REVISED ON 11/18/2021

ARLINGTON
VIRGINIA

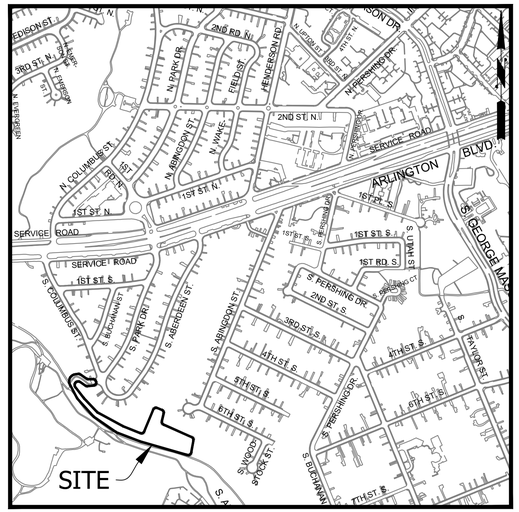
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

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

OWNER
DES/OSEM/WTRSHD

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



0 600 1200
GRAPHIC SCALE

CONSTRUCTION DRAWINGS FOR:

SPARROW POND RESTORATION
S. PARK DR & S. COLUMBUS ST

PROJECT NUMBER: S44D

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 5 BUSINESS 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

SHEET NUMBER	SHEET TITLES
01	COVER
02	LEGEND
03	OVERALL SITE PLAN
04	EXISTING CONDITIONS AND DEMOLITION PLAN
05	EXISTING CONDITIONS AND DEMOLITION PLAN
06	EXISTING CONDITIONS AND DEMOLITION PLAN
07	EROSION & SEDIMENT CONTROL PLAN - PHASE I
08	EROSION & SEDIMENT CONTROL PLAN - PHASE I
09	EROSION & SEDIMENT CONTROL PLAN - PHASE I
10	EROSION & SEDIMENT CONTROL PLAN - PHASE II
11	EROSION & SEDIMENT CONTROL PLAN - PHASE II
12	EROSION & SEDIMENT CONTROL PLAN - PHASE II
13	EROSION AND SEDIMENT CONTROL NOTES
14	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
15	EROSION AND SEDIMENT CONTROL DETAILS
16	EROSION AND SEDIMENT CONTROL DETAILS
17	STORMWATER POLLUTION PREVENTION PLAN
18	STORMWATER POLLUTION PREVENTION PLAN
19	STORMWATER POLLUTION PREVENTION PLAN
20	SITE PLAN
21	SITE PLAN
22	SITE PLAN
23	GRADING PLAN
24	GRADING PLAN
25	GRADING PLAN
26	STORM PROFILES
27	STORM PROFILE & COMPS
28	POND SECTIONS
29	MAINTENANCE ACCESS RAMP PROFILE
30	SWM DIVIDES & SOIL MAP
31	EXISTING SWM CALCULATIONS
32	PROPOSED SWM CALCULATIONS
33	SWM TMDL CALCULATIONS
34	WATER QUALITY IMPACT ASSESSMENT PLAN
35-36	TREE PRESERVATION PLAN
37	TREE PRESERVATION NOTES & DETAILS
38-41	TREE PRESERVATION SCHEDULE

SHEET LIST

SHEET NUMBER	SHEET TITLES
42-43	TREE REPLACEMENT CALCULATIONS
44-45	PLANTING PLAN
46	PLANTING DETAILS, SCHEDULE & NOTES
47	EXISTING RPA
48	EXISTING RPA
49	PROPOSED RPA
50	PROPOSED RPA
51	SITE DETAILS
52	SITE DETAILS
53	SITE DETAILS
54	SITE DETAILS
55	SIGNING AND PAVEMENT MARKING PLAN
56	MAINTENANCE OF TRAFFIC PLAN
57	MAINTENANCE OF TRAFFIC PLAN
58	MAINTENANCE OF TRAFFIC PLAN
59	MAINTENANCE OF TRAFFIC NOTES & DETAILS
60	TURNING MOVEMENT EXHIBIT
61	TURNING MOVEMENT EXHIBIT

SWM#
SWM 20-0159

ADT

STREET CLASSIFICATION

POSTED SPEED

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SEAL
COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

APPROVALS	DATE
Ankur Patel	05/10/22
QUALITY CONTROL ENGINEER: Amy Pflaum	05/27/22
CONSTRUCTION MANAGEMENT SUPERVISOR: Adam E. Fuleau	6/2/2022
WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
TRANSPORTATION DIRECTOR: Dennis M. Leach	6/7/22
PROJECT MANAGER: Ty Asfaw	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

COVER

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

01

FILENAME: S44D-200-COVER.DWG PATH: Q:\DATAS\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING		
CENTERLINE / BASELINE		
COMMUNICATIONS CABLE	COM COM	COM COM
CONTOURS - MAJOR, MINOR	250 250	250
CRITICAL ROOT ZONE	CRZ CRZ	CRZ CRZ
EASEMENT		
ELECTRIC (UNDERGROUND)		UGE UGE
FENCE (MATERIAL NOTED)		X X X X X
FIBER OPTIC	FO FO	
GAS LINE	GAS GAS	GAS GAS
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	#" g #" g #" g	X" G X" G X" G
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
SANITARY SEWER UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#" s #" s	
SANITARY SEWER OVER 20"		
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		
WATERLINE UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#" w #" w	
WATERLINE OVER 20"		

SYMBOL LEGEND

EXISTING FEATURE	PROPOSED FEATURE
EX 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
	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE TYPE INDICATED ELEC, 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)
	DETAIL NUMBER (SEE NOTE)
NORTH ARROW	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE

SYMBOL LEGEND

EXISTING FEATURE	PROPOSED FEATURE
EX STRIPING	PROP STRIPING
EX BUS STOP	PROP BUS STOP

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

DEMOLITION AREA

GRADING LEGEND

EXISTING FEATURE		PROPOSED FEATURE	
EX GRADE	EX: XXX.XX	FINISHED GRADE	XXX.XX
		FINISHED GRADE AT TOP OF WALL	TW: XXX.XX
		FINISHED GRADE AT BOTTOM OF WALL	BW: XXX.XX

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Ankur Patel 05/10/22

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Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

LEGEND

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

02

FILENAME: S44D-202-LEGEND.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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REVISIONS	DATE

SPARROW POND RESTORATION
S44D

S. PARK DR & S. COLUMBUS ST

OVERALL SITE PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 50 100
GRAPHIC SCALE

03

FILENAME: S44D-232-OVERALL SITE PLAN.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

12
146 S. Columbus St
RPC: 21-008-032

11
150 S. Columbus St
RPC: 21-008-033

SECTION THREE
ARLINGTON FOREST
DB. 477, PG. 497

S. COLUMBUS ST

S. PARK DR

33" CULVERT TO BE REMOVED

EX. 101

EX. 102

REMOVE AND RELOCATE SIGN

EX. 103

EX. 104

EX. 105

EX. 106

2659

2660

asphalt

pp co917

12" STORM PIPES TO BE REMOVED

REMOVE AND RELOCATE SIGN

CURB ADJACENT TO TRAIL TO BE REMOVED

MATCHLINE - SEE SHEET 05

LEGEND:

X- X- X- X- - UTILITY TO BE REMOVED

PAVEMENT TO BE REMOVED IN PREPARATION OF INSTALLING NEW PAVEMENT SECTION AND STORM SYSTEM ONLY AFTER ALL OTHER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED

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[signature] WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

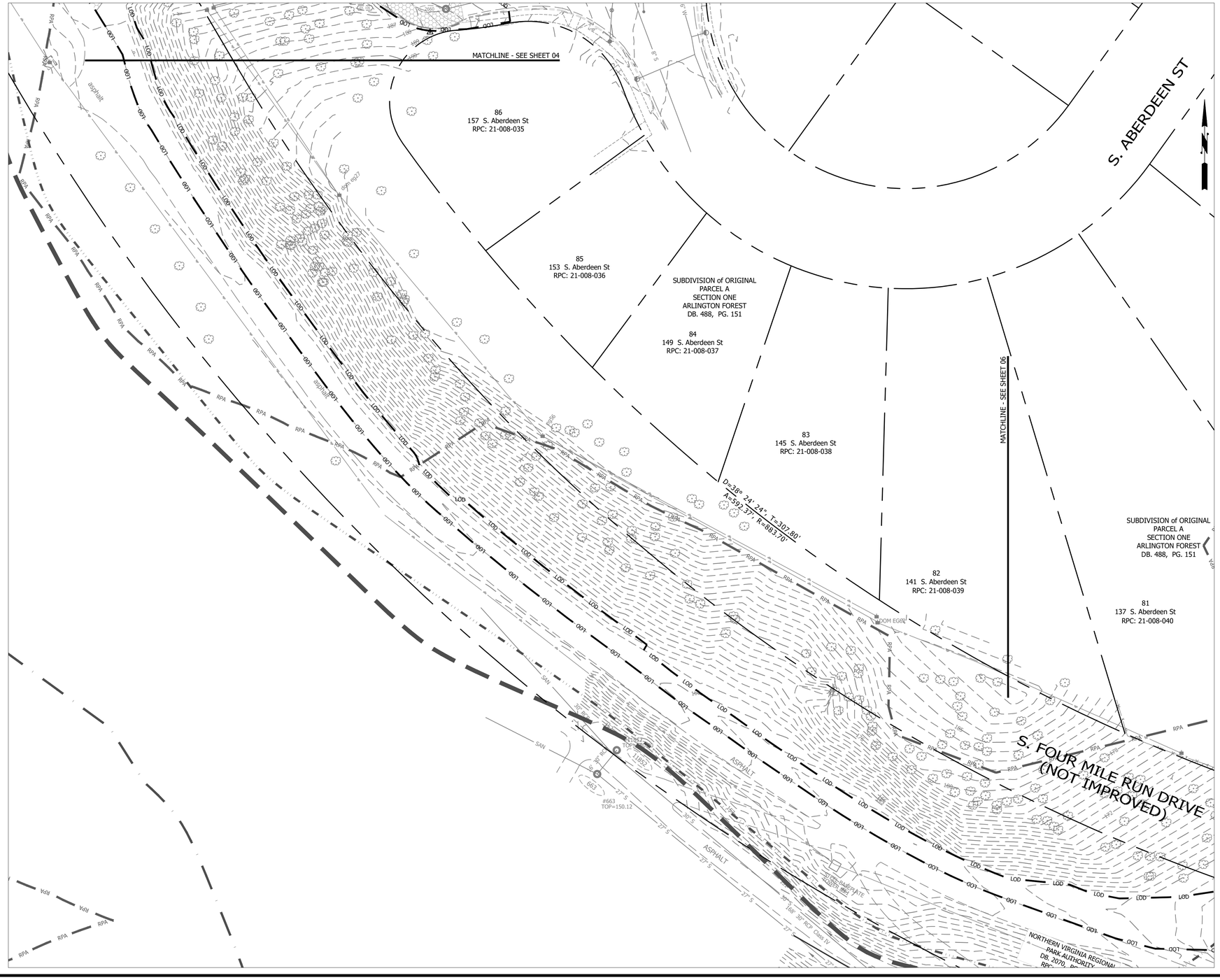
SCALE:

0 10 20
GRAPHIC SCALE

04

FILENAME: S44D-214-EXISTING CONDITIONS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021



STORM DRAIN INVERTS

#15988
TOP OF WALL = 146.42'
30" CINV. IN = 141.55' (25610)

#25609
STONE 3'x2' STONE HEADWALL BOX CULVERT
INV. IN = 142.45' (25610)

#25610
TOP OF WALL = 146.58'
30" CINV. OUT = 141.87" (15988)
* 3'X2' STONE BOX CULVERT
STONE ENDWALL
INV. OUT = 141.47' (25609)

#30126
TOP 36" CMP = 155.39'
(INV. BURIED)

EX #100
TOP 36" CMP = 152.35'
(INVERT BURIED)

#EX. 101
33" CMP INV. IN = 164.99 (EX.102)

#EX. 102
33" CMP INV. OUT = 166.41

#EX. 103
12" PVC INV. OUT = 184.86

#EX. 104
12" PVC INV. OUT = 186.46 (EX.103)

#EX. 105
12" PVC INV. OUT = 186.51 (EX.106)

#EX. 106
12" PVC INV. OUT = 184.84

SANITARY SEWER

#661
TOP = 140.77'
C/L INV. = 127.03'

#662
TOP = 146.77
C/L INV. = 133.01

#663
TOP = 150.12
COULD NOT MEASURE

#11474
TOP = 142.00'
C/L INV. = 121.01'

#11846
TOP = 154.70'
C/L INV. = 132.83'

#11847
TOP = 152.22'
C/L INV. = 134.40'

#11848
TOP = 148.43'
C/L INV. = 134.98' (PLAN *)

#11849
TOP = 152.70'
C/L INV. = 136.56'

#11850
TOP = 147.00'
C/L INV. = 136.91'

#11851
TOP = 149.42'
C/L INV. = 137.70'

#11852
TOP = 150.30'
C/L INV. = 138.30' (PLAN *)

* CALCULATED FROM THE ASBUILT PLAN SET FOR CONTRACT 72-8-S ~BEING THE 'FOUR MILE RUN RELIEF SEWER'.

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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
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05

FILENAME: S44D-214-EXISTING CONDITIONS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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MATCHLINE - SEE SHEET 05

GENERAL SURVEY NOTES:

1. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM AN ACTUAL GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 05/2016 TO 06/2016, UPDATED 10/2018, 02/2019, 08/2019, AND 03/2021 ; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
3. VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
4. CONTOUR INTERVAL: 1'
5. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

EXISTING POND LEGEND

- EXISTING 100-YEAR FLOODPLAIN
- EXISTING 500-YEAR FLOODPLAIN
- WET — EXISTING WETLAND BOUNDARY

DEMOLITION LEGEND

- UTILITY TO BE REMOVED

32
129 S. Aberdeen St
RPC: 21-008-042

80
133 S. Aberdeen St
RPC: 21-008-041

81
137 S. Aberdeen St
RPC: 21-008-040

SUBDIVISION of ORIGINAL PARCEL A
SECTION ONE
ARLINGTON FOREST
DB. 488, PG. 151

4
518 S. Abingdon St
RPC: 23-006-079

O'HARA'S SIXTH ADDITION TO NORTH BARCROFT
DB. 1155, PG. 544

S. ABINGDON ST

5
520 S. Abingdon St
RPC: 23-006-078

6
519 S. Abingdon St
RPC: 23-006-076

7
515 S. Abingdon St
RPC: 23-006-075

8
4768 6th Street S.
RPC: 23-006-074

9
4764 6th Street S.
RPC: 23-006-073

18
4760 6th Stre
RPC: 23-006-

191.68'
N20° 56' 56"W

128.00'
N39° 29' 44"W

EX. RPA

157.20'
S82° 50' 51"W

S63° 43' 54"E
146.14'

S. FOUR MILE RUN DRIVE
(NOT IMPROVED)

36" STORM PIPE AND APPURTENANCES TO BE REMOVED

3.16'
N73° 52' 09"W

CHAIN LINK FENCE

EX. WETLANDS

TRAV 9 = #11849

NORTHERN VIRGINIA REGIONAL PARK AUTHORITY
2070, PG. 1145
RPC: 21-010-020

STEEL RAILING TO BE REMOVED

W&OD TRAIL

TRV#10

TRV 8 = 11850

EX. 3'X2' STONE BOX CULVERT

PARK BENCH SHADE

STONE RET. WALL

STEEL RAILING

ASPHALT

WOODEN DECK

FOUR MILE RUN TRAIL

FOUR MILE RUN

COUNTY BOARD OF ARLINGTON COUNTY, VA
GLENCARLYN PARK
RPC: 21-010-001

EX. 100-YR FLOODPLAIN WITHIN FOUR MILE RUN STREAM
(BASED ON FEMA INFORMATION)

EX. 100-YR FLOODPLAIN WITHIN POND
(BASED ON ELEVATION 152.0 FROM THE ENGINEERING AND ENVIRONMENTAL ASSESSMENT DATED MARCH 1995.)

PARCEL 5
COUNTY BOARD OF ARLINGTON COUNTY, VA
D.B. 1629, PG. 406

RPC: 21-010-001

EX. 500-YR FLOODPLAIN
(BASED ON FEMA INFORMATION)

184.02'
N75° 08' 29"W

238.78'
S20° 47' 06"W

PARCEL 4
COUNTY BOARD OF ARLINGTON COUNTY, VA
D.B. 1593, PG. 465

A=295.60', R=1248.40'
D=13° 34' 00", T=148.49'

RPC: 21-010-020

EXISTING MBTA SHELTERS

TRV#100

STEEL BASEPLATE (MBTA)

PEPCO

EX. 100-YR FLOODPLAIN WITHIN FOUR MILE RUN STREAM
(BASED ON FEMA INFORMATION)

ARLINGTON
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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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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
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Adam E. Fuller CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis W. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D

S. PARK DR & S. COLUMBUS ST

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
GRAPHIC SCALE

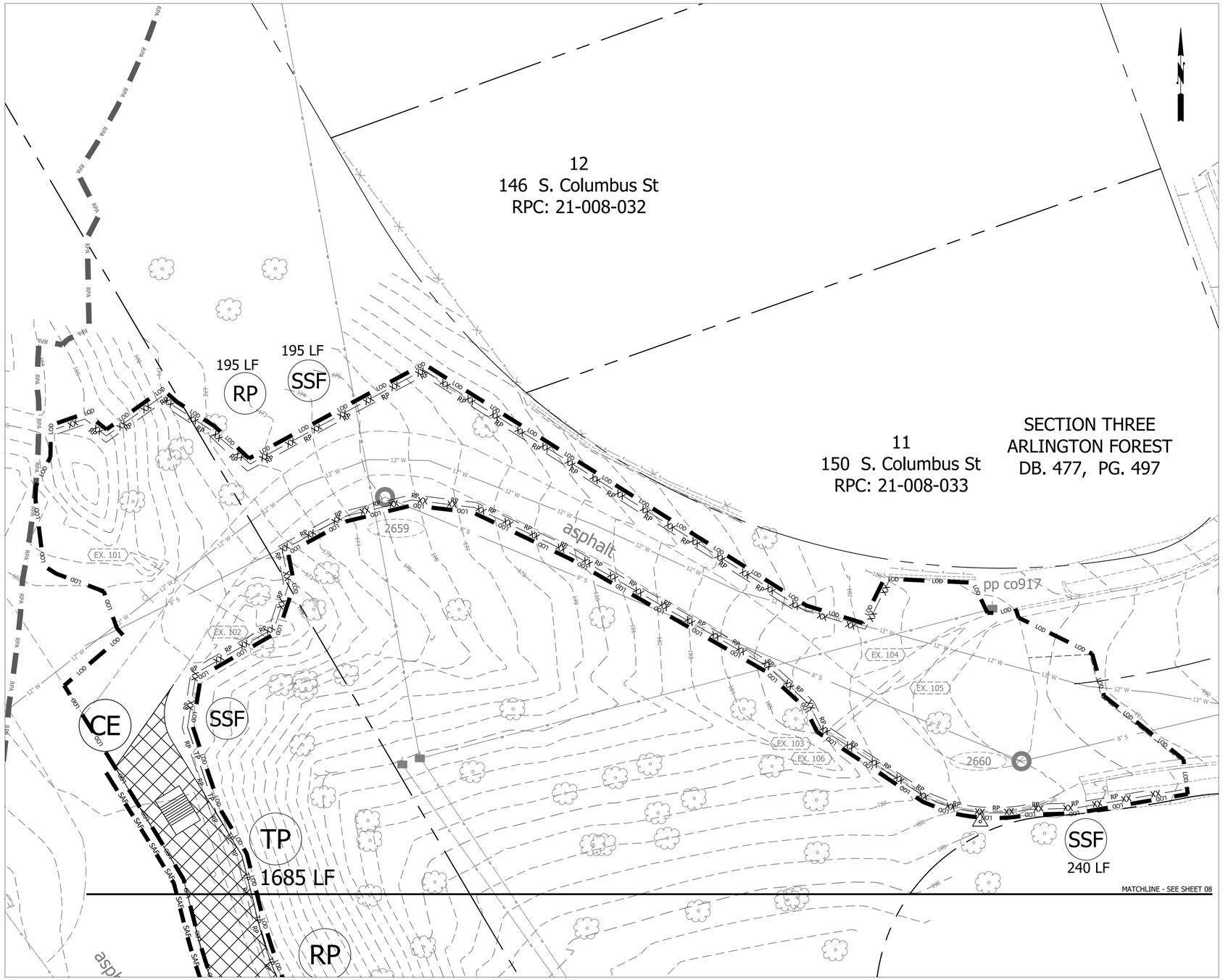
06

FILENAME: S44D-214-EXISTING CONDITIONS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JMILLER

REVISED ON 11/18/2021

EROSION & SEDIMENT CONTROL NOTES:

A. ROOT PRUNING LOCATIONS ALSO SHOWN ON SHEETS 35-36 FOR REFERENCE. USE EROSION CONTROL PLAN FOR LOCATION OF TREE PROTECTION AND (SUPER) SILT FENCE.



EROSION AND SEDIMENT CONTROL LEGEND

3.02	TEMPORARY CONSTRUCTION ENTRANCE	CE	
3.05	TEMPORARY SUPER SILT FENCE	SSF	XX
3.09	TEMPORARY DIVERSION DIKE	DD	
	CONCRETE WASHOUT AREA	CWA	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP
	TEMPORARY DAM	TD	
3.01	SAFETY FENCE	SAF	SAF
3.03	CONSTRUCTION ROAD STABILIZATION	CRS	
3.36	EROSION CONTROL BLANKET	B\M	
3.18	OUTLET PROTECTION	OP	
3.24	TEMPORARY CULVERT CROSSING	TC	
3.07	INLET PROTECTION	IP	
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW
	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ

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TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION & SEDIMENT CONTROL PLAN - PHASE I

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 10 20
GRAPHIC SCALE

07

FILENAME: S44D-224-E AND S PLAN-PHASE I.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

EROSION & SEDIMENT CONTROL NOTES:

A. ROOT PRUNING LOCATIONS ALSO SHOWN ON SHEETS 35-36 FOR REFERENCE. USE EROSION CONTROL PLAN FOR LOCATION OF TREE PROTECTION AND (SUPER) SILT FENCE.

SHEET NOTES:

1. FENCE LOCATION SHOWN ALONG W&OD TRAIL IS FOR VISUAL PURPOSES ONLY. FENCE SHALL BE LOCATED ALONG EDGE OF TRAIL AND SHALL NOT ENCROACH ON TRIAL.
2. CONSTRUCTION PATH TO BE CONSTRUCTED PER DETAIL D03C ON SHEET 52. DUST CONTROL (VESCH 3.39) SHALL BE IMPLEMENTED AS NECESSARY.
3. SAFETY FENCE TO BE POLYETHYLENE AND "INTERNATIONAL ORANGE" PER VESCH STANDARD 3.01. FENCE POSTS TO BE ANCHORED WITH CONCRETE BLOCKS ON THE GROUND SURFACE. CONTRACTOR SHALL NOT ANCHOR POSTS INTO GROUND. CONTRACTOR SHALL AVOID DAMAGE OR IMPEDIMENT TO TRAIL.

EROSION AND SEDIMENT CONTROL LEGEND

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	CONCRETE WASHOUT AREA	CWA	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP
	TEMPORARY DAM	TD	
3.01	SAFETY FENCE	SAF	SAF
3.03	CONSTRUCTION ROAD STABILIZATION	CRS	
3.36	EROSION CONTROL BLANKET	B\M	
3.18	OUTLET PROTECTION	OP	
3.24	TEMPORARY CULVERT CROSSING	TC	
3.07	INLET PROTECTION	IP	
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW
	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ

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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION & SEDIMENT CONTROL PLAN - PHASE I

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
GRAPHIC SCALE

08

FILENAME: S44D-224-E AND S PLAN-PHASE I.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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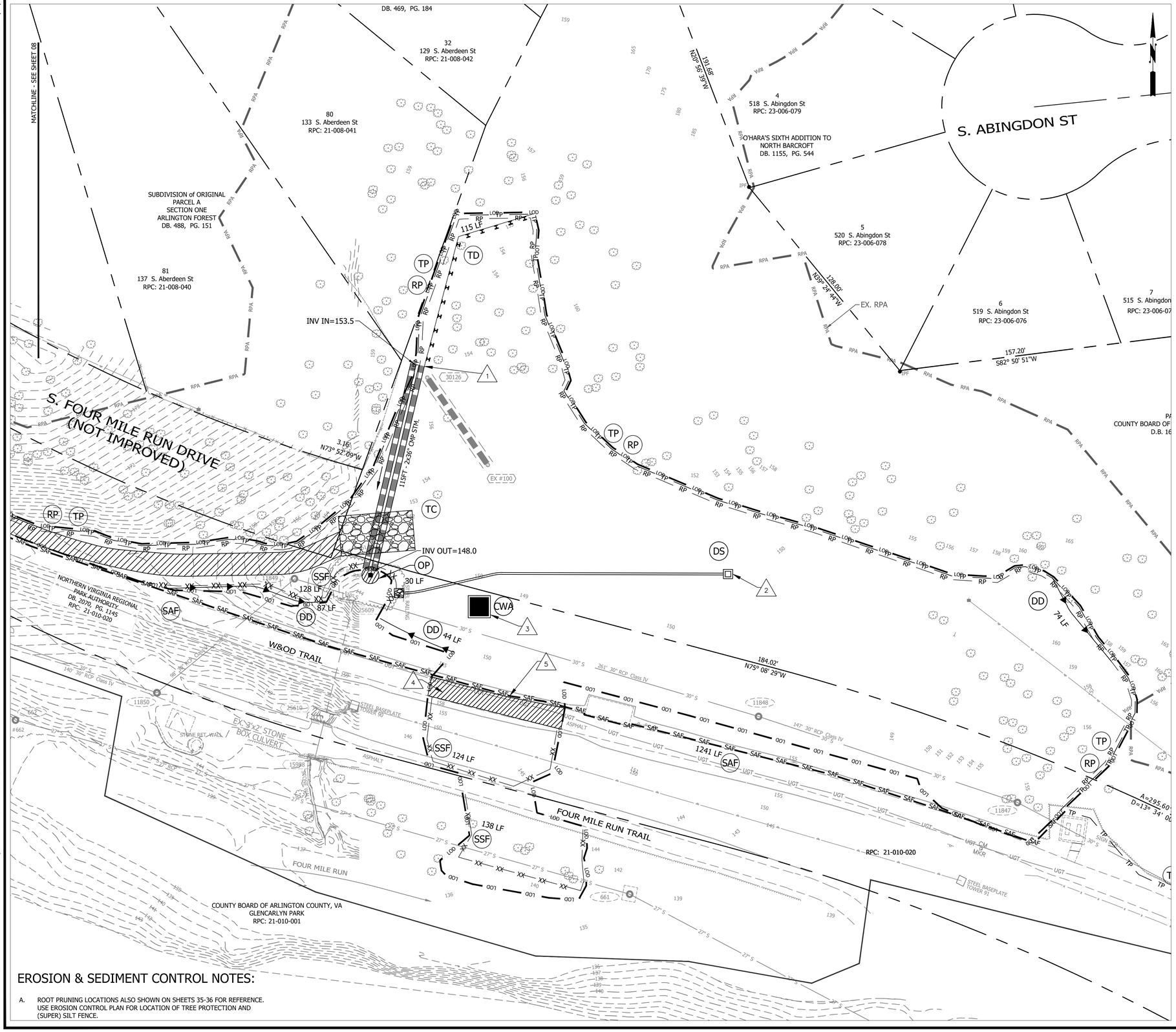

SHEET NOTES:

1. CONTRACTOR TO ENSURE FLOWS FROM TEMPORARY DAM TO BE ROUTED THROUGH BOTH 36" PIPES
2. CONTRACTOR SHALL RELOCATE DEWATERING STRUCTURE AS NEEDED WHILE SITE GRADING IS BEING PERFORMED
3. CONCRETE WASHOUT SHALL BE RELOCATED AS NEEDED OR DIRECTED BY INSPECTOR
4. PEDESTRIAN BRIDGE TO BE INSTALLED TO ALLOW FOR PEDESTRIAN TRAFFIC ON THE W&OD TRAIL DURING OPEN TRENCH OPERATIONS OF THE EMBANKMENT. CONTRACTOR SHALL PROVIDE SHOP DRAWING TO ARLINGTON COUNTY AS A FORMAL SUBMITTAL PRIOR TO INSTALLATION.
5. CONTRACTOR TO RELOCATE SAFETY FENCE AS NEEDED DURING OPEN TRENCH OPERATIONS

EROSION AND SEDIMENT CONTROL LEGEND

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	LIMITS OF WORK		LOW
	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ

EROSION & SEDIMENT CONTROL NOTES:

A. ROOT PRUNING LOCATIONS ALSO SHOWN ON SHEETS 35-36 FOR REFERENCE. USE EROSION CONTROL PLAN FOR LOCATION OF TREE PROTECTION AND (SUPER) SILT FENCE.

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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION & SEDIMENT CONTROL PLAN - PHASE I

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09

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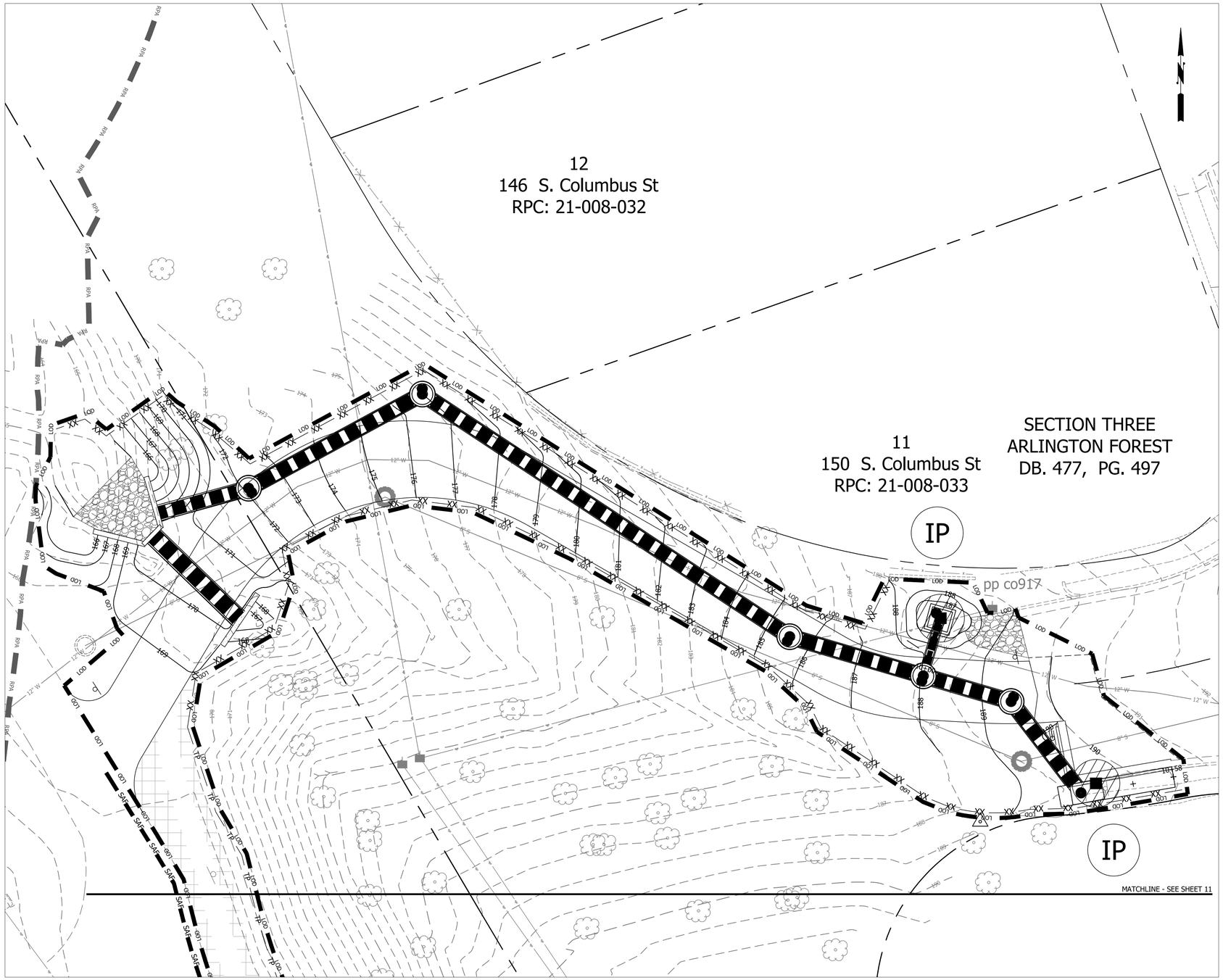

EROSION AND SEDIMENT CONTROL LEGEND

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	ROOT PRUNING		RP
	CRITICAL ROOT ZONE		CRZ
	PERMANENT SEEDING	PS	

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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION & SEDIMENT CONTROL PLAN - PHASE II

DESIGNED: JM
DRAWN: JM
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PLOTTED: APRIL 6 2023

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FILENAME: S44D-225-E AND S PLAN-PHASE II.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: : JJMILLER

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EROSION AND SEDIMENT CONTROL LEGEND

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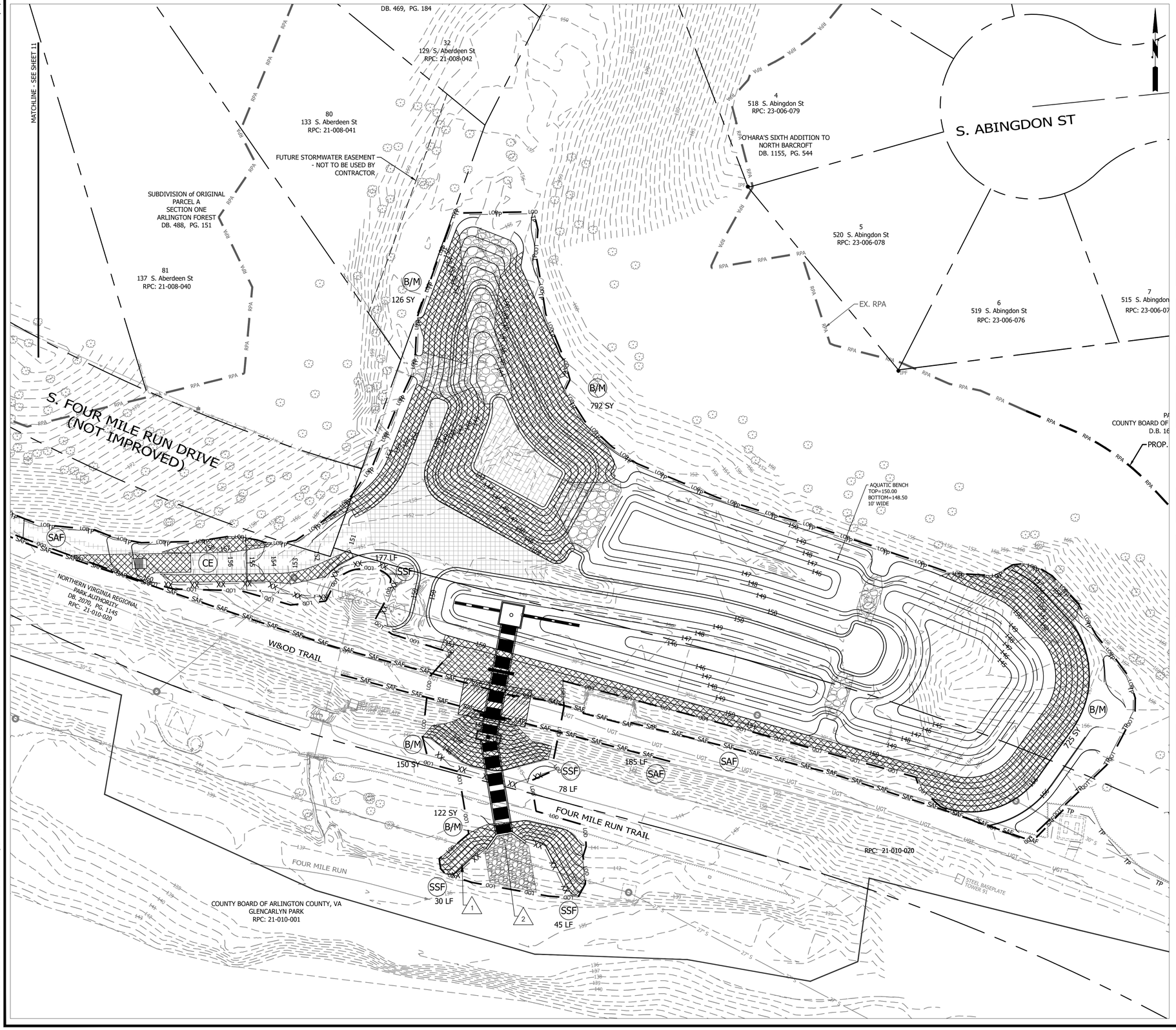

SHEET NOTES:

1. CONTRACTOR TO USE SANDBAGS TO DIVERT STREAM AROUND OUTFALL WORK AS NECESSARY
2. CONTRACTOR TO ONLY DISTURB AMOUNT OF AREA THAT CAN BE STABILIZED BY THE END OF THE DAY FOR OUTFALL WORK

EROSION AND SEDIMENT CONTROL LEGEND

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3.05	TEMPORARY SUPER SILT FENCE	SSF	XX
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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION & SEDIMENT CONTROL PLAN - PHASE II

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
GRAPHIC SCALE

12

FILENAME: S44D-22-E AND S PLAN-PHASE II.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF RESTORING SPARROW POND TO ITS ORIGINAL DESIGN THAT WILL PRODUCE CONSTRUCTED WETLANDS AND ADDING A SEDIMENT FOREBAY.THIS PROJECT WILL DISTURB APPROXIMATELY 1.95 ac AND RESIDES WITHIN THE ARLINGTON FOREST BRANCH WATERSHED. THE PROJECT IS LOCATED ON BOTH ARLINGTON COUNTY PROPERTY AND NOVA PARKS PROPERTY. THIS PROJECT SERVES TO REMOVE THE SIGNIFICANT AMOUNT OF SEDIMENT THAT HAS ACCUMULATED OVER THE YEARS AND TO RESTORE THE POND TO BE A WETLAND HABITAT FOR PLANT AND WILDLIFE. THE ADDITION OF THE FOREBAY TO THE POND SERVES TO PREVENT FUTURE SEDIMENTATION OF THE POND. THE PROJECT WILL ALSO SAFELY CONVEY RUNOFF TO THE FOUR MILE RUN STREAM AND PREVENT OVERTOPPING OF THE W&OD EMBANKMENT DURING THE 100-YEAR STORM EVENT.

EXISTING SITE CONDITIONS:

THE SITE IS LOCATED SOUTHEAST OF THE INTERSECTION OF S. PARK DR AND S. COLUMBUS ST THE POND IS CURRENTLY HEAVILY VEGETATED AND HAS SMALL PERMANENT POOLS.

ADJACENT PROPERTIES:

CONTRACTOR SHALL NOT DISTURB ON PRIVATE PROPERTY ADJACENT TO THE SITE. WORK SHALL ONLY OCCUR ON ARLINGTON COUNTY AND NOVA PARKS PROPERTY WITHIN THE LIMITS OF WORK.

OFF-SITE AREAS:

CRITICAL AREAS:

THERE ARE STEEP SLOPES LOCATED WITHIN THE LIMITS OF DISTURBANCE ON ALL SIDES OF THE PROJECT.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE, INLET/OUTLET PROTECTION, CULVERT INLET PROTECTION, TEMPORARY CULVERT CROSSING, DIVERSION DIKES, EROSION CONTROL BLANKETS, DEWATERING STRUCTURE, TREE PROTECTION, CONSTRUCTION ROAD STABILIZATION, AND DUST CONTROL. CONTRACTOR IS RESPONSIBLE FOR PERFORMING BEST MANAGEMENT PRACTICES AND GOOD HOUSE KEEPING PRACTICES FOR THE SITE THROUGHOUT THE DURATION OF THE PROJECT.

PERMANENT STABILIZATION:

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

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

TOTAL LAND DISTURBANCE.....= 85,130 SF (1.95ACRES)
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 3,920 SF (0.090 ACRES)
POST-IMPROVEMENT IMPERVIOUS AREA....= 4,490 SF (0.103 ACRES)
INCREASED IMPERVIOUS AREA.....= 570 SF (0.013 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND WITHIN THE ARLINGTON FOREST BRANCH WATERSHED (SEE SOILS MAP ON SHEET 09 FOR LOCATION)

SOIL#:	SOIL NAME:	HYDROLOGIC GROUP:	ERODABILITY GROUP:
4B	URBAN LAND-SASSAFRAS-NEABSCO	-	N/A
6D	GLENELG-MANOR	B	6
10C	URBAN LAND-GLENELG	-	N/A
12	URBAN LAND-UDORTHENTS	-	N/A
W	WATER	-	N/A

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THE PROJECT IS LOCATED WITHIN THE WITHIN THE 500-YEAR FLOODPLAIN FOR THE FOUR MILE RUN STREAM AND WILL DISTURB WITHIN THE 100-YEAR FLOODPLAIN FOR THE FOUR MILE RUN STREAM. THE SITE IS LOCATED WITHIN AN EXISTING RPA AND A NEW RPA IS BEING PROPOSED WITH THIS PROJECT THAT IS BASED ON THE DELINEATION OF THE NEW WETLANDS.

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 & CONSTRUCTION ACCESS PATH IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE. MAXIMUM SPEED FOR VEHICLES ON THE PATH OR TRAIL SHALL NOT EXCEED 15 MPH.
   c. INSTALL PERIMETER SAFETY FENCE (SAF) AS SHOWN ON E&S PHASE I PLAN.
   d. INSTALL TEMPORARY DAM AND TEMPORARY CULVERT CROSSING.
   e. 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.
   f. SEED AND MULCH ALL EARTHEN CONTROLS.
   g. 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.
   h. 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. REMOVE TEMPORARY DAM AND TEMPORARY CULVERT CROSSING AS NECESSARY AND REROUTE FLOWS BACK INTO POND.
   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/MATTING AND MULCHING - VESCH 3.36 AND 3.35
   c.a. EROSION CONTROL MATTING 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 OR AS DIRECTED BY THE PROJECT OFFICER.
   c.b. EROSION CONTROL MATTING TO BE USED AS CALLED OUT IN THE PLAN AND SHALL BE VDOT EC-2 TYPE 2 UNLESS OTHERWISE DIRECTED BY THE PROJECT OFFICER.
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.
   e.b. NATIVE SEED MIX MUST BE USED FOR PERMANENT STABILIZATION WITHIN THE RPA. SEE SHEET 46 FOR SEED MIX.
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:

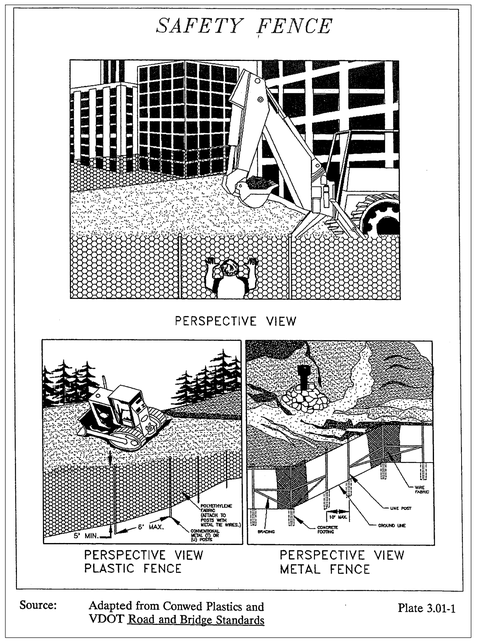
PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO 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.

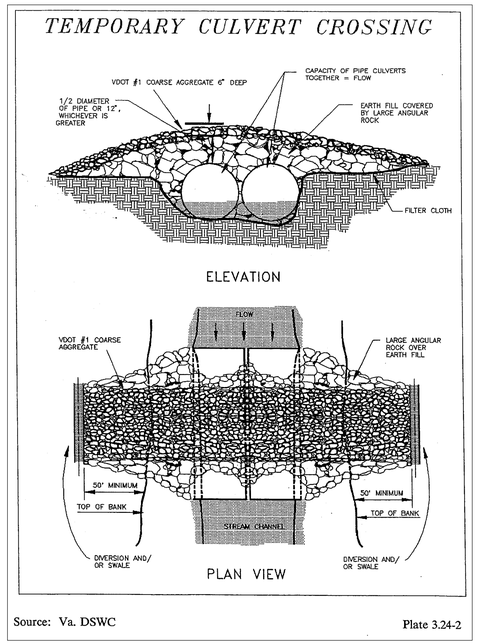
IN ADDITION TO THESE P

REVISED ON 11/18/2021



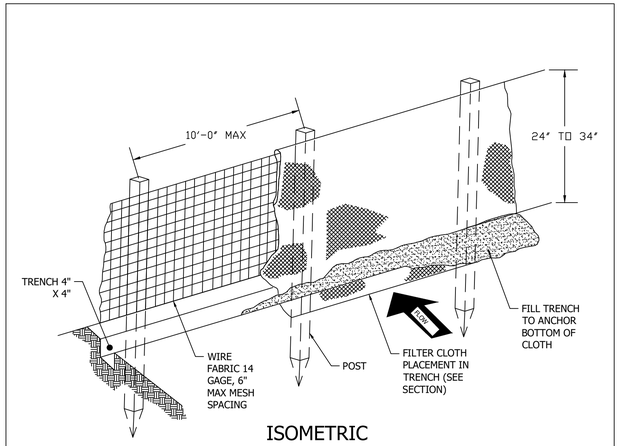
Source: Adapted from Conwed Plastics and VDOT Road and Bridge Standards

Plate 3.01-1



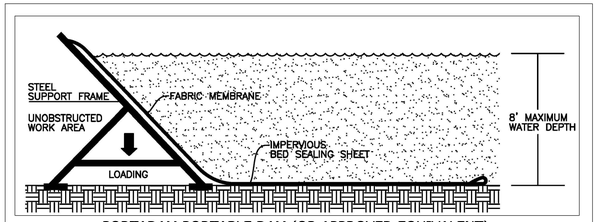
Source: Va. DSWC

Plate 3.24-2



MODIFIED-VESCH 3.05

SILT FENCE NOT TO SCALE



PORTADAM PORTABLE DAM (OR APPROVED EQUIVALENT)

N.T.S.

NOTES:
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A SOLID FOOTING FOR THE PORTADAM (OR APPROVED EQUIVALENT) IF REQUIRED, AT NO ADDITIONAL COST TO THE COUNTY
2. IMPERVIOUS BED SEALING SHEET TO BE EXTENDED AT EITHER END IN ORDER TO PROVIDE A WATERTIGHT SEAL.

TEMPORARY DAM

NTS

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES (cont.)

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fuller 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

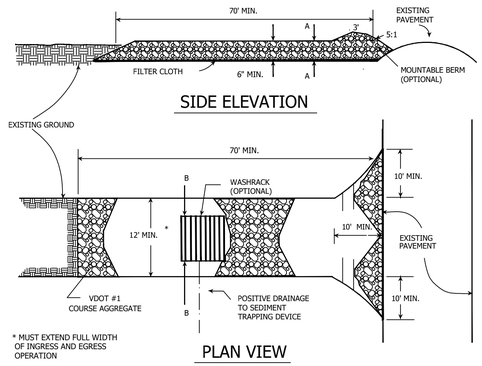
SCALE:

AS SHOWN

FILENAME: S44D-220-E AND S NOTES AND DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

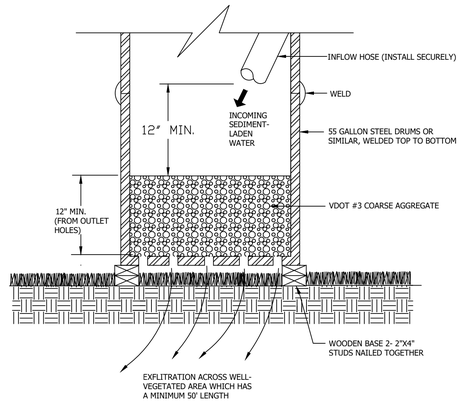
REVISED ON 11/18/2021

STONE CONSTRUCTION ENTRANCE



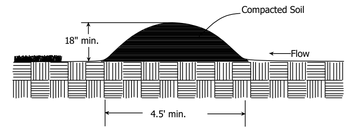
SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC — Plate 3.02-1

FILTER BOX



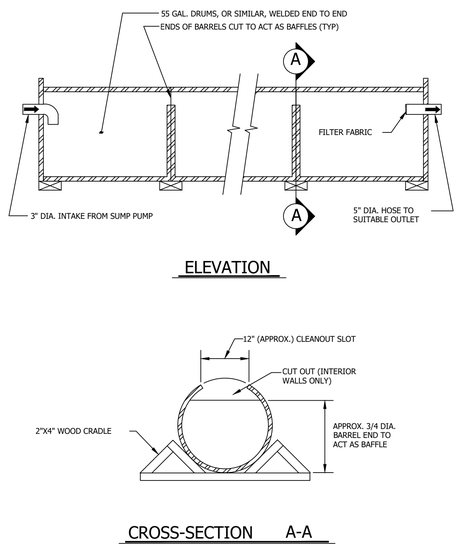
SOURCE: VA. DSWC — PLATE: 3.26-2

TEMPORARY DIVERSION DIKE



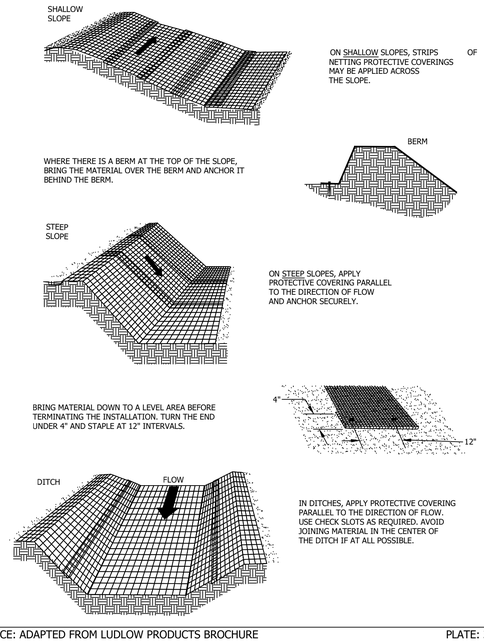
SOURCE: VA. DSWC — PLATE 3.09-1

PORTABLE SEDIMENT TANK



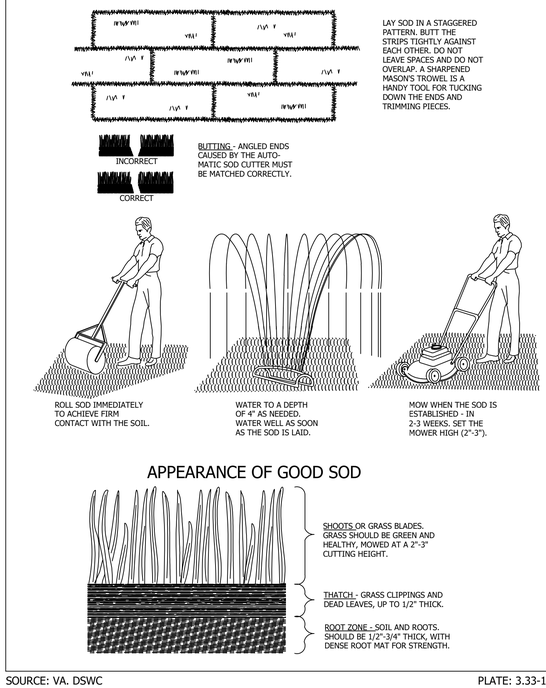
SOURCE: USDA - SCS — PLATE: 3.26-1

TYPICAL ORIENTATION OF TREATMENT - 1 (SOIL STABILIZATION BLANKET)



SOURCE: ADAPTED FROM LUDLOW PRODUCTS BROCHURE — PLATE: 3.36-1

SODDING



SOURCE: VA. DSWC — PLATE: 3.33-1

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

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S. PARK DR & S. COLUMBUS ST

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DESIGNED: JM
DRAWN: JM
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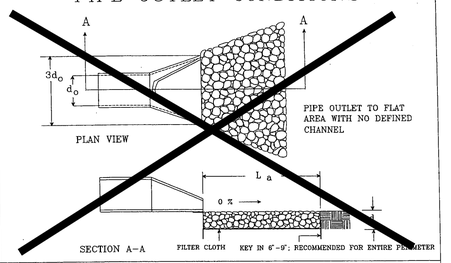
SCALE:

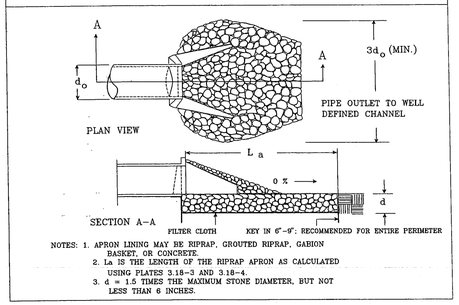
AS SHOWN

FILENAME: S44D-220-E AND S NOTES AND DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

PIPE OUTLET CONDITIONS



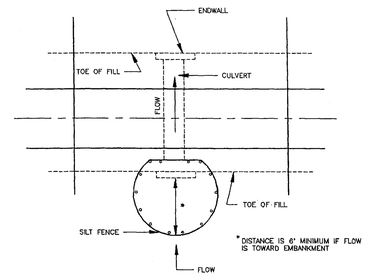


NOTES: 1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18–3 AND 3.18–4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

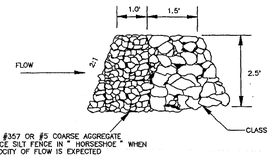
Source: Va. DSWC

Plate 3.18-1

SILT FENCE CULVERT INLET PROTECTION



OPTIONAL STONE COMBINATION **

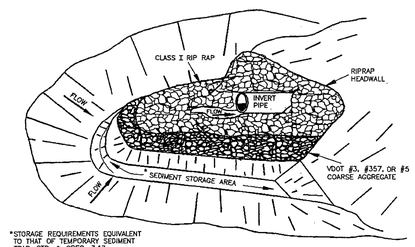


** VDOT #3, #357 OR #5 COARSE AGGREGATE TO REPLACE SILT FENCE IN " HORSESHOE " WHEN HIGH VELOCITY OF FLOW IS EXPECTED

Source: Adapted from VDOT Standard Sheets and Va. DSWC

Plate 3.08-1

CULVERT INLET SEDIMENT TRAP

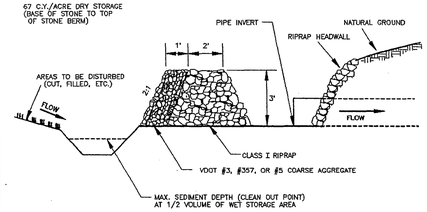


*STORAGE REQUIREMENTS EQUIVALENT TO THAT OF TEMPORARY SEDIMENT TRAP, STD. & SPEC. 3.13

67 C.Y./ACRE WET STORAGE (BELOW BASE OF STONE)

67 C.Y./ACRE DRY STORAGE (BASE OF STONE TO TOP OF STONE BERM)

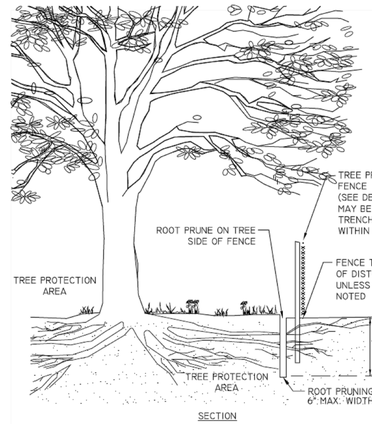
PERSPECTIVE VIEW



ELEVATION

Source: North Carolina Sediment Control Commission

Plate 3.08-2



SECTION

NOTES

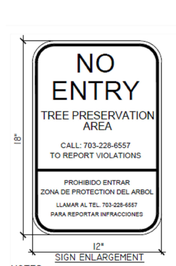
1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.
2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.
4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.
5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.
6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.

