ARLINGTON
VIRGINIA

Plans For:

Towers Park Playground Renovations

801 South Scott Street
Arlington, VA 22204
ITB # 20-246-ITB

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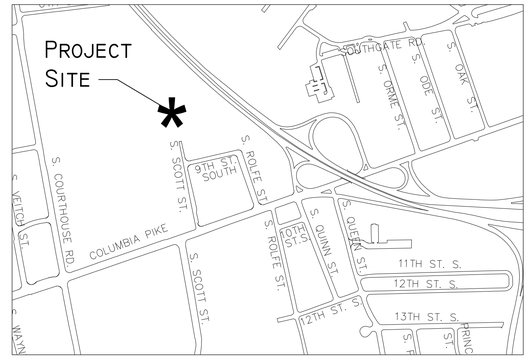
DEPARTMENT OF PARKS AND RECREATION

Park Development Division

2100 Clarendon Boulevard, Suite 414, Arlington, VA 22201
Phone: 703.228.3332 Fax: 703.228.3328 www.arlingtonva.us

ENGINEER
NAME: A. MORTON THOMAS & ASSOCIATES, INC.
ADDRESS: 14555 AVION PARKWAY, SUITE 150
CHANTILLY, VA 20151
TELEPHONE #: (703) 817-1373

CONTRACTOR
NAME: TO BE DETERMINED
ADDRESS: TO BE DETERMINED
TELEPHONE #: TO BE DETERMINED



VICINITY MAP - 1" = 500'

GENERAL NOTES

1. THE CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE CONDITIONS OF THE SITE. THE CONTRACTOR SHALL THOROUGHLY EXAMINE AND BE FAMILIAR WITH THE DRAWINGS AND SPECIFICATIONS. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES, OMISSIONS, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE CONTRACT DOCUMENTS OR BE IN DOUBT AS TO THEIR MEANING, HE SHALL BRING THESE ITEMS TO THE ATTENTION OF THE PROJECT OFFICER FOR DIRECTION BEFORE PROCEEDING WITH WORK.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BE RESPONSIBLE FOR ADHERENCE TO ALL ORDINANCES, REGULATIONS, LAWS AND CODES HAVING JURISDICTION OVER THE PROPERTY.
3. THE CONTRACTOR SHALL SUBMIT A REQUIRED "RESPONSIBLE LAND DISTURBER" CERTIFICATION LETTER AS PART OF OBTAINING A BUILDING (OR DISTURBANCE) PERMIT.
4. THE CONTRACTOR IS RESPONSIBLE FOR LICENSING AS REQUIRED BY APPLICABLE REGULATORY AGENCIES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL SALES, USE AND CAPITAL GAINS TAXES.
6. UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS DETERMINED FROM VISIBLE EVIDENCE AND AVAILABLE RECORDS. ADDITIONAL UNDERGROUND UTILITY LINES MAY BE PRESENT THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PRESERVE EXISTING UTILITIES.
7. CONTRACTOR SHALL NOT SUBSTITUTE PRODUCTS OR MATERIALS WITHOUT PRIOR APPROVAL BY THE PROJECT OFFICER.
8. THE CONTRACTOR SHALL IDENTIFY ALL STAGING AREAS AND LIMITS OF WORK FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO THE START OF WORK. AREAS OUTSIDE LIMITS OF WORK SHALL NOT BE USED FOR STORAGE OR MOVEMENT OF MATERIALS, MACHINERY OR DEBRIS.
9. THE CONTRACTOR SHALL OBTAIN THE PROJECT OFFICER'S APPROVAL FOR TIMES OF DAY DURING WHICH CONSTRUCTION OPERATIONS MAY OCCUR. ALL CONSTRUCTION OPERATIONS SHALL OCCUR WITHIN TIMES SPECIFIED BY LOCAL ORDINANCES.
10. CONSTRUCTION ACTIVITIES FOR THIS PROJECT OCCUR ENTIRELY ON PARK PROPERTY, THEREFORE, A MAINTENANCE OF TRAFFIC (MOT) PLAN IS NOT EXPECTED TO BE REQUIRED. HOWEVER, IF THE ARLINGTON DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) DETERMINES THAT AN MOT PLAN IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE PLAN TO DES FOR THEIR REVIEW AND APPROVAL.
11. THE CONTRACTOR SHALL BE ON SITE AT TIME OF ALL MATERIALS DELIVERIES.
12. THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND FREE OF TRASH AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A TRASH RECEPTACLE TO BE USED ON SITE DURING CONSTRUCTION AND SHALL REMOVE TRASH FROM THE SITE ON A DAILY BASIS.
13. THE CONTRACTOR SHALL KEEP VEHICULAR ACCESS AREAS CLEAN DURING CONSTRUCTION. VEHICULAR AND OTHER PAVED AREAS SHALL BE WASHED FREE OF MUD ON A WEEKLY BASIS DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL SECURE THE CONSTRUCTION AREA WITH FENCING AT END OF WORKDAY AND WHEN CONTRACTOR IS NOT ON SITE.
15. THE CONTRACTOR SHALL DISTRIBUTE ALL PROJECT MATERIALS AND EQUIPMENT AND DISTRIBUTE ANY STOCKPILES IN SUCH A MANNER AS TO PROTECT EXISTING CONDITIONS, SUCH AS UTILITIES, PAVING, VEGETATION, ETC. THE CONTRACTOR SHALL NOT STOCKPILE SOIL OR CONSTRUCTION MATERIALS, OR DRIVE VEHICLES WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES TO REMAIN. THE CONTRACTOR SHALL OBTAIN THE PROJECT OFFICER'S APPROVAL FOR ALL CONSTRUCTION ACCESS AREAS, STAGING AND STOCKPILE AREAS PRIOR TO CONSTRUCTION.
16. THE CONTRACTOR SHALL NOT BLOCK STREETS, PARKING AREAS, HOUSE OR DRIVEWAY ENTRANCES DURING CONSTRUCTION WITHOUT THE PROJECT OFFICER'S PERMISSION AND APPROVAL OF ANY RIGHT-OF-WAY PERMITS IF REQUIRED.
17. THE CONTRACTOR SHALL STAKE THE ALIGNMENT OF ALL PAVEMENT, WALLS, CURBING, SAFETY SURFACING AND SITE FEATURES IN THE FIELD FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL PROMPTLY REPAIR ALL DAMAGE TO EXISTING PAVEMENT, DRIVEWAYS, AND ADJACENT FACILITIES CAUSED BY CONSTRUCTION OPERATIONS. COST OF REPAIRS SHALL BE AT CONTRACTOR'S EXPENSE.
19. CONTRACTOR SHALL REMOVE ALL EXCESS SOIL, TEMPORARY FENCING, EROSION CONTROL MEASURES, STABILIZATION MATERIALS, AND OTHER DEBRIS AND SHALL DISPOSE OF LEGALLY UPON COMPLETION OF THE PROJECT. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN ALL PAVED AREAS, WALLS, SITE FURNISHINGS AND FEATURES, ETC. UPON COMPLETION OF THE PROJECT.
20. REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.

ARLINGTON COUNTY
DEPARTMENT OF ENVIRONMENTAL SERVICES
WATER-SEWER CONSTRUCTION REQUIREMENTS (REVISED MARCH 2005)

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS & SPECIFICATIONS (LATEST EDITION) AND SHALL BE APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES. UPON PHYSICAL INSPECTION, THE COUNTY RESERVES THE RIGHT TO REJECT THE USE OF ANY MATERIAL FOUND TO BE DEFECTIVE OR NOT CONFORMING TO THE STANDARDS AND SPECIFICATIONS.
2. BEFORE START OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE FOLLOWING INFORMATION AND/OR EVIDENCE OF COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND LAWS, TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES:

A. THE NAME AND ADDRESS OF THE CONTRACTOR HIRED TO WORK ON THE PROJECT. THE CONTRACTOR SHALL BE REGISTERED IN THE COMMONWEALTH OF VIRGINIA. SATISFACTORY EVIDENCE SHALL BE FURNISHED OF THE CONTRACTOR'S PRIOR EXPERIENCE AS PRIME CONTRACTOR IN THE CONSTRUCTION OF WATER MAINS AND/OR SANITARY SEWER INSTALLATIONS. FURTHER, THE CONTRACTOR SHALL FURNISH A LETTER WITH A LIST OF MATERIALS AND SUPPLIERS FOR PROPOSED PROJECT.

B. A RIGHT OF WAY PERMIT IS REQUIRED TO WORK IN ARLINGTON COUNTY STREETS. IN INSTANCES OF EXCAVATIONS IN STATE RIGHT OF WAY, THE DATE AND NUMBER OF ALL PERMITS REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) SHALL BE FURNISHED.

C. IF ANY OTHER EASEMENT IS NEEDED, TWO (2) COPIES OF THE DESCRIPTION OF SUCH EASEMENT, AS ACTUALLY RECORDED, SHALL BE FURNISHED, INCLUDING THE PLACE, DATE AND REFERENCE OF SUCH RECORDATION.

D. WRITTEN NOTICE OF TENTATIVE STARTING DATE OF CONSTRUCTION, WHICH SHALL BE A MINIMUM OF ONE (1) WEEK FOLLOWING THE DATE OF NOTICE. IN ADDITION, THE CONTRACTOR SHALL FURNISH THE NAMES AND TELEPHONE NUMBERS OF TWO (2) RESPONSIBLE PERSONS WHO CAN BE CONTACTED IN CASE OF EMERGENCY.

ACTUAL CONSTRUCTION SHALL NOT BEGIN UNTIL THE ABOVE ITEMS HAVE BEEN COMPLETED AND THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES APPROVED THE STARTING DATE AND ARRANGEMENTS HAVE BEEN MADE FOR THE REQUIRED INSPECTION SERVICE.

3. ALL CONSTRUCTION SHALL BE ACCOMPLISHED FROM APPROVED PLANS, SPECIFICATIONS AND CUT SHEETS SUBMITTED BY A REGISTERED ENGINEER AND APPROVED BY THE COUNTY. TO AVOID CONSTRUCTION DELAYS ALL NECESSARY TEST HOLE INFORMATION SHALL BE OBTAINED PRIOR TO MOBILIZATION AND CONSTRUCTION PLANS SHALL BE REVISED ACCORDINGLY.
4. NO EXISTING WATER MAINS, FIRE HYDRANTS, OR SANITARY SEWERS MAY BE TAKEN OUT OF SERVICE OR MADE INACCESSIBLE BY THE CONTRACTOR WITHOUT THE PRIOR APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
5. UPON COMPLETION OF CONSTRUCTION, ALL FINAL TESTS, AS REQUIRED, SHALL BE PERFORMED IN THE PRESENCE OF THE COUNTY'S REPRESENTATIVE. WATER AND SEWER SERVICE CONNECTIONS SHALL NOT BE MADE UNTIL THE WATER AND/OR SEWER MAINS AND APPURTENANCES HAVE BEEN APPROVED AND ACCEPTED BY ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.
6. EXISTING WATER SERVICES MAY BE ALLOWED FOR CONSTRUCTION PURPOSES ONLY FOR WHICH CONTRACTOR SHALL REQUEST TO THE ARLINGTON COUNTY'S UTILITY SERVICES BY CALLING 703-228-3636. PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, THE DEVELOPER SHALL REQUEST TO THE UTILITY SERVICES IN WRITING FOR THE DISCONTINUATION OF ALL EXISTING WATER SERVICES. ALSO, THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING METER BOXES RELATED TO THE SERVICES BEING DISCONTINUED.
7. THE CONTRACTOR SHALL MAINTAIN BACKFILL FOR UTILITY EXCAVATIONS UNTIL ARLINGTON COUNTY HAS FINALLY ACCEPTED THE PROPOSED WATER AND/OR SEWER MAIN. ALSO, ALL SURFACES OVER THE UTILITY EXCAVATIONS SHALL EITHER BE RESTORED TO THE ORIGINAL CONDITION OR FINISHED AS PER THE PROPOSED DESIGN BEFORE THE ACCEPTANCE OF THE PROJECT. PAVEMENT PATCHING FOR UTILITY CUTS IN THE PUBLIC STREETS SHALL BE PERFORMED IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS AND SPECIFICATIONS OR AS PER VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS DEPENDING UPON THE STREET JURISDICTION. PRIOR TO FINAL PAVING, THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES AND SANITARY SEWER MANHOLE FRAME AND COVERS AS PER COUNTY STANDARDS, REMOVE ALL ABANDONED SANITARY MANHOLES AND VALVE BOXES OVER THE ABANDONED WATER MAINS, AND COMPLETE ALL NECESSARY WATER MAIN "CUT AND CAPS".
8. UPON COMPLETION, APPROVAL, AND ACCEPTANCE OF WATER AND/OR SEWER MAINS AND APPURTENANCES, THE DEVELOPER'S REGISTERED ENGINEER SHALL SUBMIT TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, A SET OF MYLAR TRACINGS INDICATING THE AS-BUILT CONDITIONS AND A SIGNED STATEMENT CONFIRMING THAT THE WORK, AS INDICATED, IS ACCEPTABLE TO THE ENGINEER. SUCH SUBMITTALS SHALL BE MADE BEFORE REQUESTING REDUCTION AND/OR RELEASE OF THE SURETY BOND.

ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT ARLINGTON COUNTY DES STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL REMOVE AND REPLACE, TO THE CURRENT ARLINGTON COUNTY DES STANDARDS AND SPECIFICATIONS, ANY EXISTING ENTRANCES, CURB AND GUTTER OR SIDEWALK ALONG THE FRONTAGE OF THIS SITE IN POOR CONDITION, OR DAMAGED DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND CLOSING, TO ARLINGTON COUNTY STANDARDS, ANY EXISTING ENTRANCES NOT BEING USED IN CONJUNCTION WITH THIS DEVELOPMENT.
4. THE CONTRACTOR SHALL OBTAIN ARLINGTON COUNTY PERMITS FOR EACH SITE.
5. THERE MAY BE UNDERGROUND CONDUIT, CABLES AND TRAFFIC DETECTION DEVICES IN THIS AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY TRAFFIC CONTROLS THAT ARE DISTURBED DURING CONSTRUCTION. NOTIFY THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU AT (703) 228-3575, 24 HOURS PRIOR TO STARTING WORK.
6. THE CONTRACTOR SHALL NOT DISTURB OR REMOVE ANY TRAFFIC CONTROL SIGNS, PARKING METERS OR ANY OTHER TRAFFIC CONTROL DEVICE WITHOUT PRIOR PERMISSION FROM THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU. CONTACT TRANSPORTATION ENGINEERING AT (703) 228-3575.
7. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU, PRIOR TO PLACING ANY OBSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY, OR ON SIDEWALKS ALONG THE FRONTAGE OF THIS DEVELOPMENT.
8. THE CONTRACTOR SHALL OBTAIN PERMITS FROM THE INSPECTION SERVICES DIVISION PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION OF ON-SITE FACILITIES. FOR INFORMATION AND PERMIT REQUIREMENTS TELEPHONE (703) 228-3800.

UTILITY MARKING REQUIREMENTS:

9. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 811, 72 HOURS PRIOR TO THE START OF ANY EXCAVATION OR CONSTRUCTION, FOR THE MARKING OF UNDERGROUND UTILITIES IN THE RIGHT-OF-WAY.
10. UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS DETERMINED FROM A TOPOGRAPHIC SURVEY AND AVAILABLE RECORDS. ADDITIONAL UNDERGROUND UTILITY LINES MAY BE PRESENT THAT ARE NOT SHOWN. THE CONTRACTOR SHALL LOCATE AND PRESERVE ALL EXISTING UTILITIES.

HORIZONTAL DATUM:

THE SITE SHOWN HERON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983 AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY.

VERTICAL DATUM:

THE SITE SHOWN HERON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY.

PROPERTY NOTE:

THE SUBJECT PROPERTY IS IDENTIFIED AS RPC#25-021-014, RPC#25-021-015, RPC#25-021-016, RPC#25-021-017, RPC#25-021-018, RPC#25-021-022, RPC#25-021-023, RPC#25-021-024, RPC#25-021-025, RPC#25-021-027, RPC#25-021-041, RPC#25-021-046 AND RPC#25-021-050.

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Parks Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

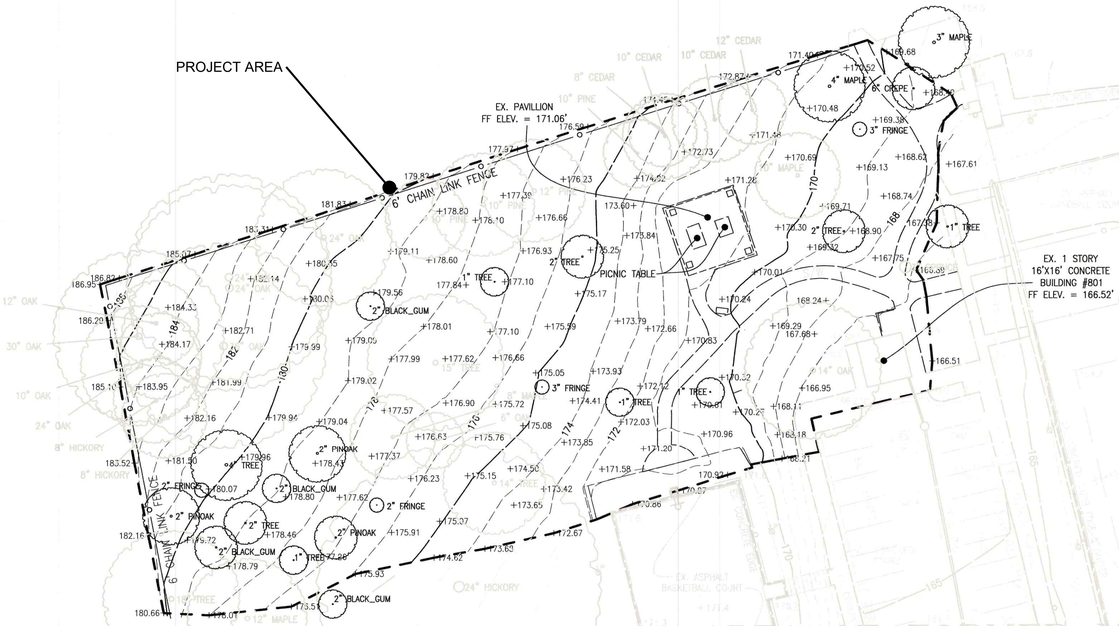
TOWERS PARK PLAYGROUND RENOVATIONS
By-Right (County Project)
5/6/2020
801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

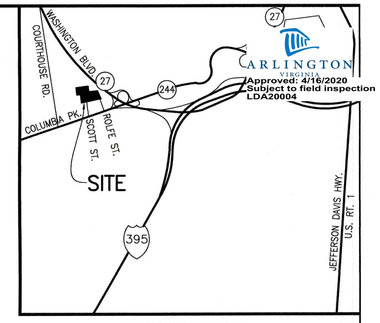
100% CONSTRUCTION DRAWINGS
LDA#11341
SWM# 20-0010

Approvals	Date
Park Development Division Chief	
Design Manager	DEC 2019

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet
C-01
No. 1 of 41





VICINITY MAP
SCALE: 1" = 2000'

NOTES:

1. THE PORTION OF PROPERTY SHOWN HEREON IS NOW IN THE NAME OF THE COUNTY BOARD OF ARLINGTON AND IS ZONED S-3A.
2. THIS TOPOGRAPHIC MAPPING SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, KEVIN D. NELSON FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE ORIGINAL DATA WAS OBTAINED ON JANUARY 29, 2019 - JANUARY 31, 2019; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
3. THE CONTOUR INTERVAL EQUALS ONE FOOT.
4. HORIZONTAL DATUM IS REFERENCED TO VIRGINIA STATE PLANE COORDINATE SYSTEM, ZONE NORTH (NAD83).
5. VERTICAL DATUM IS REFERENCED TO NAVD 88.

SIGNED TOPOGRAPHIC SURVEY

LEGEND

- EX. STORM SEWER MANHOLE
- EX. STORM SEWER CURB INLET
- EX. SANITARY SEWER MANHOLE
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. MATER METER
- EX. GAS VALVE
- EX. LIGHT POLE
- EX. POWER POLE
- EX. GUY WIRE
- EX. SIGN
- EX. BOLLARD
- EX. BASKETBALL HOOP
- EX. HANDICAPPED PARKING SPACE
- EX. SPOT ELEVATION
- EX. TREE <TRUNK DIAMETER><TYPE><DRIP LINE SHOWN TO SCALE>
- EX. CHAINLINK FENCE
- EX. BOARD FENCE
- EX. OVERHEAD ELECTRIC LINE
- EX. SPORTS EQUIPMENT NET

25 12.5 0 25 50 75
GRAPHICAL SCALE: 1" = 25'

COMMONWEALTH OF VIRGINIA
02.21.19
KEVIN D. NELSON
Lic. No. 002419
LAND SURVEYOR

C-02

SCALE: , 2019

William H. Gordon Associates, Inc.
Civil Engineering • Survey • Land Planning • Landscape Architecture
Site Security Consulting • GIS
4501 Daly Drive, Suite 200
Chantilly, Virginia 20151
Phone: (703) 263-1900 Fax: (703) 263-0766 www.whga.com

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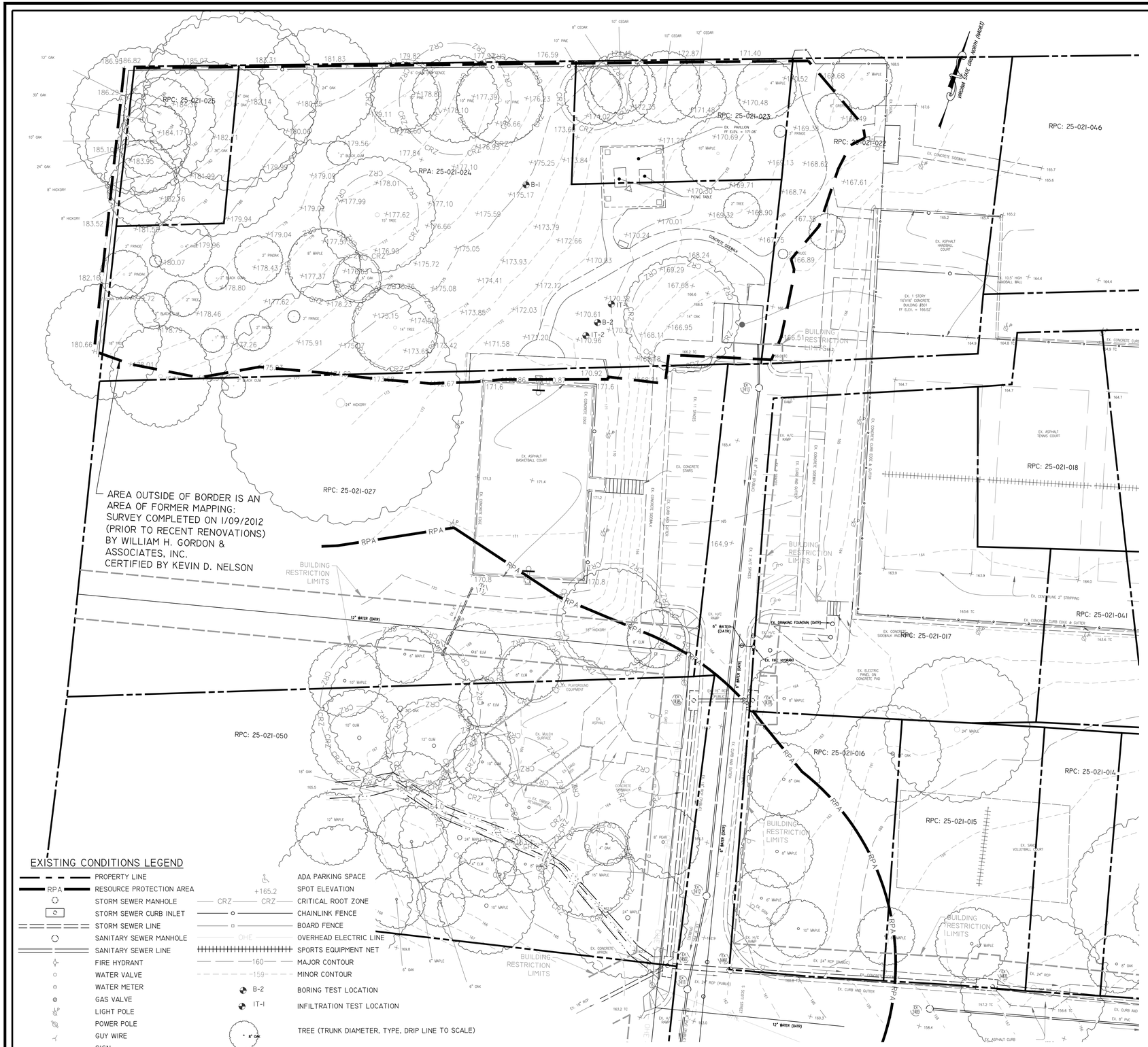

STORM SEWER AS-BUILT TABLE

STRUCTURE No.	TYPE	ELEVATION	DESCRIPTION
2	TOP	149.59	RIM (CURB INLET)
	24" RCP	145.54	INVERT IN(3)
	27" RCP	145.39	INVERT OUT(SOUTH/EAST)
3	TOP	153.44	RIM (MANHOLE)
	24" RCP	149.29	INVERT IN(4)
	12" PVC	150.24	INVERT IN(SOUTH)
	24" RCP	149.22	INVERT OUT(2)
4	TOP	154.18	RIM (MANHOLE)
		(CAN NOT ACCESS)	
14470	TOP	157.49	RIM (CURB INLET)
	24" RCP	152.69	INVERT IN(6)
	24" RCP	152.59	INVERT OUT(4)
14497	TOP	162.13	RIM (MANHOLE)
		156.73	INVERT CENTERLINE
			(DOGHOUSE STRUCTURE)
14507	TOP	163.16	RIM (CURB INLET)
	18" RCP	158.16	INVERT IN(SOUTH)
	18" RCP	158.16	INVERT IN(8)
	24" RCP	157.66	INVERT OUT(6)
14385	TOP	164.11	RIM (CURB INLET)
	15" RCP	161.61	INVERT IN(9)
	18" RCP	160.41	INVERT OUT(7)
14378	TOP	164.21	RIM (CURB INLET)
	15" RCP	161.36	INVERT OUT(8)
10	6" PIPE	167.40	INVERT OUT
11	TOP	169.90	RIM (INLINE DRAIN)
	6"	167.55	INVERT OUT(10)

SANITARY SEWER AS-BUILT TABLE

STRUCTURE No.	TYPE	ELEVATION	DESCRIPTION
A	TOP	149.59	RIM (MANHOLE)
	8" PVC	146.28	INVERT IN(B)
	8" PVC	146.23	INVERT OUT(SOUTH/EAST)
B	TOP	154.46	RIM (MANHOLE)
	8" PVC	147.11	INVERT IN(C)
	8" PVC	147.04	INVERT OUT(A)
2409	TOP	158.08	RIM (MANHOLE)
	8" PVC	149.58	INVERT OUT(B)
2411	TOP	163.00	RIM (MANHOLE)
	8" PVC	155.74	INVERT IN(E)
	8" PVC	155.70	INVERT OUT(SOUTH/EAST)
2412	TOP	163.08	RIM (MANHOLE)
	8" PVC	156.28	INVERT IN(F)
	8" PVC	156.26	INVERT OUT(D)
2413	TOP	165.60	RIM (MANHOLE)
	6" PVC	157.55	INVERT IN(BUILDING)
	8" PVC	157.45	INVERT OUT(E)

PROPERTY AREAS

RPC NUMBER	AREA	
	SF	ACRES
25-021-014	3,208	0.0736
25-021-015	6,416	0.1473
25-021-016	6,624	0.1521
25-021-017	13,891	0.3189
25-021-018	4,728	0.1085
25-021-022	10,890	0.2500
25-021-023	5,445	0.1250
25-021-024	21,780	0.5000
25-021-025	2,722	0.0625
25-021-027	36,399	0.8356
25-021-041	2,819	0.0647
25-021-046	10,936	0.2511
25-021-050	26,878	0.6170
TOTAL AREA:	152,736	3.5063

EXISTING CONDITIONS LEGEND

- PROPERTY LINE
- RPA — RESOURCE PROTECTION AREA
- STORM SEWER MANHOLE
- STORM SEWER CURB INLET
- STORM SEWER LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER LINE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS VALVE
- LIGHT POLE
- POWER POLE
- GUY WIRE
- SIGN
- BOLLARD
- BASKETBALL HOOP
- TRAVERSE STATION
- ADA PARKING SPACE
- +165.2 — SPOT ELEVATION
- CRZ — CRZ — CRITICAL ROOT ZONE
- CHAINLINK FENCE
- BOARD FENCE
- OHE — OVERHEAD ELECTRIC LINE
- SPORTS EQUIPMENT NET
- 160 — MAJOR CONTOUR
- 159 — MINOR CONTOUR
- B-2 — BORING TEST LOCATION
- IT-1 — INFILTRATION TEST LOCATION
- 8" OAK — TREE (TRUNK DIAMETER, TYPE, DRIP LINE TO SCALE)
- STREAM LIMITS
- LIMITS OF BUILDING RESTRICTION FOR PUBLIC UTILITIES

0 10' 20' 40'
SCALE: 1"=20'

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

EXISTING CONDITIONS PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-03-VF01-150396021.dwg
Plotted: 2020-03-12

Scale: 1" = 20'
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER
Digitally signed by Jefferson K. Sinclair Jr
Date: 2020.05.26 09:16:04-04'00'

Sheet

C-03

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TREE PRESERVATION LEGEND

LOD LOD	LIMITS OF DISTURBANCE
200	EXISTING CONTOUR
LOD/TP	LIMITS OF DISTURBANCE / TREE PROTECTION FENCE (2 LF-04)
CRZ CRZ	CRITICAL ROOT ZONE (1 LF-04)
	TEMPORARY ROOT PROTECTION MATTING / HAND REMOVAL AREA (4 LF-04)
	PERMANENT ROOT AERATION MATTING (3 LF-04)
	REFORESTATION AREA

NOTES:

1. TREE PROTECTION FENCE SHALL REMAIN IN PLACE UNTIL COUNTY PROJECT OFFICER APPROVES ITS REMOVAL.
2. LIMITS OF DISTURBANCE / TREE PROTECTION FENCE AND PERIMETER SEDIMENT CONTROLS TO BE INSTALLED AT LIMITS OF WORK. SEPARATION BETWEEN THESE ITEMS ON THE PLANS IS FOR GRAPHICAL PURPOSES.
3. EXCAVATION WITHIN CRZ OF EXISTING TREES TO REMAIN SHALL BE PERFORMED WITH SPECIAL CARE (I.E. HAND OR LIGHT MACHINERY OPERATIONS) AS TO NOT DAMAGE, DISTURB OR REMOVE TREE ROOTS.
4. CONSTRUCTION SAFETY FENCING AND PERIMETER SEDIMENT CONTROLS SHALL BE INSTALLED AS SHOWN ON THE PHASE IA EROSION AND SEDIMENT CONTROL PLAN PRIOR TO COMMENCING TO DEMOLITION ACTIVITIES AS INDICATED ON THE DEMOLITION PLAN. UPON COMPLETION THE AREA SHALL IMMEDIATELY BE STABILIZED.

Towers Park Playground Renovations Tree Inventory

Tree Survey Information Completed by : Kathy von Bredow #MA -4729A 2019.08.07

8/8/2019

Tree #	Botanical Name	Common Name	Size (DBH)	Critical Root Zone (CRZ)	Species Rating	Condition %	Action	RPA	Inside Reforestation Area	Replacement Calculation	Replacement	Notes
1	*Pinus strobus*	Eastern white pine	14"	14'	75%	81%	Protect			9		Compacted soils
2	*Pinus strobus*	Eastern white pine	18"	18'	75%	84%	Protect			11		
3	*Pinus strobus*	Eastern white pine	23"	23'	75%	78%	Protect			13		Double leader
4	*Quercus acutissima*	Sawtooth oak	17"	17'	50%	84%	Protect			7		Very large canopy
5	*Quercus alba*	White oak	9"	9'	85%	72%	Protect			5		Suppressed, poor form
6	*Quercus acutissima*	Sawtooth oak	17"	17'	50%	84%	Protect			7		
7	*Quercus bicolor*	Swamp white oak	21"	21'	85%	84%	Protect			15		
8	*Linden spp.*	Linden spp.	12"	12'	80%	69%	Protect	X		6		Girdling roots, compacted soils
9	*Robinia pseudoacacia*	Black locust	23"	23'	65%	63%	Protect/Prune deadwood	X		9		Interior deadwood
10	*Linden spp.*	Linden spp.	13"	13'	80%	75%	Protect	X		8		Girdling roots, compacted soils
11	*Nyssa sylvatica*	Blackgum	10"	10'	85%	84%	Protect	X		7		
12	*Acer saccharinum*	Silver maple	33"	33'	60%	63%	Protect	X	Y	12		Poor form, decay
13	*Liquidambar styraciflua*	Sweetgum	13"	13'	80%	84%	Protect	X	Y	9		
14	*Liquidambar styraciflua*	Sweetgum	17"	17'	80%	81%	Protect	X	Y	11		
15	*Liquidambar styraciflua*	Sweetgum	15"	15'	80%	84%	Protect	X	Y	10		
16	*Acer rubrum*	Red maple	29"	29'	80%	78%	Protect	X	Y	18		Minor deadwood, prune
17	*Liquidambar styraciflua*	Sweetgum	16"	16'	80%	81%	Protect	X	Y	10		
18	*Acer rubrum*	Red maple	19"	19'	80%	69%	Protect	X	Y	10		Deadwood, prune
19	*Nyssa sylvatica*	Blackgum	7"	8'	85%	84%	Protect	X	Y	5		
20	*Malus spp.*	Malus spp.	4"	8'	70%	72%	Protect	X		2		

TREE CANOPY COVERAGE NOTE:

PER SECTION 61-10.C.3 OF THE CHESAPEAKE BAY PRESERVATION ORDINANCE, THE PROPOSED USE IS EXEMPT FROM THE TREE CANOPY COVERAGE REQUIREMENTS OF THE ORDINANCE.

ARLINGTON VIRGINIA

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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

TREE PRESERVATION OVERALL PLAN & TREE TABLE

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: LF-01-04_TP.DWG
Plotted: Dec. 22, 20
Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

LF-01

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TREE PRESERVATION LEGEND

- LOD LOD — LIMITS OF DISTURBANCE
- 200 — EXISTING CONTOUR
- LOD/TP — LIMITS OF DISTURBANCE / TREE PROTECTION FENCE (2 LF-04)
- CRZ CRZ — CRITICAL ROOT ZONE (1 LF-04)
- TEMPORARY ROOT PROTECTION MATTING / HAND REMOVAL AREA (4 LF-04)
- PERMANENT ROOT AERATION MATTING (3 LF-04)
- REFORESTATION AREA

NOTES:

1. TREE PROTECTION FENCE SHALL REMAIN IN PLACE UNTIL COUNTY PROJECT OFFICER APPROVES ITS REMOVAL.
2. LIMITS OF DISTURBANCE / TREE PROTECTION FENCE AND PERIMETER SEDIMENT CONTROLS TO BE INSTALLED AT LIMITS OF WORK. SEPARATION BETWEEN THESE ITEMS ON THE PLANS IS FOR GRAPHICAL PURPOSES.
3. EXCAVATION WITHIN CRZ OF EXISTING TREES TO REMAIN SHALL BE PERFORMED WITH SPECIAL CARE (I.E. HAND OR LIGHT MACHINERY OPERATIONS) AS TO NOT DAMAGE, DISTURB OR REMOVE TREE ROOTS.
4. CONSTRUCTION SAFETY FENCING AND PERIMETER SEDIMENT CONTROLS SHALL BE INSTALLED AS SHOWN ON THE PHASE IA EROSION AND SEDIMENT CONTROL PLAN PRIOR TO COMMENCING TO DEMOLITION ACTIVITIES AS INDICATED ON THE DEMOLITION PLAN. UPON COMPLETION THE AREA SHALL IMMEDIATELY BE STABILIZED.

