	52	Fair	2	8	1	2.0	3	3		Stressed	Full Crown, Stressed
22	2	dogwood, flowering	Cornus florida	73	Good	2	8	1	2.0	3	2			Full Crown
23	2	dogwood, flowering	Cornus florida	73	Good	2	8	1	2.0	3	2			Full Crown
24	2	dogwood, flowering	Cornus florida	73	Good	2	8	1	2.0	3	2			Full Crown
25	2	dogwood, flowering	Cornus florida	73	Good	2	8	1	2.0	3	2			Full Crown
26	15	planetree, London	Platanus hybrida	50	Fair	12	40	1	8.0	23	4		Stressed	Small DW (1-2"), Basal Decay, Stressed, Serious Decline
27	2	planetree, London	Platanus hybrida	75	Good	12	30	1	4.0	11	3			Full Crown
28	2	planetree, London	Platanus hybrida	75	Good	12	30	1	4.0	11	3			Full Crown
29	5	cherry, kwanzan	Prunus x kwanzan	72	Good	14	12	1	3.0	8	2			Full Crown

Priority - this is meant to capture a tree's "priority for preservation" relating to tree preservation planning on development projects. The tree is rated using it's condition as a guide, but assessor also takes into account other factors, such as: species desirability, species longevity, uniqueness, aesthetics both of the tree itself and it's relation to the site and other factors as seen fit. This is meant to be a qualitative rating based solely on the site at the time of the inventory (and does not account for any proposed plans).

- Priority 1 = highest priority for protection (i.e. particularly good condition, unique tree and/or should be protected at all reasonable cost).
- Priority 2 = good or high fair condition tree well worth protecting though not uniquely valuable.
- Priority 3 = fair condition average tree that will not be missed if it were gone, not worth any special protection measures.
- Priority 4 = trees that should be removed under most any curcumstances (invasive/undesireable species, poor or dead trees, particularly high risk situations, etc).

TREE PLANTING NOTES

1. CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR INSPECTION.
   CONTRACTOR TO PREPARE TREE PLANTING STRIPS FOR THE REPLACEMENT TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 3293000.4A, 329300.4B.
   1.1. ALL PLANTS TO HAVE TREE TAGS FOR INSPECTION PRIOR TO INSTALLATION
   1.2. ALL PLANTS TO BE INSTALLED PER CONTRACT SPECIFICATIONS
   1.3. THE CONTRACTOR IS RESPONSIBLE FOR CALLING MS. UTILITY PRIOR TO THE SCHEDULED DATE FOR PLANT INSTALLATION.
2. CONTRACTOR TO PREPARE STREET TREE PLANTING PITS ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 329300.3A, 329300.3B AND 329300.11C
3. CONTRACTOR TO PLANT THE TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 329300.1 (ON FLAT LAND) OR 329300.2 (ON SLOPES)



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

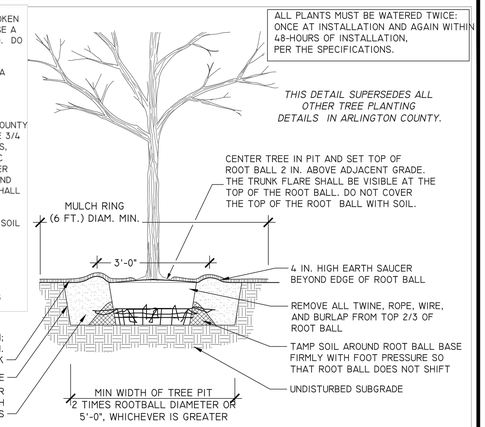
311300.1 (2016) (02231.1)

1/2" = 1'-0"

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

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

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

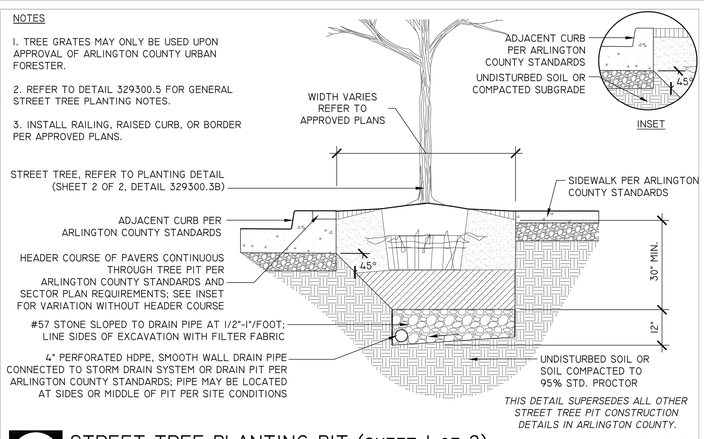


TREE PLANTING DETAIL

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

NOT TO SCALE

NOTES
1. TREE GRATES MAY ONLY BE USED UPON APPROVAL OF ARLINGTON COUNTY URBAN FORESTER.
2. REFER TO DETAIL 329300.5 FOR GENERAL STREET TREE PLANTING NOTES.
3. INSTALL RAILING, RAISED CURB, OR BORDER PER APPROVED PLANS.

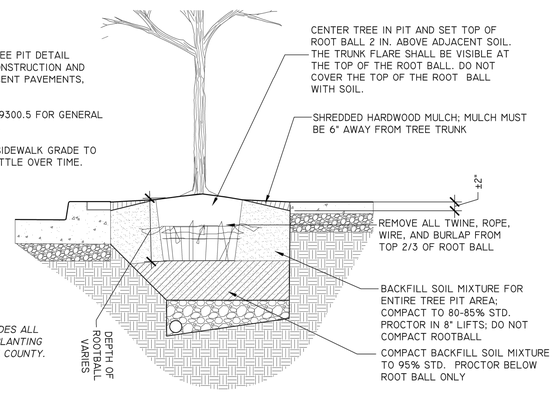


STREET TREE PLANTING PIT (SHEET 1 OF 2)

FOR TREE PLANTING PITS IN RIGHT-OF-WAY & ADJACENT TO PAVING
329300.3A (2020)

1/2" - 1'-0"

NOTES
1. REFER TO STREET TREE PIT DETAIL (329300.5A) FOR PIT CONSTRUCTION AND INFORMATION ON ADJACENT PAVEMENTS, CURB, AND DRAINAGE.
2. REFER TO DETAIL 329300.5 FOR GENERAL TREE PLANTING NOTES.
3. MOUND SOIL ABOVE SIDEWALK GRADE TO ALLOW FOR SOIL TO SETTLE OVER TIME.



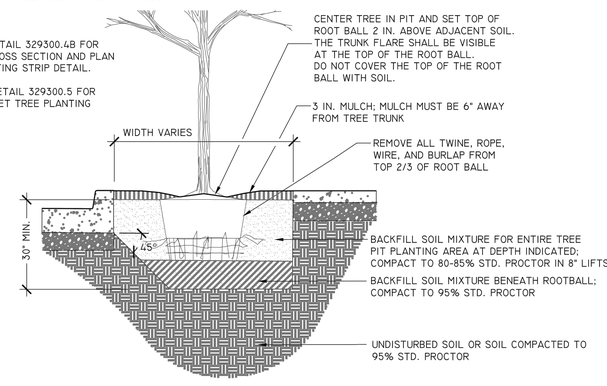
STREET TREE PLANTING PIT (SHEET 2 OF 2)

FOR TREE PLANTING PITS IN RIGHT-OF-WAY & ADJACENT TO PAVING
329300.3B (2020)

1/2" = 1'-0"

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

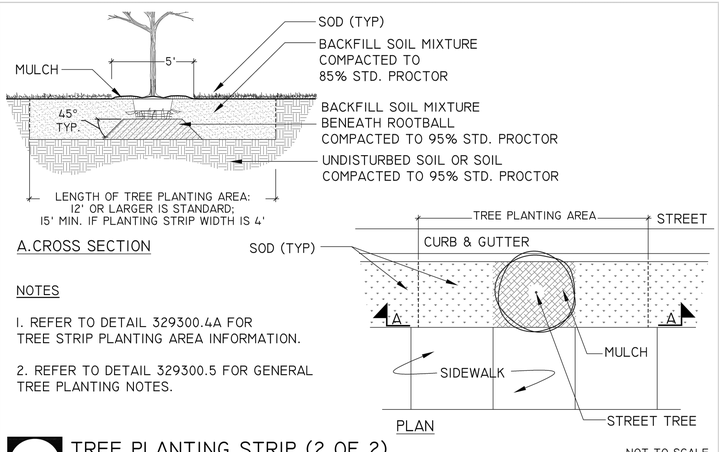
NOTES
1. REFER TO DETAIL 329300.4B FOR ADDITIONAL CROSS SECTION AND PLAN OF TREE PLANTING STRIP DETAIL.
2. REFER TO DETAIL 329300.5 FOR GENERAL STREET TREE PLANTING NOTES.



TREE PLANTING STRIP (1 OF 2)

FOR TREE PLANTING STRIPS IN RIGHT-OF-WAY
329300.4A (2016) (02939.4A)

1/2" - 1'-0"



A.CROSS SECTION

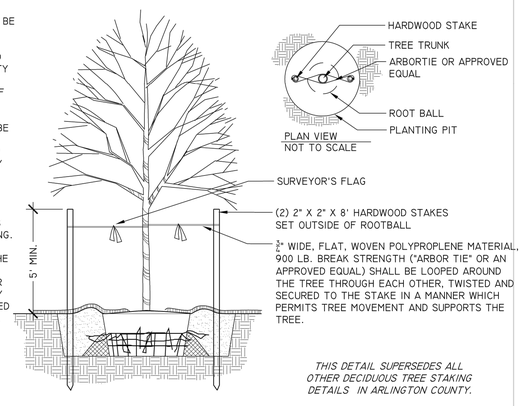
NOTES
1. REFER TO DETAIL 329300.4A FOR TREE STRIP PLANTING AREA INFORMATION.
2. REFER TO DETAIL 329300.5 FOR GENERAL TREE PLANTING NOTES.

TREE PLANTING STRIP (2 OF 2)

FOR TREE PLANTING STRIPS IN RIGHT-OF-WAY
329300.4B (2018)

NOT TO SCALE

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



DECIDUOUS TREE STAKING

ELEVATION
329300.6 (2016) (02930.6)

NOT TO SCALE

NOTES
1. NOTIFY THE DPR URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE SCHEDULED INSTALLATION OF TREE PITS AND PLANTING OF ANY STREET TREES FOR INSPECTION.
2. A PERMIT IS REQUIRED WHEN TREES ARE PLANTED IN PUBLIC RIGHT-OF-WAY OR IN A PUBLIC EASEMENT. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL ISSUE THE PERMIT ACCORDING TO THE PROVISIONS OF THE CURRENT ARLINGTON COUNTY ADMINISTRATIVE REGULATION 4.3.
3. TREE SPECIES SHALL BE SELECTED FROM THE "ARLINGTON COUNTY STREET TREE LIST" OR PER SECTOR PLAN REQUIREMENTS.
4. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.
5. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
6. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
7. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS: SEE PLAN
8. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.
9. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES.
10. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED.
11. IF THE QUANTITY OF ACCEPTABLE EXISTING SOIL IS INSUFFICIENT FOR THE PLANTING REQUIREMENTS, THE CONTRACTOR MAY USE TOPSOIL. SOIL TEST REPORT RESULTS FOR THE TOPSOIL WILL BE MADE AVAILABLE TO THE COUNTY URBAN FORESTER UPON REQUEST. CONTRACTOR SHALL SUBMIT TOPSOIL FOR APPROVAL TO COUNTY URBAN FORESTER THAT MEETS THE FOLLOWING SPECIFICATIONS:
    (A.) TOPSOIL CONSISTS OF A SANDY LOAM WITH UNIFORM COMPOSITION AND IS FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER 1/2" IN LENGTH.
    (B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF 1.0% ORGANIC MATTER
    (C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIOHMS PER CENTIMETER.
12. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
13. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.
14. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLODS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.
15. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST OF 20 GALLONS PER TREE.
16. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

GENERAL NOTES FOR STREET TREE PLANTINGS

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

ARLINGTON
VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL
COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

LANDSCAPE NOTES AND DETAILS

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

AS SHOWN

C092.1

FILENAME: CC16-260-LANDSCAPE_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

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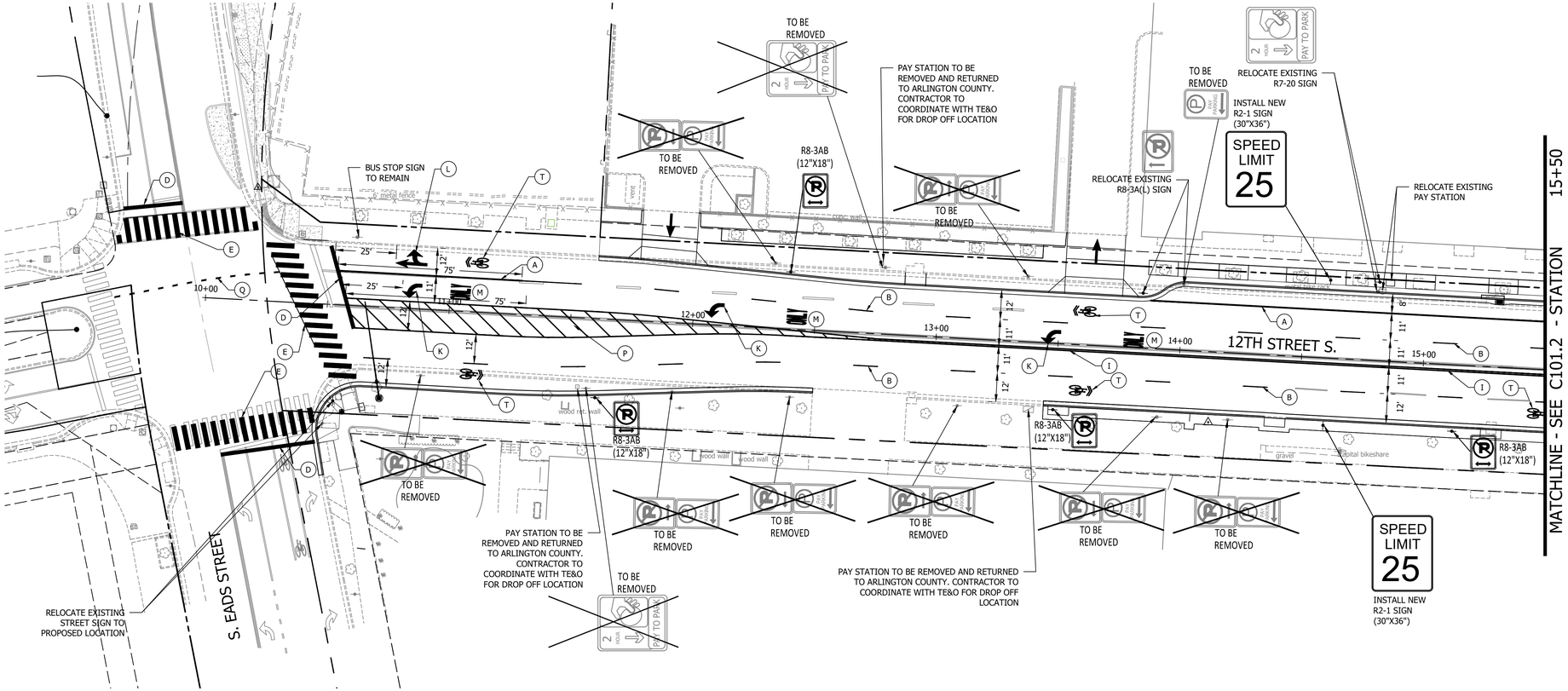
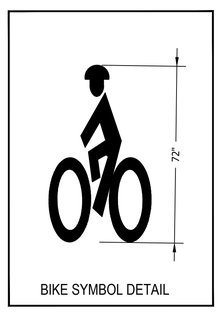
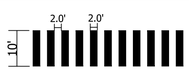




BIKE SYMBOL DETAIL

EXISTING SIGN TO BE REMOVED

= INCLUDES SIGN AND POST



HIGH VISIBILITY CROSSWALK

NOT TO SCALE

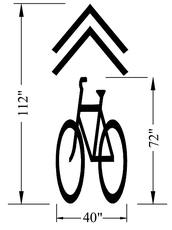
STRIPING LEGEND

(A) EXISTING STRIPING

(A) PROPOSED STRIPING

LEGEND

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	SIGN	



SHARED LANE MARKING

STANDARD PAVEMENT MARKING LEGEND

(A)	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
(B)	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C)	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(D)	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
(E)	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(F)	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, 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 8" 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 8" WIDTH @45 DEGREE	GORE MARKINGS
(Q)	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(R)	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTENSIONS
(S)	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STOP BARS
(T)	TYPE B CLASS 1	BIKE SHARROW	BIKE SHARROW SEE DETAIL THIS SHEET
(U)	TYPE B CLASS 1	GREEN	GREEN BICYCLE CROSSING AREA
(V)	TYPE B CLASS 1	WHITE ARROW	THRU LANES
(W)	TYPE B CLASS 1	GREEN CROSSWALK	BIKE LANE CROSSWALK (SEE DETAIL, THIS SHEET)
(X)	TYPE B CLASS 1	BIKE SYMBOL	BIKE SYMBOL (SEE DETAIL, THIS SHEET)
(Y)	TYPE B CLASS 1	RED	BUS LANE

SIGN AND PAVEMENT MARKING NOTES:

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9. SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
10. BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.
11. EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.
12. FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATION, DETAILS MK-1 TO MK-12

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4/23/2021
PROFESSIONAL ENGINEER

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Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

SIGN AND MARKING PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
HORIZ. SCALE

C101.1

FILENAME: CC16-280-SIGNAGE_AND_STRIPING.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALALLO

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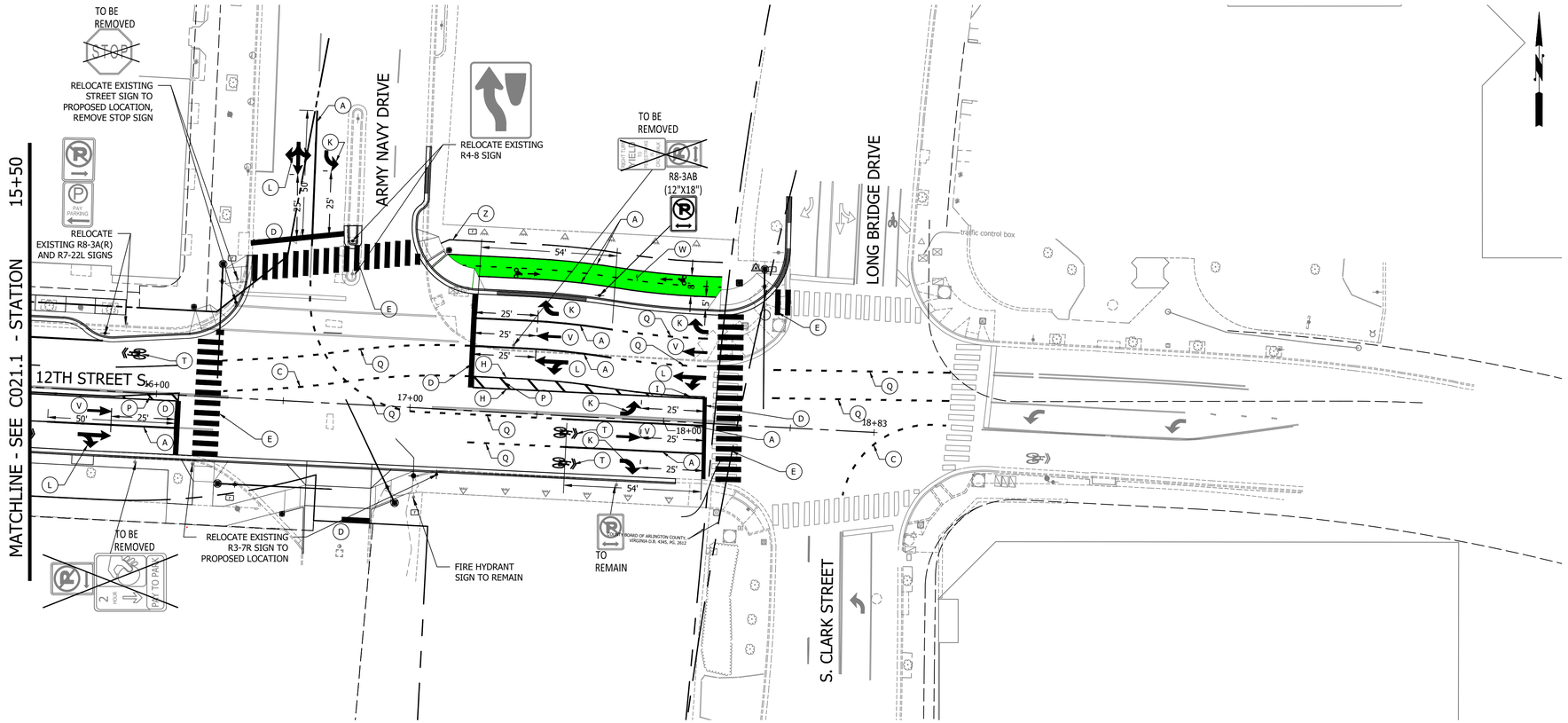
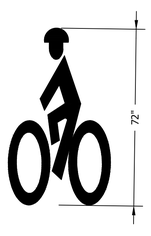
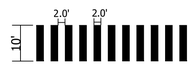


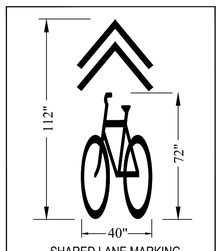


BIKE SYMBOL DETAIL



HIGH VISIBILITY CROSSWALK

NOT TO SCALE



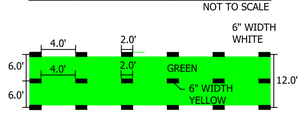
SHARED LANE MARKING

EXISTING SIGN TO BE REMOVED

= INCLUDES SIGN AND POST

BIKE CROSSWALK DETAILS

NOT TO SCALE



STRIPING LEGEND

(A) EXISTING STRIPING

(A) PROPOSED STRIPING

LEGEND

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	SIGN	

STANDARD PAVEMENT MARKING LEGEND

(A)	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
(B)	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C)	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(D)	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
(E)	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(F)	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, 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
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(Y)	TYPE B CLASS 1	RED	BUS LANE
(Z)	DETECTABLE DIRECTIONAL WAYFINDING TILE		

PAVEMENT MARKING NOTES:

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SIGN NOTES:

1. FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE HEAVY DUTY ANCHOR (30"X2.50") WITH HARDWARE FOR 2" POST. USE $\frac{3}{8}$" CORNER BOLT WITH FLANGED NUT AND $\frac{3}{8}$" DRIVER RIVET WITH WASHER.
2. CONTACT TE&O CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 48 HRS PRIOR TO POURING CONCRETE. ALTERNATIVE CONTACT AT 703-228-3788 OR 571-414-7497.

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12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

SIGN AND MARKING PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
HORIZ. SCALE

C101.2

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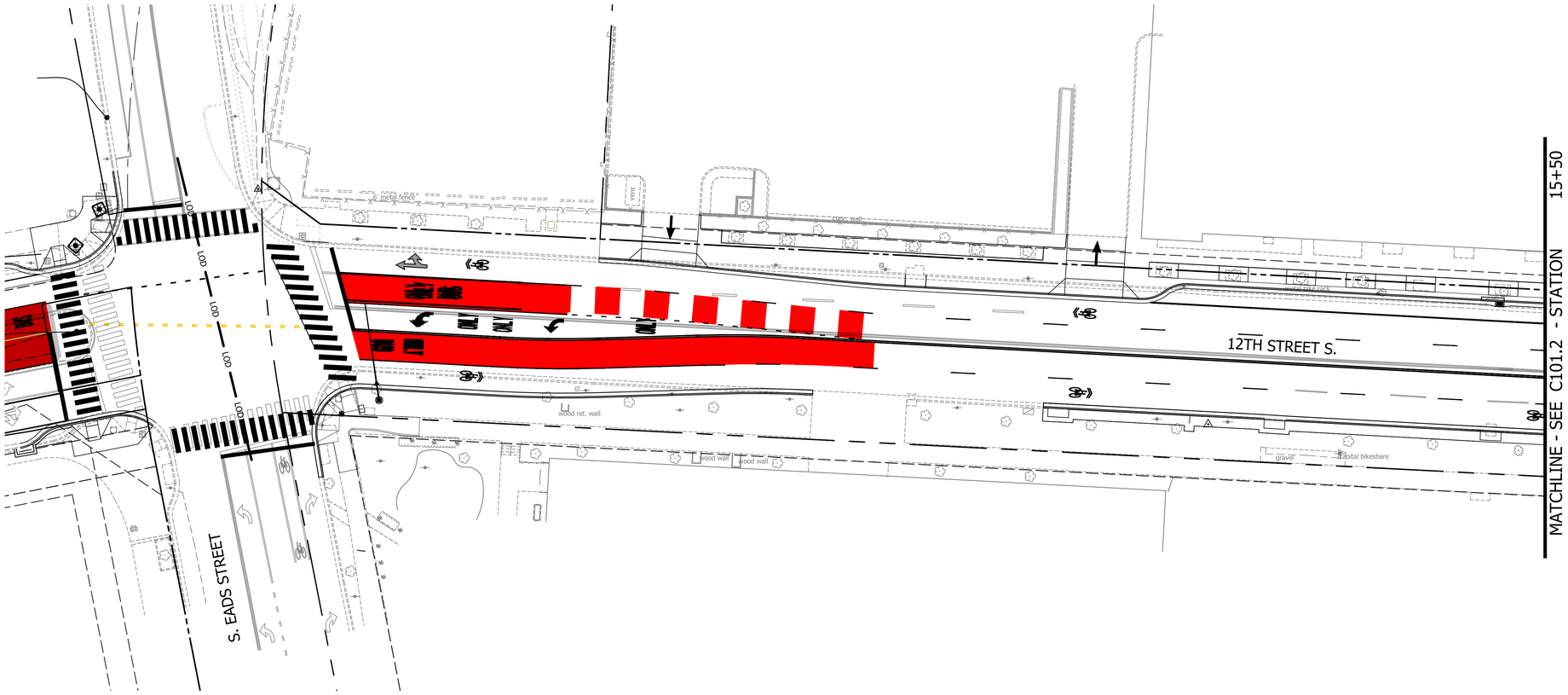