ROOT PRUNING

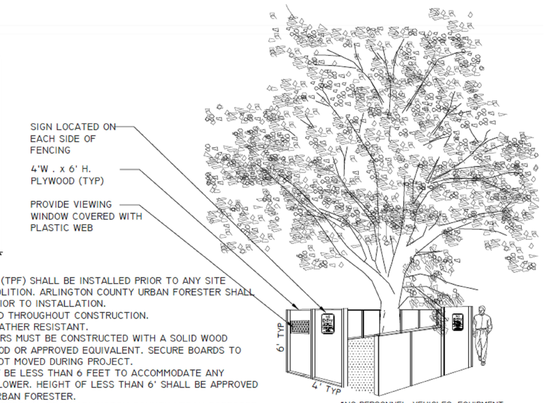
311300.5 (2016) (02231.5)

N.T.S.

ARLINGTON VIRGINIA DPR



SIGN ENLARGEMENT



NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION.
2. TPF SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. SIGN MATERIAL TO BE WEATHER RESISTANT.
4. TREE PROTECTION BARRIERS MUST BE CONSTRUCTED WITH A SOLID WOOD FRAME CLAD WITH PLYWOOD OR APPROVED EQUIVALENT. SECURE BOARDS TO ENSURE PROTECTION IS NOT MOVED DURING PROJECT.
5. HEIGHT OF BOARDING MAY BE LESS THAN 6 FEET TO ACCOMMODATE ANY BRANCHES THAT MAY BE LOWER. HEIGHT OF LESS THAN 6' SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
6. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
7. PROVIDE 12"(WIDTH) X4'(HEIGHT) CUT-OUTS ALONG PANELS FACING PAVED SURFACES SUCH AS SIDEWALKS, TWO CUT-OUTS PER FENCE PANEL.

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

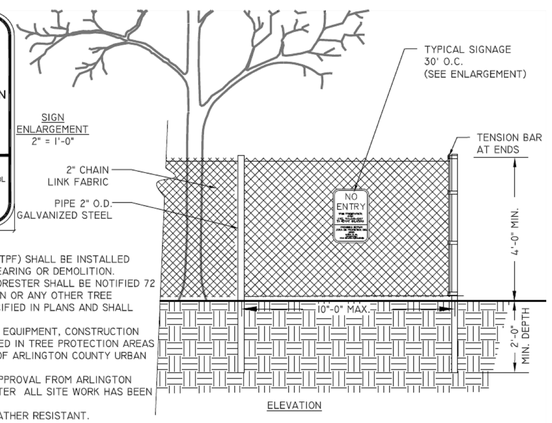
TREE PROTECTION BARRIERS FOR RESTRICTED SPACE AND TREE PITS

311300.14NS (2019)

N.T.S.

ARLINGTON VIRGINIA DPR

SIGN ENLARGEMENT 2" = 1'-0"



ELEVATION

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

4' CHAIN LINK TREE PROTECTION FENCE (RESIDENTIAL)

311300.2 (2016) (02231.2)

1/2" = 1'-0"

ARLINGTON VIRGINIA DPR

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EROSION AND SEDIMENT CONTROL DETAILS

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FILENAME: S44D-220-E AND S NOTES AND DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

STORMWATER POLLUTION PREVENTION PLAN

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

For Construction Activities At:

Sparrow Pond Restoration Project
S. Abington St & 6th St S.
Arlington, VA 22204

Latitude: 38.8624 N (decimal degrees)

Longitude: 77.1154 W (decimal degrees)

Construction Activity Operator:

TO BE DETERMINED

SWPPP Preparation Date:

June 2020

CERTIFICATION

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

Operator Name: _____

Title: _____

Signature: _____

Date: _____

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

	(Std. & Spec 3.08 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Dewatering (Std. & Spec 3.26 and/or Arlington County Std. & Spec from approved ESC plan)			
☐	Turbidity Curtain (Std. & Spec 3.27 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Tree Protection (Arlington County Std. & Spec from approved ESC plan)			
☐	Stream Crossing / Cofferdams (Std. & Spec 3.25 or on plan)			
☐	Pump Around System (detail on approved plan)			
☒	Rip Rap (Std. & Spec. 3-19)			
☒	Temporary Culvert Crossing			

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

☐ Perimeter controls (silt fence, hay bales, stone berms) used to prevent sediment from leaving the site shall be checked for undermining, holes, or deterioration and repaired/replaced if needed.

☐ Sediment that has accumulated against perimeter controls shall be removed if the depth exceeds more than 1/2 of the silt fence height.

☐ Exposed soil or slopes shall be covered with straw, tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.

☐ Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side). Stockpiled materials should not obstruct flow along the curb line.

☐ Inlet protection controls shall be inspected to ensure they are installed per approved ESC plan, are functioning properly, and maintained as needed.

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fellows 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

STORMWATER POLLUTION PREVENTION PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

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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

Pollution Prevention Practices:

(1) **Clearing, grading, excavating, and un-stabilized areas** – Maintain as much existing vegetation as practicable. Utilize erosion and sediment controls to prevent sediment from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Plastic sheeting, tarps, 2" deep straw cover, and/or erosion matting can be used for temporary slope stabilization.

(2) **Paving and saw cutting operations** – Cover storm drain inlets during paving and saw cutting operations. Use pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids. Slurry from saw cutting operations may not enter a storm drain; it must be captured and disposed of properly.

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

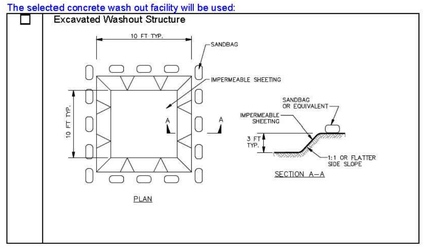
☐	Method of covering / protecting storm drains:
☐	Method for containment, collection, disposal of saw cut slurry:

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

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

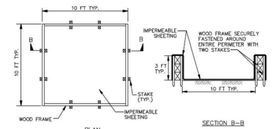
The selected concrete wash out facility will be used:

☐ Excavated Washout Structure

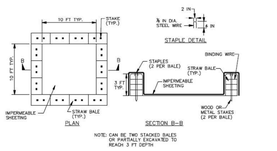


STORMWATER POLLUTION PREVENTION PLAN

☐ Washout Structure with Wood Planks



☐ Washout Structure with Straw Bales



☐ Prefabricated Containment System
Type: _____

☐ Other:

(4) **Washing / cleaning** – Prevent the discharge of wash water to the storm drain system or surface waters.

- ☐ Wash water or liquid wastes may not enter a storm drain or surface waters.
- ☐ Provide a suitable containment system for cleaning equipment such as a drum, prefabricated system, lined container, or portable wash pad.
- ☐ The wash / containment area must be sized appropriately for the needs of the project.
- ☐ Locate wash / containment areas away from storm drains.

(5) **Dewatering operations** – Construction site dewatering may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.

- ☐ Dewatering detail on approved ESC plan will be used.
- ☐ Dewatering option from Planning & Field Guide for Pollution Prevention (P2):
  - ☐ Filter Box
  - ☐ Straw Bale/Silt Fence Pit
  - ☐ Portable Sediment Tank
  - ☐ Filter Bag

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☐ Pump from Settling Pit
☐ Manufactured System: _____

☐ Other: _____

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

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

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

☐	Method used to ensure flow through:

☐ Provide secondary containment for paint, pesticides, cleaners, solvents, and/or other chemicals and keep these items secured and covered when not in use

☐ Regularly inspect containers.

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

☐ Regularly inspect vehicles and equipment for leaks. Clean up all spills and leaks upon discovery.

☐ Use containment measures when conducting fueling (e.g. place spill pad, board, plastic sheeting on ground)

☐ Regularly inspect fuel containers.

☐ Provide secondary containment and secure storage for fuel, oil, and/or lubricants

☐ Keep drip pans, sheeting, and/or absorbent pads under heavy equipment when not in use (i.e. overnight) to capture leaks.

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

☐ A sufficient number of waste containers must be kept on a site to handle the quantity of waste produced.

☐ Keep roll off containers covered and/or dumpster / trash lids closed.

☐ Check waste containers frequently for damage / leaks and clean using DRY methods when necessary. Never clean out a dumpster by power washing or hosing it out.

☐ Replace containers that are leaking, cracked, corroded, or otherwise deteriorating.

☐ Do not bury waste material. Dispose of excess dry concrete, grout and mortar in the trash.

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

☐ Locate portable lavatories away from storm drains and surface waters.

☐ Keep portable lavatories level and provide secondary containment (i.e. trays)

☐ Regularly inspect facilities for leaks

☐ Schedule routine maintenance

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

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

6.0 Stormwater Management Controls

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

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

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

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

☐	Sheet flow to Vegetated Filter (1 or 2)		(See Cover Page of this SWPPP)
☐	Grass Channel		
☐	Rainwater Harvesting		
☐	Permeable Pavement (1 or 2)		
☐	Infiltration (1 or 2)		
☐	Bio-retention (1 or 2)		
☒	Constructed Wetland		

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: _____

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

Company/Organization:
Name of Inspector:
Telephone Number:
Qualifications:

Inspection Schedule

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

☒ Once every 4 business days

Inspection Date: _____

Describe phase of construction: _____

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

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

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

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

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

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

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

Operator or Assigned Qualified Personnel Name: _____

Signature: _____

Date: _____

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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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PHONE: 703.228.3629
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COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
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PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum	05/27/22
QUALITY CONTROL ENGINEER	
Adam E. Fellows	6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR	
	6/6/22
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	6/7/22
TRANSPORTATION DIRECTOR	
Ty Asfaw	06/10/22
PROJECT MANAGER	

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

STORMWATER POLLUTION PREVENTION PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

REVISED ON 11/18/2021

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REVISED ON 11/18/2021

STORMWATER POLLUTION PREVENTION PLAN

9.0 Grading & Stabilization Activities Log

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

10.0 SWPPP Modification & Update Log

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

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

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

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

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

Enter the SWPPP preparation date.

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

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

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

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

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

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

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

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

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

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

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

June 30, 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:

Sparrow Pond Restoration
street address

lot, block, section subdivision

permit number

Dear Mrs. Li:

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

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

Sincerely,

_____
signed

_____
name printed

_____
professional registration (type and number)

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ARLINGTON, VA 22201
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FAX: 703.228.3606

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COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum	05/27/22
QUALITY CONTROL ENGINEER	
Adam E. Fuleau	6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR	
	6/6/22
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DESIGNED: JM
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CHECKED: AP

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N/A

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REVISED ON 11/18/2021

SHEET NOTES:

1. ADJUST SANITARY MANHOLE TO FINISHED GRADE. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE TO MANHOLE
2. PROPOSED VDOT EW-1. SEE DETAIL ON SHEET 53.
3. PROPOSED MODIFIED VDOT EW-2 BASED ON 48" PIPE. SEE DETAIL ON SHEET 53.
4. SIGN TO BE RELOCATED
5. ELECTRIC POLE TO BE REMOVED BY DOMINION ENERGY SEPARATE OF THESE PLANS PRIOR TO THE START OF CONSTRUCTION
6. CONTRACTOR SHALL INSTALL VDOT SAFETY SLAB (SL-1) IN MANHOLE. SEE DETAL SL-1 ON SHEET 54
7. PROVIDE KNOCK-OUT WALL ON EAST SIDE OF STRUCTURE FOR 30" PIPE WITH INV=182.10 @ 114° OF OUTGOING PIPE.
8. 12 LF OF R-2.0 CONCRETE CURB AND GUTTER
9. EDGE OF EXISTING TRAIL

LEGEND:

PROPOSED TRAIL FOOTPRINT WITH NEW SECTION (SEE DETAIL D22 ON SHEET 53).

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

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COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fuller CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SITE PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

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GRAPHIC SCALE

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SHEET NOTES:

14 PROPOSED 9' WIDE MAINTENANCE PATH. FOR SECTION SEE DETAIL D03A ON SHEET 52. SECTION EXTENDS FROM S. PARK DR TRAIL SPUR TO PROFILE OF MAINTENANCE ACCESS RAMP. TRANSITION BETWEEN 2 SECTIONS TO BE AS SHOWN AS PLANS.

GENERAL NOTES:

A. CONTRACTOR SHALL NOT TRANSPORT ANY VEHICLE OR EQUIPMENT LARGER THAN 35 FT IN HEIGHT ALONG THE W&OD TRAIL TO AVOID POWER LINES.

B. IF CRANE IS REQUIRED IT MUST MAINTAIN 20 FT OF HORIZONTAL CLEARANCE FROM POWER LINES. CONTACT GARY DORMAN (571-203-5085) FROM DOMINION PRIOR TO START OF WORK.

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S. PARK DR & S. COLUMBUS ST

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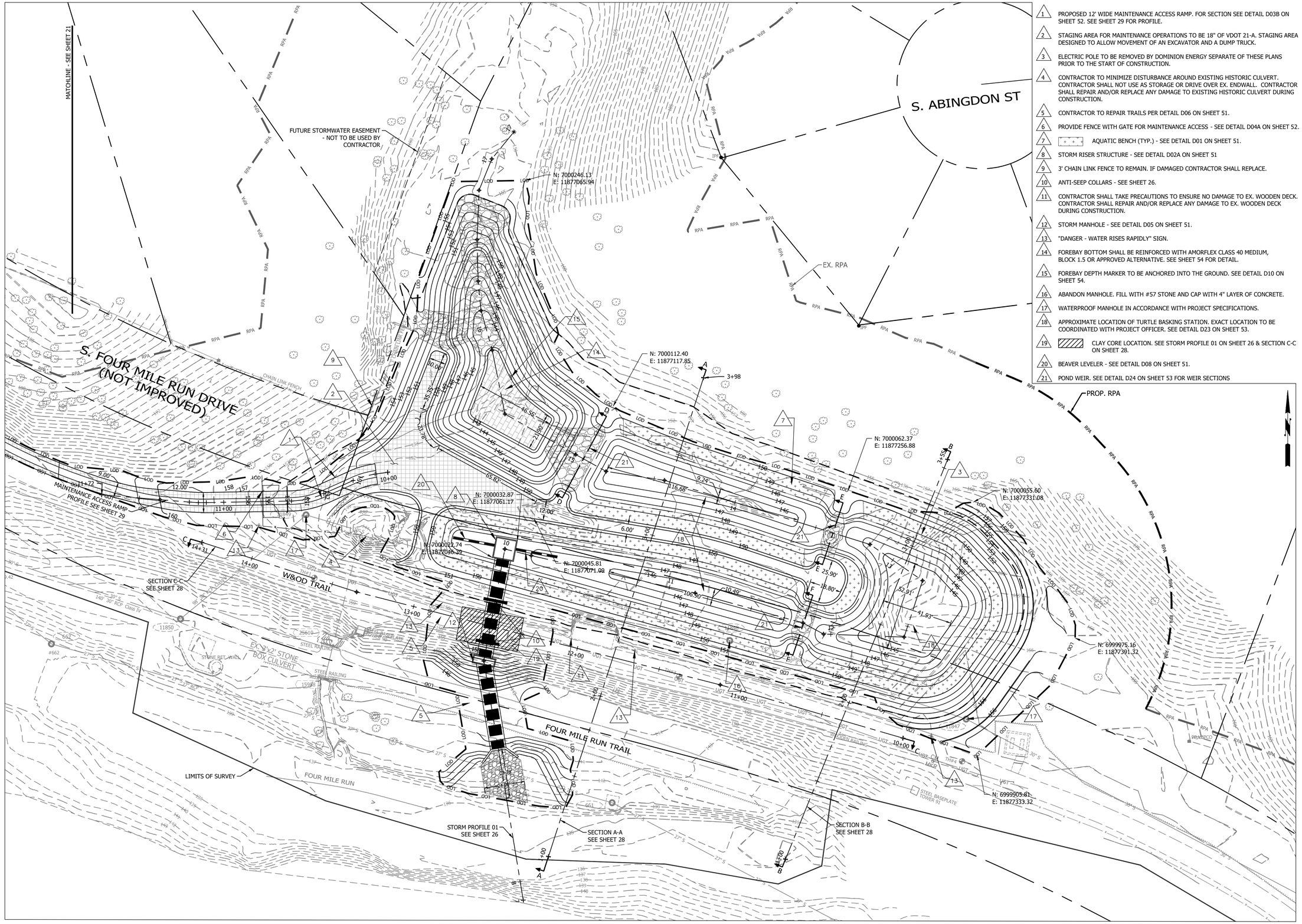

SHEET NOTES:

1. PROPOSED 12' WIDE MAINTENANCE ACCESS RAMP. FOR SECTION SEE DETAIL D03B ON SHEET 52. SEE SHEET 29 FOR PROFILE.
2. STAGING AREA FOR MAINTENANCE OPERATIONS TO BE 18" OF VDOT 21-A. STAGING AREA DESIGNED TO ALLOW MOVEMENT OF AN EXCAVATOR AND A DUMP TRUCK.
3. ELECTRIC POLE TO BE REMOVED BY DOMINION ENERGY SEPARATE OF THESE PLANS PRIOR TO THE START OF CONSTRUCTION.
4. CONTRACTOR TO MINIMIZE DISTURBANCE AROUND EXISTING HISTORIC CULVERT. CONTRACTOR SHALL NOT USE AS STORAGE OR DRIVE OVER EX. ENDWALL. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGE TO EXISTING HISTORIC CULVERT DURING CONSTRUCTION.
5. CONTRACTOR TO REPAIR TRAILS PER DETAIL D06 ON SHEET 51.
6. PROVIDE FENCE WITH GATE FOR MAINTENANCE ACCESS - SEE DETAIL D04A ON SHEET 52.
7. AQUATIC BENCH (TYP.) - SEE DETAIL D01 ON SHEET 51.
8. STORM RISER STRUCTURE - SEE DETAIL D02A ON SHEET 51
9. 3' CHAIN LINK FENCE TO REMAIN. IF DAMAGED CONTRACTOR SHALL REPLACE.
10. ANTI-SEEP COLLARS - SEE SHEET 26.
11. CONTRACTOR SHALL TAKE PRECAUTIONS TO ENSURE NO DAMAGE TO EX. WOODEN DECK. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGE TO EX. WOODEN DECK DURING CONSTRUCTION.
12. STORM MANHOLE - SEE DETAIL D05 ON SHEET 51.
13. "DANGER - WATER RISES RAPIDLY" SIGN.
14. FOREBAY BOTTOM SHALL BE REINFORCED WITH AMORFLEX CLASS 40 MEDIUM, BLOCK 1.5 OR APPROVED ALTERNATIVE. SEE SHEET 54 FOR DETAIL.
15. FOREBAY DEPTH MARKER TO BE ANCHORED INTO THE GROUND. SEE DETAIL D10 ON SHEET 54.
16. ABANDON MANHOLE. FILL WITH #57 STONE AND CAP WITH 4" LAYER OF CONCRETE.
17. WATERPROOF MANHOLE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
18. APPROXIMATE LOCATION OF TURTLE BASKING STATION. EXACT LOCATION TO BE COORDINATED WITH PROJECT OFFICER. SEE DETAIL D23 ON SHEET 53.
19. CLAY CORE LOCATION. SEE STORM PROFILE 01 ON SHEET 26 & SECTION C-C ON SHEET 28.
20. BEAVER LEVELER - SEE DETAIL D08 ON SHEET 51.
21. POND WEIR. SEE DETAIL D24 ON SHEET 53 FOR WEIR SECTIONS

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SHEET NOTES:

1. INSTALL C-2 STANDARD CURB AND GUTTER
2. NOSE-DOWN CURB
3. PROPOSED VDOT EW-1
4. PROPOSED MODIFIED VDOT EW-2 BASED ON 48" PIPE (SEE DETAIL EW-2 ON SHEET 53)
5. SAW CUT

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SPARROW POND RESTORATION
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S. PARK DR & S. COLUMBUS ST

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SHEET NOTES:

1. VEPCO/DOMINION ENERGY 25' BUFFER FROM TRANSMISSION STRUCTURES

GENERAL NOTES:

1. CONTRACTOR SHALL NOT TRANSPORT ANY VEHICLE OR EQUIPMENT LARGER THAN 35 FT IN HEIGHT ALONG THE W&OD TRAIL TO AVOID POWER LINES.
2. IF CRANE IS REQUIRED IT MUST MAINTAIN 20 FT OF HORIZONTAL CLEARANCE FROM POWER LINES. CONTACT GARY DORMAN (571-203-5085) FROM DOMINION PRIOR TO START OF WORK.
3. ALL TOPS OF MANHOLES WITHIN THE LIMITS OF DISTURBANCE SHALL BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.

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SHEET NOTES:

1. VEPCO/DOMINION ENERGY 25' BUFFER FROM TRANSMISSION STRUCTURES
2. AQUATIC BENCH (TYP.) - SEE DETAIL D01 ON SHEET 51

GENERAL NOTES:

1. FINISHED GRADE WHERE RIP-RAP IS SHOWN SHALL BE THE TOP OF THE RIP-RAP

MATCHLINE - SEE SHEET 24

S. ABINGDON ST

6TH ST S.

S. FOUR MILE RUN DRIVE (NOT IMPROVED)

FUTURE STORMWATER EASEMENT - NOT TO BE USED BY CONTRACTOR

270 SY - CL II RIP-RAP 3.2' DEEP PER VDOT PG-3 TYPE II

97 SY - CL II RIP-RAP 3.2' DEEP VDOT PG-3 TYPE II EXCEPT WHERE WEIR IS CALLED OUT

EX. RPA

PROP. RPA

PROP. 100-YR FLOODPLAIN

AQUATIC BENCH TOP=150.00 BOTTOM=148.50 10' WIDE

27 SY - CL II RIP-RAP 3.2' DEEP VDOT PG-3 TYPE I

FOREBAY

POOL 1

POOL 2

POOL 3

W&OD TRAIL

FOUR MILE RUN TRAIL

FOUR MILE RUN

CHAIN LINK FENCE

STONE RET. WALL

STEEL RAILING

WOODEN RAILING

STEEL BASEPLATE TOWER 91

PEPCO

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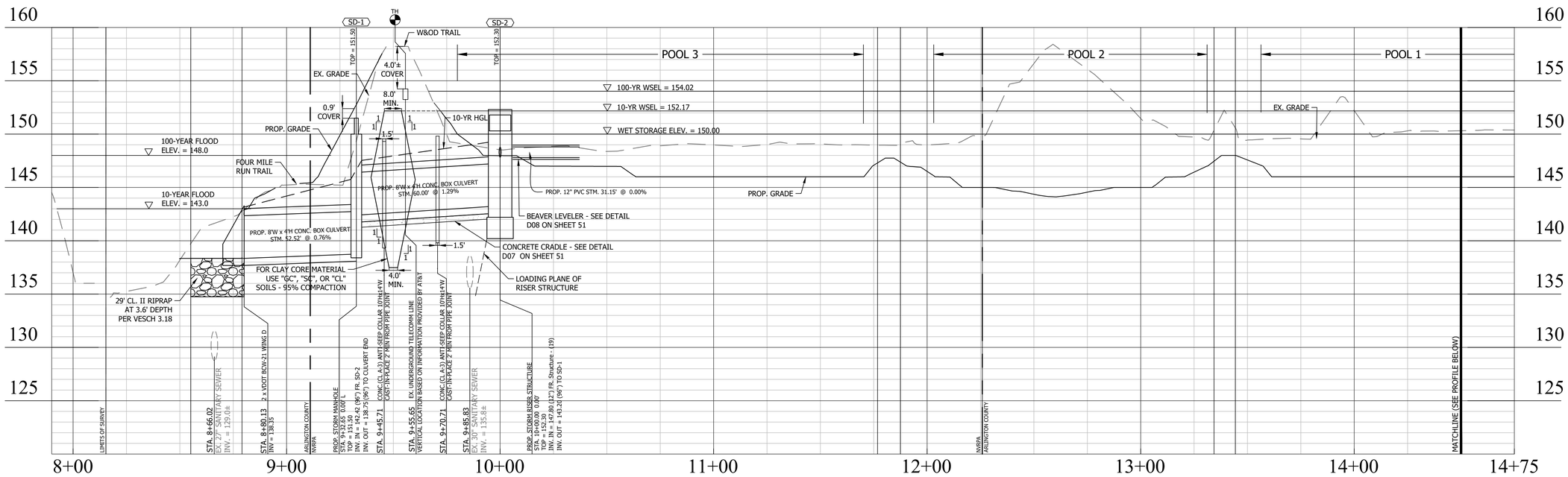
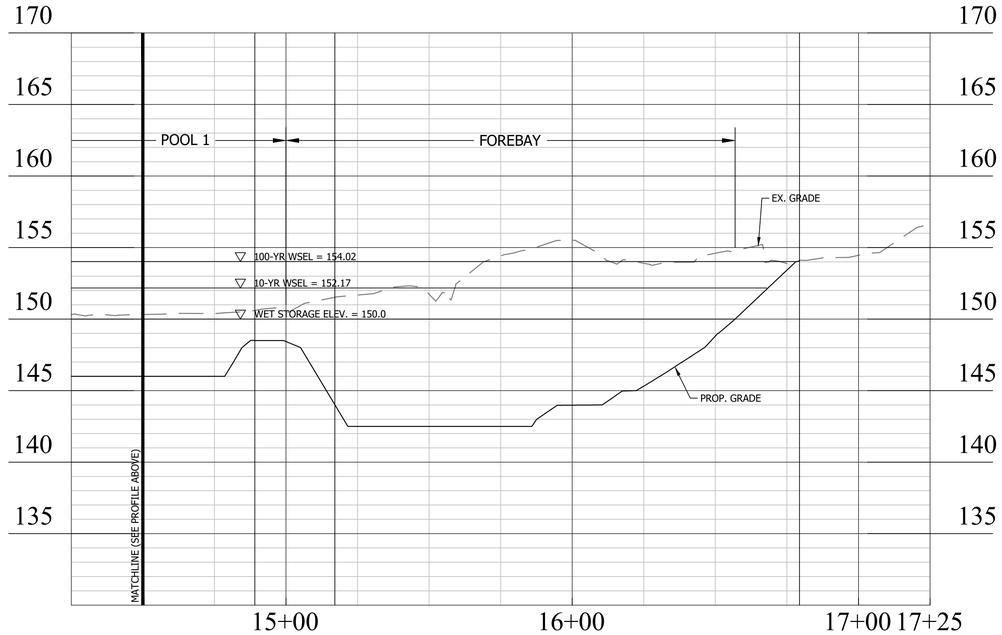


STORM PROFILE 01 - PART 01

(SEE SHEET 22)



STORM PROFILE 01 - PART 02

(SEE SHEET 22)

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2100 CLARENDON BOULEVARD, SUITE 813
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Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

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QUALITY CONTROL ENGINEER

Adam E. Fellows 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

STORM PROFILES

DESIGNED: JM
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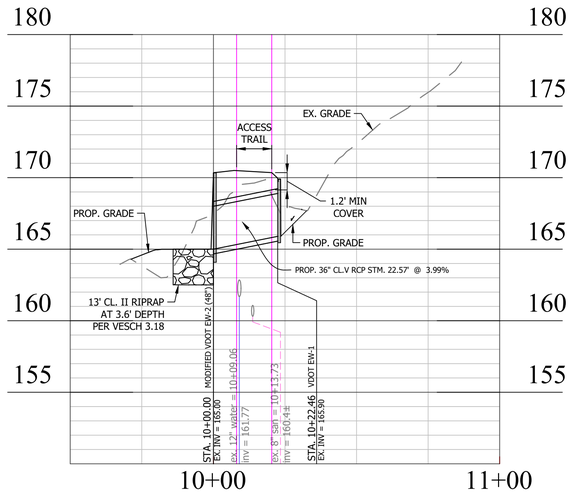
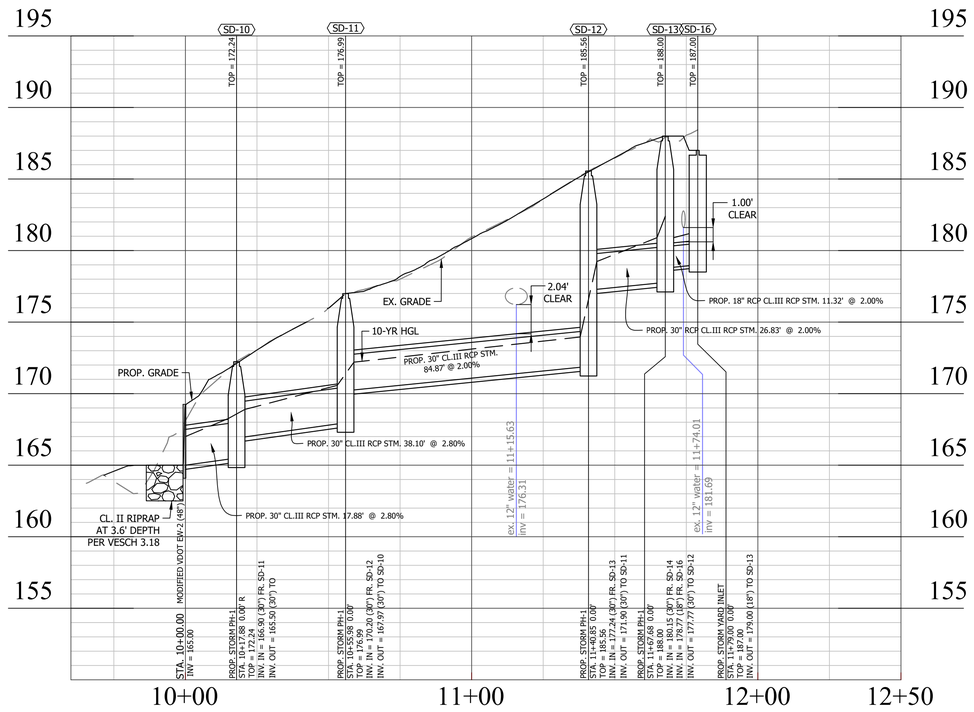


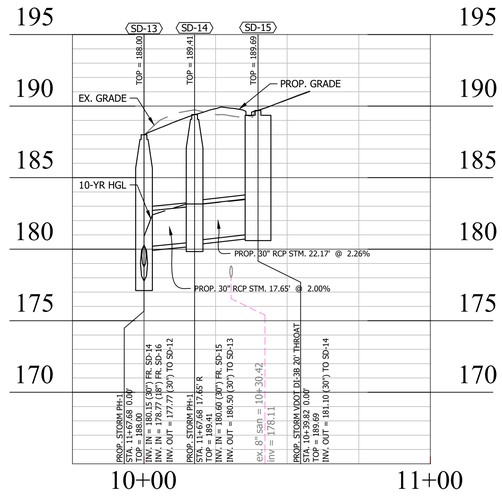
STORM PROFILE 02

(SEE SHEET 20)



STORM PROFILE 03

(SEE SHEET 20)



STORM PROFILE 04

(SEE SHEET 20)

Storm Inlet Computations

Inlet				Flow						Curb Inlet														Operation			Sag Inlets Only			
Number	Type	Length (ft)	Station	Drainage Area (acres)	C	CA	i (in/hr)	Q Incr (ft^3/s)	Q Carryover (ft^3/s)	Q_T (ft^3/s)	S Gutter Slope (ft/ft)	Sx Crosssslope (ft/ft)	T Spread (ft)	W (ft)	W/T	Sw (ft/ft)	Sw/Sx	E_o	a (in)	S'w	Se (ft/ft)	L_T Computed Length (ft)	L/L_T	E (%)	Q_i Intercepted (ft^3/s)	Q_b Carryover (ft^3/s)	d (ft)	h (ft)	d/h	T Spread @ Sag (ft)
SD15	DI-3C	20		6.23	0.60	3.738	6.79	25.38		25.381		0.08500				0.0833											0.62	0.46	0.00	7.30
SD16	Yard Inlet	4		1.90	0.60	1.140	6.79	7.74		7.741	Number of Throats =		4	Height	0.5		Ponding Depth (d) =		0.28	Overland Rief Elev. =		188.00	Inlet Top Elevation =		187.00		Ponding Elev. =		187.28	

Storm Drain Design Computations

From Point	To Point	Drainage Area	Runoff Coefficient	CA			Inlet Time	Time of Conc.	Rainfall	Runoff Q	Invert Elevations		Length	Slope	Diameter	Capacity	Velocity	Flow Time	Remarks
		Acres	C	Incr.	Offsite	Accum.	min	min	in/hr	cfs	Upper End	Lower End	ft	%	in	cfs	fps	min	
SD15	SD14	6.23	0.60	3.74	0.00	3.74	5.00	5.00	6.79	25.38	181.10	180.85	22.17	1.13%	30	43.56	9.21	0.04	
SD14	SD13	0.00	0.00	0.00	0.00	3.74	5.00	5.04	6.78	25.33	180.65	180.40	17.65	1.42%	30	48.82	10.04	0.03	
SD16	SD13	1.90	0.60	1.14	0.00	1.14	5.00	5.00	6.79	7.74	179.00	178.77	11.32	2.03%	18	14.97	8.54	0.02	
SD13	SD12	0.00	0.00	0.00	0.00	4.88	5.00	5.07	6.77	33.00	177.77	177.24	26.83	1.98%	30	57.65	12.14	0.04	
SD12	SD11	0.00	0.00	0.00	0.00	4.88	5.00	5.11	6.75	32.94	171.90	170.20	84.87	2.00%	30	58.05	12.20	0.12	
SD11	SD10	0.00	0.00	0.00	0.00	4.88	5.00	5.22	6.71	32.75	167.97	166.90	38.10	2.81%	30	68.74	13.83	0.05	
SD10	OUTFALL	0.00	0.00	0.00	0.00	4.88	5.00	5.27	6.70	32.68	165.50	165.00	17.88	2.80%	30	68.59	13.80	0.02	

Hydraulic Grade Line Computations

Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (ft)	D_o (in)	Q_o (cfs)	L_o (ft)	Sf_o (%)	H_f (ft)	V_o (ft/s)	H_o (ft)	Junction Loss Q_i	V_i (ft/s)	Q_iV_i	$V_i^2/2g$ (ft)	H_i (ft)	Angle (°)	H_a (ft)	H_t (ft)	1.3 H_t (ft)	0.5 H_t (ft)	Final H (ft)	Inlet Water Surface Elev. (ft)	Rim Elev. (ft)
OUTFALL					Outlet Pipe Dia. = 30.00			Outlet Pipe Inv. = 165.00		0.8xDia + Pipe Inv. = 167.00				Outlet WSEL =						Starting WSEL = 167.00		
SD10		167.00	30	32.68	17.88	0.6347%	0.11	13.80	0.74					1.04		0.51	2.29	0.00	1.14	1.26	168.26	172.52
	SD11									32.75	13.83	453.08	2.97	1.04	13	0.51						
SD11		168.90	30	32.75	38.10	0.6376%	0.24	13.83	0.74					0.81		1.32	2.87	0.00	1.43	1.68	170.58	176.99
	SD12									32.94	12.20	401.84	2.31	0.81	62	1.32						
SD12		172.20	30	32.94	84.87	0.6450%	0.55	12.20	0.58					0.80		0.48	1.86	2.42	1.21	1.76	173.96	185.56
	SD13									33.00	12.14	400.64	2.29	0.80	17	0.48						
SD13		179.24	30	33.00	26.83	0.6474%	0.17	12.14	0.57					0.55		0.79	1.91	2.49	1.24	1.42	180.66	188.00
	SD14									25.33	10.04	254.19	1.56	0.55	0	0.00						
	SD16									7.74	8.54	66.13	1.13	0.40	90	0.79						
SD14		182.40	30	25.33	17.65	0.3813%	0.07	10.04	0.39					0.46		0.53	1.38	0.00	0.69	0.76	183.16	189.41
	SD15									25.38	9.21	233.75	1.32	0.46	36	0.53						
SD15		183.16	30	25.38	22.17	0.3828%	0.08	9.21	0.40								0.40	0.51	0.26	0.34	183.50	189.69
SD16		180.66	18	7.74	11.32	0.5429%	0.06	8.54	0.34								0.34	0.44	0.22	0.28	180.94	187.00

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S44D
S. PARK DR & S. COLUMBUS ST

STORM PROFILE & COMPS

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0 5 10
VERT. SCALE

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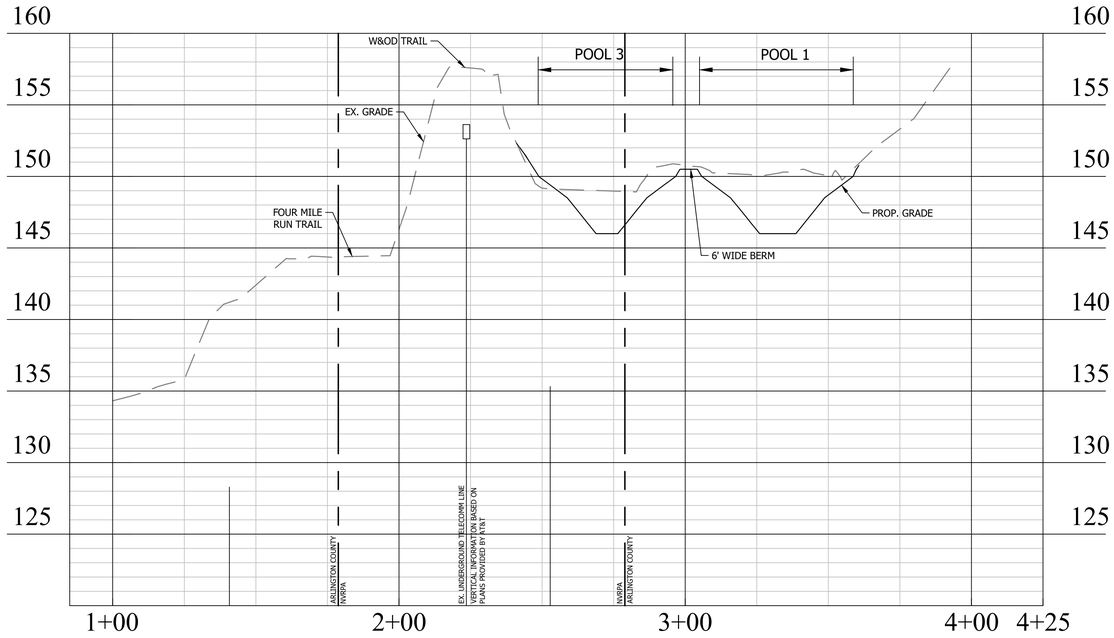
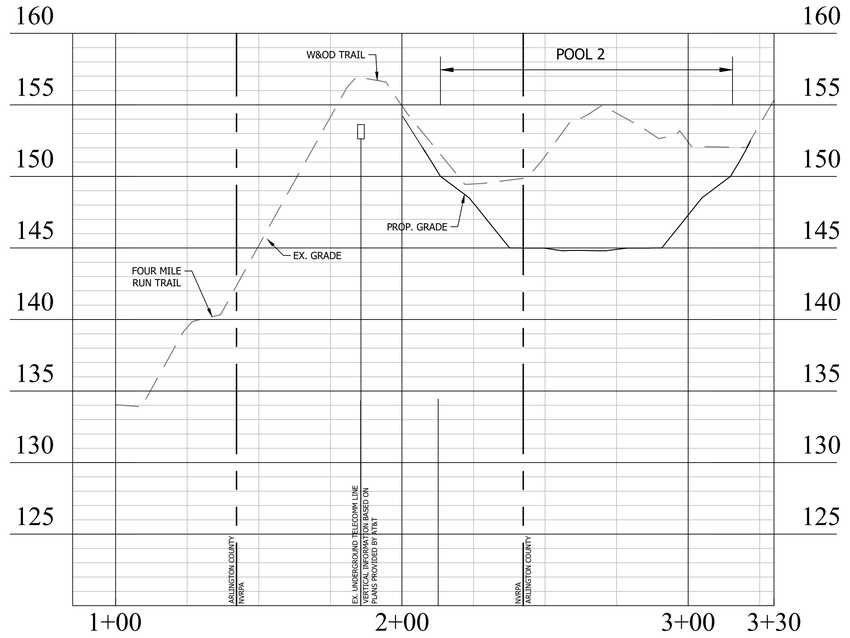
REVISED ON 11/18/2021



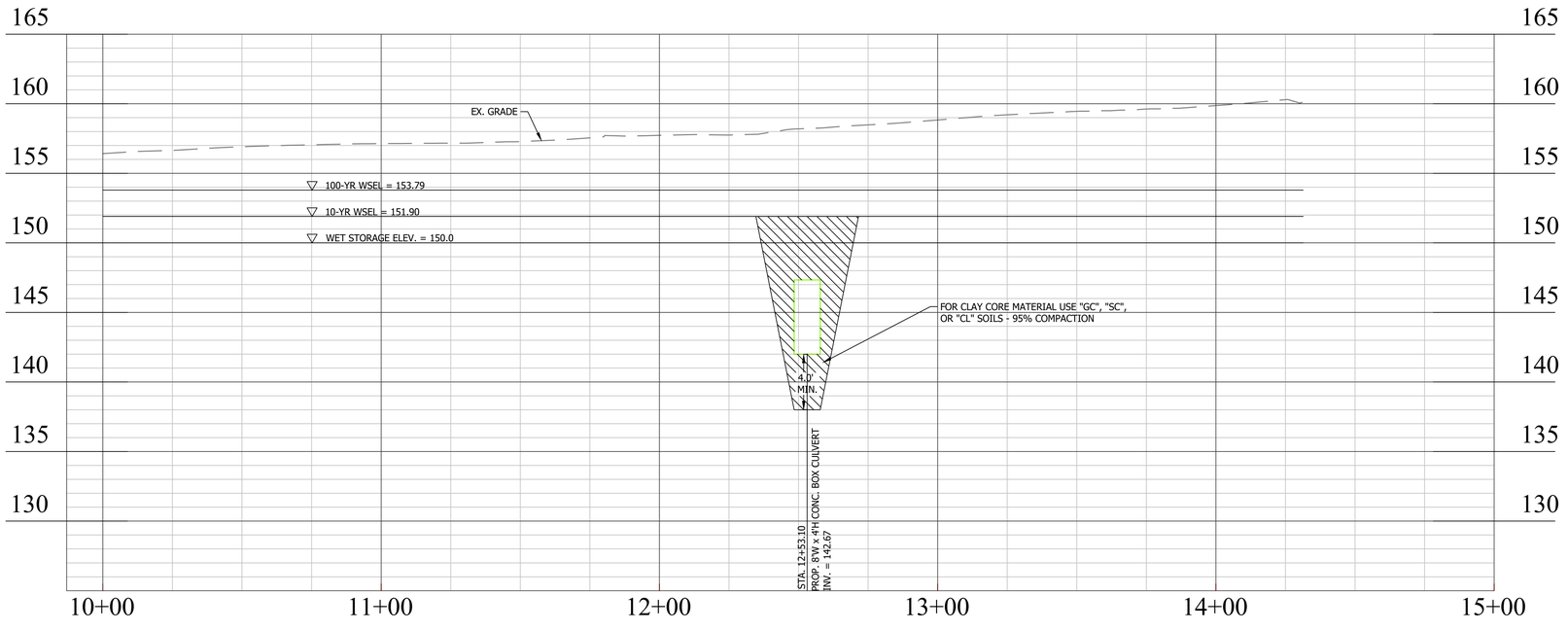
SECTION A-A

(SEE SHEET 22)



SECTION B-B

(SEE SHEET 22)



SECTION C-C

(SEE SHEET 22)

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fillery CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

POND SECTIONS

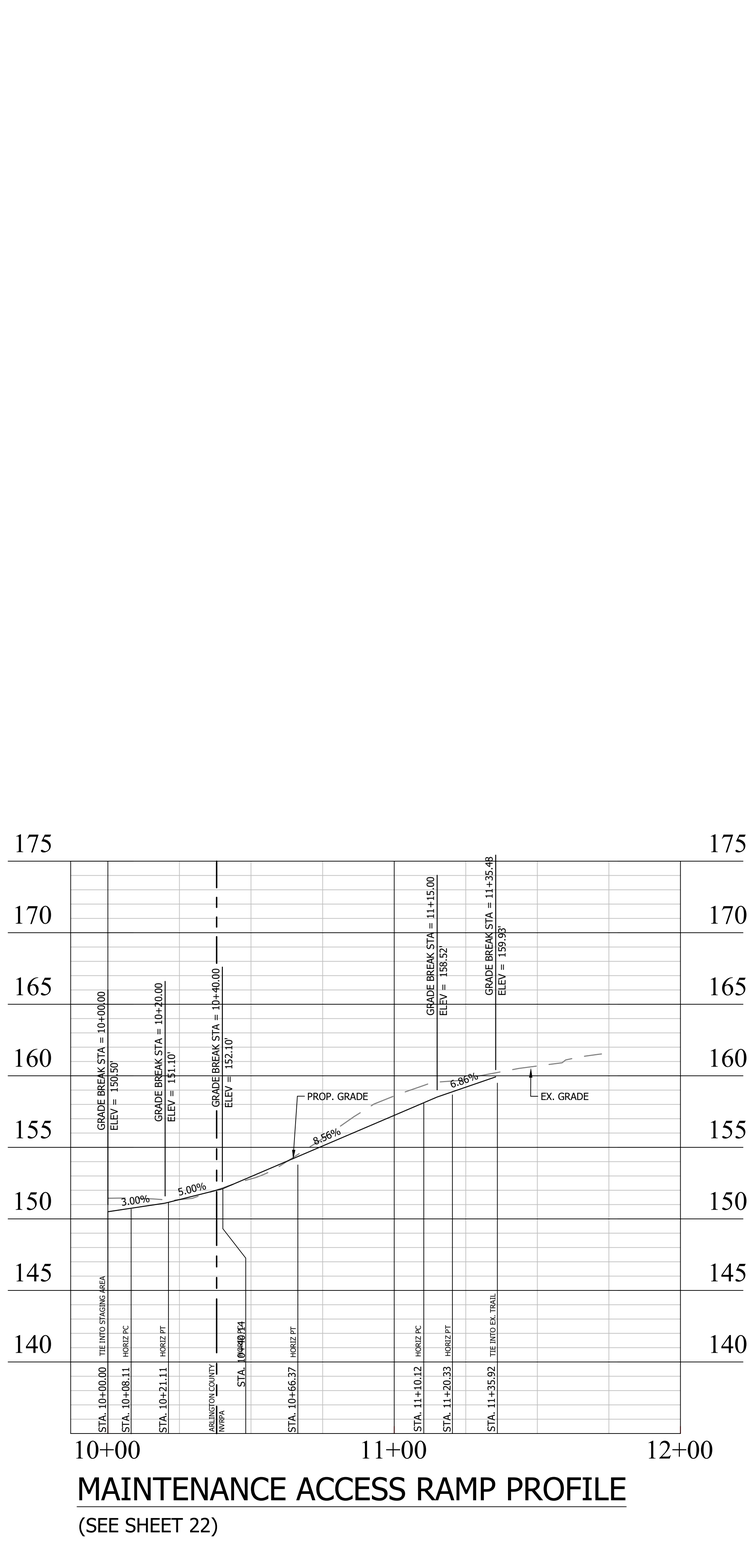
DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

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

FILENAME: S44D-252-STORM PROFILES.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021



MAINTENANCE ACCESS RAMP PROFILE

(SEE SHEET 22)

ARLINGTON
VIRGINIA
DEPARTMENT OF
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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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

APPROVALS	DATE
Ankur Patel	05/10/22
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fuller CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