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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

TREE PRESERVATION PLAN - DEMOLITION

Approval Date

Design Supervisor

Revisions Date

Designed:
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COMMONWEALTH OF VIRGINIA
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12-22-2020
LANDSCAPE ARCHITECT

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LF-02

No. 5 of 41

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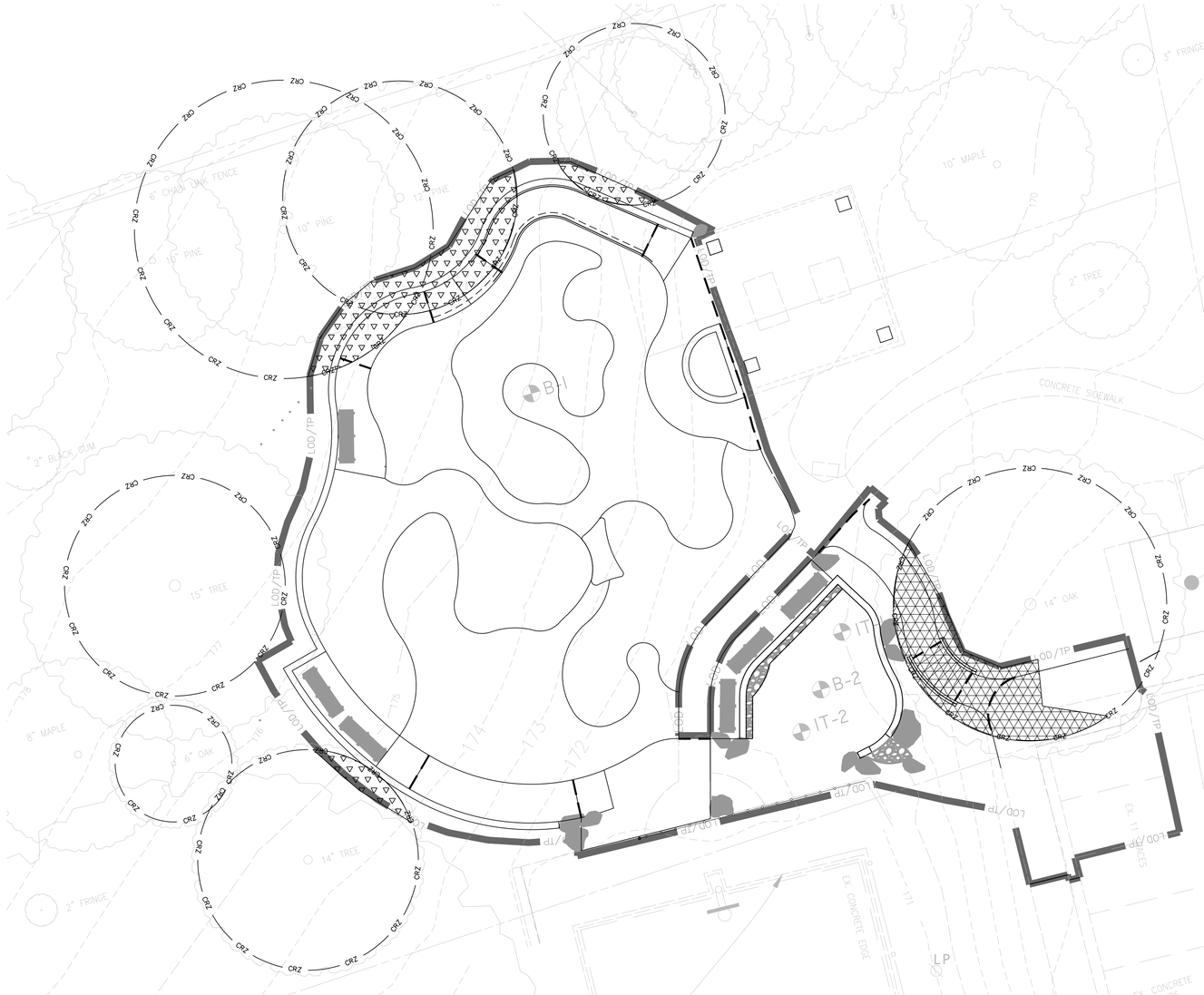
TREE PRESERVATION LEGEND

LOD LOD	LIMITS OF DISTURBANCE
200	EXISTING CONTOUR
LOD/TP	LIMITS OF DISTURBANCE / TREE PROTECTION FENCE
CRZ CRZ	CRITICAL ROOT ZONE
	TEMPORARY ROOT PROTECTION MATTING / HAND REMOVAL AREA
	PERMANENT ROOT AERATION MATTING
	REFORESTATION AREA

2 LF-04
1 LF-04
4 LF-04
3 LF-04



0 5 10 20
SCALE: 1" = 10' - 0"

NOTES:

1. TREE PROTECTION FENCE SHALL REMAIN IN PLACE UNTIL COUNTY PROJECT OFFICER APPROVES ITS REMOVAL.
2. LIMITS OF DISTURBANCE / TREE PROTECTION FENCE AND PERIMETER SEDIMENT CONTROLS TO BE INSTALLED AT LIMITS OF WORK. SEPARATION BETWEEN THESE ITEMS ON THE PLANS IS FOR GRAPHICAL PURPOSES.
3. EXCAVATION WITHIN CRZ OF EXISTING TREES TO REMAIN SHALL BE PERFORMED WITH SPECIAL CARE (I.E. HAND OR LIGHT MACHINERY OPERATIONS) AS TO NOT DAMAGE, DISTURB OR REMOVE TREE ROOTS.
4. CONSTRUCTION SAFETY FENCING AND PERIMETER SEDIMENT CONTROLS SHALL BE INSTALLED AS SHOWN ON THE PHASE IA EROSION AND SEDIMENT CONTROL PLAN PRIOR TO COMMENCING TO DEMOLITION ACTIVITIES AS INDICATED ON THE DEMOLITION PLAN. UPON COMPLETION THE AREA SHALL IMMEDIATELY BE STABILIZED.

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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
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Sheet Title

TREE PRESERVATION PLAN - CONSTRUCTION

Approval Date

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Revisions Date

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LF-03

No. 6 of 41

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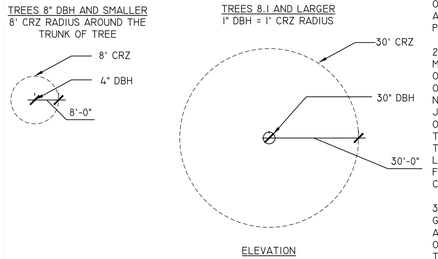
TREE PRESERVATION NOTES

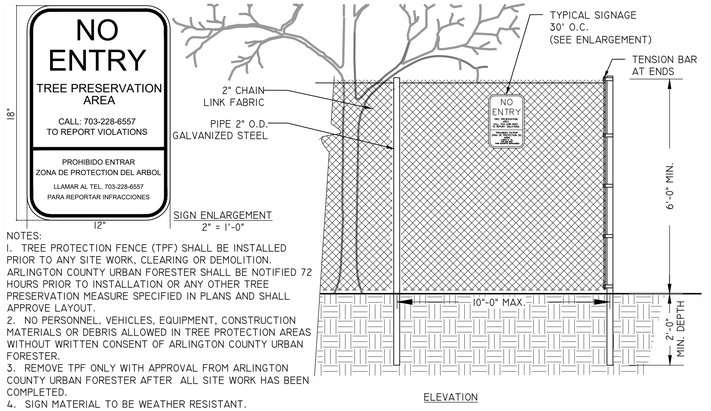
1. ALL MEASURES WILL BE REVIEWED AFTER INSTALLATION AND APPROVED BY THE PROJECT MANAGER AND COUNTY URBAN FORESTER. SUBSTITUTIONS OR ALTERNATIVE METHODS OR MATERIALS SHALL BE REVIEWED AND APPROVED BY COUNTY AND URBAN FORESTER. ALL TREE PROTECTION MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF DEMOLITION, SITE CLEARING OR CONSTRUCTION AND MAINTAINED THROUGHOUT CONSTRUCTION. TREE PROTECTION MEASURES SHALL ONLY BE REMOVED WITH COUNTY APPROVAL.TREE PROTECTION DEVICES SHALL BE MAINTAINED UNTIL ALL WORK IN THE VICINITY HAS BEEN COMPLETED AND SHALL NOT BE REMOVED OR RELOCATED WITHOUT THE CONSENT OF THE COUNTY URBAN FORESTER. IF THE COUNTY URBAN FORESTER DEEMS THAT THE PROTECTIVE DEVICES ARE INSUFFICIENT, INSTALLATION OF ADDITIONAL PROTECTIVE DEVICES MAY BE REQUIRED AS DIRECTED BY COUNTY REPRESENTATIVE.
2. HEAVY EQUIPMENT, VEHICULAR TRAFFIC, STOCKPILING OF MATERIALS, OR DEPOSITION OF SEDIMENT SHALL NOT BE PERMITTED WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN. DEMOLITION OF EXISTING CONDITIONS AND CONSTRUCTION OF PROPOSED IMPROVEMENTS IS PERMITTED WITHIN DRIPLINE (WITHIN LIMITS OF WORK) WITH LIGHT DUTY EQUIPMENT.CONSTRUCTION EQUIPMENT ACCESS BETWEEN VARIOUS WORK AREAS SHALL REMAIN ON EXISTING PAVEMENT/IMPROVED SURFACES TO THE GREATEST EXTENT POSSIBLE. WHERE THIS IS NOT POSSIBLE AND WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE TO REMAIN, ACCESS SHALL BE MADE ON ROOT PROTECTION MATTING (RPM) OR APPROVED ALTERNATIVE. CONTRACTOR TO DETERMINE ACCESS NEEDS AND COORDINATE RPM INSTALLATION WITH THE CONTRACT ARBORIST AND COUNTY URBAN FORESTER AT THE PRE-CONSTRUCTION MEETING OR BEFORE.
3. NO PROTECTIVE DEVICES, SIGNS, UTILITY BOXES OR OTHER OBJECTS SHALL BE NAILED OR AFFIXED TO TREES TO BE PRESERVED.
4. IN THE EVENT THAT A TREE OR PORTION THEREOF IS DEAD OR DYING DUE TO CONSTRUCTION OR ENVIRONMENTAL CHANGES RESULTING FROM DEMOLITION, CONSTRUCTION AND/OR CLEARING, AND POSES A HAZARD TO EITHER LIFE OR PROPERTY, THE CONTRACTOR SHALL NOTIFY PROJECT OFFICER AND TAKE SUCH ACTION AS NECESSARY TO ELIMINATE THE HAZARD CAREFULLY AS PER PROJECT MANAGER'S APPROVAL.
5. ANY DAMAGE INFLICTED TO THE ABOVE OR BELOW-GROUND PORTIONS OF THE TREES SHOWN TO BE PRESERVED SHALL BE REPAIRED IMMEDIATELY. ALL DAMAGED BRANCHES IN THE CROWN SHALL BE CUT OFF CLEANLY PER ARLINGTON COUNTY URBAN FORESTER.
6. TREES THAT ARE REQUIRED TO BE REMOVED SHALL BE REMOVED IN SUCH A WAY THAT SURROUNDING TREES, VEGETATION, LANDSCAPING, STRUCTURES, AND SITE FEATURES ARE NOT DAMAGED.
7. TREES THAT ARE REQUIRED TO BE REMOVED SHALL BE CUT DOWN BY HAND WITH A CHAIN SAW. THESE TREES SHALL BE CUT DOWN FLUSH WITH THE GROUND (WITHIN 2" OF THE SOIL), AND CUT INTO MOVABLE LENGTHS, TO PREVENT THE CREATION OF A NEW HAZARD. REMAINING STUMPS SHALL BE REMOVED OR GROUND DOWN WITH A STUMP GRINDER.
8. TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED, OR PULLED INTO TREE PRESERVATION AREAS. EQUIPMENT OPERATORS SHALL NOT CLEAN ANY PART OF THEIR EQUIPMENT BY SLAMMING IT AGAINST THE TRUNKS OF TREES TO BE RETAINED.
9. THE EXACT LOCATION AND DEPTH OF ROOT PRUNING WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING. SPECIFIC EQUIPMENT & METHODS WILL BE DETERMINED BY CONTRACT ARBORIST AND COUNTY URBAN FORESTER BASED UPON DEPTH & TREE IMPACT. (SEE DETAIL)
10. 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. COORDINATE WITH SILT FENCE INSTALLATION TO MINIMIZE UNNECESSARY ROOT DAMAGE. ROOT PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST AND SHALL FOLLOW ALL DPR APPROVED DETAILS.
11. SPECIAL DEMO AREAS: HEAVY EQUIPMENT, VEHICULAR TRAFFIC, STOCKPILING OF MATERIALS, OR DEPOSITION OF SEDIMENT SHALL NOT BE PERMITTED. CONTRACTOR SHALL HAND EXCAVATE AND REMOVE WITH NON MECHANIZED EQUIPMENT. ACCESS SHALL BE MADE ON ROOT PROTECTION MATTING (RPM) OR APPROVED ALTERNATIVE. CONTRACTOR TO DETERMINE ACCESS NEEDS AND COORDINATE RPM INSTALLATION WITH THE CONTRACT ARBORIST AND COUNTY URBAN FORESTER AT THE PRE-CONSTRUCTION MEETING OR BEFORE. BACKFILL OF VOIDS FROM DEMOLITION WITHIN THE SPECIAL TREE PROTECTION AREAS SHALL BE LOOSELY PLACED TOPSOIL. ONLY THE AMOUNT OF SOIL NECESSARY TO FILL THE VOID WITHOUT SPREADING OVER EXISTING ADJACENT GRADES SHALL BE ALLOWED. THESE AREAS SHALL BE MULCHED WITH 3" OF APPROVED MULCH WITHIN 24 HOURS OF DEMOLITION ACTIVITIES.
12. ROOTS ENCOUNTERED DURING DEMOLITION SHALL BE REVIEWED ON A CASE-BY-CASE BASIS BY THE CONTRACTOR, PROJECT MANAGER AND COUNTY URBAN FORESTER. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TREATMENT OR PRUNING METHODS AS NEEDED AND IN GENERAL CONFORMANCE WITH ACCEPTED INDUSTRY STANDARDS AND THIS SECTION.
13. TREE LOCATIONS MAY BE APPROXIMATE. OWNER AND CONTRACT ARBORIST SHALL VERIFY ALL TREE LOCATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND/OR TREATMENT OR REMOVAL.
14. PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF DEMOLITION/CONSTRUCTION ACTIVITY. COUNTY, OWNER, DESIGN TEAM MEMBERS (PROJECT MANAGER, LANDSCAPE ARCHITECT, ARLINGTON COUNTY URBAN FORESTER,ARLINGTON COUNTY LANDSCAPE ARCHITECT), CONTRACT ARBORIST, SITE AND LANDSCAPE CONTRACTORS SHALL ATTEND.
15. 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.
16. TREES RATED "POOR" OR "DEAD" THAT ARE NOT RECOMMENDED FOR REMOVAL DUE TO CONSTRUCTION IMPACT MAY WARRANT FURTHER EVALUATION AND/OR TREATMENT OR REMOVAL.



NOTES:

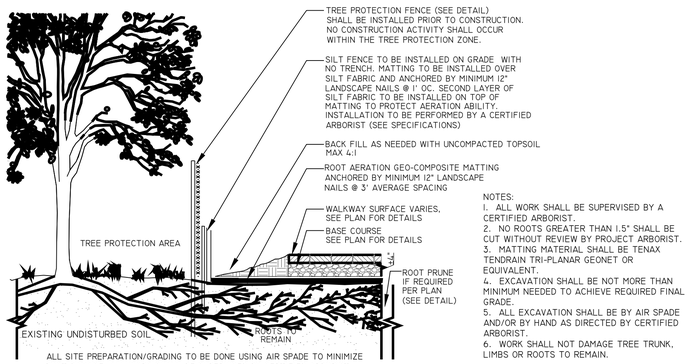
1. GRAPHICALLY, THE CRITICAL ROOT ZONE (CRZ) IS REPRESENTED AS A CIRCULAR REGION MEASURED OUTWARD FROM A TREE TRUNK REPRESENTING THE AREA OF ROOTS THAT MUST BE MAINTAINED OR PROTECTED FOR THE TREE'S SURVIVAL.
2. THE CRZ OF A TREE IS THE ZONE IN WHICH THE MAJORITY OF THE ROOTS LAY. 95% OF THE ROOTS OF MOST TREES WILL BE FOUND IN THE UPPER 12-18" OF THE SOIL. MOST OF THE ROOTS THAT SUPPLY THE NUTRIENTS AND WATER TO THE TREE ARE FOUND JUST BELOW THE SOIL SURFACE. THE TOTAL AMOUNT OF A TREE'S ROOTS ARE GENERALLY PROPORTIONAL TO THE VOLUME OF THE TREE'S CANOPY. THEREFORE, IF THE ROOTS ONLY PENETRATE A THIN LAYER OF SOIL, THEN THE ROOTS MUST SPREAD FAR FROM THE TREE, BEYOND THE EXTENSION OF THE CANOPY.
3. PLOT ACCURATE TRUNK LOCATIONS OF ALL TREES GREATER THAN 3" DIAMETER AT BREAST HEIGHT (DBH) AND/OR TREE STANDS WITHIN DEVELOPMENT AREAS ON ALL PLANS FOR THE PROJECT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.
4. PLOT ACCURATE TRUNK LOCATIONS OF OFFSITE TREES WHICH WILL HAVE THEIR CRZ AFFECTED BY DEVELOPMENT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

1 LF-04 — TREE PROTECTION DETAIL FOR DETERMINING CRITICAL ROOT ZONE — N.T.S.
3I1300.3 (2019)



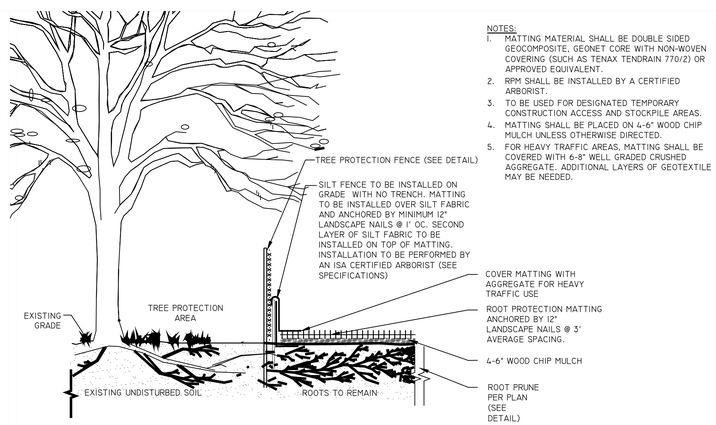
NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OR ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, 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.

2 LF-04 — 6' CHAIN LINK TREE PROTECTION FENCE — 1/2" = 1'-0"
3I1300.1 (2019) — LOD/CONSTRUCTION FENCE



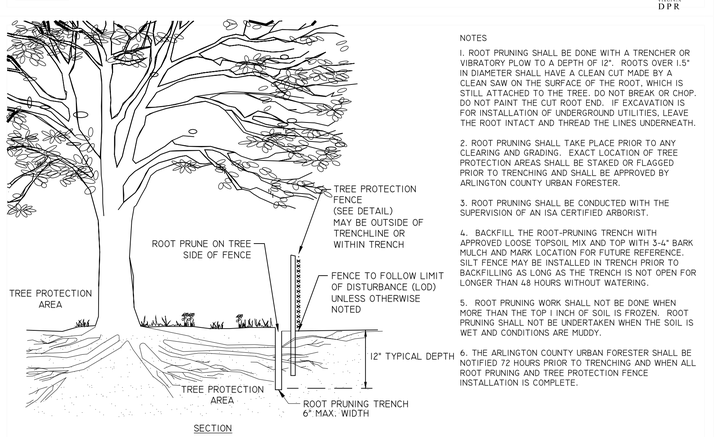
NOTES:
1. ALL WORK SHALL BE SUPERVISED BY A CERTIFIED ARBORIST.
2. NO ROOTS GREATER THAN 1.5" SHALL BE CUT WITHOUT REVIEW BY PROJECT ARBORIST.
3. MATTING MATERIAL SHALL BE TENAX TENDRAIN TRI-PLANAR GEONET OR EQUIVALENT.
4. EXCAVATION SHALL BE NOT MORE THAN MINIMUM NEEDED TO ACHIEVE REQUIRED FINAL GRADE.
5. ALL EXCAVATION SHALL BE BY AIR SPADE AND/OR BY HAND AS DIRECTED BY CERTIFIED ARBORIST.
6. WORK SHALL NOT DAMAGE TREE TRUNK, LIMBS OR ROOTS TO REMAIN.

3 LF-04 — ABOVE GRADE SIDEWALK WITH ROOT AERATION MATTING — N.T.S.
3I1300.10NS



NOTES:
1. MATTING MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENAX TENDRAIN 770/2) OR APPROVED EQUIVALENT.
2. RPM SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
3. TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
4. MATTING SHALL BE PLACED ON 4-6" WOOD CHIP MULCH UNLESS OTHERWISE DIRECTED.
5. FOR HEAVY TRAFFIC AREAS, MATTING SHALL BE COVERED WITH 6-8" WELL GRADED CRUSHED AGGREGATE. ADDITIONAL LAYERS OF GEOTEXTILE MAY BE NEEDED.

4 LF-04 — TEMPORARY ROOT PROTECTION MATTING WITHIN CRZ — NOT TO SCALE
3I1300.7NS



NOTES
1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.
2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.
4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.
5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.
6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.

5 LF-04 — ROOT PRUNING — N.T.S.
3I1300.5 (2019)

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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

TREE PRESERVATION NOTES & DETAILS

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

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LF-04

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DEMOLITION LEGEND

Symbol	Description
property line	PROPERTY LINE
RPA	RESOURCE PROTECTION AREA (RPA)
LOD/TP	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
CRZ	CRITICAL ROOT ZONE (CRZ)
crosshatch	ASPHALT PAVEMENT TO BE REMOVED
dotted	CONCRETE PAVEMENT TO BE REMOVED
diagonal hatch	COMPACTED MULCH TO BE REMOVED
grey line	TIMBER BORDER TO BE REMOVED
// // //	FENCE TO BE REMOVED
X	SITE FEATURE TO BE REMOVED

DEMOLITION NOTES:

1. LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE LIMIT OF DISTURBANCE PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCY TO THE PROJECT OFFICER. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 811 A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.
2. THE DEMOLITION PLAN IS A GENERAL GUIDE OF WHAT ITEMS NEED TO DEMOLISHED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL ITEMS THAT REQUIRED DEMOLITION TO COMPLETE THE PROPOSED CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT AND PRESERVE ALL EXISTING SITE STRUCTURES AND FEATURES NOT SCHEDULED FOR DEMOLITION AND/ OR CONSTRUCTION FROM DAMAGE DUE TO DEMOLITION PROCEDURES. ANY RESULTING DAMAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE PROJECT OFFICER.
4. TREE PROTECTION AND CONSTRUCTION FENCE SHALL BE THE SAME WHEREVER THEY OVERLAP.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SAFETY AND SECURITY AT THE PROJECT SITE FOR THE DURATION OF THE CONTRACT.
6. CONTRACTOR SHALL COORDINATE WITH THE PROJECT OFFICER TO IDENTIFY ANY NECESSARY STAGING/STORAGE AREAS. PROPOSED STAGING AND STORAGE AREAS SHALL BE REVIEWED AND APPROVED BY THE PROJECT OFFICER, AND THE LIMITS OF WORK WILL BE ADJUSTED ACCORDINGLY.
7. ANY STOCKPILING, REGARDLESS OF LOCATION ON SITE, SHALL BE STABILIZED IMMEDIATELY AFTER ITS ESTABLISHMENT AND FOR THE DURATION OF THE PROJECT. STOCKPILES SHALL BE CONTAINED BY STRAW BALES OR EROSION CONTROL FENCING AND COVERED WITH PLASTIC OR CANVAS AT THE END OF EACH WORK DAY FOR THE DURATION OF THE PROJECT.
8. TEMPORARY CONSTRUCTION FENCING SHALL BE ERECTED AS SHOWN ON THE PLANS PRIOR TO BEGINNING CONSTRUCTION OPERATIONS AND MAINTAINED UNTIL COMPLETION OF PROJECT.
9. WHERE ITEMS TO BE REMOVED OCCUR WITHIN TREE PROTECTION ZONES, THE CONTRACTOR SHALL REMOVE THE ITEMS WORKING WITH A COUNTY ARBORIST (PROVIDED BY COUNTY) ON-SITE TO OBSERVE AND MINIMIZE TREE DAMAGE. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT FIVE BUSINESS DAYS PRIOR TO THESE REMOVALS.
10. CARE SHALL BE TAKEN TO PRESERVE EXISTING TREES AND THEIR ROOT SYSTEMS. TREES INCURRING ROOT DAMAGE DUE TO CONSTRUCTION SHALL BE PRUNED AND FERTILIZED PER THE SPECIFICATIONS.
11. NO MATERIALS OR EQUIPMENT SHALL BE PERMITTED WITHIN THE TREE PROTECTION AREA.
12. UNAUTHORIZED TREE REMOVALS, TREE DEATH OR SEVERE DAMAGE DUE TO THE CONTRACTOR'S FAILURE TO EXERCISE PROPER CARE WHEN WORKING NEAR TREES, SHALL RESULT IN A FINE EQUAL TO THE LANDSCAPE VALUE OF THE TREE AS PUBLISHED IN THE LATEST EDITION OF THE COUNCIL OF TREE AND LANDSCAPE APPRAISERS GUIDE FOR PLANT APPRAISALS PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
13. COUNTY ARBORIST INSPECTION IS REQUIRED PRIOR TO ANY SITE LAND DISTURBANCE ACTIVITY.
14. DEMOLITION STAGE EROSION AND SEDIMENT CONTROLS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION. REFER TO SHEET C-07 FOR DETAILED SEQUENCE OF CONSTRUCTION FOR DEMOLITION PHASING NOTES.
15. REFER TO TREE PRESERVATION DETAILS AND EROSION AND SEDIMENT CONTROL DRAWINGS FOR TREE PROTECTION AND OTHER REQUIRED TREE CARE.
16. ALL MATERIAL FROM DEMOLITION NOT IDENTIFIED FOR REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS.
17. ALL PAVEMENT REMOVED SHALL BE DONE SUCH THAT REMAINING PAVEMENT IS LEFT WITH CLEAN STRAIGHT EDGE. CONCRETE PAVEMENT/ CURBING SHALL BE REMOVED TO THE NEAREST JOINT.
18. EXISTING PAVEMENT SHALL BE SAW CUT WHEN NEXT TO REMAINING PAVEMENT BEFORE REMOVAL. ALL SAW CUTS SHALL BE STRAIGHT, EVEN CUTS; JAGGED CUTS WILL NOT BE PERMITTED.
19. WOOD AND STEEL TUBE FENCE REMOVED: INCLUDES ALL FENCE POSTS AND CONCRETE FOOTINGS.
20. CONCRETE REMOVAL: SHALL INCLUDE CONCRETE, STEEL REINFORCEMENT, AND GRAVEL BASE WHERE NO PROPOSED CONCRETE WILL BE INSTALLED.
21. ASPHALT REMOVAL: SHALL INCLUDE SURFACE, BASE AND SUBBASE MATERIALS.
22. PER SPECIFICATIONS, PLAYGROUND EQUIPMENT REMOVAL SHALL INCLUDE REMOVAL AND DISPOSAL OF ALL EQUIPMENT AND FOOTERS.
23. CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY SITE FURNISHINGS WITHIN THE LIMITS OF DISTURBANCE NOT REMOVED FROM SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION (IE SIGNAGE, BENCHES, TRASH RECEPTACLES, ETC).
24. CONTRACTOR SHALL PROVIDE EXISTING DAMAGE PHOTOS PRIOR TO MOBILIZING OR PERFORMING ANY WORK. LOCATIONS OF PICTURES TO BE RECORDED ON THIS SHEET.
25. TO PREVENT DAMAGES OUTSIDE THE LIMITS OF DISTURBANCE, NO PARK AREAS OUTSIDE THE LOD SHALL BE USED FOR STAGING OR STORAGE.
26. UPON COMPLETION OF THE PROJECT, ALL EXCESS SOIL, SAND, MULCH, TEMPORARY FENCING, EROSION CONTROL MEASURES, STABILIZATION MATERIALS, AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY. ALL PAVED AREAS, WALLS, ETC. SHALL BE THOROUGHLY WASHED AND CLEANED UPON COMPLETION OF THE PROJECT.
27. REFER TO SITE CLEARING, DEMOLITION, & REMOVALS SPECIFICATIONS FOR EXISTING EQUIPMENT REMOVAL AND RE-PURPOSING.
28. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
29. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT OCCURS TO ANY EXISTING SITE ELEMENT THAT IS NOT MARKED FOR DEMOLITION DURING CONSTRUCTION AND MUST REPLACE AT NO COST TO ARLINGTON COUNTY IF DAMAGED.
30. CONTRACTOR SHALL INFORM LANDSCAPE ARCHITECT AND PROJECT OFFICER IF ANY ITEMS/INFORMATION IS NOT LISTED OR CALLED OUT, SO AN APPROPRIATE SOLUTION CAN BE DISCUSSED. CONTRACTOR SHALL HAVE WRITTEN APPROVAL FROM LANDSCAPE ARCHITECT AND PROJECT OFFICER PRIOR TO ANY FURTHER SITE WORK.

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

DEMOLITION PLAN

100% Construction Drawings

Approval	Date
Design Manager	

Revisions	Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-04-CD01-150396021.dwg
Plotted: 2020-12-22

Scale: 1" = 20'
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet C-04

EROSION & SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION
		— - - —	PROPERTY LINE
		— RPA —	RESOURCE PROTECTION AREA
		— LOD —	LIMITS OF DISTURBANCE
		— LOW —	LIMITS OF WORK
		— TPF —	TREE PROTECTION/CONSTRUCTION SAFETY FENCE ON PAVEMENT
3.38	TP	— LOD/TP —	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
3.02	CE		MODIFIED 40' CONSTRUCTION ENTRANCE WITH WASH RACK
3.07	IP		INLET PROTECTION
3.05	SF	— X —	SILT FENCE

EROSION AND SEDIMENT CONTROL NOTES:

1. WHERE SILT FENCE IS SHOWN ADJACENT TO TREE PROTECTION FENCE, ADHERE SILT FABRIC DIRECTLY TO TREE PROTECTION FENCE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-CONTRUCTING ANY ASPHALT, CURB AND GUTTER OR SIDEWALK AS NECESSARY TO BRING THE AREA BACK TO GOOD CONDITION.
3. CONTRACTOR SHALL REFER TO SHEET LF-01 FOR ROOT MATTING PLACEMENT PRIOR TO INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES. CONTRACTOR SHALL USE STONE AT CURB TO CREATE A MOUNTABLE CURB TO PRESERVE ASPHALT, CURB AND SIDEWALK TO THE EXTENT PRACTICABLE.
4. REFER TO SEQUENCE OF CONSTRUCTION, SHEET C-07.
5. FOR TREE PROTECTION FENCE INSTALLED ON PAVEMENT, ANCHOR POSTS INTO CONCRETE BLOCKS, NOT ANCHORED INTO PAVEMENT, SO AS TO NOT DISTURB EXISTING PAVEMENT.
6. AREA TO BE USED FOR STAGING AREA AND MATERIAL STORAGE.
7. THE AREA BEYOND THE CONSTRUCTION ENTRANCE WHERE BIORETENTION WILL BE INSTALLED SHALL BE TEMPORARILY PROTECTED BY MULCH.

0 10' 20' 40'
SCALE: 1"=20'

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
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Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

EROSION AND SEDIMENT CONTROL PLAN - PHASE I

100% Construction Drawings

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Design Manager	

Revisions	Date

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Plotted: 2020-03-12

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Seal

COMMONWEALTH OF VIRGINIA
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER
Jefferson K Sinclair Jr
Digitally signed by Jefferson K Sinclair Jr
Date: 2020.03.13 09:28:24-04'00'

Sheet
C-05

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-05-CE01-150396021.dwg

EROSION & SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION
			PROPERTY LINE
		RPA	RESOURCE PROTECTION AREA
		LOD	LIMITS OF DISTURBANCE
		LOW	LIMITS OF WORK
3.38	TP	LOD/TP	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
3.02	CE		MODIFIED 40' CONSTRUCTION ENTRANCE WITH WASH RACK
3.07	IP		INLET PROTECTION
3.05	SF	X	SILT FENCE
		STM #	STORM SEWER STRUCTURE

EROSION AND SEDIMENT CONTROL NOTES:

1. WHERE SILT FENCE IS SHOWN ADJACENT TO TREE PROTECTION FENCE, ADHERE SILT FABRIC DIRECTLY TO TREE PROTECTION FENCE.
2. CONTRACTOR SHALL PROVIDE STONE AT EXISTING CURB TO CREATE MOUNTABLE ACCESS FOR CONSTRUCTION ENTRANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-CONTRUCTING ANY ASPHALT, CURB AND GUTTER OR SIDEWALK AS NECESSARY TO BRING THE AREA BACK TO GOOD CONDITION.
3. CONTRACTOR SHALL REFER TO SHEET LF-01 FOR ROOT MATTING PLACEMENT PRIOR TO INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES.
4. REFER TO SEQUENCE OF CONSTRUCTION, SHEET C-07.
5. FOR TREE PROTECTION FENCE INSTALLED ON PAVEMENT, ANCHOR POSTS INTO CONCRETE BLOCKS (NOT ANCHORED INTO GROUND), SO AS NOT TO DISTURB EXISTING PAVEMENT.
6. SEE SHEET C-14 FOR ADDITIONAL INFORMATION.

SCALE: 1"=20'

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

EROSION AND SEDIMENT CONTROL PLAN - PHASE II

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

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Drawn: KRF
Checked: CMB

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Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
LANDSCAPE ARCHITECT

Sheet C-06

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-06-CE01-150396021.dwg

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
TYPE OF DEVELOPMENT: RENOVATION OF A PLAYGROUND FACILITY, PORTIONS OF PARK PATHS, AND REFORESTATION. THERE WILL BE AN INCREASE IN IMPERVIOUS AREA, THEREFORE AN URBAN BIORERETENTION FACILITY AND NEW FORESTED AREA WILL PROVIDE STORMWATER QUALITY MANAGEMENT IN ACCORDANCE WITH THE JANUARY 2013 DRAFT VERSION 2.0 SPECIFICATION 9 OF THE VIRGINIA DEQ DESIGN SPECIFICATIONS AND SUPPLEMENTED BY THE JULY 2019 ARLINGTON COUNTY STORMWATER MANUAL.

TOTAL AREA OF DISTRUBANCE: 0.3523 ACRES

EXISTING SITE CONDITIONS
EXISTING SLOPES: 2-35%

OVERALL, IN BOTH THE PRE-DEVELOPED AND POST-DEVELOPED CONDITIONS, THE SITE DRAINS TO THE SOUTHEAST.

ADJACENT PROPERTIES
NORTH: NAVAL SUPPORT FACILITY ARLINGTON
EAST: SOUTH WASHINGTON BOULEVARD
SOUTH: 9TH STREET SOUTH
WEST: NAVAL SUPPORT FACILITY ARLINGTON

OFF-SITE AREAS
THERE IS NO PROPOSED CONSTRUCTION ON ADJACENT PROPERTIES.

SOILS
12 URBAN LAND-UDORTHENTS COMPLEX, 2% TO 15% SLOPES

THE ENTIRE SITE CONSISTS OF URBAN LAND-UDORTHENS COMPLEX SOIL (12) AND IS A HYDROLOGIC GROUP D SOIL.

CRITICAL EROSION AREAS
THERE IS A RESOURCE PROTECTION AREA WITHIN THE LIMITS OF DISTURBANCE. REFER TO THE WQIA NARRATIVE ON SHEET C-23 FOR A DETAILED DESCRIPTION OF PROPOSED EROSION AND SEDIMENT CONTROL MEASURES AND OTHER MITIGATION STRATEGIES.

EROSION AND SEDIMENT CONTROL MEASURES
PERMANENT OR TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MUST BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. ANY STOCKPILES MUST BE MULCHED AND SEEDED IMMEDIATELY AS DIRECTED BY THE COUNTY INSPECTOR. THERE ARE NO CRITICAL AREAS WITHIN THE LIMITS OF DISTURBANCE. SEDIMENT CONTROL WILL BE EXECUTED THROUGH THE INSTALLATION OF SILT FENCE, TREE PROTECTION AND INLET PROTECTION WITHIN THE LIMITS OF DISTURBANCE.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED.

STRUCTURAL PRACTICES

SAFETY FENCE - 3.01
TREE PROTECTION FENCE TO BE USED AS CONSTRUCTION SAFETY FENCE. SAFETY FENCE SHALL FULLY ECLOSE AREAS OF CONSTRUCTION AND ACCESS TO THE BASKETBALL COURTS SHALL REMAIN OPEN AT ALL TIMES. FOR TREE PROTECTION FENCE INSTALLED ON PAVEMENT, ANCHOR FENCE POSTS INTO CONCRETE BLOCKS (NOT ANCHORED INTO GROUND).

CONSTRUCTION ENTRANCE - 3.02
INSTALL A TEMPORARY CONSTRUCTION ENTRACE WITH A WASH RACK IN THE EXISTING PARKING LOT AS SHOWN. THE EXISTING PARKING LOT WILL BE USED AS A TEMPORARY CONSTRUCTION ENTRANCE/STAGING AREA AND WILL REMAIN IN PLACE THROUGHOUT CONSTRUCTION. WASH ALL CONSTRUCTION VEHICLES LEAVING THE SITE AS NECESSARY TO ENSURE THAT SEDIMENT WILL NOT LEAVE THE SITE. DIRECT WASH WATER TO NEAREST SEDIMENT CONTROL DEVICE.

SILT FENCE - 3.05
INSTALL SILT FENCE BARRIER DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW. WHERE SILT FENCE IS SHOWN ADJACENT TO TREE PROTECTION FENCE, ADHERE SILT FABRIC DIRECTLY TO TREE PROTECTION FENCE.

INLET PROTECTION - 3.07
INSTALL SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND STORM DRAIN INLETS.

TREE PRESERVAION & PROTECTION - 3.38
INSTALL TREE PROTECTION FENCING TO PROTECT TREES FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITY. TREE PROTECTION FENCE TO BE USED AS CONSTRUCTION SAFETY FENCE. FOR TREE PROTECTION FENCE INSTALLED ON PAVEMENT, ANCHOR POSTS INTO CONCRETE BLOCKS (NOT INTO PAVEMENT), SO AS TO NOT DISTURB EXISTING PAVEMENT.

VEGETATIVE MEASURES

1. TOPSOILING (STOCKPILE)
TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS ARE TO BE STABILIZED WITH TEMPORARY VEGETATION WITHIN 14 DAYS.

2. TEMPORARY SEEDING
DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN A PERIOD OF 14 DAYS WILL HAVE TEMPORARY VEGETATION ESTABLISHED. TEMPORARY VEGETATION WILL REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AND OFF-SITE AREAS. TEMPORARY SEEDING PLANT MATERIAL SHALL BE RAPIDLY GROWING PLANTS SELECTED FROM VESCH STANDARD AND SPEC. 3.31 AND TABLE 3.31-A&B. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION ARE TO BE RESEEDED AS SOON AS POSSIBLE. FERTILIZER SHALL BE APPLIED AT A RATE OF 600 LBS. PER ACRE. FERTILIZER SHALL BE INCORPORATED INTO TOP 2-4 INCHES OF SOIL. SEED SHALL BE BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5 INCHES DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO SPEC 3.35.

