

ARLINGTON VIRGINIA

Construction Drawings For:

Thomas Jefferson Park Upper Field Conversion

(By Right)

3501 2nd Street South,
Arlington, VA 22204

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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

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

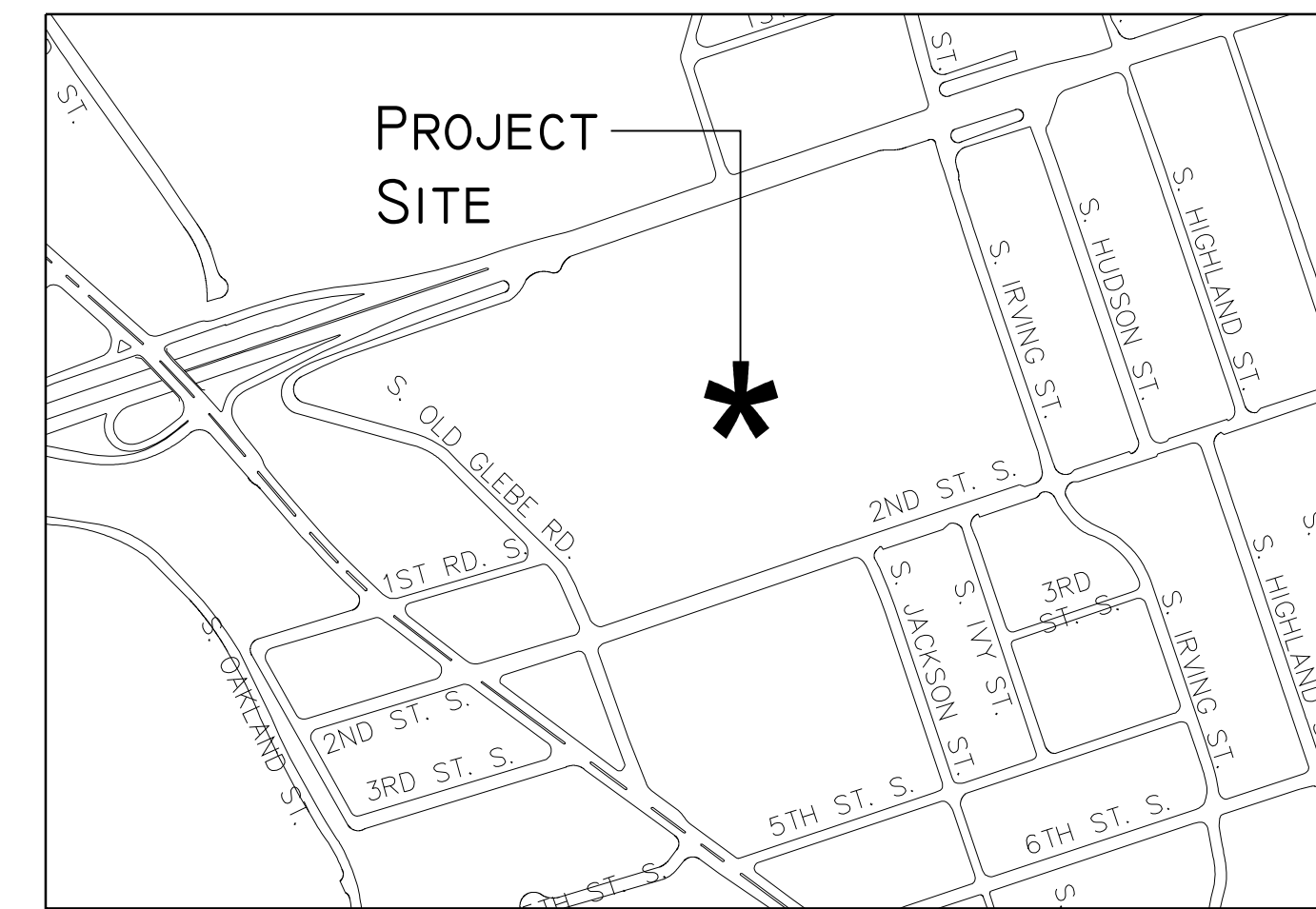
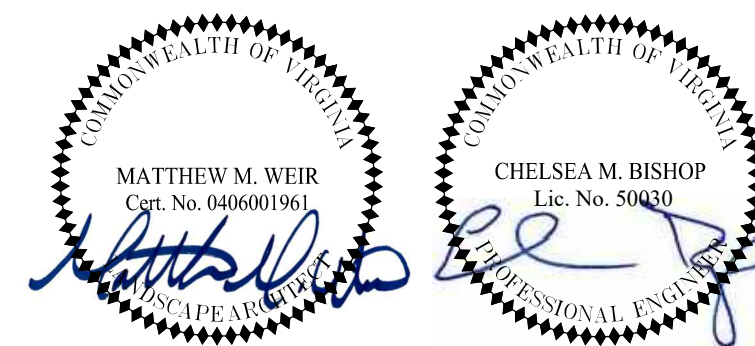
GENERAL NOTES:

- 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.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BE RESPONSIBLE FOR ADHERENCE TO ALL ORDINANCES, REGULATIONS, LAWS AND CODES HAVING JURISDICTION OVER THE PROPERTY.
- THE CONTRACTOR SHALL SUBMIT A REQUIRED "RESPONSIBLE LAND DISTURBER" CERTIFICATION LETTER AS PART OF OBTAINING A BUILDING (OR DISTURBANCE) PERMIT.
- THE CONTRACTOR IS RESPONSIBLE FOR LICENSING AS REQUIRED BY APPLICABLE REGULATORY AGENCIES.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL SALES, USE AND CAPITAL GAINS TAXES.
- 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.
- CONTRACTOR SHALL NOT SUBSTITUTE PRODUCTS OR MATERIALS WITHOUT PRIOR APPROVAL BY THE PROJECT OFFICER.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL BE ON SITE AT TIME OF ALL MATERIALS DELIVERIES.
- 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.
- 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.
- THE CONTRACTOR SHALL SECURE THE CONSTRUCTION AREA WITH FENCING AT END OF WORKDAY AND WHEN CONTRACTOR IS NOT ON SITE.
- 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.
- 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.
- 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.
- 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.
- 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.
- REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.

CONTRACTOR:
TO BE DETERMINED

LANDSCAPE ARCHITECT/ENGINEER:

A. MORTON THOMAS
& ASSOCIATES, INC.
14555 AVION PARKWAY, SUITE 150
CHANTILLY, VA 20151
PHONE: 703.817.1373
WWW.AMTENGINEERING.COM



VICINITY MAP - 1" = 500'

GLOSSARY OF ABBREVIATIONS

TRAFFIC CONTROL

- CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 5 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS.
- THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST TWO WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR AT 703-228-3049. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE AT MINIMUM 11' WIDE.
- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES NOTES:

- ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT ARLINGTON COUNTY DES STANDARDS AND SPECIFICATIONS.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND CLOSING, TO ARLINGTON COUNTY STANDARDS, ANY EXISTING ENTRANCES NOT BEING USED IN CONJUNCTION WITH THIS DEVELOPMENT.
- THE CONTRACTOR SHALL OBTAIN ARLINGTON COUNTY PERMITS FOR EACH SITE.
- 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.
- 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.
- 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.
- 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:

- 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.
- 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 HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF: VIRGINIA STATE GRID NORTH NAD 83 AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY.

VERTICAL DATUM:

THE SITE SHOWN HEREON IS REFERENCED TO VERTICAL DATUM OF: NAVD 88 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY.

QUANTITIES NOTE:

ANY QUANTITIES SPECIFIED ON THE CONSTRUCTION DOCUMENTS ARE ESTIMATES ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES SHOWN ON THE DRAWINGS AND SPECIFICATIONS DO NOT GUARANTEE A SPECIFIC QUANTITY OR DOLLAR AMOUNT. ADDITIONALLY, EVERY ITEM REQUIRED TO BUILD THE PROJECT MAY NOT BE LISTED ON THE BID SHEET.

ABBREVIATION:	REFERENCE:	IP	INLET PROTECTION
AC (A.C.)	ARLINGTON COUNTY	ITB	INVITATION TO BID
AC (AC.)	ACRES	KSI	KILOPOUND PER SQUARE INCH
ADA (A.D.A.)	AMERICANS WITH DISABILITIES ACT	L#	LINE NUMBER (LAYOUT)
ANSI	AMERICAN NATIONAL STANDARDS	LA	LANDSCAPE ARCHITECT
	ALLOWANCE	LB (LB.)	POUNDS
APPROX.	APPROXIMATE, APPROXIMATELY	LDA	LAND DISTURBING ACTIVITY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LF	LINEAR FEET (FOOT)
B&B	BALL & BURLAP	LP	LOW POINT
B/T	BETWEEN	LS (L.S.)	PROFESSIONAL LAND SURVEYOR, OR LUMP SUM
BL	BASILINE	MANUF.	MANUFACTURER
BP	BEST MANAGEMENT PRACTICES	MAX (MAX.)	MAXIMUM
BP (B.P.)	BOTTOM STEP	MD	MARYLAND
BS	BOTTOM WALL	MECH.	MECHANICAL
BW	CURVE NUMBER (LAYOUT)	MH	MANHOLE
CBG	CURBS AND GUTTER	MIN (MIN.)	MINIMUM
CE	CONSTRUCTION ENTRANCE	MM (MM.)	MILLIMETER
CAL (CAL.)	CALIPER	MON (MON.)	MONUMENT
CF (C.F.)	CUBIC FEET	MOT (M.O.T.)	MAINTENANCE OF TRAFFIC
CFR	CODE OF FEDERAL REGULATIONS	MS4	MUNICIPAL SEWER SYSTEM PERMIT PROGRAM
CFS	CUBIC FEET PER SECOND	NA (N/A)	NOT APPLICABLE
CIP (C.I.P.)	CAST IN PLACE	NAD 83	NORTH AMERICAN HORIZONTAL DATUM83
CJ	CONTROL JOINT	NAVJ 88	NORTH AMERICAN VERTICAL DATUM88
CL	CENTER LINE	NIC (N.I.C.)	NOT IN CONTRACT
CLA (C.L.A.)	CERTIFIED LANDSCAPE ARCHITECT	NTD	NEW TO (JOINT)
CM (CM.)	CENTIMETER	NTS (N.T.S.)	NOT TO SCALE
CM	CURVE NUMBER	OC (O.C.)	ON CENTER
CO	CLEANOUT	OFF (OFF.)	OFFSET
CONC (CONC.)	CONCRETE	PC	POINT OF CURVATURE
CONT (CONT.)	CONTINUOUS	PCC	POINT OF COMPOUND CURVATURE
CRZ	CRITICAL ROOT ZONE	PDD	PARK DEVELOPMENT DIVISION
DIA	DIAMETER	PE (P.E.)	PROFESSIONAL ENGINEER
DBH	DIAMETER AT BREAST HEIGHT	PERF (PERF.)	PERFORATED
DC (D.C.)	DISTRICT OF COLUMBIA	PL	PLATE
DCR	DEPT. OF CONSERVATION AND RECREATION	PO	PROJECT OFFICER
DEMO	DEMOLITION	POC (P.O.C.)	POINT OF CONNECTION (IRRIGATION), POINT OF CURVATURE (LAYOUT)
DES	DEPT. OF ENVIRONMENTAL QUALITY	PRC	POINT OF REVERSE CURVATURE
DEG	DEPT. OF ENVIRONMENTAL SERVICES	PSI (P.S.I.)	POUNDS PER SQUARE INCH
DIA (DIA.)	DIAMETER	PT (P.T.)	PRESSURE TREATED LUMBER, OR POINT OF TANGENCY (LAYOUT)
DOJ	DEPARTMENT OF JUSTICE	PVC (P.V.C.)	POLYVINYL CHLORIDE
DPR	DEPARTMENT OF PARKS & RECREATION	QTY (QTY.)	CAPACITY QUANTITY
DS	DEWATERING STRUCTURE	RAD.	RADIUS
DSWC	DIVISION OF SOIL AND WATER CONSERVATION	RCP	REINFORCED CONCRETE PIPE
E&S	EROSION AND SEDIMENT CONTROL	REQ.	REQUIRED
E.G.	EXAMPLE GRAZIA (FOR EXAMPLE)	RET.	RETAINING
EA	EACH	RLA (R.L.A.)	REGISTERED LANDSCAPE ARCHITECT
EC (E.C.)	EPOXY COATED	ROW (R.O.W.)	RIGHT-OF-WAY
EJ	EXPANSION JOINT	RPA	RESOURCE PROTECTION AREA
EJD	EXPANSION JOINT WITH DOWEL	Rv	VOLUMETRIC RUNOFF COEFFICIENT
ELEC (ELEC.)	ELECTRIC	SCH (SCH.)	SCHEDULE
ELEV (ELEV.)	ELEVATION	SCHD	SCHEDULE
EP (E.P.)	END POINT	SF (S.F., SQ. FT.)	SQUARE FOOT (FEET)
EQ (EQ.)	EQUAL	SFF	SUPER SILT FENCE
ESC	EROSION AND SEDIMENT CONTROL	SPEC.	SPECIFICATION, OR SPECIFIED
ESD	ENVIRONMENTAL SITE DESIGN	SS	STAINLESS STEEL
ETC	ET CETERA	STA (STA.)	STATION
EW (E.W.)	EACH WAY	STD (STD.)	STANDARD
EX	EXISTING	SWM	STORMWATER MANAGEMENT
EX. JOINT	EXPANSION JOINT	T&B	TOP AND BOTTOM
FG	FINISH GRADE	TAN (TAN.)	TANGENT
FP	FLOODPLAIN	TEMP.	TEMPORARY
FT (FT.)	FEET	TP	TREE PROTECTION
FT/GS (GAL.)	FEET PER SECOND	TS	TOP STEP
GALV (GALV.)	GALLONS	TW	TOP WALL
GALVZ (GALVZ.)	GALVANIZED	TYP (TYP.)	TYPICAL
GPM	GALLONS PER MINUTE	UGE	UNDERGROUND ELECTRIC LINE
HORIZ (HORIZ.)	HORIZONTAL	UON (U.O.N.)	UNLESS OTHERWISE NOTED
HP	HIGH POINT	VA	VIRGINIA
HSS	HOLLOW STRUCTURAL STEEL	VERT.	VERTICAL
I.E.	ID EST C IN OTHER WORDS)	VPDES	VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
I.P.F.	IRON PIPE FOUND	W/	WITH
I.P.S.	IRON PIPE SET	WSE	WATER SURFACE ELEVATION
ID (I.D.)	IDENTIFICATION	WTF	WELDED WIRE FABRIC
INFO	INFORMATION	YR	YEAR
INV (INV.)	INVERT	XING	CROSSING



DEPARTMENT OF PARKS
AND RECREATION

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

22-DPR-ITB-24
20-0077-SWM

THOMAS JEFFERSON PARK UPPER FIELD CONVERSION

By-Right (County Project)
5/25/2021
3501 2nd Street South, Arlington, VA 22204

LDA-13023
SWM# 20-0077

Approvals Date

Park Development Division Chief

Design Manager

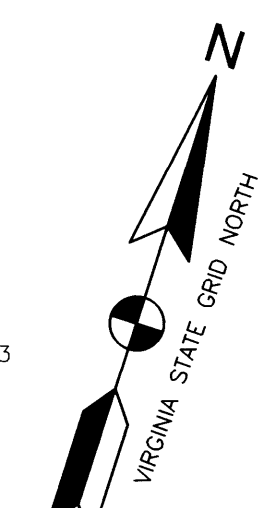
COVER SHEET

Sheet

C-01
SHEET 01 OF 42

RPC 24-011-037
THE COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA

LOT 20
ROBERT R DYE'S
4TH ADDITION TO
ASHTON HEIGHTS
DB 395, PG 536



NOTES:

- HORIZONTAL DATUM: VIRGINIA STATE GRID NORTH NAD 83
VERTICAL DATUM: NAVD 88
BASED ON RTK GPS OBSERVATIONS
- THIS SURVEY MAY NOT SHOW ALL COVENANTS, RESTRICTIONS,
EASEMENTS OR DEDICATIONS OF RECORD WITH MAY EXIST IN
THE CHAIN OF TITLE. NO TITLE REPORT HAS BEEN
FURNISHED.
- THE PARCEL IDENTIFICATION NUMBER FOR THE PROPERTY
DELINEATED ON THIS SURVEY IS RPC 240-011-037 AND IS
ZONED S-3A.
- OWNER:
THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA
DEED BOOK 1583, PAGE 612
DEED BOOK 1586, PAGE 439
DEED BOOK 1586, PAGE 442
DEED BOOK 1664, PAGE 1
DEED BOOK 1710, PAGE 280
- PROPERTY INFORMATION TAKE FROM DEEDS OF RECORD AND
DOES NOT REPRESENT A BOUNDARY SURVEY BY THIS FIRM.
- UTILITIES SHOWN ARE BASED ON FIELD INVESTIGATION,
VISIBLE FIELD EVIDENCE AND AVAILABLE RECORDS. UTILITY
LOCATIONS SHOWN ARE FOR DESIGN PURPOSES ONLY AND
CANNOT BE GUARANTEED. CONTRACTOR/ENGINEER SHOULD
DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO
VERIFY EXACT LOCATION.
- CONTOUR INTERVAL IS ONE (1) FOOT.

LEGEND:

- ⊙ TRASH CAN
- BOLLARD
- ⊕ FIRE HYDRANT
- ⊕ WATER VALVE
- ⊕ STORM DRAIN GRATE
- UTILITY MANHOLE
- ⊕ ELECTRIC BOX
- ⊕ LIGHT POLE
- ⊕ LAMP POST
- ⊕ SIGN
- ⊕ CLEANOUT
- ⊕ TRAVERSE STATION
- ⊕ BENCHMARK
- w — WATERLINE PAINT MARK
- UGU — UNKNOWN LINE PAINT MARK
- UGE — ELECTRIC PAINT MARK
- ○ — CHAIN-LINK FENCE
- CRZ — CRITICAL ROOT ZONE
- (DATR) DATA ACCORDING TO RECORD

STORM DRAIN DATA:

- | | |
|---|---|
| ① INLET
TOP=218.05
INV IN(A)=211.55
INV IN(B)=211.55
INV OUT=211.05 | ⑧ GRATE
TOP=203.88
INV IN(A)=196.78
INV IN(B)=194.68
INV IN(C)=197.32
INV IN(D)=196.73
INV OUT=194.58 |
| ② INLET
TOP=216.93
INV IN=207.78
INV OUT=207.68 | ⑨ GRATE
TOP=202.16
INV IN(A)=200.22
INV IN(B)=200.65
INV IN(C)=200.16
INV OUT=197.95 |
| ③ INLET
TOP=215.13
INV IN=204.83
INV OUT=204.68 | ⑩ TRENCH DRAIN
TOP=202.59
INV OUT=202.08 |
| ④ INLET
TOP=215.08
INV IN(A)=201.53
INV IN(B)=202.02
INV OUT=200.16 | ⑪ TRENCH DRAIN
TOP=202.84
INV=202.33 |
| ⑤ GRATE
TOP=208.47
INV IN(A)=RECESSED
(UNOBTAINABLE)
INV IN(B)=199.27
INV IN(C)=199.97
INV OUT=199.12 | ⑫ GRATE
TOP=202.04
INV IN(A)=200.29
INV IN(B)=200.09
INV OUT=197.99 |
| ⑥ GRATE
TOP=208.66
INV IN=206.31
INV OUT=206.01 | ⑬ TRENCH DRAIN
TOP=202.66
INV=202.13 |
| ⑦ GRATE (DATR)
STR NOT FOUND IN FIELD | ⑭ TRENCH DRAIN
TOP=205.88
NO PIPES VISIBLE |
| | ⑮ INLET
TOP=224.98
INV=218.44 |

TRAVERSE DATA:

NO	NORTHING	EASTING	ELEV	DESCRIPTION
100	7003276.9840	11883106.5280	217.22	REBAR AND CAP
101	7003161.7760	11882771.2780	212.93	REBAR AND CAP

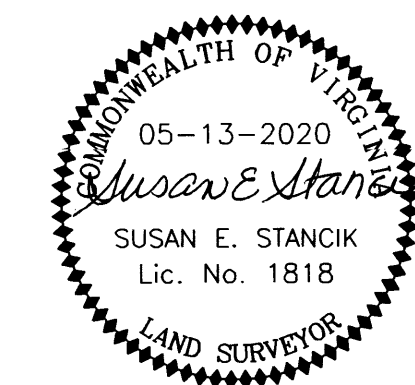
BENCHMARK DATA:

NO	ELEV	DESCRIPTION
1	216.92	SQUARE CUT AT CORNER OF INLET
2	212.81	CORNER OF WALL

SURVEYOR'S CERTIFICATE:

THE TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF SUSAN E STANCIK FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE DATA WAS OBTAINED IN DECEMBER 2019 AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

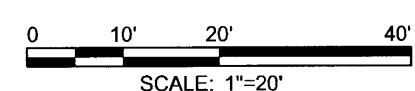
Susan E Stancik
SUSAN E STANCIK, LS



TOPOGRAPHIC SURVEY
THOMAS JEFFERSON UPPER FIELD
ARLINGTON COUNTY, VIRGINIA
SCALE 1" = 20'
FEBRUARY 2020
REVISED MAY 13, 2020

A. MORTON THOMAS & ASSOCIATES, INC
CONSULTING ENGINEERS
14555 AVION PKWY, SUITE 150
CHANTILLY, VA 20151
PH: 703.817.1373

PROJECT ID: 15-0396.028



X:\Rockville\15-0396.028 - TJ Park - Upper Field Conversion\04-Survey\CAD\vf-01-15-0396-028.dwg

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field
Conversion**

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**EXISTING
CONDITIONS
PLAN**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

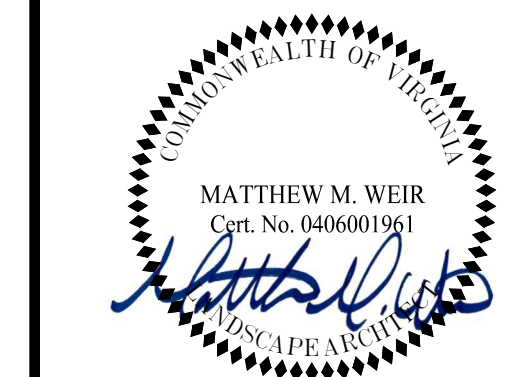
Filename: C-03-150396028 Existing Conditions.dwg

Plotted: May, 24, 21

Scale: 1"=20'

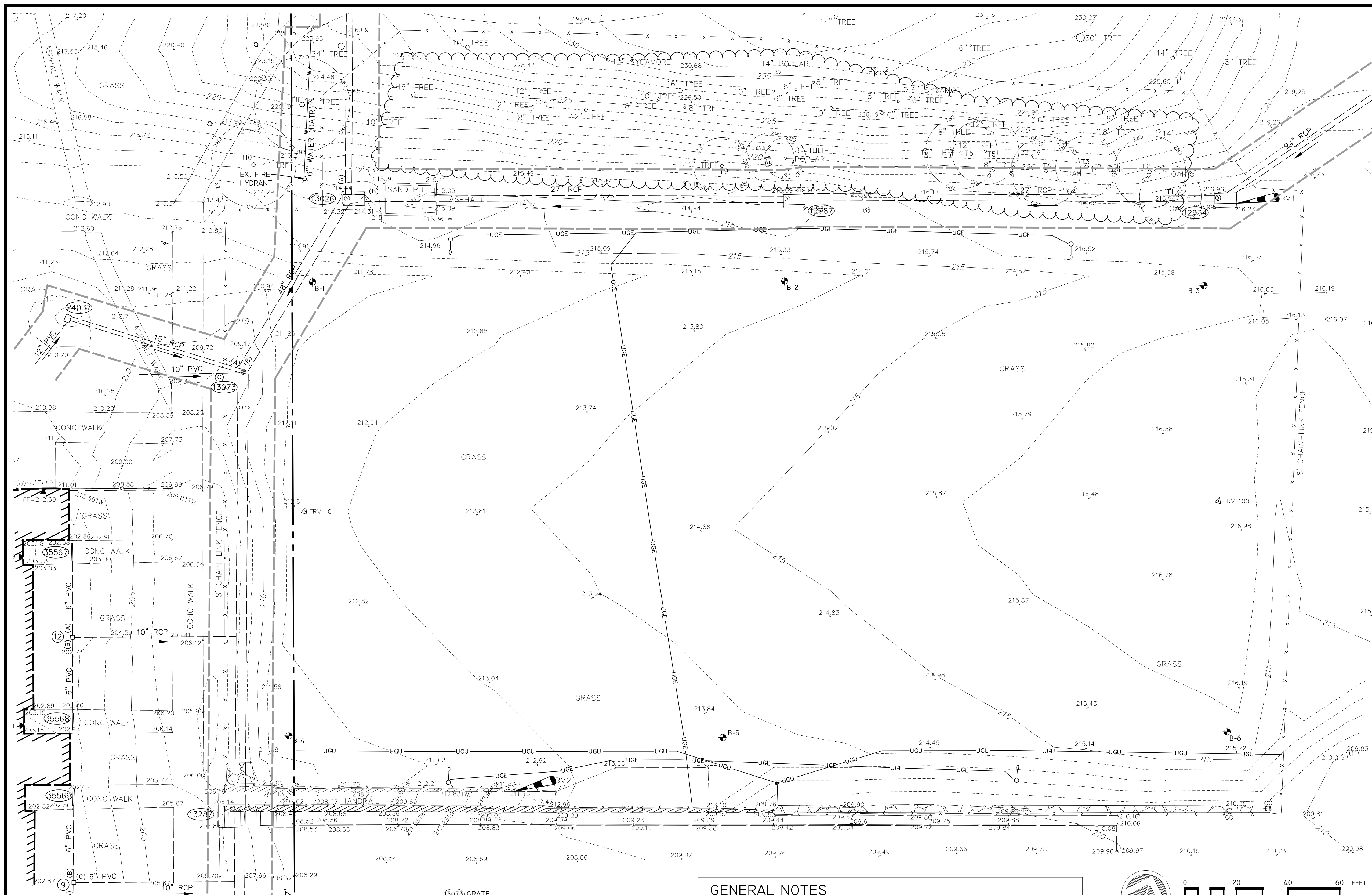
Date: Apr. 16, 21

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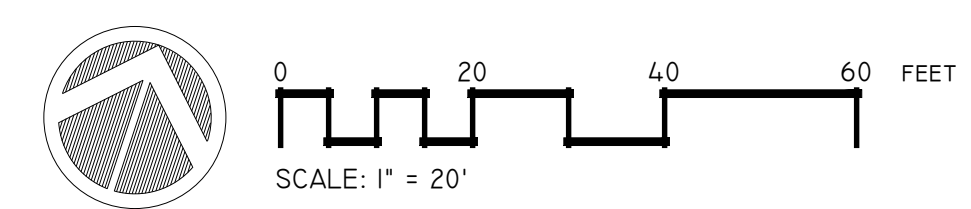
Sheet

C-03
SHEET 03 OF 42



GENERAL NOTES

- HORIZONTAL DATUM: VIRGINIA STATE GRID NORTH NAD 83
VERTICAL DATUM: NAVD 88
BASED ON RTK GPS OBSERVATIONS
- THIS SURVEY MAY NOT SHOW ALL COVENANTS, RESTRICTIONS, EASEMENTS OR DEDICATIONS OF RECORD WITH MAY EXIST IN THE CHAIN OF TITLE. NO TITLE REPORT HAS BEEN FURNISHED.
- THE PARCEL IDENTIFICATION NUMBER FOR THE PROPERTY DELINEATED ON THIS SURVEY IS RPC 240-011-037 AND IS ZONED S-3A.
- OWNER:
THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA
DEED BOOK 1583, PAGE 612
DEED BOOK 1586, PAGE 439
DEED BOOK 1586, PAGE 442
DEED BOOK 1664, PAGE 1
DEED BOOK 1710, PAGE 280
- PROPERTY INFORMATION TAKE FROM DEEDS OF RECORD AND DOES NOT REPRESENT A BOUNDARY SURVEY BY THIS FIRM.
- UTILITIES SHOWN ARE BASED ON FIELD INVESTIGATION, VISIBLE FIELD EVIDENCE AND AVAILABLE RECORDS. UTILITY LOCATIONS SHOWN ARE FOR DESIGN PURPOSED ONLY AND CANNOT BE GUARANTEED. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.
- CONTOUR INTERVAL IS ONE (1) FOOT.



- LEGEND**
- ⊙ TRASH CAN
 - BOLLARD
 - ⊕ FIRE HYDRANT
 - WATER VALVE
 - STORM DRAIN GRATE
 - UTILITY MANHOLE
 - ⊙ STORM DRAIN MANHOLE
 - ⊞ ELECTRIC BOX
 - ⊙ LIGHT POLE
 - ⊙ LAMP POST
 - ⊙ SIGN
 - CLEANOUT
 - △ TRAVERSE STATION
 - ⊙ BENCH MARK
 - W — WATER LINE PAINT MARK
 - UGU — UNKNOWN LINE PAINT MARK
 - UGE — ELECTRIC PAINT MARK
 - x — x — x — CHAIN LINK FENCE
 - ▨ WALL
 - ▨ RIP RAP
 - ⊙ TREE LINE
 - ⊙ CRZ ⊙ CRITICAL ROOT ZONE
 - ⊙ B-# SOIL BORING (SEE BORING SHEET(S))
 - ⊙ DATR DATA ACCORDING TO RECORD LIMITS OF BUILDING RESTRICTION FOR PUBLIC UTILITIES

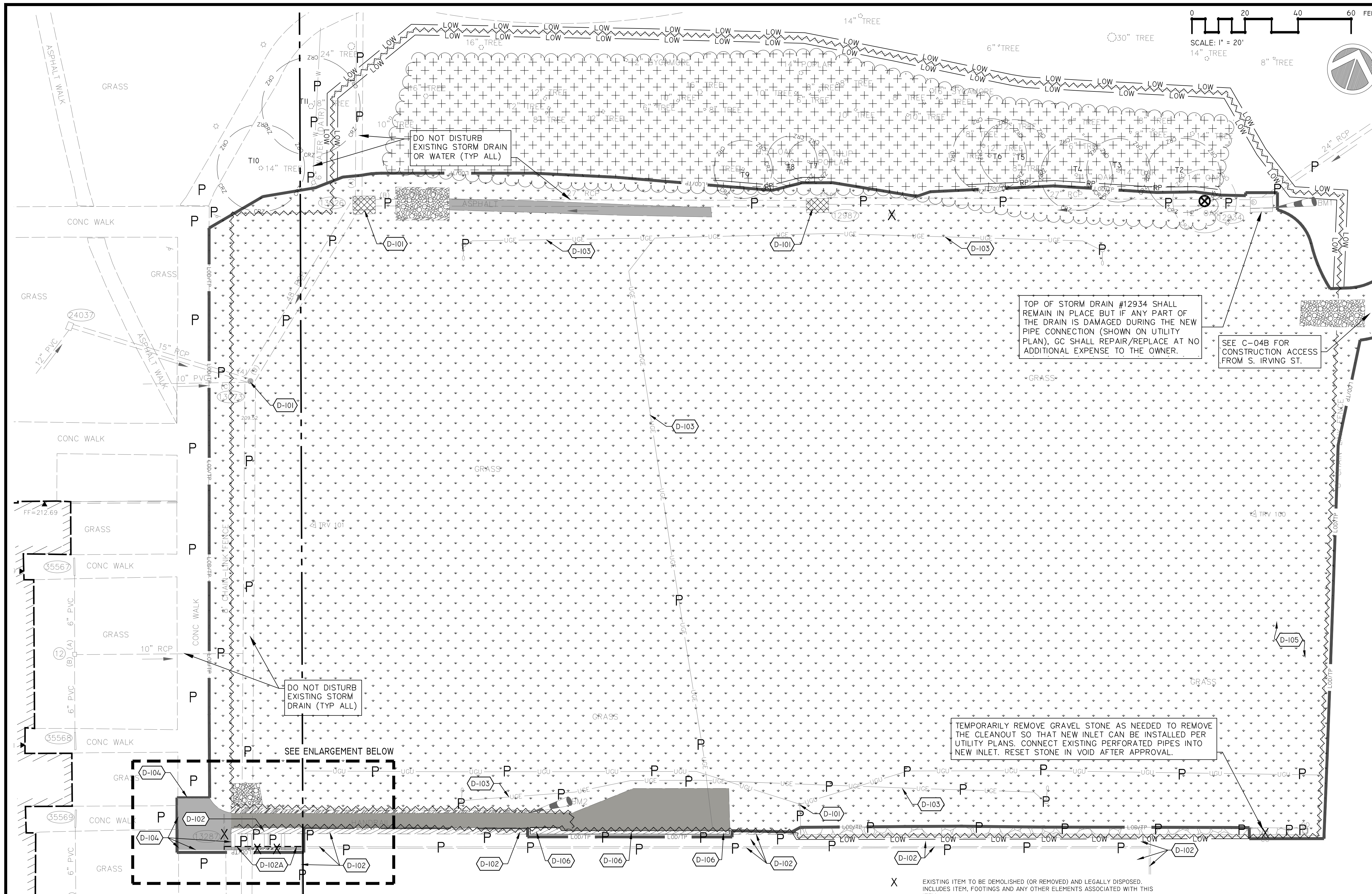
TRAVERSE DATA:

NO	NORTHING	EASTING	ELEV	DESCRIPTION
100	7003276.9840	11883106.5280	217.22	REBAR AND CAP
101	7003161.7760	11882771.2780	212.93	REBAR AND CAP

BENCHMARK DATA:

NO	ELEV	DESCRIPTION
1	216.92	SQUARE CUT AT CORNER OF INLET
2	212.81	CORNER OF WALL

- STORM DRAIN DATA:**
- (2807) INLET
TOP=218.05
INV IN(A)=211.55
INV IN(B)=211.55
INV OUT=211.05
 - (2930) INLET
TOP=216.93
INV IN=207.78
INV OUT=207.68
 - (2987) INLET
TOP=215.13
INV IN=204.83
INV OUT=204.68
 - (3026) INLET
TOP=215.08
INV IN(A)=201.53
INV IN(B)=202.02
INV OUT=200.28
 - (3073) GRATE
TOP=208.47
INV IN(A)=RECESSED (UNOBTAINABLE)
INV IN(B)=199.27
INV IN(C)=199.97
INV OUT=199.12
 - (24037) GRATE
TOP=208.66
INV IN=206.31
INV OUT=206.01
 - (35573) GRATE (DATR)
STR NOT FOUND IN FIELD
 - (8) GRATE
TOP=203.88
INV IN(A)=196.78
INV IN(B)=194.68
INV IN(C)=197.32
INV IN(D)=196.73
INV OUT=194.58
 - (9) GRATE
TOP=202.16
INV IN(A)=200.22
INV IN(B)=200.65
INV IN(C)=200.16
INV OUT=197.95
 - (35569) TRENCH DRAIN
TOP=202.59
INV OUT=202.08
 - (35568) TRENCH DRAIN
TOP=202.84
INV=202.33
 - (12) GRATE
TOP=202.04
INV IN(A)=200.29
INV IN(B)=200.09
INV OUT=199.29
 - (35567) TRENCH DRAIN
TOP=202.66
INV=202.13
 - (35287) TRENCH DRAIN
TOP=205.88
NO PIPES VISIBLE
 - (15) INLET
TOP=224.98
INV=218.44



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 BE 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 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. TEMPORARY CONSTRUCTION FENCING SHALL BE ERCTED AS SHOWN ON THE PLANS PRIOR TO BEGINNING CONSTRUCTION OPERATIONS AND MAINTAINED UNTIL COMPLETION OF PROJECT. 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. 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 PROJECT OFFICER AND LANDSCAPE ARCHITECT 72 HOURS PRIOR TO THESE REMOVALS.
9. 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.
10. NO MATERIALS OR EQUIPMENT SHALL BE PERMITTED WITHIN THE TREE PROTECTION AREA. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN A FINE OF \$500 PER DAY OF VIOLATION.
11. 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.
12. COUNTY ARBORIST INSPECTION IS REQUIRED PRIOR TO ANY SITE LAND DISTURBANCE ACTIVITY.
13. DEMOLITION STAGE EROSION AND SEDIMENT CONTROLS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION.
14. ALL MATERIAL FROM DEMOLITION NOT IDENTIFIED FOR REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS.
15. 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.
16. 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.
17. CHAIN LINK FENCE REMOVED: INCLUDES ALL FENCE POSTS AND CONCRETE FOOTINGS.
18. CONCRETE REMOVAL: SHALL INCLUDE CONCRETE, STEEL REINFORCEMENT, AND GRAVEL BASE WHERE NO PROPOSED CONCRETE WILL BE INSTALLED.
19. ASPHALT REMOVAL: SHALL INCLUDE SURFACE, BASE AND SUBBASE MATERIALS.
20. 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).
21. CONTRACTOR SHALL PROVIDE EXISTING DAMAGE PHOTOS PRIOR TO MOBILIZING OR PERFORMING ANY WORK. LOCATIONS OF PICTURES TO BE RECORDED ON THIS SHEET.
22. TO PREVENT DAMAGES OUTSIDE THE LIMITS OF DISTURBANCE, NO PARK AREAS OUTSIDE THE LOD SHALL BE USED FOR STAGING OR STORAGE.
23. 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. PAVED AREAS, WALLS, ETC. SHALL BE THOROUGHLY WASHED AND CLEANED UPON COMPLETION OF THE PROJECT.
24. REFER TO SITE CLEARING, DEMOLITION, & REMOVALS SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
25. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
26. 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.
27. 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.

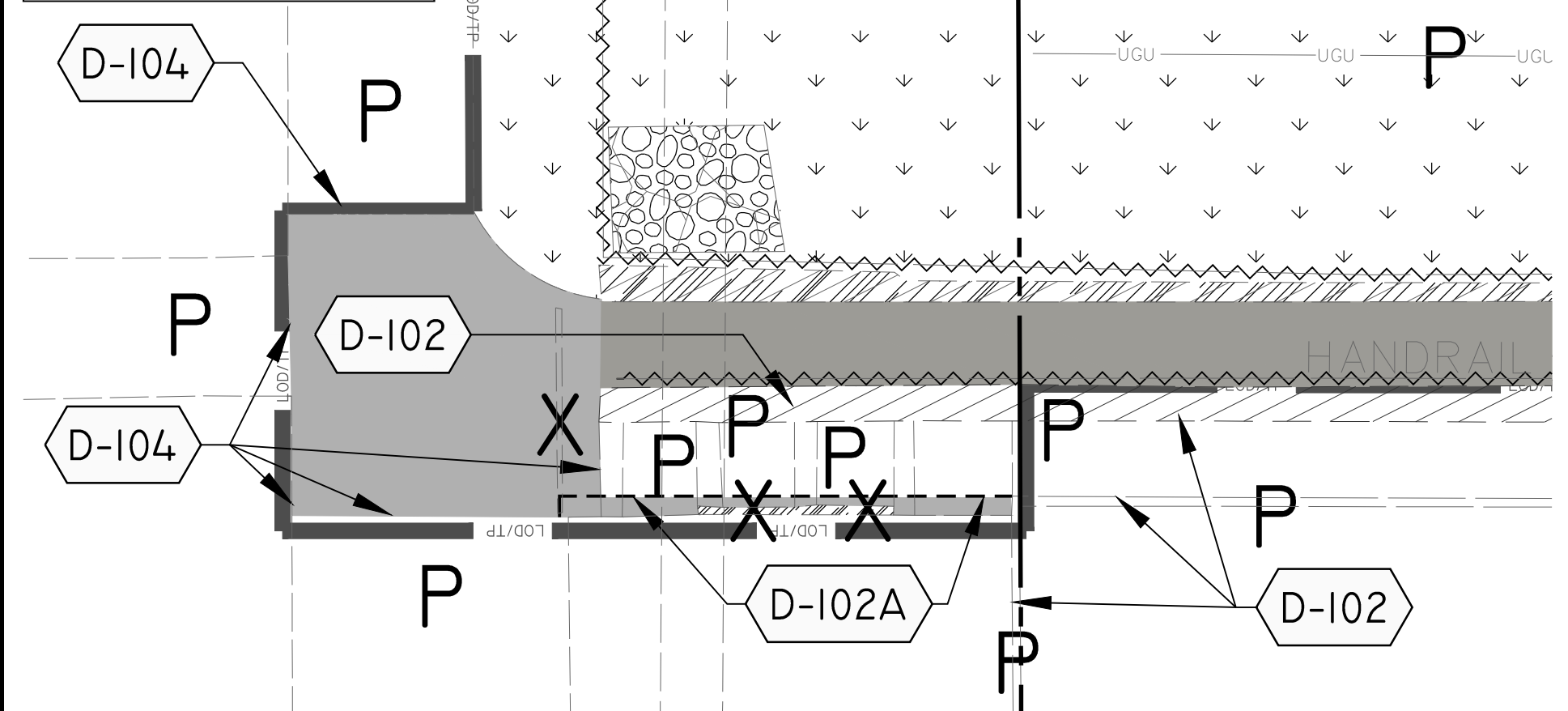
TREE PRESERVATION NOTES:

1. BEFORE ANY GRADING, DEMOLITION, SITE IMPROVEMENTS, OR OTHER DISTURBANCE (ASIDE FROM THE INSTALLATION OF TREE PROTECTION AND EROSION/SEDIMENT CONTROL DEVICES) IS PERFORMED, TREE PROTECTION MEASURES SHALL BE INSTALLED PER THE PLAN BY THE CONTRACTOR AND INSPECTED/APPROVED BY AN ARLINGTON COUNTY ARBORIST.
2. IF THE TREE PRESERVATION MEASURES PROVIDED ON THE PLANS AND SPECIFICATIONS ARE NOT FOLLOWED DURING ANY PART OF THE CONSTRUCTION PROCESS, THE URBAN FORESTER MAY ASK FOR THE REMOVAL AND REPLACEMENT OF ANY DAMAGED TREES AT THE CONTRACTOR'S EXPENSE. THIS WILL BE COORDINATED WITH THE PROJECT OFFICER AND LANDSCAPE ARCHITECT.
3. GENERALLY, ROOT PRUNING AND TREE PROTECTION FENCE ARE LOCATED AT THE LIMIT OF DISTURBANCE. THEREFORE, THE LAYOUT OF LINES DEPICTING ROOT PRUNING AND TREE PROTECTION FENCE ARE DIAGRAMMATIC, AND FOR REFERENCE ONLY. PLEASE REFER TO THE TREE PRESERVATION DETAILS FOR MORE INFORMATION.
4. CONTRACTOR SHALL COORDINATE TREATMENT (I.E., RADIAL TRENCHING, SUPERSONIC AIR TOOL DECOMPACTION, SOIL COMPOST AMENDMENT, ROOT PRUNING) OF EXISTING TREES WITH COUNTY AS DEEMED NECESSARY.
5. SEE TREE PROTECTION DETAILS ON LF-01.
6. ARLINGTON COUNTY URBAN FORESTER RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO TREE PROTECTION MEASURES BASED ON CONDITIONS ENCOUNTERED IN THE FIELD.
7. ALL ADJUSTMENTS TO THIS PLAN SHALL BE APPROVED BY URBAN FORESTER PRIOR TO SITE WORK.
8. CONTRACTOR TO NOTIFY ARLINGTON COUNTY URBAN FORESTER 72 HOURS PRIOR TO INSTALLATION OF ANY TREE PRESERVATION MEASURES SHOWN ON PLANS AND ARLINGTON COUNTY URBAN FORESTER SHALL APPROVE THE LAYOUT OF TREE PRESERVATION MEASURES.

EXISTING IRRIGATION DEMOLITION NOTE:

CONTRACTOR SHALL REMOVE ANY EXISTING IRRIGATION HEADS, VALVES, BOXES, WATER LINES AND ALL OTHER APPURTANCES WITHIN THE LIMITS OF DISTURBANCE. COORDINATE THE CAPPING OF THE IRRIGATION LINE TO REMAIN WITH ARLINGTON COUNTY PROJECT OFFICER.

DEMOLITION ENLARGEMENT
SCALE: 1" = 10'

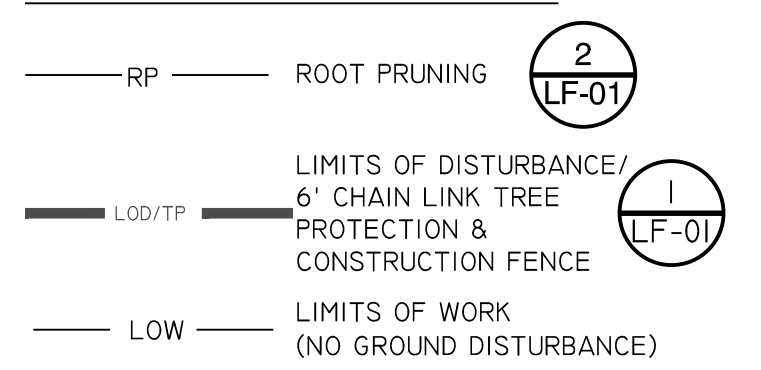


DEMOLITION SCHEDULE

SYMBOL	DEMOLITION DESCRIPTION
D-101	ADJUST EXISTING UTILITY TO PROPOSED ELEVATION OR FINISH GRADE. VERIFY WITH GRADING AND UTILITY PLANS. CONTRACTOR SHALL VERIFY THAT THE EXISTING STRUCTURE SUPPORT THE NEW OR ADJUSTED TOP AS CALLED FOR IN THESE DRAWINGS, INCLUDING THE MODIFICATIONS NECESSARY. IF THE CONDITION OF THE EXISTING STRUCTURE IS SUCH THAT IT WILL NOT SUPPORT A NEW OR ADJUSTED TOP, THE STRUCTURE IS TO BE REPLACED WITH A NEW STRUCTURE. COST FOR THESE MODIFICATIONS AND/OR REPLACEMENTS ARE TO BE INCLUDED IN THE OVERALL PROJECT WITHOUT ADDITIONAL COMPENSATION.
D-102	PROTECT EXISTING LOWER FIELD SURFACE, CURBING, WALL AND STAIRS DURING CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE ARLINGTON COUNTY.
D-102A	BEFORE CUTTING, G.C. SHALL LAY-OUT AND MARK (FOR APPROVAL BY ARLINGTON COUNTY LANDSCAPE ARCHITECT) THE SAW CUT LOCATION, SAW CUT THE EXISTING STAIRS (CONCRETE AND GRANITE) TO PROVIDE A CONSISTENT STAIR WIDTH. REMOVE CHECK WALL. SEE DEMO & LAYOUT PLANS AND 24-038.
D-103	EXISTING UNDERGROUND ELECTRICAL LINE FOR EXISTING FIELD LIGHTS. (EXISTING FIELD LIGHTS SHALL REMAIN). COORDINATE SHUT-OFF WITH THOMAS JEFFERSON COMMUNITY CENTER. IN AREAS OF PROPOSED CUT (SEE GRADING PLAN), ADJUST EXISTING UGE LINE(S) TO 12" - 24" BELOW THE PROPOSED FINISH GRADES (18" @ POLE BASES). UGE MUST BE DEEPENED TO SUFFICIENT DEPTH AS REQUIRED BY LOCAL CODES).
D-104	SAW CUT EXISTING PAVEMENT AT LOCATION SHOWN ON SITE PLAN AND LAYOUT PLAN
D-105	VERIFY LOCATION & CAP EXISTING IRRIGATION MAINLINE AT LIMIT OF DISTURBANCE.
D-106	ADD ADDITIONAL SEGMENTAL BLOCKS AND CAPS FROM DEMOLISHED WALL AT TOP EXISTING WALL. SEE GRADING PLAN. COORDINATE WITH WALL MANUFACTURER. CLEAN EXISTING BLOCKS (I.E., CAULKING/GLUE) BEFORE REINSTALLING. INSTALL GEORGRID TIEBACKS PER MANUFACTURER'S RECOMMENDATIONS.

X	EXISTING ITEM TO BE DEMOLISHED (OR REMOVED) AND LEGALLY DISPOSED. INCLUDES ITEM, FOOTINGS AND ANY OTHER ELEMENTS ASSOCIATED WITH THIS ITEM.
P	EXISTING ITEM TO BE PROTECTED AND PRESERVED (DO NOT DISTURB OR ALTER). ALL ITEMS SHALL BE PRESERVED AND PROTECTED UNLESS OTHERWISE NOTED ON THE PLANS OR OTHERWISE INSTRUCTED BY THE PROJECT OFFICER.
⊗	REMOVE TREE & GRIND STUMP
SYMBOL	DEMOLITION DESCRIPTION
—	REMOVE AND DISPOSE EXISTING TURF GRASS. STOCKPILE TOPSOIL. REMOVE AND DISPOSE EXISTING IRRIGATION LINES BELOW FIELD AFTER CAPPING EXISTING IRRIGATION MAINLINE
⊠	ADJUST AND REPLACE EXISTING STORM DRAIN INLET. SEE SITE PLAN, GRADING PLAN, UTILITY PLAN AND UTILITY DETAILS.
⊞	INVASIVE/NON-NATIVE REMOVAL ZONE BY THIRD PARTY. THIS WORK IS NOT IN CONTRACT FOR GENERAL CONTRACTOR.
⊞	EXISTING WALL TO BE DEMOLISHED AND REMOVED TO FULL DEPTH, INCLUDING FOOTERS AND SUB-BASE.
⊞	EXISTING PAVED AREA (I.E., CONCRETE OR ASPHALT) TO BE DEMOLISHED AND REMOVED. DEMOLISH FULL DEPTH, INCLUDING GRAVEL BASE.
⊞	EXISTING GRAVEL/STONE/SAND BED (INCLUDING LONG JUMP LANDING AREA) TO BE DEMOLISHED AND REMOVED. DEMOLISH FULL DEPTH, INCLUDING BASE.
⊞	EXISTING CHAIN LINK FENCE AND GATES TO BE DEMOLISHED AND REMOVED, INCLUDING FOOTERS.
---	SAW CUT EXISTING STAIRS & CHECK WALL

TREE PROTECTION LEGEND



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park
Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
DEMOLITION PLAN

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-04-150396028 Demolition.dwg
Plotted: May, 24, 21

Scale: 1"=20'
Date: Apr, 16, 21



Sheet

C-04
SHEET 04 OF 42



TEMPORARY ROOT PROTECTION MATTING

- TEMPORARY PROTECTION MATTING SHALL BE ALTERNAMAT (OR APPROVED EQUAL). SECURE MATTING AS NEEDED PER MANUFACTURER'S HARDWARE.
- CONTRACTOR SHALL SUBMIT SUBMITTAL OF PREFERRED MATTING PRODUCT FOR REVIEW AND APPROVED BY ARLINGTON COUNTY PROJECT OFFICER.
- CONTRACTOR SHALL MAINTAIN AND ADJUST MATTING AS NEEDED OVER THE COURSE OF CONSTRUCTION, AND AS REQUIRED BY THE COUNTY'S E&S INSPECTOR, DPR'S PROJECT OFFICER AND COUNTY ARBORIST.
- IN CRITICAL ROOT ZONES, ARLINGTON COUNTY RESERVES THE RIGHT TO REQUIRE MULTIPLE LAYERS OF MATTING TO REDUCE COMPACTION NEAR EXISTING TREES.
- FOLLOWING CONSTRUCTION, GENERAL CONTRACTOR SHALL DEEP-PLUG AERATE (3 PASSES) AND OVERSEED (IN ACCORDANCE WITH SPECIFICATIONS) COMPACTED AREAS WITHIN THE LIMIT OF WORK (LOW).



PROTECT EXISTING ASPHALT TRAIL DURING CONSTRUCTION OF SOCCER FIELD. AFTER FINAL COMPLETION, RE-PAVE DAMAGED ASPHALT AND REPAIR DAMAGED CURB/GUTTER AS DIRECTED BY PROJECT OFFICER AND AS REQUIRED BY ARLINGTON COUNTY DES.

CONSTRUCTION ACCESS VIA EXISTING CURB CUT ON SOUTH IRVING STREET. SEE PHOTO BELOW RIGHT.

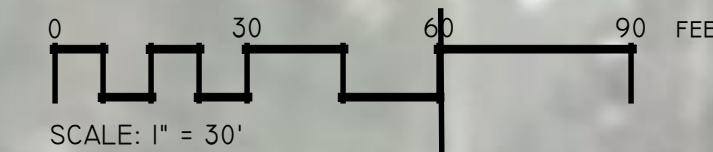
THE SPECIFIC CENTERLINE ALIGNMENT SHALL BE STAKED OUT BY THE GENERAL CONTRACTOR PRIOR TO THE PRE-CONSTRUCTION MEETING. (CONSTRUCTION ACCESS SHALL FOLLOW THE EXISTING "ACCESS ROUTE" USED BY ARLINGTON COUNTY DPR FOR REGULAR FIELD MOWING & MAINTENANCE.) ARLINGTON COUNTY DPR PROJECT OFFICER, LANDSCAPE ARCHITECT, AND URBAN FORESTER WILL REVIEW AND APPROVE ALIGNMENT PRIOR TO CONTRACTOR SETTING UP CONSTRUCTION FENCING AND BEGINNING CONSTRUCTION.

AFTER CONSTRUCTION, REMOVE THE FENCING AND TEMPORARY ROOT PROTECTION MATTING. DECOMPACT THE EXISTING SOIL AND OVERSEED. SEE NOTES TOP LEFT THIS SHEET.

- THIS PLAN IS INTENDED TO DEMONSTRATE CONSTRUCTION ACCESS ONLY. FOR ADDITIONAL INFORMATION, SEE THE FOLLOWING PLANS:
- EXISTING CONDITIONS: C-03
 - DEMOLITION/TREE PROTECTION: C-04
 - TREE PROTECTION FENCE DETAILS: LF-01
 - EROSION & SEDIMENT CONTROL: C-05 TO C-08
 - SITE/MATERIALS, GRADING, LAYOUT: C-09 TO C-15B

- SITE LEGEND**
- LODTP LIMITS OF DISTURBANCE/ 6" CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE
 - LOW LIMITS OF WORK (NO GROUND DISTURBANCE)

- CONSTRUCTION ACCESS LEGEND**
- APPROXIMATE HAUL / CONSTRUCTION ACCESS ROUTE
 - LOW LIMITS OF WORK (NO GROUND DISTURBANCE)
 - TEMPORARY PROTECTION MATTING (SEE IMAGE THIS SHEET - OR APPROVED EQUAL)



CONSTRUCTION ACCESS ENTRY POINT VIA SOUTH IRVING STREET



IMAGERY CREDIT: GOOGLE MAPS

CONSTRUCTION ACCESS VIA EXISTING CURB CUT ON SOUTH IRVING STREET. CONTRACTOR SHALL REPLACE AS INSTRUCTED BY ARLINGTON COUNTY PROJECT OFFICER.

CONTRACTOR SHALL REPLACE DAMAGED ASPHALT TRAIL AS INSTRUCTED BY ARLINGTON COUNTY PROJECT OFFICER.



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
CONSTRUCTION ACCESS & HAUL ROUTE PLAN

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

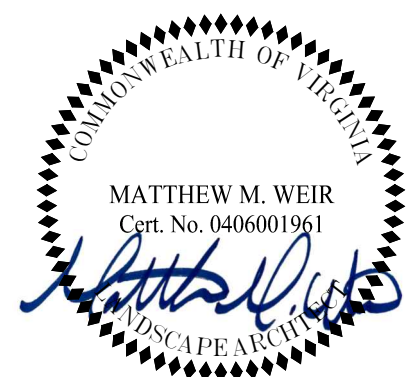
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Plotted: May, 24, 21

Scale: 1"=20'

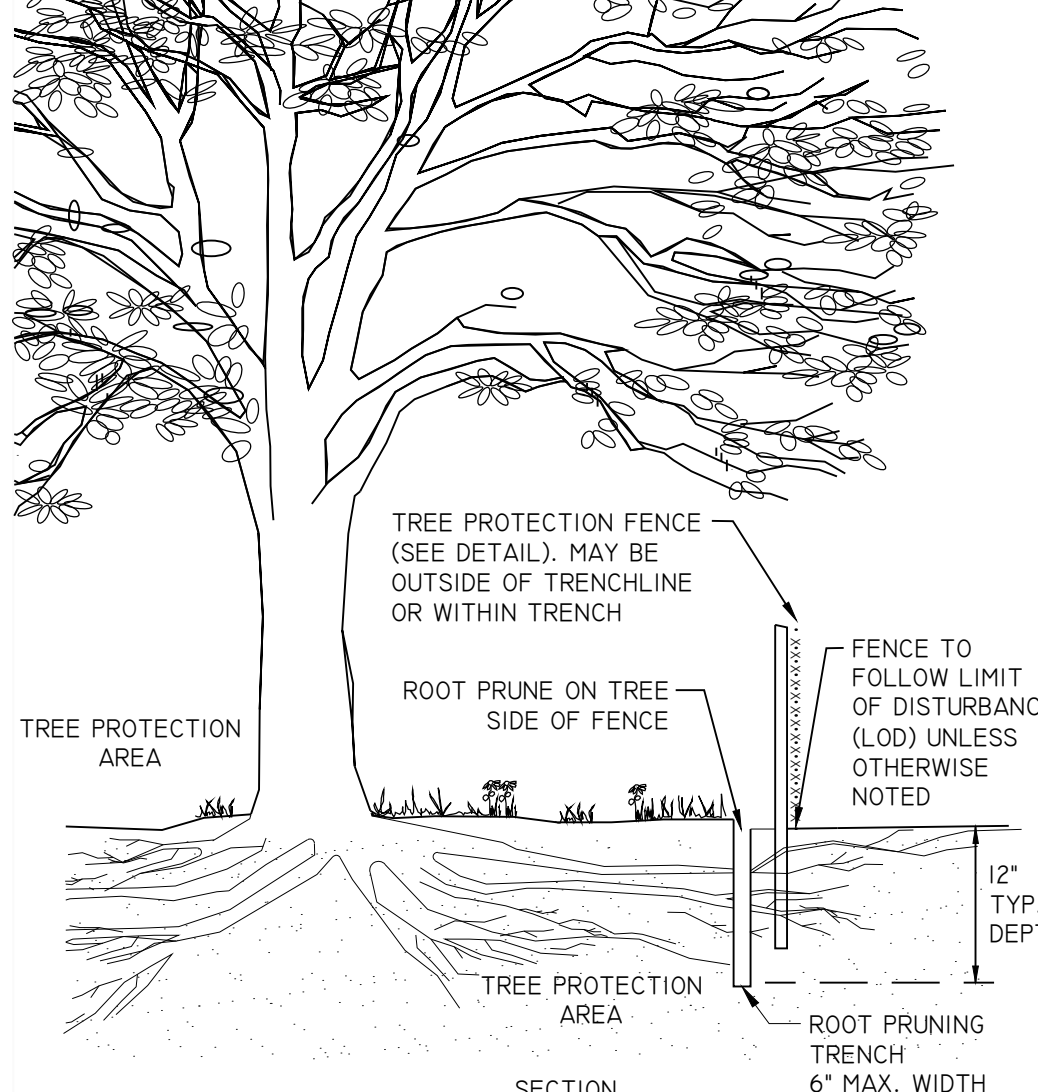
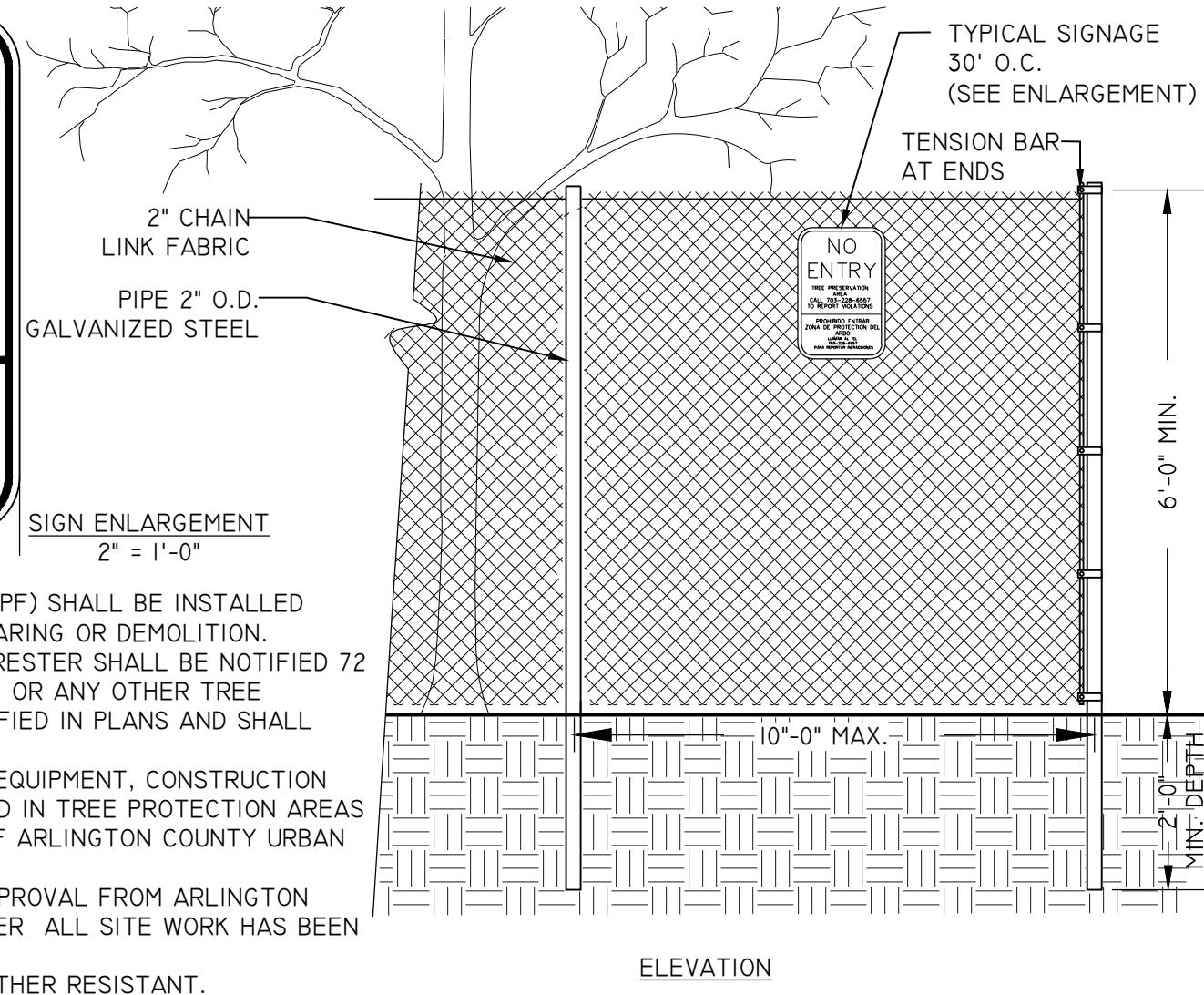
Date: Apr. 16, 21

Seal



Sheet

C-04B
SHEET04BDF 42



- NOTES
1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY FLOW 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.

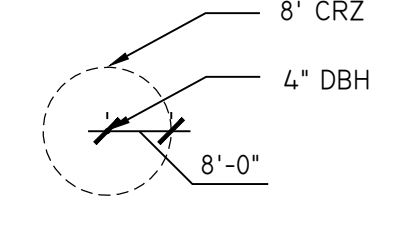
1 LIMITS OF DISTURBANCE/ 6' CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE
311300.1 (20016)



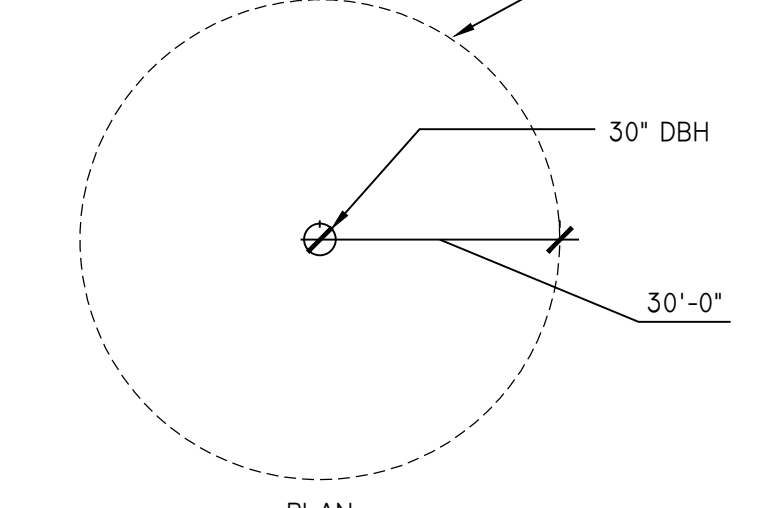
2 ROOT PRUNING
311300.5 (2019)



TREES 8" DBH AND SMALLER
8' CRZ RADIUS AROUND THE TRUNK OF TREE



TREES 8.1 AND LARGER
1" DBH = 1' CRZ RADIUS



- 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.