MAINTENANCE ACCESS RAMP PROFILE

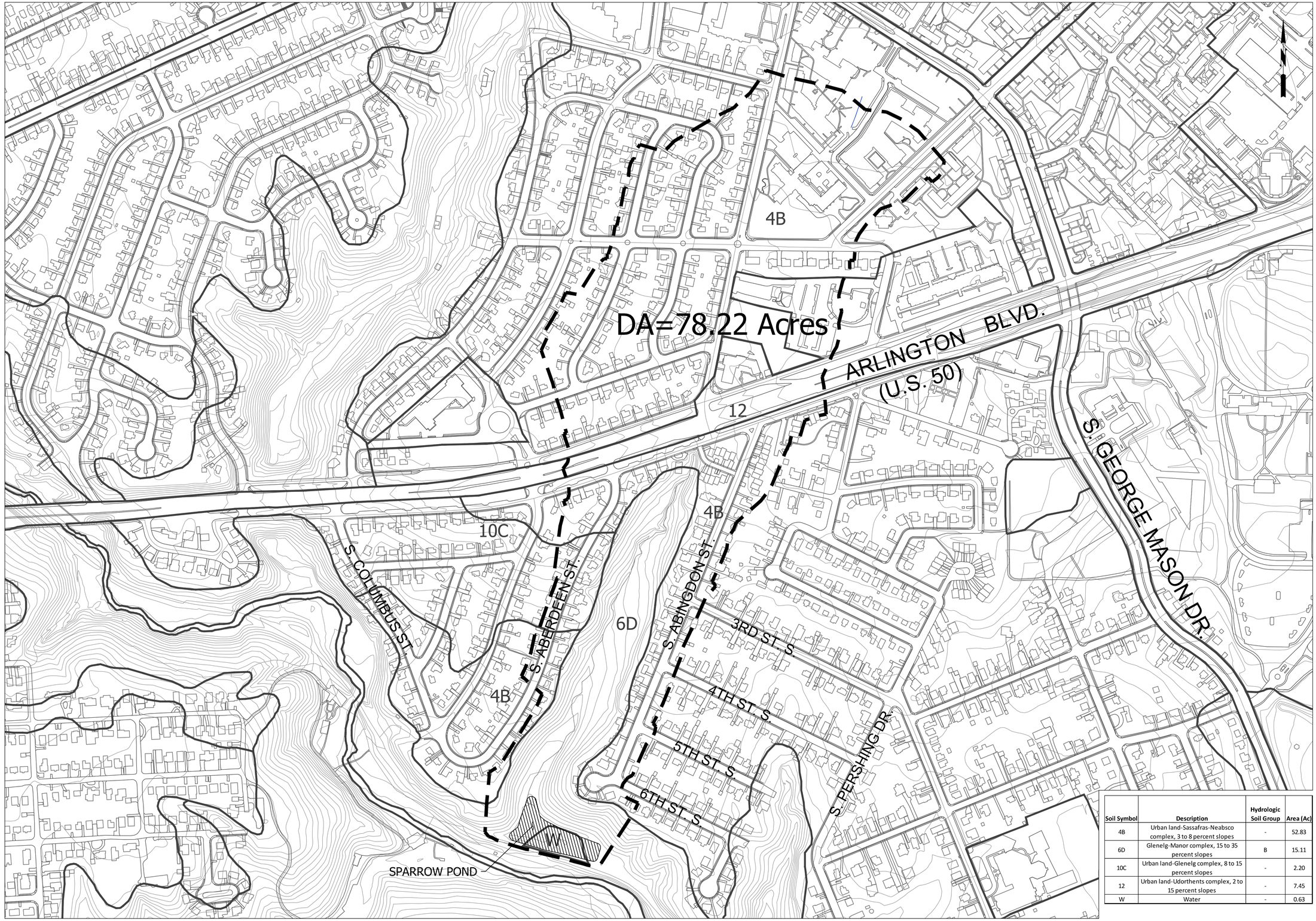
DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

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

FILENAME: S44D-252-STORM PROFILES.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021



Soil Symbol	Description	Hydrologic Soil Group	Area (Ac)
4B	Urban land-Sassafras-Neabsco complex, 3 to 8 percent slopes	-	52.83
6D	Glenelg-Manor complex, 15 to 35 percent slopes	B	15.11
10C	Urban land-Glenelg complex, 8 to 15 percent slopes	-	2.20
12	Urban land-Udorthents complex, 2 to 15 percent slopes	-	7.45
W	Water	-	0.63

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ARLINGTON, VA 22201
PHONE: 703.228.3629
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SEAL

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ANKUR B. PATEL
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Ankur Patel 05/10/22

APPROVALS	DATE
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Adam E. Fuleau CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SWM DIVIDES & SOIL MAP

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 200 400
GRAPHIC SCALE

30

FILENAME: S44D-254-SWM_DIVIDES.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

STORAGE-ELEVATION-DISCHARGE TABLE

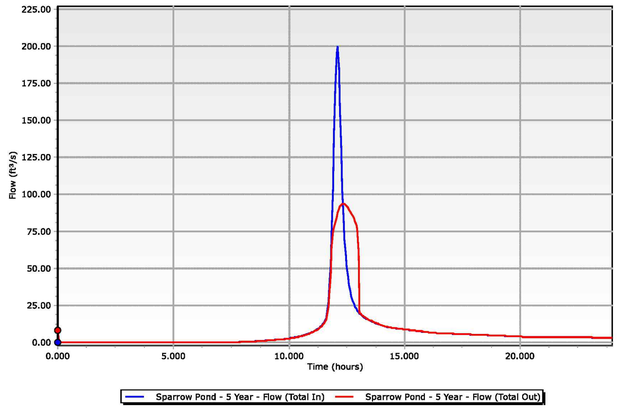
Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
142.00	-3.24	0.000	10.00	0.00	-3.24	-3.24
142.45	-3.24	0.000	14.08	0.00	-3.24	-3.18
142.50	-3.24	0.000	14.57	0.00	-3.24	-3.17
143.00	0.00	0.000	20.00	0.00	0.00	0.16
143.50	9.04	0.001	33.31	0.00	9.04	9.35
144.00	16.24	0.001	50.00	0.00	16.24	16.78
144.50	24.67	0.002	72.86	0.00	24.67	25.55
145.00	34.25	0.003	100.00	0.00	34.25	35.61
145.50	43.63	0.004	186.60	0.00	43.63	45.77
146.00	49.73	0.007	300.00	0.00	49.73	53.21
146.50	52.59	0.011	348.21	0.00	52.59	57.87
147.00	56.77	0.015	400.00	0.00	56.77	64.13
147.50	60.65	0.020	448.61	0.00	60.65	70.36
148.00	64.31	0.026	500.00	0.00	64.31	76.65
148.50	67.76	0.041	2,441.99	0.00	67.76	87.60
149.00	71.05	0.087	5,848.00	0.00	71.05	113.24
149.50	74.19	0.184	11,231.39	0.00	74.19	163.02
150.00	77.21	0.352	18,356.00	0.00	77.21	247.42
150.50	80.11	0.594	23,974.48	0.00	80.11	367.55
151.00	82.90	0.905	30,342.00	0.00	82.90	520.88
151.50	85.61	1.274	34,074.28	0.00	85.61	702.43
152.00	88.24	1.688	38,023.00	0.00	88.24	905.22
152.50	90.80	2.140	40,723.68	0.00	90.80	1,126.48
153.00	93.27	2.623	43,517.00	0.00	93.27	1,362.91
153.50	95.69	3.139	46,369.24	0.00	95.69	1,614.97
154.00	98.04	3.688	49,312.00	0.00	98.04	1,883.06
154.50	100.34	4.303	57,892.09	0.00	100.34	2,182.83
155.00	102.60	5.020	67,160.00	0.00	102.60	2,532.14
155.50	104.80	5.791	67,160.50	0.00	104.80	2,907.45
156.00	106.95	6.562	67,161.00	0.00	106.95	3,282.72

5-YEAR HYDROGRAPH

Peak Discharge	93.48 ft³/s
Time to Peak	12.350 hours
Hydrograph Volume	15.606 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
5.000	0.00	0.00	0.00	0.00	0.00
5.250	0.00	0.00	0.00	0.00	0.00
5.500	0.00	0.00	0.00	0.00	0.00
5.750	0.00	0.00	0.00	0.00	0.00
6.000	0.00	0.00	0.00	0.00	0.00
6.250	0.00	0.00	0.00	0.00	0.00
6.500	0.00	0.00	0.00	0.00	0.00
6.750	0.00	0.00	0.00	0.00	0.00
7.000	0.00	0.00	0.00	0.00	0.00
7.250	0.01	0.01	0.02	0.04	0.06
7.500	0.08	0.11	0.13	0.16	0.17
7.750	0.20	0.22	0.25	0.28	0.31
8.000	0.34	0.37	0.40	0.43	0.46
8.250	0.50	0.53	0.57	0.62	0.66
8.500	0.71	0.75	0.80	0.86	0.91
8.750	0.97	1.02	1.08	1.14	1.21
9.000	1.27	1.34	1.41	1.48	1.54
9.250	1.61	1.67	1.73	1.78	1.84
9.500	1.89	1.94	1.99	2.05	2.11
9.750	2.18	2.26	2.35	2.45	2.55
10.000	2.66	2.77	2.89	3.02	3.15
10.250	3.29	3.45	3.61	3.78	3.95
10.500	4.14	4.33	4.53	4.75	4.98
10.750	5.23	5.50	5.78	6.09	6.41
11.000	6.75	7.11	7.49	7.91	8.38
11.250	8.91	9.53	10.21	10.96	11.77
11.500	12.64	13.74	15.42	18.53	24.04
11.750	32.86	45.92	64.28	74.75	77.79
12.000	81.19	84.58	87.64	90.13	91.91
12.250	93.00	93.47	93.48	93.14	92.53
12.500	91.74	90.82	89.68	88.46	87.04
12.750	85.54	83.79	81.85	79.60	76.64
13.000	60.14	20.05	19.22	18.49	17.84
13.250	17.25	16.72	16.23	15.78	15.36
13.500	14.96	14.57	14.19	13.83	13.48
13.750	13.15	12.83	12.53	12.24	11.96
14.000	11.68	11.41	11.15	10.91	10.68
14.250	10.48	10.30	10.15	10.02	9.90
14.500	9.79	9.68	9.58	9.48	9.39
14.750	9.29	9.20	9.11	9.02	8.92
15.000	8.83	8.74	8.65	8.55	8.46
15.250	8.37	8.28	8.18	8.09	8.00
15.500	7.90	7.81	7.71	7.62	7.53
15.750	7.43	7.34	7.24	7.15	7.05
16.000	6.96	6.87	6.77	6.69	6.61
16.250	6.53	6.47	6.42	6.37	6.33
16.500	6.29	6.25	6.21	6.18	6.14
16.750	6.11	6.07	6.04	6.01	5.97
17.000	5.94	5.91	5.87	5.84	5.81
17.250	5.77	5.74	5.71	5.67	5.64
17.500	5.61	5.57	5.54	5.51	5.47
17.750	5.44	5.40	5.37	5.34	5.30
18.000	5.27	5.24	5.20	5.17	5.13
18.250	5.10	5.06	5.03	5.00	4.96
18.500	4.93	4.89	4.86	4.83	4.79
18.750	4.76	4.72	4.69	4.65	4.62
19.000	4.59	4.55	4.52	4.48	4.45
19.250	4.41	4.38	4.34	4.31	4.28
19.500	4.24	4.21	4.17	4.14	4.10
19.750	4.07	4.03	4.00	3.96	3.93
20.000	3.89	3.86	3.83	3.79	3.77
20.250	3.74	3.72	3.71	3.69	3.68
20.500	3.67	3.66	3.65	3.65	3.64
20.750	3.63	3.63	3.62	3.61	3.61
21.000	3.60	3.59	3.59	3.58	3.57
21.250	3.57	3.56	3.55	3.55	3.54
21.500	3.53	3.53	3.52	3.51	3.51
21.750	3.50	3.49	3.49	3.48	3.47
22.000	3.47	3.46	3.45	3.45	3.44
22.250	3.43	3.43	3.42	3.41	3.41
22.500	3.40	3.39	3.39	3.38	3.37
22.750	3.37	3.36	3.35	3.35	3.34
23.000	3.33	3.33	3.32	3.31	3.31
23.250	3.30	3.29	3.28	3.28	3.27
23.500	3.26	3.26	3.25	3.24	3.24
23.750	3.23	3.22	3.22	3.21	3.20
24.000	3.20	(N/A)	(N/A)	(N/A)	(N/A)



10-YEAR HYDROGRAPH

NOTE: THE EXISTING POND WAS NOT ABLE TO CONTAIN THE 10-YEAR OR 100-YEAR STORM DURING MODELING

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

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ANKUR B. PATEL
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PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
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Adam E. Fillery CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Nafaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EXISTING SWM CALCULATIONS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

FILENAME: S44D-255-STORM_COMPS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: : JJMILLER

REVISED ON 11/18/2021

STORAGE-ELEVATION-DISCHARGE TABLE

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
144.00	0.00	0.000	0.00	0.00	0.00	0.00
144.50	0.00	0.002	544.00	0.00	0.00	1.01
145.00	0.00	0.017	2,176.00	0.00	0.00	8.06
145.50	0.00	0.050	3,614.48	0.00	0.00	23.98
146.00	0.00	0.101	5,416.00	0.00	0.00	48.89
146.50	0.00	0.173	7,167.51	0.00	0.00	83.73
147.00	0.00	0.266	9,164.00	0.00	0.00	128.99
147.50	0.00	0.385	11,511.77	0.00	0.00	186.29
148.00	0.00	0.532	14,127.00	0.00	0.00	257.39
148.50	0.00	0.728	20,318.91	0.00	0.00	352.55
149.00	0.00	1.003	27,633.00	0.00	0.00	485.23
149.50	0.00	1.343	31,693.39	0.00	0.00	649.90
150.00	0.00	1.731	36,032.00	0.00	0.00	837.90
150.30	0.29	1.991	39,319.40	0.00	0.29	963.73
150.50	8.81	2.176	41,590.71	0.00	8.81	1,062.14
151.00	55.38	2.688	47,548.00	0.00	55.38	1,356.14
151.50	122.09	3.245	49,577.79	0.00	122.09	1,692.62
152.00	204.12	3.826	51,650.00	0.00	204.12	2,055.81
152.50	299.03	4.429	53,496.78	0.00	299.03	2,442.78
153.00	361.93	5.054	55,376.00	0.00	361.93	2,808.10
153.50	393.99	5.699	56,952.93	0.00	393.99	3,152.17
154.00	423.67	6.362	58,552.00	0.00	423.67	3,502.69
154.50	451.54	7.044	60,435.59	0.00	451.54	3,861.06
155.00	477.57	7.749	62,349.00	0.00	477.57	4,228.15
155.50	502.36	8.475	64,123.55	0.00	502.36	4,604.24
156.00	526.23	9.221	65,923.00	0.00	526.23	4,989.34

EXISTING AND PROPOSED PEAK FLOW RATES

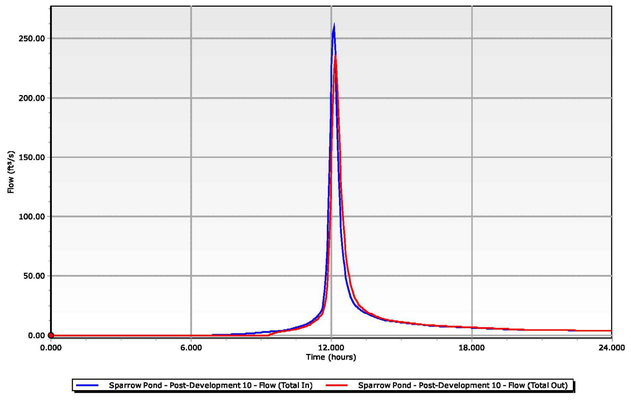
	Ex. Peak Inflow (cfs)	Ex. Peak Outflow (cfs)	Ex. Peak Elevation (ft)	Prop. Peak Inflow (cfs)	Prop. Peak Outflow (cfs)	Prop. Peak Elevation (cfs)
5-Year	199.95	93.48	153.04	203.65	182.31	151.87
10-Year	258.87	-	-	258.87	235.68	152.17
100-year	526.12	-	-	526.12	424.70	154.02

10-YEAR HYDROGRAPH

Peak Discharge	235.68 ft³/s
Time to Peak	12.150 hours
Hydrograph Volume	19.969 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.650	0.00	0.00	0.00	0.00	0.00
6.900	0.01	0.01	0.01	0.01	0.01
7.150	0.01	0.01	0.02	0.02	0.02
7.400	0.02	0.03	0.03	0.03	0.04
7.650	0.04	0.04	0.05	0.05	0.06
7.900	0.06	0.06	0.07	0.07	0.08
8.150	0.08	0.09	0.09	0.10	0.11
8.400	0.11	0.12	0.13	0.13	0.14
8.650	0.15	0.16	0.16	0.17	0.18
8.900	0.19	0.20	0.21	0.22	0.23
9.150	0.25	0.26	0.27	0.28	0.45
9.400	0.92	1.31	1.65	1.95	2.20
9.650	2.42	2.62	2.80	2.97	3.13
9.900	3.28	3.44	3.59	3.75	3.90
10.150	4.07	4.23	4.40	4.58	4.77
10.400	4.97	5.17	5.39	5.61	5.84
10.650	6.09	6.35	6.62	6.91	7.22
10.900	7.55	7.89	8.26	8.65	9.27
11.150	10.01	10.71	11.43	12.18	12.99
11.400	13.86	14.81	15.83	17.00	18.51
11.650	20.89	24.89	31.39	41.37	56.01
11.900	81.34	112.83	153.10	192.57	222.96
12.150	235.68	228.68	207.23	180.80	153.18
12.400	128.10	109.00	93.44	80.27	69.28
12.650	60.19	53.24	48.18	43.72	39.87
12.900	36.60	33.82	31.47	29.47	27.78
13.150	26.32	25.07	23.98	23.02	22.17
13.400	21.41	20.72	20.09	19.50	18.95
13.650	18.43	17.93	17.46	17.01	16.59
13.900	16.18	15.79	15.41	15.05	14.69
14.150	14.35	14.03	13.73	13.46	13.21
14.400	12.98	12.78	12.60	12.44	12.28
14.650	12.14	12.00	11.87	11.75	11.62
14.900	11.50	11.38	11.26	11.15	11.03
15.150	10.91	10.79	10.68	10.56	10.44
15.400	10.33	10.21	10.09	9.98	9.86
15.650	9.74	9.62	9.51	9.39	9.27
15.900	9.15	9.03	8.91	8.80	8.74
16.150	8.67	8.59	8.51	8.43	8.35
16.400	8.28	8.21	8.14	8.07	8.01
16.650	7.96	7.90	7.85	7.80	7.75
16.900	7.70	7.65	7.60	7.56	7.51
17.150	7.47	7.42	7.38	7.34	7.29
17.400	7.25	7.21	7.17	7.12	7.08
17.650	7.04	7.00	6.95	6.91	6.87
17.900	6.83	6.78	6.74	6.70	6.66
18.150	6.61	6.57	6.53	6.49	6.44
18.400	6.40	6.36	6.32	6.27	6.23
18.650	6.19	6.15	6.10	6.06	6.02
18.900	5.98	5.93	5.89	5.85	5.80
19.150	5.76	5.72	5.68	5.63	5.59
19.400	5.55	5.50	5.46	5.42	5.38
19.650	5.33	5.29	5.25	5.20	5.16
19.900	5.12	5.07	5.03	4.99	4.94
20.150	4.90	4.86	4.82	4.79	4.75
20.400	4.72	4.69	4.67	4.64	4.62
20.650	4.61	4.59	4.57	4.56	4.54
20.900	4.53	4.52	4.51	4.50	4.49
21.150	4.48	4.47	4.46	4.45	4.44
21.400	4.43	4.42	4.41	4.41	4.40
21.650	4.39	4.38	4.37	4.36	4.35
21.900	4.35	4.34	4.33	4.32	4.31
22.150	4.30	4.30	4.29	4.28	4.27
22.400	4.26	4.25	4.24	4.24	4.23
22.650	4.22	4.21	4.20	4.19	4.19
22.900	4.18	4.17	4.16	4.15	4.14
23.150	4.14	4.13	4.12	4.11	4.10
23.400	4.09	4.09	4.08	4.07	4.06
23.650	4.05	4.04	4.03	4.03	4.02
23.900	4.01	4.00	3.99	(N/A)	(N/A)

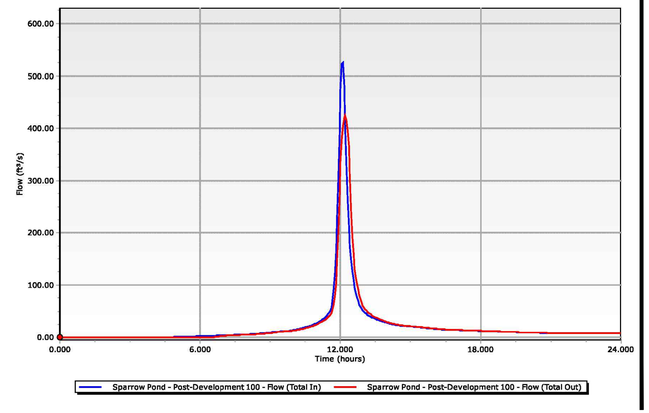


100-YEAR HYDROGRAPH

Peak Discharge	424.70 ft³/s
Time to Peak	12.200 hours
Hydrograph Volume	42.050 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
4.400	0.00	0.00	0.00	0.00	0.00
4.650	0.01	0.01	0.01	0.01	0.02
4.900	0.02	0.02	0.03	0.03	0.03
5.150	0.04	0.04	0.05	0.05	0.06
5.400	0.06	0.07	0.08	0.08	0.09
5.650	0.10	0.10	0.11	0.12	0.13
5.900	0.14	0.15	0.16	0.17	0.18
6.150	0.19	0.20	0.21	0.22	0.23
6.400	0.24	0.25	0.27	0.28	0.32
6.650	0.81	1.24	1.60	1.92	2.19
6.900	2.43	2.65	2.84	3.01	3.17
7.150	3.31	3.45	3.57	3.69	3.80
7.400	3.91	4.02	4.12	4.21	4.31
7.650	4.41	4.50	4.59	4.68	4.77
7.900	4.86	4.95	5.04	5.13	5.22
8.150	5.32	5.41	5.52	5.63	5.75
8.400	5.88	6.02	6.17	6.34	6.51
8.650	6.69	6.87	7.07	7.27	7.48
8.900	7.69	7.91	8.13	8.36	8.59
9.150	8.84	9.26	9.61	9.90	10.15
9.400	10.37	10.55	10.72	10.87	11.01
9.650	11.14	11.29	11.46	11.65	11.88
9.900	12.14	12.42	12.74	13.07	13.43
10.150	13.81	14.22	14.65	15.11	15.60
10.400	16.11	16.65	17.21	17.79	18.40
10.650	19.04	19.71	20.42	21.18	21.98
10.900	22.85	23.76	24.71	25.72	26.77
11.150	27.90	29.12	30.48	32.01	33.72
11.400	35.61	37.67	39.90	42.47	45.84
11.650	51.17	61.35	79.03	104.78	143.36
11.900	197.44	269.33	333.94	377.36	403.78
12.150	420.72	424.70	415.43	395.32	365.90
12.400	309.49	240.73	190.57	157.36	132.26
12.650	114.04	100.34	88.92	79.54	71.92
12.900	65.74	60.70	56.54	53.54	51.09
13.150	48.84	46.80	44.96	43.29	41.77
13.400	40.39	39.12	37.94	36.84	35.79
13.650	34.80	33.86	32.96	32.11	31.29
13.900	30.51	29.76	29.04	28.35	27.68
14.150	27.03	26.41	25.84	25.31	24.84
14.400	24.41	24.03	23.68	23.36	23.07
14.650	22.79	22.53	22.28	22.04	21.80
14.900	21.57	21.34	21.11	20.89	20.66
15.150	20.44	20.21	19.99	19.77	19.55
15.400	19.32	19.10	18.88	18.65	18.43
15.650	18.21	17.99	17.76	17.54	17.32
15.900	17.09	16.87	16.65	16.42	16.20
16.150	15.98	15.78	15.58	15.40	15.23
16.400	15.08	14.95	14.83	14.72	14.61
16.650	14.52	14.42	14.33	14.25	14.16
16.900	14.08	14.00	13.91	13.83	13.75
17.150	13.67	13.59	13.51	13.43	13.35
17.400	13.27	13.19	13.11	13.03	12.95
17.650	12.88	12.80	12.72	12.64	12.56
17.900	12.48	12.40	12.32	12.24	12.16
18.150	12.08	12.00	11.92	11.84	11.76
18.400	11.68	11.60	11.52	11.43	11.35
18.650	11.27	11.19	11.11	11.03	10.95
18.900	10.87	10.79	10.71	10.63	10.55
19.150	10.47	10.39	10.31	10.23	10.15
19.400	10.07	9.99	9.91	9.83	9.75
19.650	9.67	9.58	9.50	9.42	9.34
19.900	9.26	9.18	9.10	9.02	8.94
20.150	8.86	8.80	8.76	8.72	8.68
20.400	8.64	8.60	8.57	8.54	8.51
20.650	8.48	8.46	8.43	8.41	8.39
20.900	8.36	8.34	8.33	8.31	8.29
21.150	8.27	8.25	8.24	8.22	8.20
21.400	8.19	8.17	8.15	8.14	8.12
21.650	8.10	8.09	8.07	8.06	8.04
21.900	8.02	8.01	7.99	7.98	7.96
22.150	7.94	7.93	7.91	7.90	7.88
22.400	7.86	7.85	7.83	7.82	7.80
22.650	7.78	7.77	7.75	7.74	7.72
22.900	7.70	7.69	7.67	7.66	7.64
23.150	7.62	7.61	7.59	7.58	7.56
23.400	7.54	7.53	7.51	7.50	7.48
23.650	7.46	7.45	7.43	7.42	7.40
23.900	7.38	7.37	7.35	(N/A)	(N/A)



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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fillenwarth 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis W. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

PROPOSED SWM CALCULATIONS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

FILENAME: S44D-255-STORM_COMPS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

SPARROW POND RETROFIT STORMWATER MANAGEMENT NARRATIVE

THE SPARROW POND RETROFIT PROJECT IS LOCATED IN ARLINGTON, VIRGINIA NEAR THE INTERSECTION OF SOUTH ABINGDON STREET AND 6TH STREET SOUTH. THE POND WAS FORMED BY THE BLOCKING OF TWO CULVERTS CONSTRUCTED WITH THE ORIGINAL WASHINGTON AND OLD DOMINION (W&OD) RAILROAD EMBANKMENT TO PASS GRANDMA'S CREEK TO TO FOUR MILE RUN. ONE CULVERT HAS BEEN COMPLETELY BURIED WITH SEDIMENT FROM RUNOFF SINCE THE EARLY 1980'S. THE OTHER WAS RESTRICTED BY A SMALL BEAVER DAM BEGINNING IN THE MID-1980'S. THE BEAVER DAM WAS REMOVED AND ONE CULVERT PASSES FLOW THROUGH THE ORIGINAL RAILROAD EMBANKMENT. OVER THE YEARS THE POND HAS FILLED WITH SEDIMENT FROM THE ARLINGTON FOREST BRANCH WATERSHED WHICH HAS DECREASED THE CAPACITY OF THE POND. IN THE LATE 1990'S/EARLY 2000'S SEDIMENT WAS REMOVED TO RESTORE THE POND TO A HABITAT THAT SUPPORTS PLANT AND WILDLIFE. TODAY THE POND IS VISITED BY USERS OF THE W&OD AND FOUR MILE RUN TRAILS.

WATER QUALITY CRITERIA

THE DRAINAGE AREA TO THIS FACILITY IS 78.23 ACRES. THE FACILITY DESIGN IS BASED ON THE VIRGINIA DEQ STORMWATER DESIGN SPECIFICATION FOR A CONSTRUCTED WETLAND. DUE TO THE SIZE OF THE DRAINAGE AREA AND FOOTPRINT OF THE POND, IT IS NOT FEASIBLE TO TREAT THE ENTIRE DRAINAGE AREA. THE WATERSHED FOR THE FACILITY PRODUCES 93 POUNDS OF PHOSPHOROUS AND 782 POUNDS OF NITROGEN EVERY YEAR. THE FACILITY HAS A TREATMENT VOLUME OF 139,693 CF AT AN ELEVATION OF 151. THE FACILITY WILL REMOVE APPROXIMATELY 38 POUNDS OF PHOSPHOROUS AND 318 POUNDS OF NITROGEN EACH YEAR.

WATER QUANTITY CRITERIA

THE ORIGINAL PROJECT (DATED FROM 1995) ONLY ANALYZED THE POND FOR SUFFICIENT CAPACITY OF THE EXISTING CULVERT AND EMBANKMENT TO PASS THE 100-YEAR DESIGN STORM WITHOUT OVERTOPPING. THE ORIGINAL DESIGN USED THE RATIONAL METHOD TO DETERMINE A PEAK FLOW OF 275 CFS FOR THE 100-YEAR STORM, THIS IS NOT A VALID METHOD SINCE THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (1999) STATES THE DRAINAGE AREA MUST BE LESS THAN 20 ACRES FOR THE RATIONAL METHOD TO VALID. USING THE TR-55 METHOD THE PEAK FLOW WAS CALCULATED TO BE 526 CFS FOR THE 100-YEAR STORM. IN THE ORIGINAL DESIGN A SYNTHETIC INFLOW HYDROGRAPH USING UNIT HYDROGRAPHS FROM THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, WHICH IS NO LONGER AN ACCEPTABLE METHOD. USING MODERN SOFTWARE TO MODEL THE INFLOW HYDROGRAPH, THE EXISTING POND IS NOT SUFFICIENT TO PASS THE 100-YEAR STORM WITHOUT OVERTOPPING THE EMBANKMENT.

THIS PROJECT IS ONLY TO PROVIDE WATER QUALITY AND SAFELY CONVEY THE 100-YEAR STORM WITHOUT OVERTOPPING THE EMBANKMENT. THIS PROJECT DOES NOT PROVIDE DETENTION FOR THE MAJOR STORM EVENT(S), DUE TO THE PROJECT BEING A RETROFIT OF AN EXISTING CONDITION. LESS INTENSE STORMS WERE NOT ANALYZED WITH THIS PROJECT (OTHER THAN TO DETERMINE WATER SURFACE ELEVATIONS) AND NO CONTROLS HAVE BEEN PROVIDED FOR THESE STORMS.

A RISER STRUCTURE WITH A 8'x4' BOX CULVERT PASSING UNDER THE W&OD EMBANKMENT TO FOUR MILE RUN IS BEING PROPOSED. THE RISER CREST WILL BE SET AT AN ELEVATION 150' WHICH IS THE WET STORAGE ELEVATION FOR THE POND. THE REVISED POND HAS BEEN DESIGNED TO SAFELY CONVEY THE 100-YEAR 24-HOUR STORM EVENT WITHOUT OVERTOPPING THE EMBANKMENT. A MINIMUM OF 2' OF FREEBOARD HAS BEEN PROVIDED BETWEEN THE TOP OF EMBANKMENT ELEV OF 156.10 AND 100-YEAR WSEL OF 154.02 PER THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

THIS PROJECT HAS BEEN CATEGORIZED AS A STREAM RESTORATION AND FOLLOWS ARLINGTON COUNTY LINEAR PROJECT REQUIREMENTS.

Sparrow Pond Water Quality Volume

Elevation (ft)	Area (ft^2)	Volume at Elevation (ft^3)	Cumulative Volume (ft^3)	Cumulative Volume (ac-ft)
144	0	0	0	0.00
145	2,176	725	725	0.02
146	5,416	3,675	4,400	0.10
147	9,164	7,208	11,609	0.27
148	14,127	11,556	23,165	0.53
149	27,633	20,506	43,671	1.00
150	36,032	31,740	75,411	1.73
151	47,548	41,657	117,068	2.69

CONSTRUCTED WETLANDS
(DESIGNED BASED ON VA DEQ STORMWATER DESIGN SPECIFICATION NO. 13)

% of Surface Area

Depth Zone	Min Depth	Max Depth	Upper Elev	Upper Area	Lower Elev	Lower Area	Zone Area	% of Total	Suggested
High Marsh	0.5	-0.5	150.50	29,257	149.50	23,548	5,709	19.5%	70%
Transition	-0.5	-1.5	149.50	23,548	148.50	16,377	7,171	24.5%	-
Deep Pool	-1.5	-4	148.50	16,377	146.00	5,416	16,377	56.0%	25%

% of Treatment Volume

Depth Zone	Min Depth	Max Depth	Upper Elev	Upper Volume	Lower Elev	Lower Volume	Zone Volume	% of Total	Suggested
High Marsh	0.5	-0.5	150.50	122,890	149.50	62,602	26,351	36.5%	70%
Transition	-0.5	-1.5	149.50	62,602	149.00	46,968	19,854	27.5%	-
Deep Pool	-1.5	-4	149.00	46,968	146.00	8,267	26,009	36.0%	25%

Characterize the Acres and Loads Draining to the Retrofit

	Urban Impervious Acres	Urban Pervious Acres	Total Urban Acres	Forested Acres	Impervious LOADS (per DCR Potomac River Basi TN	TP	TSS	Pervious LOADS (per DCR Potomac River Basin) TN	TP	TSS	TOTAL LOADS to retrofit TN	TP	TSS
Regulated AC	28.06	29.77	57.83		473.0	45.5	32863.6	299.8	12.2	5234.1	**772.9**	**57.7**	**38097.7**
Regulated APS	0.00	0.00	0.00		0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
Regulated VDOT	3.96	2.29	6.25		66.8	6.4	4639.9	23.0	0.9	401.8	**89.8**	**7.4**	**5041.7**
Regulated FED			0.00		0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
Unregulated Land	0.08	0.53	0.61	13.54	1.3	0.1	93.7	5.3	0.2	93.2	**6.7**	**0.3**	**186.9**
	32.10	32.59	64.69	13.54									

Calculate retrofit removal rates and loads removed

		REMOVAL RATES per adjustor curves		
Retrofit storage vol (ac-ft)	Runoff depth treated (in)	TN	TP	TSS
3.21	1.2001	**37%**	**57%**	**73%**

Calculate total loads removed for Regulated and Unregulate

	TN	TP	TSS
Regulated AC	282.3	33.1	27834.6
Regulated APS	0.0	0.0	0.0
Regulated VDOT	32.8	4.2	3683.5
Regulated FED	0.0	0.0	0.0
Unregulated Land	2.4	0.2	136.5
	317.6	**37.5**	**31654.6**

Calculate net credit to MS4

	TN	TP	TSS
Total loads removed by retrofit	317.6	37.5	31654.6
Baseline reductions required for other regulated and unregu	8.16	0.86	989.82
	309.4	**36.7**	**30664.8**

Sparrow Pond Existing Stage Storage[1]

Elevation (ft)	Area (ft^2)	Volume at Elevation (ft^3)	Cumulative Volume (ft^3)	Cumulative Volume (ac-ft)
146	312	0	0	0.00
147	501	407	407	0.01
148	763	632	1,039	0.02
149	6,075	3,419	4,458	0.10
150	18,397	12,236	16,694	0.38
151	30,304	24,351	41,044	0.94
152	37,895	34,100	75,144	1.73
153	43,297	40,596	115,740	2.66
154	48,873	46,085	161,825	3.71
155	61,562	55,218	217,042	4.98

Sparrow Pond Retrofit Stage Storage[1]

Elevation (ft)	Area (ft^2)	Volume at Elevation (ft^3)	Cumulative Volume (ft^3)	Cumulative Volume (ac-ft)
144	0	0	0	0.00
145	2,176	725	725	0.02
146	5,416	3,675	4,400	0.10
147	9,164	7,208	11,609	0.27
148	14,127	11,556	23,165	0.53
149	27,633	20,506	43,671	1.00
150	36,032	31,740	75,411	1.73
151	47,548	41,657	117,068	2.69
152	51,650	49,585	166,653	3.83
153	55,376	53,502	220,155	5.05
154	58,552	56,957	277,112	6.36
155	62,349	60,441	337,552	7.75
156	65,923	64,128	401,680	9.22

Proposed Forebay Stage Storage[1]

Elevation (ft)	Area (ft^2)	Volume at Elevation (ft^3)	Cumulative Volume (ft^3)	Cumulative Volume (ac-ft)
142.5	1341	0	0	0
143	1590	732	732	0.017
144	2396	1979	2711	0.062
145	3234	2805	5516	0.127
146	4138	3677	9192	0.211
147	5102	4612	13804	0.317
148	6146	5616	19420	0.446
148.5	6677	3205	22625	0.519

NOTE:
1. VOLUMES SHOWN ARE FOR COMPARISON PURPOSES ONLY. NOT FOR USE IN CALCULATIONS.

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

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

Project Name: Sparrow Pond Retrofit
Date: 1/21/2022
Linear Development Project? Yes

CLEAR ALL

data input cells
constant values
calculation cells
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 1.9500

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Maximum reduction required: 20%
The site's net increase in impervious cover (acres) is: 0.0100
Linear project? Yes
Post-Development TP Load Reduction for Site (lb/yr): -0.4563
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓
TP LOAD REDUCTION NOT REQUIRED

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space		1.8600			1.8600
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed					0.0000
Impervious Cover (acres)		0.0900			0.0900
					1.9500

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land		1.8500			1.8500 *
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed					0.0000
Impervious Cover (acres)		0.1000			0.1000
Area Check	OK.	OK.	OK.	OK.	1.9500

** Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method*

Constants

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

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	1.8600	1.8500
Weighted Rv(forest)	0.0300	0.0300
% Forest	95%	95%
Managed Turf Cover (acres)	0.0000	0.0000
Weighted Rv(turf)	0.0000	0.0000
% Managed Turf	0%	0%
Impervious Cover (acres)	0.0900	0.0900
Rv(impervious)	0.9500	0.9500
% impervious	5%	5%
Total Site Area (acres)	**1.9500**	**1.9400**
Site Rv	**0.0725**	**0.0727**

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0118	0.0118
Pre-ReDevelopment Treatment Volume (cubic feet)	512.9190	511.8300
Pre-ReDevelopment TP Load (lb/yr)	**0.3223**	**0.3216** *
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.1700	0.1700 *
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.7954

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post-ReDev. & New Impervious	
Forest/Open Space Cover (acres)	1.8500
Weighted Rv(forest)	0.0300
% Forest	95%
Managed Turf Cover (acres)	0.0000
Weighted Rv (turf)	0.0000
% Managed Turf	0%
Impervious Cover (acres)	0.1000
Rv(impervious)	0.9500
% impervious	5%
Final Site Area (acres)	**1.9500**
Final Post Dev Site Rv	**0.0772**

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0125
Final Post-Development Treatment Volume (cubic feet)	546.3150
Final Post-Development TP Load (lb/yr)	**0.3432** *
Final Post-Development TP Load per acre (lb/acre/yr)	0.1800

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	1.8500
Weighted Rv(forest)	0.0300
% Forest	95%
Managed Turf Cover (acres)	0.0000
Weighted Rv (turf)	0.0000
% Managed Turf	0%
ReDev. Impervious Cover (acres)	0.0900
Rv(impervious)	0.9500
% impervious	5%
Total ReDev. Site Area (acres)	**1.9400**
ReDev Site Rv	**0.0727**

Treatment Volume and Nutrient Load

Post-ReDevelopment Treatment Volume (acre-ft)	0.0118
Post-ReDevelopment Treatment Volume (cubic feet)	511.8300
Post-ReDevelopment TP Load (TP) (lb/yr)*	0.3216
Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.1700
Max. Reduction Required (Below Pre-ReDevelopment Load)	20%
TP Load Reduction Required for Redeveloped Area (lb/yr)	-0.4738

Land Cover Summary-New Impervious

Post-Development New Impervious	
New Impervious Cover (acres)	0.0100
Rv(impervious)	0.9500
Post-Development Treatment Volume (acre-ft)	0.0008
Post-Development Treatment Volume (cubic feet)	34.4850
Post-Development TP Load (lb/yr)	**0.0217**
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.0176**

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

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

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

* *Reduction below new development load limitation not required*

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr) -0.4563 ** *TP LOAD REDUCTION NOT REQUIRED*
Linear Project TP Load Reduction Required (lb/yr): -0.4563 ** *TP LOAD REDUCTION NOT REQUIRED*

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	2.3054	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	2.4555

MAINTENANCE RESPONSIBILITY TABLE

Maintenance	DPR Responsibility	DES Responsibility	NVRPA
Ponds/Forebay	None	Retrofitted pond, forebay and all its stormwater components in perpetuity. • Cleaning out the forebay and pools. • Beaver baffles – ensuring they are functional and at the correct elevation	
Vegetation	Period: Five years after completion of construction and forward • Invasive control/establishment • Berm vegetation, if any • Aquatic bench vegetation	Period: Construction completion - 5 years • Vegetation management (invasive control/establishment) for five years post-construction	
Public access elements	• Trails, boardwalks, platforms, bike racks, benches, fencing, park signage and trash containers • Non-vegetation natural resource elements, duck boxes, turtle basking stations • Amphibian pools • Bollards & swing gate	• Maintenance access road infrastructure • Maintenance staging areas	• Sparrow Pond observation platform & educational signage • W&OD trail infrastructure
Mowing	• Park turf areas • Designated areas adjacent to trails • Maintenance access road		

MAINTENANCE NOTE:
SEDIMENT SHOULD BE REMOVED FROM THE FOREBAY EVERY 3 TO 5 YEARS OR WHEN 3.5 FEET (ELEV 146.0) HAS ACCUMULATED, WHICHEVER COMES FIRST. MAINTENANCE VEHICLES WILL USE THE PROPOSED MAINTENANCE ACCESS PATH AND AVOID DRIVING ON THE W&OD TRAIL. MAINTENANCE ACCESS IS COVERED UNDER THE MAINTENANCE ACCESS AGREEMENT BETWEEN NOVA PARKS (FORMERLY NVRPA) AND ARLINGTON COUNTY THAT WILL ACCOMPANY THESE PLANS.

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

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SEAL
COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER
Adam E. Fuleay 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR
6/6/22
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR
Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SWM TMDL CALCULATIONS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

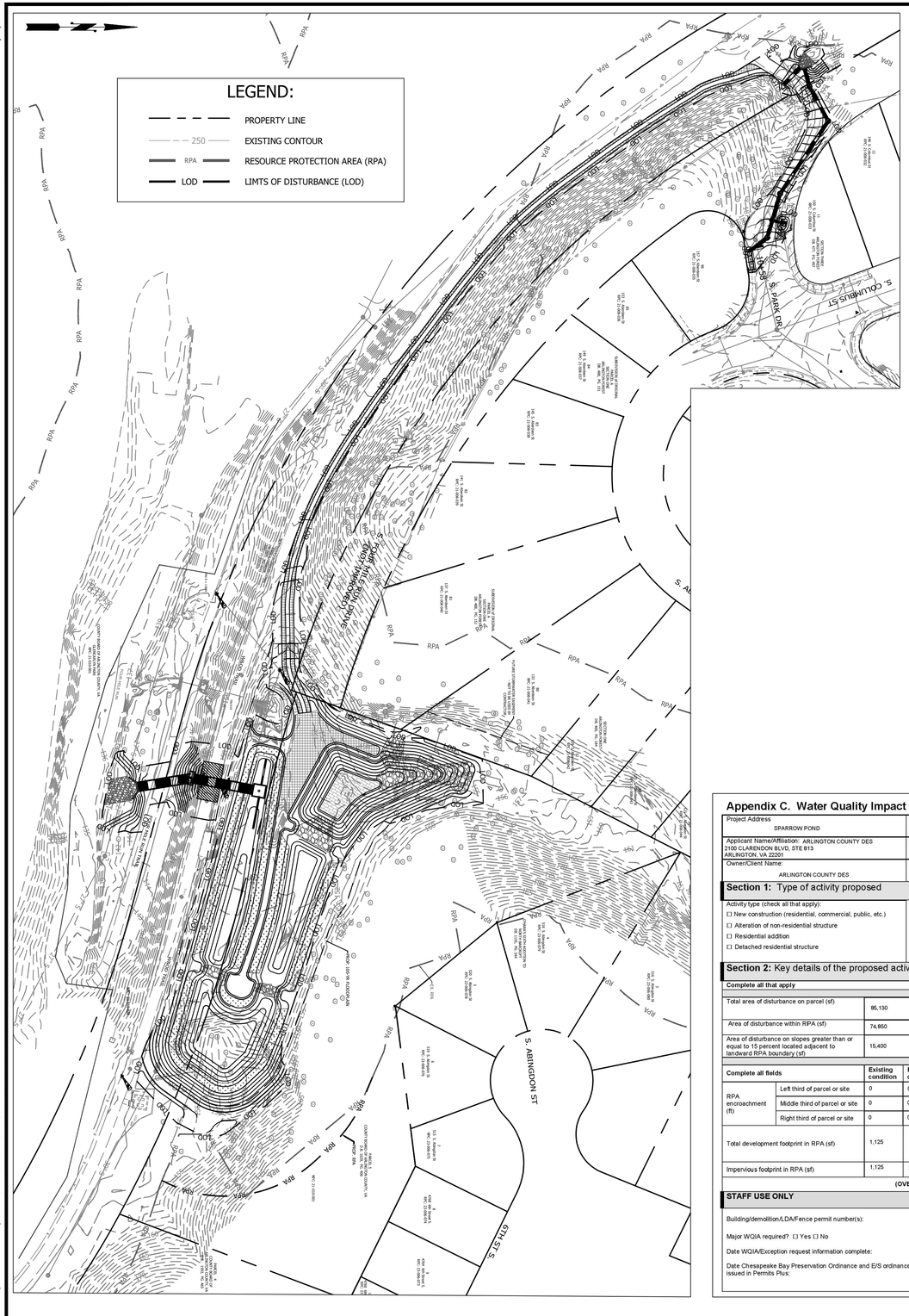
SCALE:

N/A

33

FILENAME: S44D-255-STORM_COMPS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021



FILENAME: S44D-257-WQIA.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

OCTOBER 21, 2019

APPROVED JURISDICTIONAL DETERMINATION

Northern Virginia Regulatory Section
NAO-2019-01728 (Sparrow Pond)

Ms. Ty Asfaw
Arlington County DES/OSEM
2100 Clarendon Boulevard, Suite 705
Arlington, VA 22201

Dear Ms. Asfaw:

This letter is in regard to your request for a verification of an approved jurisdictional determination for waters of the U.S. (including wetlands) on property known as Sparrow Pond on an approximately 3.4 acre parcel, south of Arlington Boulevard (Route 50), approximately 0.6 miles southwest of the intersection of Arlington Boulevard and South George Mason Drive in Arlington County, Virginia.

An onsite jurisdictional determination has found waters of the U.S. (including wetlands) regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344) on property listed above. This letter shall serve to confirm the delineation by Wetland Studies and Solutions, Inc., as shown on the map titled, "Sparrow Pond" dated June 6, 2019 (copy enclosed).

The basis for this determination is the application of the Corps' 1987 Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, and the positive indicators of wetland hydrology, hydric soils and hydrophytic vegetation. The wetland is a water of the United States and is part of a tributary system to interstate waters (33 CFR 328.3(a)). These waters meet the Corps' definition of waters of the United States, are part of a tributary system to interstate waters (33 CFR 328.3 (a)) and have an ordinary high water mark. **This letter is not confirming the Cowardin classifications of these aquatic resources.**

Discharges of dredged or fill material, including those associated with mechanized landclearing, into jurisdictional waters and/or wetlands on this site will require a Department of the Army permit and may require authorization by state and local authorities, including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps jurisdiction for the waters and/or wetlands on the subject property and does

not authorize any work in these jurisdictional areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the North Atlantic Division Office at the following address:

ATTN: Mr. James Haggerty, Regulatory Program Manager
United States Army Corps of Engineers
CENAD-PD-OR
Fort Hamilton Military Community
301 General Lee Avenue
Brooklyn, NY 11252-6700
Email: james.w.haggerty@usace.army.mil

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **"December 21, 2019."** It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This jurisdictional determination is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date. If you have any questions, please contact Ms. Theresita Crockett-Augustine in the Northern Virginia Field Office at 18139 Triangle Plaza, Suite 213, Dumfries, Virginia 22026, (757) 201-7194 or **theresita.m.crockett-augustine@usace.army.mil**.

Sincerely,
Theresita Crockett-Augustine
Digitally signed by Theresita Crockett-Augustine
Date: 2019.10.21 09:03:54 -04'00'

Theresita Crockett-Augustine
Environmental Scientist
Northern Virginia Regulatory Section

Enclosures:
Delineation Map
Appeals Form
Supplemental Preapplication Information

Appendix C. Water Quality Impact Assessment Data Sheet

Project Address	Date:
SPARROW POND	1/20/2022
Applicant Name/Affiliation: ARLINGTON COUNTY DES 2100 CLARENDON BLVD, STE 813 ARLINGTON, VA 22201	Applicant Contact Information (phone and email): (703) 228-7586 (apatel@arlingtonva.us)
Owner/Client Name: ARLINGTON COUNTY DES	Owner/Client Contact Information (phone and email):

Section 1: Type of activity proposed

Activity type (check all that apply):
- ☐ New construction (residential, commercial, public, etc.)
- ☐ Alteration of non-residential structure
- ☐ Residential addition
- ☐ Detached residential structure
- ☐ Deck, patio, or retaining wall
- ☒ Landscaping (includes tree removal)
- ☒ Utility work
- ☐ Fence
- ☒ Other (please describe): Pond restoration and installation of maintenance road

Section 2: Key details of the proposed activity

Complete all that apply		Explanation
Total area of disturbance on parcel (sf)	85,130	Includes building footprint plus a 10 foot buffer. Also includes all soil disturbance, ingress/egress areas, stockpiling areas, etc.
Area of disturbance within RPA (sf)	74,850	Includes removal of trees ≥ 3" in diameter
Area of disturbance on slopes greater than or equal to 15 percent located adjacent to landward RPA boundary (sf)	15,400	Does not apply to RPA parcels along Chain Bridge Road (15 percent and greater slopes are included as part of RPA)

Complete all fields		Existing condition	Proposed condition	Explanation
RPA encroachment (ft)	Left third of parcel or site	0	0	The **distance** (in feet) from the existing or proposed structure to the designated RPA feature (edge of stream or open channel, wetland, etc.). Encroachments of zero (0) indicate the project will impact the stream or other RPA feature.
	Middle third of parcel or site	0	0	
	Right third of parcel or site	0	0	
Total development footprint in RPA (sf)		1,125	2,660	The existing footprint includes the **area** of any existing structures, patios, decks, walkways, etc. Proposed footprint is the anticipated post-project area of all structures, additions, decks, walkways, regraded area behind a retaining wall, etc.
Impervious footprint in RPA (sf)		1,125	2,660	Total **area** of impervious surfaces within the RPA (rooftops, pavement, etc.)