3. PERMANENT SEEDING
IF SEEDING IS BEING USED, ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISHED GRADING. SEEDING SHALL BE DONE ACCORDING TO VESCH SPEC. 3.32-D. EROSION CONTROL BLANKETS ARE TO BE INSTALLED OVER FILL SLOPES, WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED. THIS WILL PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND ALLOW THE SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED PRIOR TO MULCHING. SOIL TESTS SHOULD BE USED TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. THE PLANTING SUIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND BE FREE FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH STD. 3.30.

5. SODDING
IF SOD IS BEING USED, AREAS THAT ARE TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE PLANS. SOIL TESTS SHOULD BE USED 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 AND ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID IN EXCESSIVELY WET OR DRY WEATHER AND BE DELIVERED AND INSTALLED WITHIN 36 HOURS. SOD SHOULD NOT BE LAID ON FROZEN SOIL SURFACE AND SHALL BE INSTALLED PER PLATE 3.33-1 OF THE VESCH.

6. DUST CONTROL
DUST SHALL BE MINIMIZED AS MUCH AS PRACTICABLE.

SEDIMENT CONTROL - SEQUENCE OF CONSTRUCTION NARRATIVE

SEQUENCE OF CONSTRUCTION - PHASE I
A. CONTRACTOR TO HAVE CONSTRUCTION WORKER PARKING, HAUL ROUTE, AND EXCAVATION PROTECTION PLAN APPROVED BY ARLINGTON COUNTY.
B. CONTRACTOR TO SUBMIT SEDIMENT DISPOSAL PLAN TO ARLINGTON COUNTY INSPECTOR FOR APPROVAL.
C. INSTALL INLET PROTECTION (IP), SILT FENCE (SF), TREE PROTECTION FENCE (TP), AND CONSTRUCTION ENTRANCE (CE). REFER TO TREE PRESERVATION PLAN AND EROSION AND SEDIMENT CONTROL PLANS PHASE I FOR TREE PROTECTION LOCATIONS, NOTES AND DETAILS. CONTRACTOR MAY USE EXISTING PARKING LOT AS A STAGING AREA DURING CONSTRUCTION. SAFETY FENCE SHALL FULLY ENCLOSE ALL AREAS OF CONSTRUCTION. EXISTING PLAYGROUND SHALL REMAIN OPEN AND ACCESSIBLE UNTIL NEW PLAYGROUND IS COMPLETED.
D. INSTALL PROPOSED UTILITIES INCLUDING STORM DRAINS AND UNDERDRAINS FOR URBAN BIORETENTION AND ENGINEERED WOOD FIBER AREAS. IMMEDIATELY PROVIDE INLET PROTECTION UPON INSTALLATION.
E. INSTALL SITE IMPROVEMENTS FOR NEW PLAYGROUND INCLUDING CONCRETE WALKS, CURB, PLAYGROUND AND BIORETENTION WALLS. POUR-IN-PLACE PLAY SURFACE, ENGINEERED WOOD FIBER PLAY SURFACE, PLAYGROUND EQUIPMENT AND SITE FURNISHINGS. PERFORM FINAL GRADING AND PAVING.
F. RESTORE AND STABILIZE DISTURBED AREA BY NEW PAYGROUND INSTALLATION. ONCE ALL UPSTREAM AREAS HAVE BEEN STABILIZED, INSTALL THE URBAN BIORETENTION MEDIA, STONE, MULCH, VEGETATION, AND RIVER GRAVEL SPLASH PADS .
G. REMOVE TREE PROTECTION FENCING, SILT FENCE, CONSTRUCTION ENTRANCE AND INLET PROTECTION IN THE BIORETENTION WITH THE APPROVAL OF SITE INSPECTOR.

SEQUENCE OF CONSTRUCTION - PHASE 2
A. INSTALL SILT FENCE (SF), CONSTRUCTION ENTRANCE (CE), AND TREE PROTECTION FENCE (TP) AROUND EXISTING PLAYGROUND, UNLESS OTHERWISE DIRECTED BY THE INSPECTOR. REFER TO TREE PRESERVATION PLAN AND EROSION AND SEDIMENT CONTROL PLANS PHASE II FOR TREE PROTECTION LOCATIONS, NOTES AND DETAILS.
B. DEMOLISH AND REMOVE COMPACTED PLAYGROUND MULCH, SAND BOX, TIMBER BORDER, CONCRETE WHERE NO PROPOSED CONCRETE IS TO BE INSTALLED, AND ASPHALT PAVEMENT AS INDICATED ON THE DEMOLITION PLAN. REMOVE EXISTING PLAYGROUND EQUIPMENT AND PLAYGROUND FOOTINGS AND DISPOSE OF PROPERLY.
D. DEMOLISH AND REMOVE EXISTING FENCE AND FENCE POST FOOTINGS. PERFORM EARTHWORK, FILLING AND ROUGH GRADING OPERATIONS.
E. RESTORE AND STABILIZE DISTURBED AREAS AND PERFORM FINAL GRADING. REMOVE EROSION AND SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF SITE INSPECTOR.
F. INSTALL NEW TREES AND PLANTINGS FOR REFORESTED AREA. REFER TO PLANTING PLAN FOR REFORESTATION TIMING AND DETAILS.

MAINTENANCE
A. ALL CONTROLS ARE TO BE INSPECTED ON A DAILY BASIS BY THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE, ANY DAMAGED CONTROLS ARE TO BE REPAIRED BY THE END OF THE WORKING DAY.
B. ALL CONSTRUCTLON VEHICLES LEAVING THE SITE SHALL BE WASHED AS NECESSARY TO INSURE THAT SEDIMENT WILL NOT BE REMOVED FROM THE SITE. WASH WATER TO BE TRUCKED INTO THE SITE OR OBTAINED FROM A METERED WATER CONNECTION. WASH WATER TO BE DIRECTED TO A SEDIMENT TRAPPING DEVICE.
C. TO PREVENT CLOGGING, CURB INLETS ARE TO BE PROTECTED FROM DEBRIS AND CONSTRUCTION MATERIAL. CONTRACTOR TO COORDINATE WITH SITE INSPECTOR TO DETERMINE METHODOLOGY OF PROTECTION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-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 ADMINISTRATIVE CODE 9VAC25-840-40 EROSION AND SEDIMENT CONTROL REGULATIONS, MINIMUM STANDARDS.
ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSRTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN 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 CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
ES-6: THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
ES-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.
ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION 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.

PRE-STORM EROSION AND SEDIMENT CONTROL CHECKLIST
PER EROSION AND SEDIMENT CONTROL GENERAL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN ESC PLAN. ESC PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

PERIMETER CONTROLS
□ SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WORN. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (STD & SPEC 3.09).
□ WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
□ SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHOULD BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
□ HAY BALES OR A STONE BERM SHOULD BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.

EXPOSED SLOPES AND SOIL
□ EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
□ CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT / EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
□ EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) STD & SPEC 3.36. BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES
□ SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.

STOCKPILES
□ STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED / ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHOULD BE PLACED ALONG THE PERIMETER OF THE STOCK PILE (DOWNHILL SIDE).

INLET PROTECTION
□ INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW / BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.
IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

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

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED

APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Iolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (Iolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

SEED[1]

LAND USE	SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] Perennial Ryegrass Kentucky Bluegrass[1] Pearl's Premium Deep-Rooted Mix[4]	95-100% 0-5% 0-5% TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue[1]	TOTAL: 200-250 lbs.
General Slope (3:1 or less)	Tall Fescue[1] Red Top Grass Seasonal Nurse Crop[2]	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Crownvetch[3]	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html

2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February 16th - April	Annual Rye
May 1st - August 15th	Foxtail Millet
August 16th - October	Annual Rye
November - February 15th	Winter Rye

3- Substitue Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled Sericea, all other periods, use unhulled Sericea). If Flat pea is used in lieu of Crown vetch, increase rate to 30lbs./acre. All legume seed must be properly inoculated. Weeping lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in mixes.

SPECIES	APPLICATION PER ACRE
4 - Harpoon Hard Fescue	19.65%
Eugene Creeping Red Fescue	14.75%
Carmen Chewings Fescue	14.70%
Dakota Tall Fescue	9.83%
Frontier Perennial Ryegrass	9.82%
Deepblue Kentucky Bluegrass	9.80%
Sheep Fescue	9.80%
Boreal Creeping Red Fescue	9.80%
Inert Matter	1.77%
Other Crop Seed	0.05%
Weed Seed	0.03%

FERTILIZER & LIME

- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES: Per Acre	RATES: Per 1000 sq. ft.	NOTES:
Straw or Hay	1½ - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA#20004

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

EROSION AND SEDIMENT CONTROL NOTES

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-07-C-08-CE05-150396021.dwg
Plotted: 2019-12-17

Scale: N/A
Date: December 17, 2019

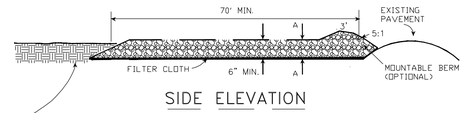
Seal

COMMONWEALTH OF VIRGINIA
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER
Digitally signed by Jefferson K. Sinclair Jr
Date: 2019.12.17 15:51:31 -05'00'

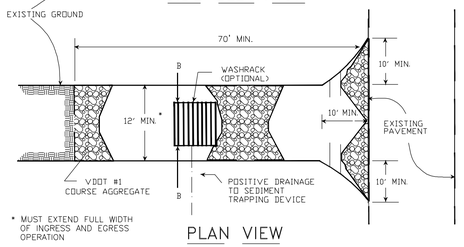
Sheet C-07

No. 11 of 41

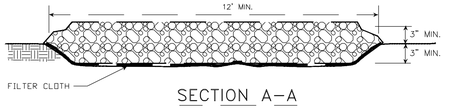
STONE CONSTRUCTION ENTRANCE



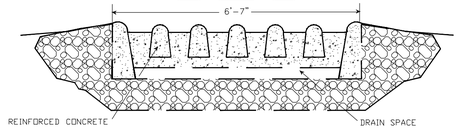
SIDE ELEVATION



PLAN VIEW



SECTION A–A

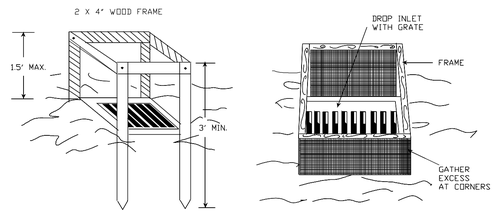


SECTION B–B

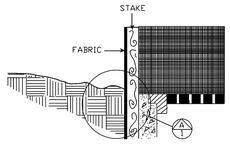
SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC

Plate 3.02-1

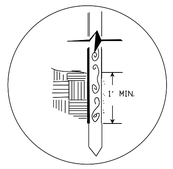
SILT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS



ELEVATION OF STAKE AND FABRIC ORIENTATION



DETAIL A

SPECIFIC APPLICATION

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

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

PLATE 3.07-1

5-7-2020
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:

801 S. Scott Street
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 703-228-3586 *telephone number* with questions about this plan or my execution of the duties of Responsible Land Disturber.

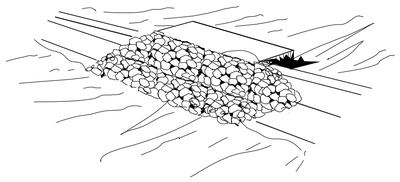
Sincerely,

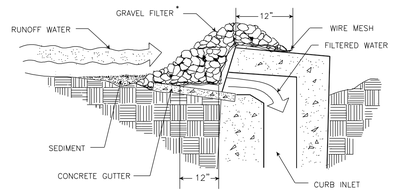
signed

Juan Du, RLA
name printed

LA 2120
professional registration (type and number)

GRAVEL CURB INLET SEDIMENT FILTER





SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

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

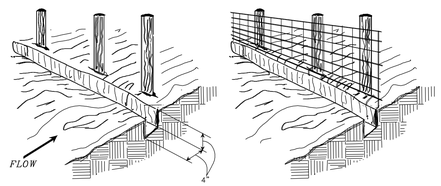
SOURCE: VA. DSWC

PLATE 3.07-6

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

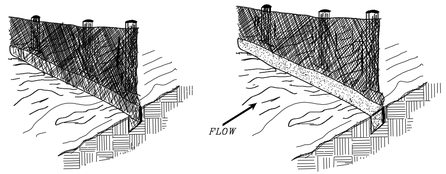
1. SET POSTS AND EXCAVATE A 4"x4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.

2. STAPLE WIRE FENCING TO THE POSTS.

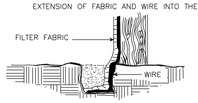


3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.

4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



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

PLATE 3.05-1

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations
By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

EROSION AND SEDIMENT CONTROL DETAILS

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-07-C-08-CE05-150396021.dwg
Plotted: 2019-12-17

Scale: N/A
Date: December 16, 2019

Seal

COMMONWEALTH OF VIRGINIA
Jeffersen K. Sinclair Jr
Digitally signed by Jeffersen K Sinclair Jr
Date: 2019.12.17 15:53:24-05'00'
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

Sheet C-08

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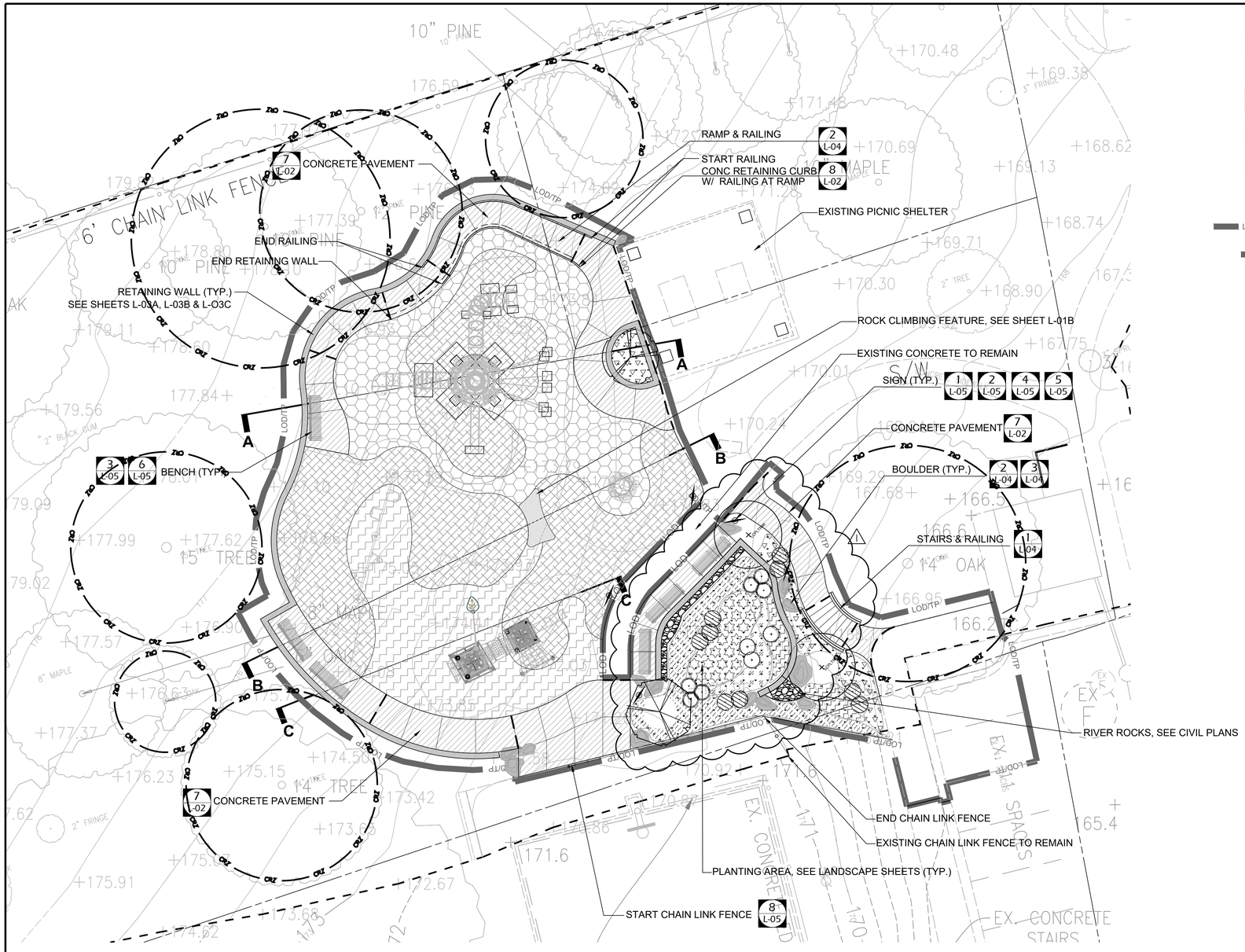

LEGEND

DETAIL # / SHEET # — #/##

- POURED-PLAY SAFETY SURFACE — 4 L-02, 5 L-02, 6 L-02
- ENGINEERED WOOD FIBER PLAY SURFACE — 1 L-02, 2 L-02
- PLANTING
- PROPERTY LINE
- LOD/TP — LIMITS OF DISTURBANCE / TREE PROTECTION FENCE — 2 LF-04
- LOD — LIMITS OF WORK

NOTES:

1. FINAL LOCATION OF ALL SITE FURNISHINGS SHALL BE APPROVED BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
2. PROVIDE EXPANSION JOINTS WHERE PROPOSED CONSTRUCTION MEETS EXISTING.
3. SEE SHEET L-01 FOR PLAY EQUIPMENT INFORMATION.
4. SEE SHEETS LF-01 THROUGH LF-04FOR TREE PRESERVATION INFORMATION.
5. SEE SHEETS L-06 & L-07 FOR LANDSCAPE CONSERVATION INFORMATION.
6. SEE SHEET C-09B FOR SECTIONS AA, BB & CC.
7. SEE SHEET L-02 SECTION DD.

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE & MATERIALS PLAN

Approval — Date
DESIGN SUPERVISOR — DS_DATE
Design Supervisor

Revisions — Date
1 UNWANTED TEXT DELETED — 3/4/21

Designed:
Drawn:
Checked:

Filename: C-09A_SITE-MATERIAL.DWG
Plotted: Mar. 4, 21
Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet
C-09AR
No. 13 of 41

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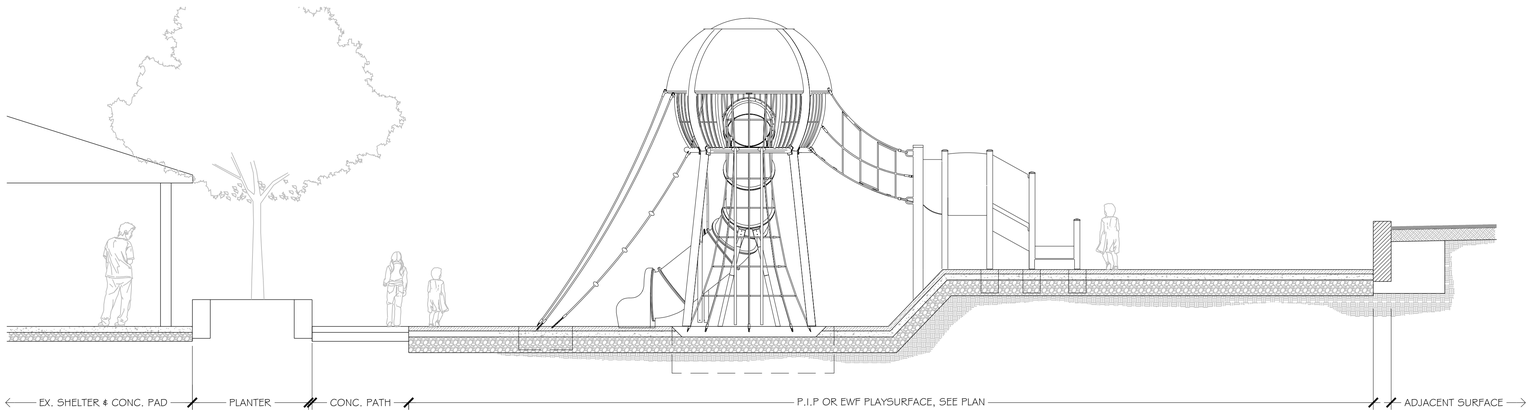
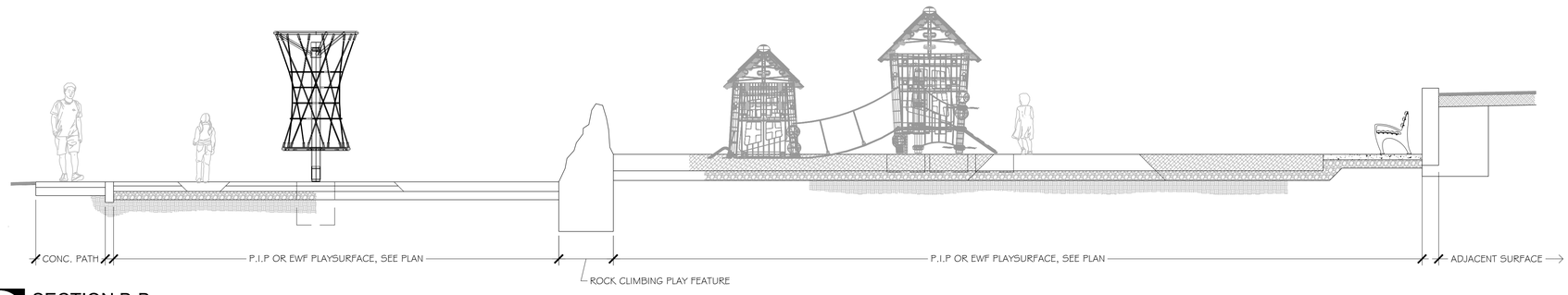


1 C-09A SECTION A-A

SCALE: 1/4" = 1'-0"



2 C-09A SECTION B-B

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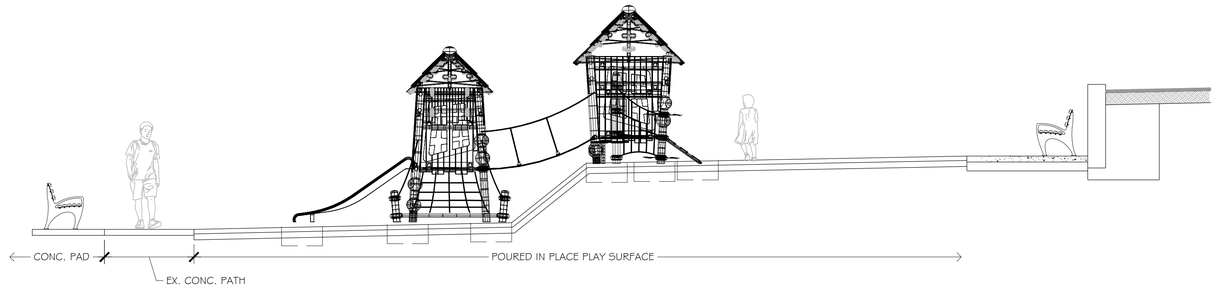


3 C-09A SECTION C-C

SCALE: 1/4" = 1'-0"

NOTES:
1. EQUIPMENT FOUNDATION SHOWN IN SECTIONS IS DIAGRAMATIC.
2. FOUNDATION OF ALL PLAY EQUIPMENT SHALL BE PROVIDED BY CONTRACTOR PER MANUFACTURES RECOMMENDATIONS.

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

LANDSCAPE DESIGN SECTIONS

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: C-09B_LA DESIGN SECTIONS.DWG
Plotted: Feb. 11, 21

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

C-09B

No. 14 of 41

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-09B_LA DESIGN SECTIONS.dwg

LAYOUT LEGEND

P.C. POINT OF CURVATURE

POINT OF BEGINNING (NORTHWEST CORNER OF EXISTING PICNIC SHELTER CONCRETE PAD)

BOULDER - TO BE FIELD LOCATED BY LANDSCAPE ARCHITECT

POINT SCHEDULE

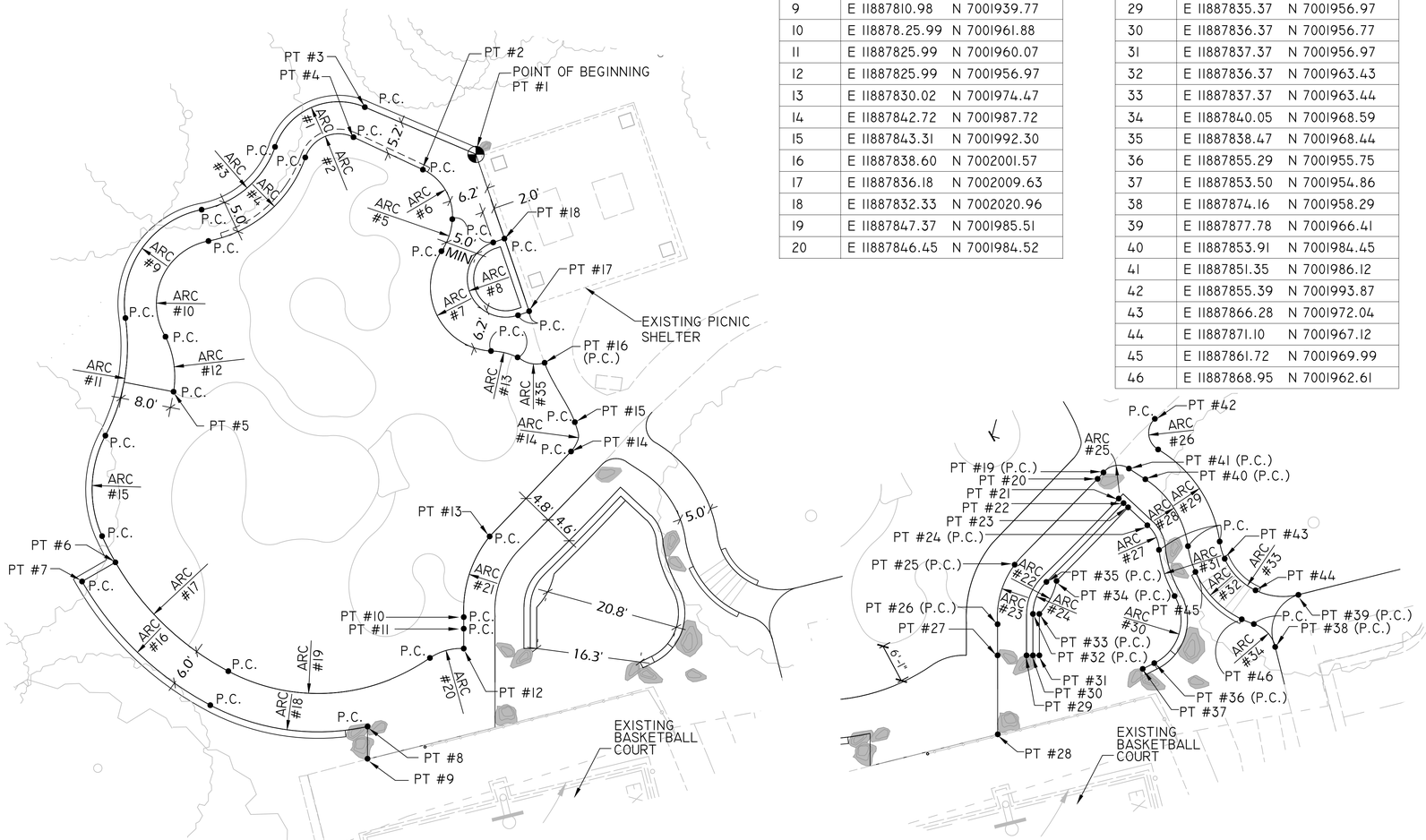
POINT#	COORDINATES
1	E 11887827.89 N 7002034.09
2	E 11887819.60 N 7002031.72
3	E 11887810.55 N 7002041.47
4	E 11887808.79 N 7002036.78
5	E 11887780.71 N 7001997.06
6	E 11887771.64 N 7001970.43
7	E 11887766.44 N 7001967.44
8	E 11887810.98 N 7001944.79
9	E 11887810.98 N 7001939.77
10	E 11887825.99 N 7001961.88
11	E 11887825.99 N 7001960.07
12	E 11887825.99 N 7001956.97
13	E 11887830.02 N 7001974.47
14	E 11887842.72 N 7001987.72
15	E 11887843.31 N 7001992.30
16	E 11887838.60 N 7002001.57
17	E 11887836.18 N 7002009.63
18	E 11887832.33 N 7002020.96
19	E 11887847.37 N 7001985.51
20	E 11887846.45 N 7001984.52

POINT SCHEDULE

POINT#	COORDINATES
21	E 11887849.76 N 7001981.43
22	E 11887850.50 N 7001980.74
23	E 11887851.22 N 7001980.07
24	E 11887854.22 N 7001977.27
25	E 11887833.52 N 7001971.12
26	E 11887830.86 N 7001961.83
27	E 11887830.86 N 7001956.97
28	E 11887830.89 N 7001944.65
29	E 11887835.37 N 7001956.97
30	E 11887836.37 N 7001956.77
31	E 11887837.37 N 7001956.97
32	E 11887836.37 N 7001963.43
33	E 11887837.37 N 7001963.44
34	E 11887840.05 N 7001968.59
35	E 11887838.47 N 7001968.44
36	E 11887855.29 N 7001955.75
37	E 11887853.50 N 7001954.86
38	E 11887874.16 N 7001958.29
39	E 11887877.78 N 7001966.41
40	E 11887853.91 N 7001984.45
41	E 11887851.35 N 7001986.12
42	E 11887855.39 N 7001993.87
43	E 11887866.28 N 7001972.04
44	E 11887871.10 N 7001967.12
45	E 11887861.72 N 7001969.99
46	E 11887868.95 N 7001962.61

CURVE SCHEDULE

ARC#	RADIUS (FEET)	ARC LENGTH (FEET)	CENTER POINT COORDINATES
1	10.50	17.17	E 11887806.45 N 7002031.80
2	5.50	9.20	E 11887806.45 N 7002031.80
3	15.00	15.67	E 11887782.38 N 7002040.21
4	20.00	20.89	E 11887782.38 N 7002040.21
5	10.00	5.34	E 11887814.22 N 7002024.59
6	8.00	9.55	E 11887816.21 N 7002024.47
7	10.00	21.10	E 11887830.23 N 7002013.39
8	5.13	21.84	E 11887831.70 N 7002014.46
9	15.00	22.92	E 11887788.04 N 7002010.76
10	10.00	27.38	E 11887788.04 N 7002010.76
11	30.00	18.93	E 11887743.53 N 7002004.16
12	14.34	8.80	E 11887766.56 N 7001999.36
13	13.66	11.72	E 11887829.48 N 7001989.77
14	3.60	5.02	E 11887840.28 N 7001990.36
15	18.00	16.24	E 11887786.01 N 7001981.82
16	50.08	28.18	E 11887809.84 N 7001992.41
17	44.08	29.39	E 11887809.84 N 7001992.41
18	36.00	25.26	E 11887803.27 N 7001979.96
19	30.00	26.19	E 11887803.27 N 7001979.96
20	8.74	5.55	E 11887824.60 N 7001950.14
21	18.38	13.53	E 11887844.36 N 7001962.94
22	10.53	5.88	E 11887829.73 N 7001970.69
23	13.70	11.23	E 11887844.51 N 7001962.94
24	7.00	5.57	E 11887843.36 N 7001963.44
25	3.00	4.20	E 11887849.71 N 7001983.61
26	3.00	5.57	E 11887857.43 N 7001991.68
27	2.00	4.00	E 11887850.74 N 7001993.27
28	15.00	12.75	E 11887845.70 N 7001971.89
29	20.00	17.87	E 11887845.70 N 7001971.89
30	7.50	12.27	E 11887851.97 N 7001962.47
31	19.15	7.65	E 11887875.04 N 7001975.81
32	15.00	16.78	E 11887875.40 N 7001976.15
33	10.00	16.74	E 11887875.40 N 7001976.15
34	5.00	5.10	E 11887869.31 N 7001957.10
35	4.23	4.07	E 11887837.29 N 7002005.59



LAYOUT NOTES

1. NEW WORK SHALL MEET AND MATCH EXISTING ALIGNMENT OF FEATURES AND FINISHED GRADES AT EXISTING PAVEMENT OR OTHER FACILITIES TO REMAIN. THE CONTRACTOR SHALL MAKE ANY NECESSARY MINOR ADJUSTMENTS IN THE PROPOSED WORK TO MEET THE INTENT OF THE PLANS AND TO PROVIDE SMOOTH TRANSITIONS BETWEEN EXISTING CONDITIONS AND NEW WORK.
2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, SPOT ELEVATIONS AND EXISTING CONDITIONS IN THE FIELD AND SHALL BE RESPONSIBLE FOR PERFORMING THE WORK IN ACCORDANCE WITH THE SAME. CONTRACTOR SHALL NOTIFY PROJECT OFFICER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH WORK.
3. THE CONTRACTOR SHALL STAKE THE ALIGNMENT OF PAVEMENT, EDGING, WALKS, AND SITE FEATURES IN THE FIELD FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO INSTALLATION. NO CHANGES SHALL BE MADE TO THE DESIGN OR LAYOUT OF THE PROJECT WITHOUT WRITTEN APPROVAL BY THE PROJECT OFFICER PRIOR TO INSTALLATION.
4. LAYOUT OF PARK BENCHES, SIGNS, AND BOULDERS SHALL BE DETERMINED AND VERIFIED BY PROJECT OFFICER IN THE FIELD.

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

LAYOUT PLAN

100% CONSTRUCTION DRAWING

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: C-10A-10B_LAYOUT.DWG
Plotted: Jan. 20, 21

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

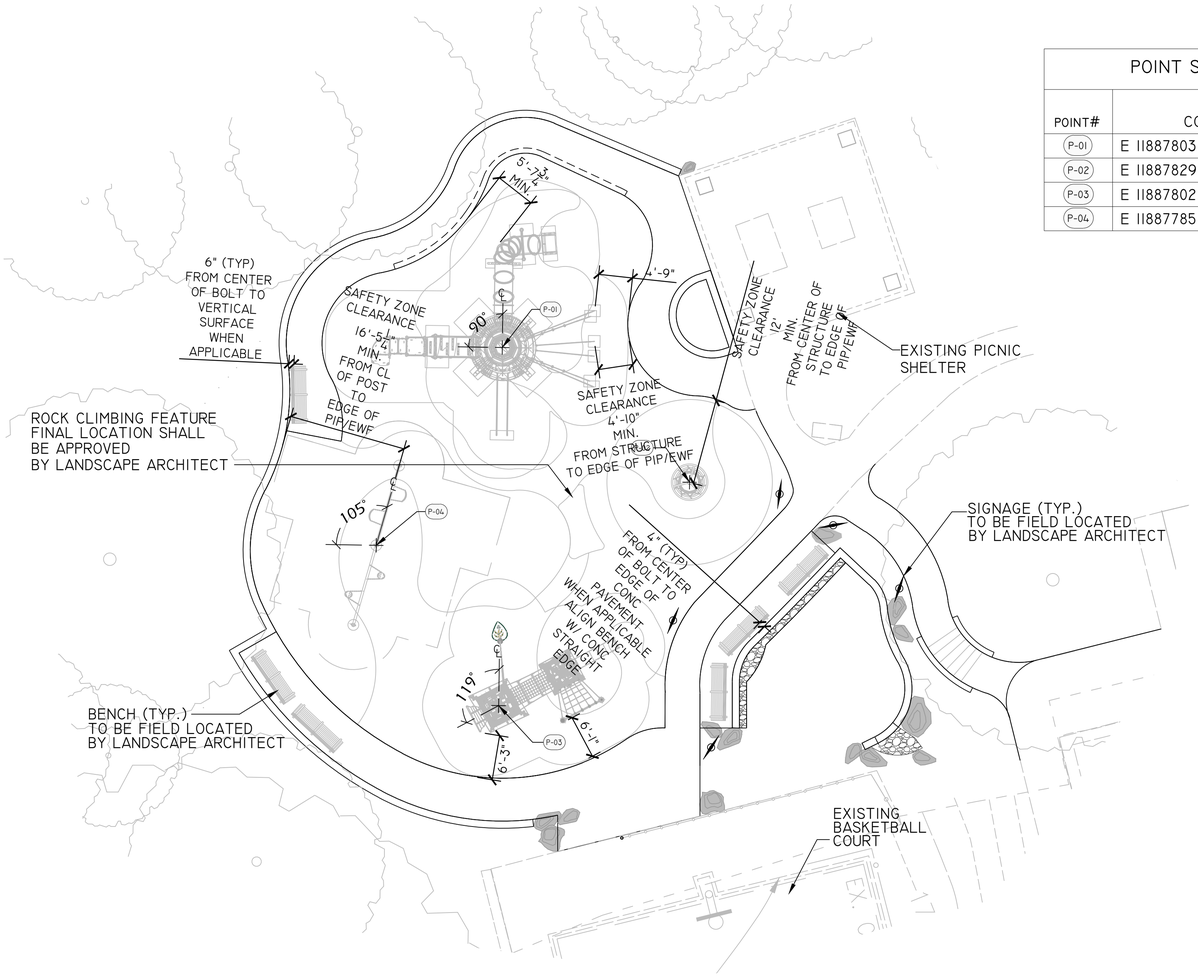
Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

C-10A

No. 15 of 41



POINT SCHEDULE	
POINT#	COORDINATES
P-01	E 11887803.23 N 7002010.15
P-02	E 11887829.41 N 7001991.32
P-03	E 11887802.72 N 7001960.10
P-04	E 11887785.62 N 7001982.51

SYMBOL		PLAY EQUIPMENT DESCRIPTION	MODEL NO.	MANUFACTURER	REMARKS	COLOR
3 L-01A	P-01	JELLYFISH TOWER	COROCORDI9-0098-2CI	KOMPAN	INSTALL PER MANUFACTURER`S INSTRUCTIONS AND RECOMMENDATIONS	TBD FROM MANUFACTURER`S FULL RANGE
6 L-01A	P-02	NET TWISTER	COR203001-1101	KOMPAN	INSTALL PER MANUFACTURER`S INSTRUCTIONS AND RECOMMENDATIONS	TBD FROM MANUFACTURER`S FULL RANGE
5 L-01A	P-03	WOODVILLE TOWERS	USP0360800	PLAYSPEC	INSTALL PER MANUFACTURER`S INSTRUCTIONS AND RECOMMENDATIONS	TBD FROM MANUFACTURER`S FULL RANGE
1 L-01A / 1A L-01A	P-04	SWINGS	--	PLAYSPEC	INSTALL PER MANUFACTURER`S INSTRUCTIONS AND RECOMMENDATIONS	TBD FROM MANUFACTURER`S FULL RANGE

LAYOUT NOTES

1. NEW WORK SHALL MEET AND MATCH EXISTING ALIGNMENT OF FEATURES AND FINISHED GRADES AT EXISTING PAVEMENT OR OTHER FACILITIES TO REMAIN. THE CONTRACTOR SHALL MAKE ANY NECESSARY MINOR ADJUSTMENTS IN THE PROPOSED WORK TO MEET THE INTENT OF THE PLANS AND TO PROVIDE SMOOTH TRANSITIONS BETWEEN EXISTING CONDITIONS AND NEW WORK.
2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, SPOT ELEVATIONS AND EXISTING CONDITIONS IN THE FIELD AND SHALL BE RESPONSIBLE FOR PERFORMING THE WORK IN ACCORDANCE WITH THE SAME. CONTRACTOR SHALL NOTIFY PROJECT OFFICER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH WORK.
3. THE CONTRACTOR SHALL STAKE THE ALIGNMENT OF PAVEMENT, EDGING, WALKS, AND SITE FEATURES IN THE FIELD FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO INSTALLATION. NO CHANGES SHALL BE MADE TO THE DESIGN OR LAYOUT OF THE PROJECT WITHOUT WRITTEN APPROVAL BY THE PROJECT OFFICER PRIOR TO INSTALLATION.
4. LAYOUT OF PARK BENCHES, SIGNS, AND BOULDERS SHALL BE DETERMINED AND VERIFIED BY PROJECT OFFICER IN THE FIELD.