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GRAPHIC SCALE

C102.1

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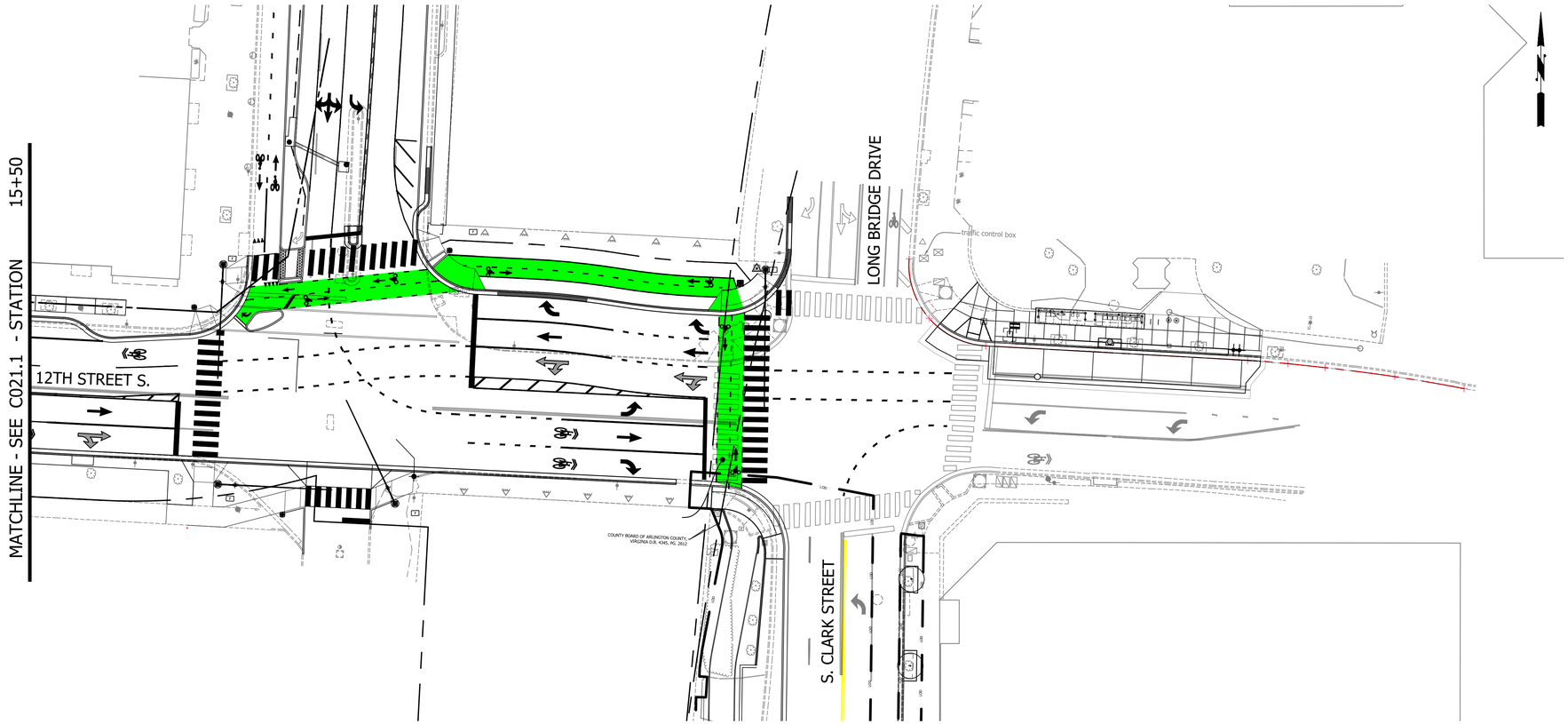

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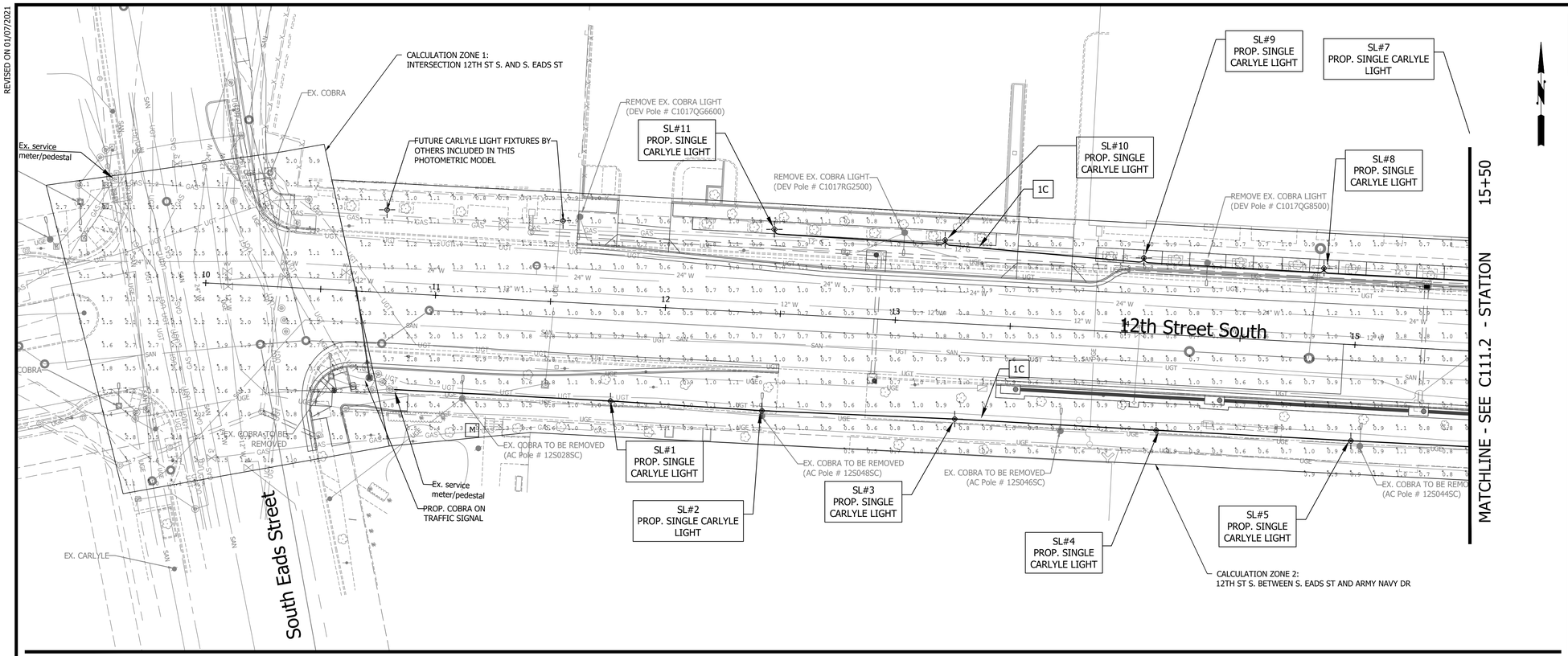

CONSTRUCTION NOTES AND LEGENDS:

SL# CONTRACTOR SHALL FURNISH AND INSTALL LED SINGLE POST-TOP LUMINAIRE FIXTURE ON 16' POLE, 24" DIA. AND 48" DEPTH FOUNDATION PER AC LIGHTING STANDARD DRAWING NO. 14060-01 & 14112-01 AND AC LIGHTING SPECIFICATION SECTION 14060, 14080 & 14112.

JB CONTRACTOR SHALL INSTALL JUNCTION BOX PER AC LIGHTING SPECIFICATION SECTION: JUNCTION BOXES AND LIGHTING STANDARDS DRAWING.
JB1 - SMALL JUNCTION BOX (DRAWING NO. 14040-01)
JB2 - LARGE JUNCTION BOX (DRAWING NO. 14040-02)

1C CONTRACTOR SHALL FURNISH AND INSTALL 1 - 2" SCHEDULE 40 PVC OR 1-2" SCHEDULE 80 HDPE/SDR11 CONDUIT 24" BELOW FINISH GRADE PER AC LIGHTING STANDARD DRAWING NO. 14030-01

STREETLIGHT CONTROL TABLE

STREETLIGHT CONTROL

SL #	POLE ID	STATION (12th Street S.)	OFFSET (℄ POLE)	TYPE
SL#1	12S0412S	11+78.4	41.9 (RIGHT)	SINGLE CARLYLE
SL#2	12S0410S	12+44.3	42.4' (RIGHT)	SINGLE CARLYLE
SL#3	12S0408S	13+28.1	41.5' (RIGHT)	SINGLE CARLYLE
SL#4	12S0406S	14+15.8	41.6' (RIGHT)	SINGLE CARLYLE
SL#5	12S0404S	15+00.5	41.8' (RIGHT)	SINGLE CARLYLE
SL#6	12S0402S	15+77.6	41.4' (RIGHT)	SINGLE CARLYLE

STREETLIGHT CONTROL

SL #	POLE ID	STATION 12th Street S.)	OFFSET (℄ POLE)	TYPE
SL#7	12S0401S	15+68.3	32.7' (LEFT)	SINGLE CARLYLE
SL#8	12S0403S	14+84.3	32.5' (LEFT)	SINGLE CARLYLE
SL#9	12S0405S	14+06.4	32.8' (LEFT)	SINGLE CARLYLE
SL#10	12S0407S	13+19.8	35.9' (LEFT)	SINGLE CARLYLE
SL#11	12S0409S	12+45.5	36.6' (LEFT)	SINGLE CARLYLE

Calculation Summary

Zone Description		CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
1:	Intersection: 12th St S and S Eads St	Illuminance	Fc	2.19	4.5	0.5	4.38	9.00
2:	12th St S between S Eads St and Army NavY Dr	Illuminance	Fc	0.95	3.7	0.3	3.17	12.33
3:	Intersection: 12th St S and Army Navy Dr	Illuminance	Fc	2.03	4.8	0.3	6.77	16.00
4:	12th St S between Army Navy Dr and S Clark St	Illuminance	Fc	0.81	3.4	0.1	8.10	34.00
5:	Intersection: 12th St S and S Clark St	Illuminance	Fc	2.25	4.6	0.3	7.50	15.33

STREETLIGHT JUNCTION BOXES CONTROL TABLE

STREETLIGHT CONTROL

JB #	JUNCTION BOX ID	STATION 12th Street S.)	OFFSET (CENTER JUNCTION BOX)	TYPE
	JB2 #1	15+88.6	40.3' (RIGHT)	LARGE JUNCTION BOX
	JB2 #2	15+72.4	31.4' (LEFT)	LARGE JUNCTION BOX

CC16 - 12th STREET SOUTH_ SCHEDULE OF ELECTRICAL SERVICE

CIRCUIT NUMBER		STREETLIGHTS SERVED	CONNECTED LOAD KW	CONNECTED LOAD AMPS	PHASE AND VOLTS	BRANCH CIRCUIT BREAKERS	FRAME SIZE	TRIP SIZE	REMARKS
CKT - 1	RUN A/B	POLE NO. 1, 2 3, 4, 5, 6, 7, 8, 9, 10 and 11	0.759	6.33	1/120	2	100	20	11 - single luminaire carlyle pole (1 - 69W LED PER POLE)
		TOTAL	0.76	6.33					CARLYLE SINGLE LUMINAIRE LED = 0.48 AMPERE
									CARLYLE = 69 WATTS

PROJECT : CC16 - 12th Street South Complete Street Project 16-Feb-21

STREET LIGHT VOLTAGE DROP CALCULATION

Per AC Streetlight Standards and Specification - Acceptable Voltage Drop is 5% max at the furthest receptacle

Streetlight Types:
1. 11 each - Single Carlyle - 69W GX4 350mA Type V 4000K LED
Amperes required per LED Light is 0.48A

For #6 AWG copper cable, effective impedance used in the calculation is 0.3951 ohms/1000 ft.

CIRCUIT RUN # 1A - VOLTAGE DROP FROM EXISTING METER (SERIAL NO. XXXXXX) TO SIX (6) CARLYLE POLES (SL#1, #3, #5, #7, #9 & #11)

CKT #	FROM	TO	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. METER		5	#6 AWG	N/A	6	6.48	0.01
CKT1-1A	METER	SL#1	94	#6 AWG	1	1	1.08	0.04
CKT1-1A	SL#1	SL#3	150	#6 AWG	1	2	2.16	0.13
CKT1-1A	SL#3	SL#5	173	#6 AWG	1	3	3.24	0.22
CKT1-1A	SL#5	SL#7	166	#6 AWG	1	4	4.32	0.28
CKT1-1A	SL#7	SL#9	170	#6 AWG	1	5	5.40	0.36
CKT1-1A	SL#9	SL#11	170	#6 AWG	1	6	6.48	0.44
			Total Voltage Drop of Circuit Run # 1A at last pole (V):					1.48
			Percent Voltage Drop for Circuit Run # 1A at last pole:					1.24%

CIRCUIT RUN # 1B - VOLTAGE DROP FROM EXISTING METER (SERIAL NO. XXXXXX) TO FIVE (5) CARLYLE POLES (SL#2, #4, #6, #8 & #10)

CKT #	FROM	TO	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. METER		5	#6 AWG	N/A	5	5.40	0.01
CKT1-1B	METER	SL#2	160	#6 AWG	1	1	1.08	0.07
CKT1-1B	SL#2	SL#4	172	#6 AWG	1	2	2.16	0.15
CKT1-1B	SL#4	SL#6	162	#6 AWG	1	3	3.24	0.21
CKT1-1B	SL#6	SL#8	180	#6 AWG	1	4	4.32	0.31
CKT1-1B	SL#8	SL#10	170	#6 AWG	1	5	5.40	0.36
			Total Voltage Drop of Circuit Run # 1B at last pole (V):					1.10
			Percent Voltage Drop for Circuit Run # 1B at last pole:					0.92%

GENERAL NOTES:

1. CONDUIT RUN LOCATIONS ARE APPROXIMATE ONLY. FIELD LOCATE ALIGNMENT.
2. INSTALLING CONDUITS EITHER BY TRENCHING AND/OR BORING WILL BE AT THE CONTRACTOR DISCRETION. HOWEVER, AT ANY ROADWAY CROSSING E.G. INTERSECTIONS AND DRIVEWAY ENTRANCES SHALL BE INSTALLED BY BORING ONLY UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER. FOR THIS PROJECT, MEASUREMENT AND PAYMENT FOR TRENCHING AND/OR DIRECT BORE WILL BE CONSIDERED AS THE SAME UNIT BID PRICE.
3. CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 24" BELOW THE SURFACE.
4. CONTRACTOR SHALL COORDINATE LOCATION OF THE CONDUIT WITH THE PLACEMENT OF PROPOSED LANDSCAPING.
5. CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH DOMINION VIRGINIA POWER.
6. THE METERED SERVICE PEDESTAL SHALL BE MIDWEST COMPANY MODEL NUMBERS R281C1P6H OR R208CP6HP AND NO SUBSTITUTIONS WILL BE ALLOWED. SEE SECTION 14100: ELECTRICAL SERVICE FOR MORE DETAILS.
7. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO NEC STANDARDS.
8. ALL FOUNDATIONS OF POLES THAT ARE TO BE RELOCATED OR REMOVED SHALL BE REMOVED A MINIMUM OF 12 INCHES BELOW GRADE AND BACKFILLED.
9. CONTRACTOR TO COORDINATE THE EXACT LOCATION OF SERVICE METERS AND ASSOCIATED CONDUIT WITH ARLINGTON COUNTY AND DOMINION VIRGINIA POWER.
10. THE PROPOSED PROJECT WILL PROVIDE TEST HOLES INFORMATION. HOWEVER, THIS DOES NOT REMOVE THE RESPONSIBILITIES FROM THE CONTRACTOR TO INVESTIGATE THE SITE PRIOR TO START OF ANY CONSTRUCTION ACTIVITIES.
11. CONTRACTOR IS RESPONSIBLE FOR USING THE PROPER MEANS AND METHODS OF CONSTRUCTION TO INSTALL THE PROPOSED STREETLIGHTS, CONDUITS AND FOUNDATIONS. IT IS RECOMMENDED FOR CONTRACTOR TO PROBE OR EXPLORE THE WORK SITE AREA FOR ANY POSSIBLE CONFLICT WITH UTILITY NOT SHOWN ON THE PLAN. PROBING AND EXPLORING ARE CONSIDERED INCIDENTAL FOR INSTALLING THE PROPOSED STREETLIGHT COMPLETE AND NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE.
12. ALL ELECTRICAL UTILITIES FED/UNDERGROUND CONDUCTOR SHALL COMPLY WITH THE LATEST VERSION OF ARLINGTON COUNTY LIGHTING STANDARDS AND SPECIFICATIONS.

ARLINGTON VIRGINIA

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.
STREETLIGHT PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

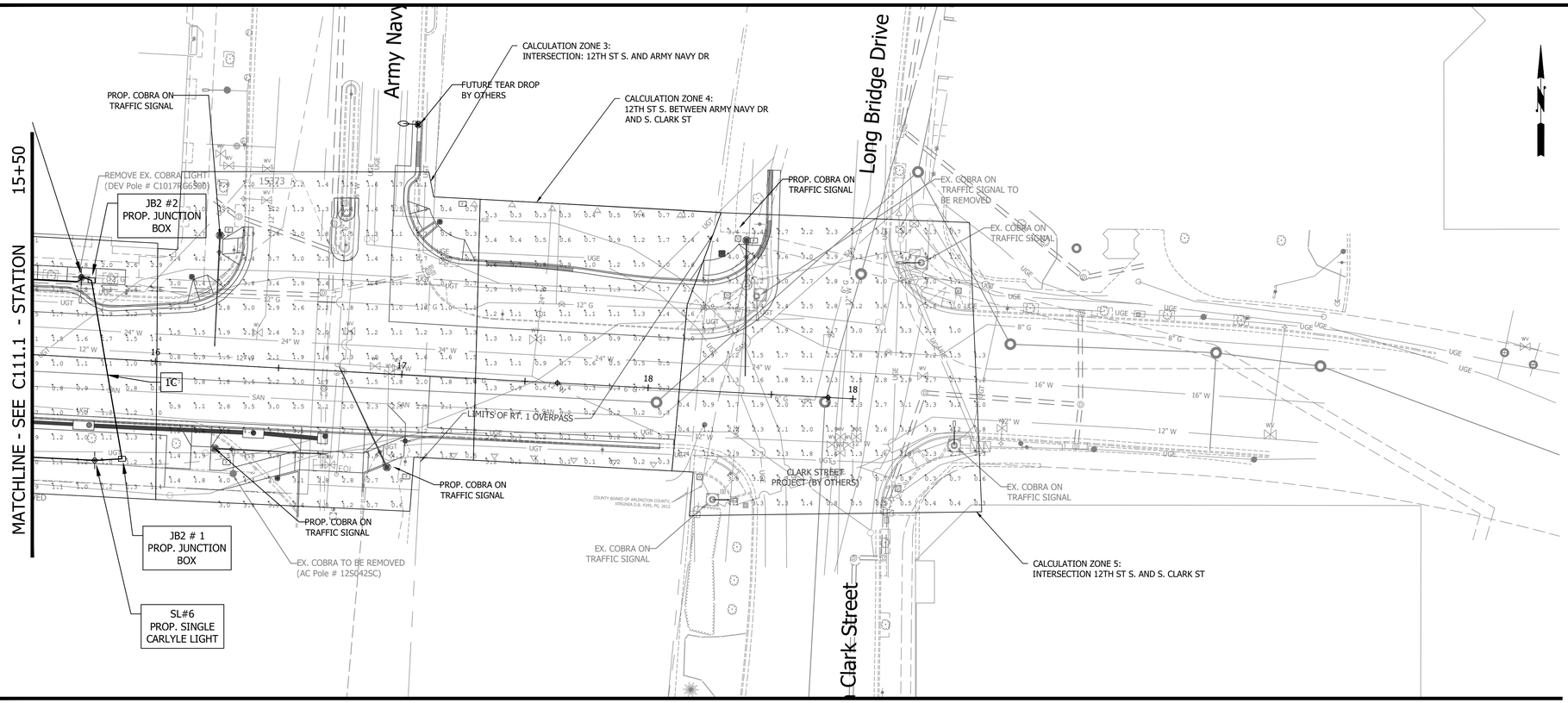
PLOTTED: MAY 17 2021

SCALE:
0 25 50
GRAPHIC SCALE

C111.1

FILENAME: CC16-275-STREETLIGHT_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

REVISED ON 01/07/2021



CONSTRUCTION NOTES AND LEGENDS:

SL# CONTRACTOR SHALL FURNISH AND INSTALL LED SINGLE POST-TOP LUMINAIRE FIXTURE ON 16' POLE, 24" DIA. AND 48" DEPTH FOUNDATION PER AC LIGHTING STANDARD DRAWING NO. 14060-01 & 14112-01 AND AC LIGHTING SPECIFICATION SECTION 14060, 14080 & 14112.

JB CONTRACTOR SHALL INSTALL JUNCTION BOX PER AC LIGHTING SPECIFICATION SECTION: JUNCTION BOXES AND LIGHTING STANDARDS DRAWING.
JB1 - SMALL JUNCTION BOX (DRAWING NO. 14040-01)
JB2 - LARGE JUNCTION BOX (DRAWING NO. 14040-02)

1C CONTRACTOR SHALL FURNISH AND INSTALL 1 - 2" SCHEDULE 40 PVC OR 1-2" SCHEDULE 80 HDPE/SDR11 CONDUIT 24" BELOW FINISH GRADE PER AC LIGHTING STANDARD DRAWING NO. 14030-01

STREETLIGHT CONTROL TABLE

STREETLIGHT CONTROL

SL #	POLE ID	STATION (12th Street S.)	OFFSET (℄ POLE)	TYPE
SL#1	12S0412S	11+78.4	41.9 (RIGHT)	SINGLE CARLYLE
SL#2	12S0410S	12+44.3	42.4' (RIGHT)	SINGLE CARLYLE
SL#3	12S0408S	13+28.1	41.5' (RIGHT)	SINGLE CARLYLE
SL#4	12S0406S	14+15.8	41.6' (RIGHT)	SINGLE CARLYLE
SL#5	12S0404S	15+00.5	41.8' (RIGHT)	SINGLE CARLYLE
SL#6	12S0402S	15+77.6	41.4' (RIGHT)	SINGLE CARLYLE

STREETLIGHT CONTROL

SL #	POLE ID	STATION 12th Street S.)	OFFSET (℄ POLE)	TYPE
SL#7	12S0401S	15+68.3	32.7' (LEFT)	SINGLE CARLYLE
SL#8	12S0403S	14+84.3	32.5' (LEFT)	SINGLE CARLYLE
SL#9	12S0405S	14+06.4	32.8' (LEFT)	SINGLE CARLYLE
SL#10	12S0407S	13+19.8	35.9' (LEFT)	SINGLE CARLYLE
SL#11	12S0409S	12+45.5	36.6' (LEFT)	SINGLE CARLYLE

Calculation Summary

Zone Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
1: Intersection: 12th St S and S Eads St	Illuminance	Fc	2.19	4.5	0.5	4.38	9.00
2: 12th St S between S Eads St and Army NavY Dr	Illuminance	Fc	0.95	3.7	0.3	3.17	12.33
3: Intersection: 12th St S and Army Navy Dr	Illuminance	Fc	2.03	4.8	0.3	6.77	16.00
4: 12th St S between Army Navy Dr and S Clark St	Illuminance	Fc	0.81	3.4	0.1	8.10	34.00
5: Intersection: 12th St S and S Clark St	Illuminance	Fc	2.25	4.6	0.3	7.50	15.33

STREETLIGHT JUNCTION BOXES CONTROL TABLE

STREETLIGHT CONTROL

JB # JUNCTION BOX ID	STATION 12th Street S.)	OFFSET (CENTER JUNCTION BOX)	TYPE
JB2 #1	15+88.6	40.3' (RIGHT)	LARGE JUNCTION BOX
JB2 #2	15+72.4	31.4' (LEFT)	LARGE JUNCTION BOX

CC16 - 12th STREET SOUTH_ SCHEDULE OF ELECTRICAL SERVICE

CIRCUIT NUMBER		STREETLIGHTS SERVED	CONNECTED LOAD KW	CONNECTED LOAD AMPS	PHASE AND VOLTS	BRANCH CIRCUIT BREAKER S	FRAME SIZE	TRIP SIZE	REMARKS
CKT - 1	RUN A/B	POLE NO. 1, 2 3, 4, 5, 6, 7, 8, 9, 10 and 11	0.759	6.33	1/120	2	100	20	11 - single luminaire carlyle pole (1 - 69W LED PER POLE)
		TOTAL	0.76	6.33					CARLYLE SINGLE LUMINAIRE LED = 0.48 AMPERE
									CARLYLE = 69 WATTS

PROJECT : CC16 - 12th Street South Complete Street Project 16-Feb-21

STREET LIGHT VOLTAGE DROP CALCULATION

Per AC Streetlight Standards and Specification - Acceptable Voltage Drop is 5% max at the furthest receptacle

Streetlight Types:
1. 11 each - Single Carlyle - 69W GX4 350mA Type V 4000K LED
Amperes required per LED Light is 0.48A

For #6 AWG copper cable, effective impedance used in the calculation is 0.3951 ohms/1000 ft.

CIRCUIT RUN # 1A - VOLTAGE DROP FROM EXISTING METER (SERIAL NO. XXXXXX) TO SIX (6) CARLYLE POLES (SL#1, #3, #5, #7, #9 & #11)

CKT #	FROM	TO	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. METER		5	#6 AWG	N/A	6	6.48	0.01
CKT1-1A	METER	SL#1	94	#6 AWG	1	1	1.08	0.04
CKT1-1A	SL#1	SL#3	150	#6 AWG	1	2	2.16	0.13
CKT1-1A	SL#3	SL#5	173	#6 AWG	1	3	3.24	0.22
CKT1-1A	SL#5	SL#7	166	#6 AWG	1	4	4.32	0.28
CKT1-1A	SL#7	SL#9	170	#6 AWG	1	5	5.40	0.36
CKT1-1A	SL#9	SL#11	170	#6 AWG	1	6	6.48	0.44
			Total Voltage Drop of Circuit Run # 1A at last pole (V):					1.48
			Percent Voltage Drop for Circuit Run # 1A at last pole:					1.24%

CIRCUIT RUN # 1B - VOLTAGE DROP FROM EXISTING METER (SERIAL NO. XXXXXX) TO FIVE (5) CARLYLE POLES (SL#2, #4, #6, #8 & #10)

CKT #	FROM	TO	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. METER		5	#6 AWG	N/A	5	5.40	0.01
CKT1-1B	METER	SL#2	160	#6 AWG	1	1	1.08	0.07
CKT1-1B	SL#2	SL#4	172	#6 AWG	1	2	2.16	0.15
CKT1-1B	SL#4	SL#6	162	#6 AWG	1	3	3.24	0.21
CKT1-1B	SL#6	SL#8	180	#6 AWG	1	4	4.32	0.31
CKT1-1B	SL#8	SL#10	170	#6 AWG	1	5	5.40	0.36
			Total Voltage Drop of Circuit Run # 1B at last pole (V):					1.10
			Percent Voltage Drop for Circuit Run # 1B at last pole:					0.92%

GENERAL NOTES:

1. CONDUIT RUN LOCATIONS ARE APPROXIMATE ONLY. FIELD LOCATE ALIGNMENT.
2. INSTALLING CONDUITS EITHER BY TRENCHING AND/OR BORING WILL BE AT THE CONTRACTOR DISCRETION. HOWEVER, AT ANY ROADWAY CROSSING E.G. INTERSECTIONS AND DRIVEWAY ENTRANCES SHALL BE INSTALLED BY BORING ONLY UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER. FOR THIS PROJECT, MEASUREMENT AND PAYMENT FOR TRENCHING AND/OR DIRECT BORE WILL BE CONSIDERED AS THE SAME UNIT BID PRICE.
3. CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 24" BELOW THE SURFACE.
4. CONTRACTOR SHALL COORDINATE LOCATION OF THE CONDUIT WITH THE PLACEMENT OF PROPOSED LANDSCAPING.
5. CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH DOMINION VIRGINIA POWER.
6. THE METERED SERVICE PEDESTAL SHALL BE MIDWEST COMPANY MODEL NUMBERS R281C1P6H OR R208CP6HP AND NO SUBSTITUTIONS WILL BE ALLOWED. SEE SECTION 14100: ELECTRICAL SERVICE FOR MORE DETAILS.
7. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO NEC STANDARDS.
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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
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Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

STREETLIGHT PLAN

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

0 25 50
HORIZ. SCALE

C111.2

FILENAME: CC16-275-STREETLIGHT_PLAN.DWG PATH: Q:\DATA\CC16\DESIGN\CAD\ACTIVE PLOTTED BY: CBALLO

TRANSPORTATION MANAGEMENT PLAN (TMP)
(TYPE B - CATEGORY IV)

Temporary Traffic Control Plan

MAINTENANCE OF TRAFFIC GENERAL NOTES:

UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THE FOLLOWING:

1. THE CONTRACTOR SHALL FOLLOW THE MAINTENANCE OF TRAFFIC (M.O.T.) REQUIREMENTS SET FORTH IN THIS PLAN. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH RELEVANT STANDARDS AND GUIDELINES AS SET FORTH IN THE LATEST ADOPTED VERSIONS OF THE FOLLOWING:

   2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2 - SEPTEMBER 1 2019)
   2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1 AND 2)
   2011 VIRGINIA SUPPLEMENT TO 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1)
   2016 VDOT ROAD AND BRIDGE STANDARDS
   2020 VDOT ROAD AND BRIDGE SPECIFICATIONS
   2016 VDOT LANE CLOSURE GUIDELINES FOR NORTHERN VIRGINIA (SEPTEMBER 21, 2016)
   2013 ARLINGTON COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS

2. ACCESS TO ALL ROADWAYS, DRIVEWAYS AND PROPERTIES SHALL BE MAINTAINED AND PROVIDED AT ALL TIMES.

3. PAVING DURING CONSTRUCTION PHASES SHALL BE CARRIED THROUGH BASE COURSE. FINAL SURFACE COURSE SHALL BE PLACED ONLY AFTER SUBSTANTIAL COMPLETION OF MAJOR PHASES.