(OVER)

STAFF USE ONLY

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

Major WQIA required? ☐ Yes ☐ No

Date WQIA/Exception request information complete:

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

Section 3: Plan and Narrative

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

THIS PROJECT CONSISTS OF THE RETROFITTING OF SPARROW POND OT ENHANCE WATER QUALITY IN FOUR MILE RUN AND ITS RECEIVING WATERS. OVER THE YEARS SPARROW POND HAS ACCUMULATED SILT AND REDUCED THE ABILITY TO TREAT THE INFLUENT WATER AS WELL AS REDUCE THE CAPACITY OF THE POND. THE RETROFIT HAS BEEN DESIGNED AS A CONSTRUCTED WETLAND WITH A FOREBAY TO PREVENT SEDIMENT ACCUMULATION AND FACILITATE MAINTENANCE, SHALLOW EMRGENT WETLAND AREAS AND DEEP WATER HABITATS. THE RETROFIT HAS A CONTRIBUTING DRAINAGE AREA OF APPROXIMATELY 80.76 ac.
EXISTING TREES WILL BE SAVED WHERE POSSIBLE. 111 TREES ARE DESIGNATED FOR REMOVAL, 48 ARE EITHER DEAD OR IN POOR CONDITION, AS SHOWN ON SHEETS 34-45. TREE PLANTING, REPLACEMENT, AND CRITICAL ROOT ZONE INFORMATION CAN ALSO BE FOUND ON THESE SHEETS.
EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLIMENTED AND MAINTAINED AS SHOWN ON SHEETS 6-11 IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
SAFE CONVEYANCE OF THE 100-YEAR STORM EVENT IS ALSO BEING INCORPORATED WITH THIS PROJECT. THIS WILL PREVENT OVERTOPPING OF THE W&OD EMBANKMENT DURING THE 100-YEAR STORM EVENT.THIS WILL BE ACCOMPLISHED BY INSTALLED A RISER STRUTURE THAT WILL PASS STORMWATER UNDER THE W&OD AND FOUR MILE RUN TRAILS INTO THE STREAM THROUGH A BOX CULVERT. DUE TO THE CONSTRAINTS OF THE SITE, NO DETENTION WILL BE PROVIDED FOR ANY MAJOR STORM EVENT(S). SHEET 32 PROVIDES MORE INFORMATION REGARDING THE STORMWATER CONVEYENCE AND WATER QUALITY DESIGN OF THIS PROJECT.

Additional Water Quality Impact Assessment Information

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

Appendix D. Exception Request Form

Applicant:	Project address:

Section 1: Brief description of exception request

Section 2: Parcel, structure, and ownership information

Date parcel ownership began: N/A

Date existing principal structure built: N/A

Will existing principal structure remain intact?
☐ Yes ☐ No

Date(s) of construction of any prior work by current owner (alterations, additions, decks, patios, etc.)—list individually:

Date	Type of prior work
1.	
2.	
3.	
4.	

STAFF USE ONLY

- ☐ Allowable development in RPA (§ 61-7.A)
- ☐ Allowable modification in RPA (§ 61-7.B)
- ☐ Allowable encroachment in RPA (§ 61-7.C)
- ☐ Expansion of nonconforming structure or use in RPA (§ 61-14) (exception request required)
- ☐ New development in the RPA, redevelopment that increases impervious area in the RPA or encroaches further into the RPA, or any other proposed disturbance of any RPA component (exception request required)
- ☐ Exempted activity in RPA (§ 61-15) _____
- ☐ Proposed development in RMA on 15 percent slopes adjacent to RPA
- ☐ Other RMA activity_____

CBORC hearing required? ☐ Yes ☐ No

Date public notification sent certified mail:

Hearing date:

CBORC decision: ☐ Approved ☐ Not approved

Date of final approval letter:

ARLINGTON
VIRGINIA

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

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SEAL
COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum	05/27/22
QUALITY CONTROL ENGINEER	
Adam E. Fillery	6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR	
	6/6/22
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	6/7/22
TRANSPORTATION DIRECTOR	
Ty Asfaw	06/10/22
PROJECT MANAGER	

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

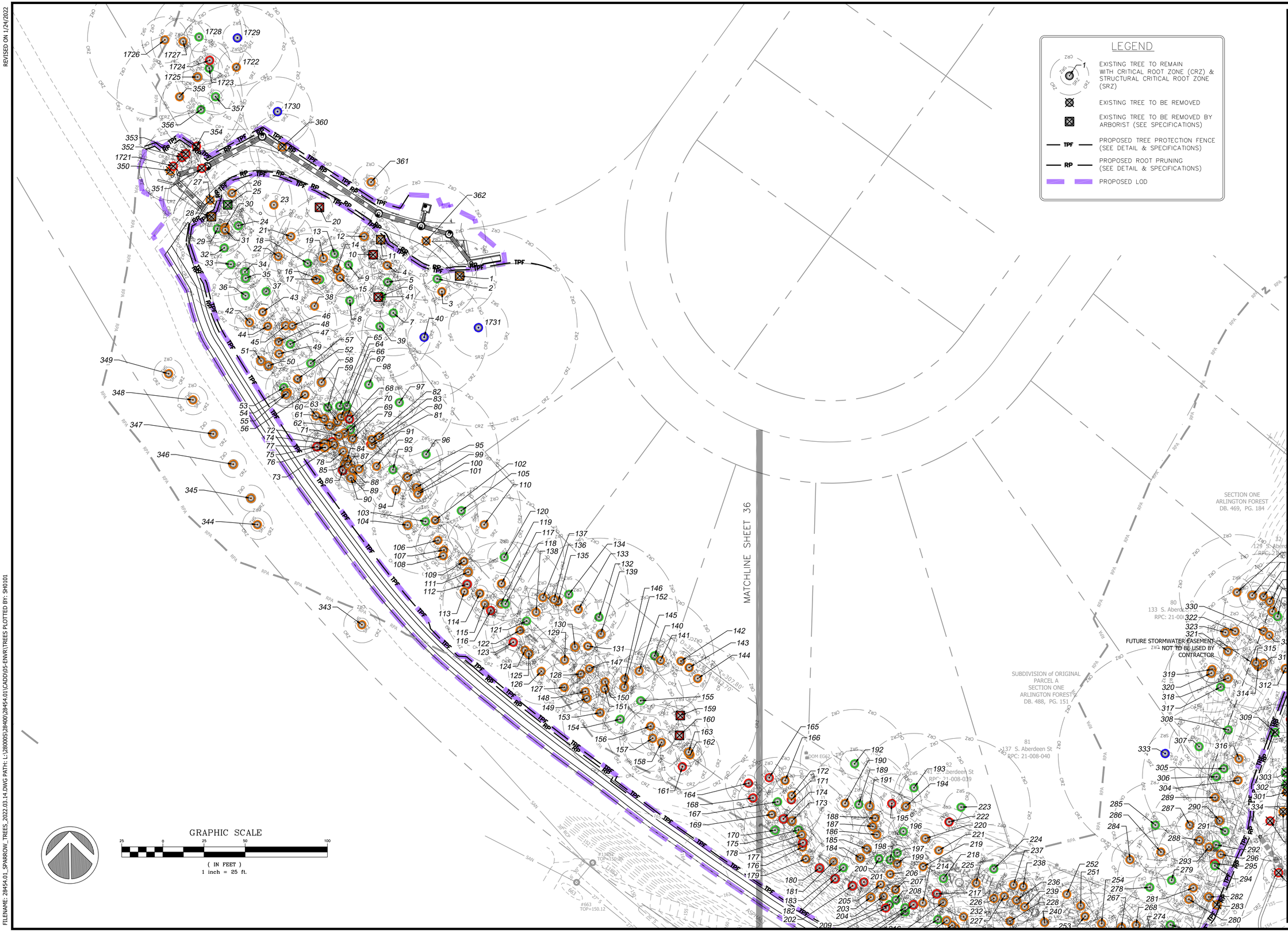
WATER QUALITY IMPACT ASSESSMENT PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:
0 50 100
GRAPHIC SCALE

REVISED ON 1/24/2022



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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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE
CARY HULSE
ISA No PD-1080A
CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION PLAN
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

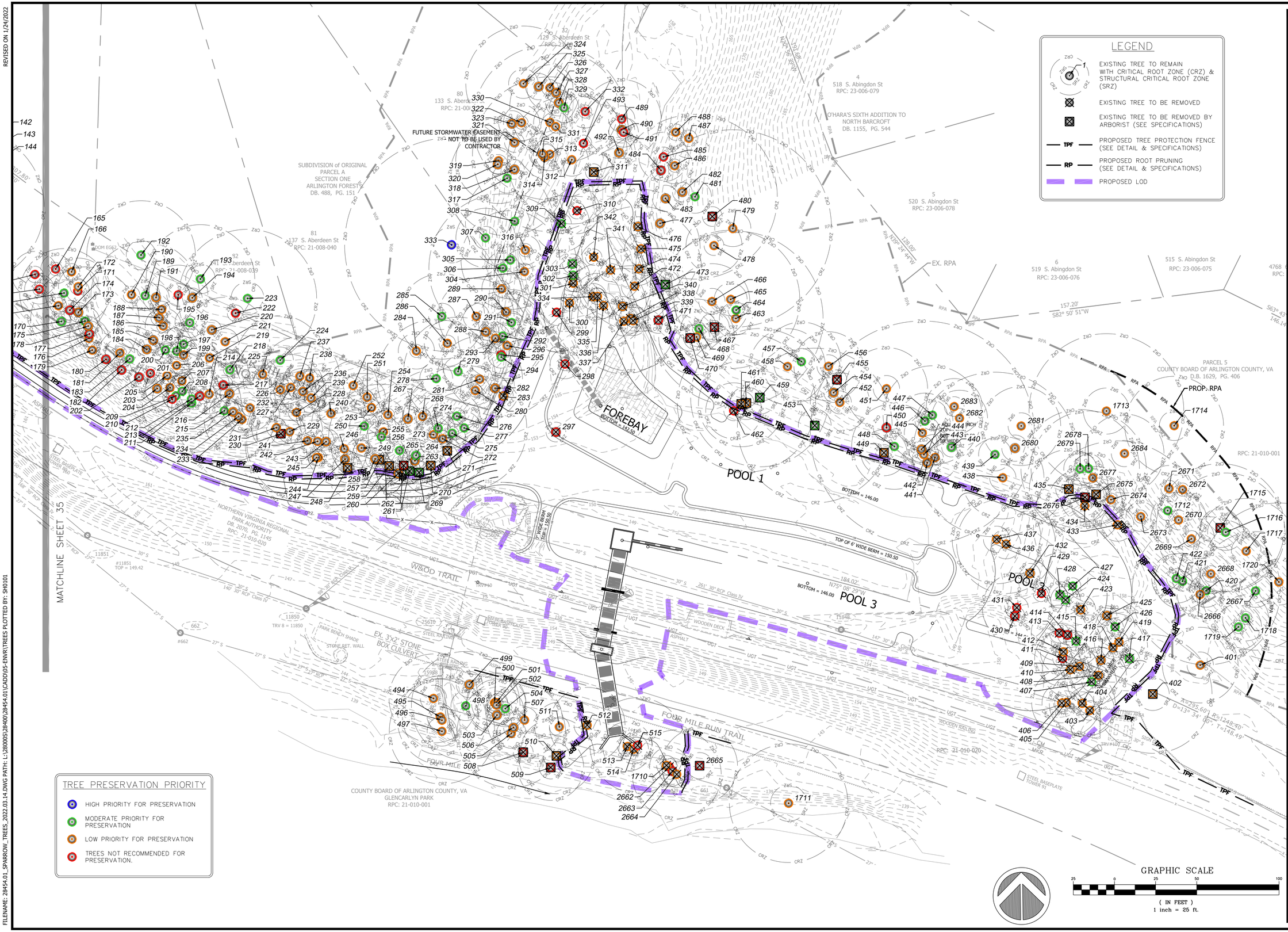
PLOTTED: MARCH 15 2022

SCALE:
1" = 25'

SHEET 35

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\2840\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022



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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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE CERTIFIED ARBORIST
CARY HULSE
ISA No PD-1080A

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

TREE PRESERVATION PLAN
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
1" = 25'

SHEET 36

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

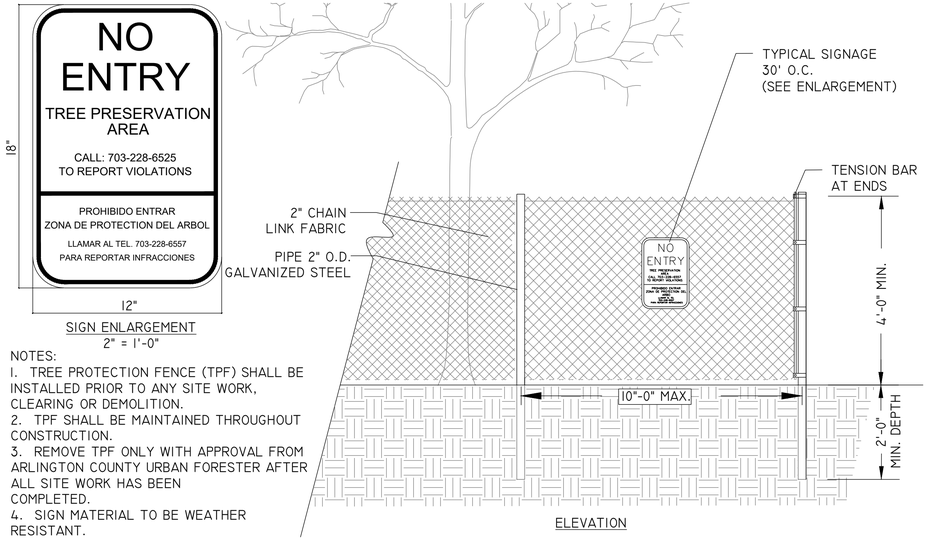
REVISED ON 1/24/2022

TREE PRESERVATION SPECIFICATIONS AND NARRATIVE

1. GENERAL
   - 1.1. REFER TO THE TREE PROTECTION ACTION KEY (TPAK) FOR SPECIFIC RECOMMENDATIONS FOR EACH TREE.
   - 1.2. PRIOR TO ANY DEMOLITION OR CONSTRUCTION WORK WITHIN OR ADJACENT TO TREE PROTECTION AREAS (TPA), A PRE-CONSTRUCTION SITE WALK SHALL BE HELD TO INCLUDE THE CONTRACT ARBORIST AND PROJECT ARBORIST WITH THE CONTRACTOR, ARCHITECT, *ARLINTON COUNTY*, AND OWNER.
   - 1.3. SUBSTITUTIONS OR ALTERNATIVE METHODS OR MATERIALS SHALL BE REVIEWED AND APPROVED BY *ARLINTON COUNTY*.
   - 1.4. ALL TREE PROTECTION MEASURES MUST BE IN PLACE PRIOR TO COMMENCEMENT OF DEMOLITION, SITE CLEARING OR CONSTRUCTION AND MAINTAINED THROUGHOUT CONSTRUCTION. TREE PROTECTION MEASURES MAY ONLY BE REMOVED WITH *ARLINTON COUNTY* APPROVAL.
   - 1.5. ALL MEASURES WILL BE REVIEWED AFTER INSTALLATION AND APPROVED BY OWNER AND *ARLINTON COUNTY*.
2. REMOVAL BY ARBORIST
   - 2.1. TREES DESIGNATED AS "REMOVAL BY ARBORIST" SHALL BE REMOVED BY A QUALIFIED ARBORIST "BY HAND", TO MINIMIZE POTENTIAL FOR DAMAGE TO REMAINING TREES AND ROOTS.
   - 2.2. CREWS SHALL BE DIRECTLY SUPERVISED BY A CERTIFIED ARBORIST.
   - 2.3. TRUCKS AND MECHANIZED EQUIPMENT SHALL NOT ENTER THE FENCED TREE PROTECTION AREAS, EXCEPT WHERE EXPLICITLY APPROVED BY THE PROJECT ARBORIST AND UTILIZING APPROVED ROOT PROTECTION DEVICE.
   - 2.4. STUMPS SHALL BE LEFT IN PLACE OR GROUND OUT AT THE OWNERS DISCRETION. STUMPS IN TURF/LANDSCAPE AREAS OR WITHIN ROOT AERATION MATTING AREAS SHALL BE GROUND.
   - 2.5. STUMP GRINDING SHALL BE DONE WITH SMALL MACHINES SPECIFICALLY DESIGNED FOR THAT PURPOSE. NO STUMPS SHALL BE EXCAVATED EXCEPT AS DESCRIBED HEREIN. STUMPS SHALL BE GROUND NOT MORE THAN 8" BELOW GRADE AND CARE MUST BE TAKEN TO MINIMIZE DAMAGE TO ROOTS OF RETAINED TREES.
3. TREE PROTECTION FENCE
   - 3.1. INSTALL AND MAINTAIN TEMPORARY TREE PROTECTION FENCE FOR EACH TREE PROTECTION AREA AS SHOWN ON THE PLAN. INSTALLATION IS TYPICALLY AFTER ROOT PRUNING AND PRIOR TO CLEARING & GRADING.
   - 3.2. FENCE SHALL BE ONE OF THE FOLLOWING: (SEE DETAIL)
     - 3.2.1. 4' HIGH, 14 GAUGE WELDED WIRE FENCE MOUNTED ON 6' STEEL "T" POSTS SPACED NOT MORE THAN 10' APART. FENCE SHALL BE ATTACHED TO POSTS USING GALVANIZED STEEL CLIPS OR ALUMINUM TIES. PLASTIC "ZIP" TIES SHALL NOT BE USED.
     - 3.2.2. 6' HIGH CHAIN LINK FENCE FABRIC MOUNTED ON 8', 1.5"ø GALVANIZED STEEL PIPE LINE POSTS. CORNER POSTS SHALL BE 2"ø. FENCE SHALL BE ATTACHED TO POSTS USING ALUMINUM TIES. PLASTIC "ZIP" TIES SHALL NOT BE USED.
     - 3.2.3. "SUPER SILT FENCE" (SILT FENCE WITH AN INCORPORATED CHAIN LINK FENCE FABRIC) INSTALLED AS SPECIFIED BY APPROPRIATE STATE OR LOCAL EROSION AND SEDIMENT CONTROL REQUIREMENTS.
   - 3.3. SILT FENCE SHALL BE COORDINATED FOR INSTALLATION TO ENHANCE PROTECTION AND AVOID UNNECESSARY ROOT CUTS BY SILT FENCE INSTALLATION.
   - 3.4. FENCE SHALL REMAIN FOR THE DURATION OF CONSTRUCTION. FENCE MAY BE REMOVED ONLY AFTER ALL CONSTRUCTION AND FINAL LANDSCAPING IS COMPLETE AND WITH *ARLINTON COUNTY* APPROVAL.
4. TREE PROTECTION AREA SIGNS
   - 4.1. TREE PROTECTION AREA SIGNS SHALL BE AFFIXED TO ALL TREE PROTECTION FENCE AT 30' SPACING AVERAGE.
   - 4.2. SIGNS SHALL BE BILINGUAL (ENGLISH AND SPANISH).
   - 4.3. SIGNS SHALL NOT BE AFFIXED DIRECTLY TO TREES. SEE DETAIL.
   - 4.4. SIGN MATERIAL SHALL BE WATERPROOF, HEAVY VINYL OR SIMILAR.
   - 4.5. SIGNS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
5. ROOT PRUNE
   - 5.1. THE EXACT LOCATION AND DEPTH WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING. SPECIFIC EQUIPMENT & METHODS WILL BE DETERMINED BY PROJECT ARBORIST AND *ARLINTON COUNTY* BASED UPON DEPTH & TREE IMPACT. (SEE DETAIL)
   - 5.2. HAND PRUNE ROOTS OVER 1" DIAMETER WITHIN CRZS OF SIGNIFICANT TREES. STEEP SLOPES, DEEP EXCAVATIONS AND PAVEMENT/CURB REMOVAL WILL BE REVIEWED WHEN OPEN FOR HAND ROOT PRUNING DURING CONSTRUCTION.
   - 5.3. COORDINATE WITH SILT FENCE INSTALLATION TO MINIMIZE UNNECESSARY ROOT DAMAGE.
   - 5.4. ROOT PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST.
6. WOOD CHIP MULCH
   - 6.1. INSTALL MULCH FOR DESIGNATED SIGNIFICANT TREES. MULCH AREA SHALL BE ONE OF THE FOLLOWING, AT THE DISCRETION OF THE CONTRACT ARBORIST AND OWNER:
     - 6.1.1. INSTALL MULCH BED RINGS. MULCH SHOULD COVER AT LEAST THE ENTIRE STRUCTURAL ROOT ZONE. LARGER MULCH BEDS ARE PREFERRED.
     - 6.1.2. PROVIDE CONTINUOUS MULCH STRIP 10' TO 15' WIDE ALONG LOD WITHIN PRESERVED CRZ AREAS.
   - 6.2. MULCH SHALL BE INSTALLED TO A DEPTH OF 4". TOTAL MULCH DEPTH SHALL NOT EXCEED 4" SHOULD EXISTING MULCH BE PRESENT.
   - 6.3. MULCH SHALL BE DOUBLE GROUND SHREDDED HARDWOOD, AGED FOR AT LEAST 6 MONTHS FROM AN APPROVED SOURCE. INSUFFICIENTLY OR IMPROPERLY AGED MULCH CONTAINING HIGH BACTERIAL COUNTS OR HIGH LEVELS OF BARK, WALNUT, INVASIVE SPECIES, OR OTHER MATERIALS RESISTANT TO DECOMPOSITION SHALL NOT BE USED.
   - 6.4. MULCH SHALL NOT CONTACT TRUNK OF TREES.
   - 6.5. EDGING SHALL NOT BE USED.
7. CONSTRUCTION MONITORING/INSPECTIONS
   - 7.1. A CERTIFIED ARBORIST SHALL ACTIVELY MONITOR THE SITE TO ENSURE ADHERENCE TO ALL TREE PROTECTION REQUIREMENTS.
   - 7.2. THIS WORK IS TYPICALLY PREFORMED BY THE CONTRACT ARBORIST, TO BE HIRED BY THE GENERAL CONTRACTOR OR OWNER.
   - 7.3. SCHEDULE:
     - 7.3.1. PHASE 1 (DURING INITIAL CLEARING AND INSTALLATION OF TREE PROTECTION AND PERIMETER E&S CONTROLS) INSPECTIONS SHALL BE AT LEAST WEEKLY.
     - 7.3.2. PHASE 2 (DURING ALL REMAINING SITE WORK AND UNTIL PROJECT COMPLETION) INSPECTIONS SHALL BE AT LEAST MONTHLY.
     - 7.3.3. TRANSITION FROM WEEKLY TO MONTHLY SCHEDULE SHALL REQUIRE OWNER AND *ARLINTON COUNTY* APPROVAL.
   - 7.4. REPORTS SHALL BE PROVIDED TO THE OWNER AND *ARLINTON COUNTY*. REPORTS SHALL DOCUMENT CONDITION OF TREE PROTECTION DEVICES AND PROVIDE RECOMMENDATIONS FOR MAINTENANCE AND/OR ADDITIONAL CARE.
   - 7.5. ADDITIONAL ARBORIST INSPECTIONS AND/OR DIRECT ARBORIST OVERSIGHT OF CRITICAL TREE PRESERVATION ACTIVITIES, TREE PRUNING, TREE REMOVAL, OR OTHER SENSITIVE ACTIVITIES MAY BE REQUIRED. WEEKLY INSPECTIONS DO NOT SATISFY THE NEED FOR DIRECT ARBORIST OVERSIGHT THAT MAY BE REQUIRED FOR SPECIFIC ACTIVITIES.
8. MISCELLANEOUS TREE PROTECTION REQUIREMENTS
   - 8.1. NO TOXIC MATERIALS SHALL BE STORED WITHIN 100' OF TREE PROTECTION AREAS.
   - 8.2. ALL WORK IN OR NEAR TREE PROTECTION AREAS SHALL BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO TREES, SHRUBS, GROUND COVER, SOIL AND ROOT SYSTEMS.
   - 8.3. MECHANIZED EQUIPMENT SHALL NOT BE PERMITTED TO ENTER ANY TREE PROTECTION AREAS WITHOUT EXPLICIT APPROVAL BY THE PROJECT ARBORIST AND *ARLINTON COUNTY*, AND WITH ADEQUATE APPROVED ROOT PROTECTION DEVICES.
9. CANOPY PRUNING & SUPPORT CABLES
   - 9.1. CANOPY PRUNING SHALL BE CLEANING PRUNING AND/OR RESTORATION PRUNING AND SHALL BE IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA BEST MANAGEMENT PRACTICES.
   - 9.2. PRUNING SHALL REMOVE ONLY DEAD, DYING, DAMAGED OR BROKEN BRANCHES GREATER THAN 1" IN DIAMETER. PRUNING OF SMALL TREES MAY INCLUDE REMOVAL OF LIMBS TO IMPROVE STRUCTURE.
   - 9.3. FOLIAGE REMOVAL SHALL NOT BE MORE THAN 25% OF THE TOTAL LIVE CANOPY VOLUME OF ANY TREE IN ANY ONE SEASON. PRUNING SHALL NOT REMOVE INTERIOR BRANCHING EXCEPT AS OTHERWISE STATED.
   - 9.4. PRUNING FOR SPECIFIC CLEARANCE (FOR CONSTRUCTION ACCESS OR PROPOSED IMPROVEMENTS) SHALL BE REVIEWED AND APPROVED BY THE OWNER AND *ARLINTON COUNTY*.
   - 9.5. SUPPORT CABLES SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA BEST MANAGEMENT PRACTICES.

ARLINGTON COUNTY STANDARD TREE PROTECTION NOTES

1. BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, TREE PROTECTION NEEDS TO BE INSTALLED PER PLAN, AND INSPECTED BY AN ARLINGTON COUNTY PARKS AND RECREATION URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
2. PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL PLANTS, MATERIALS, AND EQUIPMENT.
3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.
4. PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT. ALL PLANTS KEPT ON SITE FOR ANY PERIOD OF TIME SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.
5. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
6. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN MUDDY OR FROZEN CONDITION. LAWNS, TREES AND SHRUBS SHALL BE INSTALLED BETWEEN 03/15 AND 06/15 OR BETWEEN 09/15 AND 12/01. IF A PROJECT COMPLETION IS OUTSIDE OF THIS PLANTING PERIOD, CONTACT THE ARLINGTON COUNTY URBAN FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.
7. NO PLANT, EXCEPT GROUND COVERS, SHALL BE PLANTED WITHIN TWO FEET OF A SIDEWALK.
8. TREES AND SHRUBS SHALL BE PLANTED IN HOLES TWO TO THREE TIMES AS WIDE AND TO THE DEPTH OF THE ROOT BALL.
9. PLANTS SHALL BE PLANTED IN IN SITU SOIL THAT IS THOROUGHLY WATERED.
10. SET ALL PLANTS PLUMB AND STRAIGHT SET AT SUCH LEVEL THAT NORMAL OR NATURAL RELATIONSHIP BETWEEN THE PLANT AND THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE THE PLANT IN THE CENTER OF THE PIT.
11. INJURED ROOTS SHALL BE PRUNED TO CLEAN ENDS BEFORE PLANTING WITH CLEAN, SHARP TOOLS. THE LEADER OF TREES SHALL NOT BE CUT BACK.
12. PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY A DEPARTMENT OF PARKS AND RECREATION URBAN FORESTER.
13. ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL OR COMPOST AND SEEDED IN ACCORDANCE WTH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET AND/OR LANDSCAPE PLAN.



NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
2. TPF SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

1/37 — 4' CHAIN LINK TREE PROTECTION FENCE (RESIDENTIAL) — 1/2" = 1'-0"

02231.2 (2013)

ARLINGTON VIRGINIA DPR

ADDITIONAL NOTES:

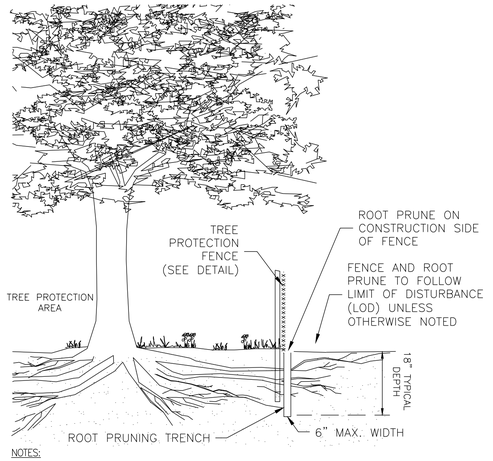
1. *TREE LOCATIONS MAY BE APPROXIMATE. OWNER AND CONTRACT ARBORIST SHALL VERIFY ALL TREE LOCATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND/OR TREATMENT OR REMOVAL.*
2. *PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF DEMOLITION/CONSTRUCTION ACTIVITY. ARLINTON COUNTY, OWNER, DESIGN TEAM MEMBERS (PROJECT ARBORIST, LANDSCAPE ARCHITECT, ENGINEER AND ARCHITECT), CONTRACT ARBORIST, SITE AND LANDSCAPE CONTRACTORS SHALL ATTEND.*
3. *THE INSPECTION OF THESE TREES CONSISTED SOLELY OF A VISUAL INSPECTION FROM THE GROUND. WHILE MORE THOROUGH TECHNIQUES ARE AVAILABLE FOR INSPECTION AND EVALUATION, THEY WERE NEITHER REQUESTED NOR CONSIDERED NECESSARY OR APPROPRIATE AT THIS TIME.*
4. *TREES RATED "POOR" OR "DEAD" THAT ARE NOT RECOMMENDED FOR REMOVAL DUE TO CONSTRUCTION IMPACT MAY WARRANT FURTHER EVALUATION AND/OR TREATMENT OR REMOVAL.*

TREE INVENTORY NOTES:

1. TREE INVENTORY FIELDWORK AND LEVEL 2 RISK ASSESSMENT PERFORMED BY DAVID MEANS, ISA CERTIFIED ARBORIST IL-0110A, OF WETLAND STUDIES AND SOLUTIONS, INC. (WSSI) BETWEEN MAY AND JUNE 2019 WITH AN ADDITIONAL UPDATE IN MAY 2020.
2. FURTHER TREE INVENTORY WAS CONDUCTED IN DECEMBER 2021 BY NATHAN EVANS, ISA# MA-6119A.

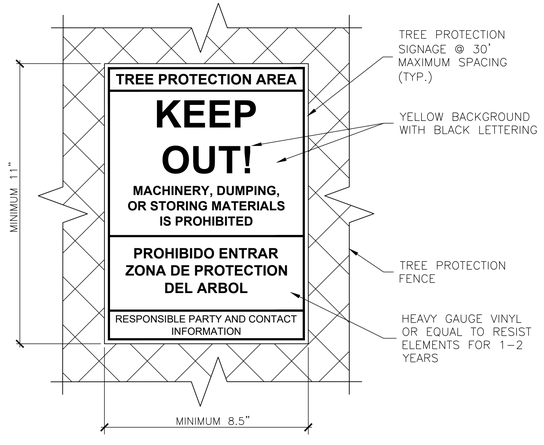
RISK ASSESSMENT NOTES:

1. A LEVEL 2 RISK ASSESSMENT WAS CONDUCTED AT THE TIME OF THE TREE INVENTORY.
2. THE TIME PERIOD FOR THIS RISK ASSESSMENT IS ONE YEAR, OR UNTIL CONSTRUCTION IN THE VICINITY OF THE TREES BEGINS. RISK ASSESSMENT CAN ONLY ADDRESS THE TREE AND SITE CONDITIONS PRESENT AT THE TIME OF THE ASSESSMENT.
3. POTENTIAL RISK PRESENTED BY FUTURE TREE IMPACTS (SUCH AS IMPACTS FROM PROPOSED CONSTRUCTION ACTIVITIES) OR FUTURE SITE IMPROVEMENTS OR TARGETS CANNOT BE ASSESSED AND WAS NOT INCLUDED IN THIS RISK ASSESSMENT.
4. ASSESSMENT WAS LIMITED TO LEVEL 2 BASIC VISUAL ASSESSMENT. NO AERIAL CROWN INSPECTIONS, SUB-SURFACE ROOT INVESTIGATIONS, OR INTERNAL INVESTIGATIONS WERE DONE.
5. ONLY THOSE TREES WITHIN THE DESIGNATED SCOPE OF WORK WERE INCLUDED, AND ASSESSMENTS WERE ONLY PERFORMED WITHIN THE LIMITATIONS PROVIDED.
6. THE ASSESSMENT CONSIDERED ONLY SIGNIFICANT KNOWN AND EXISTING TARGETS, AND VISIBLE OR ACCESSIBLE TREE DEFECTS.
7. NOT ALL DEFECTS ARE DETECTABLE AND NOT ALL FAILURES ARE PREDICTABLE OR PREVENTABLE.



NOTES:
1. TREE PROTECTION AREA WILL BE DETERMINED AS PART OF THE PLAN REVIEW PROCESS. EXACT LOCATION, DEPTH AND METHODS OF ROOT PRUNING TO BE DETERMINED IN THE FIELD BY PROJECT ARBORIST.
2. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.
3. TRENCH SHOULD BE BACKFILLED IMMEDIATELY OR INCORPORATED WITH SILT FENCE INSTALLATION.
4. ROOTS SHOULD BE SEVERED BY ROCK SAW, TRENCHER, VIBRATORY PLOW OR APPROVED EQUIVALENT.
5. ROOTS OVER 1.5" DIAMETER SHOULD BE CLEANLY CUT BY HAND. ROOT PRUNING ADJACENT TO SPECIMEN TREES MAY REQUIRE SOIL REMOVAL BY SUPERSONIC AIR TOOL TO MINIMIZE TREE AND ROOT IMPACTS.
6. COORDINATE WITH SILT FENCE INSTALLATION (IF REQUIRED) TO MINIMIZE ROOT IMPACTS FROM ADDITIONAL TRENCHING.

2/37 — ROOT PRUNING (TYPICAL)
SCALE: NTS



NOTES:
1. SIGNS TO BE ATTACHED TO TREE PROTECTION FENCE OR POSTS AT READABLE LEVEL.
2. 30' MINIMUM SPACING AVERAGE ADJUSTED FOR MAXIMUM READABILITY.
3. MINIMUM ONE SIGN FOR SMALL TREE PROTECTION AREAS.
4. SIGNS MAY BE REMOVED FROM RESIDENTIAL LOTS UPON ISSUANCE OF USE AND OCCUPANCY.
5. SIGNS TO REMAIN ON NON RESIDENTIAL SITES FOR MAINTENANCE PERIOD.

3/37 — TREE PROTECTION AREA SIGN (TYPICAL)
SCALE: NTS

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE — CARY HULSE — ISA No PD-1080A — CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION NOTES & DETAILS
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 37

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
1	10,11	mulberry, spp.	Morus spp.	58	Fair	24	15	2	8.0	22	3		X									Narrow Crown, One Sided, Large DW (3"+), Branch Decay, Broken Limbs, Co-Dominant Stems, Suppressed, Stressed, Excessive Lean
2	16	sweetgum, American	Liquidambar styraciflua	64	Fair	16	55	1	8.0	24	2			X	X	X	X	X			Narrow Crown, Small DW (1-2"), Trunk Decay, Mechanical Damage
3	3	maple, red	Acer rubrum	50	Fair	6	25	1	2.0	5	3				X						Narrow Crown, Small DW (1-2"), Branch Decay, Suppressed, Mechanical Damage
4	10	blackgum	Nyssa sylvatica	50	Fair	14	50	1	6.0	15	3			X	X	X	X	X			One Sided, Small DW (1-2"), Suppressed
5	9	oak, black	Quercus velutina	70	Good	15	45	1	5.0	14	2				X						Narrow Crown, Excessive Lean
6	14	oak, black	Quercus velutina	73	Good	15	65	1	7.0	21	2				X						Narrow Crown, Suppressed, Excessive Lean
7	17	oak, northern red	Quercus rubra	72	Good	27	70	1	8.0	26	2				X						Narrow Crown, One Sided, Basal Decay, Suppressed, Vines
8	21	oak, northern red	Quercus rubra	75	Good	26	80	1	9.0	32	2				X						Narrow Crown, One Sided, Small DW (1-2")
9	13	oak, chestnut	Quercus montana	67	Fair	15	65	1	7.0	20	2				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
10	5	mulberry, spp.	Morus spp.	0	Dead	0	18	1	3.0	8	4		X								Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Trunk Decay, Branch Decay, Suppressed, Stressed, Mechanical Damage, Serious Decline
11	8	elm, slippery	Ulmus rubra	50	Fair	14	20	1	5.0	12	3		X								One Sided, Small DW (1-2"), Suppressed, Overhead Utility, Stream Erosion
12	4	mulberry, spp.	Morus spp.	50	Fair	11	18	1	3.0	6	3				X						One Sided, Suppressed, Overhead Utility
13	24	oak, northern red	Quercus rubra	80	Good	35	75	1	10.0	36	2				X						Full Crown, Small DW (1-2")
14	10	oak, chestnut	Quercus montana	50	Fair	15	50	1	6.0	15	3				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
15	3	oak, chestnut	Quercus montana	58	Fair	4	20	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed
16	21	oak, white	Quercus alba	77	Good	33	85	1	9.0	32	2				X						Full Crown, Small DW (1-2")
17	4	maple, red	Acer rubrum	50	Fair	8	30	1	3.0	6	3				X						Narrow Crown, Suppressed
18	12	oak, chestnut	Quercus montana	67	Fair	15	65	1	7.0	18	2				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
19	6	maple, red	Acer rubrum	47	Poor	12	50	1	4.0	9	3				X						Narrow Crown, One Sided, Trunk Decay, Basal Decay, Suppressed, Stressed, Mechanical Damage, Overhead Utility, Excessive Lean
20	18	mulberry, spp.	Morus spp.	38	Poor	20	25	1	8.0	27	4		X								One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Suppressed, Stressed, Mechanical Damage, Overhead Utility, Serious Decline, Excessive Lean
21	6,4,4,3	maple, red	Acer rubrum	55	Fair	13	45	4	5.0	13	3				X						One Sided, Small DW (1-2"), Branch Decay, Suppressed, Overhead Utility
22	6	maple, red	Acer rubrum	47	Poor	8	45	1	4.0	9	3				X						Narrow Crown, Small DW (1-2"), Vines, Overhead Utility
23	14	elm, slippery	Ulmus rubra	50	Fair	14	55	1	7.0	21	3			X	X	X	X	X			Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
24	6	blackgum	Nyssa sylvatica	63	Fair	15	55	1	4.0	9	2				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
25	26	tuliptree	Liriodendron tulipifera	69	Fair	23	80	1	10.0	39	2		X								Narrow Crown, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Mechanical Damage
26	6	ash, white	Fraxinus americana	41	Poor	6	50	1	4.0	9	3			X	X	X	X	X			One Sided, Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Mechanical Damage, Serious Decline
27	17	cherry, black	Prunus serotina	50	Fair	20	65	1	8.0	26	3	X									Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Trunk Decay, Broken Limbs, Suppressed, Stressed, Vines, Mechanical Damage, Excessive Lean
28	9,7	mulberry, spp.	Morus spp.	50	Fair	14	35	2	6.0	17	3		X							3' two stems, then 4.5' measurement	One Sided, Small DW (1-2"), Branch Decay, Suppressed
29	11	hickory, pignut	Carya glabra	75	Good	22	60	1	6.0	17	2			X	X	X	X	X			Full Crown, Narrow Crown, One Sided, Small DW (1-2")
30	8	maple, red	Acer rubrum	50	Fair	14	60	1	5.0	12	3			X	X	X	X	X			Narrow Crown, One Sided, Small DW (1-2"), Branch Decay, Suppressed
31	7	maple, red	Acer rubrum	50	Fair	14	50	1	4.0	11	3				X						Narrow Crown, One Sided, Small DW (1-2"), Branch Decay, Suppressed
32	15,12	oak, northern red	Quercus rubra	58	Fair	21	75	2	9.0	29	2			X	X	X	X	X		,	Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Co-Dominant Stems
33	13,15	oak, northern red	Quercus rubra	75	Good	25	75	2	9.0	30	2			X	X	X	X	X			Full Crown, Large DW (3"+), Small DW (1-2"), Basal Decay, Co-Dominant Stems, Vines
34	4	blackgum	Nyssa sylvatica	75	Good	9	45	1	3.0	6	2				X						Narrow Crown, One Sided, Suppressed
35	4	blackgum	Nyssa sylvatica	75	Good	9	45	1	3.0	6	2				X						Narrow Crown, One Sided, Suppressed
36	13,4	beech, American	Fagus grandifolia	75	Good	20	55	2	7.0	20	2				X						Full Crown, Co-Dominant Stems, Suppressed
37	15	oak, white	Quercus alba	63	Fair	14	65	1	8.0	23	2				X						Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay
38	17	oak, chestnut	Quercus montana	50	Fair	16	70	1	8.0	26	3				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Basal Decay, Branch Decay, Suppressed
39	21	oak, northern red	Quercus rubra	75	Good	28	80	1	9.0	32	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Branch Decay
40	25	oak, northern red	Quercus rubra	78	Good	38	90	1	10.0	38	1				X						Full Crown
41	8	ZZ Unknown dead tree	ZZ Unknown dead tree	0	Dead	1	18	1	5.0	12	4		X								Mechanical Damage
42	6	locust, black	Robinia pseudoacacia	42	Poor	8	40	1	4.0	9	3				X						Narrow Crown, One Sided, Branch Decay
43	3	cherry, black	Prunus serotina	48	Poor	11	20	1	2.0	5	3				X						One Sided, Suppressed, Stressed, Excessive Lean
44	3	blackgum	Nyssa sylvatica	50	Fair	6	30	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed
45	5,3,3	maple, red	Acer rubrum	50	Fair	17	45	3	4.0	10	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed
46	18	oak, northern red	Quercus rubra	50	Fair	18	75	1	8.0	27	3				X						Narrow Crown, One Sided, Suppressed
47	9	blackgum	Nyssa sylvatica	75	Good	13	65	1	5.0	14	2				X						Narrow Crown, One Sided, Suppressed
48	7	maple, red	Acer rubrum	50	Fair	12	50	1	4.0	11	3				X						Narrow Crown, One Sided, Vines
49	6	locust, black	Robinia pseudoacacia	50	Fair	7	45	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
50	5	sassafras	Sassafras albidum	50	Fair	8	40	1	3.0	8	3				X						Narrow Crown, One Sided, Vines
51	4	sassafras	Sassafras albidum	50	Fair	8	35	1	3.0	6	3				X						Narrow Crown, One Sided, Vines
52	10	tuliptree	Liriodendron tulipifera	61	Fair	11	75	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed
53	7	sassafras	Sassafras albidum	72	Good	6	50	1	4.0	11	2				X						Narrow Crown, One Sided, Suppressed, Vines
54	6	sassafras	Sassafras albidum	66	Fair	6	45	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
55	5	tuliptree	Liriodendron tulipifera	47	Poor	5	45	1	3.0	8	3				X						Narrow Crown, One Sided, Branch Decay, Broken Limbs, Suppressed
56	3	cherry, black	Prunus serotina	53	Fair	5	25	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines
57	16	oak, northern red	Quercus rubra	70	Good	10	50	1	8.0	24	2				X						Narrow Crown, One Sided, Large DW (3"+), Suppressed
58	5	maple, red	Acer rubrum	50	Fair	10	45	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
59	12	tuliptree	Liriodendron tulipifera	75	Good	17	65	1	7.0	18	2				X						Full Crown, One Sided, Suppressed, Vines
60	6	sassafras	Sassafras albidum	55	Fair	7	50	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
61	5	sassafras	Sassafras albidum	52	Fair	6	40	1	3.0	8	3				X						Narrow Crown, One Sided, Trunk Decay, Suppressed, Vines, Excessive Lean
62	6	sassafras	Sassafras albidum	47	Poor	4	50	1	4.0	9	3				X						Narrow Crown, One Sided, Trunk Decay, Basal Decay, Suppressed, Vines, Excessive Lean
63	5	cherry, black	Prunus serotina	50	Fair	7	50	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
64	3	blackgum	Nyssa sylvatica	50	Fair	4	18	1	2.0	5	3				X						Narrow Crown, Suppressed
65	3	blackgum	Nyssa sylvatica	59	Fair	8	18	1	2.0	5	2				X						Narrow Crown, Suppressed

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
66	22	oak, northern red	Quercus rubra	75	Good	28	65	1	9.0	33	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Broken Limbs
67	4	maple, red	Acer rubrum	47	Poor	7	20	1	3.0	6	3				X						Narrow Crown, Small DW (1-2"), Trunk Decay, Broken Limbs, Suppressed, Stressed, Mechanical Damage
68	3	sassafras	Sassafras albidum	0	Dead	1	20	1	2.0	5	4				X						Stressed, Serious Decline
69	6	oak, northern red	Quercus rubra	75	Good	6	30	1	4.0	9	2				X						Narrow Crown, Suppressed
70	3,4	maple, red	Acer rubrum	52	Fair	5	25	2	3.0	8	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Vines
71	4	sassafras	Sassafras albidum	50	Fair	7	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
72	3	sassafras	Sassafras albidum	0	Dead	1	18	1	2.0	5	4				X						
73	4	cherry, black	Prunus serotina	50	Fair	6	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Vines
74	5	sassafras	Sassafras albidum	50	Fair	7	25	1	3.0	8	3				X						Narrow Crown, One Sided, Trunk Decay, Basal Decay, Suppressed, Vines
75	5	sassafras	Sassafras albidum	0	Dead	1	18	1	3.0	8	4				X						
76	5	sassafras	Sassafras albidum	50	Fair	5	25	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Vines
77	8	sassafras	Sassafras albidum	50	Fair	7	30	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Vines
78	4	sassafras	Sassafras albidum	50	Fair	6	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Vines
79	4	sassafras	Sassafras albidum	50	Fair	6	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Vines
80	8	blackgum	Nyssa sylvatica	0	Dead	2	18	1	5.0	12	4				X						
81	10	blackgum	Nyssa sylvatica	48	Poor	8	40	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed, Vines, Mechanical Damage
82	3	blackgum	Nyssa sylvatica	48	Poor	5	16	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines, Mechanical Damage
83	4	blackgum	Nyssa sylvatica	47	Poor	5	16	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Vines, Mechanical Damage
84	5	sassafras	Sassafras albidum	50	Fair	7	25	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Vines
85	5	sassafras	Sassafras albidum	50	Fair	7	25	1	3.0	8	3				X						Narrow Crown, One Sided, Trunk Decay, Suppressed, Vines, Mechanical Damage, Insect/Disease Problem
86	4	sassafras	Sassafras albidum	0	Dead	1	14	1	3.0	6	4				X						Trunk Decay, Vines, Mechanical Damage, Insect/Disease Problem
87	4	sassafras	Sassafras albidum	41	Poor	3	18	1	3.0	6	3				X						Narrow Crown, One Sided, Broken Limbs, Suppressed, Stressed, Vines
88	5	sassafras	Sassafras albidum	50	Fair	6	18	1	3.0	8	3				X						Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Suppressed, Stressed, Vines
89	5	sassafras	Sassafras albidum	50	Fair	7	18	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Vines
90	6	sassafras	Sassafras albidum	50	Fair	9	18	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
91	6	sassafras	Sassafras albidum	50	Fair	9	20	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines, Excessive Lean
92	4,4	oak, northern red	Quercus rubra	50	Fair	10	25	2	4.0	8	3				X						Narrow Crown, One Sided, Small DW (1-2"), Co-Dominant Stems, Suppressed, Vines
93	19	tuliptree	Liriodendron tulipifera	75	Good	20	55	1	9.0	29	2				X						Full Crown, Large DW (3"+), Small DW (1-2")
94	10	cherry, black	Prunus serotina	39	Poor	8	16	1	6.0	15	3				X						One Sided, Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Mechanical Damage, Serious Decline
95	5	maple, red	Acer rubrum	53	Fair	8	25	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Excessive Lean
96	29	oak, northern red	Quercus rubra	80	Good	40	80	1	10.0	44	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Broken Limbs, Mechanical Damage
97	22	oak, northern red	Quercus rubra	75	Good	29	75	1	9.0	33	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Trunk Decay, Broken Limbs
98	8,20,3	oak, chestnut	Quercus montana	73	Good	28	80	3	9.0	33	2				X					This tree has been recently spiked. Possibly by the utility co.	Full Crown, Large DW (3"+), Small DW (1-2"), Mechanical Damage
99	5,4	blackgum	Nyssa sylvatica	55	Fair	9	16	2	4.0	10	3				X						Full Crown, Large DW (3"+), Co-Dominant Stems
100	4	maple, red	Acer rubrum	47	Poor	6	12	1	3.0	6	3				X						Narrow Crown, One Sided, Trunk Decay, Suppressed, Vines, Mechanical Damage
101	8	oak, northern red	Quercus rubra	50	Fair	15	25	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Vines, Mechanical Damage, Overhead Utility
102	3	maple, red	Acer rubrum	48	Poor	4	14	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
103	21	tuliptree	Liriodendron tulipifera	75	Good	23	60	1	9.0	32	2				X						Full Crown, Vines
104	4	tuliptree	Liriodendron tulipifera	47	Poor	6	10	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Stressed, Vines
105	24	oak, white	Quercus alba	75	Good	27	80	1	10.0	36	2				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2")
106	8	blackgum	Nyssa sylvatica	50	Fair	9	20	1	5.0	12	3				X						Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Basal Decay, Suppressed, Vines, Mechanical Damage
107	8,8	maple, red	Acer rubrum	44	Poor	9	20	2	6.0	17	3				X						Narrow Crown, One Sided, Suppressed, Stressed, Vines, Mechanical Damage, Serious Decline
108	8	maple, red	Acer rubrum	44	Poor	5	14	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Stressed, Vines, Mechanical Damage, Serious Decline
109	3	maple, red	Acer rubrum	48	Poor	4	14	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines
110	15	oak, chestnut	Quercus montana	50	Fair	16	65	1	8.0	23	3				X						Narrow Crown, Large DW (3"+), Small DW (1-2"), Co-Dominant Stems, Suppressed
111	5	maple, red	Acer rubrum	38	Poor	6	12	1	3.0	8	3				X						Small DW (1-2"), Branch Decay, Suppressed, Stressed, Vines, Mechanical Damage
112	4	sassafras	Sassafras albidum	0	Dead	5	35	1	3.0	6	4				X						Trunk Decay, Basal Decay, Branch Decay, Mechanical Damage, Insect/Disease Problem
113	3	oak, northern red	Quercus rubra	44	Poor	4	12	1	2.0	5	3				X						Trunk Decay, Branch Decay, Suppressed, Vines, Mechanical Damage, Overhead Utility
114	3	maple, red	Acer rubrum	50	Fair	6	16	1	2.0	5	3				X						Narrow Crown, Trunk Decay, Branch Decay, Suppressed, Vines, Mechanical Damage, Overhead Utility
115	18	oak, northern red	Quercus rubra	34	Poor	9	25	1	8.0	27	3				X						Narrow Crown, One Sided, Large DW (3"+), Trunk Decay, Branch Decay, Suppressed, Stressed, Mechanical Damage, Overhead Utility, Insect/Disease Problem
116	6	oak, chestnut	Quercus montana	41	Poor	7	18	1	4.0	9	4				X						Narrow Crown, One Sided, Trunk Decay, Suppressed, Mechanical Damage, Overhead Utility
117	4	hickory, pignut	Carya glabra	61	Fair	7	18	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
118	25	oak, chestnut	Quercus montana	69	Fair	25	80	1	10.0	38	2				X						Full Crown, Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2")
119	3	cherry, black	Prunus serotina	50	Fair	6	14	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Mechanical Damage, Overhead Utility
120	24	oak, white	Quercus alba	75	Good	24	70	1	10.0	36	2				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
121	13	hickory, pignut	Carya glabra	72	Good	13	40	1	7.0	20	2				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
122	14	blackgum	Nyssa sylvatica	52	Fair	12	25	1	7.0	21	3				X						Narrow Crown, One Sided, Suppressed, Mechanical Damage, Overhead Utility
123	8,4	blackgum	Nyssa sylvatica	44	Poor	12	25	2	5.0	13	4				X						Narrow Crown, One Sided, Basal Decay, Co-Dominant Stems, Suppressed, Mechanical Damage, Overhead Utility
124	8	oak, white	Quercus alba	50	Fair	7	30	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility

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

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SEAL

CARY HULSE
ISA No PD-1080A
CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION SCHEDULE
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 38