4 TREE PROTECTION DETAIL FOR DETERMINING CRITICAL ROOT ZONE
311300.3 (2019)



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (INCHES)	CRITICAL ROOT ZONE AREA (SQUARE FEET)	AMT CONDITION RATING	NOTES:	TREE TO BE REMOVED BY CONTRACTOR	% CRZ WITHIN LIMITS OF DISTURBANCE	PRESERVATION MEASURES
T1	QUERCUS FALCATA	SOUTHERN RED OAK	12.0	452	82.81	0	REMOVE	65%	
T2	QUERCUS RUBRA	NORTHERN RED OAK	14.0	615	79.69	0		22%	TPF, RP
T3	FAGUS GRANDIFOLIA	AMERICAN BEECH	12.0	452	68.75	0		13%	TPF, RP
T4	QUERCUS FALCATA	SOUTHERN RED OAK	13.5	572	79.69	0		28%	TPF, RP
T5	PRUNUS SEROTINA	BLACK CHERRY	13.0	531	62.50	3 TRUNKS (9", 6.5", 7"), VINES CLIMBING		0%	TPF, RP
T6	PRUNUS SEROTINA	BLACK CHERRY	14.0	615	67.19	2 TRUNKS (8", 11.5"), VINES CLIMBING		2%	TPF, RP
T7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	8.0	201	75.00	0		0%	TPF, RP
T8	QUERCUS RUBRA	NORTHERN RED OAK	9.5	283	75.00	0		1%	TPF, RP
T9	ULMUS RUBRA	SLIPPERY ELM	11.0	380	68.75	WINTER IDENTIFICATION		13%	TPF, RP
T10	PLATANUS OCCIDENTALIS	SYCAMORE	16.5	855	78.13	MINOR EPICORMIC GROWTH		10%	TPF
T11	FAGUS GRANDIFOLIA	AMERICAN BEECH	18.5	1075	67.19	SHALLOW ROOTS, WATER SPROUTS AT ROOTS, MOWER DAMAGE		0%	

*HIGHLIGHTED CELLS INDICATE TREE TO BE REMOVED

CONTRACTOR SHALL REFER TO THE DEMOLITION PLAN FOR SPECIFIC PROTECTION MEASURES. IN THE EVENT OF A DISCREPANCY BETWEEN THE PRESERVATION MEASURES LISTED IN THIS TREE TABLE AND THE DEMOLITION PLAN, THE PLAN SHALL GOVERN.

TPF = TREE PROTECTION FENCE
RP = ROOT PRUNING

NOTE: THIS PLAN IS FOR TREE PROTECTION/ FOREST CONSERVATION PURPOSES ONLY.

TREE IDENTIFICATION, CONDITIONS AND RETENTION POTENTIAL:

NOTE 1: TREE SPECIES NAMED REPRESENT THE PROFESSIONAL JUDGMENT OF THE PREPARER. THERE ARE A VARIETY OF REASONS IDENTIFICATION CAN BE INCONCLUSIVE: WINTER IDENTIFICATION IS LESS RELIABLE THAN DURING THE GROWING SEASON. PROPER IDENTIFICATION CAN ONLY BE MADE ON THE BASIS OF FLOWERING PARTS, WHICH ARE OFTEN ABSENT. WHILE THE NAMED GENERA ARE FELT TO BE RELIABLE, SOME SPECIES AND HYBRIDS ARE LESS CERTAIN. ONE EXAMPLE IS THE DISTINCTION BETWEEN QUERCUS SPECIES. Q. RUBRA, Q. BOREALIS, Q. PALUSTRIS AND Q. FALCATA ARE ALL CLASSIFIED AS "RED OAKS", AND THEY ARE NOTABLE FOR FREELY HYBRIDIZING. EVEN EXAMINATION OF FLORAL PARTS IS OFTEN INCONCLUSIVE. THE GENERA MALUS AND CRATAEGUS POSE A SIMILAR CHALLENGE.

NOTE 2: NO WARRANTY, EXPRESSED OR IMPLIED, CAN BE MADE WITH RESPECT TO TREE SAFETY, FITNESS OR SURVIVAL. THE COMMENTARY ABOUT INDIVIDUAL TREES NOTES SOME ACTUAL OR POTENTIAL DEFECTS TO BE CONSIDERED. HOWEVER, HIDDEN FACTORS AND UNFORESEEABLE EVENTS MAY BE HIGHLY SIGNIFICANT, WHILE SOME OF THE POTENTIAL PROBLEMS NOTED MAY NOT. THE PROPOSED DISTURBANCES WILL HAVE SOME ADVERSE IMPACT UPON THE REMAINING TREES. OTHER STRESSES SUCH AS DISEASE, WIND, SUNSCALD, AIR POLLUTION, REFLECTED HEAT AND LIGHT, INSUFFICIENT OR EXCESS RAINFALL CAN COMBINE TO CAUSE ADDITIONAL DAMAGE OR DEATH TO A TREE. ANY RECOMMENDED ACTIONS ARE INTENDED TO PARTIALLY OFFSET FORESEEABLE DAMAGE. HOWEVER, TREES SHOULD BE MONITORED AND ADDITIONAL CORRECTIVE MEASURES OR REMOVAL MAY BE NECESSARY.



DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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22-DPR-ITB-24

Project Name and Location
Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
TREE PRESERVATION DETAILS

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

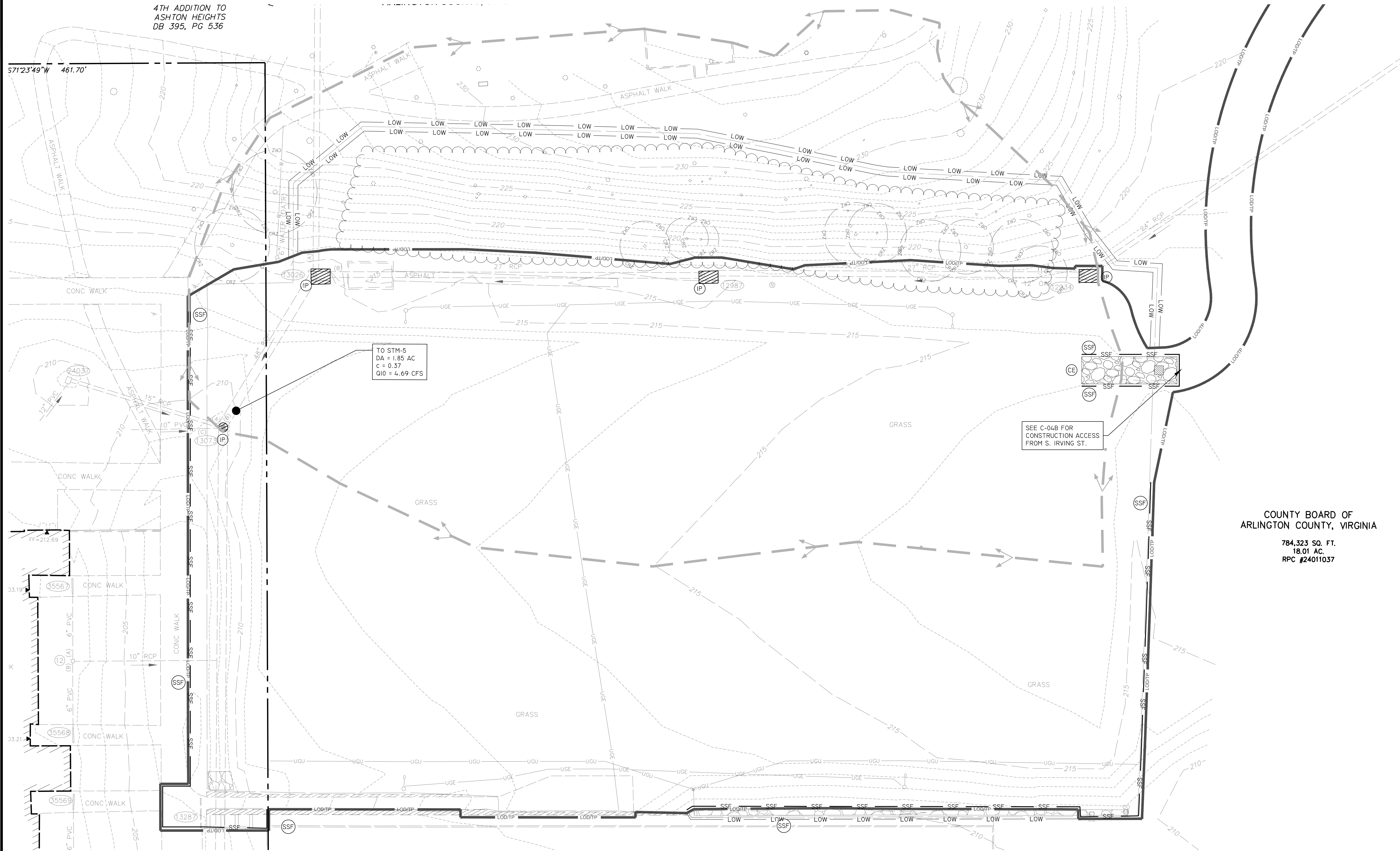
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Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: LF-01-150396028 Tree Pres Det.dwg
Plotted: May, 24, 21

Scale: 1"=20'
Date: May, 24, 21



Sheet
LF-01
SHEET 05 OF 42



COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA
784,323 SQ. FT.
18.01 AC.
RPC #24011037



DEPARTMENT OF PARKS
AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
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22-DPR-ITB-24

Project Name and Location
**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

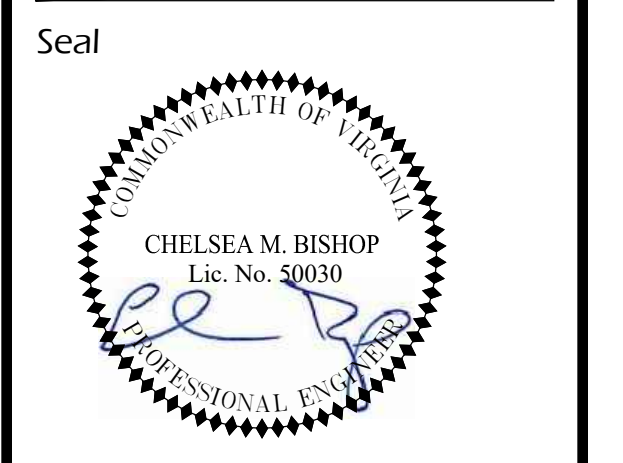
3501 2nd Street South
Arlington, VA 22204

Sheet Title
**EROSION AND
SEDIMENT
CONTROL PLAN
- PHASE I**

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

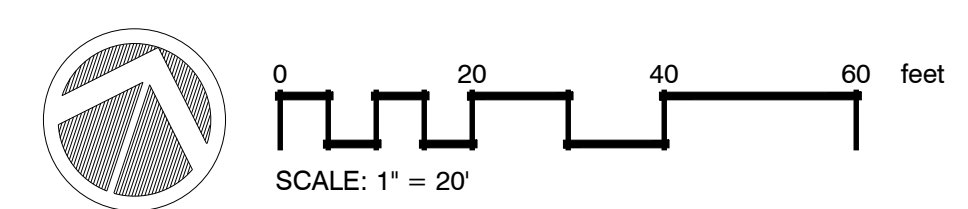
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Scale: 1"=20'
Date: May 24, 21



Sheet
C-05
SHEET 06 OF 42

EROSION AND SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION	NO.	KEY	SYMBOL	DESCRIPTION
3.38	TP	LOD/TP	LIMITS OF DISTURBANCE/ 6' CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE	3.07	IP	[Hatched Box]	INLET PROTECTION
		LOW	LIMITS OF WORK	3.05	SSF	SSF	SUPER SILT FENCE
3.02	CE	[Wash Rack Symbol]	MODIFIED CONSTRUCTION ENTRANCE WITH WASH RACK			[Dashed Arrow]	DRAINAGE DIVIDE



EROSION AND SEDIMENT CONTROL NOTES:
1. WHERE BOTH SILT FENCE AND TREE PROTECTION FENCE ARE SHOWN, THE FILTER FABRIC SHALL BE ADHERED TO THE TREE PROTECTION FENCE TO PROTECT THE TREE ROOTS.

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**EROSION AND
SEDIMENT
CONTROL PLAN
- PHASE II**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

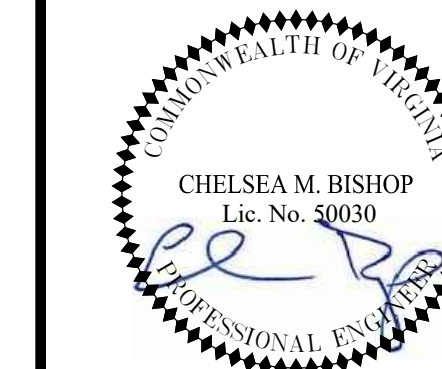
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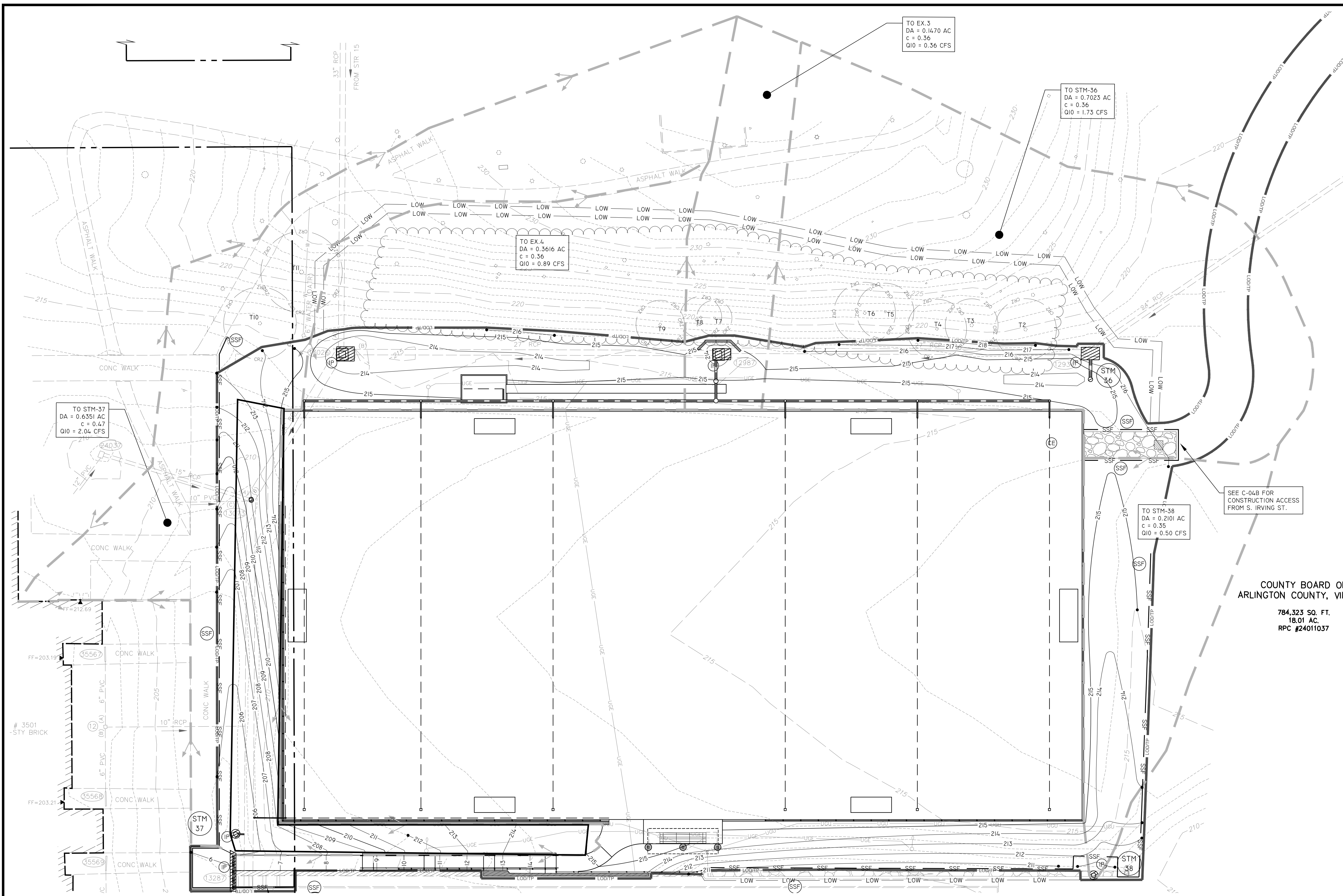
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Seal



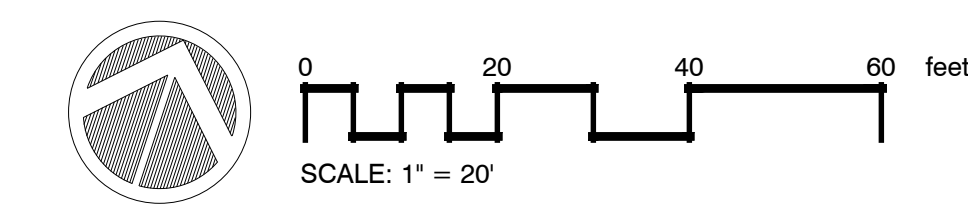
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C-06
SHEET 07 OF 42



EROSION AND SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION	NO.	KEY	SYMBOL	DESCRIPTION
3.38	TP	— LOD/TP —	LIMITS OF DISTURBANCE/ 6" CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE	3.07	IP	◉	INLET PROTECTION
		— LOW —	LIMITS OF WORK			▨	
3.02	CE	◻	MODIFIED CONSTRUCTION ENTRANCE WITH WASH RACK	3.05	SSF	— SSF —	SUPER SILT FENCE
						↔	DRAINAGE DIVIDE



EROSION AND SEDIMENT CONTROL NOTES:

- WHERE BOTH SUPER SILT FENCE AND TREE PROTECTION FENCE ARE SHOWN, THE FILTER FABRIC SHALL BE ADHERED TO THE TREE PROTECTION FENCE TO PROTECT THE TREE ROOTS.
- TREE PROTECTION FENCE PROPOSED ALONG THE SOCCER FIELD FENCE SHALL BE A SEPARATE TEMPORARY FENCE.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
TYPE OF DEVELOPMENT: RENOVATION OF A MIDDLE SCHOOL SOCCER FIELD. THERE WILL BE AN INCREASE IN IMPERVIOUS AREA THEREFORE A PERMEABLE SYNTHETIC TURF FIELD AND TWO GRASS CHANNELS WILL PROVIDE STORMWATER QUALITY AND QUANTITY MANAGEMENT IN ACCORDANCE WITH ARLINGTON COUNTY CHESAPEAKE BAY PRESERVATION ORDINANCE AND THE STORMWATER DETENTION ORDINANCE OF ARLINGTON COUNTY.

TOTAL AREA OF DISTURBANCE: 2.5749 ACRES

EXISTING SITE CONDITIONS
EXISTING SLOPES: 1-25%

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

ADJACENT PROPERTIES
NORTH: ARLINGTON BLVD.
EAST: S. IRVING STREET
SOUTH: 2ND STREET S.
WEST: THOMAS JEFFERSON MIDDLE SCHOOL

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

SOILS
4A SASSAFRAS-URBAN LAND-NEABSCO COMPLEX, 0 TO 3 PERCENT SLOPES

THE ENTIRE SITE CONSISTS OF URBAN LAND-SASSAFRAS-NEABSCO COMPLEX (4) AT VARYING SLOPES, URBAN LAND-SASSAFRAS-NEABSCO COMPLEX IS HYDROLOGIC GROUP D SOIL.

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 14 DAYS. ANY STOCKPILES MUST BE MULCHED AND SEEDED IMMEDIATELY AS DIRECTED BY THE COUNTY INSPECTOR. THERE ARE CRITICAL EROSION 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

CONSTRUCTION ENTRANCE - 3.02
INSTALL A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK OVERTOP THE EXISTING TRAIL AS SHOWN. THE EXISTING TRAIL SURFACE 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.

SUPER SILT FENCE
INSTALL SUPER SILT FENCE BARRIER DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW.

TREE PRESERVAION & PROTECTION - 3.38
INSTALL TREE PROTECTION FENCING TO PROTECT TREES FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITY.

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

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 RESEEDD 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 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 WITH KENTUCKY 31 TALL FESCUE ACCORDING TO MINIMUM STANDARD #5, VESCH SPEC. 3.32-A&B. 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 ACCORDING TO SPEC. 3.35. 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 SOIL 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. SEE SHEET C-04B FOR ACCESS PLAN FROM S. IRVING STREET.
B. CONTRACTOR TO SUBMIT SEDIMENT DISPOSAL PLAN TO ARLINGTON COUNTY INSPECTOR FOR APPROVAL.
C. INSTALL SILT FENCE (SF), INLET PROTECTION (IP), TREE PROTECTION (TP), AND CONSTRUCTION ENTRANCE (CE). REFER TO LF SERIES SHEETS FOR TREE PROTECTION LOCATIONS, NOTES AND DETAILS.
D. DEMOLISH AND REMOVE EXISTING RETAINING WALL, CONCRETE, ASPHALT, AND GRAVEL AS INDICATED ON THE DEMOLITION PLAN. REMOVE DESIGNATED MANAGED TURF AREAS, PERFORM EARTHWORK OPERATIONS INCLUDING SUBGRADE PREPARATION FOR THE SYNTHETIC TURF FIELD.

SEQUENCE OF CONSTRUCTION - PHASE 2

E. ALL SEDIMENT AND EROSION CONTROL DEVICES INSTALLED AS PART OF PHASE I SHALL REMAIN IN PLACE AND FUNCTIONING, UNLESS OTHERWISE DIRECTED BY THE INSPECTOR.
F. INSTALL SITE IMPROVEMENTS INCLUDING UNDERDRAINS, STORM PIPES AND STRUCTURES, CONCRETE WALKS, SYNTHETIC TURF FIELD LAYERS, GEOWEB REINFORCED TURF PAVING, LONG JUMP ASPHALT AND SAND PIT, RETAINING WALLS, FENCING, SHADE STRUCTURE, AND SITE FURNISHINGS. PERFORM FINAL GRADING.
G. RESTORE AND STABILIZE DISTURBED AREAS.
H. REMOVE EROSION AND SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF SITE INSPECTOR.

MAINTENANCE

A. ALL CONTROLS ARE TO BE INSPECTED ON A DAILY BASIS BY THE SITE SUPERINTENDENT OR HIS REPRESENTATIVE. ANY DAMAGED CONTROLS ARE TO BE REPAIRED BY THE END OF THE WORKING DAY.
B. ALL CONSTRUCTION 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, BLOCK AND GRAVEL INLET IS 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 9VAC25-840-4.0 EROSION AND SEDIMENT CONTROL REGULATIONS, MINIMUM STANDARDS.
ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
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 RESEEDD 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 BACKFILL.
- 5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- 7. ANY DISTURBED AREA NOT COVERED BY NOTE # 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- 8. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

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

<ul style="list-style-type: none">● 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>

SEED¹		
LAND USE	SPECIES	APPLICATION PER ACRE
<u>Minimum Care Lawn</u> (Commercial or Residential)	Tall Fescue ¹	95-100%
	Perennial Ryegrass	0-5%
	Kentucky Bluegrass ¹	0-5%
		TOTAL: 175-200 lbs.
<u>High-Maintenance Lawn</u>	Tall Fescue ¹	TOTAL: 200-250 lbs.
<u>General Slope (3:1 or less)</u>	Tall Fescue ¹	128 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
<u>Low-Maintenance Slope</u> (Steeper than 3:1)	Tall Fescue ¹	108 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
	Crownvetch ³	20 lbs.
		TOTAL: 150 lbs.

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

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

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

3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

<ul style="list-style-type: none">● 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>

MULCHES:	RATES:		NOTES:
	Per Acre	Per 1000 sq. ft.	
Straw or Hay	1 ½ - 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.

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%



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
EROSION AND SEDIMENT CONTROL NOTES

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

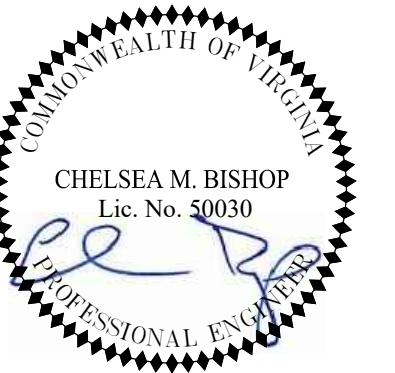
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Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: c-07-150396028 esc notes.dwg

Plotted: May, 24, 21

Scale: 1"=20'
Date: Jul. 23, 20

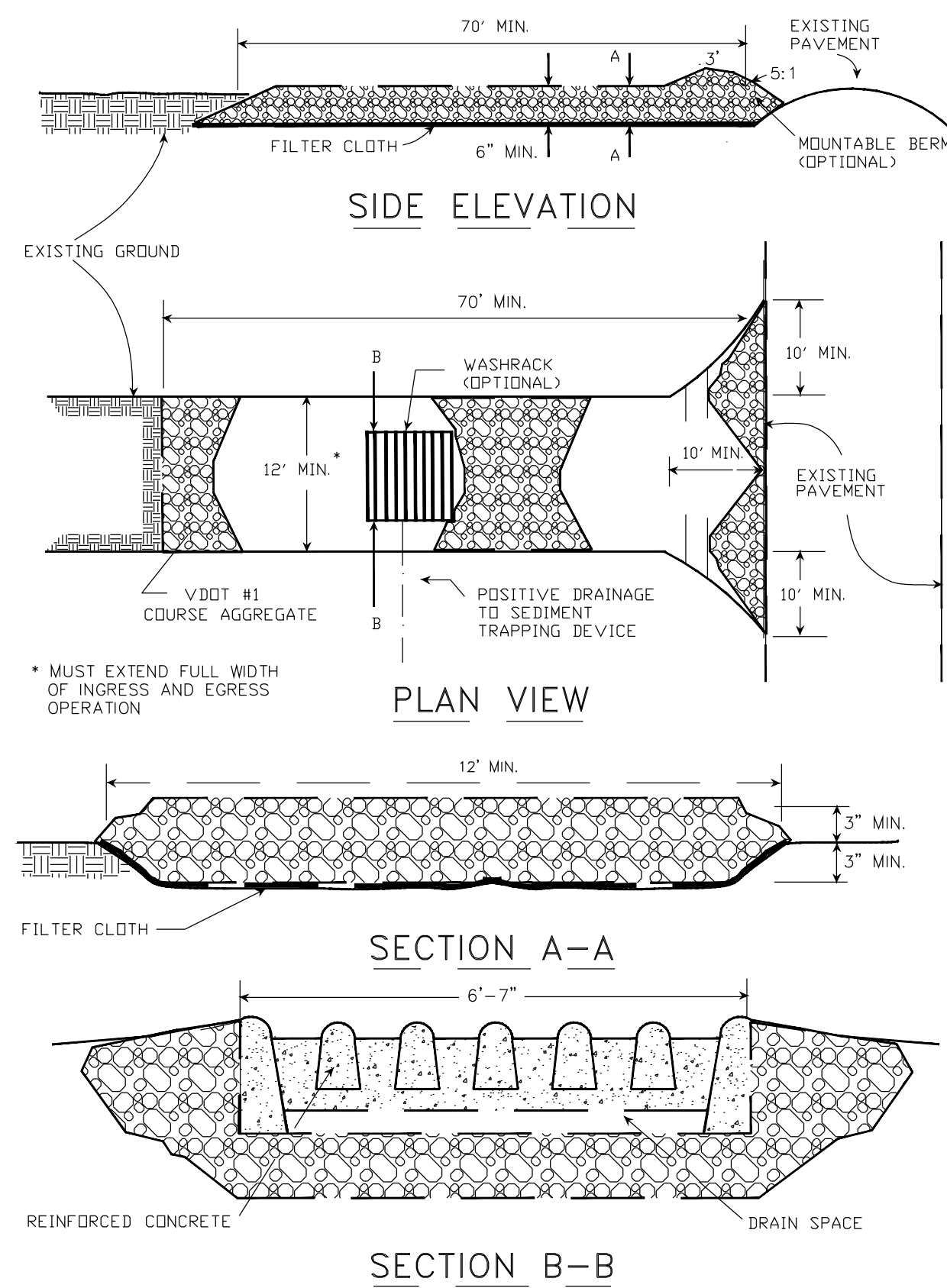
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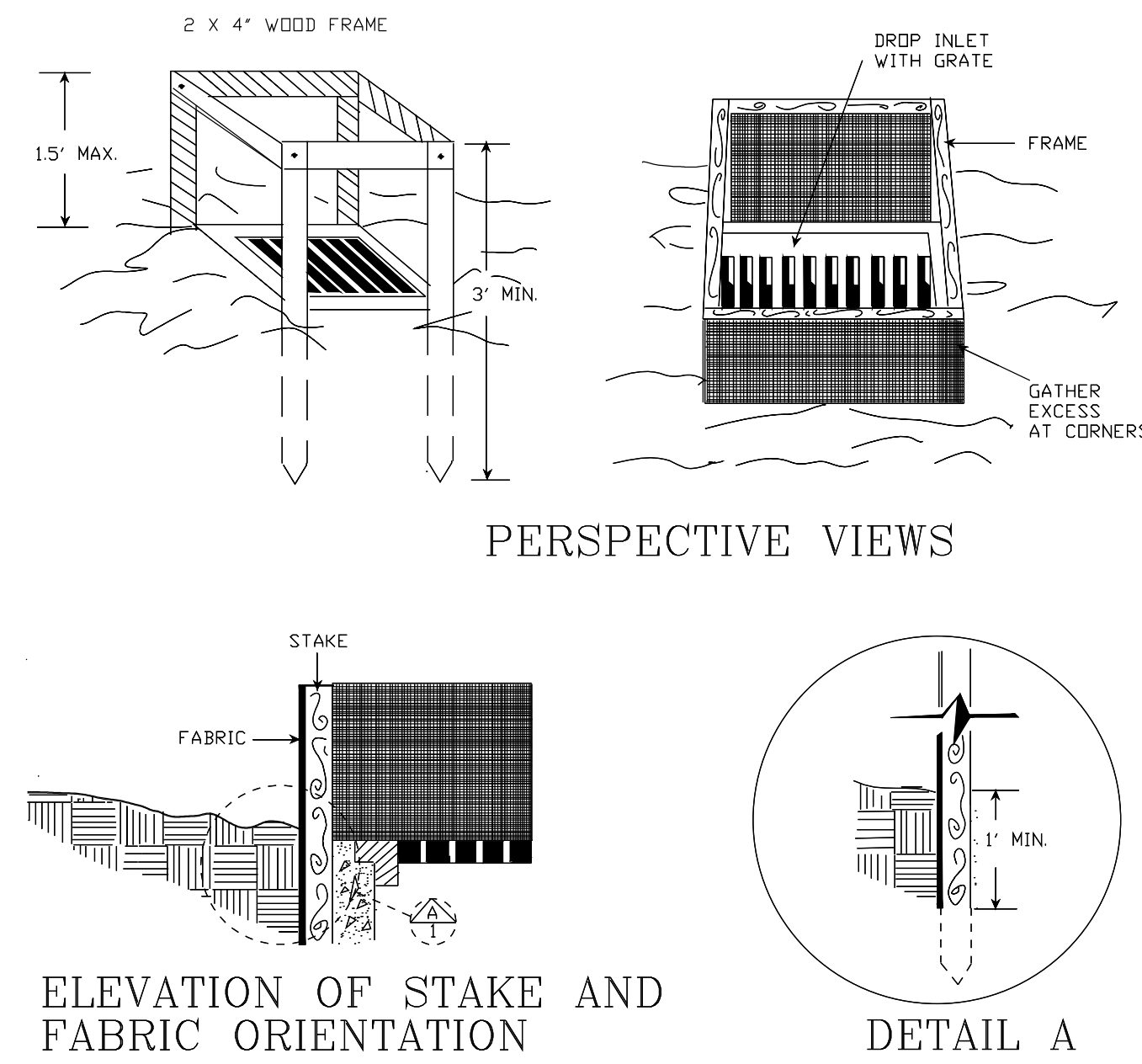
C-07
SHEET 08 OF 42

STONE CONSTRUCTION ENTRANCE



SOURCE: ADAPTED FROM 1983 MARYLAND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, AND VA. DSWC PLATE 3.02-1

SILT FENCE DROP INLET PROTECTION

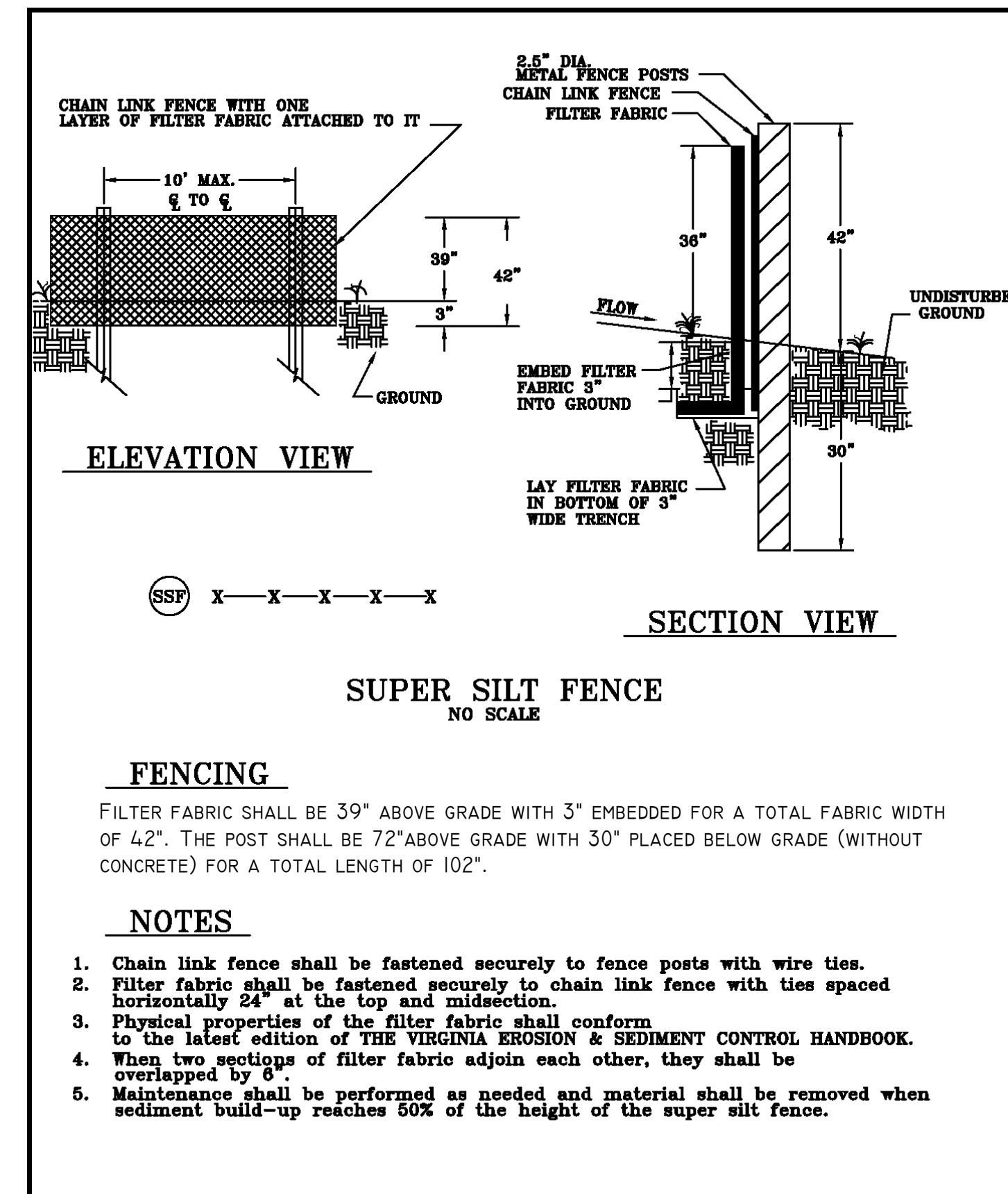


ELEVATION OF STAKE AND FABRIC ORIENTATION

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



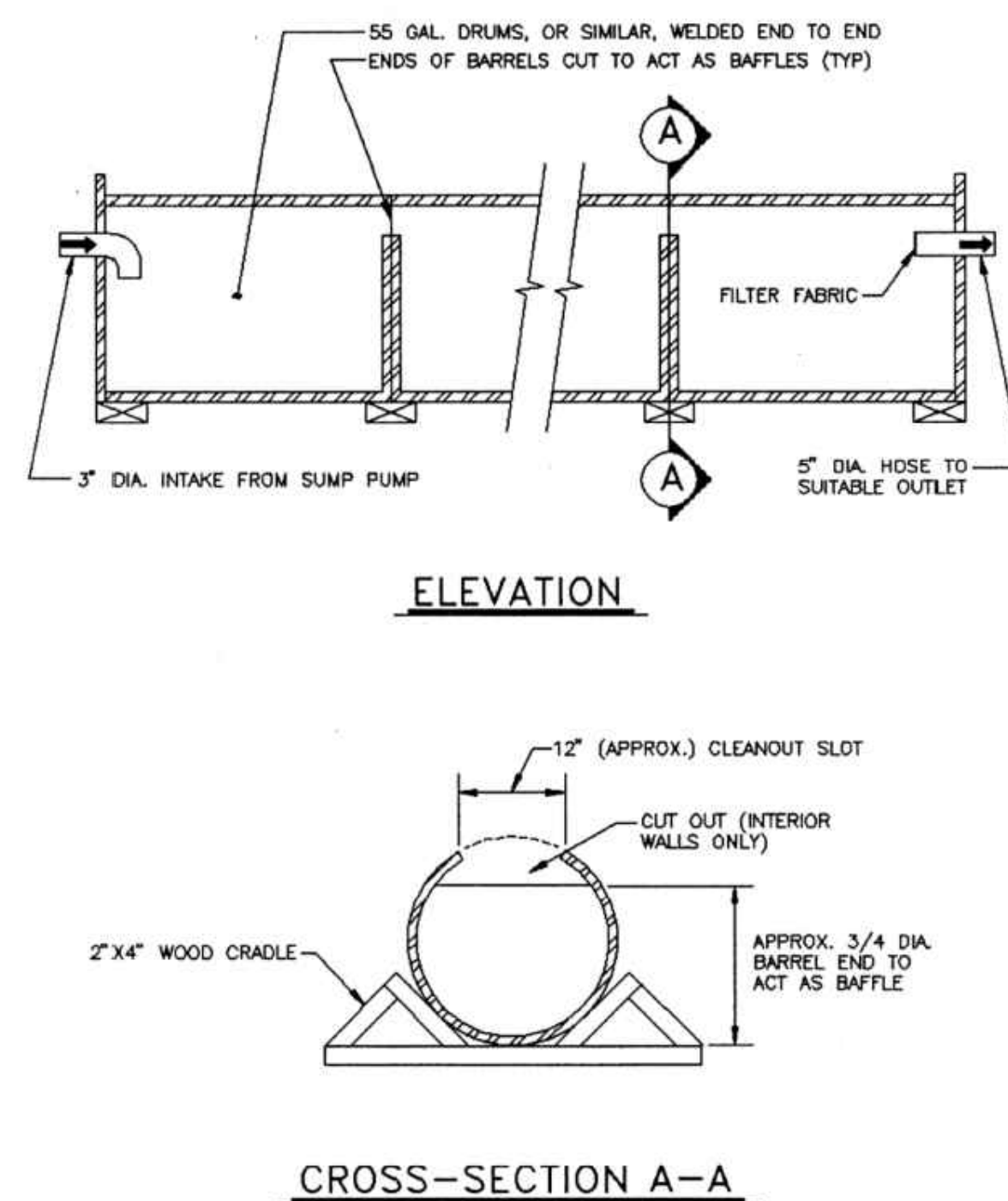
FENCING

FILTER FABRIC SHALL BE 39" ABOVE GRADE WITH 3" EMBEDDED FOR A TOTAL FABRIC WIDTH OF 42". THE POST SHALL BE 72" ABOVE GRADE WITH 30" PLACED BELOW GRADE (WITHOUT CONCRETE) FOR A TOTAL LENGTH OF 102".

NOTES

- Chain link fence shall be fastened securely to fence posts with wire ties.
- Filter fabric shall be fastened securely to chain link fence with ties spaced horizontally 24" at the top and midsection.
- Physical properties of the filter fabric shall conform to the latest edition of THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.
- When two sections of filter fabric adjoin each other, they shall be overlapped by 6".
- Maintenance shall be performed as needed and material shall be removed when sediment build-up reaches 60% of the height of the super silt fence.

PORTABLE SEDIMENT TANK



Source: USDA-SCS PLATE 3.26-1

_____ date

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

Re: Erosion and Sediment Control Permit Application for:

_____ 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:

- Reviewing the erosion and sedimentation (E&S) plan for the project.
- Walking the site prior to construction to identify critical areas.
- 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.
- Regularly 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.
- Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
- 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.
- Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at _____ with questions about this plan or my execution of the duties of Responsible Land Disturber.

Sincerely,

_____ signed

_____ name printed

_____ professional registration (type and number)



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

22-DPR-ITB-24

Project Name and Location
Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
EROSION AND SEDIMENT CONTROL DETAILS

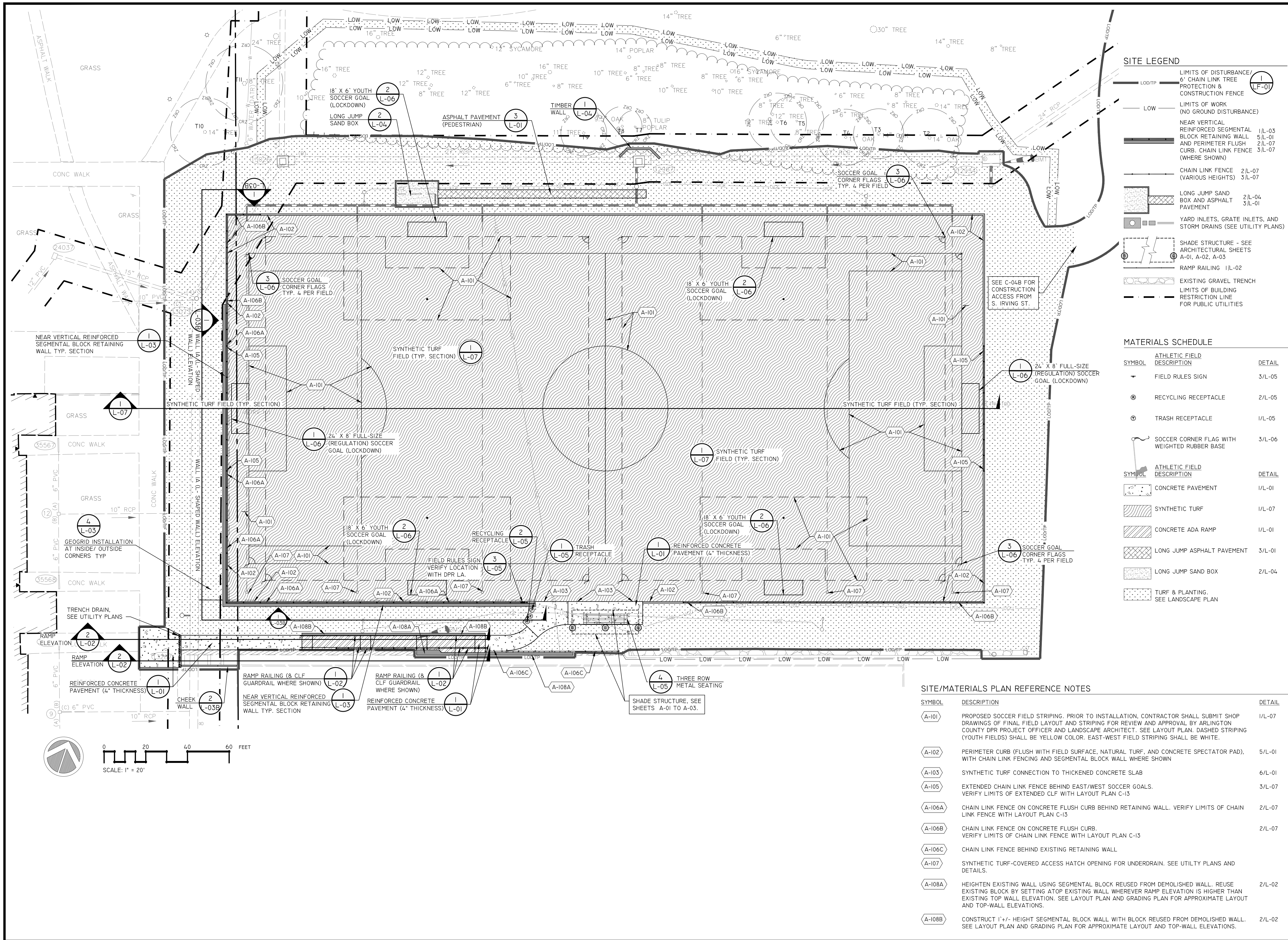
100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB
Filename: C-08-150396028 ESC Details.dwg
Plotted: May, 24, 21
Scale: 1"=20'
Date: May, 19, 20



Sheet
C-08
SHEET 09 OF 42



- ### SITE LEGEND
- LODTP LIMITS OF DISTURBANCE/ 6" CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE 1/LF-01
 - LOW LIMITS OF WORK (NO GROUND DISTURBANCE)
 - NEAR VERTICAL REINFORCED SEGMENTAL BLOCK RETAINING WALL AND PERIMETER FLUSH CURB, CHAIN LINK FENCE (WHERE SHOWN) 1/L-03, 5/L-01, 2/L-07, 3/L-07
 - CHAIN LINK FENCE (VARIOUS HEIGHTS) 2/L-07, 3/L-07
 - LONG JUMP SAND BOX AND ASPHALT PAVEMENT 2/L-04, 3/L-01
 - YARD INLETS, GRATE INLETS, AND STORM DRAINS (SEE UTILITY PLANS)
 - SHADE STRUCTURE - SEE ARCHITECTURAL SHEETS A-01, A-02, A-03
 - RAMP RAILING 1/L-02
 - EXISTING GRAVEL TRENCH
 - LIMITS OF BUILDING RESTRICTION LINE FOR PUBLIC UTILITIES

MATERIALS SCHEDULE

SYMBOL	ATHLETIC FIELD DESCRIPTION	DETAIL
+	FIELD RULES SIGN	3/L-05
⊙	RECYCLING RECEPTACLE	2/L-05
⊙	TRASH RECEPTACLE	1/L-05
⊙	SOCCER CORNER FLAG WITH WEIGHTED RUBBER BASE	3/L-06
SYMBOL	ATHLETIC FIELD DESCRIPTION	DETAIL
[Pattern]	CONCRETE PAVEMENT	1/L-01
[Pattern]	SYNTHETIC TURF	1/L-07
[Pattern]	CONCRETE ADA RAMP	1/L-01
[Pattern]	LONG JUMP ASPHALT PAVEMENT	3/L-01
[Pattern]	LONG JUMP SAND BOX	2/L-04
[Pattern]	TURF & PLANTING, SEE LANDSCAPE PLAN	

SITE/MATERIALS PLAN REFERENCE NOTES

SYMBOL	DESCRIPTION	DETAIL
A-101	PROPOSED SOCCER FIELD STRIPING. PRIOR TO INSTALLATION, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF FINAL FIELD LAYOUT AND STRIPING FOR REVIEW AND APPROVAL BY ARLINGTON COUNTY DPR PROJECT OFFICER AND LANDSCAPE ARCHITECT. SEE LAYOUT PLAN. DASHED STRIPING (YOUTH FIELDS) SHALL BE YELLOW COLOR. EAST-WEST FIELD STRIPING SHALL BE WHITE.	1/L-07
A-102	PERIMETER CURB (FLUSH WITH FIELD SURFACE, NATURAL TURF, AND CONCRETE SPECTATOR PAD), WITH CHAIN LINK FENCING AND SEGMENTAL BLOCK WALL WHERE SHOWN	5/L-01
A-103	SYNTHETIC TURF CONNECTION TO THICKENED CONCRETE SLAB	6/L-01
A-105	EXTENDED CHAIN LINK FENCE BEHIND EAST/WEST SOCCER GOALS. VERIFY LIMITS OF EXTENDED CLF WITH LAYOUT PLAN C-13	3/L-07
A-106A	CHAIN LINK FENCE ON CONCRETE FLUSH CURB BEHIND RETAINING WALL. VERIFY LIMITS OF CHAIN LINK FENCE WITH LAYOUT PLAN C-13	2/L-07
A-106B	CHAIN LINK FENCE ON CONCRETE FLUSH CURB. VERIFY LIMITS OF CHAIN LINK FENCE WITH LAYOUT PLAN C-13	2/L-07
A-106C	CHAIN LINK FENCE BEHIND EXISTING RETAINING WALL	
A-107	SYNTHETIC TURF-COVERED ACCESS HATCH OPENING FOR UNDERDRAIN. SEE UTILITY PLANS AND DETAILS.	
A-108A	HEIGHTEN EXISTING WALL USING SEGMENTAL BLOCK REUSED FROM DEMOLISHED WALL. REUSE EXISTING BLOCK BY SETTING ATOP EXISTING WALL WHEREVER RAMP ELEVATION IS HIGHER THAN EXISTING TOP WALL ELEVATION. SEE LAYOUT PLAN AND GRADING PLAN FOR APPROXIMATE LAYOUT AND TOP-WALL ELEVATIONS.	2/L-02
A-108B	CONSTRUCT 1'-7" HEIGHT SEGMENTAL BLOCK WALL WITH BLOCK REUSED FROM DEMOLISHED WALL. SEE LAYOUT PLAN AND GRADING PLAN FOR APPROXIMATE LAYOUT AND TOP-WALL ELEVATIONS.	2/L-02

22-DPR-ITB-24

Project Name and Location
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 (By Right)

3501 2nd Street South
 Arlington, VA 22204

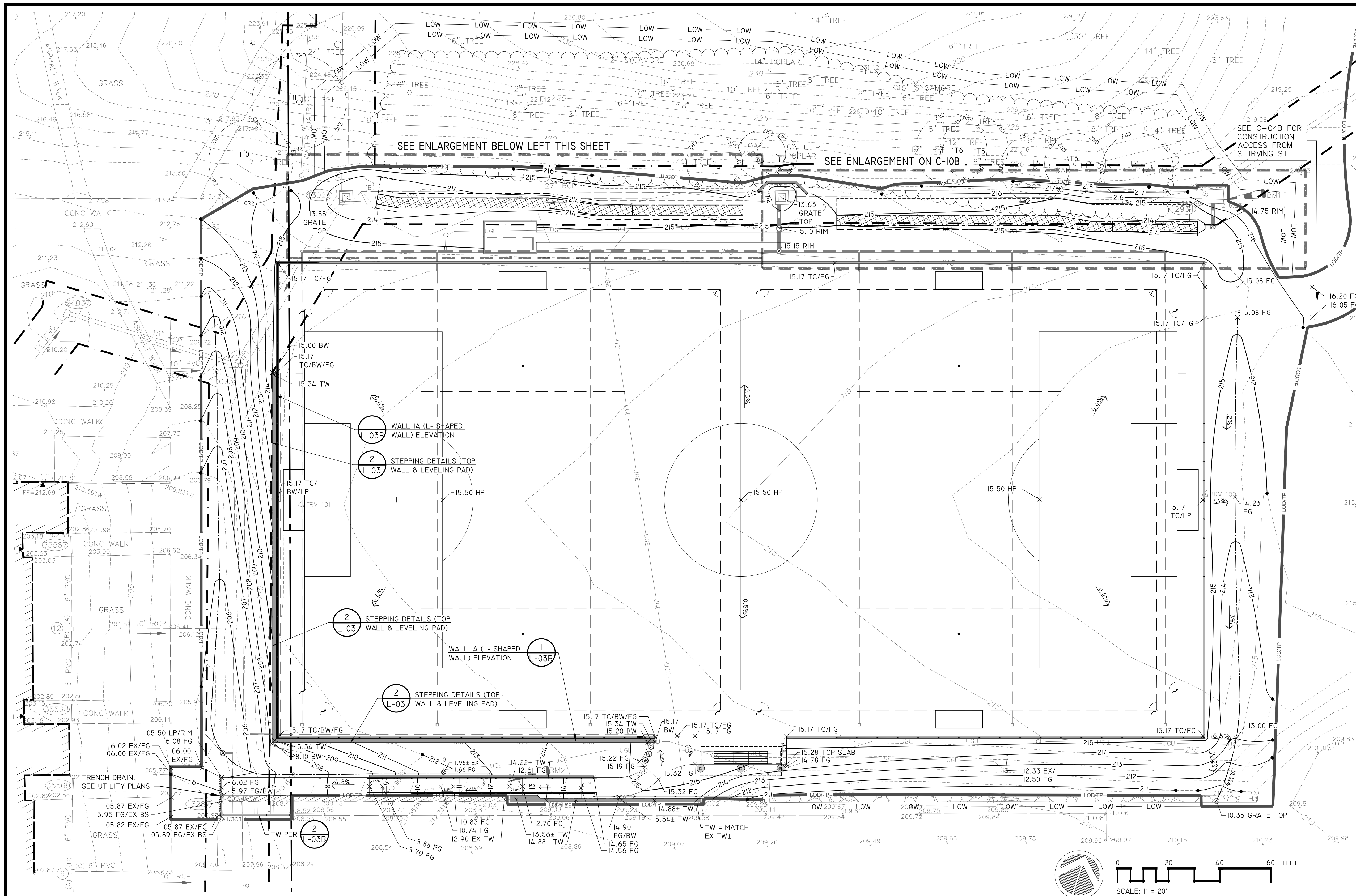
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SITE & MATERIALS PLAN

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB
 Filename: C-09-150396028 Site.dwg
 Plotted: May, 24, 21
 Scale: 1"=20'
 Date: Apr. 16, 21





SITE LEGEND

LOD/TP	LIMITS OF DISTURBANCE/ 6" CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE	1 LF-01
LOW	LIMITS OF WORK (NO GROUND DISTURBANCE)	
	NEAR VERTICAL REINFORCED SEGMENTAL BLOCK RETAINING WALL AND PERIMETER FLUSH CURB, CHAIN LINK FENCE (WHERE SHOWN)	1/L-03 5/L-01 2/L-07 3/L-07
	CHAIN LINK FENCE (VARIOUS HEIGHTS)	2/L-07 3/L-07
	LONG JUMP SAND BOX AND ASPHALT PAVEMENT	2/L-04 3/L-01
	YARD INLETS, GRATE INLETS, AND STORM DRAINS (SEE UTILITY PLANS)	
	SHADE STRUCTURE - SEE ARCHITECTURAL SHEETS A-01, A-02, A-03	
	RAMP RAILING	1/L-02
	EXISTING GRAVEL TRENCH	
	LIMITS OF BUILDING RESTRICTION LINE FOR PUBLIC UTILITIES	

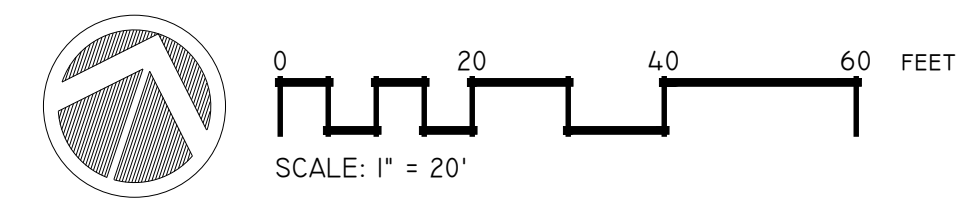
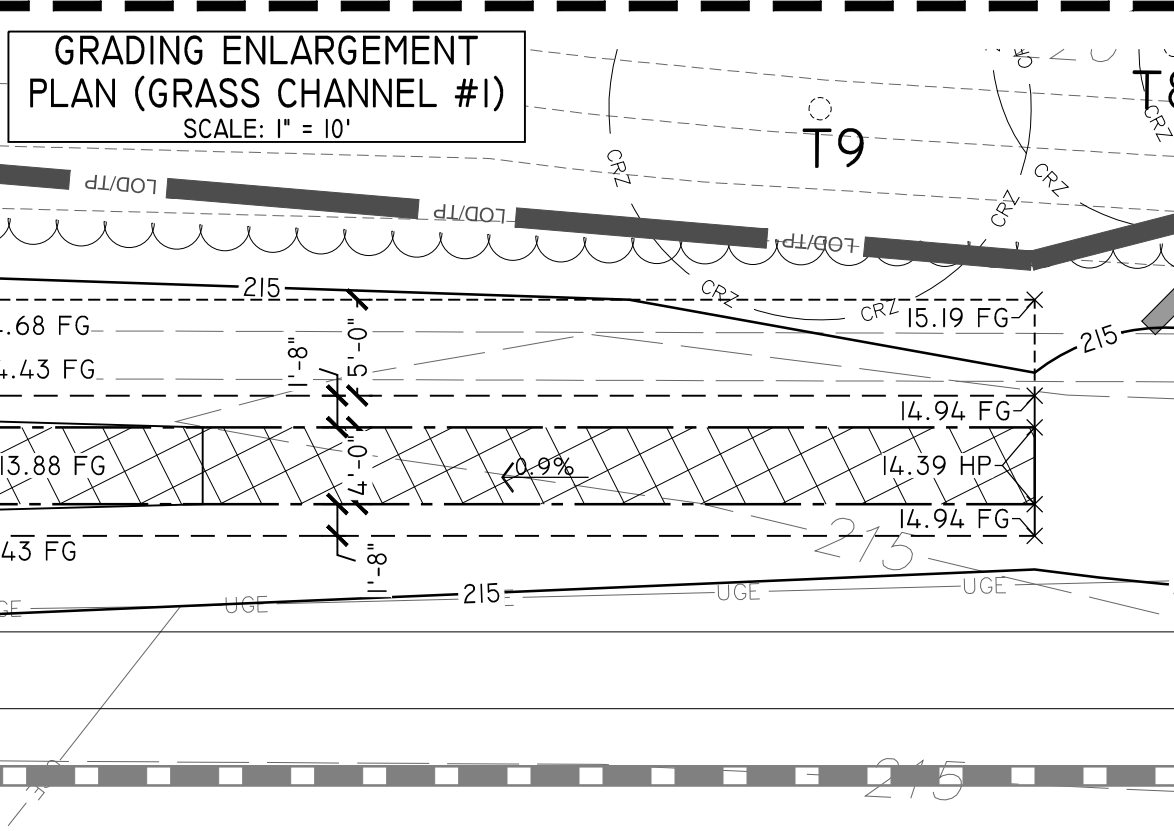
GRADING LEGEND

213	PROPOSED MINOR CONTOUR
215	PROPOSED MAJOR CONTOUR
	PROP. GRASS CHANNEL BENCH
	PROP. GRASS CHANNEL SIDE SLOPE
	PROP. GRASS CHANNEL BOTTOM
	PROP. GRASS CHANNEL SIDE SLOPE
13.74	PROPOSED SPOT ELEVATION
2.65%	PROPOSED SLOPE
FG	PROPOSED FINISH GRADE
TW	PROPOSED TOP WALL
BW	PROPOSED BOTTOM WALL (ADJACENT FINISH GRADE)
TC	PROPOSED TOP CURB
BC	PROPOSED BOTTOM CURB
LP	PROPOSED LOW POINT
HP	PROPOSED HIGH POINT
INV	PROPOSED INVERT (SEE SWM/STORM DRAIN PLANS)
BR/TR	PROPOSED NON-BMP SWALE BOTTOM/TOP RAMP (FG ELEV.)
BL/TL	PROPOSED NON-BMP SWALE BOTTOM/TOP RAMP LANDING (FG ELEV.)

- GRADING & ADA COMPLIANCE NOTES:**
- 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.
 - SEE SHEET C-12 FOR ADA ACCESS PLAN.
 - 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.
 - PROPOSED GRADING SHALL MEET EXISTING GRADE UNIFORMLY TO ENSURE A SMOOTH TRANSITION. NOTIFY ARLINGTON COUNTY PROJECT OFFICER IMMEDIATELY IF THERE ARE ANY EDGE CONDITIONS THAT CREATE AREAS WITHOUT POSITIVE DRAINAGE.
 - ALL LONGITUDINAL SLOPES ALONG THE WALKS SHALL BE NO STEEPER THAN 4.8% WITHOUT RAILING AND 7.8% WITH RAILING. THE GROSS 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.
 - ANY HARDSCAPE SURFACE AREAS THAT ARE BUILT WITHOUT COMPLYING WITH THE ABOVE CODE MUST BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE.
 - THE MAXIMUM VERTICAL CHANGE BETWEEN THE FINISH GRADES OF ADJACENT HARDSCAPE SURFACES IS 1/8". THE MAXIMUM HORIZONTAL GAP BETWEEN THE EDGES OF ADJACENT HARDSCAPE SURFACES IS 3/8".

NOTE: THE MAXIMUM ALLOWABLE DROP FROM THE TOP WALL (TW) ELEVATION OF THE RETAINING WALLS (TIMBER AND SEGMENTAL BLOCK) TO THE FINISH GRADE OF THE ADJACENT BOTTOM WALL (BW) ELEVATION IS 2.5' (30"). IF THE "FALL HEIGHT" EXCEEDS 30", A BARRIER (I.E., HANDRAIL, GUARDRAIL, FENCING) IS REQUIRED.

NOTE: GRADING IS NOT COMPLETE UNTIL CONTRACTOR ACQUIRES APPROVAL FROM PROJECT OFFICER AND LANDSCAPE ARCHITECT. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE PROJECT OFFICER.