4. CONSTRUCTION SIGNS ARE TO BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 512 OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.

5. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROMPTLY REMOVED AT THE COMPLETION OF WORK.

6. ALL TEMPORARY CONSTRUCTION PAVEMENT MARKING SHALL BE TYPE D, CLASS II.

7. REMOVAL OF EXISTING PAVEMENT MARKING SHALL BE ACCORDING TO SECTION 512.03 (J) OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.

8. THE CONTRACTOR IS REQUIRED TO MEET ALL OF THE DROP-OFF REQUIREMENTS SHOWN IN FIGURE 2 OF APPENDIX A OF THE VIRGINIA WORK AREA PROTECTION MANUAL. COST OF PLACING AND REMOVING THE WEDGE IS CONSIDERED INCIDENTAL.

9. ALL NEW AND TEMPORARY PAVEMENT MARKINGS SHALL TIE INTO THE EXISTING PAVEMENT MARKINGS AT TIE-IN POINTS. ALL OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED.

10. THE ALLOWABLE LANE CLOSURE HOURS SHALL BE IN ACCORDANCE WITH TABLE 1 SHOWN ON SHEET C120.2. THE CONTRACTOR WILL NOT BE ALLOWED TO PERFORM ANY LANE CLOSURES DURING PEAK HOURS. ALL TEMPORARY LANE CLOSURES MUST CONFORM TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL STANDARDS.

11. UNLESS PREAPPROVED OR OTHERWISE NOTED, ALLOWABLE HOURS FOR ALL LANE AND SHOULDER CLOSURES SHALL BE IN ACCORDANCE WITH THE INFORMATION SHOWN ON TABLE 1 ON SHEET C120.2, AND THE LANE CLOSURES IN NOVA DISTRICT MEMORANDUM, DATED SEPTEMBER 29, 2016.

12. ANY REQUEST FOR DEVIATION FROM THE ALLOWABLE LANE CLOSURE HOURS MUST BE SUBMITTED TO VDOT AND ARLINGTON COUNTY FOR REVIEW A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WORK.

13. LANE AND SHOULDER CLOSURE HOURS OF OPERATION MAY BE ADJUSTED BY VDOT AND ARLINGTON COUNTY DURING THE CONTRACT AT ANY TIME, AS NECESSARY, IF HEAVY VOLUME OR SIGNIFICANT QUEUING ROUTINELY DEVELOP AS A RESULT OF THE PROJECT.

14. WHEN SHOULDER CLOSURES WITH BARRIER OPERATIONS ARE PERFORMED THE CONTRACTOR MUST CONFORM TO 2011 VIRGINIA WORK AREA PROTECTION MANUAL TTC-7.1 STANDARD. BARRIER MUST INCLUDE PANELS, DELINEATORS AND LIGHTS IN ACCORDANCE WITH TTC-7.1.

15. TEMPORARY CONNECTIONS AND PHASED CONSTRUCTION SHALL BE CONSTRUCTED AND COMPLETED IN A MANNER WHICH WILL MINIMIZE DISRUPTION OF TRAFFIC.

16. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED BY THE CONTRACTOR AS NECESSARY FOR EACH PHASE. THE MESSAGES ON THE PCMS SHALL BE DISPLAYED UPON APPROVAL FROM VDOT AND ARLINGTON COUNTY ENGINEER. THE FIRST MESSAGE SHALL BE DISPLAYED THREE (3) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION TO NOTIFY THE PUBLIC OF THE DATE CONSTRUCTION WILL BEGIN. ANY CHANGE OF TRAFFIC PATTERNS MUST ALSO BE COMMUNICATED VIA PCMS THREE (3) WEEKS PRIOR TO THE START OF THOSE CHANGES.

17. AS DETAILED IN SECTION 105.14(b) OF THE 2020 ROAD AND BRIDGE SPECIFICATIONS, REMOVAL OF SNOW AND CONTROL OF ICE ON ROADS OPEN TO PUBLIC TRAVEL WILL BE PERFORMED BY VDOT FOR VDOT ROADWAYS. FOR COUNTY ROADS, THE OPERATION WILL BE PERFORMED BY THE ARLINGTON COUNTY.

18. THE CONTRACTOR MUST NOTIFY AND/OR COORDINATE WITH THE VARIOUS LOCAL AREA EMERGENCY SERVICES (AND SCHOOLS, DEPENDING ON TIME OF YEAR) OF ALL CLOSURES, TIMES AND ANY DETOUR ROUTES FOR SITUATIONAL AWARENESS.

19. CONTRACTOR SHALL ONLY REFER TO AND FOLLOW THE SOC SHOWN ON THIS PLAN. ANY DEVIATION FROM THE SOC SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

20. CONTRACTOR SHALL BE RESPONSIBLE OF INSTALLING APPLICABLE WORK ZONE SIGNS PER VA WAPM TTC 35.1 AND 36.2 FOR ALL SIDEWALK AND CROSSWALK CLOSURES DURING CONSTRUCTION.

21. THE CONTRACTOR SHALL NOT BEGIN ANY LANE AND/OR SHOULDER CLOSURES IF HEAVY TRAFFIC OR SIGNIFICANT QUEUING AND BACKUPS ARE ALREADY PRESENT.

22. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.

23. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY ENGINEER SHALL RESTRICT PARKING BY CONTACTING THE DES - PERMITTING SECTION AT 703-228-4798.

24. DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.

25. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE ENGINEER. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.

26. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL OR AS APPROVED BY THE ENGINEER.

27. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS SHOWN OTHERWISE ON THE PLANS.

28. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH THE MUTCD.

29. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER THE ADA REQUIREMENTS.

30. WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MID-BLOCK WORK SITES.

31. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.

32. 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.

33. 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.

34. 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.

35. THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO THE TRANSIT STOPS OR ROUTES. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE A MINIMUM OF 11' WIDE UNLESS SHOWN OTHERWISE ON THE PLANS.

36. AT SIGNALIZED INTERSECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT. TRAFFIC SENSORS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF THIS PROJECT. THIS PAY ITEM IS COVERED UNDER THE PROPOSED TRAFFIC SIGNALS WORK.

37. CONTRACTOR SHALL COVER ANY EXISTING TRAFFIC SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THE MOT PLANS.

38. CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.

39. CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.

40. CONTRACTOR SHALL PROVIDE 1 WEEK ADVANCE NOTIFICATION TO THE ARLINGTON COUNTY SIGNAL CONSTRUCTION MANAGER, TRANSPORTATION ENGINEERING AND OPERATION (TE&O) PRIOR TO CHANGING THE MOT PHASES AND/OR STAGES.

41. IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDE THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY VDOT AND ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O). THE MOT PLAN CONTAIN TYPES OF SIGNAGES AND BARRICADES USED, AND RECOMMENDED PHASES AND SEQUENCES OF CONSTRUCTION.

42. EACH MOT PHASE AND STAGE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE/STAGE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

43. CONTRACTOR SHALL MAINTAIN A MINIMUM OF SINGLE TRAVEL LANE AT ALL TIMES DURING CONSTRUCTION WITH A MINIMUM CLEAR ROADWAY WIDTH NO LESS THAN THOSE SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

44. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COSTS FOR PLACING, MAINTAINING AND REMOVING BACKFILLED MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR RELATED ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

45. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.

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

47. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AS DEFINED IN THE VA WAPM SHALL BE MAINTAINED.

48. ALL WORK AREAS (AND THE LIMITS THEREOF) AND LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL, (REVISION 2), THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 1 AND 2), THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS, (REVISION 2), THE 2008 VDOT ROAD AND BRIDGE STANDARDS AND LANE CLOSURES IN NOVA DISTRICT MEMORANDUM (SEPTEMBER 29 2016), AND SHALL BE DIRECTED OR APPROVED BY THE ENGINEER.

49. THE FOLLOWING TRAFFIC CONTROL SPECIFICATIONS FROM THE VIRGINIA WORK AREA PROTECTION MANUAL WILL BE USED AS NEEDED: TTCS-4.2, 16.2, 17.2, 28.2, 35.1, 36.2, 53.0, 57.2, 58.1.

50. THE STAGING AREA TO STORE EQUIPMENT AND MATERIALS WITHIN THE RIGHT OF WAY ARE NOT IDENTIFIED FOR EACH MOT PHASE. THE CONTRACTOR MUST MAKE ARRANGEMENTS FOR THESE AREAS ACCORDING TO VDOT POLICIES.

51. HAULING TRUCKS ENTERING AND EXITING THE WORK ZONE MUST HAVE A "WORK VEHICLE DO NOT FOLLOW" (G20-V1) VEHICLE-MOUNTED SIGN MOUNTED IN A CONSPICUOUS POSITION ON THE REAR OF THE VEHICLE ENTERING THE WORK SPACE TO LOAD/UNLOAD MATERIALS.

52. UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.

53. THE TRANSPORTATION MANAGEMENT PLAN AND TEMPORARY TRAFFIC CONTROL / SEQUENCE OF CONSTRUCTION (TMP/TTC) IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE OR STAGE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. ANY CHANGES TO THE TMP/TTC PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION THAT MAY AFFECT THE EXISTING TRAFFIC.

54. PAVEMENT MARKINGS IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE ERADICATED/COVERED IN COMPLIANCE WITH VDOT'S ROAD AND BRIDGE SPECIFICATIONS SECTION 512.03(L).

55. THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING ROADWAYS AND COMMERCIAL/RESIDENTIAL ENTRANCES DURING CONSTRUCTION WITH TRAFFIC DRUMS OR OTHER CHANNELIZING DEVICES AS DIRECTED BY THE ENGINEER.

56. THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF SIGNS REMOVAL IS ALLOWED, CONTRACTOR SHALL STORE THE SIGNS PER VDOT STANDARDS. DEPENDING ON THE CONDITION OF THE CONSTRUCTION SIGNS, CONTRACTOR MAY BE REQUIRED TO REPLACE THEM IF DIRECTED BY THE ENGINEER.

57. ALL WORK VEHICLES SHALL BE EQUIPPED WITH WARNING LIGHTS WHICH SHALL BE A HIGH INTENSITY AMBER ROTATING, FLASHING, OSCILLATING OR STROBE LIGHT OR IN COMBINATION. THESE WARNING LIGHTS SHALL MEET THE STANDARDS AND REQUIREMENTS OF THE VA WAPM SHOWN IN SECTION 6F.95.

58. TEMPORARY LANE WIDTHS SHALL NOT BE LESS THAN 11' FOR TRAVEL LANES UNLESS NOTED OTHERWISE ON PLANS.

59. THE CONTRACTOR SHALL STORE ALL EQUIPMENT AND MATERIALS BEHIND BARRIERS/TRAFFIC DRUMS AND NOT WITHIN THE ESTABLISHED CLEAR ZONE OF THE TRAVEL LANES AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS.

60. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR THE MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.

61. THE RECOMMENDED PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) MESSAGES AS ADVANCE NOTIFICATION OR AS PART OF THE LANE CLOSURE/DETOUR DURING CONSTRUCTION ARE SHOWN ON EACH APPLICABLE PLAN SHEET. ALL PCMS UNITS SHOWN ON PLANS SHALL BE PLACED THREE (3) WEEKS PRIOR TO THE START OF EACH MOT SUB-PHASE AS ADVANCE NOTIFICATION. AFTER THE ADVANCE NOTIFICATION, ALL PROPOSED PCMS UNITS SHALL REMAIN AT THE RECOMMENDED LOCATION FOR ONE (1) WEEK AND WILL BE ACTIVATED FOR USE DURING LANE CLOSURE/DETOUR ONLY.

62. CERTIFIED FLAGGERS SHALL CARRY VALID CERTIFICATION CARDS AT ALL TIMES DURING CONSTRUCTION.

63. THE CONTRACTOR SHALL COORDINATE WORK AT COMMERCIAL/RESIDENTIAL ENTRANCES WITH AFFECTED PROPERTY AND BUSINESS OWNERS. CONTRACTOR SHALL ADHERE TO THE NOTES PROVIDED ON THIS PLAN SHEET, IN ADDITION TO THE GENERAL NOTES PROVIDED ON TTC PLAN SHEET C120.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.

64. THE CONTRACTOR SHALL PERFORM NECESSARY ADJUSTMENT DURING BOTH WORKING AND NON-WORKING HOURS TO ENSURE THE PROTECTION AND SAFETY OF ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT AND THE CONSTRUCTION SITE ITSELF.

65. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS PEDESTRIAN ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.

66. THE CONTRACTOR SHALL NOT LEAVE ANY PORTION OF THE WORK ZONE WITH ANY OPEN TRENCHES UNATTENDED WHERE BARRIER IS NOT PRESENT. ON AREAS WHERE BARRIER IS NOT PRESENT, THE CONTRACTOR SHALL NOT MAKE PAVEMENT EXCAVATIONS OR OPENINGS TO A GREATER EXTENT THAT CANNOT BE REPLACED AND REPAVED DURING THE SAME WORKING DAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.

67. THE CONTRACTOR SHALL PROVIDE SHADOW VEHICLE PARKED AT 80-120 FEET IN ADVANCE OF THE FIRST WORK CREW WITH TYPE B ARROW BOARD IN CAUTION MODE OR AT LEAST ONE HIGH INTENSITY AMBER ROTATING, FLASHING OR OSCILLATING LIGHT.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION (SOC) OF THESE MAINTENANCE OF TRAFFIC PLANS CONSISTS OF THE WORK FOR BOTH CC16 12TH STREET S. BETWEEN S. EADS ST AND S. CLARK ST, AND MA13 - SEGMENT I TRANSITWAY EXTENSION TO PENTAGON CITY AT CRYSTAL DR. AND 12TH ST S PROJECTS. THE SOC FOR PHASE 1 ARE FOR ONE OF THE PROPOSED BUS STATIONS IN PROJECT MA13 - SEGMENT 1, WHILE THE REMAINING PHASE 2 AND PHASE 3 SOC ARE FOR PROJECT CC16. CONTRACTOR SHALL OBTAIN A COPY OF THE FINAL MA13 - SEGMENT 1 CONSTRUCTION PLANS FROM THE ENGINEER AND PLAN THE WORK FOR BOTH PROJECTS ACCORDINGLY.

PHASE 1A: CONSTRUCT BUS SHELTER, CATCH BASIN, RCP PIPES AND SIDEWALKS AS PART OF PROJECT MA13 - SEGMENT I.
1. CLOSE THE EXISTING WB 12TH STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE) PER 2011 VA WAPM, REVISION 2 (SEP 1, 2019).
2. CLOSE THE EXISTING SIDEWALKS AS SHOWN ON PLANS WITH WATER-FILLED JERSEY BARRIERS AND DIVERT PEDESTRIANS ONTO THE PROPOSED 5 FEET PATHWAY.

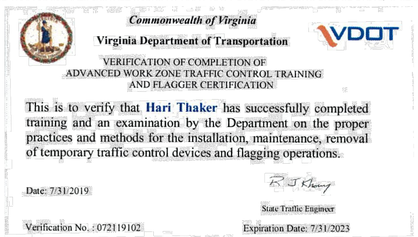
PHASE 1B: CONSTRUCT ADA RAMP AND REMAINING SIDEWALKS AS PART OF PROJECT MA13 - SEGMENT I.
1. CONTINUE TO CLOSE THE EXISTING WB 12TH STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE).
2. CLOSE THE PROPOSED RAMP AREA AT THE NE QUADRANT AS SHOWN ON PLANS.
3. MAINTAIN 5 FEET PEDESTRIAN ACCESS ON SIDEWALKS.
4. CLOSE THE EAST LEG CROSSWALK USING TYPE III BARRICADE AND WORK ZONE SIGNS PER TTC-36.2 TO DIVERT PEDESTRIANS ACROSS 12TH STREET S.

PHASE 1C: CONSTRUCT BUS PAD AND INSTALL PAVEMENT MARKINGS AND SIGNS AS PART OF PROJECT MA13 - SEGMENT I.
1. CONTINUE TO CLOSE THE EXISTING WB 12 STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE).
2. MAINTAIN MINIMUM OF 5 FEET PEDESTRIAN ACCESS ON SIDEWALKS.

PHASE 2A: CONSTRUCT STORMWATER STRUCTURES, ALL UNDERGROUND UTILITIES, AND CURB AND GUTTERS.
1. CLOSE THE EXISTING PARKING LANES ON BOTH EB AND WB 12TH STREET S BETWEEN S. EADS STREET AND ARMY NAVY DRIVE USING TTC-4.2 AS SHOWN ON PLANS.
2. CLOSE PARTIAL NORTHERN SIDEWALKS UNDER US 1 (RICHMOND HIGHWAY) BETWEEN ARMY NAVY DRIVE AND LONG BRIDGE DRIVE/ S CLARK STREET AS SHOWN ON PLANS.
3. PROVIDE FLAGGERS TO MAINTAIN ACCESS TO PRIVATE PARKING GARAGE ENTRANCE (ACROSS ARMY NAVY DRIVE) DURING CONSTRUCTION. THIS PARKING GARAGE ENTRANCE SHALL BE FULLY OPEN FOR ACCESS BEFORE THE END OF EACH WORK DAY.
4. MAINTAIN 5 FEET MINIMUM PEDESTRIAN PATHWAY ON BOTH NORTHERN AND SOUTHERN SIDEWALKS AS SHOWN ON PLANS.
5. MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING CONSTRUCTION.

PHASE 2B: CONSTRUCT REMAINING DRIVEWAYS, SIDEWALKS, RAMPS AND MEDIAN ON THE NORTH SIDE OF 12TH STREET S.
1. CONTINUE TO CLOSE THE NEWLY CONSTRUCTED WB 12TH STREET S PARKING LANE WITH WATER-FILLED JERSEY BARRIERS TO PROVIDE THE MINIMUM 5-FEET PEDESTRIAN PATHWAY AS SHOWN ON PLANS.
2. CLOSE THE EB ARMY NAVY DRIVE INSIDE LANE USING TTC-17.2 AS SHOWN ON PLANS TO CONSTRUCT THE MEDIAN NOSE AT THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE. THE MEDIAN NOSE REMOVAL AND INSTALLATION WORK SHALL BEGIN AT THE END OF PHASE 2B CONSTRUCTION AS NOTED ON PLANS.
3. MAINTAIN 5-FEET MINIMUM PEDESTRIAN PATHWAY ON BOTH NORTHERN AND SOUTHERN SIDEWALKS AS SHOWN ON PLANS.
4. MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING CONSTRUCTION.

PHASE 3: PERFORM MILLING AND PAVING OPERATIONS, SIGNING AND PAVEMENT MARKINGS, AND TRAFFIC SIGNALS INSTALLATIONS.
1. PRIOR TO STARTING PHASE 3 CONSTRUCTION WORK OR IMMEDIATELY AFTER PHASE 2B, THE CONTRACTOR SHALL PROVIDE THE TEMPORARY MARKINGS AND TRAFFIC SIGNALS AT THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE AS SHOWN ON PLANS TO PROVIDE THE INTERIM TRAFFIC SIGNALIZATION AND MAINTAIN THE NORTH CROSSWALK AT THE INTERSECTION.
2. THE CONTRACTOR SHALL REFER TO ALL ASSOCIATED NOTES SHOWN ON SHEET C123.1 FOR THE THE INTERIM TRAFFIC SIGNALIZATION SHOWN FOR THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE DURING CONSTRUCTION.
3. BEGIN MILLING/PAVING OPERATIONS BY CLOSING THE OUTSIDE LANES ON 12TH STREET S WITHIN PROJECT LIMITS USING TTC-16.2 PER 2011 VA WAPM, REVISION 2 (SEP 1, 2019).
4. MILL THE OUTSIDE LANES ON 12TH STREET S WHILE MAINTAINING THE TRAFFIC ON INSIDE LANES.
5. CLOSE THE INSIDE LANES ON 12TH STREET S USING TTC-17.2 PER 2011 VA WAPM REVISION 2 (SEP 1, 2019).
6. MILL THE INSIDE LANES ON 12TH STREET S WITHIN PROJECT LIMITS WHILE MAINTAINING THE TRAFFIC ON OUTSIDE LANES.
7. MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING CONSTRUCTION.
8. INSTALL PROPOSED SIGNS AND PAVEMENT MARKINGS PER THE FINAL SIGNING AND PAVEMENT MARKING PLANS.
9. COMPLETE THE TRAFFIC SIGNALS INSTALLATIONS AT ARMY NAVY DRIVE AND LONG BRIDGE DRIVE/ S CLARK STREET.


Commonwealth of Virginia
Virginia Department of Transportation
VDOT
VERIFICATION OF COMPLETION OF
ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING
AND FLAGGER CERTIFICATION

This is to verify that **Hari Thaker** 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.

Date: 7/31/2019
State Traffic Engineer
Verification No. : 072119102
Expiration Date: 7/31/2023

ARLINGTON
VIRGINIA

DEPARTMENT OF
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4-22-2021
PROFESSIONAL ENGINEER

Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER
Kamal Taktak 4.29.21
CONSTRUCTION MANAGEMENT SUPERVISOR
05.10.2021
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 05/17/21
TRANSPORTATION DIRECTOR
4/26/21
PROJECT MANAGER

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

MAINTENANCE OF TRAFFIC
TRANSPORTATION MANAGEMENT PLANS

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:

C120.1

REVISED ON 01/07/2021
FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

TRANSPORTATION MANAGEMENT PLAN (TMP)
(TYPE B - CATEGORY IV)

Temporary Traffic Control Plan

TEMPORARY TRAFFIC CONTROL PLAN

This project shall have a Type B, Category IV TMP in accordance with VDOT's Location and Design Division IIM-LD 241.7/TE 351.5. The components of the Temporary Traffic Control Plan (TTCP) include detailed plans, notes, typical sections and cross sections.

TMP REQUIREMENTS

During the first day of each MOT phase and/or stage, the Engineer and Construction Manager shall inspect the work zone to ensure the temporary traffic control setting is in compliance with the TMP. On the third to fifth day of the TMP implementation, the Construction Manager 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.

The following TMP requirements shall be provided as incidental items to the project:

1. Designate a person assigned to the project who will have the primary responsibility, with sufficient authority, for implementing the TMP and other safety and mobility aspects of the permit work. This person shall coordinate with the Arlington County Construction Manager and VDOT for the duration of construction.

2. Ensure that personnel assigned to the project are trained in traffic control to the level commensurate with their responsibilities in accordance with VDOT's work zone traffic control training guidelines.

3. Perform reviews of the Construction Area to ensure compliance with contract documents at regularly scheduled intervals at the direction of the Engineer. Maintain a copy of the temporary traffic control plans at the work site at all times.

4. Schedule all phases of construction in such a manner that all above and under ground utilities and facilities including electric, gas, water, storm sewer, sanitary sewer, traffic signals, lighting, telecommunication and other communication will not be interrupted during construction.

SPECIAL DETAILS

1. The VDOT Engineer reserves the right to monitor traffic conditions impacted by the work and the VDOT Engineer shall have the authority to impose additional restrictions for other holidays or special local events as determined necessary in the event that safety or other conditions warrant. VDOT has the authority to change or alter the work time frame(s) accordingly.

2. For towing and traffic enforcement within the approved construction site, the Contractor shall contact the local police contacts (as listed in the Incident Response Section of the Transportation Operations Plan).

ESTIMATED CONSTRUCTION SCHEDULE

To be provided by the Contractor

DETAIL PLANS / DETAIL DRAWINGS

- Sequence of Construction.
- Location of Work zones.
- Type and location of temporary lane usage and markings during construction closures.
- Type and location of temporary traffic control devices.
- Reference to TTC figures to be used during different phases of Construction.

DETOUR ROUTE

Not Applicable

TYPICAL SECTIONS

The typical sections to be used during construction vary along the project corridor and are shown within the plan sheets. See MOT sheets. Travel lanes with a minimum width of 11' are to be maintained during all construction operations along 12th Street S. unless noted otherwise on plans.

LIMITATIONS OF OPERATION

All work areas (and the limits thereof) and lane closures shall be in accordance with the 2011 Virginia Work Area Protection Manual and Lane Closures in NOVA District Memorandum (September 29, 2016), and shall be directed or approved by the Engineer. The Department reserves the right to change work when such changes are in the best interest of the traveling public. The Contractor shall not conduct operations when the weather causes unsafe conditions for the traveling public as determined by the Engineer. Lane closure restrictions are listed in Table 1 on this sheet.

Additional lane closures or work that restricts traffic flow will not be permitted on holidays from the day before a holiday until the day after the holiday, unless otherwise approved by VDOT. When a holiday falls on a Friday, additional lane closures are not permitted from Thursday through Monday. When a holiday falls on a Monday, additional lane closures are not permitted from Friday through Tuesday. Furthermore, as the Thanksgiving Day holiday occurs on a Thursday, work will not be permitted from Wednesday until 9:30 a.m. on the following Monday.

TRANSPORTATION OPERATIONS PLAN

The Transportation Operations Plan documents the processes used in the event of an incident within the work zone. This plan includes:

1. Notification process to the Traffic Operations Center
2. Emergency response agencies contact list
3. Procedures to respond to traffic incidents in work zones
4. Procedures to clear incidents

Incident Management procedures are area and situation specific; however, follow National Incident Management System (NIMS) guidelines. The implementation of the processes is the responsibility of the field TMP manager.

1. Notification Process to the Traffic Operations Center

VDOT must review and approve all lane closures for interstate highways and all state maintained roadways.

VDOT has a "Limitations of Operations/Maintenance of Traffic" document that governs all work zones for interstate highways and all state maintained roadways. This document stipulates the acceptable lane closure times, number of required lanes to be in operation as well as other pertinent information regarding what is expected within the work area.

All lane closures are submitted by the Contractor via VDOT's "Lane Closure Advisory Management System" (LCAMS) website at http://vdot.openlcams.com. LCAMS provides a collaborative method to plan and monitor projects, resolve conflicts, and exchange information about existing and scheduled activities across the region. Each user (the Contractor) is granted access after training and the website is open to the public to view closures.

All lane and/or shoulder closures shall be entered into LCAMS at least ten (10) days in advance and shall not be later than close of business Wednesday the week prior to the scheduled lane closure(s). When proposed closures information including location, purpose, specific lane(s) to be closed, time and duration of closure are entered into the LCAMS, the program will alert the contractor/user regarding other work scheduled at that proposed time duration and closures in the vicinity areas. Any conflicts generated from LCAMS shall be resolved by contractor/user no later than close of business Thursday the week prior to the scheduled closure(s).

On the day the closure is scheduled, the inspector is responsible for calling the Arlington County Traffic Management Center (TMC) at (703) 228-5000 and VDOT Traffic Operations Center (TOC) at (703) 877-3449 to confirm the lane closure start/end times for each day of work. The contractor must contact the County and VDOT Northern Region Transportation Operations Center (TOC) 15-45 minutes prior to executing lane and/or shoulder closures and contact TOC once work has been completed and lane and/or shoulder closures have been removed. If scheduled work is no longer going to take place, the inspector shall notify TOC as soon as possible. The contractor shall be responsible for maintaining project lane closure information on LCAMS and VaTraffic throughout the duration of the project in accordance with IIM-OD-16-03, dated December 16, 2016.