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\2800S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
125	4	hickory, pignut	Carya glabra	50	Fair	6	18	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
126	13	oak, white	Quercus alba	45	Poor	7	18	1	7.0	20	3				X						Narrow Crown, One Sided, Basal Decay, Suppressed, Mechanical Damage, Overhead Utility
127	10	hickory, pignut	Carya glabra	47	Poor	8	18	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed, Mechanical Damage, Overhead Utility
128	11	blackgum	Nyssa sylvatica	50	Fair	12	35	1	6.0	17	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
129	14	oak, chestnut	Quercus montana	50	Fair	15	40	1	7.0	21	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
130	5	hickory, pignut	Carya glabra	50	Fair	8	30	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
131	3	oak, white	Quercus alba	50	Fair	4	18	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
132	32	oak, white	Quercus alba	75	Good	32	80	1	10.0	48	2				X						Full Crown, One Sided
133	5,6	oak, white	Quercus alba	50	Fair	12	30	2	5.0	12	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Overhead Utility
134	24	oak, white	Quercus alba	66	Fair	12	30	1	10.0	36	2				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Overhead Utility
135	3	hickory, pignut	Carya glabra	50	Fair	5	14	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
136	6	hickory, pignut	Carya glabra	50	Fair	5	35	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
137	6	hickory, pignut	Carya glabra	50	Fair	5	20	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
138	7	hickory, pignut	Carya glabra	50	Fair	7	16	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
139	4	blackgum	Nyssa sylvatica	50	Fair	6	16	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
140	24	oak, white	Quercus alba	75	Good	30	80	1	10.0	36	2				X						Full Crown, Large DW (3"+), Small DW (1-2")
141	6	pine, eastern white	Pinus strobus	50	Fair	6	25	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
142	10	hickory, pignut	Carya glabra	50	Fair	16	30	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed
143	3	cherry, black	Prunus serotina	50	Fair	5	20	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
144	9	mulberry, spp.	Morus spp.	45	Poor	12	30	1	5.0	14	3				X						Narrow Crown, Large DW (3"+), Small DW (1-2"), Suppressed, Vines, Overhead Utility
145	7	hickory, pignut	Carya glabra	50	Fair	12	18	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed, Mechanical Damage, Overhead Utility
146	12	maple, red	Acer rubrum	48	Poor	13	50	1	7.0	18	3				X						Narrow Crown, Small DW (1-2"), Trunk Decay, Basal Decay, Suppressed, Mechanical Damage
147	6	beech, American	Fagus grandifolia	50	Fair	15	20	1	4.0	9	3				X						Full Crown, Suppressed, Overhead Utility
148	8	oak, northern red	Quercus rubra	50	Fair	11	25	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Overhead Utility
149	4	oak, white	Quercus alba	50	Fair	6	14	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed, Vines
150	9,7	oak, chestnut	Quercus montana	50	Fair	13	35	2	6.0	17	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Overhead Utility
151	9	beech, American	Fagus grandifolia	50	Fair	16	25	1	5.0	14	3				X						Narrow Crown, Suppressed
152	4	blackgum	Nyssa sylvatica	50	Fair	7	20	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
153	8	blackgum	Nyssa sylvatica	48	Poor	7	16	1	5.0	12	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines, Mechanical Damage
154	23	beech, American	Fagus grandifolia	75	Good	23	70	1	9.0	35	2			X	X	X	X	X			Full Crown
155	17	blackgum	Nyssa sylvatica	75	Good	22	70	1	8.0	26	2				X						Full Crown, One Sided
156	11	maple, red	Acer rubrum	50	Fair	14	35	1	6.0	17	3				X						Narrow Crown, One Sided, Suppressed
157	13	oak, northern red	Quercus rubra	53	Fair	12	50	1	7.0	20	3				X						Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
158	12,4,9	maple, red	Acer rubrum	50	Fair	12	45	3	8.0	23	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Vines
159	31	ZZ Unknown dead tree	ZZ Unknown dead tree	0	Dead	5	18	1	10.0	47	4		X								
160	12	oak, northern red	Quercus rubra	0	Dead	1	40	1	7.0	18	4		X								
161	9	maple, red	Acer rubrum	19	Critical	4	25	1	5.0	14	4					X					Narrow Crown, One Sided, Small DW (1-2"), Basal Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines
162	12	mulberry, spp.	Morus spp.	44	Poor	10	30	1	7.0	18	3					X					Narrow Crown, One Sided, Suppressed, Vines
163	5	tuliptree	Liriodendron tulipifera	44	Poor	6	14	1	3.0	8	3					X					Narrow Crown, One Sided, Suppressed, Stressed, Excessive Lean
164	9	maple, red	Acer rubrum	27	Poor	1	16	1	5.0	14	4					X				Topped	Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Suppressed, Vines, Mechanical Damage, Serious Decline, Insect/Disease Problem
165	6	maple, red	Acer rubrum	0	Dead	6	16	1	4.0	9	4					X					Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Suppressed, Vines, Mechanical Damage, Serious Decline, Insect/Disease Problem
166	3	cherry, black	Prunus serotina	50	Fair	6	18	1	2.0	5	3					X					Narrow Crown, One Sided, Small DW (1-2"), Branch Decay, Suppressed, Vines
167	18	oak, northern red	Quercus rubra	72	Good	34	65	1	8.0	27	2					X					Full Crown, Large DW (3"+), Vines, Overhead Utility
168	6	maple, red	Acer rubrum	0	Dead	3	10	1	4.0	9	4					X				Topped	Vines, Mechanical Damage, Overhead Utility
169	3	maple, red	Acer rubrum	48	Poor	7	12	1	2.0	5	3					X					Narrow Crown, One Sided, Basal Decay, Co-Dominant Stems, Suppressed, Vines, Overhead Utility, Excessive Lean
170	4	hickory, pignut	Carya glabra	72	Good	7	16	1	3.0	6	2					X					Narrow Crown, One Sided, Co-Dominant Stems, Suppressed, Vines, Overhead Utility
171	13	cherry, black	Prunus serotina	33	Poor	10	10	1	7.0	20	4					X					One Sided, Large DW (3"+), Small DW (1-2"), Root Damage/Decay, Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Mechanical Damage, Overhead Utility, Serious Decline, Excessive Lean, Insect/Disease Problem
172	8	maple, red	Acer rubrum	50	Fair	17	35	1	5.0	12	3					X					Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Stressed, Vines, Overhead Utility
173	4	hornbeam, American	Carpinus caroliniana	44	Poor	9	14	1	3.0	6	3					X					Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Basal Decay, Suppressed, Stressed, Vines, Mechanical Damage, Overhead Utility
174	4	maple, red	Acer rubrum	0	Dead	0	12	1	3.0	6	4					X					
175	22	oak, northern red	Quercus rubra	72	Good	34	80	1	9.0	33	2					X					Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Vines
176	8	blackgum	Nyssa sylvatica	50	Fair	15	35	1	5.0	12	3					X					Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
177	5	blackgum	Nyssa sylvatica	42	Poor	7	8	1	3.0	8	4					X					Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Suppressed, Vines, Overhead Utility, Serious Decline, Excessive Lean
178	4	maple, red	Acer rubrum	27	Poor	12	6	1	3.0	6	3					X					Narrow Crown, One Sided, Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Mechanical Damage, Overhead Utility, Serious Decline, Excessive Lean
179	3	cherry, sweet	Prunus avium	50	Fair	7	14	1	2.0	5	3					X					Narrow Crown, One Sided, Suppressed, Overhead Utility

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
180	3,4	oak, white	Quercus alba	25	Critical	7	12	2	3.0	8	4				X						Narrow Crown, One Sided, Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Co-Dominant Stems, Suppressed, Stressed, Vines, Mechanical Damage, Overhead Utility, Serious Decline, Excessive Lean
181	6	oak, white	Quercus alba	47	Poor	9	16	1	4.0	9	3				X						Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Suppressed, Stressed, Vines, Overhead Utility, Serious Decline
182	4	oak, white	Quercus alba	38	Poor	3	8	1	3.0	6	4				X					Topped	Narrow Crown, One Sided, Small DW (1-2"), Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Overhead Utility, Serious Decline
183	13	cherry, black	Prunus serotina	75	Good	27	70	1	7.0	20	2				X						Full Crown, One Sided, Small DW (1-2"), Suppressed, Vines
184	4	maple, red	Acer rubrum	50	Fair	7	20	1	3.0	6	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
185	3,3	maple, red	Acer rubrum	50	Fair	12	20	2	3.0	6	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed
186	7	maple, red	Acer rubrum	50	Fair	12	35	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed
187	3,2	oak, white	Quercus alba	47	Poor	7	18	2	3.0	5	3				X						Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Basal Decay, Co-Dominant Stems, Suppressed, Vines
188	3	oak, white	Quercus alba	50	Fair	7	18	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines
189	22	cherry, black	Prunus serotina	59	Fair	40	90	1	9.0	33	2				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Suppressed, Vines
190	3	oak, white	Quercus alba	50	Fair	7	10	1	2.0	5	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
191	5	holly, American	Ilex opaca	58	Fair	8	16	1	3.0	8	3				X						Full Crown, Suppressed, Vines
192	22	oak, white	Quercus alba	75	Good	39	85	1	9.0	33	2				X						Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Vines
193	22	oak, white	Quercus alba	75	Good	39	90	1	9.0	33	2				X						Full Crown, Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
194	4	cherry, sweet	Prunus avium	50	Fair	7	18	1	3.0	6	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Overhead Utility
195	12	cherry, black	Prunus serotina	0	Dead	7	18	1	7.0	18	4				X						
196	6	hickory, pignut	Carya glabra	61	Fair	16	40	1	4.0	9	2				X						Narrow Crown, One Sided, Suppressed, Vines
197	8	blackgum	Nyssa sylvatica	59	Fair	15	40	1	5.0	12	2				X						Narrow Crown, Suppressed, Vines
198	9	blackgum	Nyssa sylvatica	50	Fair	17	45	1	5.0	14	2				X						Narrow Crown, One Sided, Suppressed, Vines
199	6	blackgum	Nyssa sylvatica	50	Fair	12	35	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
200	3	blackgum	Nyssa sylvatica	50	Fair	10	20	1	2.0	5	2				X						Narrow Crown, One Sided, Suppressed, Vines
201	6	hickory, pignut	Carya glabra	42	Poor	8	18	1	4.0	9	4				X					Topped	Narrow Crown, Branch Decay, Suppressed, Stressed, Vines, Overhead Utility, Serious Decline
202	4	oak, white	Quercus alba	39	Poor	5	16	1	3.0	6	4				X					Topped	Narrow Crown, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Overhead Utility, Serious Decline
203	5	hickory, pignut	Carya glabra	50	Fair	8	25	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
204	10	oak, white	Quercus alba	50	Fair	14	40	1	6.0	15	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines, Overhead Utility
205	3	blackgum	Nyssa sylvatica	50	Fair	8	18	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed
206	3	hickory, pignut	Carya glabra	50	Fair	8	25	1	2.0	5	3				X						
207	3	blackgum	Nyssa sylvatica	50	Fair	8	18	1	2.0	5	3				X						Narrow Crown, Suppressed
208	19	oak, white	Quercus alba	75	Good	37	90	1	9.0	29	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Vines
209	18	oak, white	Quercus alba	75	Good	37	90	1	8.0	27	2				X						Full Crown, Large DW (3"+), Small DW (1-2"), Vines
210	8	oak, white	Quercus alba	0	Dead	0	6	1	5.0	12	4				X						
211	20	oak, white	Quercus alba	75	Good	24	90	1	9.0	30	2				X						Full Crown, Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed, Vines, Overhead Utility
212	10	blackgum	Nyssa sylvatica	75	Good	20	40	1	6.0	15	2				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines, Overhead Utility
213	4	maple, red	Acer rubrum	13	Critical	3	12	1	3.0	6	4				X						Root Damage/Decay, Trunk Decay, Basal Decay, Branch Decay, Suppressed, Stressed, Vines, Mechanical Damage, Serious Decline, Excessive Lean, Insect/Disease Problem
214	8	oak, white	Quercus alba	50	Fair	15	35	1	5.0	12	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
215	21	oak, white	Quercus alba	75	Good	24	80	1	9.0	32	2				X						Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed, Vines, Overhead Utility
216	4	blackgum	Nyssa sylvatica	50	Fair	8	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
217	4	blackgum	Nyssa sylvatica	0	Dead	0	12	1	3.0	6	4				X						
218	7	hickory, pignut	Carya glabra	75	Good	18	50	1	4.0	11	2				X						Narrow Crown, Suppressed
219	3	blackgum	Nyssa sylvatica	50	Fair	7	18	1	2.0	5	3				X						Narrow Crown, Suppressed
220	4	maple, red	Acer rubrum	50	Fair	13	25	1	3.0	6	3				X						Narrow Crown, Suppressed
221	18	oak, white	Quercus alba	50	Fair	31	65	1	8.0	27	3				X						Narrow Crown, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Suppressed, Vines
222	3	cherry, black	Prunus serotina	31	Poor	4	14	1	2.0	5	4				X						Narrow Crown, Small DW (1-2"), Root Damage/Decay, Trunk Decay, Basal Decay, Branch Decay, Suppressed, Stressed, Mechanical Damage, Overhead Utility
223	28	oak, white	Quercus alba	75	Good	52	100	1	10.0	42	2				X						Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Overhead Utility
224	18	oak, white	Quercus alba	75	Good	39	95	1	8.0	27	2				X						Full Crown, One Sided, Large DW (3"+), Small DW (1-2")
225	6	blackgum	Nyssa sylvatica	50	Fair	11	35	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
226	6	oak, black	Quercus velutina	50	Fair	15	40	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
227	13	oak, white	Quercus alba	50	Fair	19	60	1	7.0	20	3				X						Narrow Crown, One Sided, Suppressed, Vines
228	9	blackgum	Nyssa sylvatica	50	Fair	18	60	1	5.0	14	3				X						Narrow Crown, One Sided, Suppressed, Vines
229	13	cherry, black	Prunus serotina	44	Poor	19	35	1	7.0	20	3				X					Topped	Narrow Crown, One Sided, Branch Decay, Suppressed, Vines, Mechanical Damage
230	10	oak, black	Quercus velutina	0	Dead	0	16	1	6.0	15	4	X								Topped	
231	10	oak, white	Quercus alba	47	Poor	19	45	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed, Vines, Overhead Utility
232	9	maple, red	Acer rubrum	50	Fair	20	60	1	5.0	14	3				X						Narrow Crown, One Sided, Suppressed, Vines
233	15	blackgum	Nyssa sylvatica	47	Poor	20	60	1	8.0	23	3				X						Narrow Crown, One Sided, Trunk Decay, Basal Decay, Suppressed, Vines
234	6	blackgum	Nyssa sylvatica	50	Fair	12	40	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
235	4	blackgum	Nyssa sylvatica	50	Fair	10	25	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
236	9	hickory, pignut	Carya glabra	50	Fair	13	40	1	5.0	14	3				X						Narrow Crown, One Sided, Suppressed
237	16	oak, white	Quercus alba	50	Fair	22	60	1	8.0	24	3				X						Narrow Crown, One Sided, Suppressed, Vines
238	3	hickory, pignut	Carya glabra	50	Fair	7	18	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed
239	6	hickory, pignut	Carya glabra	50	Fair	13	40	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
240	14	hickory, pignut	Carya glabra	50	Fair	19	60	1	7.0	21	3				X						Narrow Crown, One Sided, Suppressed, Vines

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE CARY HULSE ISA No PD-1080A CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION SCHEDULE
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 39

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
241	23,8	tuliptree	Liriodendron tulipifera	47	Poor	21	90	2	10.0	37	3			X	X	X	X	X			Narrow Crown, One Sided, Trunk Decay, Basal Decay, Co-Dominant Stems, Suppressed, Insect/Disease Problem
242	21,20	tuliptree	Liriodendron tulipifera	75	Good	28	95	2	10.0	44	3			X	X	X	X	X			Narrow Crown, One Sided, Co-Dominant Stems, Suppressed
243	5	blackgum	Nyssa sylvatica	50	Fair	7	18	1	3.0	8	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
244	3	oak, shingle	Quercus imbricaria	50	Fair	4	14	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed
245	3	oak, laurel	Quercus laurifolia	52	Fair	5	18	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines
246	15	tuliptree	Liriodendron tulipifera	59	Fair	20	90	1	8.0	23	3			X	X	X	X	X			Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Vines
247	4	hickory, pignut	Carya glabra	50	Fair	6	25	1	3.0	6	3			X	X	X	X	X			Narrow Crown, One Sided, Suppressed, Vines
248	6	oak, white	Quercus alba	50	Fair	7	25	1	4.0	9	3		X								Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Branch Decay, Suppressed, Vines
249	8	oak, northern red	Quercus rubra	50	Fair	14	35	1	5.0	12	3				X						Narrow Crown, One Sided, Suppressed, Vines
250	21	hickory, pignut	Carya glabra	75	Good	20	70	1	9.0	32	2			X	X	X	X	X			Full Crown, One Sided, Small DW (1-2"), Suppressed, Vines
251	7	hickory, pignut	Carya glabra	50	Fair	15	45	1	4.0	11	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
252	10	hickory, pignut	Carya glabra	59	Fair	14	55	1	6.0	15	3				X						Narrow Crown, One Sided, Suppressed, Vines
253	3	oak, northern red	Quercus rubra	50	Fair	6	18	1	2.0	5	3				X						Narrow Crown, Suppressed, Vines
254	6	hickory, pignut	Carya glabra	50	Fair	13	45	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed, Vines
255	3	oak, white	Quercus alba	50	Fair	8	20	1	2.0	5	3				X						Narrow Crown, One Sided, Suppressed, Vines
256	21	tuliptree	Liriodendron tulipifera	75	Good	29	95	1	9.0	32	2			X	X	X	X	X			Full Crown, One Sided, Large DW (3"+), Broken Limbs, Vines
257	11	oak, white	Quercus alba	50	Fair	26	60	1	6.0	17	3		X								Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
258	4	oak, northern red	Quercus rubra	50	Fair	13	30	1	3.0	6	3			X	X	X	X	X			Narrow Crown, One Sided, Suppressed, Vines
259	6	mulberry, spp.	Morus spp.	50	Fair	14	18	1	4.0	9	3		X								Narrow Crown, One Sided, Suppressed
260	4	oak, chestnut	Quercus montana	50	Fair	10	16	1	3.0	6	3	X									Narrow Crown, One Sided, Suppressed, Vines
261	13	tuliptree	Liriodendron tulipifera	50	Fair	21	65	1	7.0	20	2		X								Narrow Crown, One Sided, Suppressed, Vines
262	8	ZZ Unknown dead tree	ZZ Unknown dead tree	0	Dead	0	45	1	5.0	12	4		X								
263	5	oak, black	Quercus velutina	50	Fair	11	30	1	3.0	8	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
264	5	hickory, pignut	Carya glabra	50	Fair	9	40	1	3.0	8	2				X						Narrow Crown, One Sided, Suppressed
265	17	oak, chestnut	Quercus montana	50	Fair	32	70	1	8.0	26	2			X	X	X	X	X			Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed, Vines
267	5	hickory, pignut	Carya glabra	50	Fair	8	30	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed, Vines
268	8	hickory, pignut	Carya glabra	50	Fair	18	55	1	5.0	12	3				X						Narrow Crown, One Sided, Vines, Overhead Utility
269	12	hickory, pignut	Carya glabra	73	Good	24	80	1	7.0	18	2		X								Narrow Crown, One Sided, Suppressed
270	12	hickory, pignut	Carya glabra	52	Fair	24	70	1	7.0	18	3		X								Narrow Crown, One Sided, Suppressed, Vines
271	15	hickory, pignut	Carya glabra	53	Fair	24	80	1	8.0	23	3		X								Narrow Crown, One Sided, Suppressed
272	9	oak, northern red	Quercus rubra	50	Fair	23	75	1	5.0	14	3			X	X	X	X	X			Narrow Crown, One Sided, Suppressed, Vines
273	7	hickory, mockernut	Carya tomentosa	50	Fair	14	45	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed, Vines
274	24	tuliptree	Liriodendron tulipifera	75	Good	32	90	1	10.0	36	2			X	X	X	X	X			Narrow Crown, One Sided, Large DW (3"+), Suppressed, Vines
275	6	beech, American	Fagus grandifolia	69	Fair	14	35	1	4.0	9	2				X						Full Crown, Vines
276	9	hickory, pignut	Carya glabra	73	Good	18	65	1	5.0	14	2				X						Full Crown, One Sided, Suppressed, Vines
277	25	oak, northern red	Quercus rubra	75	Good	35	75	1	10.0	38	2			X	X	X	X	X			
278	24	tuliptree	Liriodendron tulipifera	75	Good	47	120	1	10.0	36	2				X						Full Crown, Large DW (3"+), Branch Decay, Broken Limbs
279	22	tuliptree	Liriodendron tulipifera	75	Good	47	120	1	9.0	33	2			X	X	X	X	X			Full Crown, One Sided, Large DW (3"+), Branch Decay, Broken Limbs
280	6	maple, red	Acer rubrum	50	Fair	14	50	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
281	11,13	tuliptree	Liriodendron tulipifera	50	Fair	26	65	2	8.0	26	3			X	X	X	X	X			Narrow Crown, One Sided, Co-Dominant Stems, Suppressed
282	3,4	hickory, pignut	Carya glabra	50	Fair	19	35	2	3.0	8	3			X	X	X	X	X			Narrow Crown, One Sided, Suppressed
283	4	sycamore, American	Platanus occidentalis	50	Fair	11	16	1	3.0	6	3	X									Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
284	7	blackgum	Nyssa sylvatica	50	Fair	21	45	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed
285	17	tuliptree	Liriodendron tulipifera	50	Fair	28	70	1	8.0	26	2				X						Narrow Crown, One Sided, Suppressed
286	9	oak, northern red	Quercus rubra	50	Fair	28	65	1	5.0	14	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
287	15	hickory, pignut	Carya glabra	50	Fair	28	80	1	8.0	23	3				X						Full Crown, Small DW (1-2"), Suppressed, Insect/Disease Problem
288	5	oak, northern red	Quercus rubra	50	Fair	13	45	1	3.0	8	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
289	8	hickory, pignut	Carya glabra	45	Poor	16	55	1	5.0	12	3				X						Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Basal Decay, Suppressed
290	5	beech, American	Fagus grandifolia	75	Good	17	35	1	3.0	8	3				X						Full Crown, Suppressed, Vines
291	13	maple, red	Acer rubrum	75	Good	30	65	1	7.0	20	2			X	X	X	X	X			Full Crown, One Sided, Small DW (1-2"), Suppressed
292	18	tuliptree	Liriodendron tulipifera	75	Good	28	80	1	8.0	27	2			X	X	X	X	X			Full Crown, Narrow Crown, One Sided, Suppressed
293	6	blackgum	Nyssa sylvatica	50	Fair	17	45	1	4.0	9	3				X						Narrow Crown, One Sided, Suppressed
294	24	oak, northern red	Quercus rubra	72	Good	42	85	1	10.0	36	2			X	X	X	X	X			Full Crown, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Excessive Lean
295	5	hornbeam, American	Carpinus caroliniana	34	Poor	5	14	1	3.0	8	4				X						Large DW (3"+), Small DW (1-2"), Branch Decay, Stressed, Serious Decline
296	13	maple, red	Acer rubrum	50	Fair	28	45	1	7.0	20	3			X	X	X	X	X			Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed, Vines
297	4	ash, green	Fraxinus pennsylvanica	0	Dead	1	14	1	3.0	6	4	X									
298	6	ash, green	Fraxinus pennsylvanica	0	Dead	1	18	1	4.0	9	4	X									
299	16	ZZ Unknown dead tree	ZZ Unknown dead tree	0	Dead	1	16	1	8.0	24	4	X									
300	3	hophornbeam, American	Ostrya virginiana	50	Fair	12	12	1	2.0	5	3	X									Full Crown, One Sided, Small DW (1-2"), Branch Decay, Broken Limbs, Suppressed
301	3	hophornbeam, American	Ostrya virginiana	50	Fair	14	25	1	2.0	5	3	X									Full Crown, One Sided, Suppressed
302	32	sycamore, American	Platanus occidentalis	75	Good	51	120	1	10.0	48	2	X									Full Crown, One Sided, Small DW (1-2"), Included Bark/Weak Union
303	4	hophornbeam, American	Ostrya virginiana	75	Good	14	25	1	3.0	6	2	X									Full Crown, Small DW (1-2"), Suppressed, Vines
304	9	maple, red	Acer rubrum	50	Fair	23	50	1	5.0	14	3			X	X	X	X	X			Full Crown, One Sided, Suppressed
305	20	tuliptree	Liriodendron tulipifera	73	Good	34	90	1	9.0	30	2			X	X	X	X	X			Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
306	30	tuliptree	Liriodendron tulipifera	73	Good	42	110	1	10.0	45	2			X	X	X	X	X			Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
307	12	tuliptree	Liriodendron tulipifera	73	Good	40	75	1	7.0	18	2				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
308	20	tuliptree	Liriodendron tulipifera	69	Fair	40	75	1	9.0	30	2			X	X	X	X	X			Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
309	11	maple, red	Acer rubrum	75	Good	25	60	1	6.0	17	2	X									Full Crown
310	9	hornbeam, American	Carpinus caroliniana	0	Dead	2	14	1	5.0	14	4	X									
311	8	hornbeam, American	Carpinus caroliniana	50	Fair	13	25	1	5.0	12	3		X								Narrow Crown, One Sided, Large DW (3"+), Branch Decay, Broken Limbs, Excessive Lean
312	26	tuliptree	Liriodendron tulipifera	44	Poor	34	80	1	10.0	39	3			X	X	X	X	X			Narrow Crown, One Sided, Branch Decay, Broken Limbs, Stressed

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
313	31	tuliptree	Liriodendron tulipifera	47	Poor	34	80	1	10.0	47	3			X	X	X	X	X			Narrow Crown, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Stressed, Hardware
314	5	hickory, pignut	Carya glabra	50	Fair	12	35	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
315	5	hickory, pignut	Carya glabra	50	Fair	12	35	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
316	6	maple, red	Acer rubrum	50	Fair	19	45	1	4.0	9	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed
317	23	oak, northern red	Quercus rubra	75	Good	45	110	1	9.0	35	2				X						Full Crown, One Sided, Large DW (3"+), Branch Decay, Broken Limbs
318	4	hickory, pignut	Carya glabra	50	Fair	11	18	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
319	17	oak, northern red	Quercus rubra	50	Fair	41	85	1	8.0	26	3				X						Narrow Crown, One Sided, Large DW (3"+), Branch Decay, Broken Limbs, Suppressed
320	4	dogwood, flowering	Cornus florida	50	Fair	10	18	1	3.0	6	3				X						Narrow Crown, Small DW (1-2"), Branch Decay, Suppressed, Stressed
321	4	hickory, pignut	Carya glabra	50	Fair	13	30	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
322	7	hickory, pignut	Carya glabra	50	Fair	16	45	1	4.0	11	3				X						Narrow Crown, One Sided, Suppressed
323	5	hickory, pignut	Carya glabra	50	Fair	14	45	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
324	23	tuliptree	Liriodendron tulipifera	50	Fair	24	70	1	9.0	35	3				X						Full Crown, One Sided, Large DW (3"+), Small DW (1-2"), Broken Limbs, Suppressed
325	5	hickory, pignut	Carya glabra	50	Fair	17	35	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
326	9	hickory, pignut	Carya glabra	50	Fair	18	50	1	5.0	14	3				X						Narrow Crown, One Sided, Suppressed
327	4	hophornbeam, American	Ostrya virginiana	50	Fair	15	18	1	3.0	6	3				X						Narrow Crown, One Sided, Suppressed
328	5	hickory, pignut	Carya glabra	50	Fair	13	40	1	3.0	8	3				X						Narrow Crown, One Sided, Suppressed
329	22	tuliptree	Liriodendron tulipifera	75	Good	38	110	1	9.0	33	2				X						Full Crown, One Sided
330	31	tuliptree	Liriodendron tulipifera	75	Good	38	125	1	10.0	47	3				X						Full Crown, One Sided, Large DW (3"+)
331	5,3	maple, red	Acer rubrum	50	Fair	15	30	2	4.0	9	3				X						Narrow Crown, One Sided, Co-Dominant Stems, Suppressed
332	5,4	hophornbeam, American	Ostrya virginiana	0	Dead	3	16	2	4.0	10	4				X						
333	43	hickory, pignut	Carya glabra	84	Good	60	125	1	11.0	65	1				X					Possible County Champion Tree	
334	5	maple, red	Acer rubrum	50	Fair	18	20	1	3.0	8	3	X									Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Suppressed, Vines
335	9	maple, red	Acer rubrum	50	Fair	25	50	1	5.0	14	3	X									Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Broken Limbs, Suppressed
336	17	elm, slippery	Ulmus rubra	50	Fair	32	60	1	8.0	26	3	X									Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Suppressed
337	21	tuliptree	Liriodendron tulipifera	59	Fair	30	75	1	9.0	32	3	X									Full Crown, One Sided, Suppressed
338	21	tuliptree	Liriodendron tulipifera	48	Poor	26	60	1	9.0	32	3	X									Full Crown, One Sided, Suppressed
339	6	maple, red	Acer rubrum	50	Fair	16	35	1	4.0	9	3	X								sugar maple? Need a branch sample	Narrow Crown, One Sided, Suppressed
340	4	hornbeam, American	Carpinus caroliniana	50	Fair	12	16	1	3.0	6	3	X									Full Crown, Small DW (1-2"), Trunk Decay, Suppressed
341	13	maple, red	Acer rubrum	42	Poor	15	25	1	7.0	20	3	X									Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Suppressed, Insect/Disease Problem
342	3	maple, sugar	Acer saccharum	50	Fair	15	25	1	2.0	5	3	X									Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Stressed, Vines
343	7	crabapple, flowering	Malus spp.	50	Fair	10	14	1	4.0	11	3				X						Full Crown, Small DW (1-2")
344	6	dogwood, flowering	Cornus florida	50	Fair	8	16	1	4.0	9	3				X						Full Crown, Small DW (1-2"), Branch Decay, Broken Limbs
345	5	crabapple, southern	Malus angustifolia	50	Fair	9	14	1	3.0	8	3				X						Full Crown
346	5	crabapple, flowering	Malus spp.	50	Fair	9	14	1	3.0	8	3				X						Full Crown
347	5	crabapple, flowering	Malus spp.	50	Fair	9	14	1	3.0	8	3				X						Full Crown
348	6	crabapple, flowering	Malus spp.	50	Fair	9	14	1	4.0	9	3				X						Full Crown
349	6	crabapple, flowering	Malus spp.	50	Fair	9	14	1	4.0	9	3				X						Full Crown
350	7,8,7	mulberry, spp.	Morus spp.	33	Poor	17	18	3	7.0	19	3	X									Large DW (3"+), Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Co-Dominant Stems, Suppressed, Vines, Insect/Disease Problem
351	23	ash, green	Fraxinus pennsylvanica	0	Dead	22	18	1	9.0	35	4	X									
352	4	hickory, pignut	Carya glabra	28	Poor	5	14	1	3.0	6	4	X									Small DW (1-2"), Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines
353	5	hickory, pignut	Carya glabra	27	Poor	5	14	1	3.0	8	4	X									Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Serious Decline
354	3	hickory, pignut	Carya glabra	27	Poor	5	14	1	2.0	5	4	X									Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Serious Decline
356	10,13,4	beech, American	Fagus grandifolia	50	Fair	27	55	3	8.0	25	2			X	X	X	X	X			Narrow Crown, One Sided, Small DW (1-2"), Co-Dominant Stems, Suppressed, Vines
357	7	beech, American	Fagus grandifolia	50	Fair	27	55	1	4.0	11	2				X						Narrow Crown, One Sided, Small DW (1-2"), Branch Decay, Co-Dominant Stems, Suppressed, Vines, Overhead Utility, Excessive Lean
358	25	oak, northern red	Quercus rubra	75	Good	49	75	1	10.0	38	3			X	X	X	X	X			Full Crown, One Sided, Small DW (1-2"), Suppressed, Vines, Excessive Lean
360	13	maple, red	Acer rubrum	50	Fair	23	65	1	7.0	20	3	X									Narrow Crown, One Sided, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Mechanical Damage
361	7	mulberry, spp.	Morus spp.	47	Poor	15	30	1	4.0	11	3			X	X	X	X	X			Narrow Crown, One Sided, Small DW (1-2"), Trunk Decay, Suppressed, Mechanical Damage
362	10,15,16	mulberry, spp.	Morus spp.	33	Poor	15	30	3	10.0	36	3	X									Narrow Crown, One Sided, Large DW (3"+), Small DW (1-2"), Root Damage/Decay, Trunk Decay, Basal Decay, Branch Decay, Broken Limbs, Included Bark/Weak Union, Co-Dominant Stems, Suppressed, Stressed, Mechanical Damage, Overhead Utility, Serious Decline, Excessive Lean, Insect/Disease Problem
401	15	sycamore, American	Platanus occidentalis	58	Fair	15	48	1	8.0	23	3			X	X	X	X	X			Vines
402	24	sycamore, American	Platanus occidentalis	55	Fair	18	65	1	10.0	36	3		X								
403	10	sycamore, American	Platanus occidentalis	61	Fair	10	48	1	6.0	15	3	X									Narrow Crown, One Sided, Vines
404	13	sycamore, American	Platanus occidentalis	50	Fair	10	48	1	7.0	20	3	X									Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Vines
405	14	locust, black	Robinia pseudoacacia	50	Fair	15	45	1	7.0	21	3	X									Large DW (3"+), Broken Limbs
406	8	sycamore, American	Platanus occidentalis	44	Poor	7	18	1	5.0	12	3	X								broken top	
407	10	sycamore, American	Platanus occidentalis	59	Fair	14	50	1	6.0	15	2	X									
408	11	sycamore, American	Platanus occidentalis	50	Fair	16	50	1	6.0	17	3	X									Small DW (1-2"), Basal Decay
409	5,5	sycamore, American	Platanus occidentalis	50	Fair	15	40	2	4.0	11	3	X									
410	11	sycamore, American	Platanus occidentalis	50	Fair	30	60	1	6.0	17	3	X									Basal Decay
411	11	locust, black	Robinia pseudoacacia	44	Poor	25	50	1	6.0	17	4	X									Excessive Lean
412	9	sycamore, American	Platanus occidentalis	50	Fair	12	48	1	5.0	14	3	X									Small DW (1-2")
413	11	locust, black	Robinia pseudoacacia	0	Dead	1	20	1	6.0	17	4	X									
414	4	mulberry, spp.	Morus spp.	50	Fair	6	25	1	3.0	6	4	X									Suppressed
415	10	sycamore, American	Platanus occidentalis	55	Fair	12	48	1	6.0	15	2	X									One Sided, Small DW (1-2")
416	5	sycamore, American	Platanus occidentalis	48	Poor	7	25	1	3.0	8	3	X									Narrow Crown, One Sided, Broken Limbs, Suppressed, Vines
417	4	mulberry, spp.	Morus spp.	63	Fair	10	20	1	3.0	6	2	X									Small DW (1-2"), Vines
418	14	locust, black	Robinia pseudoacacia	48	Poor	15	48	1	7.0	21	3	X								leaning	Small DW (1-2"), Included Bark/Weak Union, Co-Dominant Stems, Vines
419	10	catalpa, northern	Catalpa speciosa	48	Poor	15	48	1	6.0	15	3	X									Large DW (3"+), Small DW (1-2")

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE CARY HULSE ISA No PD-1080A CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION SCHEDULE
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 40

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
420	30	oak, northern red	Quercus rubra	75	Good	25	90	1	10.0	45	2			X	X	X	X	X			Basal Decay
421	11	hickory, pignut	Carya glabra	61	Fair	11	50	1	6.0	17	2			X	X	X	X	X			Vines
422	10	hickory, pignut	Carya glabra	55	Fair	11	50	1	6.0	15	2			X	X	X	X	X			Vines
426	8	oak, northern red	Quercus rubra	56	Fair	12	45	1	5.0	12	2	X									Vines
425	4	ash, spp.	Fraxinus spp.	56	Fair	9	30	1	3.0	6	3	X									Vines
423	6	elm, slippery	Ulmus rubra	50	Fair	9	30	1	4.0	9	3	X									Co-Dominant Stems, Vines
424	19	tuliptree	Liriodendron tulipifera	55	Fair	15	55	1	9.0	29	2	X									Small DW (1-2"), Vines
427	3	tuliptree	Liriodendron tulipifera	55	Fair	8	20	1	2.0	5	2	X									One Sided
428	5	tuliptree	Liriodendron tulipifera	58	Fair	10	35	1	3.0	8	2	X									Included Bark/Weak Union, Co-Dominant Stems, Vines
429	3	cherry, black	Prunus serotina	41	Poor	8	16	1	2.0	5	4	X									Narrow Crown, Suppressed, Vines
430	4	mulberry, spp.	Morus spp.	45	Poor	6	12	1	3.0	6	4	X									Vines, Serious Decline
431	7,12	ZZ Unknown dead tree	ZZ Unknown dead tree	0	Dead	8	20	2	7.0	21	4	X									
432	4	cherry, black	Prunus serotina	53	Fair	4	12	1	3.0	6	3	X									One Sided, Suppressed
433	30,16	oak, white	Quercus alba	50	Fair	25	60	2	10.0	51	3	X								broken top	Large DW (3"+), Branch Decay, Broken Limbs, Included Bark/Weak Union, Co-Dominant Stems, Vines
434	15	tuliptree	Liriodendron tulipifera	56	Fair	18	70	1	8.0	23	3	X									
435	16	cherry, black	Prunus serotina	48	Poor	15	75	1	8.0	24	3		X								Narrow Crown, One Sided, Excessive Lean
436	20	tuliptree	Liriodendron tulipifera	55	Fair	20	60	1	9.0	30	3	X									Included Bark/Weak Union, Co-Dominant Stems
437	18	sycamore, American	Platanus occidentalis	50	Fair	16	48	1	8.0	27	3	X									Small DW (1-2"), Vines
438	12,12	maple, red	Acer rubrum	50	Fair	15	50	2	8.0	25	3			X	X	X	X	X			One Sided, Basal Decay, Included Bark/Weak Union, Co-Dominant Stems
439	33	tuliptree	Liriodendron tulipifera	63	Fair	25	80	1	10.0	50	2			X	X	X	X	X			Large DW (3"+), Broken Limbs
440	4	cherry, black	Prunus serotina	55	Fair	4	14	1	3.0	6	2				X						Broken Limbs, Vines
441	8,5	locust, black	Robinia pseudoacacia	50	Fair	6	25	2	5.0	14	3			X	X	X	X	X			Vines, Excessive Lean
442	5	locust, black	Robinia pseudoacacia	50	Fair	5	20	1	3.0	8	3			X	X	X	X	X			Narrow Crown, One Sided, Small DW (1-2")
443	6	locust, black	Robinia pseudoacacia	50	Fair	5	25	1	4.0	9	3				X						Excessive Lean
444	5	locust, black	Robinia pseudoacacia	50	Fair	5	25	1	3.0	8	3				X						Excessive Lean
445	45	oak, northern red	Quercus rubra	55	Fair	30	85	1	11.0	68	3			X	X	X	X	X			Large DW (3"+), Trunk Decay, Basal Decay
446	11	tuliptree	Liriodendron tulipifera	50	Fair	10	55	1	6.0	17	2				X						One Sided, Vines
447	20	tuliptree	Liriodendron tulipifera	59	Fair	18	75	1	9.0	30	2				X						Vines
448	17	tuliptree	Liriodendron tulipifera	55	Fair	14	70	1	8.0	26	2			X	X	X	X	X			One Sided, Small DW (1-2"), Vines
449	9	locust, black	Robinia pseudoacacia	50	Fair	10	50	1	5.0	14	3		X								Vines
450	5	locust, black	Robinia pseudoacacia	48	Poor	5	20	1	3.0	8	4				X						Vines, Excessive Lean
451	14,9	hickory, pignut	Carya glabra	58	Fair	12	55	2	8.0	25	3				X						Included Bark/Weak Union, Co-Dominant Stems
452	12	oak, white	Quercus alba	55	Fair	12	64	1	7.0	18	3				X						Narrow Crown, Large DW (3"+), Vines
453	26,18	tuliptree	Liriodendron tulipifera	55	Fair	22	75	2	10.0	47	2		X								Included Bark/Weak Union, Co-Dominant Stems, Vines
454	4	maple, sugar	Acer saccharum	50	Fair	8	20	1	3.0	6	3				X						Narrow Crown, One Sided, Small DW (1-2"), Suppressed, Vines
455	4	oak, white	Quercus alba	47	Poor	6	14	1	3.0	6	4		X								Small DW (1-2"), Basal Decay, Branch Decay, Suppressed, Stressed, Serious Decline
456	14	hickory, pignut	Carya glabra	58	Fair	14	55	1	7.0	21	3				X						Narrow Crown, One Sided
457	16	tuliptree	Liriodendron tulipifera	59	Fair	13	75	1	8.0	24	2				X						
458	15	oak, northern red	Quercus rubra	50	Fair	13	75	1	8.0	23	3				X						Narrow Crown, One Sided, Vines
459	28	tuliptree	Liriodendron tulipifera	50	Fair	20	80	1	10.0	42	2		X								
460	28	tuliptree	Liriodendron tulipifera	45	Poor	20	80	1	10.0	42	3		X								Vines
461	17	oak, white	Quercus alba	53	Fair	15	70	1	8.0	26	3		X								Vines
462	11	birch, river	Betula nigra	42	Poor	15	35	1	6.0	17	4	X									Small DW (1-2"), Vines, Unstable Root System
463	35	tuliptree	Liriodendron tulipifera	58	Fair	30	90	1	10.0	53	3			X	X	X	X	X			Included Bark/Weak Union, Co-Dominant Stems
464	3	hickory, pignut	Carya glabra	55	Fair	8	18	1	2.0	5	3				X						
465	28	oak, white	Quercus alba	55	Fair	20	75	1	10.0	42	3				X						One Sided, Small DW (1-2"), Vines
466	15	oak, northern red	Quercus rubra	50	Fair	12	60	1	8.0	23	3				X						Narrow Crown, One Sided, Vines
467	6	unknown tree	unknown tree	0	Dead	1	6	1	4.0	9	4		X								
468	7	blackgum	Nyssa sylvatica	50	Fair	7	32	1	4.0	11	2				X						
469	15	blackgum	Nyssa sylvatica	50	Fair	12	65	1	8.0	23	3			X	X	X	X	X			Small DW (1-2")
470	5	blackgum	Nyssa sylvatica	25	Critical	5	18	1	3.0	8	4		X							broken top	Narrow Crown, One Sided, Small DW (1-2"), Broken Limbs, Suppressed, Serious Decline
471	5	unknown tree	unknown tree	0	Dead	1	6	1	3.0	8	4	X									
472	15	tuliptree	Liriodendron tulipifera	48	Poor	12	70	1	8.0	23	3	X									Small DW (1-2"), Basal Decay, Broken Limbs, Stream Erosion
473	6	hickory, pignut	Carya glabra	55	Fair	6	35	1	4.0	9	2		X								
474	25	tuliptree	Liriodendron tulipifera	50	Fair	20	90	1	10.0	38	3	X									Basal Decay, Stream Erosion
475	24	tuliptree	Liriodendron tulipifera	58	Fair	20	90	1	10.0	36	3	X									Small DW (1-2"), Basal Decay, Stream Erosion
476	4	hornbeam, American	Carpinus caroliniana	50	Fair	8	18	1	3.0	6	3	X									
477	5	hickory, pignut	Carya glabra	50	Fair	8	25	1	3.0	8	3				X						Mechanical Damage
478	11	tuliptree	Liriodendron tulipifera	50	Fair	10	60	1	6.0	17	3				X						Narrow Crown, One Sided, Small DW (1-2")
479	40	oak, northern red	Quercus rubra	55	Fair	25	90	1	11.0	60	3			X	X	X	X	X			Full Crown, Trunk Decay, Basal Decay, Co-Dominant Stems
480	4	sassafras	Sassafras albidum	31	Poor	6	16	1	3.0	6	4		X							broken top	Broken Limbs, Serious Decline
481	33	tuliptree	Liriodendron tulipifera	56	Fair	28	90	1	10.0	50	2			X	X	X	X	X			Large DW (3"+)
482	4	blackgum	Nyssa sylvatica	50	Fair	5	16	1	3.0	6	3				X						
483	5	blackgum	Nyssa sylvatica	50	Fair	6	25	1	3.0	8	3				X					leaning	Suppressed
484	4	sassafras	Sassafras albidum	45	Poor	5	30	1	3.0	6	4				X						Basal Decay, Excessive Lean, Unstable Root System
485	10	blackgum	Nyssa sylvatica	41	Poor	5	18	1	6.0	15	4				X					broken top	Small DW (1-2"), Serious Decline
486	7	blackgum	Nyssa sylvatica	52	Fair	8	25	1	4.0	11	3				X						
487	8	tuliptree	Liriodendron tulipifera	48	Poor	8	30	1	5.0	12	3				X						Branch Decay, Broken Limbs
488	3	maple, red	Acer rubrum	50	Fair	5	25	1	2.0	5	3				X						
489	16	maple, red	Acer rubrum	44	Poor	15	55	1	8.0	24	4				X						Trunk Decay, Basal Decay, Mechanical Damage
490	5	elm, slippery	Ulmus rubra	50	Fair	6	30	1	3.0	8	3				X						Vines
491	6	mulberry, spp.	Morus spp.	34	Poor	6	30	1	4.0	9	4				X						Small DW (1-2"), Trunk Decay, Basal Decay, Suppressed, Serious Decline
492	5	elm, slippery	Ulmus rubra	50	Fair	5	20	1	3.0	8	3				X						Small DW (1-2"), Stream Erosion
493	3	boxelder	Acer negundo	38	Poor	4	18	1	2.0	5	4				X						Trunk Decay, Basal Decay, Suppressed, Serious Decline
494	18	tuliptree	Liriodendron tulipifera	55	Fair	16	90	1	8.0	27	3				X						Vines
495	15	sycamore, American	Platanus occidentalis	50	Fair	15	75	1	8.0	23	3				X						
496	18	sycamore, American	Platanus occidentalis	50	Fair	15	75	1	8.0	27	3				X					leaning	
497	21	tuliptree	Liriodendron tulipifera	50	Fair	16	85	1	9.0	32	3				X						Vines, Stream Erosion, Unstable Root System
498	22	tuliptree	Liriodendron tulipifera	50	Fair	16	85	1	9.0	33	2				X						Vines, Stream Erosion, Unstable Root System
499	5	elm, slippery	Ulmus rubra	47	Poor	5	18	1	3.0	8	3				X						Basal Decay, Unstable Root System
500	9	mulberry, spp.	Morus spp.	48	Poor	7	16	1	5.0	14	3				X						Small DW (1-2"), Basal Decay, Broken Limbs, Suppressed
501	12	mulberry, spp.	Morus spp.	50	Fair	7	18	1	7.0	18	3				X						One Sided, Broken Limbs
502	12	mulberry, spp.	Morus spp.	47	Poor	6	25	1	7.0	18	3				X						Small DW (1-2"), Trunk Decay, Basal Decay, Broken Limbs
503	4	elm, American	Ulmus americana	50	Fair	4	20	1	3.0	6	3				X						Vines
504	7	elm, American	Ulmus americana	55	Fair	8	30	1	4.0	11	2				X						Full Crown
505	22	maple, red	Acer rubrum	55	Fair	16	65	1	9.0	33	3				X						Small DW (1-2")
506	4	elm, American	Ulmus americana	50	Fair	8	20	1	3.0	6	3				X						Small DW (1-2"), Suppressed
507	15	maple, red	Acer rubrum	50	Fair	15	65	1	8.0	23	3				X						Small DW (1-2")

