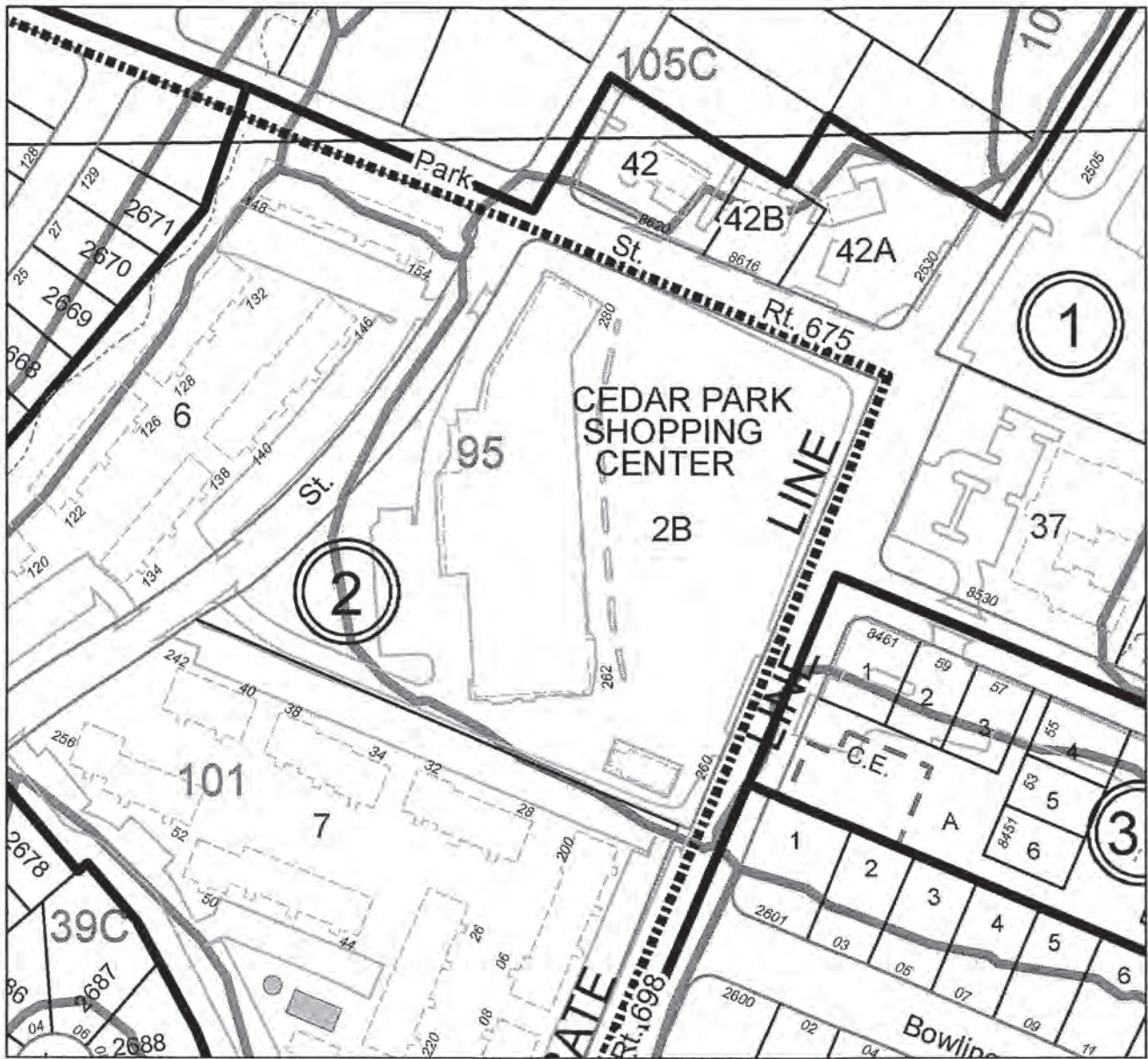


THE TOWN OF
VIENNA
ESTABLISHED 1890
PLANNING & ZONING
APPROVED

THE TOWN OF
VIENNA
ESTABLISHED 1890
PUBLIC WORKS
APPROVED

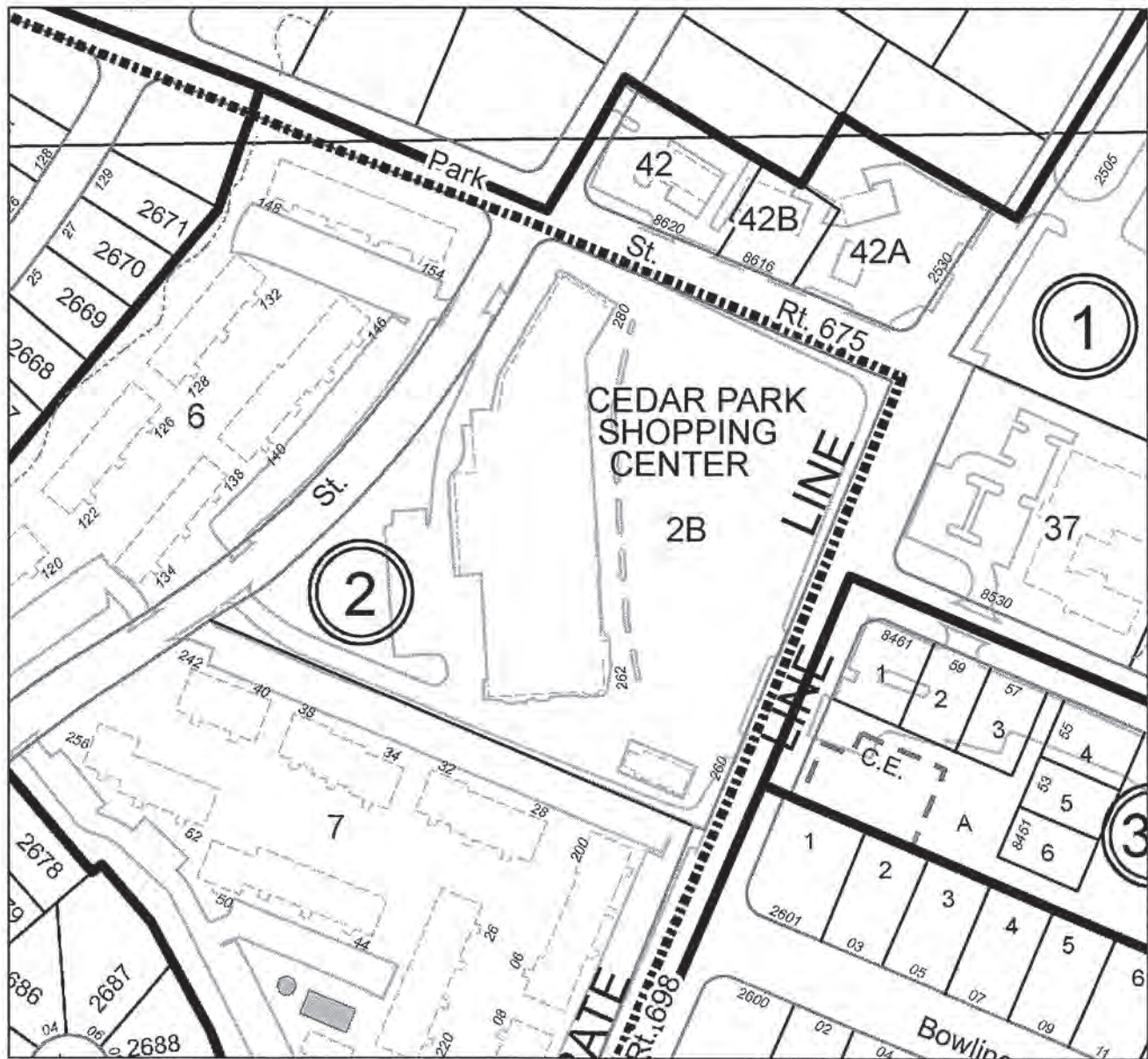
CEDAR PARK SHOPPING CENTER REFURBISHMENT

ZONING DISTRICT C-1 FINAL SITE PLAN TOWN OF VIENNA, VIRGINIA



SOILS MAP

SCALE 1" = 500'



VICINITY MAP

SCALE 1" = 500'

SCOPE OF WORK NOTE

THE SUBJECT PLAN CALLS ONLY FOR THE EXTERIOR RENOVATION OF THE EXISTING BUILDING FRONTAGE, WITH PLAZA/PARKING IMPROVEMENTS. THIS PLAN PROPOSES APPROPRIATE SWM CONTROLS TO MEET TOWN STANDARDS

USE TABULATIONS

RETAIL/OFFICE/STORAGE 58,734 S.F.
RESTAURANT 16,738 S.F. (WITH 354 SEATS)

SITE TABULATION

TAX MAP REFERENCE: 49-1 ((2)) 2B
SITE AREA: 7.21 ACRES
ZONE: C-1:LOCAL COMMERCIAL ZONE REGULATIONS
USE: EX-RETAIL, OFFICE, AND BASEMENT STORAGE
OWNERSHIP: GRI CEDAR PARK LLC

OWNER/DEVELOPER

GRI CEDAR PARK, L.L.C.
4350 EAST-WEST HIGHWAY
SUITE 400
BETHESDA, MD. 20814
(301) 907-7800
CONTACT: GREGG ZIKE
EMAIL: gzike@firstwash.com

CIVIL ENGINEER

VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE
SUITE 200
MCLEAN, VA 22102
(703) 442-7800
CONTACT: STEPHEN CROWELL, P.E.,
EMAIL: crowell@vika.com