.. Emergency Response Agencies Contact List

VDOT's NRO (Northern Region Operations) TOC - (703) 877-3449
Arlington County Traffic Management Center (TMC) - (703) 228-5000
Virginia State Police - (703) 845-6300
Arlington County Police - (703) 558-2222
911 Emergency Center - 911
Project Construction Manager - (XXX) XXX-XXXX

Arlington County
Construction Management Supervisor, DES - Kamal Taktak (703) 228-7527
DES Operation Manager, TE&O - Scott Sedwick (703) 228-0650
Assistant Bureau Chief, Engineering Bureau, DES - Adil Chauhan (703) 228-7542
DES R-O-W Permitting Section - (703) 228-4798
Transit Bureau - (703) 228-3049
Water, Sewer and Street Operation - (703) 228-6555

3. Notification Process for Incidents and Related Traffic Delays

Throughout the County and VDOT NOVA District, the ITS and TOC control room operators monitor traffic flow and are able to quickly detect traffic delays and incidents on the interstate, highways, and bridges. When traffic slows due to an incident, control room operators are then able to send this information to VA511 and the HAR and activate electronic message signs to immediately notify commuters and travelers of current roadway conditions. The TOC operators also contact emergency personnel if needed and dispatch Safety Service Patrol (SSP).

In case of an emergency, 911 should be called immediately. Once 911 has been notified, the contractor will immediately notify VDOT of the event, who will then distribute the information to the appropriate agencies through their communications networks.

In the case of a non-emergency incident or an unexpected traffic disruption that does not require emergency personnel (i.e. utility break, construction delay, etc.), the contractor will contact VDOT immediately, who will then distribute the information to the appropriate agencies through their communications networks. In addition to Emergency Responders listed in Section 2, Public Safety and Emergency Management officials should be notified of impacts arising from traffic incidents and other construction activities.

4. Procedures to Clear Incidents

The following is a set of procedures and a list of local emergency contact agencies that shall be communicated with in the event of traffic incidents that occur in the Work Zone:

a) Contractor will notify State (or local) Police and the Arlington County Coordinator and Construction Manager in Charge at numbers listed on this plan.
b) Depending upon the severity of an incident, the contractor may have to shut down work. Lane closures or shoulder work should not begin if heavy traffic or significant queuing and backups are already present.
c) Upon arrival on scene, State Police will determine the response necessary to guide the traveling public around the incident. Local Police can assist in controlling traffic on ramps or along side streets.
d) Inspector will notify Construction Manager (County and Contractor) and Area Construction Engineer of an incident and take pictures as necessary, especially pictures of contractor's Work Zone to verify the proper setup.
e) Process for notification of incident includes the Contractor calling:

   i. Project/Maintenance of Traffic Coordinator - Contractor To Provide
   ii. Construction Manager - Contractor To Provide
   iii. Project Construction Manager - (XXX) XXX-XXXX
   iv. District Work Zone Safety Coordinator - Brian Fry (703) 259-2394
   v. District Traffic Engineer - Ivan Horodyskyj (703) 259-2330
   vi. District Public Affairs Manager - Jenni McCord (703) 259-2926

f) The State (or local) Police report of the incident will be reviewed by the Area Construction Engineer to determine if any modifications of the Temporary Traffic Control Plans are necessary. If it is determined that it is necessary to alter the plan, a meeting will be called with the contractor, the Area Construction Engineer, Arlington County personnel, Construction Manager, VDOT traffic safety representatives and the State (or local) Police (if necessary) to discuss modification and implementation of an improved traffic control plan. The contractor must continually monitor lane closures and/or detour routes and make spot adjustments as needed/available to ease undue backups, delays, or queuing.

PUBLIC COMMUNICATIONS PLAN

Once this TMP and related TTCPs are approved by the County and VDOT, the contractor shall submit four (4) sets of all relevant information necessary for the proposed closures to the Department thirty (30) days in advance of establishing the work zone. The department will review and offer comments. A pre-activity meeting with the contractor will be held by the Project Management Team to address any deficiencies and finalize the timeline. As part of this pre-activity meeting, the Project Management Team shall enlist the input of all outside entities that will participate in or be affected by the lane closures. These parties shall include: VDOT to review TTCPs; VDOT's Traffic Operations Center (TOC) to aid in alerting the public as well as offer alternate routes; Virginia State and Local Police; and VDOT Public Affairs to coordinate the dissemination of information to the public.

Arlington County will begin the public outreach effort following the successful completion of the pre-activity meeting concerning sequence of construction work. The public outreach information will include, but not limited to lane closures, detour routes and traffic delays. Such information will be provided before and during work deployment as required. Methods to communicate work zone information may include, but not be limited to, direct mailings, public meetings, newsletters, flyers, portable message signs, 511 system, project website, and/or media.

As part of the public outreach and communication the following shall occur:

1. The contractor will be required to have weekly coordination meetings with the Arlington County in order to provide the County with updates for distribution. This meeting will cover any potential design changes and/or other types of changes which may impact the traffic operations through the projects.

2. Arlington County will provide information to road users, the general public, area residents and appropriate public entities regarding the project, the impacts expected from the project's work zones as well as changing conditions on the project.

The following shall occur upon the implementation of lane closures:

1. The Project Management Team will observe traffic movement.
2. The Project Management Team will monitor any complaints and or comments received by the Public Affairs office.
3. The Project Management Team will review observations, complaints and comments to examine if additional measures are warranted.

Roles and Responsibilities

The County Communication Strategy and Plan will be directed by the Arlington County Project Manager and his project team. The following are the key personnel of the 12th Street S. between S. Eads St and S. Clark St (CC16), and Transitway Extension to Pentagon City at Crystal Dr and 12th St S. (MA13 - Segment 1) projects who will be the point of contact for all communications, issues and disputes throughout construction:

Project Management and Media Inquiries
Project Manager (CC16) - Mark Dennis (703) 228-3916
Project Manager (MA13) - Diana Isaza (703) 228-4523
Media Specialist (CC16 & MA13) - Eric Balliet (703) 228-3770

Project Design for CC16 & MA13
Design Engineer Team Supervisor - Trevor Lantzy (703) 228-0596
Design Engineer - Christopher Balallo (703) 228-3474

Local Business Coordinator--The County media specialist will be responsible to reach out to local business organization (e.g. National Landing (formerly the Crystal City BID)), other business organizations and businesses prior to and throughout the construction.

TABLE 1: ALLOWABLE LANE CLOSURE HOURS

VDOT R-O-W:	LANE CLOSURES (MAJOR ARTERIALS)			
	MON. TO THU.	FRIDAY	SATURDAY	SUNDAY
DAY TIME	9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	*Not Allowed	*Not Allowed
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed	*Not Allowed

Arlington County R-O-W:	LANE CLOSURES (MINOR ARTERIAL)		
	MON. TO FRI.	SATURDAY	SUNDAY
DAY TIME	9:00 AM TO 4:00 PM	*Not Allowed	*Not Allowed
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed

ARLINGTON
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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
4-22-2021
PROFESSIONAL ENGINEER

Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER
Kamal Taktak 4.29.21
CONSTRUCTION MANAGEMENT SUPERVISOR
05.10.2021
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 05/17/21
TRANSPORTATION DIRECTOR
4/26/21
PROJECT MANAGER

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

MAINTENANCE OF TRAFFIC
TRANSPORTATION MANAGEMENT PLANS

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

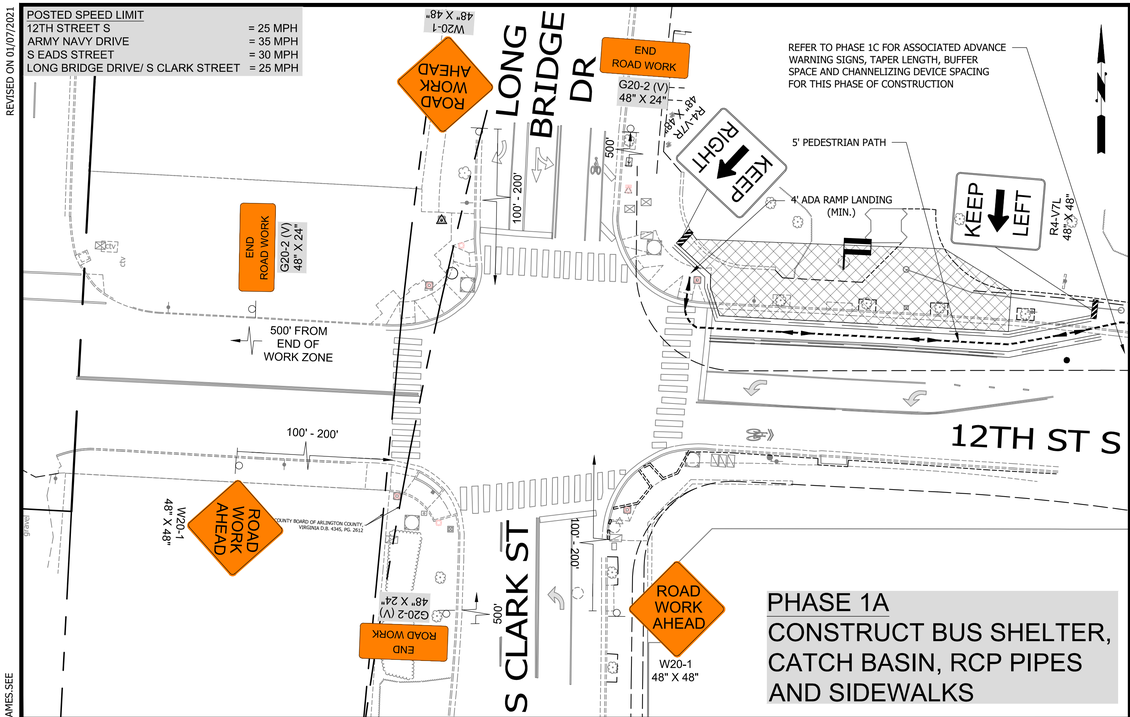
SCALE:

C120.2

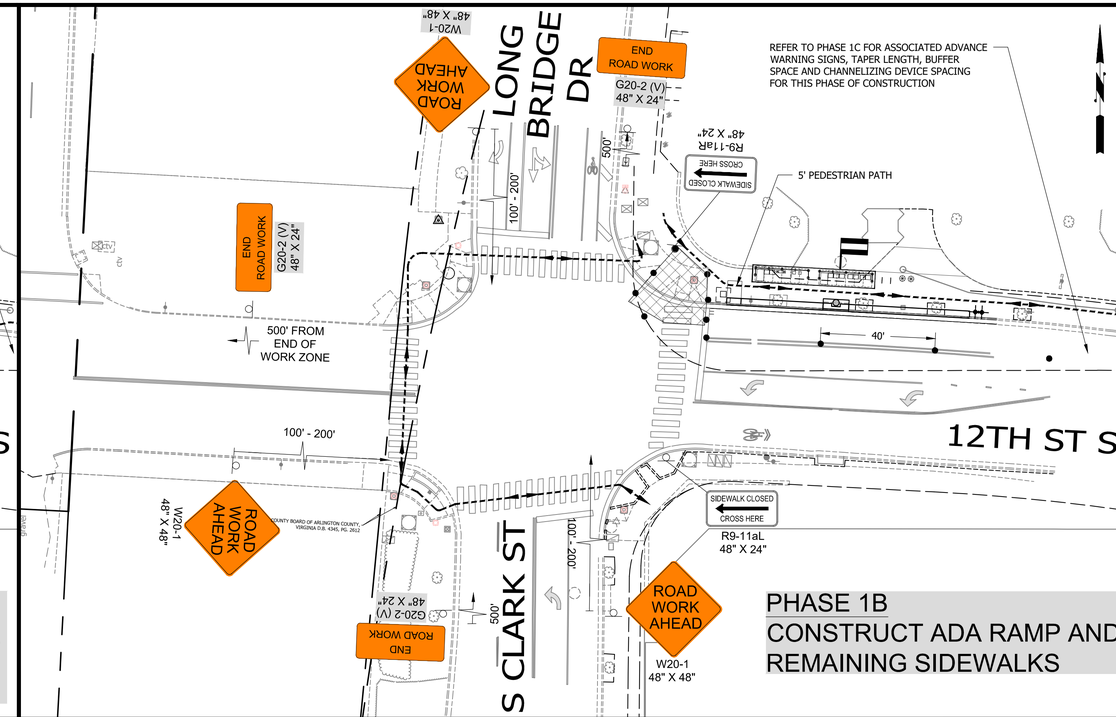
REVISED ON 01/07/2021
FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

REVISED ON 01/07/2021

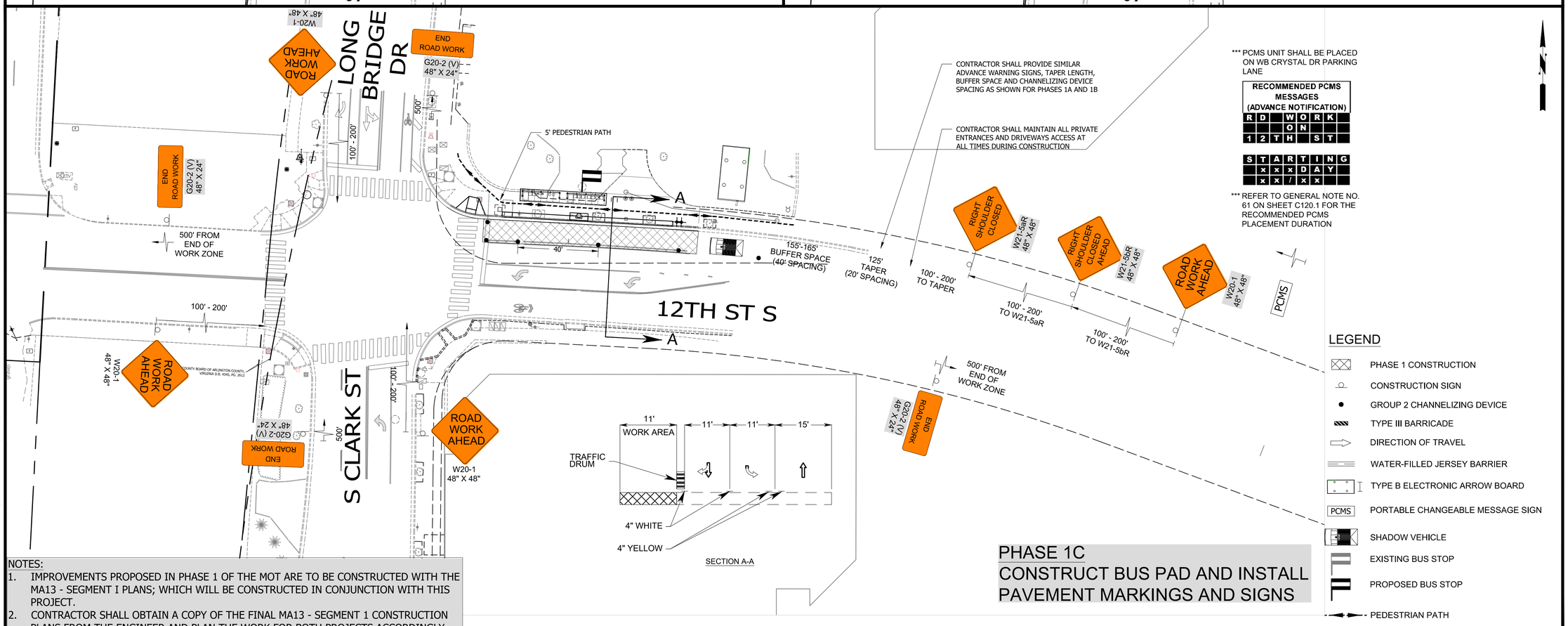
POSTED SPEED LIMIT	
12TH STREET S	= 25 MPH
ARMY NAVY DRIVE	= 35 MPH
S EADS STREET	= 30 MPH
LONG BRIDGE DRIVE/ S CLARK STREET	= 25 MPH



PHASE 1A
CONSTRUCT BUS SHELTER, CATCH BASIN, RCP PIPES AND SIDEWALKS



PHASE 1B
CONSTRUCT ADA RAMP AND REMAINING SIDEWALKS



PHASE 1C
CONSTRUCT BUS PAD AND INSTALL PAVEMENT MARKINGS AND SIGNS

LEGEND

- PHASE 1 CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SHADOW VEHICLE
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PEDESTRIAN PATH

NOTES:

1. IMPROVEMENTS PROPOSED IN PHASE 1 OF THE MOT ARE TO BE CONSTRUCTED WITH THE MA13 - SEGMENT I PLANS; WHICH WILL BE CONSTRUCTED IN CONJUNCTION WITH THIS PROJECT.
2. CONTRACTOR SHALL OBTAIN A COPY OF THE FINAL MA13 - SEGMENT 1 CONSTRUCTION PLANS FROM THE ENGINEER AND PLAN THE WORK FOR BOTH PROJECTS ACCORDINGLY.

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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SEAL

COMMONWEALTH OF VIRGINIA — HARSHIT THAKER — Lic. No. 049174 — 4-22-2021 — PROFESSIONAL ENGINEER

Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.
MAINTENANCE OF TRAFFIC
PHASE 1

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

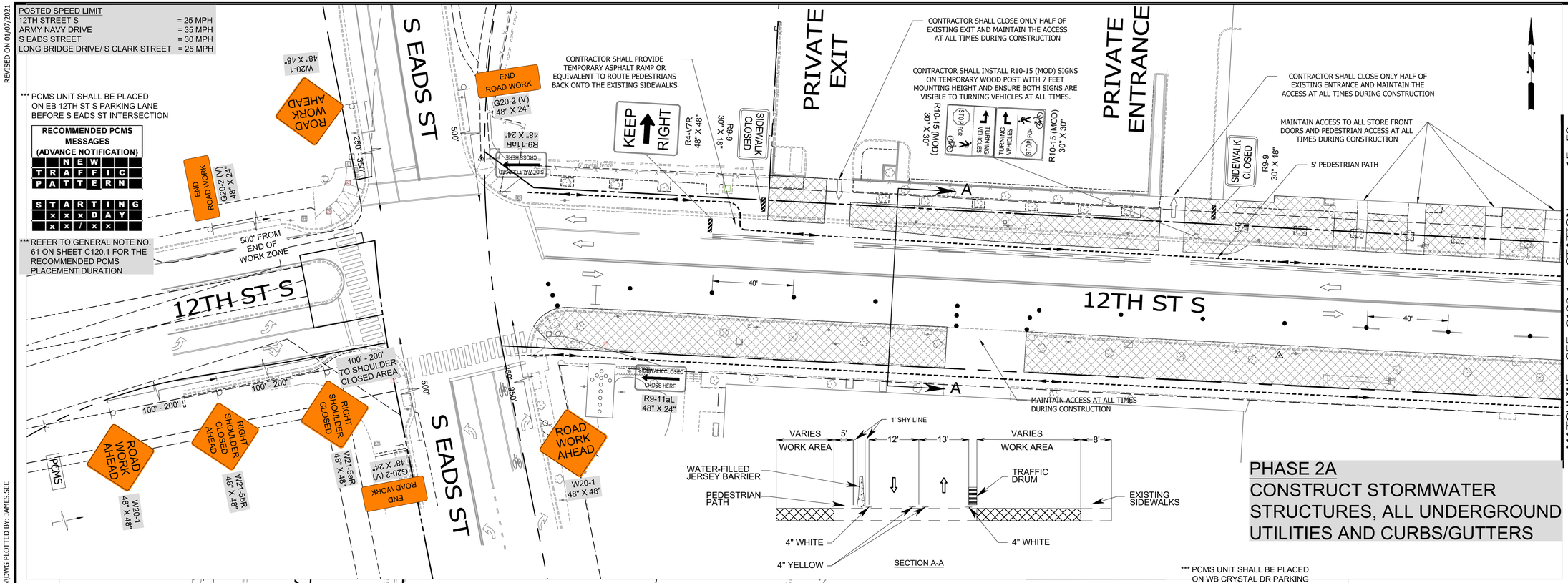
SCALE:
0 25 50
HORIZ. SCALE

C121.1

FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

REVISED ON 01/07/2021

POSTED SPEED LIMIT	
12TH STREET S	= 25 MPH
ARMY NAVY DRIVE	= 35 MPH
S EADS STREET	= 30 MPH
LONG BRIDGE DRIVE/ S CLARK STREET	= 25 MPH



LEGEND

- PHASE 2A CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SHADOW VEHICLE
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PEDESTRIAN PATH

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HARSHIT THAKER
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4-22-2021
PROFESSIONAL ENGINEER

Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
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Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

MAINTENANCE OF TRAFFIC PHASE 2A

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

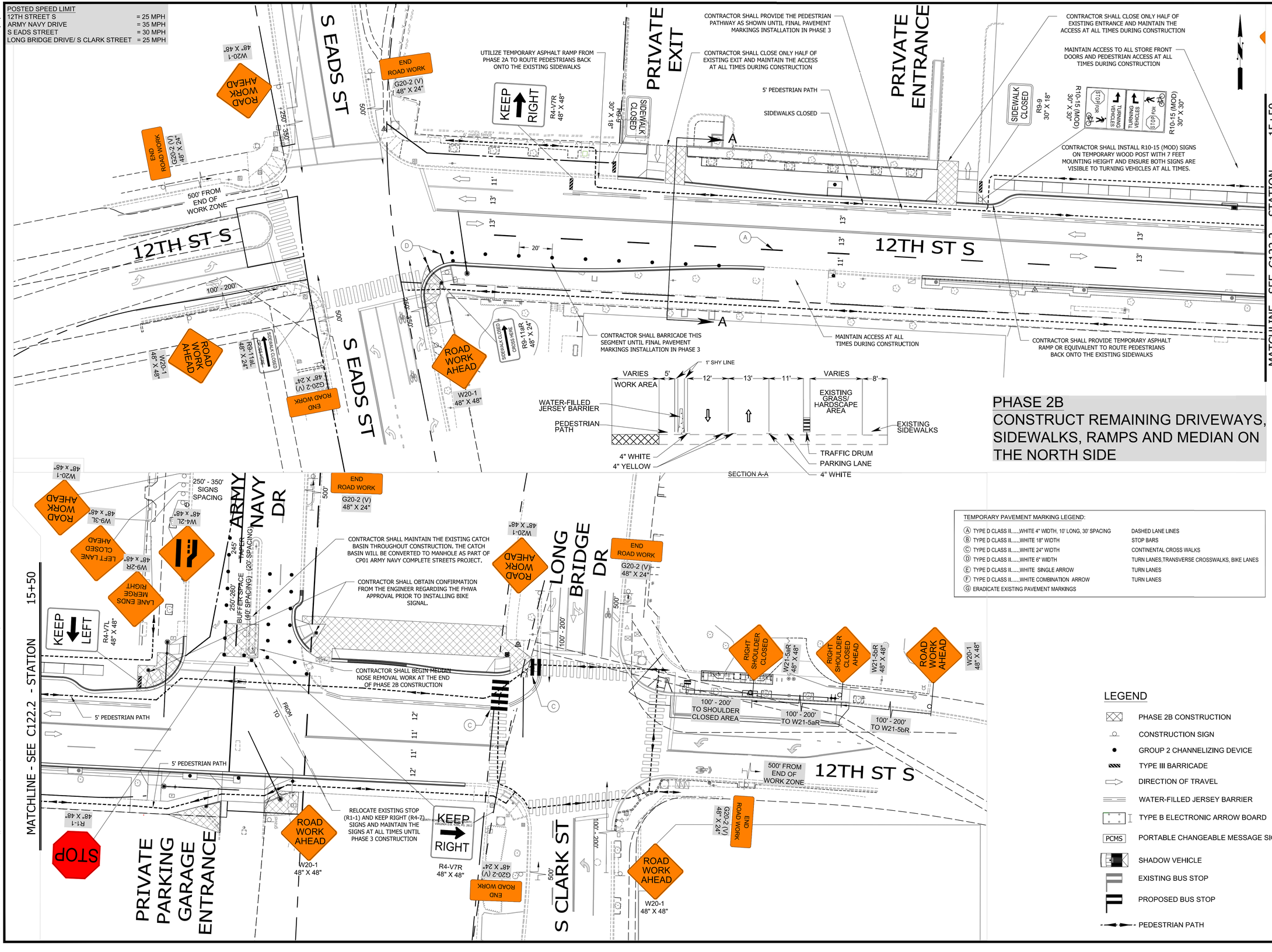
PLOTTED: MAY 18 2021

SCALE:
0 25 50
HORIZ. SCALE

C122.1

FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

POSTED SPEED LIMIT	
12TH STREET S	= 25 MPH
ARMY NAVY DRIVE	= 35 MPH
S EADS STREET	= 30 MPH
LONG BRIDGE DRIVE/ S CLARK STREET	= 25 MPH



PHASE 2B
CONSTRUCT REMAINING DRIVEWAYS, SIDEWALKS, RAMPS AND MEDIAN ON THE NORTH SIDE

TEMPORARY PAVEMENT MARKING LEGEND:

(A) TYPE D CLASS II.....WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(B) TYPE D CLASS II.....WHITE 18" WIDTH	STOP BARS
(C) TYPE D CLASS II.....WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(D) TYPE D CLASS II.....WHITE 6" WIDTH	TURN LANES,TRANSVERSE CROSSWALKS, BIKE LANES
(E) TYPE D CLASS II.....WHITE SINGLE ARROW	TURN LANES
(F) TYPE D CLASS II.....WHITE COMBINATION ARROW	TURN LANES
(G) ERADICATE EXISTING PAVEMENT MARKINGS	

LEGEND

- PHASE 2B CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SHADOW VEHICLE
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PEDESTRIAN PATH

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WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.
MAINTENANCE OF TRAFFIC
PHASE 2B

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:
0 25 50
HORIZ. SCALE

C122.2

REVISED ON 01/07/2021

FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S, MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