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

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Park Development Division
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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

PLAY EQUIPMENT LAYOUT PLAN

100% CONSTRUCTION DRAWING

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: C-10A-10B_LAYOUT.DWG
Plotted: Feb. 11, 21

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

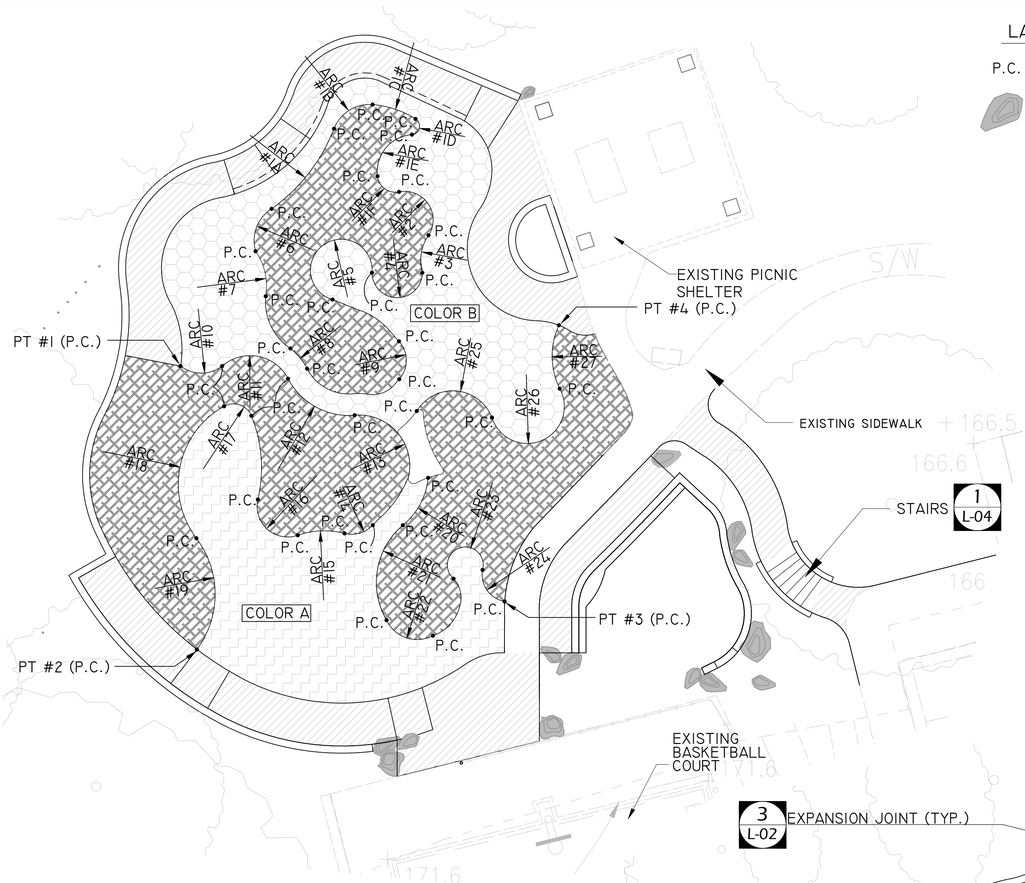
Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

C-10B

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-10A-10B_LAYOUT.DWG



LAYOUT LEGEND

P.C. POINT OF CURVATURE

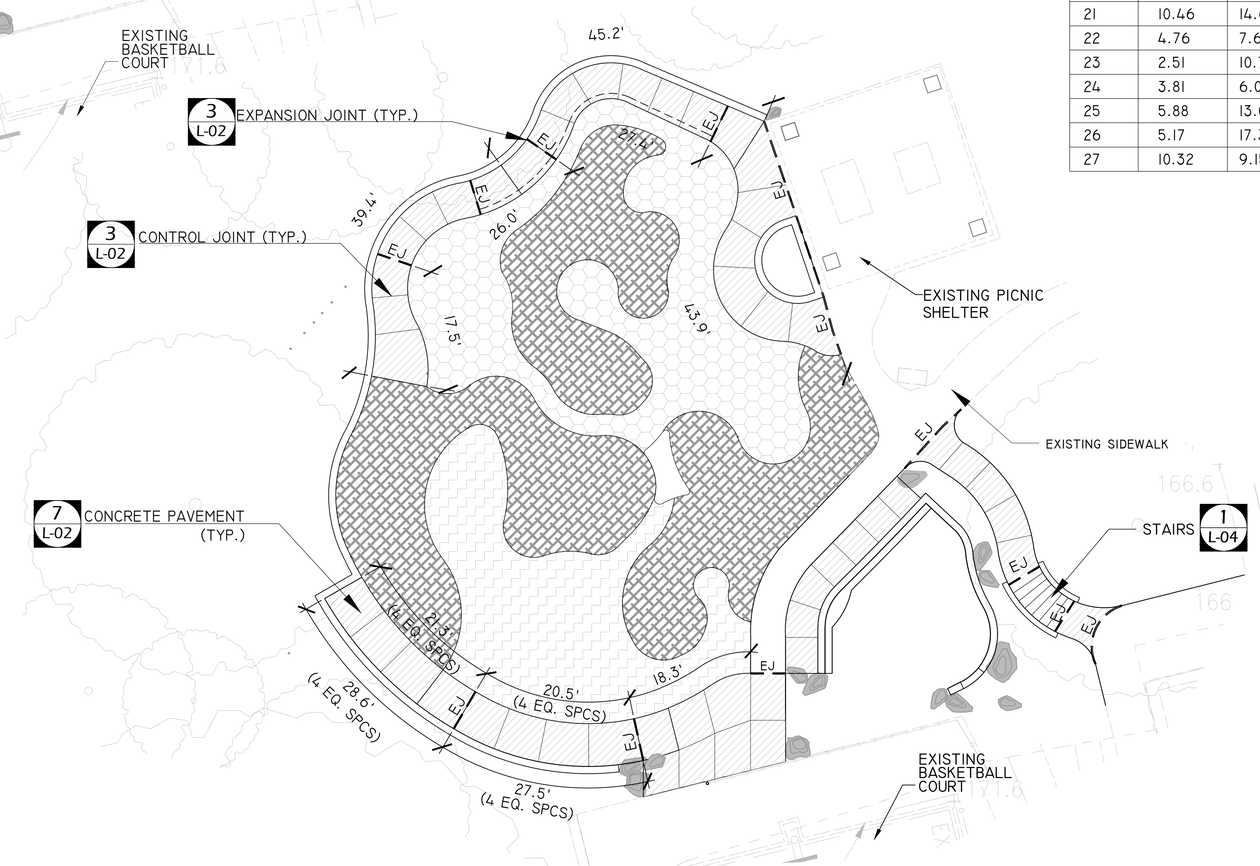
BOULDER - TO BE FIELD LOCATED BY LANDSCAPE ARCHITECT

POINT SCHEDULE		
POINT#	COORDINATES	
1	E 11887780.71	N 7001997.06
2	E 11887782.87	N 7001957.45
3	E 11887825.87	N 7001964.16
4	E 11887833.46	N 7002002.77

NOTES:

1. ALL FORM WORK SHALL BE APPROVED BY PROJECT OFFICER BEFORE CONCRETE IS POURED.
2. PRELIMINARY LAYOUT LOCATIONS (BEFORE CONCRETE IS TO BE POURED) OF SAFETY SURFACING SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL NOTIFY PROJECT OFFICER 48 HOURS PRIOR TO THIS OPERATION.
3. SCORING AND JOINT LOCATIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL NOTIFY PROJECT OFFICER 48 HOURS PRIOR TO THIS OPERATION.
4. SEE SHEET C-10B FOR PLAY AREA EQUIPMENT LAYOUT.
5. SCORING LINES & PATTERNS ARE GRAPHIC REPRESENTATIONS.
6. SEE SHEET C-10A FOR REFERENCE POINT INFORMATION.
7. CONTRACTOR SHALL INSTALL EXPANSION JOINTS WHERE BOULDERS AND CONCRETE MEET.

CURVE SCHEDULE				
ARC#	RADIUS (FEET)	ARC LENGTH (FEET)	CENTER POINT COORDINATES	
1A	24.53	14.41	E 11887779.27	N 7002039.08
1B	5.28	6.80	E 11887807.08	N 7002028.34
1C	13.69	6.38	E 11887806.35	N 7002019.97
1D	1.20	2.97	E 11887812.91	N 7002030.59
1E	5.23	8.41	E 11887813.42	N 7002024.19
1F	2.55	4.20	E 11887810.75	N 7002023.91
2	3.99	9.32	E 11887812.01	N 7002017.49
3	5.68	4.94	E 11887819.97	N 7002012.01
4	3.52	11.53	E 11887810.97	N 7002010.14
5	4.30	19.40	E 11887803.17	N 7002010.48
6	5.27	6.80	E 11887796.26	N 7002014.60
7	8.65	6.61	E 11887784.08	N 7002008.20
8	9.00	3.68	E 11887790.42	N 7001992.50
9	4.00	5.79	E 11887808.25	N 7001997.86
10	4.70	6.26	E 11887783.62	N 7002000.76
11	6.00	10.72	E 11887790.42	N 7001992.50
12	9.62	11.24	E 11887804.25	N 7001999.78
13	7.10	13.33	E 11887805.62	N 7001983.11
14	4.00	4.32	E 11887804.64	N 7001977.55
15	11.21	6.64	E 11887800.79	N 7001962.83
16	4.27	9.12	E 11887795.68	N 7001977.45
17	2.69	4.56	E 11887788.11	N 7001989.09
18	12.49	21.36	E 11887792.89	N 7001980.53
19	12.96	16.67	E 11887772.59	N 7001965.17
20	9.75	7.71	E 11887805.60	N 7001982.36
21	10.46	14.63	E 11887818.52	N 7001966.82
22	4.76	7.63	E 11887813.79	N 7001963.59
23	2.51	10.72	E 11887820.49	N 7001969.25
24	3.81	6.00	E 11887826.66	N 7001967.90
25	5.88	13.09	E 11887818.75	N 7001987.73
26	5.17	17.31	E 11887829.16	N 7001991.40
27	10.32	9.15	E 11887842.96	N 7001998.45



MATERIALS LEGEND

X / XX DETAIL # / SHEET #

- POURED-IN-PLACE SAFETY SURFACING - COLOR A — 4 L-02, 5 L-02, 6 L-02
- POURED-IN-PLACE SAFETY SURFACING - COLOR B — 4 L-02, 5 L-02, 6 L-02
- ENGINEERED WOOD FIBER PLAY SURFACE — 1 L-02, 2 L-02
- CONCRETE
- E.J. EXPANSION JOINT

MATERIAL COLORS

COLOR A: BLEND OF PURPLE (60%), GOLD (10%), BRIGHT GREEN (15%) AND BLACK (15%)

COLOR B: BLEND OF EGGSHELL (60%), GOLD (25%), AND BLACK (15%)

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SAFETY SURFACING & SCORING PLAN

100% CONSTRUCTION DRAWING

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: C-10C_SCORING-PIP.DWG
Plotted: Dec. 22, 20

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

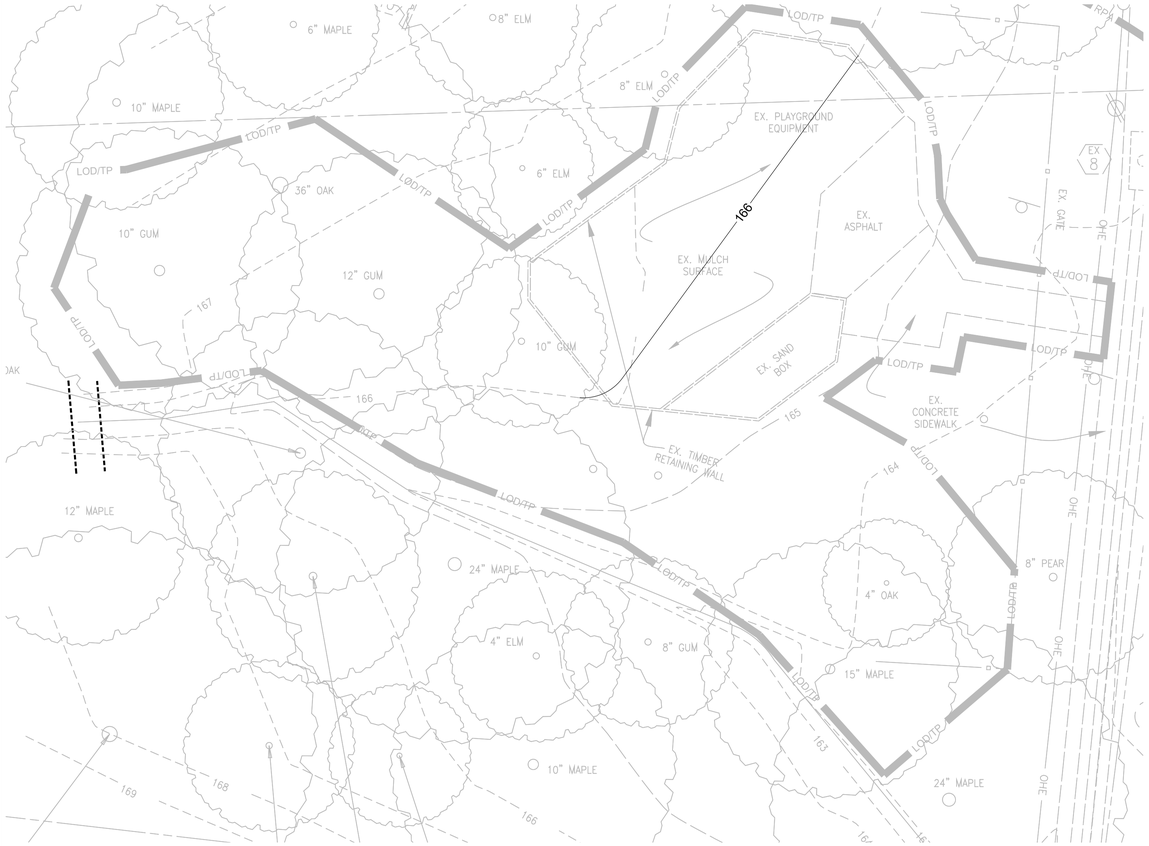
Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

C-10C

No. 17 of 41



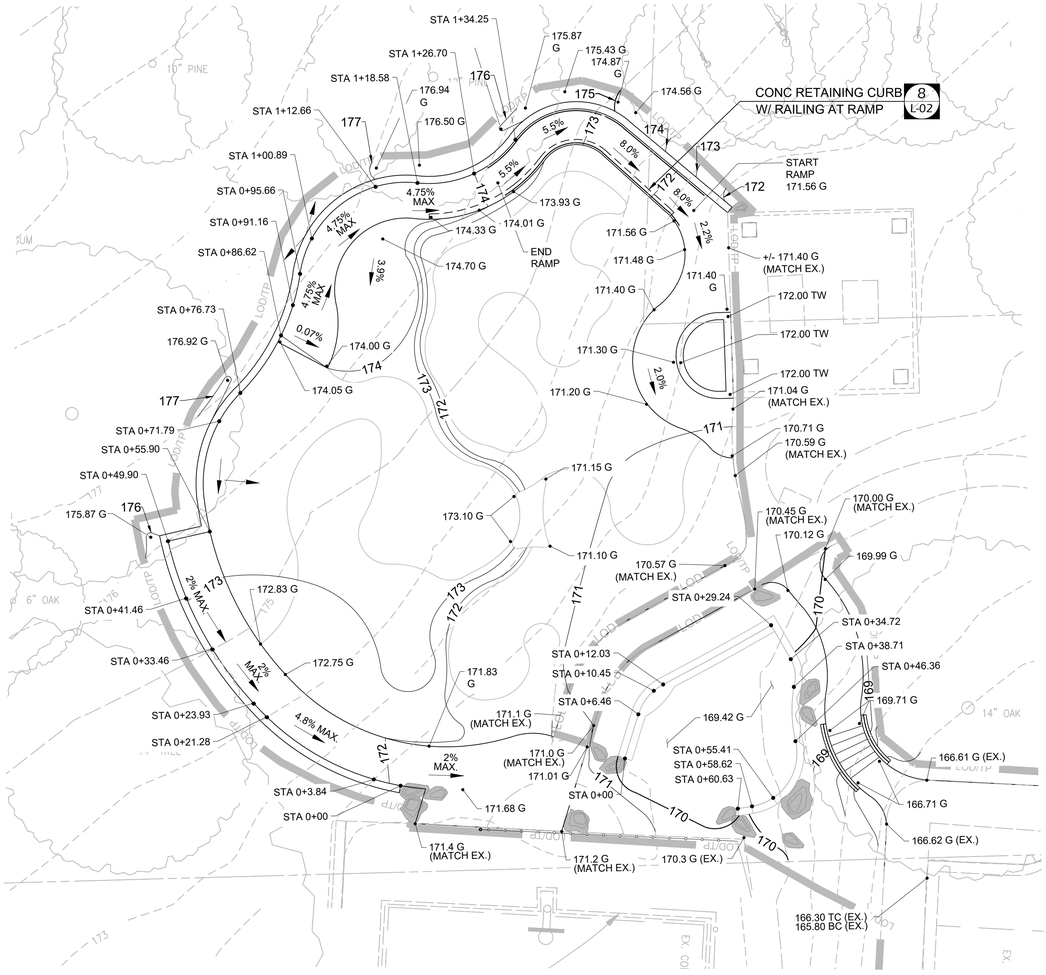
EXISTING PLAYGROUND AREA

GRADING LEGEND

- PROPERTY LINE
- 173 EXISTING MINOR CONTOUR
- 175 EXISTING MAJOR CONTOUR
- 173 PROPOSED MINOR CONTOUR
- 175 PROPOSED MAJOR CONTOUR
- TW TOP OF WALL
- BW BOTTOM OF WALL
- G GRADE SPOT

GRADING AND ADA COMPLIANCE NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DOCUMENTS AND CONTRACT CONDITIONS INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADA) AND THE VIRGINIA ACCESSIBILITY CODE AND ANY UPDATES. IF THE CONTRACTOR OBSERVES THAT PORTIONS OF THE PROJECT ARE NON-COMPLIANT WITH THE ADA, HE SHALL NOTIFY ARLINGTON COUNTY PROJECT OFFICER SO THAT A FIELD ADJUSTMENT CAN BE MADE TO ENSURE COMPLIANCE. GRADE TOLERANCES SHALL BE MEASURED WITH A 2 FOOT DIGITAL LEVEL.
2. SEE SHEET C-13 FOR ADA ACCESS PLAN.
3. VERIFY ALL EXISTING AND PROPOSED GRADES PRIOR TO FINAL CONSTRUCTION. CONTRACTOR SHALL STAKE OUT GRADES IN THE FIELD FOR REVIEW BY ARLINGTON COUNTY PROJECT OFFICER AND LANDSCAPE ARCHITECT PRIOR TO FINAL CONSTRUCTION.
4. PROPOSED GRADING SHALL MEET EXISTING GRADE UNIFORMLY TO ENSURE A SMOOTH TRANISTION. NOTIFY ARLINGTON COUNTY CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY EDGE CONDITIONS THAT CREATE AREAS WITHOUT POSITIVE DRAINAGE.
5. IN AREAS WHERE FULL DEPTH PAVEMENT AND THE MULCH PLAYGROUND IS DEMOLISHED, CONTRACTOR SHALL PROVIDE FILL TO BRING GRADES BACK TO EXISTING CONDITIONS AND IMMEDIATELY STABILIZE UPON COMPLETION. FINAL GRADES SHALL BE A MINIMUM OF 2% TO PROMOTE PROPER DRAINAGE. SEE SHEET C-07 FOR PERMANENT SEEDING SPECIFICATIONS.
6. ALL LONGITUDINAL SLOPES ALONG THE WALKS SHALL BE NO STEEPER THAN 4.8% WITHOUT RAILING AND 7.8% WITH RAILING. THE CROSS SLOPE SHALL BE MINIMUM 1% AND MAXIMUM 1.8% OR AS NOTED ON THE DRAWINGS. ALL LANDING AND TRANSITION AREAS SHALL BE LESS THAN 1.8% IN ALL DIRECTIONS. THESE LIMITS PROVIDE A 0.2% MARGIN FROM THE D.O.J. ADA REQUIREMENTS TO ALLOW FOR CONSTRUCTION TOLERANCES.
7. ANY HARDSCAPE SURFACE AREAS THAT ARE BUILT WITHOUT COMPLYING WITH THE ABOVE CODE MUST BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE COUNTY.
8. THE MAXIMUM VERTICAL CHANGE BETWEEN THE FINISH GRADES OF ADJACENT HARDSCAPE SURFACES IS 1/4". THE MAXIMUM HORIZONTAL GAP BETWEEN THE EDGES OF ADJACENT HARDSCAPE SURFACES IS 3/8".
9. PROPOSED BOTTOM OF WALL AS SHOWN INDICATES THE FINISH GRADE WHERE WALL INTERSECTS WITH HARDSCAPE OR SOFTSCAPE. SEE SHEET L-01 FOR FOOTER ELEVATIONS.
10. SEE SHEET L-03A, B, C FOR TOP OF WALL ELEVATIONS.



PROPOSED PLAYGROUND AREA

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

GRADING PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-11_GRADING.dwg
Plotted: 2021-01-20
Scale: AS SHOWN
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-28-2020
LANDSCAPE ARCHITECT

Sheet C-11

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-11_GRADING.dwg

SHEET OMITTED

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park
Playground
Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

GRADING
SECTIONS

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-12-CG01-150396021.dwg
Plotted: 2020-12-23

Scale: 1" = 20'
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B. SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet C-12

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-12-CG01-150396021.dwg

LEGEND

- ADA PLAY SURFACE
- ADA ACCESSIBLE WALKWAY
- PROPERTY LINE
- LOD/TP — LIMITS OF WORK / TREE PROTECTION FENCE
- LOD — LIMITS OF DISTURBANCE/WORK
- BOULDER
- ADA ACCESSIBLE ROUTE
- ADA ACCESSIBLE PLAY DESTINATION
- DESTINATION / ADA ACCESSIBLE SEATING

ADA NOTES:

1. ADA COMPLIANCE NOTE: THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF ADA STANDARDS FOR ACCESSIBLE DESIGN, BY THE DEPARTMENT OF JUSTICE. SHOULD ANY QUESTIONS ARISE DURING CONSTRUCTION, INSTALLATION, OR IF ANY CLARIFICATIONS ARE NEEDED, THE CONTRACTOR SHALL CONTACT THE COUNTY PROJECT OFFICER.
2. SEE GRADING PLANS FOR SPOT ELEVATIONS AND GENERAL NOTES.

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

ADA ACCESS PLAN

–
–

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: C-13_ADA.DWG
Plotted: Dec. 23, 20

Scale: 1"=10'-0"
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Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

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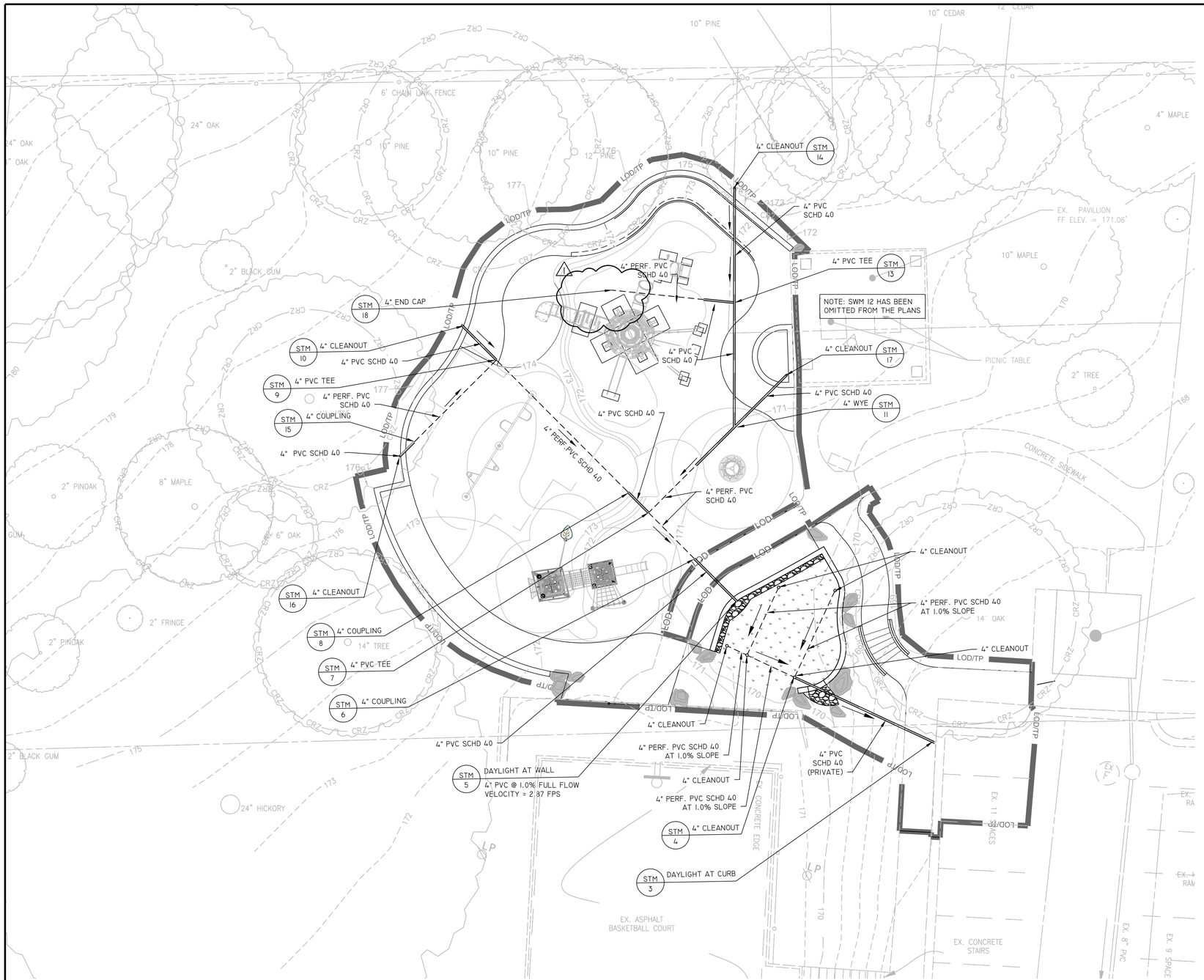
C-13
No. 20 of 41



UTILITY LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
LOD/TP	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
	SOLID PVC PIPE
	PERFORATED PVC PIPE
	URBAN BIORETENTION FACILITY
•	4" PVC CLEANOUT (DETAIL 3/C-21)
STM #	STORM SEWER STRUCTURE

NOTES:

1. LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCY TO THE PROJECT OFFICER. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 811 A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.
2. ALL NEW SITE DRAINAGE SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE PROJECT OFFICER PRIOR TO THE INSTALLATION OF BACKFILL MATERIAL.
3. FIELD VERIFY AND COORDINATE ALL PROPOSED LOCATIONS FOR EQUIPMENT, PIPE RUNS, AND SLOPES WITH EXISTING CONDITIONS PIOR TO BEGINNING NEW WORK AS SHOWN. CONTRACTOR TO SLOPE PIPES APPROPRIATELY TO ENSURE POSITIVE DRAINAGE.
4. ALL PROPOSED STORM PIPE WITHIN AND UPSTREAM OF THE PROPOSED BIORETENTION FACILITY SHALL BE PRIVATELY MAINTAINED.

0 10' 20'
SCALE: 1"=10'

ARLINGTON
VIRGINIA

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21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

UTILITY PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

1	CORRECTED ARROW	3/4/21

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-14-CU01-150396021.dwg
Plotted: 2021-03-04

Scale: 1" = 20'
Date: MARCH 13, 2020

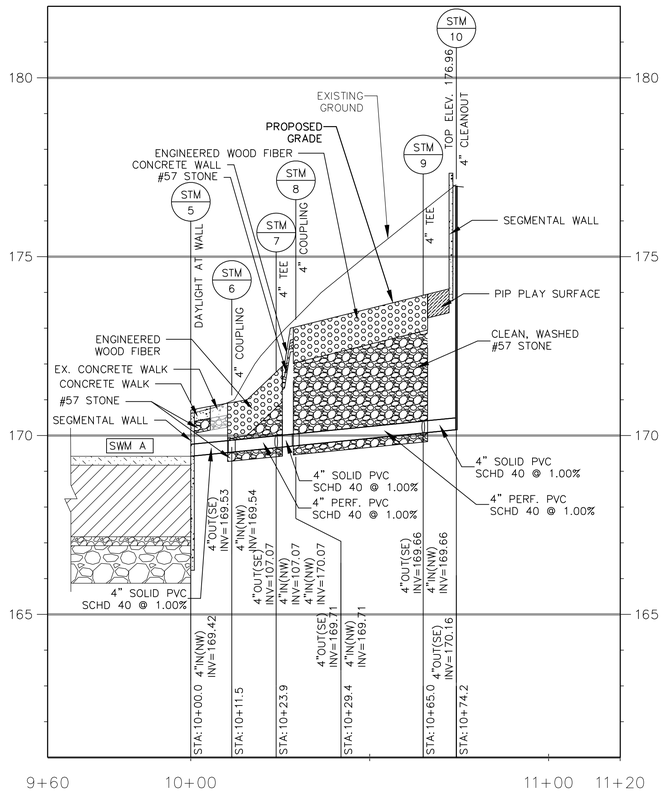
Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

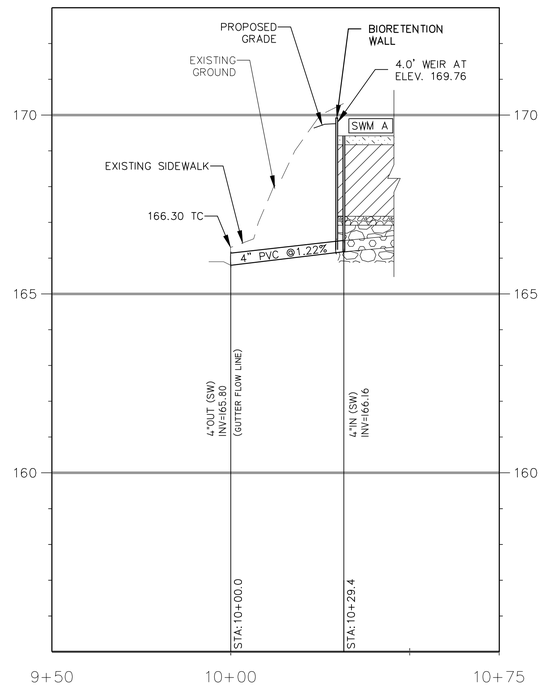
Sheet C-14R

No. 21 of 41

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-14-CU01-150396021.dwg



STM-10 TO STM-5 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



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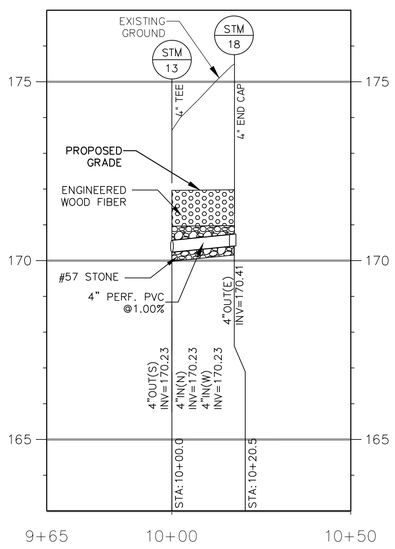
VERT. 1" = 2'



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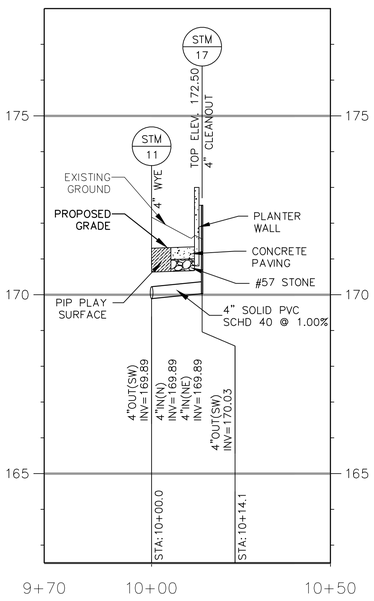

STM-17 TO STM-11 PROFILE
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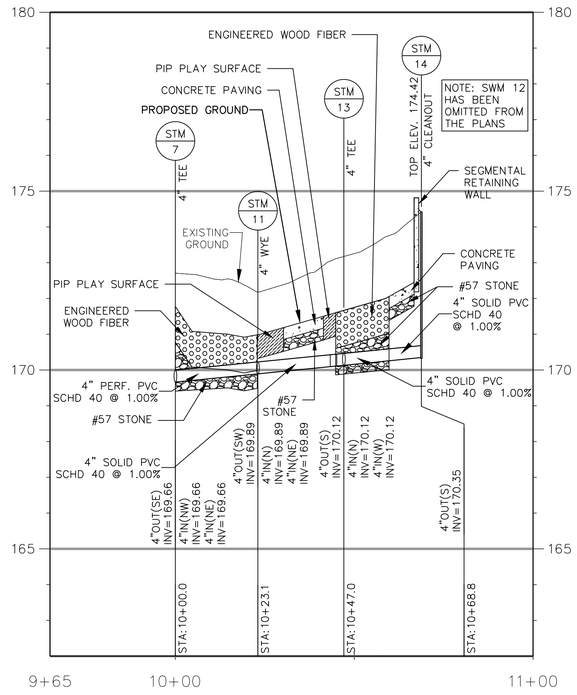
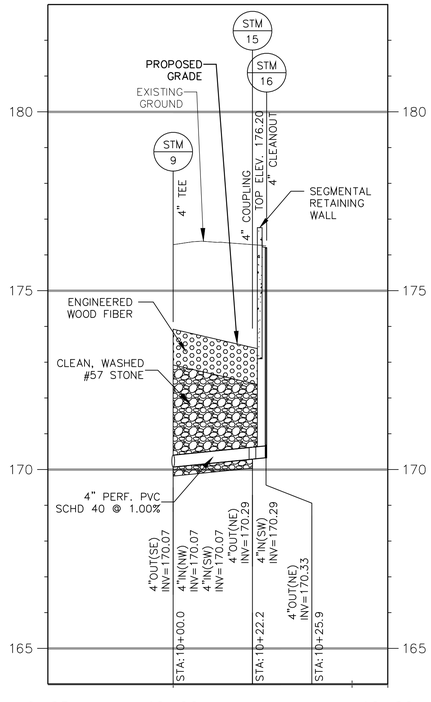
VERT. 1" = 2'



STM-14 TO STM-7 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STM-16 TO STM-9 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

STORM SEWER PROFILES

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-15-CU02-150396021.dwg
Plotted: 2020-12-23

Scale: AS SHOWN
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet C-15

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-15-CU02-150396021.dwg

BORING LOG NO. B-1

Page 1 of 1

PROJECT: Towers Park

CLIENT: A Morton Thomas & Assoc Inc
Chantilly, VA

SITE: 801 South Scott Street
Arlington, VA

LOCATION See Exploration Plan

Approximate Surface Elev.: 175 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI
1		0.3	174+/-							
			TOPSOIL							
			FILL - LEAN CLAY WITH SAND (CL), light brown, moist, very stiff				18	7-8-12-18 N=20	10	34-18-16
		2.5	172.5+/-							
			FILL - LEAN CLAY WITH GRAVEL (CL), light brown, moist, hard				18	32-30-21 N=51		
		5.0	170+/-	5						
			FILL - SANDY LEAN CLAY (CL), light brown, moist, very stiff				18	7-8-9 N=17	15	32-18-14
			stiff							
							2	4-5-6 N=11		
		13.5	161.5+/-	10						
2			**POTOMAC FORMATION - SANDY LEAN CLAY (CL)**, brown to gray, moist, stiff				18	3-4-5 N=9		
				15		SS#3				
			gray, medium stiff				18	2-3-3 N=6		
		20.0	155+/-	20						
			Boring Terminated at 20 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method:
2-1/4 Inch H.S.A.

