REVISED ON 05/23/2018

ARLINGTON
VIRGINIA

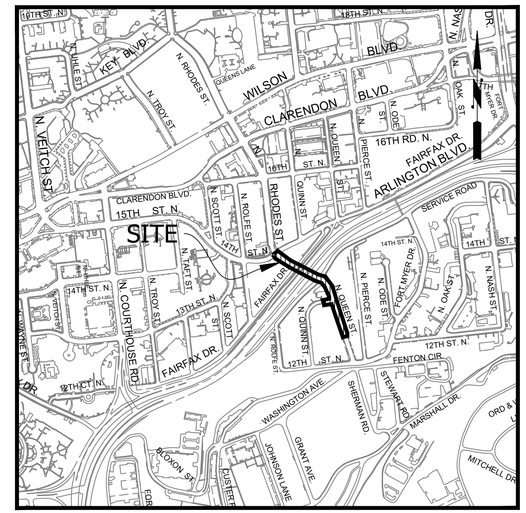
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

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:

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

N. Rhodes Street - 14th St. N. to N. Quinn St.

PROJECT NUMBER: WI08

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. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
15. WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
16. 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. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
17. 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

18. 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.
19. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
20. 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:

21. 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.
22. 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.
23. 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.

Sheet List Table

LDA 21096

SWM# 21-0107

ADT

N. RHODES ST.: 5,300 AADT (VDOT 2019 AADT)
N. QUEEN ST. : NO RECENT TRAFFIC DATA
ARLINGTON BLVD. (RTE 50 E): 53,000 AADT (VDOT 2019 AADT)
ARLINGTON BLVD. (RTE 50 W): 53,000 AADT (VDOT 2019 AADT)
FAIRFAX DRIVE: 2,700 AADT (VDOT 2019 AADT)

STREET CLASSIFICATION

N. RHODES ST. - MINOR ARTERIAL
N. QUEEN ST. - MINOR ARTERIAL
ARLINGTON BLVD. (RTE 50) - MAJOR ARTERIAL
FAIRFAX DRIVE - 25 MPH - NEIGHBORHOOD PRINCIPAL ARTERIAL

POSTED SPEED

N. RHODES ST/N. QUEEN ST - 25 MPH
ARLINGTON BLVD (RTE 50) - 45 MPH
ARLINGTON BLVD (RTE 50E) SERVICE ROAD - 25 MPH
FAIRFAX DRIVE - 25 MPH

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SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

COVER

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:

(AS SHOWN)

C000.1

FILENAME: WI08-200-COVER SHEET.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018

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 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

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Dennis M. Leach — TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

LEGEND

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:

N/A

C006.1

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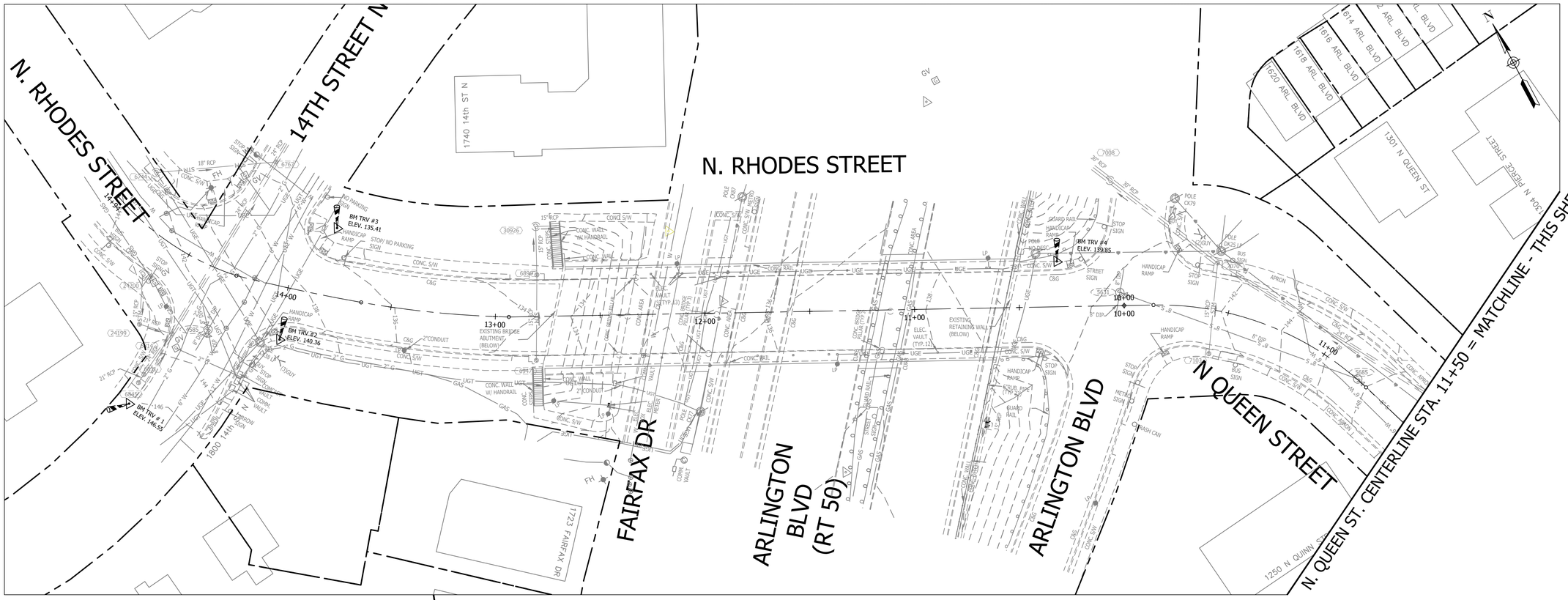

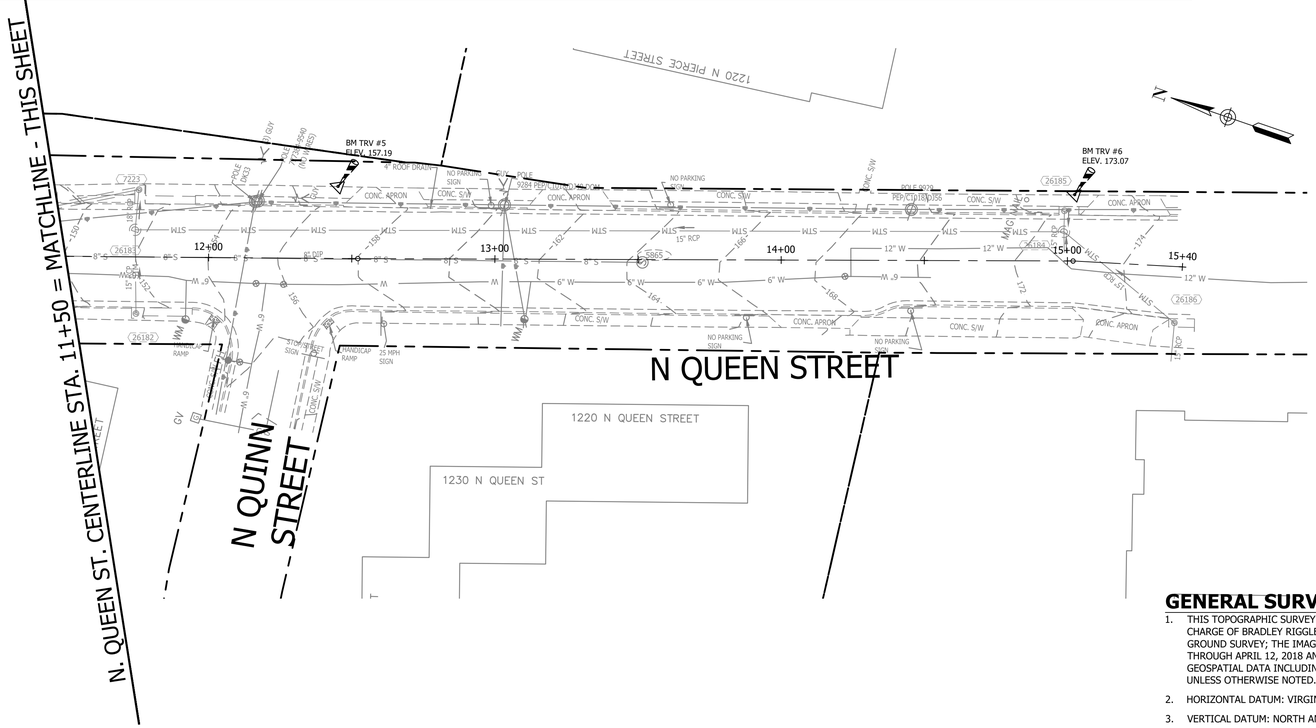

STORM STRUCTURES

#6744
TOP = 142.98
15" RCP INV IN = 138.73 (FROM 24241)
15" RCP INV IN = 138.58 (FROM 24206)
18" RCP INV IN = 138.58
18" RCP IN OUT = 138.53

#6767
TOP = 135.28
24" RCP INV IN = 130.27
18" RCP INV IN = 131.47 (FROM 6744)
24" RCP IN OUT = 130.02 (TO 6686)

#6814
TOP = 143.39
24" RCP INV IN = 136.24
21" RCP INV IN = 136.94
24" RCP IN OUT = 136.29

#6831
TOP = 145.16
21" RCP INV IN = 136.26
15" RCP INV IN = 140.36 (FROM 6904)
24" RCP IN OUT = 137.61

#6845
TOP = 145.72
21" RCP INV IN = 139.02 (FROM 6744)
21" RCP IN OUT = 138.58

#6896
TOP = 134.15
15" RCP INV IN = 130.10
15" RCP IN OUT = 129.75

#6947
TOP = 134.28
15" RCP IN OUT = 130.83

#7008
TOP = 138.97
30" RCP INV IN = 130.62
30" RCP IN OUT = 130.57 (TO 6905)

#7070
TOP = 141.71
24" RCP INV IN = 136.36
15" RCP IN In = 136.88
30" RCP IN OUT = 136.27

#7103
TOP = 141.75
15" RCP IN OUT = 137.60

#7223
TOP = 151.87
18" RCP INV IN = 146.57
24" RCP IN OUT = 146.47

#24199
TOP = 145.09
15" RCP INV IN = 140.19
21" RCP INV IN = 137.34
21" RCP IN OUT = 137.09

#24200
TOP = 143.86
15" RCP IN OUT = 140.56

#26182
TOP = 151.82
15" RCP IN OUT = 147.62

#26183
TOP = 151.83
15" RCP INV IN = 146.98 (FROM 26182)
15" RCP IN OUT = 146.75 (FROM 26184)
18" RCP INVOUT = 146.68 (TO 7223)

#26184
TOP = 172.69
15" RCP INV IN = 165.98 (FROM 26186)
15" RCP INV IN = 165.69 (FROM 26186)
15" RCP IN OUT = 165.94 (FROM 26185)
15" RCP INVOUT = 165.64

#26185
TOP = 172.80
15" RCP IN OUT = 165.91

#26186
TOP = 175.33
15" RCP INV IN = 166.30
24" RCP IN OUT = 166.24

#30926
TOP = 123.12
15" RCP INV IN = 116.72 (FROM 6896)
15" RCP IN OUT = 116.62 (TO 6923)

SANITARY STRUCTURES

#4585
RIM = 142.78
8" DIP INV IN = 131.54
8" DIP INV IN = 132.08
10" DIP INV IN = 133.12 (ABANDONED)
8" DIP INV IN = 131.48 (FROM 5273)
8" DIP INV OUT = 131.42

#5631
RIM = 140.13
8" DIP INV IN = 131.23 (ABANDONED)
8" DIP INV IN = 122.79
8" DIP INV IN = 122.73 8" DIP INV OUT = 122.69

#5685
RIM = 147.52
4" DIP INV IN = 138.62 (ABANDONED)
8" DIP INV IN = 133.988" DIP INV OUT = 133.96

#5865
RIM = 164.39
LID WEDGED INACCESSIBLE)

GENERAL SURVEY NOTES:

1. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF BRADLEY RIGGLEMAN OF BC CONSULTANTS (LS# 2216) FROM AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM APRIL 9 THROUGH APRIL 12, 2018 AND JUNE 4, 2018; 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: 2'
5. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

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PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EXISTING CONDITIONS PLAN

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:

0 25 50
GRAPHIC SCALE

C011.1

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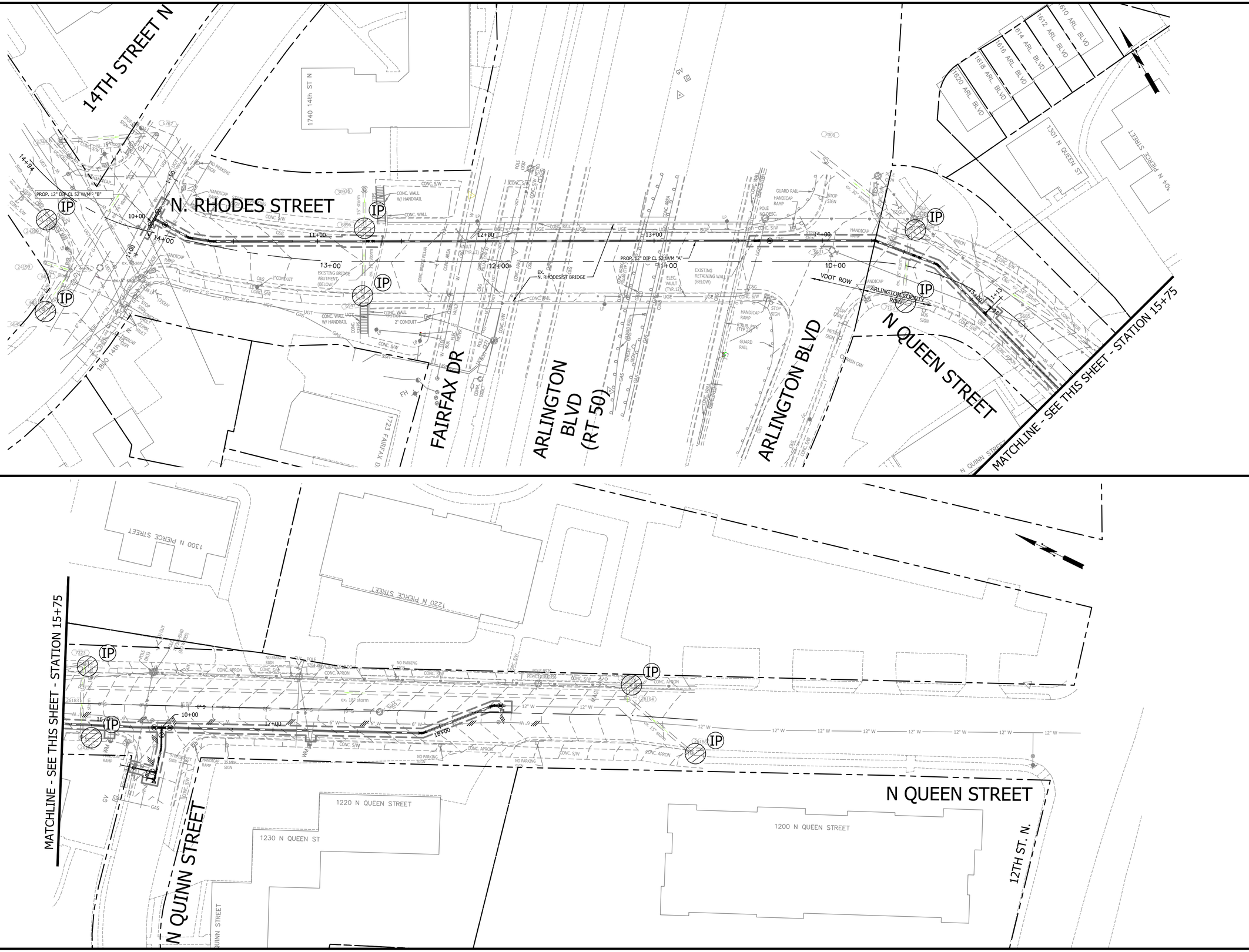

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL PLAN

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:
0 10 20
HORIZ. SCALE

C031.1

FILENAME: WI08-224-E_AND_S_PLAN.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018

FILENAME: WI08-220-E_AND_S_CONTROL_NOTES_DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PROPOSED 12" DUCTILE IRON PIPE WILL REPLACE THE EXISTING ABANDONED 6" WATERMAIN ACROSS ARLINGTON BOULEVARD TO IMPROVE WATER SERVICE IN THIS CORNER OF FORT MYER NEIGHBORHOOD. THE PROPOSED WATERMAIN WILL CONNECT THE EXISTING 12" WATERMAIN IN 14th STREET NORTH TO THE EXISTING 12" WATERMAIN IN NORTH QUEEN STREET. THIS PROJECT IS LOCATED WITHIN THE "ROCKY RUN" WATERSHED.

EXISTING SITE CONDITIONS:

THE N RHODES STREET & N QUEEN STREET IS A PAVED MINOR ARTERIAL WITH A SPEED LIMIT OF 25 MPH. THERE ARE STREET PARKING ALLOWED ON BOTH SIDES OF N QUEEN STREET BETWEEN ARLINGTON BLVD SERVICE ROAD TO 12TH STREET N.

ADJACENT PROPERTIES:

THERE ARE COMMERCIAL/APARTMENT PROPERTIES ON BOTH SIDES OF N QUEEN STREET.

OFF-SITE AREAS:

THERE ARE NO OFF-SITE AREAS FOR THIS PROJECT.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE.

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.

TOTAL LAND DISTURBANCE.....................= 4,580 SF (0.11 ACRES) = LIMIT OF WORK IS WITHIN THE ROW
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 4,580 SF (0.11 ACRES)
POST-IMPROVEMENT IMPERVIOUS AREA...= 4,580 SF (0.11 ACRES)
INCREASED IMPERVIOUS AREA................= 0 SF (0 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET C032.1 FOR LOCATION)

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

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE

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. TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02

a.a. A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.

a.b. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.

a.c. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

a.d. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

b. SILT FENCE - VESCH 3.05

b.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.

b.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

b.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.

b.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.

b.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.

b.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.

c. TEMPORARY DIVERSION DIKE - VESCH 3.09

c.a. A SYSTEM OF TEMPORARY DIKES, TO DIRECT FLOW INTO PROPOSED & EXISTING STORM SEWER STRUCTURES WILL BE INSTALLED AS INDICATED IN EROSION & SEDIMENT CONTROL PLAN.

c.b. THE STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.

d. STORM DRAIN INLET PROTECTION - VESCH 3.07

d.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.

d.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.

d.c. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

e. DEWATERING STRUCTURE - VESCH 3.26

e.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.

e.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.

e.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.

f. TREE PROTECTION - VESCH 3.38

f.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:

f.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.

f.a.b. REPAIR OF DAMAGE:

f.a.A.a. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.

f.a.A.b. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.

f.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.

f.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.

f.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.

f.a.A.f. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.

f.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.

f.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.

f.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.

f.b.c. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.

f.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. EROSION CONTROL BLANKET AND MULCHING - VESCH 3.36 AND 3.35

c.a. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION.

d. DUST CONTROL - VESCH 3.39

d.a. DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH

e. PERMANENT SEEDING - VESCH 3.32

e.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.

f. SODDING - VESCH 3.33

f.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.

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

SEAL

SOLOMON W SHIKUR
Lic. No. 44276
6/28/21

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL NOTES

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:

N/A

C032.1

REVISED ON 05/23/2018

March 26, 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: Fort Myer Heights Watermain Improvement

N. Rhodes Street
street address

From 14th Street N. to N. Queen Street
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.

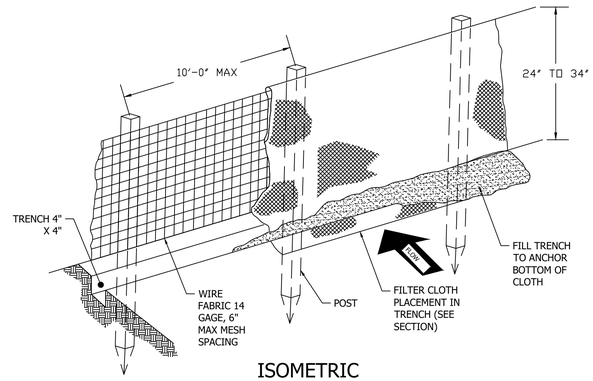
I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of Responsible Land Disturber.
telephone number

Sincerely,

signed

Solomon Shikur
name printed

VA PE #44276
professional registration (type and number)



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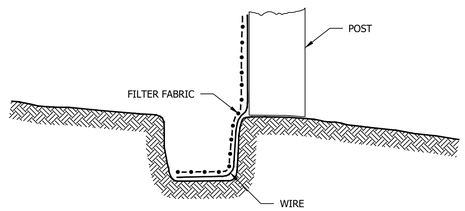

SECTION

MODIFIED-VESCH 3.05

SILT FENCE

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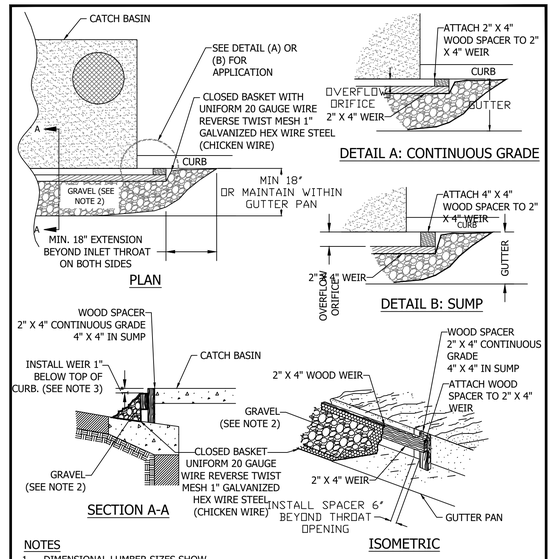


NOTES
1. DIMENSIONAL LUMBER SIZES SHOW.
2. GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, # 357 OR #5.
3. WEIR HEIGHT MAY BE ADJUSTED BY PROJECT OFFICER OR INSPECTOR IN FLOOD PRONE AREAS.
4. PAINT 2"X4" WEIR, CLOSED BASKET, AND GUTTER WITH HIGH VISIBILITY INCANDESCENT ORANGE PAINT.
5. REMOVE SEDIMENT AFTER 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.