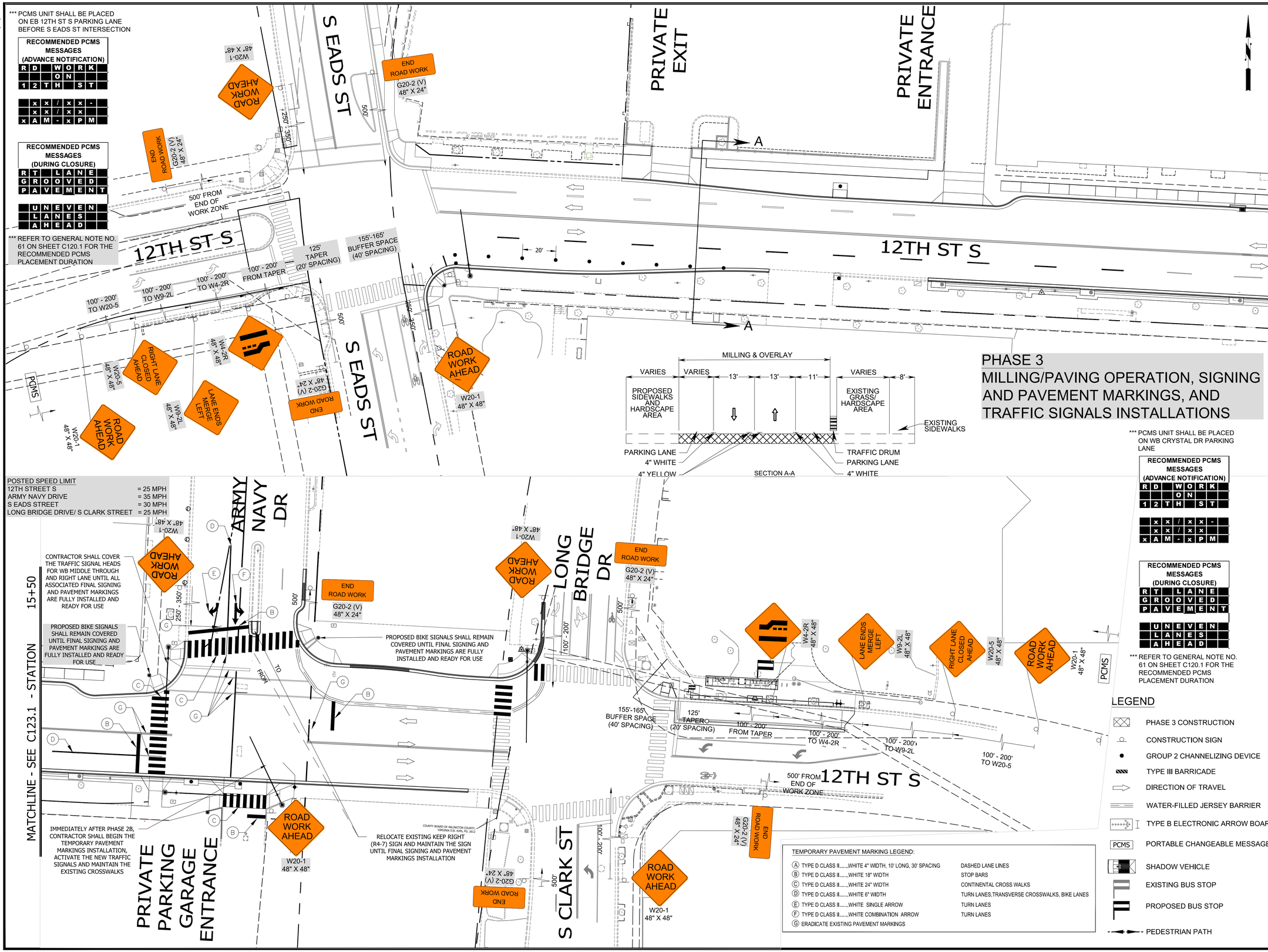
REVISED ON 01/07/2021

*** PCMS UNIT SHALL BE PLACED ON EB 12TH ST S PARKING LANE BEFORE S EADS ST INTERSECTION

RECOMMENDED PCMS MESSAGES (ADVANCE NOTIFICATION)
RD WORK
ON
12TH ST
xx/xx-
xx/xx
xAM-xPM

RECOMMENDED PCMS MESSAGES (DURING CLOSURE)
RT LANE
GROOVED
PAVEMENT
UNEVEN
LANES
AHEAD

*** REFER TO GENERAL NOTE NO. 61 ON SHEET C120.1 FOR THE RECOMMENDED PCMS PLACEMENT DURATION



PHASE 3
MILLING/PAVING OPERATION, SIGNING AND PAVEMENT MARKINGS, AND TRAFFIC SIGNALS INSTALLATIONS

*** PCMS UNIT SHALL BE PLACED ON WB CRYSTAL DR PARKING LANE

RECOMMENDED PCMS MESSAGES (ADVANCE NOTIFICATION)
RD WORK
ON
12TH ST
xx/xx-
xx/xx
xAM-xPM

RECOMMENDED PCMS MESSAGES (DURING CLOSURE)
RT LANE
GROOVED
PAVEMENT
UNEVEN
LANES
AHEAD

*** REFER TO GENERAL NOTE NO. 61 ON SHEET C120.1 FOR THE RECOMMENDED PCMS PLACEMENT DURATION

POSTED SPEED LIMIT

12TH STREET S	= 25 MPH
ARMY NAVY DRIVE	= 35 MPH
S EADS STREET	= 30 MPH
LONG BRIDGE DRIVE/ S CLARK STREET	= 25 MPH

TEMPORARY PAVEMENT MARKING LEGEND:

A	TYPE D CLASS II.....,WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
B	TYPE D CLASS II.....,WHITE 18" WIDTH	STOP BARS
C	TYPE D CLASS II.....,WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
D	TYPE D CLASS II.....,WHITE 6" WIDTH	TURN LANES,TRANSVERSE CROSSWALKS, BIKE LANES
E	TYPE D CLASS II.....,WHITE SINGLE ARROW	TURN LANES
F	TYPE D CLASS II.....,WHITE COMBINATION ARROW	TURN LANES
G	ERADICATE EXISTING PAVEMENT MARKINGS	

LEGEND

- PHASE 3 CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SHADOW VEHICLE
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PEDESTRIAN PATH

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4-22-2021
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WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

MAINTENANCE OF TRAFFIC
PHASE 3

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:
0 25 50
HORIZ. SCALE

C123.1

FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

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)[1]), 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 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

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[1] 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[1] 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	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	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[2]											
Shoulder Taper = ⅓ L Minimum											

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

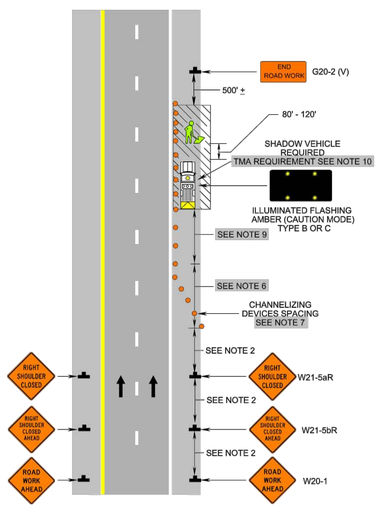
Channelizing Device Spacing							
Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35 / 36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80' / 120'

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

Standard:

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

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[1]
4. *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.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing 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	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Limited Access highways shall use a 1000' merging taper regardless of the posted speed.											
Shifting Tapers see Table 6H-2.[2]						Shoulder Taper = ⅓ 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'	Travelway	40'	80'	* Construction Access	80' / 120'

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

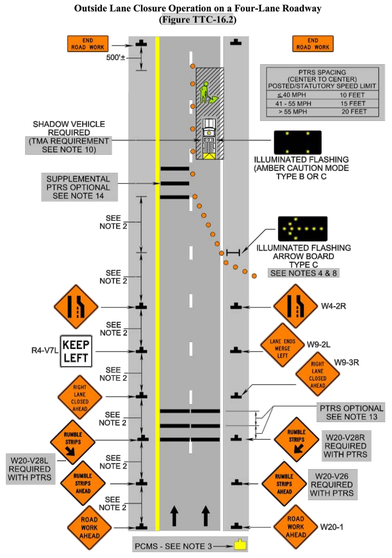
8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights but can be used to supplement the amber rotating, flashing, or[1] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

Option:[2]

13. PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[2]
14. The supplemental PTRS may be eliminated.[2]

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

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



2: Revision 2 – 9/1/2019

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

Standard:

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

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[1]
4. *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.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing 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	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Limited Access highways shall use a 1000' merging taper regardless of the posted speed.											
Shifting Tapers see Table 6H-2.[2]						Shoulder Taper = ⅓ 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'	Travelway	40'	80'	*Construction Access	80' / 120'

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

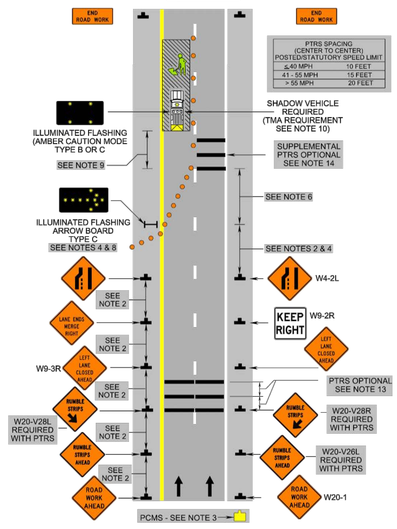
8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights but can be used to supplement the amber rotating, flashing, or[1] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

Option:[2]

13. PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[2]
14. The supplemental PTRS may be eliminated.

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

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



2: Revision 2 – 9/1/2019

Typical Traffic Control
Lane Closure Operation in an Intersection
(Figure TTC-28.2)
NOTES

Guidance:

1. *The control of traffic through the intersection in order of preference should be:*
   a. *Obtain the services of law enforcement personnel.*
   b. *Detour the effective routes to other roads and streets as approved and directed by the* District[1] *Traffic Engineer.*
   c. *Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.*

   Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34.
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.*
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.*[2]

Standard:

4. **Channelizing device spacing shall be on 20' centers or less.**
5. **PTRS shall be used as noted in Section 6F.99.**

Guidance:

6. *If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscillating*[1] *light should be parked 80'-120' in advance of the first work crew.*

Standard:

7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or 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:

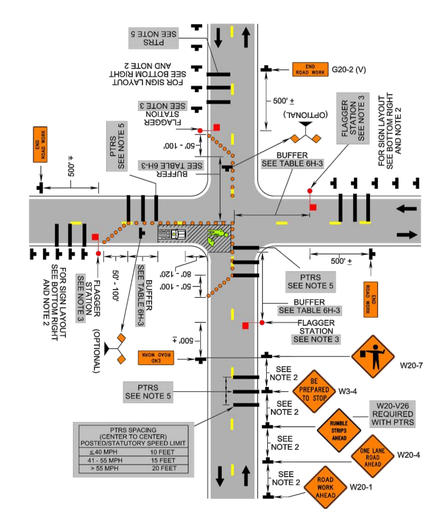
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

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

Lane Closure Operation in an Intersection
(Figure TTC-28.2)



2: Revision 2 – 9/1/2019

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TRANSPORTATION DIRECTOR
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PROJECT MANAGER

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.
MAINTENANCE OF TRAFFIC
TTC DETAILS

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:

C124.1

REVISED ON 01/07/2021
FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

Typical Traffic Control

Sidewalk Closure and Bypass Sidewalk Operation

(Figure TTC-35.1)

NOTES

Standard:

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

Guidance:

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

Option:

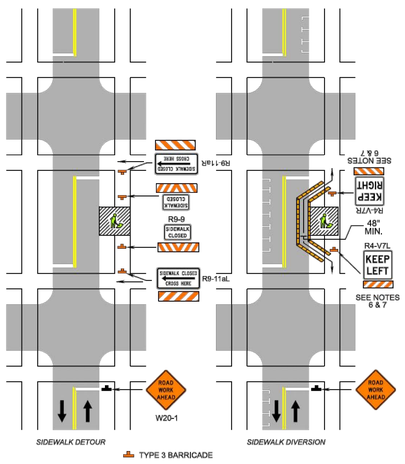
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7.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

Standard:

8. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.[2]**

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.[2]**

Support:

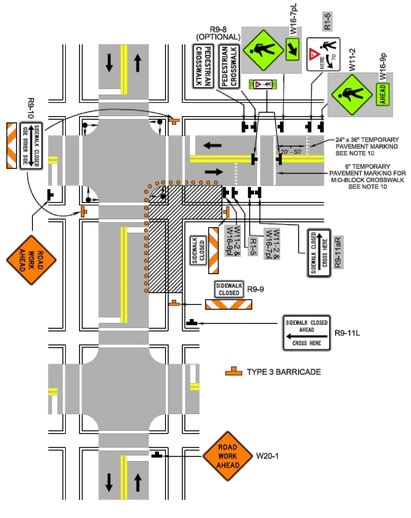
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD[1] for crosswalk[1] lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:[2]

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

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.

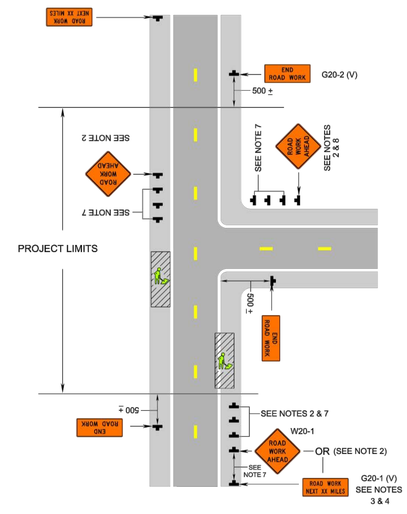
Standard:

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 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

Signing for Project Limits
(Figure TTC-53.0)



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:

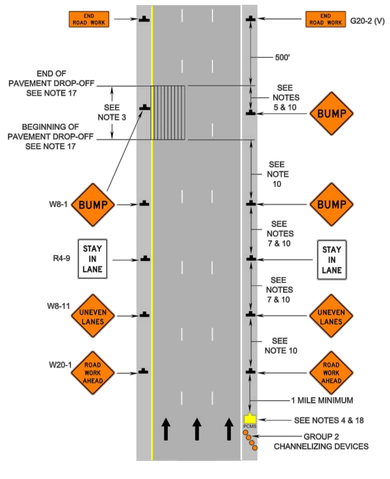
16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

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)



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4/26/21
PROJECT MANAGER

REVISIONS	DATE

12TH STREET SOUTH
CC16
BETWEEN S. EADS ST. AND S. CLARK ST.

MAINTENANCE OF TRAFFIC
TTC DETAILS

DESIGNED: JCFS/ KS
DRAWN: JCFS/ KS
CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:

C124.2

REVISED ON 01/07/2021
FILENAME: CC16-286-MOT.DWG PATH: \\ALEXANDRIA-DATA\TRANS\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009454 - CC16 - 12TH STREET S. MOT DESIGN\07 DESIGN\DWG PLOTTED BY: JAMES.SEE

Typical Traffic Control

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)

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 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 Traffic Engineer shall determine speed reductions.**
7. **The ROUGH ROAD (W8-8), UNMARKED PAVEMENT AHEAD (W8-V4) 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 ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
8. **PAVEMENT AHEAD (W8-V4) 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 ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
9. **Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350' ± 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.**
10. **All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

11. *For sign spacing distances see Table 6H-5.*

Option:

12. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
13. 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.
14. 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:

15. **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.**
16. **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:

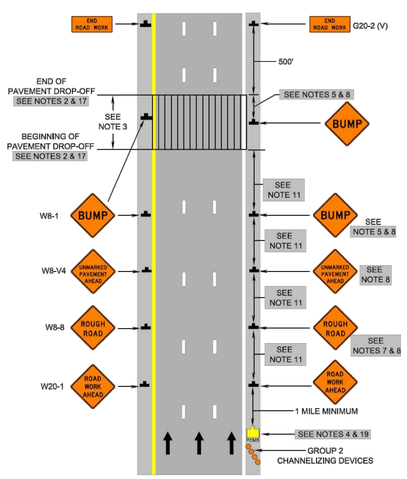
17. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:

18. **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.**
19. **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 Full Paving Operations on a Multi-Lane Roadway
(Figure TTC-58.1)



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

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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 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. COBRA LIGHTING SHALL BE LED TYPE RFL-145W64LED4K-T-R2M-UNIV-DMG-PH8-RCD7-[USA-003]-BK. DECORATIVE POST-TOP LIGHTING SHALL BE HADCO DECORATIVE POST-TOP LUMINAIRE WITH RELUME LED KIT (UAZ XRE LED 57.69W).

B. CONTROLLER AND FOUNDATION

1. NEW CONTROLLER CABINETS SHALL BE TS2, P TYPE WITH 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 4 GREEN INTERVAL
   2.2 TO START/RESTART IN PHASE 3 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 BIKE SIGNAL HEADS ARE TO BE INSTALLED ONLY AFTER WRITTEN FHWA APPROVAL.

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 (INCLUDING CCU) UNLESS OTHERWISE SPECIFIED.
2. NEW OVERHEAD VIDEO DETECTION SHALL BE FLIR CAMERAS AND SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION.
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. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION.

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 61-01, 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.
9. 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.
10. CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
11. ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
12. REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES.
13. MULE TAPE SHOULD BE LEFT IN ALL CONDUITS AND SECURED AT BOTH ENDS.
14. ALL 90 DEGREE BENDS AND CONDUIT ENCASED IN CONCRETE SHALL BE RIGID GALVANIZED STEEL AND SHALL EXTEND 6 INCHES OUT OF THE CONCRETE BEFORE ADAPTING TO PVC OR HDPE.

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.

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.
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.

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

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

PROJECT MANAGER	**DATE**
CONSTRUCTION MANAGER	**DATE**

Index of Sheets

SHEET NO.:	SHEET DESCRIPTION:
300.1	INDEX OF SHEETS, SIGNAL NOTES
300.2-300.5	SIGNAL PLAN
301.1	SIGNAL DETAIL PLAN
302.1-302.2	SIGNAL COMMUNICATION PLAN
303.1-303.2	INTERIM AND ULTIMATE PLAN

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL

COMMONWEALTH OF VIRGINIA
JONATHAN CRISAFI
Lic No. 058317
PROFESSIONAL ENGINEER

04/23/2021
5:04:56 PM

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak — CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach — TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST
CC16

BETWEEN S. EADS ST. AND S. CLARK ST.

INDEX OF SHEETS, SIGNAL NOTES

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

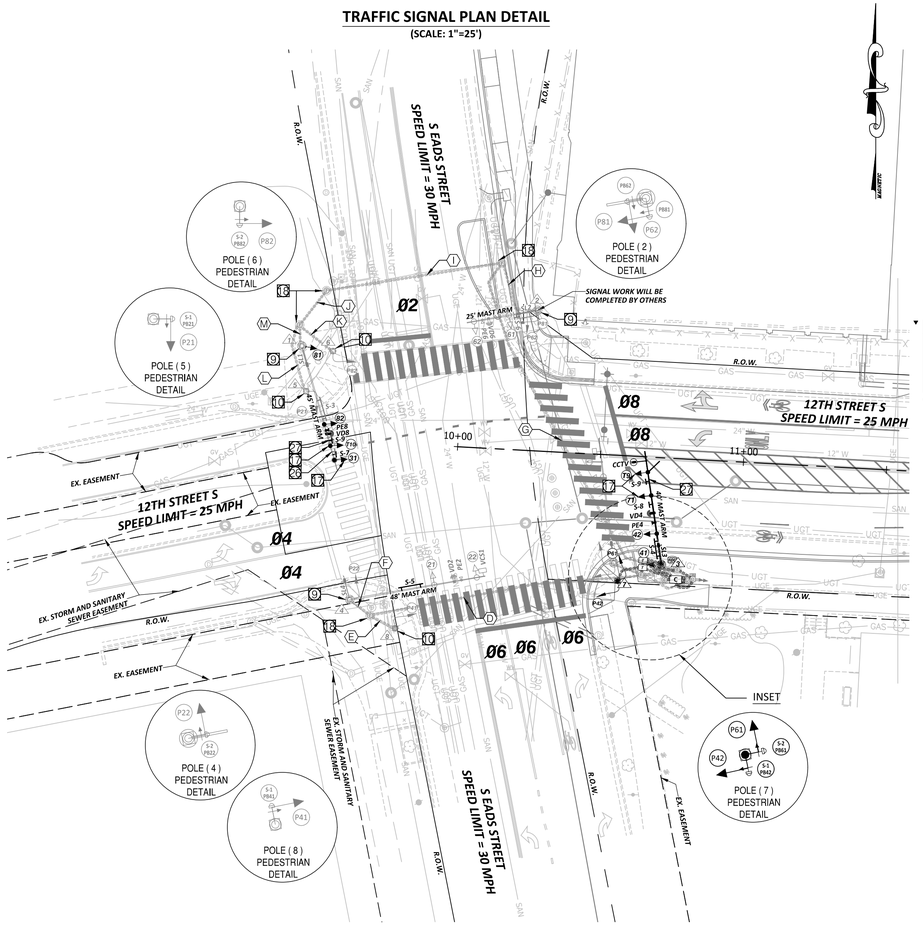
SCALE:

T300.1

REVISED ON 03/05/21
FILENAME: CP16-290-TRAFFIC-SIGNAL PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

REVISED ON 03/05/21

TRAFFIC SIGNAL PLAN DETAIL
(SCALE: 1"=25')



ACCESSIBLE PEDESTRIAN PUSHBUTTON

ITALICS INDICATES EXISTING EQUIPMENT
BOLD INDICATES PROPOSED EQUIPMENT

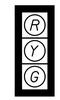
PUSHBUTTON	WALK MESSAGE
PB41, **PB42** *PB81, PB82*	"EADS STREET, WALK SIGN IS ON TO CROSS EADS STREET."
PB21, PB22 **PB61**, *PB62*	"12TH STREET, WALK SIGN IS ON TO CROSS 12TH STREET."

*** PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.**

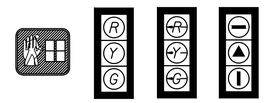
*** ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATIONS AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.**

EXISTING SIGNALS (TO REMAIN)

RELOCATED SIGNALS



PROPOSED SIGNALS



EXISTING STREET SIGNS (TO REMAIN)

S-3

PROPOSED STREET SIGNS

S-4

S-5

RELOCATED SIGNS

S-7
R3-5(L)
36"X30"

EXISTING SIGNS (TO REMAIN)

S-6
R3-5(R)
36"X30"

PROPOSED SIGNS

S-8
R3-5(L)
36"X30"

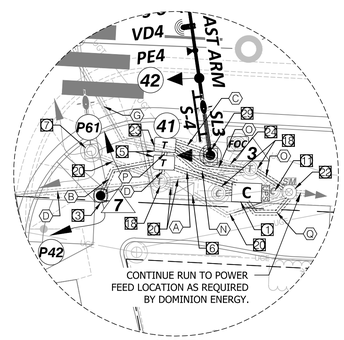
S-9
CUSTOM
36"X30"

CONDUIT & CABLE RUNS

- (A) 1-3" CONDUIT (TRENCHING)
  EXISTING WIRING
- (B) 1-2" CONDUIT (TRENCHING)
  2-14/7c PED SIGNAL HEAD P42,P61
  2-14/3c PED PUSH BUTTON PB42,PB61
- (C) 1-3" CONDUIT (TRENCHING)
  3-14/7c SIGNAL HEADS 41,42,71,T9
  1-12/2c CABLE FOR LUMINAIRE SL3
  1-COAXIAL CABLE FOR VIDEO DETECTION VD4
  1-14/4c VIDEO DETECTION POWER VD4
  1-LEAD-IN CABLE FOR OPTICOM GTT EVP PE4
  1-LEAD-IN CABLE FOR CCTV CAMERA
  1-3" SPARE CONDUIT (TRENCHING)
- (D) EXISTING CONDUIT AND WIRING
- (E) EXISTING CONDUIT AND WIRING
- (F) EXISTING CONDUIT AND WIRING
- (G) 3-2" CONDUIT (EXISTING)
  EXISTING WIRING
  2-14/7c SIGNAL HEADS 31,T10
- (H) EXISTING CONDUIT AND WIRING
- (I) 3-2" CONDUIT (EXISTING)
  EXISTING WIRING
  2-14/7c SIGNAL HEADS 31,T10
- (J) 3-3" CONDUIT (EXISTING)
  EXISTING WIRING
  2-14/7c SIGNAL HEADS 31,T10
- (K) EXISTING CONDUIT AND WIRING
- (L) EXISTING CONDUIT AND WIRING
- (M) 1-3" CONDUIT (EXISTING)
  EXISTING WIRING
  2-14/7c SIGNAL HEADS 31,T10
- (N) 1-3" CONDUIT (TRENCHING)
  2-14/7c PED SIGNAL HEAD P42,P61
  2-14/3c PED PUSH BUTTON PB42,PB61
  3-14/7c SIGNAL HEADS 41,42,71,T9
  1-COAXIAL CABLE FOR VIDEO DETECTION VD4
  1-14/4c VIDEO DETECTION POWER VD4
  1-LEAD-IN CABLE FOR OPTICOM GTT EVP PE4
  1-LEAD-IN CABLE FOR CCTV CAMERA
  1-3" CONDUIT (TRENCHING)
  EXISTING WIRING
  2-14/7c SIGNAL HEADS 31,T10
  1-3" CONDUIT (TRENCHING)
  EXISTING WIRING
- (O) 1-2" CONDUIT (TRENCHING)
  EXISTING WIRING
  1-12/2c CABLE FOR LUMINAIRE SL3
- (P) 1-2" CONDUIT (TRENCHING)
  EXISTING WIRING
  2-14/7c PED SIGNAL HEAD P42,P61
  2-14/3c PED PUSH BUTTON PB42,PB61
- (Q) 1-2" CONDUIT (TRENCHING)
  1-6/4c ELECTRICAL SERVICE CABLE

DEMOLITION & CONSTRUCTION NOTES

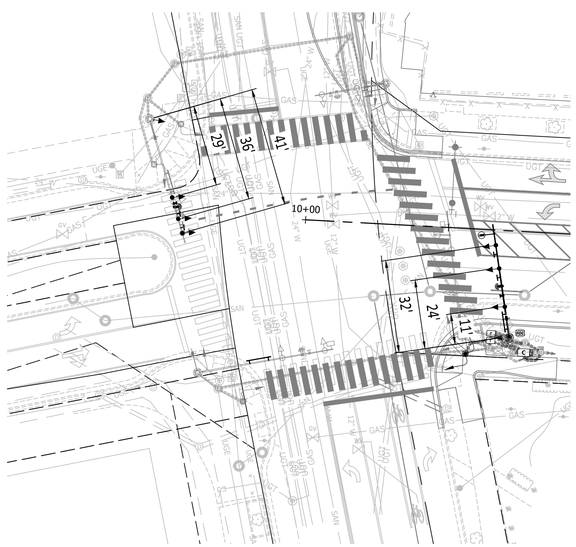
1. INSTALL TRAFFIC SIGNAL CABINET AND FOUNDATION, 12" CABINET BASE RISER, UPS AND ASSOCIATED EQUIPMENT.
3. INSTALL PEDESTAL POLE & FOUNDATION WITH SIGNALS, SIGNS, POLE IDENTIFICATION STICKERS, AND EQUIPMENT AS SHOWN. POLE SHALL BE 10' IN HEIGHT.
5. INSTALL ARLINGTON STANDARD RECTANGULAR JUNCTION BOX PER STD 61-04 TYPE 3.
6. REMOVE EXISTING CABINET & CONTROLLER. SALVAGE EXISTING EQUIPMENT TO BE RETURNED TO ARLINGTON PROPERTY YARD.
7. REMOVE EXISTING SIGNAL POLE, MAST ARM, SIGNAL HEADS, OTHER MOUNTED EQUIPMENT, AND ASSOCIATED WIRING. SALVAGE EXISTING EQUIPMENT TO BE RETURNED TO ARLINGTON PROPERTY YARD. DEMOLISH EXISTING FOUNDATION.
9. MAINTAIN AND PROTECT EXISTING TRAFFIC SIGNAL MAST ARM POLE.
10. MAINTAIN AND PROTECT EXISTING PEDESTAL/CARLYLE POLE.
11. REMOVE EXISTING JUNCTION BOX.
17. SIGNAL HEAD TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13.
18. MAINTAIN AND PROTECT EXISTING JUNCTION BOX.
20. ABANDON EXISTING CONDUIT.
22. MAINTAIN AND PROTECT ELECTRIC SERVICE METER, PEDESTAL, AND ASSOCIATED WIRING.
23. MAINTAIN EXISTING CONDUIT RUN "G" THROUGH NEW JUNCTION BOX. MAINTAINING EXISTING CABLE CONNECTIONS THROUGH NEW JUNCTION BOX UNTIL REWIRING TO NEW CONTROLLER. SEE SHEET T300.3 FOR POTENTIAL SEQUENCING.
24. ABANDON OR REUSE REMAINING CONDUIT RUN "G" (BETWEEN NEW JUNCTION BOX AND EXISTING MANHOLE) TO FACILITATE CONDUIT RUN "O". IF ABANDONING CONDUIT RUN, INSTALL NEW CONDUIT RUN "O" BETWEEN NEW JUNCTION BOX AND EXISTING MANHOLE.
26. RELOCATE EXISTING SIGN ALONG MAST ARM TO PROPOSED LOCATION.
27. SIGN TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13.
29. INSTALL ORNAMENTAL TRAFFIC SIGNAL MAST ARM POLE & FOUNDATION WITH LUMINAIRE, SIGNALS, SIGNS, POLE IDENTIFICATION STICKER, AND EQUIPMENT AS SHOWN.