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS
Water not encountered

▽ *Cave in depth: 16-ft.*

Terracon
19955 Highland Vista Dr Ste 170
Ashburn, VA

Boring Started: 09-03-2019 | Boring Completed: 09-03-2019
Drill Rig: D-50 | Driller: Terracon
Project No.: JD195078

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT: GEO SMART LOG-HQ WELL JOY\95078 TOWERS PARK.GPJ | TERRACON_DATATEMPLATE.GDT 1/28/19

BORING LOG NO. B-2

Page 1 of 1

PROJECT: Towers Park

CLIENT: A Morton Thomas & Assoc Inc
Chantilly, VA

SITE: 801 South Scott Street
Arlington, VA

LOCATION See Exploration Plan

Approximate Surface Elev.: 170 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI
1		0.3	169+/-							
			TOPSOIL							
			FILL - LEAN CLAY WITH SAND (CL), brown, moist, very stiff				18	5-8-11-9 N=19		
			light brown, stiff				20	7-7-7-9 N=14		
		4.0	166+/-							
			FILL - LEAN CLAY WITH GRAVEL (CL), light brown, moist, dense				24	16-16-17-21 N=33		
3		6.0	164+/-	5						
			POTOMAC FORMATION - CLAYEY SAND (SC), fine grained, light brown and gray, moist, medium dense				24	11-11-10-10 N=21		
		8.0	162+/-							
			POTOMAC FORMATION - SANDY LEAN CLAY (CL), light brown and gray, moist, stiff				24	12-4-5-6 N=9		
		10.0	160+/-	10						
2			**POTOMAC FORMATION - GRAVELLY LEAN CLAY (CL)**, grey, very stiff				24	8-8-8-8 N=16		
						SS#5				
			medium stiff				24	2-2-4-6 N=6		
		16.0	154+/-	15						
			Boring Terminated at 16 Feet				24	2-3-3-4 N=6		

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method:
2-1/4 Inch H.S.A.

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS
Water not encountered

▽ *Cave in depth: 12-ft.*

Terracon
19955 Highland Vista Dr Ste 170
Ashburn, VA

Boring Started: 09-03-2019 | Boring Completed: 09-03-2019
Drill Rig: D-50 | Driller: Terracon
Project No.: JD195078

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT: GEO SMART LOG-HQ WELL JOY\95078 TOWERS PARK.GPJ | TERRACON_DATATEMPLATE.GDT 1/28/19

Test Boring No.	Approximate Test Depth (ft)	Approximate Test Elevation	Field Infiltration Rate (Inches/hour)
IT-1	11	EL 160	0.5
IT-2	10	EL 160	0.2

Test Boring No.	Approximate Test Depth (ft)	USDA Soil Texture Classification	Estimated Infiltration Rate (Inches/hour)
B-2	4-6	Loam	0.52
B-2	8-10	Loam	0.52

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA200004

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

SOIL BORING LOGS

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-17-CU05-150396021.dwg
Plotted: 2019-12-17

Scale: 1" = 20'
Date: December 13, 2019

Seal

COMMONWEALTH OF VIRGINIA
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER
Digitally signed by Jefferson K Sinclair Jr
Date: 2019.12.17 16:14:06-05'00'

Sheet C-16

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-17-CU05-150396021.dwg

PRE-DEVELEPMENT WATER QUALITY LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
RPA	RESOURCE PROTECTION AREA
LOD/TP	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE - 15,344 SF (0.3523 AC)
	MANAGED TURF AREA - 13,916 SF (0.3195 AC)

NO EXISTING FORESTED AREA SHALL BE DISTURBED.

EXISTING IMPERVIOUS AREAS

MATERIAL	SURFACE AREA (SF)	LEGEND
CONCRETE PAVING	834	
ASPHALT PAVING	535	
TIMBER BORDER	58	
TOTAL AREA	1,427 (0.0328 AC)	
TOTAL IMPERVIOUS AREA IN RPA	584 (0.0134 AC)	

0 10' 20' 40'
SCALE: 1"=20'

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

PRE-DEVELOPMENT WATER QUALITY PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-18-CQ01-150396021.dwg
Plotted: 2019-12-17

Scale: 1" = 20'
Date: December 17, 2019

Seal

COMMONWEALTH OF VIRGINIA
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K Sinclair Jr
Date: 2019.12.17 16:16:17 -05'00'

Sheet C-17

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-18-CQ01-150396021.dwg

POST-DEVELEPMENT WATER QUALITY LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
RPA	RESOURCE PROTECTION AREA
LOD	LIMITS OF DISTURBANCE - 15,344 SF (0.3523 AC)
LOD/TP	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
	TURF AREA - 4,025 SF (0.0924 AC) INCLUDING ENGINEERED WOOD FIBER - 6,087 SF (0.1397 AC)
	NEW FORESTED AREA - 4,650 SF (0.1068 AC)
	ENGINEERED WOOD FIBER - 2,062 SF (0.0473 AC)

NO EXISTING FORESTED AREA SHALL BE DISTURBED.

PROPOSED IMPERVIOUS AREAS

MATERIAL	SURFACE AREA (SF)	LEGEND
POUR-IN-PLACE PLAY SURFACE	2,116	
CONCRETE PAVING	1,933	
ASPHALT PAVING	288	
CONCRETE WALL AND CURB	270	
TOTAL AREA	4,607 (0.1058 AC)	
TOTAL IMPERVIOUS AREA IN RPA	0	

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

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VIRGINIA

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Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

POST-DEVELOPMENT WATER QUALITY PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-19-CQ11-150396021.dwg
Plotted: 2019-12-17

Scale: 1" = 20'
Date: December 17, 2019

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J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

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Date: 2019.12.17 16:16:57-05'00'

Sheet C-18

No. 25 of 41

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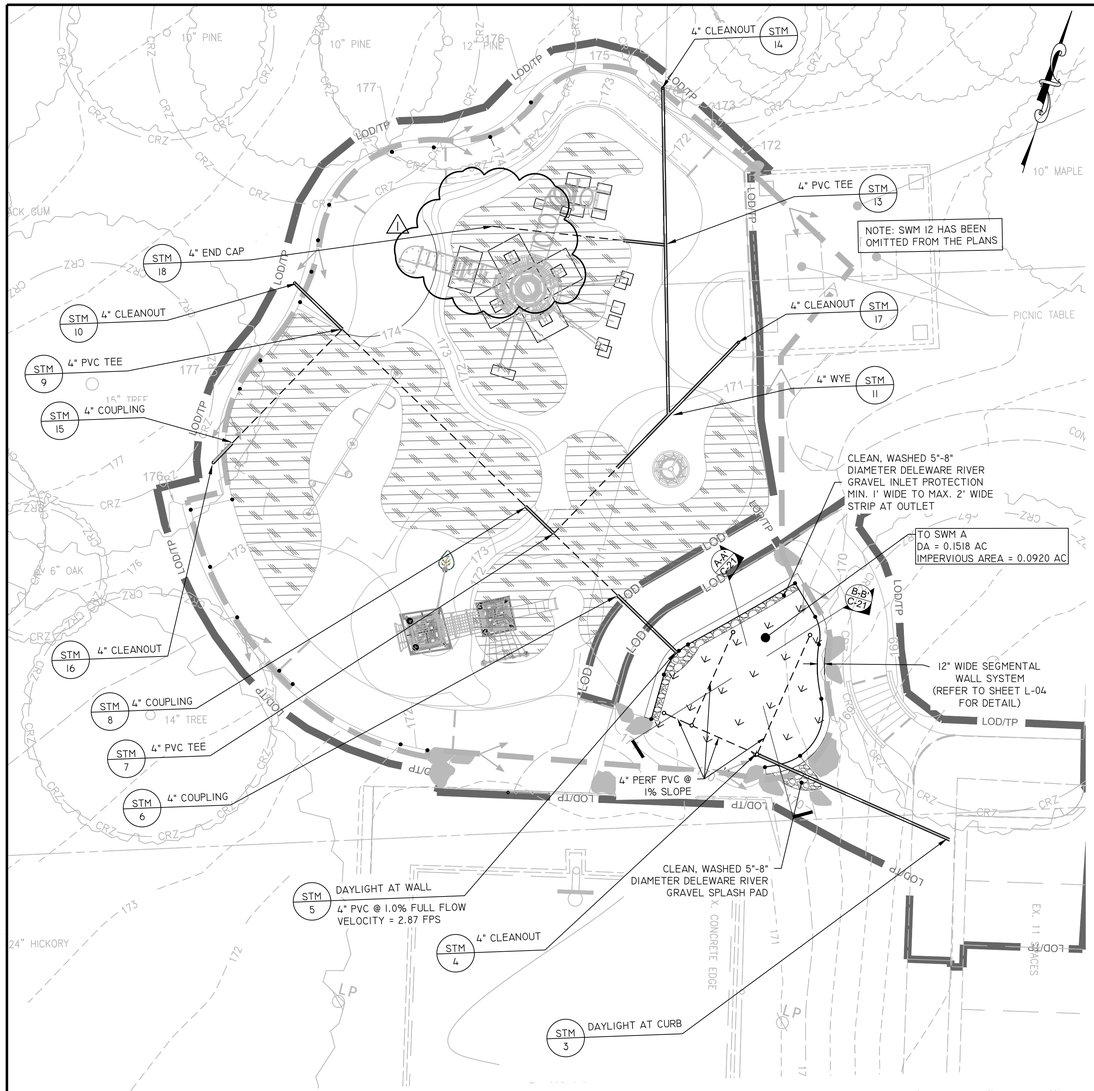
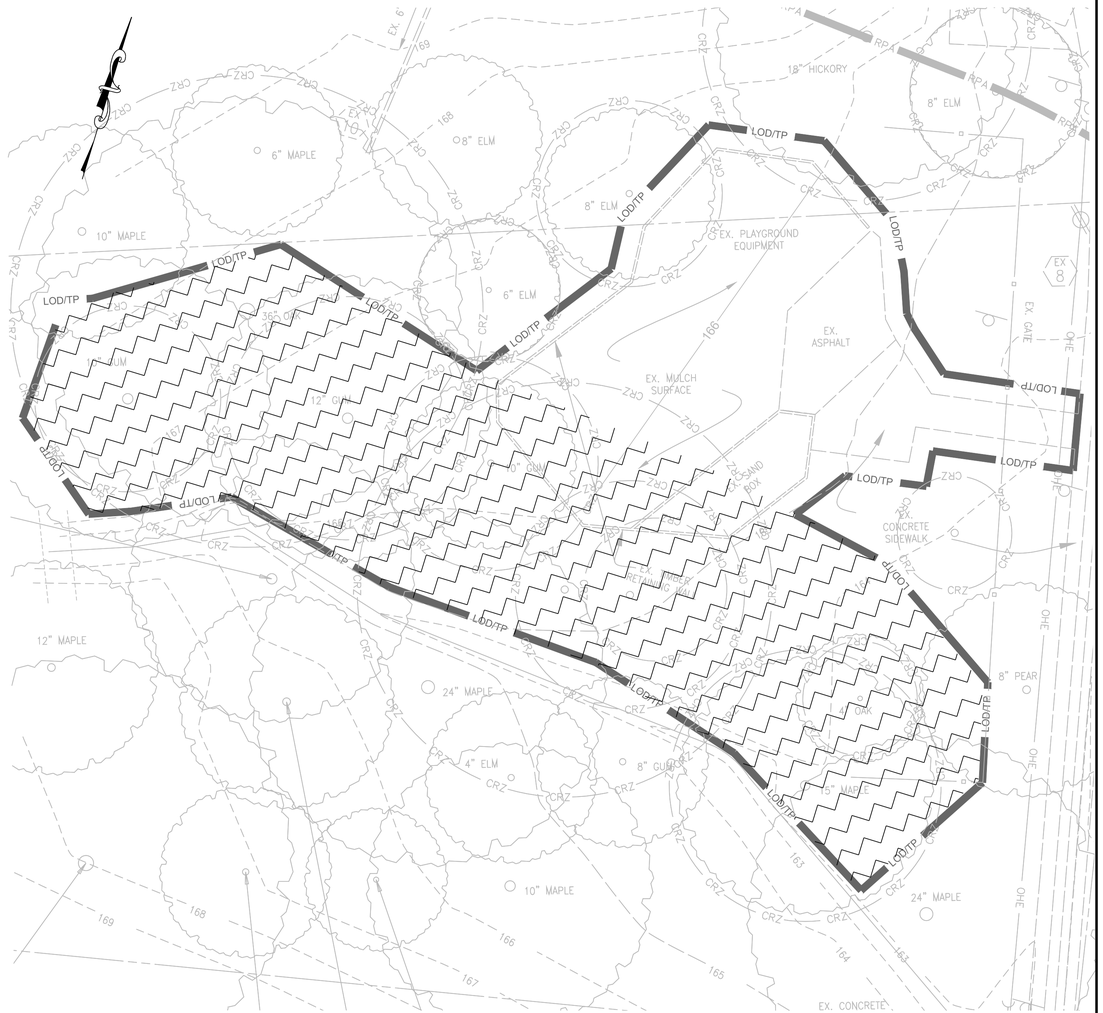


PROPOSED PLAYGROUND AREA

STORMWATER MANAGEMENT LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	LIMITS OF DISTURBANCE/TREE PROTECTION FENCE
RPA	RESOURCE PROTECTION AREA
	DRAINAGE DIVIDE
	SOLID PVC SCHD 40 PIPE
	PERFORATED PVC SCHD 40 PIPE
	BIORETENTION FACILITY (LEVEL 1) - SWM A
	NEW FORESTED AREA (REFER TO SHEET REF-01)
	RIVER GRAVEL INLET/OUTLET PROTECTION
	ENGINEERED WOOD FIBER WITH STONE STORAGE BELOW
A-A'	SECTION CALLOUT (SEE SHEET C-21 FOR SECTION DETAILS)



EXISTING PLAYGROUND AREA

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

STORMWATER MANAGEMENT PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions	Date
1 PIPE & ARROW ADJUSTED	3/4/21

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-19-CW01-150396021.dwg
Plotted: 2021-03-04

Scale: 1" = 20'
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet C-19R

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: C-19-CW01-150396021.dwg

WATER QUALITY NARRATIVE

THE SITE IS DEFINED BY THE TOTAL APPLICABLE AREA WITHIN THE LIMITS OF DISTURBANCE OF 0.3523 ACRES. THE IMPERVIOUS AREA FOR THE EXISTING CONDITION IS 0.0320 ACRES (9.1%) AND 0.1050 ACRES (29.9%) FOR THE PROPOSED CONDITION. DUE TO THE INCREASE IN IMPERVIOUS AREA THERE IS A 0.1007 LB/YEAR PHOSPHOROUS LOAD REDUCTION REQUIRED. TO MEET COUNTY AND STATE REQUIREMENTS FOR WATER QUALITY AND QUANTITY THE PLANS PROPOSE AN URBAN BIORETENTION FACILITY ALONG WITH REFORESTATION. THE URBAN BIORETENTION FACILITY PROVIDES 0.1282 LB/YR PHOSPHORUS LOAD REDUCTION WHICH MEETS AND EXCEEDS THE TOTAL PHOSPHORUS REDUCTION BY 0.0276 LB/YR. THE FACILITY IS DESIGNED IN ACCORDANCE TO THE JANUARY 2013 DRAFT VERSION 2.0 SPEC 9 OF THE VIRGINIA DEQ DESIGN SPECIFICATIONS SUPPLEMENTED BY THE JULY 2019 ARLINGTON COUNTY STORMWATER MANUAL.

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: Towers Park
Date: 12/12/2019
Linear Development Project? No

CLEAR ALL (Ctrl+Shift+R)

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

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.3523

Maximum reduction required:	10%
The site's net increase in impervious cover (acres) is:	0.0730
Post-Development TP Load Reduction for Site (lb/yr):	0.1007

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✔
Total disturbed area entered? ✔

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.3195	0.3195
Impervious Cover (acres)				0.0328	0.0328
					0.3523

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested				0.1068	0.1068	*
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.1397	0.1397	
Impervious Cover (acres)				0.1058	0.1058	
Area Check	OK.	OK.	OK.	OK.	0.3523	

** 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
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-ReDevelopment	**Listed**	**Adjusted[1]**
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.3195	0.2465
Weighted Rv (turf)	0.2500	0.2500
% Managed Turf	91%	88%
Impervious Cover (acres)	0.0328	0.0328
Rv(impervious)	0.9500	0.9500
% Impervious	9%	12%
Total Site Area (acres)	**0.3523**	**0.2793**
Site Rv	**0.3152**	**0.3322**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.1068
Weighted Rv(forest)	0.0500
% Forest	30%
Managed Turf Cover (acres)	0.1397
Weighted Rv (turf)	0.2500
% Managed Turf	40%
Impervious Cover (acres)	0.1058
Rv(impervious)	0.9500
% Impervious	30%
Final Site Area (acres)	**0.3523**
Final Post Dev Site Rv	**0.3996**

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.1068
Weighted Rv(forest)	0.0500
% Forest	38%
Managed Turf Cover (acres)	0.1397
Weighted Rv (turf)	0.2500
% Managed Turf	50%
ReDev. Impervious Cover (acres)	0.0328
Rv(impervious)	0.9500
% Impervious	12%
Total ReDev. Site Area (acres)	**0.2793**
ReDev Site Rv	**0.2557**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.0730
Rv(impervious)	0.9500

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0093	0.0077	
Pre-ReDevelopment Treatment Volume (cubic feet)	403.0571	336.8096	
Pre-ReDevelopment TP Load (lb/yr)	**0.2532**	**0.2116**	
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.7200	0.7600	
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.1145*	

Final Post-Development Treatment Volume (acre-ft)	0.0117		
Final Post-Development Treatment Volume (cubic feet)	511.0133		
Final Post-Development TP Load (lb/yr)	**0.3211**		
Final Post-Development TP Load per acre (lb/acre/yr)	0.9100		

Post-ReDevelopment Treatment Volume (acre-ft)	0.0060	**Post-Development Treatment Volume (acre-ft)**	0.0058
Post-ReDevelopment Treatment Volume (cubic feet)	259.2728	**Post-Development Treatment Volume (cubic feet)**	251.7405
Post-ReDevelopment Load (TP) (lb/yr)*	**0.1629**	**Post-Development TP Load (lb/yr)**	**0.1582**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.5800		
Max. Reduction Required (below Pre-ReDevelopment Load)	10%		
TP Load Reduction Required for Redeveloped Area (lb/yr)	-0.0276	**TP Load Reduction Required for New Impervious Area (lb/yr)**	**0.1282**

** 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).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.1007**

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.1068	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER (ac)	0.1058	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER TREATED (ac)	0.0920	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA (ac)	0.1397	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA TREATED (ac)	0.0598	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 511.0133

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	148.6122	0.0000	0.0000	0.0000	0.0000	148.6122
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.3089	0.0000	0.0000	0.0000	0.0000	0.3089
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.1282	0.0000	0.0000	0.0000	0.0000	0.1282
TP LOAD REMAINING (lb/yr)	0.1806	0.0000	0.0000	0.0000	0.0000	0.1806
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.0675	0.0000	0.0000	0.0000	0.0000	1.0675

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.3211
TP LOAD REDUCTION REQUIRED (lb/yr)	0.1007
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.1282
TP LOAD REMAINING (lb/yr)	0.1928
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.0000 **

** TARGET TP REDUCTION EXCEEDED BY 0.0276 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	2.2969
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.0675
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	1.2293

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

1-year storm	2-year storm	10-year storm
2.58	3.13	4.80

Use NOAA Atlas 14 (http://hdsc.nws.noaa.gov/hdsc/pfds/)

***Notes (see below):**

[1] The curve numbers and runoff volumes computed in this spreadsheet for each drainage area are limited in their applicability for determining and demonstrating compliance with water quantity requirements. See VRRM User's Guide and Documentation for additional information.

[2] Runoff Volume (RV) for pre- and post-development drainage areas must be in volumetric units (e.g., acre-feet or cubic feet) when using the Energy Balance Equation. Runoff measured in watershed-inches and shown in the spreadsheet as RV(watershed-inch) can only be used in the Energy Balance Equation when the pre- and post-development drainage areas are equal. Otherwise RV(watershed-inch) must be multiplied by the drainage area.

[3] Adjusted CNs are based on runoff reduction volumes as calculated in D.A. tabs. An alternative CN adjustment calculation for Vegetated Roofs is included in BMP specification No. 5.

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.1068
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.1397
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.1058
	CN	98	98	98	98

CN$_{(D.A. A)}$ 84

Total Area (acres):	0.3523
Runoff Reduction Volume (ft^3):	148.6122

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* **with no Runoff Reduction***	1.1784	1.6239	3.0880
$RV_{Developed}$ *(watershed-inch)* **with Runoff Reduction***	1.0622	1.5077	2.9718
Adjusted CN*	82	82	83

**See Notes above*

Drainage Area A

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Space (acres)				0.1068	0.1068	0.0500
Managed Turf (acres)				0.1397	0.1397	0.2500
Impervious Cover (acres)				0.1058	0.1058	0.9500
				Total	0.3523	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr) 0.3089
Post Development Treatment Volume in D.A. A (ft^3) 491.6291

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists--

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40	0.0598	0.0920	0.0000	148.6122	222.9183	371.5305	25	0.0000	0.2332	0.1282	0.1049	

WATER QUANTITY NARRATIVE

WATER QUANTITY COMPLIANCE FOR THE SITE IMPROVEMENTS IS BEING ACCOMPLISHED BY THE RUNOFF REDUCTION PROVIDED BY A LEVEL I BIORETENTION FACILITY AND FORESTED AREA. PER THE ARLINGTON COUNTY CODE, CHAPTER 60, THE DEVELOPED SITE SHALL PROVIDE STORMWATER DETENTION SUFFICIENT TO PASS THE I-YEAR AND 10-YEAR 24-HOUR PEAK FLOW RATES UTILIZING THE ENERGY BALANCE METHOD.

THE TOTAL APPLICABLE AREA (LIMITS OF DISTURBANCE) IS 0.3523 ACRES.

UTILIZING ARLINGTON COUNTY'S ENERGY BALANCE SPREADSHEET, PRE- AND POST-DEVELOPMENT RUNOFF COMPUTATIONS FOR THE SITE WERE DEVELOPED TO ESTABLISH ALLOWABLE RELEASE RATES FOR THE I-YEAR AND 10-YEAR, 24-HOUR STORMS, 0.42 CFS AND 1.26 CFS, RESPECTIVELY. THIS SPREADSHEET UTILIZES THE VIRGINIA RUNOFF REDUCTION ADJUSTED CURVE NUMBERS FROM THE CHANNEL AND FLOOD PROTECTION TAB, SHOWN ON THIS SHEET. FOR THE I-YEAR AND 10-YEAR EVENTS, THE POST-DEVELOPED PEAK FLOWS ARE GREATER THAN THE ALLOWABLE RELEASE RATES AND 505 CF OF STORAGE IS REQUIRED.

TREATMENT VOLUME FOR THE STORMWATER MANAGEMENT FACILITY IS 372 CF. THE TOTAL QUALITY AND QUANTITY STORAGE VOLUME TO BE PROVIDED IS 372 + 505 CF = 877.

THE DETENTION IS PROVIDED WITHIN THE LEVEL I BIORETENTION FACILITY IS 485 CF, SEE BIORETENTION SIZING SPREADSHEET ON SHEET C-21. DETENTION PROVIDED WITH IN THE STONE OF THE SECTION OF ENGINEERED WOOD FIBER IS 412 CF: 2,062 SF x 6" DEPTH x 0.4 VOID RATIO = 412 CF

TOTAL STORAGE PROVIDED: 485 CF + 412 CF = 897 CF.

CHECK: 897 CF > 877 CF ✓

IT IS THE ENGINEER'S OPINION THAT THE IMPROVEMENTS PROPOSED WITH THIS APPLICATION WILL HAVE NO ADVERSE IMPACT TO THE ADJACENT PROPERTIES.

PER FEMA FLOODPLAIN MAP 51013C0077C, DATED 8/19/2013, THIS SITE IS IN ZONE X, OUTSIDE THE FLOODPLAIN.

PER ARLINGTON COUNTY GIS, RPA IS PRESENT. SEE SHEET C-22 FOR THE WATER QUALITY IMPACT ASSESSMENT.

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre) 0.3523

	1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.58	2.58	4.8	4.8
CN	82	82	82	83
S=1000/CN-10	2.20	2.20	2.20	2.05
0.2S	0.44	0.44	0.44	0.41
RV=(P-0.2S)^2/(P-0.2S)+S (in.)	1.06	1.06	2.90	2.99

QPost Development <=I.F.* (Qpre-development* RVpre-development)/RVDeveloped)

I.F 0.9

CHANNEL PROTECTION (1-YEAR)		
Qpre-development (cfs)	0.47	From TR55
QPost Development (cfs)	0.47	From TR55
RVPost Development (with runoff reduction) (in.)	1.0619	From RRM
Qallowable (cfs)	0.42	

FLOOD CONTROL (10-YEAR)	
Qpre-development	1.29
QPost Development	1.29
RVPost Development (with runoff reduction)	2.9715
Qallowable	1.26

Qallowable/QPost Development	0.90	Fig 11.7 of DEQ Manual
Vs/Vr	0.15	
Vs	0.16	
Storage Required (CF)	205	

Qallowable/QPost Development	0.98
Vs/Vr	0.13
Vs	0.40
Storage Required (CF)	505

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA#20004

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

STORMWATER MANAGEMENT CALCULATIONS AND NARRATIVE

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-21-CW06-150396021.dwg
Plotted: 2019-12-17

Scale: 1" = 20'
Date: December 17, 2019

Seal

COMMONWEALTH OF VIRGINIA
Jefferson K. Sinclair Jr
Digitally signed by Jefferson K. Sinclair Jr
Date: 2019.12.17 16:35:34-05'00'
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

Sheet C-20

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-21-CW06-150396021.dwg

Construction Inspection Checklist: Urban Bioretention – Planter Box

ARLINGTON VIRGINIA

Address/ Location: _____ Building Permit #: _____

LDA Permit #: _____ SWM#: _____

Contractor: _____ Telephone: _____

Certifying Professional*: _____ Telephone: _____

Date Started: _____ Final Inspection Date: _____

Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of urban bioretention facilities. This checklist does not necessarily distinguish between all the design variations. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on Virginia Stormwater BMP Clearinghouse and Arlington County Stormwater Guidance Manual.

All items should be crossed off when completed. **Items labeled "Certification of…" must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
☐	Conduct a pre-construction meeting with the contractor designated to install the planter box, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	
☐	Stormwater has been diverted around the area of the bioretention practice and perimeter erosion control measures to protect the facility during construction have been installed.	

EXCAVATION AND BOX CONSTRUCTION		DATE
☐	Area is marked and the size and location conforms to plan.	
☐	Excavation has achieved proper grades and the required geometry and elevations.	
☐	Box is constructed using the material specified and to the required dimensions as shown on the approved plans. ***Constructed interior dimensions:*** _____	
☐	Waterproofing is installed on sides and bottom of interior of the box as specified.	
☐	**Certification of Excavation and Box Construction Inspection:** Inspector certifies the successful completion of the steps listed above and any necessary photos are attached. Photo required of: entire interior (sides and bottom) of planter box waterproofed. Material ticket required of waterproofing membrane if plastic membrane is used (no receipt required for liquid membrane).	

FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT		DATE
☐	All aggregates conform to specifications as certified by quarry.	
☐	Underdrain size and perforations meet the specifications (holes should be spaced 6" apart, maximum of 3 rows of holes). Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
☐	Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section below. Any planter boxes that are in series (drain from one to another), requires the submission of invert elevations.	

☐	Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	
☐	**Certification of Filter Layer and Underdrain Placement Inspection:** Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached. Photos required include: o Perforated underdrain pipe with a solid vertical overflow pipe; o Depth of #57 stone; o Depth of choker stone (pea gravel or #8). Material delivery tickets required: o #57 stone and choker stone (pea gravel or #8)	

BIORETENTION SOIL MEDIA PLACEMENT		DATE
☐	Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
☐	No filter fabric is to be used between the stone layer and the soil layer. Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area. Elevation has been verified after settlement (2 to 4 days after initial placement).	
☐	**Certification of Soil Media Placement Inspection:** Inspector certifies the successful completion of the soil media steps listed above. Photos and material delivery tickets for these items are attached. Photo required includes a measurement of the soil media installed. Material delivery ticket required from an approved soil media vendor.	

PRETREATMENT AND PLANT INSTALLATION		DATE
☐	Placement of energy dissipaters and pretreatment practices (splash block/rocks, gutter guards, etc.) are installed in accordance with the approved plans.	
☐	Overflow has atrium grate installed.	
☐	Downspouts are installed in accordance with the approved plans providing the correct drainage area.	
☐	The number and spacing of plants are installed in accordance with the approved plans. If there is no approved landscape plan for the planter boxes, the plants are to be chosen from VA DEQ Stormwater Design Specification No. 9: Table 9.6 Popular Native Plant Materials for Bioretention.	
☐	A 2-3 inch layer of shredded hardwood mulch has been installed.	
☐	**Certification of Pretreatment and Plant Installation Inspection:** Inspector certifies the successful completion of the pretreatment, energy dissipaters, plants, overflow grates and mulch as listed above. Photos and copies of material delivery tickets are attached. Photos required for this step for each planter include: o Overall photo showing the number of plants installed; o Location of downspout/inflow pipe with the appropriate splash block/rocks; o Distance from the top of mulch to the top of the overflow pipe; o Distance from the top of mulch to the top of the planter box. Material delivery tickets required for this step include: o Approved plants listing number and species; o Shredded hardwood mulch.	

DRY WELL OR CONNECTION TO STORM SEWER		DATE
☐	Dry well is constructed to the correct dimensions and proper materials including the proper geotextile, stone, and overflow mechanism (pop-up emitter) per the plan (if applicable).	

☐	Underdrain is directly tied into the public storm sewer system and the connection has been witnessed by DES inspector (if applicable).	
☐	**Certification of Dry Well or Connection to Storm Sewer:** Inspector certifies the successful completion of the dry well or connection to the storm sewer. Photos and material delivery tickets for these items are attached. Photos required for dry well include: o Excavated dry well with fabric installed on sides (no fabric on bottom); o Dimensions of dry well (L x W x D); o Perforated pipe installed inside of dry well; o Solid pipe for any pipe located outside of dry well (above gravel to grade); o Depth of #57 stone; o Fabric installed on top of gravel; o Completed dry well with turf cover and pop-up emitter installed. Material Tickets required: o Geotextile used; o #57 stone.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

- See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

Planter Box Material Specifications

Material	Specification	Notes
Waterproofing	Watertight shell or impermeable liner	Use a thirty mil (minimum) PVC Geomembrane liner or equivalent.
Filter Media Composition	Filter Media to contain: • 80%-90% sand with >75% being coarse to very coarse • 10%-20% soil fines • 3%-5% organic matter in the form of plant based compost meeting Clearinghouse Design Specification #4, Section 6.5	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Plant available P within Low+ (L+) to Medium (M) per DCR 2014 Nutrient Management Criteria (18-40 mg/kg P for the Mehlich III procedure) and CEC >5	The media must be procured from approved filter media vendors.
Mulch Layer	Use aged, shredded hardwood bark mulch	Lay a 2 to 3 inch layer on the surface of the filter bed.
Choking Layer	3 inch layer of pea gravel or VDOT #8 stone which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	12 inches for the underdrain
Underdrains and Overflows	Use 4 inch rigid schedule 40 PVC pipe with 3/8-inch perforations at 6 inches on center, maximum of 3 rows of perforations; position each underdrain on a 1% or 2% slope.	Lay the perforated pipe under the length of the planter box, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend overflow pipes to the surface with vented caps.
Plant Materials	1 quart-sized perennial installed per 1-2 sf and/or 1 3-gallon shrub installed per 7.5 sf over entire ponding area	Choose either herbaceous and/or shrubs

July 2014 (Revised April 2015). Sizing spreadsheet for SW planters for compliance with Arlington County Stormwater Managment Ordinance

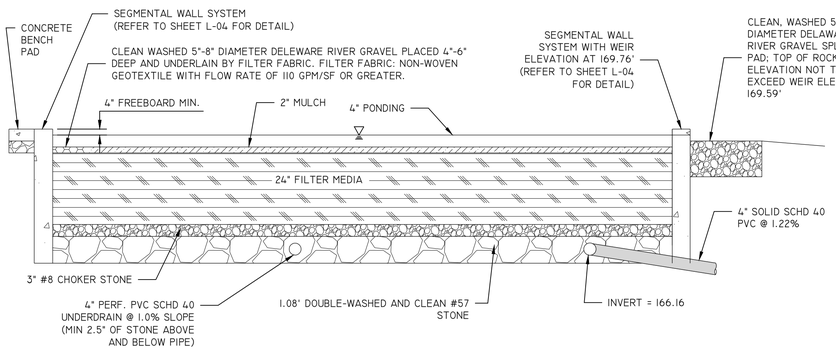
Enter data into highlighted cells. WQV needs to > 100% for credit.

Facility name/type	Impervious Area to Facility	Pervious Area to Facility	Total Drainage Area	Total Drainage Area	Rainfall Depth (P)	Rv	Target storage (WQv)	Width	Length	Ponding depth	Filter depth	Gravel depth	Surface Area	Ponding Volume (1.00 void)	Soil Storage Volume (0.25 void)	Gravel Storage Volume (0.4 void)	Available Storage	% Water Quality Volume Captured
	(SF)	(SF)	(SF)	(acre)	(in)		(CF)	(ft)	(ft)	(in)	(in)	(in)	(SF)	(CF)	(CF)	(CF)	(CF)	Must be ≥ 100% (Max. 200%)
Stormwater Planter Box #1	4007	2607	6614	0.1518	1.00	0.66	365.02	9.00	48.66	4	24	16"	437.94	145.98	218.97	234.74	599.69	164.29%

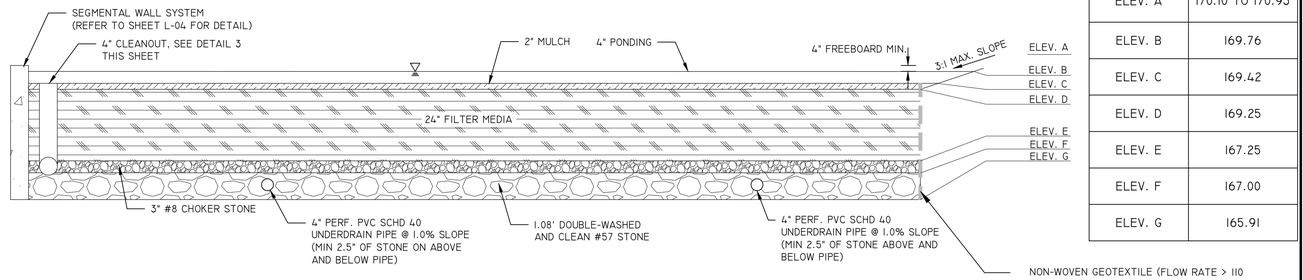
REFORESTATION: MINIMUM WIDTH = 35 FEET; 4,980 SF (0.1143 AC); SEE SHEET REF-01

WEIGHTED C-VALUE = 0.70
I10 = 6.83 IN./HR
Q10 = 0.1518 AC x 6.83 IN/HR x 0.70 = .73 CFS

WEIR CALCULATION
MAX. Q = 3.3 x P(H)^(3/2)
H = 2"
WIDTH = 4 FEET ; P = 8.34 FEET
Q = 3.3 x 8.34' x (0.17')^(3/2)
Q = 1.93 CFS > 0.73 CFS



1 URBAN BIORETENTION TYPICAL SECTION A-A'
SCALE:NTS



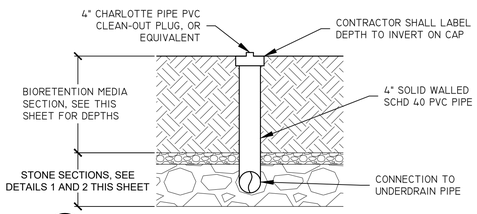
2 URBAN BIORETENTION TYPICAL SECTION B-B'
SCALE:NTS

URBAN BIORETENTION ELEVATION TABLE	
ELEV. A	170.10 TO 170.93
ELEV. B	169.76
ELEV. C	169.42
ELEV. D	169.25
ELEV. E	167.25
ELEV. F	167.00
ELEV. G	165.91

GENERAL NOTE:

1. ALL UNDER DRAINS SHOWN IN URBAN BIORETENTION FACILITY ARE 4" PERFORATED SCHEDULE 40 PVC PIPE 3/8", PERFORAGTED @ 6" O/C LENGTH WISE 90° RADIALLY AROUND WITH THE EXCEPTION OF THE FIRST 5 FT WHICH IS SOLID 4" PVC.