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

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Project Name and Location
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 (By Right)

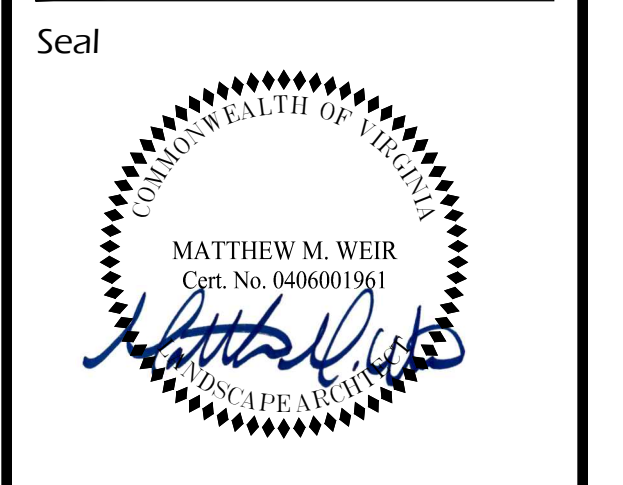
3501 2nd Street South
 Arlington, VA 22204

Sheet Title
GRADING PLAN

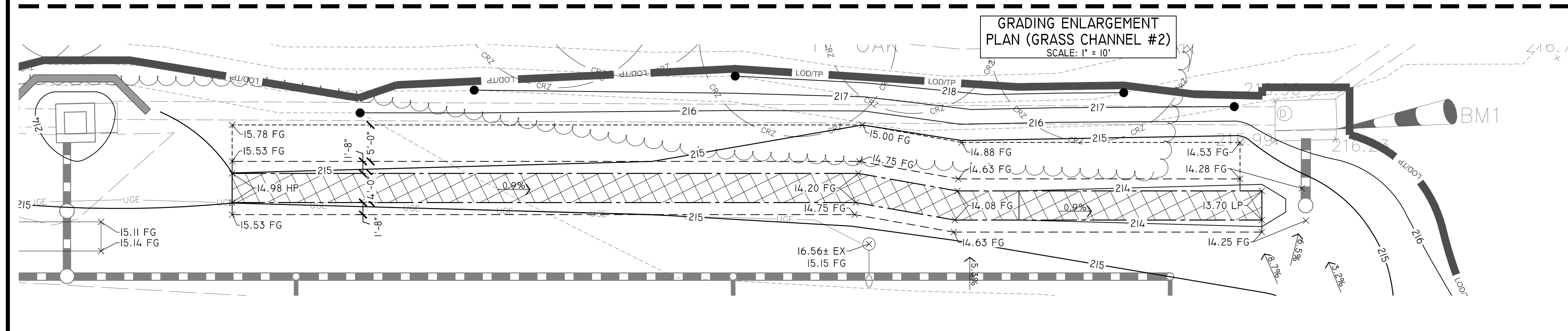
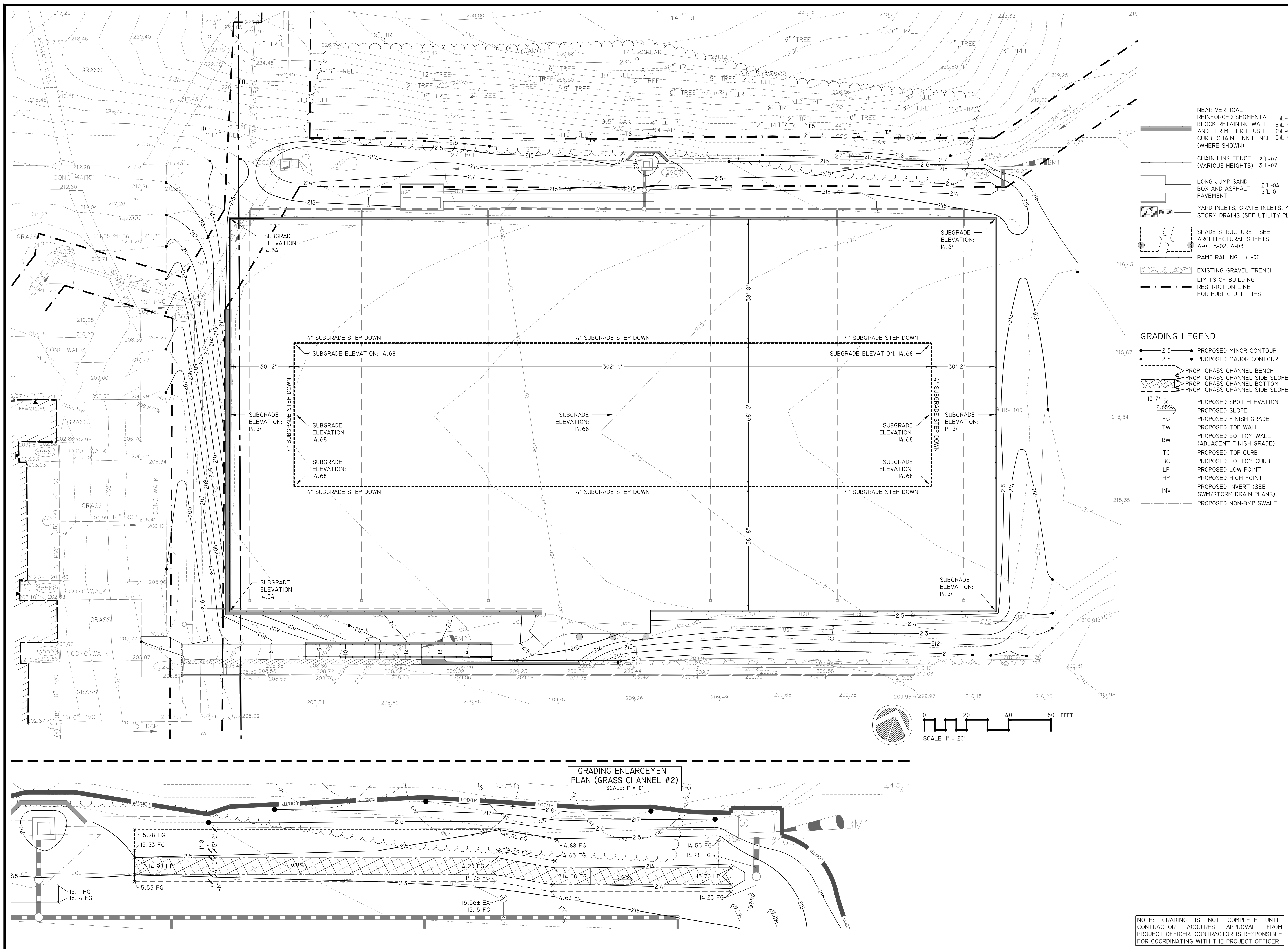
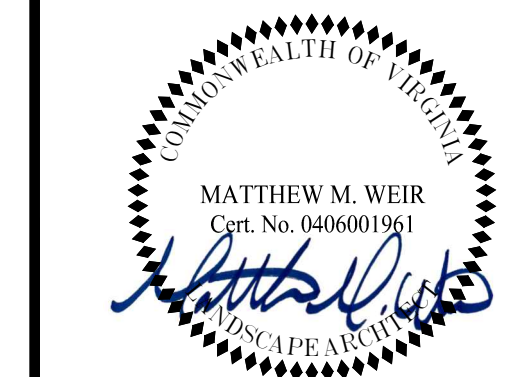
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Approval	Date
Design Manager	
Revisions	Date

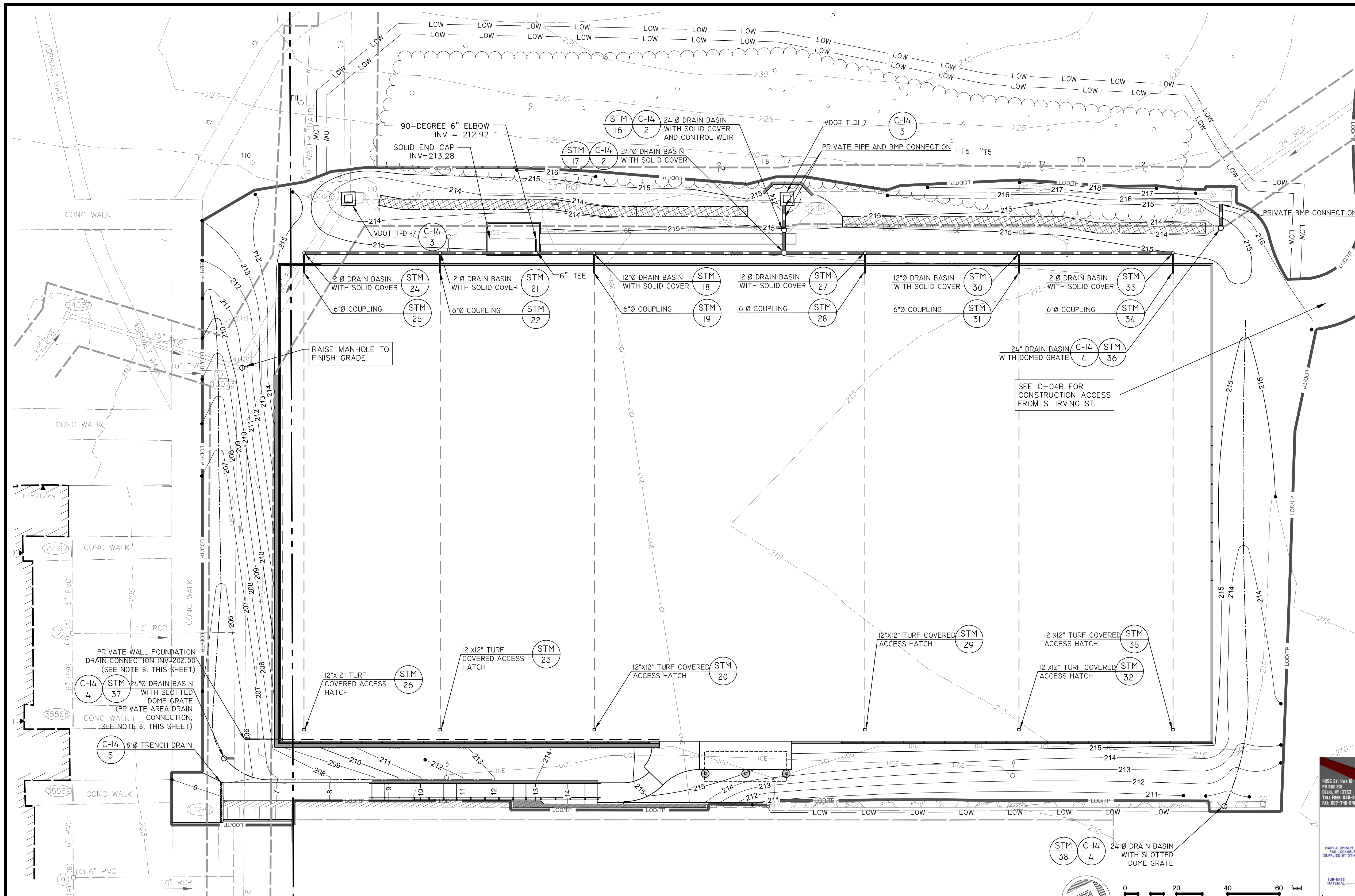
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 Scale: 1"=20'
 Date: Apr. 16, 21



Sheet
C-10
 SHEET 1 A OF 42



NOTE: GRADING IS NOT COMPLETE UNTIL CONTRACTOR ACQUIRES APPROVAL FROM PROJECT OFFICER. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE PROJECT OFFICER.



- UTILITY 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 PRIOR TO BEGINNING NEW WORK AS SHOWN. CONTRACTOR TO SLOPE PIPES APPROPRIATELY TO ENSURE POSITIVE DRAINAGE.
 4. IN AREAS OF CUT, DEEPEN EXISTING UNDERGROUND ELECTRIC CONDUIT 12-24" BELOW FINISH GRADE. SEE DEMOLITION PLAN FOR ADDITIONAL INFORMATION.
 5. CONTRACTOR SHALL COORDINATE LOCATIONS OF STAND ALONE SOCCER GOAL SAFETY SYSTEM LOCKDOWN (4/L-06) WITH PERMEABLE PAVEMENT UNDERDRAIN PIPES. SHOULD A CONFLICT ARISE THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER, IN WRITING, PRIOR TO INSTALLATION.
 6. ALL CONNECTIONS (INCLUDING THE PIPE) MADE TO THE COUNTY'S STORM SEWER SYSTEM ARE CONSIDERED PRIVATE AND ANY REQUIRED REPAIR OR MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CURRENT AND FUTURE PROPERTY OWNER.
 7. ALL PROPOSED STORM DRAIN PIPES SHALL BE PRIVATELY MAINTAINED.
 8. CONNECTION SHALL BE CORE DRILLED IN THE PRESENCE OF THE ASSIGNED DES INFRASTRUCTURE INSPECTOR.
 9. REFER TO SHEETS C-15, C-15A AND C-15B FOR STORM SEWER PROFILES.



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

22-DPR-ITB-24

Project Name and Location
**Thomas Jefferson Park
 Upper Field Conversion**
 (By Right)

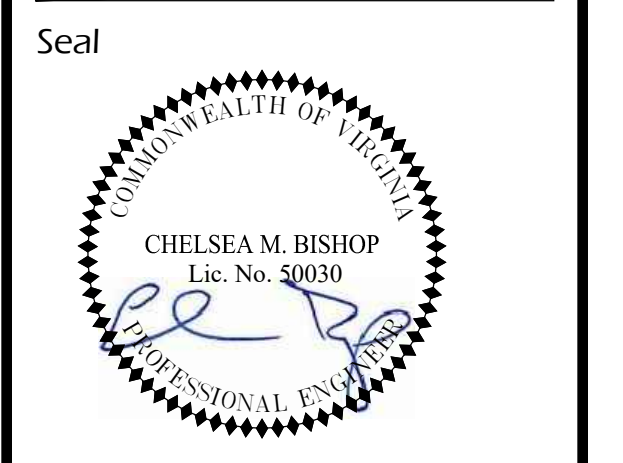
3501 2nd Street South
 Arlington, VA 22204

Sheet Title
UTILITY PLAN

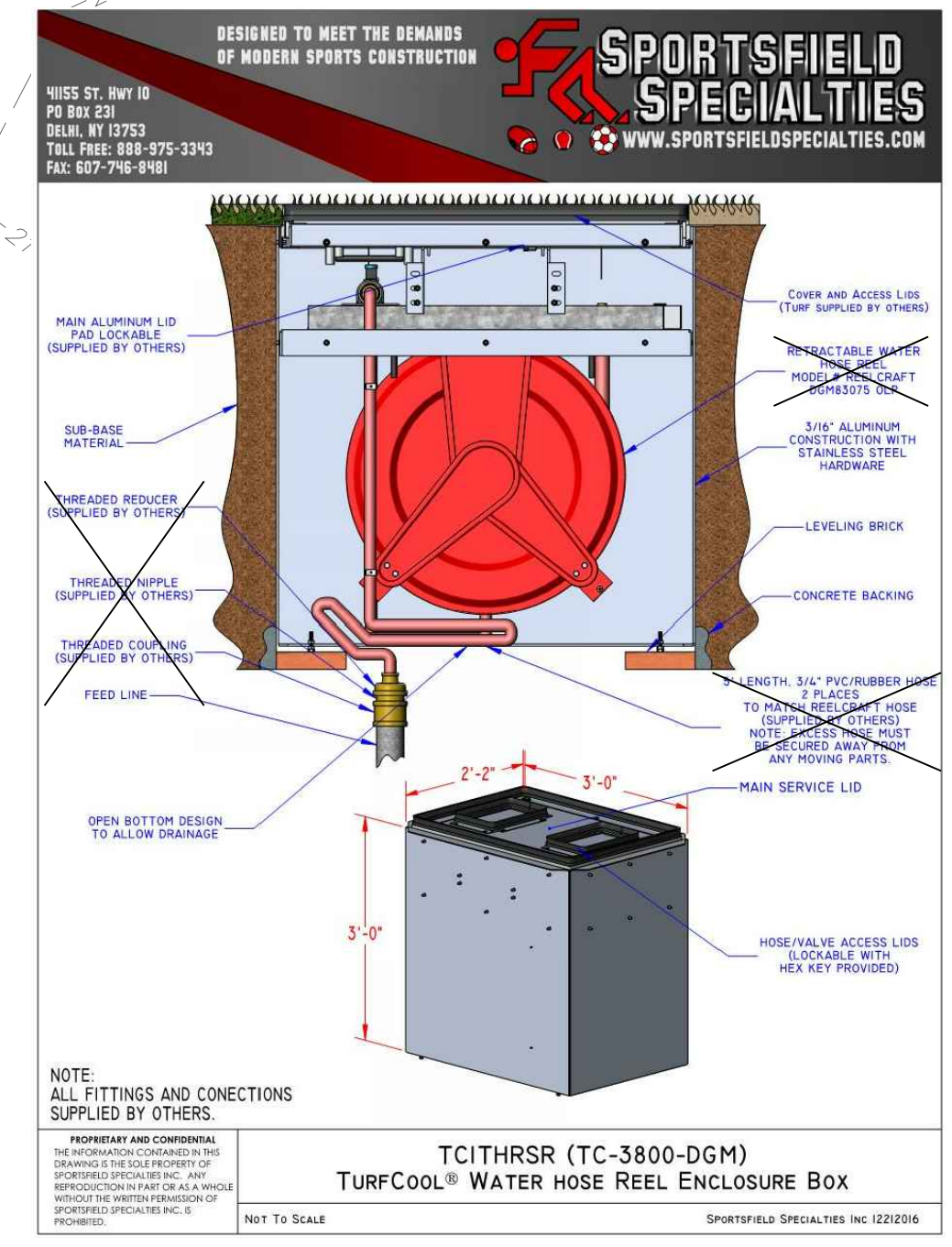
100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB
 Filename: C-11-150396028 Utility.dwg
 Plotted: May, 24, 21
 Scale: 1"=20'
 Date: May, 24, 21

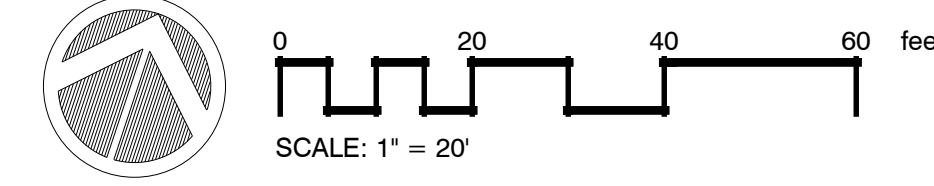


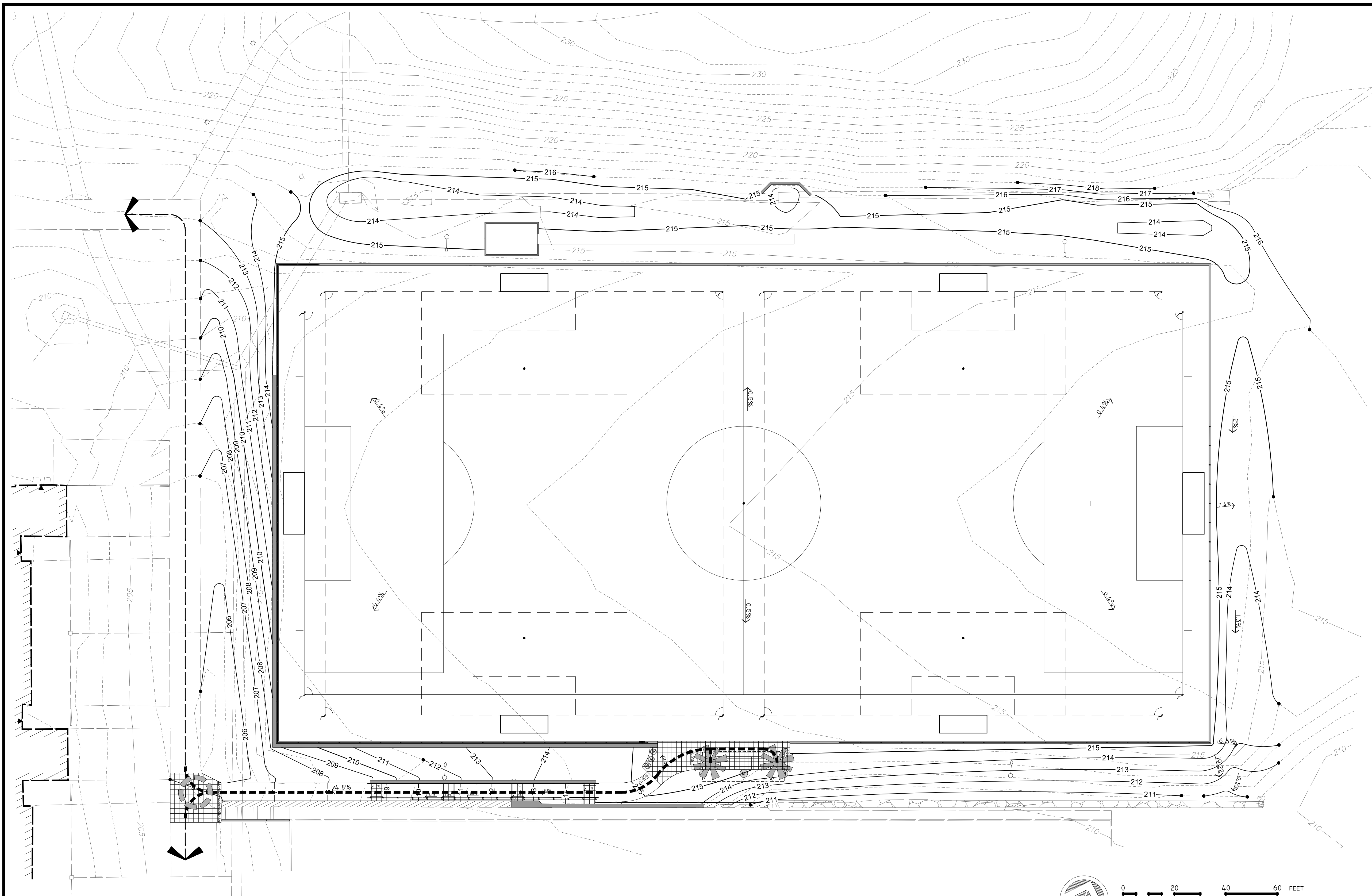
Sheet
C-11
 SHEET 12 OF 42



UTILITY LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	LIMITS OF DISTURBANCE/ 6' CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE
---	SOLID PVC PIPE
---	PERFORATED PVC PIPE
○	12" NYLOPLAST DRAIN BASIN (DETAIL 1/C-14)
○	24" NYLOPLAST DRAIN BASIN (DETAIL 2/C-14)
□	VDOT T-DI-7 (DETAIL 3/C-14)
□	ACCESS HATCH
---	LIMITS OF BUILDING RESTRICTION FOR PUBLIC UTILITIES





- SITE LEGEND**
- NEAR VERTICAL REINFORCED SEGMENTAL BLOCK RETAINING WALL AND PERIMETER FLUSH CURB, CHAIN LINK FENCE (WHERE SHOWN) 1/L-03, 5/L-01, 2/L-07, 3/L-07
 - CHAIN LINK FENCE (VARIOUS HEIGHTS) 2/L-07, 3/L-07
 - LONG JUMP SAND BOX AND ASPHALT PAVEMENT 2/L-04, 3/L-01
 - YARD INLETS, GRATE INLETS, AND STORM DRAINS (SEE UTILITY PLANS)
 - SHADE STRUCTURE - SEE ARCHITECTURAL SHEETS A-01, A-02, A-03
 - RAMP RAILING 1/L-02
 - EXISTING GRAVEL TRENCH

SITE FURNISHINGS SCHEDULE

SYMBOL	ATHLETIC FIELD DESCRIPTION	DETAIL
▲	FIELD RULES SIGN	3/L-05
⊙	RECYCLING RECEPTACLE	2/L-05
⊕	TRASH RECEPTACLE	1/L-05
⋈	SOCCER CORNER FLAG WITH WEIGHTED RUBBER BASE	3/L-06

- GRADING LEGEND**
- 213 PROPOSED MINOR CONTOUR
 - 215 PROPOSED MAJOR CONTOUR

- ADA ACCESSIBILITY LEGEND**
- ⊙ ADA ACCESSIBLE ENTRY POINT
 - ⋈ ADA ACCESSIBLE SEATING
 - ADA ACCESSIBLE ROUTE
 - ▤ ADA ACCESSIBLE LANDING
 - EXISTING SIDEWALK ROUTE

ADA NOTES:

- 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 PROJECT OFFICER.
- SEE GRADING PLAN FOR SPOT ELEVATIONS AND NOTES.

PARK ACCESSIBILITY TABULATION

FEATURE/COMPONENT/ELEMENT	ACCESSIBLE QUANTITY	TOTAL QUANTITY	% ACCESSIBLE
THREE ROW METAL SEATING	1	1 BLEACHER, 2 ADA PADS	100%
TRASH/RECYCLING	3	3	100%
SHADE STRUCTURE	1	1	100%



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3501 2nd Street South
 Arlington, VA 22204

Sheet Title
ADA ACCESS PLAN

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

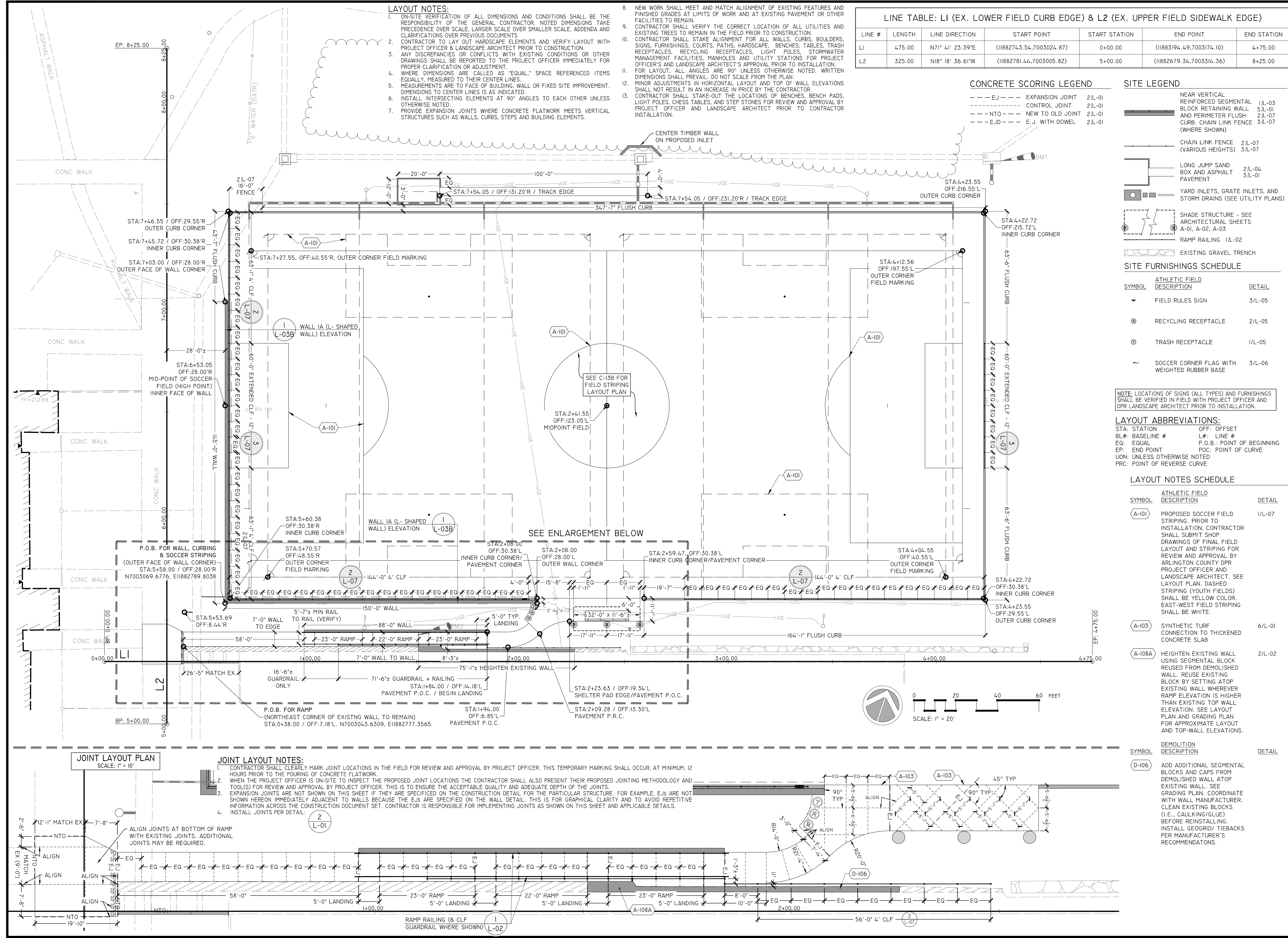
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 Plotted: May, 24, 21
 Scale: 1"=20'
 Date: Apr. 16, 21



Sheet
C-12
 SHEET 13 OF 42

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB
Filename: C-13-150396028 Layout.dwg
Plotted: May, 24, 21
Scale: 1"=20'
Date: Apr. 16, 21



22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**FIELD STRIPING
LAYOUT PLAN**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

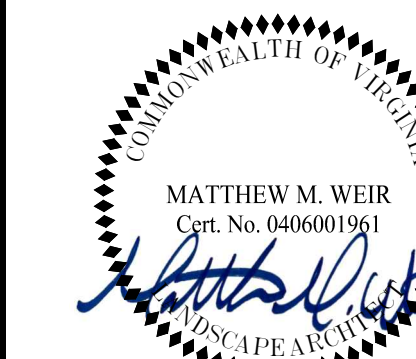
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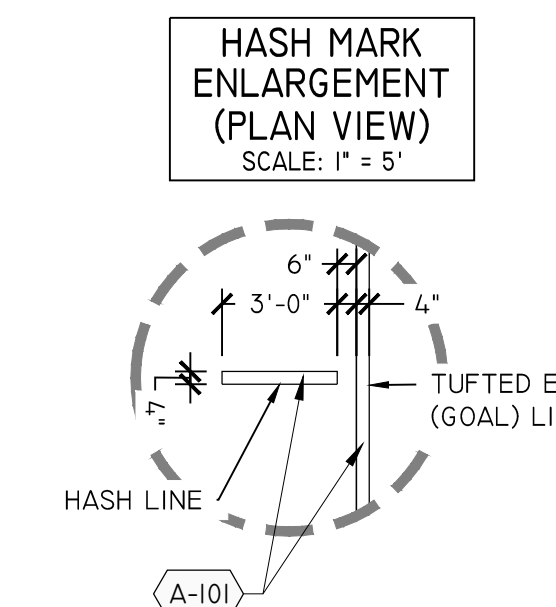
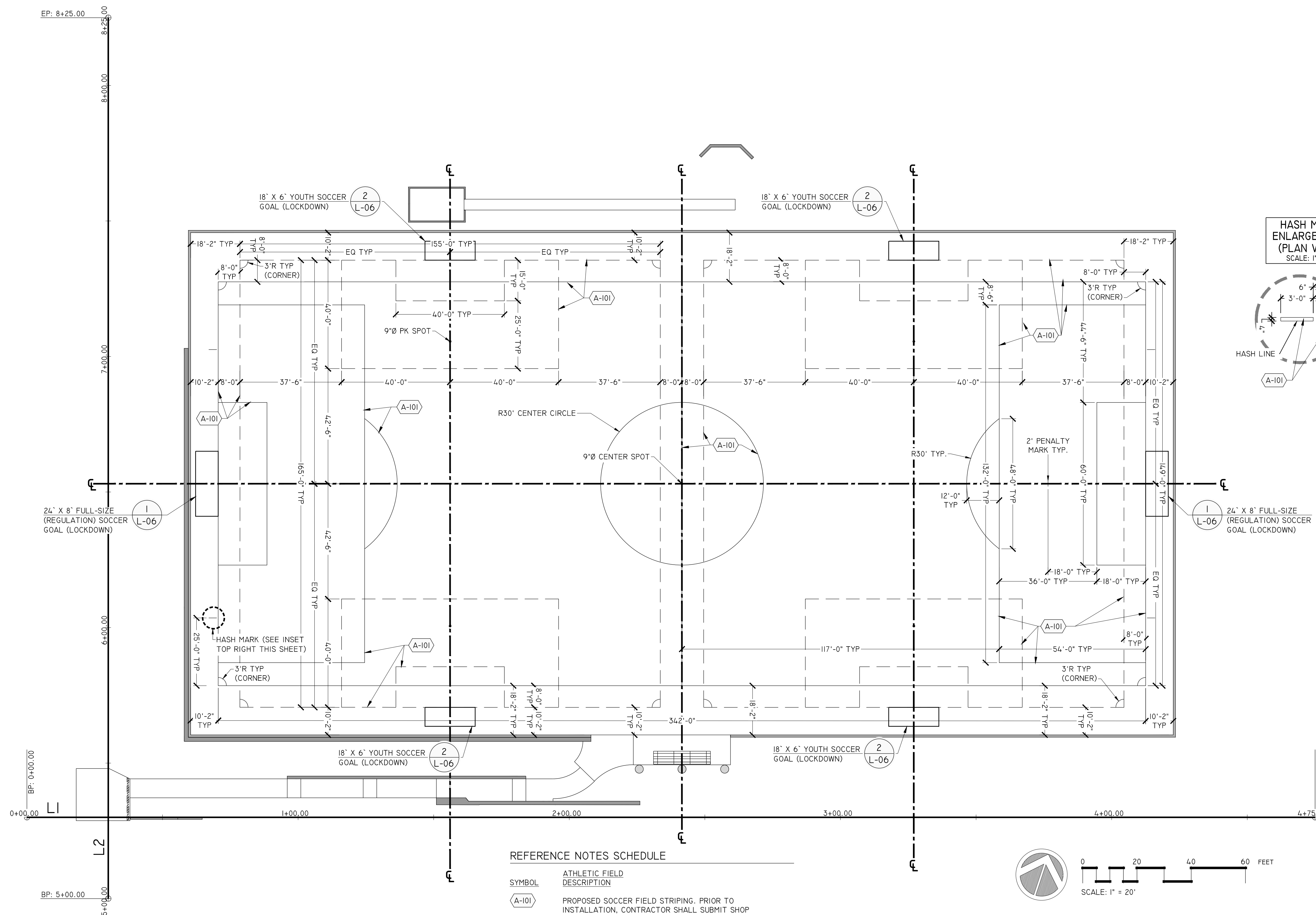
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Date: Apr. 16, 21

Seal



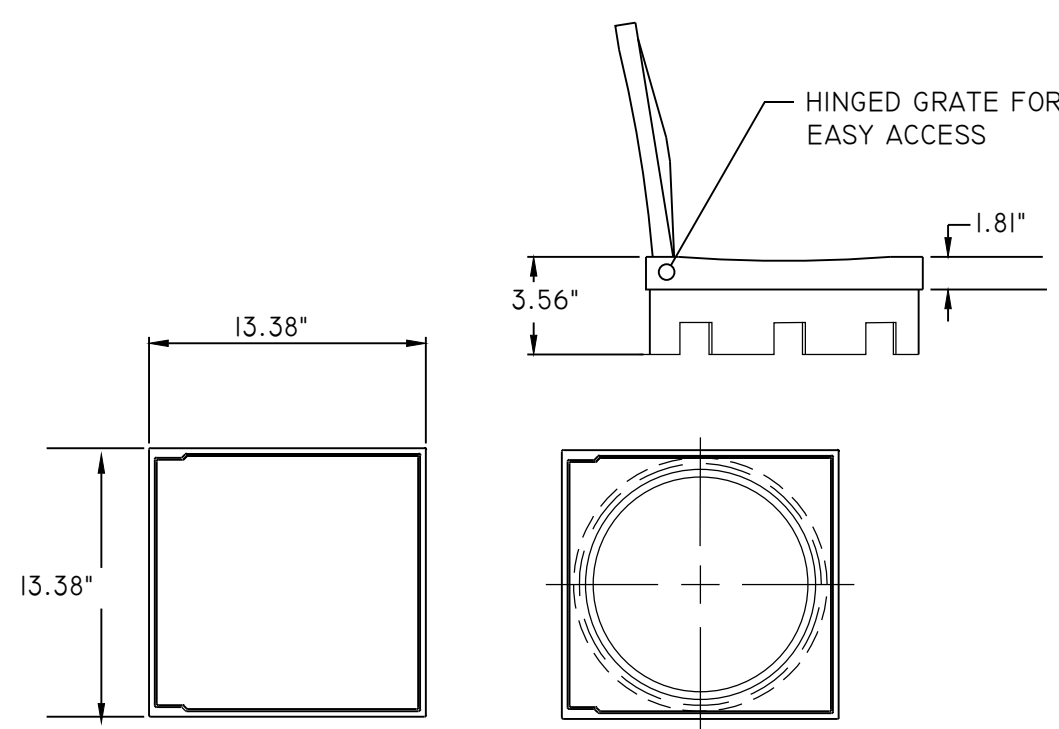
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C-13B
SHEET 15 OF 42

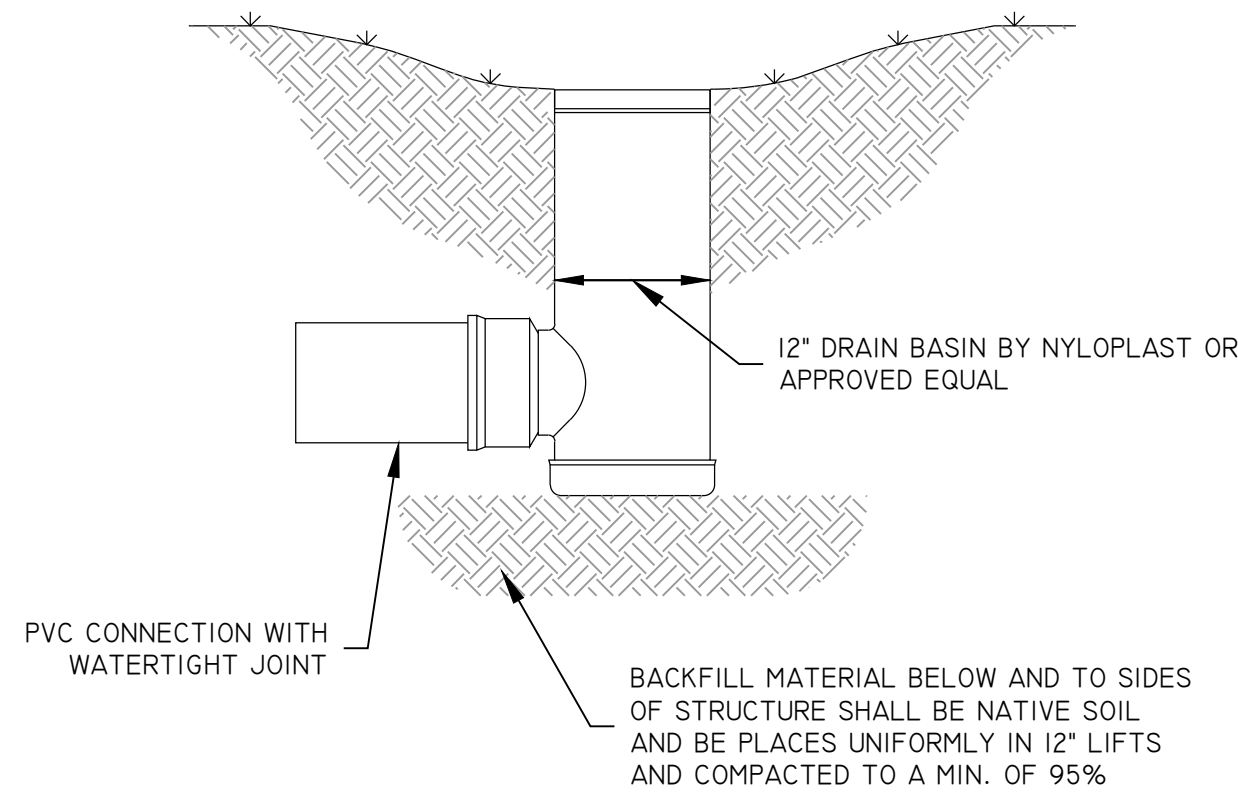


REFERENCE NOTES SCHEDULE

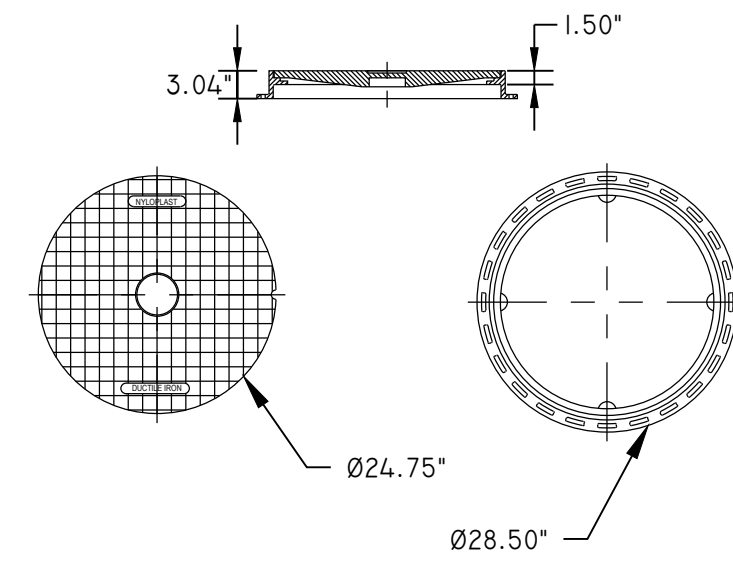
SYMBOL	ATHLETIC FIELD DESCRIPTION
(A-101)	PROPOSED SOCCER FIELD STRIPING. PRIOR TO INSTALLATION, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF FINAL FIELD LAYOUT AND STRIPING FOR REVIEW AND APPROVAL BY ARLINGTON COUNTY DPR PROJECT OFFICER AND LANDSCAPE ARCHITECT. SEE LAYOUT PLAN. DASHED STRIPING (YOUTH FIELDS) SHALL BE YELLOW COLOR. EAST-WEST FIELD STRIPING SHALL BE WHITE.



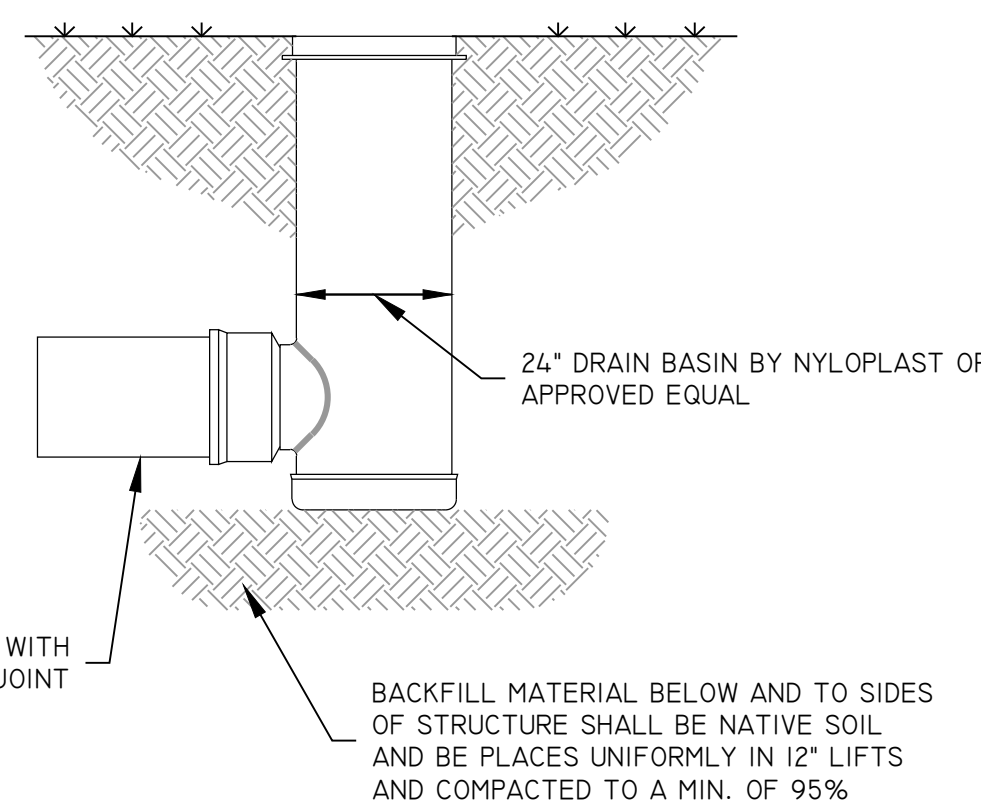
- NOTES:
- 1.) 12" COVER SHALL BE NYLOPLAST AMERICA INC. OR APPROVED EQUAL.
 - 2.) CASTING SHALL BE FURNISHED WITH A BLACK PAINT
 - 3.) COVER SHALL BE PEDESTRIAN (H-10) RATED
 - 4.) COVER SHALL BE DUCTILE IRON AND CONFORM TO ASTM A48 - CLASS 30B



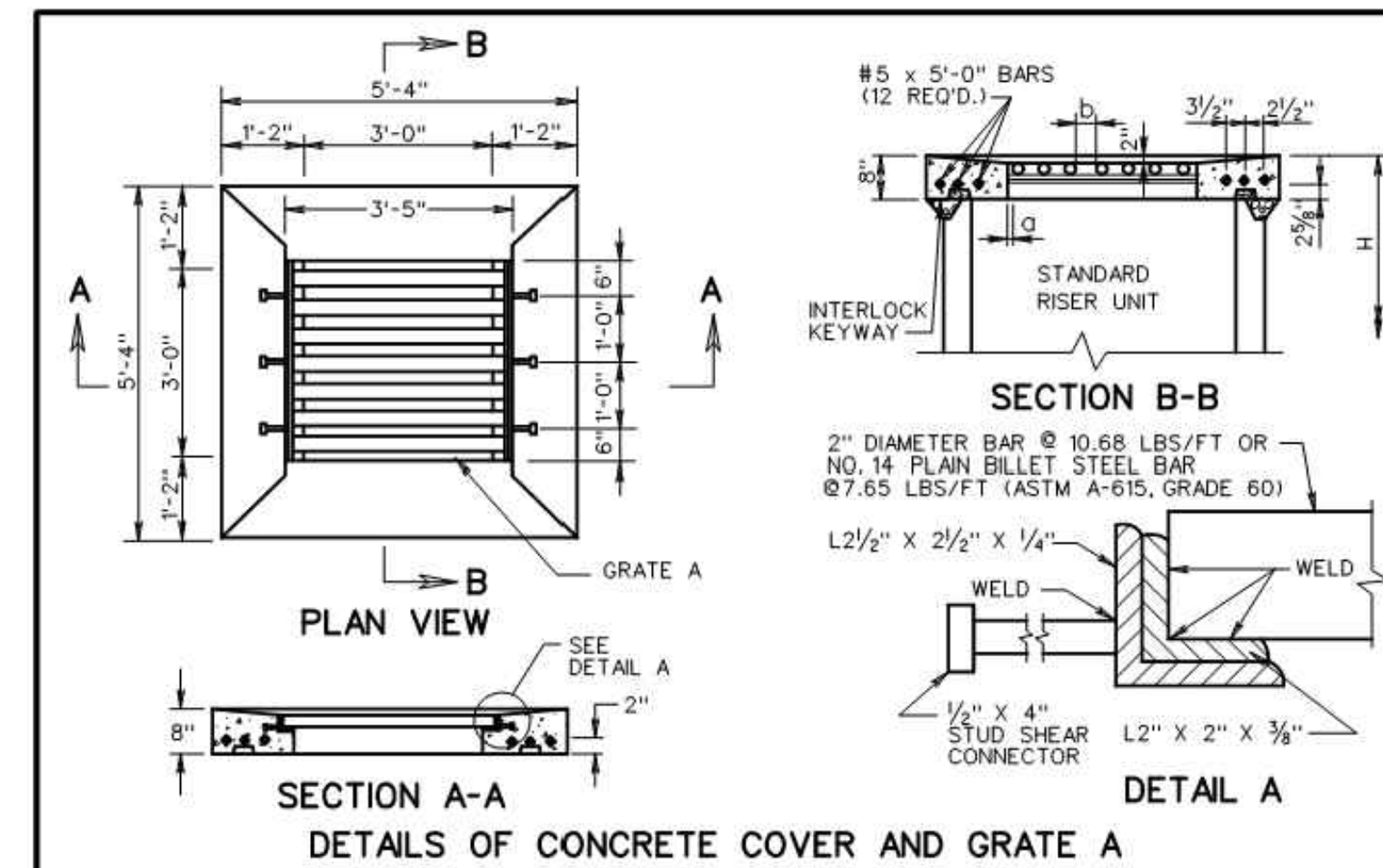
1 12" DRAIN BASIN WITH STANDARD GRATE COVER
N.T.S.



- NOTES:
- 1.) 24" COVER SHALL BE NYLOPLAST AMERICA INC. OR APPROVED EQUAL.
 - 2.) CASTING SHALL BE FURNISHED WITH A BLACK PAINT
 - 3.) COVER SHALL BE PEDESTRIAN (H-10) RATED
 - 4.) COVER SHALL BE DUCTILE IRON AND CONFORM TO ASTM A48 - CLASS 30B

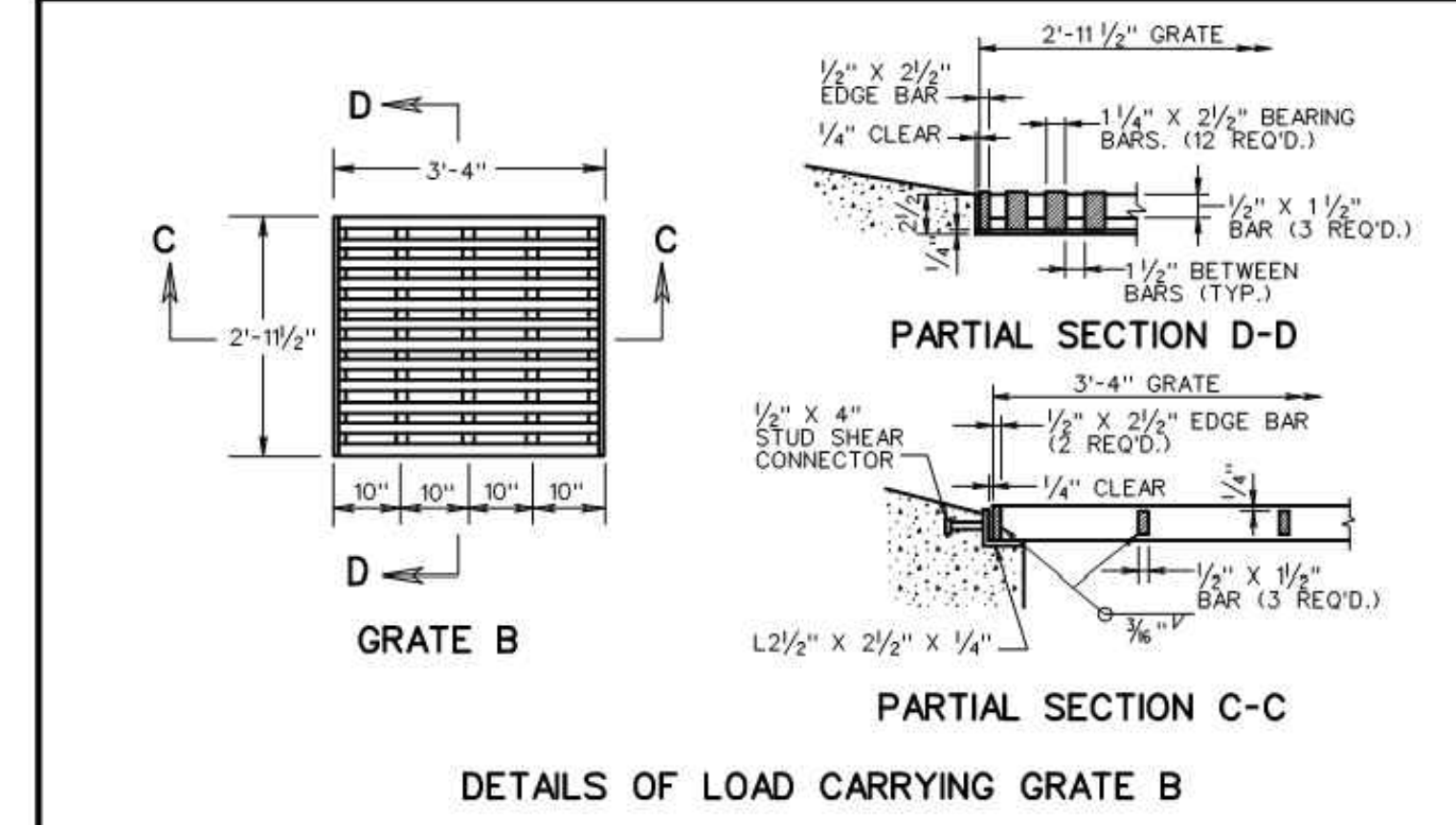


2 24" DRAIN BASIN WITH SOLID COVER
N.T.S.



GRATE A BAR SPACING CHART		
GRATE TYPE	MAXIMUM DIMENSION	
	a	b
A I	1 1/2"	3"
A II	1"	1"

- NOTES:
1. SEE GENERAL NOTES-PRECAST FOR ADDITIONAL DETAILS.
 2. CONCRETE COVER AND GRATE ARE TO BE FURNISHED AS A SINGLE UNIT. OUTSIDE DIMENSIONS OF GRATE ARE TO BE 3'-4" X 2'-11 1/2" (GRATE A) OR 3'-4" X 2'-11 1/2" (GRATE B).
 3. DIMENSIONS SHOWN ARE MINIMUM. ACTUAL DIMENSIONS MAY VARY WITH MANUFACTURER.
 4. GRATE A IS TO BE UTILIZED IN LOCATIONS NOT NORMALLY SUBJECT TO TRAFFIC.
 5. GRATE B IS TO BE UTILIZED IN LOCATIONS NORMALLY SUBJECT TO TRAFFIC.
 6. ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
 7. GRATE AND COLLAR ARE TO BE GALVANIZED AFTER FABRICATION.
 8. JOINTS BETWEEN CONCRETE COVER AND GUTTERS (WHEN REQUIRED) ARE TO BE DOWELED, KEYPED, OR OTHER VDOT APPROVED METHODS.
 9. CONCRETE SHALL BE 4000 PSI MINIMUM.
 10. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A-615.
 11. GRATE BARS ARE TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO THE DITCH FLOW.
 12. SEE STANDARD DI-7, 7A, 7B FOR DETAILS OF GUTTER. METHOD OF PLACEMENT, ALTERNATE METHODS OF CONSTRUCTION.



SPECIFICATION REFERENCE		STANDARD PRECAST TOP UNITS	
105	233		
302			

VIRGINIA DEPARTMENT OF TRANSPORTATION

2016 ROAD & BRIDGE STANDARDS

3 VDOT T-DI-7 INLET
N.T.S.

ACO DRAIN
PowerDrain - S200K iron edged channels

ACO Specification Information

Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - SK2-00	4" round	7.87'	153	0.34
B	Bottom outlet - SK2-040	4" round	15.75'	216	0.48
C	Bottom outlet - SK2-040	6" round	15.75'	486	1.08
D	End outlet - SK2-00	4" round	7.87'	132	0.29
E	End outlet - SK2-40	4" round	15.75'	202	0.45
F	End outlet - SK2-10	6" round	9.84'	320	0.71
G	End outlet - SK2-40	6" round	15.75'	437	0.97
H	Type SK2-9020	4" round	31.83'	297	0.66
I	Type SK2-9020	6" round	31.83'	658	1.47
J	Type SK2-9020	4" round	23.19'	255	0.57
K	Type SK2-9020	6" round	30.44'	290	0.65
L	Type SK2-9020	4" round	24.68'	570	1.27
M	Type SK2-9020	6" round	24.13'	296	0.67
N	Type SK2-9020	4" round	31.62'	294	0.66
O	Type SK2-9020	6" round	31.62'	651	1.45
P	Type SK2-9020	8" round	31.82'	1149	2.56
Q	Type SK2-9020	6" round	30.32'	640	1.43
R	Type SK2-9020	4" round	23.18'	291	0.65
S	Type SK2-9020	4" round	29.50'	288	0.64

4 24" DRAIN BASIN WITH SLOTTED DOME GRATE
N.T.S.

ACO DRAIN
PowerDrain - S200K iron edged channels

ACO Specification Information

Description	Part No.	Invert (inch)	Weight (lb.)	Description	Part No.	Invert (inch)	Weight (lb.)
SK2-00 Constant depth channel - 39.37' (1m)	68001	7.87'	200	SK2-00 Sloped channel - 39.37' (1m)	68028	13.38'	115.8
SK2-01 Sloped channel - 39.37' (1m)	68001	8.07'	205	SK2-09 Sloped channel - 39.37' (1m)	68029	13.38'	116.1
SK2-02 Sloped channel - 39.37' (1m)	68002	8.26'	210	SK2-30 Sloped channel - 39.37' (1m)	68030	13.37'	101.2
SK2-03 Sloped channel - 39.37' (1m)	68003	8.46'	215	SK2-030 Constant depth channel - 39.37' (1m)	68047	13.77'	300
SK2-04 Sloped channel - 39.37' (1m)	68004	8.66'	220	SK2-030 Constant depth channel - 19.69' (0.5m)	68048	13.77'	300
SK2-05 Sloped channel - 39.37' (1m)	68005	8.85'	225	SK2-31 Sloped channel - 39.37' (1m)	68031	13.97'	305
SK2-06 Sloped channel - 39.37' (1m)	68006	9.05'	230	SK2-32 Sloped channel - 39.37' (1m)	68032	14.17'	300
SK2-07 Sloped channel - 39.37' (1m)	68007	9.25'	235	SK2-33 Sloped channel - 39.37' (1m)	68033	14.17'	305
SK2-08 Sloped channel - 39.37' (1m)	68008	9.44'	240	SK2-34 Sloped channel - 39.37' (1m)	68034	14.56'	310
SK2-09 Sloped channel - 39.37' (1m)	68009	9.64'	245	SK2-35 Sloped channel - 39.37' (1m)	68035	14.76'	315
SK2-10 Sloped channel - 39.37' (1m)	68010	9.84'	250	SK2-36 Sloped channel - 39.37' (1m)	68036	14.96'	320
SK2-11 Sloped channel - 39.37' (1m)	68011	10.04'	255	SK2-37 Sloped channel - 39.37' (1m)	68037	15.15'	325
SK2-12 Sloped channel - 39.37' (1m)	68012	10.24'	260	SK2-38 Sloped channel - 39.37' (1m)	68038	15.35'	330
SK2-13 Sloped channel - 39.37' (1m)	68013	10.43'	265	SK2-39 Sloped channel - 39.37' (1m)	68039	15.55'	335
SK2-14 Sloped channel - 39.37' (1m)	68014	10.62'	270	SK2-040 Constant depth channel - 39.37' (1m)	68049	15.74'	400
SK2-15 Sloped channel - 39.37' (1m)	68015	10.82'	275	SK2-040 Constant depth channel - 19.69' (0.5m)	68050	15.74'	400
SK2-16 Sloped channel - 39.37' (1m)	68016	11.02'	280	SK2-040 Constant depth channel - 19.69' (0.5m)	68051	15.74'	400
SK2-17 Sloped channel - 39.37' (1m)	68017	11.22'	285	SK2-630D catch basin - 19.69' (0.5m)	68056	49.41'	1250
SK2-18 Sloped channel - 39.37' (1m)	68018	11.41'	290	SK2-630D catch basin - 19.69' (0.5m)	99902	-	-
SK2-19 Sloped channel - 39.37' (1m)	68019	11.61'	295	SK2-630D catch basin - 19.69' (0.5m)	99904	-	-
SK2-20 Sloped channel - 39.37' (1m)	68020	11.81'	300	SK2 channel universal end cap	96823	19.69'	500
SK2-020 Constant depth channel - 39.37' (1m)	68045	11.81'	300	SK2 channel universal end cap	93488	-	-
SK2-020 Constant depth channel - 19.69' (0.5m)	68046	11.81'	300	SK2 channel universal end cap	93476	-	-
SK2-21 Sloped channel - 39.37' (1m)	68021	12.00'	305	SK2 channel universal end cap	01318	-	-
SK2-22 Sloped channel - 39.37' (1m)	68022	12.20'	310	SK2 ductile iron slotted grate-Ø	02449	-	-
SK2-23 Sloped channel - 39.37' (1m)	68023	12.40'	315	SK2 ductile iron slotted grate-Ø	72853	-	-
SK2-24 Sloped channel - 39.37' (1m)	68024	12.59'	320	SK2 ductile iron slotted grate-Ø	99991	-	-
SK2-25 Sloped channel - 39.37' (1m)	68025	12.79'	325	SK2 ductile iron slotted grate-Ø	-	-	-
SK2-26 Sloped channel - 39.37' (1m)	68026	12.99'	330	SK2 ductile iron slotted grate-Ø	-	-	-
SK2-27 Sloped channel - 39.37' (1m)	68027	13.18'	335	SK2 ductile iron slotted grate-Ø	-	-	-

5 8" TRENCH DRAIN
N.T.S.

ACO DRAIN
8" width - ductile iron longitudinal grate

ACO Specification Information

Product Features

- Certified to EN 1433 Load Class E - 135,000 lbs - 2,323 psi
- Uses PowerLock® boltless locking system
- Suitable for use with S200K and H200K channels
- Manufactured from ductile iron to ASTM A 536-64 - Grade 304 65-45-12
- Anti-Shunt lugs

Specifications

General
The surface drainage system shall be ACO PowerDrain or SlabDrain, complete with ACO ductile iron longitudinal grate with PowerLock® locking as manufactured by ACO, Inc. or similar approved.

Materials
The covers shall be manufactured from ductile iron and have minimum properties as follows:
 • Independently certified to meet Load Class E to EN 1433 - 135,000 lbs - 2,323 psi
 • Ductile iron to ASTM 536-64 - Grade 65-45-12
 • Intake area of 395 sq. cm per sq. meter of grate

Installation
The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

6 8" TRENCH DRAIN
N.T.S.



DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
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Project Name and Location
Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
UTILITY DETAILS

100% Construction Drawings (for Bid)

Approval _____ Date _____

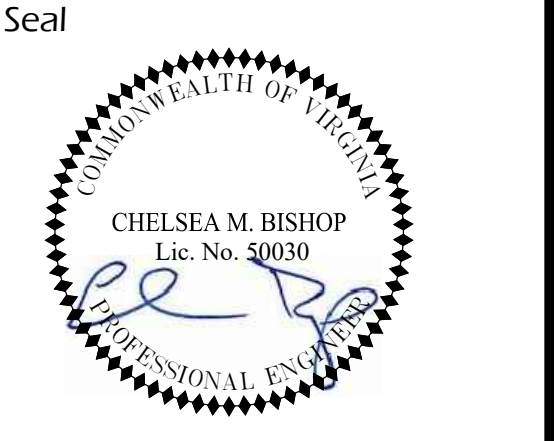
Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: JMS
Checked: SDT, AKS, MMW, CMB

Filename: C-16-150396028 Utility Details.dwg
Plotted: May, 24, 21

Scale: 1"=20'
Date: Jun. 11, 20



Sheet
C-14
SHEET 16 OF 42

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**STORM
PROFILES AND
COMPUTATIONS**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
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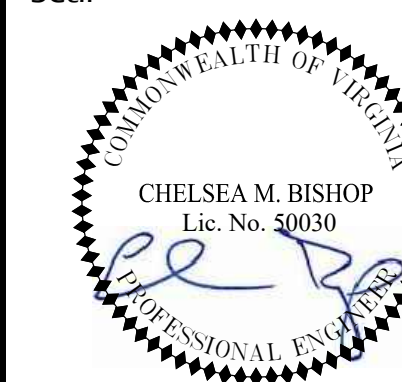
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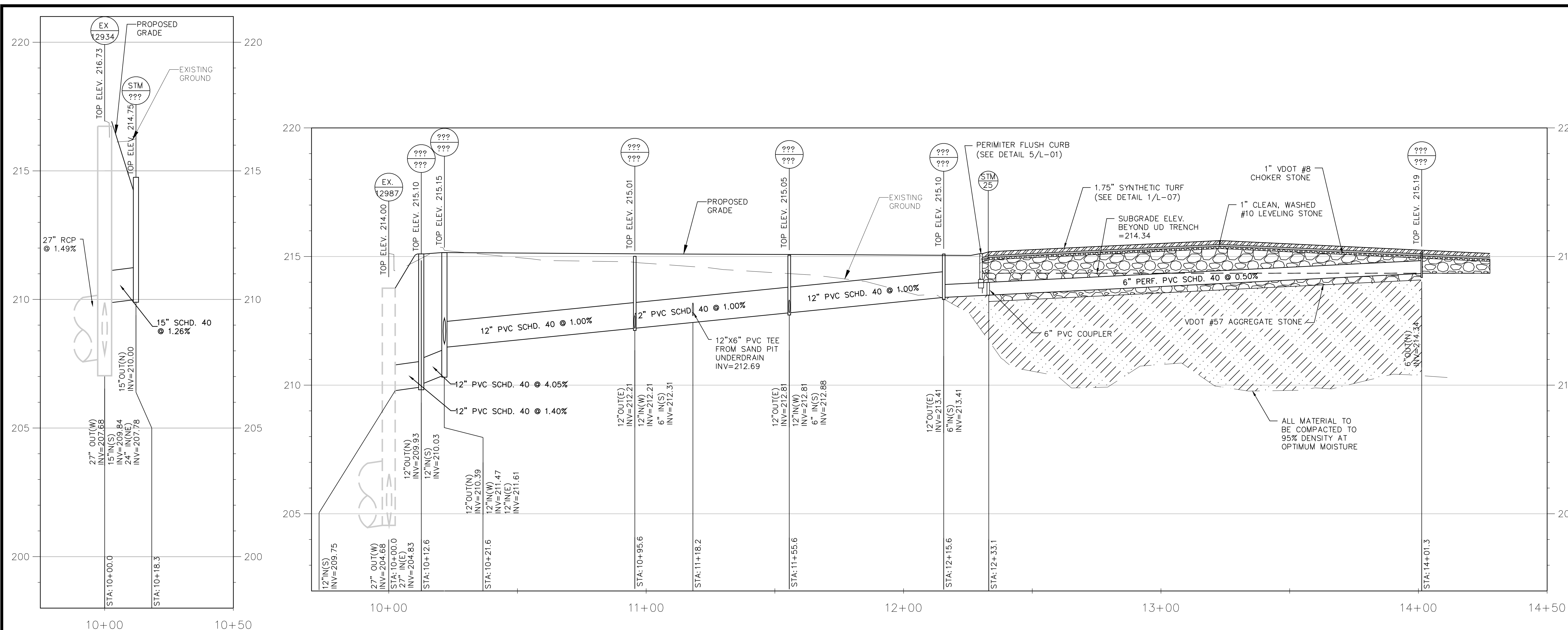
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Seal



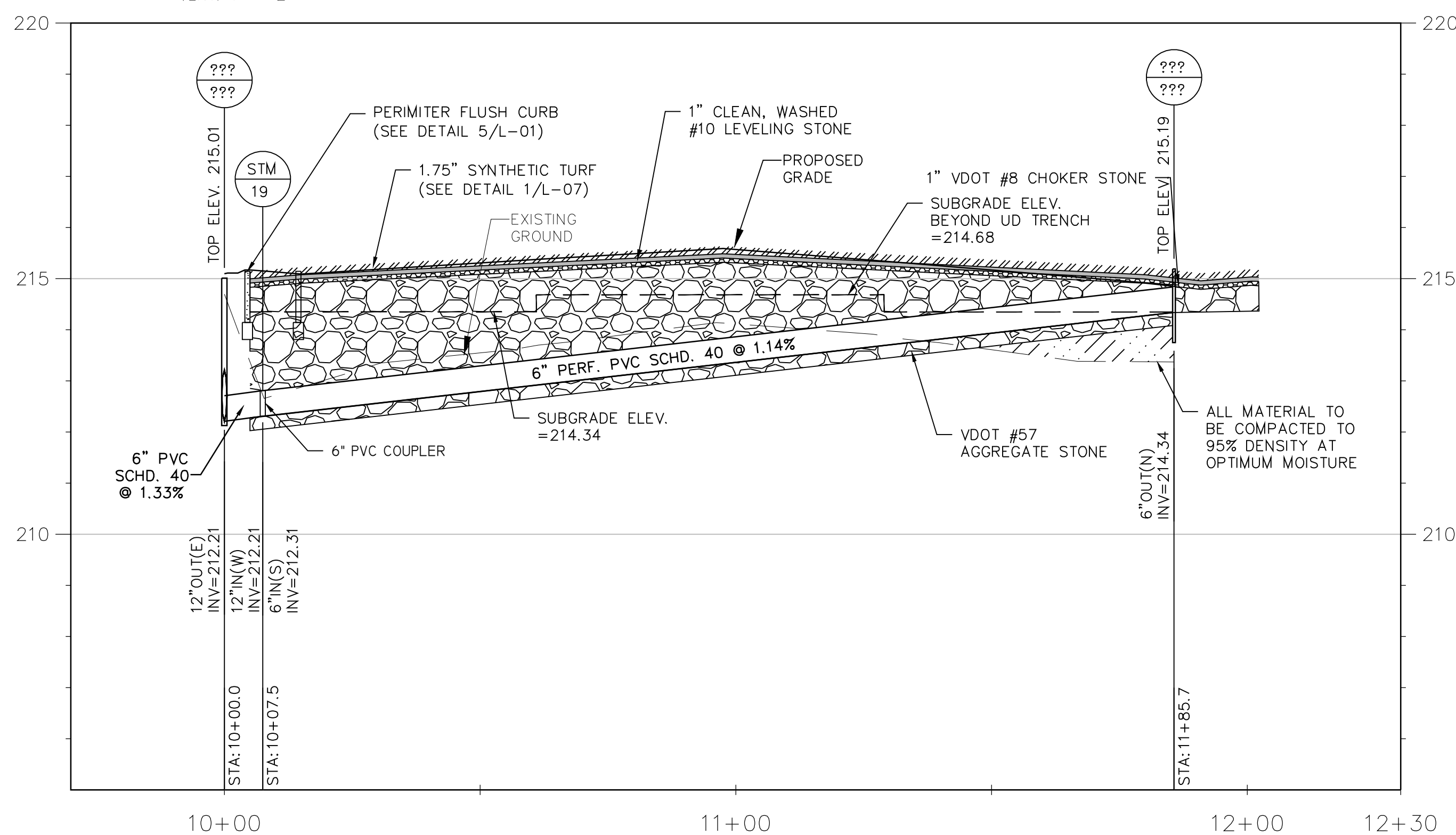
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C-15
SHEET 17 OF 42



EX. 2 TO STM-36 PROFILE

SCALE: HORZ 1" = 20'
VERT. 1" = 2'

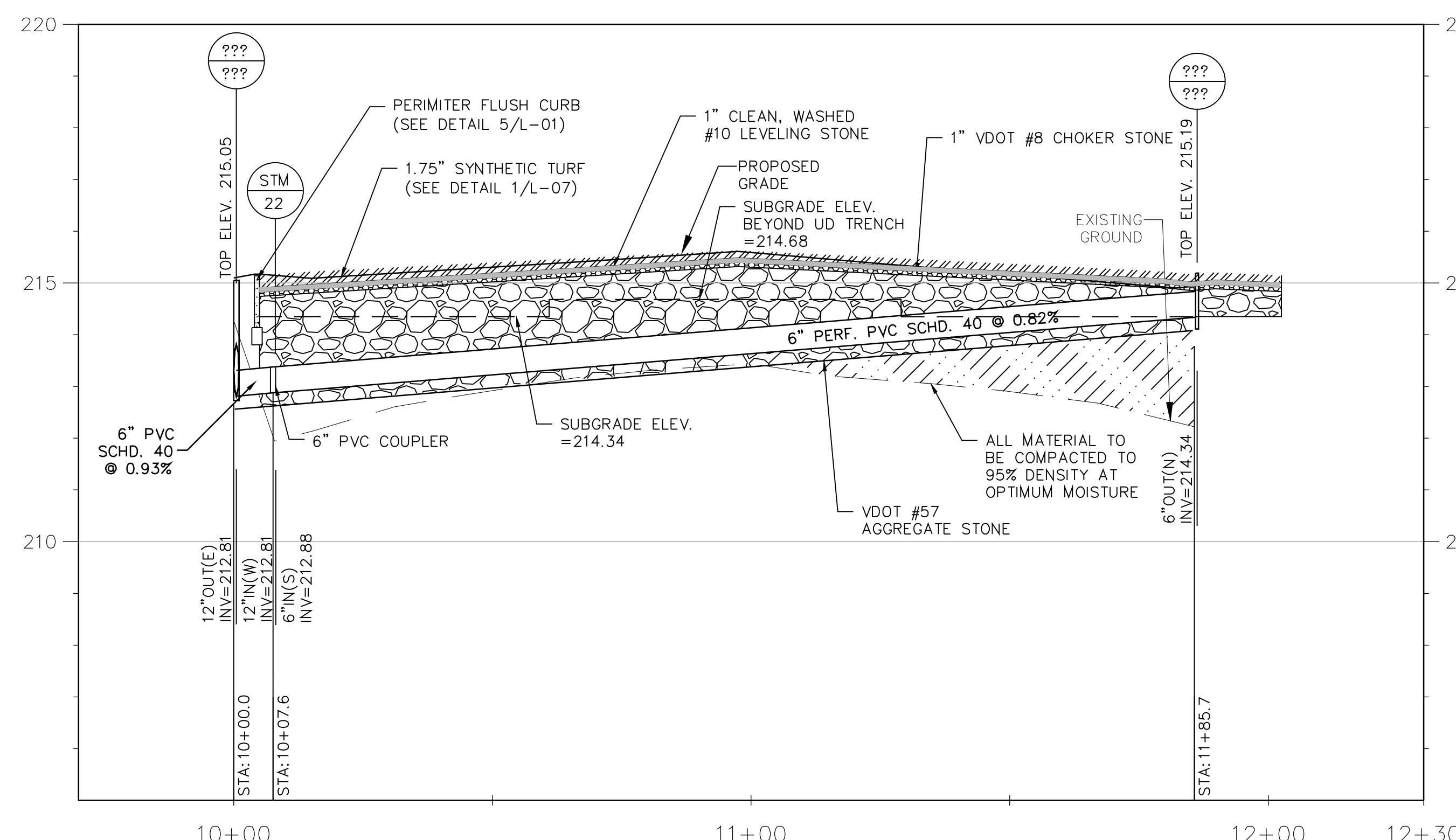


STM-20 TO STM-18 PROFILE

SCALE: HORZ 1" = 20'
VERT. 1" = 2'

STM-26 TO EX-3 PROFILE

SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STM-23 TO STM-21 PROFILE

SCALE: HORZ 1" = 20'
VERT. 1" = 2'

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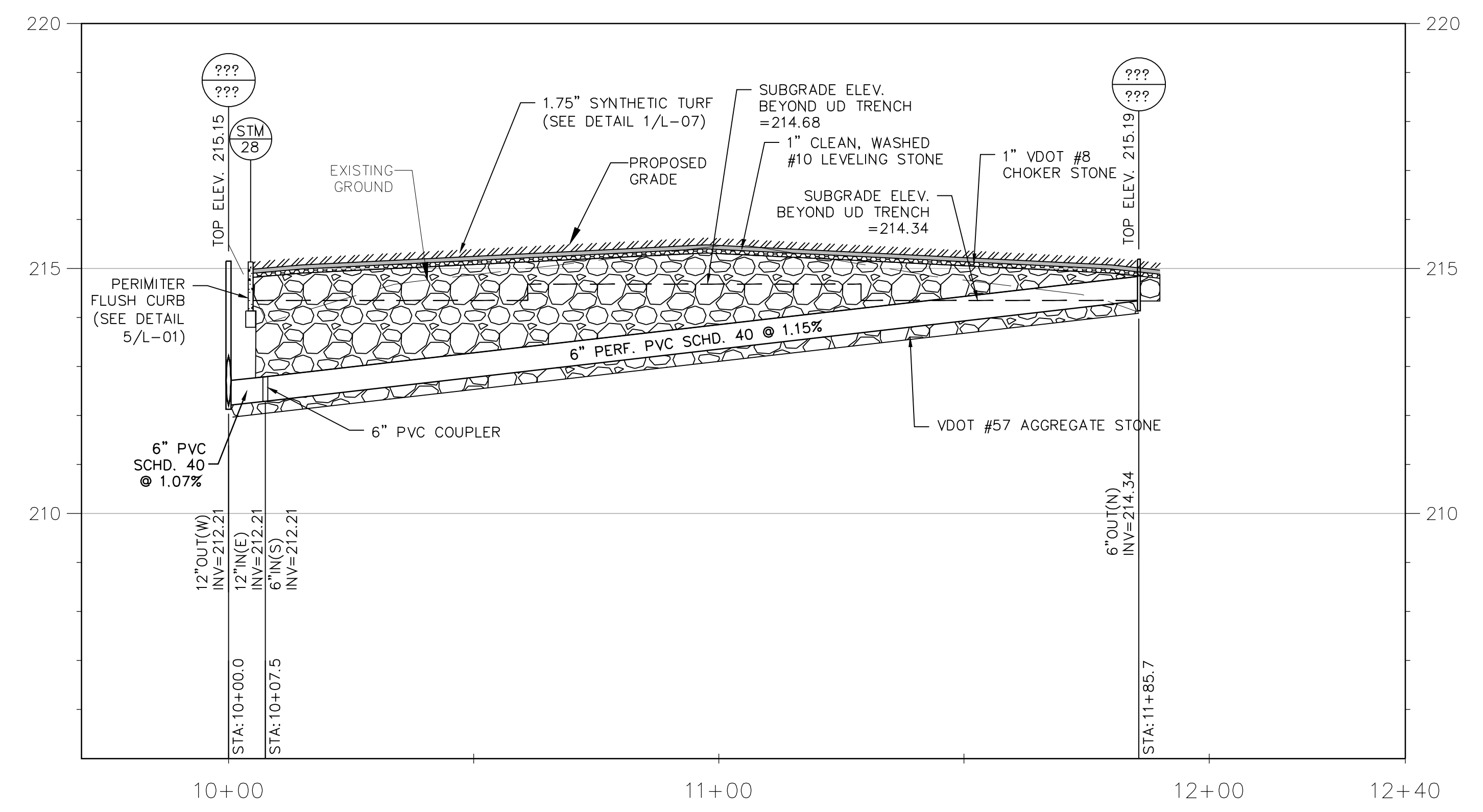
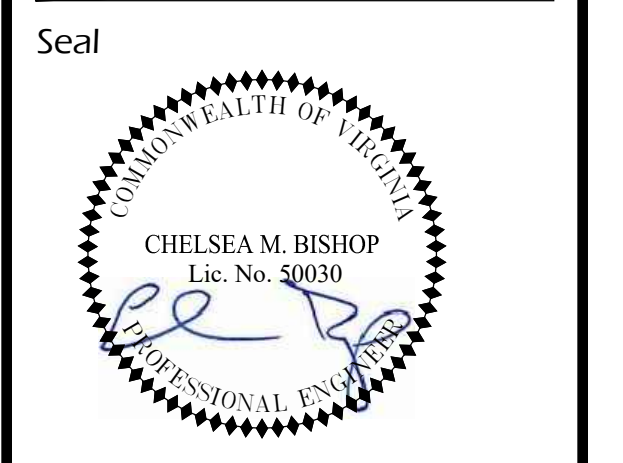
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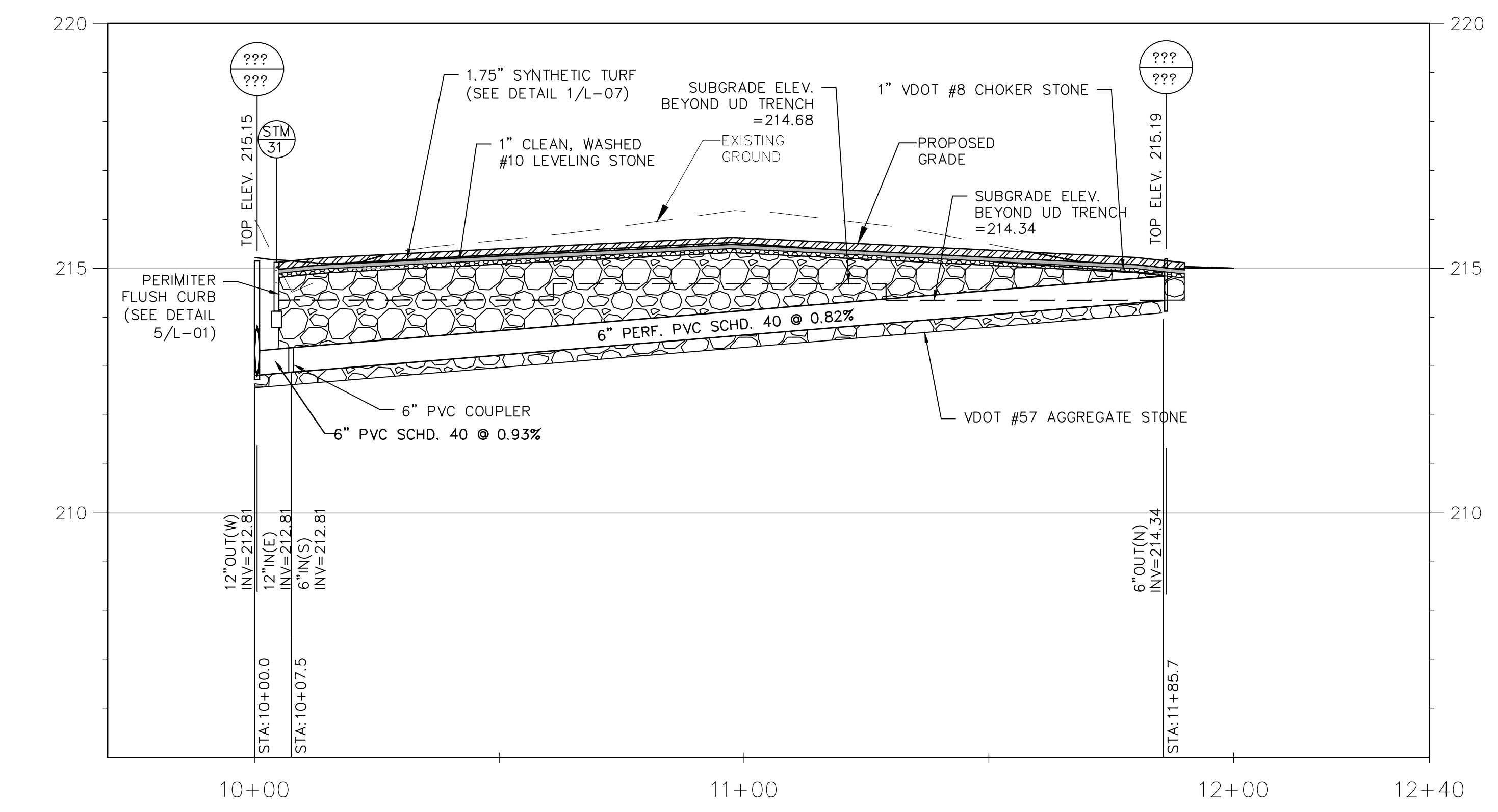
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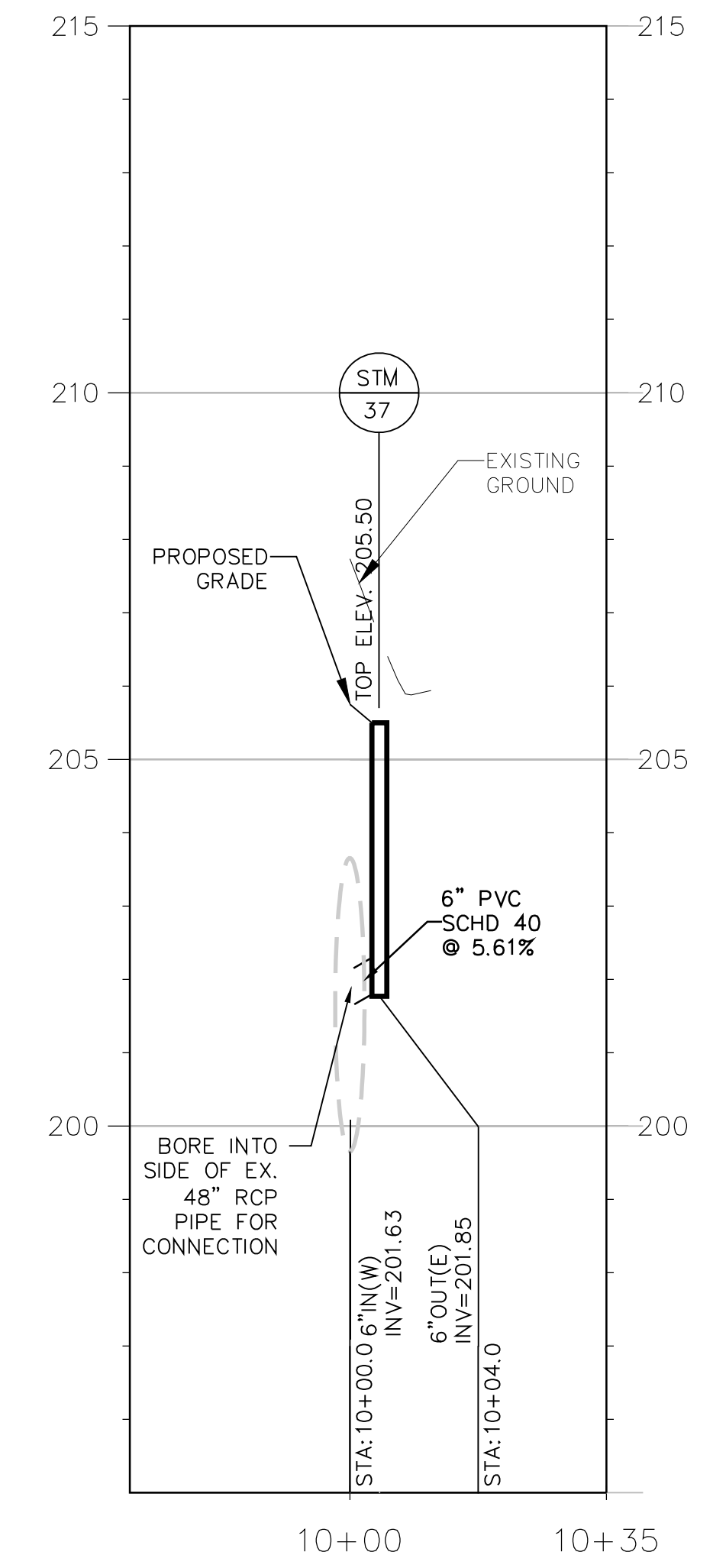
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STM-29 TO STM-27 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STM-32 TO STM-30 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STM-37 TO EX. PIPE PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

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May 24, 21
Plotted: 21

Scale: M=20/24
Date: 21

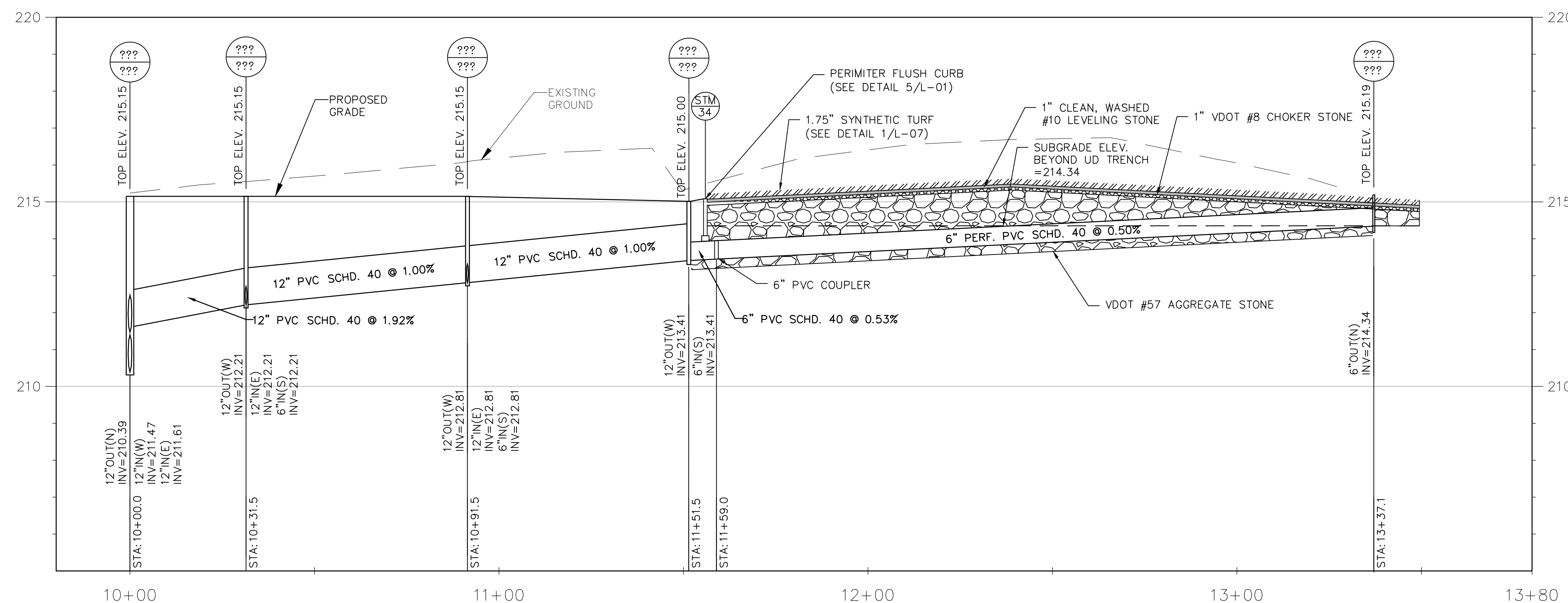
Seal



Sheet

C-15B

SHEET 19 OF 42



STM-35 TO STM-17 PROFILE

SCALE: HORZ 1" = 20'
VERT. 1" = 2'

STM-36, 37 AND 38 NYLOPLAST Ø24" DRAIN BASIN SIZING:

WEIR: $Q = 3.3 \times P(H)^{3/2}$
 $P = 6.74'$
 $H = 0.25'$
 $Q = 3.3 \times 6.74' \times (0.25')^{3/2}$
 $Q = 2.78$ CFS

ORIFICE: $Q = 0.6 \times A \times (2 \times G \times H)^{1/2}$
 $A = 1.88$ FT²
 $H = 0.25'$
 $Q = 0.6 \times 1.88 \times [2 \times (32.2 \text{ FT/S}^2) \times 0.25']^{1/2}$
 $Q = 4.53$ CFS

2.78 CF IS THE CONTROLLING FLOW RATE FOR EACH STM.

Q10 STM 36 = 1.73 CFS
 Q10 STM 37 = 2.04 CFS
 Q10 STM 38 = 0.50 CFS

22-DPR-ITB-24

Project Name and Location

**Thomas
Jefferson Park
Upper Field
Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**PRE-
DEVELOPMENT
WATER
QUALITY MAP**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-18-150396028 Pre-Dev.dwg
Plotted: May 24, 21

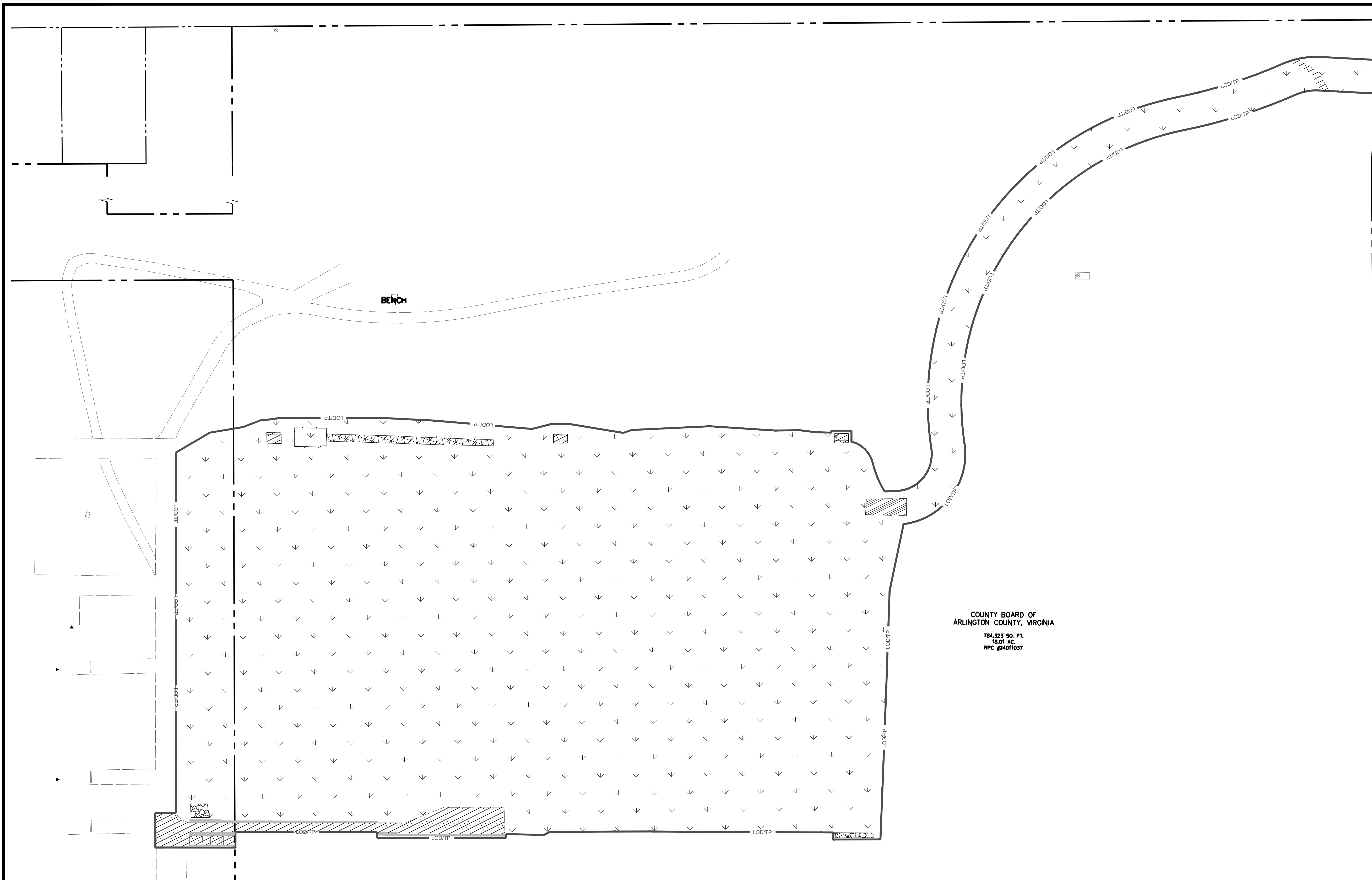
Scale: 1"=20'
Date: May 24, 21

Seal



Sheet

C-16
SHEET 20 OF 42



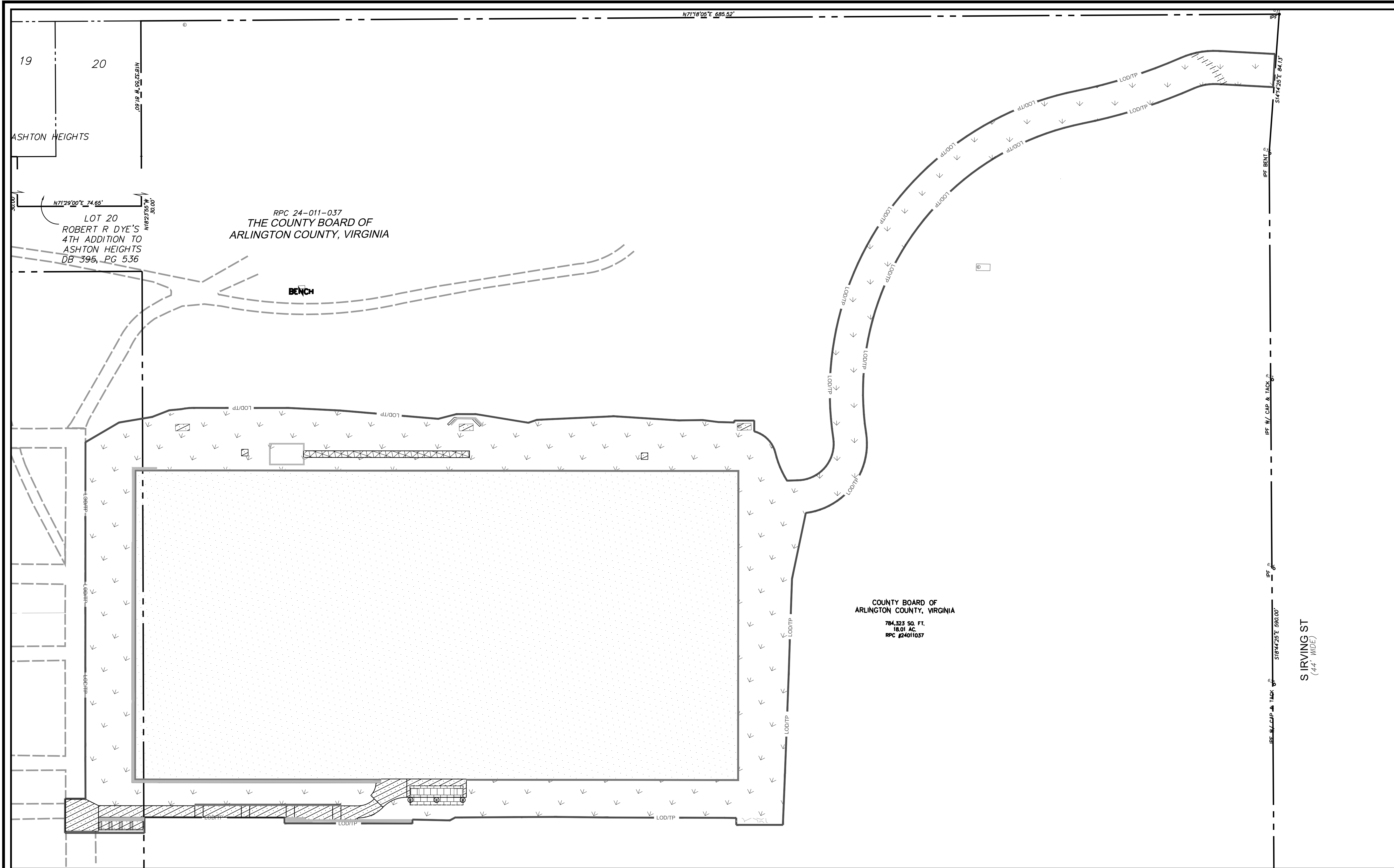
COUNTY BOARD OF
ARLINGTON COUNTY, VIRGINIA
784,323 SQ. FT.
18.01 AC.
RPC #2401037

PRE-DEVELOPMENT WATER QUALITY LEGEND

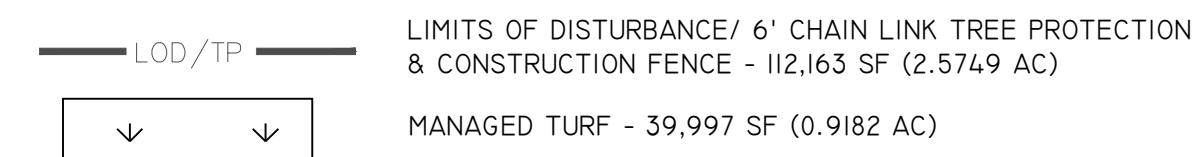
- LOD/TP — LIMITS OF DISTURBANCE/ 6' CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE - 112,163 SF (2.5749 AC)
- ↓ ↓ MANAGED TURF LOD - 108,539 SF (2.4917 AC)

EXISTING IMPERVIOUS AREAS

MATERIAL	SURFACE AREA (SF)	LEGEND
CONCRETE PAVING	2,480	
WALL	342	
RIPRAP	156	
ASPHALT PAVING	409	
GRAVEL	237	
TOTAL IMP. AREA	3,624 (0.0832 AC)	



POST-DEVELOPMENT WATER QUALITY LEGEND



PROPOSED IMPERVIOUS AREAS		
MATERIAL	SURFACE AREA (SF)	LEGEND
CONCRETE PAVING	2,468	
WALL	786	
RIP RAP	57	
ASPHALT	400	
PERMEABLE PAVEMENT	67,152	
FLUSH CONCRETE CURB	935	
SHADE STRUCTURE	368	
TOTAL IMP. AREA	72,166 (1.6567 AC)	



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**POST-DEVELOPMENT
WATER
QUALITY MAP**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

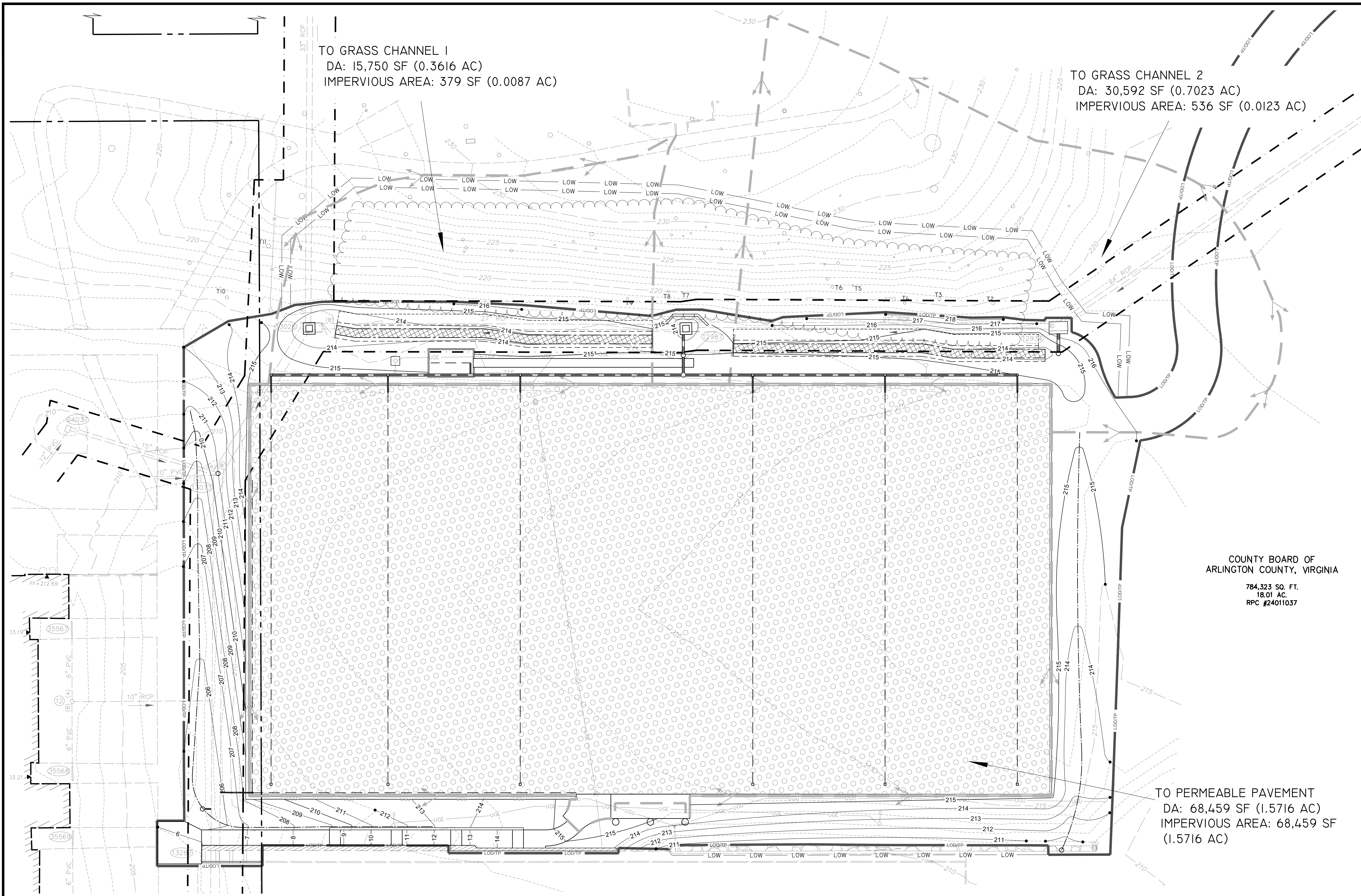
Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-19-150396028 Post-Dev.dwg
Plotted: May 24, 21

Scale: 1"=20'
Date: May 24, 21



Sheet
C-17
SHEET 21 OF 42



TO GRASS CHANNEL 1
 DA: 15,750 SF (0.3616 AC)
 IMPERVIOUS AREA: 379 SF (0.0087 AC)

TO GRASS CHANNEL 2
 DA: 30,592 SF (0.7023 AC)
 IMPERVIOUS AREA: 536 SF (0.0123 AC)

COUNTY BOARD OF
 ARLINGTON COUNTY, VIRGINIA
 784,323 SQ. FT.
 18.01 AC.
 RPC #24011037

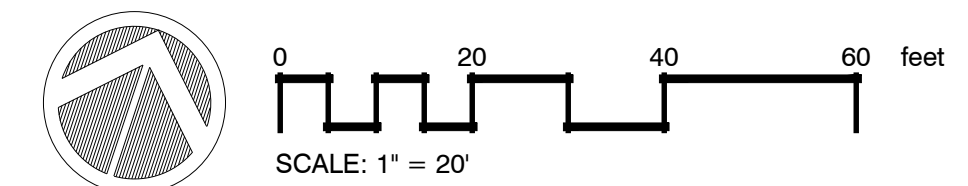
TO PERMEABLE PAVEMENT
 DA: 68,459 SF (1.5716 AC)
 IMPERVIOUS AREA: 68,459 SF
 (1.5716 AC)

STORMWATER MANAGEMENT LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
LOD/TP	LIMITS OF DISTURBANCE/ 6" CHAIN LINK TREE PROTECTION & CONSTRUCTION FENCE
LOW	LIMITS OF WORK
---	SOLID PVC PIPE
---	6" PERFORATED PVC PIPE

	DRAINAGE DIVIDE
	PERMEABLE PAVEMENT FACILITY (LEVEL 2) (SEE DETAIL I, SHEET L-07)
	GRASS CHANNEL (C/D SOILS) (SEE SHEET C-21 FOR DESIGN DETAILS)

--- LIMITS OF BUILDING RESTRICTION FOR PUBLIC UTILITIES



TREE PROTECTION NOTE:
 SEE TREE PRESERVATION SHEETS FOR ADDITIONAL REQUIREMENTS BEFORE, DURING AND AFTER DEMOLITION PHASE.



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22-DPR-ITB-24

Project Name and Location
**Thomas Jefferson Park
 Upper Field Conversion**
 (By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title
**STORMWATER
 MANAGEMENT
 PLAN**

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB

Filename: C-20-150396028 SWM Plan.dwg
 Plotted: May, 24, 21

Scale: 1"=20"
 Date: May, 24, 21



Sheet
C-18
 SHEET 22 OF 42

WATER QUALITY NARRATIVE

THE SITE IS DEFINED BY THE TOTAL APPLICABLE AREA WITHIN THE LIMITS OF DISTURBANCE OF 2.5749 ACRES. THE IMPERVIOUS AREA FOR THE EXISTING CONDITION IS 0.0832 ACRES (3.2%) AND 1.6567 ACRES (64.3%) FOR THE PROPOSED CONDITION. DUE TO THE INCREASE IN IMPERVIOUS AREA THERE IS A 2.9049 LB/YEAR PHOSPHORUS LOAD REDUCTION REQUIRED. TO MEET COUNTY AND STATE REQUIREMENTS FOR WATER QUALITY AND QUANTITY THE PLANS PROPOSE A LEVEL II PERMEABLE PAVEMENT FACILITY AND TWO GRASS CHANNEL (C/D SOILS) FACILITIES. THE PERMEABLE PAVEMENT FACILITY PROVIDES 2.7656 LB/YR PHOSPHORUS LOAD REDUCTION, GRASS CHANNEL 1 PROVIDES 0.0517 LB/YR PHOSPHORUS LOAD REDUCTION AND GRASS CHANNEL 2 PROVIDES 0.0986 LB/YR PHOSPHORUS LOAD REDUCTION. THE TOTAL PHOSPHORUS LOAD REDUCTION OF 2.9139 LB/YR EXCEEDS THE TOTAL PHOSPHORUS REDUCTION BY 0.0090 LB/YR. THE FACILITIES ARE DESIGNED IN ACCORDANCE TO THE JANUARY 2013 DRAFT VERSION 2.0 SPEC 3 AND SPEC 7 OF THE VIRGINIA DEQ DESIGN SPECIFICATIONS SUPPLEMENTED BY THE MARCH 2020 ARLINGTON COUNTY STORMWATER MANUAL.

Project Name: Thomas Jefferson Park
Date: 5/17/2020
Linear Development Project? No

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 2.5749

Check: *BMP Design Specifications List: 2013 Draft Sids & Specs*

Maximum reduction required:	20%	Linear project?	No
The site's net increase in impervious cover (acres):	1.5735	Land cover areas entered correctly?	✓
Post-Development TP Load Reduction for Site (lb/yr):	2.9049	Total disturbed area entered?	✓

Pre-Development Land Cover (acres)

Soils	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) -- disturbed, graded for grass or other turf use	2.4917			0.0832	2.5749
Impervious Cover (acres)				0.0832	0.0832

Post-Development Land Cover (acres)

Soils	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) -- disturbed, graded for grass or other turf use	0.9182			0.0000	0.9182
Impervious Cover (acres)				1.6567	1.6567

Constants

Annual Rainfall (inches)	45
Target Rainfall Excess (inches)	1.00
Target Phosphorus (TP) EMC (mg/L)	0.26
Target Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load Reduction (lb/yr)	0.41
P ₁ (unitless correction factor)	0.90

Runoff Coefficients (Rv)

Soils	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.05	0.08	0.08	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-DEVELOPMENT

Land Cover Summary (Pre-Dev)	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	0.0000	0.0000
Managed Turf Cover (acres)	2.4917	0.9182
Impervious Cover (acres)	0.0832	0.0832
Total Site Area (acres)	2.5749	1.0014

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary (Post-Dev)	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	0.0000	0.0000
Managed Turf Cover (acres)	0.9182	0.9182
Impervious Cover (acres)	1.6567	1.6567
Total Site Area (acres)	2.5749	2.5749

Treatment Volume and Nutrient Load

Pre-Development Treatment Volume (acre-ft)	0.0585	0.0017
Post-Development Treatment Volume (acre-ft)	5.126	0.1246

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, C_{10adj}) and runoff depths (RV_{Developed}) are computed with and without reduction practices.

Drainage Area A	A Soils	B Soils	C Soils	D Soils	Total Area (acres)	Runoff Reduction Volume (ft ³)
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	0.0000	0.0000	0.0000	0.0000	2.2133	4,131.6061
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	39	61	74	80		
Impervious Cover	98	98	98	98		

Adjusted Land Cover Summary: Post-Development land cover minus previous land cover (forest/open space or managed turf) is managed proposed for new impervious cover.

Adjusted Total Coverage: is associated with Post-Development coverage (minus coverage of new impervious covers).

Column 1: shows land reduction requirement for new impervious cover (based on new development land limit, 0.42 inches/year).

Baseline TP Load (lb/yr)	0.4106
TP Load Reduction Required for New Impervious Cover	2.7641

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr): 2.9049

Drainage Area A

Soils	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.5653	0.5653	0.2500	0.0000	1.3806	0.1806
Impervious Cover (acres)	1.6480	1.6480	0.9500	0.0000	4.2460	0.9500

Stormwater Best Management Practices (RR = Runoff Reduction)

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
3. Permeable Pavement (RR)													
5.3. Permeable Pavement (2" Spec #1)	75		1.3738		4,094.7070	1,334.9327	5,429.6397	33	0.0000	3.4133	2.7868	0.6265	
4. Grass Channel (RR)													
4.1. Grass Channel C/D Soils (Spec #1)	10	0.6800	0.0000	0.0000	68.8892	601.7924	670.6816	35	0.0000	0.4306	0.0986	0.3320	

Drainage Area B

Soils	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.3529	0.0087	0.2500	0.0000	0.6116	0.2500
Impervious Cover (acres)	0.0087	0.0087	0.9500	0.0000	1.9754	0.9500

Stormwater Best Management Practices (RR = Runoff Reduction)

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
4. Grass Channel (RR)													
4.1. Grass Channel C/D Soils (Spec #1)	10	0.3529	0.0087	0.0000	35.2929	313.3328	348.6257	15	0.0000	0.2268	0.0317	0.1951	

Site Information - Revised 9/19/2017

Project SWM #	LDA Permit #	Disturbed Area (acres)	% Impervious	Pre-Development TP load (lb/yr)	Post-Development TP load (lb/yr)	TP load reduction achieved (lb/yr)	Pre-Development TN load (lb/yr)	Post-Development TN load (lb/yr)	TN load reduction achieved (lb/yr)	Total Site (acres)	Pre-Forest Area (acres)	Pre-Turf Area (acres)	Post-Development Area (acres)	Post-Turf Area (acres)	Post-Development Area (acres)	Pre-Runoff Volume	Post-Runoff Volume	Runoff Reduction	Site Latitude	Site Longitude	Anticipated Start Date
2.5749		2.5749	3.2	64.3	1.80	4.11	2.91	11.45	29.42	2.5749	0.0000	2.4917	0.0832	0.9182	2.5749	2548.1330	6546.3965	4162.4303	38.870741	-77.094948	TBD

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)	0.0000	0.0000	0.0000	0.0000	0.0000	OK
IMPERVIOUS COVER (ac)	1.6480	0.0087	0.0000	0.0000	0.0000	OK
IMPERVIOUS COVER TREATED (ac)	1.5839	0.0087	0.0000	0.0000	0.0000	OK
MANAGED TURF AREA (ac)	0.5653	0.3529	0.0000	0.0000	0.0000	OK
MANAGED TURF AREA TREATED (ac)	0.0000	0.3529	0.0000	0.0000	0.0000	AREA EXCEEDED
AREA CHECK	AREA EXCEEDED	OK	OK	OK	OK	

Site Treatment Volume (ft³) 6,546.3965

Runoff Reduction Volume and TP by Drainage Area

Soils	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
Runoff Reduction Volume Achieved (ft ³)	4,131.6061	35.0259	0.0000	0.0000	0.0000	4,166.6320
TP Load Available for Removal (lb/yr)	3.8930	0.2701	0.0000	0.0000	0.0000	4.1131
TP Load Reduction Achieved (lb/yr)	2.8622	0.0517	0.0000	0.0000	0.0000	2.9139
TP Load Remaining (lb/yr)	1.0309	0.1684	0.0000	0.0000	0.0000	1.1993
Nitrogen Load Reduction Achieved (lb/yr)	20.6106	0.4403	0.0000	0.0000	0.0000	21.0509

Total Phosphorus

Final Post-Development TP Load (lb/yr)	4.1131
TP Load Reduction Required (lb/yr)	X
TP Load Remaining (lb/yr)	X
Remaining TP Load Reduction Required (lb/yr)	CHECK AREAS!

Total Nitrogen (For Information Purposes)

Post-Development TP Load (lb/yr)	29,4244
Nitrogen Load Reduction Achieved (lb/yr)	21,0509
Remaining Post-Development Nitrogen Load (lb/yr)	8,3735

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

Storm	1-year storm	2-year storm	10-year storm
Runoff Depth (in)	2.59	3.14	4.82

Notes (see below):

- 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 quality requirements. See Virginia's Guide and Documentation for additional information.
- 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.
- 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* (Continued)

Drainage Area B	A Soils	B Soils	C Soils	D Soils	Total Area (acres)	Runoff Reduction Volume (ft ³)
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	0.0000	0.0000	0.0000	0.0000	0.3616	35.0259
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	39	61	74	80		
Impervious Cover	98	98	98	98		

RV_{Developed} (watershed-inch) with no Runoff Reduction* 1.8663 (1-year), 2.3882 (2-year), 4.0213 (10-year)

RV_{Developed} (watershed-inch) with Runoff Reduction* 1.3500 (1-year), 1.8739 (2-year), 3.5200 (10-year)

Adjusted CN* 86 (1-year), 87 (2-year), 88 (10-year)

Drainage Area A (Continued)

Soils	A Soils	B Soils	C Soils	D Soils	Total Area (acres)	Runoff Reduction Volume (ft ³)
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	0.0000	0.0000	0.0000	0.0000	2.2133	4,131.6061
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	39	61	74	80		
Impervious Cover	98	98	98	98		

RV_{Developed} (watershed-inch) with no Runoff Reduction* 1.9517 (1-year), 1.3500 (2-year), 2.7364 (10-year)

RV_{Developed} (watershed-inch) with Runoff Reduction* 0.9200 (1-year), 1.2951 (2-year), 2.7097 (10-year)

Adjusted CN* 79 (1-year), 79 (2-year), 80 (10-year)

WATER QUANTITY NARRATIVE

WATER QUANTITY COMPLIANCE FOR THE SITE IMPROVEMENTS IS BEING ACCOMPLISHED BY THE RUNOFF REDUCTION PROVIDED BY A LEVEL II PERMEABLE PAVEMENT FACILITY AND TWO GRASS CHANNELS (C/D SOILS). PER THE ARLINGTON COUNTY CODE, CHAPTER 60, THE DEVELOPED SITE SHALL PROVIDE STORMWATER DETENTION SUFFICIENT TO PASS THE 1-YEAR AND 10-YEAR 24-HOUR PEAK FLOW RATES UTILIZING THE ENERGY BALANCE METHOD.

THE TOTAL APPLICABLE AREA (LIMITS OF DISTURBANCE) IS 2.5749 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 1-YEAR AND 10-YEAR 24-HOUR STORMS, 1.95 CFS AND 7.37 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 1-YEAR AND 10-YEAR EVENTS, THE POST-DEVELOPED PEAK FLOWS ARE GREATER THAN THE ALLOWABLE RELEASE RATES AND 6,945 CF OF STORAGE IS REQUIRED.

TOTAL BMP TREATMENT VOLUME FOR THE STORMWATER MANAGEMENT FACILITIES IS 5,962 CF; 5,962 CF FROM THE PERMEABLE PAVEMENT FACILITY AND 0 CF OF TREATMENT VOLUME FROM THE GRASS CHANNELS. THE TOTAL QUALITY AND QUANTITY VOLUME TO BE PROVIDED IS 5,962 + 6,432 CF = 12,394 CF.

THE RESERVOIR SECTION OF THE PERMEABLE PAVEMENT FACILITY SHALL HAVE AN AVERAGE DEPTH OF 6". THE LEVEL II PERMEABLE PAVEMENT FACILITY THEREFORE, PROVIDES A TOTAL STORAGE VOLUME OF 13,430 CF. FOR PERMEABLE PAVEMENT FACILITY AND GRASS CHANNELS FACILITY SIZING SEE SHEETS C-20 AND C-21.

CHECK: 13,430 CF > 12,394 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 51013C0076C, DATED 8/19/2013, THIS SITE IS IN ZONE X, OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

PER ARLINGTON COUNTY GIS, NO RPA IS PRESENT. SEE SHEET C-22 FOR THE STORMWATER MANAGEMENT DETAILS.

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre)	1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.59	2.59	4.82	4.82
CN	81	85	81	87
S=100/CN-10	2.35	1.76	2.35	1.49
0.2S	0.47	0.35	0.47	0.30
RV=(P-0.2S) ² /(P-0.2S)+S	1.01	1.25	2.83	3.40

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

Channel Protection (1-Year)	Qpre-development	QPost Development	RVPost Development (with runoff reduction)	Qallowable
I.F.	0.8			
Qpre-development	3.23			
QPost Development	4.03			
RVPost Development (with runoff reduction)		1.290		
Qallowable		2.02		

Qallowable/QPost Development	0.50
Vs/Vr	0.28
Vs	0.36
Storage required (cf)	3408

FLOOD CONTROL (10-YEAR)

Qpre-development	9.05
QPost Development	10.61
RVPost Development (with runoff reduction)	3.395
Qallowable	7.54

Qallowable/QPost Development	0.71
Vs/Vr	0.20
Vs	0.69
Storage required (cf)	6432

CN CALCULATION BETWEEN DA_A AND DA_B:

1-YR STORM: $[[(2.2133 \text{ AC} * 86) + (0.3616 \text{ AC} * 79)] = 85$
 2,574.9 AC

RV POST DEVELOPMENT (WITH RUNOFF REDUCTION) DA_A AND DA_B:

1-YR STORM: $[[(2.2133 \text{ AC} * 1.35) + (0.3616 \text{ AC} * 0.925)] = 1.290$
 2,574.9 AC

10-YR STORM: $[[(2.2133 \text{ AC} * 88) + (0.3616 \text{ AC} * 80)] = 87$
 2,574.9 AC

10-YR STORM: $[[(2.2133 \text{ AC} * 3.507) + (0.3616 \text{ AC} * 2.7097)] = 3.395$
 2,574.9 AC

Stormwater Management Facility Information- Revised 3/19/2019

Facility Type**	Description	Location	LDA Permit #	Project SWM #	Building Permit #	Facility ID	BMP downstream of another BMP (in Series)?	Upstream (Primary) BMP	Chesapeake Bay Segment	Watershed	HUC6	Soils	Runoff Treated (in)	Volume Treated (ft ³)	Treated Area (acres)	Forest Area (acres)	Turf Area (acres)	Impervious Area (acres)	RPC	Phosphorus Efficiency (%)	Nitrogen Efficiency (%)	Sediment Efficiency (%)	TP load removed (lbs)	TN load removed (lbs)
PERMEABLE PAVEMENT #2	SYNTHETIC TURF FIELD	SOCCER FIELD	0	0		0A	No		POTT VA	Doctor's Branch	PL2S	C/D	1.10	5962.0626	1.5716	0.0000	0.0000	1.5716	24011037	81.00	81.00	79.00	2.76	19.77
GRASS CHANNEL C/D SOILS	GRASS CHANNEL 2	NORTH OF FIELD	0	0	0	0B			POTT VA	Doctor's Branch	PL2S	C/D	1.00	668.5916	0.7023	0.0000	0.6900	0.0123	24011037	23.00	28.00	75.00	0.10	0.84
GRASS CHANNEL C/D SOILS	GRASS CHANNEL 1	NORTH OF FIELD	0	0	0	0C			POTT VA	Doctor's Branch	PL2S	C/D	1.00	308.2	0.3616	0.0000	0.3529	0.0087	24011037	23.00	28.00	75.00	0.05	0.44



DEPARTMENT OF PARKS AND RECREATION

Park Development Division
 2100 Clarendon Boulevard, Suite 414
 Arlington, VA 22201
 Phone: 703.228.3332
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22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion
 (By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title

STORMWATER MANAGEMENT NARRATIVE & CALCULATIONS

100% Construction Drawings (for Bid)

Approval Date

PERMEABLE PAVEMENT SIZING CALCULATIONS

TREATMENT VOLUME:
 $T_{VMBP} = \frac{(1.1' \times RV \times \Delta)}{12}$
 $T_{VMBP-A} = \frac{[1.1' \times 0.95 \times 68,459 \text{ SF}]}{12 \times \text{FT}} = 5,962 \text{ CF}$

VOLUME PROVIDED IN PERMEABLE PAVEMENT

USING EQUATION 7.1 TO DETERMINE MINIMUM STONE DEPTH:

EQ. 7.1 = $[(0.09 \text{ FT} \times 68,459 \text{ SF} \times 0.95) + (0.09 \text{ FT} \times 67,152 \text{ SF})] / (0.4 \times 67,152 \text{ SF}) = 0.44 \text{ FT (USE 6")}$

D-STONE 10-YR = $0.4 \times 67,152 \text{ SF} \times D = 6,432 \text{ CF} \Rightarrow 6,432 \text{ CF} / (67,152 \text{ SF} \times 0.4) = D = 0.24 \text{ FT (USE 3")}$

D-STONE TVBMP = $0.4 \times 67,152 \text{ SF} \times D = 5,962 \text{ CF} \Rightarrow 5,962 \text{ CF} / (67,152 \text{ SF} \times 0.4) = D = 0.22 \text{ FT (USE 3")}$

TOTAL STONE DEPTH = 3" (10-YR) + 3" (TVBMP) = 6"

(CHECK: D-STONE 10-YR + D-STONE TVBMP ≥ EQUATION 7.1)
 3" + 3" ≥ 6" ✓

TOTAL VOLUME PROVIDED:

GRAVEL: $\eta = 0.40$
 AVERAGE DEPTH OVER SUBGRADE = 0.50 FT
 FOOTPRINT = 67,152 SF

$67,152 \text{ SF} \times 0.40 \times 0.50 \text{ FT} = 13,430 \text{ CF}$

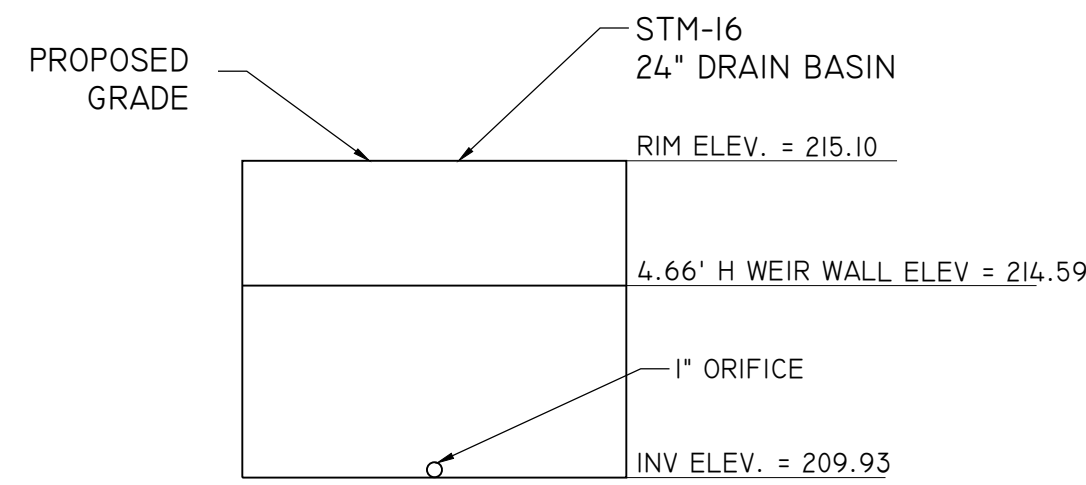
(CHECK: 13,430 CF > 12,349 CF ✓)

SYNTHETIC TURF AS PERMEABLE PAVEMENT

1. THE SYNTHETIC TURF SHALL MEET A MINIMUM FLOW RATE OF 30 INCHES/HOUR, OR 0.31 GAL/MIN/SF. ALTHOUGH THIS IS LESS THAN THE COUNTY'S INFILTRATION REQUIREMENT OF 5 GAL/MIN/SF, IT MAY BE APPROVED PER LISTED MAINTENANCE REQUIREMENTS.
2. SYNTHETIC TURF IS TYPICALLY REPLACED EVERY 8 TO 10 YEARS DEPENDING ON USE.
3. SYNTHETIC TURF IS MAINTAINED THROUGHOUT THE YEAR THAT INCLUDE THE FOLLOWING:
 - 3.1. G-MAX OR HEAD INJURY CRITERIA (HIC) TESTING TO ENSURE THE SAFETY OF THOSE USING THE FIELD
 - 3.2. ADDING ADDITIONAL INFILL MATERIAL IN AREAS WHERE IT HAS DISPLACED BY PLAY
 - 3.3. SWEEPING TO REDISTRIBUTE THE INFILL MATERIAL EQUALLY ACROSS THE TURF
 - 3.4. VISUAL INSPECTION OF THE SYNTHETIC TURF FOR PREMATURE WARE, RIPS, OR OTHER FAILURE
 - 3.5. RUNNING MAGNETS OVER THE SURFACE TO PICK UP METALS
4. DPR SHALL RENT OR PURCHASE A SYNTHETIC TURF COVER TO PROTECT THE FIELD DURING THE COUNTY FAIR.

BUILDING RESTRICTION LINE & THE REPAIR/REPLACEMENT OF SYNTHETIC TURF & PERIMETER CURB

1. THE COUNTY'S BUILDING RESTRICTION LINE FOR PUBLICLY-MAINTAINED STORM AND WATER MAINS IS PRESENT ON SITE. THE BUILDING RESTRICTION LINE IS EITHER A 10' OFFSET FROM THE OUTSIDE OF PIPES (PIPES >15") OR A 10' OFFSET FROM THE CENTER OF THE PIPE (PIPES <15"). THE RESTRICTION LINE IS ON EACH SIDE OF THE PIPE.
2. THE TRIANGULAR NORTHWEST CORNER OF THE SYNTHETIC TURF SOCCER FIELD IS WITHIN THE BUILDING RESTRICTION LINE. THIS INCLUDES A FLUSH CONCRETE CURB, THE SYNTHETIC TURF, AND DRAINAGE STONE BENEATH THE SYNTHETIC TURF. THE DEPARTMENT OF ENVIRONMENTAL SERVICES WET UTILITY DIVISION HAS APPROVED THE LAYOUT IN THIS CIRCUMSTANCE.
3. IN THE EVENT THAT THE COUNTY NEEDS TO PERFORM MAINTENANCE ON THE PIPES WITHIN THE BUILDING RESTRICTION LINE, THE ARLINGTON COUNTY DEPARTMENT OF PARKS AND RECREATION, OR THE ARLINGTON COUNTY SCHOOL BOARD WILL BE RESPONSIBLE FOR REPAIRING THE PERIMETER CONCRETE CURB AND SYNTHETIC TURF. THE SAME APPLIES TO THE TIMBER RETAINING WALL NEAR STORM DRAIN STRUCTURE I2987.