SHEET INDEX

01.01	COVER SHEET
02.01	NOTES AND LEGEND
03.01-03.02	DETAILS
04.01	EXISTING CONDITION PLAN
04.02	DEMOLITION PLAN
05.01	OVERALL SITE AND CONTEXT PLAN
06.01	SITE PLAN
06.02	DETAIL GRADING PLAN
07.01	INTENTIONALLY OMITTED
08.01-08.02	UTILITY PROFILES AND COMPUTATIONS
09.01	INTENTIONALLY OMITTED
10.01	INTENTIONALLY OMITTED
11.01	INTENTIONALLY OMITTED
12.01	PHASE I EROSION AND SEDIMENT CONTROL PLAN
13.01	PHASE II EROSION AND SEDIMENT CONTROL PLAN
14.01	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
15.01	FIRE PROTECTION PLAN
16.01	INTENTIONALLY OMITTED
17.01	LANDSCAPE PLAN
17.02	LANDSCAPE DETAILS
17.03	EXISTING TREE INVENTORY PLAN
18.01-18.07	SWM/BMP PLAN AND NARRATIVES
19.01	ADEQUATE OUTFALL ANALYSIS
20.01	CORRESPONDENCE

ZONING TABULATION

	ZONING REFERENCE	REQUIREMENTS	PROPOSED	TOTAL # REQUIRED
COMMERCIAL USE PARKING SPACES	18-130. H	ONE (1) PARKING SPACE FOR EVERY TWO HUNDRED (200) SQUARE FEET OF FLOOR AREA ON ALL FLOORS COMMERCIAL / STORAGE SPACE: 1 PER EVERY 4 SEATS RESTAURANT SPACE	388	COMMERCIAL 58,734 / 200 = 293.67 RESTAURANT 354 SEATS / 4 = 88.5 TOTAL = 383
SCREENING	18-101	WHEN THE LOT ON WHICH PARKING SPACES ARE LOCATED ABUTS THE REAR OR SIDE LOT LINES OF, OR IS ACROSS THE STREET FROM, ANY LAND IN A RESIDENTIAL ZONE OTHER THAN PUBLICLY OWNED LAND, AN ORNAMENTAL MASONRY WALL, OR EVERGREEN PLANTINGS SIX (6) FEET OR MORE IN HEIGHT SHALL BE MAINTAINED SO AS TO SCREEN SUBSTANTIALLY THE PARKING LOT FROM VIEW FROM THE NEAREST PROPERTY IN THE RESIDENTIAL ZONE.	NOT APPLICABLE TO SUBJECT BUILDING	N/A
LANDSCAPING	18-252.E.1.C	10% OF THE SITE AREA AT 20 YEAR MATURITY WILL BE PROVIDED AS TREE CANOPY.	10.05%	10%

ZONING TABULATION C-1: LOCAL COMMERCIAL ZONE

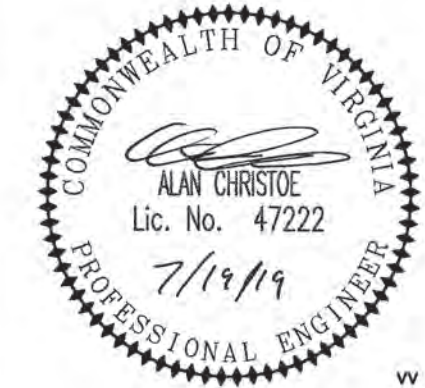
SUBJECT	ZONING REFERENCE	REQUIREMENTS	PROPOSED (1)
MINIMUM LOT AREA	18-75.1	N/A ACRES	7.21 ACRES
MINIMUM BUILDING SETBACKS			
FROM FRONT LOT LINE	18-75.1	15 FT	79'(CEDAR LANE); 74.5'(PARK STREET); 347'(PATRICK STREET)
FROM SIDE LOT LINE	18-75.1	N/A FT	N/A
FROM REAR LOT LINE	18-75.1	25 FT	392'
SIDE YARD FROM RESIDENTIAL ZONE BOUNDARY	18-75.1	8 FT	392'
MAXIMUM BUILDING HEIGHT	18-75.2	3 STORIES/35 FT	1 STORY/15 FT
TREE COVERAGE	18-252E	10%	10.05%

NO PROPOSED BUILDING ARE INCLUDED IN THIS APPLICATION. THIS PLAN CALLS FOR RENOVATION OF THE EXISTING PARKING AREA AND STORE FRONTS ONLY.