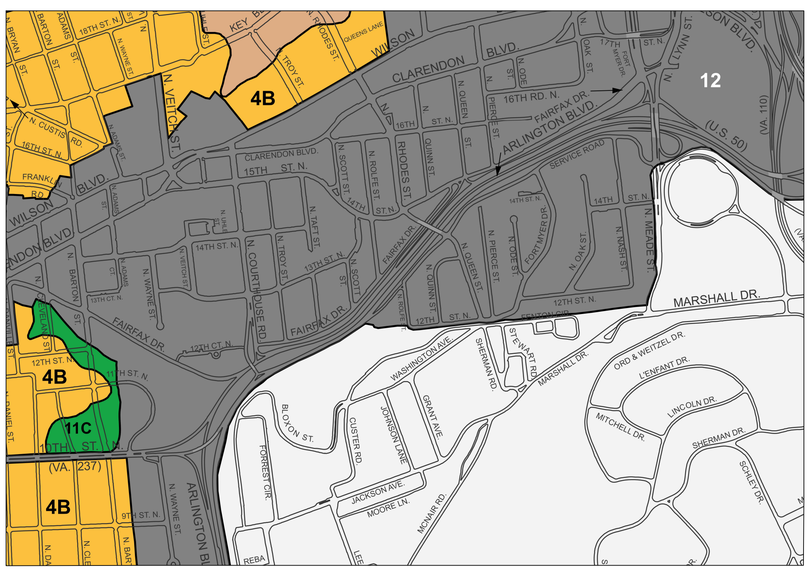
CURB INLET PROTECTION

REVISION & DATE

ARLINGTON VIRGINIA

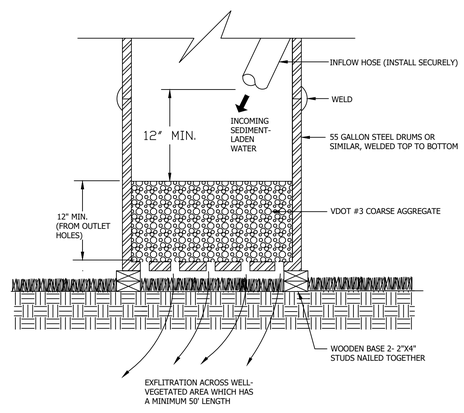
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. 3.07-7 (ACG)



HYDROLOGIC SOILS MAP
NOT TO SCALE

FILTER BOX



ELEVATION VIEW

SOURCE: VA. DSWC

PLATE: 3.26-2

EROSION AND SEDIMENT CONTROL LEGEND

3.05	TEMPORARY SILT FENCE	SF	
3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	

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COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
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6/28/21
PROFESSIONAL ENGINEER

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19 2021

SCALE:

AS SHOWN

C032.2

FILENAME: WI08-220-E_AND_S_CONTROL_NOTES_DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018

STORMWATER POLLUTION PREVENTION PLAN

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	☒ Yes	☐ NA
Stormwater Management Plan	☐ Yes	☒ NA
LDA Permit	☒ Yes	☐ NA

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

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
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)
☒	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	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			

STORMWATER POLLUTION PREVENTION PLAN

5.0 Potential Sources of Pollution & Pollution Prevention Practices

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

STORMWATER POLLUTION PREVENTION PLAN

7.0 Spill Prevention & Response

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

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

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

Emergency Contacts:

Local Contacts

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

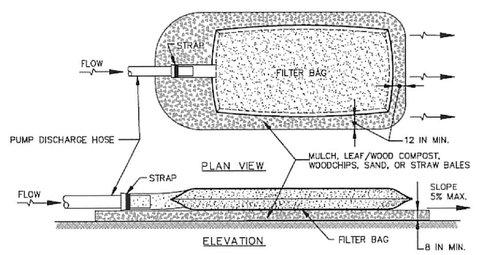
Nights, Holidays & Weekends

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

Spill kit on site: ☐ Yes ☐ No

Location(s) of spill kit: _____

The Maryland Standard F-4 for a filter bag is provided as an acceptable option for use in Arlington County if straw bales or stone are used as the layer under the filter bag. The use of mulch, leaf/wood compost, woodchips or sand is not acceptable.



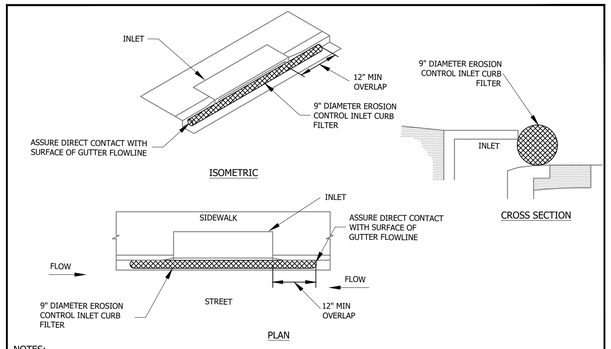
CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT^2	ASTM D-4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

15



NOTES:
1. CONTRACTOR TO OBTAIN PERMISSION FROM ARLINGTON COUNTY PRIOR TO USE ON SITE.
2. THE SEDIMENT FILTER SOCK TO BE INSTALLED DAILY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS SWEPT OR FLUSHED WHENEVER APPLICABLE AT THE END OF THE CONSTRUCTION DAY.

SEDIMENT FILTER SOCK INLET PROTECTION

ARLINGTON VIRGINIA
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

ARLINGTON VIRGINIA

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
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N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL NOTES AND DETAILS - 2

DESIGNED: LD
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PLOTTED: AUGUST 19 2021

SCALE:

AS SHOWN

C032.3

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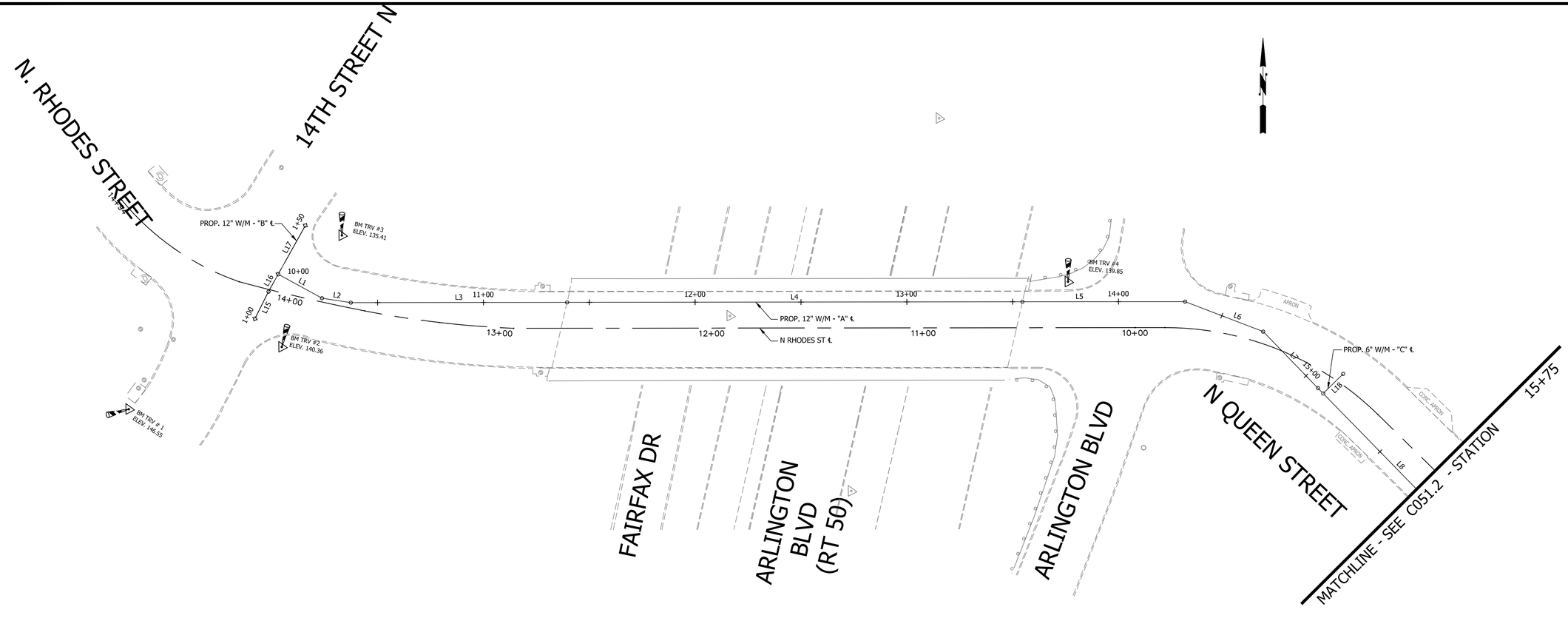

PROP. 12" W/M - "A" ℄ (RHODES ST-QUEEN ST)

ALIGNMENT: PROP 12-INCH WM - 'A'

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	S 34° 18' 14" E	23.58'	10+00.00	10+23.58	7010334.67, 11887403.82	7010315.19, 11887417.11
L2	S 54° 18' 31" E	13.75'	10+23.58	10+37.33	7010315.19, 11887417.11	7010307.17, 11887428.28
L3	S 63° 03' 27" E	102.17'	10+37.33	11+39.50	7010307.17, 11887428.28	7010260.88, 11887519.36
L4	S 63° 04' 50" E	215.10'	11+39.50	13+54.60	7010260.88, 11887519.36	7010163.49, 11887711.15
L5	S 63° 02' 36" E	76.86'	13+54.60	14+31.46	7010163.49, 11887711.15	7010128.65, 11887779.66
L6	S 41° 59' 29" E	39.47'	14+31.46	14+70.93	7010128.65, 11887779.66	7010099.32, 11887806.07
L7	S 17° 08' 38" E	37.19'	14+70.93	15+08.12	7010099.32, 11887806.07	7010063.78, 11887817.03
L8	S 17° 18' 46" E	106.84'	15+08.12	16+14.96	7010063.78, 11887817.03	7009961.78, 11887848.82

PROP. 12" W/M - "B" ℄ (RHODES ST-QUEEN ST)

ALIGNMENT: PROP 12-INCH WM - 'B'

LINE SEGMENT TABLE						
Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L15	N 53° 39' 07" E	14.26'	1+00.00	1+14.26	7010320.98, 11887384.53	7010329.43, 11887396.01
L16	N 56° 07' 41" E	9.40'	1+14.26	1+23.67	7010329.43, 11887396.01	7010334.67, 11887403.82
L17	N 56° 07' 13" E	26.33'	1+23.67	1+50.00	7010334.67, 11887403.82	7010349.35, 11887425.69

BENCHMARK TABLE

BM#	NORTHING	EASTING	ELEV.
TRV #1	7,010,316.0953	11,887,313.4451	146.552
TRV #2	7,010,303.2831	11,887,389.6765	140.364
TRV #3	7,010,337.3192	11,887,438.9039	135.412
TRV #4	7,010,162.1221	11,887,734.5510	139.852
TRV #5	7,009,934.5340	11,887,898.4930	157.168
TRV #6	7,009,690.2378	11,887,979.5790	173.073

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Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

GEOMETRIC CONTROL PLAN - 1

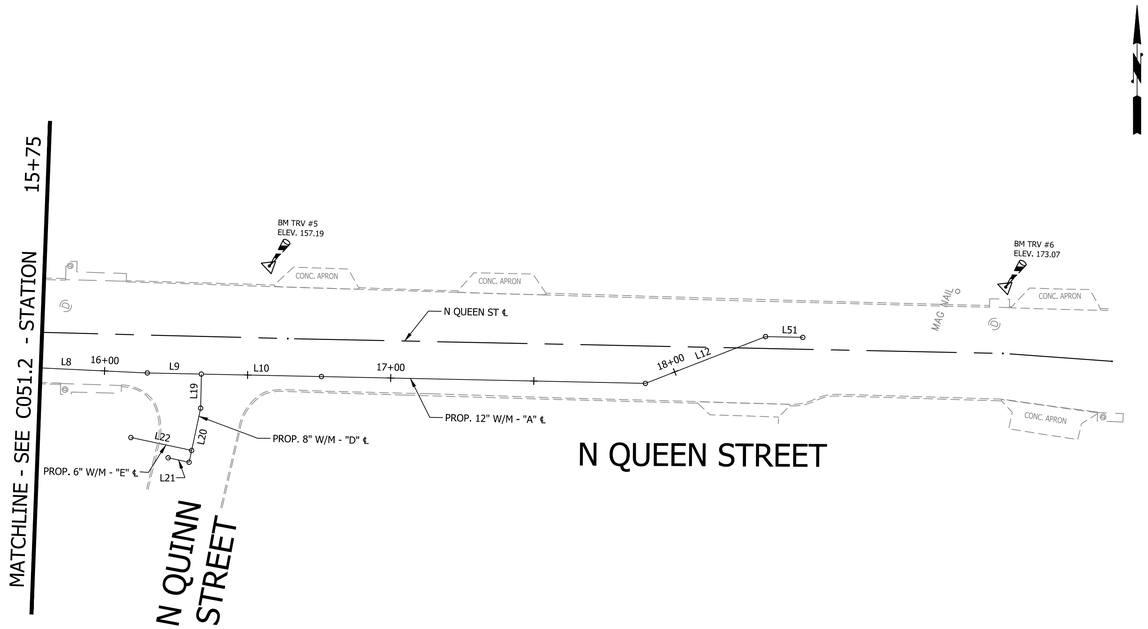
DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

0 25 50
GRAPHIC SCALE

C045.1



PROP. 12" W/M - "A" ℄ (RHODES ST-QUEEN ST)

ALIGNMENT: PROP 12-INCH WM - 'A'

LINE SEGMENT TABLE

Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L8	S 17° 18' 46" E	106.84'	15+08.12	16+14.96	7010063.78, 11887817.03	7009961.78, 11887848.82
L9	S 18° 48' 50" E	18.88'	16+14.96	16+33.83	7009961.78, 11887848.82	7009943.92, 11887854.91
L10	S 18° 48' 50" E	41.96'	16+33.83	16+75.79	7009943.92, 11887854.91	7009904.20, 11887868.44
L12	S 41° 17' 33" E	45.03'	17+89.02	18+34.06	7009797.00, 11887904.92	7009763.17, 11887934.64
L51	S 18° 45' 02" E	13.00'	18+34.06	18+47.06	7009763.17, 11887934.64	7009750.86, 11887938.81

PROP. 6" W/M - "C" ℄ (QUEEN ST)

ALIGNMENT: PROP 6-INCH WM - 'C'

LINE SEGMENT TABLE

Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L18	N 72° 41' 14" E	13.23'	1+00.00	1+13.23	7010060.44, 11887818.07	7010064.37, 11887830.70

PROP. 8" W/M - "D" ℄ (QUINN ST)

ALIGNMENT: PROP 8-INCH WM - 'D'

LINE SEGMENT TABLE

Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L19	S 71° 11' 10" W	11.90'	10+00.00	10+11.90	7009943.92, 11887854.91	7009940.08, 11887843.65
L20	S 81° 59' 52" W	19.34'	10+11.90	10+31.24	7009940.08, 11887843.65	7009937.39, 11887824.49
L21	N 7° 58' 06" W	7.49'	10+31.24	10+38.73	7009937.39, 11887824.49	7009944.80, 11887823.46

PROP. 6" W/M - "E" ℄ (QUINN ST)

ALIGNMENT: PROP 6-INCH WM - 'E'

LINE SEGMENT TABLE

Line #	Bearing	Distance	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L22	N 8° 00' 08" W	21.70'	1+00.00	1+21.70	7009937.97, 11887828.68	7009959.46, 11887825.66

BENCHMARK TABLE

BM#	NORTHING	EASTING	ELEV.
TRV #1	7,010,316.0953	11,887,313.4451	146.552
TRV #2	7,010,303.2831	11,887,389.6765	140.364
TRV #3	7,010,337.3192	11,887,438.9039	135.412
TRV #4	7,010,162.1221	11,887,734.5510	139.852
TRV #5	7,009,934.5340	11,887,898.4930	157.168
TRV #6	7,009,690.2378	11,887,979.5790	173.073

ARLINGTON
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ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

GEOMETRIC CONTROL PLAN - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

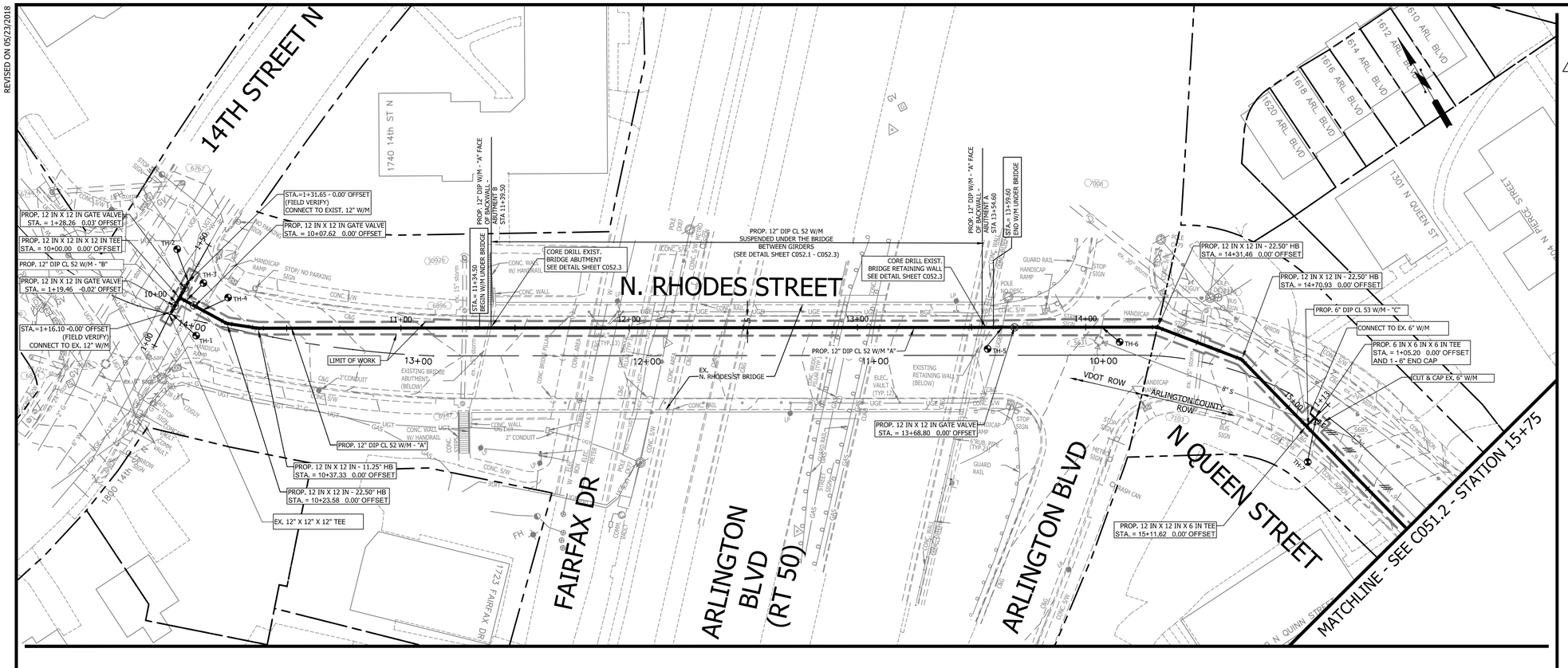
PLOTTED: AUGUST 23 2021

SCALE:

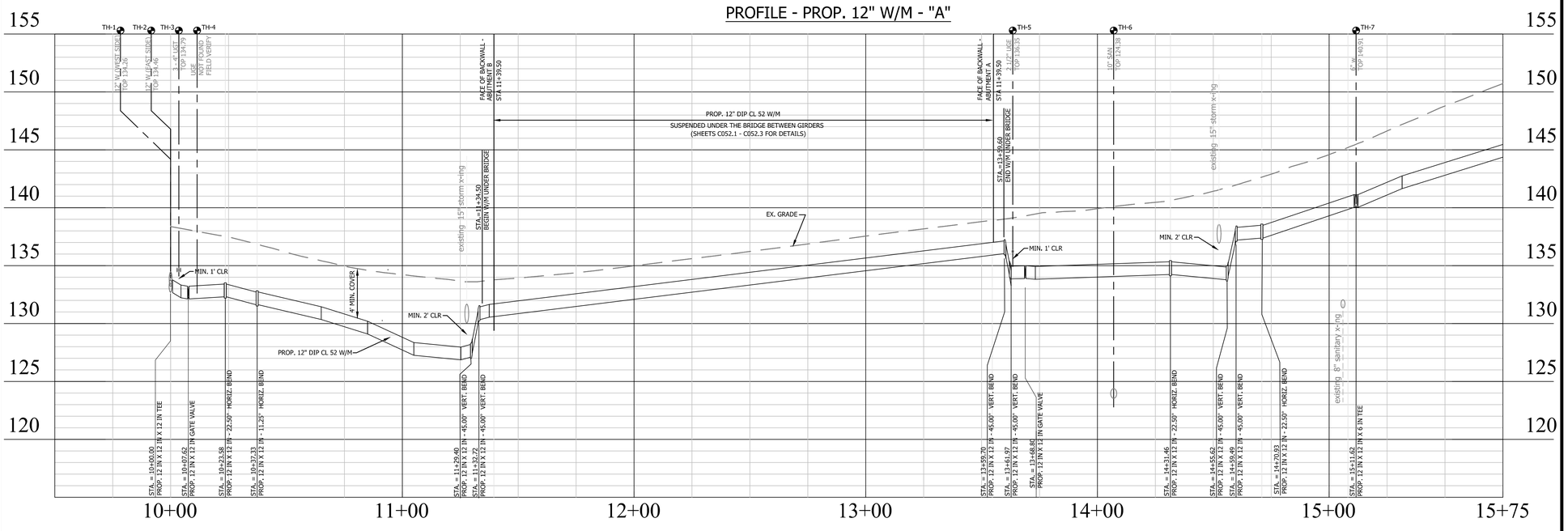
0 25 50
GRAPHIC SCALE

C045.2

REVISED ON 05/23/2018



PROFILE - PROP. 12" W/M - "A"



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. PROPOSED BENDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. DURING CONSTRUCTION IT MAY NEED TO DEFLECT PIPES AND INSTALL ADDITIONAL BENDS AS NECESSARY TO ACCOMPLISH THE INSTALLATION OF WATER MAINS AS SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.