* SEE URBAN BIORETENTION ELEVATION TABLE TO THE RIGHT FOR ELEVATIONS



3 CLEANOUT/OBSERVATION WELL DETAIL
SCALE:NTS

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA20004

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

STORMWATER MANAGEMENT DETAILS

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-22-CW05-150396021.dwg
Plotted: 2020-03-12

Scale: N/A
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
Jeffrey Keith Sinclair Jr
Digitally signed by Jefferson K Sinclair Jr
Date: 2020.05.04 11:44:30-04'00'
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

Sheet C-21

No. 28 of 41

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-22-CW05-150396021.dwg

Appendix C. Water Quality Impact Assessment Data Sheet

Project Address	Date:
801 SOUTH SCOTT STREET ARLINGTON, VA 22204	12/09/2019
Applicant Name/Affiliation:	**Applicant Contact Information (phone and email):**
JUAN DU/DPR	703-228-3586; JDU@ARLINGTONVA.US
Owner/Client Name:	**Owner/Client Contact Information (phone and email):**
DEPARTMENT OF PARKS AND RECREATION	703-228-3586; JDU@ARLINGTONVA.US

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): GRADING, PLAYGROUND AND BIORETENTION

Section 2: Key details of the proposed activity

Complete all that apply		Explanation
Total area of disturbance on parcel (sf)	15,346	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)	6,949	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)	0	Does not apply to RPA parcels along Chain Bridge Road (15 percent and greater slopes are included as part of RPA)

Complete all fields		Existing condition	Proposed condition	Explanation
RPA encroachment (ft)	Left third of parcel or site	88.8	88.8	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	19.5	147.8	
	Right third of parcel or site	62.8	66.7	
Total development footprint in RPA (sf)		1,427	0	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)		1,427	0	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.

1. REFER TO SHEETS LF-01 THROUGH LF-04 FOR TREE PRESERVATION PLANS AND DETAILS AND SHEET REF-01 FOR REFORESTATION PLAN & NOTES.
2. REFER TO SHEETS C-20 AND C-21 FOR STORMWATER MANAGEMENT PLAN AND COMPUTATIONS AND DETAILS.
3. REFER TO SHEET C-05, C-06, C-07 AND C-08 FOR EROSION AND SEDIMENT CONTROL PLAN, NARRATIVE, NOTES, AND DETAILS.

PROJECT NARRATIVE:

THE PROJECT CONSISTS OF PLAYGROUND AND SITE IMPROVEMENTS LOCATED AT 801 SOUTH SCOTT STREET. THIS PROPERTY IS OWNED BY ARLINGTON COUNTY. DEMOLITION ACTIVITIES INCLUDE THE REMOVAL OF THE EXISTING COMPACTED MULCH PLAYGROUND AREAS WITH TIMBER BORDERS, PLAY EQUIPMENT, ASPHALT PAVEMENT AND CONCRETE PAVEMENT WITHIN THE RPA. THE EXISTING PLAYGROUND AREA WILL BE PARTIALLY REFORESTED AND PARTIALLY CONVERTED TO MANAGED TURF COVER. PROJECT IMPROVEMENTS INCLUDE NEW HARDSCAPE, PLAYGROUND AREA AND PLAY EQUIPMENT, ASSOCIATED SITE FEATURES, VEGETATION, REFORESTATION, AND AN URBAN BIORETENTION FACILITY AND ALL ASSOCIATED UTILITIES NORTHWEST OF THE PARKING LOT OUTSIDE OF THE RPA. THE NEW PLAYGROUND WILL BE INSTALLED AND FULLY STABILIZED AND FUNCTIONING PRIOR TO ANY DEMOLITION AND REFORESTATION ACTIVITIES AT THE EXISTING PLAYGROUND SITE WITHIN THE RPA. NO TREES ARE TO BE REMOVED WITHIN THE RESOURCE PROTECTION AREA (RPA) AND NO GRADING IS PROPOSED AROUND THEM, THEREFORE, THERE WILL BE NO IMPACTS TO TREES OR CRITICAL ROOT ZONES (CRZS) WITHIN THE RPA. THERE IS A 86 SF AREA WITHIN THE LOD WITHIN THE RPA IMMEDIATELY ADJACENT TO THE WATER FEATURE WITH SLOPES GREATER THAN 15%. SILT FENCE ADHERED TO CHAIN LINK FENCE IS PROPOSED IN THIS AREA TO PROTECT THE WATER FEATURE. CRZ PROTECTION MEASURES FOR THE TREES OUTSIDE OF THE RPA LIMITS INCLUDE LIMITS OF DISTURBANCE AND TREE PROTECTION FENCE SET IN A MANNER TO LIMIT DISTURBANCE AND STANDARD TREE PROTECTION NOTES HAVE BEEN INCLUDED ON THE TREE PRESERVATION PLAN TO FURTHER HIGHLIGHT THE IMPORTANCE OF PROTECTING THE EXISTING TREES. ADDITIONALLY, EROSION AND SEDIMENT CONTROL PLAN PHASE I PROVIDES A NOTE ABOUT THE INSTALLATION OF THE STONE CONSTRUCTION ENTRANCE TO REFER TO SHEET LF-01 FOR ROOT PROTECTION MATTING. STORMWATER RUNOFF FROM THE SITE IS IN THE FORM OF SHEET FLOW TO THE SOUTHEAST. RUNOFF COLLECTED AND TREATED BY THE PROPOSED URBAN BIORETENTION FACILITY WILL BE PIPED AND DAYLIGHT INTO THE EXISTING FACE OF CURB AT THE NORTHWEST CORNER OF THE PARKING LOT. STORMWATER QUALITY AND QUANTITY CONTROL TREATMENT REQUIREMENTS ARE MET BY THE INSTALLATION OF THE URBAN BIORETENTION FACILITY AND REFORESTATION. EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN PROVIDED FOR BOTH DEMOLITION AND PROPOSED PHASES OF THE SITE WORK.

REFER TO SHEET REF-01 FOR REFORESTATION AREA DETAILS, DIMENSIONS, PLANTINGS AND LONG-TERM MAINTANANCE PLAN.

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:
JUAN DU/DPR	801 SOUTH SCOTT STREET ARLINGTON, VA 22204

Section 1: Brief description of exception request

N/A

Section 2: Parcel, structure, and ownership information

Date parcel ownership began: 3/8/1977

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:

POLLUTION PREVENTION NOTES

1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT. UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS: WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.

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

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	Likely Present at Your Project Site?	
External buildings wash down	☐ Yes	☒ No
Uncontaminated foundation or footing drains	☒ Yes	☐ No
Uncontaminated excavation dewatering	☒ Yes	☐ No
Landscape irrigation	☐ Yes	☒ No
Others [describe]	☐ Yes	☐ No

5.0 Potential Sources of Pollution & Pollution Prevention Practices

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

Pollution Prevention Practices:

(1) **Clearing, grading, excavating and un-stabilized areas** – Utilize erosion and sediment controls to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.

(2) **Paving operations** – Cover storm drain inlets during paving operations and utilize pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids.

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

(4) **Structure construction, stucco, painting and cleaning** – Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix paint indoors, in a containment area or in a flat unpaved area. Prevent the discharge of soaps, solvents, detergents and wash water from construction materials, including the clean-up of stucco paint, form release oils and curing compounds.

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

(6) **Material delivery and storage** – Designate areas of the construction site for material delivery and storage. Place near construction entrances, away from waterways, and avoid transport near drainage paths or waterways.

(7) **Material use during building process** – Use materials only where and when needed to complete the construction activity. Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals.

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

(9) **Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities. Locate sanitary facilities in a convenient location away from waterways.

(10) **Landscaping operations** – Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Apply nutrients in accordance with manufacturer's recommendations and not during rainfall events.

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

7.0 Spill Prevention & Response

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

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

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

Emergency Contacts:

Normal Working Hours

DEQ Northern Regional Office	703-583-3800

Nights, Holidays & Weekends

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

Local Contacts

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

ARLINGTON VIRGINIA
Approved: 4/16/2020
Subject to field inspection
LDA200004

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

Towers Park Playground Renovations

By Right (County Project)

801 SOUTH SCOTT STREET
ARLINGTON, VA 22204

Sheet Title

WATER QUALITY IMPACT ASSEMENT AND POLLUTION PREVENTION PLAN

100% Construction Drawings

Approval Date

Design Manager

Revisions Date

Designed: CMB
Drawn: KRF
Checked: CMB

Filename: C-23-CW01-150396021.dwg
Plotted: 2020-03-12

Scale: 1" = 20'
Date: MARCH 13, 2020

Seal

COMMONWEALTH OF VIRGINIA
Jeffery Mark Sinclair Jr
Digitally signed by Jefferson Keith Sinclair Jr
Date: 2020.03.12 09:46:30-04'00'
J. KEITH SINCLAIR, JR.
Lic. No. 11195
PROFESSIONAL ENGINEER

Sheet C-22

Path: X:\Chantilly\15-0396.021 - Towers Park Playground Renovations\05-CAD\ Filename: C-23-CW01-150396021.dwg

ITEM: BELT SWINGS
MODEL ZZXX0818,0819
MANUFACTURER: PLAYGROUND SPECIALISTS INC.
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (800) 385-0075
ADDRESS: 29 APPLES CHURCH RD THURMONT, MD 21788
WEBSITE: WWW.PLAYSPEC.COM

1 / L-01A DOUBLE BAY SINGLE POST SWING FRAME

NTS

ITEM: BUCKET SWING SEAT
MODEL NO: ZZXX0265
MANUFACTURER: PLAYWORLD
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (800) 385-0075
ADDRESS: 29 APPLES CHURCH RD THURMONT, MD 21788
WEBSITE: WWW.PLAYSPEC.COM

ITEM: BELT SWING SEAT
MODEL NO: ZZXX0260
MANUFACTURER: PLAYWORLD
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (800) 385-0075
ADDRESS: 29 APPLES CHURCH RD THURMONT, MD 21788
WEBSITE: WWW.PLAYSPEC.COM

IA / L-01A BUCKET & BELT SWING SEAT

NTS

NOTE:
FOUNDATION OF ALL PLAY EQUIPMENT SHALL BE PROVIDED BY CONTRACTOR, PER MANUFACTURER'S RECOMMENDATIONS.

This item is not provided by KOMPAN design studio/Corocord

Materials and dimensions of the mounds need to be confirmed locally!
The shown design of the mound is only for conceptual purposes!

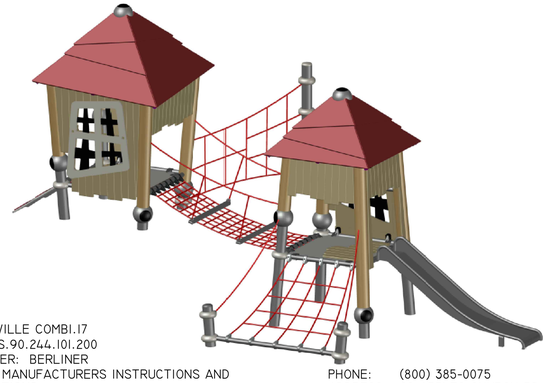
COROCORD19-0098-2C1

ITEM: JELLYFISH TOWER
MODEL NO: COROCORD19-0098-2C1
MANUFACTURER: KOMPAN
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (301) 213-6433
ADDRESS: 10211 CONNECTICUT AVE KENSINGTON, MD 20895
WEBSITE: WWW.KOMPAN.US

3 / L-01A JELLYFISH TOWER

NTS



ITEM: WOODVILLE COMBI.17
MODEL NO: US.90.244.101.200
MANUFACTURER: BERLINER
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (800) 385-0075
ADDRESS: 29 APPLES CHURCH RD THURMONT, MD 21788
WEBSITE: WWW.PLAYSPEC.COM

5 / L-01A WOODVILLE TOWERS

NTS

ITEM: NET TWISTER
MODEL NO: IG110 COR203001-1101
MANUFACTURER: KOMPAN
INSTALL PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
COLORS TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PHONE: (301) 213-6433
ADDRESS: 10211 CONNECTICUT AVE KENSINGTON, MD 20895
WEBSITE: WWW.KOMPAN.US

6 / L-01A NET TWISTER

NTS

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS PLAY EQUIPMENT

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: L-01_DETL-PLAYEQUIP.DWG
Plotted: Feb. 11, 21

Scale: VARIES
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

L-01A

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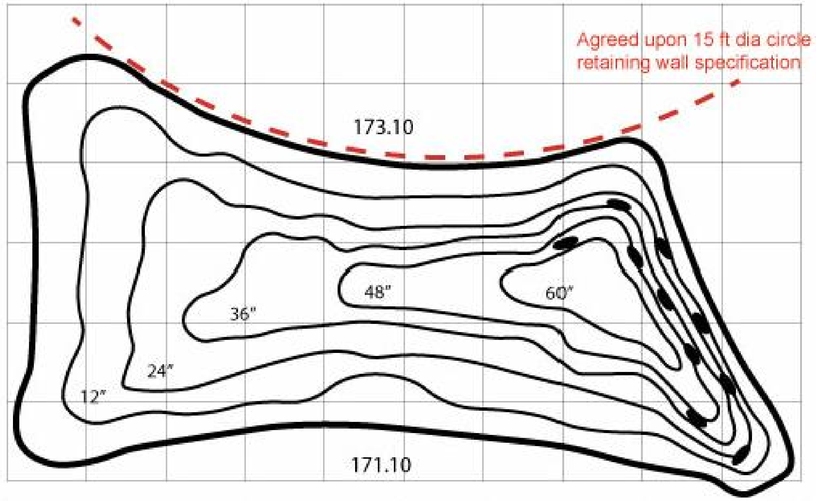
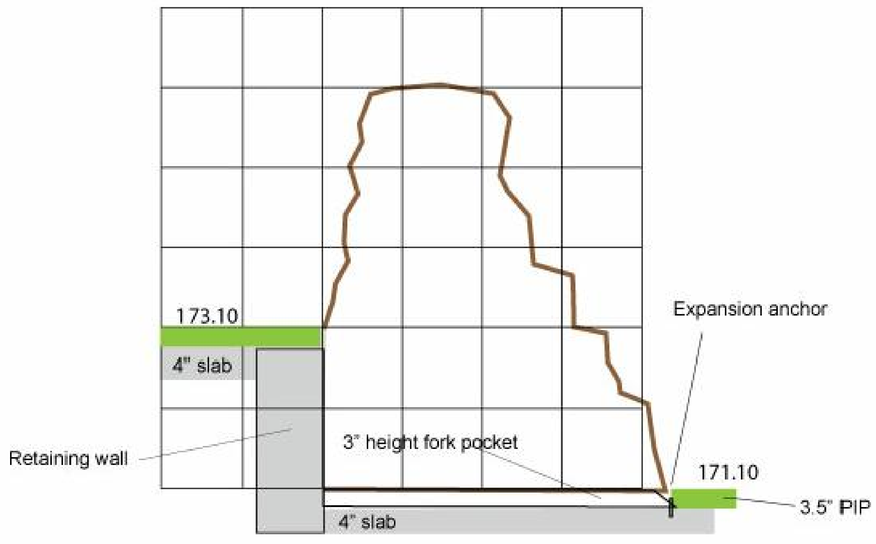
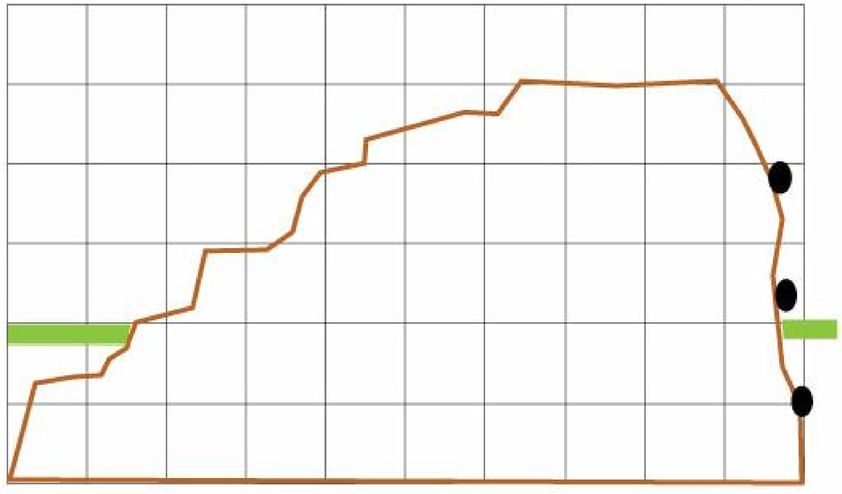
Rock Climber

Design Details #1142042-01-03
Custom GFRC Sloped Climber - 2 sided
Approximately 10' W x 5' H x 5' Depth
Morphic footprint and low relief angular rock surfacing
Colors to be similiar to picture

Construction Details
Built with welded internal steel tubing and rebar skeleton
18 gauge expanded metal is welded to the entire exterior
Coated with 1" sprayed (GFRC) sculptural concrete
Painted with concrete paint / stain
Ages 5- 12
Bury depth to match 3.5" PIP







Conceptual design only and is subject to possible changes

Custom GFRC lead times can be 12 weeks

Arlington Custom Climber Sparks@Play 2-8-2020

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS
PLAY EQUIPMENT
ROCK CLIMBER

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: L-01_DETL-PLAYEQUIP.DWG
Plotted: Feb. 11, 21

Scale: NTS
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

L-01B

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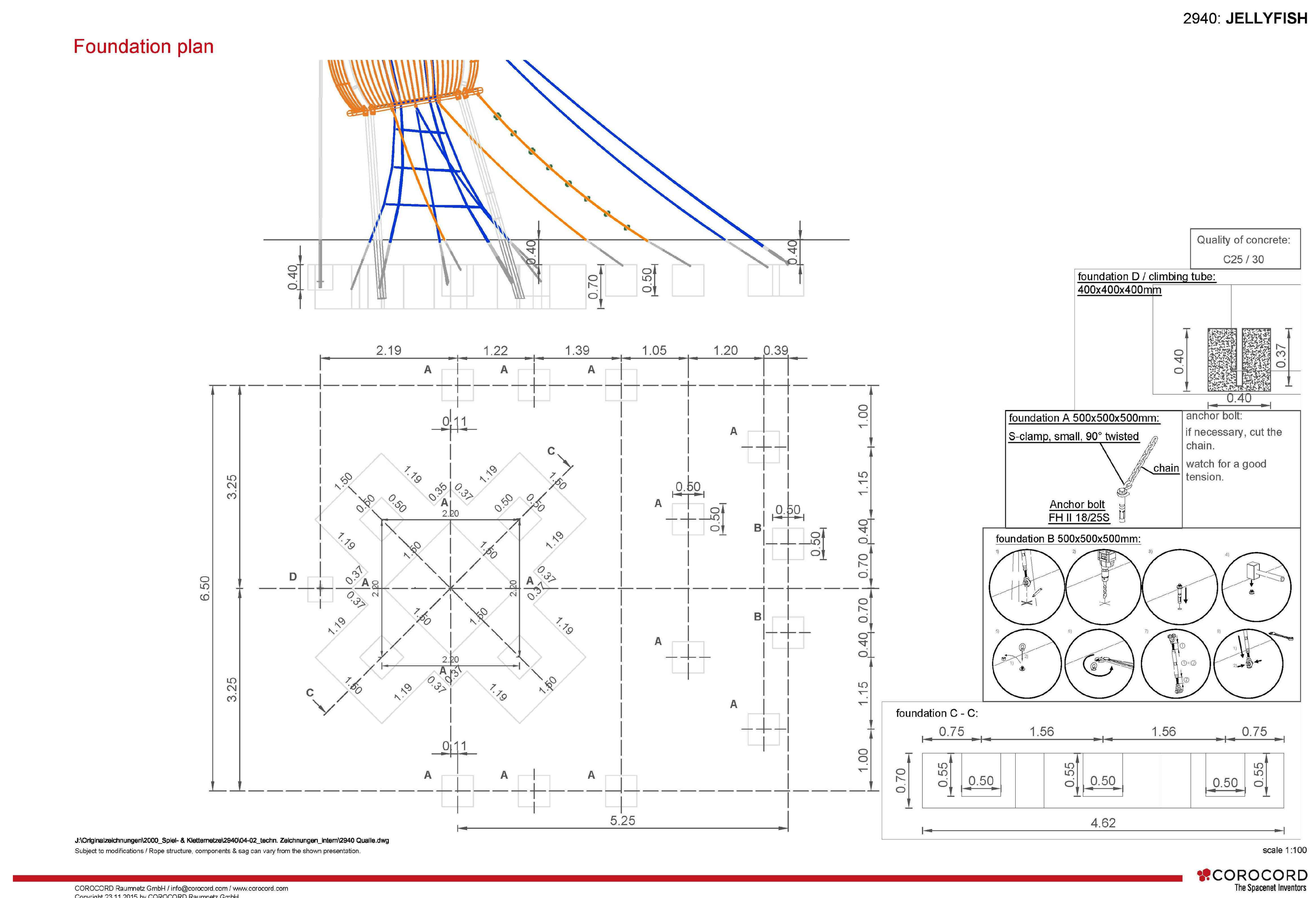

1 L-01C JELLYFISH_TOWER_FOOTING_DETAIL
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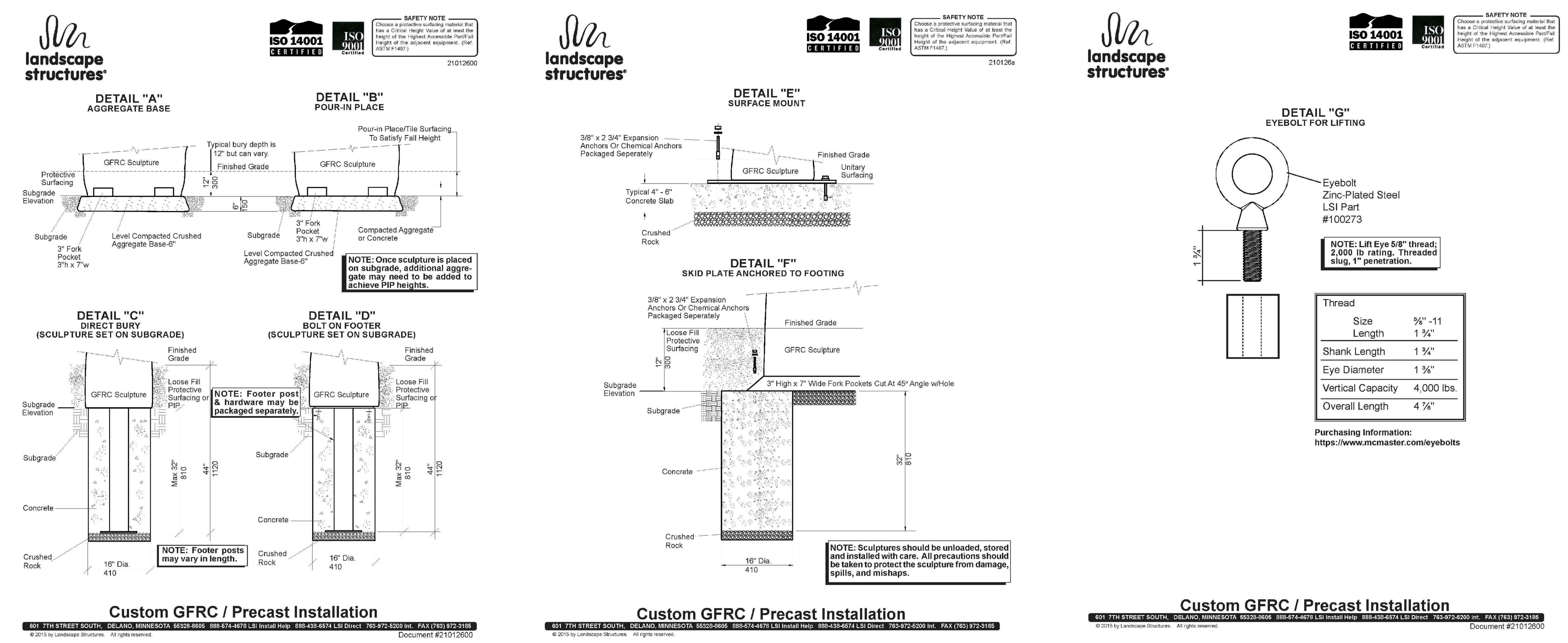
NTS



2 L-01C GFRC_ROCK_CLIMBER_FOOTING_DETAIL
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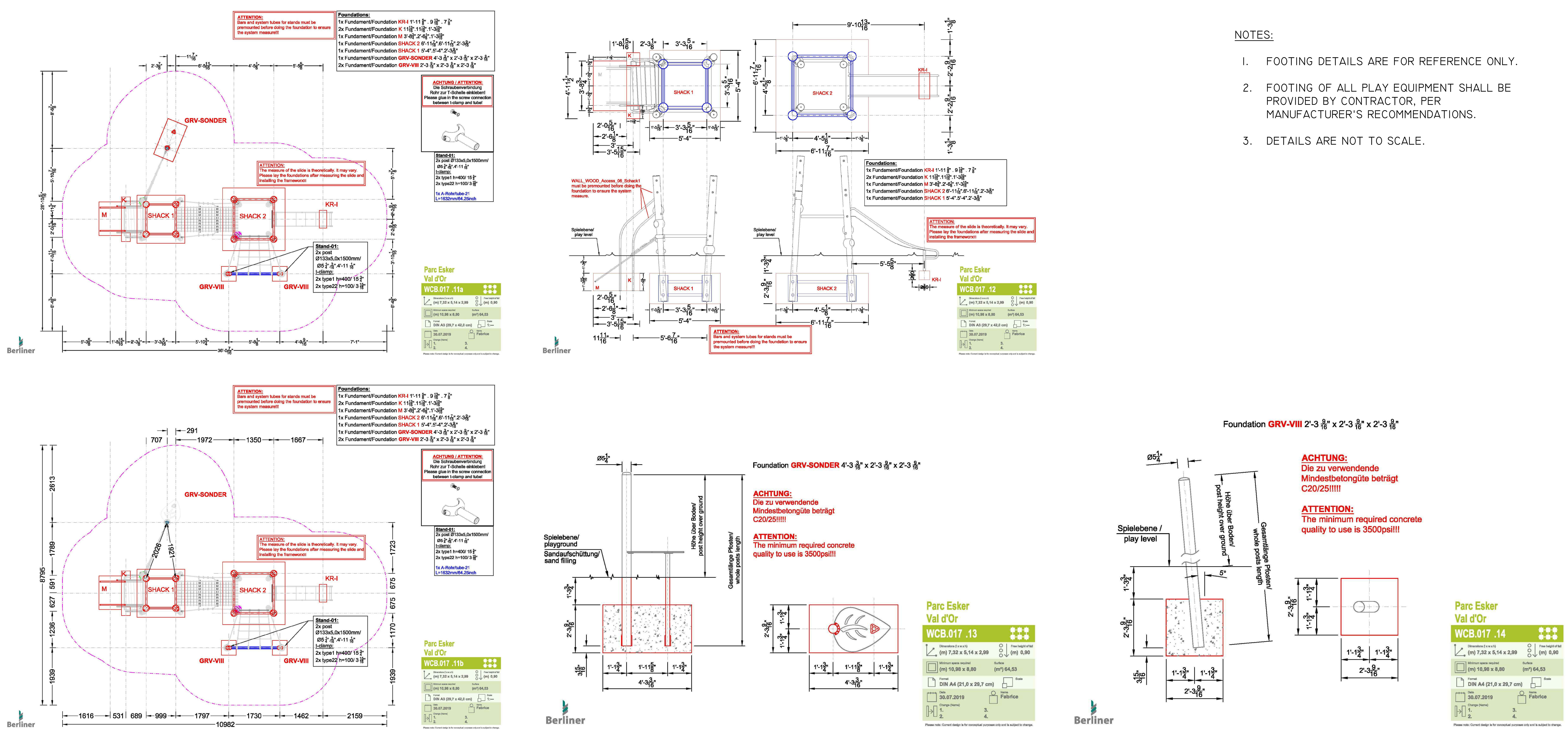
NTS

NOTES:

1. FOOTING DETAILS ARE FOR REFERENCE ONLY.
2. FOOTING OF ALL PLAY EQUIPMENT SHALL BE PROVIDED BY CONTRACTOR, PER MANUFACTURER'S RECOMMENDATIONS.
3. DETAILS ARE NOT TO SCALE.



3 L-01C WOODVILLE_COMBI._17_FOOTING_DETAIL
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NTS

ARLINGTON VIRGINIA
DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location
TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

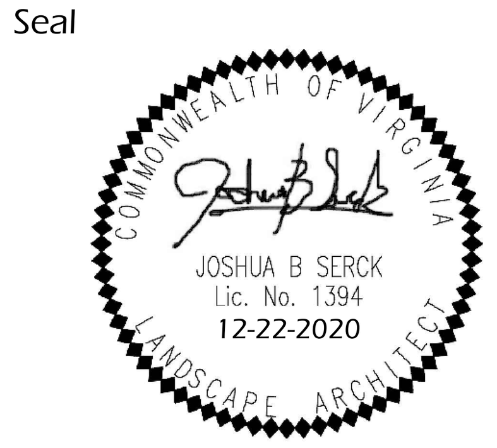
Sheet Title
SITE DETAILS PLAY EQUIPMENT FOOTING DETAILS

Approval | Date
Design Supervisor

Revisions | Date

Designed:
Drawn:
Checked:
Filename: L-01_DETL-PLAYEQUIP.DWG
Plotted: Feb. 11, 21
Scale: NTS
Date: DECEMBER 20, 2019

Seal



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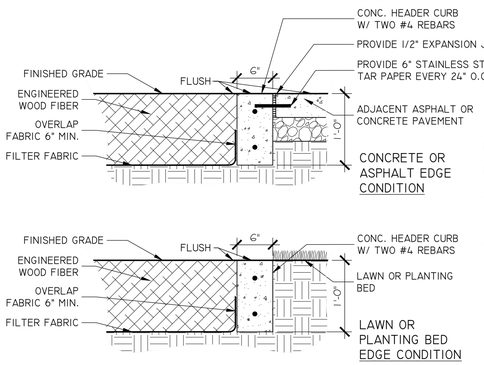
L-01C

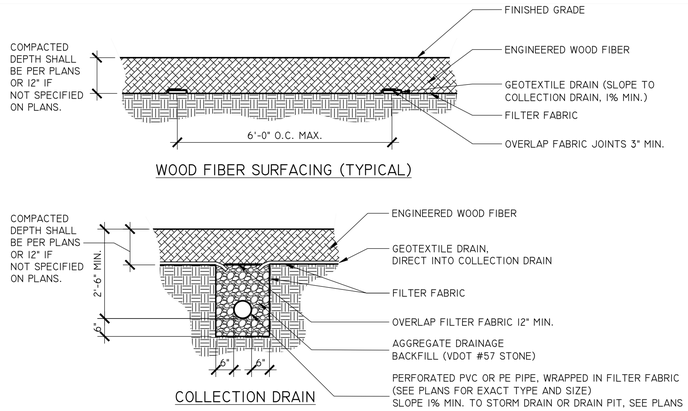


NOTES:

1. SEE PLANS FOR EXACT EDGE CONDITIONS.
2. INSTALL SO THAT NO TRIPPING HAZARDS OR IMPEDIMENTS TO PERSONS WITH DISABILITIES EXIST WHEN COMPLETED.
3. SEE APPROPRIATE DETAILS FOR ASPHALT AND/OR CONCRETE PAVING.

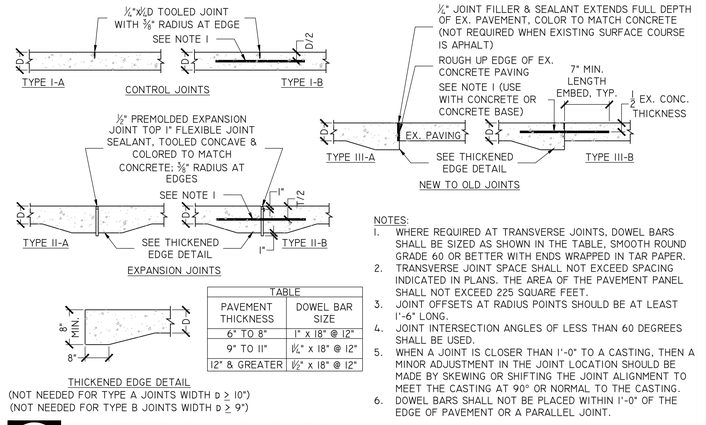
1 L-02 ENGINEERED WOOD FIBER EDGE CONDITIONS

SECTION — 1"= 1'-0"



2 L-02 ENGINEERED WOOD FIBER

02791.1 (2013) — 1/2" = 1'-0"



NOTES:

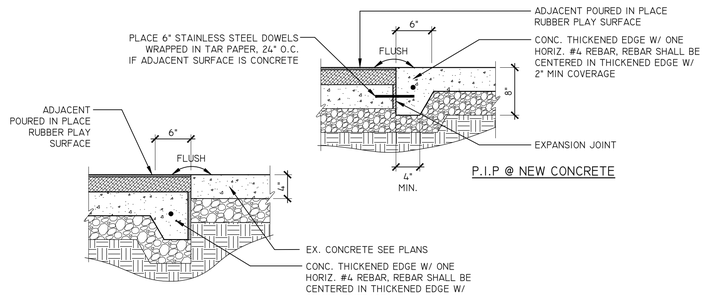
1. WHERE REQUIRED AT TRANSVERSE JOINTS, DOWEL BARS SHALL BE SIZED AS SHOWN IN THE TABLE, SMOOTH ROUND GRADE 60 OR BETTER WITH ENDS WRAPPED IN TAR PAPER.
2. TRANSVERSE JOINT SPACE SHALL NOT EXCEED SPACING INDICATED IN PLANS. THE AREA OF THE PAVEMENT PANEL SHALL NOT EXCEED 225 SQUARE FEET.
3. JOINT OFFSETS AT RADIUS POINTS SHOULD BE AT LEAST 1'-6" LONG.
4. JOINT INTERSECTION ANGLES OF LESS THAN 60 DEGREES SHALL BE USED.
5. WHEN A JOINT IS CLOSER THAN 1'-0" TO A CASTING, THEN A MINOR ADJUSTMENT IN THE JOINT LOCATION SHOULD BE MADE BY SKEWING OR SHIFTING THE JOINT ALIGNMENT TO MEET THE CASTING AT 90° OR NORMAL TO THE CASTING.
6. DOWEL BARS SHALL NOT BE PLACED WITHIN 1'-0" OF THE EDGE OF PAVEMENT OR A PARALLEL JOINT.

THICKENED EDGE DETAIL
(NOT NEEDED FOR TYPE A JOINTS WIDTH D ≥ 10")
(NOT NEEDED FOR TYPE B JOINTS WIDTH D ≥ 9")

TABLE	
PAVEMENT THICKNESS	DOWEL BAR SIZE
6" TO 8"	1" x 18" @ 12"
9" TO 11"	1¼" x 18" @ 12"
12" & GREATER	1½" x 18" @ 12"

3 L-02 CONCRETE PAVING JOINTS

SECTION 031500.X — NTS

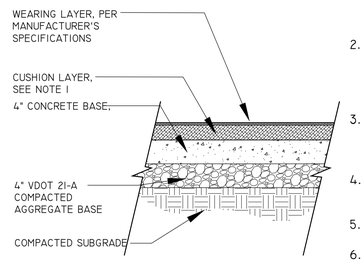


P.I.P @ EX CONCRETE

NOTES:
1.CONSTRUCT EXPANSION JOINTS AT 10' INTERVALS (STD.) AT BEGINNING AND ENDS OF ALL CURVE P.O.T'S AT STRUCTURES AND AT MIDPOINT OF ALL CURB RETURNS, MAX. & MIN. DISTANCES SHALL BE 13' & 6' RESPECTIVELY.
2.USE ½" PRE-FORMED EXPANSION JOINT FILLER, NON EXTRUDING.

4 L-02 POURED IN PLACE SAFETY SURFACING EDGE CONDITION

321817 — 1"=1'-0"

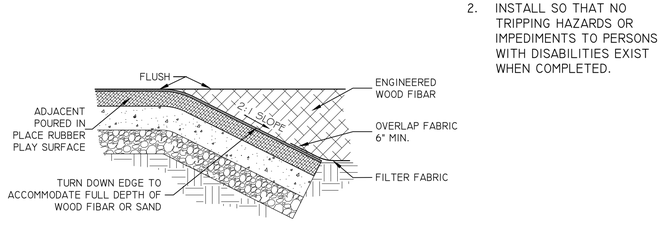


NOTES:

1. POURED-IN-PLACE RUBBER CUSHION LAYER SHALL BE, AT A MINIMUM, AN ADEQUATE THICKNESS FOR THE FALL HEIGHT OF THE PLAY EQUIPMENT IN THE AREA, AS PER THE MANUFACTURER'S RECOMMENDATIONS.
2. IF TRANSITIONS BETWEEN DEPTHS OF POURED-IN-PLACE ARE NEEDED, ACCOMMODATE THE TRANSITIONS BELOW GRADE SO THAT FINISHED GRADE IS ALWAYS FLUSH.
3. WEARING LAYER COLORS SHALL BE SELECTED BY LANDSCAPE ARCHITECT, SOLID COLOR, NO MORE THAN 10% BLACK, REFER TO SPECIFICATIONS.
4. PROVIDE 6" x 6"WELDED WIRE STEEL FABRIC REINFORCEMENT IN THE CONCRETE BASE.
5. SEE PLANS FOR LOCATIONS OF SPECIFIC EDGE CONDITIONS.
6. ENSURE THAT NO TRIPPING HAZARDS OR IMPEDIMENTS EXIST AT FINISHED GRADE AND ENSURE SMOOTH TRANSITIONS.

5 L-02 POURED IN PLACE SAFETY SURFACING

321817 — 1"=1'-0"



NOTES:

1. SEE PLANS FOR EXACT EDGE CONDITIONS.
2. INSTALL SO THAT NO TRIPPING HAZARDS OR IMPEDIMENTS TO PERSONS WITH DISABILITIES EXIST WHEN COMPLETED.

6 L-02 POURED IN PLACE TURN DOWN EDGE CONDITION

321817 — 1"=1'-0"

NOTES:

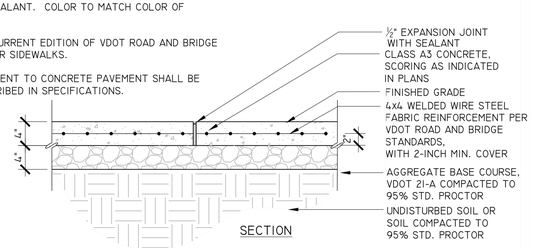
1. THIS DETAIL IS INTENDED FOR NON-RIGHT-OF-WAY APPLICATIONS ONLY. ALL CONCRETE PAVEMENT WITHIN COUNTY RIGHT-OF-WAY SHALL BE CONSTRUCTED PER ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) STANDARDS.