VIKA
ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING
VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

REVISIONS	DATE
1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

COVER SHEET

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019
DWG. SCALE: N/A
VIKA NO. 7062H
SHEET NO. 01.01

THESE PLANS AND PROFILES AND ALL THE NEW CONSTRUCTION WITH THIS PLAN SHALL BE IN ACCORDANCE WITH THE CURRENT APPROVED STANDARDS AND SPECIFICATIONS OF THE TOWN OF VIENNA AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

2. ALL LAND, ON OR OFF SITE, WHICH IS DISTRIBUTED BY THIS DEVELOPMENT AND WHICH IS NOT BUILT UPON OR SURFACED, SHALL BE ADEQUATELY SEEDED AND STABILIZED TO CONTROL EROSION AND SEDIMENTATION IN ACCORDANCE WITH TOWN OF VIENNA AND STATE STANDARDS.

3. A SMOOTH GRADE SHALL BE MAINTAINED FROM CENTERLINE OF PROPOSED ROADS OR PARKING AREAS TO PROPOSED CURB AND GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR THE PONDING OF ANY WATER ON THE ROADWAY.

4. ALL STRUCTURE TOPS ARE TO BE SET AFTER FINE GRADING IS FINISHED TO AVOID UNNECESSARY ADJUSTING.

5. ALL FINISHED GRADING, SEEDING AND SODDING SHALL BE DONE IN A MANNER TO PRECLUDE THE PONDING OF THE WATER ON THE SITE, PARTICULARLY ADJACENT TO THE BUILDING OR STORM INLETS.

6. CONTRACTOR IS TO VERIFY THAT ALL UTILITIES, I.E., WATER, SEWER, GAS, ELECTRIC, TELEPHONE, CABLE, ETC., ARE IN PLACE PRIOR TO CONSTRUCTION OF SUBBASE AND/OR PAVING.

7. CUT AND PATCH WORK IN EXISTING PUBLIC STREETS MUST BE PERFORMED IN ACCORDANCE WITH VDOT AND TOWN OF VIENNA STANDARDS AND SPECIFICATIONS.

8. ALL EXISTING CURB AND GUTTER ALONG THE FRONTAGE OF THIS SITE IN POOR CONDITION OR DAMAGED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED TO THE STANDARDS AND SPECIFICATIONS OF TOWN OF VIENNA AND VDOT.

9. ALL PIPES SHOWN AS RCP ON THESE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

10. ALL CONSTRUCTION SHALL COMPLY WITH OSHA SAFETY STANDARD FOR EXCAVATION 1926 PART P AND OTHER APPLICATION OSHA REQUIREMENTS.

11. TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO KNOWN GRAVE SITES ON THE SUBJECT PROPERTY.

12. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION AND NOTIFY VIENNA IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND APPROVED PLAN.

13. EXISTING MANHOLE FRAMES AND COVERS AND VALVE BOXES AND COVERS TO REMAIN SHALL BE ADJUSTED OR RECONSTRUCTED, AS NECESSARY, TO MATCH FINISHED GRADES.

14. ALL STREETS AND PARKING AREAS OUTSIDE PUBLIC RIGHTS-OF-WAY ARE TO BE PRIVATELY OWNED AND MAINTAINED.

15. EARTH SWALES AND STORM SEWER CONNECTIONS SHALL BE CONSTRUCTED IMMEDIATELY FOLLOWING CLEARING AND GRUBBING.

16. ALL ON SITE IMPROVEMENTS ARE SUBJECT TO INSPECTION UNDER TOWN OF VIENNA CODES.

17. DEVELOPER RETAINS THE RIGHT TO SELECTIVELY CLEAR UNDER STORY IN DESIGNATED TREE SAVE LOCATIONS, AND TO REMOVE DEAD OR DYING VEGETATION. FURTHER, DEVELOPER WILL DETERMINE AN APPROPRIATE GROUND PLAN TREATMENT FOR EACH TREE SAVE AREA TO MINIMIZE CONTEXTUAL FIT. OPTIONS MAY INCLUDE LEAVING IT AS IS OR CLEARING AND ADDING GROUND COVER OR TURF AS APPROVED BY THE URBAN FORESTER.

18. SIDEWALKS ARE 5 FT WIDE UNLESS NOTED OTHERWISE.

19. SEPARATE BUILDING PERMIT REQUIRED FOR ALL SIGNS AND FOR RETAINING WALLS 2 FT IN HEIGHT OR HIGHER A HANDRAIL SHALL BE INSTALLED ON ALL RETAINING WALLS WHERE REQUIRED BY BUILDING CODE.