3. SEE DETAIL INSTRUCTION ON SHEET C052.5 - WATERMAIN NOTES & DETAILS - 3 FOR THE POLYETHYLENE ENCASEMENT OF THE PROPOSED PIPES.

4. SEE ASPHALT PAVEMENT WIDENING (WP-2) & PIPE TRENCH REINSTATEMENT FOR HCC WITH ASPHALT OVERLAY DETAILS ON SHEET C052.4 - WATERMAIN NOTES & DETAILS - 2 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.

5. ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN COUNTY RIGHT OF WAY AND VDOT STANDARDS WITHIN VDOT RIGHT OF WAY.

6. DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.

7. ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.

8. TH # IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.

9. REFER TO PROFILE VIEW FOR ELEVATION INFORMATION.

10. 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.

11. ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED AS PER ARLINGTON COUNTY SPECIFICATION 02550. 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 SHEET C052.5 - WATERMAIN NOTES & DETAILS - 3.

12. SERVICE RE-TAPS - 1 $\frac{1}{2}$" AND 2" (TAP MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.

13. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO CAP HYDRANT LEAD CAP, INSTALL THRUST RESTRAINT BEHIND THE VALVE, ABANDON THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.

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SEAL

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SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
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REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN PLAN & PROFILE - 1

DESIGNED: LD
DRAWN: LD
CHECKED: SS

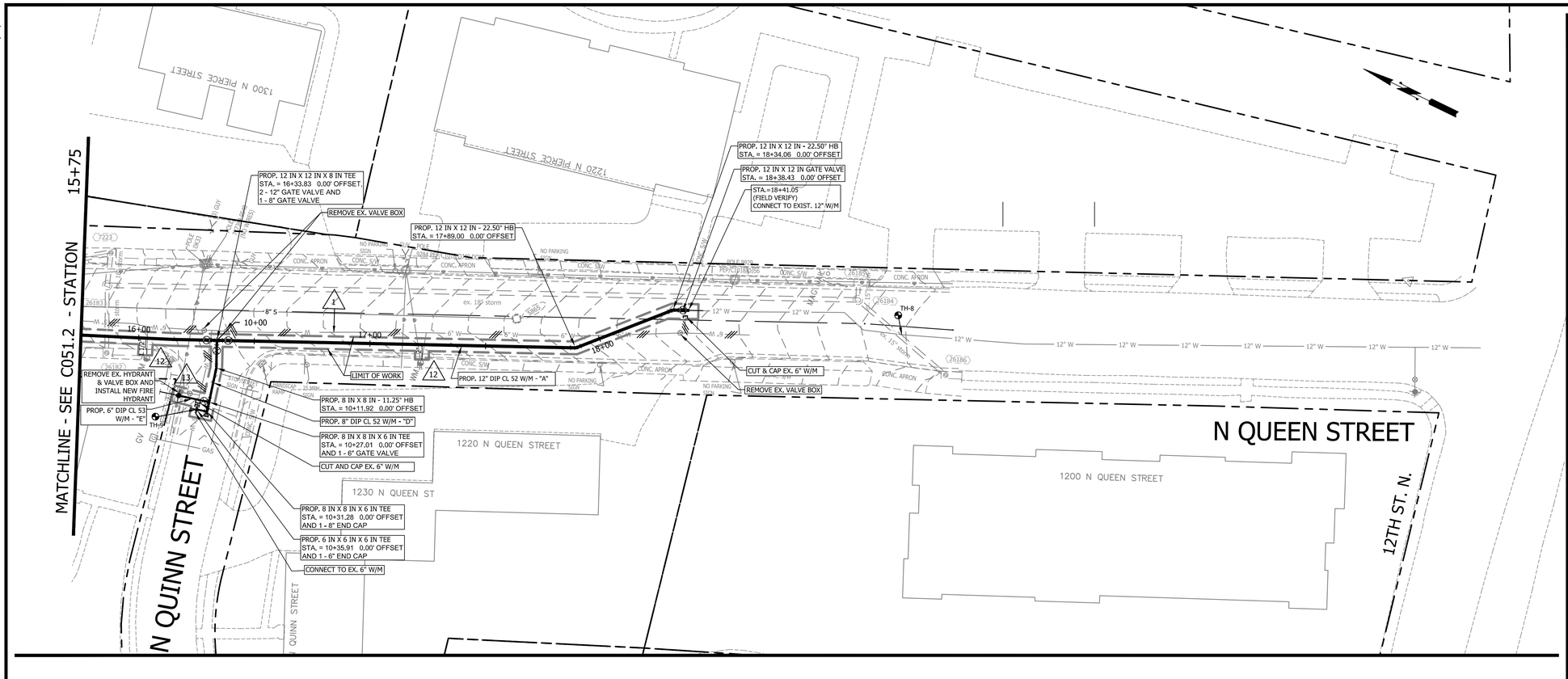
PLOTTED: AUGUST 23 2021

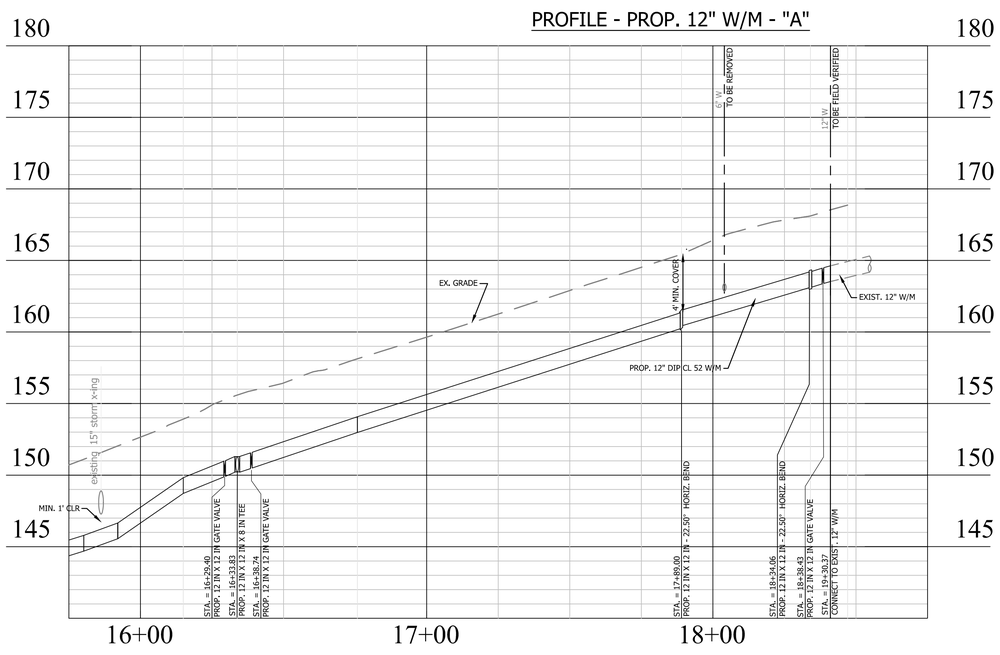
SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

C051.1

FILENAME: WI08-240-WATERMAIN_P_AND_P.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018





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Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN PLAN & PROFILE - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

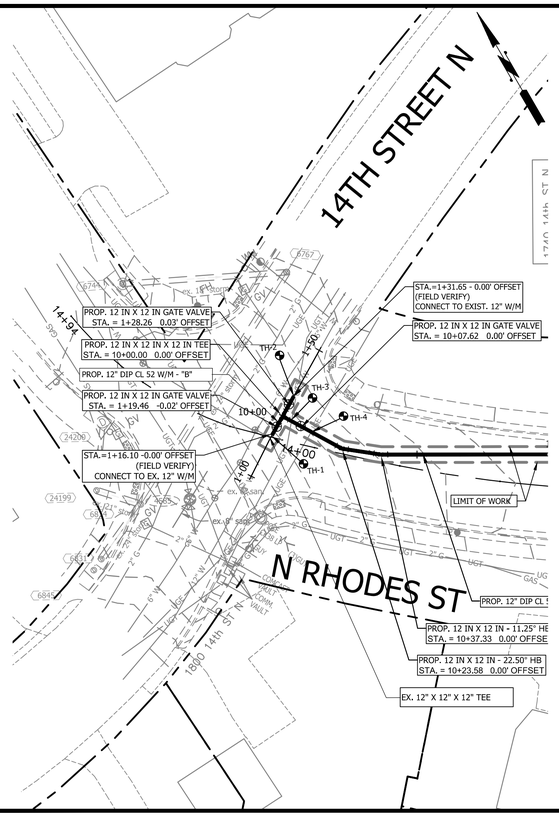
PLOTTED: AUGUST 23 2021

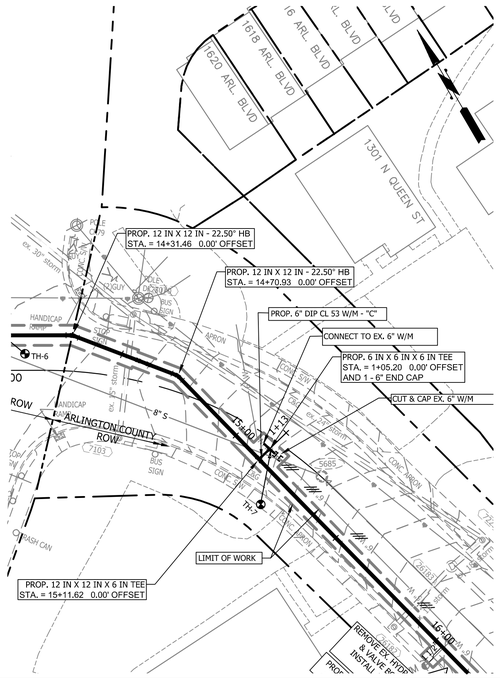
SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

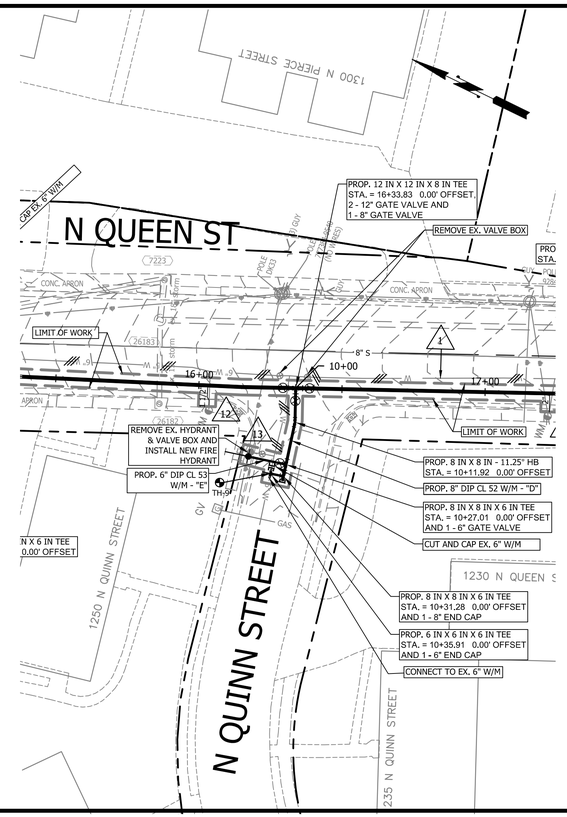
C051.2

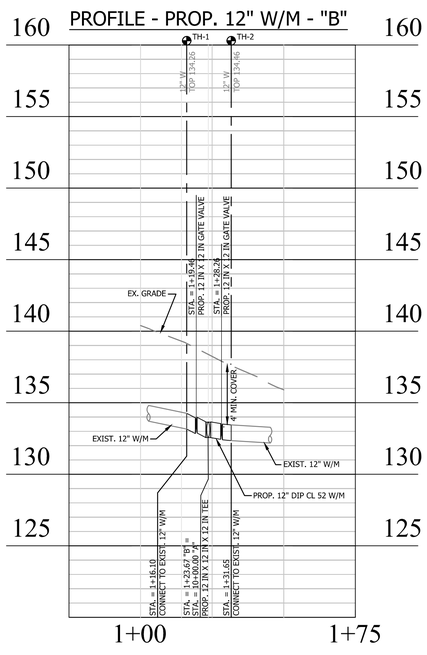
FILENAME: WI08-240-WATERMAIN_P_AND_P.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

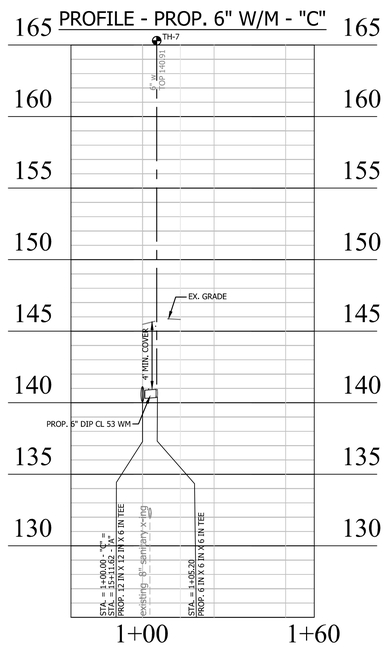
REVISED ON 05/23/2018

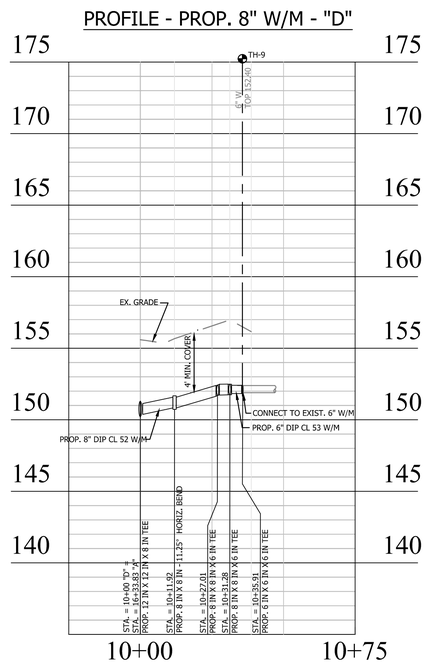


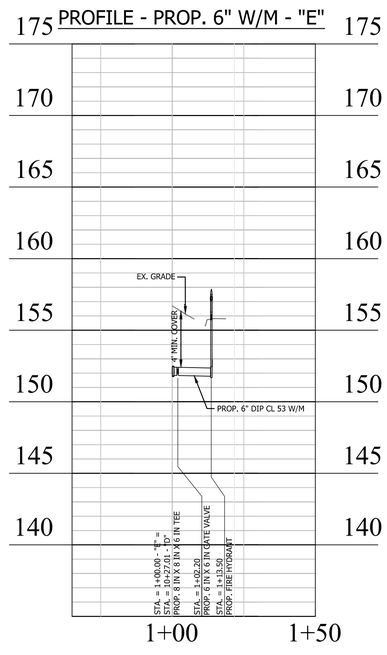












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6/28/21
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REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN PLAN & PROFILE - 3

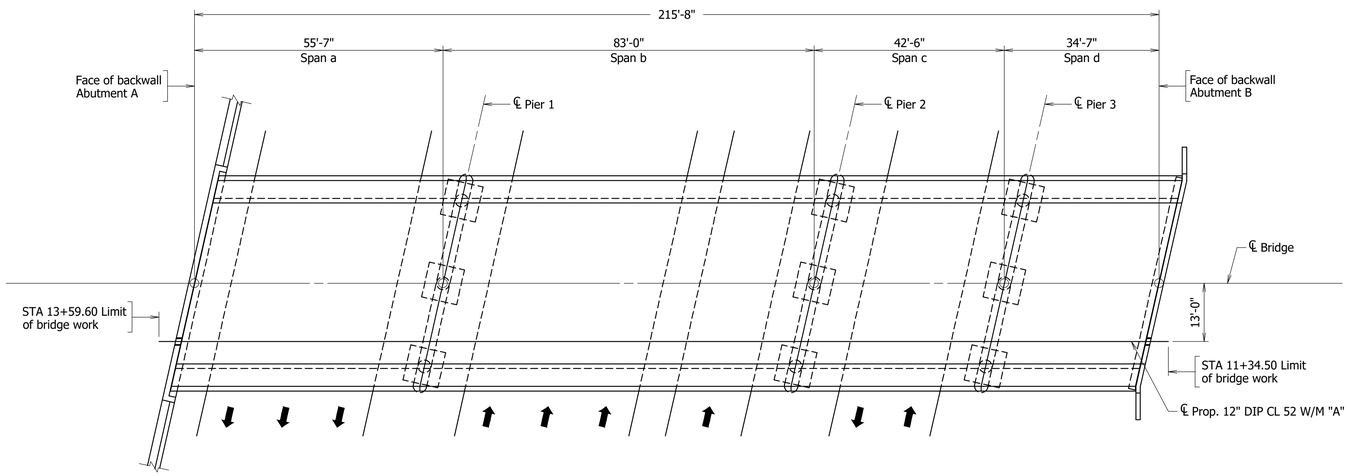
DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

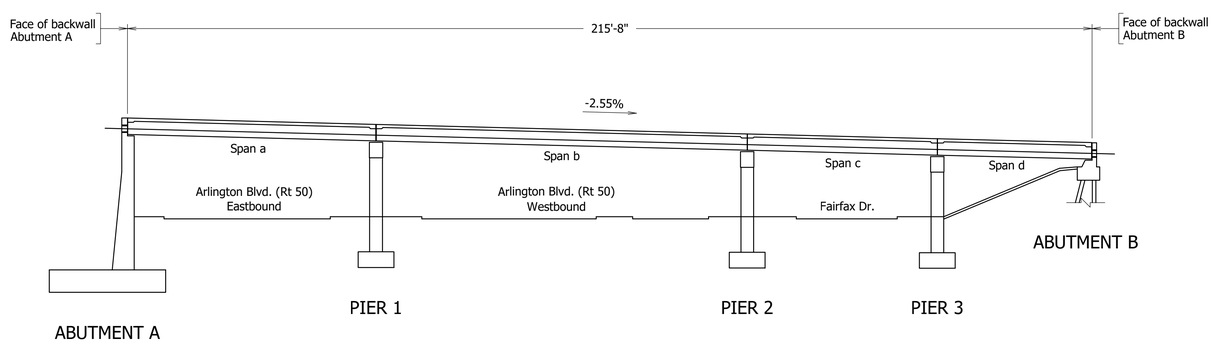
SCALE:
0 5 10
VERT. SCALE
0 10 20
HORIZ. SCALE

C051.3

FILENAME: WI08-240-WATERMAIN_P_AND_P.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON



PLAN



DEVELOPED SECTION ALONG ℄

GENERAL NOTES:

Widths: 5'-0" sidewalk, 36'-0" roadway, 5'-0" sidewalk.
Overall width 46'-0" face-to-face of rails.

Span layout: 55'-7" - 83'-0" - 42'-6" - 34'-7" steel rolled beam spans.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.

Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.

Bridge No. of existing bridge is 5004. Plan No. is 170-01 and 170-01A.

Dimensions shown for the existing structure were developed from the existing plans and are approximate. All dimensions that relate to the existing structure shall be field verified.