2. JOINTS: PROVIDE EXPANSION JOINTS EVERY 20' O.C. UNLESS OTHERWISE INDICATED IN PLANS AND AROUND HARD OBJECTS SUCH AS HYDRANTS, MANHOLE COVERS, EXISTING PAVEMENTS, ETC. PROVIDE HAND-TOOLED CONTROL JOINTS EVERY 5' O.C. OR AS SHOWN ON THE PLANS. CONTROL (SCORE) JOINTS SHALL BE CUT TO ¼ DEPTH OF TOTAL CONCRETE THICKNESS.

3. EXPANSION JOINTS SHALL BE DOWELED TO PREVENT FUTURE DIFFERENTIAL SETTLEMENT AND SEALED WITH SEALANT. COLOR TO MATCH COLOR OF CONCRETE.

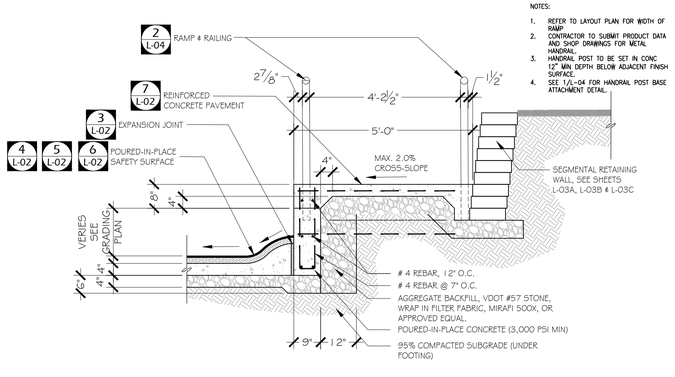
4. FINISH IN ACCORDANCE WITH CURRENT EDITION OF VDOT ROAD AND BRIDGE SPECIFICATIONS SECTION 404.7 FOR SIDEWALKS.

5. DISTURBED LAWN AREAS ADJACENT TO CONCRETE PAVEMENT SHALL BE BACKFILLED AND SEEDED AS DESCRIBED IN SPECIFICATIONS.



7 L-02 REINFORCED CONCRETE PAVEMENT (4" THICKNESS)

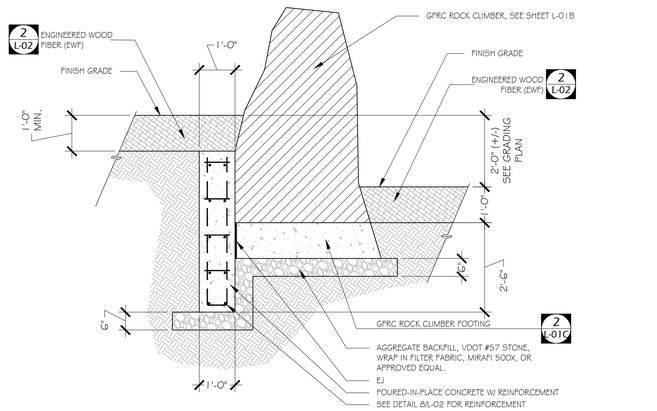
321313.1 (2017) — 1" = 1'-0"



NOTES:
1. REFER TO LAYOUT PLAN FOR WIDTH OF RAMP
2. CONTRACTOR TO SUBMIT PRODUCT DATA AND SHOP DRAWINGS FOR METAL HANDRAIL.
3. HANDRAIL POST TO BE SET IN CONC. 12" MIN. DEPTH BELOW ADJACENT FINISH SURFACE.
4. SEE 1/L-04 FOR HANDRAIL POST BASE ATTACHMENT DETAIL.

8 L-02 CONC RETAINING CURB W/ RAILING AT RAMP

1/2" = 1'-0"



9 L-02 CONC RETAINING WALL @ GFRC ROCK CLIMBER

1/2" = 1'-0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
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Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS

Approval — Date

Design Supervisor

Revisions — Date

Designed:
Drawn:
Checked:

Filename: L-02_DETL.DWG
Plotted: Feb. 11, 21

Scale: VARIES
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

L-02

No. 33 of 41

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GEOGRID-REINFORCED SOIL MODULAR BLOCK RETAINING WALLS

KEYSTONE® 4" CENTURY
SEGMENTAL RETAINING WALL SYSTEM, OR EQUIVALENT

SEGMENTAL BLOCK RETAINING WALLS GENERAL NOTES:

1. PROPERTIES OF THE RETAINING WALL FACING UNITS SHALL CONFORM TO THOSE PRESENTED IN THE PRODUCT LITERATURE FOR THE SELECTED PRODUCT.
2. THE RETAINING WALL FACING UNITS SHALL HAVE A GRANITE COLOR.
3. REINFORCEMENT FOR THIS SEGMENTAL BLOCK RETAINING WALL SYSTEM, SHALL BE MIRAFI XT GEOGRIDS, OR EQUIVALENT, AS APPROVED BY THE ENGINEER.
4. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS OF AASHTO M-288-06, CLASS III (e.g., MIRAFI 140N OR EQUIVALENT).
5. THE GRANULAR LEVELING PAD SHALL CONSIST OF VDOT #21A CRUSHED STONE, VDOT No. 57, OR EQUIVALENT. AN OPTIONAL UNREINFORCED CONCRETE LEVELING PAD MAY BE USED IN LIEU OF A GRANULAR LEVELING PAD.
6. CONSTRUCTION OF THE RETAINING WALL COMPONENTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS. PRIOR TO START OF WALL CONSTRUCTION, THE CONTRACTOR SHALL REVIEW THE MANUFACTURER'S INSTALLATION MANUAL FOR GEOGRID-REINFORCED, AND GRAVITY, SEGMENTAL BLOCK RETAINING WALLS.
7. THE RETAINING WALL DESIGN WAS PERFORMED USING THE KEYWALLPRO DESIGN SOFTWARE).
8. THE RETAINING WALL DESIGN WAS PERFORMED IN ACCORDANCE WITH THE NCMA DESIGN METHOD (3RD EDITION), THE 2015 IBC, AND THE 2015 VUSBC.
9. THESE DRAWINGS HAVE BEEN PREPARED BY AFS Geo Consultants, LLC SOLELY FOR THE USE OF RECOMMENDED SEGMENTAL BLOCK WALL INSTALLATION CONTRACTORS.
10. GEOGRIDS SHALL BE ORIENTED WITH THE ROLL/ STRENGTH DIRECTION PERPENDICULAR TO THE WALL FACE.
11. SLOPE THE FIRST GEOGRID LAYER (LOWEST) ON ALL SECTIONS 5 DEGREES DOWNWARD AND AWAY FROM THE WALL FACE. ALL OTHER LAYERS MAY BE HORIZONTAL.
12. REINFORCED BACKFILL, IF USED, SHALL BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES IN COMPACTED LIFT THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. COMPACTION OF THE NO. 57 AGGREGATE, IF USED WITHIN THE REINFORCED ZONE, MAY BE ACHIEVED BY A MINIMUM OF TWO PASSES OF A VIBRATORY ROLLER OR UNTIL THERE IS NO VISIBLE MOVEMENT OF THE AGGREGATE, AS DETERMINED BY THE ENGINEER. COMPACTION TESTING IS NOT REQUIRED FOR THE NO. 57 STONE BACKFILL.
13. HEAVY COMPACTION EQUIPMENT SHALL NOT BE OPERATED WITHIN THREE FEET OF THE WALL FACE. HAND OPERATED EQUIPMENT SHALL BE USED WITHIN THREE FEET OF FACING UNITS. IMPACT TYPE COMPACTORS SHALL BE KEPT CLEAR OF THE WALL FACE. A REDUCED LIFT THICKNESS OF 4 INCHES SHALL BE USED WITHIN THREE FEET OF THE WALL FACE.
14. ALL WALL DIMENSIONS, WALL STEPS, ETC. ARE APPROXIMATE. CONTRACTOR SHALL ADJUST DIMENSIONS AS REQUIRED TO MEET ACTUAL FIELD CONDITIONS.
15. TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. AFS Geo Consultants CAN NOT ASSUME ANY LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS THEREOF. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, IS THE SOLE RESPONSIBILITY OF THE USER.
16. THE CONTRACTOR SHALL CONSTRUCT THE RETAINING WALL(S) BASED ON THE LINES, GRADES, AND DIMENSIONS SHOWN ON THE APPROVED CIVIL/SWM PLANS. THE CONTRACTOR SHALL ADJUST THE WALL GRADES AND DIMENSIONS TO MEET ACTUAL FIELD CONDITIONS, AS APPROVED BY THE PROJECT CIVIL ENGINEER. AFS Geo Consultants, LLC SHALL BE GIVEN THE OPPORTUNITY TO REVIEW ANY CHANGES TO THE PROPOSED GRADING IN THE VICINITY OF THE RETAINING WALL, TO DETERMINE IF REDESIGN OF THE WALL IS REQUIRED.
17. ALL TEMPORARY EXCAVATIONS SHALL COMPLY WITH OSHA REGULATIONS (BY OTHERS).
18. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FOUNDATION SOILS, REINFORCED BACKFILL, RETAINED BACKFILL, GRANULAR LEVELING PAD, AND DRAINAGE AGGREGATE AGAINST POTENTIAL EROSION AND SCOUR, UNTIL THE FINAL GROUND COVER (ON BOTH SIDES OF EACH WALL) HAS BEEN INSTALLED/FINISHED. STORM WATER RUNOFF SHOULD GENERALLY BE COLLECTED AND DIVERTED AWAY FROM THE RETAINING WALL AREA DURING CONSTRUCTION.
19. THE CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES/EXISTING SLOPES/ROADWAYS ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. STABILITY OF EXISTING STRUCTURES, DURING CONSTRUCTION, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY.
21. THE FOLLOWING SOIL PARAMETERS HAVE BEEN USED FOR THE DESIGN OF THIS RETAINING WALL:

Soil Design Parameters
Segmental Block Retaining Wall

Material	Description	γ (pcf)	Φ (degrees)	C (psf)	Max. Applied Bearing Pressure
Foundation Soils (Note c.)	Approved/Firm Natural Soils, or Approved/Firm Existing Fill	120	**Φf = 27**	0	1,000 psf
Retained Backfill/Soil	Undisturbed Natural Soils, or Approved Fill	120	**Φr = 27**	0	N/A
Reinforced Backfill (Note d.)	Compacted Fill (Sandy ML , SM, or more granular per ASTM D-2487) LL < 45, PI < 20 **5 < pH < 9** %Fines = 70 Max. **Max. Aggregate Size = ¾"**	120	**Φre = 27**	0	N/A

NOTES:

a. DESIGN PARAMETERS ARE BASED ON THE RESULTS OF THE GEOTECHNICAL REPORT PREPARED BY TERRACON, DATED OCTOBER 17, 2019.

b. C = COHESION, Φ = FRICTION ANGLE, G = MOIST UNIT WEIGHT, N/A = NOT APPLICABLE, LL = LIQUID LIMIT, AND PI = PLASTICITY INDEX.

c. MODERATELY TO HIGHLY PLASTIC CLAY AND SILT SOILS (CL/CH AND ML/MH SOIL CLASSIFICATION, WITH A LL ³ 45). IF ENCOUNTERED AT THE FOUNDATION SUBGRADE LEVEL, SHALL BE UNDERCUT A MINIMUM OF 18" BELOW THE BOTTOM OF THE LEVELING PAD AND REPLACED WITH A COMPACTED GRANULAR FILL MATERIAL, OR NO. 57 CRUSHED AGGREGATE, FOR THE ENTIRE WIDTH OF THE REINFORCED ZONE, UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

d. THE REINFORCED BACKFILL MATERIAL SHALL BE SUBSTANTIALLY FREE OF SHALE OR OTHER SOFT, POOR DURABILITY PARTICLES. IF PROCESSED MATERIAL/AGGREGATE IS USED, THE MATERIAL SHALL HAVE A MAGNESIUM SULFATE SOUNDNESS LOSS OF LESS THAN 30 PERCENT AFTER FOUR (4) CYCLES, AS DETERMINED BY ASTM C88-13

e. BEARING CAPACITY AND SETTLEMENT OF THE FOUNDATION SOILS IS THE RESPONSIBILITY OF THE GEOTECHNICAL ENGINEER. ANY UNSUITABLE/LOOSE SOILS AND/OR UNDOCUMENTED EXISTING FILL, ENCOUNTERED AT THE RETAINING WALL'S SUBGRADE SHALL BE REMOVED AND REPLACED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

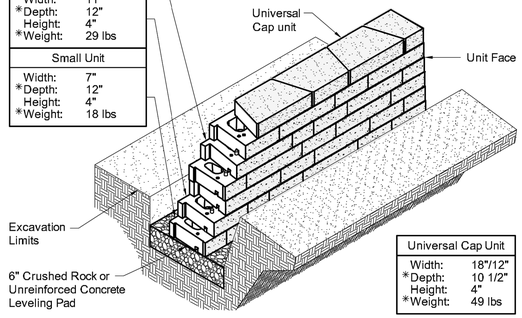
Large Unit	
Width:	18"
*Depth:	12"
Height:	4"
*Weight:	46 lbs

Medium Unit	
Width:	11"
*Depth:	12"
Height:	4"
*Weight:	29 lbs

Small Unit	
Width:	7"
*Depth:	12"
Height:	4"
*Weight:	18 lbs

Base Leveling Pad Notes:

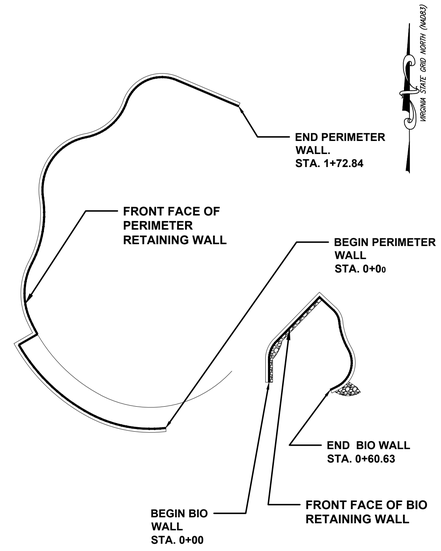
1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.



Universal Cap Unit	
Width:	18"/12"
*Depth:	10 1/2"
Height:	4"
*Weight:	49 lbs

Century Wall Unit/Base Pad Isometric Section View

* Dimensions & Weight May Vary by Region



SEGMENTAL BLOCK WALLS LAYOUT PLAN
SCALE 1" = 20'

AFS Geo Consultants, LLC
Geotechnical Consulting and Retaining Wall Design
7820 LakeLand Valley Dr.
Springfield, VA 22153
Tel: (703) 249-4655
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ARLINGTON VIRGINIA
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Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS - SEGMENTAL RETAINING WALL

–

Approval Date

DESIGN SUPERVISOR DS_DATE
Design Supervisor

Revisions	Date
REV 1	REV 1 DATE
REV 2	REV 2 DATE
REV 1	REV 3 DATE
REV 1	REV 4 DATE
REV 5	REV 5 DATE

Designed:
Drawn:
Checked:

Filename: WALL PLANS_AFS_DEC_20_R1.DWG
Plotted: Dec. 9, 20

Scale: VARIES
Date: December 8, 2020

Seal

COMMONWEALTH OF VIRGINIA
ALY F. SOLIMAN
Lic. No. 023883
12/7/2020
PROFESSIONAL ENGINEER

Sheet L-03A

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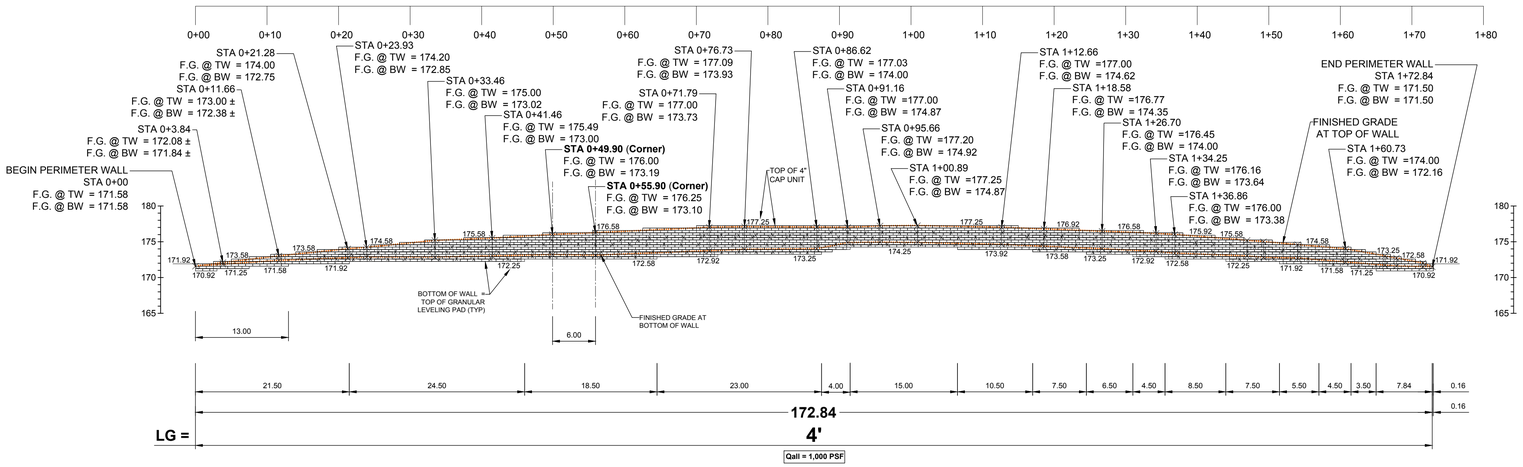
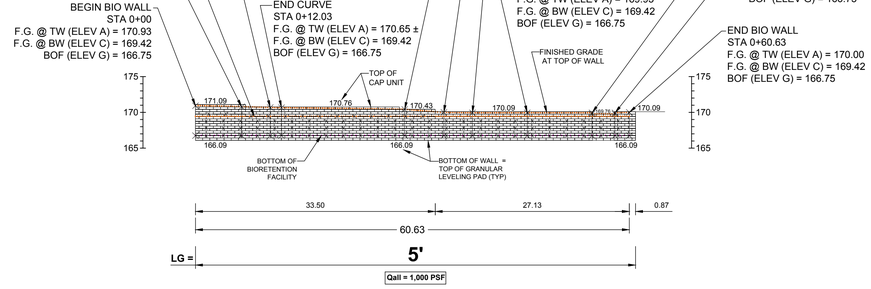


ELEVATION - PERIMETER RETAINING WALL - FRONT FACE
SCALE 1"=10'

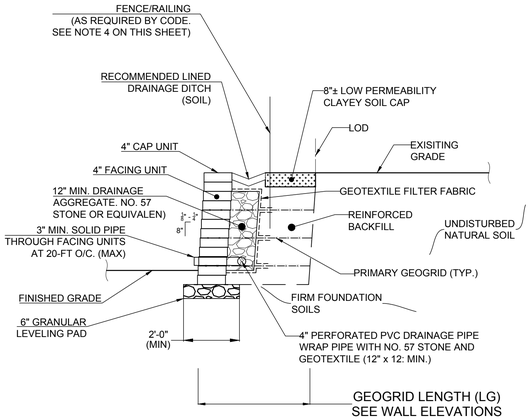


ELEVATION - BIO RETAINING WALL - FRONT FACE
SCALE 1"=10'

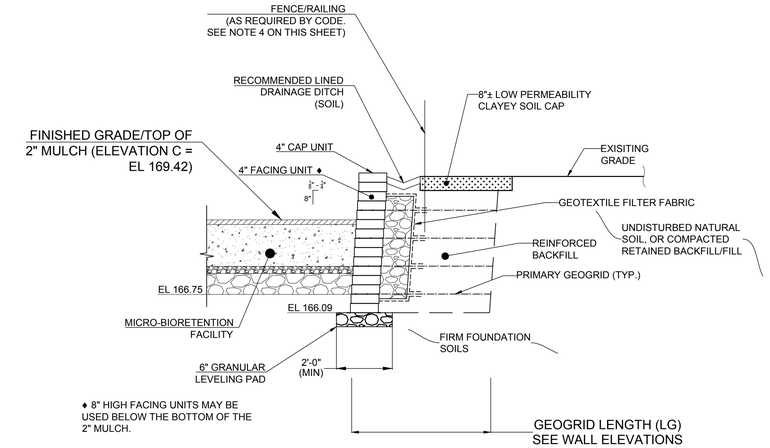
LEGEND:

—x—x—	MIRAFAI 3XT GEOGRIDS.
Qall	APPLIED VERTICAL BEARING PRESSURE
F.G. @TW	FINISHED GRADE AT TOP OF WALL
F.G. @ BW	FINISHED GRADE AT BOTTOM OF WALL
BOF	BOTTOM OF BIO RETENTION FACILITY
LG	LENGTH OF PRIMARY GEOGRIDS (FEET) - REINFORCED WALL

ALL DIMENSIONS ARE IN FEET
ALL STATIONS ARE ALONG FRONT FACE OF WALL



TYPICAL PERIMETER WALL SECTION
SCALE: N.T.S.



TYPICAL BIO WALL SECTION
SCALE: N.T.S.

NOTES:

1. TEMPORARY EXCAVATION SLOPES (IF APPLICABLE) SHALL MEET OSHA REQUIREMENTS, STABILTY OF TEMPORARY EXCAVATION SLOPES IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. OUTLET PERFORATED DRAINAGE PIPES INTO A NEARBY STORM STRUCTURE, OR DAYLIGHT AT LOW ENDS OF WALL, OR USE WEEP HOLES THROUGH THE FACING UNITS (AS SHOWN), AS APPLICABLE. OUTLET DESIGN/SELECTION BY CONTRACTYOR SUBJECT TO APPROVAL OF THE ENGINEER.
3. WRAP ALL PERFORATED DRAINAGE PIPES SURROUNDED BY SOIL BACKFILL WITH NO. 57 STONE AND GEOTEXTILE (12" x 12" MIN.), AS APPLICABLE. ALL OUTLET PIPES SHALL BE SOLID/NON-PEROFRATED.
4. A FENCE, A HANDRAIL, OR OTHER MEANS OF PERMANENT FALL PROTECTION MAY BE INSTALLED ALONG THE TOP OF THE RETAINING WALL(S) WHERE THE EXPOSED RETAINING WALL HEIGHT IS 30 INCHES OR GREATER, OR AS REQUIRED BY LOCAL AUTHORITIES. RAILING HEIGHT IS 3'-6". AS DECTITAED BY THE oWNER
5. THE CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES/EXISTING SLOPES/ROADWAYS ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. STABILITY OF EXISTING STRUCTURES, DURING CONSTRUCTION, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR

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Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS - SEGMENTAL RETAINING WALL

Approval	Date
DESIGN SUPERVISOR	DS_DATE
Design Supervisor	

Revisions	Date
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Designed:
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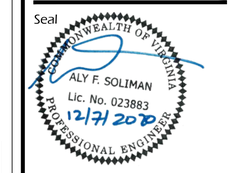
Seal



Sheet

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No. 35 of 41

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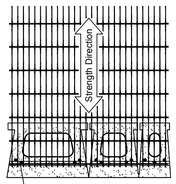
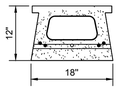
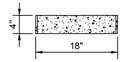


Grid & Pin Connection

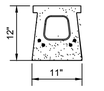
Century Wall Unit Elevation



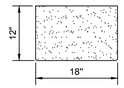
Large Unit Plan



Cap Unit Elevation



Medium Unit Plan



Cap Unit Plan

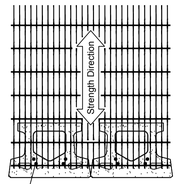
Small Unit Plan

Straight Split Cap Unit

Century Wall Unit

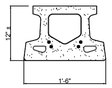
* Dimensions & Availability Will Vary by Region

4" High Units



Grid & Pin Connection

Compac III Elevation



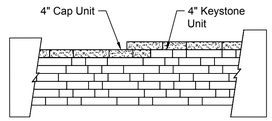
Compac III Plan

Compac III Unit

8" High Units

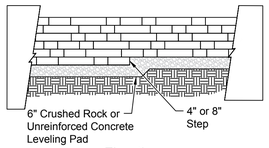
(MAY ONLY BE USED BELOW GRADE)

MODULAR BLOCK UNITS DETAILS N.T.S



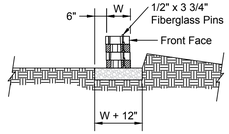
Note:
1. Secure all cap units with Keystone Kapseal or equal.

Top of Wall Steps



Elevation

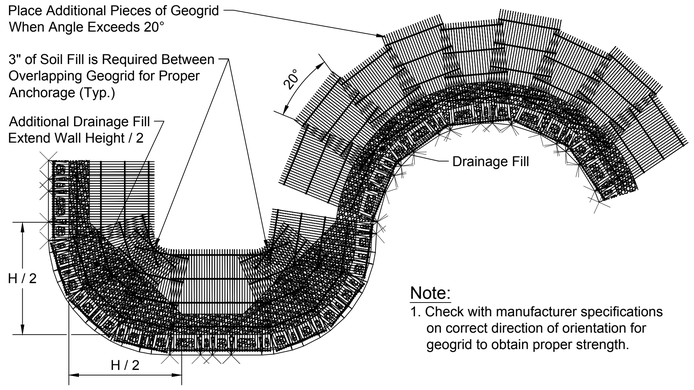
Note:
1. The leveling pad is to be constructed of crushed stone or 2000 psi ± unreinforced concrete.



Section

Leveling Pad Detail

TOP AND BOTTOM OF WALL DETAILS N.T.S



Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.

GEOGRID INSTALLTION ON CURVES N.T.S

AFS Geo Consultants, LLC
Geotechnical Consulting and Retaining Wall Design
7820 LakeLand Valley Dr.
Springfield, VA 22153
Tel: (703) 249-4655
Fax: (703) 249-4656

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS - SEGMENTAL RETAINING WALL

–

Approval Date

DESIGN SUPERVISOR DS_DATE
Design Supervisor

Revisions Date

REV 1 REV 1 DATE
REV 2 REV 2 DATE
REV 1 REV 3 DATE
REV 1 REV 4 DATE
REV 5 REV 5 DATE

Designed:
Drawn:
Checked:

Filename: WALL PLANS_AFS_DEC_20_R1.DWG
Plotted: Dec. 9, 20

Scale: VARIES
Date: DECEMBER 8, 2020

Seal

COMMONWEALTH OF VIRGINIA
ALY F. SOLIMAN
Lic. No. 023883
12/9/2020
PROFESSIONAL ENGINEER

Sheet

L-03C

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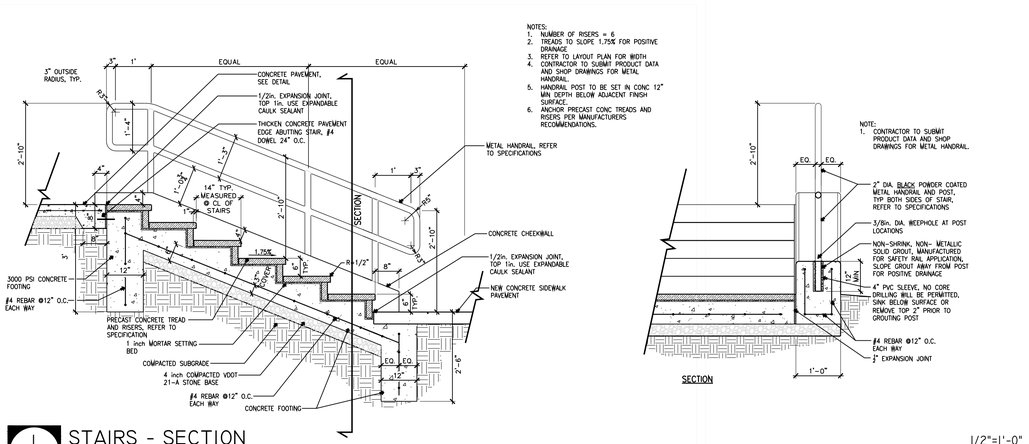
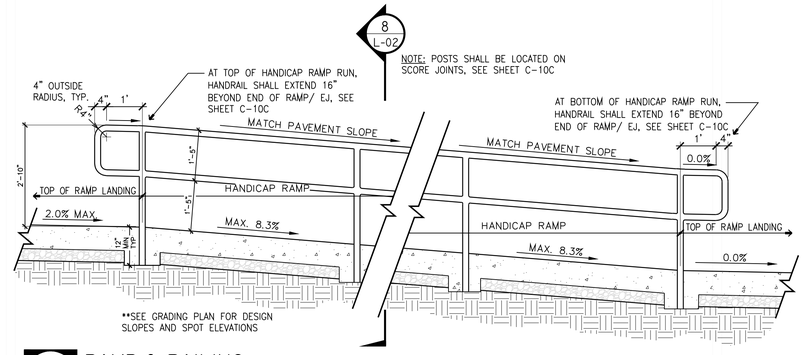
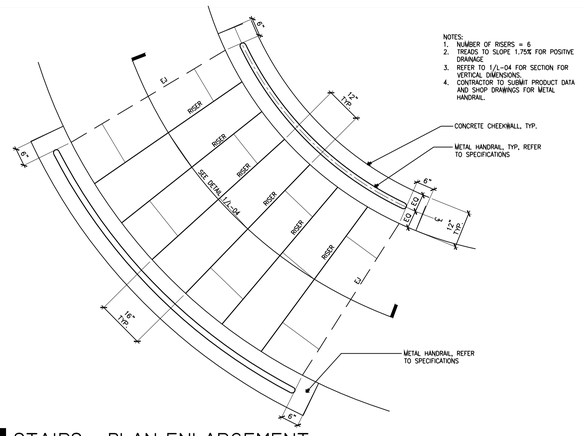


1 L-04 STAIRS - SECTION 1/2"=1'-0"



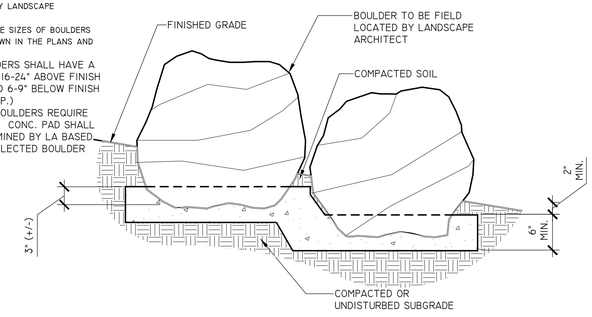
2 L-04 RAMP & RAILING 1/2"=1'-0"



1A L-04 STAIRS - PLAN ENLARGEMENT 1/2"=1'-0"

NOTES:

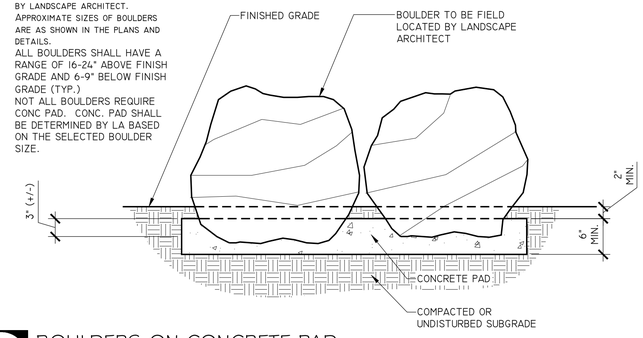
1. BOULDERS SHALL BE PENNSYLANIA MOUNTAIN BOULDERS AS PROVIDED BY TRI-STATE STONE, BETHESDA, MD, OR APPROVED EQUAL.
2. BOULDERS SHALL BE FIELD SELECTED BY LANDSCAPE ARCHITECT.
3. APPROXIMATE SIZES OF BOULDERS ARE AS SHOWN IN THE PLANS AND DETAILS.
4. ALL BOULDERS SHALL HAVE A RANGE OF 16-24" ABOVE FINISH GRADE AND 6-9" BELOW FINISH GRADE (TYP.)
5. NOT ALL BOULDERS REQUIRE CONC PAD. CONC. PAD SHALL BE DETERMINED BY LA BASED ON THE SELECTED BOULDER SIZE.



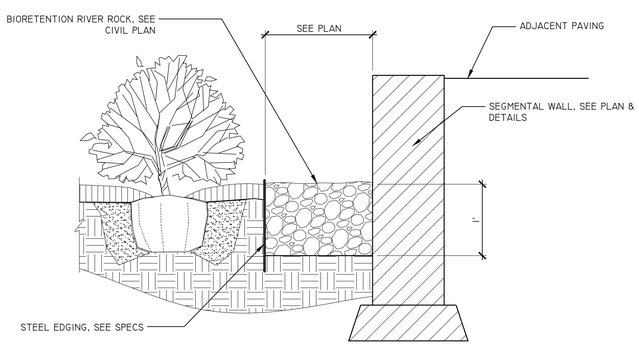
3 L-04 BOULDERS ON SLOPES FILE LOCATION
SECTION 1"= 1'-0"

NOTES:

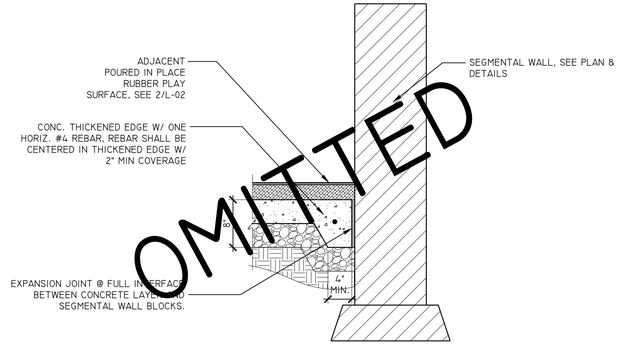
1. BOULDERS SHALL BE PENNSYLANIA MOUNTAIN BOULDERS AS PROVIDED BY TRI-STATE STONE, BETHESDA, MD, OR APPROVED EQUAL.
2. BOULDERS SHALL BE FIELD SELECTED BY LANDSCAPE ARCHITECT.
3. APPROXIMATE SIZES OF BOULDERS ARE AS SHOWN IN THE PLANS AND DETAILS.
4. ALL BOULDERS SHALL HAVE A RANGE OF 16-24" ABOVE FINISH GRADE AND 6-9" BELOW FINISH GRADE (TYP.)
5. NOT ALL BOULDERS REQUIRE CONC PAD. CONC. PAD SHALL BE DETERMINED BY LA BASED ON THE SELECTED BOULDER SIZE.



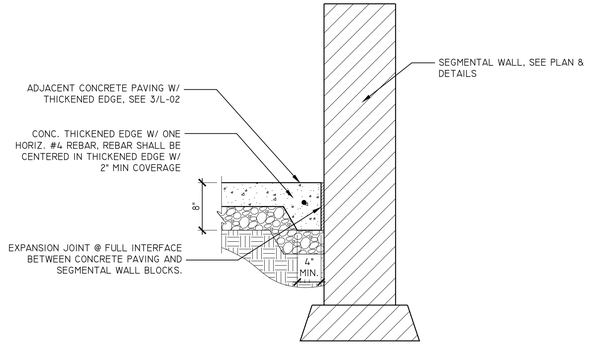
4 L-04 BOULDERS ON CONCRETE PAD FILE LOCATION
SECTION 1"= 1'-0"



5 L-04 RIVERROCK @ SEGMENTAL WALL 1"=1'-0"



6 L-04 PIP SAFETY SURFACING @ SEGMENTAL WALL 1"=1'-0"



7 L-04 CONCRETE PAVING @ SEGMENTAL WALL 1"=1'-0"

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS - WALL, STAIRS & BOULDERS

Approval	Date
DESIGN SUPERVISOR	DS_DATE
Design Supervisor	

Revisions	Date
REV 1	REV 1 DATE
REV 2	REV 2 DATE
REV 1	REV 3 DATE
REV 1	REV 4 DATE
REV 5	REV 5 DATE

Designed:
Drawn:
Checked:

Filename: L-04_DETL-WALL-BOULDER-STAIR.DWG
Plotted: Feb. 11, 21

Scale: VARIES
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

L-04

No. 37 of 41

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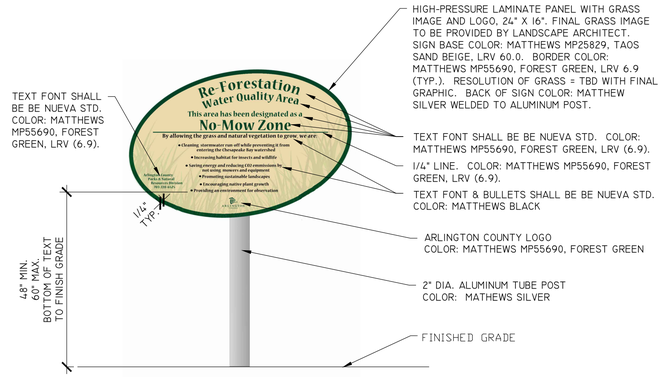
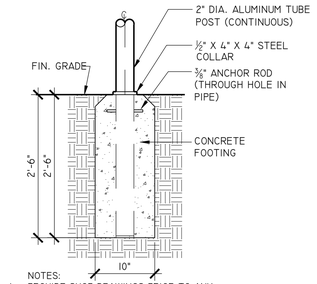


1 L-05 **REFORESTATION SIGN** 1" = 1'-0"

10430.x (2018)



NOTES:
1. PROVIDE SHOP DRAWINGS PRIOR TO ANY FABRICATION.
2. SEE LAYOUT PLAN FOR LOCATIONS.
3. FINAL COLORS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY FABRICATION.
4. SIGNS SHALL BE AS FABRICATED BY ENGRAPHIX ARCHITECTURAL SIGNAGE OR APPROVED EQUAL. SEE SPECIFICATIONS.
5. ENSURE PROPER MOUNTING WITH WELDED BRACKET.
6. WHEN SIGN IS IN POURED-IN-PLACE PLAYGROUND SURFACING, SURFACING SHALL BE ABOVE CONCRETE SIGN FOOTING.