20. RETAINING WALLS SHOWN HEREON ARE TO BE DESIGNED BY OTHERS. CONTRACTOR IS TO COORDINATE FINAL RETAINING WALL DESIGN WITH THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH TOWN OF VIENNA, AND ALL OTHER LOCAL COUNTY AND STATE AGENCIES.
2. MANY EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO DIG TEST PITS IN ADVANCE OF TRENCHING IN ORDER TO DETERMINE THE EXACT LOCATION AND ELEVATION AT CROSSINGS. IF A CONFLICT IS DISCOVERED, NOTIFY VYA, INC. AT (703) 442-7800. PRIOR TO BEGINNING INSTALLATION OF UTILITIES, CONTRACTOR SHALL VERIFY INVERTS AT ALL CONNECTIONS WITH EXISTING UTILITIES PRIOR TO PURCHASING OR ORDERING ANY PRECAST STRUCTURES.
3. NO UNDERGROUND ELECTRIC, TELEPHONE, TELEVISION CABLE, GAS OR OTHER UNDERGROUND UTILITIES SHALL BE INSTALLED WITHIN THE TOWN EASEMENT PARALLEL TO THE PROPOSED WATER MAIN. PLAN AND PROFILES OF ALL UTILITY CROSSINGS OF WATER MAINS WITHIN EASEMENTS SHALL BE SUBMITTED TO THE PUBLIC WATER SUPPLY AGENCY FOR APPROVAL PRIOR TO CONSTRUCTION.
4. ALL HYDRANT LOCATIONS TO BE APPROVED BY THE FAIRFAX COUNTY FIRE MARSHAL. HYDRANTS SHALL BE INSTALLED ACCORDING TO TOWN OF VIENNA STANDARDS AND SPECIFICATIONS.
5. ALL HYDRANT BRANCHES SHALL HAVE, A MINIMUM COVER OF 3 FT. AT A DITCH LINE.
6. ANY BLASTING NECESSARY TO INSTALL UTILITIES SHALL REQUIRE A PERMIT AND SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF VIENNA STANDARDS AND THE PROJECT SPECIFICATIONS.
7. NO PLANTINGS OR ERECTION OR OTHER OBSTRUCTIONS SHALL BE MADE WITHIN 4 FT OF ANY FIRE HYDRANT OR WITHIN 10 FT OF ANY FIRE DEPARTMENT CONNECTION.
8. ALL STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF VIENNA REQUIREMENTS, VDOT SPECIFICATIONS SECTION 302 AND SECTION 240 AND AS SPECIFIED ON THE DRAWINGS AND THE PROJECT STANDARDS.
9. BEDDING FOR ALL STORM DRAIN PIPE SHALL BE AS SPECIFIED IN THE REFERENCED SPECIFICATIONS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
10. ALL STORM SEWER STRUCTURES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF VIENNA, AND REQUIRED STANDARD DETAILS OR AS SPECIFIED ON THE DRAWINGS.
11. THE CONTRACTOR IS REQUIRED TO PERFORM ALL TESTS REQUIRED BY THE TOWN OF VIENNA TO SECURE ACCEPTANCE OF ALL UTILITIES.
12. ALL CONCRETE USED IN UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT SPECIFICATION SECTION 219 AND SHALL BE OF THE CLASS INDICATED ON STANDARD DETAILS AND THE DRAWINGS.
13. A 10 FT HORIZONTAL SEPARATION SHALL BE MAINTAINED UNLESS OTHERWISE SPECIFIED BETWEEN ALL WATER LINES AND SANITARY SEWER LINES.
14. PROPOSED UNDERGROUND UTILITIES SUCH AS ELECTRIC, TELEPHONE, CABLE AND GAS WHICH SERVE THIS FACILITY SHALL BE LOCATED WITH A MINIMUM 5 FT SEPARATION FROM PUBLIC WATER MAINS AND SANITARY SEWERS.
15. WATER METERS SHALL BE LOCATED IN AN ACCESSIBLE LOCATION AND SHALL NOT BE INSTALLED UNDER EXISTING PIPING OR CLOSE TO OTHER FACILITIES.
16. FOR SANITARY INSTALLED UNDER ROADWAYS AND/OR EASEMENTS PLANNED FOR FUTURE ROADWAYS, BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY; IN ACCORDANCE WITH VDOT SPECIFICATIONS, SECTIONS 200, 302, 303, AND 520 PER TOWN OF VIENNA SPECIFICATIONS.

1. UTILITY SWEEP IS REQUIRED FOR THE SUBJECT PROPERTY IN THE AREA OF RETAINING WALL CONSTRUCTION.
2. REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR DETAILED INFORMATION REGARDING ANY PADS OR SIGNS FOR DRIVE THRU FACILITIES.
3. REFER TO THE ARCHITECTURAL PLANS FOR DETAILS REGARDING SPECIFIC DRIVE THRU FEATURES