Plan no.
170-01B

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SEAL

COMMONWEALTH OF VIRGINIA
BRIAN C. GRAHAM
Lic. No. 027140
6-25-2021
PROFESSIONAL ENGINEER

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N RHODES ST - 14TH ST N TO N QUINN ST

GENERAL PLAN AND ELEVATION

DESIGNED: DCS
DRAWN: DCS
CHECKED: AEE

PLOTTED: AUGUST 20 2021

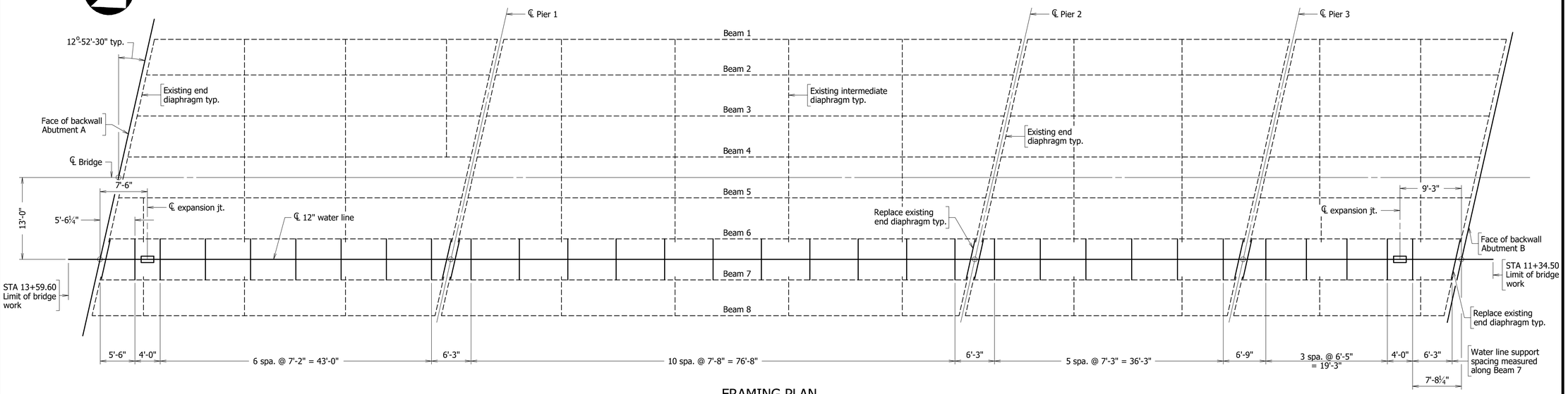
SCALE:

1/16" = 1'-0"

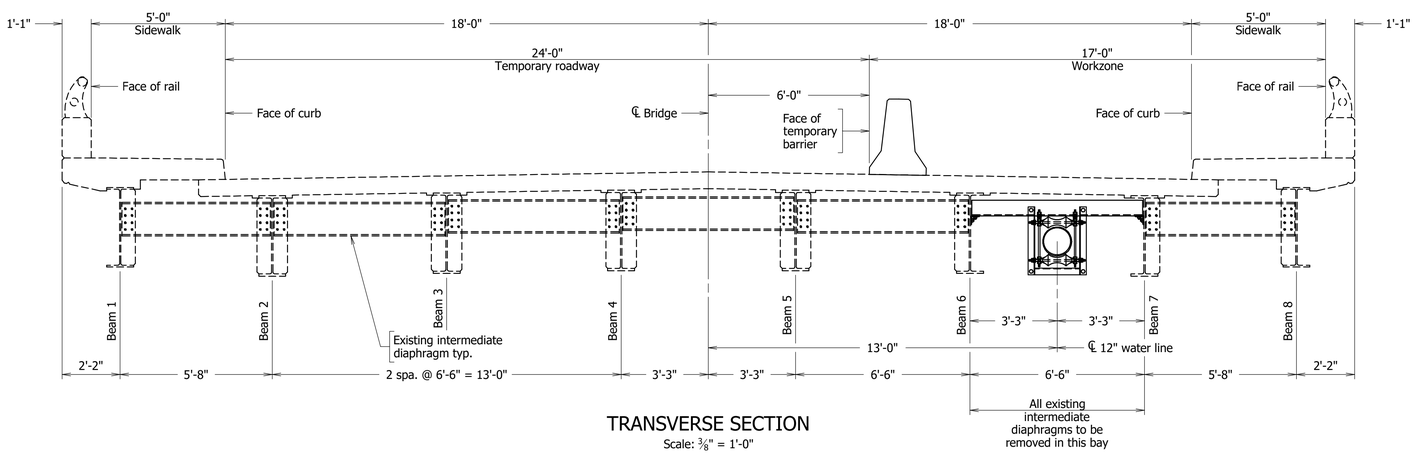
C052.1

Notes:

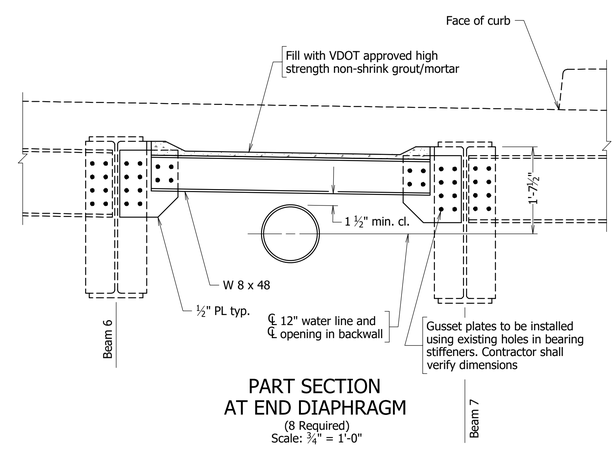
The Contractor shall adjust the support spacing as necessary to avoid conflict with existing connector plates while maintaining 8'-0" maximum spacing.



FRAMING PLAN
Scale: ⅛" = 1'-0"



TRANSVERSE SECTION
Scale: ⅜" = 1'-0"



PART SECTION
AT END DIAPHRAGM
(8 Required)
Scale: ¾" = 1'-0"

Plan no.
170-01B

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

SEAL

COMMONWEALTH OF VIRGINIA
BRIAN C. GRAHAM
Lic. No. 027140
6-25-2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N RHODES ST - 14TH ST N TO N QUINN ST

FRAMING PLAN AND TRANSVERSE SECTION

DESIGNED: DCS
DRAWN: DCS
CHECKED: AEE

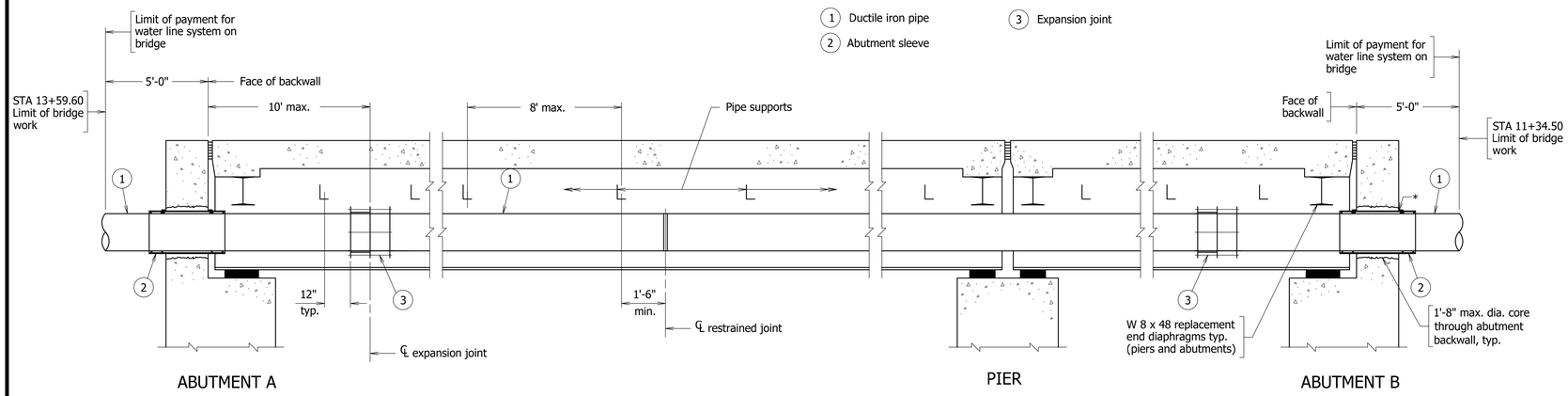
PLOTTED: AUGUST 20 2021

SCALE:

AS SHOWN

C052.2

REVISED ON 05/23/2018
FILENAME: C052-BRIDGE PLANS.DWG PATH: T:\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009419 - PO 265992- N. RHODES WATER MAIN\07 DESIGN\DWG PLOTTED BY: DEVIN.JI



ELEVATION

Not to scale

* After grout has completely cured, apply a heavy coat of asphalt over the grout and the interface of the backwall and steel sleeve, typ. at each abutment. Asphalt shall be in accordance with Section 213 of the VDOT Road and Bridge Specifications.

Notes:

Material - Ductile iron with restrained joint
- Minimum thickness - Class 52 (rated pressure 300 psi)
- Hydrostatic test pressure shall be 150 psi minimum
- Specification: ANSI/AWWA C151/A21.51
- Finish - Cement mortar lined; bituminous outer coat
- Steel sleeve - API 5L-B ⅜" wall

Structural steel for angles, W-shapes, and gusset plates shall be ASTM A709 Grade 50 and shall be galvanized in accordance with ASTM A123. H.S. bolts shall be F3125 ASTM A325, Type 1.

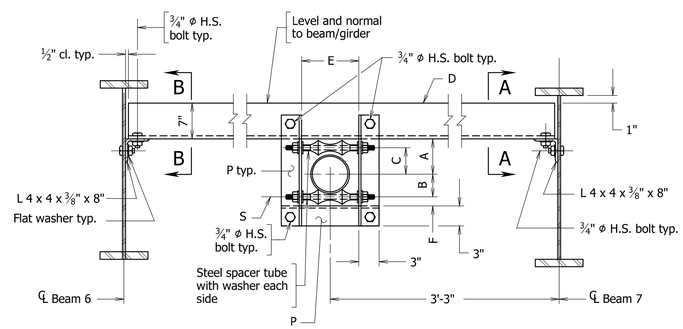
Expansion Joint - Dresser style 63, Type 3

Galvanization - Miscellaneous hardware: Rods, nuts, hardware in link seals, etc. shall be galvanized in accordance with ASTM A153.

Payment - Water Line System shall be paid for on a lump sum basis, wherein no measurement shall be made, and shall be paid for at the contract lump sum price, which price shall include asphalt sealer, welded wire fabric, removal of existing diaphragms, core drilling, preparing and coating steel surfaces, disposal of materials, furnishing and installing ductile iron water main, expansion joints, testing, disinfecting (when required), end diaphragms with gusset plates, hangers, rollers, rods, abutment sleeves, link seals, high-strength non-shrink grout/mortar and miscellaneous hardware; all as detailed on the Water Line System drawing included herein and within the pay limits shown thereon. Such price shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.

Removal of existing diaphragms and core drilling abutment backwalls shall be in accordance with Section 413 of the VDOT Road and Bridge Specifications. The existing structure is designated a Type B Structure in accordance with Section 411 of the VDOT Road and Bridge Specifications.

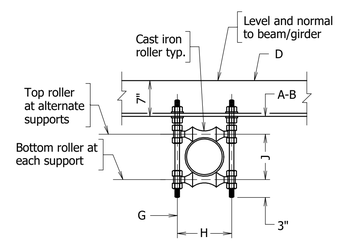
The Contractor shall prepare all steel surfaces that are in contact with new steel members in accordance with Section 411 of the VDOT Road and Bridge Specifications using Method 3. The Contractor shall prepare and spot coat all coatings damaged during repairs using a zinc rich primer from the VDOT Approved Products List. All galvanizing that has been chipped or damaged during handling or drilling shall be repaired in accordance with Section 233.03 of the VDOT Road and Bridge Specifications.



TYPICAL SUPPORT DETAIL AT EXPANSION JOINT

Provide support detail on both sides of expansion joint

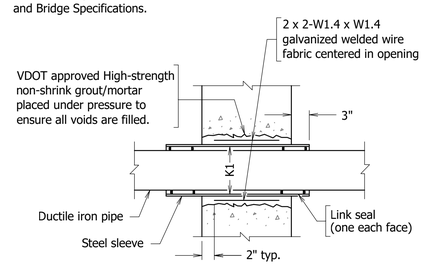
Not to scale



TYPICAL SUPPORT DETAIL

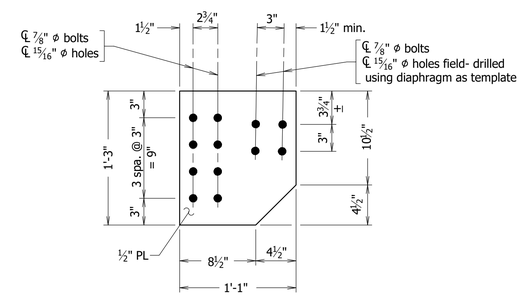
For details not shown, see Typical Support Detail at Expansion Joint.

Not to scale



ABUTMENT SLEEVE DETAIL

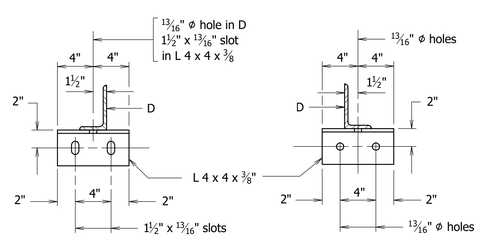
Not to scale



GUSSET PLATE DETAIL

(16 Required)

Not to scale

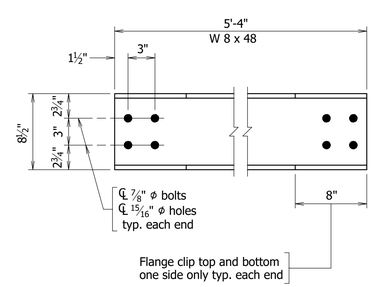


SECTION A-A

Scale: 1½" = 1'-0"

SECTION B-B

Scale: 1½" = 1'-0"



END DIAPHRAGM DETAIL

(8 Required)

Not to scale

DIMENSIONS

Pipe ø	A**	B**	C**	D	E	F	G	H**	J**	K1	P	S
12"	11½"	8⅜"	8⅝"	L 7 x 4 x ½	1'-8"	3½"	1"	1'-5¾"	1'-4¾"	1'-4"	L 3 x 3 ½ x ⅜	1¼"

G = diameter of rod
S = diameter of shaft

** The Contractor shall verify and/or adjust these values based on the manufacturers' requirements at no additional cost to the County. The Contractor shall ensure that adjustment of these values does not result in the bottom of water line supports projecting below the bottom flange of Beam 7 in spans a, b, and c.

Plan no. 170-01B

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

SEAL

COMMONWEALTH OF VIRGINIA
BRIAN C. GRAHAM
Lic. No. 047340
6-25-2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N RHODES ST - 14TH ST N TO N QUINN ST

WATERMAIN NOTES & DETAILS

DESIGNED: DCS
DRAWN: DCS
CHECKED: AEE

PLOTTED: AUGUST 20 2021

SCALE:

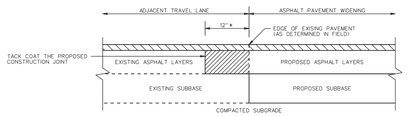
AS SHOWN

C052.3

REVISED ON 05/23/2018
FILENAME: C052-BRIDGE PLANS.DWG PATH: T:\1009400 - MASTER-ARLINGTON COUNTY ON-CALL\1009419 - PO 265992- N. RHODES WATER MAIN\07 DESIGN\DWG PLOTTED BY: DEVIN.JI

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.

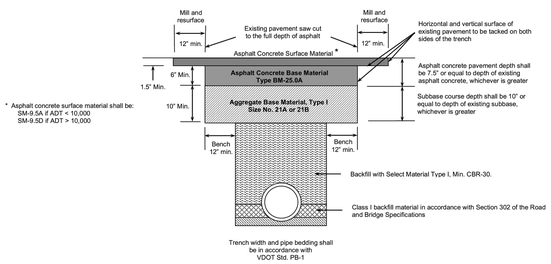
VDOT ROAD AND BRIDGE STANDARDS	ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1 / REVISION DATE		315
303.02		

2016 ROAD & BRIDGE STANDARDS

Virginia Department of Transportation
NOVA District Materials Section

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

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

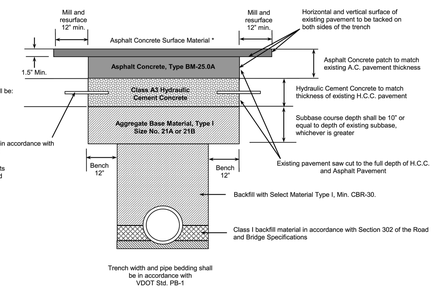


Not to Scale

Q:\mafi typical Sections\Pavement Details\Trench Reinstatement, Asphalt Concrete Pavement (March 2013).doc

Virginia Department of Transportation
NOVA District Materials Section

Detail: Pipe Trench Reinstatement for Hydraulic Cement Concrete Pavement with Asphalt Overlay



Not to Scale

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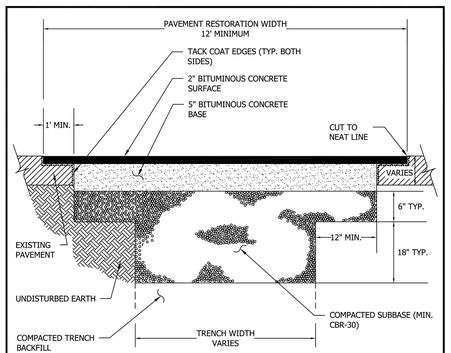


TYPICAL SECTION

NOTES:

1. THIS DETAIL SHALL BE REQUIRED ON UTILITY CUTS IN COUNTY STREETS PAVED WITHIN 5 YEARS OF DATE OF ISSUANCE OF PERMIT.
2. WHERE PRACTICAL, LIMITS OF 12 FOOT WIDE OVERLAY SHALL CORRESPOND WITH TRAVEL LANES AS DIRECTED BY THE PROJECT OFFICER.
3. WHEN THE DISTANCE FROM THE EDGE OF EXISTING PAVEMENT TO THE EDGE OF THE PAVEMENT RESTORATION IS 3' OR LESS, THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND REPLACED BACK TO THE EDGE.
4. THICKNESS OF BASE MAY BE REDUCED TO 3" WHEN PATCH IS BEING MADE IN PAVEMENTS OF SURFACE TREATED GRAVEL, AND AS DIRECTED BY THE PROJECT OFFICER.
5. WHEN WIDENING OR PATCHING A STREET WITH ASPHALT, A NEAT, CLEAN JOINT OF AT LEAST ONE (1) INCH IN DEPTH BETWEEN OLD AND NEW PAVEMENT SHALL BE PROVIDED FOR TOPPING SO AS TO ELIMINATE THE NEED FOR FEATHERING OF THE OVERLAY.
6. FOR TRENCH AND BEDDING DETAILS, SEE DRAWING No. M-3.0.

MODIFIED PAVEMENT PATCHING FOR UTILITY CUTS ON NEWLY PAVED STREET

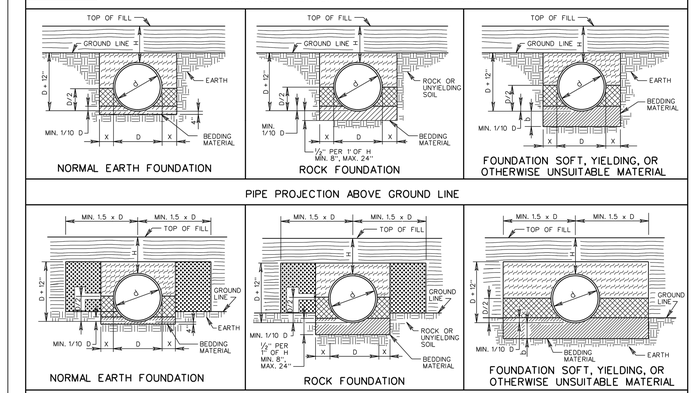
ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **M-6.1**

2016 ROAD & BRIDGE STANDARDS

PB-1

NO PROJECTION OF PIPE ABOVE GROUND LINE



BEDDING MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

CLASS I BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

FOR PLASTIC PIPE CLASS I BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

FOR ALL OTHER PIPE REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

EMBANKMENT

REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

NOTES:

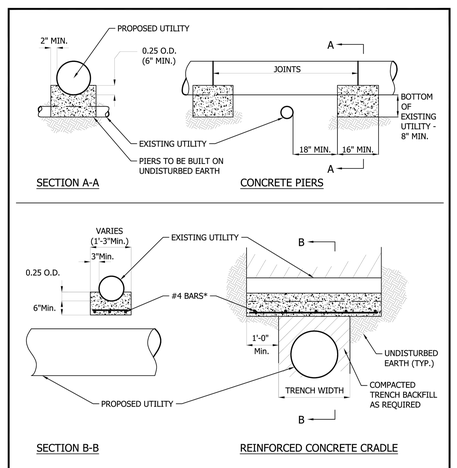
FOR GENERAL NOTES ON PIPE BEDDING, SEE INSTALLATION OF PIPE CULVERTS AND STORM SEWERS GENERAL NOTES ON SHEET 107.00.

CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26 MAY BE USED IN PLACE OF CLASS I BACKFILL.

CLASS I BACKFILL MATERIAL SHALL BE EXTENDED TO 12" ABOVE THE PROP. PIPE.

VDOT ROAD AND BRIDGE STANDARDS	INSTALL. OF PIPE CULVERTS AND STORM SEWERS CIRC. PIPE BEDDING AND BACKFILL - METHOD "A" VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 4 / REVISION DATE		302
107.01 / 07.12		303

2016 ROAD & BRIDGE STANDARDS



*REBARS: LONGITUDINAL - 6" O.C. (3 BARS MIN.)
TRANSVERSE - 18" O.C.

NOTES:

1. ALL CONCRETE SHALL BE CLASS A3.
2. FOR NONREINFORCED CRADLE DETAIL AND OTHER NOTES AND DIMENSIONS NOT SHOWN SEE DRAWING M-3.0.

CONCRETE PIER AND REINFORCED CONRETE CRADLE DETAILS FOR UTILITY CROSSINGS

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

ISSUED 9/14/2020 — DRAWING NO. **M-7.0**

REVISED ON 05/23/2018

FILENAME: WI08-204-DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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

SEAL

COMMONWEALTH OF VIRGINIA — SOLOMON W SHIKUR — Lic. No. 44376 — 6/28/21 — PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN NOTES & DETAILS - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

AS SHOWN

C052.4

REVISED ON 05/23/2018

POLYETHYLENE ENCASEMENT

INSTALLATION INSTRUCTIONS:

TAPING OVER POLYETHYLENE ENCASEMENT ALLOWS DIRECT TAPS TO BE MADE THROUGH THE TAPE AND POLYETHYLENE ENCASEMENT. ELIMINATES POTENTIAL REPAIRS TO EXPOSED AREA.

TIE STRAPS ALLOW EASY, QUICK, SECURE TIE DOWN OF POLYETHYLENE ENCASEMENT BEHIND THE BELL CONTOUR AND ON OVERLAPS AGAINST THE PIPE SURFACE.

FIGURE 1.
REMOVE ALL LUMPS OF CLAY, MUD, CINDERS, ETC. WHICH MAY HAVE ACCUMULATED ON THE SURFACE OF THE PIPE. A POLYETHYLENE TUBE SHOULD BE CUT SO THAT IT IS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION. SLIP THE TUBE ONTO THE PIPE. ALLOW APPROXIMATELY ONE FOOT OF THE TUBE TO OVERHANG EACH END OF THE PIPE.