2 L-05 **REFORESTATION SIGN** 1" = 1'-0"

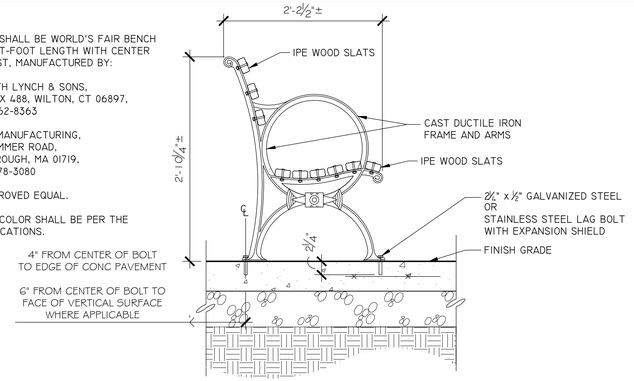
10430.x (2018)

NOTES:
1. BENCH SHALL BE WORLD'S FAIR BENCH IN EIGHT-FOOT LENGTH WITH CENTER ARMREST, MANUFACTURED BY:

   KENNETH LYNCH & SONS,
   P.O. BOX 488, WILTON, CT 06897,
   (203) 762-8363

   TITAN MANUFACTURING,
   235 SUMMER ROAD,
   BOXBOROUGH, MA 01719,
   (800) 378-3080

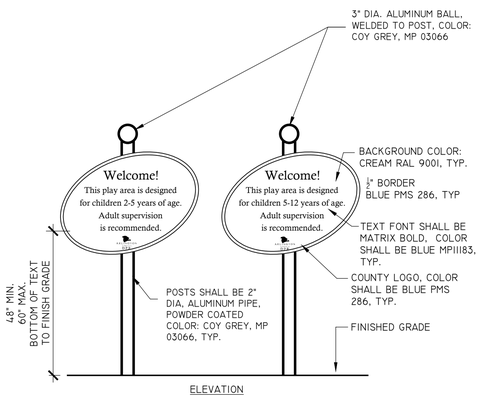
   OR APPROVED EQUAL.
2. METAL COLOR SHALL BE PER THE SPECIFICATIONS.



ALTERNATE ATTACHEMENT CONDITIONS

3 L-05 **1939 WORLD'S FAIR BENCH** 3/4" = 1'-0"

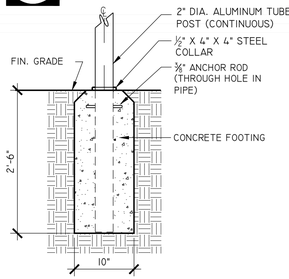
02870.x (2013)



ELEVATION

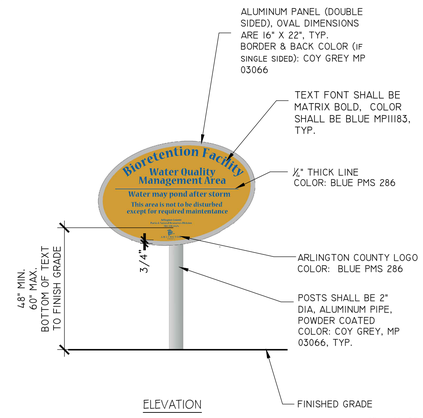
4 L-05 **AGE-APPROPRIATE PLAYGROUND SIGNS** 1" = 1'-0"

10430.4 (2018)



FOOTING DETAIL

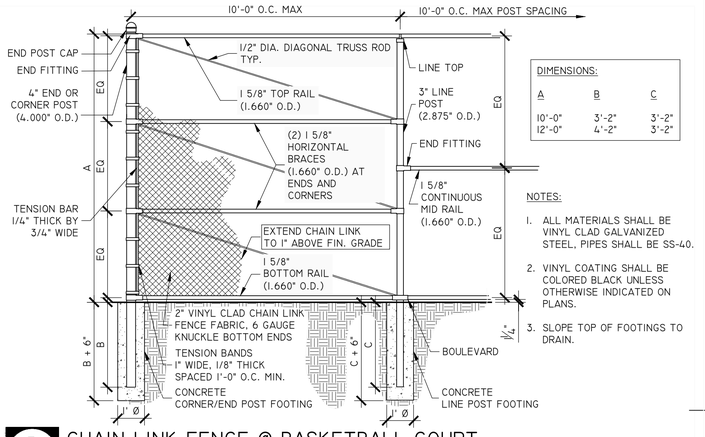
NOTES:
1. PROVIDE SHOP DRAWINGS PRIOR TO ANY FABRICATION.
2. SEE LAYOUT PLAN FOR LOCATIONS.
3. FINAL COLORS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY FABRICATION.
4. SIGNS SHALL BE AS FABRICATED BY ENGRAPHIX ARCHITECTURAL SIGNAGE OR APPROVED EQUAL. SEE SPECIFICATIONS.
5. ENSURE PROPER MOUNTING WITH WELDED BRACKET.
6. WHEN SIGN IS IN POURED-IN-PLACE PLAYGROUND SURFACING, SURFACING SHALL BE ABOVE CONCRETE SIGN FOOTING.



ELEVATION

5 L-05 **BIORETENTION SIGN** 1" = 1'-0"

10430.x (2018)



DIMENSIONS:

A	B	C
10'-0"	3'-2"	3'-2"
12'-0"	4'-2"	3'-2"

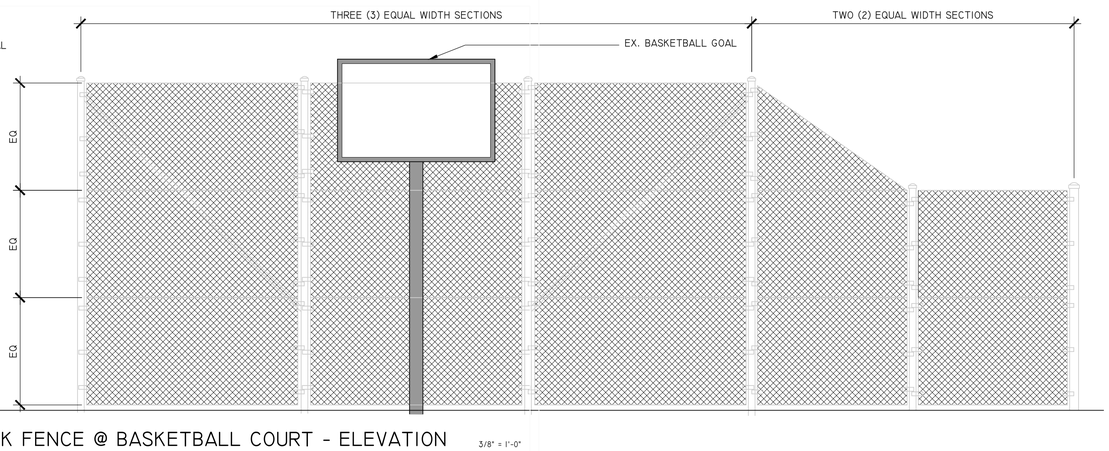
NOTES:
1. ALL MATERIALS SHALL BE VINYL CLAD GALVANIZED STEEL, PIPES SHALL BE SS-40.
2. VINYL COATING SHALL BE COLORED BLACK UNLESS OTHERWISE INDICATED ON PLANS.
3. SLOPE TOP OF FOOTINGS TO DRAIN.

7 L-05 **CHAIN LINK FENCE @ BASKETBALL COURT** 3/8" = 1'-0"

02820.x (2013)

NOTE:

FENCE DIMENSION AND MATERIAL TO MATCH EX FENCE AT OPPOSITE SIDE OF BASKETBALL COURT.



8 L-05 **CHAIN LINK FENCE @ BASKETBALL COURT - ELEVATION** 3/8" = 1'-0"

02820.x (2013)

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

SITE DETAILS - FURNITURE, SIGNAGE & FENCING

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: L-05_DETL-FURNITURE-SIGN.DWG
Plotted: Feb. 11, 21

Scale: VARIES
Date: JUNE 27, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

L-05

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NOTES

1. PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED ON THE APPROVED LANDSCAPE PLAN.

2. PLANTS SHALL BE TYPICAL OF SPECIES AND VARIETY, AND COMPLY WITH THE MOST RECENT ANSI Z60.1 STANDARDS.

3. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.

4. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.

5. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. THE LEADER OF THE TREE SHALL NOT BE CUT BACK. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS. INURED ROOTS SHALL BE PRUNED TO CLEAN ENDS WITH CLEAN, SHARP TOOLS PRIOR TO PLANTING.

6. PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED AND NOTIFY PROJECT OFFICER. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED. ALL PLANTS KEPT ON SITE FOR ANY PERIOD SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.

7. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY. REMOVE ALL TAGS AND TAPE FROM THE PLANTS AFTER PLANTING.

8. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES. PLANTS, OTHER THAN GROUNDCOVER, SHALL NOT BE PLANTED WITHIN 2 FT OF A SIDEWALK. TREE SHALL NOT BE PLANTED WITHIN 5 FT OF A FENCE OR 10 FT OF A BUILDING.

9. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED. PLANTS SHALL BE PLANTED IN HEALTHY, UNCOMPACTED SOIL.

10. REFER TO PLANTING DETAILS AND SPECIFICATIONS FOR SPECIFIC INSTRUCTIONS. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH LOCAL ACCEPTED PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS MUDDY OR IN FROZEN CONDITION. TREES AND SHRUBS SHALL BE INSTALLED BETWEEN SEPTEMBER 15TH AND DECEMBER 15TH OR BETWEEN MARCH 15TH AND JUNE 15TH. CONTACT THE ARLINGTON COUNTY FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.

11. TREES PLANTED SHALL RECEIVE A 3-INCH LAYER OF SHREDDED HARDWOOD MULCH, IN A 6-FOOT RING SURROUNDING THE TREES, WITH A 6-INCH CLEAR AREA NEAR THE TRUNK. REFERENCE TREE PLANTING DETAIL.TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

12. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.

13. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLODS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.

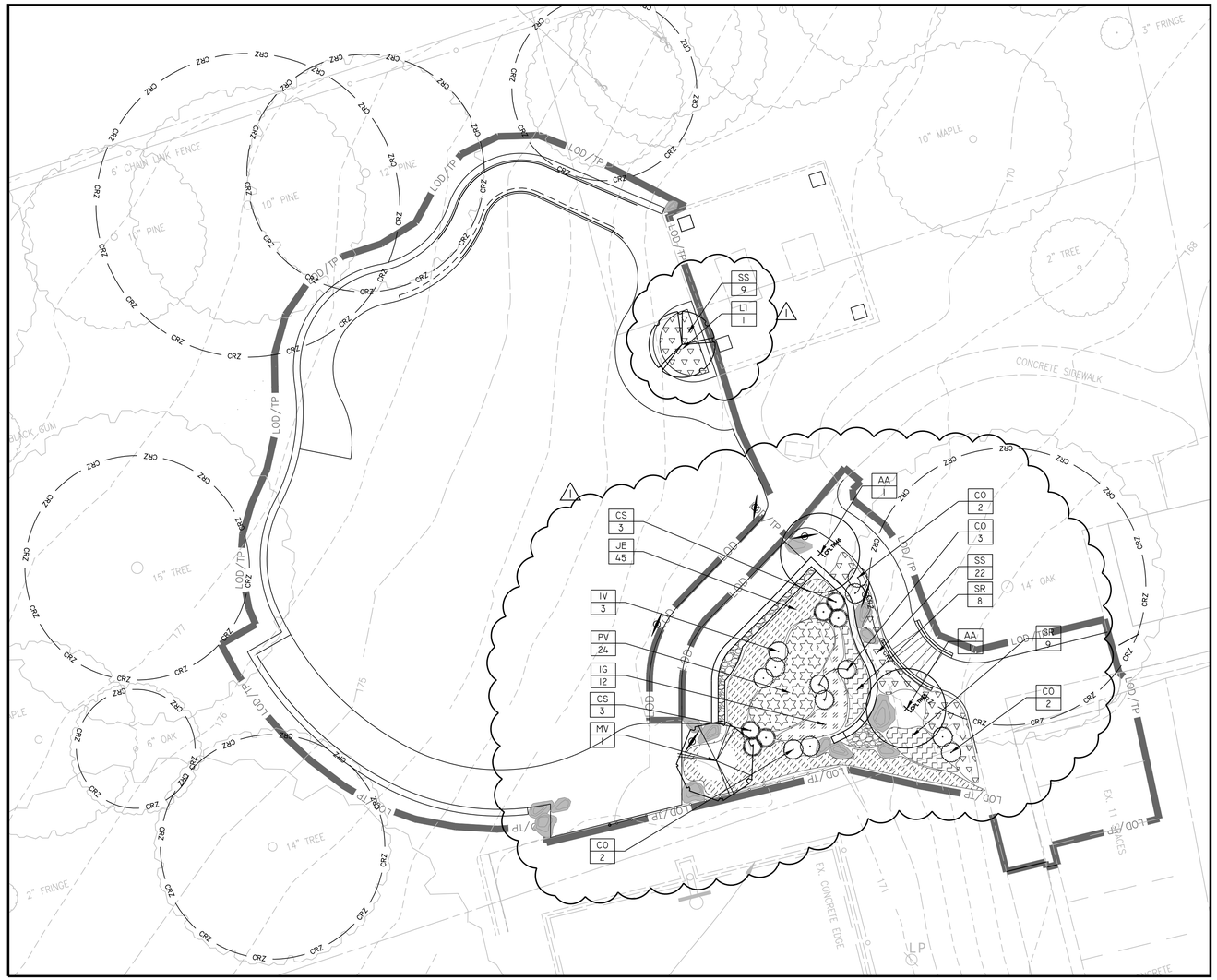
14. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST OF 20 GALLONS PER TREE.

15. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

16. AT PROJECT COMPLETION, PRIOR TO FINAL ACCEPTANCE, PRESERVED AND PLANTED TREES SHALL BE INSPECTED BY AN ARLINGTON COUNTY URBAN FORESTER.

PLANTING SCHEDULE

KEY	QTY.	LATIN NAME	COMMON NAME	SIZE	SPACING	NOTE
TREES						
AA	2	Amenlanchier arborea	Downy Serviceberry	2" Cal.	As shown	B&B, SINGLE STEM, SPECIMEN
LI	1	Lagerstroemia indica 'moskogee'	Crape Myrtle	7'-8'	As shown	B&B, 3 STEM MAX., SPECIMEN
MV	1	Magnolia virginiana	Sweetbay Magnolia	2" Cal.	As shown	B&B, SPECIMEN
SHRUBS						
CS	6	Cornus sericea 'Cardinal'	Red Twig Dogwood	18"-24"	2'-6" O.C.	See Plan
IV	3	Ilex 'Sparkleberry'	Winterberry	18"-24"	2'-6" O.C.	See Plan
CO	9	Cephalanthus occidentalis	Buttonbush	18"-24"	2'-6" O.C.	See Plan
GRASSES						
PV	24	Panicum virgatum	Switch Grass	#1 Cont.	15"-18" O.C.	
SS	31	Schizachyrium scoparium	Little Bluestem	#1 Cont.	15"-18" O.C.	
PERENNIALS						
IG	12	Iris versicolor	Blue Flag Iris	#1 Cont.	15"-18" O.C.	
JE	45	Juncus effusus	Common Rush	#1 Cont.	15"-18" O.C.	
SR	17	Solidago rugosa 'Fireworks'	Rough Goldenrod	#1 Cont.	15"-18" O.C.	



LEGEND:

- EXISTING TREE TO REMAIN
- PROPOSED TREE
- PROPOSED SHRUB
- PROPOSED GRASS / PERENNIAL
- CRZ — CRITICAL ROOT ZONE OF EXISTING TREES (>3"DBH) WITHIN LIMITS OF WORK
- PROPERTY LINE
- LOD/TP — LIMITS OF WORK / TREE PROTECTION FENCE
- LOD — LIMITS OF DISTURBANCE/WORK
- CRZ — LIMITS OF DISTURBANCE/WORK

0 5 10 20
SCALE: 1" = 10' - 0"

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

LANDSCAPE CONSERVATION PLAN & NOTES

Approval Date

Design Supervisor

Revisions Date
1 HATCH ADDED 3/4/21

Designed:
Drawn:
Checked:

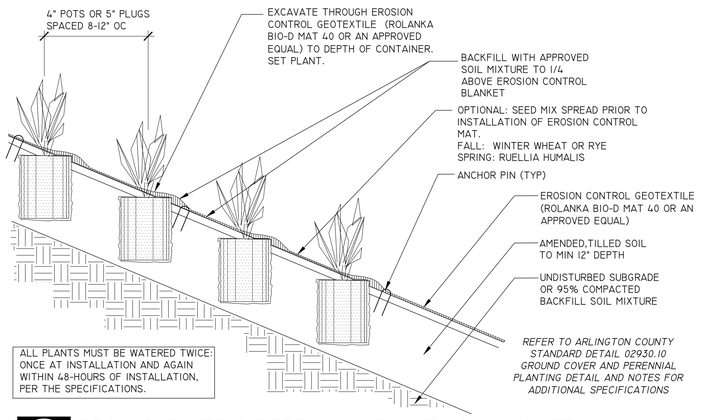
Filename: L-06-07_LA CONSERVATION.DWG
Plotted: Mar. 4, 21

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet
L-06R
No. 38 of 41



1 L-06 GROUND COVER & PERENNIAL PLANTING ON SLOPE

NOT TO SCALE

ELEVATION
329300.12 (2016)

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

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. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.

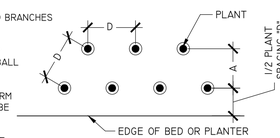
4. GROUND COVERS AND PERENNIALS SHALL BE INSTALLED WITH TRIANGULAR SPACING. REFER TO CHART.

4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR 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 REMOVE EXCESS SOIL & DEBRIS FROM SITE.

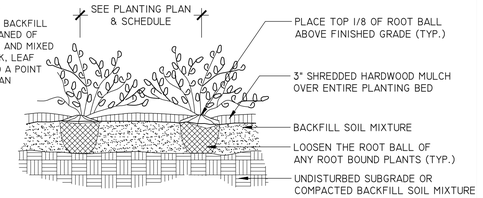
6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF PLANTS.

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



PLANT SPACING "D" O.C.	ROW "A" O.C.	PLANTS PER S.F.
6"	5"	4.00
8"	7"	2.25
9"	8"	1.77
12"	10"	1.00
15"	13"	0.77
18"	16"	0.44

TRIANGULAR SPACING PLAN & CHART
NOT TO SCALE



THIS DETAIL SUPERSEDES ALL OTHER GROUND COVER PLANTING DETAILS IN ARLINGTON COUNTY.

2 L-06 GROUND COVERS & PERENNIAL PLANTING

NOT TO SCALE

ELEVATION
329300.10 (2019)

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

2. PLANTING PIT/TRENCH SHALL BE DUG DEEP ENOUGH TO ALLOW AT LEAST 1/8TH OF ROOT BALL TO SET ABOVE EXISTING GRADE.

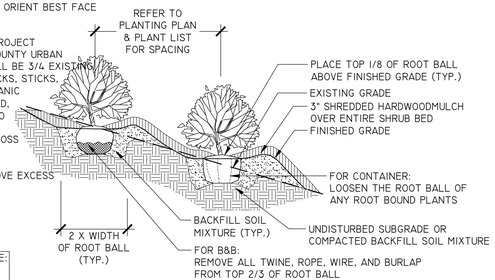
3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS IN THE CENTER OF THE PLANTING PIT. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.

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.

3 L-06 SHRUB PLANTING ON SLOPE

NOT TO SCALE

ELEVATION
329300.9 (2019)

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

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.

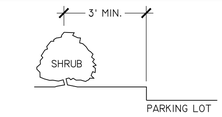
4. UNLESS OTHERWISE DIRECTED BY COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED).

5. CONTRACTOR SHALL REMOVE EXCESS SOIL & DEBRIS FROM SITE.

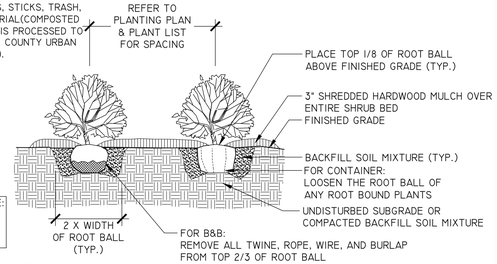
6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF SHRUBS

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

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



TYPICAL SHRUB PLACEMENT NEAR PARKING LOTS
NOT TO SCALE



4 L-06 SHRUB PLANTING

NOT TO SCALE

ELEVATION
329300.8 (2019)

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.

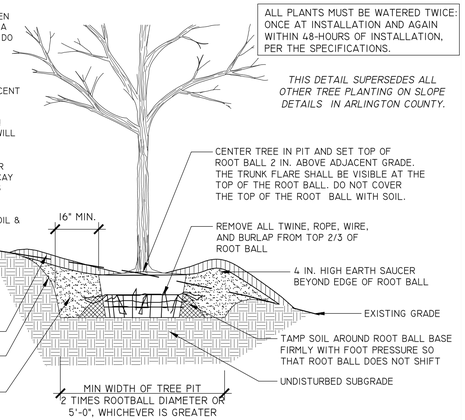
3. UNLESS OTHERWISE DIRECTED BY THE ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY 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.

5 L-06 TREE PLANTING ON SLOPE

1/2" = 1'-0"

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

NOTES
1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.

3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

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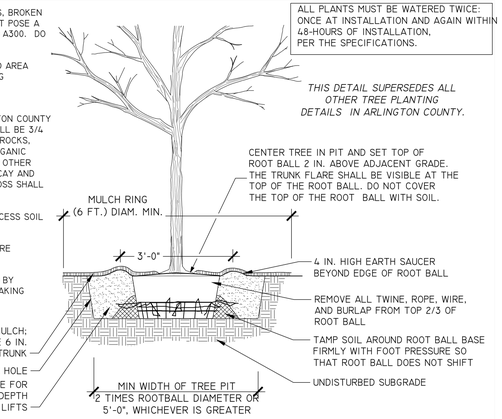

6 L-06 TREE PLANTING DETAIL

NOT TO SCALE

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

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

LANDSCAPE CONSERVATION DETAILS

–

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Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: L-06-07_LA CONSERVATION.DWG
Plotted: Dec. 23, 20

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

Sheet

L-07

No. 40 of 41

MAINTENANCE NARRATIVE

THE REFORESTATION PLOT WILL BE ON PUBLIC LAND MANAGED BY ARLINGTON COUNTY DEPARTMENT OF PARKS AND RECREATION. THIS WILL INCLUDE A LONG-TERM MANAGEMENT PARTNERSHIP BETWEEN PARKS AND NATURAL RESOURCES, CONSISTENT WITH THE PROVISIONS OF THE VSMP REGULATIONS TO ALLOW INSPECTION AND MAINTENANCE. THE PARK AND PLAYGROUND AREAS WILL BE MAINTAINED TO PROVIDE CONTROL OF SEDIMENT RUNOFF AND/OR EROSIVE AREAS. A LONG TERM VEGETATION MANAGEMENT PLAN, INCLUDING AN INVASIVE MANAGEMENT PLAN, AND A PLANTING LIST IS PROVIDED ON THIS SHEET.

ANNUAL INSPECTIONS ARE REQUIRED AND SHOULD BE CONDUCTED IN THE NON-GROWING SEASON TO MAKE IT EASIER TO SEE THE FLOW PATH. THE INSPECTIONS SHOULD CHECK TO ENSURE THAT:

- DEBRIS AND SEDIMENT DOES NOT BUILD UP AT THE TOP OF THE REFORESTATION AREA.
- SCOUR AND EROSION DO NOT OCCUR WITHIN THE REFORESTATION AREA.
- VEGETATED DENSITY EXCEEDS A 90% COVER IN THE REFORESTATION AREA (WITH AN 80% COVER BY THE END OF CONSTRUCTION).
- NO MOWING IS PERMITTED IN THE REFORESTATION AREA AND EDUCATIONAL SIGNAGE AND PHYSICAL DEMARCATION OF THE AREA TO PREVENT ACCIDENTAL MOWING WILL BE PROVIDED.
- STABILITY/MAINTENANCE OF PERIMETER CONTROLS (TREE PROTECTION FENCE, SILT FENCE).

CONSTRUCTION NARRATIVE

THE ENTIRE CONSTRUCTION SEQUENCE CAN BE FOUND ON THE "SEQUENCE OF CONSTRUCTION NARRATIVE" ON THE EROSION AND SEDIMENT CONTROL PLANS. ADDITIONAL NOTES:

- ONLY VEHICULAR TRAFFIC NECESSARY FOR THE REFORESTATION AREA CONSTRUCTION SHOULD BE ALLOWED WITHIN THE DEMOLISHED PLAYGROUND FOOTPRINT OF THE REFORESTATION AREA.
- VEHICULAR ACCESS FOR THE PLANT INSTALLATION SHALL OCCUR FROM THE DEMOLISHED PLAYGROUND ENTRANCE AREA AT SOUTH SCOTT STREET.
- IF EXISTING TOPSOIL IS STRIPPED DURING GRADING, IT SHALL BE STOCKPILED AND STABILIZED FOR LATER USE.
- THE PROPOSED REFORESTATION AREA SHALL HAVE SILT FENCE (SEE EROSION & SEDIMENT CONTROL PLANS) AND TREE PROTECTION FENCE (SEE TREE PRESERVATION PLANS) AROUND THE PERIMETER.

REFORESTATION NOTES:

REFORESTATION IN TOWERS PARK
REFORESTATION AREA: 4,980 SQUARE FEET = 0.11 ACRES
RPA DELINEATION: DETERMINATION IS 100' FROM STREAM BANK

REFORESTATION NOTES:

1. TURF GRASS IN RESTORATION AREA WILL BE TREATED WITH A FOLIAR APPLICATION OF HERBICIDE IN SPRING 2020.
2. IN THE FOLLOWING FALL, AREA WILL BE PLANTED TO 80% DENSITY. REFORESTATION PLANTINGS SHALL BE LAID OUT IN THE FIELD BY CONTRACTOR WITH PROJECT OFFICER AND COUNTY LANDSCAPE ARCHITECT ONSITE. CARE SHALL BE TAKEN TO AVOID ROOTS FOR EXISTING TREES THAT ARE TO BE PRESERVED.
3. INVASIVE PLANT MANAGEMENT (IMP) WILL BE CARRIED OUT FOR 5 YEARS AFTER INSTALLATION OF REFORESTATION PLANTING. REPLACEMENT PLANTINGS WILL BE CARRIED OUT AS NEEDED TO MEET THE COVER GOALS OUTLINED BELOW. THE IMP PLAN WILL BE PERFORMED BY ARLINGTON COUNTY PARKS AND NATURAL RESOURCES DIVISION (PNR) FOR A TOTAL OF 10 VISITS WITHIN 5 YEARS AND THE BI-ANNUAL VISIT WILL INCLUDED INSPECTION AND REPLACEMENT OF PLANTINGS INCLUDING SEEDS. TARGET SPECIES TO BE REMOVED IN THE IMP PLAN WILL BE FROM ARLINGTON COUNTY'S INVASIVE PLANT LIST LOCATED HERE: https://environment.arlingtonva.us/trees/invasive-plants/invasive-plant-program/
4. IN REFORESTATION, TREES MAY BE SPACED SLIGHTLY CLOSER THAN OPTIMAL SPACING FOR STREET TREES AS IS NOTED ON PLANTING LIST TO ENCOURAGE LESS VEGETATION COMPETITION AND MAINTENANCE. THIS SPACING WILL BE DETERMINED IN THE FIELD.
5. STRAW/COCO DOUBLE BIO MAT (ECSC-2B) SHALL BE INSTALLED AROUND ALL NEW PLANTINGS WITHIN REFORESTED AREA TO SUPPRESS COMPETING VEGETATION GROWTH, RETAIN SOIL MOISTURE AND REDUCE EROSION.
6. REFORESTED ARE PLANTINGS SHALL BE PLANTED IN *IN SITU* SOIL AND SHALL BE THOROUGHLY WATERED.
7. ACCESS TO THE REFORESTED PLANTING AREA WILL BE FROM SOUTH SCOTT STREET. THIS ACCESS LOCATION WILL BE VERIFIED AT THE PRE-CONSTRUCITON MEETING.
8. REFORESTATION AND ASSOCIATED SITE WORK SHALL BE PERFORMED BY THE TOWERS PARK PLAYGROUND RENOVATIONS GENERAL CONTRACTOR.
9. LANDSCAPE ARCHITECT WILL PROVIDE A CERTIFICATION INDICATING THAT THE REFORESTATION AREA HAS BEEN INSTALLED PER PLAN AND THAT THE COVERAGE IS 80% PRIOR TO CLOSE OF PERMIT.

COVER GOALS:

1. NO BARE SOIL AND 80% NON-TURF COVER BY THE END OF CONSTRUCTION.
2. SHALL MAINTAIN NO BARE SOIL OR TURF COVER WITH (GROUND LAYER TO BE VEGETATED OR WITH NATURAL MATERIALS SUCH AS LEAF LITTER AND MULCH) 90% DENSITY THROUGHOUT THE 5 YEARS.

PLAN NARRATIVE:

THE PURPOSE OF THIS PROJECT IS TO REFOREST A 0.11 ACRE AREA WITHIN THE RPA, WHICH PARTIALLY OVERLAP WITH THE EXISTING TOWERS PARK PLAYGROUND. A SWING SET, A SAND BOX AND A PLAY STRUCTURE SURROUNDED BY TIMBER CURBS AND COVERED ON THE GROUND WITH MULCH AND ASPHALT CURRENTLY OCCUPIES THE SPACE, WHERE THE REFORESTATION WILL OCCUR. AS PART OF THE TOWERS PARK PLAYGROUND RENOVATIONS, THE EXISTING PLAYGROUND WILL BE REMOVED ENTIRELY.
THE REMAINING GROUND SURFACE AND ANY SURROUNDING TURF GRASS/INVASIVE SPECIES THAT ARE WITHIN THE LIMITS OF DISTURBANCE SHALL UNDERGO A FOLIAR HERBICIDE APPLICATION TO KILL THE REMAINING UNDESIRED VEGETATION. THE AREA WILL BE DENSELY PLANTED WITH NATIVE TREES, SHRUBS AND UNDERSTORY PLANTS.
THE REFORESTATION GOALS INCLUDE ESTABLISHING 80% NATIVE COVER BY THE END OF CONSTRUCTION , 90% NATIVE COVER BY THE END OF SUBSEQUENT GROWING SEASON AND MAINTAINED THROUGHOUT 5 YEARS. THE INVASIVE PLANT MANAGEMENT PLAN INCLUDES TREATMENT OF PRIORITIZED INVASIVE PLANT SPECIES IDENTIFIED BY COUNTY STAFF, WITH TWO ANNUAL HERBICIDE TREATMENTS.
FUNDING FOR 5 YEARS OF MAINTENANCE WILL NOT BE INCLUDED IN THE COST OF THE PROJECT. MAINTENANCE IS TO BE PERFORMED BY PNR. OVERALL RESPONSIBILITY IS BY PNR. INFORMATIONAL SIGNAGE AND PERIMETER FENCING IS INCLUDED IN THE PROJECT.

LONG-TERM VEGETATION AND INVASIVE MANAGEMENT PLAN:

PNR WILL PROVIDE THE MAINTENANCE OF THE TOWERS PARK REFORESTATION AREA, AS DEFINED BY THE REFORESTATION PLAN FOR OVERALL FIVE (5) YEARS FOLLOWING THE PROJECT COMPLETION. THERE WILL BE THREE (3) YEARS OF TREATMENT FOR INVASIVE CONTROL CURRENTLY SPECIFIED BY THE INVASIVE CONTROL CONTRACTOR FOR THE TOWERS PARK SITE. IN THE SUBSEQUENT TWO (2) YEARS, THE SITE WILL BE INSPECTED TWICE ANNUALLY AND TREATED AS NEEDED BY PNR. FUNDING AND ACTIVE MAINTENANCE WILL BE PROVIDED BY DPR TO ADDRESS THE INVASIVE CONTROL NEEDS DURING ALL FIVE (5) YEARS FOLLOWING THE PROJECT COMPLETION.

TREATMENT RECOMMENDATIONS AND ASSUMPTIONS

RECOMMENDATIONS ARE BASED ON TWO TREATEMENTS PER YEAR.

- CUTTING AND TREATMENT OF LARGE BUSHES AND CLIMBING VINES
- LARGE TREES WILL BE GIRDLED AND LEFT STANDING
- GROUNDCOVER INVAISVES WILL BE FOLIAR SPRAYED
- NATIVE PLANTED PLANTED WITH APPROPRIATE DISTRIBUTION ON SITE
- TURF GRASSES SPRAYED PRIOR TO PLANTING
- PNR WILL RETRIEVE AND PLANT THE PLANTS (SPECIES LIST PROVIDED BY ARLINGTON COUNTY)
- NATIVE GRASS SEEDING IS NOT ACCOMMODATED BY THIS ESTIMATE.

	BOTANICAL/COMMON	QTY	CONTAINER	CALIPER/SIZE	SPACING
	OVERSTORY/CANOPY TREES				
	QUERCUS RUBRA	1	B & B	2 - 2.5"CAL	15' O.C.
*	NYSSA SYLVATICA	1	B & B	2 - 2.5"CAL	15' O.C.
	CARYA TOMENTOSA / MOCKERNUT HICKORY	1	B & B	2 - 2.5"CAL	15' O.C.
	TOTAL	3			
	UNDERSTORY/ORNAMENTAL TREES				
	AMELANCHIER CANADENSIS / CANADIAN SERVICEBERRY	6	B & B	7-8' HEIGHT	10-12' O.C.
	SASSAFRAS ALBIDUM / SASSAFRAS	6	B & B	7-8' HEIGHT	10-12' O.C.
	CERCIS CANADENSIS / EASTERN REDBUD (SINGLE STEM)	5	B & B	7-8' HEIGHT	10-12' O.C.
	CORNUS FLORIDA / FLOWERING DOGWOOD	5	B & B	7-8' HEIGHT	10-12' O.C.
	TOTAL	22			
	SHRUBS				
	ARONIA MELANOCARPA / CHOKEBERRY	3	3 GAL	15-18"	4-6' O.C.
	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL	3	3 GAL	15-18"	10' O.C.
*	CEPHALANTHUS OCCIDENTALIS / BUTTONBUSH	3			
	ILEX VERTICILLATA / WINTERBERRY	3	3 GAL	15-18"	8' O.C.
*	SAMBUCUS CANADENSIS / AMERICAN BLACK ELDERBERRY	3	3 GAL	15-18"	8' O.C.
	PHYSOCARPUS OPULIFOLIUS / NINEBARK	3	3 GAL	15-18"	4-6' O.C.
*	LINDERA BENZOIN / SPICEBUSH	3	3 GAL	15-18"	8' O.C.
	VACCINIUM ANGUSTIFOLIUM / LOWBUSH BLUEBERRY	3	3 GAL	15-18"	4-6' O.C.
	VIBURNUM DENTATUM / VIBURNUM	3	3 GAL	15-18"	5-7' O.C.
	TOTAL	27			
	HERBACEOUS PERENNIALS AND GRASSES				
	ANDROPOGON VIRGINICUS / BROOMSEDGE BLUESTEM	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	JUNCUS EFFUSUS	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	JUNCUS TENUIS	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	SCIRPUS CYPERINUS	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ASCLEPIAS SYRIACA / COMMON MILKWEED	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ASCLEPIAS INCARNATA	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ASCLEPIAS VERTICILLATA	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ASCLEPIAS TUBEROSA	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ECHINACEA PURPUREA / PURPLE CONEFLOWER	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	ELYMUS VIRGINICUS / VIRGINIA WILD RYE	7	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	PACKERA AUREA / GOLDEN RAGWORT	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	ONOCLEA SENSIBILIS	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
*	IRIS VERSICOLOR / BLUE FLAG	8	DP -50 PLUG	2.25" X 5" PLUG	18-20" O.C.
	TOTAL	97			
	* WET TOLERANT SPECIES				

MINIMUM REFORESTATION PLANTING REQUIREMENTS:

TOWERS PARK REFORESTATION

REFORESTATION CALCULATIONS:
0.11 ACRES TO BE PLANTED FOR REFORESTATION

CANOPY TREE REQUIREMENT:
100 x .11 = 11 (LESS 8 EXISTING) = 3

UNDERSTORY TREE REQUIREMENT:
200 x .11 = 22

SHRUB/GRASS/PERENNIAL REQUIREMENT:
1089 x .11 = 120

NOTE: SEE PLANTING PLAN FOR ARLINGTON COUNTY STANDARD PLANTING DETAILS.

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

21-DPR-ITB-467

Project Name and Location

TOWERS PARK PLAYGROUND RENOVATIONS

801 S Scott St
Arlington, VA 22204

Sheet Title

REFORESTATION PLAN & NOTES

Approval Date

Design Supervisor

Revisions Date

Designed:
Drawn:
Checked:

Filename: REF-01_REF.DWG
Plotted: Dec. 23, 20

Scale: 1"=10'-0"
Date: DECEMBER 20, 2019

Seal

COMMONWEALTH OF VIRGINIA
JOSHUA B SERCK
Lic. No. 1394
12-22-2020
LANDSCAPE ARCHITECT

Sheet

REF-01

No. 41 of 41

Path: L:\Division\Park Development\Projects\Towers Park\Playground Renovation\Design\CAD\ Filename: REF-01_REF.dwg