DRAIN BASIN INTERNAL WEIR PLATE DETAIL

NOTE: CONTRACTOR SHALL ORDER STRUCTURE STM-16 WITH METAL WEIR PLATE PER MANUFACTURER SPECIFICATIONS.

MINIMUM 48-HOUR DRAWDOWN CALCULATION

48 HOURS = 172,800 S
 $T_v = 6,945 \text{ CF}$

MAX. Q = 6,945 CF / 172,800 S = 0.0402 CFS

TREATMENT VOLUME DEPTH IN PERMEABLE PAVEMENT: 3"

THE SUBGRADE ELEVATION ADJACENT TO THE OUTLET CONTROL STRUCTURE IS 214.34' FT. ACCOUNTING FOR THE TREATMENT VOLUME DEPTH: 214.34' FT + 0.25 FT = 214.59' FT

THE BOTTOM OF THE OUTLET CONTROL STRUCTURE IS AT ELEVATION 209.93 FT AND THE DESIRED CONTROL ELEVATION IS AT 214.34 FT. THEREFORE: 214.59 FT - 209.93 FT = 4.66' MINIMUM WEIR WALL HEIGHT REQUIRED IN CONTROL STRUCTURE

SOLVE FOR DRAWDOWN MAXIMUM ORIFICE SIZE:

$A = Q / ((2GH)^{0.5} \times 0.6)$

$H = 4.62'$ (AVG. TO CENTROID FOR 1" ORIFICE)
 $G = 32.2 \text{ FT/S}^2$

$A = 0.0402 \text{ CFS} / ((2 \times 4.62 \text{ FT} \times 32.2 \text{ FT/S}^2)^{0.5} \times 0.6)$
 $A = 0.0039 \text{ SF}$

CHECK: 1" ORIFICE AREA = $\pi \times R^2$
 $R = 0.04 \text{ FT}$
 $A = \pi \times (0.04 \text{ FT})^2$
 $A = 0.0039 \text{ SF} < 0.0112 \text{ SF} \checkmark$

Material Specifications for Underneath the Permeable Pavements

Material	Specification	Notes
Bedding Layer	PC: None PICP: 2 in. depth of No. 8 stone above 4 inches of No. 57	ASTM D448 size No. 8 stone (e.g. 3/8 to 3/16 inch in size). ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) Should be washed, clean and free of all fines.
Reservoir Layer	PC: No. 57 stone PICP: No. 2 or 3 stone	PC: ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) PICP: No. 2 Stone (e.g. 3 inch to 3/4 inch in size) or No. 3 Stone. Depth is based on the pavement structural and hydraulic requirements. Should be washed, clean and free of all fines.
Underdrain		Use 4 to 6 inch diameter perforated PVC (AASHTO M 252) pipe, with 3/8-inch perforations at 8 inches on center, each underdrain installed at a minimum 0.5% slope located 20 feet or less from the next pipe (or equivalent corrugated HDPE may be used for non-vehicular applications). Perforated pipe installed for the full length of the permeable pavement cell, and non-perforated pipe, as needed, is used to connect with the storm drain system. T's and Y's installed as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with caps.
Filter Layer		The underlying native soils should be separated from the stone reservoir by a 2 to 4 inch layer of choker stone (e.g. No. 8) covered by a 6 to 8 inch layer of coarse sand (e.g. ASTM C 33, gradation) or use an appropriate filter fabric for the particular application based on AASHTO M288-06. At a minimum the fabric shall have a Flow Rate greater than 125 gpm/sq. ft. (ASTM D4491), and an Apparent Opening Size (AOS) equivalent to a US # 70 or # 80 sieve (ASTM D4751). The geotextile AOS selection is based on the percent passing the No. 200 sieve in "A" Soil subgrade, using FHWA or AASHTO selection criteria.
Observation Well		Use a perforated 4 to 6 inch vertical PVC pipe (AASHTO M 252) with a cap, installed flush with the surface. Applications in vehicular areas shall have a metal cap. All applications shall have an observation well installed.

*PC: Permeable Concrete, PICP: Permeable Interlocking Concrete Pavers

Permeable Pavement Maintenance Schedule

Maintenance	Schedule
<ul style="list-style-type: none"> Check observation wells 3 days after a storm event in excess of 1/2 inch in depth. Standing water observed in the well after three days is a clear indication of clogging. Inspect the surface of the permeable pavement for evidence of sediment deposition, organic debris, staining or ponding that may indicate surface clogging. If any signs of clogging are noted, schedule a vacuum sweeper (no brooms or water spray) to remove deposited material. Inspect the structural integrity of the pavement surface, looking for signs of surface deterioration, such as slumping, cracking, spalling or broken pavers. Replace or repair affected areas, as necessary. Check inlets, pretreatment cells and any flow diversion structures for sediment buildup and structural damage. Note if any sediment needs to be removed. Inspect the condition of the observation well and make sure it is still capped. Generally, inspect any contributing drainage area for any controllable sources of sediment or erosion. 	Annually
<ul style="list-style-type: none"> Inspected and certified by a professional licensed in the State of Virginia DPR SHALL RENT OR PURCHASE A SYNTHETIC TURF COVER TO PROTECT THE FIELD DURING THE COUNTY FAIR. 	Once every 5 years

Construction Inspection Checklist: Permeable Pavement

Address/ Location: _____ Building Permit #: _____
 LDA Permit #: _____ SWM#: _____
 Contractor: _____ Telephone: _____
Installer / Contractor's Certification (Required)
 Permeable Interlocking Pavers: Name of ICPI Certified Installer or PICP Specialist: _____
 Pervious Concrete: NRMCA Installer or Craftsman Certification Number: _____
 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 permeable pavement. This checklist does not necessarily differentiate between the types of pavement materials and the different construction requirements. 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
<input type="checkbox"/> Walk through site with builder/contractor/subcontractor to review the SWPPP (erosion and sediment control plan, the stormwater management plan, and the Pollution Prevention plan)	
<input type="checkbox"/> Determine when permeable pavement is built in project construction sequence; before or after building construction and determine measures for protection and surface cleaning.	
<input type="checkbox"/> Identify the tentative schedule for construction, verify the certification of the installer (ICPI for permeable interlocking pavers or NRMCA for pervious concrete) and requirements and schedule for interim inspections.	
<input type="checkbox"/> Storage locations for aggregate material have been identified (hard surface or on geotextile).	
<input type="checkbox"/> Conduct a pre-construction meeting with the contractor designated to install the permeable pavement, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	

SEDIMENT MANAGEMENT	DATE
<input type="checkbox"/> Access routes for delivery and construction vehicles identified.	
<input type="checkbox"/> Vehicle tire/track washing station location/maintenance (if specified in the erosion and sediment control plan/SWPPP).	
<input type="checkbox"/> Contributing drainage areas are stabilized and are not eroding.	

EXCAVATION	DATE
<input type="checkbox"/> Excavated area marked with paint and/or stakes.	
<input type="checkbox"/> Excavation size and location conforms to plan.	

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<input type="checkbox"/> Runoff is diverted around the excavation area to a stabilized conveyance.	
<input type="checkbox"/> If excavation is used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
<input type="checkbox"/> Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
<input type="checkbox"/> For Level 2 permeable pavement, ensure the bottom of the excavation is scarified prior to placement of stone.	
<input type="checkbox"/> No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
<input type="checkbox"/> The excavation has achieved the proper elevations and grade (0% slope) as noted on the approved plans.	
<input type="checkbox"/> Certification of Excavation Inspection: Inspector certifies the successful completion of the excavation steps listed above.	
<input type="checkbox"/> For Level 2, field infiltration test results at excavation bottom: _____	
Photos required include excavated subgrade prior to covering with fabric and stone, and include measurement from subgrade to reference point (i.e., top of edge restraint, top of apron, top of garage entrance, top of flow barriers and flow barrier excavation cuts, etc.).	

FILTER LAYER, UNDERDRAIN, STONE RESERVOIR, AND BEDDING LAYER PLACEMENT	DATE
<input type="checkbox"/> All aggregates, including, as required, the filter layer (choker stone & sand or geotextile), the reservoir layer, and bedding layer conform to specifications as certified by quarry.	
<input type="checkbox"/> Underdrain size and perforations meet the specifications (if applicable).	
<input type="checkbox"/> Placement of filter layer and initial layer of reservoir layer aggregates (approximately 2 inches) spread (not dumped) to avoid aggregate segregation.	
<input type="checkbox"/> Placement of underdrain, observation wells, and underdrain fittings in accordance with the approved plans.	
<input type="checkbox"/> Concrete curbs or plastic/metal edge restraints are installed.	
<input type="checkbox"/> Sides of excavation covered with geotextile, prior to placing stone reservoir aggregate; no tears or holes, or excessive wrinkles are present.	
<input type="checkbox"/> Flow barriers are properly installed (if applicable).	
<input type="checkbox"/> Stone reservoir layer and bedding layer is properly installed.	
<input type="checkbox"/> Certification of Filter Layer, Underdrain, Stone Reservoir and Bedding Layer Inspection: Inspector certifies the successful completion of the filter layer, underdrain, stone reservoir and bedding layer placement steps listed above. Photos and material delivery tickets for these items are attached.	
Photos required include: <ul style="list-style-type: none"> Non-woven geotextile fabric installed on bottom and sides of excavated subgrade; Perforated observation well prior to installation of stone; Perforated underdrain (if applicable) and connection to storm sewer or dry well; Depth of #2 or #3 stone installed (if applicable); Edge restraints; Depth of #57 stone installed; Depth of #8 stone installed. 	
Photos required of flow barrier (if applicable): <ul style="list-style-type: none"> 12" height of berm; 12" height of cut for flow barrier; Impermeable liner. 	

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<input type="checkbox"/> Distance between flow barriers.	
Material delivery tickets required include: <ul style="list-style-type: none"> Choker stone & sand or geotextile installed at subbase; Geotextile installed along sides; Impermeable liner on gravel flow berms (if applicable); #2 or #3 stone (if applicable), #57 stone, #8 stone. 	
PERMEABLE PAVERS OR PERVIOUS CONCRETE INSTALLATION	DATE
<input type="checkbox"/> Permeable paver surface is installed.	
<input type="checkbox"/> If pavers are used, the joints are full of #8 or #9 stone.	
<input type="checkbox"/> Certification of Pavement Installation: Contractor and/or manufacturer certifies that permeable pavement has been placed in accordance with manufacturers specifications (ICPI Tech Spec #18 for interlocking concrete pavers or ACI#522.1-13 for pervious concrete).	
Photos required include: <ul style="list-style-type: none"> Overall of completed installation; Observation well with proper cap installed. 	
For Level 2, completed facility observed infiltration rate: _____	
Material delivery tickets required for the pavers or concrete installed.	
<input type="checkbox"/> The permeable pavement is protected until the remainder of the site is stabilized.	

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

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22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion

(By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title
STORMWATER MANAGEMENT DETAILS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB

Filename: C-22-150396028 SWM Details.dwg
 May 24, 21

Scale: 1"=20'
 Date: Apr. 15, 21

Seal



Sheet

C-20
 SHEET 24 OF 42

Grass Channel 1 1-Inch	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.03 ft ³ /s
Results	
Normal Depth	0.03 ft
Flow Area	0.12 ft ²
Wetted Perimeter	4.18 ft
Hydraulic Radius	0.03 ft
Top Width	4.17 ft
Critical Depth	0.01 ft
Critical Slope	0.15917 ft/ft
Velocity	0.26 ft/s
Velocity Head	0.00 ft
Specific Energy	0.03 ft
Froude Number	0.27
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.03 ft
Critical Depth	0.01 ft
Channel Slope	0.00900 ft/ft

Grass Channel 2 1-Inch	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.03 ft ³ /s
Results	
Normal Depth	0.03 ft
Flow Area	0.12 ft ²
Wetted Perimeter	4.18 ft
Hydraulic Radius	0.03 ft
Top Width	4.17 ft
Critical Depth	0.01 ft
Critical Slope	0.15917 ft/ft
Velocity	0.26 ft/s
Velocity Head	0.00 ft
Specific Energy	0.03 ft
Froude Number	0.27
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.03 ft
Critical Depth	0.01 ft
Channel Slope	0.00900 ft/ft

Grass Channel 1	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Normal Depth	0.03 ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.03 ft ³ /s
Cross Section Image	

Grass Channel 2	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Normal Depth	0.03 ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.03 ft ³ /s
Cross Section Image	

GRASS CHANNEL 1

1-INCH TREATMENT VOLUME STORM (EQ. II.12):
 $QPTV = QU \times A \times QA$

CN = 80 ; IA = 200/CN-2 = 0.5
P = 1.0"
IA/P = 0.5
PER EXHIBIT 4-II AND Tc = 5 MINUTES, QU = 53 cfs/mi²/IN
A = 0.000484375 mi²
QA = 1.0"

$QPTV = 53 \text{ cfs/mi}^2/\text{IN} \times 0.000484375 \text{ mi}^2 \times 1.0" = 0.03 \text{ cfs}$

HYDRAULIC RESIDENCE TIME
L = 540V

L = 143 LF
V = 0.26 FPS
CHECK: 143 LF >= 540 x 0.26 FPS = 140.4

GRASS CHANNEL 2

1-INCH TREATMENT VOLUME STORM (EQ. II.12):
 $QPTV = QU \times A \times QA$

CN = 80 ; IA = 200/CN-2 = 0.5
P = 1.0"
IA/P = 0.5
PER EXHIBIT 4-II AND Tc = 5 MINUTES, QU = 53 cfs/mi²/IN
A = 0.000484375 mi²
QA = 1.0"

$QPTV = 53 \text{ cfs/mi}^2/\text{IN} \times 0.000484375 \text{ mi}^2 \times 1.0" = 0.03 \text{ cfs}$

HYDRAULIC RESIDENCE TIME
L = 540V

L = 141 LF
V = 0.26 FPS
CHECK: 141 LF >= 540 x 0.26 FPS = 140.4

9.3. Ongoing Maintenance

Once established, grass channels have minimal maintenance needs outside of the spring clean up, regular mowing, repair of check dams and other measures to maintain the hydraulic efficiency of the channel and a dense, healthy grass cover.

Table 3.5. Suggested Spring Maintenance Inspections/Cleanups for Grass Channels

Activity
Add reinforcement planting to maintain 90% turf cover. Reseed any soil-killed vegetation.
REMOVE ANY ACCUMULATED SAND, TRASH OR SEDIMENT DEPOSITS BEHIND OVERFLOW STRUCTURES.
Examine channel bottom for evidence of erosion, braiding, excessive ponding or dead grass.
Check inflow points for clogging and remove any sediment.
Inspect side slopes and grass filter strips for evidence of any rill or gully erosion and repair.
Look for any bare soil or sediment sources in the contributing drainage area and stabilize immediately.

* DPR SHALL INSTALL TEMPORARY FENCING TO PROTECT THE GRASS CHANNEL DURING THE COUNTY FAIR.

6.7. Grass Channel Material Specifications

The basic material specifications for grass channels are outlined in Table 3.4 below.

Table 3.4. Grass Channel Materials Specifications	
Component	Specification
Grass	A dense cover of water-tolerant, erosion-resistant grass. The selection of an appropriate species or mixture of species is based on several factors including climate, soil type, topography, and sun or shade tolerance. Grass species should have the following characteristics: a deep root system to resist scouring; a high stem density with well-branched top growth; water-tolerance; resistance to being flattened by runoff; an ability to recover growth following inundation; and, if receiving runoff from roadways, salt-tolerance. REFER TO LP-SERIES SHEETS FOR SEEDING SPECIFICATIONS.
Erosion Control Fabric	CURLEX NETFREE, OR EQUIVALENT

GRASS CHANNEL 1 (2 YEAR)	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.57 ft ³ /s
Results	
Normal Depth	0.16 ft
Flow Area	0.73 ft ²
Wetted Perimeter	5.03 ft
Hydraulic Radius	0.14 ft
Top Width	4.97 ft
Critical Depth	0.08 ft
Critical Slope	0.08553 ft/ft
Velocity	0.78 ft/s
Velocity Head	0.01 ft
Specific Energy	0.17 ft
Froude Number	0.36
Flow Type	Subcritical
Cross Section Image	

GRASS CHANNEL 1 (10 YEAR)	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	0.75 ft ³ /s
Results	
Normal Depth	0.19 ft
Flow Area	0.88 ft ²
Wetted Perimeter	5.21 ft
Hydraulic Radius	0.17 ft
Top Width	5.15 ft
Critical Depth	0.10 ft
Critical Slope	0.08085 ft/ft
Velocity	0.96 ft/s
Velocity Head	0.01 ft
Specific Energy	0.20 ft
Froude Number	0.37
Flow Type	Subcritical
Cross Section Image	

GRASS CHANNEL 2 (2 YEAR)	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	1.37 ft ³ /s
Results	
Normal Depth	0.27 ft
Flow Area	1.30 ft ²
Wetted Perimeter	5.71 ft
Hydraulic Radius	0.23 ft
Top Width	5.63 ft
Critical Depth	0.15 ft
Critical Slope	0.07198 ft/ft
Velocity	1.05 ft/s
Velocity Head	0.02 ft
Specific Energy	0.29 ft
Froude Number	0.39
Flow Type	Subcritical
Cross Section Image	

GRASS CHANNEL 2 (10 YEAR)	
Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.050
Channel Slope	0.00900 ft/ft
Left Side Slope	3.00 ft/ft (H:V)
Right Side Slope	3.00 ft/ft (H:V)
Bottom Width	4.00 ft
Discharge	1.82 ft ³ /s
Results	
Normal Depth	0.32 ft
Flow Area	1.58 ft ²
Wetted Perimeter	6.01 ft
Hydraulic Radius	0.26 ft
Top Width	5.91 ft
Critical Depth	0.16 ft
Critical Slope	0.06825 ft/ft
Velocity	1.16 ft/s
Velocity Head	0.02 ft
Specific Energy	0.34 ft
Froude Number	0.39
Flow Type	Subcritical
Cross Section Image	

Construction Inspection Checklist: Grass Channels

- Make sure the desired coverage of turf or erosion control fabric has been achieved following construction, both on the channel beds and their contributing side-slopes.
- Inspect check dams and pre-treatment structures to make sure they are at correct elevations, are properly installed, and are working effectively.
- Make sure outfall protection/energy dissipation at concentrated inflows is stable.
- Log the filtering practice's GPS coordinates and submit them for entry into the local BMP maintenance tracking database.
- Pre-construction meeting with the contractor designated to install the grass channel practice has been conducted.
- Impervious cover has been constructed/installed and area is free of construction equipment, vehicles, material storage, etc.
- All pervious areas of the contributing drainage areas have been adequately stabilized and erosion control measures have been removed.
- Grass channel has not been used during construction; or
- Grass channel has been used for construction and is scheduled to be restored by removing construction sediment and incorporating soil amendments.
- Stormwater has been diverted for the construction of the inflow measures (5' WIDE GRASS FILTER STRIP WITH MAXIMUM 5% SLOPE)
- Proper grades have been achieved with light equipment to avoid compaction to provide the required geometry of the grass channel: length and longitudinal slope, bottom width, and side slopes.
- Pretreatment practices have been installed for sheet flow entry.
- Channel bed and banks and adjacent disturbed areas have all been adequately stabilized (with matting if required, or needed to ensure a dense vegetative cover) prior to diverting runoff into the channel.
- All erosion and sediment control practices have been removed.
- Follow-up inspection and as-built survey/certification has been scheduled.
- GPS coordinates have been documented for all grass channels on the parcel.



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park
Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
STORMWATER MANAGEMENT DETAILS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

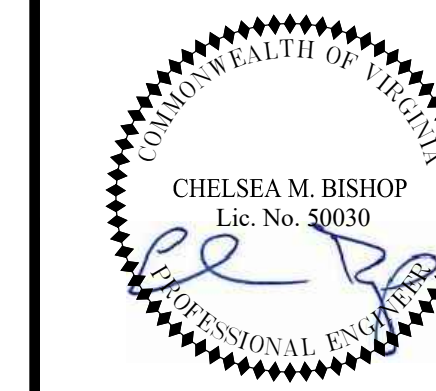
Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-22-150396028 SWM Details.dwg
May 24, 21

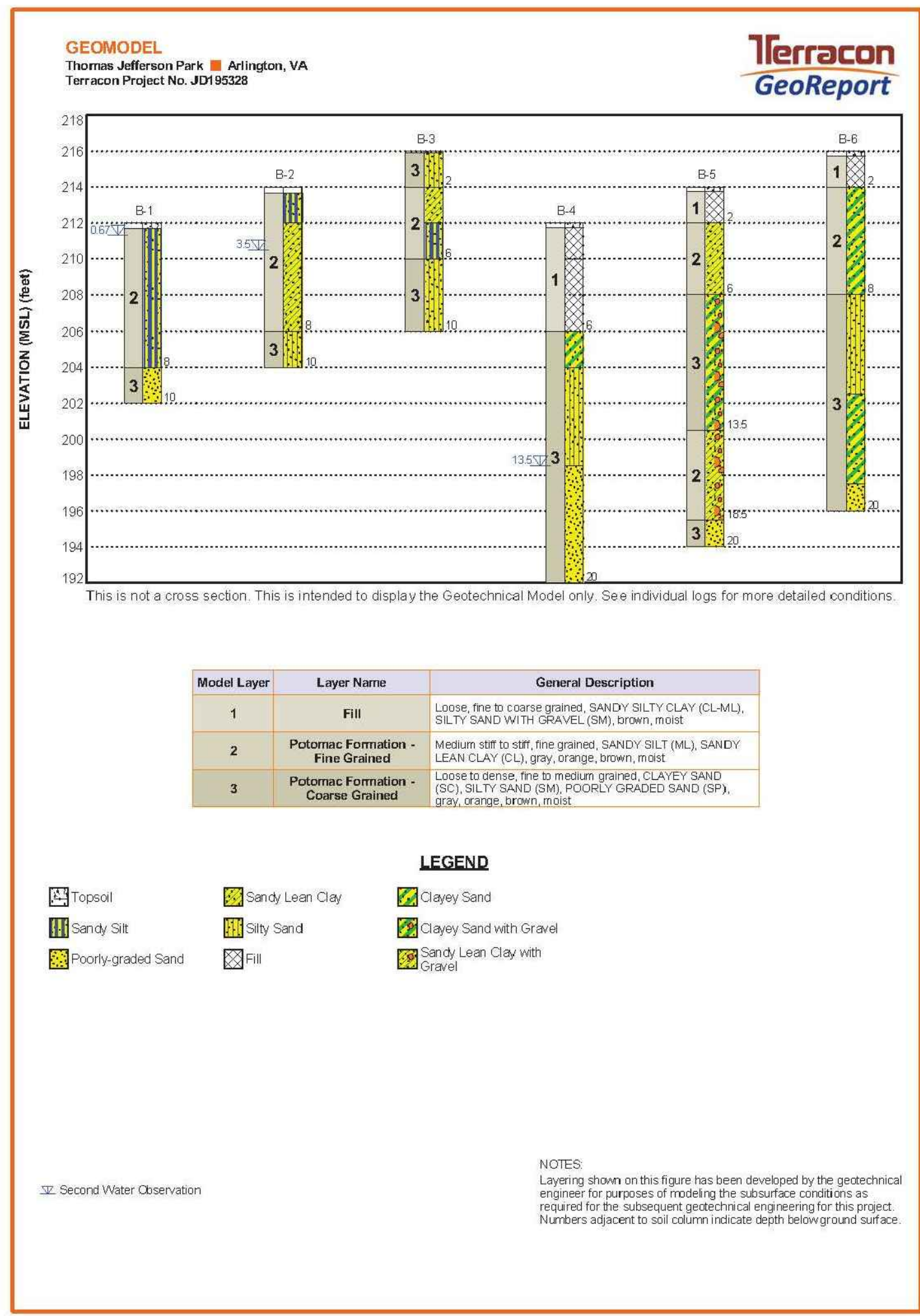
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Date: Apr. 15, 21

Seal



Sheet

C-21
SHEET 25 OF 42



Client: Geococepts Engineering
 Suite 170
 19955 Highland Vista Drive
 Ashburn, VA 20147

Grower: Thomas Jefferson Park
 JD195328

Report No.: 20-008-0595
 Cust No.: 74328
 Date Printed: 01/10/2020
 Page: 1 of 1
 Date Received: 01/09/2020

Lab No	Field ID	Sample Identification	Percent Sand	Percent Silt	Percent Clay	Textural Classification
15921	B-1 2-4		31.8	39.5	28.6	Clay Loam
15922	B-2 2-4		21.8	37.5	40.6	Clay
15923	B-3 2-4		29.8	37.5	32.6	Clay Loam
15924	B-4 2-4		51.8	25.5	22.6	Sandy Clay Loam
15925	B-5 2-4		43.8	27.5	28.6	Clay Loam
15927	B-6 2-4		39.8	33.5	26.6	Loam

Analysis prepared by: Waypoint Analytical Virginia, Inc.

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

22-DPR-ITB-24

Project Name and Location

Thomas
 Jefferson Park
 Upper Field
 Conversion
 (By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title
 SOIL BORING
 LOGS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB

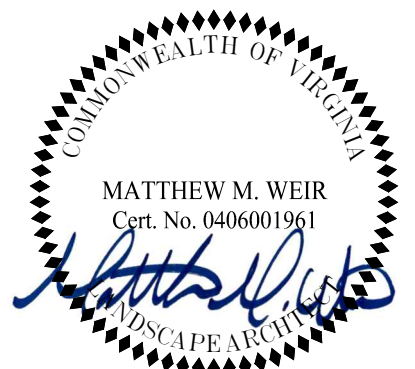
Filename: C-23-150396028 Boring Logs.dwg

Plotted: May, 24, 21

Scale: 1"=20'

Date: Apr. 16, 21

Seal



Sheet

C-22
 SHEET 26 OF 42

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park
Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
SOIL BORING LOGS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

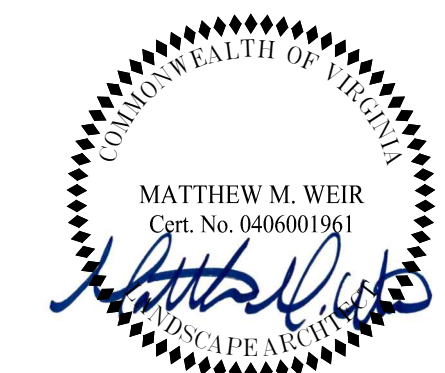
Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-23-150396028 Boring Logs.dwg
Plotted: May, 24, 21

Scale: 1"=20'
Date: Apr. 16, 21

Seal



Sheet

C-23
SHEET 27 OF 42

BORING LOG NO. B-3		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	216	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	216.4	0.0	216.4
1.0	214.4	1.0	214.4
2.0	212.4	2.0	212.4
3.0	210.4	3.0	210.4
4.0	208.4	4.0	208.4
5.0	206.4	5.0	206.4
6.0		6.0	
7.0		7.0	
8.0		8.0	
9.0		9.0	
10.0		10.0	
Boring Terminated at 10 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 6.6-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

BORING LOG NO. B-2		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	214	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	214.4	0.0	214.4
1.0	212.4	1.0	212.4
2.0	210.4	2.0	210.4
3.0	208.4	3.0	208.4
4.0	206.4	4.0	206.4
5.0	204.4	5.0	204.4
6.0		6.0	
7.0		7.0	
8.0		8.0	
9.0		9.0	
10.0		10.0	
Boring Terminated at 10 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 3.5-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

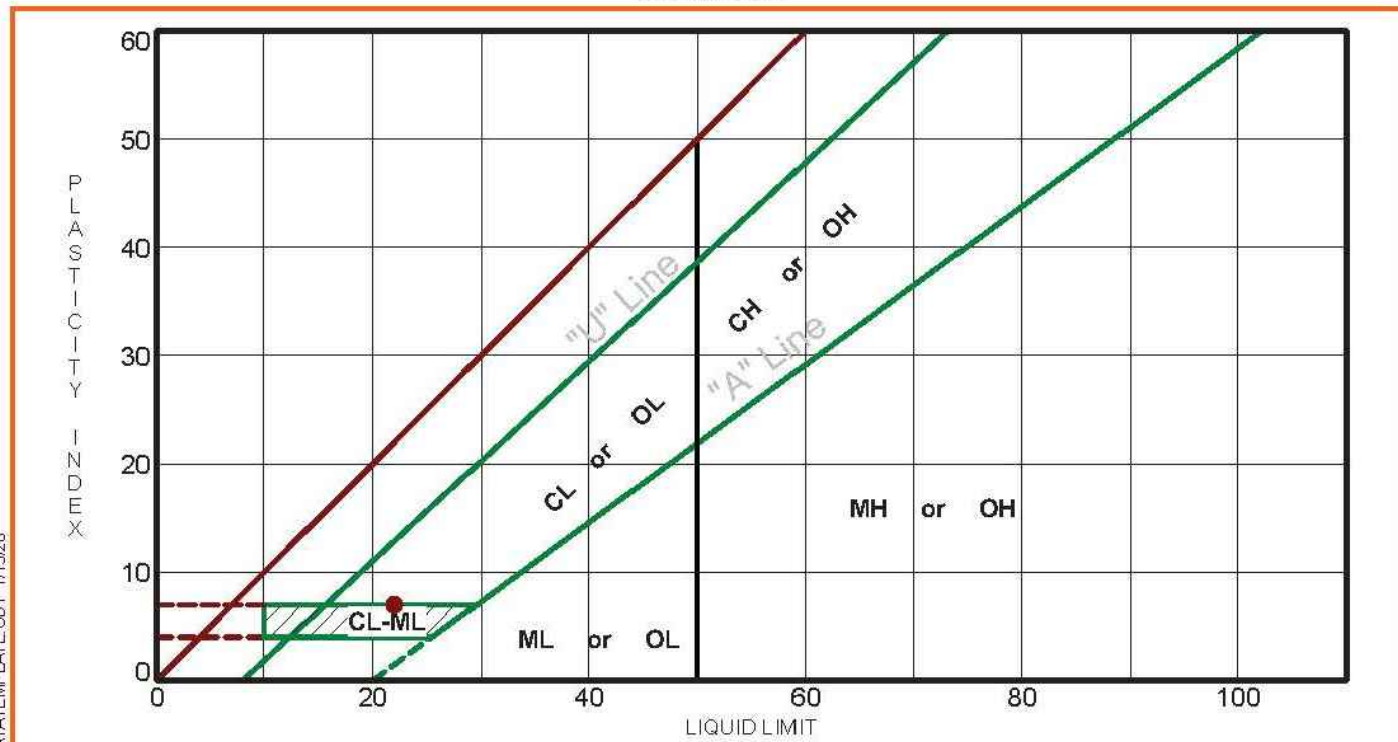
BORING LOG NO. B-6		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	216	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	216.4	0.0	216.4
1.0	214.4	1.0	214.4
2.0	212.4	2.0	212.4
3.0	210.4	3.0	210.4
4.0	208.4	4.0	208.4
5.0	206.4	5.0	206.4
6.0	204.4	6.0	204.4
7.0	202.4	7.0	202.4
8.0	200.4	8.0	200.4
9.0	198.4	9.0	198.4
10.0	196.4	10.0	196.4
Boring Terminated at 20 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 13.5-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

BORING LOG NO. B-5		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	214	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	214.4	0.0	214.4
1.0	212.4	1.0	212.4
2.0	210.4	2.0	210.4
3.0	208.4	3.0	208.4
4.0	206.4	4.0	206.4
5.0	204.4	5.0	204.4
6.0	202.4	6.0	202.4
7.0	200.4	7.0	200.4
8.0	198.4	8.0	198.4
9.0	196.4	9.0	196.4
10.0	194.4	10.0	194.4
Boring Terminated at 20 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 18-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

BORING LOG NO. B-1		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	212	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	212.4	0.0	212.4
1.0	210.4	1.0	210.4
2.0	208.4	2.0	208.4
3.0	206.4	3.0	206.4
4.0	204.4	4.0	204.4
5.0	202.4	5.0	202.4
6.0	200.4	6.0	200.4
7.0	198.4	7.0	198.4
8.0	196.4	8.0	196.4
9.0	194.4	9.0	194.4
10.0	192.4	10.0	192.4
Boring Terminated at 10 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 6.6-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

BORING LOG NO. B-4		Page 1 of 1	
PROJECT: Thomas Jefferson Park		CLIENT: A Morton Thomas & Assoc Inc Chantilly, VA	
SITE: 3501 2nd St Arlington, VA		LOCATION: See Exploration Plan	
APPROXIMATE SURFACE ELEVATION (FT) +/-	212	DEPTH (FT)	
WATER LEVEL OBSERVATIONS		WATER LEVEL OBSERVATIONS	
DEPTH	APPROXIMATE SURFACE ELEVATION (FT) +/-	DEPTH (FT)	APPROXIMATE SURFACE ELEVATION (FT) +/-
0.0	212.4	0.0	212.4
1.0	210.4	1.0	210.4
2.0	208.4	2.0	208.4
3.0	206.4	3.0	206.4
4.0	204.4	4.0	204.4
5.0	202.4	5.0	202.4
6.0	200.4	6.0	200.4
7.0	198.4	7.0	198.4
8.0	196.4	8.0	196.4
9.0	194.4	9.0	194.4
10.0	192.4	10.0	192.4
Boring Terminated at 20 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Hammer Type: Automatic			
Advancement Method: 2-1/4in. H.S.A.		Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	
Abandonment Method: Boring backfilled with auger cuttings upon completion.		Notes: See Supporting Information for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS: Groundwater not encountered at time of drilling. After 24 hours: 13.5-ft		Terracon	
Boring Started: 01-03-2019		Boring Completed: 01-03-2019	
Drill Rig: D-50 track		Driller: Terracon	
Project No.: JD196328		Project No.: JD196328	

ATTERBERG LIMITS RESULTS
ASTM D4318

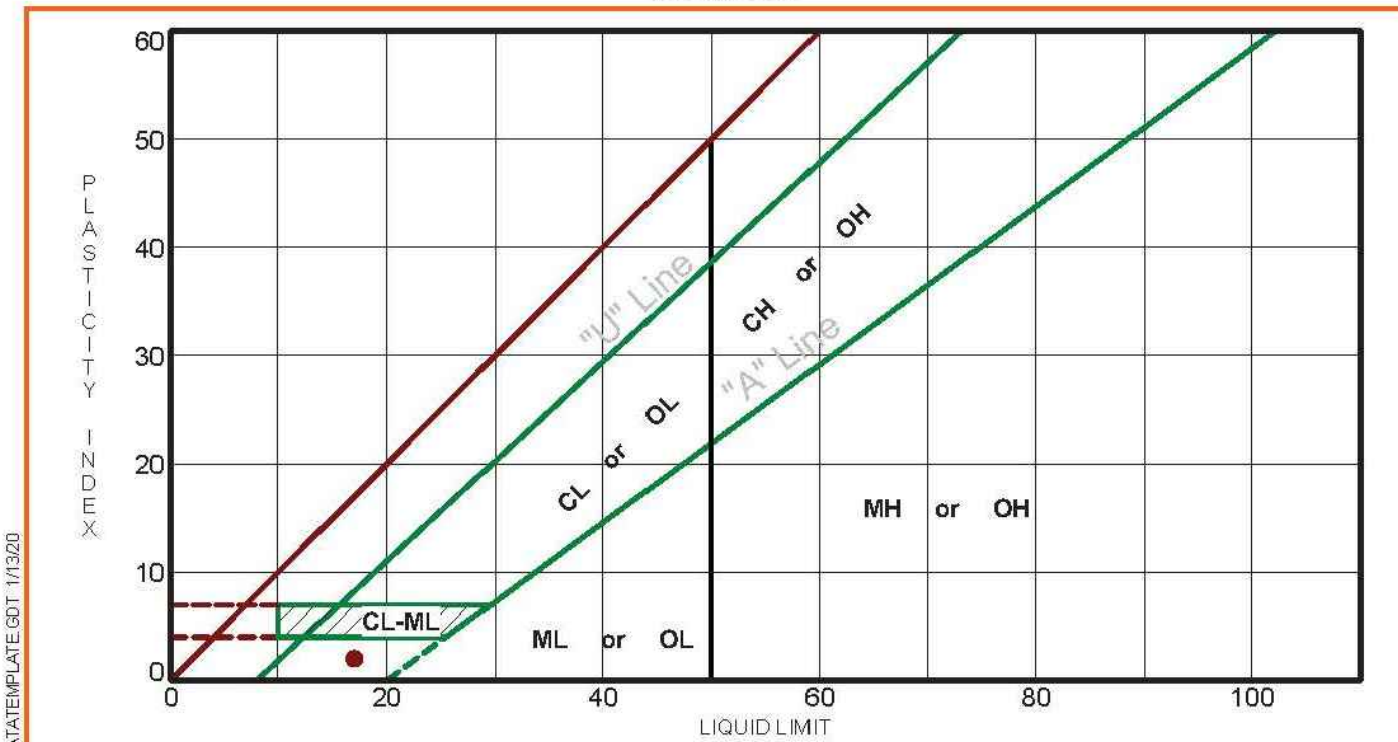


Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
B-4	0 - 2	22	15	7	57.1	CL-ML	SANDY SILTY CLAY

PROJECT: Thomas Jefferson Park
 Terracon
 1955 Highland Vista Dr Ste 170
 Ashburn, VA

PROJECT NUMBER: JD195328
 CLIENT: A Morton Thomas & Assoc Inc
 Chantilly, VA

ATTERBERG LIMITS RESULTS
ASTM D4318

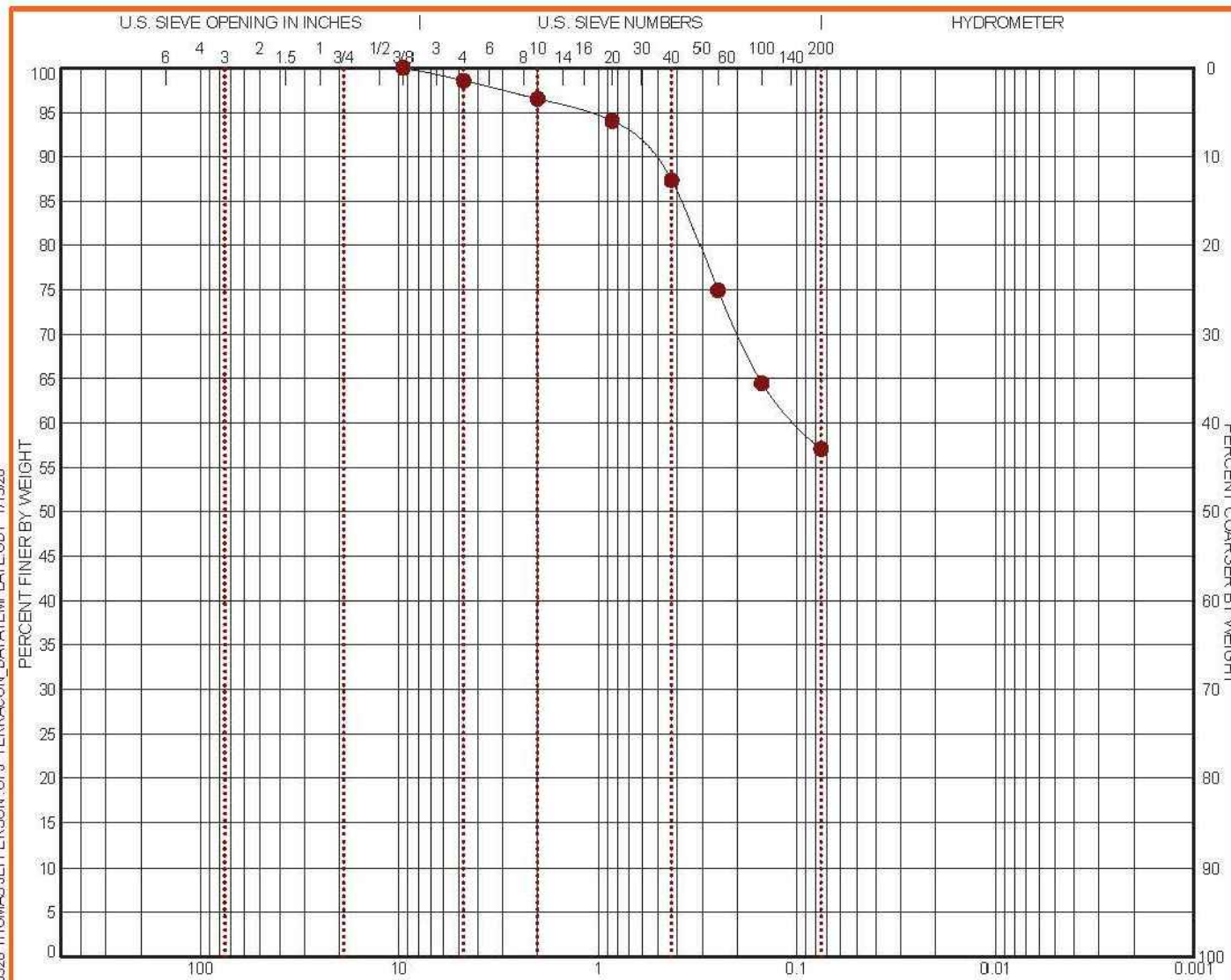


Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
B-4	8 - 10	17	15	2	43.9	SM	SILTY SAND

PROJECT: Thomas Jefferson Park
 Terracon
 1955 Highland Vista Dr Ste 170
 Ashburn, VA

PROJECT NUMBER: JD195328
 CLIENT: A Morton Thomas & Assoc Inc
 Chantilly, VA

GRAIN SIZE DISTRIBUTION
ASTM D422 / ASTM C136



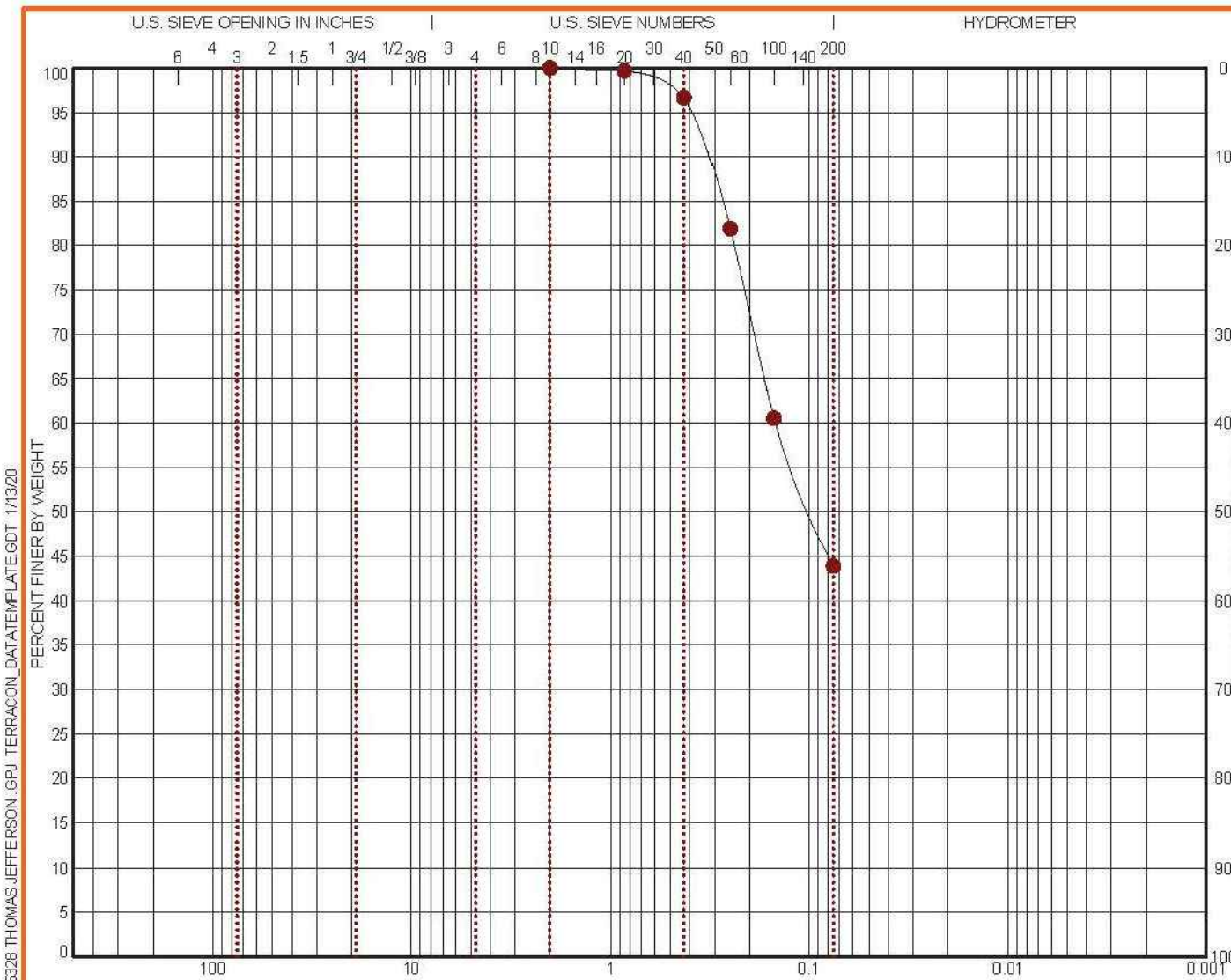
BORING ID	DEPTH	GRAVEL		SAND			SILT OR CLAY		USCS
		coarse	fine	coarse	medium	fine	% SILT	% CLAY	
B-4	0 - 2	0.0	1.4	41.5			57.1		CL-ML

GRAIN SIZE			SOIL DESCRIPTION		
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
D ₁₀ 0.075	100.0	#10	100.0		
D ₃₀ 0.075	99.56	#40	99.97		
D ₅₀ 0.075	98.51	#60	98.68		
D ₆₀ 0.075	94.02	#80	91.99		
D ₇₅ 0.075	87.34	#100	83.53		
D ₁₀₀ 0.075	74.95	#200	43.89		
D ₂₀₀ 0.075	57.40				
D ₄₂₅ 0.075	57.98				

PROJECT: Thomas Jefferson Park
 Terracon
 1955 Highland Vista Dr Ste 170
 Ashburn, VA

PROJECT NUMBER: JD195328
 CLIENT: A Morton Thomas & Assoc Inc
 Chantilly, VA

GRAIN SIZE DISTRIBUTION
ASTM D422 / ASTM C136



BORING ID	DEPTH	GRAVEL		SAND			SILT OR CLAY		USCS
		coarse	fine	coarse	medium	fine	% SILT	% CLAY	
B-4	8 - 10	0.0	0.0	56.1			43.9		SM

GRAIN SIZE			SOIL DESCRIPTION		
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
D ₁₀ 0.075	100.0	#10	100.0		
D ₃₀ 0.075	99.97	#40	98.68		
D ₅₀ 0.075	98.68	#60	91.99		
D ₆₀ 0.075	83.53	#80	83.53		
D ₁₀₀ 0.075	43.89	#200	43.89		

PROJECT: Thomas Jefferson Park
 Terracon
 1955 Highland Vista Dr Ste 170
 Ashburn, VA

PROJECT NUMBER: JD195328
 CLIENT: A Morton Thomas & Assoc Inc
 Chantilly, VA



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

22-DPR-ITB-24

Project Name and Location
**Thomas Jefferson Park
 Upper Field
 Conversion**
 (By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title
SOIL BORING LOGS

100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB
 Filename: C-23-150396028 Boring Logs.dwg
 Plotted: May, 24, 21
 Scale: 1"=20'
 Date: Apr. 16, 21



POLLUTION PREVENTION NOTES

- 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.
- 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.
- 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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uncontaminated foundation or footing drains	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Uncontaminated excavation dewatering	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Landscape irrigation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Others [describe]	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants								
		Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals
Clearing, grading, excavating, and un-stabilized areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X								X
Paving operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X		X	
Concrete washout and cement waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			X	X				X	
Structure construction, stucco, painting, and cleaning	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X	X
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X						X	
Material delivery and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X
Material use during building process	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X	X	X	X	X	X	X
Solid waste disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								X	X
Sanitary waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X		X			X		
Landscaping operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X			X			X	X
Others [describe]	<input type="checkbox"/> Yes <input type="checkbox"/> No	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]

Pollution Prevention Practices:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 overflowing.
- 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.
- 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.
- 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

- 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.**
- 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.
- Stop the spill source.
- Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
- If possible, stop spill from entering drains (use absorbent or other material as necessary).
- Stop spill from spreading (use absorbent or other material)
- If spilled material has entered a storm sewer, contact locality's storm water department.
- Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
- 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 804-674-2400
24 Hour Reporting Service

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



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
POLLUTION PREVENTION PLAN

100% Construction Drawings (for Bid)

Approval _____ Date _____

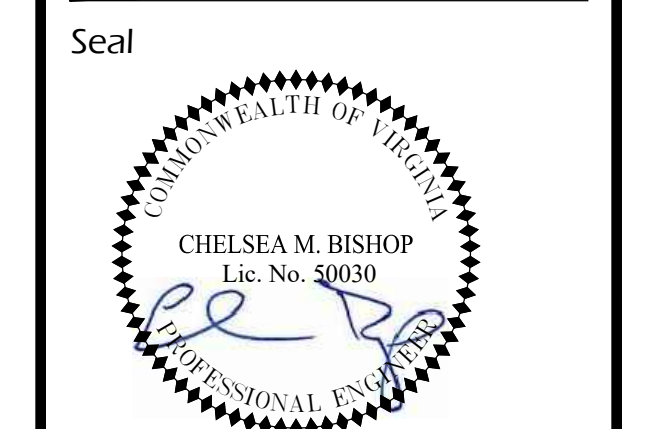
Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: C-24-150396028 Pollution Prevention Plan
Plotted: May, 24, 21

Scale: 1"=20'
Date: Mar. 13, 20



Sheet
C-25
SHEET 29 OF 42

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field
Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**SITE DETAILS -
FLATWORK**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

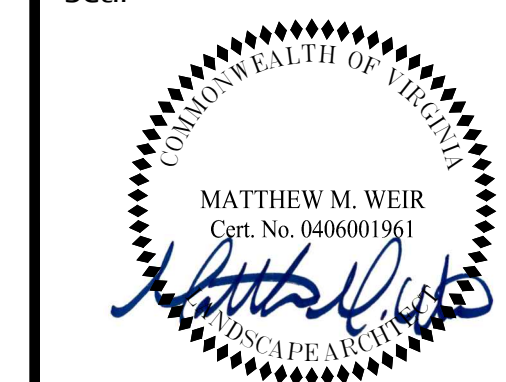
Filename: L-01-150396028 Site Details.dwg

Plotted: May 24, 21

Scale: AS SHOWN

Date: Apr. 16, 21

Seal



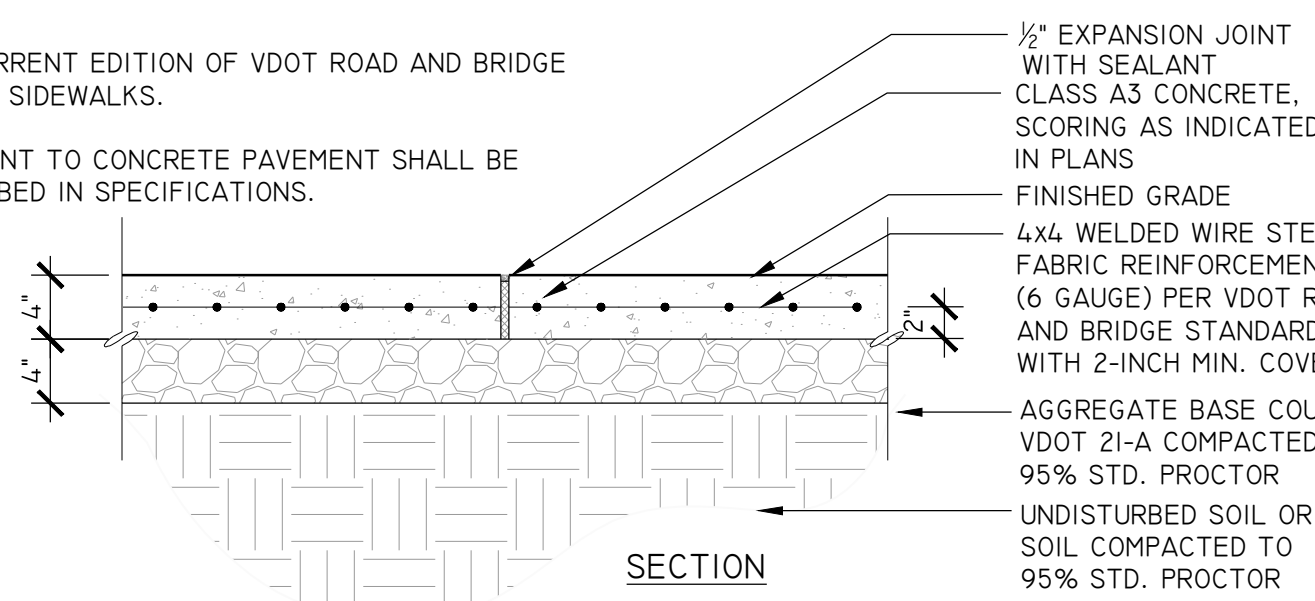
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L-01

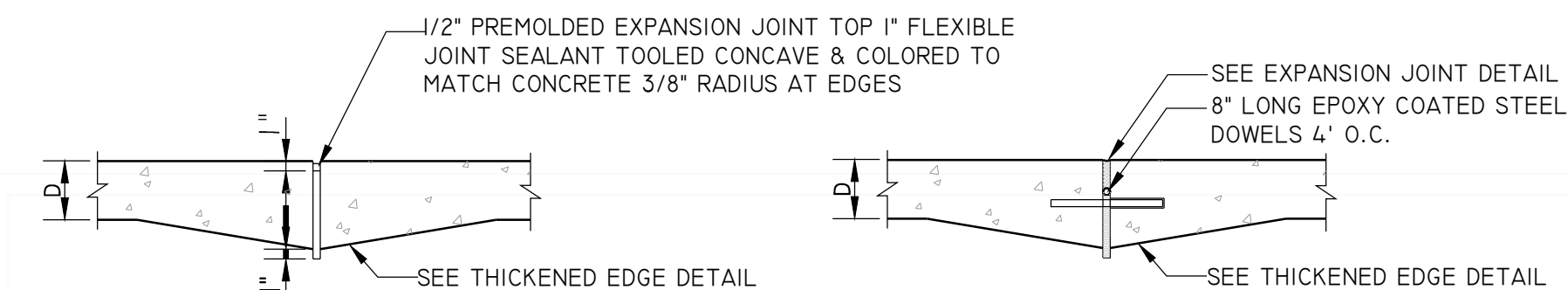
SHEET 30 OF 42

NOTES:

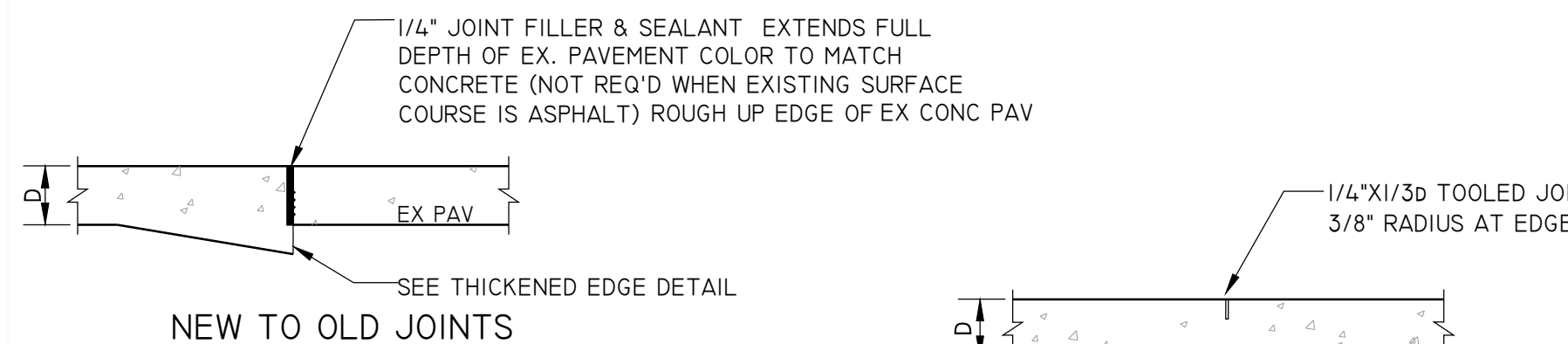
- THIS DETAIL IS INTENDED FOR NON-RIGHT-OF-WAY APPLICATIONS ONLY. ALL CONCRETE PAVEMENT WITHIN COUNTY RIGHT-OF-WAY SHALL BE CONSTRUCTED PER ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) STANDARDS.
- JOINTS: PROVIDE EXPANSION JOINTS EVERY 20' O.C. UNLESS OTHERWISE INDICATED IN PLANS AND 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 1/3 DEPTH OF TOTAL CONCRETE THICKNESS.
- EXPANSION JOINTS SHALL BE DOWELED TO PREVENT FUTURE DIFFERENTIAL SETTLEMENT AND SEALED WITH SEALANT. COLOR TO MATCH COLOR OF CONCRETE.
- FINISH IN ACCORDANCE WITH CURRENT EDITION OF VDOT ROAD AND BRIDGE SPECIFICATIONS SECTION 404.7 FOR SIDEWALKS.
- DISTURBED LAWN AREAS ADJACENT TO CONCRETE PAVEMENT SHALL BE BACKFILLED AND SEEDED AS DESCRIBED IN SPECIFICATIONS.
- PROVIDE 2" REVEAL FROM CONCRETE SURFACE TO PLANTING BED AND TURF AREAS.



1 REINFORCED CONCRETE PAVEMENT (4" THICKNESS)
321313.1 (2017)

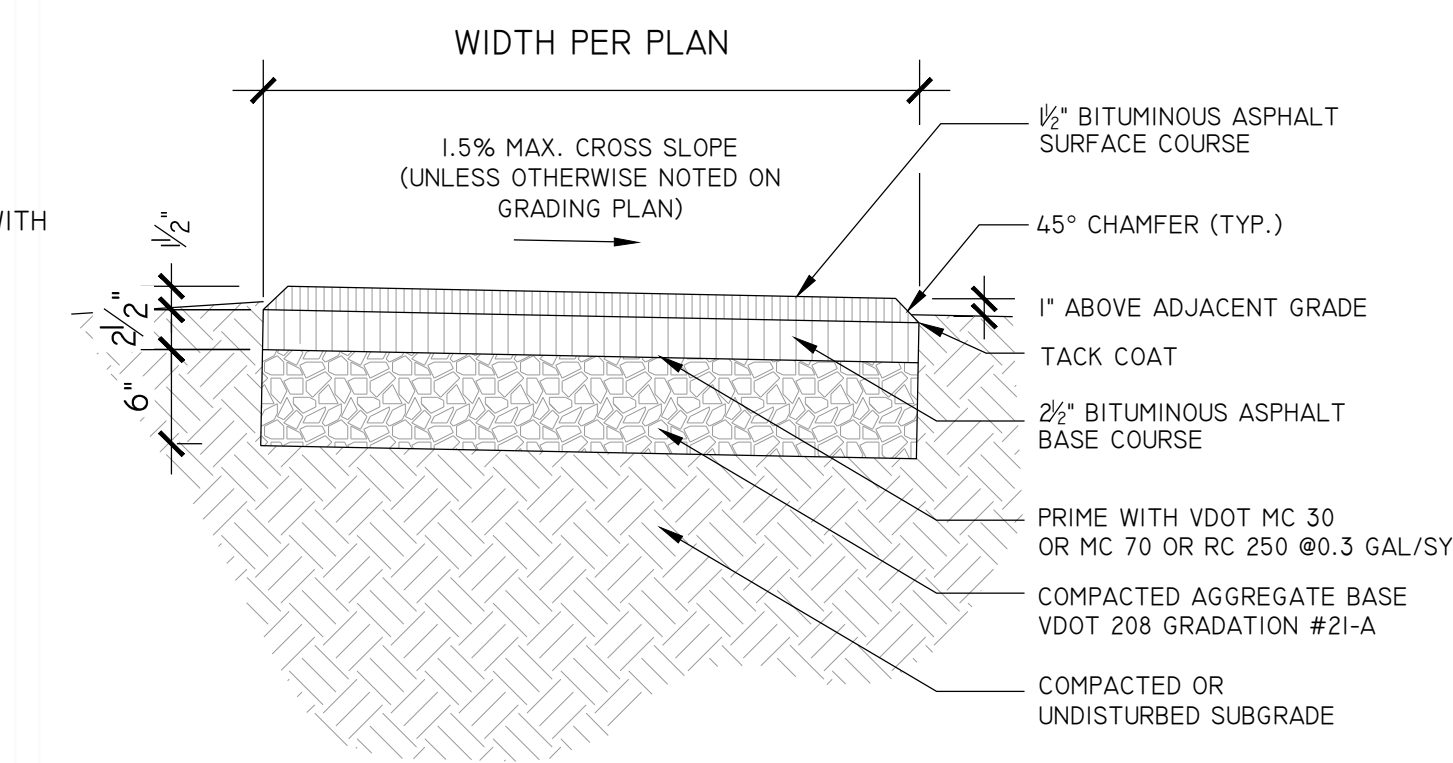


2 CONCRETE PAVEMENT JOINTS
321313.4 (2017)

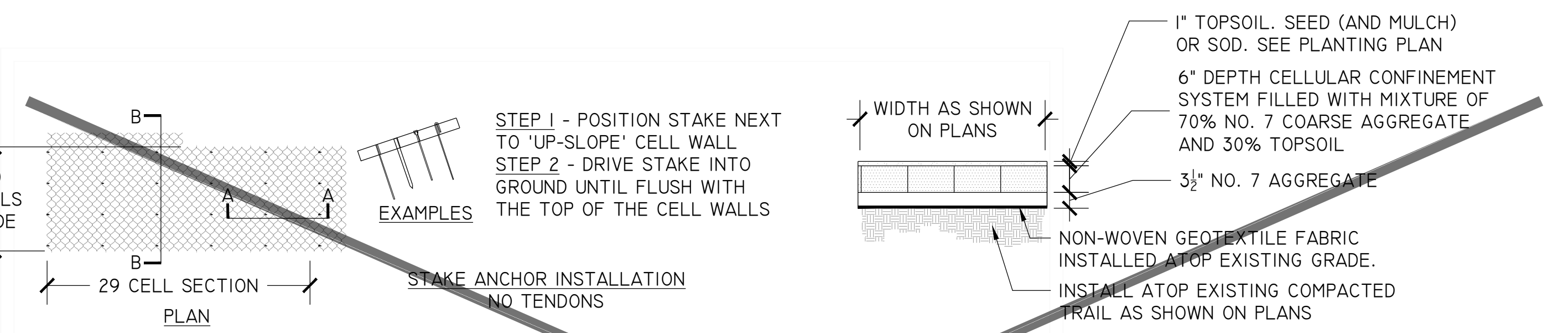


- NOTES:**
- TRANSVERSE JOINT SPACE SHALL NOT EXCEED SPACING INDICATED IN PLANS. THE AREA OF THE PAVEMENT PANEL SHALL NOT EXCEED 225 SQUARE FEET.
 - JOINT OFFSETS AT RADIUS POINTS SHOULD BE AT LEAST 1'-6" LONG.
 - JOINT INTERSECTION ANGLES OF LESS THAN 60 DEGREES SHALL NOT BE USED.
 - WHEN A JOINT IS 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.