1. METHODS AND MATERIALS USED SHALL CONFORM TO CURRENT COUNTY/TOWN AND VDOT STANDARDS AND SPECIFICATIONS.
2. ALL UTILITIES, INCLUDING ALL POLES, ARE TO BE RELOCATED AS NECESSARY, PRIOR TO CONSTRUCTION AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT OF WAY.
4. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY.
5. A 4 IN (MIN.) LAYER OF STONE IS REQUIRED BENEATH CURB AND GUTTER.
6. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1.5 IN DEPTH; ANY COSTS ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
7. ALL EXISTING UTILITIES WILL BE ADJUSTED TO GRADE BY THE CONTRACTOR.
8. STABLE SUB-GRADE IS DEFINED AS THAT SOLID, UNDISTURBED EARTH CAPABLE OF SUPPORTING STREET LOADING WITHOUT DAMAGING SETTLEMENT AS DETERMINED BY THE ENGINEER.
9. WHERE UNSTABLE SUB-GRADE IS ENCOUNTERED, IT SHALL BE MADE STABLE BY COMPACTION OR REPLACEMENT AS REQUIRED.
10. ALL CONCRETE SHALL BE CLASS "A3" UNLESS SPECIFIED OTHERWISE.
11. CONTRACTOR TO GRIND OR MILL EXISTING PAVEMENT AS REQUIRED TO OVERLAY EXISTING PAVEMENT AND TO INDUCE REQUIRED CROSS-SLOPE. PROVIDE HEEL CUT AND SMOOTH FINISH SURFACE BETWEEN LIMIT OF OVERLAY AND EXISTING PAVEMENT SURFACE ASPHALT THAT IS MILLED IS TO BE RE-USED AS SUBBASE FOR NEW PAVEMENT SECTIONS.

1. THE SUBJECT PROPERTY IS IDENTIFIED ON FAIRFAX COUNTY TAX MAP AS TAX MAP #0491 (02) 0002B AND IS ZONED C-1.
2. THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND SHOWS ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY PANEL NO. 510902016SE, FOR FAIRFAX COUNTY, VIRGINIA AND UNINCORPORATED AREAS, DATED SEPTEMBER 17, 2010. ZONE "X" IS NOT IDENTIFIED AS A SPECIAL FLOOD HAZARD ZONE AREA.
3. THE HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO VIRGINIA COORDINATE SYSTEM OF 1983 (VC'S 1983) AND THE VERTICAL DATUM SHOWN HEREON IS REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NGVD '88) BY A GPS SURVEY PERFORMED BY VILFA VIRGINIA, LLC ON FEBRUARY 26, 2014.
4. THERE IS NO OBSERVABLE EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.
5. THERE IS NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
6. THERE IS NO OBSERVABLE EVIDENCE OF SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
7. THE HORIZONTAL CLOSURE AND ACCURACY OF THE SURVEY CONTROL USED TO PERFORM THIS SURVEY IS 1:168,404 WHICH EXCEEDS THE MINIMUM PRECISION OF 1:20,000 WITH THE ATTENDANT ANGULAR CLOSURE WHICH SUSTAINS THE ERROR OF CLOSURE.
8. THE RECORD DESCRIPTION CONTAINED HEREON AND ALL OTHER INFORMATION SHOWN HEREON IS CORRECT.
9. THE SUBJECT PROPERTY HAS DIRECT VEHICULAR ACCESS TO AND FROM A PUBLIC STREET (PARK STREET - ROUTE 675, PATRICK STREET, SE AND CEDAR LANE, SE - ROUTE 698) AS SHOWN HEREON.
10. EXCEPT AS SHOWN HEREON, THERE ARE NO DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, ENCRoACHMENTS, OvERLAPPING OF IMPROVEMENTS, EASEMENTS OR ROADWAYS.
11. COMMON BOUNDARY LINES WITH THE SUBJECT PROPERTY AND ADJOINING BOUNDARIES ARE CONTIGUOUS, WITH NO GAPS GORES OR OvERLAPS, UNLESS NOTED OTHERWISE HEREON.
12. THE AREA OF THE SUBJECT PROPERTY AND THE RESPECTIVE PARCELS THEREOF AS SHOWN IS CORRECT.
13. THIS ALTA/ACSM LAND TITLE SURVEY IS FOR THE USE OF THE SPECIFIC ENTITIES LISTED IN THE SURVEYOR'S CERTIFICATE FOR ACQUISITION/ LENDING/ REFINANCING PURPOSES AND IS NOT INTENDED FOR DESIGN OR CONSTRUCTION PURPOSES, INCLUDING THE INSTALLATION OF FENCES OR CONSTRUCTION OF OTHER IMPROVEMENTS. UTILITY LINES MAY NOT BE SHOWN AS ACTUAL WIDTHS AND SIZES.
14. THE SUBJECT PROPERTY IS CURRENTLY IN THE NAME OF GRI CEDAR PARK, LLC BY DEED RECORDED IN DEED BOOK 19100 AT PAGE 1934 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
15. STATE CODE OF VIRGINIA: PURSUANT TO SECTION 54-1-402 OF THE CODE OF VIRGINIA, ANY DETERMINATION OF CONTOURS IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR THE DESIGN, MODIFICATION OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY FOR FLOOD PLAIN DETERMINATION.