FIGURE 2.
PUSH BACK THE OVERHANGING TUBE ENDS UNTIL THEY CLEAR THE PIPE ENDS.

FIGURE 3.
TAKE UP THE SLACK IN THE TUBE TO MAKE A SNUG BUT NOT TIGHT FIT. FOLD EXCESS BACK OVER THE TOP OF THE PIPE.

FIGURE 4.
SECURE THE FOLD WITH POLYETHYLENE COMPATIBLE ADHESIVE TAPE AT SEVERAL LOCATIONS ALONG THE PIPE BARREL.

FIGURE 5.
DIG A SHALLOW BELL-HOLE IN THE TRENCH BOTTOM AT THE JOINT LOCATION.

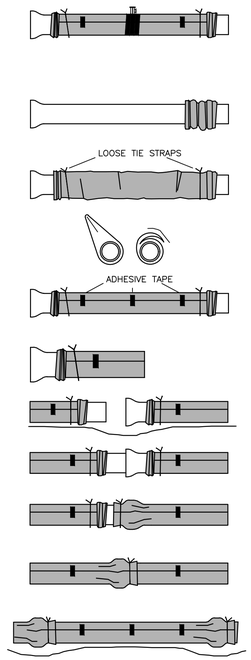
FIGURE 6.
PLACE THE PIPE INTO THE TRENCH.

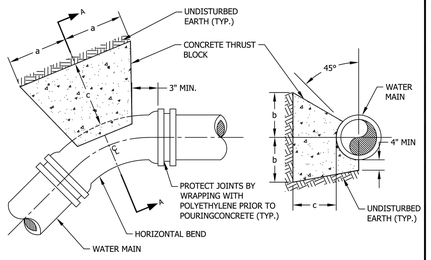
FIGURE 7.
ASSEMBLE THE JOINT.

FIGURE 8.
PULL THE POLYETHYLENE TUBE END OF THE PREVIOUSLY INSTALLED PIPE OVER THE NEW PIPE AND SECURE WITH THE TIE STRAP FROM THE PRECEDING PIPE BELL.

FIGURE 9.
OVERLAP THE SECURED TUBE END OF THE NEW PIPE SECTION. SECURE THE NEW TUBE END IN PLACE WITH THE SPIGOT END TIE STRAP.

FIGURE 10.
REPAIR ALL RIPS, TEARS, OR OTHER TUBE DAMAGE WITH SUITABLE ADHESIVE TAPE. EXPERIENCE HAS SHOWN THAT VERY SMALL PIN POINT SIZED PUNCTURES NEED NOT BE REPAIRED.





PLAN SECTIONA-A

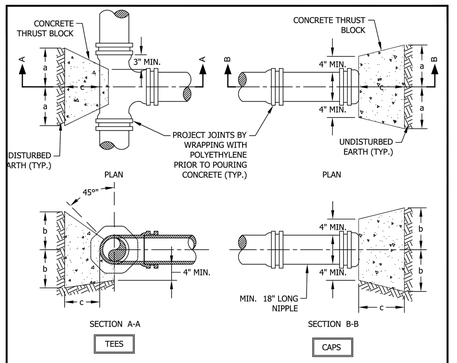
PIPE DIA.	HORIZONTAL BEND								MIN. C
	11 1/4° (1/32)		22 1/2° (1/16)		45° (1/8)		90° (1/4)		
	a	b	a	b	a	b	a	b	
6"	5"	7"	7"	7"	11"	9"	15"	12"	18"
8"	7"	8"	11"	9"	14"	12"	20"	16"	18"
12"	10"	10"	16"	12"	23"	16"	36"	20"	18"
16"	12"	14"	20"	16"	32"	20"	48"	24"	24"

NOTES:
1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF. THE MINIMUM THICKNESS OF UNDISTURBED EARTH BEHIND THE BLOCKING SHALL BE 5 FEET.
2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI.
3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK.
4. SPECIAL BLOCKING DESIGN SHALL BE REQUIRED FOR CONDITIONS AND SIZES OTHER THAN THOSE INDICATED ON THIS SHEET.

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS

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

ISSUED 9/14/2020 — DRAWING NO. **W-2.0**



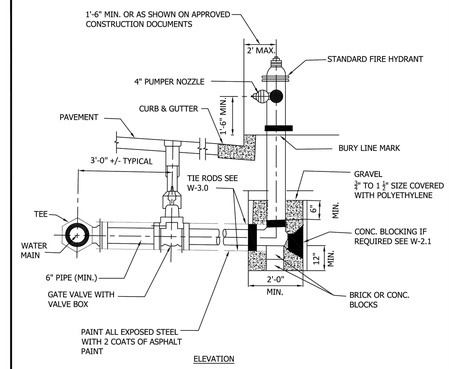
PIPE DIAMETER	a	b	MIN. C	
			TEES	CAPS
6"	11"	11"	12"	18"
8"	15"	15"	12"	18"
12"	24"	20"	18"	18"
16"	33"	24"	24"	24"

NOTES:
1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF. THE MINIMUM THICKNESS OF UNDISTURBED EARTH BEHIND THE BLOCKING SHALL BE 5 FEET.
2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI. SPECIAL BLOCKING DESIGN SHALL BE REQUIRED FOR CONDITIONS AND SIZES OTHER THAN THOSE INDICATED ON THIS SHEET
3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK.
4. THE BLOCKS FOR THE TEES SHALL BE SIZED ACCORDING TO THE DIAMETER OF THE BRANCH MAIN.

CONCRETE THRUST BLOCKS FOR TEES AND CAPS

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

ISSUED 9/14/2020 — DRAWING NO. **W-2.1**



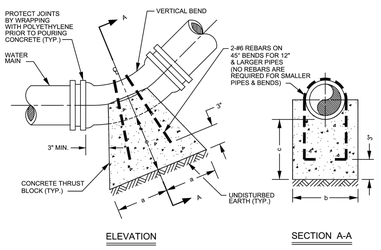
ELEVATION

NOTES:
1. ALL VALVES AND FIRE HYDRANTS SHALL BE STRAPPED TO MAIN UNLESS DIRECTED OTHERWISE.
2 PROVIDE VERTICAL OFFSETS OR BENDS AS REQUIRED TO SET HYDRANTS AT PROPER GRADE.
3 MAXIMUM BURY DEPTH OF FIRE HYDRANT IS 6' UNLESS APPROVED OTHERWISE.

FIRE HYDRANT SETTING

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

ISSUED 9/14/2020 — DRAWING NO. **W-7.0**



ELEVATION SECTION A-A

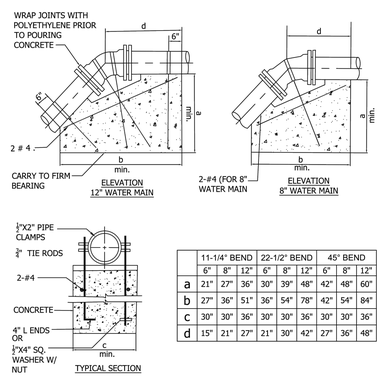
PIPE DIA.	LOWER VERTICAL BEND								
	11 1/4° (1/32)			22 1/2° (1/16)			45° (1/8)		
	a	b	c	a	b	c	a	b	c
6"	3"	14"	9"	3"	14"	9"	6"	14"	9"
8"	3"	16"	9"	5"	16"	9"	9"	16"	9"
12"	4"	20"	9"	8"	20"	9"	14"	22"	14"
16"	6"	24"	9"	11"	24"	11"	19"	26"	19"

NOTES :
1. ALL BEARING SURFACES FOR CONCRETE BLOCKING SHALL BE UNDISTURBED EARTH WITH A MINIMUM BEARING VALUE OF 2,000 PSF. THE MINIMUM THICKNESS OF UNDISTURBED EARTH BENEATH THE BLOCKING SHALL BE 5 FEET.
2. BLOCKING SHOWN IS FOR A MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI. SPECIAL BLOCKING DESIGN SHALL BE REQUIRED FOR CONDITIONS AND SIZES OTHER THAN THOSE INDICATED ON THIS SHEET.
3. FORM THE NON-BEARING SIDES OF THRUST BLOCKS BY USING PROPER FORMWORK.
4. PAINT ALL EXPOSED STEEL WITH TWO COATS OF ASPHALT PAINT.

CONCRETE THRUST BLOCKS FOR LOWER VERTICAL BENDS

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

ISSUED 9/14/2020 — DRAWING NO. **W-2.2**



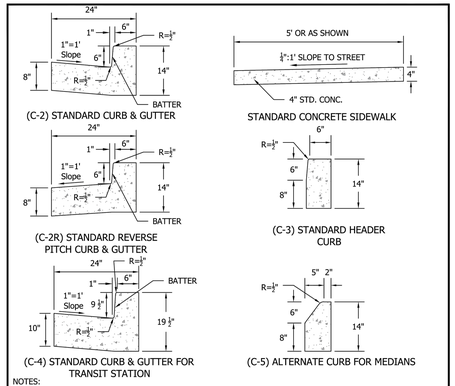
	11-1/4° BEND			22-1/2° BEND			45° BEND		
	6"	8"	12"	6"	8"	12"	6"	8"	12"
a	21"	27"	36"	30"	39"	48"	42"	48"	60"
b	27"	36"	51"	36"	54"	78"	42"	54"	84"
c	30"	30"	36"	30"	30"	36"	30"	30"	36"
d	15"	21"	27"	21"	30"	42"	27"	36"	48"

NOTES:
1. BLOCKING SHOWN IS FOR MAXIMUM STATIC PRESSURE OF 120 PSI PLUS WATER HAMMER ALLOWANCE OF 120 PSI. SPECIAL BLOCKING SHALL BE DESIGNED FOR SIZES AND CONDITIONS OTHER THAN THOSE INDICATED.
2. PAINT ALL EXPOSED STEEL WITH 2 COATS OF ASPHALT PAINT
3. FORM SIDES OF THRUST BLOCKS.

CONCRETE THRUST BLOCKS UPPER VERTICAL BENDS

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

ISSUED 9/14/2020 — DRAWING NO. **W-2.3**



NOTES:
1. SECTION C-3 IS TO BE USED ONLY WITH RIGID TYPE PAVEMENT UNLESS OTHERWISE DIRECTED IN WRITING OR WHEN SHOWN ON APPROVED PLANS.
2. EXPANSION JOINTS IN HEADER CURB AND STANDARD CURB AND GUTTER SHALL BE 40' APART OR AT EXPANSION JOINTS IN CONCRETE PAVEMENT.
3. EXPANSION JOINTS MAY BE OMITTED IF 1/8" JOINTS ARE PLACED EVERY 10' OF LESS
4. EXPANSION JOINTS IN THE SIDEWALK SHALL BE 40' APART. IF ADJACENT TO CONCRETE CURB, EXPANSION JOINTS SHALL MATCH JOINT OF CURB. AN EXPANSION JOINT SHALL BE PLACED BETWEEN CURB AND SIDEWALK.
5. SEE DRAWING R-2.2 FOR DETAIL OF SIDEWALK STRESS COLUMN TO BE PLACED UNDER SIDEWALK WHEN PLACED ADJACENT TO BACK OF CURB.
6. SEE ARLINGTON COUNTY SPECIFICATION SECTIONS 02611 AND 03100 FOR MATERIAL SPECS.
7. PROVIDE 6" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER CURB AND GUTTER.
8. PROVIDE 3" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER SIDEWALK
9. WHENEVER CURB ABUTTS RIGID PAVEMENT, PROVIDE LONGITUDINAL JOINT PER VDOT PR-2.
10. SECTION C-5 TO BE USED WHEN BICYCLE LANE RUNS ALONG A MEDIAN.

CONCRETE CURB & GUTTER AND SIDEWALK

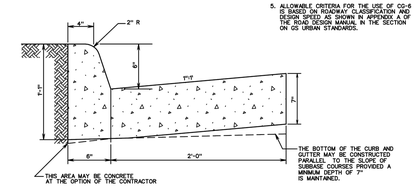
ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **R-2.0**

2016 ROAD & BRIDGE STANDARDS

CG-6

NOTES:
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE FAB FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 ARE SHOWN IN ACCORDANCE WITH ROADWAY DESIGN GUIDE AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.



SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE — SHEET 1 OF 1 — 201.03

2016 ROAD & BRIDGE STANDARDS

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

SEAL

COMMONWEALTH OF VIRGINIA — SOLOMON W SHIKUR — Lic. No. 44276 — 6/28/21 — PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN NOTES & DETAILS - 3

DESIGNED: LD
DRAWN: LD
CHECKED: SS

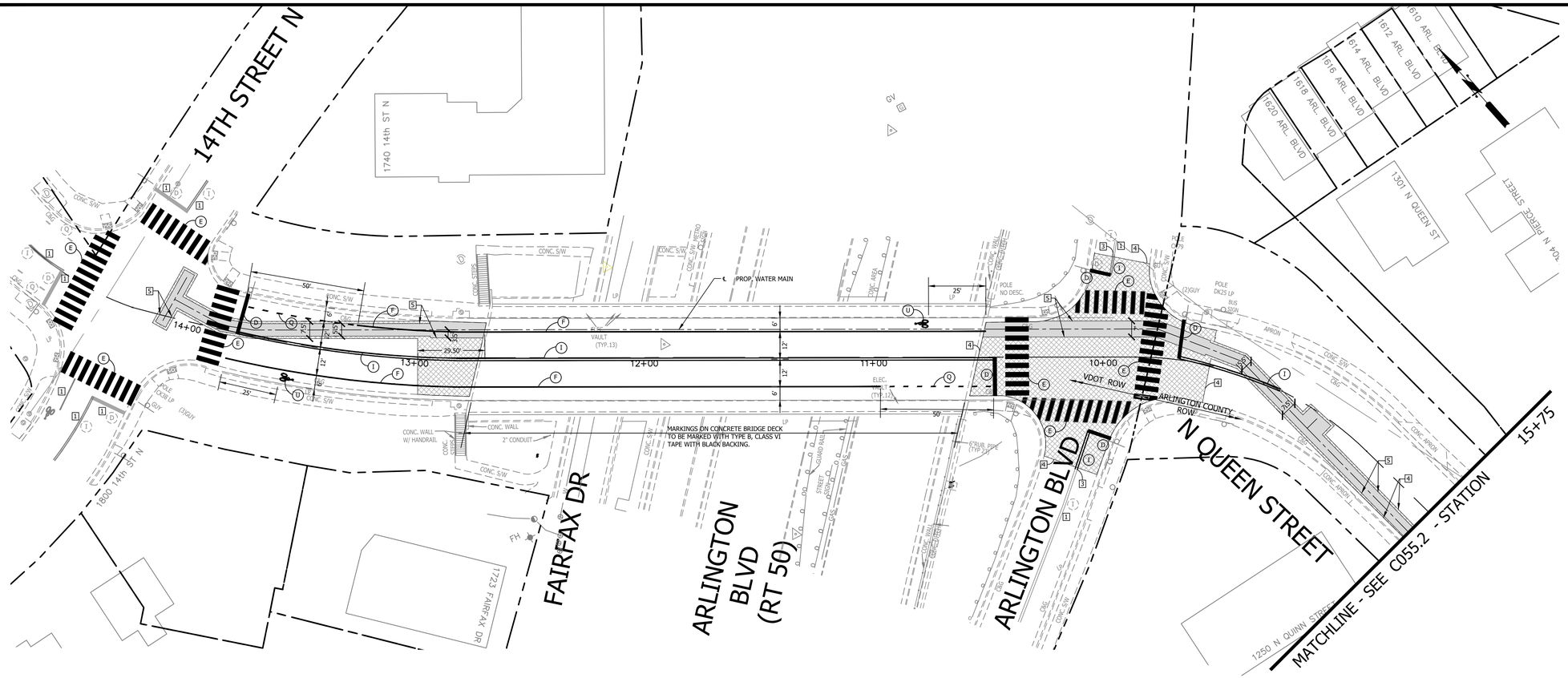
PLOTTED: AUGUST 23 2021

SCALE:

AS SHOWN

C052.5

FILENAME: WI08-204-DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON



STANDARD PAVEMENT MARKING LEGEND

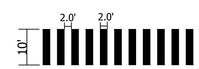
Ⓐ	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
Ⓑ	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
Ⓒ	TYPE B CLASS 1	WHITE 4" WIDTH, 2' LONG 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓓ	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
Ⓔ	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
Ⓕ	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, BIKE LANES
Ⓖ	TYPE B CLASS 1	YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
Ⓗ	TYPE B CLASS 1	YELLOW 4" WIDTH	EDGE LINES
Ⓘ	TYPE B CLASS 1	YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
Ⓙ	TYPE B CLASS 1	WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
Ⓚ	TYPE B CLASS 1	WHITE SINGLE ARROW	TURN LANES
Ⓛ	TYPE B CLASS 1	WHITE COMBINATION ARROW	TURN LANES
Ⓜ	TYPE B CLASS 1	WHITE 8' LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY, etc.)
Ⓝ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓞ	TYPE B CLASS 1	WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
Ⓟ	TYPE B CLASS 1	YELLOW 8" WIDTH @45 DEGREE	GORE MARKINGS
Ⓠ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
Ⓡ	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTENSIONS
Ⓢ	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STOP BARS
Ⓣ	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
Ⓤ	TYPE B CLASS 1	WHITE BIKE SYMBOL	

PAVEMENT MARKING NOTES:

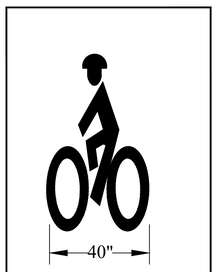
1. STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING .
2. CONTACT DES-TRANSPORTATION ENGINEERING & OPERATIONS CONSTRUCTION MANAGEMENT SPECIALIST OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 TO APPROVE MARKING LAYOUT 48 HOURS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

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 $\frac{5}{16}$" 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.



HIGH VISIBILITY CROSSWALK
NOT TO SCALE



BIKE SYMBOL DETAIL

LEGEND

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	SIGN	
Ⓐ	STRIPING	Ⓐ

PAVEMENT LEGEND:

- EXIST. PAVEMENT TO BE REMOVED (FULL DEPTH SAW CUT AND REPLACE WITH NEW PAVEMENT)
- MILL AND RESURFACE EXISTING PAVEMENT (PROVIDE 2" MIN. MILLING DEPTH)

CONSTRUCTION NOTES:

1. EXISTING PAVEMENT MARKINGS TO REMAIN.
2. ERADICATE EXISTING PAVEMENT MARKINGS.
3. TIE INTO EXISTING PAVEMENT MARKINGS.
4. LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT
5. LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT
6. REMOVE AND REPLACE CONCRETE CURB & GUTTER AS PER ARLINGTON STD. DWG. R-2.0.

NOTE:
ALL PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH VDOT STANDARD WP-2.

ARLINGTON
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SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

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Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

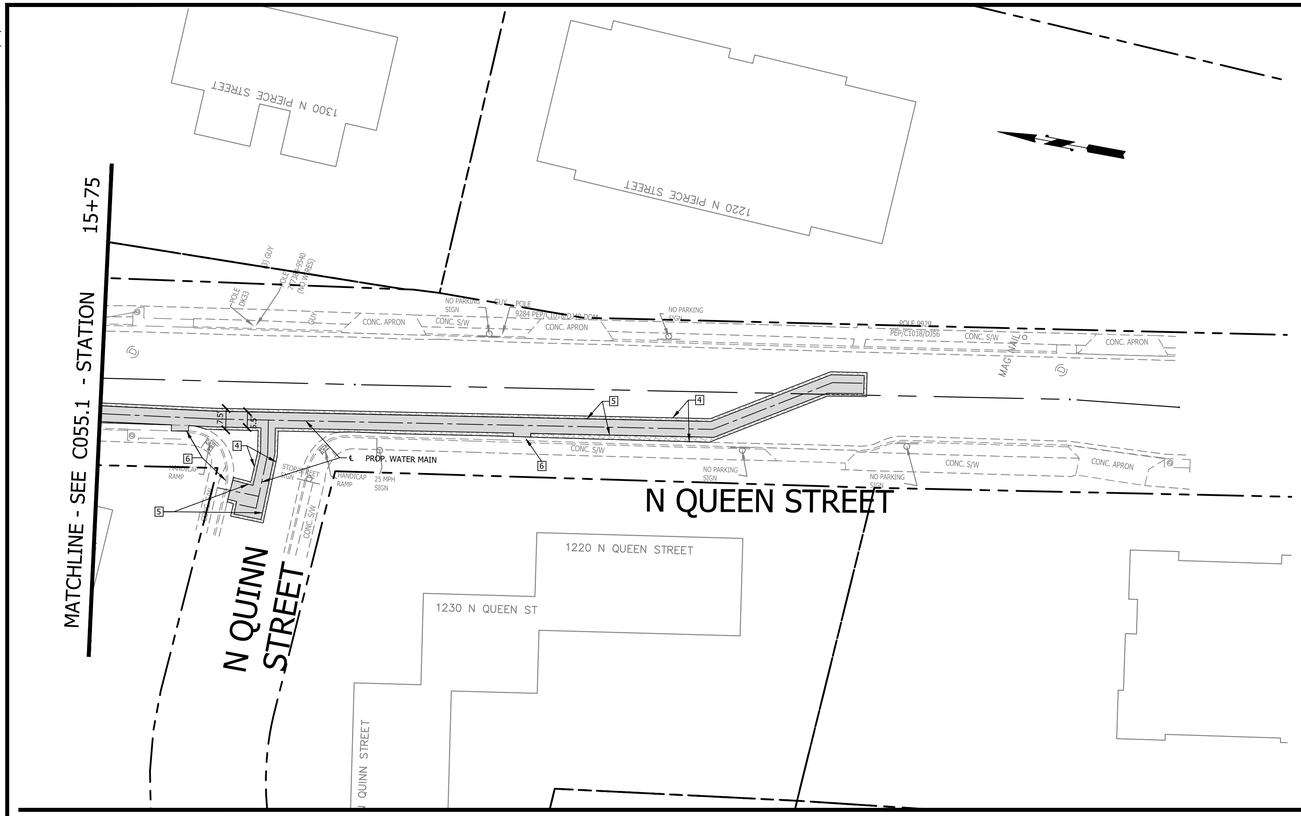
PAVING AND PAVEMENT MARKING PLAN - 1

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:
0 25 50
GRAPHIC SCALE

C055.1



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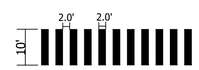
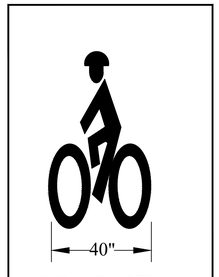


HIGH VISIBILITY CROSSWALK
NOT TO SCALE



BIKE SYMBOL DETAIL

LEGEND

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	SIGN	
Ⓐ	STRIPING	Ⓐ

PAVEMENT LEGEND:

- EXIST. PAVEMENT TO BE REMOVED (FULL DEPTH SAW CUT AND REPLACE WITH NEW PAVEMENT)
- MILL AND RESURFACE EXISTING PAVEMENT (PROVIDE 2" MIN. MILLING DEPTH)

CONSTRUCTION NOTES:

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2. ERADICATE EXISTING PAVEMENT MARKINGS.
3. TIE INTO EXISTING PAVEMENT MARKINGS.
4. LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT
5. LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT
6. REMOVE AND REPLACE CONCRETE CURB & GUTTER AS PER ARLINGTON STD. DWG. R-2.0.