INSET*
(SCALE: 1"=10')

***REFERENCE SHEET T300.3 FOR MORE DETAIL AND RECOMMENDED CONSTRUCTION PHASING.**

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

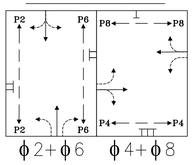


INITIAL TIMING CHART								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT		SB THRU		EB THRU		NB THRU		WB THRU
PHASE ON		X		X		X		X
PHASE OFF	X		X		X		X	
PHASE TIMINGS								
MIN GR	NOT USED	5.0	NOT USED	5.0	NOT USED	5.0	NOT USED	5.0
PASSAGE		0.0		2.0		0.0		2.0
AMBER		4.0		4.0		4.0		4.0
RED		2.6		2.7		2.6		2.7
MAX 1		70.0		50.0		50.0		70.0
MAX 2		0.0		0.0		0.0		0.0
MIN GAP		3.0		3.0		3.0		3.0
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		19.0		18.0		20.0		18.0
MODE		MIN RECALL		PED		MIN RECALL		PED

COLOR SEQUENCE CHART							
PHASE	2	4	6	8	2+6	4+8	
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	FLASH
21,22	G				G		Y
31*							N/A
41,42		G				G	R
61,62			G		G		Y
71*							N/A
81,82				G		G	R
T9,T10*							N/A
P21,P22	WALK				WALK		BLANK
P41,P42		WALK				WALK	BLANK
P61,P62			WALK		WALK		BLANK
P81,P82				WALK		WALK	BLANK

*INDICATES SIGNAL HEAD WILL NOT DISPLAY UNTIL FUTURE WORK IS COMPLETED BY OTHERS. REFER TO SHEET T303.1 FOR ULTIMATE PROPOSED OPERATION.
NOTE:BLANK SPACES REPRESENT A RED DISPLAY. WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL IS SERVICED; OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

PHASING DIAGRAM



POLE SIGNAL MOUNTING

No.	POLE IDENTIFICATION	STANDARD						LUM. LED (4)	POLE SIGNAL MOUNTING				STREET NAME SIGN
		TYPE	STATION, OFFSET	SIG. M.A. ORIENT.	SIG. M.A.	LUM. M.A. ORIENT.	LUM. M.A.		VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS	VIDEO DETECTOR PREEMPTION & CCTV	
1	198-MA-01-NW	EX. MAST ARM POLE	-	180°	45'	180°	6'	145W	31, 81*, 82*, T10	-	S-7*,S-9	VD8, PE8	*S-3*
2	198-MA-01-NE	EX. MAST ARM POLE	-	180°	25'	180°	6'	145W	*61, 62, P62, P81*	*PB62,PB81*	*S-6*	*VD6, PE6*	-
3	198-MA-01-SE	MAST ARM POLE	10+73.23, 37.3' RT	180°	40'	180°	6'	145W	41, 42, 71, T9	-	S-8,S-9	VD4, PE4, CCTV	S-4
4	198-MA-01-SW	EX. MAST ARM POLE	-	180°	48'	90°	6'	145W	*21, 22, P22*	*PB22*	*S-2*	*VD2, PE2, VCS1*	S-5
5	198-PP-01-NW	EX. PEDESTAL POLE	-	-	-	-	-	-	*P21*	*PB21*	*S-1*	-	-
6	198-PP-02-NW	EX. PEDESTAL POLE	-	-	-	-	-	-	*P82*	*PB82*	*S-2*	-	-
7	198-PP-01-SE	PEDESTAL POLE 10'	10+58.21, 43.8' RT	-	-	-	-	-	P42, P61	PB42,PB61	S-1, S-2	-	-
8	198-CP-01-SW	EX. CARLYLE POLE 16'	-	-	-	-	-	75W	*P41*	*PB41*	*S-1*	-	-

ITALICS INDICATES EXISTING EQUIPMENT
* INDICATES RELOCATED EQUIPMENT

CONDUIT AND CABLE NOTES:

1. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.
2. CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
3. FIELD VERIFY MEASUREMENTS BEFORE CONSTRUCTION.
4. CONTRACTOR TO CONTACT UTILITY COMPANIES FOR FIELD LOCATIONS.
5. CONTRACTOR SHALL RECONNECT ALL EXISTING AND REMAINING SIGNAL EQUIPMENT TO NEW CABINET/CONTROLLER LOCATION. EXISTING WIRING CAN BE REUSED IF SUFFICIENT LENGTH IS AVAILABLE, OTHERWISE NEW WIRING, IN KIND, IS TO BE INSTALLED.

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box (61-02)		
Fiber Optic Junction Box (61-04)		
Service Junction Box		
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation		
Service Meter		
Battery Backup (UPS)		
Vehicle Signal Head (LED)		
Pedestrian Push Button	PB#	PB#
Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Vehicle Count Station		

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JONATHAN CRISAFI
Lic No. 058317
PROFESSIONAL ENGINEER
04/23/2021
5:05:09 PM

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
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Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS
FROM S. EADS ST TO S. CLARK ST
CC16

SOUTH EADS STREET AND 12TH STREET SOUTH
ID #198

SIGNAL PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:
0 25 50
HORIZ. SCALE

T300.2

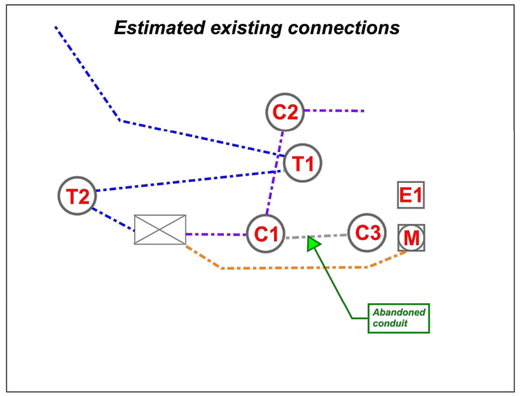
FILENAME: CP16-290-TRAFFIC-SIGNAL PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

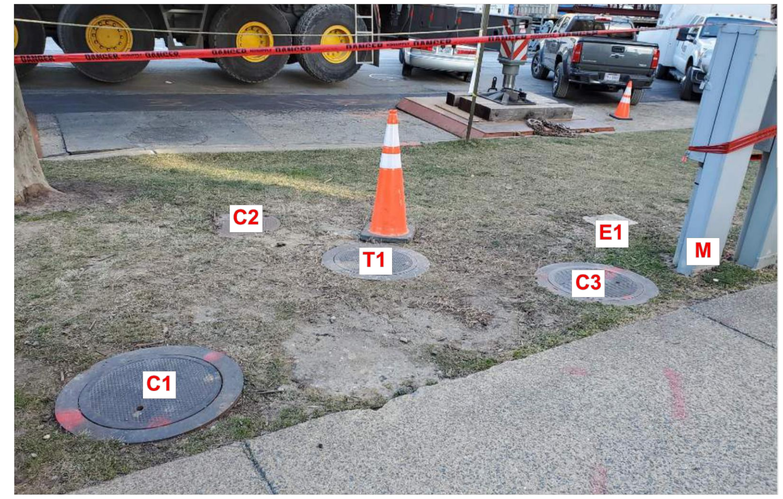
REVISED ON 03/05/21

FILENAME: CP16-290-TRAFFIC-SIGNAL PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

LEGEND

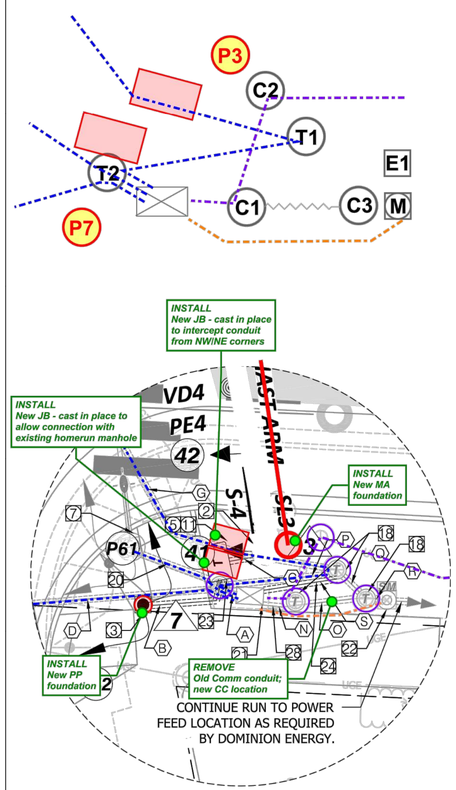
- Signal/Detection
- Communication
- Power Service
- Luminaire



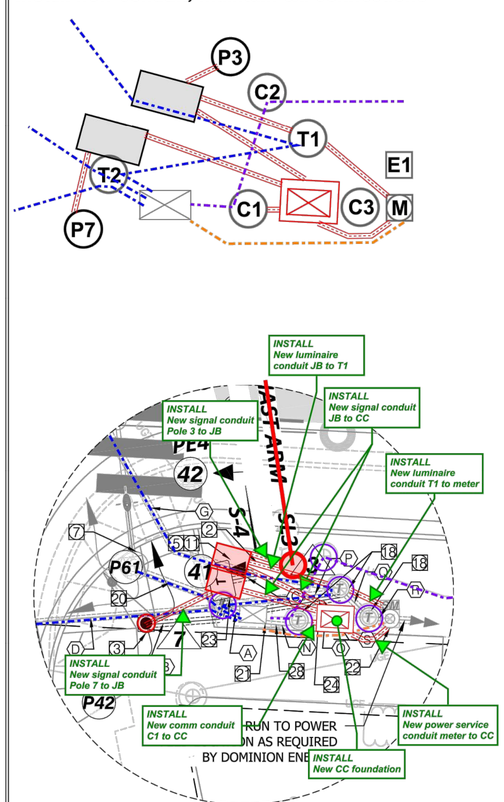


POTENTIAL CONSTRUCTION/WIRING SEQUENCE DETAIL

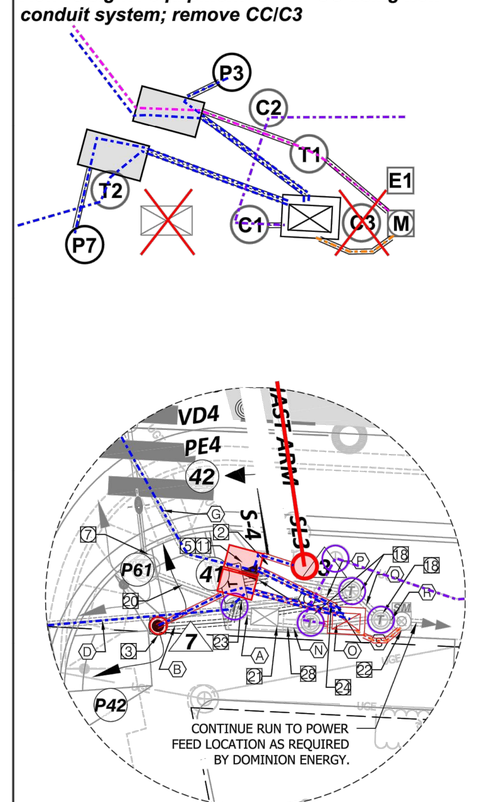
Step 1:
Install new equipment; maintain ex. connections



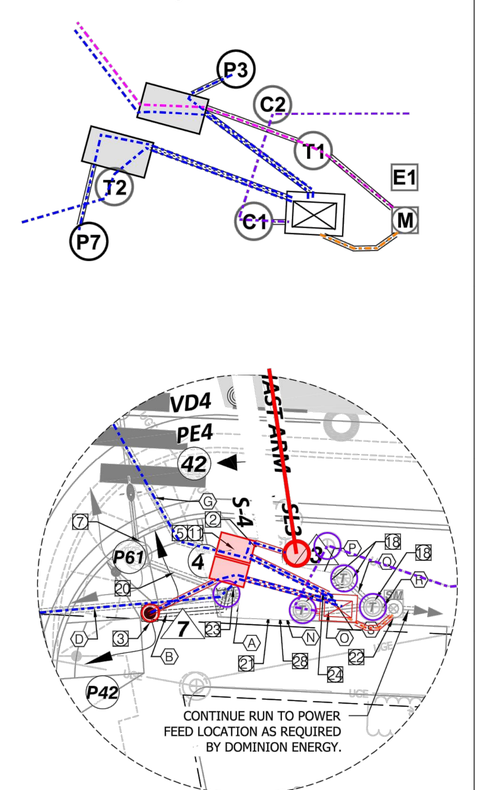
Step 2:
Install new conduit; maintain ex. connections



Step 3:
Rewire signal equipment to new CC using new conduit system; remove CC/C3



Step 4:
Power on new signal



GENERAL NOTES:

1. **FOR INFORMATIONAL PURPOSES ONLY. ULTIMATE CONSTRUCTION SEQUENCE TO BE DETERMINED BY CONTRACTOR.**
2. CONTRACTOR MUST BE RESPONSIBLE FOR KEEPING EXISTING SIGNAL OPERATING DURING THIS INSTALLATION.
3. ALL EXISTING UTILITIES ARE TO BE MAINTAINED AND PROTECTED DURING CONSTRUCTION.

ARLINGTON
VIRGINIA

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APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST
CC16

SOUTH EADS STREET AND 12TH STREET SOUTH
ID #198

SIGNAL PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

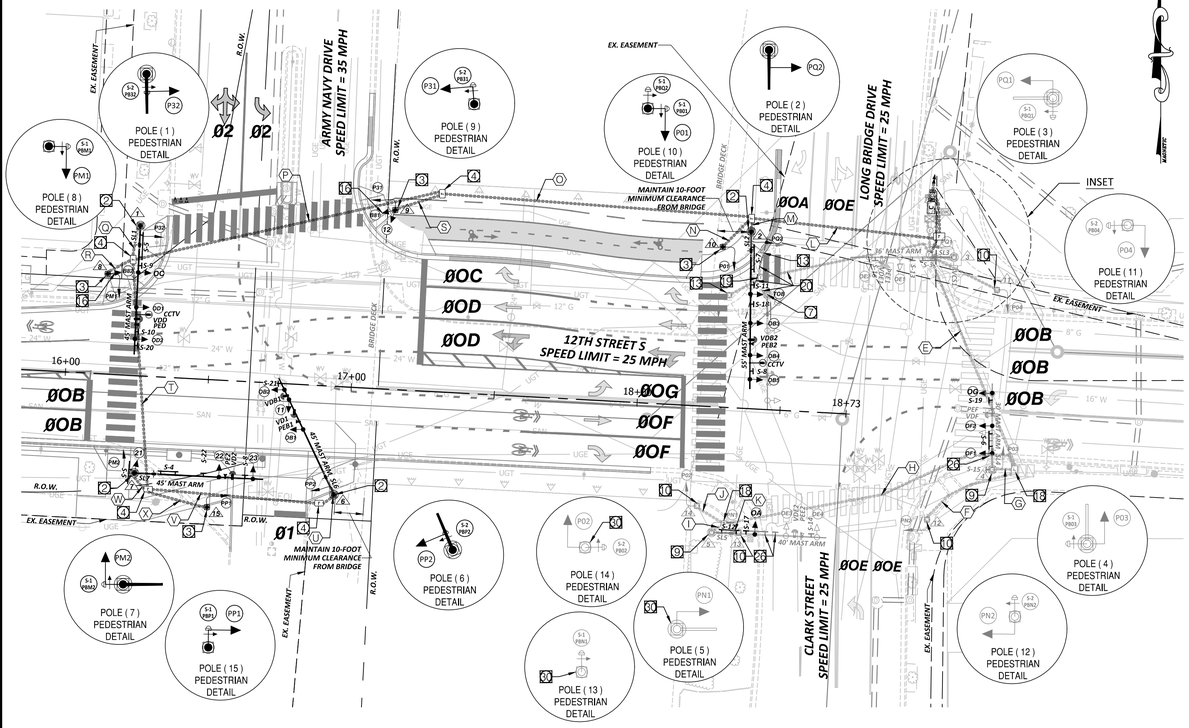
0 25 50
HORIZ. SCALE

T300.3

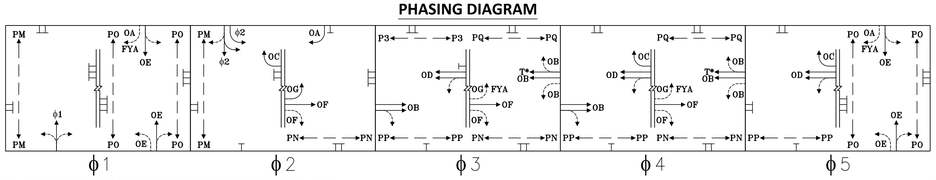
REVISED ON 03/05/21

TRAFFIC SIGNAL PLAN DETAIL

(SCALE: 1"=25')



PHASING DIAGRAM

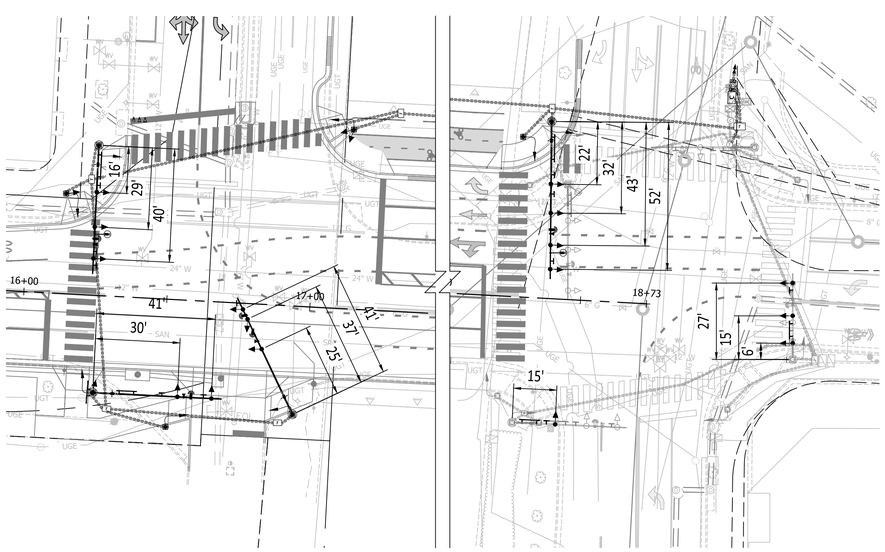


T* - INDICATES BUS THROUGH MOVEMENT WITH TRANSIT SIGNAL HEAD.

OA=ϕ1+ϕ2+ϕ5
OB=ϕ3+ϕ4
OC=ϕ2+ϕ4+ϕ5
OD=ϕ3+ϕ4+ϕ5
OE=ϕ1+ϕ5
OF=ϕ2+ϕ3+ϕ4
OG=ϕ2+ϕ3+ϕ4
OM=ϕ1+ϕ2 (PED)
ON=ϕ2+ϕ3+ϕ4 (PED)
OO=ϕ1+ϕ5 (PED)
OP=ϕ3+ϕ4+ϕ5 (PED)
OQ=ϕ3+ϕ4 (PED)

POLE LOCATION DETAIL

(SCALE: 1"=25')



CONDUIT & CABLE RUNS

A
- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 5-14/4c VIDEO DETECTION POWER VD1,VD2,VDB1,VDB2,VDD
- 2-LEAD-IN CABLE FOR CCTV CAMERA

- 1-3" CONDUIT (TRENCHING)
- 8-14/7c SIGNAL HEADS
- 11,12,21,22,23,OB1,OB2,OB3,OB4,OB5,OC,OD1,OD2,TOB

- 1-3" CONDUIT (TRENCHING)
- 8-14/7c PED SIGNAL HEADS PM1,PM2,PP1,PP2,PO1,PQ2,P31,P32

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 8-14/3c PED PUSH BUTTONS
- PBM1,PBM2,PBP1,PBP2,PBO1,PBQ2,PB31,PB32
- 5-COAXIAL CABLE FOR VIDEO DETECTION
- VD1,VD2,VDB1,VDB2,VDD

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 2-14/7c BICYCLE SIGNAL HEADS B81,B82

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 2-14/7c SIGNAL HEADS OA,OG

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 4-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PEB1,PEB2,PED

B
- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET
- 2-14/7c SIGNAL HEADS OA,OG

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET

- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO CONTROLLER CABINET

C
- EXISTING CONDUIT AND WIRING

D
- EXISTING CONDUIT AND WIRING

E
- 1-4" CONDUIT (EXISTING)
- EXISTING WIRING
- 2-14/7c SIGNAL HEADS OA,OG

- 1-4" CONDUIT (EXISTING)
- EXISTING WIRING

F
- EXISTING CONDUIT AND WIRING

G
- 1-3" CONDUIT (EXISTING)
- EXISTING WIRING
- 1-14/7c SIGNAL HEADS OG

- EXISTING CONDUIT AND WIRING

H
- 1-4" CONDUIT (EXISTING)
- EXISTING WIRING
- 1-14/7c SIGNAL HEADS OA

I
- 1-4" CONDUIT (EXISTING)
- EXISTING WIRING
- 1-14/7c SIGNAL HEADS OA

J
- EXISTING CONDUIT AND WIRING

K
- EXISTING CONDUIT AND WIRING

L
- 1-4" CONDUIT (BORING)
- 8-14/7c SIGNAL HEADS
- 11,12,21,22,23,OB1,OB2,OB3,OB4,OB5,OC,OD1,OD2,TOB
- 8-14/7c PED SIGNAL HEADS PM1,PM2,PP1,PP2,PO1,PQ2,P31,P32

- 1-4" CONDUIT (BORING)
- 2-14/7c BICYCLE SIGNAL HEADS B81,B82
- 8-14/3c PED PUSH BUTTONS
- PBM1,PBM2,PBP1,PBP2,PBO1,PBQ2,PB31,PB32
- 5-COAXIAL CABLE FOR VIDEO DETECTION
- VD1,VD2,VDB1,VDB2,VDD
- 5-14/4c VIDEO DETECTION POWER VD1,VD2,VDB1,VDB2,VDD
- 2-LEAD-IN CABLE FOR CCTV CAMERA

- 1-3" CONDUIT (BORING)
- 4-12/2c CABLE FOR LUMINAIRE SL1,SL2,SL6,SL7
- 4-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PEB1,PEB2,PED

- 1-3" SPARE CONDUIT (BORING)

M
- 1-3" CONDUIT (TRENCHING)
- 2-14/7c SIGNAL HEADS OB3,OB4,OB5,TOB
- 1-14/7c PED SIGNAL HEADS PQ2
- 1-12/2c CABLE FOR LUMINAIRE SL2
- 1-LEAD-IN CABLE FOR CCTV CAMERA
- 1-COAXIAL CABLE FOR VIDEO DETECTION VDB2
- 1-14/4c VIDEO DETECTION POWER VDB2
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PEB2

- 1-3" SPARE CONDUIT (TRENCHING)

N
- 1-2" CONDUIT (TRENCHING)
- 1-14/7c PED SIGNAL HEADS PO1
- 2-14/3c PED PUSH BUTTONS PBQ2,PBO1

O
- 1-4" CONDUIT (TRENCHING)
- 6-14/7c SIGNAL HEADS 11,12,21,22,23,OB1,OB2,OC,OD1,OD2
- 2-14/7c BICYCLE SIGNAL HEADS B81,B82
- 6-14/7c PED SIGNAL HEADS PM1,PM2,PP1,PP2,P31,P32
- 6-14/3c PED PUSH BUTTONS PBM1,PBM2,PBP1,PBP2,PB31,PB32

- 1-4" CONDUIT (TRENCHING)
- 4-COAXIAL CABLE FOR VIDEO DETECTION VD1,VD2,VDB1,VDD
- 4-14/4c VIDEO DETECTION POWER VD1,VD2,VDB1,VDD
- 3-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PEB1,PED
- 1-LEAD-IN CABLE FOR CCTV CAMERA
- 3-12/2c CABLE FOR LUMINAIRE SL1,SL6,SL7

- 1-3" SPARE CONDUIT (TRENCHING)

P
- 1-3" CONDUIT (BORING)
- 5-14/7c SIGNAL HEADS 11,21,22,23,OB1,OB2,OC,OD1,OD2
- 5-14/3c PED PUSH BUTTONS PBM1,PBM2,PBP1,PBP2,PB32

- 1-3" CONDUIT (BORING)
- 5-14/7c PED SIGNAL HEADS PM1,PM2,PP1,PP2,P32
- 1-14/7c BICYCLE SIGNAL HEADS B82
- 2-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PEB1

- 1-3" CONDUIT (BORING)
- 3-12/2c CABLE FOR LUMINAIRE SL1,SL6,SL7
- 1-LEAD-IN CABLE FOR CCTV CAMERA
- 4-COAXIAL CABLE FOR VIDEO DETECTION VD1,VD2,VDB1,VDD
- 4-14/4c VIDEO DETECTION POWER VD1,VD2,VDB1,VDD
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PED

- 1-3" SPARE CONDUIT (BORING)

Q
- 1-3" CONDUIT (TRENCHING)
- 2-14/7c SIGNAL HEADS OC,OD1,OD2
- 1-14/7c PED SIGNAL HEADS P32
- 1-14/3c PED PUSH BUTTONS PB32
- 1-12/2c CABLE FOR LUMINAIRE SL1
- 1-LEAD-IN CABLE FOR CCTV CAMERA
- 1-COAXIAL CABLE FOR VIDEO DETECTION VDD
- 1-14/4c VIDEO DETECTION POWER VDD
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PED

- 1-3" SPARE CONDUIT (TRENCHING)

R
- 1-2" CONDUIT (TRENCHING)
- 1-14/7c BICYCLE SIGNAL HEADS B82
- 1-14/7c PED SIGNAL HEADS PM1
- 1-14/3c PED PUSH BUTTONS PBM1

S
- 1-2" CONDUIT (TRENCHING)
- 1-14/7c SIGNAL HEADS 12
- 1-14/7c BICYCLE SIGNAL HEADS B81
- 1-14/7c PED SIGNAL HEADS P31
- 1-14/3c PED PUSH BUTTONS PB31

T
- 1-3" CONDUIT (BORING)
- 3-14/7c SIGNAL HEADS 11,21,22,23,OB1,OB2
- 3-14/7c PED SIGNAL HEADS PM2,PP1,PP2
- 3-14/3c PED PUSH BUTTONS PBM2,PBP1,PBP2

- 1-3" CONDUIT (BORING)
- 2-12/2c CABLE FOR LUMINAIRE SL6,SL7
- 3-COAXIAL CABLE FOR VIDEO DETECTION VD1,VD2,VDB1
- 3-14/4c VIDEO DETECTION POWER VD1,VD2,VDB1
- 2-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PEB1

- 1-3" SPARE CONDUIT (BORING)

U
- 1-3" CONDUIT (TRENCHING)
- 2-14/7c SIGNAL HEADS 11,OB1,OB2
- 1-14/7c PED SIGNAL HEADS PP2
- 1-14/3c PED PUSH BUTTONS PBP2
- 1-12/2c CABLE FOR LUMINAIRE SL6
- 2-COAXIAL CABLE FOR VIDEO DETECTION VD1,VDB1
- 2-14/4c VIDEO DETECTION POWER VD1,VDB1
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PEB1

- 1-3" SPARE CONDUIT (TRENCHING)

V
- 1-3" CONDUIT (BORING)
- 2-14/7c SIGNAL HEADS 11,OB1,OB2
- 1-14/7c PED SIGNAL HEADS PP2
- 1-14/3c PED PUSH BUTTONS PBP2
- 1-12/2c CABLE FOR LUMINAIRE SL6
- 2-COAXIAL CABLE FOR VIDEO DETECTION VD1,VDB1
- 2-14/4c VIDEO DETECTION POWER VD1,VDB1
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PEB1

- 1-3" SPARE CONDUIT (BORING)

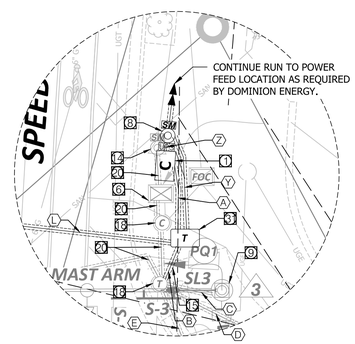
W
- 1-3" CONDUIT (TRENCHING)
- 1-14/7c SIGNAL HEADS 21,22,23
- 1-14/7c PED SIGNAL HEADS PM2
- 1-14/3c PED PUSH BUTTONS PBM2
- 1-12/2c CABLE FOR LUMINAIRE SL7
- 1-COAXIAL CABLE FOR VIDEO DETECTION VD2
- 1-14/4c VIDEO DETECTION POWER VD2
- 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PE2

- 1-3" SPARE CONDUIT (TRENCHING)

X
- 1-2" CONDUIT (TRENCHING)
- 1-14/7c PED SIGNAL HEADS PP1
- 1-14/3c SIGNAL HEADS PBP1

Y
- 1-3" CONDUIT (TRENCHING)
- EXISTING WIRING CONNECTIONS TO POWER METER
- 4-12/2c CABLE FOR LUMINAIRE SL1,SL2,SL6,SL7

Z
- 1-2" CONDUIT (TRENCHING)
- 1-6/4c ELECTRICAL SERVICE CABLE



INSET

(SCALE: 1"=10')

DEMOLITION & CONSTRUCTION NOTES

1. INSTALL TRAFFIC SIGNAL CABINET AND FOUNDATION, 12" CABINET BASE RISER, UPS AND ASSOCIATED EQUIPMENT.
2. INSTALL NON-ORNAMENTAL TRAFFIC SIGNAL MAST ARM POLE & FOUNDATION WITH LUMINAIRE, SIGNALS, SIGNS, POLE IDENTIFICATION STICKER, AND EQUIPMENT AS SHOWN.
3. INSTALL PEDESTAL POLE & FOUNDATION WITH SIGNALS, SIGNS, POLE IDENTIFICATION STICKERS, AND EQUIPMENT AS SHOWN. POLE SHALL BE 10' IN HEIGHT.
4. INSTALL ARLINGTON STANDARD RECTANGULAR JUNCTION BOX PER STD 61-04 TYPE 3.
6. REMOVE EXISTING CABINET & CONTROLLER. SALVAGE EXISTING EQUIPMENT TO BE RETURNED TO ARLINGTON PROPERTY YARD.
7. REMOVE EXISTING SIGNAL POLE, MAST ARM, SIGNAL HEADS, OTHER MOUNTED EQUIPMENT, AND ASSOCIATED WIRING. SALVAGE EXISTING EQUIPMENT TO BE RETURNED TO ARLINGTON PROPERTY YARD. DEMOLISH EXISTING FOUNDATION.
8. INSTALL ELECTRIC SERVICE METER & PEDESTAL PER STD 80-01. COORDINATE INSTALLATION WITH DOMINION ENERGY.
9. MAINTAIN AND PROTECT EXISTING TRAFFIC SIGNAL MAST ARM POLE.
10. MAINTAIN AND PROTECT EXISTING PEDESTAL/CARLYLE POLE.
13. REMOVE EXISTING PEDESTAL POLE, SIGNALS, SIGNS, EQUIPMENT AND ASSOCIATED WIRING. SALVAGE EXISTING EQUIPMENT TO BE RETURNED TO ARLINGTON PROPERTY YARD. DEMOLISH EXISTING FOUNDATION.
14. REMOVE EXISTING ELECTRIC SERVICE METER, PEDESTAL, AND ASSOCIATED WIRING. COORDINATE WITH DOMINION ENERGY.
15. INSTALL NEW CONDUIT CONNECTION FROM EXISTING MANHOLE TO NEW JUNCTION BOX.
16. SIGNAL HEAD TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT CP01.
18. MAINTAIN AND PROTECT EXISTING JUNCTION BOX.
19. REMOVE EXISTING JUNCTION BOX.
20. ABANDON EXISTING CONDUIT AND REMOVE ALL EXISTING WIRING.
26. RELOCATED EXISTING SIGN ALONG MAST ARM TO PROPOSED LOCATION.
30. REMOVE EXISTING POLE IDENTIFICATION STICKERS AND REPLACE WITH NEW STICKERS CONSISTENT WITH INFORMATION SHOWN IN POLE SIGNAL MOUNTING TABLE.
31. INSTALL ARLINGTON STANDARD RECTANGULAR JUNCTION BOX PER STD 61-04 TYPE 4.