3 ASPHALT PAVEMENT (PEDESTRIAN)
1" = 1'-0"

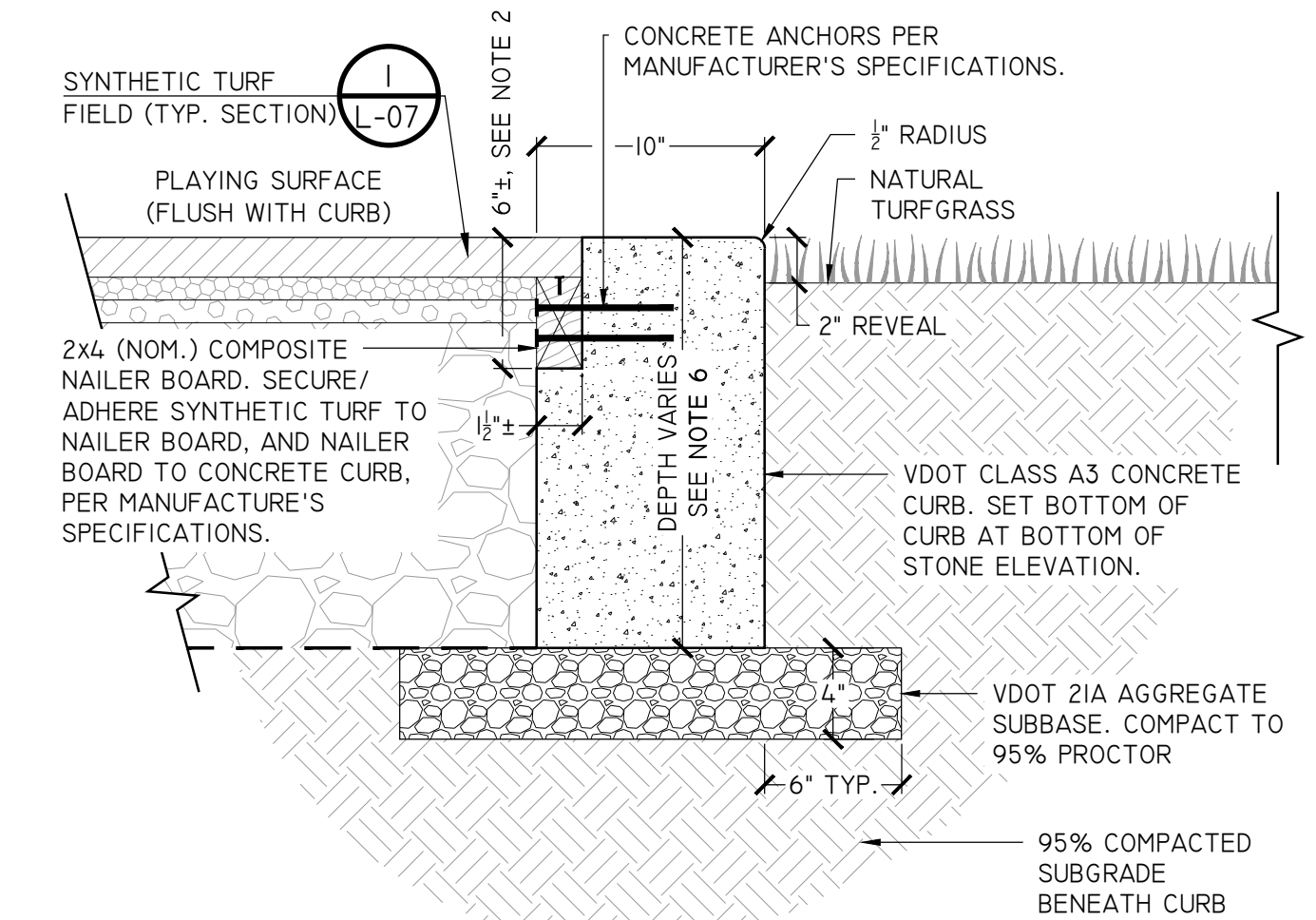


4 GEOWEB GRASS PAVING
A-FL-24

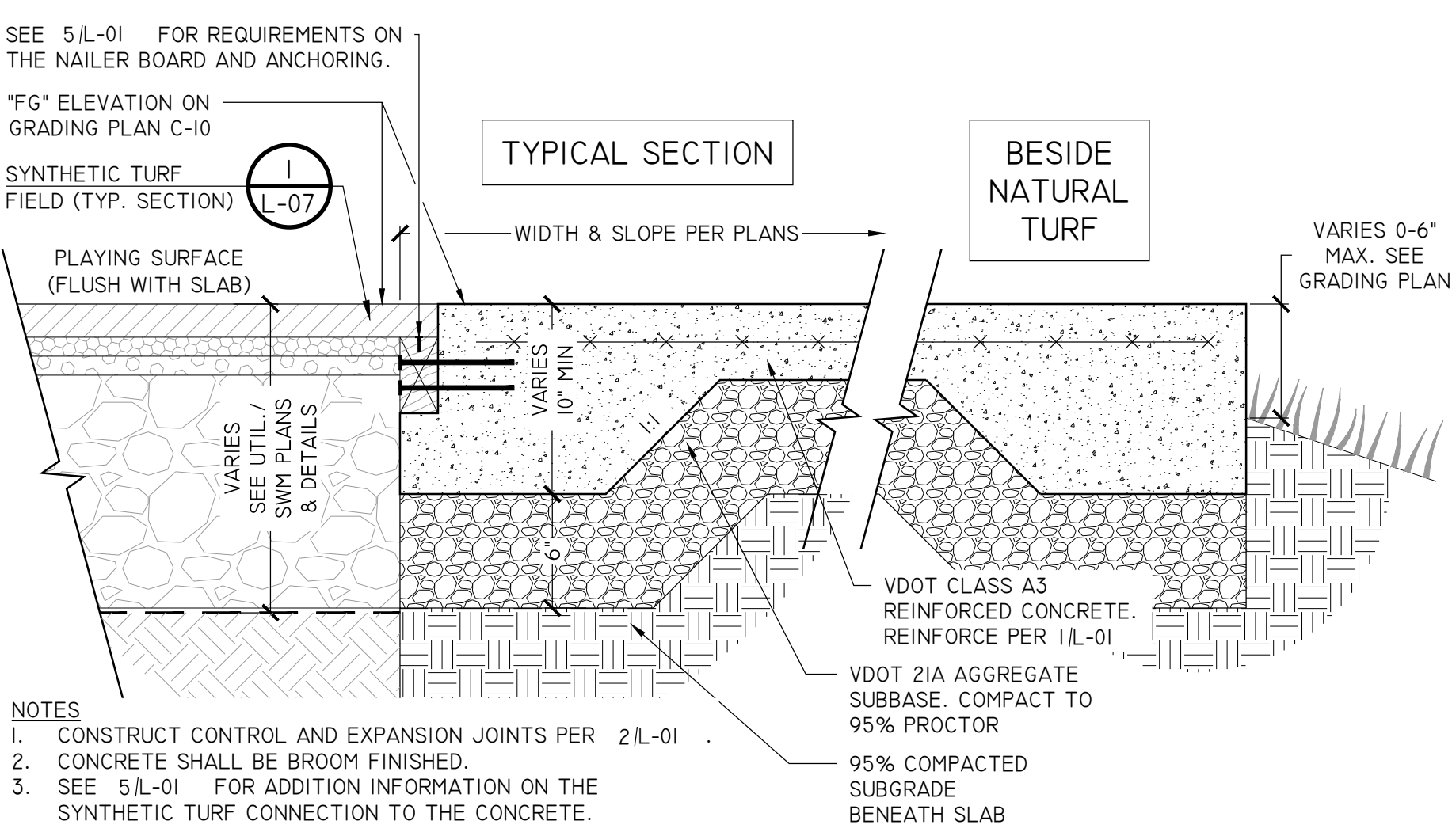


- NOTES:**
- CELLULAR CONFINEMENT SYSTEM SHALL BE TERRACELL® I40 BY GEOSYNTHETICS, OR APPROVAL EQUAL. ADDRESS: 815 BUXTON STREET, WINSTON, SALEM, NC 27101. PH: 888-239-4539. WEB: HANESGO.COM
 - DISTURBED LAWN AREAS ADJACENT TO CELLULAR CONFINEMENT SYSTEM SHALL BE BACKFILLED AND SEEDED AS DESCRIBED IN SPECIFICATIONS.
 - CONTRACTOR SHALL VERIFY STRENGTH OF EXISTING SUBGRADE. IF UNACCEPTABLE PER MANUFACTURER'S REQUIREMENTS, THE SOILS SHALL BE COMPACTED TO A 95% MINIMUM PROCTOR.
 - EXPAND THE GEOWEB SECTIONS INTO POSITION AND CONNECT THE END TO END AND INTERLEAF CONNECTIONS PER MANUFACTURER'S STANDARDS.

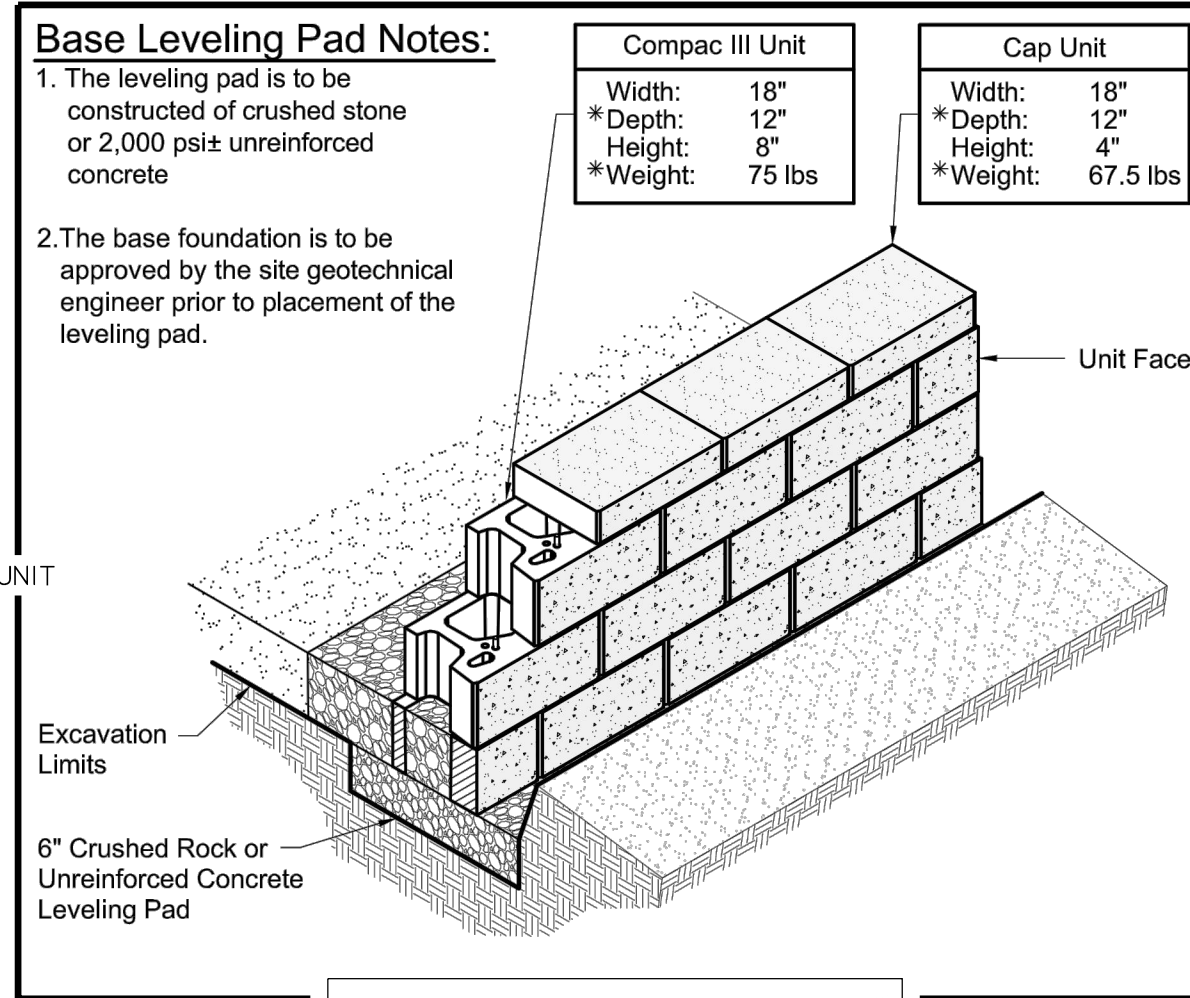
5 PERIMETER FLUSH CURB
1 1/2" = 1'-0"



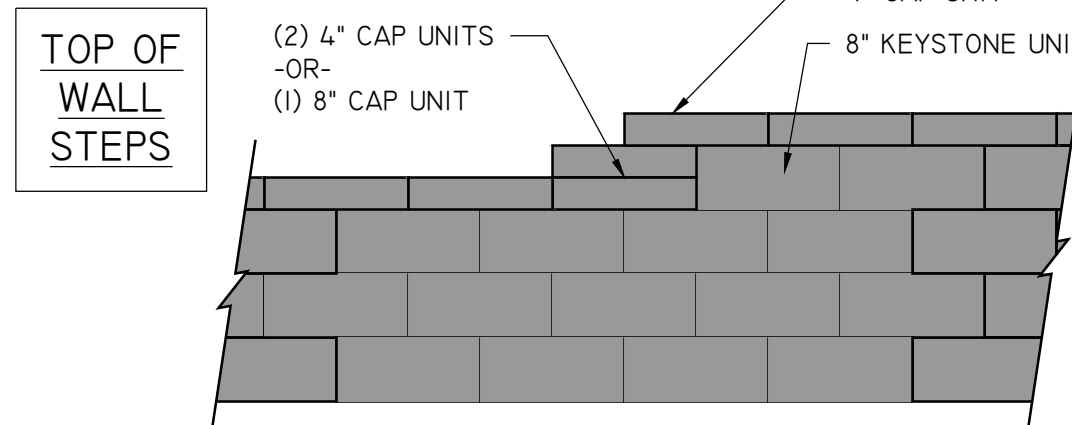
- NOTES:**
- CONSTRUCT CURB EXPANSION & CONTROL JOINTS TO ALIGN WITH FENCE POSTS. BETWEEN FENCE POSTS, CONTROL & EXPANSION JOINTS ON THE CURB SHALL BE EQUALLY SPACED ON CENTER. MAX. 10' O.C. (WHERE NO FENCE IS PRESENT ON THE CURB, CURB JOINT SPACING SHALL MATCH THAT USED WHERE A FENCE IS PRESENT.) USE 1/2" PRE-FORMED EXPANSION JOINT FILLER, NON EXTRUDING. SEALANT COLOR TO MATCH COLOR OF CONCRETE.
 - THE DEPTH AND WIDTH OF THIS NOTCH DEPEND ON THE SYNTHETIC TURF PRODUCT, WHICH SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ARLINGTON COUNTY DPR PROJECT OFFICER AS A SUBMITTAL FOR REVIEW AND APPROVAL. THE SUBMITTAL SHALL BE APPROVED PRIOR TO POURING THE FLUSH CURB SO THAT THE NOTCH DIMENSIONS AND ANCHORING TECHNIQUES CAN BE CONFIRMED.
 - CONCRETE SHALL BE BROOM FINISHED.
 - ADJACENT MATERIALS VARY - CONCRETE, NATURAL TURF, OR RETAINING WALL. VERIFY WITH SITE & MATERIALS PLAN C-09.
 - DISTURBED LAWN AREAS ADJACENT TO CONCRETE CURBING SHALL BE BACKFILLED AND SODDED/SEEDED AS DESCRIBED IN SPECIFICATIONS.
 - SEE 1/L-03 FOR DETAIL SHOWING THE FLUSH CURB AGAINST THE SEGMENTAL BLOCK RETAINING WALL.
 - DEPTH OF FLUSH CURB VARIES:
 - WHEN CURB IS BEHIND SEGMENTAL BLOCK WALL WITH FENCE, THE CURB SHALL EXTEND TO THE TOP OF SLEEVE-IT, OR TO 18" DEPTH, WHICHEVER IS GREATER. SEE DETAILS 1/L-05, 2/L-07 & 3/L-07
 - WHEN NO FENCE OR RETAINING WALL IS PRESENT, THE CURB DEPTH SHALL EXTEND TO 12" DEPTH MIN., OR TO THE DEPTH OF THE BOTTOM OF THE SYNTHETIC TURF STONE SECTION, WHICHEVER IS GREATER. SEE DETAIL 1/L-07
 - WHEN THE CHAIN LINK FENCING IS PRESENT, BUT NO SEGMENTAL BLOCK WALL IS, THE CURB SHALL EXTEND AS SHOWN IN 2/L-07 & 3/L-07



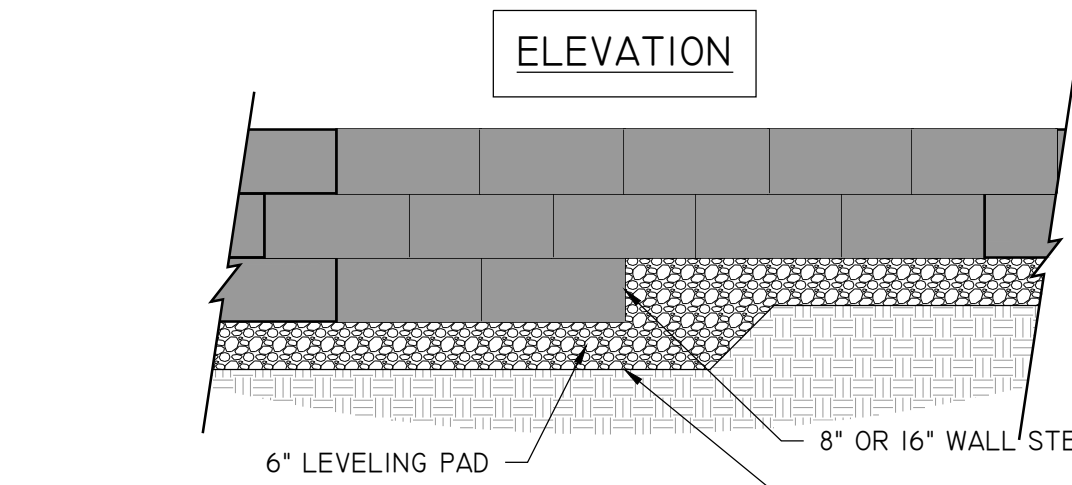
6 SYNTHETIC TURF CXN TO THICKENED CONC SLAB
1 1/2" = 1'-0"



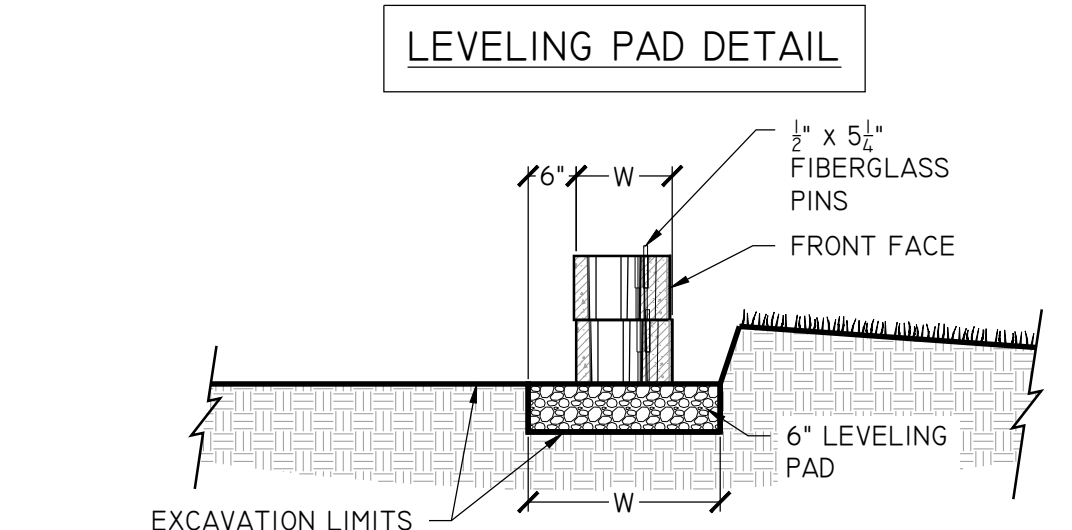
- NOTE:**
- SEGMENTAL BLOCK RETAINING WALL SHALL BE KEYSTONE COMPAC III (NEAR VERTICAL SETBACK), BY YORK BUILDING PRODUCTS, OR APPROVED EQUAL. ADDRESS: 4126 BUCKEYSTOWN PIKE, FREDERICK, MD 21704. WEBSITE: WWW.YORKBUILDING.COM
 - WRAP DRAINAGE TILE IN 2" AGGREGATE AND FILTER FABRIC WITH DRAINAGE COMPOSITE OR AGGREGATE BACK DRAIN SYSTEM, AS DIRECTED BY WALL SHOP DRAWINGS.
 - INSTALL SLEEVE-IT (OR APPROVED EQUAL) PER MANUFACTURER'S SPECS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS & SUBMITTALS, SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN VIRGINIA, TO ARLINGTON COUNTY PROJECT OFFICER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. SUBMITTAL SHALL INCLUDE ALL REQUIRED COUNTY PERMITS FOR RETAINING WALLS.
 - CONTRACTOR SHALL APPLY AN ANTI-GRAFFITI (GRAFFITI-RESISTANT) COATING TO ALL WALL SURFACES EXPOSED TO THE PUBLIC VIEW. CLEAN ALL WALL SURFACES PRIOR TO APPLYING THE COATING. SEE SPECIFICATIONS AND MANUFACTURER'S WRITTEN DIRECTIONS FOR ADDITIONAL REQUIREMENTS.



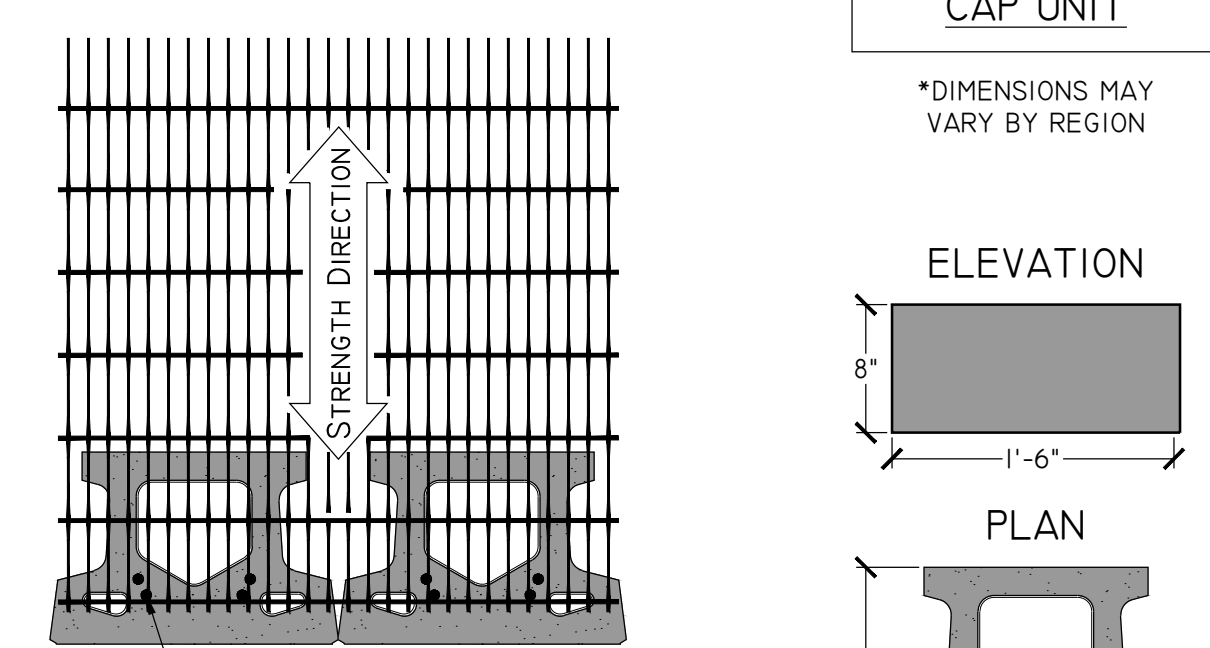
NOTE: SECURE ALL CAP UNIT WITH KEYSTONE KAPSEAL OR APPROVED EQUAL



NOTE: THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2000 PSI UNREINFORCED CONCRETE.

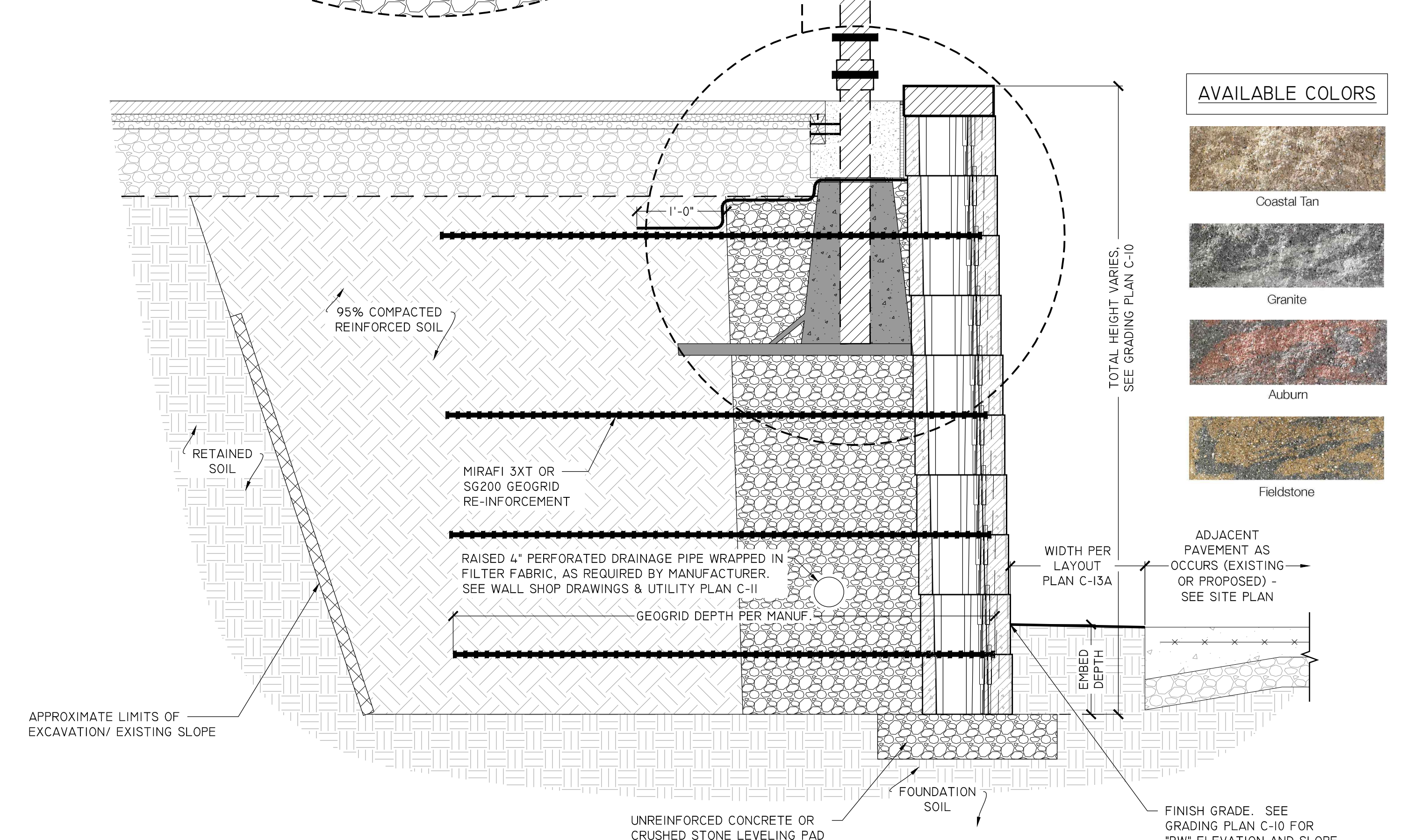
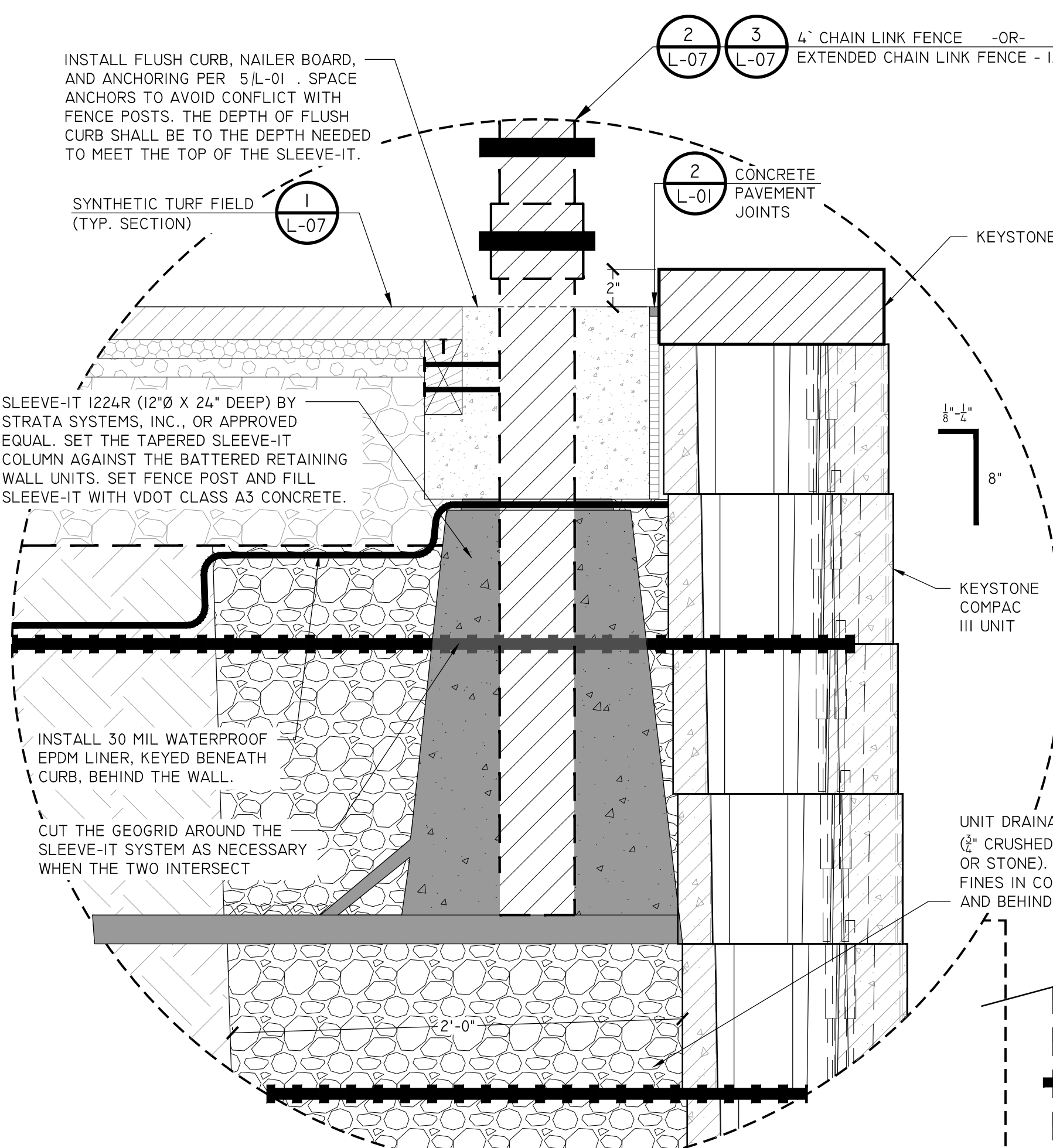


2 STEPPING DETAILS (TOP WALL & LEVELING PAD)
1/2" = 1'-0" 3232-02

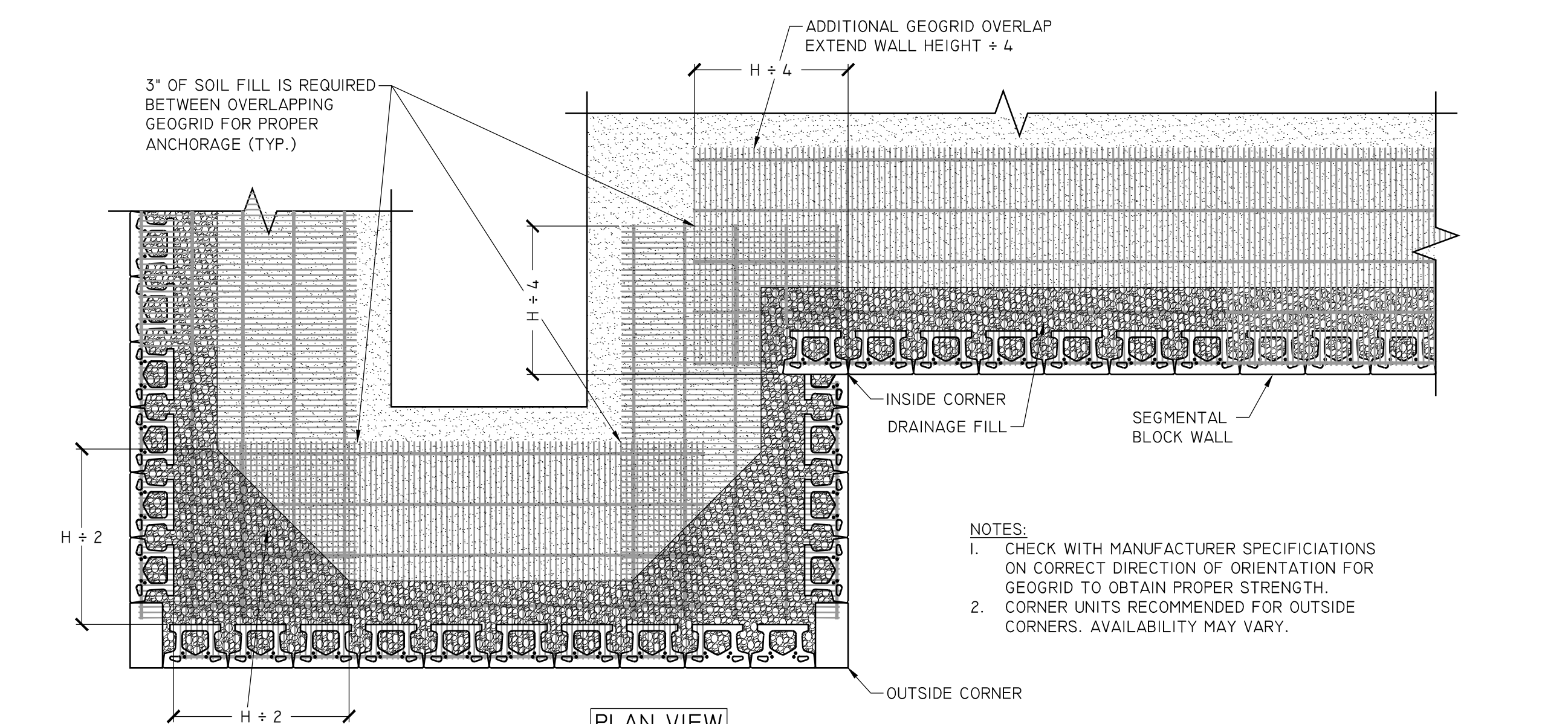


GEOGRID IS TO BE PLACED ON LEVEL BACKFILL AND EXTENDED OVER THE FIBERGLASS PINS. PLACE NEXT UNIT. PULL GRID TAUGHT AND BACKFILL. STAKE AS REQUIRED.

3 GEOGRID INSTALLATION & BLOCK SIZING
1" = 1'-0" 3232-03



1 NEAR VERTICAL REINFORCED SEGMENTAL BLOCK RETAINING WALL TYP. SECTION
1" = 1'-0" 3232-01



4 GEOGRID INSTALLATION AT INSIDE/ OUTSIDE CORNERS
5/8" = 1'-0" 3232-07

22-DPR-ITB-24

Project Name and Location

**Thomas
Jefferson Park
Upper Field
Conversion**

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**SITE DETAILS -
WALLS**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

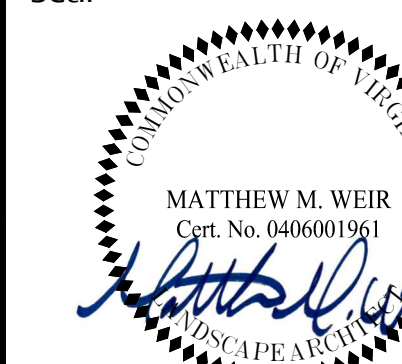
Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: L-03b-150396028 Site Details
Plotted: May, 24, 21

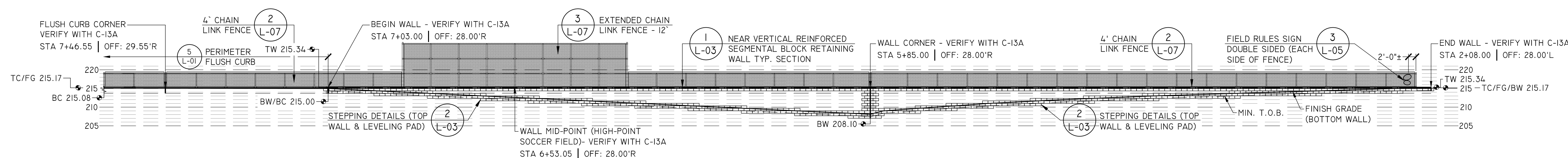
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Date: Apr. 16, 21

Seal



Sheet

L-03B
SHEET 33 OF 42



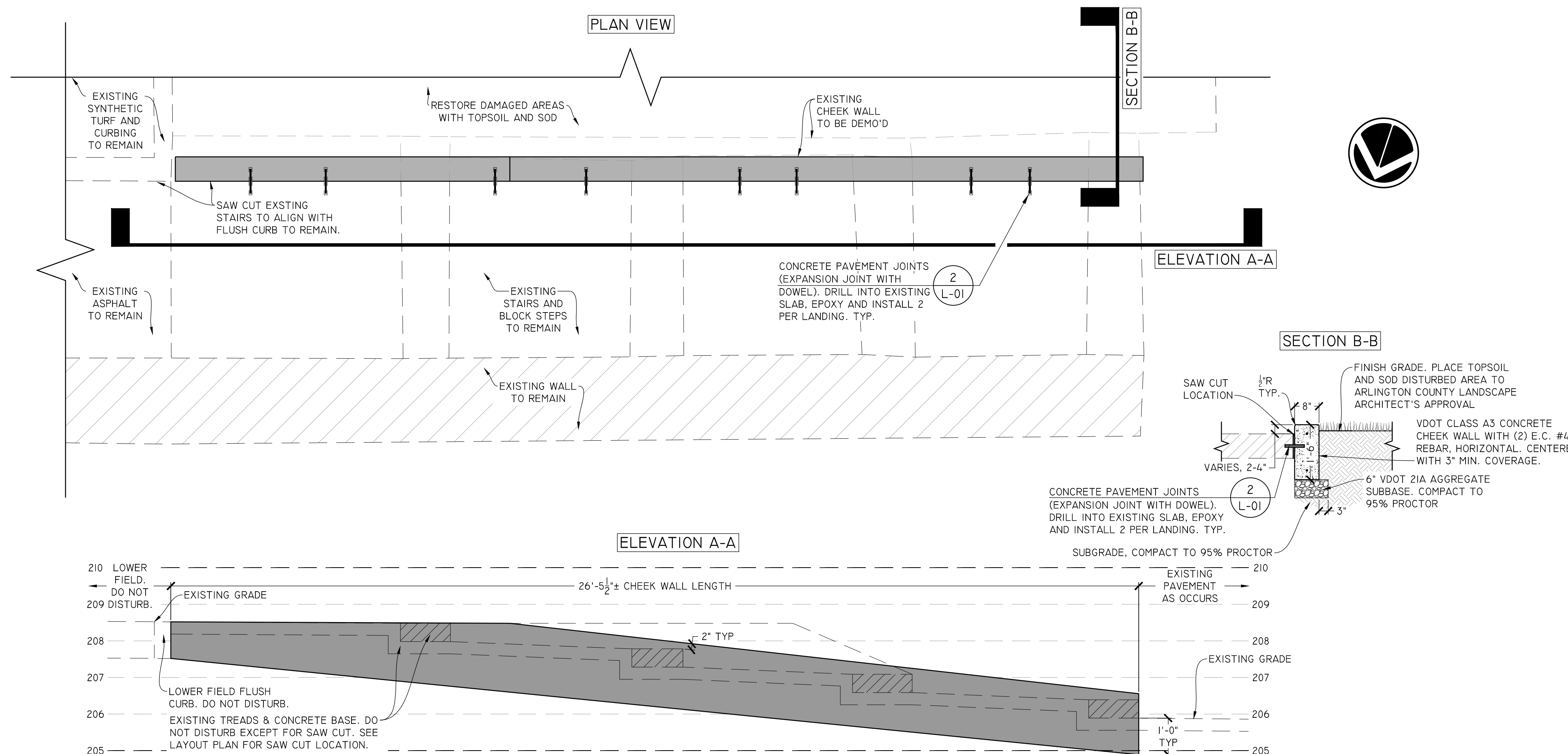
NOTES:

- DIMENSIONS ARE IMPERIAL (I-H-IV).
- LAYOUT IS FOR PRELIMINARY DESIGN ONLY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, SIGNED AND SEALED BY A VIRGINIA LICENSED PROFESSIONAL STRUCTURAL ENGINEER, DURING CONSTRUCTION FOR APPROVAL BY ARLINGTON COUNTY PROJECT OFFICER.
- THIS "UNWRAPPED" ELEVATION REPRESENTS A VIEW FROM THE OUTSIDE OF THE RETAINING WALL LOOKING TOWARDS THE UPPER SOCCER FIELD. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS.

1 WALL IA (L- SHAPED WALL) ELEVATION

1/16" = 1'-0"

3232-04



2 CHEEK WALL

1/2" = 1'-0"

A-W-51

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**SITE DETAILS -
WALLS**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

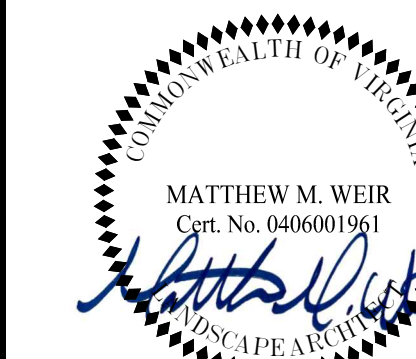
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Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: L-04-150396028 Site Details - Walls.dwg

Plotted: May, 24, 21

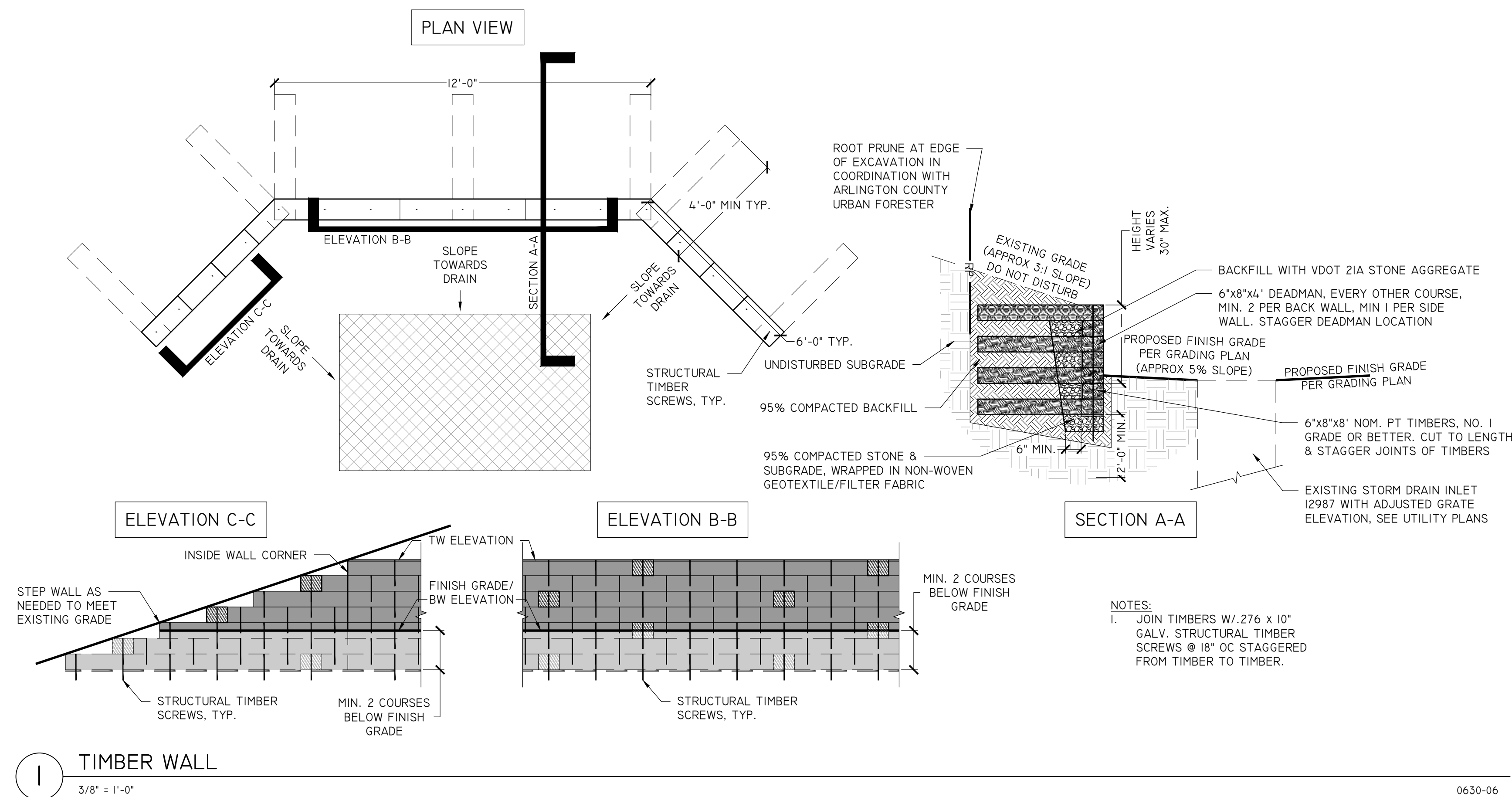
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Date: May, 24, 21

Seal



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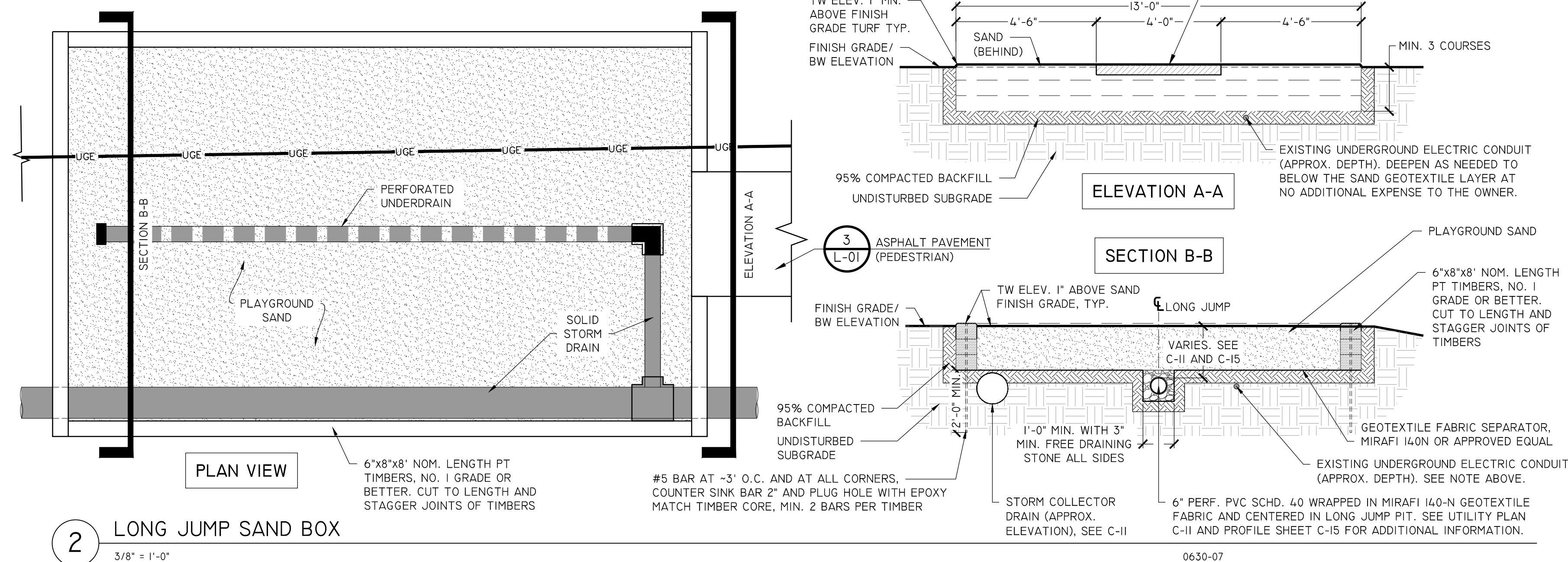
L-04
SHEET 34 OF 42



1 **TIMBER WALL**
3/8" = 1'-0"

0630-06

NOTE: PRIOR TO THE END OF THE WARRANTY PERIOD, THE GENERAL CONTRACTOR SHALL PAINT ALL EXPOSED FACES OF TIMBER WALL WITH TWO COATS OF EXTERIOR GRADE BLACK PAINT. PAINT TIMBER FACES MINIMUM 3" BELOW FINISH GRADE. THIS SHALL OCCUR APPROXIMATELY ONE YEAR FINAL ACCEPTANCE BUT WITHIN THE WARRANTY PERIOD.



2 **LONG JUMP SAND BOX**
3/8" = 1'-0"

0630-07

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
SITE DETAILS - FURNISHINGS

100% Construction Drawings (for Bid)

Approval Date

Design Manager

Revisions Date

Designed: AMT

Drawn: AMT

Checked: SDT, JKS, MMW, CMB

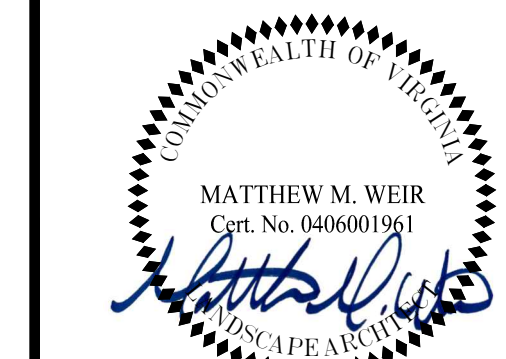
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Plotted: May 24, 21

Scale: AS SHOWN

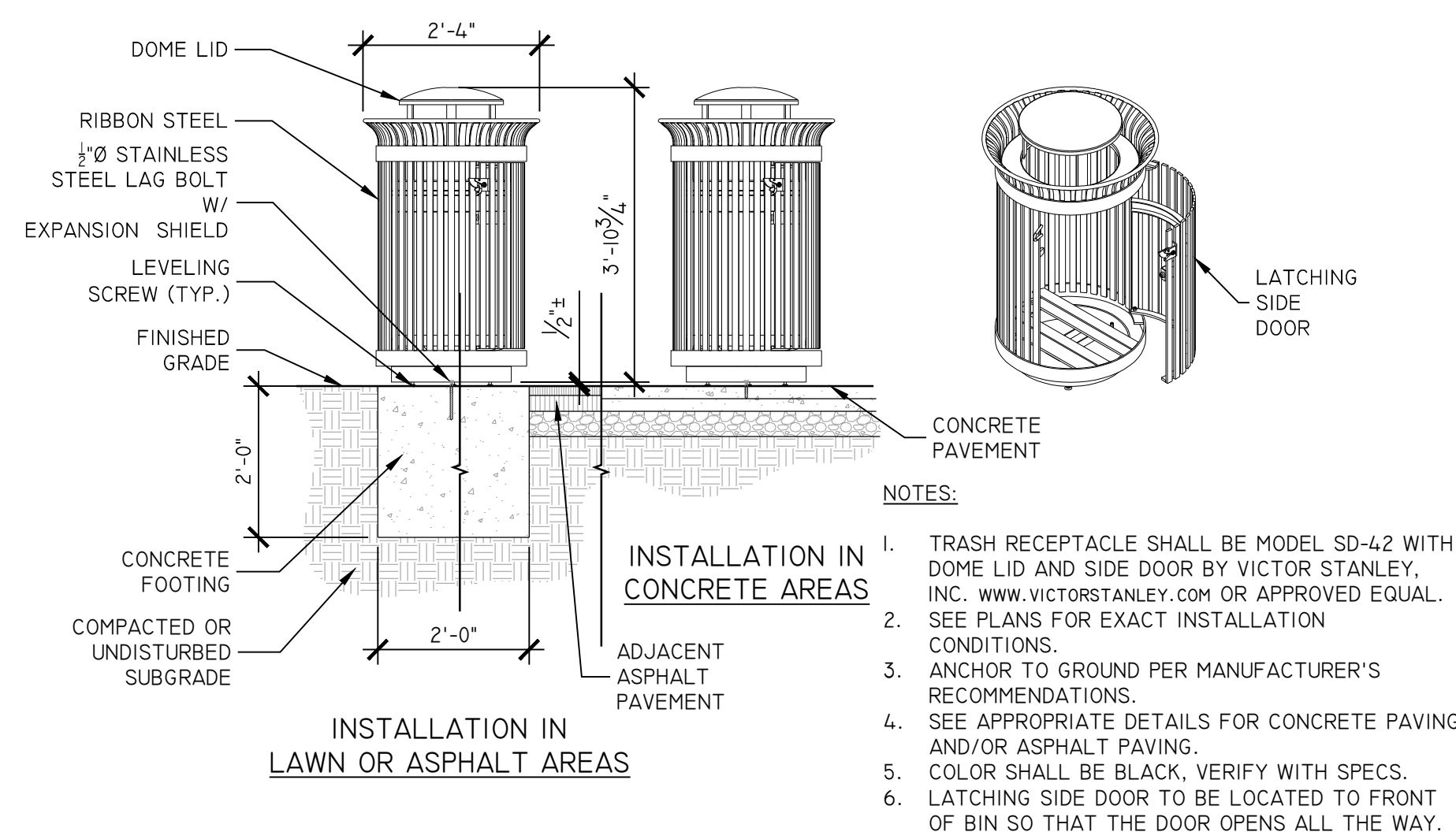
Date: Apr. 16, 21

Seal

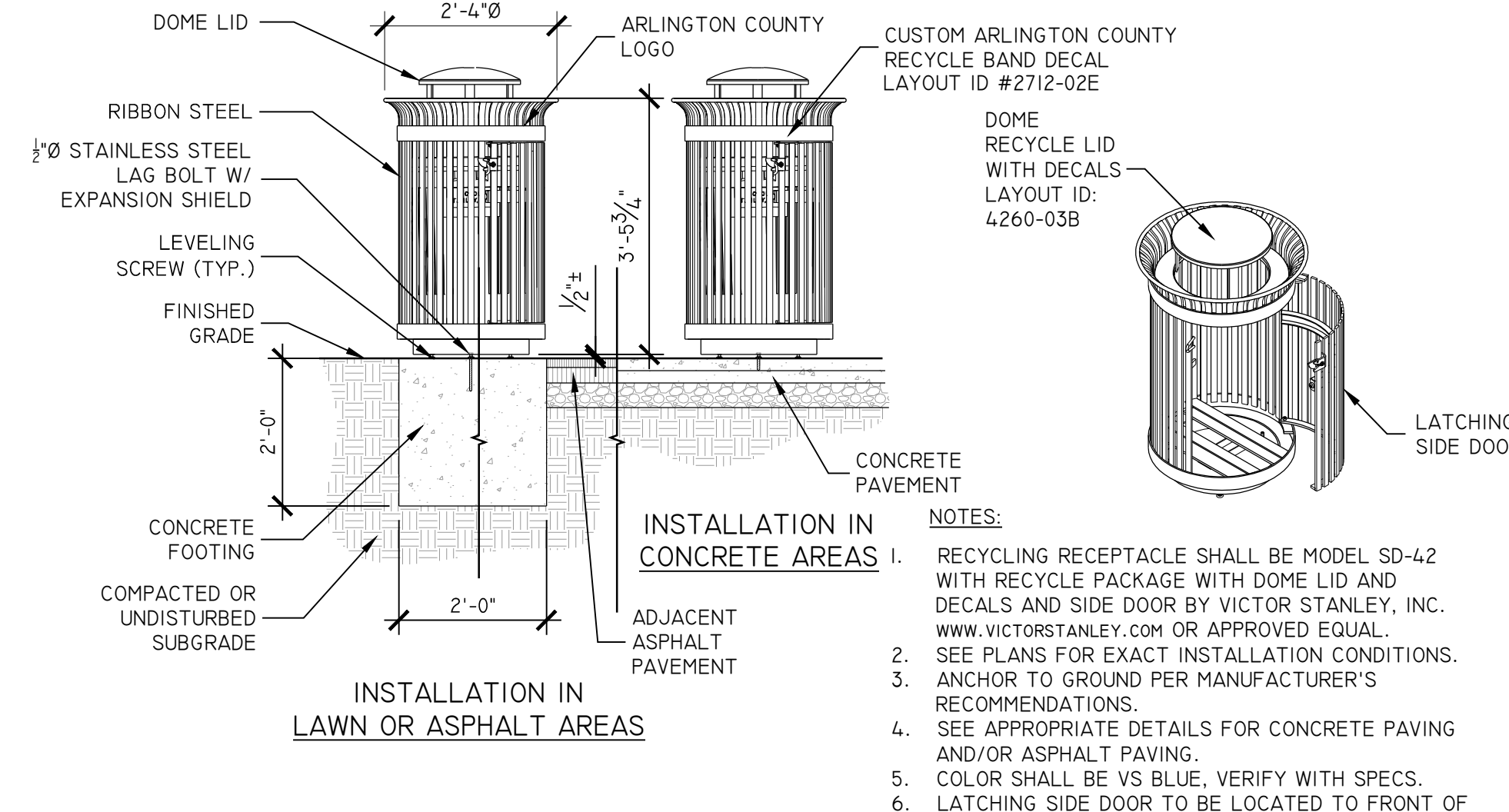


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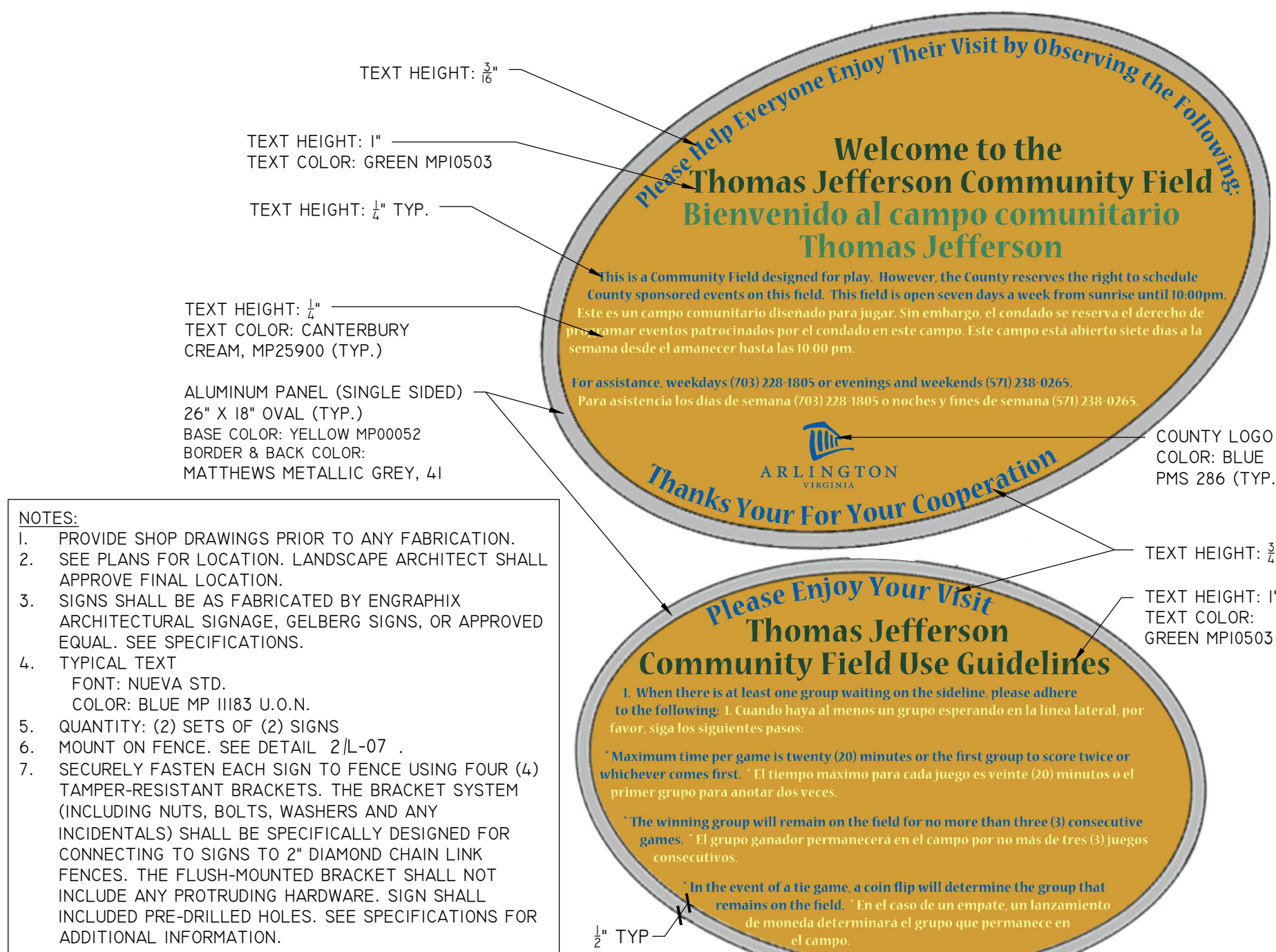
L-05
SHEET 35 OF 42



1 TRASH RECEPTACLE
I29300.5 (2018)
1/2" = 1'-0"

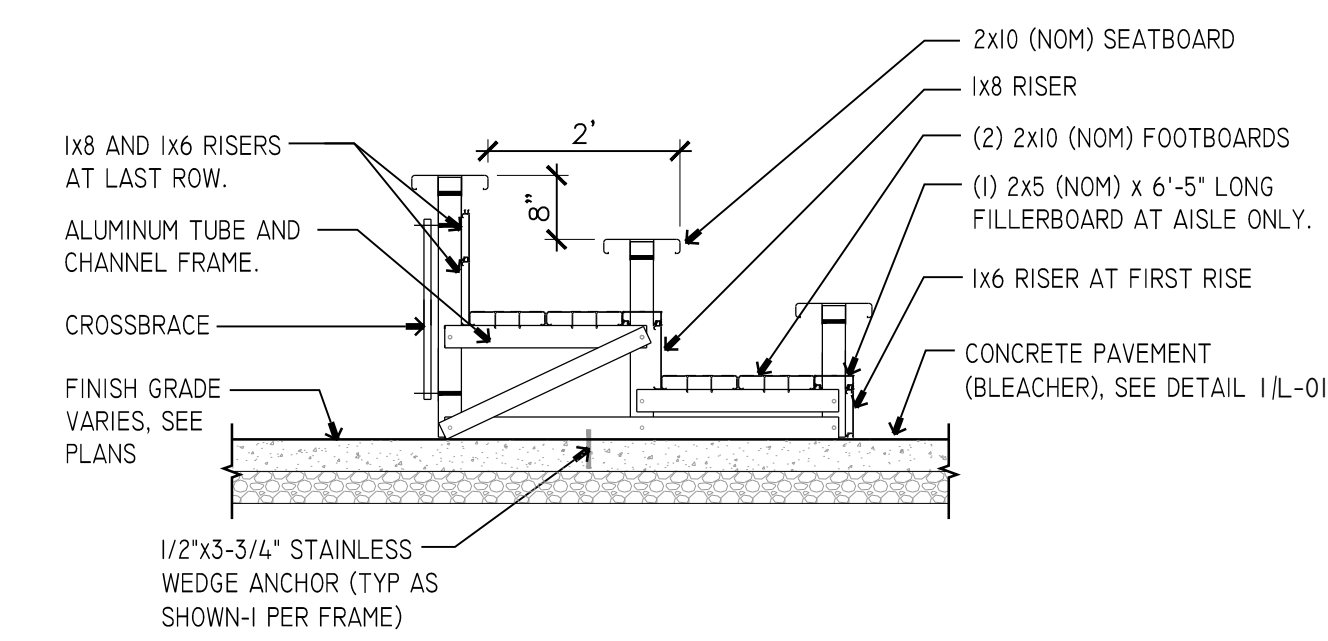


2 RECYCLING RECEPTACLE
I29300.6 (2018)
1/2" = 1'-0"

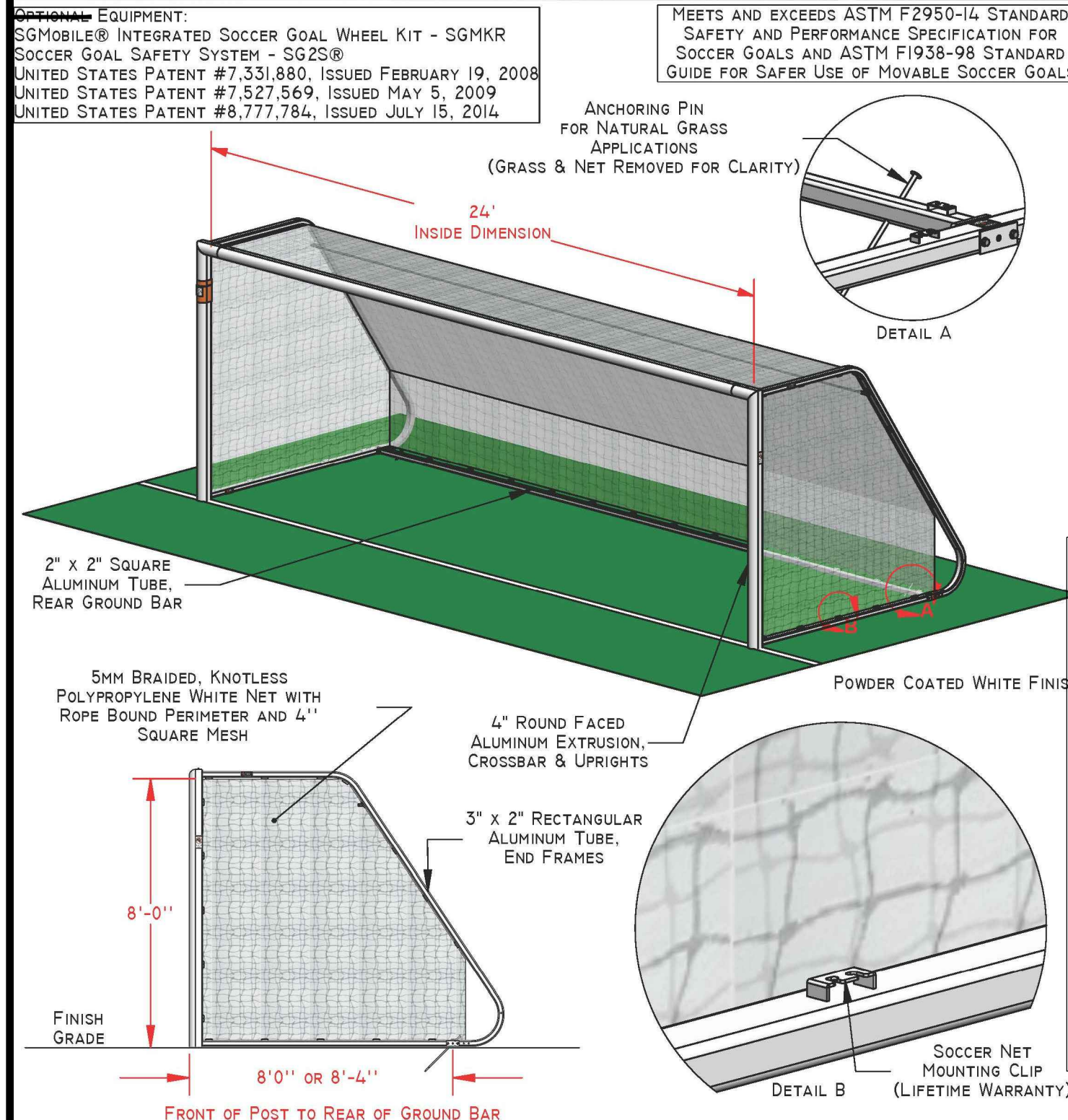


3 FIELD RULES SIGN
I' = 1'-0"
A-SG-17

- NOTES:**
1. ALUMINUM BLEACHERS SHALL BE BY DANT CLAYTON CORPORATION, OR APPROVED EQUAL. 1500 BERNHEIM LANE, LOUISVILLE, KY 40210. TELEPHONE: 502-634-3626 WWW.DANTCLAYTON.COM
 2. SUBMIT SHOP DRAWINGS/SUBMITTAL TO ARLINGTON COUNTY PROJECT OFFICER FOR REVIEW AND APPROVAL.
 3. PROVIDE PHYSICAL COLOR SAMPLES TO DPR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.
 4. SEE SPECTATOR SEATING SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
 5. NO GUARDRAILS.
 6. ROWS: 3
 7. RISE 8", RUN 24"
 8. LENGTH: 21'
 9. FOOTBOARDS SHALL BE SLIP AND STAIN RESISTANT.
 10. SEATING CAPACITY: APPROXIMATELY 42
 11. PROVIDE 5'x5' CLEAR SPACE ON EITHER SIDE OF BLEACHERS FOR ADA-ACCESSIBLE WHEELCHAIR SPACE.
 12. PROPOSED BLEACHERS AT UPPER FIELD SHALL MATCH EXISTING BLEACHERS AT LOWER FIELD.
 13. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



4 THREE ROW METAL SEATING
1/2" = 1'-0"
A-AT-28



- NOTES:**
- PRODUCT: REGULATION SIZE SOCCER GOAL (8'x24'), MODEL SG824R (SG4950), ROUND-FACED SOCCER GOAL, BY SPORTSFIELD SPECIALTIES OR APPROVED EQUAL. 41155 STATE HIGHWAY 10 PO BOX 231, DELHI, NY 13753
 - SOCCER GOALS ARE SOLD INDIVIDUALLY.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE ONE (1) SG2S SOCCER GOAL SAFETY SYSTEM (LOCKDOWN), ONE (1) SGMKR MOBILITY SYSTEM & ONE (1) NET (BY SAME MANUFACTURER) FOR EACH SOCCER GOAL.