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SOLOMON W SHIKUR
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PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

PAVING AND PAVEMENT MARKING PLAN - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

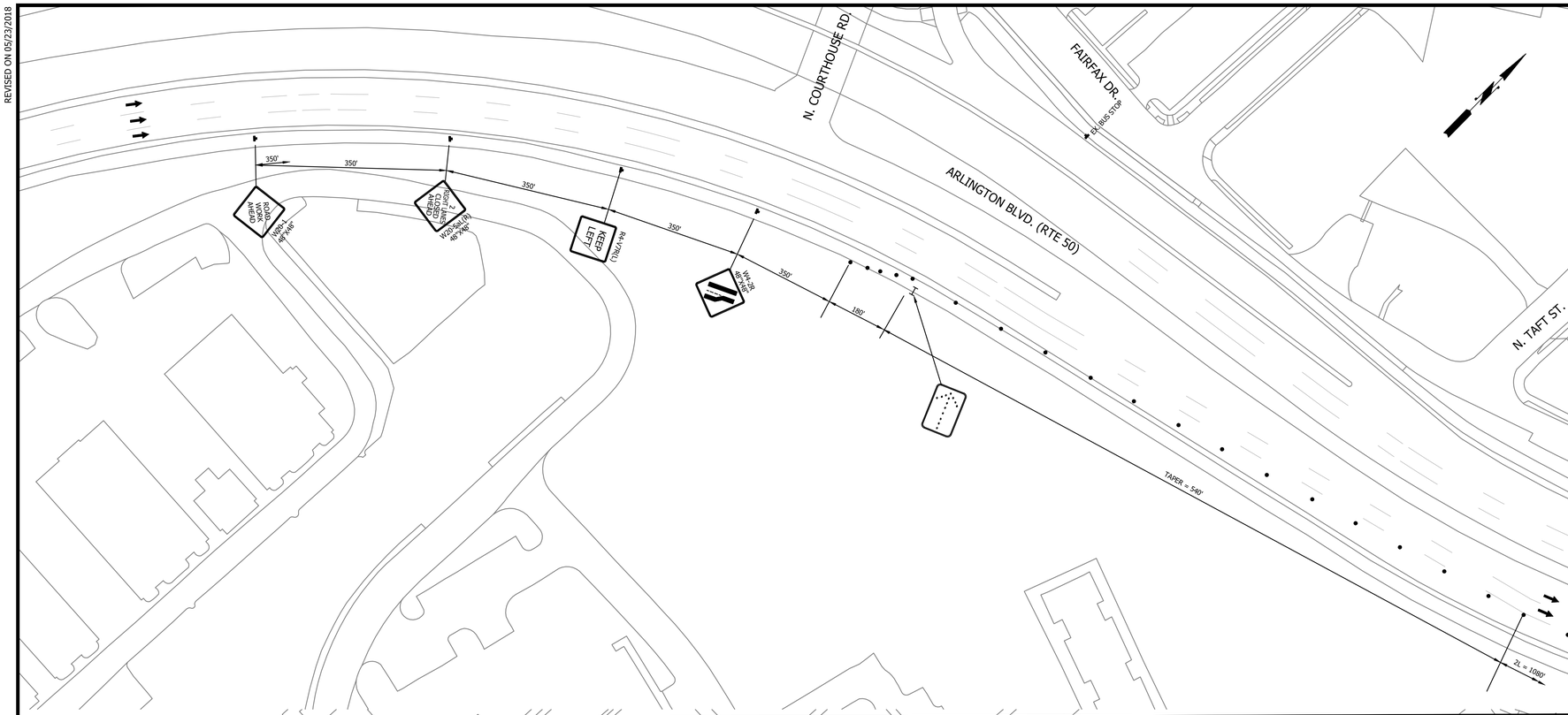
0 25 50
GRAPHIC SCALE

C055.2

REVISED ON 05/23/2018

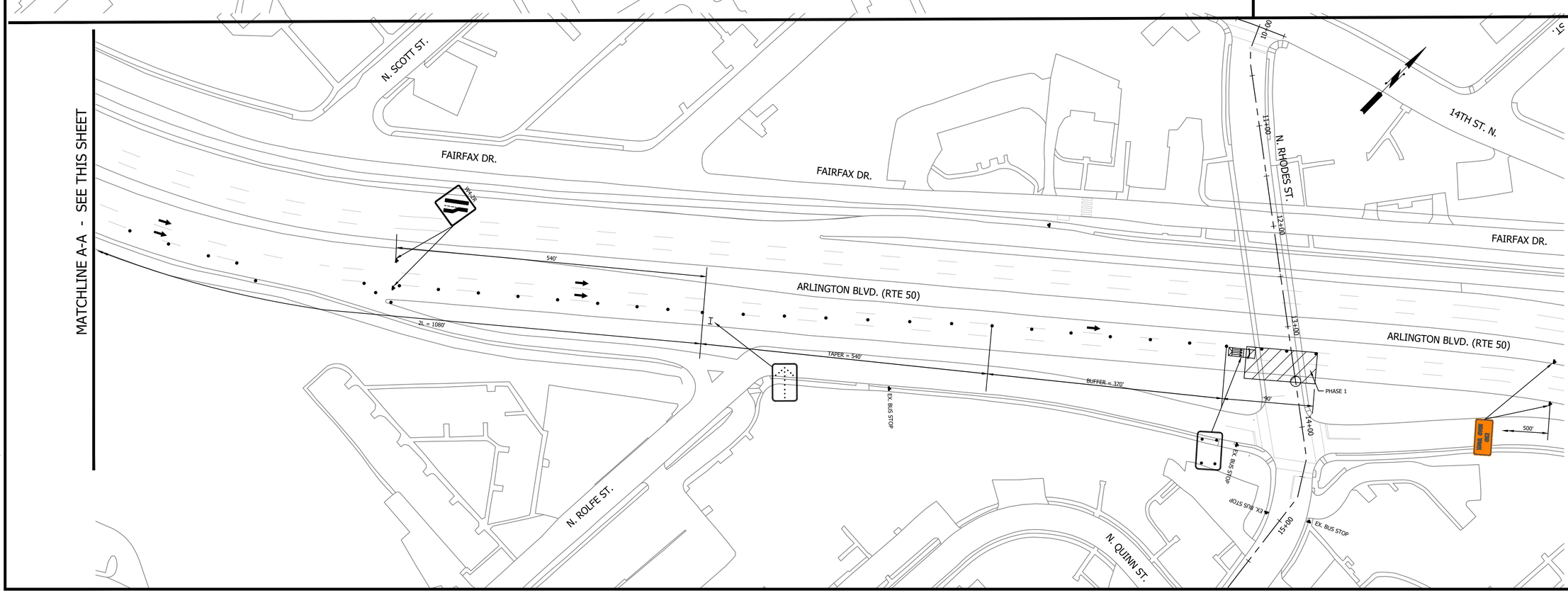
FILENAME: WI08-227-PAVING PLAN.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018



NOTES:

1. PHASE 1 WORK SHALL BE COMPLETED IN 8 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-18.2
3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.



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

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 1
PHASE 1

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

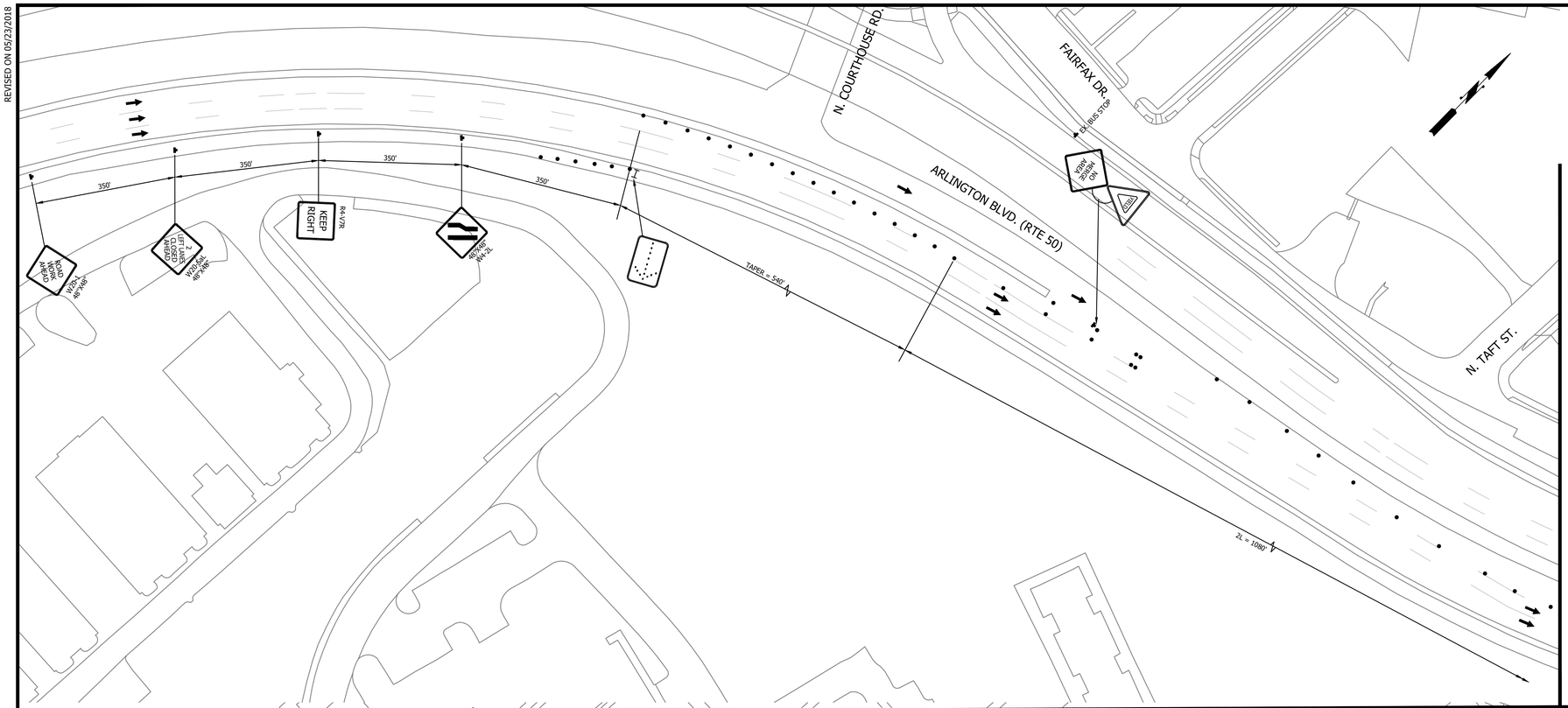
SCALE:

NOT TO SCALE

C121.1

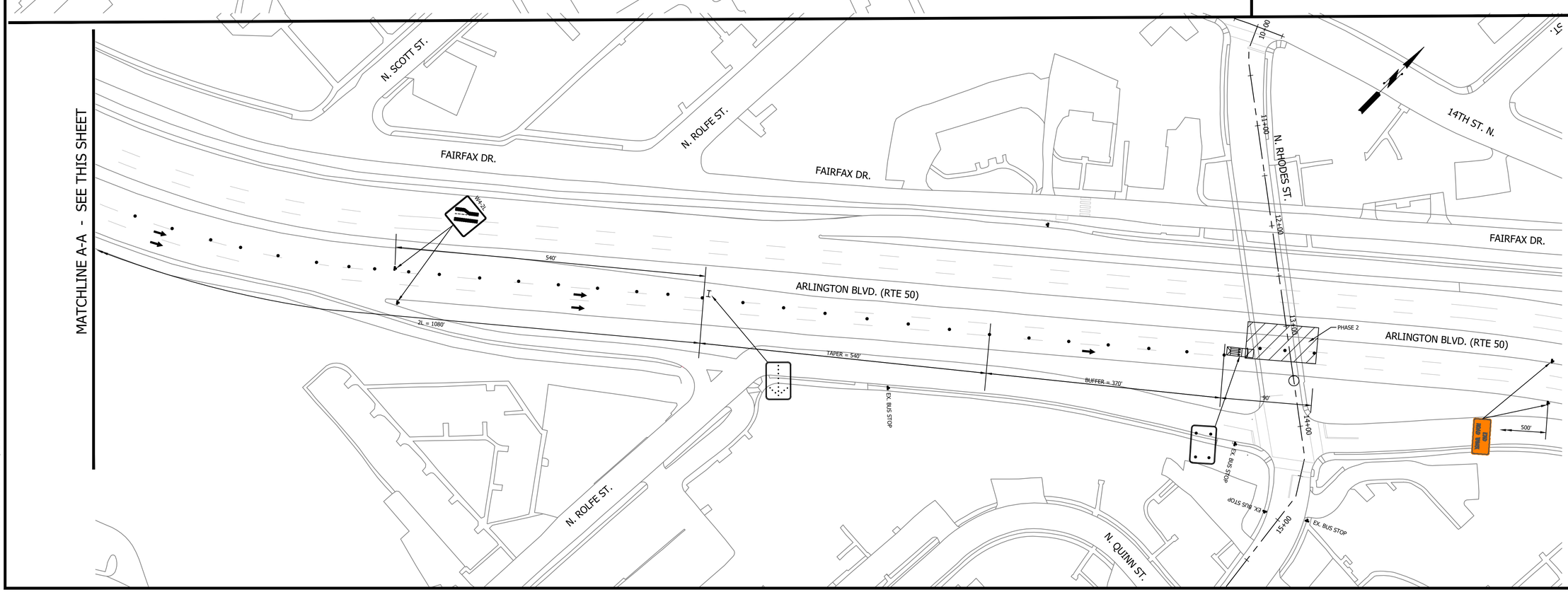
FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018



NOTES:

1. PHASE 2 WORK SHALL BE COMPLETED IN 11 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-18.2
3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.



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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 2
PHASE 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

NOT TO SCALE

C121.2

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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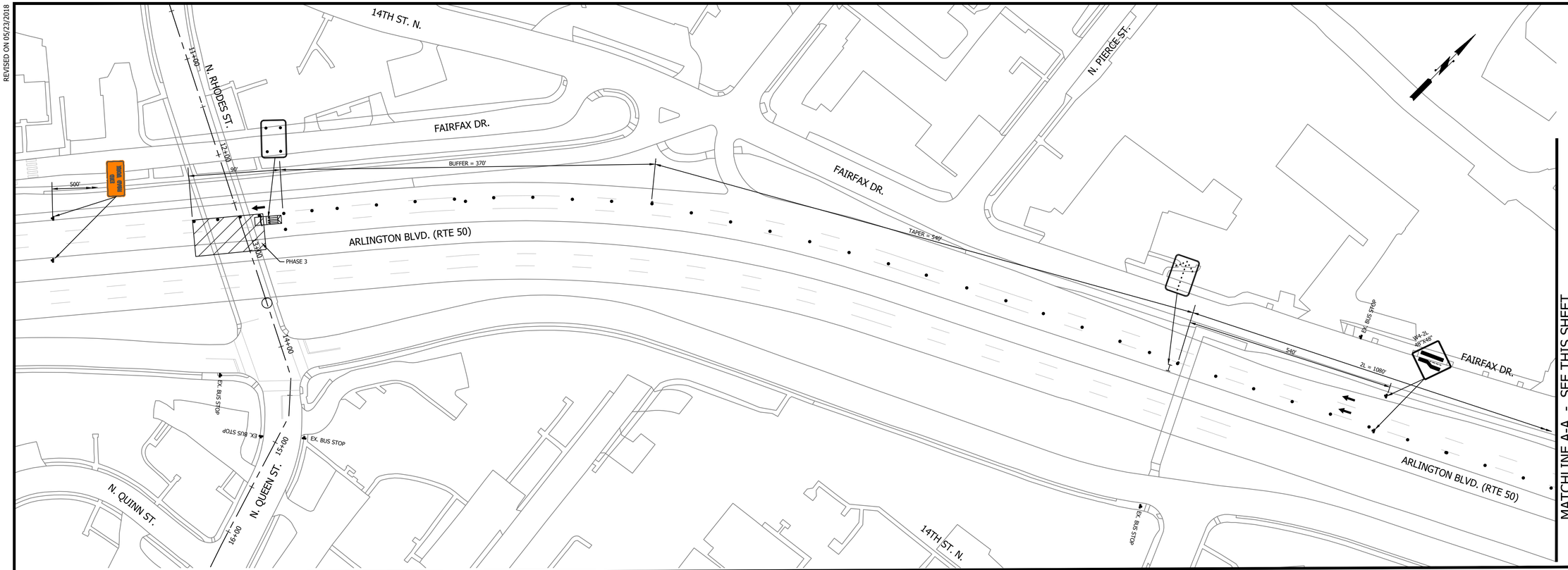

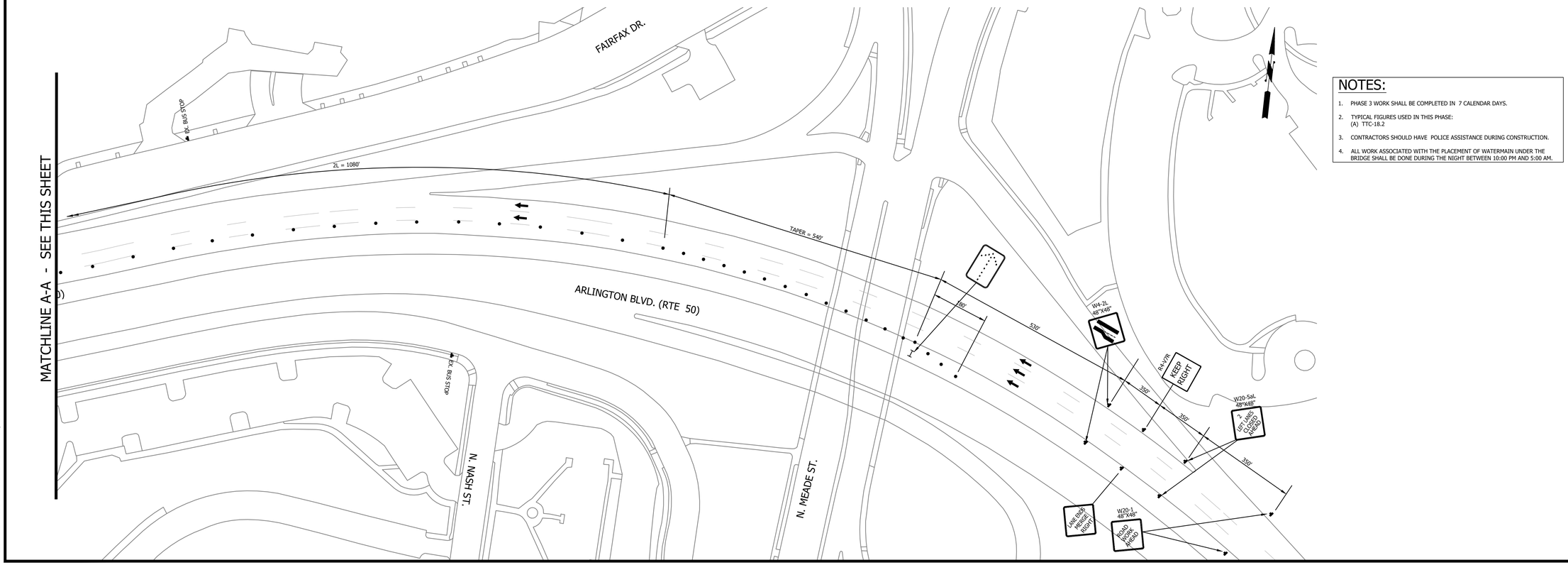

NOTES:

1. PHASE 3 WORK SHALL BE COMPLETED IN 7 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-18.2
3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.