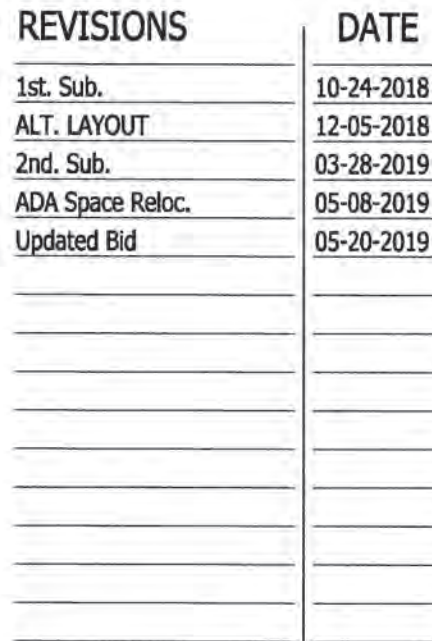
1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. IF VIKI DOES NOT PROVIDE STAKEOUT SERVICE, THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THIS PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. PROPOSED ELEVATIONS ARE TO BE CHECKED.
3. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.
4. THE CONTRACTOR IS TO CHECK THAT ALL EASEMENTS, LETTERS OF PERMISSION, ETC., ARE RECORDED/OBTAINED PRIOR TO THE START OF ANY CONSTRUCTION.
5. THE CONTRACTOR IS TO VERIFY THAT THE RELOCATION OF ALL EXISTING UTILITIES IN CONFLICT WITH PROPOSED WORK HAS BEEN COMPLETED, INCLUDING UTILITY POLES.

NOTE: THE BUILDING INFORMATION (DIMENSIONS, UTILITY CONNECTIONS, ETC.) SHOWN ON THIS PLAN HAS BEEN TAKEN FROM PLANS PREPARED BY