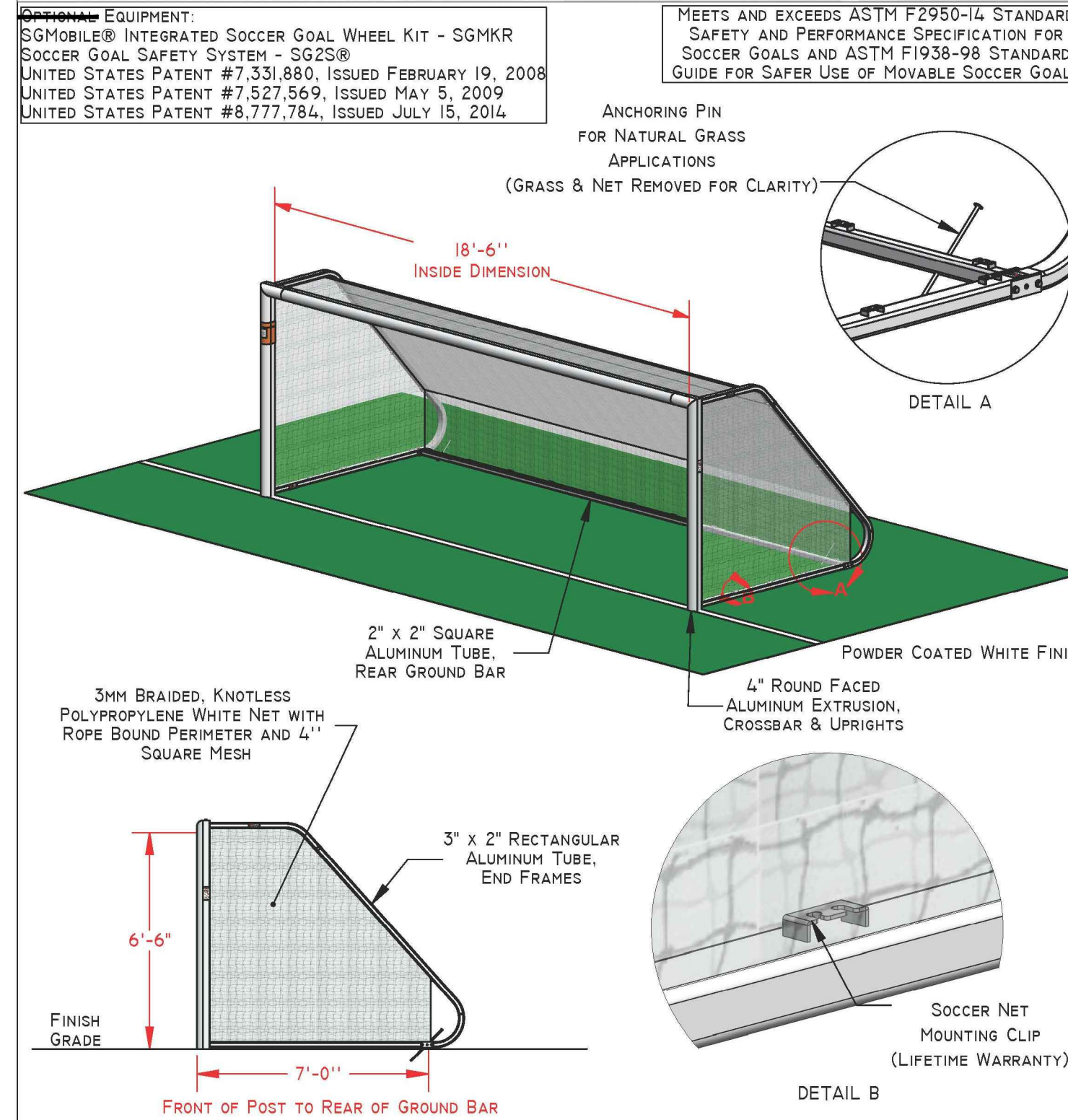
SG824R (SG4950) 8' x 24' REGULATION SIZE ROUND FACED SOCCER GOAL

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

NOT TO SCALE SPORTSFIELD SPECIALTIES INC 08202018

1 24' x 8' FULL-SIZE (REGULATION) SOCCER GOAL (LOCKDOWN)

A-AT-24



- NOTES:**
- PRODUCT: YOUTH-SIZE SOCCER GOAL (6'-6" x 18'-6"), MODEL SG618R, ROUND-FACED SOCCER GOAL, BY SPORTSFIELD SPECIALTIES OR APPROVED EQUAL. 41155 STATE HIGHWAY 10 PO BOX 231, DELHI, NY 13753
 - SOCCER GOALS ARE SOLD INDIVIDUALLY.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE ONE (1) SG2S SOCCER GOAL SAFETY SYSTEM (LOCKDOWN), ONE (1) SGMKR MOBILITY SYSTEM & ONE (1) NET (BY SAME MANUFACTURER) FOR EACH SOCCER GOAL.

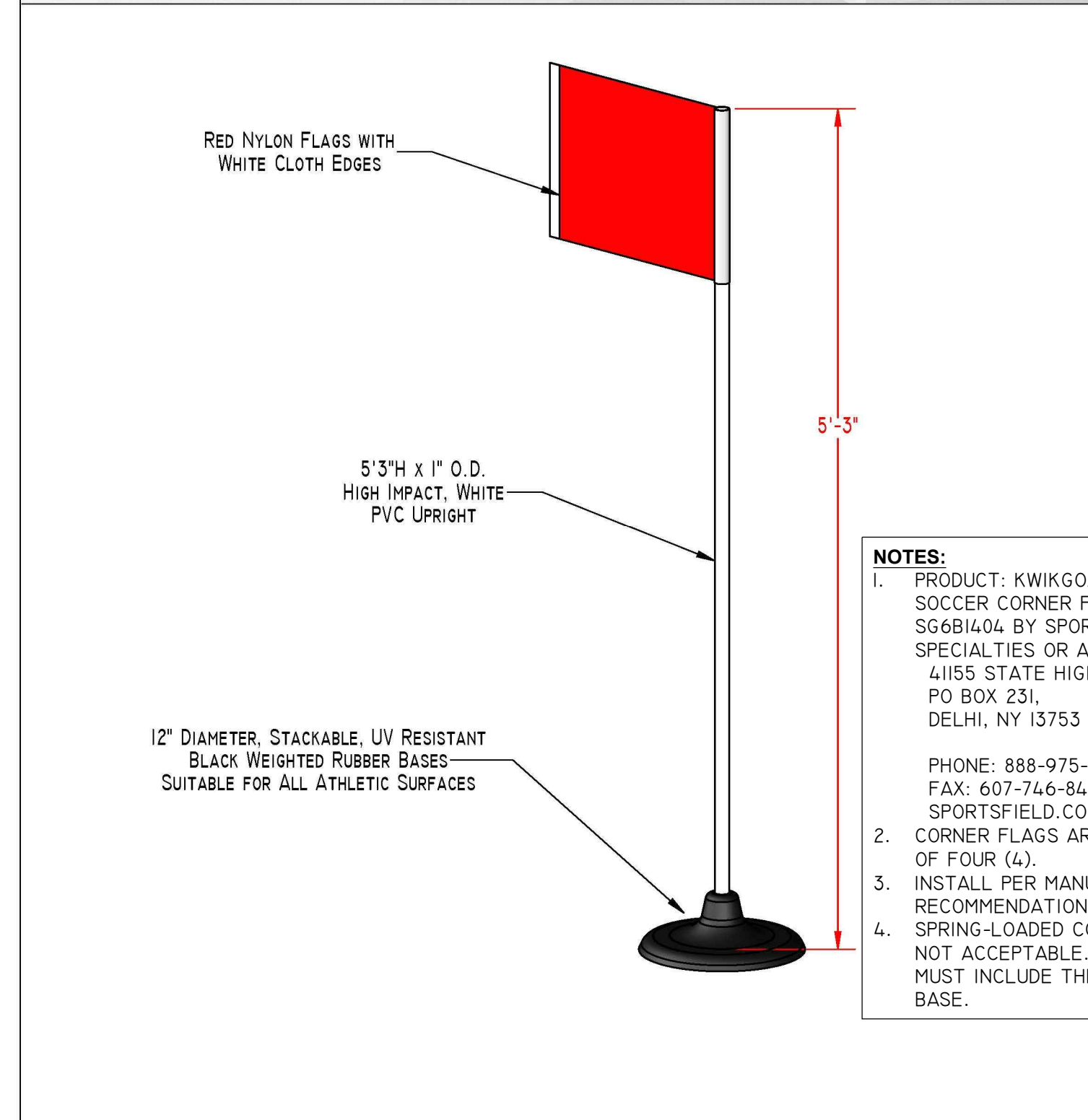
SG618R 6'6" x 18'6" YOUTH SIZE ROUND FACED SOCCER GOAL

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

NOT TO SCALE SPORTSFIELD SPECIALTIES INC 08202018

2 18' x 6' YOUTH SOCCER GOAL (LOCKDOWN)

A-AT-25



- NOTES:**
- PRODUCT: KWIKGOAL PREMIER SOCCER CORNER FLAGS, MODEL SG6B1404, BY SPORTSFIELD SPECIALTIES OR APPROVED EQUAL. 41155 STATE HIGHWAY 10 PO BOX 231, DELHI, NY 13753
 - CORNER FLAGS ARE SOLD IN SETS OF FOUR (4).
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 - SPRING-LOADED CORNER FLAGS ARE NOT ACCEPTABLE. CORNER FLAGS MUST INCLUDE THE WEIGHTED BASE.

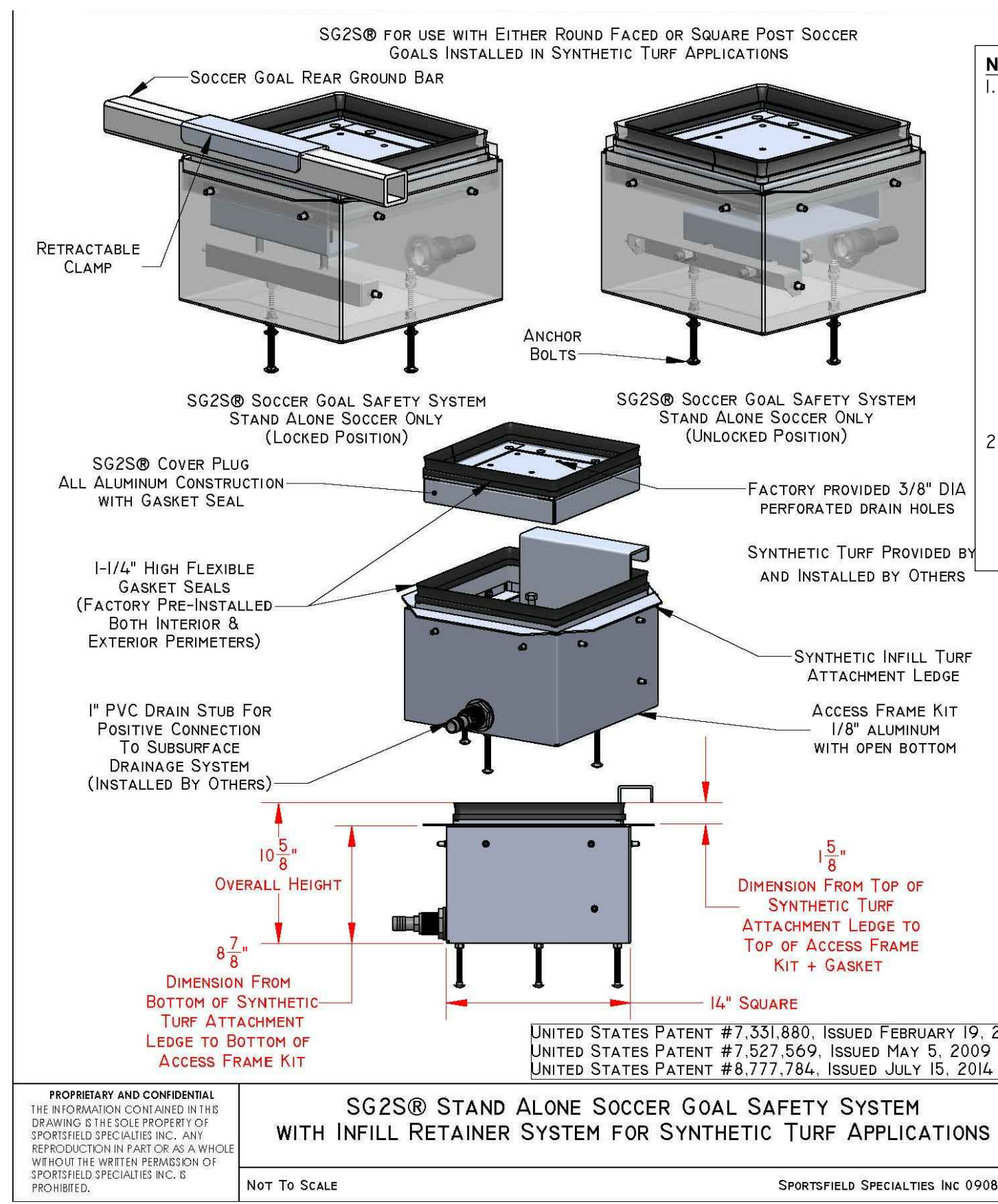
SG6B1404 - SET OF FOUR (4) KWIKGOAL® PREMIER SOCCER CORNER FLAGS

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

NOT TO SCALE SPORTSFIELD SPECIALTIES INC 02122016

3 SOCCER GOAL CORNER FLAGS

A-AT-23



- NOTES:**
- PRODUCT: STAND ALONE SOCCER GOAL SAFETY SYSTEM WITH INFILL RETAINER FOR SYNTHETIC TURF APPLICATIONS (LOCKDOWN), MODEL SG2S BY SPORTSFIELD SPECIALTIES OR APPROVED EQUAL. 41155 STATE HIGHWAY 10 PO BOX 231, DELHI, NY 13753
 - CONTRACTOR SHALL COORDINATE DRAINAGE STUB WITH UTILITY PLANS & SYNTHETIC TURF SUBGRADE AND DRAINAGE SYSTEM.

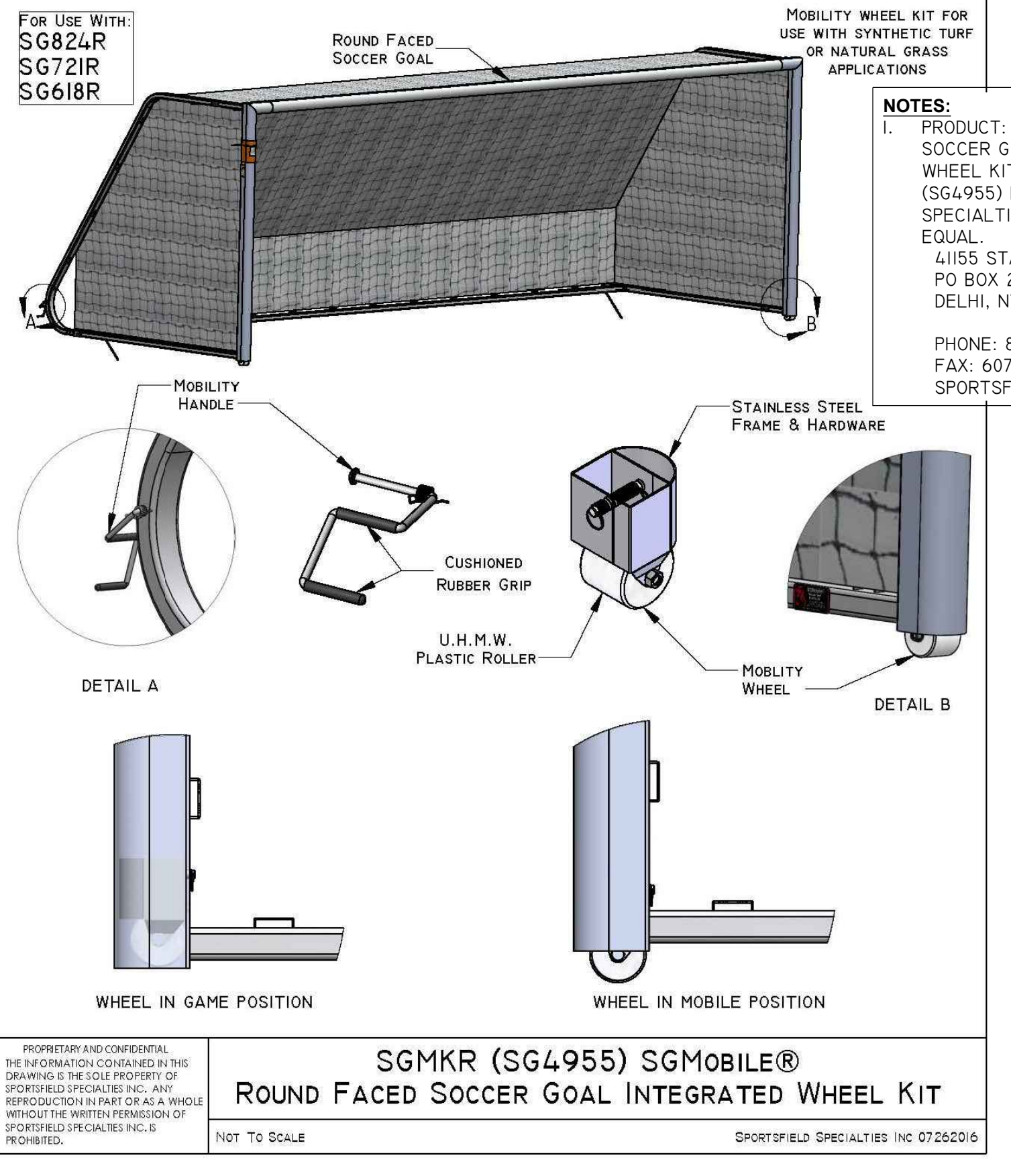
SG2S® STAND ALONE SOCCER GOAL SAFETY SYSTEM WITH INFILL RETAINER SYSTEM FOR SYNTHETIC TURF APPLICATIONS

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

NOT TO SCALE SPORTSFIELD SPECIALTIES INC 09082017

4 STAND ALONE SOCCER GOAL SAFETY SYSTEM (LOCKDOWN)

A-AT-31



- NOTES:**
- PRODUCT: ROUND FACED SOCCER GOAL INTEGRATED WHEEL KIT, MODEL SGMKR (SG4955) BY SPORTSFIELD SPECIALTIES OR APPROVED EQUAL. 41155 STATE HIGHWAY 10 PO BOX 231, DELHI, NY 13753

SGMKR (SG4955) SGMobile® ROUND FACED SOCCER GOAL INTEGRATED WHEEL KIT

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

NOT TO SCALE SPORTSFIELD SPECIALTIES INC 07262016

6 INTEGRATED MOBILITY WHEEL KIT FOR SOCCER GOAL

A-AT-29

22-DPR-ITB-24

Project Name and Location
Thomas Jefferson Park Upper Field Conversion
 (By Right)

3501 2nd Street South
 Arlington, VA 22204

Sheet Title
SITE DETAILS - ATHLETICS

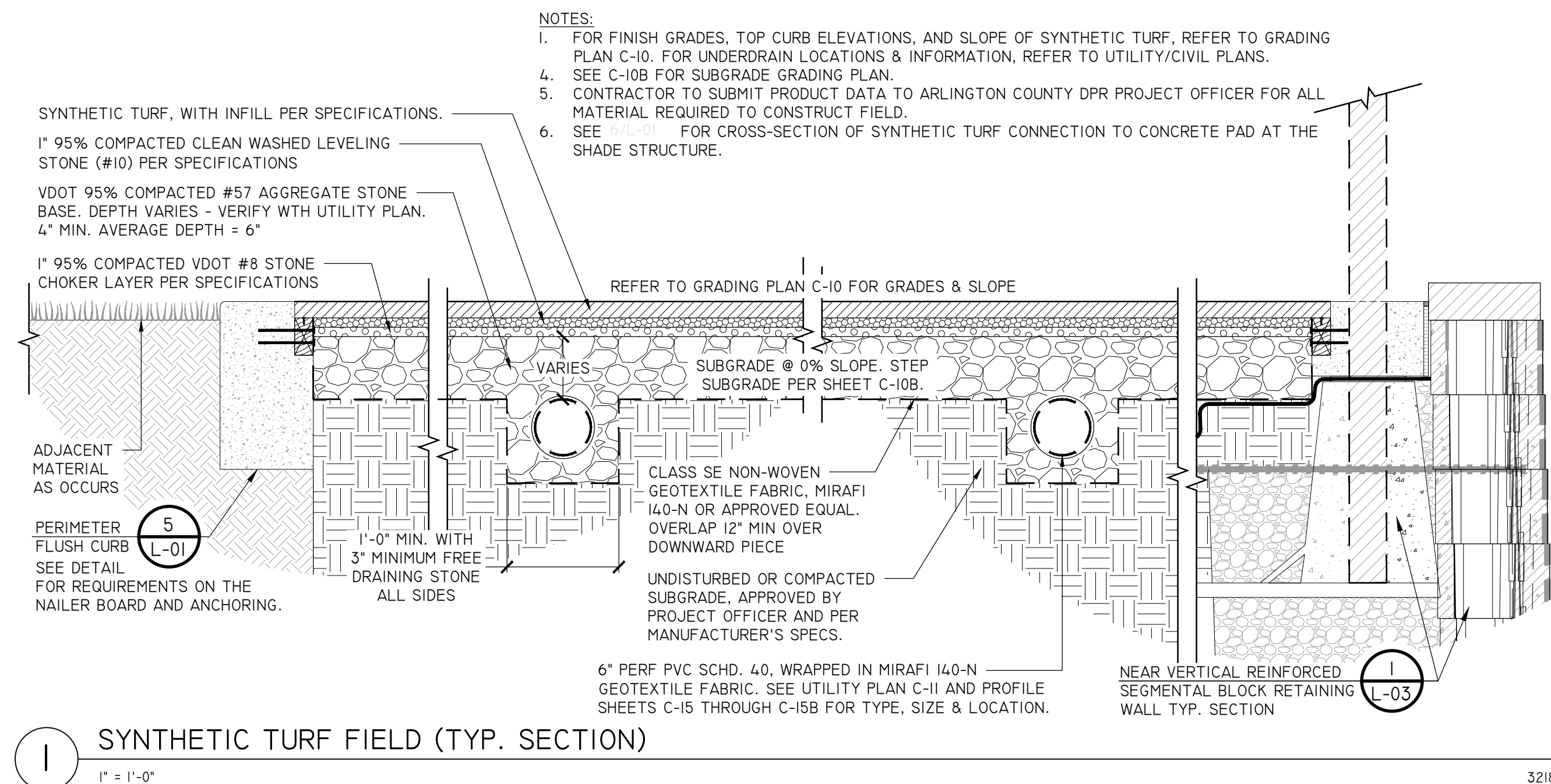
100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

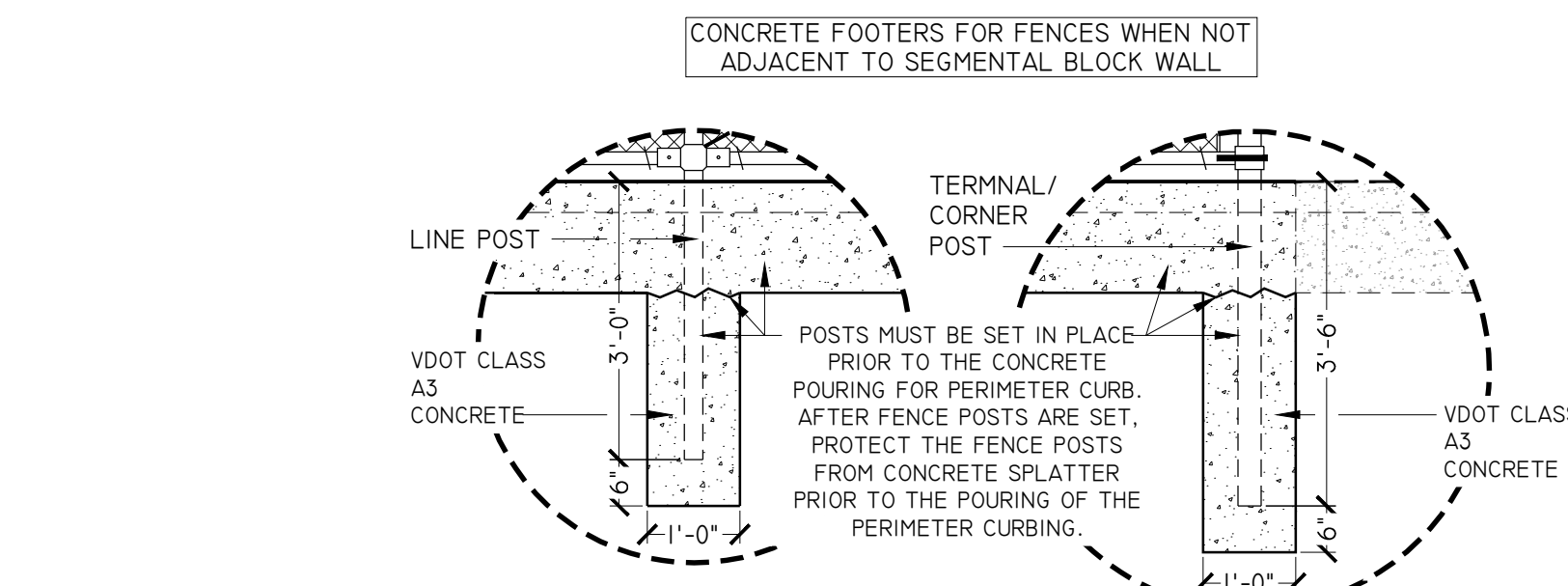
Designed: AMT
 Drawn: AMT
 Checked: SDT, JKS, MMW, CMB
 Filename: L-06-150396028 Site Details - Athletics.dwg
 Plotted: May 24, 21
 Scale: AS SHOWN
 Date: Apr. 16, 21



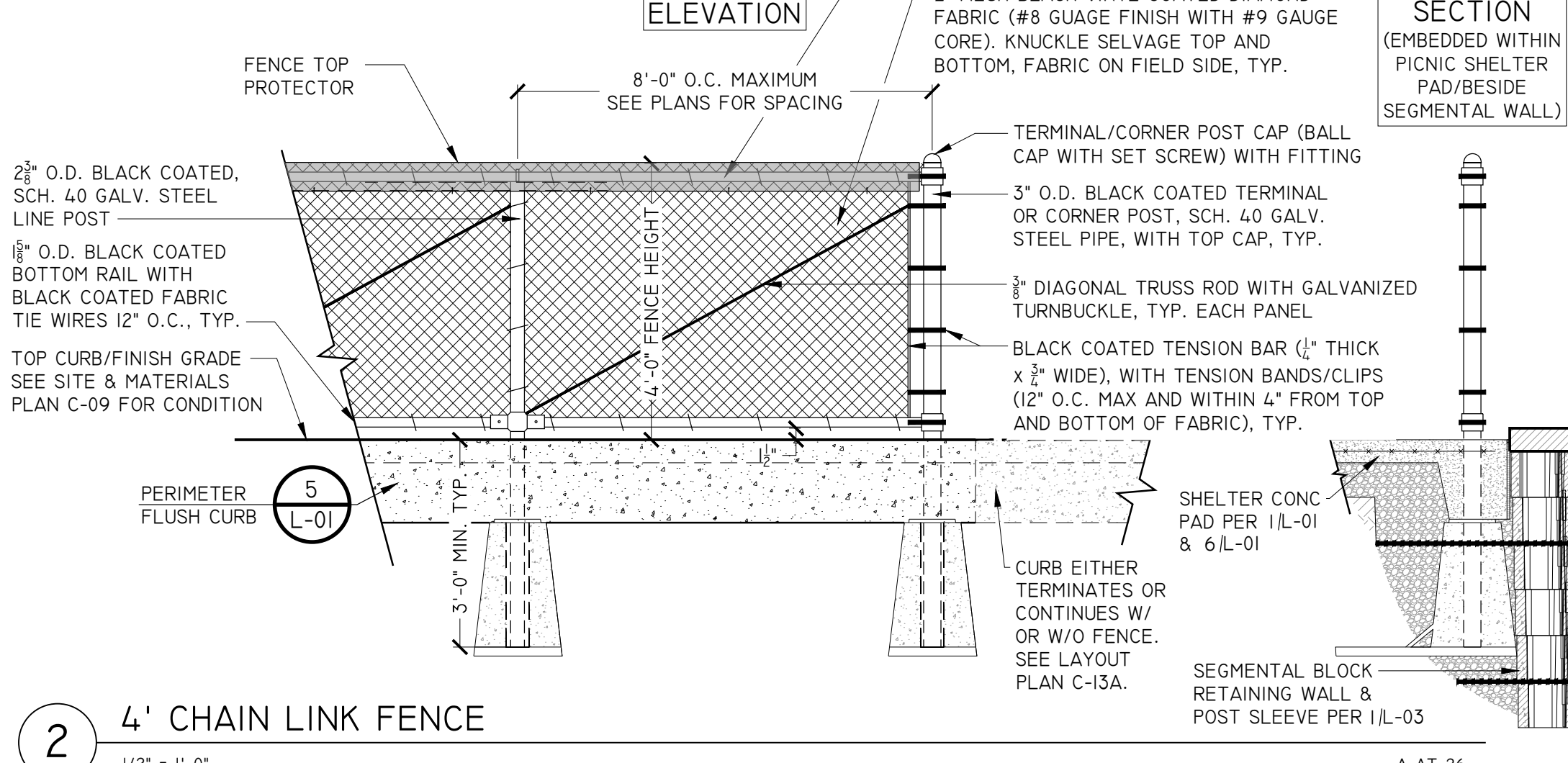
DETAIL NOT USED



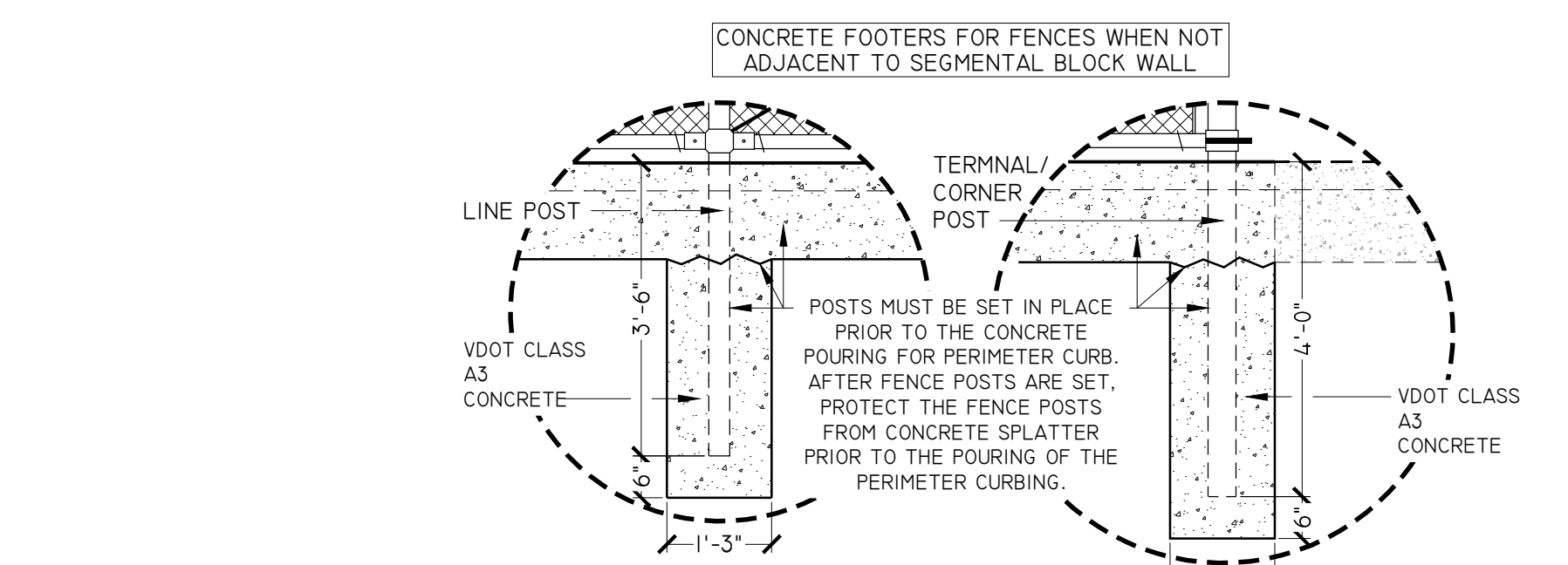
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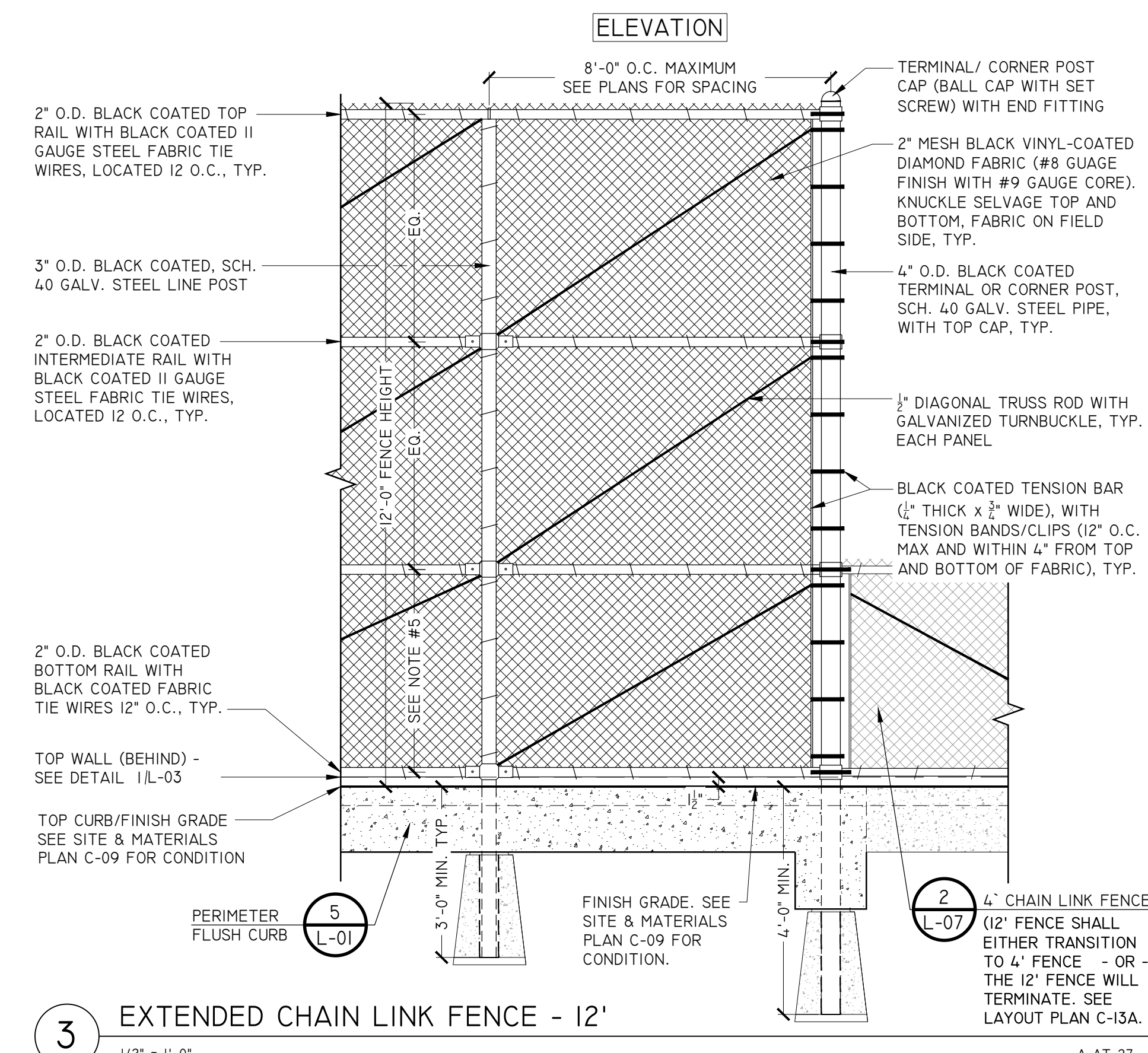
- NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING PLANS, SECTIONS, & ELEVATIONS) FOR REVIEW AND APPROVAL.
2. ALL FENCE COMPONENTS, MATERIALS AND HARDWARE (INCLUDING BUT NOT LIMITED TO FABRIC, POSTS, TIE WIRES, FITTINGS, TENSION BARS, ETC.) SHALL BE VINYL-COATED GALVANIZED STEEL. COLOR = BLACK.
3. FENCE FABRIC SHALL BE SECURED WITH KNUCKLED SELVAGE ALONG EDGES.
4. DO NOT PROVIDE INTERMEDIATE RAILING ON 4' FENCE.
5. SEE DETAIL 1/L-03 FOR A CROSS-SECTION OF THIS FENCE WHEN ADJACENT TO SEGMENTAL BLOCK RETAINING WALL.
6. FENCE TOP PROTECTOR SHALL BE SAFETY TOP CAP BY PEXCO OR APPROVED EQUAL.
-VANDAL RESISTANT WITH STEEL RINGS AND PRE-DRILLED HOLES TO SECURE TO THE FENCE
-HEAVY WEIGHT, DURABLE, FLEXIBLE PLASTIC IN "P" SHADE PROFILE
-HDPE PLASTIC WITH UV STABILIZERS
-COLOR: YELLOW. ARLINGTON COUNTY SHALL APPROVE COLOR



A-AT-26



- NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING PLANS, SECTIONS, & ELEVATIONS) FOR REVIEW AND APPROVAL.
2. ALL FENCE COMPONENTS, MATERIALS AND HARDWARE (INCLUDING BUT NOT LIMITED TO FABRIC, POSTS, TIE WIRES, FITTINGS, TENSION BARS, ETC.) SHALL BE VINYL-COATED GALVANIZED STEEL. COLOR = BLACK.
3. FENCE FABRIC SHALL BE SECURED WITH KNUCKLED SELVAGE ALONG EDGES.
4. SEE DETAIL 1/L-03 FOR A CROSS-SECTION OF THIS FENCE WHEN ADJACENT TO SEGMENTAL BLOCK RETAINING WALL.
5. HEIGHT OF LOWEST INTERMEDIATE RAIL SHALL MATCH HEIGHT OF THE TOP RAIL ON THE 4' FENCE.



A-AT-27

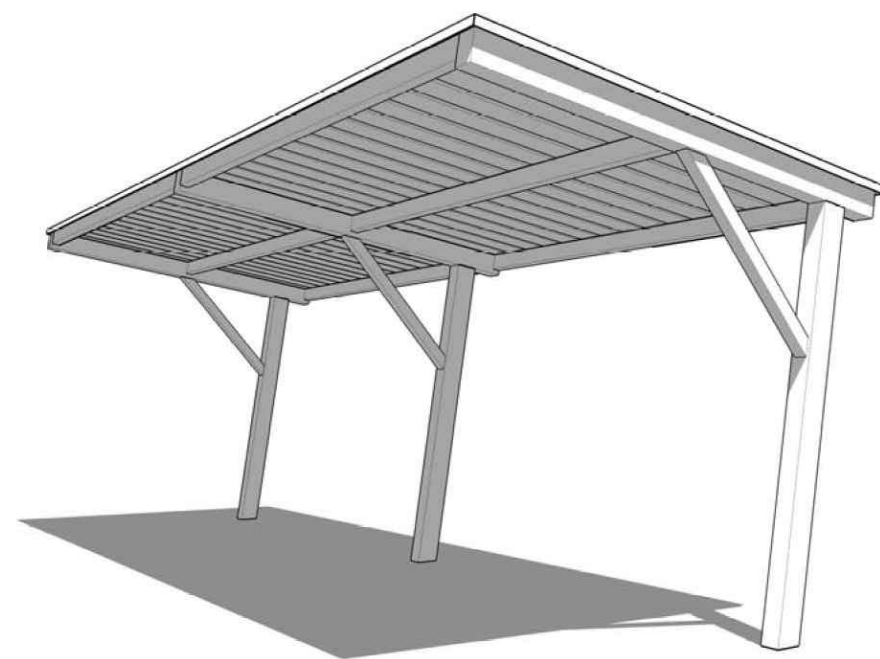


Installation Guide for:

Mono-slope Cantilever - 11'-6" x 32'-0"

Model # MC11.532

Arlington County
3501 South 2nd Street
Arlington, VA
Job # 3241-1



P.O. BOX 145, WEST OLIVE, MI 49460
(800) 552-9495 Toll Free
www.CEDARFORESTPRODUCTS.com



GENERAL:

- PROPER BRACING OF MEMBERS DURING INSTALLATION MUST BE PERFORMED UNTIL COMPLETE.
- ANY MODIFICATIONS TO THE PROPOSED SHELTER NEED TO HAVE PRIOR CONSENT FROM A LICENSED ENGINEER.
- THE INSTALLATION OF THE SHELTER SHALL BE PERFORMED BY SOMEONE OF EXPERIENCE AND COMPETENCE. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO PROPERLY ASSEMBLE THE SHELTER AS SHOWN IN THIS DOCUMENT AND TO CONSTRUCT SHELTER FOUNDATIONS AS SPECIFIED IN SUPPLEMENTAL ENGINEERING DOCUMENTS.
- READ AND UNDERSTAND INSTALLATION INSTRUCTIONS THOROUGHLY BEFORE PROCEEDING WITH THE INSTALLATION PROCESS.
- ALWAYS USE THE INSTALLATION INSTRUCTIONS THAT HAVE SHIPPED WITH THE SHELTER AS THESE ARE THE MOST CURRENT. POSSIBLE CHANGES IN MATERIAL QUANTITIES, LENGTHS, PART LABELS, ETC. MAY HAVE BEEN NECESSARY DURING FINAL SHOP DRAWINGS, EVEN AFTER SEALED ENGINEERING.
- SHOULD THERE BE ANY ERROR IN MANUFACTURING OR INSTALLATION, CEDAR FOREST PRODUCTS SHOULD BE NOTIFIED AS SOON AS POSSIBLE. ABSOLUTELY NO FIELD REPAIRS WILL BE HONORED WITHOUT PRIOR AUTHORIZATION OF PROCESS AND COST BY CEDAR FOREST PRODUCTS MANAGEMENT.

STEEL & HARDWARE SHOP NOTES:

- ALL STEEL IS TO BE ASTM A-36 EXCEPT STEEL TUBES.
- STEEL TUBES SHALL BE ASTM A-500 GRADE B.
- ALL WELDING IS TO BE DONE IN ACCORDANCE WITH THE LATEST AWS STANDARDS AND ALL WELDS ARE TO DEVELOP FULL STRENGTH OF COMPONENT PARTS. (E7081 ELECTRODES).
- ALL BOLTS TO BE ASTM A-325.
- ALL BOLTED CONNECTIONS SHOULD FOLLOW THE "TURN-OF-NUT PRETENSIONING" METHOD AS OUTLINED IN THE AISC SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO MAKE SURE ALL AISC REQUIREMENTS ARE MET.
- ALL STEEL FRAMEWORK WILL RECEIVE A CORROSION PROTECTIVE ZINC-RICH EPOXY PRIMER FOLLOWED BY A TGIC POLYESTER POWDER COAT, ELECTRO-STATICALLY APPLIED AND CURED AT 400°F.



CONTRACTOR SUPPLIED		
Item	Size	Quantity
FOUNDATION		
ANCHOR BOLT BRACING TEMPLATE	12" x 14"	3
A307 ANCHOR BOLT	3/4-10 x 18"	18
A307 FLAT WASHER	3/4"	18
A307 HEX NUT	3/4-10	36
FRAMING		
Item	Size	Quantity
COLUMN (C1)	8" x 6" x 3/16" x 10'-2 3/4"	3
RAFTER BEAM (RA1) L/R	8" x 6" x 3/16" x 11'-6"	2 (1 each)
RAFTER BEAM (RA2)	8" x 6" x 3/16" x 11'-6"	1
BRACE (B1)	4" x 4" x 3/16" x 9'-6"	3
PURLIN (P1)	6" x 3" x 1/8" x 15'-3"	6
A325 HEX BOLT	3/4-10 x 1 1/2"	24
A325 HEX BOLT	3/4-10 x 2"	12
A325 HEX BOLT	3/4-10 x 2 1/2"	12
FLAT WASHER	3/4"	48
ROOFING		
Item	Size	Quantity
ROOF PANEL	24 Ga. Multi-Rib x 11'-8"	11
EAVE TRIM	2 1/2" x 2 1/2" x 12'-0"	6
RAKE TRIM	2 1/2" x 2 1/2" x 12'-0"	2
1 1/4" TEK SCREW	12-24 x 1 1/4" TEK S	120
7/8" TEK SCREW	1/4-14 x 7/8" TEK 1	200
FINISHING		
Item	Size	Quantity
ACCESS COVER PLATE w/ (8) TEK 5 Screws	18" x 7" x 4 1/4"	3
TOUCH-UP PAINT	-	1

COLORS:

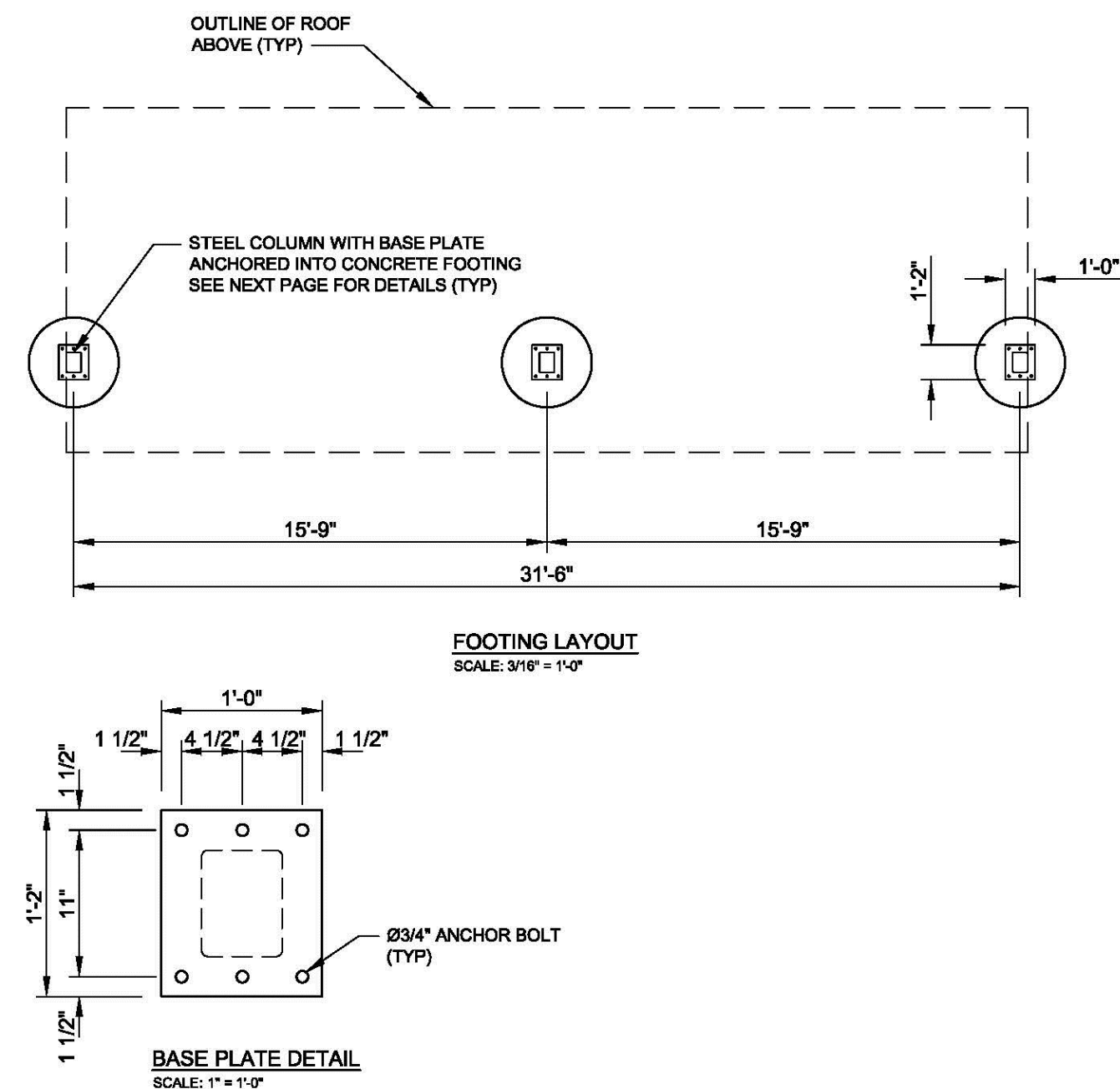
FRAME: RAL 6007 (BRILLIANT BLUE)
ROOF: CHARCOAL

- NOTES:**
- SHADE STRUCTURE SHALL BE BY CEDAR FOREST PRODUCTS INC., OR APPROVED EQUAL. STRUCTURE TYPE: MONO-SLOPE CANTILEVER. STRUCTURE DIMENSIONS: 11'-6" x 32'-0". STRUCTURE MODEL NUMBER: MC11.532.
 - CEDAR FOREST PRODUCTS CONTACT INFORMATION: ADDRESS: PO BOX 145, WEST OLIVE, MI 49460. PHONE: 800.552.9495. WEBSITE: HTTPS://CEDARFORESTPRODUCTS.COM/EMAIL: INFO@CEDARFORESTPRODUCTS.COM
 - THE SHADE STRUCTURE DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND FOR BIDDING PURPOSES ONLY. IT SHALL NOT BE USED FOR CONSTRUCTION.
 - ARLINGTON COUNTY DPR WILL PROVIDE BUILDING PERMIT FOR CEDAR FOREST PRODUCTS SHADE STRUCTURE. CONTRACTOR SHALL REFER TO AND COMPLY WITH DRAWINGS, CALCULATIONS AND REQUIREMENTS OF ARLINGTON COUNTY BUILDING PERMIT.
 - IF AN APPROVED EQUAL IS USED, IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO OBTAIN BUILDING PERMIT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA, FOR REVIEW AND APPROVAL BY PROJECT OFFICER AND LANDSCAPE ARCHITECT. THE SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO: CALCULATIONS, THE REINFORCED CONCRETE FOOTINGS, ANCHOR BOLTS CONNECTION, FASTENERS, STEEL BASE PLATE, STEEL COLUMNS, STEEL FRAMING, ROOFING, FINISHING, COLORS, AND ALL ASSOCIATED HARDWARE.
 - VERIFY ELEVATIONS WITH GRADING PLAN C-10.
 - VERIFY LAYOUT WITH LAYOUT PLAN C-13A.
 - GENERAL CONTRACTOR SHALL MATCH THE COLOR OF THE SHADE STRUCTURE WITH THE EXISTING SHADE STRUCTURES AT THE LOWER PLAYING FIELD. IF REQUESTED BY ARLINGTON COUNTY LANDSCAPE ARCHITECT, PROVIDE MANUFACTURER'S FULL RANGE OF COLORS FOR FINAL SELECTION.



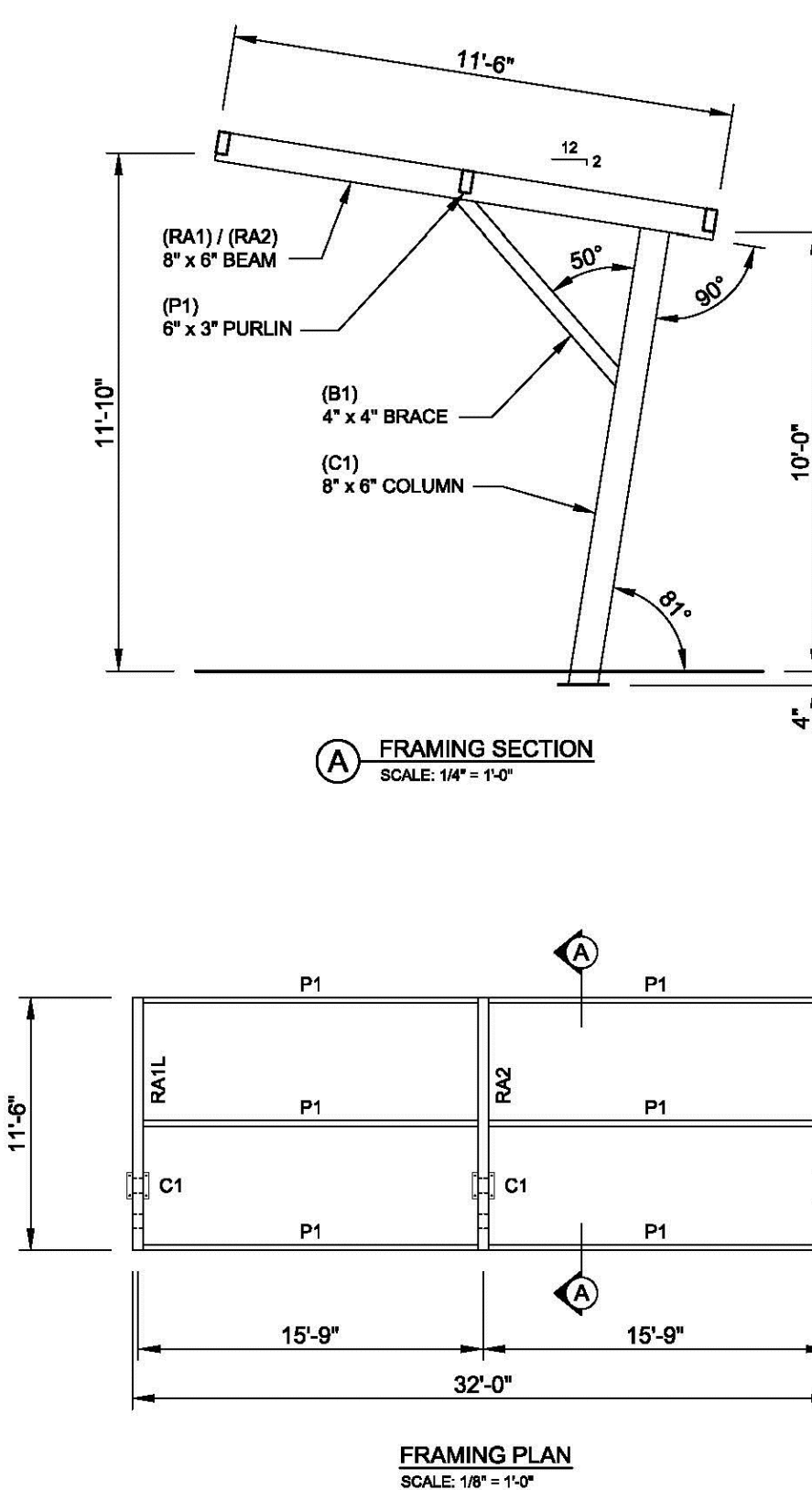
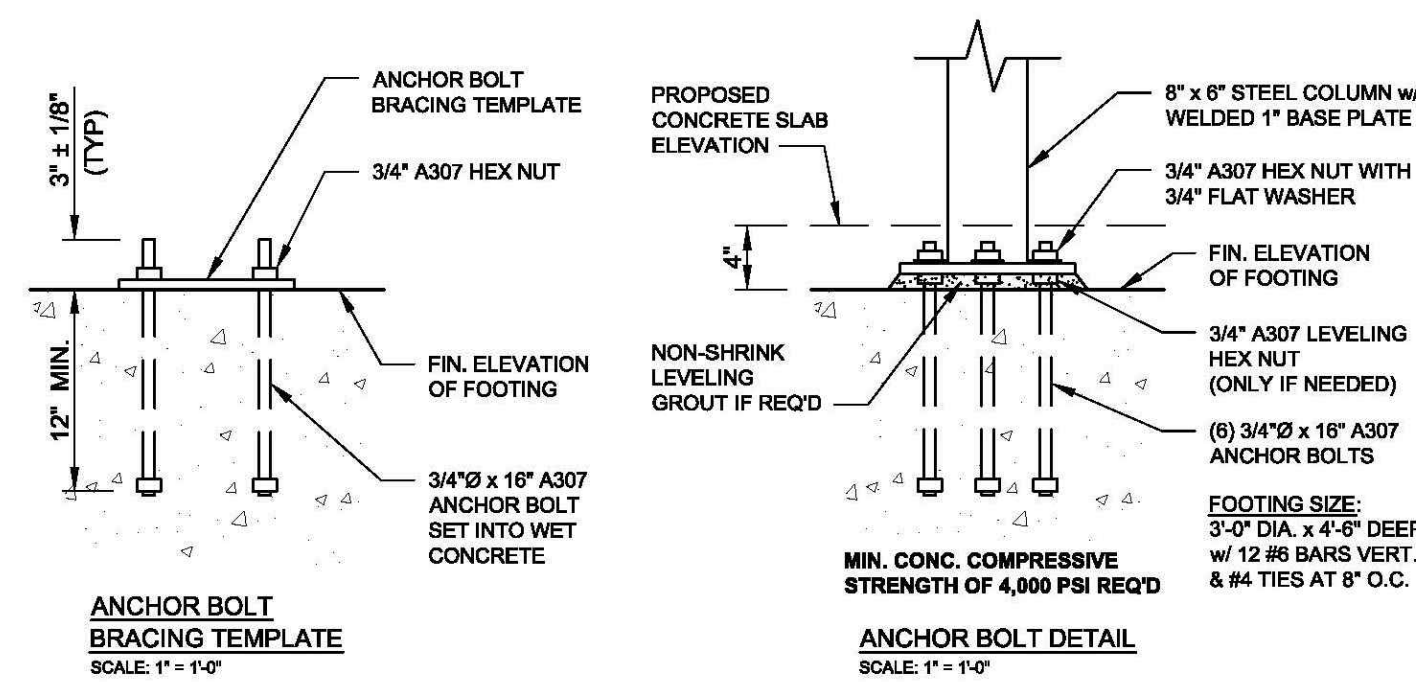
LAYOUT:

- DETERMINE LOCATION OF SHELTER. VERIFY THAT SHELTER WILL NOT INFRINGE ON BUILDING SETBACKS, EASEMENTS OR HEIGHT RESTRICTIONS.
- USING STRING LOCATE COLUMN / FOOTING CENTERLINES. MEASURE CENTERLINES AS SHOWN ON THE "FOOTING LAYOUT PLAN". BE SURE TO EXTEND STRING STAKES BEYOND THE AREA OF EXCAVATION.
- VERIFY MEASUREMENTS WITH THOSE SHOWN IN THE "FOOTING LAYOUT PLAN". IF DIMENSIONS VARY ADJUST AS NECESSARY BEFORE PROCEEDING.