CONDUIT AND CABLE NOTES:

1. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.

2. CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.

3. FIELD VERIFY MEASUREMENTS BEFORE CONSTRUCTION.

4. CONTRACTOR TO CONTACT UTILITY COMPANIES FOR FIELD LOCATIONS.

5. CONTRACTOR SHALL RECONNECT ALL EXISTING AND REMAINING SIGNAL EQUIPMENT TO NEW CABINET/CONTROLLER LOCATION. EXISTING WIRING CAN BE REUSED IF SUFFICIENT LENGTH IS AVAILABLE, OTHERWISE NEW WIRING, IN KIND, IS TO BE INSTALLED.

6. CONDUIT RUN "A" REQUIRES UP TO SEVEN (7) 3-INCH CONDUIT TO ACCOMMODATE SIGNAL EQUIPMENT FROM BOTH INTERSECTIONS INTO CABINET FOUNDATION. THIS DEVIATION FROM ARLINGTON COUNTY STANDARD 66-01 AND 66-02 HAS BEEN PERMITTED FOR THIS INSTALLATION.

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box (61-02)		
Fiber Optic Junction Box (61-04)	FOJ	FOJ
Service Junction Box		
Mast Arm Pole & Foundation	PM#	PM#
Pedestrian Pedestal Pole & Foundation		PM#
Service Meter		
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	AH	AH
Pedestrian Push Button	PB#	PB#
Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Vehicle Count Station		

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SEAL

COMMONWEALTH OF VIRGINIA
JONATHAN CRISAFI
Lic No. 058317
PROFESSIONAL ENGINEER

04/23/2021
5:05:57 PM

APPROVALS	DATE
Amy Pflaum (QUALITY CONTROL ENGINEER)	04/26/21
Kamal Taktak (CONSTRUCTION MANAGEMENT SUPERVISOR)	4.29.21
(WATER, SEWER, STREETS BUREAU CHIEF)	05.10.2021
Dennis M. Leach (TRANSPORTATION DIRECTOR)	05/17/21
(PROJECT MANAGER)	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST
CC16

ARMY NAVY DRIVE AND 12TH STREET SOUTH
SOUTH CLARK STREET AND 12TH STREET SOUTH
ID #208

SIGNAL PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

0 25 50
HORIZ. SCALE

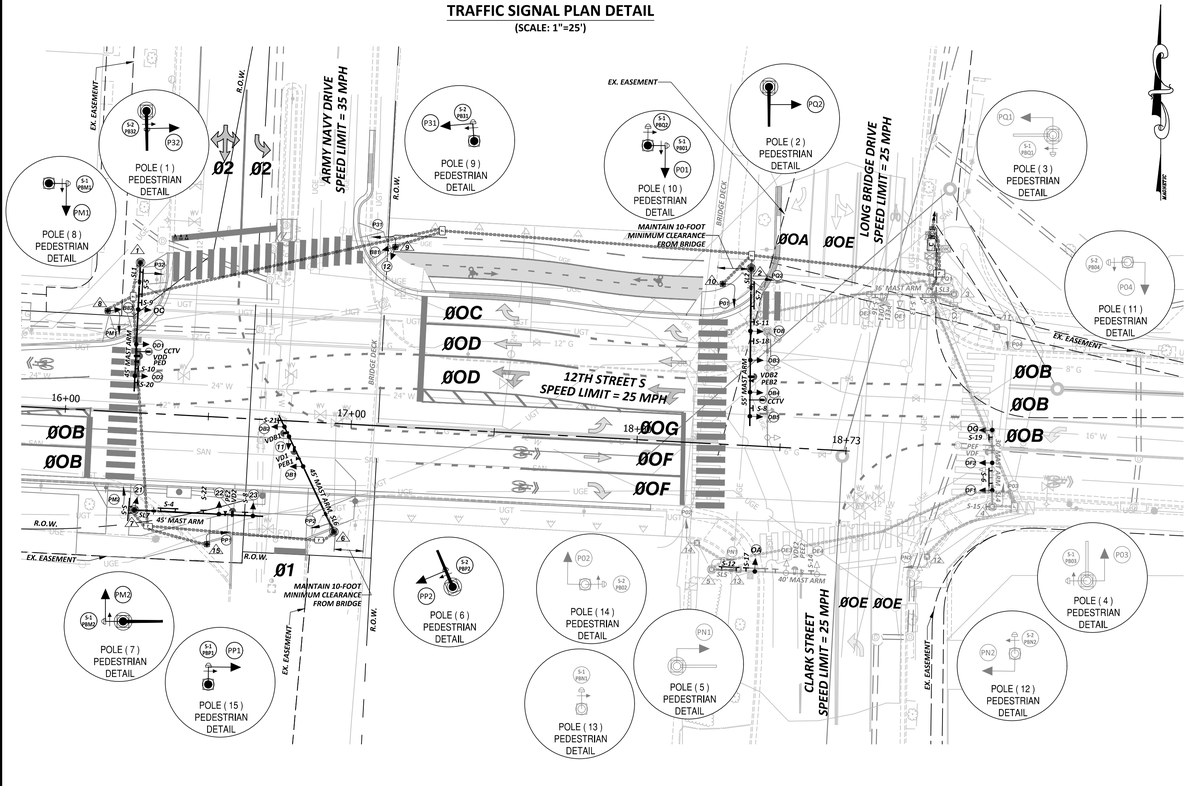
T300.4

FILENAME: CP16-290-TRAFFIC-SIGNAL PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

REVISED ON 03/05/21

TRAFFIC SIGNAL PLAN DETAIL

(SCALE: 1"=25')



EXISTING SIGNALS (TO REMAIN)

HEADS PN1,PN2,PO2, PO3,PO4,PQ1

HEADS OE1,OE2, OE3,OE4

RELOCATED SIGNALS

HEADS OF1,OF2

EXISTING STREET SIGNS (TO REMAIN)

12th St S

S-3

PROPOSED STREET SIGNS

12th St S

S-4

Army Navy Dr

S-5

← S Clark St
Long Bridge Dr →

S-7

PROPOSED SIGNALS

HEADS PM1,PM2,PO1, PP1,PP2,P31, P32,PQ2

HEADS 11,12,21, OB1,OB2,OB3, OB4,OB5, OD1, OD2

HEAD 23

HEADS OC

HEAD TOB

HEADS B81,B82

HEAD 22

HEAD OG

HEAD OA

RELOCATED STREET SIGNS

← Long Bridge Dr
S Clark St →

S-6

12th St S

S-12

EXISTING SIGNS (TO REMAIN)

S-13 R3-6(R) 36"X30"

S-14 R3-6(L) 36"X30"

S-15 R3-6(L) 36"X30"

S-16 R3-5(L) 36"X30"

PROPOSED SIGNS

S-8 R3-5(L) 36"X30"

S-9 R3-5(R) 36"X30"

S-10 R3-6(L) 36"X30"

S-11 CUSTOM 24"X24"

S-18 CUSTOM 36"X30"

S-19 R10-V1 42"X36"

S-20 R10-15(L) 30"X36"

S-21 R3-2 24"X24"

S-22 R10-15(R) 30"X36"

RELOCATED SIGNS

S-17 R3-5(R) 36"X30"

ACCESSIBLE PEDESTRIAN PUSHBUTTON

S-1 R10-3E(L) 9"X15"

S-2 R10-3E(R) 9"X15"

PBM1, PBM2,▼ PBP1, *PBN1,* **PBO1,** *PBO3, PBQ1,* **PBQ2**

PBP2, *PBN2,▼ PBO2, PBO4,* **PB31, PB32**

ITALICS INDICATES EXISTING EQUIPMENT
BOLD INDICATES PROPOSED EQUIPMENT

▼ PUSHBUTTON	WALK MESSAGE
PBN1, PBN2	"CLARK STREET, WALK SIGN IS ON TO CROSS CLARK STREET."
PBP1, PBP2 PB31, PB32	"ARMY NAVY DRIVE, WALK SIGN IS ON TO CROSS ARMY NAVY DRIVE."
PBO1, **PBQ2**	"LONG BRIDGE DRIVE, WALK SIGN IS ON TO CROSS LONG BRIDGE DRIVE."
PBM1, PBM2 PBO1, *PBO2 PBO3, PBO4*	"12TH STREET, WALK SIGN IS ON TO CROSS 12TH STREET."

*** 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.**

INITIAL TIMING CHART

PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
PHASE ON	X	X	X	X	X			
PHASE OFF						X	X	X
PHASE TIMINGS								
MIN GR	7.0	7.0	7.0	7.0	7.0	NOT USED	NOT USED	NOT USED
PASSAGE	0.0	0.0	0.0	2.0	0.0			
AMBER	4.0	4.1	4.0	4.0	4.0			
RED	2.7	3.2	2.6	2.6	2.3			
MAX 1	20.0	30.0	40.0	40.0	15.0			
MAX 2	0.0	0.0	0.0	0.0	0.0			
MIN GAP	3.0	3.0	3.0	3.0	3.0			
TIME BEFORE REDUCTION	0.0	0.0	0.0	0.0	0.0			
TIME TO REDUCE	0.0	0.0	0.0	0.0	0.0			
PED WALK	7.0	7.0	7.0	7.0	7.0			
PED CLEARANCE	20.0	16.0	20.0	19.0	8.0			
MODE	MIN RECALL	MIN RECALL	PED	MIN RECALL	MIN RECALL			

COLOR SEQUENCE CHART

PHASE	1	2	3	4	5	
SIGNAL	R/W	R/W	R/W	R/W	R/W	FLASH
11,12	G					R
21,22,23		~~G~~/G				R
TOB			▌	▌		BLANK
OB3,OB4,OB5			G	G		Y
OA	~~FYA~~	~~G~~			~~FYA~~	~~R~~
OB1,OB2			G	G		Y
OC		~~G~~		~~G~~	~~G~~	~~R~~
OD1,OD2			G	G	G	Y
OE1,OE2,OE3,OE4	G				G	R
OF1,OF2		G	G	G		Y
OG		~~G~~	~~FYA~~	~~FYA~~		~~FYA~~
B81,B82*						N/A
PM1,PM2	WALK	WALK				BLANK
PN1,PN2		WALK	WALK	WALK		BLANK
PO1,PO2,PO3,PO4	WALK				WALK	BLANK
PP1,PP2			WALK	WALK	WALK	BLANK
P31,P32			WALK			BLANK
PQ1,PQ2			WALK	WALK		BLANK

*INDICATES SIGNAL HEAD WILL NOT DISPLAY UNTIL FUTURE WORK IS COMPLETED BY OTHERS. REFER TO SHEET T303.2 FOR ULTIMATE PROPOSED OPERATION.
NOTE:BLANK SPACES REPRESENT A RED DISPLAY. WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL IS SERVICED; OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

POLE SIGNAL MOUNTING

No.	POLE IDENTIFICATION	STANDARD						LUM. LED (4)	POLE SIGNAL MOUNTING				STREET NAME SIGN
		TYPE	STATION, OFFSET	SIG. M.A. ORIENT.	SIG. M.A.	LUM. M.A. ORIENT.	LUM. M.A.		VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS	VIDEO DETECTOR PREEMPTION & CCTV	
1	208-MA-01-NW	MAST ARM POLE	16+23.41, 52.4' LT	180°	45'	180°	6'	145W	OC, OD1, OD2, P32	PB32	S-2, S-9, S-10, S-20	VDD, PED, CCTV	S-5
2	208-MA-01-MN	MAST ARM POLE	18+36.59, 61.9' LT	180°	55'	180°	6'	145W	OB3, OB4, OB5, TOB, PQ2	-	S-8, S-11, S-18	VDB2, PEB2, CCTV	S-7
3	208-MA-01-NE	EX. MAST ARM POLE	-	180°	36'	180°	6'	145W	*OE1, OE2, PQ1*	*PBQ1*	*S-1, S-13, S-16*	*VDE1, PEE1, VCS1*	S-3
4	208-MA-01-SE	EX. MAST ARM POLE	-	180°	30'	180°	6'	145W	OF1*, OF2*, OG, *PO3*	*PBO3*	*S-1, S-15,* S-19	*VDF, PEF*	S-6*
5	208-MA-01-MS**	EX. MAST ARM POLE	-	180°	40'	180°	6'	145W	OA, *OE3, OE4, PN1*	-	*S-14,* S-17*	*VDE2, PEE2*	S-12*
6	208-MA-02-MS	MAST ARM POLE	16+95.97, 37.9' RT	180°	45'	180°	6'	145W	11, OB1, OB2, PP2	PBP2	S-2, S-21	VD1, VDB1, PEB1	-
7	208-MA-01-SW	MAST ARM POLE	16+25.92, 34.0' RT	180°	45'	180°	6'	145W	21, 22, 23, PM2	PBM2	S-1, S-8, S-22	VD2, PE2	S-4, S-5
8	208-PP-01-NW	PEDESTAL POLE 10'	16+12.89, 35.0' LT	-	-	-	-	-	B82, PM1	PBM1	S-1	-	-
9	208-PP-01-MN	PEDESTAL POLE 10'	17+12.10, 62.7' LT	-	-	-	-	-	12, B81, P31	PB31	S-2	-	-
10	208-PP-02-MN	PEDESTAL POLE 10'	18+26.94, 55.9' LT	-	-	-	-	-	PO1	PBQ2, PBO1	S-1, S-1	-	-
11	208-PP-01-NE	EX. PEDESTAL POLE	-	-	-	-	-	-	*PO4*	*PBO4*	*S-2*	-	-
12	208-PP-01-SE	EX. PEDESTAL POLE	-	-	-	-	-	-	*PN2*	*PBN2*	*S-2*	-	-
13	208-PP-01-MS**	EX. PED BOLLARD POLE	-	-	-	-	-	-	-	*PBN1*	*S-1*	-	-
14	208-PP-02-MS**	EX. PEDESTAL POLE	-	-	-	-	-	-	*PO2*	*PBO2*	*S-2*	-	-
15	208-PP-01-SW	PEDESTAL POLE 10'	16+51.88, 44.6' RT	-	-	-	-	-	PP1	PBP1	S-1	-	-

ITALICS INDICATES EXISTING EQUIPMENT
* INDICATES RELOCATED EQUIPMENT
** POLE IDENTIFICATION LISTED HERE SHOULD REFLECT FINAL CONSTRUCTION AND LABELING

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box (61-02)		
Fiber Optic Junction Box (61-04)		
Service Junction Box		
Mast Arm Pole & Foundation	PM#	PM#
Pedestrian Pedestal Pole & Foundation		
Service Meter		
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	##	##
Pedestrian Push Button	PB#	PB#
Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Vehicle Count Station		

ARLINGTON
VIRGINIA

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COMMONWEALTH OF VIRGINIA
JONATHAN CRISAFI
Lic No. 058317
PROFESSIONAL ENGINEER

04/23/2021
5:06:15 PM

APPROVALS	DATE
QUALITY CONTROL ENGINEER	04/26/21
CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST

CC16

ARMY NAVY DRIVE AND 12TH STREET SOUTH
SOUTH CLARK STREET AND 12TH STREET SOUTH
ID #208

SIGNAL PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

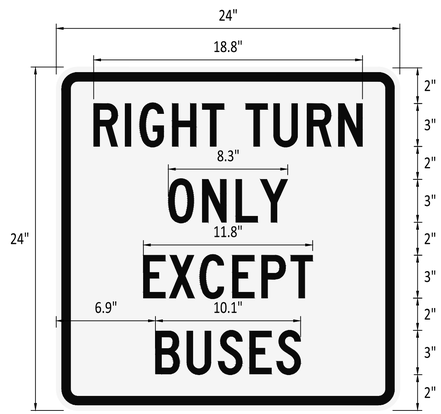
PLOTTED: APRIL 23 2021

SCALE:

0 25 50
HORIZ. SCALE

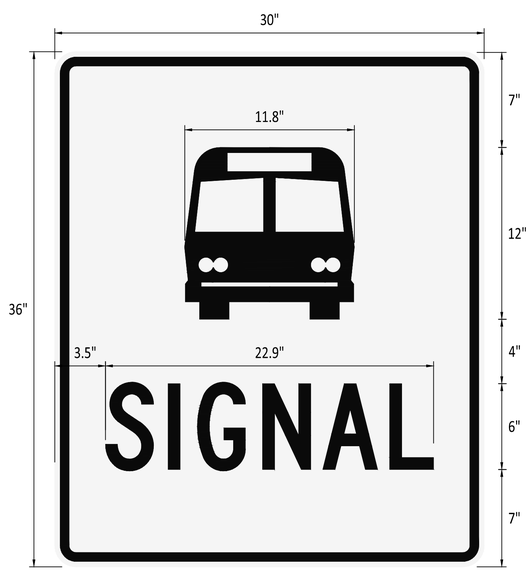
T300.5

FILENAME: CP16-290-TRAFFIC-SIGNAL PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS



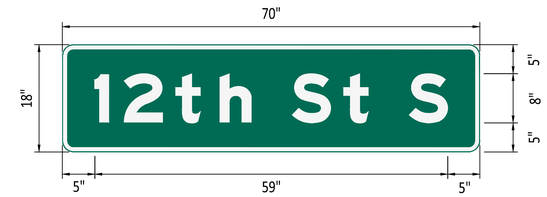
RIGHT TURN ONLY EXCEPT BUSES SIGN

REFER TO SHEET(S): T300.4 1" = 5"



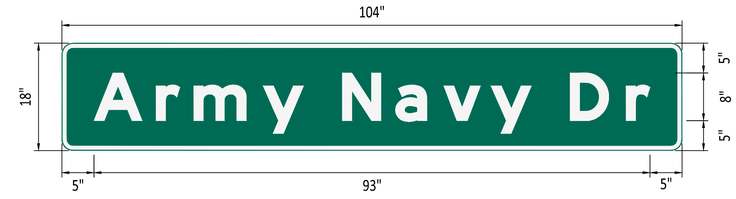
TRANSIT SIGNAL SIGN

REFER TO SHEET(S): T300.2, T300.4 1" = 5"

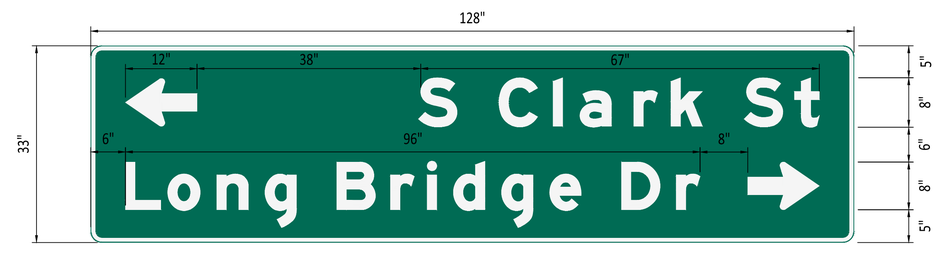


REFER TO SHEET(S): T300.2, T300.4

REFER TO SHEET(S): T300.2



REFER TO SHEET(S): T300.4



REFER TO SHEET(S): T300.4

STREET NAME SIGNS

DIMENSIONING DETAIL 1"=12"

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SEAL

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Lic No. 058317
PROFESSIONAL ENGINEER

04/23/2021
5:06:20 PM

APPROVALS	DATE
QUALITY CONTROL ENGINEER	04/26/21
CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS
FROM S. EADS ST TO S. CLARK ST
CC16

BETWEEN S. EADS ST. AND S. CLARK ST.

SIGNAL DETAIL PLAN

DESIGNED: JGA
DRAWN: JGA
CHECKED: JCC

PLOTTED: APRIL 22 2021

SCALE:

AS SHOWN

T301.1

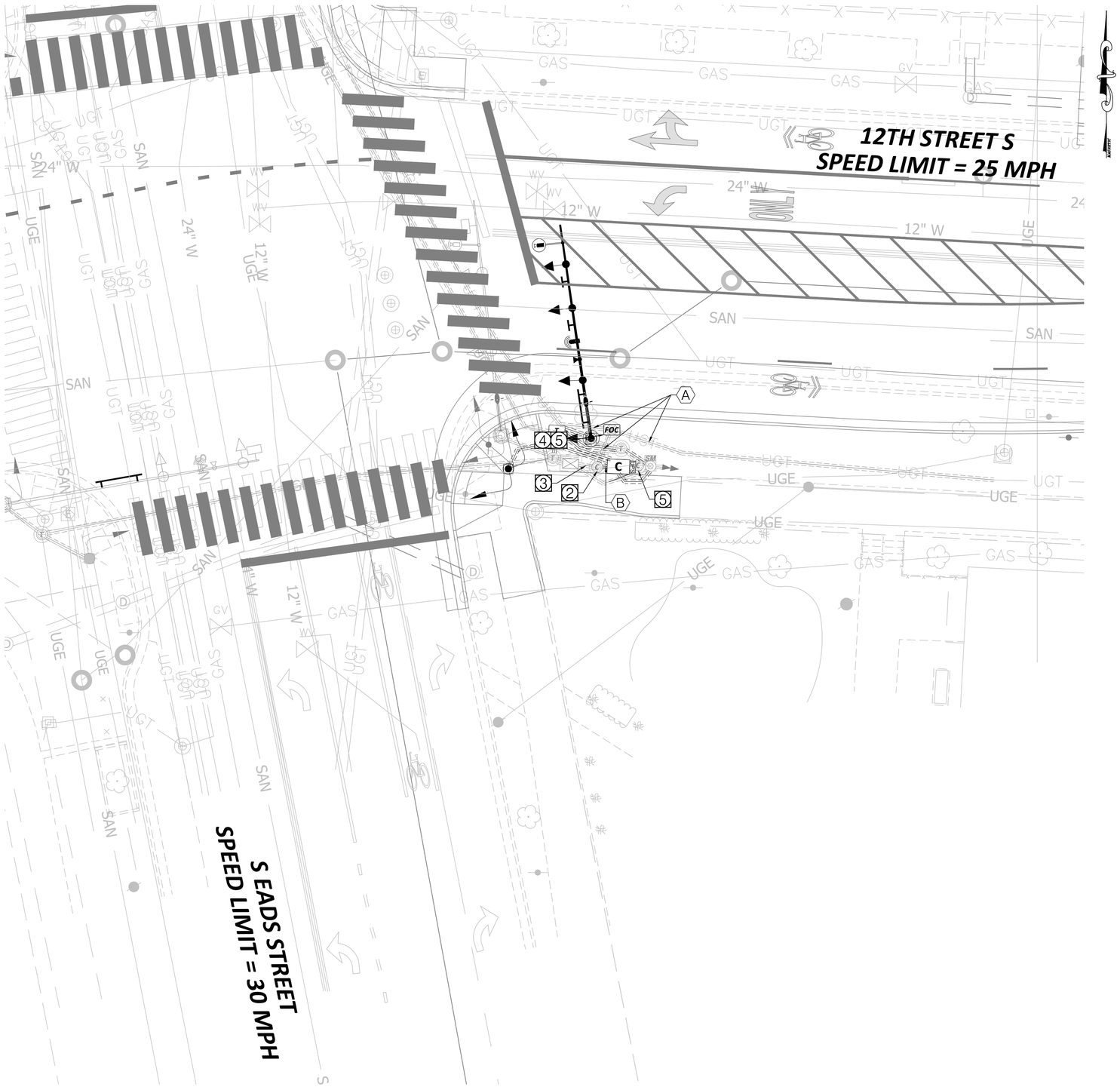
REVISED ON 03/05/21

FILENAME: CP16-291-TRAFFIC-SIGNAL_DETAIL_PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

REVISED ON 03/05/21

COMMUNICATION PLAN DETAIL

(SCALE: 1"=10')



CONDUIT & CABLE RUNS

A — 1- 2" CONDUIT (EXISTING)
EXISTING FIBER OPTIC CABLE

B — 1- 2" CONDUIT (TRENCHING)
1- 12-STRAND FIBER OPTIC CABLE

1-2" CONDUIT (SPARE)

DEMOLITION & CONSTRUCTION NOTES

2. INSTALL NEW CONDUIT CONNECTION FROM EXISTING MANHOLE TO NEW CONTROLLER CABINET.
3. RECOVER EXISTING FIBER OPTIC CABLE AND ABANDON EXISTING CONDUIT.
4. INSTALL ARLINGTON STANDARD RECTANGULAR COMMUNICATIONS JUNCTION BOX PER STD 31-04 TYPE 3.
5. REMOVE EXISTING COMMUNICATIONS JUNCTION BOX.