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

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 3
PHASE 3

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

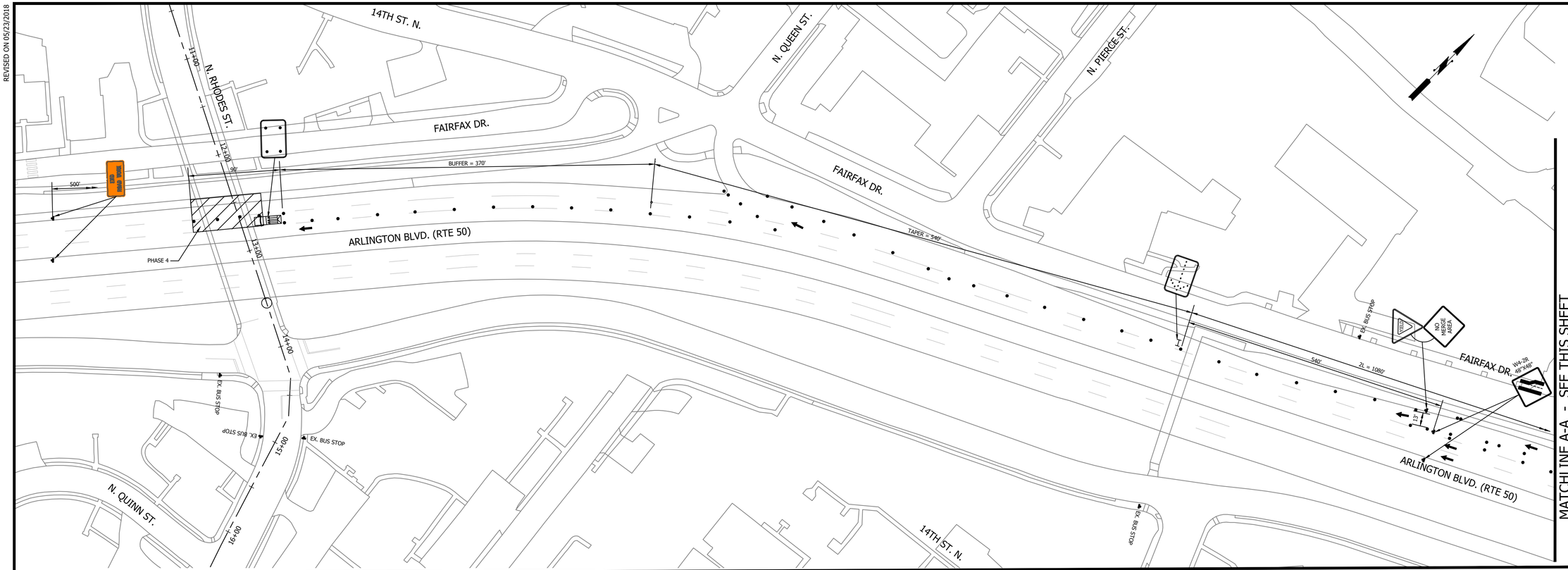
SCALE:

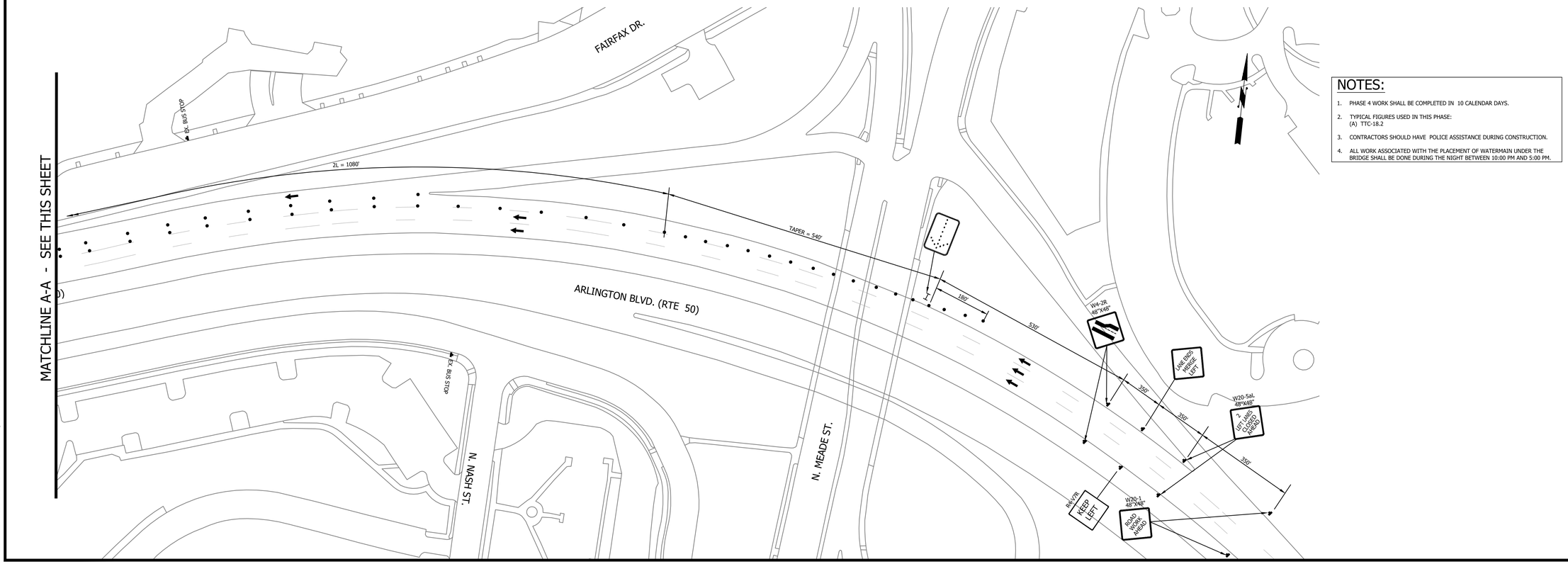
NOT TO SCALE

C121.3

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

REVISED ON 05/23/2018





NOTES:

1. PHASE 4 WORK SHALL BE COMPLETED IN 10 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-18.2
3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 PM.

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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

SEAL

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SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 4
PHASE 4

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

NOT TO SCALE

C121.4

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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FOR BUS STOP RELOCATION - CONTACT DES BUS STOP MANAGER (DIANE TRENT - 703-228-3049) FOUR WEEKS PRIOR TO CONSTRUCTION.

NOTES:

1. PHASE 5 WORK SHALL BE COMPLETED IN 10 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-34.2
   (B) TTC-35.1
3. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.
4. ALL BUS STOPS TO REMAIN OPEN AND ACCESSIBLE.
5. CONTRACTOR TO PROVIDE TEMPORARY CONSTRUCTION FACILITIES EXTENDING THE SIDEWALK TO THE TRAVEL LANE AT BUS STOPS.

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VIRGINIA

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

SEAL

Solomon W
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 5
PHASE 5

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE: 1" = 100'

C121.5

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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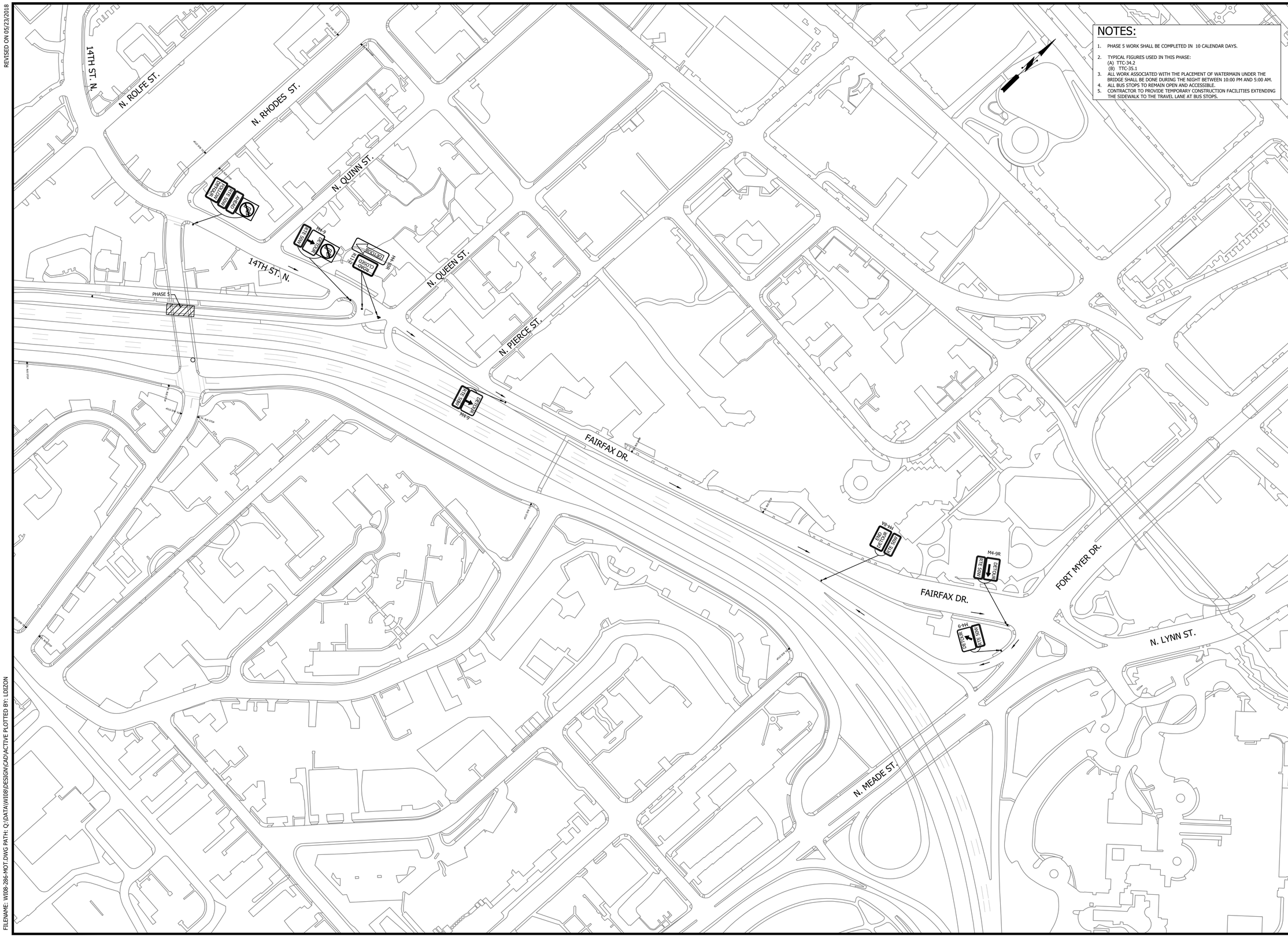

NOTES:

1. PHASE 5 WORK SHALL BE COMPLETED IN 10 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-34.2
   (B) TTC-35.1
3. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.
4. ALL BUS STOPS TO REMAIN OPEN AND ACCESSIBLE.
5. CONTRACTOR TO PROVIDE TEMPORARY CONSTRUCTION FACILITIES EXTENDING THE SIDEWALK TO THE TRAVEL LANE AT BUS STOPS.

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VIRGINIA

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

SEAL

Solomon W
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 5.1
PHASE 5 - DETOUR PLAN

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE: 1" = 100'

C121.51

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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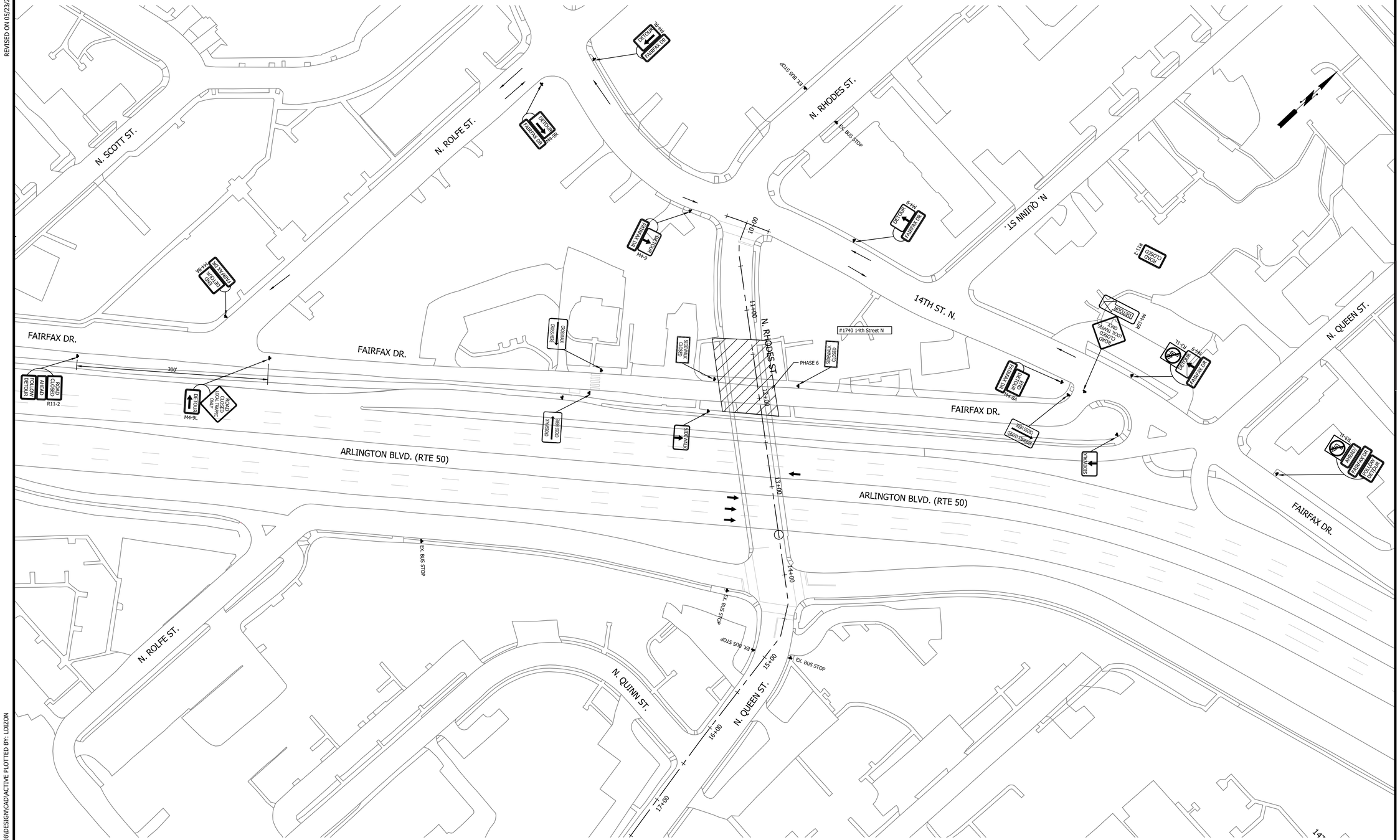

NOTES:

1. PHASE 6 WORK SHALL BE COMPLETED IN 24 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-34.2
   (B) TTC-35.1
3. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 10:00 PM AND 5:00 AM.
4. ALL BUS STOPS TO REMAIN OPEN AND ACCESSIBLE.
5. CONTRACTOR TO PROVIDE TEMPORARY CONSTRUCTION FACILITIES EXTENDING THE SIDEWALK TO THE TRAVEL LANES AT BUS STOPS.
6. CONTRACTOR TO PROVIDE ACCESS/EGRESS OF LOADING DOCK/DRIVEWAY OF #1740 14th STREET N BUILDING.

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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

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 6
PHASE 6

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

NOT TO SCALE

C121.6

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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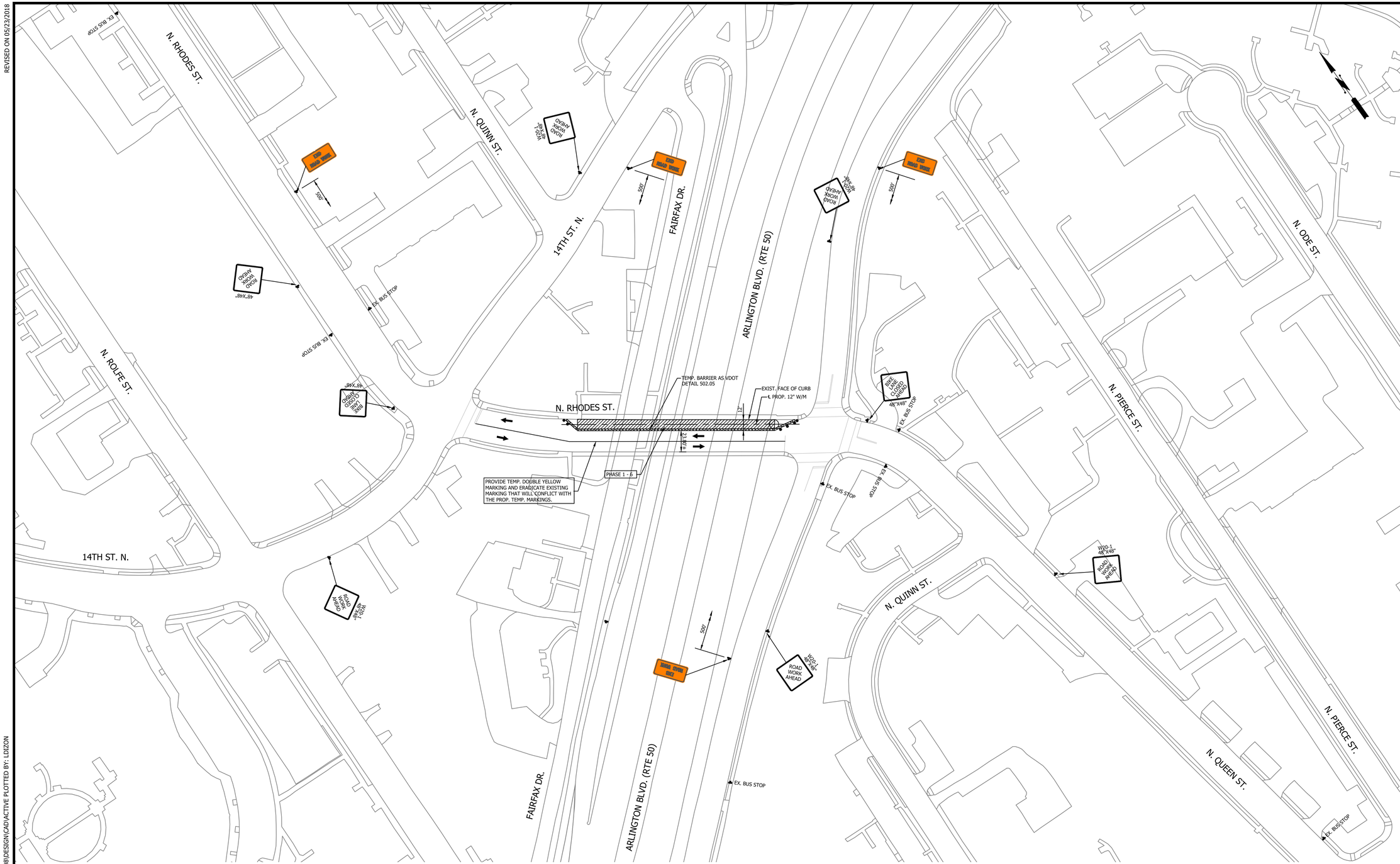

NOTES:

1. PHASE 1 THRU 6 WORK SHALL BE COMPLETED IN 74 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
   (A) TTC-1.1

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VIRGINIA

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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

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Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

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FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 7
PHASE 1 TO 6 - N. RHODES ST.

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

NOT TO SCALE

C121.7

FILENAME: WI08-286-MOT.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

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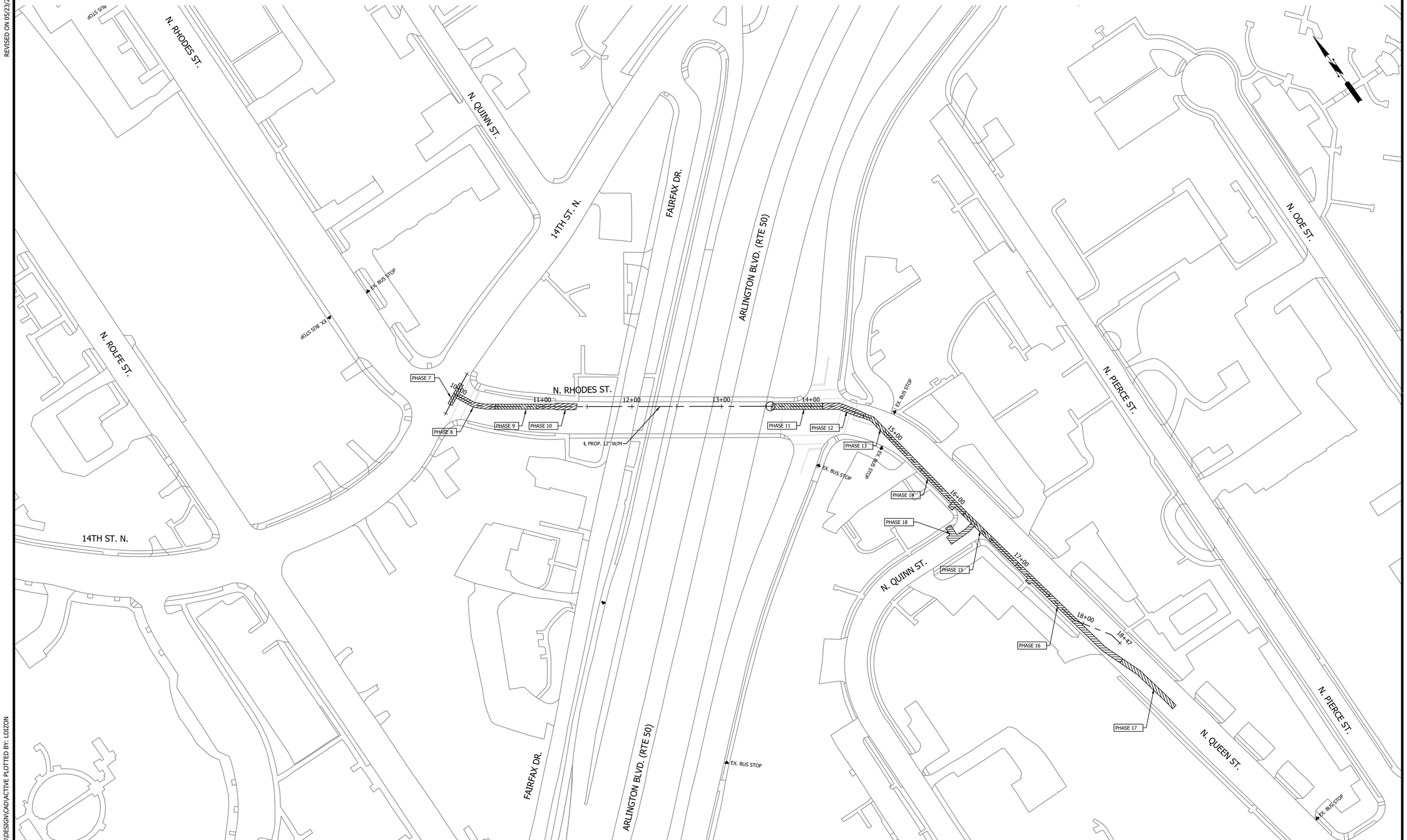

NOTES:

1. FOR TTC TYP. FIGURES AND DURATION OF EACH PHASING, SEE SHEETS C122.1 - C122.3.
2. ALL BUS STOPS TO REMAIN OPEN AND ACCESSIBLE.
3. CONTRACTOR TO PROVIDE TEMPORARY CONSTRUCTION FACILITIES EXTENDING THE SIDEWALK TO THE TRAVEL LANES AT BUS STOPS.