Date: JAN 2022

Tree Protection Action Key

Project: SPARROW POND

Tree #	DBH (Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Approx Canopy Radius (FT)	Approx Tree Height (FT)	Number of Stems	SRZ Structural Critical Root Zone (radius) in Feet	CRZ Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Priority (1-4)	Removal	Removal By Arborist	Protection Measures: Root Prune	Tree Protection Fence	Mulch	Tree Condition Inspections	Construction Oversight/Monitoring	Comments	Additional Notes	Condition Notes
508	4	hornbeam, American	Carpinus caroliniana	45	Poor	6	12	1	3.0	6	4		X								Suppressed, Excessive Lean, Stream Erosion, Unstable Root System
509	13	tuliptree	Liriodendron tulipifera	45	Poor	10	65	1	7.0	20	4		X								Narrow Crown, Small DW (1-2"), Stream Erosion, Unstable Root System
510	15	tuliptree	Liriodendron tulipifera	50	Fair	11	65	1	8.0	23	3		X								Trunk Decay, Vines, Mechanical Damage, Unstable Root System
511	10	maple, red	Acer rubrum	50	Fair	8	48	1	6.0	15	3			X	X	X	X	X			Small DW (1-2"), Basal Decay, Broken Limbs, Co-Dominant Stems, Vines
512	15	sycamore, American	Platanus occidentalis	47	Poor	12	70	1	8.0	23	3	X									Narrow Crown, Small DW (1-2"), Vines
513	10	maple, red	Acer rubrum	50	Fair	10	40	1	6.0	15	3	X									Narrow Crown, Vines, Mechanical Damage
514	6	maple, red	Acer rubrum	48	Poor	8	25	1	4.0	9	3	X									Suppressed, Vines
515	19	tuliptree	Liriodendron tulipifera	0	Dead	1	20	1	9.0	29	4	X								no top	
2662	8	tuliptree	Liriodendron tulipifera	22	Critical	4	20	1	5.0	12	4	X								Utility Topped	Narrow Crown, Large DW (3"+), Small DW (1-2"), Root Damage/Decay, Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Overhead Utility
2663	5	tuliptree	Liriodendron tulipifera	25	Critical	4	18	1	3.0	8	4	X								Utility Topped	Narrow Crown, Large DW (3"+), Small DW (1-2"), Root Damage/Decay, Trunk Decay, Branch Decay, Broken Limbs, Suppressed, Stressed, Vines, Overhead Utility
2664	18	tuliptree	Liriodendron tulipifera	67	Fair	25	70	1	8.0	27	3	X									One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Suppressed, Vines, Overhead Utility
2665	15	tuliptree	Liriodendron tulipifera	0	Dead	1	25	1	8.0	23	4		X							Utility topped several years ago.	
2666	9	hickory, mockernut	Carya tomentosa	75	Good	18	50	1	5.0	14	3					X				Co-dom at 20', one is dead.	One Sided, Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Co-Dominant Stems, Suppressed, Vines
2667	24	oak, northern red	Quercus rubra	81	Good	39	80	1	10.0	36	2					X					One Sided, Small DW (1-2"), Suppressed
2668	8	hickory, mockernut	Carya tomentosa	75	Good	18	45	1	5.0	12	3					X					Narrow Crown, Suppressed
2669	7,6	hickory, mockernut	Carya tomentosa	73	Good	15	45	2	5.0	14	3					X					Narrow Crown, Co-Dominant Stems, Suppressed, Vines
2670	11	hickory, mockernut	Carya tomentosa	73	Good	18	55	1	6.0	17	3					X					Narrow Crown, Suppressed, Vines
2671	9	hickory, mockernut	Carya tomentosa	75	Good	17	55	1	5.0	14	3					X					Narrow Crown, Suppressed, Vines
2672	7	hickory, mockernut	Carya tomentosa	75	Good	12	50	1	4.0	11	3					X					Narrow Crown, Suppressed, Vines
2673	6	maple, red	Acer rubrum	70	Good	15	35	1	4.0	9	3					X					One Sided, Small DW (1-2"), Suppressed, Mechanical Damage
2674	6	holly, American	Ilex opaca	72	Good	11	18	1	4.0	9	3			X	X	X	X	X			Full Crown, Suppressed
2675	11	maple, red	Acer rubrum	75	Good	18	55	1	6.0	17	3		X								One Sided, Small DW (1-2"), Broken Limbs
2676	8,6	maple, red	Acer rubrum	30	Poor	5	20	2	6.0	15	4		X							Co-dominant trunks. Tops broken out at 20' from storm damage. 6" is dead. 8" is pushing epicormic branches.	One Sided, Trunk Decay, Broken Limbs, Co-Dominant Stems, Suppressed, Stressed, Serious Decline
2677	10	tuliptree	Liriodendron tulipifera	61	Fair	16	60	1	6.0	15	3			X	X	X	X	X			One Sided, Suppressed, Mechanical Damage
2678	23	tuliptree	Liriodendron tulipifera	78	Good	35	80	1	9.0	35	2			X	X	X	X	X			One Sided, Suppressed, Mechanical Damage
2679	24	tuliptree	Liriodendron tulipifera	78	Good	35	85	1	10.0	36	2			X	X	X	X	X		6" girdling root.	One Sided, Suppressed, Mechanical Damage, Girdling Roots
2680	5	hickory, mockernut	Carya tomentosa	78	Good	35	30	1	3.0	8	3					X					Narrow Crown, Suppressed
2681	16	tuliptree	Liriodendron tulipifera	75	Good	24	75	1	8.0	24	3					X					Narrow Crown, Suppressed
2682	11	tuliptree	Liriodendron tulipifera	72	Good	20	50	1	6.0	17	3					X					Narrow Crown, Suppressed
2683	11	tuliptree	Liriodendron tulipifera	70	Good	19	50	1	6.0	17	3					X					Narrow Crown, Suppressed, Vines
2684	16	hickory, mockernut	Carya tomentosa	66	Fair	20	65	1	8.0	24	3					X					One Sided, Large DW (3"+), Small DW (1-2")
1710	4	elm, slippery	Ulmus rubra	50	Fair	3		1	3.0	6	3	X								minor lean from weight of vines which were cut	
1711	24	oak, northern red	Quercus rubra	45	Poor	18		1	10.0	36	3					X				stream erosion	Small DW (1-2")
1712	4	hickory, pignut	Carya glabra	65	Fair	4		1	3.0	6	2					X					
1713	31	tuliptree	Liriodendron tulipifera	60	Fair	22		1	10.0	47	3					X					Small DW (1-2"), Broken Limbs
1714	20	maple, red	Acer rubrum	60	Fair	14		1	9.0	30	3					X					
1715	26	oak, northern red	Quercus rubra	40	Poor	22		1	10.0	39	4		X								Large DW (3"+), Small DW (1-2"), Branch Decay, Broken Limbs, Fungal Fruiting Bodies
1716	24	maple, red	Acer rubrum	65	Fair	22		1	10.0	36	2					X					
1717	21	oak, northern red	Quercus rubra	60	Fair	18		1	9.0	32	3					X					
1718	9	hickory, pignut	Carya glabra	70	Good	7		1	5.0	14	2					X					
1719	9	hickory, pignut	Carya glabra	55	Fair	5		1	5.0	14	2					X					One Sided
1720	32	oak, northern red	Quercus rubra	55	Fair	26		1	10.0	48	3					X					Large DW (3"+), Small DW (1-2"), Broken Limbs
1721	10,6,6,4	mulberry, red	Morus rubra	40	Poor	4		4	7.0	21	4	X								6" and 10" stem dead	Trunk Decay, Co-Dominant Stems, Vines
1722	25	tuliptree	Liriodendron tulipifera	50	Fair	14		1	10.0	38	3					X				secondary pwr line under canopy	Large DW (3"+), Branch Decay, Broken Limbs, Overhead Utility
1723	5	beech, American	Fagus grandifolia	65	Fair	5		1	3.0	8	2					X					
1724	8	maple, red	Acer rubrum	40	Poor	3		1	5.0	12	4					X				dead top	Large DW (3"+)
1725	6	blackgum	Nyssa sylvatica	60	Fair	4		1	4.0	9	3					X					
1726	31	oak, northern red	Quercus rubra	60	Fair	31		1	10.0	47	3					X				dead secondary leader	Trunk Decay
1727	9	maple, red	Acer rubrum	45	Poor	5		1	5.0	14	3					X					One Sided, Small DW (1-2"), Broken Limbs, Vines
1728	19	oak, northern red	Quercus rubra	65	Fair	18		1	9.0	29	2					X					
1729	19	oak, northern red	Quercus rubra	75	Good	23		1	9.0	29	1					X				beyond fence 90 deg angle between t1728 &t1722	
1730	14	oak, chestnut	Quercus montana	70	Good	12		1	7.0	21	1			X	X	X	X	X		fence cut around tree	
1731	40	oak, northern red	Quercus rubra	70	Good	34		1	11.0	60	1					X					

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE CARY HULSE ISA No PD-1080A CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE PRESERVATION SCHEDULE
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 41

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
1	15	*Morus spp.*	Yes	58%	45%	3.90	1
2	16	*Liquidambar styraciflua*	No	64%	65%	6.66	0
3	3	*Acer rubrum*	No	50%	70%	1.05	0
4	10	*Nyssa sylvatica*	No	50%	80%	4.00	0
5	9	*Quercus velutina*	No	70%	75%	4.75	0
6	14	*Quercus velutina*	No	73%	75%	7.71	0
7	17	*Quercus rubra*	No	72%	75%	9.16	0
8	21	*Quercus rubra*	No	75%	75%	11.81	0
9	13	*Quercus montana*	No	67%	75%	6.55	0
10	5	*Morus spp.*	Yes	DEAD	45%	0.00	0
11	8	*Ulmus rubra*	Yes	50%	68%	2.70	1
12	4	*Morus spp.*	No	50%	45%	0.90	0
13	24	*Quercus rubra*	No	80%	75%	14.34	0
14	10	*Quercus montana*	No	50%	75%	3.75	0
15	3	*Quercus montana*	No	58%	75%	1.30	0
16	21	*Quercus alba*	No	77%	88%	14.07	0
17	4	*Acer rubrum*	No	50%	70%	1.40	0
18	12	*Quercus montana*	No	67%	75%	6.05	0
19	6	*Acer rubrum*	No	47%	70%	1.97	0
20	18	*Morus spp.*	Yes	38%	45%	3.04	1
21	9	*Acer rubrum*	No	55%	70%	3.45	0
22	6	*Acer rubrum*	No	47%	70%	1.97	0
23	14	*Ulmus rubra*	No	50%	68%	4.73	0
24	6	*Nyssa sylvatica*	No	63%	80%	3.00	0
25	26	*Liriodendron tulipifera*	Yes	69%	70%	12.51	3
26	6	*Fraxinus americana*	No	41%	53%	1.28	0
27	17	*Prunus serotina*	Yes	50%	55%	4.68	1
28	11	*Morus spp.*	Yes	50%	45%	2.48	1
29	11	*Carya glabra*	No	75%	75%	6.19	0
30	8	*Acer rubrum*	No	50%	70%	2.80	0
31	7	*Acer rubrum*	No	50%	70%	2.45	0
32	19	*Quercus rubra*	No	58%	75%	8.24	0
33	20	*Quercus rubra*	No	75%	75%	11.25	0
34	4	*Nyssa sylvatica*	No	75%	80%	2.40	0
35	4	*Nyssa sylvatica*	No	75%	80%	2.40	0
36	14	*Fagus grandifolia*	No	75%	80%	8.40	0
37	15	*Quercus alba*	No	63%	88%	8.20	0
38	17	*Quercus montana*	No	50%	75%	6.38	0
39	21	*Quercus rubra*	No	75%	75%	11.81	0
40	25	*Quercus rubra*	No	78%	75%	14.65	0
41	8	*ZZ Unknown dead tree*	Yes	DEAD	0%	0.00	0
42	6	*Robinia pseudoacacia*	No	42%	55%	1.39	0
43	3	*Prunus serotina*	No	48%	55%	0.80	0
44	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
45	7	*Acer rubrum*	No	50%	70%	2.45	0
46	18	*Quercus rubra*	No	50%	75%	6.75	0
47	9	*Nyssa sylvatica*	No	75%	80%	5.40	0
48	7	*Acer rubrum*	No	50%	70%	2.45	0
49	6	*Robinia pseudoacacia*	No	50%	55%	1.65	0
50	5	*Sassafras albidum*	No	50%	55%	1.38	0
51	4	*Sassafras albidum*	No	50%	55%	1.10	0
52	10	*Liriodendron tulipifera*	No	61%	70%	4.27	0
53	7	*Sassafras albidum*	No	72%	55%	2.77	0
54	6	*Sassafras albidum*	No	66%	55%	2.17	0
55	5	*Liriodendron tulipifera*	No	47%	70%	1.64	0

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
56	3	*Prunus serotina*	No	53%	55%	0.88	0
57	16	*Quercus rubra*	No	70%	75%	8.44	0
58	5	*Acer rubrum*	No	50%	70%	1.75	0
59	12	*Liriodendron tulipifera*	No	75%	70%	6.30	0
60	6	*Sassafras albidum*	No	55%	55%	1.80	0
61	5	*Sassafras albidum*	No	52%	55%	1.42	0
62	6	*Sassafras albidum*	No	47%	55%	1.55	0
63	5	*Prunus serotina*	No	50%	55%	1.38	0
64	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
65	3	*Nyssa sylvatica*	No	59%	80%	1.43	0
66	22	*Quercus rubra*	No	75%	75%	12.38	0
67	4	*Acer rubrum*	No	47%	70%	1.31	0
68	3	*Sassafras albidum*	No	DEAD	55%	0.00	0
69	6	*Quercus rubra*	No	75%	75%	3.38	0
70	5	*Acer rubrum*	No	52%	70%	1.80	0
71	4	*Sassafras albidum*	No	50%	55%	1.10	0
72	3	*Sassafras albidum*	No	DEAD	55%	0.00	0
73	4	*Prunus serotina*	No	50%	55%	1.10	0
74	5	*Sassafras albidum*	No	50%	55%	1.38	0
75	5	*Sassafras albidum*	No	DEAD	55%	0.00	0
76	5	*Sassafras albidum*	No	50%	55%	1.38	0
77	8	*Sassafras albidum*	No	50%	55%	2.20	0
78	4	*Sassafras albidum*	No	50%	55%	1.10	0
79	4	*Sassafras albidum*	No	50%	55%	1.10	0
80	8	*Nyssa sylvatica*	No	DEAD	80%	0.00	0
81	10	*Nyssa sylvatica*	No	48%	80%	3.88	0
82	3	*Nyssa sylvatica*	No	48%	80%	1.16	0
83	4	*Nyssa sylvatica*	No	47%	80%	1.50	0
84	5	*Sassafras albidum*	No	50%	55%	1.38	0
85	5	*Sassafras albidum*	No	50%	55%	1.38	0
86	4	*Sassafras albidum*	No	DEAD	55%	0.00	0
87	4	*Sassafras albidum*	No	41%	55%	0.89	0
88	5	*Sassafras albidum*	No	50%	55%	1.38	0
89	5	*Sassafras albidum*	No	50%	55%	1.38	0
90	6	*Sassafras albidum*	No	50%	55%	1.65	0
91	6	*Sassafras albidum*	No	50%	55%	1.65	0
92	6	*Quercus rubra*	No	50%	75%	2.25	0
93	19	*Liriodendron tulipifera*	No	75%	70%	9.98	0
94	10	*Prunus serotina*	No	39%	55%	2.15	0
95	5	*Acer rubrum*	No	53%	70%	1.86	0
96	29	*Quercus rubra*	No	80%	75%	17.33	0
97	22	*Quercus rubra*	No	75%	75%	12.38	0
98	22	*Quercus montana*	No	73%	75%	12.12	0
99	6	*Nyssa sylvatica*	No	55%	80%	2.63	0
100	4	*Acer rubrum*	No	47%	70%	1.31	0
101	8	*Quercus rubra*	No	50%	75%	3.00	0
102	3	*Acer rubrum*	No	48%	70%	1.02	0
103	21	*Liriodendron tulipifera*	No	75%	70%	11.03	0
104	4	*Liriodendron tulipifera*	No	47%	70%	1.31	0
105	24	*Quercus alba*	No	75%	88%	15.75	0
106	8	*Nyssa sylvatica*	No	50%	80%	3.20	0
107	11	*Acer rubrum*	No	44%	70%	3.37	0
108	8	*Acer rubrum*	No	44%	70%	2.45	0
109	3	*Acer rubrum*	No	48%	70%	1.02	0
110	15	*Quercus montana*	No	50%	75%	5.63	0

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
111	5	*Acer rubrum*	No	38%	70%	1.31	0
112	4	*Sassafras albidum*	No	DEAD	55%	0.00	0
113	3	*Quercus rubra*	No	44%	75%	0.98	0
114	3	*Acer rubrum*	No	50%	70%	1.05	0
115	18	*Quercus rubra*	No	34%	75%	4.64	0
116	6	*Quercus montana*	No	41%	75%	1.83	0
117	4	*Carya glabra*	No	61%	75%	1.83	0
118	25	*Quercus montana*	No	69%	75%	12.89	0
119	3	*Prunus serotina*	No	50%	55%	0.83	0
120	24	*Quercus alba*	No	75%	88%	15.75	0
121	13	*Carya glabra*	No	72%	75%	7.01	0
122	14	*Nyssa sylvatica*	No	52%	80%	5.78	0
123	9	*Nyssa sylvatica*	No	44%	80%	3.15	0
124	8	*Quercus alba*	No	50%	88%	3.50	0
125	4	*Carya glabra*	No	50%	75%	1.50	0
126	13	*Quercus alba*	No	45%	88%	5.15	0
127	10	*Carya glabra*	No	47%	75%	3.52	0
128	11	*Nyssa sylvatica*	No	50%	80%	4.40	0
129	14	*Quercus montana*	No	50%	75%	5.25	0
130	5	*Carya glabra*	No	50%	75%	1.88	0
131	3	*Quercus alba*	No	50%	88%	1.31	0
132	32	*Quercus alba*	No	75%	88%	21.00	0
133	8	*Quercus alba*	No	50%	88%	3.50	0
134	24	*Quercus alba*	No	66%	88%	13.78	0
135	3	*Carya glabra*	No	50%	75%	1.13	0
136	6	*Carya glabra*	No	50%	75%	2.25	0
137	6	*Carya glabra*	No	50%	75%	2.25	0
138	7	*Carya glabra*	No	50%	75%	2.63	0
139	4	*Nyssa sylvatica*	No	50%	80%	1.60	0
140	24	*Quercus alba*	No	75%	88%	15.75	0
141	6	*Pinus strobus*	No	50%	55%	1.65	0
142	10	*Carya glabra*	No	50%	75%	3.75	0
143	3	*Prunus serotina*	No	50%	55%	0.83	0
144	9	*Morus spp.*	No	45%	45%	1.84	0
145	7	*Carya glabra*	No	50%	75%	2.63	0
146	12	*Acer rubrum*	No	48%	70%	4.07	0
147	6	*Fagus grandifolia*	No	50%	80%	2.40	0
148	8	*Quercus rubra*	No	50%	75%	3.00	0
149	4	*Quercus alba*	No	50%	88%	1.75	0
150	11	*Quercus montana*	No	50%	75%	4.13	0
151	9	*Fagus grandifolia*	No	50%	80%	3.60	0
152	4	*Nyssa sylvatica*	No	50%	80%	1.60	0
153	8	*Nyssa sylvatica*	No	48%	80%	3.10	0
154	23	*Fagus grandifolia*	No	75%	80%	13.80	0
155	17	*Nyssa sylvatica*	No	75%	80%	10.20	0
156	11	*Acer rubrum*	No	50%	70%	3.85	0
157	13	*Quercus rubra*	No	53%	75%	5.18	0
158	16	*Acer rubrum*	No	50%	70%	5.60	0
159	31	*ZZ Unknown dead tree*	Yes	DEAD	0%	0.00	0
160	12	*Quercus rubra*	Yes	DEAD	75%	0.00	0
161	9	*Acer rubrum*	No	19%	70%	1.18	0
162	12	*Morus spp.*	No	44%	45%	2.36	0
163	5	*Liriodendron tulipifera*	No	44%	70%	1.53	0
164	9	*Acer rubrum*	No	27%	70%	1.67	0
165	6	*Acer rubrum*	No	DEAD	70%	0.00	0

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
166	3	*Prunus serotina*	No	50%	55%	0.83	0
167	18	*Quercus rubra*	No	72%	75%	9.70	0
168	6	*Acer rubrum*	No	DEAD	70%	0.00	0
169	3	*Acer rubrum*	No	48%	70%	1.02	0
170	4	*Carya glabra*	No	72%	75%	2.16	0
171	13	*Prunus serotina*	No	33%	55%	2.35	0
172	8	*Acer rubrum*	No	50%	70%	2.80	0
173	4	*Carpinus caroliniana*	No	44%	80%	1.40	0
174	4	*Acer rubrum*	No	DEAD	70%	0.00	0
175	22	*Quercus rubra*	No	72%	75%	11.86	0
176	8	*Nyssa sylvatica*	No	50%	80%	3.20	0
177	5	*Nyssa sylvatica*	No	42%	80%	1.69	0
178	4	*Acer rubrum*	No	27%	70%	0.74	0
179	3	*Prunus avium*	No	50%	55%	0.83	0
180	5	*Quercus alba*	No	25%	88%	1.09	0
181	6	*Quercus alba*	No	47%	88%	2.46	0
182	4	*Quercus alba*	No	38%	88%	1.31	0
183	13	*Prunus serotina*	No	75%	55%	5.36	0
184	4	*Acer rubrum*	No	50%	70%	1.40	0
185	4	*Acer rubrum*	No	50%	70%	1.40	0
186	7	*Acer rubrum*	No	50%	70%	2.45	0
187	4	*Quercus alba*	No	47%	88%	1.64	0
188	3	*Quercus alba*	No	50%	88%	1.31	0
189	22	*Prunus serotina*	No	59%	55%	7.18	0
190	3	*Quercus alba*	No	50%	88%	1.31	0
191	5	*Ilex opaca*	No	58%	73%	2.10	0
192	22	*Quercus alba*	No	75%	88%	14.44	0
193	22	*Quercus alba*	No	75%	88%	14.44	0
194	4	*Prunus avium*	No	50%	55%	1.10	0
195	12	*Prunus serotina*	No	DEAD	55%	0.00	0
196	6	*Carya glabra*	No	61%	75%	2.74	0
197	8	*Nyssa sylvatica*	No	59%	80%	3.80	0
198	9	*Nyssa sylvatica*	No	50%	80%	3.60	0
199	6	*Nyssa sylvatica*	No	50%	80%	2.40	0
200	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
201	6	*Carya glabra*	No	42%	75%	1.90	0
202	4	*Quercus alba*	No	39%	88%	1.37	0
203	5	*Carya glabra*	No	50%	75%	1.88	0
204	10	*Quercus alba*	No	50%	88%	4.38	0
205	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
206	3	*Carya glabra*	No	50%	75%	1.13	0
207	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
208	19	*Quercus alba*	No	75%	88%	12.47	0
209	18	*Quercus alba*	No	75%	88%	11.81	0
210	8	*Quercus alba*	No	DEAD	88%	0.00	0
211	20	*Quercus alba*	No	75%	88%	13.13	0
212	10	*Nyssa sylvatica*	No	75%	80%	6.00	0
213	4	*Acer rubrum*	No	13%	70%	0.35	0
214	8	*Quercus alba*	No	50%	88%	3.50	0
215	21	*Quercus alba*	No	75%	88%	13.78	0
216	4	*Nyssa sylvatica*	No	50%	80%	1.60	0
217	4	*Nyssa sylvatica*	No	DEAD	80%	0.00	0
218	7	*Carya glabra*	No	75%	75%	3.94	0
219	3	*Nyssa sylvatica*	No	50%	80%	1.20	0
220	4	*Acer rubrum*	No	50%	70%	1.40	0

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
221	18	*Quercus alba*	No	50%	88%	7.88	0
222	3	*Prunus serotina*	No	31%	55%	0.52	0
223	28	*Quercus alba*	No	75%	88%	18.38	0
224	18	*Quercus alba*	No	75%	88%	11.81	0
225	6	*Nyssa sylvatica*	No	50%	80%	2.40	0
226	6	*Quercus velutina*	No	50%	75%	2.25	0
227	13	*Quercus alba*	No	50%	88%	5.69	0
228	9	*Nyssa sylvatica*	No	50%	80%	3.60	0
229	13	*Prunus serotina*	No	44%	55%	3.13	0
230	10	*Quercus velutina*	Yes	DEAD	75%	0.00	0
231	10	*Quercus alba*	No	47%	88%	4.10	0
232	9	*Acer rubrum*	No	50%	70%	3.15	0
233	15	*Nyssa sylvatica*	No	47%	80%	5.63	0
234	6	*Nyssa sylvatica*	No	50%	80%	2.40	0
235	4	*Nyssa sylvatica*	No	50%	80%	1.60	0
236	9	*Carya glabra*	No	50%	75%	3.38	0
237	16	*Quercus alba*	No	50%	88%	7.00	0
238	3	*Carya glabra*	No	50%	75%	1.13	0
239	6	*Carya glabra*	No	50%	75%	2.25	0
240	14	*Carya glabra*	No	50%	75%	5.25	0
241	24	*Liriodendron tulipifera*	No	47%	70%	7.88	0
242	29	*Liriodendron tulipifera*	No	75%	70%	15.23	0
243	5	*Nyssa sylvatica*	No	50%	80%	2.00	0
244	3	*Quercus imbricaria*	No	50%	75%	1.13	0
245	3	*Quercus laurifolia*	No	52%	70%	1.08	0
246	15	*Liriodendron tulipifera*	No	59%	70%	6.23	0
247	4	*Carya glabra*	No	50%	75%	1.50	0
248	6	*Quercus alba*	Yes	50%	88%	2.63	1
249	8	*Quercus rubra*	No	50%	75%	3.00	0
250	21	*Carya glabra*	No	75%	75%	11.81	0
251	7	*Carya glabra*	No	50%	75%	2.63	0
252	10	*Carya glabra*	No	59%	75%	4.45	0
253	3	*Quercus rubra*	No	50%	75%	1.13	0
254	6	*Carya glabra*	No	50%	75%	2.25	0
255	3	*Quercus alba*	No	50%	88%	1.31	0
256	21	*Liriodendron tulipifera*	No	75%	70%	11.03	0
257	11	*Quercus alba*	Yes	50%	88%	4.81	1
258	4	*Quercus rubra*	No	50%	75%	1.50	0
259	6	*Morus spp.*	Yes	50%	45%	1.35	1
260	4	*Quercus montana*	Yes	50%	75%	1.50	1
261	13	*Liriodendron tulipifera*	Yes	50%	70%	4.55	1
262	8	*ZZ Unknown dead tree*	Yes	DEAD	0%	0.00	0
263	5	*Quercus velutina*	No	50%	75%	1.88	0
264	5	*Carya glabra*	No	50%	75%	1.88	0
265	17	*Quercus montana*	No	50%	75%	6.38	0
267	5	*Carya glabra*	No	50%	75%	1.88	0
268	8	*Carya glabra*	No	50%	75%	3.00	0
269	12	*Carya glabra*	Yes	73%	75%	6.61	2
270	12	*Carya glabra*	Yes	52%	75%	4.64	1
271	15	*Carya glabra*	Yes	53%	75%	5.98	2
272	9	*Quercus rubra*	No	50%	75%	3.38	0
273	7	*Carya tomentosa*	No	50%	75%	2.63	0
274	24	*Liriodendron tulipifera*	No	75%	70%	12.60	0
275	6	*Fagus grandifolia*	No	69%	80%	3.30	0
276	9	*Carya glabra*	No	73%	75%	4.96	0

Date: JAN 2022

Tree Replacement Calculations

Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
277	25	*Quercus rubra*	No	75%	75%	14.06	0
278	24	*Liriodendron tulipifera*	No	75%	70%	12.60	0
279	22	*Liriodendron tulipifera*	No	75%	70%	11.55	0
280	6	*Acer rubrum*	No	50%	70%	2.10	0
281	17	*Liriodendron tulipifera*	No	50%	70%	5.95	0
282	5	*Carya glabra*	No	50%	75%	1.88	0
283	4	*Platanus occidentalis*	Yes	50%	58%	1.15	1
284	7	*Nyssa sylvatica*	No	50%	80%	2.80	0
285	17	*Liriodendron tulipifera*	No	50%	70%	5.95	0
286	9	*Quercus rubra*	No	50%	75%	3.38	0
287	15	*Carya glabra*	No	50%	75%	5.63	0
288	5	*Quercus rubra*	No	50%	75%	1.88	0
289	8	*Carya glabra*	No	45%	75%	2.72	0
290	5	*Fagus grandifolia*	No	75%	80%	3.00	0
291	13	*Acer rubrum*	No	75%	70%	6.83	0
292	18	*Liriodendron tulipifera*	No	75%	70%	9.45	0
293	6	*Nyssa sylvatica*	No	50%	80%	2.40	0
294	24	*Quercus rubra*	No	72%	75%	12.94	0
295	5	*Carpinus caroliniana*	No	34%	80%	1.38	0
296	13	*Acer rubrum*	No	50%	70%	4.55	0
297	4	*Fraxinus pennsylvanica*	Yes	DEAD	53%	0.00	0
298	6	*Fraxinus pennsylvanica*	Yes	DEAD	53%	0.00	0
299	16	*ZZ Unknown dead tree*	Yes	DEAD	0%	0.00	0
300	3	*Ostrya virginiana*	Yes	50%	83%	1.24	1
301	3	*Ostrya virginiana*	Yes	50%	83%	1.24	1
302	32	*Platanus occidentalis*	Yes	75%	58%	13.80	3
303	4	*Ostrya virginiana*	Yes	75%	83%	2.48	1
304	9	*Acer rubrum*	No	50%	70%	3.15	0
305	20	*Liriodendron tulipifera*	No	73%	70%	10.28	0
306	30	*Liriodendron tulipifera*	No	73%	70%	15.42	0
307	12	*Liriodendron tulipifera*	No	73%	70%	6.17	0
308	20	*Liriodendron tulipifera*	No	69%	70%	9.63	0
309	11	*Acer rubrum*	Yes	75%	70%	5.78	2
310	9	*Carpinus caroliniana*	Yes	DEAD	80%	0.00	0
311	8	*Carpinus caroliniana*	Yes	50%	80%	3.20	1
312	26	*Liriodendron tulipifera*	No	44%	70%	7.96	0
313	31	*Liriodendron tulipifera*	No	47%	70%	10.17	0
314	5	*Carya glabra*	No	50%	75%	1.88	0
315	5	*Carya glabra*	No	50%	75%	1.88	0
316	6	*Acer rubrum*	No	50%	70%	2.10	0
317	23	*Quercus rubra*	No	75%	75%	12.94	0
318	4	*Carya glabra*	No	50%	75%	1.50	0
319	17	*Quercus rubra*	No	50%	75%	6.38	0
320	4	*Cornus florida*	No	50%	60%	1.20	0
321	4	*Carya glabra*	No	50%	75%	1.50	0
322	7	*Carya glabra*	No	50%	75%	2.63	0
323	5	*Carya glabra*	No	50%	75%	1.88	0
324	23	*Liriodendron tulipifera*	No	50%	70%	8.05	0
325	5	*Carya glabra*	No	50%	75%	1.88	0
326	9	*Carya glabra*	No	50%	75%	3.38	0
327	4	*Ostrya virginiana*	No	50%	83%	1.65	0
328	5	*Carya glabra*	No	50%	75%	1.88	0
329	22	*Liriodendron tulipifera*	No	75%	70%	11.55	0
330	31	*Liriodendron tulipifera*	No	75%	70%	16.28	0
331	6	*Acer rubrum*	No	50%	70%	2.10	0

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE
CARY HULSE
ISA No PD-1080A
CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE REPLACEMENT CALCULATIONS
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: CH
DRAWN: CH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 42

FILENAME: 28454.01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

REVISED ON 1/24/2022

Date: JAN 2022 **Tree Replacement Calculations** Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
332	6	*Ostrya virginiana*	No	DEAD	83%	0.00	0
333	43	*Carya glabra*	No	84%	75%	27.21	0
334	5	*Acer rubrum*	Yes	50%	70%	1.75	1
335	9	*Acer rubrum*	Yes	50%	70%	3.15	1
336	17	*Ulmus rubra*	Yes	50%	68%	5.74	2
337	21	*Liriodendron tulipifera*	Yes	59%	70%	8.73	2
338	21	*Liriodendron tulipifera*	Yes	48%	70%	7.12	2
339	6	*Acer rubrum*	Yes	50%	70%	2.10	1
340	4	*Carpinus caroliniana*	Yes	50%	80%	1.60	1
341	13	*Acer rubrum*	Yes	42%	70%	3.84	1
342	3	*Acer saccharum*	Yes	50%	75%	1.13	1
343	7	*Malus spp.*	No	50%	63%	2.19	0
344	6	*Cornus florida*	No	50%	60%	1.80	0
345	5	*Malus angustifolia*	No	50%	63%	1.56	0
346	5	*Malus spp.*	No	50%	63%	1.56	0
347	5	*Malus spp.*	No	50%	63%	1.56	0
348	6	*Malus spp.*	No	50%	63%	1.88	0
349	6	*Malus spp.*	No	50%	63%	1.88	0
350	13	*Morus spp.*	Yes	33%	45%	1.92	1
351	23	*Fraxinus pennsylvanica*	Yes	DEAD	53%	0.00	0
352	4	*Carya glabra*	Yes	28%	75%	0.84	1
353	5	*Carya glabra*	Yes	27%	75%	1.00	1
354	3	*Carya glabra*	Yes	27%	75%	0.60	1
356	17	*Fagus grandifolia*	No	50%	80%	6.80	0
357	7	*Fagus grandifolia*	No	50%	80%	2.80	0
358	25	*Quercus rubra*	No	75%	75%	14.06	0
360	13	*Acer rubrum*	Yes	50%	70%	4.55	1
361	7	*Morus spp.*	No	47%	45%	1.48	0
362	24	*Morus spp.*	Yes	33%	45%	3.54	1
401	15	*Platanus occidentalis*	No	58%	58%	4.99	0
402	24	*Platanus occidentalis*	Yes	55%	58%	7.55	2
403	10	*Platanus occidentalis*	Yes	61%	58%	3.50	1
404	13	*Platanus occidentalis*	Yes	50%	58%	3.74	1
405	14	*Robinia pseudoacacia*	Yes	50%	55%	3.85	1
406	8	*Platanus occidentalis*	Yes	44%	58%	2.01	1
407	10	*Platanus occidentalis*	Yes	59%	58%	3.41	1
408	11	*Platanus occidentalis*	Yes	50%	58%	3.16	1
409	7	*Platanus occidentalis*	Yes	50%	58%	2.01	1
410	11	*Platanus occidentalis*	Yes	50%	58%	3.16	1
411	11	*Robinia pseudoacacia*	Yes	44%	55%	2.65	1
412	9	*Platanus occidentalis*	Yes	50%	58%	2.59	1
413	11	*Robinia pseudoacacia*	Yes	DEAD	55%	0.00	0
414	4	*Morus spp.*	Yes	50%	45%	0.90	1
415	10	*Platanus occidentalis*	Yes	55%	58%	3.14	1
416	5	*Platanus occidentalis*	Yes	48%	58%	1.39	1
417	4	*Morus spp.*	Yes	63%	45%	1.13	1
418	14	*Robinia pseudoacacia*	Yes	48%	55%	3.73	1
419	10	*Catalpa speciosa*	Yes	48%	45%	2.18	1
420	30	*Quercus rubra*	No	75%	75%	16.88	0
421	11	*Carya glabra*	No	61%	75%	5.03	0
422	10	*Carya glabra*	No	55%	75%	4.10	0
426	8	*Quercus rubra*	Yes	56%	75%	3.38	1
425	4	*Fraxinus spp.*	Yes	56%	53%	1.18	1
423	6	*Ulmus rubra*	Yes	50%	68%	2.03	1
424	19	*Liriodendron tulipifera*	Yes	55%	70%	7.27	2

Wetland Studies and Solutions, Inc. a DAVEY company

Date: JAN 2022 **Tree Replacement Calculations** Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
482	4	*Nyssa sylvatica*	No	50%	80%	1.60	0
483	5	*Nyssa sylvatica*	No	50%	80%	2.00	0
484	4	*Sassafras albidum*	No	45%	55%	1.00	0
485	10	*Nyssa sylvatica*	No	41%	80%	3.25	0
486	7	*Nyssa sylvatica*	No	52%	80%	2.89	0
487	8	*Liriodendron tulipifera*	No	48%	70%	2.71	0
488	3	*Acer rubrum*	No	50%	70%	1.05	0
489	16	*Acer rubrum*	No	44%	70%	4.90	0
490	5	*Ulmus rubra*	No	50%	68%	1.69	0
491	6	*Morus spp.*	No	34%	45%	0.93	0
492	5	*Ulmus rubra*	No	50%	68%	1.69	0
493	3	*Acer negundo*	No	38%	40%	0.45	0
494	18	*Liriodendron tulipifera*	No	55%	70%	6.89	0
495	15	*Platanus occidentalis*	No	50%	58%	4.31	0
496	18	*Platanus occidentalis*	No	50%	58%	5.18	0
497	21	*Liriodendron tulipifera*	No	50%	70%	7.35	0
498	22	*Liriodendron tulipifera*	No	50%	70%	7.70	0
499	5	*Ulmus rubra*	No	47%	68%	1.58	0
500	9	*Morus spp.*	No	48%	45%	1.96	0
501	12	*Morus spp.*	No	50%	45%	2.70	0
502	12	*Morus spp.*	No	47%	45%	2.53	0
503	4	*Ulmus americana*	No	50%	53%	1.05	0
504	7	*Ulmus americana*	No	55%	53%	2.01	0
505	22	*Acer rubrum*	No	55%	70%	8.42	0
506	4	*Ulmus americana*	No	50%	53%	1.05	0
507	15	*Acer rubrum*	No	50%	70%	5.25	0
508	4	*Carpinus caroliniana*	Yes	45%	80%	1.45	1
509	13	*Liriodendron tulipifera*	Yes	45%	70%	4.12	1
510	15	*Liriodendron tulipifera*	Yes	50%	70%	5.25	2
511	10	*Acer rubrum*	No	50%	70%	3.50	0
512	15	*Platanus occidentalis*	Yes	47%	58%	4.04	1
513	10	*Acer rubrum*	Yes	50%	70%	3.50	1
514	6	*Acer rubrum*	Yes	48%	70%	2.03	1
515	19	*Liriodendron tulipifera*	Yes	DEAD	70%	0.00	0
2662	8	*Liriodendron tulipifera*	Yes	22%	70%	1.23	1
2663	5	*Liriodendron tulipifera*	Yes	25%	70%	0.88	1
2664	18	*Liriodendron tulipifera*	Yes	67%	70%	8.47	2
2665	15	*Liriodendron tulipifera*	Yes	DEAD	70%	0.00	0
2666	9	*Carya tomentosa*	No	75%	75%	5.06	0
2667	24	*Quercus rubra*	No	81%	75%	14.63	0
2668	8	*Carya tomentosa*	No	75%	75%	4.50	0
2669	9	*Carya tomentosa*	No	73%	75%	4.96	0
2670	11	*Carya tomentosa*	No	73%	75%	6.06	0
2671	9	*Carya tomentosa*	No	75%	75%	5.06	0
2672	7	*Carya tomentosa*	No	75%	75%	3.94	0
2673	6	*Acer rubrum*	No	70%	70%	2.95	0
2674	6	*Ilex opaca*	No	72%	73%	3.13	0
2675	11	*Acer rubrum*	Yes	75%	70%	5.78	2
2676	10	*Acer rubrum*	Yes	30%	70%	2.08	1
2677	10	*Liriodendron tulipifera*	No	61%	70%	4.27	0
2678	23	*Liriodendron tulipifera*	No	78%	70%	12.58	0
2679	24	*Liriodendron tulipifera*	No	78%	70%	13.13	0
2680	5	*Carya tomentosa*	No	78%	75%	2.93	0
2681	16	*Liriodendron tulipifera*	No	75%	70%	8.40	0
2682	11	*Liriodendron tulipifera*	No	72%	70%	5.53	0

Wetland Studies and Solutions, Inc. a DAVEY company

Date: JAN 2022 **Tree Replacement Calculations** Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
427	3	*Liriodendron tulipifera*	Yes	55%	70%	1.15	1
428	5	*Liriodendron tulipifera*	Yes	58%	70%	2.02	1
429	3	*Prunus serotina*	Yes	41%	55%	0.67	1
430	4	*Morus spp.*	Yes	45%	45%	0.82	1
431	14	*ZZ Unknown dead tree*	Yes	DEAD	0%	0.00	0
432	4	*Prunus serotina*	Yes	53%	55%	1.17	1
433	34	*Quercus alba*	Yes	50%	88%	14.88	3
434	15	*Liriodendron tulipifera*	Yes	56%	70%	5.91	2
435	16	*Prunus serotina*	Yes	48%	55%	4.26	1
436	20	*Liriodendron tulipifera*	Yes	55%	70%	7.66	2
437	18	*Platanus occidentalis*	Yes	50%	58%	5.18	2
438	17	*Acer rubrum*	No	50%	70%	5.95	0
439	33	*Liriodendron tulipifera*	No	63%	70%	14.44	0
440	4	*Prunus serotina*	No	55%	55%	1.20	0
441	9	*Robinia pseudoacacia*	No	50%	55%	2.48	0
442	5	*Robinia pseudoacacia*	No	50%	55%	1.38	0
443	6	*Robinia pseudoacacia*	No	50%	55%	1.65	0
444	5	*Robinia pseudoacacia*	No	50%	55%	1.38	0
445	45	*Quercus rubra*	No	55%	75%	18.46	0
446	11	*Liriodendron tulipifera*	No	50%	70%	3.85	0
447	20	*Liriodendron tulipifera*	No	59%	70%	8.31	0
448	17	*Liriodendron tulipifera*	No	55%	70%	6.51	0
449	9	*Robinia pseudoacacia*	Yes	50%	55%	2.48	1
450	5	*Robinia pseudoacacia*	No	48%	55%	1.33	0
451	17	*Carya glabra*	No	58%	75%	7.37	0
452	12	*Quercus alba*	No	55%	88%	5.74	0
453	32	*Liriodendron tulipifera*	Yes	55%	70%	12.25	3
454	4	*Acer saccharum*	No	50%	75%	1.50	0
455	4	*Quercus alba*	Yes	47%	88%	1.64	1
456	14	*Carya glabra*	No	58%	75%	6.07	0
457	16	*Liriodendron tulipifera*	No	59%	70%	6.65	0
458	15	*Quercus rubra*	No	50%	75%	5.63	0
459	28	*Liriodendron tulipifera*	Yes	50%	70%	9.80	2
460	28	*Liriodendron tulipifera*	Yes	45%	70%	8.88	2
461	17	*Quercus alba*	Yes	53%	88%	7.90	2
462	11	*Betula nigra*	Yes	42%	70%	3.25	1
463	35	*Liriodendron tulipifera*	No	58%	70%	14.16	0
464	3	*Carya glabra*	No	55%	75%	1.23	0
465	28	*Quercus alba*	No	55%	88%	13.40	0
466	15	*Quercus rubra*	No	50%	75%	5.63	0
467	6	*unknown tree*	Yes	DEAD	0%	0.00	0
468	7	*Nyssa sylvatica*	No	50%	80%	2.80	0
469	15	*Nyssa sylvatica*	No	50%	80%	6.00	0
470	5	*Nyssa sylvatica*	Yes	25%	80%	1.00	1
471	5	*unknown tree*	Yes	DEAD	0%	0.00	0
472	15	*Liriodendron tulipifera*	Yes	48%	70%	5.09	2
473	6	*Carya glabra*	Yes	55%	75%	2.46	1
474	25	*Liriodendron tulipifera*	Yes	50%	70%	8.75	2
475	24	*Liriodendron tulipifera*	Yes	58%	70%	9.71	2
476	4	*Carpinus caroliniana*	Yes	50%	80%	1.60	1
477	5	*Carya glabra*	No	50%	75%	1.88	0
478	11	*Liriodendron tulipifera*	No	50%	70%	3.85	0
479	40	*Quercus rubra*	No	55%	75%	16.41	0
480	4	*Sassafras albidum*	Yes	31%	55%	0.69	1
481	33	*Liriodendron tulipifera*	No	56%	70%	12.99	0

Wetland Studies and Solutions, Inc. a DAVEY company

Date: JAN 2022 **Tree Replacement Calculations** Project: SPARROW POND

Tree #	DBH (inches)	Species	To Be Removed (Y/N)	Condition	Species Rating	Total Score	Replacements Required
2683	11	*Liriodendron tulipifera*	No	70%	70%	5.41	0
2684	16	*Carya tomentosa*	No	66%	75%	7.88	0
1710	4	*Ulmus rubra*	Yes	50%	68%	1.35	1
1711	24	*Quercus rubra*	No	45%	75%	8.10	0
1712	4	*Carya glabra*	No	65%	75%	1.95	0
1713	31	*Liriodendron tulipifera*	No	60%	70%	13.02	0
1714	20	*Acer rubrum*	No	60%	70%	8.40	0
1715	26	*Quercus rubra*	Yes	40%	75%	7.80	2
1716	24	*Acer rubrum*	No	65%	70%	10.92	0
1717	21	*Quercus rubra*	No	60%	75%	9.45	0
1718	9	*Carya glabra*	No	70%	75%	4.73	0
1719	9	*Carya glabra*	No	55%	75%	3.71	0
1720	32	*Quercus rubra*	No	55%	75%	13.20	0
1721	14	*Morus rubra*	Yes	40%	45%	2.52	1
1722	25	*Liriodendron tulipifera*	No	50%	70%	8.75	0
1723	5	*Fagus grandifolia*	No	65%	80%	2.60	0
1724	8	*Acer rubrum*	No	40%	70%	2.24	0
1725	6	*Nyssa sylvatica*	No	60%	80%	2.88	0
1726	31	*Quercus rubra*	No	60%	75%	13.95	0
1727	9	*Acer rubrum*	No	45%	70%	2.84	0
1728	19	*Quercus rubra*	No	65%	75%	9.26	0
1729	19	*Quercus rubra*	No	75%	75%	10.69	0
1730	14	*Quercus montana*	No	70%	75%	7.35	0
1731	40	*Quercus rubra*	No	70%	75%	21.00	0
					TOTAL REPLACEMENTS REQUIRED:		**124**

Wetland Studies and Solutions, Inc. a DAVEY company

FILENAME: 28454-01_SPARROW_TREES_2022.03.14.DWG PATH: L:\28000S\28400\28454.01\CADD\05-ENVR\TREES PLOTTED BY: SH0101

ARLINGTON
VIRGINIA

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

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SEAL

INTERNATIONAL SOCIETY OF ARBORICULTURE
CARY HULSE
ISA No PD-1080A
CERTIFIED ARBORIST

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

TREE REPLACEMENT CALCULATIONS
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

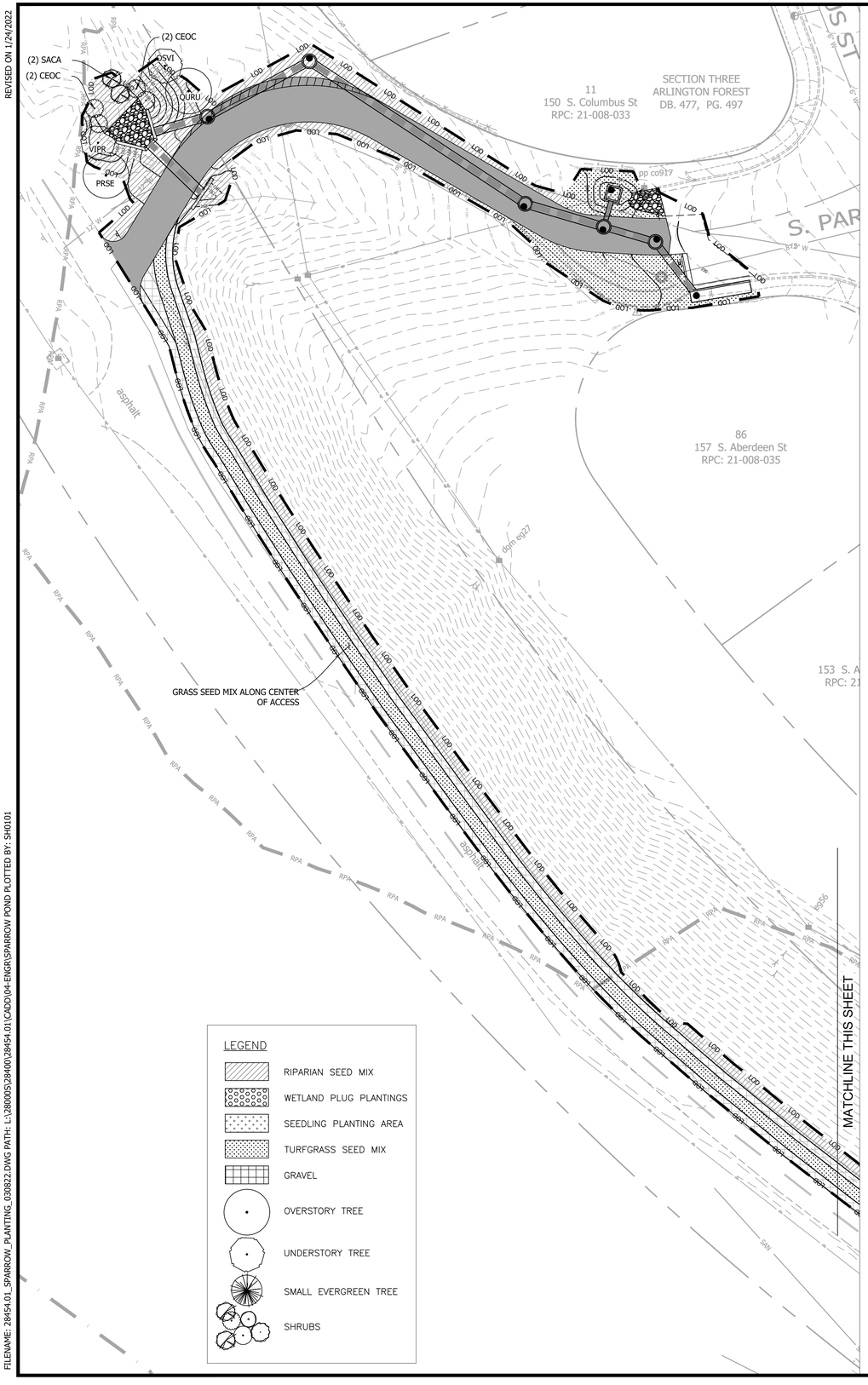
DESIGNED: CH
DRAWN: CH
CHECKED: DMC

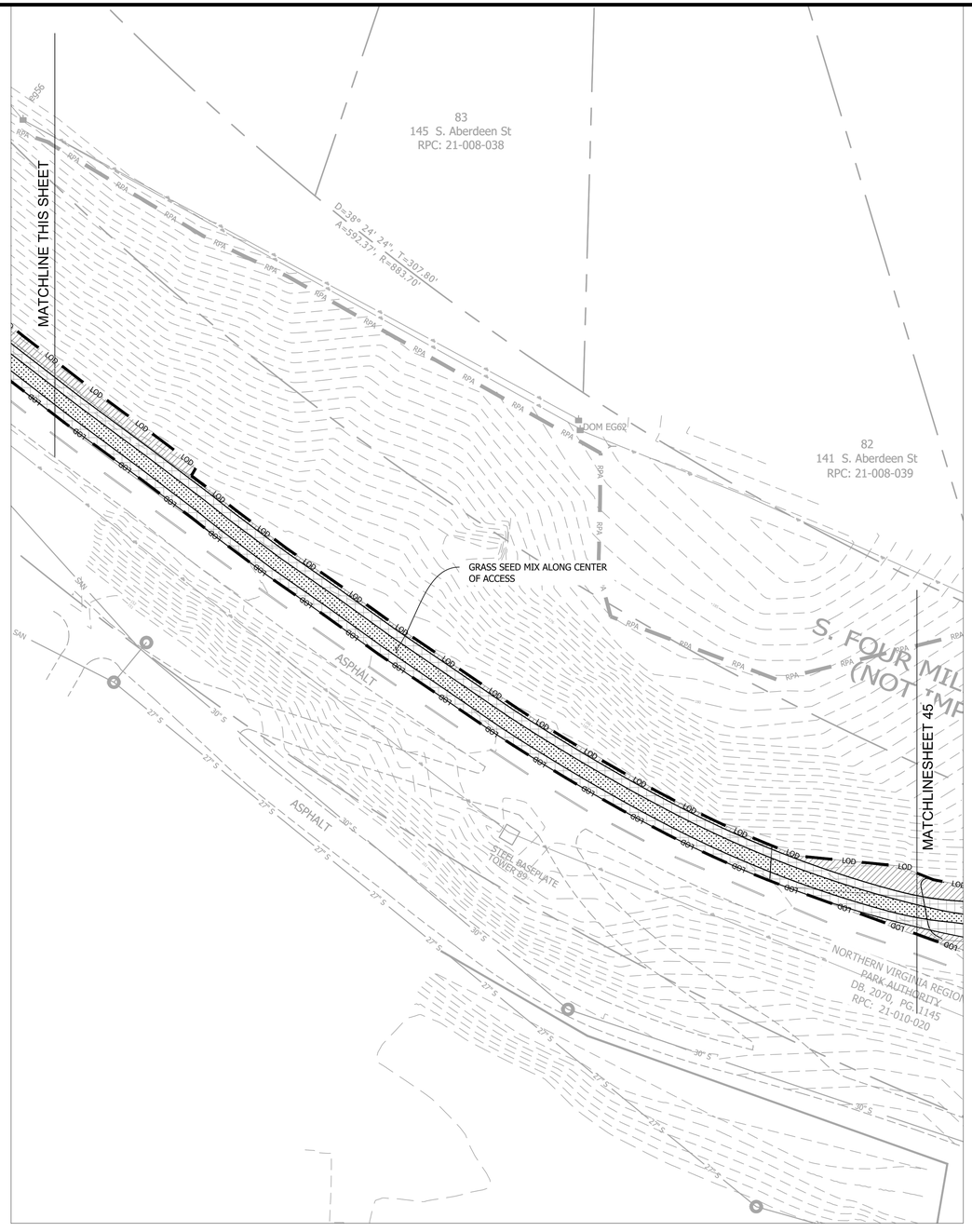
PLOTTED: MARCH 15 2022

SCALE:
N/A

SHEET 43

REVISED ON 1/24/2022





NOTES:

1. SEE VEGETATION SCHEDULES ON PLANTING DETAILS, SCHEDULES & NOTES SHEET FOR SEED MIX COMPOSITION AND APPLICATION RATE.
2. TREES PROPOSED OUTSIDE OF LOD MAY BE FIELD-ADJUSTED AS NECESSARY TO AVOID EXISTING VEGETATION.
3. PRE AND POST CONSTRUCTION INVASIVE PLANT CONTROL SHALL INCLUDE THE ENTIRE LIMITS OF DISTURBANCE AND THE ENTIRE EXTENT OF THE SEEDLING PLANTING AREA AS SHOWN ON THE PLANTING PLAN.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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

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SEAL

COMMONWEALTH OF VIRGINIA
DILLON M. CONNER
Lic. No. 0406001885
03/15/2022
LANDSCAPE ARCHITECT

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

PLANTING PLAN
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: DMC
DRAWN: SEH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
1" = 20'

SHEET 44

FILENAME: 28454.01_SPARROW_PLANTING_030822.DWG PATH: L:\28000S\28400\28454.01\CADD\04-ENGR\SPARROW POND PLOTTED BY: SH0101

REVISED ON 1/24/2022

CONTRACTOR

SUBDIVISION of ORIGINAL PARCEL A SECTION ONE ARLINGTON FOREST DB. 488, PG. 151

81
137 S. Aberdeen St
RPC: 21-008-040

5
520 S. Abingdon St
RPC: 23-006-078

6
519 S. Abingdon St
RPC: 23-006-076

7
515 S. Abingdon St
RPC: 23-006-075

EX. WETLANDS

EX. RPA

PROP. RPA

PROP. 100-YR FLOODPLAIN

PARCEL 5
COUNTY BOARD OF ARLINGTON COUNTY, V
D.B. 1629, PG. 406

RPC: 21-010

AQUATIC BENCH
TOP=150.00
BOTTOM=148.50
10' WIDE

139 AQUATIC BENCH PLUGS

147 AQUATIC BENCH PLUGS

263 AQUATIC BENCH PLUGS

40 AQUATIC BENCH PLUGS

486 AQUATIC BENCH PLUGS

MATCHLINE SHEET 44

CHAIN LINK FENCE

3.16'
N73° 57' 09"W

157.20'
S82° 50' 51"W

120.00'
N39° 24' 44"W

184.07'
N75° 08' 23"W

R MILE RUN DRIVE
T IMPROVED)

W&OD TRAIL

FOUR MILE RUN TRAIL

FOUR MILE RUN

EX. 3'X2' STONE BOX CULVERT

STEEL BASEPLATE TOWER 90

STEEL BASEPLATE TOWER 91

PARK BENCH SHADE

STONE RET. WALL

STEEL RAILING

ASPHALT

WOODEN DECK

WOODEN RAILING

STONE WALL

RAP

25610

25609

15988

RIVER RUN

VIRGINIA REGIONAL
THORITY
PG.1145
10-020

UNTY BOARD OF ARLINGTON COUNTY, VA
GLENCARLYN PARK
RPC: 21-010-001

RPC: 21-010-020

CM MKR

2 BENCHES

SIGN DER

LEGEND

- RIPARIAN SEED MIX
- WETLAND PLUG PLANTINGS
- SEEDLING PLANTING AREA
- TURFGRASS SEED MIX
- GRAVEL
- OVERSTORY TREE
- UNDERSTORY TREE
- SMALL EVERGREEN TREE
- SHRUBS

NOTES:

1. SEE VEGETATION SCHEDULES ON PLANTING DETAILS, SCHEDULES & NOTES SHEET FOR SEED MIX COMPOSITION, APPLICATION RATE, SPECIES SELECTION, AND QUANTITIES.
2. TREES PROPOSED OUTSIDE OF LOD MAY BE FIELD-ADJUSTED AS NECESSARY TO AVOID EXISTING VEGETATION.
3. PRE AND POST CONSTRUCTION INVASIVE PLANT CONTROL SHALL INCLUDE THE ENTIRE LIMITS OF DISTURBANCE AND THE ENTIRE EXTENT OF THE SEEDLING PLANTING AREA AS SHOWN ON THE PLANTING PLAN.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

FILENAME: 28454.01_SPARROW_PLANTING_030822.DWG PATH: L:\280005\28400\28454.01\CADD\04-ENGR\SPARROW POND PLOTTED BY: SH0101

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VIRGINIA

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

COMMONWEALTH OF VIRGINIA
DILLON M. CONNER
Lic. No. 0406001885
03/15/2022
LANDSCAPE ARCHITECT

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

PLANTING PLAN
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: DMC
DRAWN: SEH
CHECKED: DMC

PLOTTED: MARCH 15 2022

SCALE:
1" = 20'

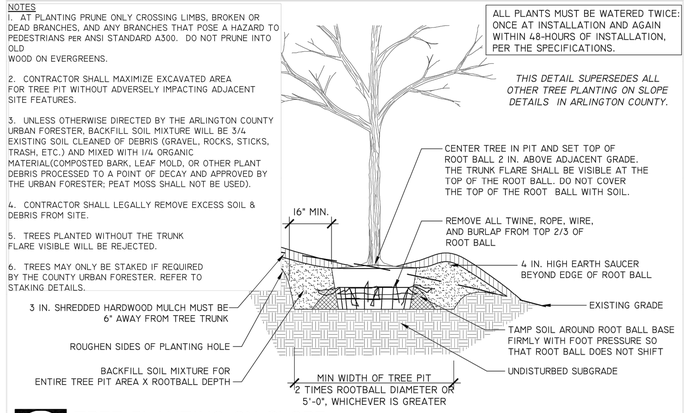
SHEET 45

REVISED ON 1/24/2022

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

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

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



TREE PLANTING ON SLOPE

1/2" = 1'-0"

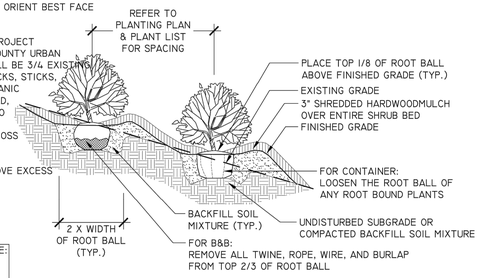
FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.2 (2019)

ARLINGTON VIRGINIA DPR

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES
2. PLANTING PIT/TRENCH SHALL BE DUG DEEP ENOUGH TO ALLOW AT LEAST 1/8TH OF ROOT BALL TO SET ABOVE EXISTING GRADE.
3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS IN THE CENTER OF THE PLANTING PIT. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.
4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS AND/OR ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).
5. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.
6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF SHRUBS

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

THIS DETAIL SUPERSEDES ALL OTHER SHRUB PLANTING ON SLOPE DETAILS IN ARLINGTON COUNTY.