FOOTINGS:

- BEFORE STARTING EXCAVATION UNDERGROUND UTILITIES SHOULD BE LOCATED SO THAT FOOTINGS ARE NOT PLACED DIRECTLY OVER EXISTING UTILITIES.
- PRE-ASSEMBLE THE ANCHOR BOLT BRACING TEMPLATES AS PER DETAIL AND SET ASIDE UNTIL CONCRETE FOOTINGS HAVE BEEN POURED.
- POUR CONCRETE FOOTINGS AS SPECIFIED IN THE ENGINEERING DETAILS. TOP ELEVATION OF FOOTINGS TO BE 4" BELOW FINISHED SLAB ELEVATION TO MAINTAIN THE PROPOSED CLEAR EAVE HEIGHT OF 10'-0". MAKE SURE THAT ALL FOOTING TOP LEVELS ARE LEVEL AND AT THE SAME ELEVATION.
- PLACE ANCHOR BOLT BRACING TEMPLATES INTO WET CONCRETE AND ALIGN BOLTS AS SHOWN IN THE "FOOTING LAYOUT PLAN." POSITION CENTER OF BASE PLATE TEMPLATES WITH STRING CENTERLINES USED DURING LAYOUT. CHECK FOR LEVEL SURFACE AND ADJUST AS NECESSARY. IT IS VERY IMPORTANT THAT BOLT ALIGNMENT IS CORRECT.
- REMOVE AND DISCARD ANCHOR BOLT BRACING TEMPLATES FROM ANCHOR BOLTS ONCE THE CONCRETE HAS HARDENED AND REACHED FULL STRENGTH (48 HOURS MINIMUM). SAVE HEX NUTS TO USE FOR COLUMN ASSEMBLY LATER.
- VERIFY THAT FOOTINGS ARE LEVEL AND UNIFORM ONCE THE CONCRETE HAS SET AND HARDENED. IF FOOTINGS ARE NOT LEVEL WITH EACH OTHER LEVELING NUTS CAN BE USED BELOW THE COLUMN BASE PLATES AND ADJUSTED AS NEEDED TO BRING THE BASE PLATES TO A UNIFORM LEVEL. USE NON-SHRINK GROUT BELOW THE BASE PLATE WHEN USING LEVELING NUTS AND ALLOW GROUT TO HARDEN BEFORE INSTALLING COLUMNS.



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park
Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
SHADE STRUCTURE DETAILS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: A-01-150396028 Shelter.dwg
Plotted: May, 24, 21

Scale: NTS
Date: May, 24, 21



Sheet
A-01
SHEET 38 OF 42

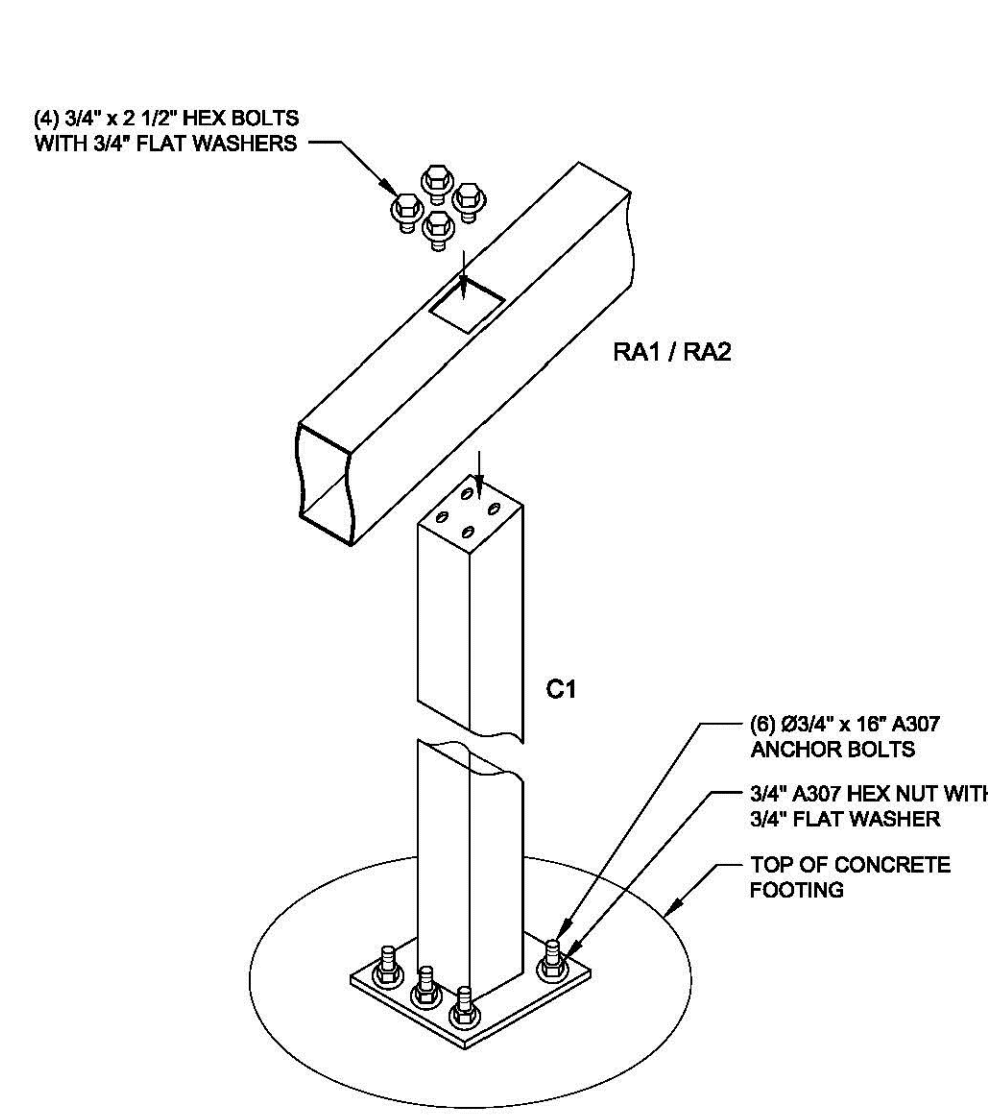
COLUMNS (C1):

1. LOWER EACH COLUMN ONTO THE ANCHOR BOLTS WITH THE HIGH POINT ORIENTATED CORRECTLY. PLUMB COLUMNS AND SECURE TO ANCHOR BOLTS WITH 3/4" A307 HEX NUTS AND 3/4" FLAT WASHERS.

RAFTER BEAMS (RA1) / (RA2):

1. RAISE AND BRACE THE RAFTER BEAMS ONTO THE COLUMNS (REFER TO FRAMING PLAN FOR RAFTER LOCATIONS). ATTACH RAFTER BEAMS TO COLUMNS USING (4) 3/4" x 2 1/2" HEX BOLTS AND FLAT WASHERS. LEVEL AND BRACE.

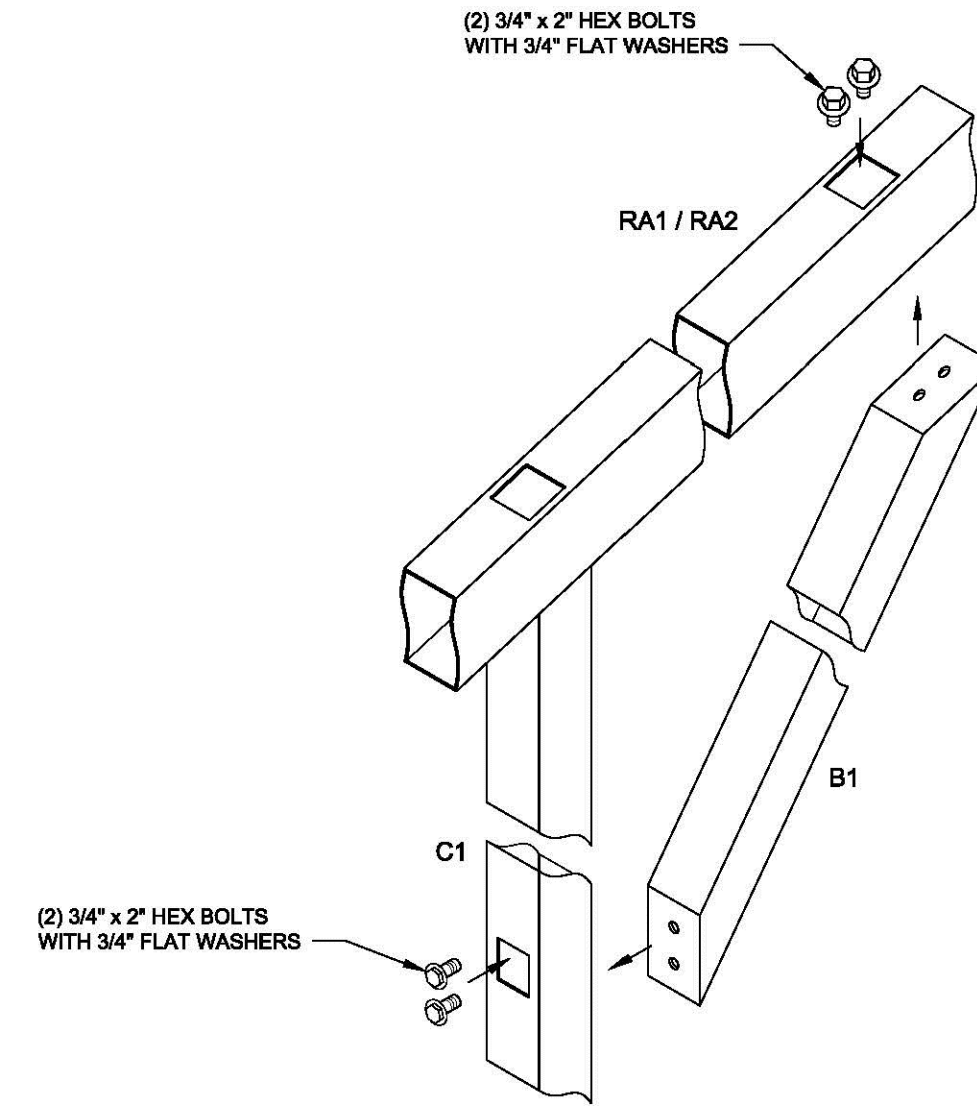
NOTE: KEEP ALL CONNECTIONS LOOSELY ATTACHED UNTIL AFTER ALL FRAMING MEMBERS ARE IN PLACE SO ADJUSTMENTS MAY BE POSSIBLE.



COLUMN & RAFTER BEAM INSTALLATION
SCALE: 3/8" = 1'-0"

BRACE (B1):

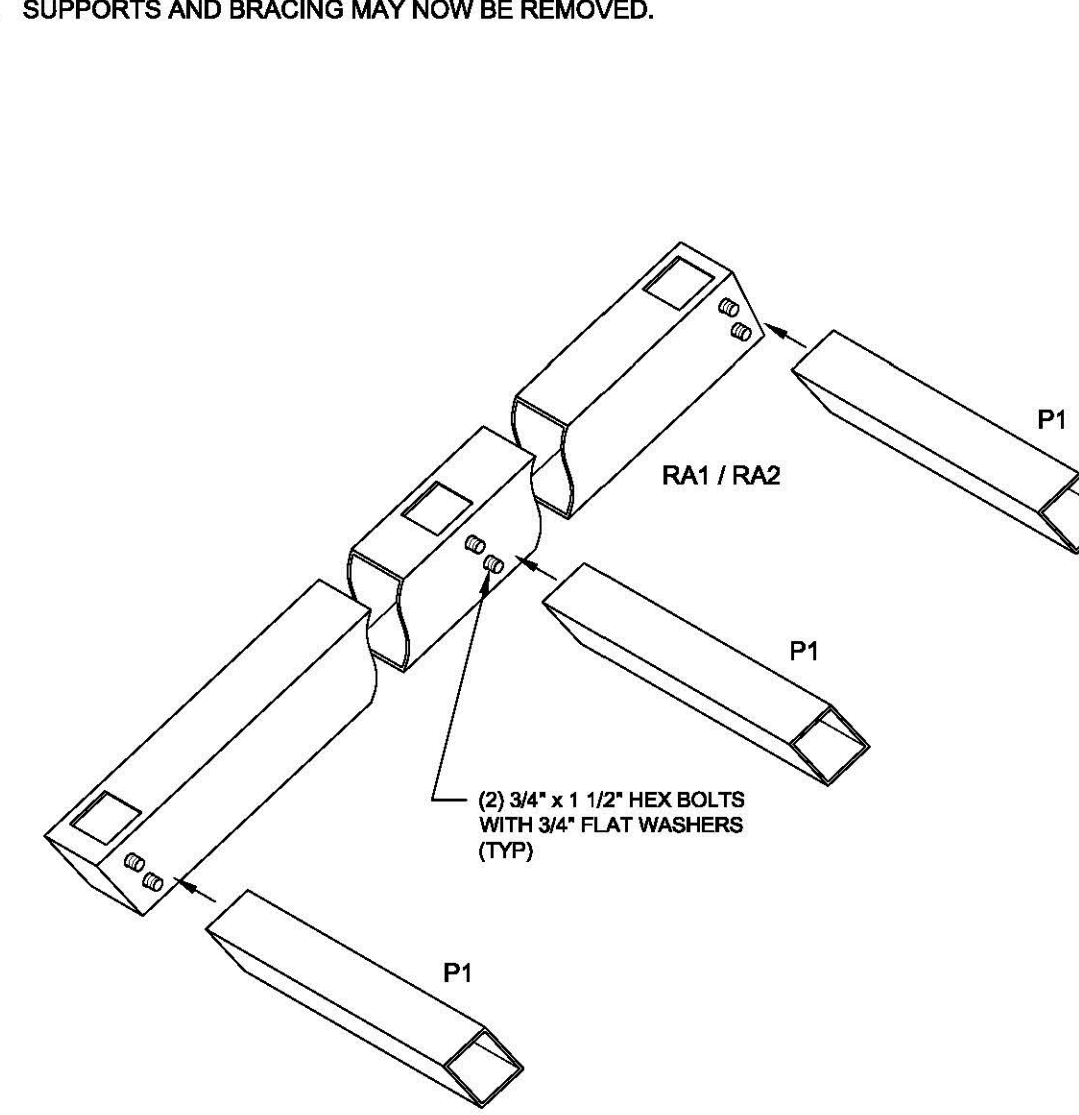
1. RAISE BRACE MEMBERS INTO PLACE BY ALIGNING THE HOLES IN THE ENDS WITH THE HOLES IN THE SIDES OF THE COLUMNS / BOTTOM OF RAFTER BEAMS.
2. ATTACH TO COLUMNS AND RAFTER BEAMS USING (2) 3/4" x 2" HEX BOLTS AND FLAT WASHERS (FINGER TIGHT ONLY). LEVEL AND BRACE.
3. ATTACH COVER PLATES, USING (2) 1 1/4" TEK SCREWS, OVER THE ACCESS OPENINGS IN THE COLUMNS ONCE THE ALL CONNECTIONS HAVE BEEN TIGHTLY SECURED.



BRACE INSTALLATION
SCALE: 3/8" = 1'-0"

PURLINS (P1):

1. RAISE PURLINS INTO PLACE BY ALIGNING THE HOLES IN THE ENDS OF THE PURLINS WITH THE HOLES IN THE SIDES OF THE RAFTER BEAMS.
2. ATTACH PURLINS USING (2) 3/4" x 1 1/2" HEX BOLTS AND FLAT WASHERS (FINGER TIGHT ONLY). LEVEL AND BRACE.
3. BEFORE TIGHTENING ALL CONNECTIONS VERIFY THE SHELTER IS PROPERLY ALIGNED, LEVEL AND PLUMB.
4. TIGHTEN ALL BOLTED CONNECTIONS THROUGHOUT THE ENTIRE STRUCTURE AND DOUBLE CHECK EACH CONNECTION AGAIN AFTER ALL OTHER CONNECTIONS HAVE BEEN TIGHTENED.
5. SUPPORTS AND BRACING MAY NOW BE REMOVED.

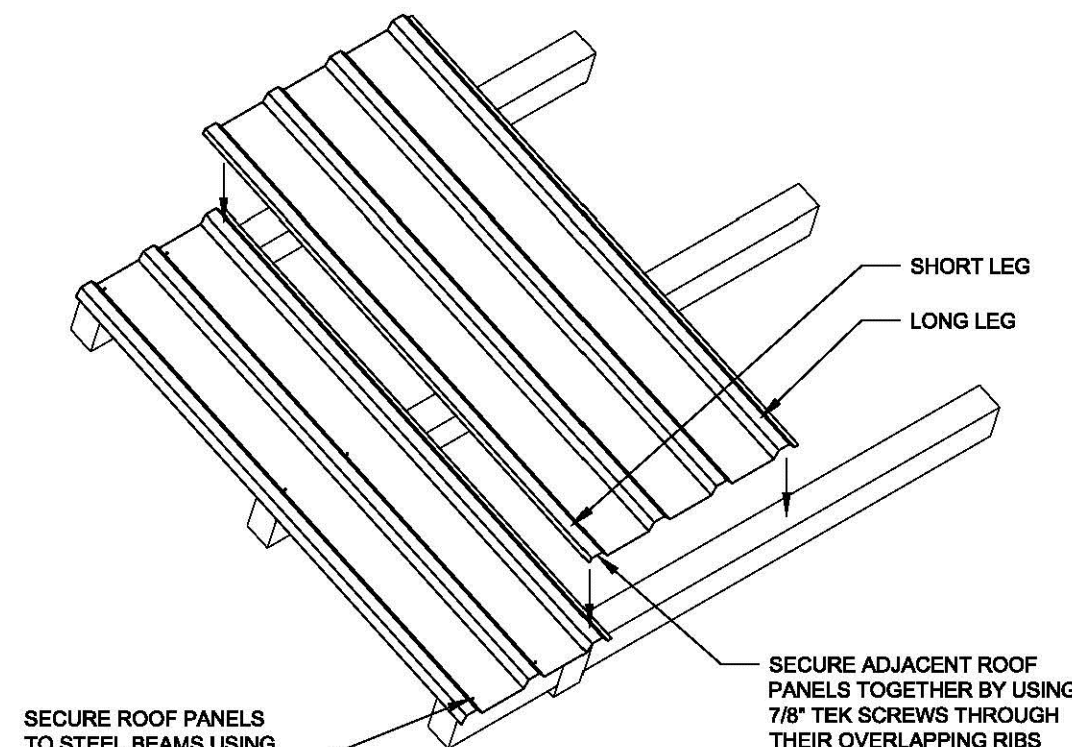


PURLIN INSTALLATION
SCALE: 3/8" = 1'-0"

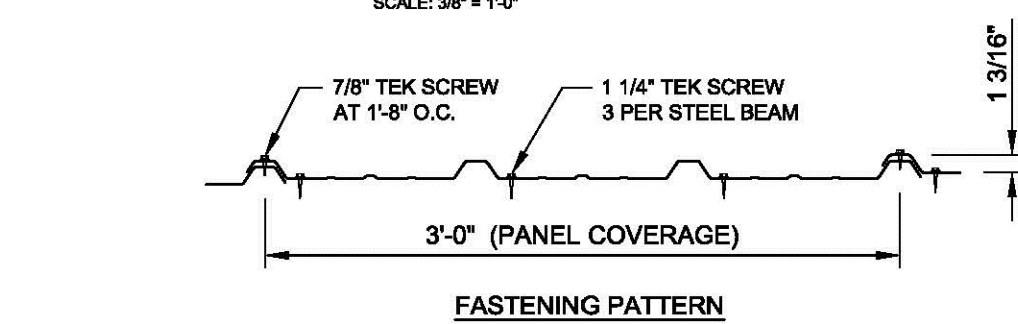
NOTES:
1. CONTRACTOR SHALL REFER TO AND COMPLY WITH NOTES ON A-01.

ROOF PANELS:

1. LAYOUT PANELS FROM LEFT TO RIGHT WITH EACH PANEL'S LONG LEG TO THE RIGHT SO THAT EACH PANEL'S SHORT LEG SIDE WILL OVERLAP ON TOP OF THE PREVIOUS PANEL'S LONG LEG SIDE.
2. POSITION PANELS AT THE ENDS SO THAT THE CENTER OF THE PANEL'S FIRST / LAST RIB IS EVEN WITH THE EXTERIOR FACE OF THE RAFTER BEAMS. ALIGN THE BOTTOM AND UPPER EDGE TO EXTEND ABOUT 1" BEYOND THE PERIMETER PURLINS.
3. THE LAST PANEL WILL BE ABOUT 12" TOO WIDE AND CAN EITHER BE OVERLAPPED THE EXTRA 12" OR CUT TO THE NECESSARY WIDTH.
4. ATTACH THE PANELS TO ALL STEEL FRAMING MEMBERS USING 1 1/4" TEK SCREWS, PLACING A SCREW NEXT EVERY RIB (SEE FASTENING PATTERN BELOW).
5. ADJACENT PANELS WILL OVERLAP AT ONE RIB. USE THE 7/8" TEK SCREWS TO ATTACH THE OVERLAPPING RIBS, PLACING A SCREW AT EVERY 1'-8" (SEE FASTENING PATTERN BELOW).



ROOF PANEL INSTALLATION
SCALE: 3/8" = 1'-0"



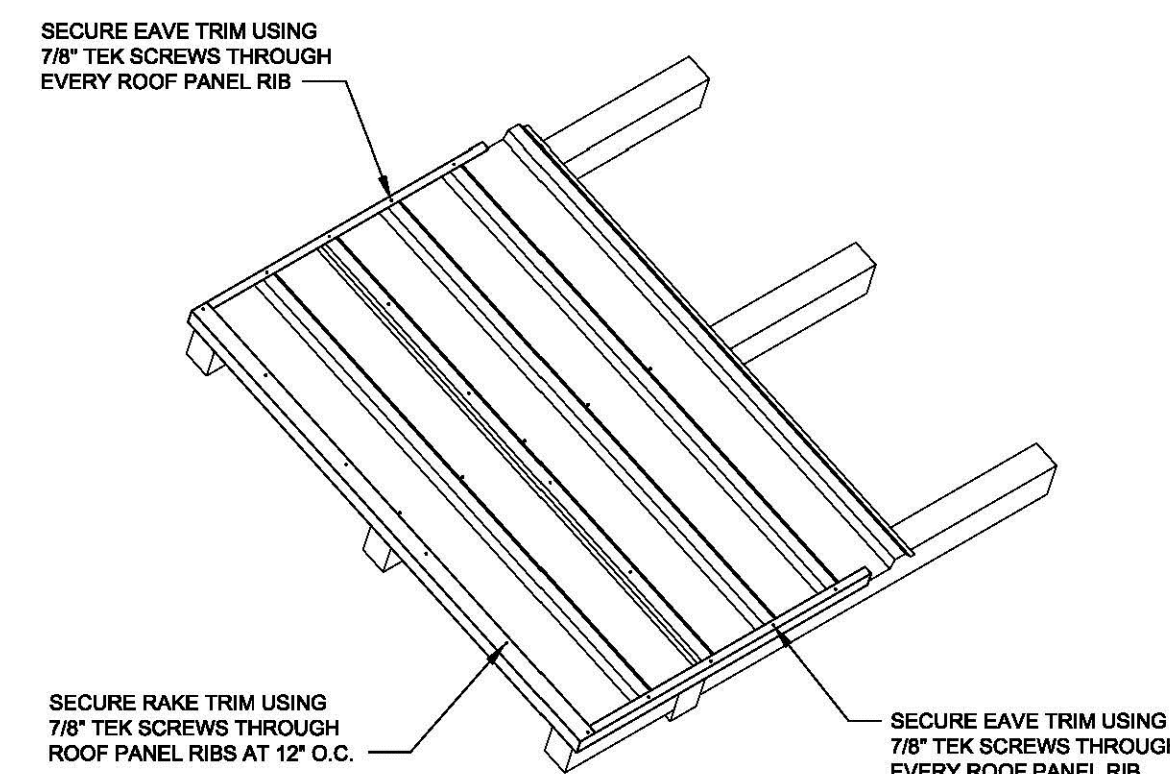
FASTENING PATTERN

EAVE TRIM:

1. POSITION THE EAVE TRIM AGAINST THE EAVE EDGE OF THE ROOF PANELS, LEAVING A MINIMUM 1/4" GAP TO ALLOW WATER TO DRAIN OUT (LOWER EAVE ONLY). TRIM EXCESS LENGTH AS NEEDED. OVERLAP ENDS BY 4" TO 6".
2. SECURE TRIM BY USING 7/8" TEK SCREWS THROUGH EVERY ROOF PANEL RIB.
3. THIS TRIM MAY BE LEFT OFF IF THERE IS CONCERN OF DEBRIS BECOMING TRAPPED WITHIN.

RAKE TRIM:

1. POSITION THE RAKE TRIM AGAINST THE SIDES OF THE END PANELS. TRIM EXCESS LENGTH AS NEEDED. OVERLAP ENDS BY 4" TO 6".
2. SECURE TRIM BY USING 7/8" TEK SCREWS THROUGH THE PANEL RIBS AT EVERY 12".



TRIM INSTALLATION
SCALE: 3/8" = 1'-0"

MAINTENANCE:

1. DURING THE ASSEMBLY PROCESS SOME SCRAPES AND SCRATCHES MAY HAVE OCCURRED. THESE WILL REQUIRE TOUCHING UP. ALSO, OVER TIME, NORMAL USE MAY CREATE MORE SCRATCHES. FOLLOW THE STANDARD PAINT PROCEDURES LISTED ON ANY SPRAY PAINT CAN. HOWEVER, IT IS IMPORTANT TO REMOVE ALL LOOSE PAINT, GREASE, OIL AND/OR RUST BEFORE LIGHTLY SANDING SURROUNDING PAINT FOR GOOD ADHESION. ADDITIONAL MATCHING TOUCH-UP PAINT IS AVAILABLE UPON REQUEST AT AN ADDITIONAL COST.
2. WHEN INSTALLING THE ROOF PANELS AND TRIM IT IS VERY IMPORTANT TO MAKE SURE ANY FINE METAL SHAVINGS OR DUST THAT MAY HAVE BEEN LEFT WHEN DRILLING OR CUTTING BE REMOVED FROM THE FINISHED SURFACE TO PREVENT RUST STAINS.
3. THE MAJORITY OF THE HARDWARE IS HIDDEN AND CANNOT BE ADJUSTED. THE HARDWARE THAT IS VISIBLE SHOULD BE CHECKED FOR TIGHTNESS AND FOR VANDALISM ATTEMPTS AT LEAST TWICE A YEAR. THE STANDARD TIGHTNESS SHOULD BE DONE BY HAND TIGHTENING THE LOOSE BOLTS AND THEN USING A WRENCH FOR 1/2 TO 1 FULL TURN.
4. CLEAN THE STEEL SURFACES PERIODICALLY USING A MILD CLEANING SOLUTION, AND HAND-WIPE TO MAINTAIN "LIKE NEW" APPEARANCE.
5. PERIODICALLY CHECK FOR DEBRIS THAT MAY HAVE GOTTEN STUCK WITHIN THE ROOF TRIM AND REMOVE.

DRILLED SHAFT FOUNDATION DESIGN WITHOUT GROUND SURFACE CONSTRAINT

	Rx [lb]	Ry [lb]	Rz [lb]	Rox [lb-ft]	RoY [lb-ft]	RoZ [lb-ft]	
Combination 1:	0	6126.799	-453.053	-20650.413	0	0	0 max vertical
Combination 2:	0	-1407.295	420.816	6600.382	0	0	0 max uplift
Combination 3:	0	6126.799	-453.053	-20650.413	0	0	0 max overturning

Foundation Dimensions:

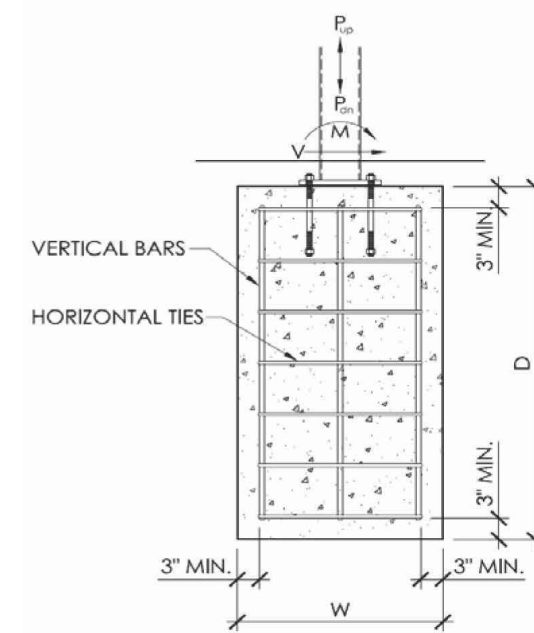
Diameter, W = 3.00 ft
Depth, D = 4.50 ft

Soil Conditions:

Allowable Soil Bearing Pressure, B_s = 1500.00 psf
Allowable Lateral Soil Bearing Pressure L_{sp} = 100.00 ps/ft

Foundation Properties:

f_c = 4000 psi
Number of Vertical Reinforcement Bars = (12)
Vertical Reinforcement Bar Size = #6
Horizontal Tie Size = #4
Horizontal Tie Spacing = 8 in. o.c.
f_y = 60000 psi
Ground Surface Constraint (0=No / 1=Yes) = 0



Bearing Pressure Analysis:

Area of Footing, A_f = πW²/4 = 7.07 sq. ft.
Actual Bearing Pressure, B_v = (P_{ov} / A_f)*1000 = 866.76 psf

Allowable Soil Bearing Pressure Exceeds Actual Soil Bearing Pressure - OK

Uplift Analysis:

Factored Wind Uplift Load = ((P_w*1.5)*1000) = 2110.93 lbs.
Weight of Footing, W_f = 4612.25 lbs.

Weight of Footing Exceeds Factored Wind Uplift Load - OK

Foundation Lateral / Overturning Analysis (Nonconstrained):

Allowable Lateral Pressure, S1 = (Lpa*D^{1/3}) = 300.00 pcf
Equivalent Column Height, h = MV = 10.02 ft
Nonconstrained Factor, A = (2.34V)/(S1*W) = 1.18 ft
Embedment Depth, d = (A/2)(1+(1+(4.36h)/A)^{1/2}) = 4.22 ft

Comb - 1

Footing Depth Exceeds Embedment Depth - OK

Allowable Lateral Pressure, S1 = (Lpa*D^{1/3}) = 300.00 pcf
Equivalent Column Height, h = MV = 4.26 ft
Nonconstrained Factor, A = (2.34V)/(S1*W) = 1.09 ft
Embedment Depth, d = (A/2)(1+(1+(4.36h)/A)^{1/2}) = 2.87 ft

Comb - 2

Footing Depth Exceeds Embedment Depth - OK

Allowable Lateral Pressure, S1 = (Lpa*D^{1/3}) = 300.00 pcf
Equivalent Column Height, h = MV = 10.02 ft
Nonconstrained Factor, A = (2.34V)/(S1*W) = 1.18 ft
Embedment Depth, d = (A/2)(1+(1+(4.36h)/A)^{1/2}) = 4.22 ft

Comb - 3

Steel Reinforcement Analysis:

Minimum Required Reinforcement, A_{s,min} = 5.09 in²
Actual Reinforcement, A_{s,act} = 5.30 in²

Actual Reinforcement Exceeds Minimum Required Reinforcement - OK

Use: 3 Ft. Diameter x 4.6 Ft. Deep Concrete Footing, w/ 12 No. 6 Bars Vertical and No. 4 Ties at 8 Inches O.C.

Notes:

- The foundation design is based on Table 1806.2 of the building code, Class 5 soil material. If different soil conditions are encountered, it is recommended that a site specific geotechnical report is conducted to determine the load bearing values of the soil.
- If the footing depth does not meet local frost requirements, footings shall be re-designed under the direction of an engineer. It is the contractor's responsibility to verify the local frost depth.

NOTES:
I. CONTRACTOR SHALL REFER TO AND COMPLY WITH NOTES ON A-01.

CFP #3241-1

Page 44 of 46

CEC #17-488



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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion

(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title

SHADE STRUCTURE DETAILS

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT

Drawn: AMT

Checked: SDT, JKS, MMW, CMB

Filename: A-01-150396028 Shelter.dwg

Plotted: May. 24. 21

Scale: NTS

Date: May. 24. 21

Seal



Sheet

A-03

SHEET 40 OF 42

22-DPR-ITB-24

Project Name and Location

**Thomas Jefferson Park
Upper Field Conversion**
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
**LANDSCAPE
PLAN**

100% Construction Drawings (for Bid)

Approval _____ Date _____

Design Manager _____

Revisions _____ Date _____

Designed: AMT

Drawn: AMT

Checked: SDT, JKS, MMW, CMB

Filename: LP-01-150396028 Landscape.pwg
May 24, 21

Scale: 1"=20'

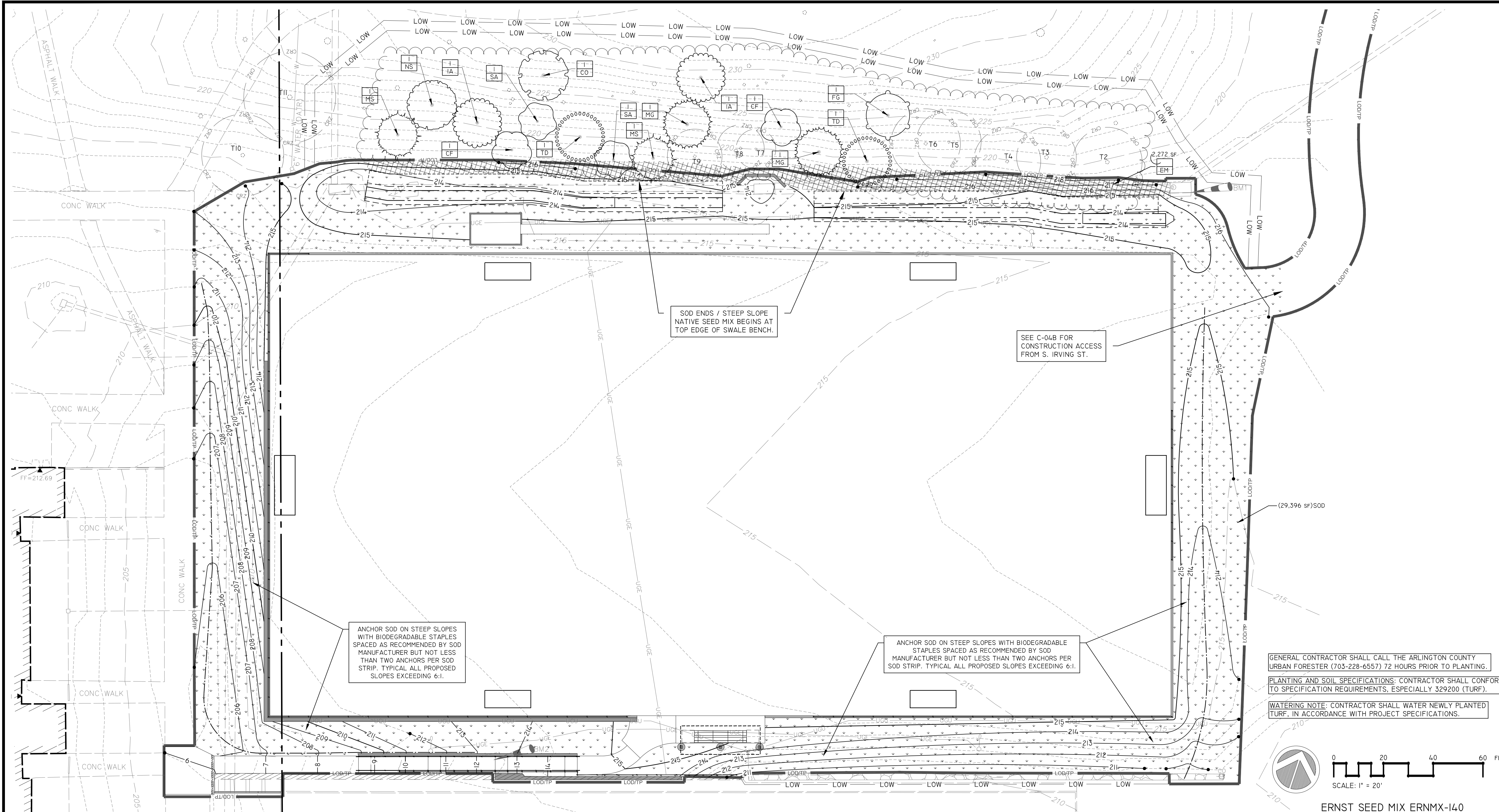
Date: Apr. 16, 21

Seal



Sheet

LP-01
SHEET 41 OF 42



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	CO	1	CELTIS OCCIDENTALIS / COMMON HACKBERRY	B & B	1" CAL	
	CF	2	CORNUS FLORIDA / EASTERN DOGWOOD	B & B	1" CAL	
	FG	1	FAGUS GRANDIFOLIA / AMERICAN BEECH	B & B	1" CAL	
	IA	2	ILEX OPACA / AMERICAN HOLLY	B & B		8'-10" H
	MG	2	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	B & B		8'-10" H
	MS	2	MAGNOLIA VIRGINIANA / SWEET BAY	B & B		8'-10" H
	NS	1	NYSSA SYLVATICA / SOUR GUM	B & B	1" CAL	
	SA	2	SASSAFRAS ALBIDUM / SASSAFRAS	B & B	1" CAL	
	TD	2	TAXODIUM DISTICHUM / BALD CYPRESS	B & B		8'-10" H

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	EM	2,272 SF	NATIVE SEED MIX FOR STEEP SLOPES / ERNST SEED MIX ERNMX-140 OR APPROVED EQUAL. STABILIZE STEEP SLOPES WITH ECS-2B DOUBLE NEW STRAW BIODEGRADABLE ROLLED EROSION CONTROL PRODUCT, OR AN APPROVED EQUAL	SEED
	SOD	29,396 SF	TURFGRASS SOD / SOD PER PLANTING SPECIFICATIONS	SOD

ERNST SEED MIX ERNMX-140
(OR APPROVED EQUAL)

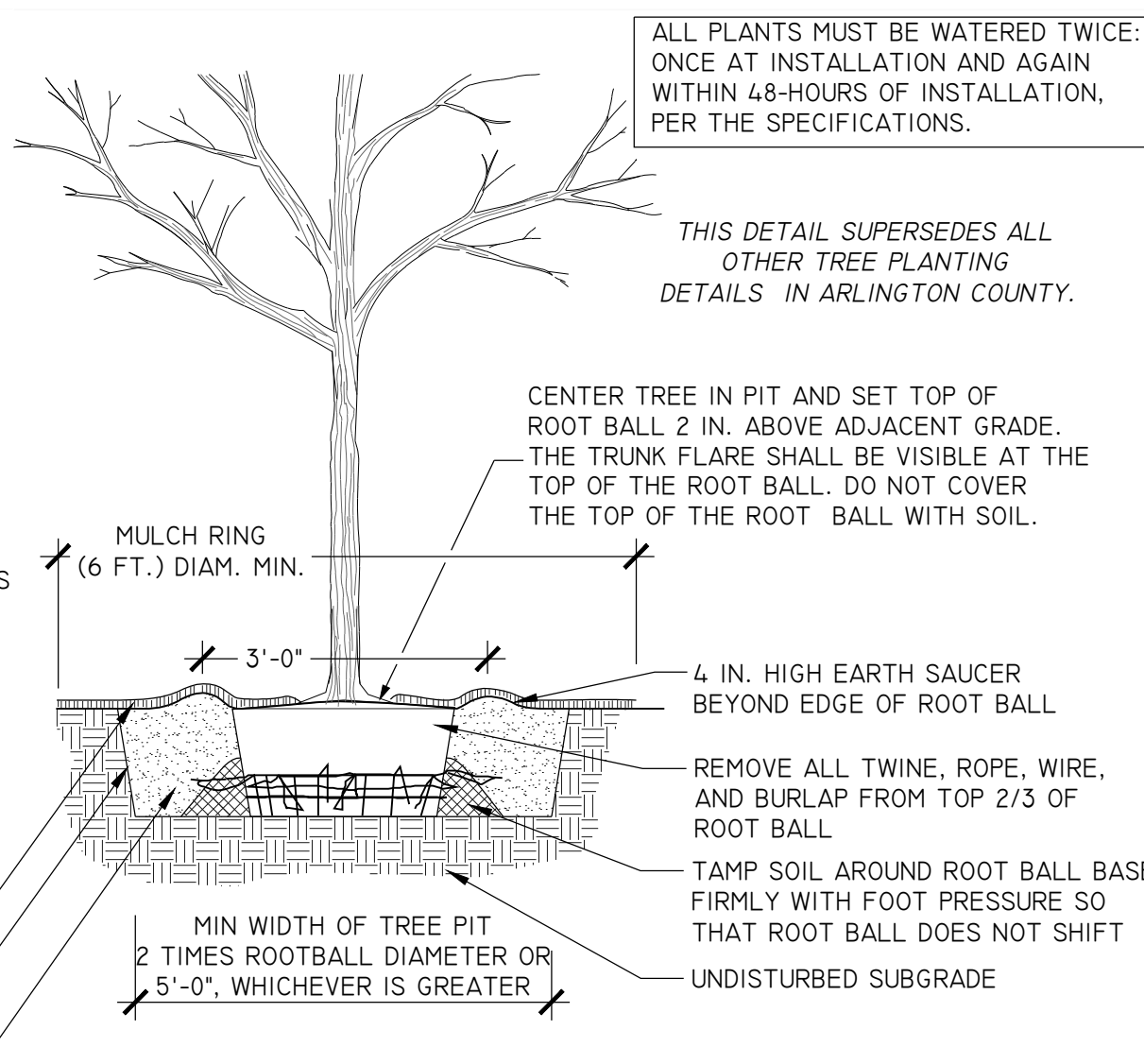
HEIGHT: 0.3-0.5' SEEDING RATE: 1/2 LB. PER 1,000SF

MIX COMPOSITION

- 39.8% SCHIZACHYRIUM SCOPARIUM, 'CAMPER' (LITTLE BLUESTEM)
- 19.0% ELYMUS VIRGINICUS, PA ECOTYPE (VIRGINIA WILDRYE)
- 17.7% PANICUM SPHAEROCARPON (ROUND SEED PANICGRASS)
- 4.0% CHAMAECRISTA FASCICULATA, PA ECOTYPE (PARTRIDGE PEA)
- 3.5% ECHINACEA PURPUREA (PURPLE CONEFLOWER)
- 3.0% RUDBECKIA HIRTA, COASTAL PLAIN NC ECOTYPE (BLACKEYED SUSAN)
- 2.0% HELIOPSIS HELIANTHOIDES, PA ECOTYPE (OXEYE SUNFLOWER)
- 2.0% PENSTEMON DIGITALIS, PA ECOTYPE (TALL WHITE BEARDTONGUE)
- 1.0% ELYMUS HYSTRIX, PA ECOTYPE (BOTTLEBRUSH GRASS)
- 1.0% LIATRIS SPICATA, PA ECOTYPE (MARSH BLAZING STAR)
- 0.5% AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE (AUTUMN BENTGRASS)
- 0.5% ASCLEPIAS TUBEROSA (BUTTERFLY MILKWEED)
- 0.5% ASTER MACROPHYLLUS, PA ECOTYPE (BIGLEAF ASTER)
- 0.5% ASTER PRENANTHOIDES, PA ECOTYPE (ZIGZAG ASTER)
- 0.5% BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE (BLUE FALSE INDIGO)
- 0.5% GEUM CANADENSE, PA ECOTYPE (WHITE AVENS)
- 0.5% PYCNANTHEMUM TENUIFOLIUM (NARROWLEAF MOUNTAINMINT)
- 0.5% SOLIDAGO BICOLOR, PA ECOTYPE (WHITE GOLDENROD)
- 0.5% TRADESCANTIA OHIENSIS, PA ECOTYPE (OHIO SPIDERWORT)
- 0.5% ZIZIA AUREA, PA ECOTYPE (GOLDEN ALEXANDERS)
- 0.4% ANEMONE VIRGINIANA, PA ECOTYPE (THIMBLEWEED)
- 0.4% ASTER LAEVIS, NY ECOTYPE (SMOOTH BLUE ASTER)
- 0.4% MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE (WILD BERGAMOT)
- 0.2% SOLIDAGO JUNCEA, PA ECOTYPE (EARLY GOLDENROD)
- 0.1% BAPTISIA TINCTORIA, PA ECOTYPE (YELLOW FALSE INDIGO)
- 0.1% PENSTEMON HIRSUTUS (HAIRY BEARDTONGUE)
- 0.1% VERONICASTRUM VIRGINICUM, PA ECOTYPE (CULVER'S ROOT)

NOTES

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



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

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

CENTER TREE IN PIT AND SET TOP OF ROOT BALL 2 IN. ABOVE ADJACENT GRADE. THE TRUNK FLARE SHALL BE VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

1 TREE PLANTING DETAIL

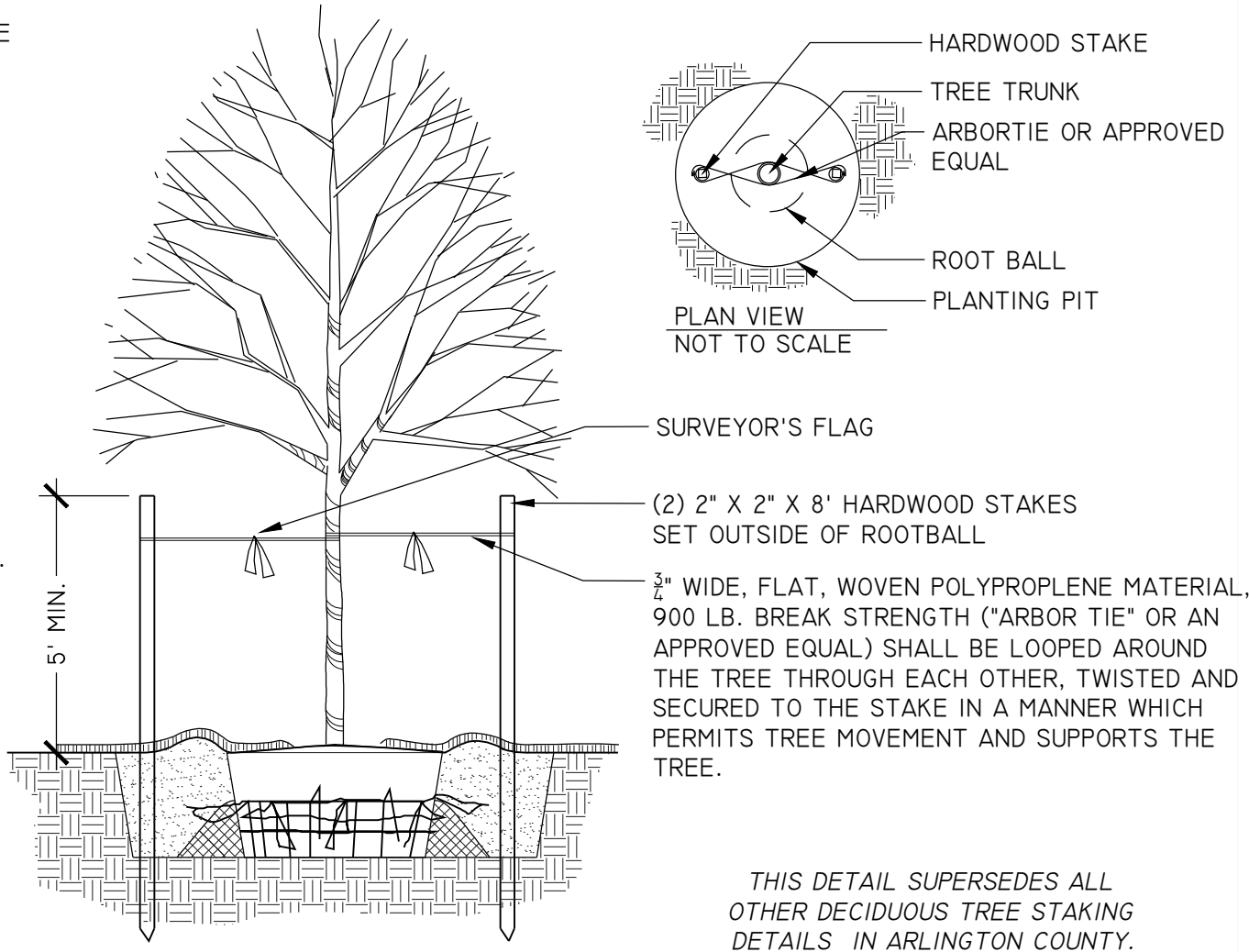
FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.1 (2016)

NOT TO SCALE



NOTES

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



THIS DETAIL SUPERSEDES ALL OTHER DECIDUOUS TREE STAKING DETAILS IN ARLINGTON COUNTY.

2 DECIDUOUS TREE STAKING

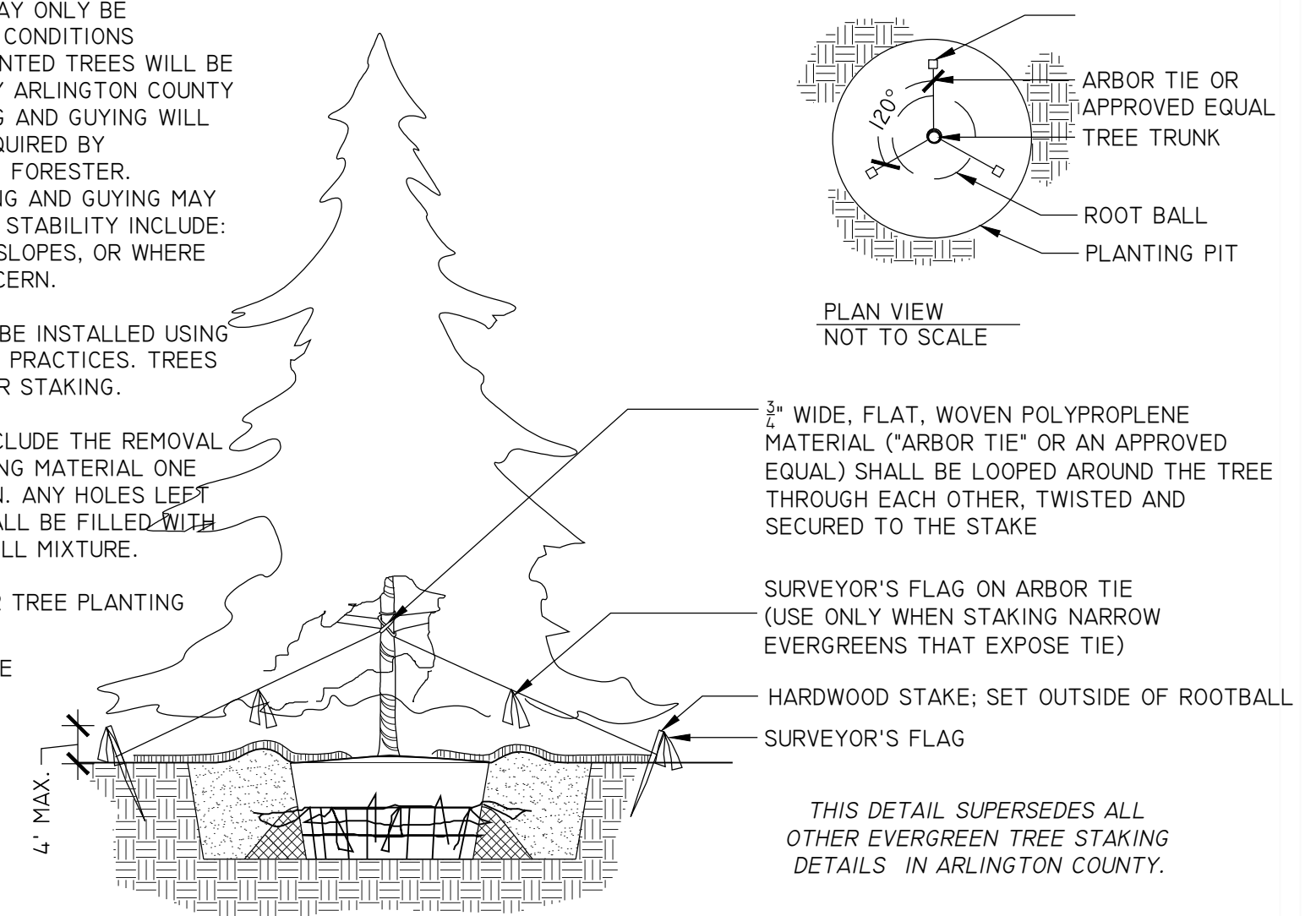
ELEVATION
329300.6 (2016)

NOT TO SCALE



NOTES

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



THIS DETAIL SUPERSEDES ALL OTHER EVERGREEN TREE STAKING DETAILS IN ARLINGTON COUNTY.

3 EVERGREEN TREE STAKING

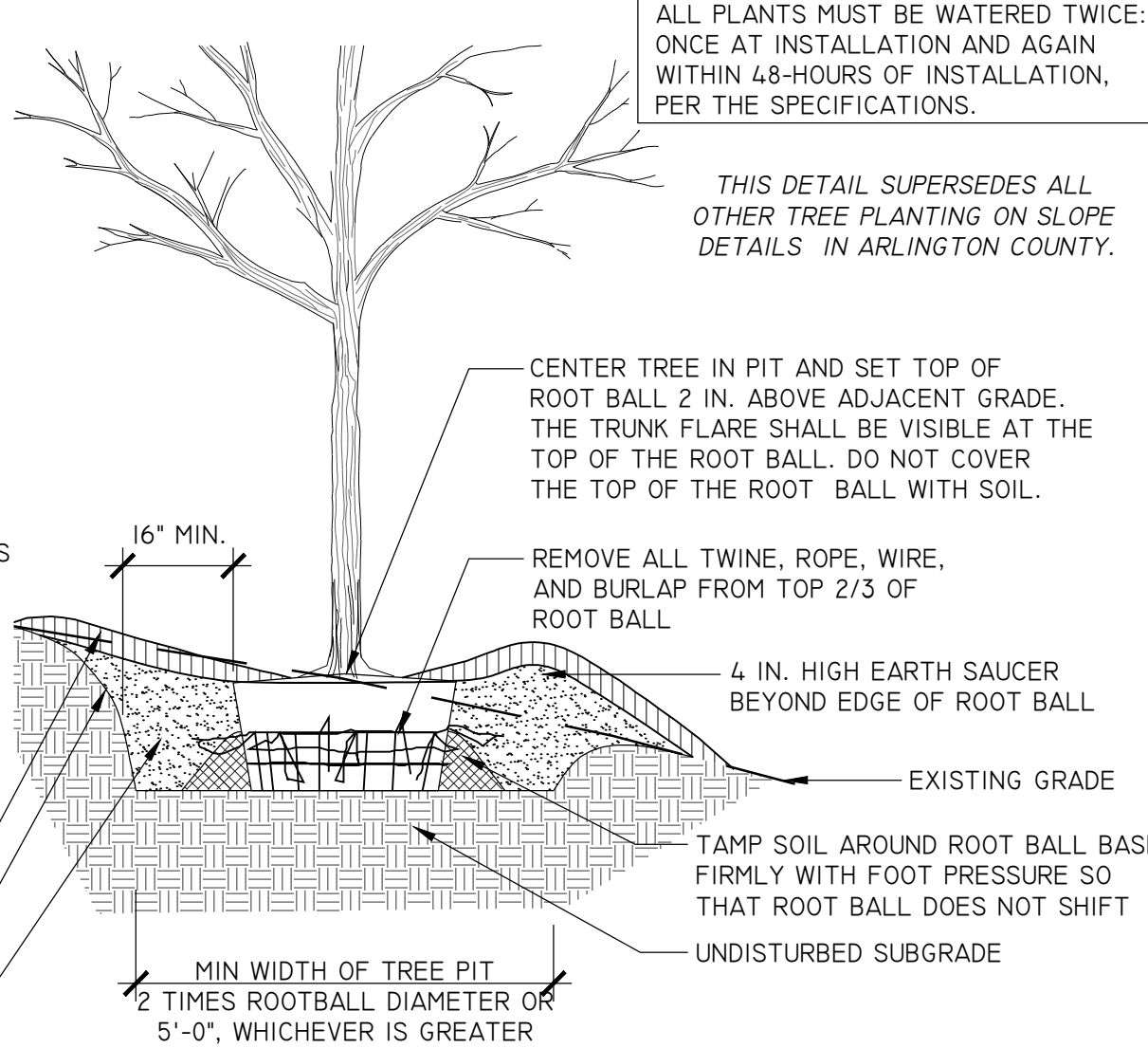
ELEVATION
329300.7 (2016)

NOT TO SCALE



NOTES

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



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

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

4 TREE PLANTING ON SLOPE

FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.2 (2016)

1/2" = 1'-0"



PLANTING GENERAL NOTES:

1. THIS PLAN IS FOR PLANTING PURPOSES ONLY, AND ANY OTHER INFORMATION SHOWN IS FOR REFERENCE ONLY. SEE SITE PLAN FOR INFORMATION ABOUT ALL LAYOUT, GRADING AND OTHER SITE IMPROVEMENTS.
2. CALL VIRGINIA 811 AT 811 OR 1-800-552-7001 TO MARK UTILITIES AT LEAST 48 HOURS BEFORE DIGGING.
3. ALL MATERIALS AND PLANTING PROCEDURES EXCEPT AS OTHERWISE NOTED SHALL CONFORM TO THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" BY THE LANDSCAPE CONTRACTORS ASSOCIATION MD-DC-VA.
4. PLANTS SHALL CONFORM TO THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. (ANSI Z60.1)
5. PLANT NAMES SHALL BE THOSE GIVEN IN THE LATEST EDITION OF STANDARD PLANT NAMES, AMERICAN COMMITTEE ON HORTICULTURAL NOMENCLATURE.
6. TOPSOIL SHALL MEET SPECIFICATIONS AS PER DEQ'S VIRGINIA EROSION AND SEDIMENT CONTROL FIELD MANUAL (SUPPLEMENT TO THE 1992 VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK) FOR SOIL AND EROSION AND SEDIMENT CONTROL.
7. THE CONTRACTOR SHALL SUBMIT REPRESENTATIVE SOIL SAMPLES FROM BOTH IN-SITU SOILS AND SOILS BROUGHT IN FROM OFF-SITE TO A STATE LICENSED TESTING LABORATORY. THE CONTRACTOR SHALL INCORPORATE OR APPLY SOIL AMENDMENTS AND FERTILIZATION BASED UPON RESULTS OF THE SOIL TESTS AND RECOMMENDATIONS BY THE TEST LAB.
8. THE CONTRACTOR SHALL APPLY GRASS ACCORDING TO DEQ'S VIRGINIA EROSION AND SEDIMENT CONTROL FIELD MANUAL FOR SOIL EROSION AND SEDIMENT CONTROL. DO NOT USE KENTUCKY 31 TALL FESCUE.
9. THE CONTRACTOR SHALL STAKE OUT ALL PLANTING BEDS AND TREE LOCATIONS AND THESE MUST BE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER BEFORE DIGGING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND COORDINATE PLANTINGS WITH ALL EXISTING UTILITIES. IF DISCREPANCIES OCCUR BECAUSE OF UTILITY LOCATIONS OR OTHER EXISTING CONDITIONS THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY TO COORDINATE ANY NECESSARY ADJUSTMENTS.
10. ALL PLANT MATERIAL SHALL BE LABELED BY THE NURSERY AND DELIVERED WITH LABELS IN PLACE FOR INSPECTION. SUBSTITUTIONS IN PLANT SPECIES OR SIZE WILL NOT BE PERMITTED EXCEPT WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNER. PRUNING IS NOT TO OCCUR UNTIL MATERIAL HAS BEEN PLANTED. CONTRACTOR SHALL PRUNE PLANT MATERIAL AS SOON THEREAFTER AS IS ADVISABLE UNDER STANDARD HORTICULTURAL PRACTICES.
11. IT IS OF UTMOST IMPORTANCE THAT ALL PLANT MATERIAL BE SET SLIGHTLY HIGHER IN RELATION TO GRADE THAN IT WAS GROWN IN THE NURSERY AND WITH GOOD EARTH TO ROOT CONTACT. ANY MATERIALS OR WORK MAY BE REJECTED BY THE LANDSCAPE ARCHITECT IF IT DOES NOT MEET THIS OR ANY OTHER REQUIREMENT OF THE SPECIFICATIONS, AND REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
12. THE CONTRACTOR SHALL MULCH AND WATER ALL PLANTS WELL ON THE DAY THEY ARE PLANTED. THE SURFACE MULCH LAYER SHALL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE CONTRACTOR SHALL APPLY THE MULCH UNIFORMLY TO A 2 TO 3 INCH DEPTH. BARK SHALL BE KEPT 3 TO 4 INCHES AWAY FROM ALL TRUNKS AND WOODY STEMS.
13. IN CASE OF DISCREPANCIES BETWEEN QUANTITIES ON THE PLANT LIST AND THE PLAN, THE PLAN SHALL GOVERN.
14. SEED OR SOD BARE AREAS AS DIRECTED BY OWNER FOR ALL DISTURBED AREAS TO BE STABILIZED THAT ARE NOT LANDSCAPED OR COVERED.

GENERAL CONTRACTOR SHALL CALL THE ARLINGTON COUNTY URBAN FORESTER (703-228-6557) 72 HOURS PRIOR TO PLANTING.



DEPARTMENT OF PARKS AND RECREATION

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

22-DPR-ITB-24

Project Name and Location

Thomas Jefferson Park Upper Field Conversion
(By Right)

3501 2nd Street South
Arlington, VA 22204

Sheet Title
LANDSCAPE DETAILS AND NOTES

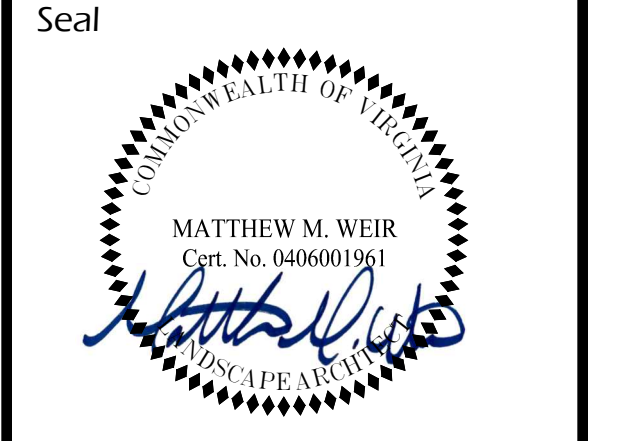
100% Construction Drawings (for Bid)

Approval	Date
Design Manager	
Revisions	Date

Designed: AMT
Drawn: AMT
Checked: SDT, JKS, MMW, CMB

Filename: LP-02-150396028 Landscape Details.dwg
May 24, 21
Plotted:

Scale: 1"=20'
Date: Apr. 16, 21



Sheet
LP-02
SHEET 42 OF 42