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ENGINEERING BUREAU
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PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MAINTENANCE OF TRAFFIC PLAN - 8
PHASE 7 TO 18

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

0 50 100
GRAPHIC SCALE

C121.8

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REVISED ON 05/23/2018

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT PROJECT
N. RHODES ST. - FROM 14TH ST. N. TO N. QUINN ST.
TRANSPORTATION MANAGEMENT PLAN (TMP)

GENERAL TMP NOTES:

1. PROJECT IS A "TYPE A" TMP PROJECT. THIS PROJECT SUPPORTS FOR THE IMPROVEMENT OF FORT MYER HEIGHTS WATERMAIN IMPROVEMENT. THE DESIGN FOR THE FORT MYER HEIGHTS WATERMAIN IMPROVEMENT PROJECT INCLUDES INSTALLATION OF A NEW 12" WATERMAIN.
2. FOR WATERMAIN REPLACEMENT WORK, THE WORKING HOURS ALONG VDOT RIGHT-OF-WAY AREA ARE AS FOLLOWS:

MON. TO THU.	FRIDAY	MON. TO FRI.	FRI. TO SAT.	SUNDAY
9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	10:00 PM TO 5:00 AM	10:00 PM TO 9:00 AM	*NOT ALLOWED

3. THE WORKING HOURS WITHIN ARLINGTON COUNTY RIGHT-OF-WAY ARE AS FOLLOWS:

MON. TO FRI.	NIGHT WORK	SUNDAY
9:00 AM TO 4:00 PM	10:00 PM TO 5:00 AM	*Not Allowed

4. BEFORE AND AFTER WORKING HOURS, ALL TRAVEL LANES SHALL BE OPENED TO THE MOTORISTS.
5. NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.
6. MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDE THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY THE ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O) BUREAU.
7. NO DRIVEWAY ENTRANCES ARE BEING AFFECTED BY THE PROPOSED WORK ALONG VDOT R-O-W.
8. THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU (703-228-3049) AT LEAST 4 WEEKS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL, IF TRANSIT IS AFFECTED.
9. THE CONTRACTOR SHALL RETAIN PEDESTRIAN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.
10. THE CONTRACTOR SHALL :
    A. DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/MOT/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION MANAGER FOR THE DURATION OF THE PROJECT.
    B. ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.
    C. PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. CONTRACTORS SHALL MAINTAIN AN APPROVED COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.
11. THIS TMP/MOT/SOC PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. 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.
12. 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.
13. 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.
14. EACH PHASE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
15. PUBLIC COMMUNICATION PLAN
    THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
    A. NOTIFYING THE VDOT PROJECT MANAGER/RESIDENCY ADMINISTRATOR OF SCHEDULED WORK PLANS AT LEAST 48 HOURS PRIOR TO BEGINNING EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.
    B. NOTIFYING THE VDOT PROJECT MANAGER/RESIDENCY ADMINISTRATOR, REGIONAL OPERATION MANAGER AND THE PUBLIC AFFAIRS STAFF OF ANY UNSCHEDULED TRAFFIC DELAYS THAT THAT MAY OCCUR.
    C. INSTALLING PORTABLE VARIABLE MESSAGE SIGNBOARDS (VMS) WITH PROJECT START DATE INFORMATION APPROXIMATELY 500' BEFORE AND AFTER THE PROJECT SITE LIMIT THREE (3) WEEKS ADVANCE PRIOR TO START OF ANY ROADWORK AND LANE CLOSURE.
16. TRANSPORTATION OPERATION PLANS
    THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:
    A. NOTIFYING THE VDOT REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) 48 HOURS IN ADVANCE IN ORDER TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA-TRAFFIC. FOR ADDITIONAL INFORMATION, PLEASE CALL CARLENE MC WHIRT AT 571-350-2078.
    B. HAVING THE LIST OF LOCAL EMERGENCY RESPONSE AGENCIES AVAILABLE AT THE WORK SITE AT ALL TIMES.
    C. IMMEDIATELY REPORTING ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.
    D. NOTIFY THE PROJECT'S CONSTRUCTION MANAGER AND CORRESPONDING ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.
    E. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE ACCIDENTS.
    F. EMERGENCY CONTACTS DURING THE DURATION OF THE PROJECTS ARE THE FOLLOWING:
    - KAMAL TAKTAK - CONSTRUCTION MANAGEMENT SUPERVISOR - 703-228-7527
    - SOLOMON SHIKUR - ENGINEERING DESIGN TEAM SUPERVISOR - 703-228-3654
    - DES R-O-W PERMITTING SECTION - 703-228-4798
    - ARLINGTON COUNTY TRANSIT BUREAU - 703-228-3049
    - WATER, SEWER AND STREET OPERATION - 703-228-6555
    - ARLINGTON COUNTY POLICE - 703 -558-2222
    - EMERGENCY CALL - 911
    - VDOT PROJECT CONSTRUCTION INSPECTOR - TBD

FIRE DEPARTMENT NOTES:

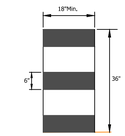
1. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
2. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE 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.
3. 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.

MAINTENANCE OF TRAFFIC (MOT) GENERAL NOTES:

1. TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT's GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
2. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
3. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGEMENT. COUNTY PROJECT OFFICER SHALL RESTRICT PARKING BY CONTACTING DES - PERMITTING SECTION, 703-228-4798.
4. PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF WORK AREA 3 WEEKS PRIOR TO CLOSURE.
5. 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.
6. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE PROJECT OFFICER. THE PROJECT OFFICER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
7. WHEN DOING WORK ALONG ARLINGTON BLVD AN ARLINGTON COUNTY POLICE OFFICER(S) SHALL BE PRESENT TO DIRECT OR MONITOR ROAD USERS DURING MOT OPERATIONS AT THE CONTRACTOR'S EXPENSE. CONTACT ARLINGTON COUNTY POLICE DEPARTMENT LT. ROBERT DESO OR HIS ASSIGNEE AT 703-228-7460 FOR DETAILS AT LEAST 2 WEEKS IN ADVANCE PRIOR TO START OF WORK AT FOLLOWING AREAS SHOWN BELOW.
   - ARLINGTON BLVD (RTE 50) / N. RHODES ST. AREA
   - FAIRFAX DR. / N. RHODES ST. AREA
8. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE PROJECT OFFICER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND AS APPROVED BY THE PROJECT OFFICER.
9. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
10. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
11. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
12. WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDBLOCK WORK SITES.
13. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
14. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED.
15. 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.
16. THE CONTRACTOR SHALL COMPLY WITH "RESTRICTED" WORKING HOURS AS DEFINED BY VDOT AND AS NOTED ON THE APPROVED VDOT PERMIT WHEN WORKING WITHIN THE VDOT RIGHT-OF-WAY. THE CONTRACTOR IS RESPONSIBLE FOR SATISFYING ALL VDOT PERMIT REQUIREMENTS.
17. MAINTENANCE OF TRAFFIC PLANS AND DETAILS SHOWN HERE SHALL BE FOLLOWED BY THE CONTRACTOR DURING CONSTRUCTION. SHOULD THE CONTRACTOR DESIRE TO FOLLOW AN ALTERNATE PLAN, HE SHALL SUBMIT THE PLAN PRIOR TO CONSTRUCTION FOR REVIEW AND APPROVAL. ALTERNATIVE PLAN PREPARATION SHALL BE NO COST TO THE COUNTY.
18. DIRECTIONAL ARROWS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS ARE FOR INFORMATION ONLY AND ARE NOT TO BE PLACED AS PAVEMENT MARKINGS.
19. THE CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THIS MOT PLAN.
20. THE 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.
21. THE CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKINGS, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
22. CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
23. ALL TEMPORARY AND BUS TRAVEL LANES SHALL BE 11' WIDE.

LEGEND:

- ILLUMINTAED FLASHING AMBER ARROW PANEL TYPE C
- ILLUMINTAED FLASHING AMBER (CAUTION MODE) ARROW PANEL TYPE B OR C
- AREA UNDER CONSTRUCTION
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- ARROW PANEL
- SIGN
- TYPE III BARRICADE
- FLAGGER STATION



DRUM GROUP 2

PHASE TABLE

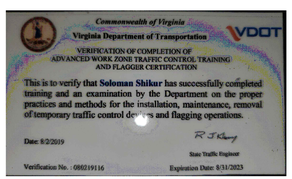
PHASE#	TTC#	COMMENTS	DURATIONS
PHASE 1	TTC-18.2	MULT-LANE CLOSURE OPERATION	8 CALENDAR DAYS
PHASE 2	TTC-18.2	MULT-LANE CLOSURE OPERATION	11 CALENDAR DAYS
PHASE 3	TTC-18.2	MULT-LANE CLOSURE OPERATION	11 CALENDAR DAYS
PHASE 4	TTC-18.2	MULT-LANE CLOSURE OPERATION	10 CALENDAR DAYS
PHASE 5	TTC-34.2 TTC-35.1	STREET CLOSURE OPERATION WITH DETOUR SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	10 CALENDAR DAYS
PHASE 6	TTC-34.2 TTC-35.1	STREET CLOSURE OPERATION WITH DETOUR SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	24 CALENDAR DAYS
PHASE 1 - 6 (N RHODES ST)	TTC- 1.1	WORK BEYOND THE SHOULDER OPERATION	74 CALENDAR DAYS
PHASE 7	TTC-28.2 TTC-35.1	LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	2 CALENDAR DAYS
PHASE 8	TTC-28.2 TTC-35.1	LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	3 CALENDAR DAYS
PHASE 9	TTC-23.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	3 CALENDAR DAYS
PHASE 10	TTC-23.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	3 CALENDAR DAYS
PHASE 11	TTC-23.2 TTC-28.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	4 CALENDAR DAYS
PHASE 12	TTC-23.2 TTC-28.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	4 CALENDAR DAYS
PHASE 13	TTC-23.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	2 CALENDAR DAYS
PHASE 14	TTC-23.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	8 CALENDAR DAYS
PHASE 15	TTC-28.2 TTC-35.1	LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	3 CALENDAR DAYS
PHASE 16	TTC-23.2 TTC-28.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	13 CALENDAR DAYS
PHASE 17	TTC-23.2 TTC-35.1	LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	5 CALENDAR DAYS
PHASE 18	TTC-28.2 TTC-35.1	LANE CLOSURE OPERATION IN AT INTERSECTION SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION	3 CALENDAR DAYS

Virginia Department of Transportation
REVIEW OF WORKING DRAWINGS
Working drawings have been reviewed in accordance with Section 105.10 2016 VDOT Road & Bridge Specifications

_X_ REVIEW COMPLETED
____ CORRECT & RESUBMIT
____ REJECTED - SEE REMARKS

Reviewed by:_____Date:_____

REVIEWED
By Brian E. Fry at 9:08 am, Jul 12, 2021


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 Soloman Shikur 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: 8/2/2019
State Traffic Engineer
Verification No. : 086019116
Expiration Date: 8/31/2023

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

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
MOT NOTES & DETAILS - 1

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

AS SHOWN

C122.1

FILENAME: WI08-228-MOT NOTES AND DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON

Typical Traffic Control
Work Beyond the Shoulder Operation
(Figure TTC-1.1)
NOTES

Guidance:

1. *The minimum distance between the sign and work vehicle should be 1300'-1500' on 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 limited is 45 mph or less.*

Option:

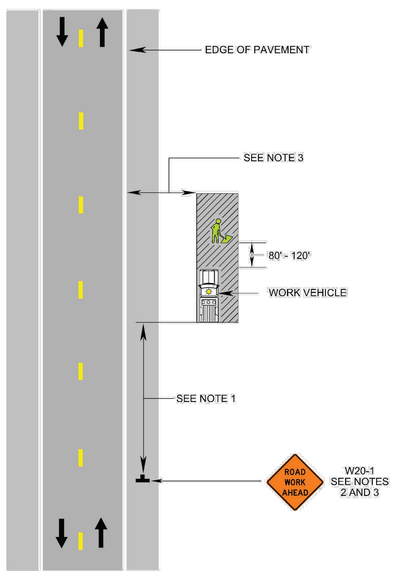
2. The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as the SHOULDER WORK (W21-5) sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.
3. The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical curb (Standard CG-2 and CG-6) on urban roadways, or outside of the clear zone for all other roadways. For clear zone values see Page A-4 of Appendix A.
4. For short-term, short duration or mobile operations[1], 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 oscillating lights.**
6. **If the work space is in the median of a divided highway, an advance warning sign shall also be placed on the left side of the directional roadway.**

1: Revision 1 – 4/1/2015

Work Beyond the Shoulder Operation
(Figure TTC-1.1)



1: Revision 1 – 4/1/2015

Typical Traffic Control
Multi-Lane Closure Operation
(Figure TTC-18.2)
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.*[2]
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 taper see Table 6H-2[2]						Shoulder Taper = ½ L Minimum					

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

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.								

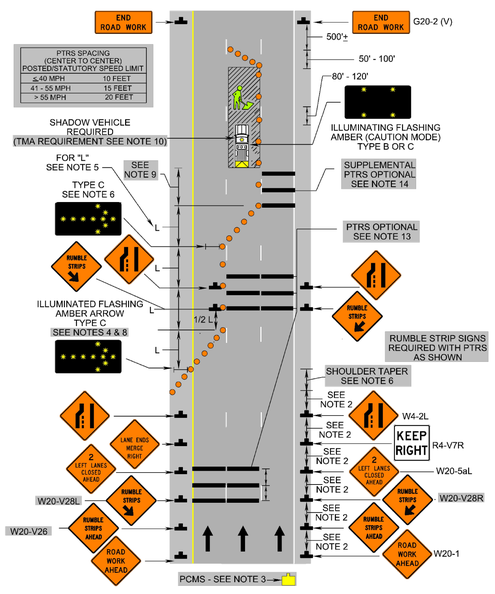
8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with 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

Multi-Lane Closure Operation
(Figure TTC-18.2)



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

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists 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. **Portable Temporary Rumle Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.**[1]
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21)-V10) sign[2] may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the* PTRS[1] *should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

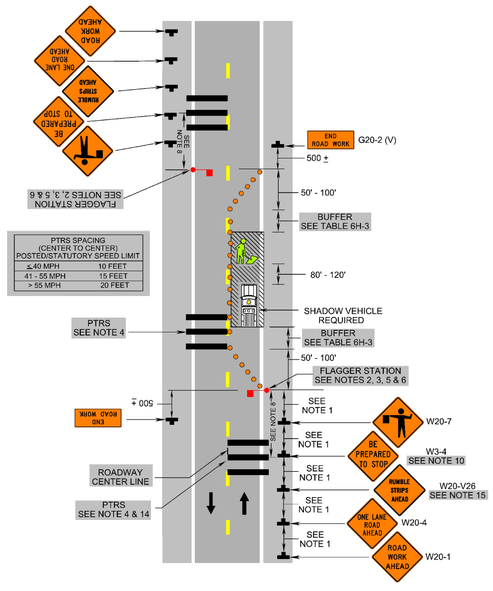
12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:[1]

14. **When used[2], three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

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

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



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

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

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MOT NOTES & DETAILS - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:

AS SHOWN

C122.2

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 oscilllating[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:

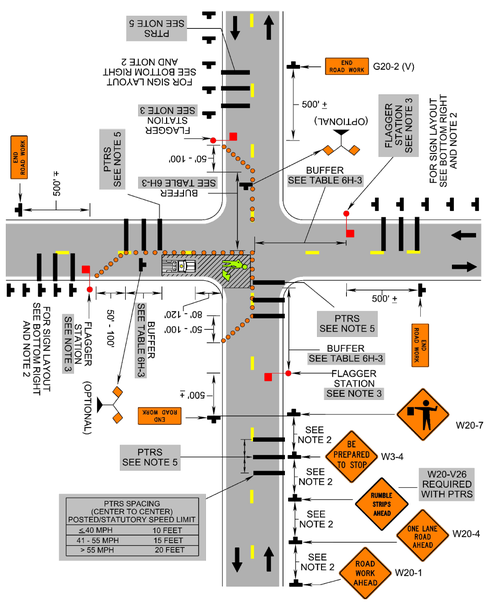
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

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

Typical Traffic Control
Street Closure Operation with Detour
(Figure TTC-34.2)
NOTES

Guidance:

1. *This plan should be used for streets without posted route numbers.*
2. *On multi-lane streets, Detour signs with an Advance Turn Arrow should be used in advance of a turn.*
3. *Sign spacing distance should be 225'-275' where the posted speed limit is 30 to 35 mph, and 100'-200' where the posted speed is 25 mph or less.*
4. *If the road is opened for a significant distance beyond the intersection and/or there are significant origin/destination points beyond the intersection, the ROAD CLOSED (R11-2) and Detour Arrow (M4-10) signs on Type 3 Barricades should be located at the corners of intersecting closed roadway or the traveled way.*
5. *In urban areas, signs on an eight foot Type 3 barricade, should not cover more than half of the top two rails. On a four foot Type 3 barricade, a sign should not cover more than the top rail. When used alone on a four foot Type 3 barricade, the ROAD CLOSED (R11-1) sign or the ROAD CLOSED TO THRU TRAFFIC (R11-4) sign should be installed above the Type 3 barricade.[2]*

Option:

6. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
7. Flashing warning lights may be used on Type 3 Barricades.
8. Detour signs may be located on the far side of intersections. A Detour sign with an advance arrow may be used in advance of a turn.
9. A Street Name (M4-VP1a) plaque may be mounted with the Detour sign. The Street Name plaque may be either white on green or black on orange.

Standard:

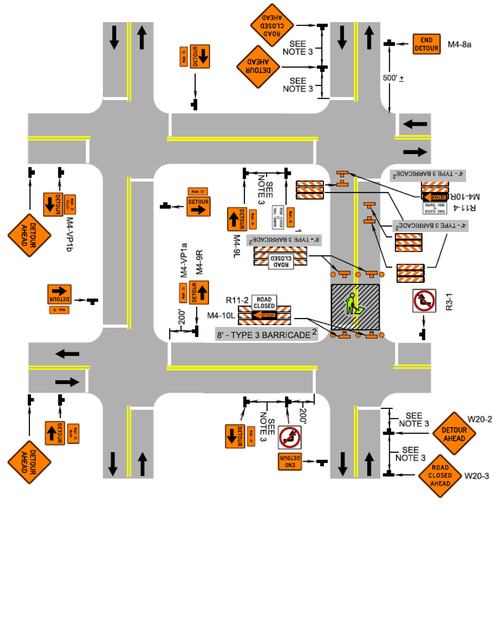
10. **When used, the Street Name plaque shall be placed above the Detour sign.**

Support:

11. See Chapter 6I for additional information on incident management traffic control.

2: Revision 2 – 9/1/2019

Street Closure Operation with Detour
(Figure TTC-34.2)



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

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

Standard:

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

Guidance:

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

Option:

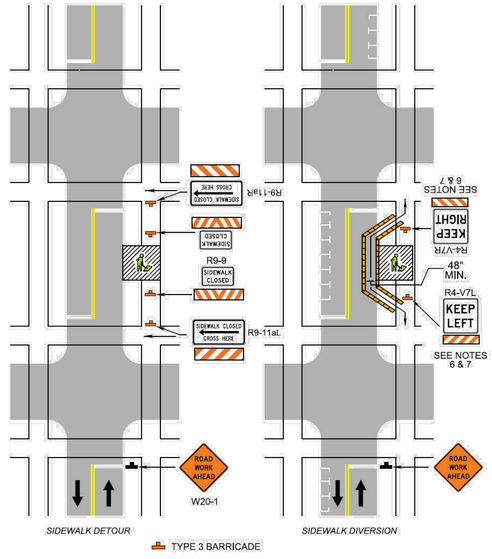
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7.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

Standard:

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

2: Revision 2 – 9/1/2019

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



2: Revision 2 – 9/1/2019

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

SEAL
COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
6/28/21
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	08/11/2021
Kamal Taktak, CONSTRUCTION MANAGEMENT SUPERVISOR	8.12.21
WATER, SEWER, STREETS BUREAU CHIEF	08.18.2021
Dennis M. Leach, TRANSPORTATION DIRECTOR	08/19/21
PROJECT MANAGER	08/12/2021

REVISIONS	DATE

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
WI08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MOT NOTES & DETAILS - 3

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:
AS SHOWN

C122.3

REVISED ON 05/23/2018

FILENAME: WI08-228-MOT NOTES AND DETAILS.DWG PATH: Q:\DATA\WI08\DESIGN\CAD\ACTIVE PLOTTED BY: LDIZON