SHRUB PLANTING ON SLOPE

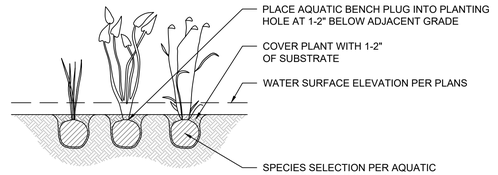
NOT TO SCALE

ELEVATION
329300.9 (2019)

ARLINGTON VIRGINIA DPR

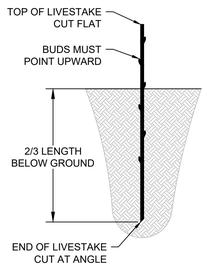
AQUATIC BENCH PLANTING DETAIL

NOT TO SCALE



LIVESTAKE PLANTING DETAIL

NOT TO SCALE

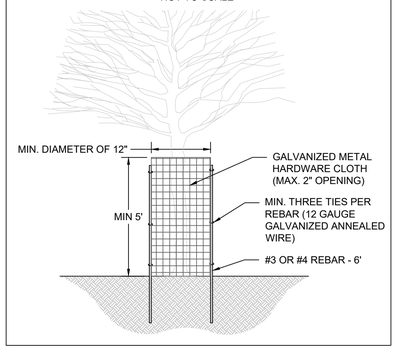


LIVE STAKE PLANTING NOTES:

1. LIVE STAKES SHALL ONLY BE PLANTED BETWEEN FEBRUARY 1st AND MARCH 31st.
2. CONTRACTOR SHALL USE A PLANTING BAR TO PUNCH A HOLE FOR THE LIVESTAKE.
3. ROOTS SHALL BE TREATED WITH ROOT GROWTH HORMONE PRIOR TO PLANTING.
4. LIVE STAKES SHOULD BE 18" TO 24" IN LENGTH AND 1/2" TO 1 1/2" IN DIAMETER.
5. INSTALL THE LIVE STAKE WITH THE CORRECT SIDE UP. LIVE STAKES SHOULD BE CUT AT AN ANGLE ON THE BOTTOM AND FLAT ON THE TOP. WHEN HELD WITH THE CORRECT END UP, THE BUDS MUST POINT UPWARD.
6. TWO-THIRDS (2/3) OF THE LIVE STAKE LENGTH MUST BE PLANTED BELOW GRADE. AS LONG AS A FEW BUDS ARE EXPOSED AT THE TOP, MORE THAN TWO-THIRDS (2/3) OF LIVE STAKE MAY BE BELOW GRADE.
7. TAMP IN AROUND THE CUTTING TO ENSURE THAT THERE ARE NO AIR POCKETS ALONG THE STEM. THE PLANTING BAR MAY BE USED TO PUSH THE SOIL IMMEDIATELY AROUND THE STEM AND PUSH IN THE SOIL TOWARD THE PLANT.
8. LIVESTAKE SPACING PER PLAN OR NOTED IN PLANTING SCHEDULE.

DEER AND BEAVER TREE PROTECTION DETAIL

NOT TO SCALE



SPARROW POND - PLANTING SCHEDULE

TYPE	SPECIES	ABBREVIATION	COMMON NAME	SIZE	SPACING	QUANTITY
OVERSTORY TREES	ACER RUBRUM	ACRU	RED MAPLE	2" CAL.	PER PLAN	5
	CARYA GLABRA	CAGL	PIGNUT HICKORY	2" CAL.		8
	LIRIODENDRON TULIPIFERA	LITU	TULIP TREE	2" CAL.		4
	NYSSA SYLVATICA	NYSY	BLACK GUM	2" CAL.		8
	PLATANUS OCCIDENTALIS	PLOC	SYCAMORE	2" CAL.		9
	PRUNUS SEROTINA	PRSE	BLACK CHERRY	2" CAL.		8
	QUERCUS ALBA	QUAL	WHITE OAK	2" CAL.		8
	QUERCUS PHELLOS	QUPH	WILLOW OAK	2" CAL.		4
	QUERCUS RUBRA	QURU	NORTHERN RED OAK	2" CAL.		8
	SALIX NIGRA	SANI	BLACK WILLOW	2" CAL.		4
				TOTAL OVERSTORY TREES:		66
UNDERSTORY TREES	CARPINUS CAROLINIANA	CACA	AMERICAN HORNBEAM	1.5" CAL	PER PLAN	10
	CERCIS CANADENSIS	CECA	EASTERN REDBUD	1.5" CAL		10
	CERCIS CANADENSIS 'ACE OF HEARTS'	CCAH	ACE OF HEARTS REDBUD	1.5" CAL		4
	CHIONANTHUS VIRGINICUS	CHVI	FRINGETREE	1.5" CAL		10
	VIBURNUM PRUNIFOLIUM	VIPR	BLACKHAW	1.5" CAL		10
	OSTRAYA VIRGINICA	OSVI	HOPHORNBEAM	1.5" CAL		10
				TOTAL UNDERSTORY TREES:		54
SHRUBS	ALNUS SERRRULATA	ALSE	BROOKSIDE ALDER	24"	PER PLAN	45
	CEPHALANTHUS OCCIDENTALIS	CEOC	BUTTONBUSH	24"		47
	LINDERA BENZOIN	LIBE	NORTHERN SPICEBUSH	24"		27
	SAMBUCUS CANADENSIS	SACA	ELDERBERRY	24"		44
	VIBURNUM DENTATUM	VIDE	SOUTHERN ARROWWOOD	24"		37
				TOTAL SHRUBS:		200

NOTES:
1. TREES AND SHRUBS SHALL BE PLANTED ACCORDING TO THE LAYOUT SHOWN ON THE PLANTING PLAN.

SPARROW POND - SEEDLING PLANTING SCHEDULE

SPECIES	COMMON NAME	SIZE	SPACING	QUANTITY
ACER RUBRUM	RED MAPLE	TUBELING	10' O.C. (APPROX 1 PER 100 SF)	22
CARYA GLABRA	PIGNUT HICKORY			44
LIRIODENDRON TULIPIFERA	TULIP TREE			22
NYSSA SYLVATICA	BLACK GUM			44
PLATANUS OCCIDENTALIS	SYCAMORE			44
PRUNUS SEROTINA	BLACK CHERRY			44
QUERCUS ALBA	WHITE OAK			44
QUERCUS PHELLOS	WILLOW OAK			22
QUERCUS RUBRA	NORTHERN RED OAK			42
SALIX NIGRA	BLACK WILLOW			22
			TOTAL TUBELINGS:	350

NOTES:
1. SPECIES SHALL BE MIXED AND PLANTED RANDOMLY IN SEEDLING PLANTING AREA PER PLANTING PLAN.

SPARROW POND - AQUATIC BENCH PLANTING SCHEDULE

SPECIES	COMMON NAME	TYPE	SPACING	QUANTITY
IRIS VERSICOLOR	BLUE FLAG IRIS	PLUG	3' O.C.	134
PELTANDRA VIRGINICA	ARROW ARUM	PLUG	3' O.C.	214
PONTEDERIA CORDATA	PICKERELWEED	PLUG	3' O.C.	214
SAGITTARIA LATIFOLIA	DUCK POTATO	PLUG	3' O.C.	214
SAURURUS CERNUUS	LIZARDS TAIL	PLUG	3' O.C.	80
SCHOENOPLECTUS TABERNAEMONTANI	SOFTSTEM BULRUSH	PLUG	3' O.C.	214
			TOTAL PLANTS:	1070

NOTES:
1. SPECIES SHALL BE MIXED AND PLANTED RANDOMLY THROUGHOUT PLANTING AREA.
2. PLANTINGS OF S. CERNUUS SHALL BE CONCENTRATED ON WESTERN SIDE OF POND.

SPARROW POND - HERBACEOUS SEED MIX

TYPE	SPECIES	COMMON NAME	% OF MIX
E&S COVER CROP	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	9%
	LOLIUM MULTIFLORUM	ANNUAL RYE	15%
	SETARIA ITALICA	FOXTAIL MILLET	15%
GRASSES & RUSHES	AGROSTIS PERENNANS	AUTUMN BENTGRASS	8%
	DICANTHELIUM CLANDESTINUM	DEERTONGUE GRASS	6%
	ELYMUS RIPARIUS	RIVERBANK WILD RYE	8%
	ELYMUS VIRGINICUS	VIRGINIA WILD RYE	8%
	JUNCUS EFFUSUS	SOFT RUSH	6%
	JUNCUS TENUIS	PATH RUSH	6%
	PANICUM VIRGATUM	SWITCHGRASS	10%
FORBS	ASCLEPIAS INCARNATA	SWAMP MILKWEED	1%
	ASCLEPIAS SYRIACA	COMMON MILKWEED	1%
	ASCPEPIAS TUBEROSA	BUTTERFLY WEED	1%
	EUTROCHIUM FISTULOSUM	JOE PYE WEED	1%
	HELENIUM AUTUMNALE	COMMON SNEEZEWEED	1%
	SOLIDAGO JUNCEA	EARLY GOLDENROD	1%
	SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	1%
	SYMPHYOTRICHUM PILOSUM	FROST ASTER	1%
	VERBESINA ALTERNIFOLIUM	WINGSTEM	1%
			100%

RATE:	60 LBS/AC
AREA:	0.97 AC
TOTAL:	58.2 LBS

SPARROW POND - GRASS SEED MIX

TYPE	SPECIES	% OF MIX
TURF GRASS	BOUTELOUA GRACILIS (BLUE GRAMA)	9%
	ERAGROSTIS SPECTABILIS (PURPLE LOVEGRASS)	1%
	FESTUCA RUBRA (CREEPING RED FESCUE)	90%
		100%

RATE:	150 LBS/AC
AREA:	0.1
TOTAL:	15 LBS

SPARROW POND - TREE REPLACEMENT CALCULATIONS

TOTAL TREE REPLACEMENTS REQUIRED:	124

TREE REPLACEMENT PROVIDED:

TYPE	QUANTITY	RATIO	TOTAL
OVERSTORY/LARGE DECIDUOUS	66	1 TO 1	66
UNDERSTORY/SMALL DECIDUOUS	54	3 TO 1	18
SMALL EVERGREEN	15	3 TO 1	5
TUBELING	350	10 TO 1	35
		TOTAL TREE REPLACEMENTS PROVIDED:	124

PLANTING NOTES:

1. MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED ON PLANS, INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.
2. GRADING AND PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE, AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE AND STANDARDS. THE ACCEPTABLE PLANTING RANGE IS FROM MARCH-JUNE 15 AND SEPTEMBER-DECEMBER, FOR NON-TREE MATERIAL, AND OCTOBER - JUNE 15 FOR TREES. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS MUDDY OR FROZEN. CARE SHALL BE TAKEN TO PROVIDE PLANTS WITH ENOUGH WATER TO COMBAT HEAT STRESS DURING HOT/DRY WEATHER.
3. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE. SOIL AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM BUILDING. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO GROWTH OF PLANT MATERIAL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT PER APPROVED PLANS. NO TREES SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS. LAYOUT OF PLANTS SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR REPRESENTATIVE PRIOR TO INSTALLATION.
5. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, VIGOROUS ROOT SYSTEMS, AND BE FREE FROM DEFECTS AND INJURIES. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF ROOTBALL SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF ANSI "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
6. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE INSTALLER TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR ALL PLANT MATERIAL. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
7. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF PRACTICAL. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OTHERWISE DIRECTED BY THE ARLINGTON COUNTY LANDSCAPE ARCHITECT OR REPRESENTATIVE.
8. ALL INJURED ROOTS SHALL BE PRUNED USING ANSI A300 STANDARDS.
9. CONTRACTOR SHALL PROVIDE 4 IN. MINIMUM THICK TOPSOIL LAYER IN ALL PLANTING AREAS. TOPSOIL SHALL BE FREE OF WEEDS, DEBRIS, ROCKS LARGER THAN 2 IN., WOOD, ROOTS, VEGETABLE MATTER, AND CLAY CLODS. CLEAN, FERTILE TOPSOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED.
10. PLANTING PITS SHALL BE DUG PER COUNTY DETAILS. SET PLANTS PLUMB AND STRAIGHT, WITH ROOT FLARES SLIGHTLY ABOVE GRADE. DO NOT COVER THE ROOT FLARE WITH SOIL OR MULCH. BACKFILL PLANTING PITS WITH AMENDED TOPSOIL, AND THOROUGHLY WATER AND TAMP AS BACK-FILLING PROGRESSES. WATER AGAIN TO ACHIEVE SOIL SATURATION IMMEDIATELY FOLLOWING PLANTING.
11. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME, SO AS NOT TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
12. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH ANSI A300: STANDARDS FOR TREE CARE PRACTICES, TO PRESERVE THE HEALTH AND APPEARANCE OF THE PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.
13. TREES SHALL BE SUPPORTED AFTER PLANTING ONLY AS DIRECTED BY THE URBAN FORESTER. IF INSTALLED, THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING, GUYING AND TREE WRAP AT THE END OF THE ONE-YEAR MAINTENANCE AND WARRANTY PERIOD.
14. ALL PLANTING BEDS SHALL BE MULCHED WITH A 3 IN. LAYER OF WEED-FREE DOUBLE SHREDDED HARDWOOD BARK MULCH, OR OTHER EQUIVALENT AS APPROVED BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE. KEEP MULCH AWAY FROM TRUNKS OF TREES AND OTHER PLANT MATERIALS.
15. NEW PLANTINGS AND TURF SHALL BE ADEQUATELY IRRIGATED OR WATERED THROUGHOUT ESTABLISHMENT.
16. UPON COMPLETION OF ALL PLANTING AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT AND DEBRIS. ALL PAVED AREAS SHALL BE BROOM-SWEPT AND LEFT IN A NEAT CONDITION.
17. URBAN FORESTER NOTIFICATION: THE DEVELOPER AGREES TO NOTIFY THE URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE INSTALLATION OF DRAINAGE, SPECIAL SOIL EXPANSION EQUIPMENT, TREE PIT CREATION, AND SCHEDULED PLANTING OF ANY TREES IN THE PUBLIC RIGHT OF WAY, AND TO BE AVAILABLE AT THE TIME OF PLANTING TO MEET WITH DPR STAFF TO INSPECT THE PLANT MATERIAL, TREE PIT AND PLANTING TECHNIQUES. SOIL USED IN THE TREE PIT MUST MEET THE SPECIFICATIONS FOR STREET TREE PLANTING IN THE "STANDARDS FOR PLANTING AND PRESERVATION OF TREES ON SITE PLAN PROJECTS" AVAILABLE FROM THE URBAN FORESTER.

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

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SEAL

COMMONWEALTH OF VIRGINIA
DILLON M. CONNER
Lic. No. 0406001885
03/15/2022
LANDSCAPE ARCHITECT

APPROVALS DATE

QUALITY CONTROL ENGINEER

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DATE

PLANTING DETAILS, SCHEDULES & NOTES
SPARROW POND RESTORATION

ARLINGTON COUNTY, VA

DESIGNED: DMC
DRAWN: SEH
CHECKED: DMC

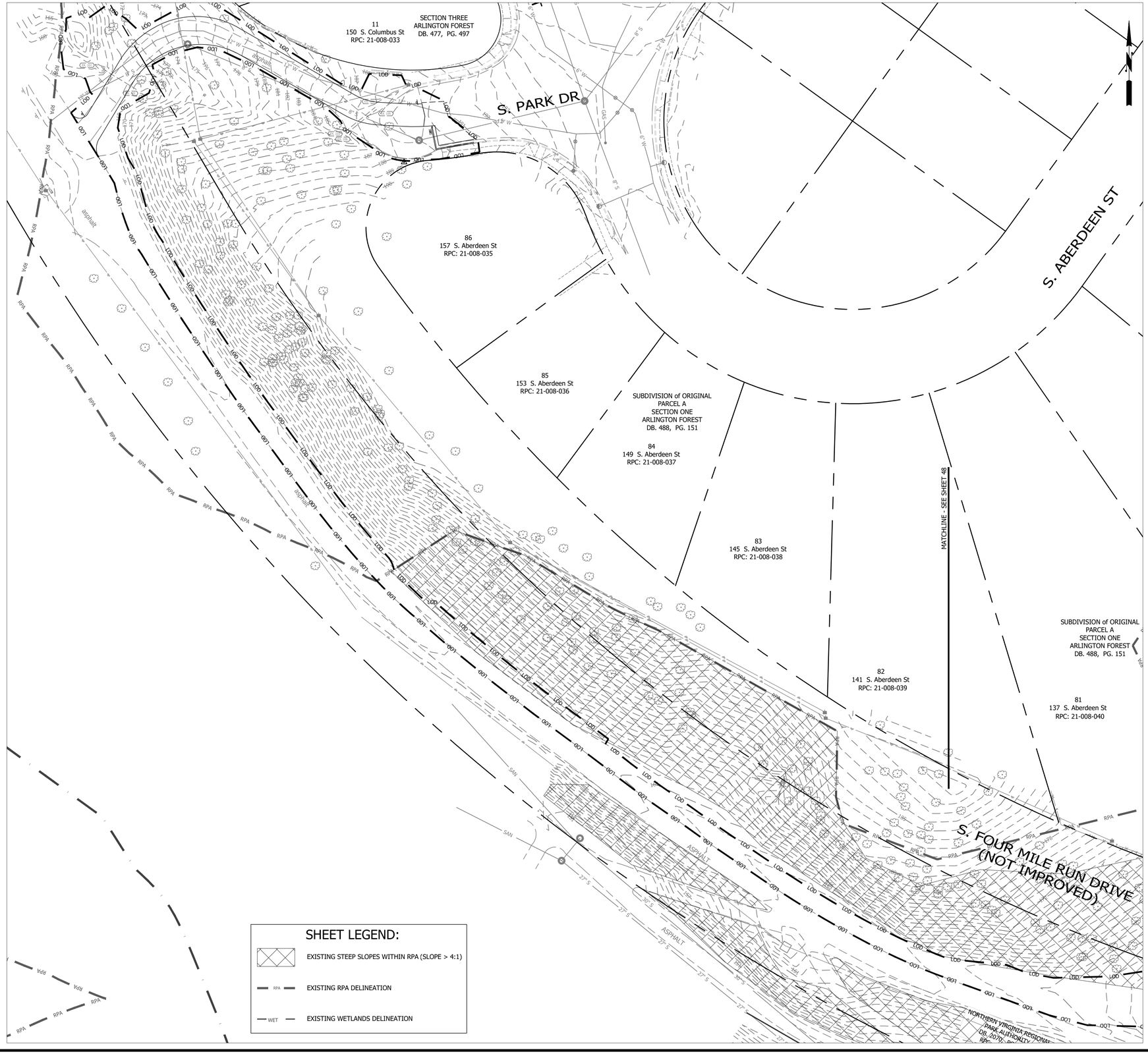
PLOTTED: MARCH 15 2022

SCALE:
1" = 20'

SHEET 46

FILENAME: 28454.01_SPARROW_PLANTING_030822.DWG PATH: L:\28000\S\28400\28454.01\CADD\04-ENGR\SPARROW POND PLOTTED BY: SH0101

REVISED ON 11/18/2021



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Ankur Patel 05/10/22

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Dennis W. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

EXISTING RPA

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
GRAPHIC SCALE

FILENAME: S44D-235-RPA EXISTING.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

MATCHLINE - SEE SHEET 47

SHEET LEGEND:

- EXISTING STEEP SLOPES WITHIN RPA (SLOPE > 4:1)
- RPA — EXISTING RPA DELINEATION
- WET — EXISTING WETLANDS DELINEATION

S. ABINGDON ST

6TH ST S.

32
129 S. Aberdeen St
RPC: 21-008-042

80
133 S. Aberdeen St
RPC: 21-008-041

81
137 S. Aberdeen St
RPC: 21-008-040

SUBDIVISION of ORIGINAL PARCEL A
SECTION ONE
ARLINGTON FOREST
DB. 488, PG. 151

4
518 S. Abingdon St
RPC: 23-006-079

O'HARA'S SIXTH ADDITION TO NORTH BARCROFT
DB. 1155, PG. 544

5
520 S. Abingdon St
RPC: 23-006-078

6
519 S. Abingdon St
RPC: 23-006-076

7
515 S. Abingdon St
RPC: 23-006-075

8
4768 6th Street S.
RPC: 23-006-074

9
4764 6th Street S.
RPC: 23-006-073

18
4760 6th Street
RPC: 23-006-07

EX. RPA

PARCEL 5
COUNTY BOARD OF ARLINGTON COUNTY, VA
D.B. 1629, PG. 406

RPC: 21-010-001

PARCEL 4
COUNTY BOARD OF ARLINGTON COUNTY, VA
D.B. 1593, PG. 465

RPC: 21-010-020

S. FOUR MILE RUN DRIVE (NOT IMPROVED)

EX #100

EX. WETLANDS

NORTHERN VIRGINIA REGIONAL PARK AUTHORITY
DB. 2070, PG. 1175
RPC: 21-010-020

W&OD TRAIL

FOUR MILE RUN TRAIL

FOUR MILE RUN

COUNTY BOARD OF ARLINGTON COUNTY, VA
GLENCARLYN PARK
RPC: 21-010-001

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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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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fuller CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis W. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D

S. PARK DR & S. COLUMBUS ST

EXISTING RPA

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 25 50
GRAPHIC SCALE

48

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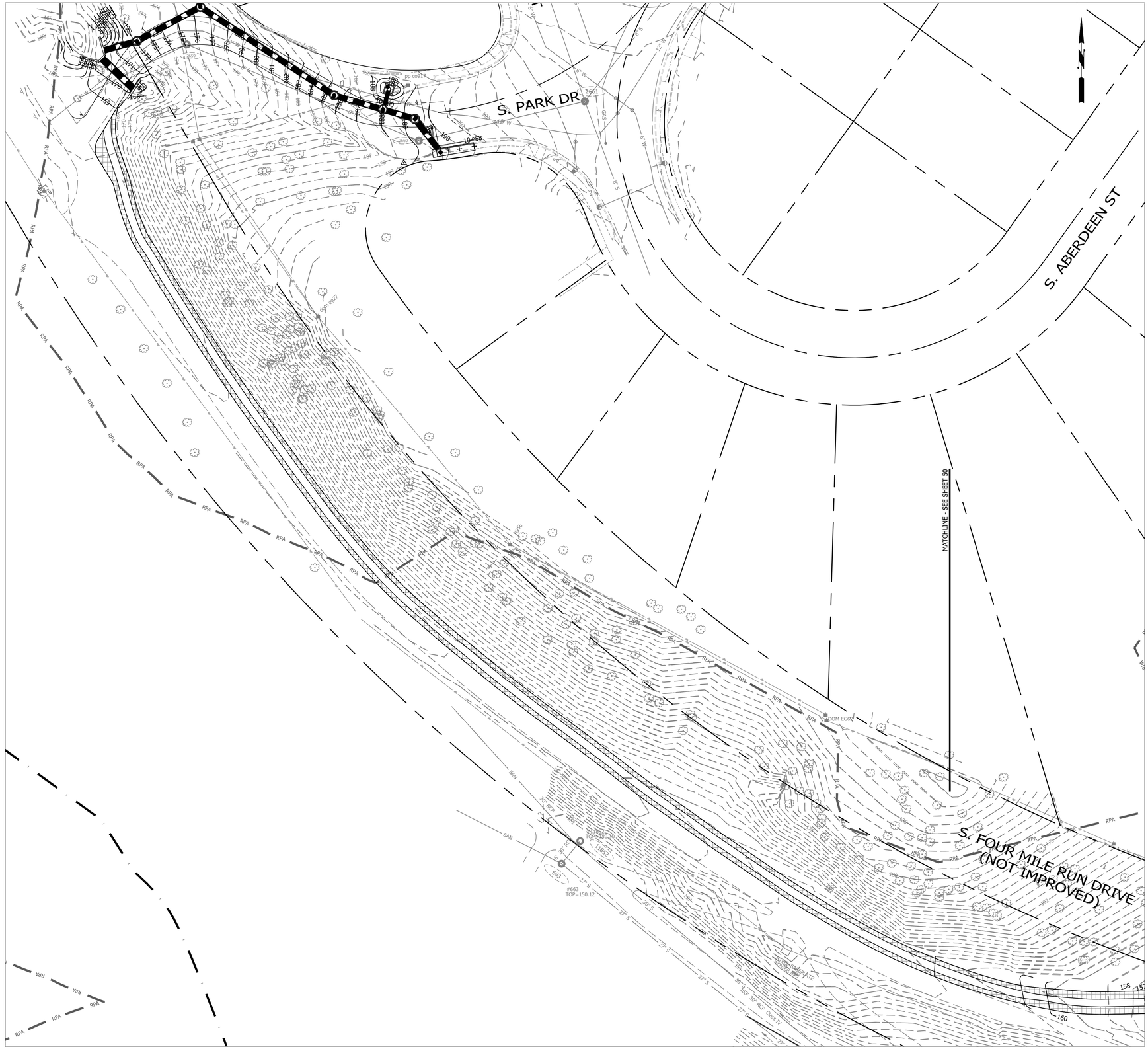
REVISED ON 11/18/2021



SHEET LEGEND:

- RPA — EXISTING RPA DELINEATION
- RPA — PROPOSED RPA DELINEATION

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FILENAME: S44D-236-RPA PROPOSED.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

MATCHLINE - SEE SHEET 49

S. ABINGDON ST

6TH ST S.

S. FOUR MILE RUN DRIVE (NOT IMPROVED)

CHAIN LINK FENCE

W&OD TRAIL

EX. 9'X2' STONE BOX CULVERT

STONE RET. WALL

STEEL RAILING

FOUR MILE RUN TRAIL

FOUR MILE RUN

EX. RPA

PROP. RPA

RPA

SHEET LEGEND:

RPA EXISTING RPA DELINEATION

RPA PROPOSED RPA DELINEATION

Impervious Area within RPA

	Impervious Area (ac)	Pervious Area (ac)	Total Area (ac)
Existing within LOD	0.027	1.777	1.804
Proposed within LOD	0.234	1.570	1.804

Note: The increase to impervious area is due to the proposed 21-A stone that will accommodate future maintenance as well as the CMU's that will line the bottom of forebay

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REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

PROPOSED RPA

DESIGNED: JM
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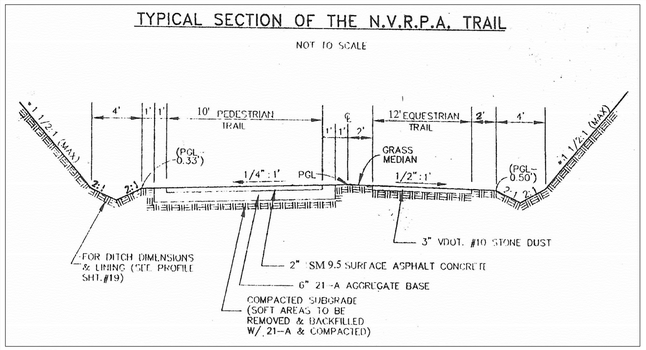
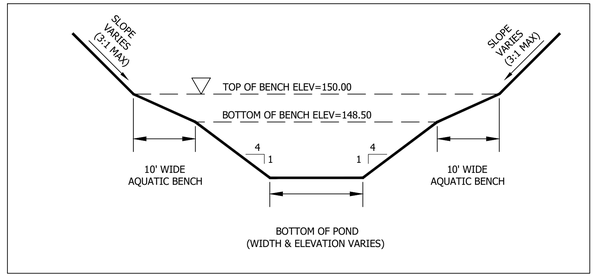
REVISED ON 11/18/2021

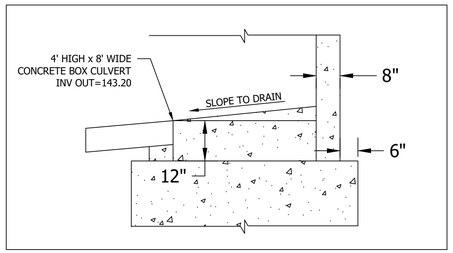


NOTES:
1. THIS SECTION IS TO BE USED FOR THE RECONSTRUCTION OF THE W&OD AND FOUR MILE RUN TRAILS

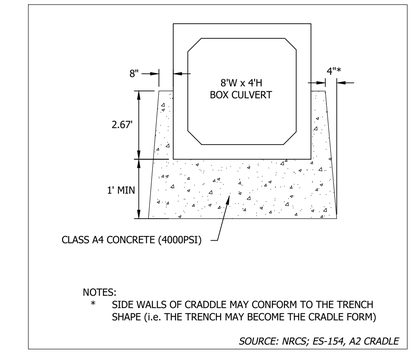
EXISTING TRAIL SECTION
D06 NTS



TYPICAL POOL SECTION
D01 NTS



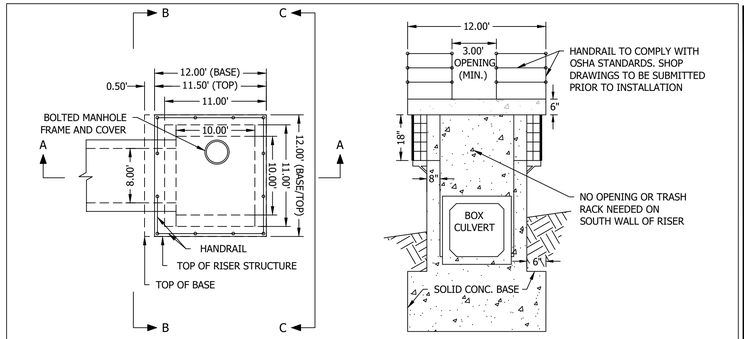
POND RISER ENGLARGEMENT
D02B NTS



NOTES:
* SIDE WALLS OF CRADDLE MAY CONFORM TO THE TRENCH SHAPE (i.e. THE TRENCH MAY BECOME THE CRADLE FORM)

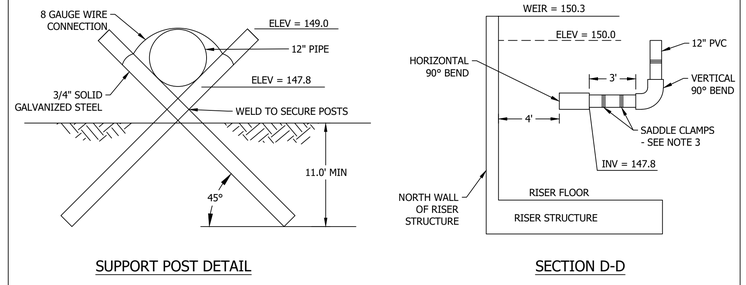
SOURCE: NRCS; ES-154, A2 CRADLE

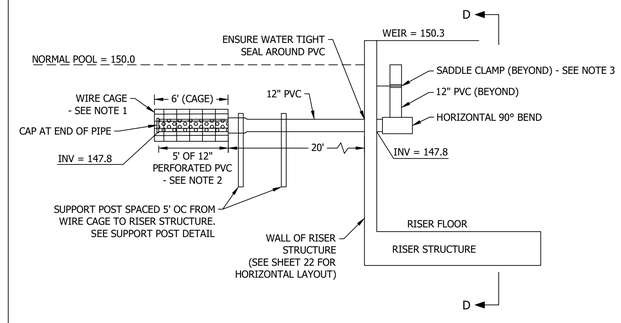
CONCRETE CRADDLE
D07 NTS



NOTES:
1. CAST-IN PLACE CONCRETE TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE TO BE 4000 PSI.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER FOR ALL COMPONENTS PROPOSED TO ARLINGTON COUNTY AS A FORMAL SUBMITTAL PRIOR TO INSTALLATION.

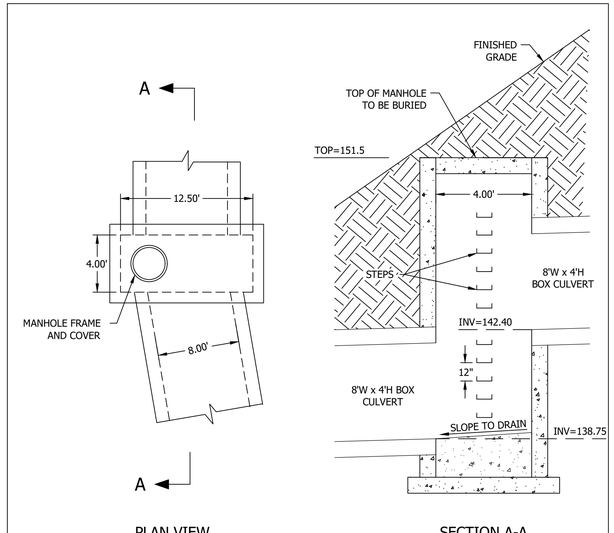
POND RISER DETAIL
D02A NTS





NOTES:
1. 24" DIAMETER GALVANIZED OR STAINLESS STEEL WIRE CAGE AROUND PIPE. 6FT 2"x4" 12 1/2 GAUGE WELD WIRE, ATTACHED TO PVC WITH 8 GAUGE WIRE TIED TO EYE BOLT DRILLED INTO PVC.
2. 12" PVC TO HAVE 1" PERFORATIONS, WITH 5 PERFORATIONS EVENLY SPACED EVERY 6" ON CENTER.
3. SADDLE CLAMPS SHALL BE ANCHORED INTO THE CONCRETE OF THE EAST WALL OF THE RISER STRUCTURE. AN APPROVED EQUIVALENT MAY BE USED TO RESTRAIN THE PIPE TO THE EAST WALL.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER FOR ALL COMPONENTS PROPOSED TO ARLINGTON COUNTY AS A FORMAL SUBMITTAL PRIOR TO INSTALLATION.

BEAVER LEVELER DETAIL
D08 NTS



NOTES:
1. CAST-IN PLACE CONCRETE TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE TO BE 4000 PSI.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER FOR ALL COMPONENTS PROPOSED TO ARLINGTON COUNTY AS A FORMAL SUBMITTAL PRIOR TO INSTALLATION.

STORM MANHOLE
D05 NTS

RISER BUOYANCY COMPUTATIONS

RISER TYPE	SQUARE
RISER INSIDE LENGTH	10 (FT)
RISER INSIDE WIDTH	10 (FT)
RISER CREST	150.30 (FT)
RISER WALL THICKNESS	6 (IN)
INVERT OUT	143.20 (FT)
NUMBER OF BARRELS	1
BASE OUTSIDE LENGTH	12.00 (FT)
BASE OUTSIDE WIDTH	12.00 (FT)
MAXIMUM BASE BOTTOM ELEVATION	140.20 (FT)
REQUIRED FACTOR OF SAFETY	1.25
PROVIDED FACTOR OF SAFETY	1.35

BUOYANCY OF STRUCTURE	PERIMETER (SF)	VOLUME OF WATER (CF)
VERTICAL WALLS (BELOW WEIR CREST)	121	943.8
RISER BASE	144	288
TOTAL VOLUME OF WATER		1232 CF
UNIT WEIGHT OF WATER		62.4 LBS/CF
TOTAL BUOYANT FORCE		76,864 LBS

CONCRETE VOLUME / WEIGHT CALCULATIONS	SURFACE AREA (SF)	VOLUME OF CONCRETE (CF)
TOP SLAB	138	69
VERTICAL WALLS	21	195.3
CONCRETE IN RISER BASE	144	288
CONCRETE FROM BOX CULVERT INVERT TO TOP OF BASE	100	100
CULVERT OPENING	-4	-16
WEIR OPENINGS IN WALL	-15	-22.5
TOTAL VOLUME OF CONCRETE		613.8 CF
UNIT WEIGHT OF CONCRETE		150 LBS/CF
TOTAL WEIGHT OF CONCRETE		92,070 LBS

SOIL VOLUME / WEIGHT CALCULATIONS	AREA (SF)	VOLUME OF WATER (CF)
AVERAGE 5FT ABOVE EXTENDED BASE	23	95
TOTAL VOLUME OF SOIL		95 CF
UNIT WEIGHT OF SOIL		120 LBS/CF
TOTAL WEIGHT OF SOIL		11,400 LBS
TOTAL WEIGHT OF SOIL AND CONCRETE		103,470 LBS

POND RISER BUOYANCY CALCS
D02C NTS

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fuller 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SITE DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

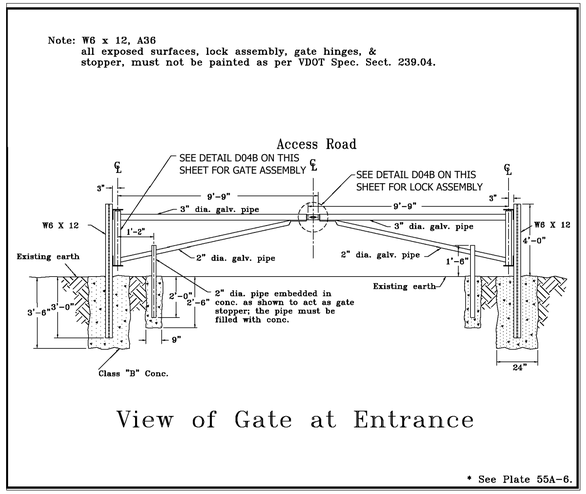
PLOTTED: APRIL 6 2023

SCALE:

AS SHOWN

FILENAME: S44D-204-DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

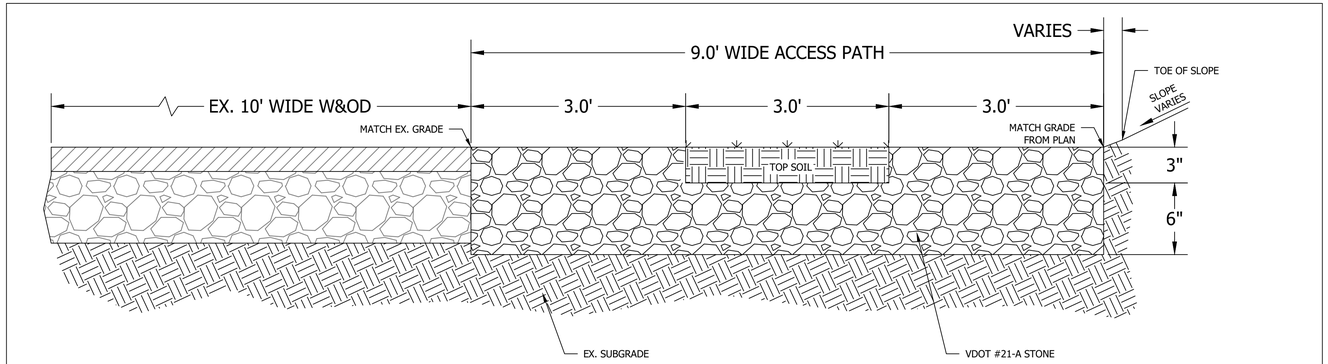
REVISED ON 11/18/2021



View of Gate at Entrance

POND ACCESS GATE - PART 1

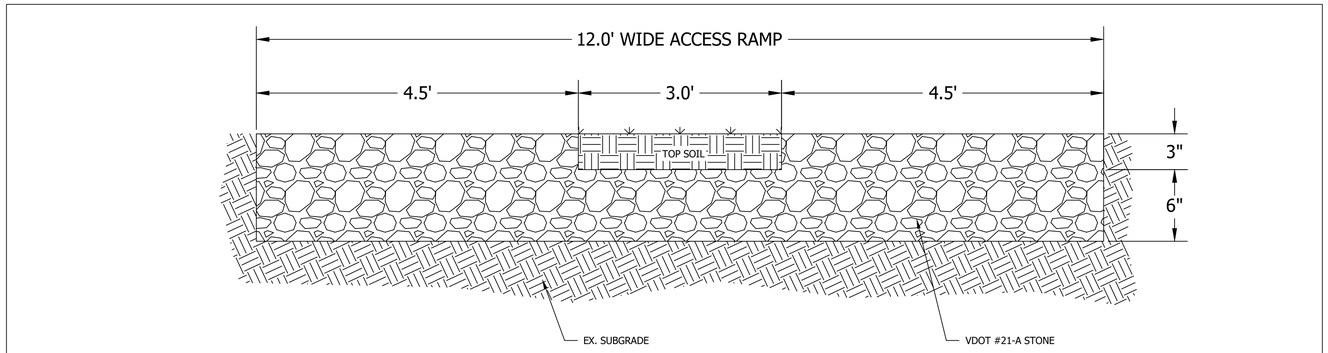
D04A NTS



NOTES:
1. ONCE CONSTRUCTION OF POND IS COMPLETE, #1 STONE WILL BE REMOVED AND ACCESS PATH SECTION TO BE INSTALLED

TYPICAL ACCESS PATH SECTION - ALONG W&OD

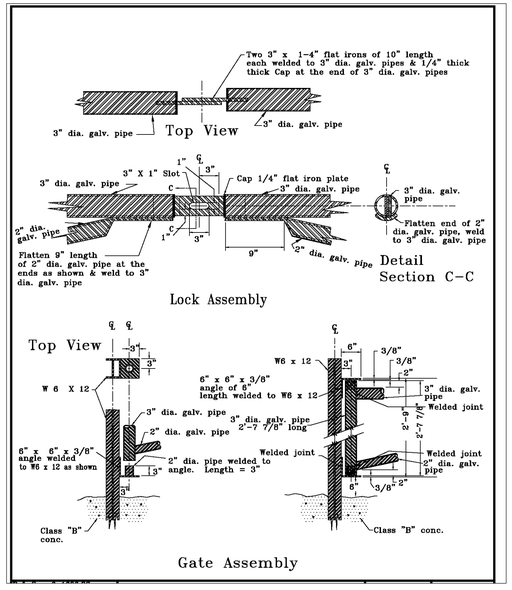
D03A NTS



NOTES:
1. ONCE CONSTRUCTION OF POND IS COMPLETE, #1 STONE WILL BE REMOVED AND ACCESS PATH SECTION TO BE INSTALLED

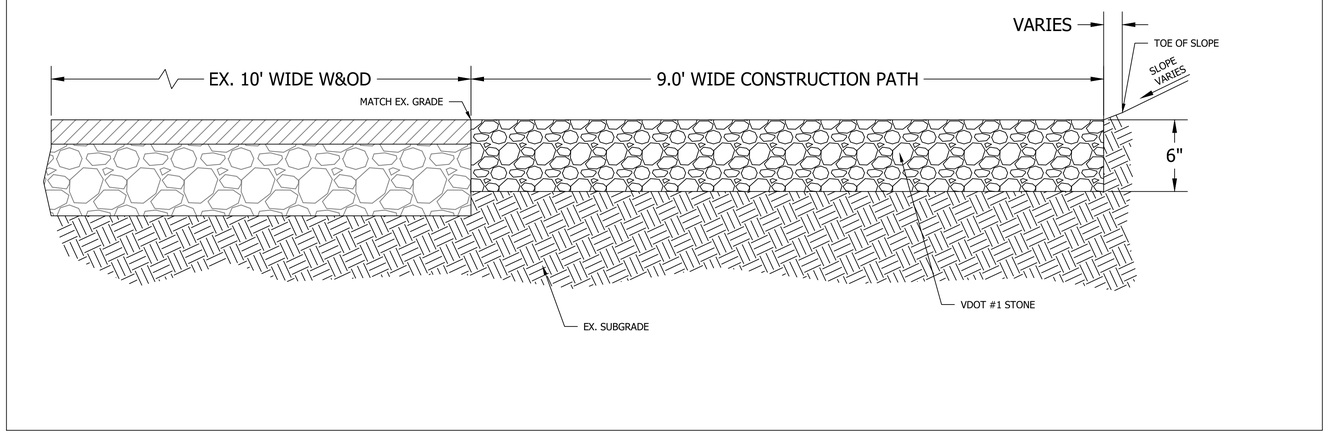
TYPICAL ACCESS PATH SECTION - ON ACCESS RAMP

D03B NTS



POND ACESS GATE - PART 2

D04B NTS



TYPICAL CONSTRUCTION PATH SECTION

D03C NTS

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

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S44D
S. PARK DR & S. COLUMBUS ST

SITE DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

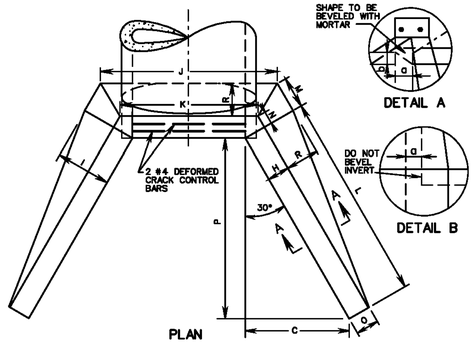
N/A

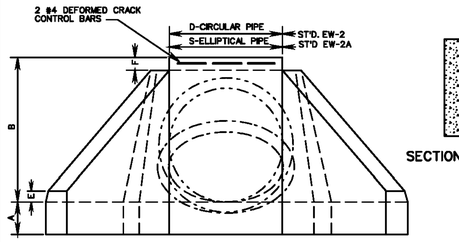
FILENAME: S44D-204-DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

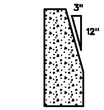
REVISED ON 11/18/2021

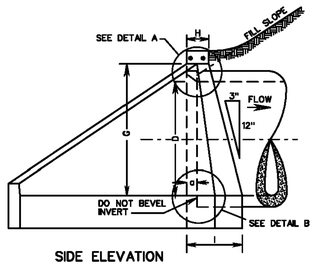
2016 ROAD & BRIDGE STANDARDS

EW-2, 2A









NOTES:

1. FOR TABLE OF DIMENSIONS AND VOLUMES FOR CIRCULAR PIPES (STANDARD EW-2) SEE SHEET 2 OF 3.
2. FOR TABLE OF DIMENSIONS AND VOLUMES FOR ELLIPTICAL PIPES (STANDARD EW-2A) SEE SHEET 3 OF 3.
3. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
4. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1' OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF ROAD.
5. ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR PRECAST SEE SHEETS 101.06 AND 101.07.
6. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
7. THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND SKEW ANGLES TO 15°.
8. COST OF BARS FOR CRACK CONTROL TO BE INCLUDED IN PRICE PER BID PER CUBIC YARD CONCRETE.
9. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT AND WINGWALLS OCCUR.
10. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT). HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
11. ¾" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

SPECIFICATION REFERENCE	STANDARD ENDWALL FOR PIPE CULVERTS	VDOT ROAD AND BRIDGE STANDARDS
105 302	42" - 96" CIRCULAR AND 60" x 38" - 106" x 68" ELLIPTICAL PIPES VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 1 OF 3: 101.03