CONDUIT AND CABLE NOTES:

1. ALL PROPOSED CONDUITS SHOULD BE HDPE SCHEDULE 40.
2. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.
3. PROPOSED COMMUNICATION CONDUIT SHOULD HAVE A PULL WIRE FOR FUTURE FIBER OPTIC CABLE.

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		C
Comm. Junction Box (61-02)	C	C
Fiber Optic Junction Box (61-04)	FOC	FOC
Battery Backup (UPS)	UPS	UPS
Conduit Run		

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PROFESSIONAL ENGINEER

04/23/2021
5:06:27 PM

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS
FROM S. EADS ST TO S. CLARK ST
CC16

SOUTH EADS STREET AND 12TH STREET SOUTH
ID #198

SIGNAL COMMUNICATION PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

0 10 20
GRAPHIC SCALE

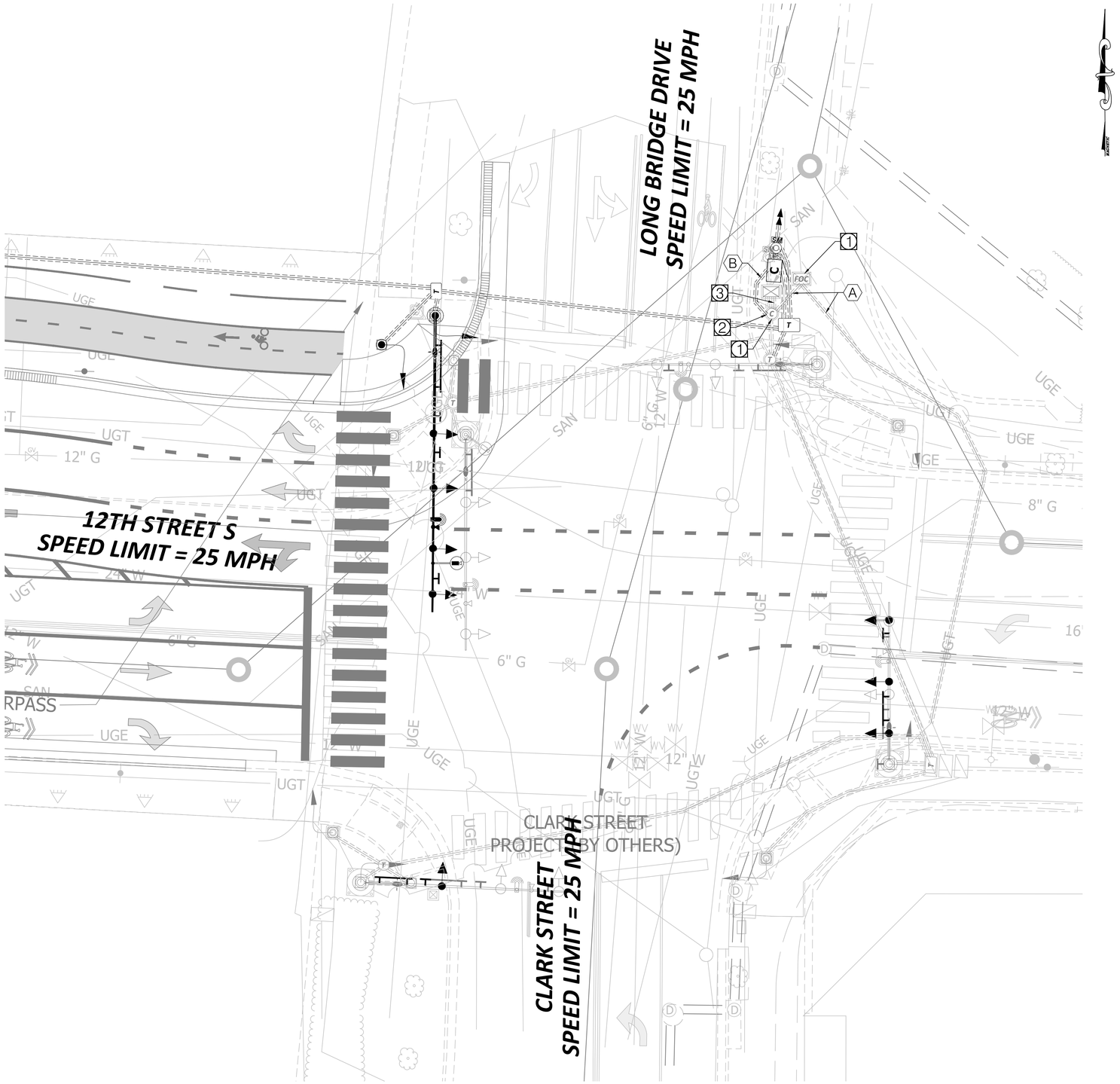
T302.1

FILENAME: CP16-292-TRAFFIC-COMM PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

REVISED ON 03/05/21

COMMUNICATION PLAN DETAIL

(SCALE: 1"=10')



CONDUIT & CABLE RUNS

A — 1- 2" CONDUIT (EXISTING)
EXISTING FIBER OPTIC CABLE

B — 1- 2" CONDUIT (TRENCHING)
1- 12-STRAND FIBER OPTIC CABLE

DEMOLITION & CONSTRUCTION NOTES

1. MAINTAIN AND PROTECT EXISTING FIBER COMMUNICATIONS JUNCTION BOX.
2. INSTALL NEW CONDUIT CONNECTION FROM EXISTING MANHOLE TO NEW CONTROLLER CABINET.
3. RECOVER EXISTING FIBER OPTIC CABLE AND ABANDON EXISTING CONDUIT.

CONDUIT AND CABLE NOTES:

1. ALL PROPOSED CONDUITS SHOULD BE HDPE SCHEDULE 40.
2. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.
3. PROPOSED COMMUNICATION CONDUIT SHOULD HAVE A PULL WIRE FOR FUTURE FIBER OPTIC CABLE.

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		C
Comm. Junction Box (61-02)	C	C
Fiber Optic Junction Box (61-04)	FOC	FOC
Battery Backup (UPS)	UPS	UPS
Conduit Run		

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5:06:35 PM

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
	05.10.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	05/17/21
TRANSPORTATION DIRECTOR	4/26/21
PROJECT MANAGER	

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS
FROM S. EADS ST TO S. CLARK ST
CC16

ARMY NAVY DRIVE AND 12TH STREET SOUTH
SOUTH CLARK STREET AND 12TH STREET SOUTH
ID #208

SIGNAL COMMUNICATION PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

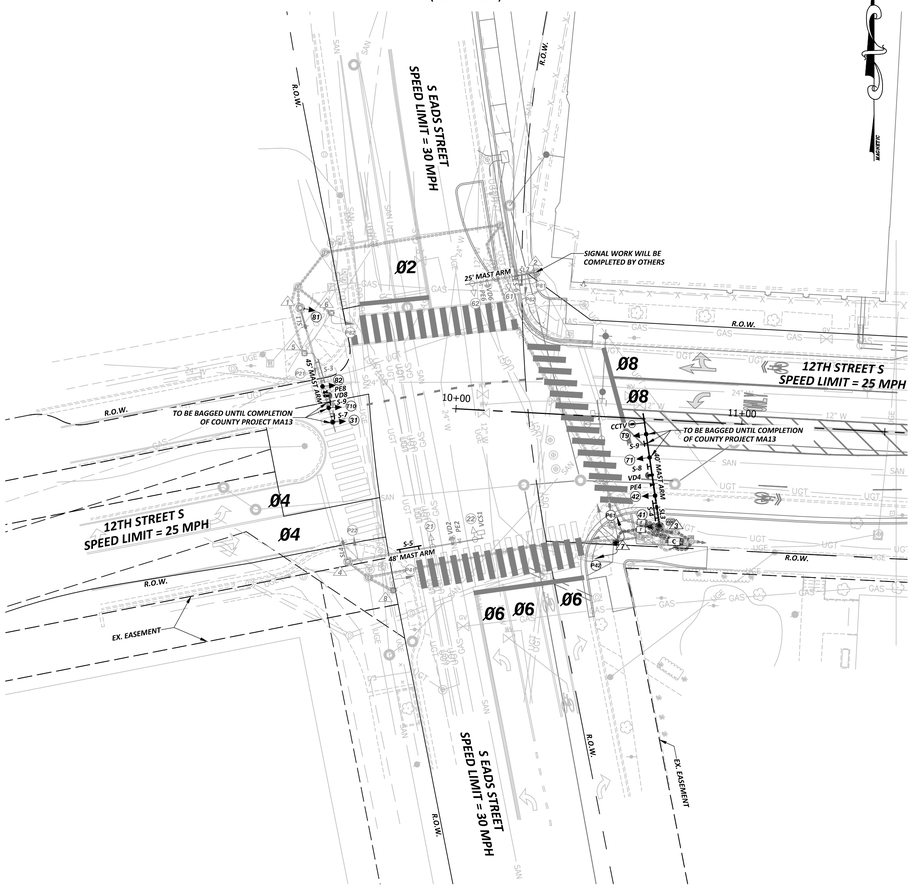
0 10 20
GRAPHIC SCALE

T302.2

FILENAME: CP16-292-TRAFFIC-COMM PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

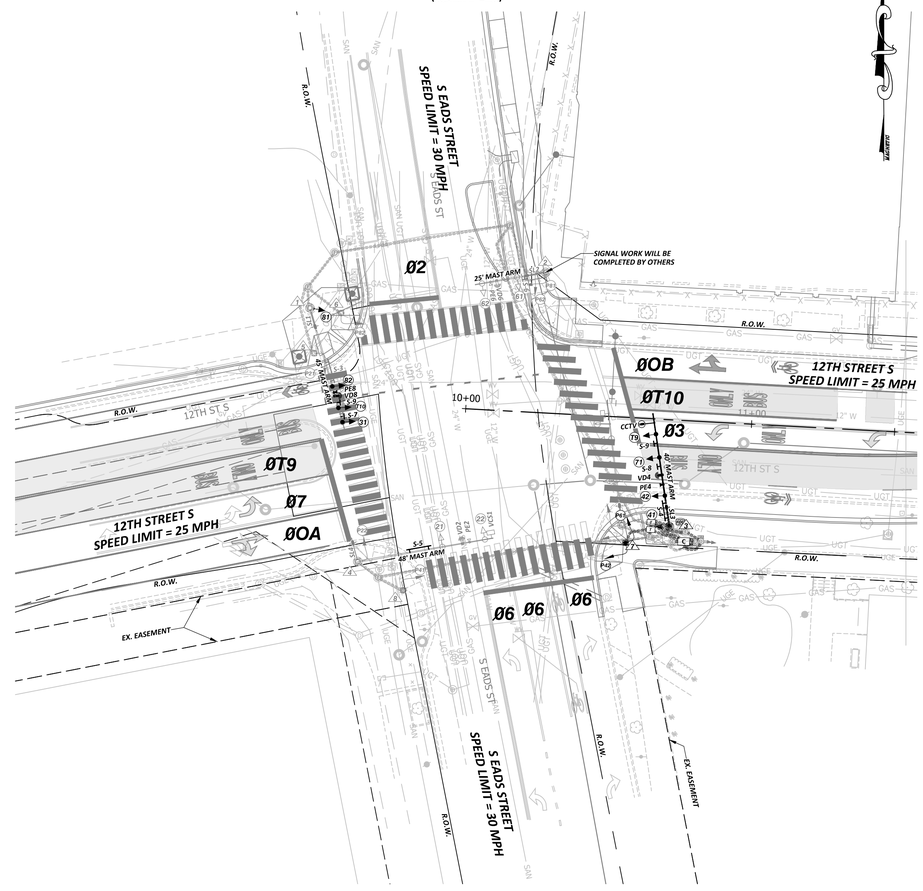
TRAFFIC SIGNAL PLAN DETAIL - INTERIM CONDITIONS (SEE SHEET T300.2 FOR DETAILS)

(SCALE: 1"=25')

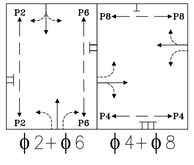


TRAFFIC SIGNAL PLAN DETAIL - ULTIMATE CONDITIONS (NOT FOR CONSTRUCTION)

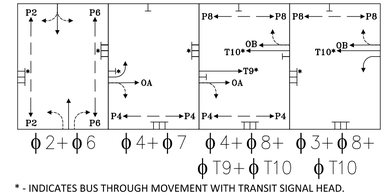
(SCALE: 1"=25')



INTERIM PHASING DIAGRAM (SEE SHEET T300.2 FOR DETAILS)



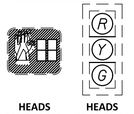
PROPOSED PHASING DIAGRAM (NOT FOR CONSTRUCTION)



OA= ϕ 4+ ϕ T9
OB= ϕ T10+ ϕ 8

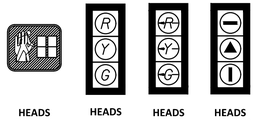
* - INDICATES BUS THROUGH MOVEMENT WITH TRANSIT SIGNAL HEAD.

EXISTING SIGNALS (TO REMAIN)



HEADS P21,P22,P41, P62,P81,P82 — HEADS 21,22,61,62

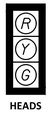
PROPOSED SIGNALS



HEADS P42,P61 — HEADS 41,42 — HEADS 31*,71* — HEADS T9*,T10*

*SIGNALS TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13

RELOCATED SIGNALS



HEADS 81,82

EXISTING STREET SIGNS (TO REMAIN)

S-3

PROPOSED STREET SIGNS

S-4

S-5

RELOCATED SIGNS

S-7
R3-5(L)
36"X30"

EXISTING SIGNS (TO REMAIN)

S-6
R3-5(R)
36"X30"

PROPOSED SIGNS

S-8
R3-5(L)
36"X30"

S-9*
CUSTOM
36"X30"

*SIGNS TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13

GENERAL NOTES:

1. FOR INFORMATIONAL PURPOSES ONLY.
2. ULTIMATE CONDITIONS REFLECT COMPLETION OF ADJACENT PROJECTS AND UPDATED SIGNAL PROGRAMMING (TO BE COMPLETED BY OTHERS).
3. ULTIMATE CONDITIONS DO NOT REPRESENT FINAL DESIGN OF TRAFFIC SIGNAL EQUIPMENT. FINAL TRAFFIC SIGNAL DESIGN WILL BE REQUIRED PRIOR TO IMPLEMENTING ULTIMATE CONDITIONS TRAFFIC SIGNAL OPERATIONS (TO BE COMPLETED BY OTHERS).

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box (61-02)		
Fiber Optic Junction Box (61-04)		
Service Junction Box		
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation	PM	PM
Service Meter		
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	22	22
Pedestrian Push Button	PB#	PB#
Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Vehicle Count Station		

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APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST
CC16

SOUTH EADS STREET AND 12TH STREET SOUTH
ID #198

INTERIM AND ULTIMATE PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

0 25 50
HORIZ. SCALE

T303.1

REVISED ON 03/05/21

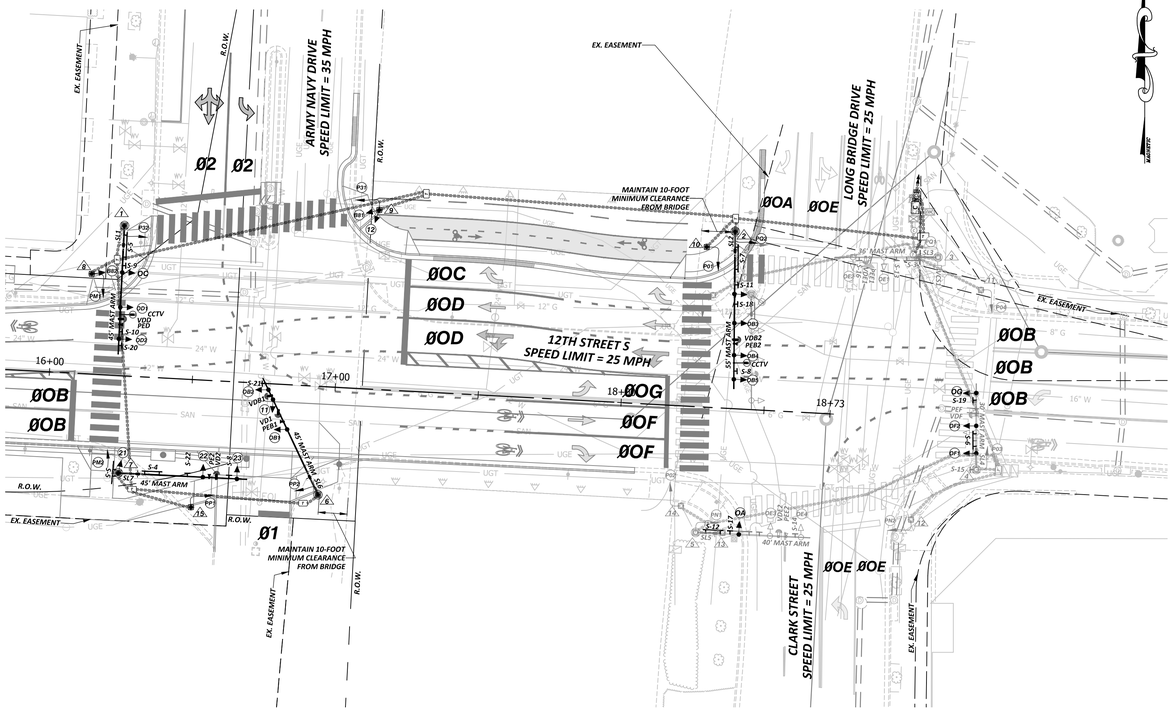
FILENAME: CP16-293-TRAFFIC-ULTIMATE AND INTERIM_PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

REVISED ON 03/05/21

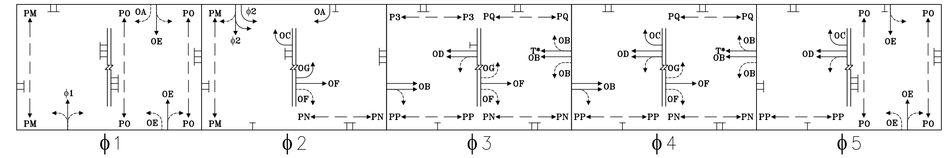
FILENAME: CP16-293-TRAFFIC-ULTIMATE AND INTERIM_PLAN.DWG PATH: H:\20\20548 - ARLINGTON COUNTY ENGINEERING ON-CALL\016 - 12TH ST S SIGNAL DESIGN\DESIGN_CD PLOTTED BY: JAMARILLAS

TRAFFIC SIGNAL PLAN DETAIL - INTERIM CONDITIONS (SEE SHEET T300.4 FOR DETAILS)

(SCALE: 1"=25')



INTERIM PHASING DIAGRAM (SEE SHEET T300.4 FOR DETAILS)



T* - INDICATES BUS THROUGH MOVEMENT WITH TRANSIT SIGNAL HEAD.

OA=ϕ1+ϕ2
OB=ϕ3+ϕ4
OC=ϕ2+ϕ4+ϕ5
OD=ϕ3+ϕ4+ϕ5
OE=ϕ1+ϕ5
OF=ϕ2+ϕ3+ϕ4
OG=ϕ2+ϕ3+ϕ4
OM=ϕ1+ϕ2 (PED)
ON=ϕ2+ϕ3+ϕ4 (PED)
OO=ϕ1+ϕ5 (PED)
OP=ϕ3+ϕ4+ϕ5 (PED)
OQ=ϕ3+ϕ4 (PED)

EXISTING SIGNALS (TO REMAIN)

HEADS PN1,PN2,PO2, PO3,PO4,PQ1

HEADS OE1,OE2, OE3,OE4

PROPOSED SIGNALS

HEADS PM1,PM2,PO1, PP1,PP2,P31, P32,PQ2

HEADS 11,12,21, OB1,OB2,OB3, OB4,OB5, OD1, OD2

HEAD 23

RELOCATED SIGNALS

HEADS OF1,OF2

HEADS OC

HEAD TOB

HEADS B81,B82

HEAD 22

HEAD OG

HEAD OA

PROPOSED STREET SIGNS

12th St S — S-4

Army Navy Dr — S-5

← S Clark St / Long Bridge Dr → — S-7

RELOCATED STREET SIGNS

← Long Bridge Dr / S Clark St → — S-6

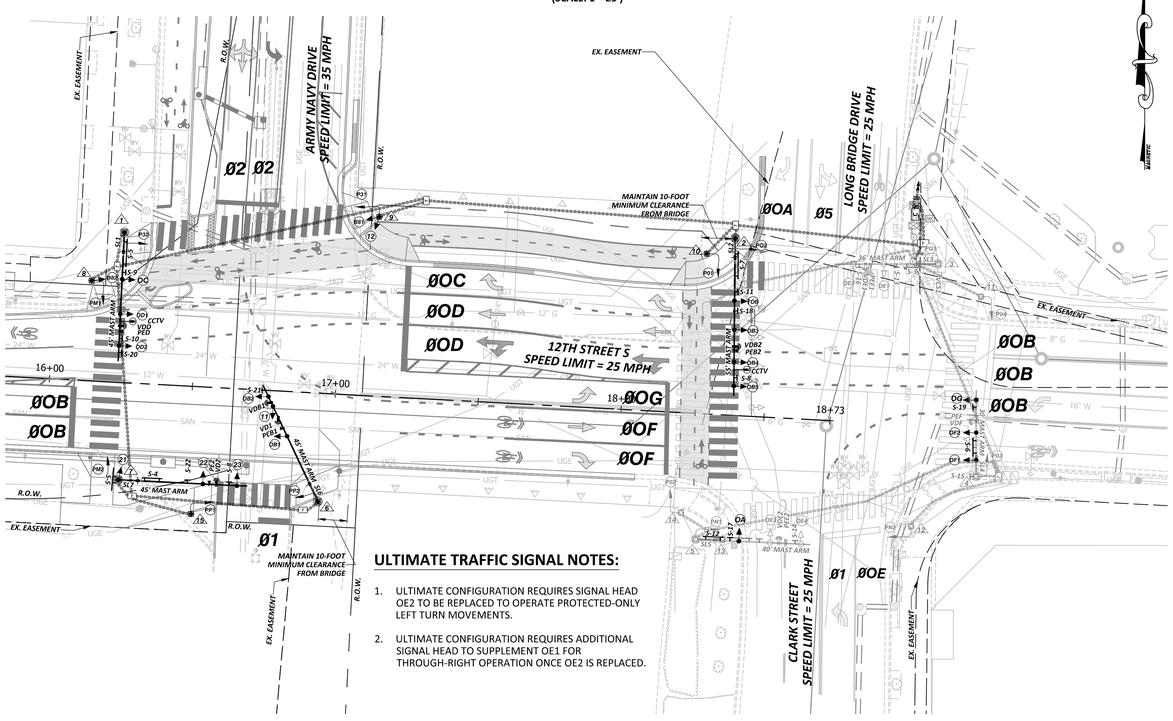
12th St S — S-12

EXISTING STREET SIGNS (TO REMAIN)

12th St S — S-3

TRAFFIC SIGNAL PLAN DETAIL - ULTIMATE CONDITIONS (NOT FOR CONSTRUCTION)

(SCALE: 1"=25')



ULTIMATE TRAFFIC SIGNAL NOTES:

1. ULTIMATE CONFIGURATION REQUIRES SIGNAL HEAD OE2 TO BE REPLACED TO OPERATE PROTECTED-ONLY LEFT TURN MOVEMENTS.
2. ULTIMATE CONFIGURATION REQUIRES ADDITIONAL SIGNAL HEAD TO SUPPLEMENT OE1 FOR THROUGH-RIGHT OPERATION ONCE OE2 IS REPLACED.

EXISTING SIGNS (TO REMAIN)

S-13 R3-6(R) 36"X30"

S-14 R3-6(L) 36"X30"

S-15 R3-6(L) 36"X30" — RIGHT LANE MUST TURN RIGHT

S-16 R3-5(L) 36"X30" — ONLY

PROPOSED SIGNS

S-8 R3-5(L) 36"X30" — ONLY

S-9 R3-5(R) 36"X30" — ONLY

S-10 R3-6(L) 36"X30"

S-11 CUSTOM 24"X24" — RIGHT TURN ONLY EXCEPT BUSES

S-18 CUSTOM 36"X30" — SIGNAL

S-19 R10-V1 42"X36" — LEFT TURN YIELD ON FLASHING YELLOW ARROW

S-20 R10-15(L) 30"X36" — TURNING VEHICLES TO

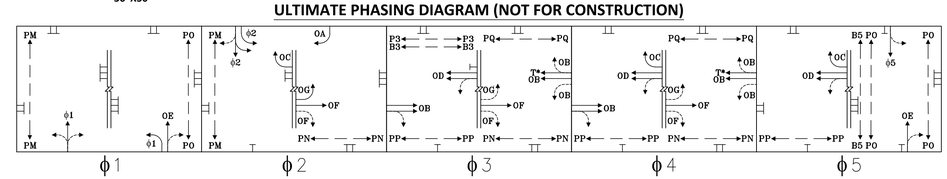
S-21 R3-2 24"X24"

S-22 R10-15(R) 30"X36" — TURNING VEHICLES TO

RELOCATED SIGNS

S-17 R3-5(R) 36"X30" — ONLY

ULTIMATE PHASING DIAGRAM (NOT FOR CONSTRUCTION)



T* - INDICATES BUS THROUGH MOVEMENT WITH TRANSIT SIGNAL HEAD.

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OE=ϕ1+ϕ5
OF=ϕ2+ϕ3+ϕ4
OG=ϕ2+ϕ3+ϕ4
OM=ϕ1+ϕ2 (PED)
ON=ϕ2+ϕ3+ϕ4 (PED)
OO=ϕ1+ϕ5 (PED)
OP=ϕ3+ϕ4+ϕ5 (PED)
OQ=ϕ3+ϕ4 (PED)

GENERAL NOTES:

1. FOR INFORMATIONAL PURPOSES ONLY.
2. ULTIMATE CONDITIONS REFLECT COMPLETION OF ADJACENT PROJECTS AND UPDATED SIGNAL PROGRAMMING (TO BE COMPLETED BY OTHERS).
3. ULTIMATE CONDITIONS DO NOT REPRESENT FINAL DESIGN OF TRAFFIC SIGNAL EQUIPMENT. FINAL TRAFFIC SIGNAL DESIGN WILL BE REQUIRED PRIOR TO IMPLEMENTING ULTIMATE CONDITIONS TRAFFIC SIGNAL OPERATIONS (TO BE COMPLETED BY OTHERS).

LEGEND

	EXISTING	PROPOSED
Controller Cabinet		
Signal Junction Box (61-02)		
Signal Junction Box (61-04)		
Comm. Junction Box (61-02)		
Fiber Optic Junction Box (61-04)	FOJ	FOJ
Service Junction Box		
Mast Arm Pole & Foundation		PM
Pedestrian Pedestal Pole & Foundation		PM
Service Meter		
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	89	89
Pedestrian Push Button	PB#	PB#
Video Detection	VD#	VD#
Emergency Vehicle Preemption	PE#	PE#
CCTV Vehicle Camera	CCTV	CCTV
Overhead Light (LED)	SL#	SL#
Conduit Run		
Vehicle Count Station		

ARLINGTON VIRGINIA

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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	04/26/21
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	4.29.21
WATER, SEWER, STREETS BUREAU CHIEF	05.10.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	05/17/21
PROJECT MANAGER	4/26/21

REVISIONS	DATE

12TH STREET SOUTH IMPROVEMENTS FROM S. EADS ST TO S. CLARK ST
CC16

ARMY NAVY DRIVE AND 12TH STREET SOUTH
SOUTH CLARK STREET AND 12TH STREET SOUTH
ID #208

INTERIM AND ULTIMATE PLAN

DESIGNED: PMH & JCC
DRAWN: PMH & JGA
CHECKED: JFR

PLOTTED: APRIL 23 2021

SCALE:

0 25 50
HORIZ. SCALE

T303.2