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

EW-2

TABLE OF DIMENSIONS AND CONCRETE VOLUMES PER ENDWALL FOR 42" - 96" CIRCULAR PIPE CULVERTS

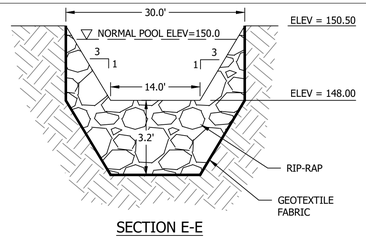
OPENING MODIFIED FOR 36" CULVERT

		DIAMETER OF PIPE CULVERTS										
	DIMENSION	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	DIMENSION
FOR 1½:1 FILL SLOPE	A	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	A
	B	4'-9½"	5'-4"	5'-10⅛"	6'-5"	6'-11½"	7'-6"	8-0½"	8'-7"	9'-2⅛"	9'-9⅞"	B
	C	3'-3⅜"	3'-9"	4'-2⅛"	4'-7"	5'-0⅝"	5'-5¾"	5'-11"	6'-4⅛"	6'-9⅜"	7'-2⅝"	C
	D	3'-8"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	D
	E	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	E
	F	0'-5½"	0'-6"	0'-6½"	0'-7"	0'-7½"	0'-8"	0'-8½"	0'-9"	0'-9½"	0'-10"	F
	G	4'-4"	4'-10"	5'-4"	5'-10"	6'-4"	6'-10"	7'-4"	7'-10"	8'-4"	8'-10"	G
	H	0'-10"	0'-10"	0'-11"	1'-0"	1'-1"	1'-2"	1'-3"	1'-4"	1'-5"	1'-6"	H
	I	1'-11"	2'-0½"	2'-3"	2'-5½"	2'-8"	2'-10½"	3'-1"	3'-3½"	3'-6"	3'-8½"	I
	J	5'-8½"	6'-4¼"	7'-1¾"	7'-10"	8'-7"	9'-4"	10'-0⅞"	10'-9⅝"	11'-7"	12'-4⅛"	J
	K	4'-5½"	4'-11¾"	5'-6⅜"	6'-1⅛"	6'-9"	7'-4⅛"	7'-11⅝"	8'-6½"	9'-2"	9'-9¼"	K
	L	6'-7⅝"	7'-8"	8'-4½"	9'-2⅛"	10'-1¼"	10'-11⅜"	11'-10"	12'-8¾"	13'-6½"	14'-5¼"	L
	M	1'-1¼"	1'-2½"	1'-3⅝"	1'-5"	1'-6½"	1'-8"	1'-9⅜"	1'-10¾"	2'-0⅛"	2'-2"	M
	N	0'-5¾"	0'-5⅞"	0'-6⅞"	0'-6⅞"	0'-7½"	0'-8⅛"	0'-8⅝"	0'-9¼"	0'-10"	0'-10⅝"	N
	O	0'-11½"	0'-11½"	1'-0⅛"	1'-1⅝"	1'-2½"	1'-3½"	1'-4½"	1'-5⅝"	1'-6½"	1'-7½"	O
	P	5'-9"	6'-6"	7'-3"	8'-0"	8'-9"	9'-6"	10'-3"	11'-0"	11'-9"	12'-6"	P
	R	1'-1"	1'-2½"	1'-4"	1'-5½"	1'-7"	1'-8⅛"	1'-10"	1'-11⅝"	2'-1"	2'-2½"	R
CUBIC YARDS CONCRETE	CONC. PIPE	3.558	4.373	5.635	7.089	8.776	10.702	12.861	15.303	18.195	21.285	CONC. PIPE
	C.M. PIPE	3.791	4.680	6.054	7.642	9.490	11.605	13.984	16.678	19.724	23.107	C.M. PIPE
FOR 2:1 FILL SLOPE	C	4'-4"	4'-10⅞"	5'-5¾"	6'-0¾"	6'-7⅝"	7'-2⅝"	7'-9½"	8'-4½"	8'-11⅜"	9'-6¼"	C
	F	0'-6½"	0'-7"	0'-7½"	0'-8"	0'-8½"	0'-9"	0'-9½"	0'-10"	0'-10½"	0'-11"	F
	G	4'-3"	4'-9"	5'-3"	5'-9"	6'-3"	6'-9"	7'-3"	7'-9"	8'-3"	8'-9"	G
	I	1'-10¾"	2'-0¼"	2'-2¾"	2'-5¼"	2'-7¾"	2'-10¼"	3'-0¾"	3'-3¼"	3'-5¾"	3'-8¼"	I
	J	5'-8¼"	6'-4"	7'-1"	7'-9¾"	8'-6⅞"	9'-3½"	10'-0½"	10'-9⅝"	11'-6⅞"	12'-3½"	J
	L	8'-8"	9'-9¾"	10'-11⅝"	12'-1½"	13'-3⅜"	14'-5¼"	15'-7"	16'-9"	17'-10½"	19'-0⅝"	L
	M	1'-1⅞"	1'-2"	1'-3½"	1'-4⅝"	1'-6⅜"	1'-7¾"	1'-9¼"	1'-10⅝"	2'-0¼"	2'-1⅝"	M
	P	7'-8"	8'-6"	9'-6"	10'-6"	11'-6"	12'-6"	13'-6"	14'-6"	15'-6"	16'-6"	P
	R	1'-0¾"	1'-2¼"	1'-3⅝"	1'-5¼"	1'-6⅞"	1'-8¼"	1'-9⅝"	1'-11⅛"	2'-0⅝"	2'-2¼"	R
CUBIC YARDS CONCRETE	CONC. PIPE	4.238	5.230	6.781	8.536	10.602	12.856	15.512	18.623	22.104	25.898	CONC. PIPE
	C.M. PIPE	4.489	5.536	7.177	9.088	11.312	13.856	16.730	19.993	23.618	27.704	C.M. PIPE
FOR 1½:1 AND 2:1 FILL SLOPES	a	0'-4½"	0'-5"	0'-5¾"	0'-6¼"	0'-7"	0'-7½"	0'-8¼"	0'-8¾"	0'-9½"	0'-10"	a
	b	0'-3⅞"	0'-4"	0'-4⅛"	0'-5"	0'-5½"	0'-6"	0'-6½"	0'-7"	0'-7½"	0'-8"	b

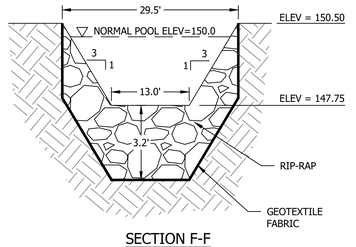
FOR ALL DIMENSIONS NOT SHOWN SEE VALUES LISTED ABOVE FOR 1½:1 FILL SLOPE

VDOT ROAD AND BRIDGE STANDARDS	STANDARD ENDWALL FOR PIPE CULVERTS	SPECIFICATION REFERENCE
SHEET 2 OF 3 — REVISION DATE — 101.04	42" - 96" CIRCULAR PIPES VIRGINIA DEPARTMENT OF TRANSPORTATION	105 302

2016 ROAD & BRIDGE STANDARDS



SECTION E-E



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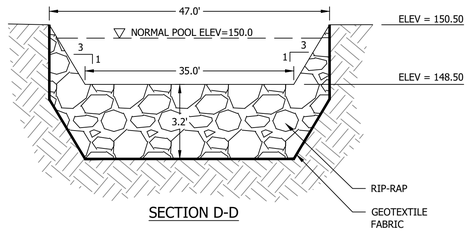


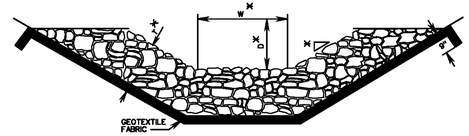
SECTION D-D

1. RIP-RAP FOR WEIRS TO BE CLASS II AND TO BE INSTALLED PER VESCH 3.18. RIP-RAP TO BE INSTALLED TO A DEPTH OF 2.5' BELOW FINISHED GRADE.
2. WEIRS TO BE INSTALLED PER VDOT PG-3 TYPE I

POND WEIR SECTIONS

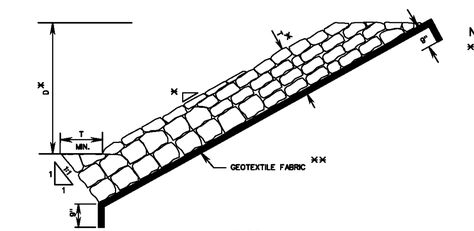
D24 NTS

PG-3



TYPE I
RIPRAP DITCH PROTECTION

MINIMUM THICKNESS "T"	
RIP RAP CLASS	MINIMUM "T"
CLASS AI	20"
CLASS I	26"
CLASS II	38"
CLASS III	53"



TYPE II
RIPRAP SLOPE PROTECTION

NOTES:

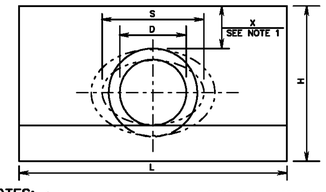
×× RIP RAP BEDDING MATERIAL
GEOTEXTILE FABRIC TO BE PROVIDED UNDER ALL RIPRAP INSTALLATIONS CLASS AI, CLASS I AND CLASS II UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.
RIPRAP INSTALLATIONS OF CLASS III SHALL HAVE AN INTERMEDIATE AGGREGATE BEDDING LAYER(S) AS SPECIFIED ON THE PLANS BASED ON GEOTECHNICAL RECOMMENDATIONS.
× SEE TYPICAL SECTION SHOWN ON PLANS FOR SIDE SLOPE, BOTTOM WIDTH AND DEPTH OF CHANNEL AND RIPRAP THICKNESS.

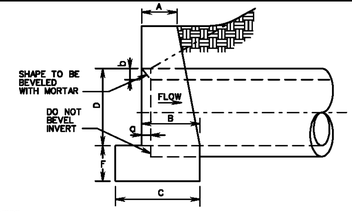
VDOT ROAD AND BRIDGE STANDARDS	STANDARD RIP RAP DITCH & SLOPE PROTECTION PG-3	SPECIFICATION REFERENCE
SHEET 1 OF 1 — REVISION DATE — 109.02	VIRGINIA DEPARTMENT OF TRANSPORTATION	245 414

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

EW-1,1A





NOTES:

1. 'H' MAY BE REDUCED UNTIL "X" REACHES A MINIMUM OF 4" WHERE ENDWALL WOULD PROTRUDE ABOVE SHOULDER LINE. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
3. ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR PRECAST SEE SHEET 101.02.
4. THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND ALL SKEWS(0° TO 45°).
5. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALLS OCCUR
6. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT).
7. HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
8. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1' OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
9. ¾" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

EW-1

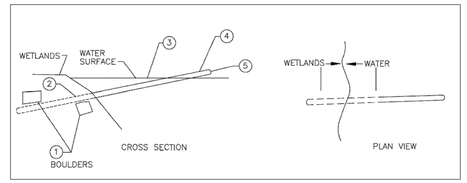
ENDWALL FOR CIRCULAR PIPE						
	DIAMETER OF PIPE CULVERT					
	12"	15"	18"	21" OR 24"	27" OR 30"	33" OR 36"
A	0'-8"	0'-8"	0'-9"	0'-11"	1'-0"	1'-0"
B	0'-11"	1'-1"	1'-3"	1'-6"	1'-9"	2'-0"
C	1'-4"	1'-7"	1'-9"	2'-2"	2'-6"	2'-9"
D	1'-0"	1'-3"	1'-6"	2'-0"	2'-6"	3'-0"
F	0'-8"	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"
H	2'-3"	2'-11"	3'-2"	3'-9"	4'-3"	4'-9"
L	4'-0"	5'-0"	6'-0"	8'-0"	10'-0"	12'-0"
a	0'-0 7/16"	0'-1 3/16"	0'-2"	0'-2 5/8"	0'-3 1/4"	0'-3 7/8"
b	0'-1"	0'-1 1/4"	0'-1 5/8"	0'-2"	0'-2 1/2"	0'-3"
CUBIC YARDS OF CONCRETE						
CONC. PIPE	0.241	0.492	0.697	1.319	2.067	2.947
C.M. PIPE	0.257	0.521	0.739	1.398	2.198	3.145

EW-1A

ENDWALL FOR ELLIPTICAL PIPE								
	SIZE OF ELLIPTICAL PIPE CULVERT (SPAN x RISE)							
	23"x14"	30"x19"	34"x22"	38"x24"	42"x27"	45"x29"	49"x32"	53"x34"
A	0'-8"	0'-9"	0'-10"	0'-11"	1'-0"	1'-0"	1'-0"	1'-0"
B	1'-2"	1'-5"	1'-8"	1'-8"	1'-9"	1'-10"	1'-11"	1'-11"
C	1'-8"	1'-11"	2'-1"	2'-4"	2'-5"	2'-7"	2'-8"	2'-9"
D	1'-2"	1'-7"	1'-10"	2'-0"	2'-3"	2'-5"	2'-8"	2'-10"
F	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"
H	2'-10"	3'-3"	3'-7"	3'-9"	4'-0"	4'-2"	4'-5"	4'-7"
L	5'-5"	7'-2"	8'-8"	9'-2"	10'-2"	10'-11"	12'-1"	12'-11"
S	1'-11"	2'-8"	2'-10"	3'-2"	3'-8"	3'-9"	4'-1"	4'-5"
a	0'-2 1/2"	0'-3 1/4"	0'-3 1/2"	0'-4"	0'-4 1/2"	0'-4 3/4"	0'-5"	0'-5 1/2"
b	0'-2"	0'-2 1/2"	0'-2 3/4"	0'-3"	0'-3 1/2"	0'-3 3/4"	0'-4"	0'-4 1/2"
CUBIC YARDS OF CONCRETE								
CONC.PIPE	0.502	0.855	1.236	1.500	1.811	2.101	2.512	2.801

SPECIFICATION REFERENCE	STANDARD ENDWALL FOR PIPE CULVERTS	VDOT ROAD AND BRIDGE STANDARDS
105 302	12" - 36" CIRCULAR AND 23" x 14" - 53" x 34" ELLIPTICAL PIPES VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 1 OF 1: 101.01

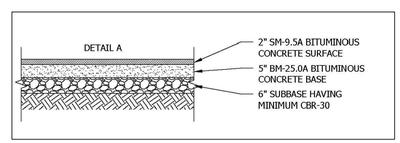
2016 ROAD & BRIDGE STANDARDS



1. BOULDERS TO BE D_{50}>1 FT. ATTACHED TO TREE TRUNK WITH 3/16", 7x19 TYPE 304 STAINLESS STEEL CABLE.
2. MINIMUM EMBEDDED LENGTH OF TRUNK = 2 FT
3. MINIMUM DISTANCE BETWEEN EDGE OF SHORE AND EXPOSED TRUNK = 5 FT
4. SALVAGE TREE TRUNK WITH BARK ATTACHED AND BRANCHES REMOVED. MINIMUM TRUNK DIAMETER = 8". TRUNK SHOULD BE PLACED TO MINIMUM SLOPE OF APPROXIMATELY 5%
5. SPECIFIC LOCATIONS FOR INSTALLATION WILL BE IDENTIFIED IN CONSULTATION WITH PROJECT OFFICER. MAXIMUM 4 TREE TRUNKS TO BE INSTALLED.

TURTLE BASKING STATION

D23 NTS



TRAIL SECTION

D22 NTS

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fuller 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SITE DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

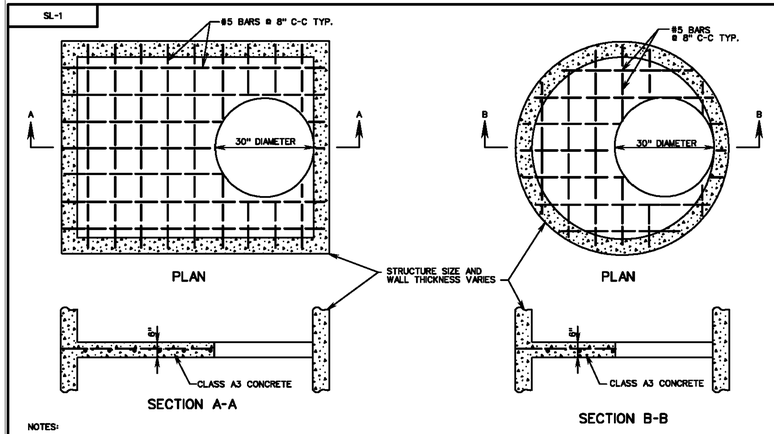
SCALE:

N/A

FILENAME: S44D-204-DETAILS.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

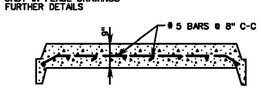
SL-1



NOTES:

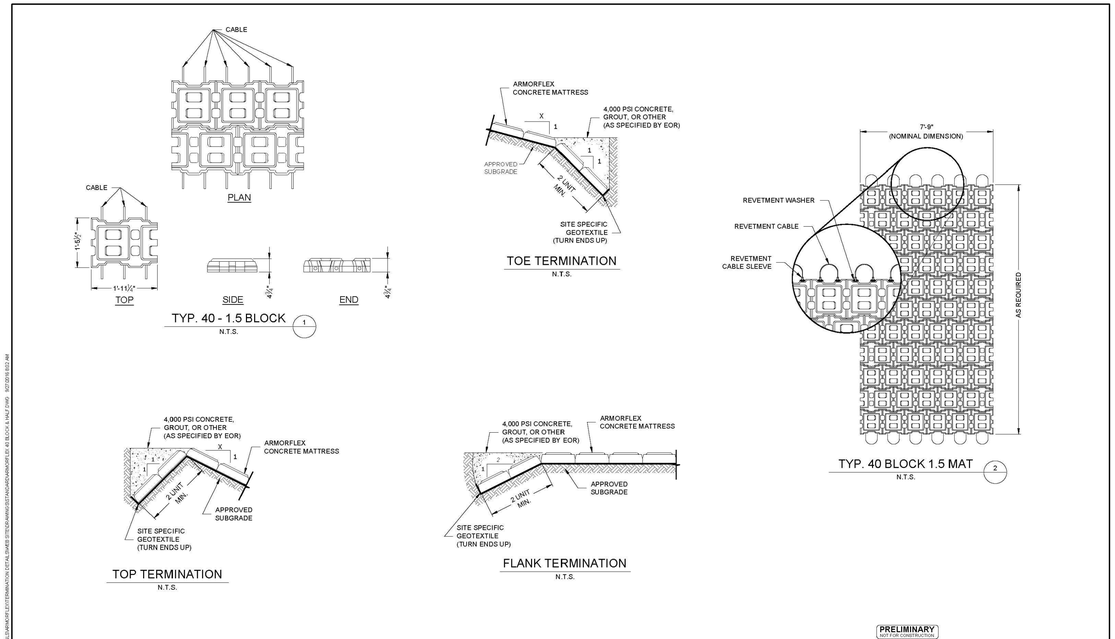
1. THE STANDARD SAFETY SLAB (SL-1) IS TO BE USED ONLY WHEN SPECIFIED IN THE PLANS ON THE DRAINAGE SUMMARY SHEET AND/OR THE DRAINAGE DESCRIPTION FOR MANHOLES, JUNCTION BOXES, AND DROP INLETS WITH HEIGHTS GREATER THAN 12 FEET. THE SPACING OF ADJACENT SAFETY SLABS SHALL BE 8' TO 12' WITH NO SAFETY SLAB LOCATED WITHIN 8 FEET OF THE TOP OR BOTTOM OF THE STRUCTURE. SAFETY SLABS SHALL NOT BE LOCATED BELOW ANY INLET PIPE OF 30" DIAMETER OR GREATER.
2. THE COST OF THE SL-1 IS INCLUDED IN THE COST OF THE STRUCTURE.
3. ACCESS OPENINGS ARE TO BE STAGGERED FROM ONE SIDE OF STRUCTURE TO THE OTHER WHERE APPLICABLE. STEPS ARE TO BE STAGGERED ACCORDINGLY.
4. SAFETY SLAB MAY BE CAST-IN-PLACE OR PRECAST. CAST-IN-PLACE CONCRETE TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE A4 (4000 PSI). REINFORCING STEEL TO BE IN ACCORDANCE WITH AASHTO M31.
5. ACCESS OPENINGS MAY BE 30" DIAMETER OR 30" SQUARE. WHEN STRUCTURE WIDTH IS LESS THAN 30" THE ACCESS OPENING SHALL BE RECTANGULAR (STRUCTURE WIDTH BY 30" LONG).

SEE CAST IN PLACE DRAWINGS FOR FURTHER DETAILS



TYPICAL PRECAST UNIT

VDOT ROAD AND BRIDGE STANDARDS	TYPICAL CONCRETE SAFETY SLAB FOR DROP INLETS, MANHOLES AND JUNCTION BOXES	SPECIFICATION REFERENCE
SHEET 1 OF 1	VIRGINIA DEPARTMENT OF TRANSPORTATION	302
108.14	REVISION DATE	



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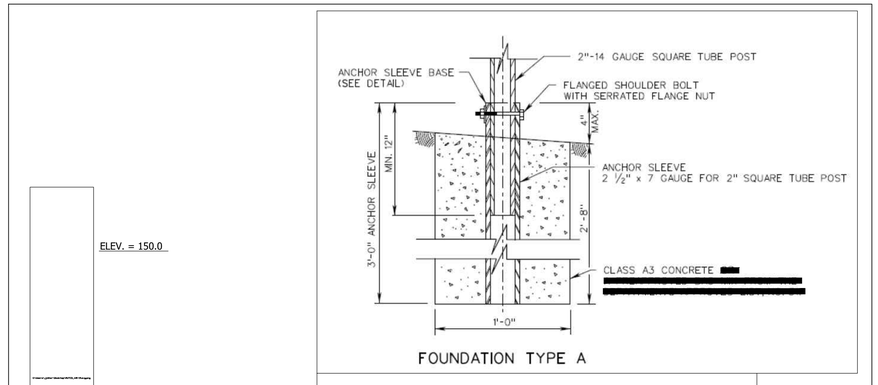
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

ARMORTEC Erosion Control Solutions
CONTECH PROPOSAL DRAWING

ARMORFLEX
CLASS 40 MEDIUM, BLOCK 1.5
STANDARD TERMINATION DETAILS

PROJECT No.: *****	ERO No.: ****	DATE: 9/20/2016
DESIGNED: ****	DRAWN: MEG	
CHECKED: ****	APPROVED: CBK	
SHEET NO.: CT1 OF CT2		

NOTE: APPROVED ALTERNATIVE MAY BE USED.

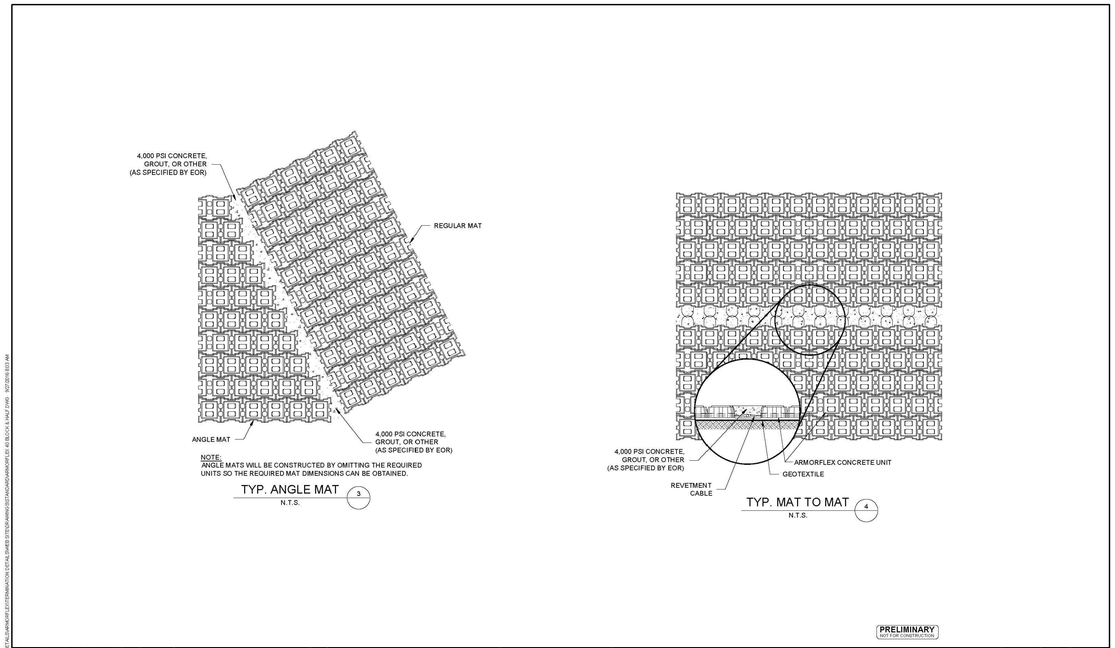


NOTES:

1. CAST-IN PLACE CONCRETE TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE TO BE 4000 PSI.
2. ATTACH W8-19 SIGN TO SQUARE TUBE POST.
3. STEEL POST, ANCHOR SLEEVE, AND APPURTENANCES TO BE GALVANIZED.
4. 5 FEET MARKING TO BE SET AT ELEVATION 150.0.

FOREBAY DEPTH MARKER

D10 NTS



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ARMORFLEX
CLASS 40 MEDIUM, BLOCK 1.5
STANDARD TERMINATION DETAILS

PROJECT No.: *****	ERO No.: ****	DATE: 9/20/2016
DESIGNED: ****	DRAWN: MEG	
CHECKED: ****	APPROVED: CBK	
SHEET NO.: CT2 OF CT2		

NOTE: APPROVED ALTERNATIVE MAY BE USED.

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DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS DATE

Amy Pflaum 05/27/22
QUALITY CONTROL ENGINEER

Adam E. Fillenwarth 6/2/2022
CONSTRUCTION MANAGEMENT SUPERVISOR

6/6/22
WATER, SEWER, STREETS BUREAU CHIEF

Dennis W. Leach 6/7/22
TRANSPORTATION DIRECTOR

Ty Asfaw 06/10/22
PROJECT MANAGER

REVISIONS DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SITE DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

54

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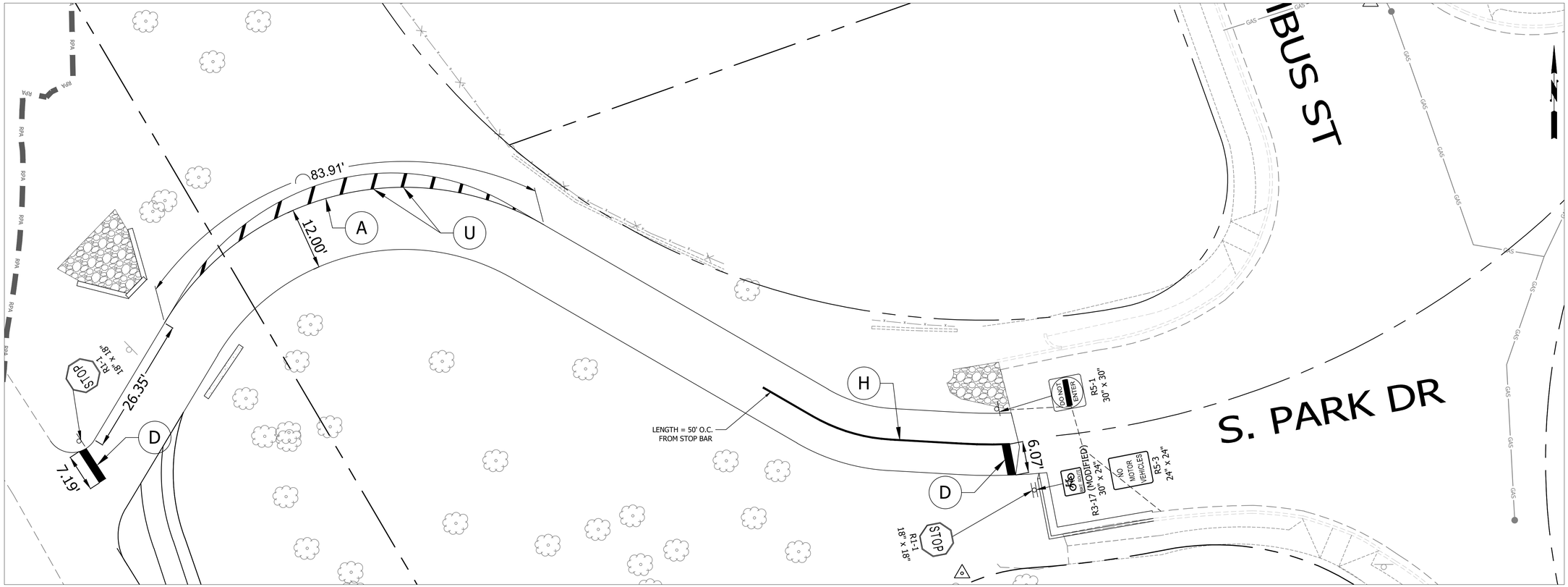

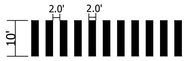

HIGH VISIBILITY CROSSWALK
NOT TO SCALE

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 5" 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 6" WIDTH, 5' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES

PAVEMENT MARKING NOTES:

1. 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.
2. 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 OIL BASED, HIGHWAY GRADE.
5. EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.

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.

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

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COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fuleau CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

SIGNING AND PAVEMENT MARKING PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: JUNE 27 2022

SCALE:

0 10 20
HORIZ. SCALE

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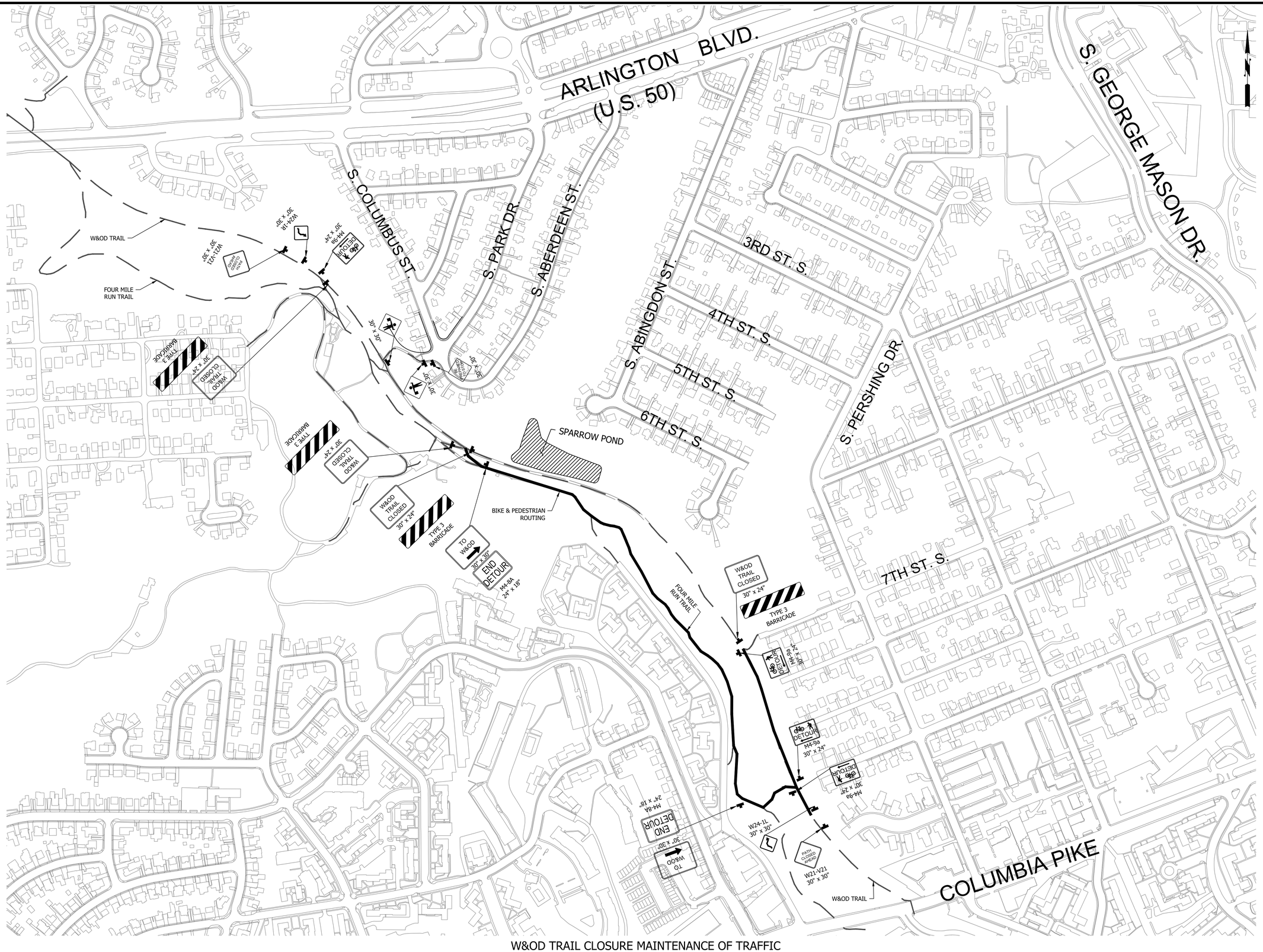

W&OD TRAIL CLOSURE MAINTENANCE OF TRAFFIC

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PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

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Dennis W. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

MAINTENANCE OF TRAFFIC PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 200 400
GRAPHIC SCALE

FILENAME: S44D-286-MOT.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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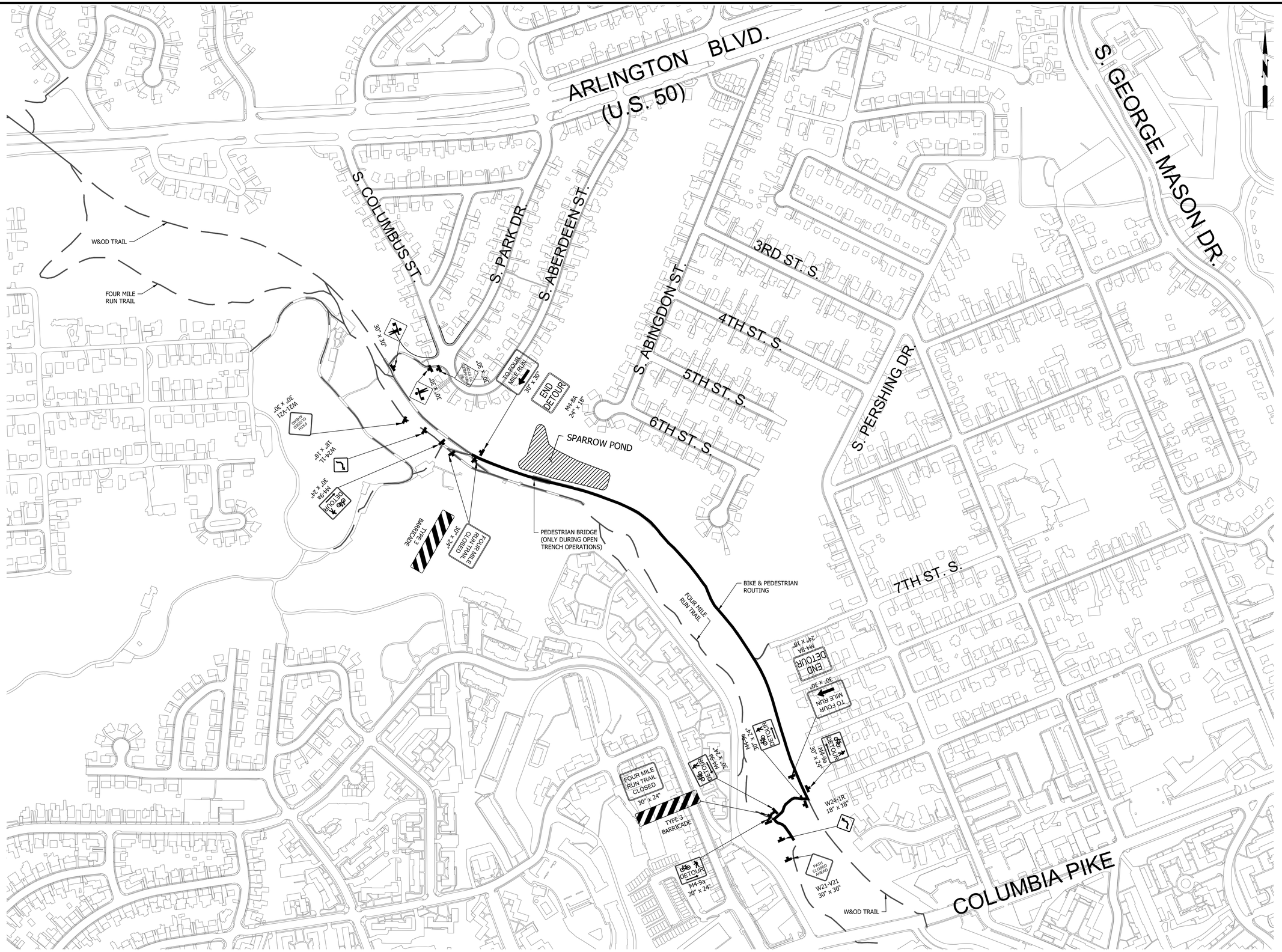

FOUR MILE RUN TRAIL CLOSURE MAINTENANCE OF TRAFFIC

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ANKUR B. PATEL
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Ankur Patel 05/10/22

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Adam E. Fuller, CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach, TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw, PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D

S. PARK DR & S. COLUMBUS ST

MAINTENANCE OF TRAFFIC PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

0 200 400
GRAPHIC SCALE

57

SPARROW POND RESTORATION S44D

FILENAME: S44D-286-MOT-PHASE II.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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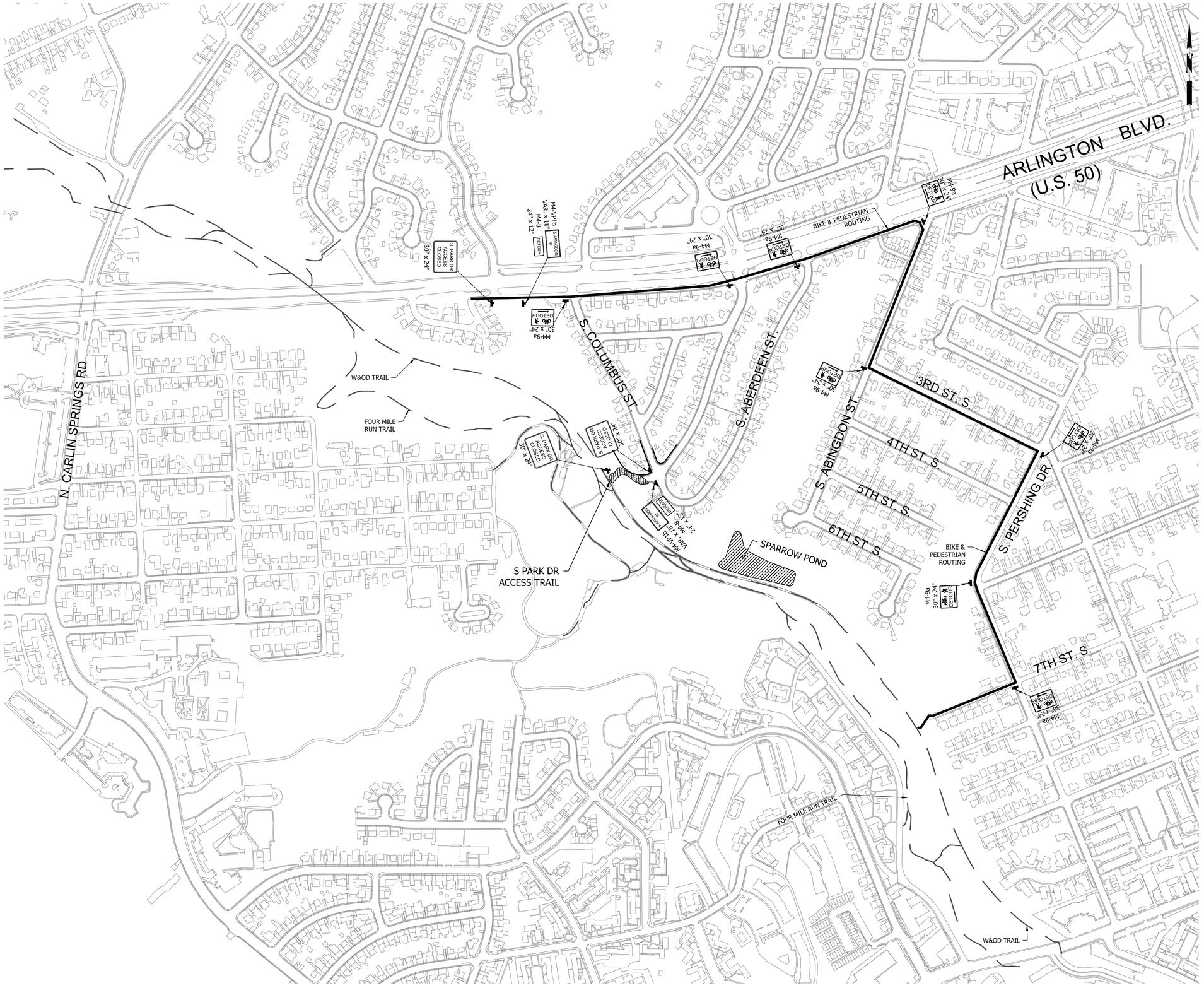

S PARK DR ACCESS TRAIL CLOSURE MAINTENANCE OF TRAFFIC

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VIRGINIA

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FACILITIES & ENGINEERING DIVISION
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PROFESSIONAL ENGINEER

Ankur Patel 05/10/22

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	05/27/22
Adam E. Fuleau CONSTRUCTION MANAGEMENT SUPERVISOR	6/2/2022
 WATER, SEWER, STREETS BUREAU CHIEF	6/6/22
Dennis M. Leach TRANSPORTATION DIRECTOR	6/7/22
Ty Asfaw PROJECT MANAGER	06/10/22

REVISIONS	DATE

SPARROW POND RESTORATION
S44D
S. PARK DR & S. COLUMBUS ST

MAINTENANCE OF TRAFFIC PLAN

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

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GRAPHIC SCALE

FILENAME: S44D-286-MOT-PHASE III.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021

SEQUENCE OF CONSTRUCTION

1. ESTABLISH CONSTRUCTION ACCESS ROAD ALONG W&OD TRAIL BETWEEN S. PARK DR AND POND.
2. DRAIN THE POND, CLEAR/GRUB AS NECESSARY FOR ACCESS.
3. SET UP MOT FOR CLOSURE OF W&OD TRAIL FOR EXCAVATION & INSTALLATION OF THE PEDESTRIAN BRIDGE. KEEP FOUR MILE RUN TRIAL OPEN DURING THIS TIME TO ALLOW FOR RE-ROUTING OF W&OD TRAIL TRAFFIC.
4. ONCE PEDESTRIAN BRIDGE IS INSTALLED & W&OD TRAIL IS OPEN, CLOSE FOUR MILE RUN TRAIL
5. CONSTRUCT THE OUTFALL. START FROM DOWNSTREAM SIDE.
6. ONCE THE CULVERT UNDER THE FOUR MILE RUN TRAIL IS INSTALLED AND BACKFILLED RECONSTRUCT THE TRAIL SURFACE AND OPEN TRAIL FOR TRAFFIC.
7. ONCE CULVERT UNDER W&OD TRAIL IS INSTALLED CLOSE THE W&OD TO REMOVE THE PEDESTRIAN BRIDGE AND DETOUR TRAFFIC TO FOUR MILE RUN. FINISH BACKFILL OF THE EMBANKMENT AND RECONSTRUCT THE W&OD TRAIL SURFACE.
8. OPEN W&OD AND CONTINUE WORKING WITHIN POND. BOTH TRAILS SHALL BE OPEN TO TRAFFIC AT THIS TIME.
9. CLOSE THE TRAIL FROM S PARK DR TO THE W&OD TO INSTALL STORM SEWER AND PAVEMENT SECTION.
10. INSTALL STORM SEWER NEAR S PARK DR IN THIS AREA.
11. INSTALL NEW PAVEMENT SECTION NEAR S PARK DR.
12. OPEN TRAIL FROM S PARK DR TO THE W&OD TRAIL.

CONSTRUCTION NOTES

1. FOR ALL ARTERIAL STREETS, PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF THE PROJECT SITE AT EACH VEHICULAR APPROACH 3 WEEKS PRIOR TO STREET CLOSURE IN LOCATIONS DIRECTED BY THE PROJECT OFFICER.
2. CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS.
3. CONTACT TRANSPORTATION ENGINEERING OPERATIONS AT 703-228-6598 OR 571-437-1077 AND THE PROJECT OFFICER TO APPROVE MARKING LAYOUT 48 HOURS PRIOR TO INSTALLATION OF MARKINGS.
4. ONE LANE CLOSURE IN EACH DIRECTION OF TRAFFIC WILL BE PERMITTED FOR FINAL PAVEMENT OVERLAY.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC ON ANY INTERSECTION WITHIN THE WORK AREA.
6. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
7. 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
8. 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.
9. CONTRACTOR TO NOTIFY ARLINGTON COUNTY WATER, SEWER, STREETS ABOUT THE CONDITION OF THE SANITARY LINE PRIOR TO EXCAVATION.

MOT NOTES:

1. PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT OF WAY PERMIT. CONTACT DES-PERMITTING SECTION, 703-228-4798, AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
2. ALL TEMPORARY BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
3. THE CONTRACTOR SHALL MAINTAIN ADA ACCESSIBLE PARKING SPACES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT DES - PERMITING, 703-228-4798, TO COORDINATE RELOCATION OF EXISTING ADA ACCESSIBLE PARKING SPACES OR TO INSTALL TEMPORARY SIGNAGE OUT OF AND ADJACENT TO THE WORK ZONE AS CONSTRUCTION PROGRESSES. MULTIPLE RELOCATIONS MAY BE NECESSARY DURING EACH PHASE.

PEDESTRIAN NOTE:

1. 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.

NOTES:

1. WARNING SIGN SPACING :
   100' CHANNELIZATION DEVICES SPACING FOR TRANSITION A AREAS = 20'
2. ANY DEVIATIONS FROM THE MOT SHOWN SHALL BE APPROVED BY ARLINGTON COUNTY CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION.
3. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
4. TEMPORARY SIGNAGE AND BARRICADES SHALL NOT BE PLACED WHERE THEY WILL OBSTRUCT PEDESTRIAN TRAVEL ON TRAIL, UNLESS SIGNAGE IS INTENDED TO CLOSE THAT SECTION OF TRAIL
5. FLAGGERS SHALL BE USED FOR CONSTRUCTION TRAFFIC ON THE TRAIL SPUR FROM S. PARK DR AND THE W&OD TRAIL. CONSTRUCTION TRAFFIC SHALL ONLY OPERATE FROM 10AM-2PM DURING WORK DAYS.

MOT GENERAL NOTES

1. TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
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, 703-228-3629.
4. 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.
5. 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.
6. 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.
7. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
8. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
9. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
10. WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDBLOCK WORK SITES.
11. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
12. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
13. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
14. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRED DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.
15. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED.
16. 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.
17. WORK HOURS ARE RESTRICTED TO 9:00 AM TO 4:00 PM, MONDAY THROUGH FRIDAY.
18. CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THIS MOT PLAN.
19. 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.
20. CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
21. COORDINATE WITH DES - TRANSIT BUREAU AT 703-228-3049 AT LEAST TWO (20 WEEKS PRIOR TO COMMENCEMENT OF WORK IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO TRANSIT STOPS OR ROUTES. NOTE: ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11-FEET WIDE.

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

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SEAL

COMMONWEALTH OF VIRGINIA
ANKUR B. PATEL
Lic. No. 57048
PROFESSIONAL ENGINEER

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S44D
S. PARK DR & S. COLUMBUS ST

MAINTENANCE OF TRAFFIC NOTES & DETAILS

DESIGNED: JM
DRAWN: JM
CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

N/A

FILENAME: S44D-286-MOT-PHASE II.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

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ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
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TURNING MOVEMENT EXHIBIT

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CHECKED: AP

PLOTTED: APRIL 6 2023

SCALE:

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GRAPHIC SCALE

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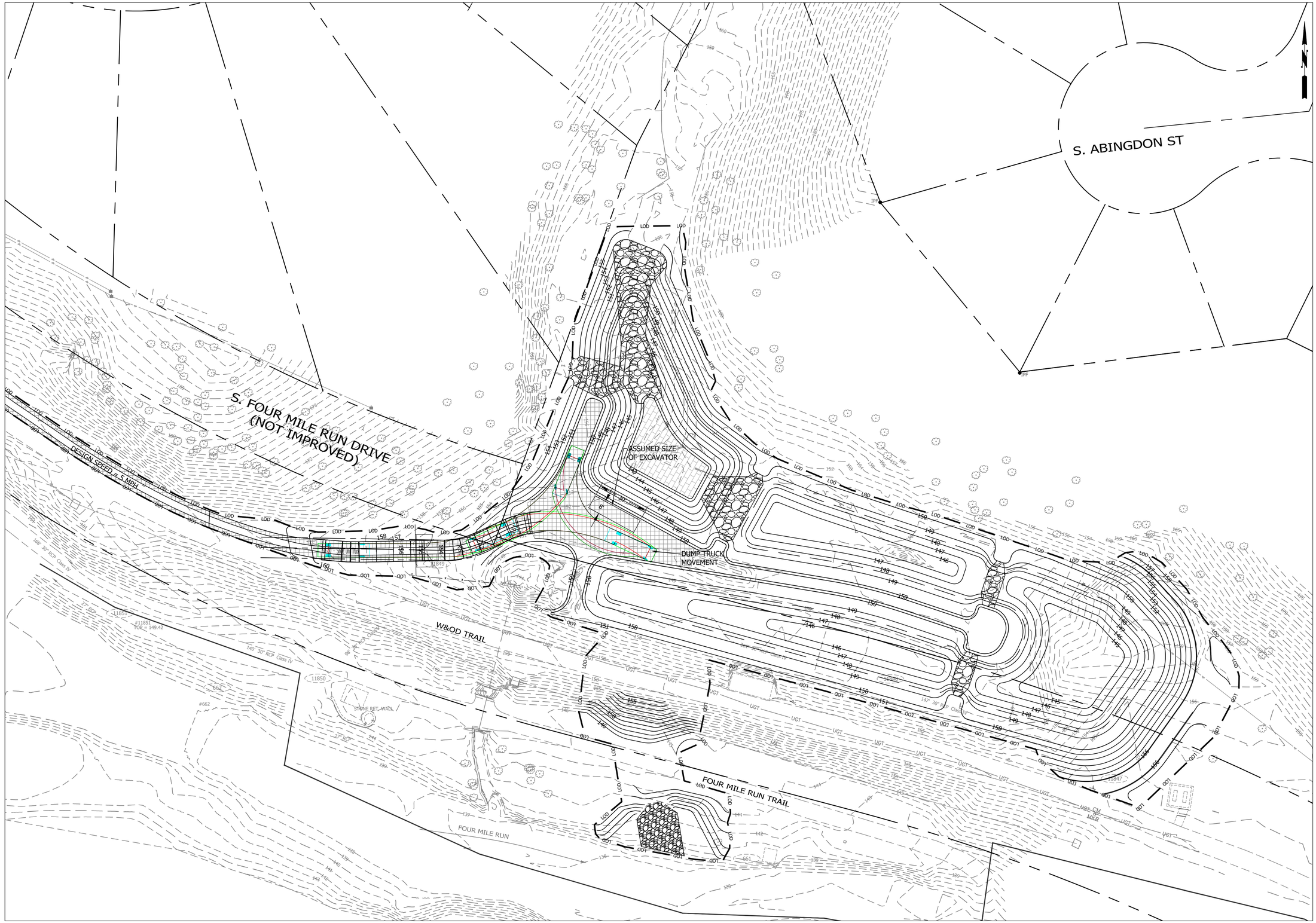
FILENAME: S44D-295-AUTOTURN.DWG PATH: Q:\DATA\S44D\DESIGN\CAD\ACTIVE PLOTTED BY: JJMILLER

REVISED ON 11/18/2021



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