N/A	N/A	N/A
ARCHITECT	DATED	
N/A	N/A	N/A
MEP	DATED	

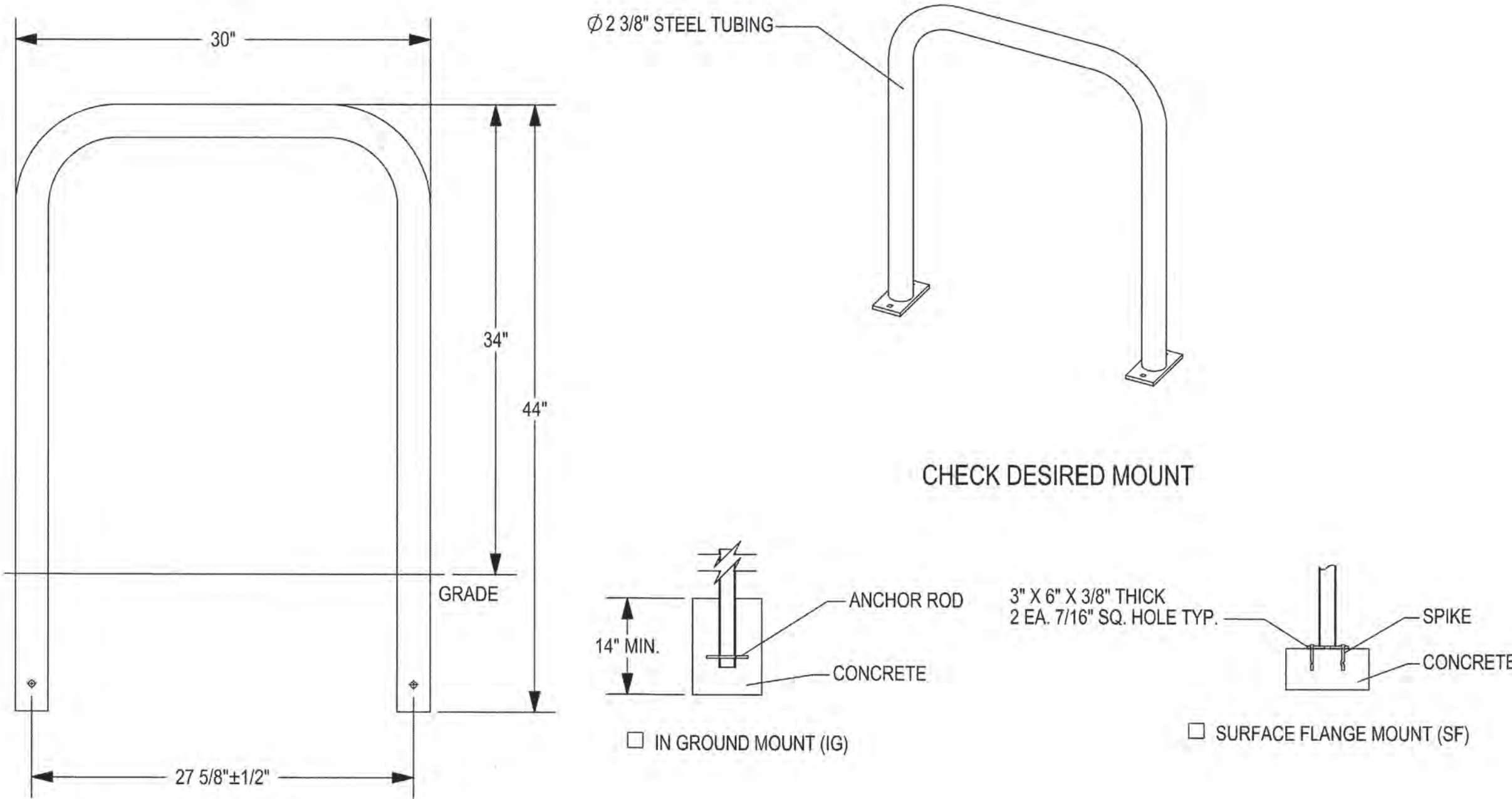
	EXISTING	PROPOSED (NEW)
STORM SEWER	EX 15" RCP	15" RCP
SANITARY SEWER	8" S	8" S
WATERLINE	8" W	8" W
UNDERGROUND TELEPHONE LINE	T	T
UNDERGROUND ELECTRICAL LINE	E	E
OVERHEAD TELEPHONE	OHT	OHT
OVERHEAD WIRES	OH W	OH W
OVERHEAD ELECTRIC	OH E	OH E
GAS LINE	2" G	2" G
INTERMEDIATE CONTOUR	32	22
INDEX CONTOUR	32	20
EDGE OF PAVEMENT	EP	EP
CURB AND GUTTER		
PROPERTY LINE		P
EASEMENT LINE		E
CENTERLINE		C
WATER SURFACE
CONDUIT		
DOOR ENTRANCE/EXIT	△	▲
TREE DRIP LINE		
TREE	15" OAK	+
FLOW LINE		
FENCELINE		
ACCESSIBLE RAMP (VDOT STD.)		
ACCESSIBLE ROUTE		
SPECIAL PAVING OR BRICK SIDEWALK		
RETAINING WALL		
SANITARY SEWER W/MANHOLE	8" S	8" SAN
RIP RAP		
BENCHMARK		B.M. #1 TRV #1 ELEV=101.62
STORM SEWER MANHOLE	Ⓢ	●
STORM DRAIN STRUCTURE	Ⓢ	■
YARD INLET	Ⓢ	■
SD STRUCTURE LBL	D 00	D 00
SANITARY MANHOLE	Ⓢ	●
SANITARY STRUCTURE LBL	S 00	S 00
SANITARY CLEANOUT	C.O.	C.O.
WATER MANHOLE	Ⓢ	●
FIRE HYDRANT	OR	+
FIRE DEPARTMENT CONNECTION		FDC
VALVE		●
METER		●
REDUCER		▶
TEE		+
CROSS		+
BENDS		
TEL MANHOLE	Ⓢ	Ⓢ T
ELEC MANHOLE	Ⓢ	Ⓢ E
STREET LIGHT	OR	OR
UTILITY POLE	OR	+
GUY WIRE		
GAS MANHOLE	Ⓢ	Ⓢ
GAS VALVE	●	●
SPOT ELEVATION	+ 00.0	+ 00.0
SOIL BORING		SB
TEST PIT		TP
VEHICLES PER DAY COUNT		000
STREET NAME SIGN		
STOP SIGN		●
PARKING TABULATION	4	4
PARKING METER		
DUMPSTER	D	D

A	AREA / ARC	IPS	IRON PIPE SET
AC	ACRE	IFC	INTERNATIONAL FIRE CODE
ACOE	US ARMY CORPS OF ENGINEERS	IBC	INTERNATIONAL BUILDING CODE
ADA	AMERICANS WITH DISABILITIES ACT	J	JOB
ADAAG	AMERICANS WITH DISABILITIES ACCESSIBILITY GUIDELINES	K	JUNCTION BOX
ABA	ARCHITECTURAL BARRIERS ACT	K	ONE THOUSAND (KILO)
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	L	LENGTH
ARCH	ARCHITECTURAL	LAT	LATERAL
ASPH	ASPHALT	LL	LOWER LEVEL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	LP	LOW POINT
B		LS	LOADING SPACE
BB	BOTTOM OF LINE	LF	LINEAR FEET
BC	BOTTOM OF CURB	LT	LIGHT
BF	BASEMENT FLOOR	M	MECH
BLDG	BUILDING	MH	MANHOLE
BM	BENCH MARK	MI	MILE
BO	BLOW OFF VALVE	MS	MEDIAN STRIP
BOS	BOARD OF SUPERVISORS	MSL	MEAN SEA LEVEL
BRL	BUILDING RESTRICTION LINE	MON	MONUMENT
BW	BOTTOM OF WALL (FINISHED GRADE ON WALL FOUNDATION)	N	N / F
BFE	BASE FLOOD ELEVATION	NFA	NET FLOOR AREA
C		NO #	NUMBER
CE	COEFFICIENT OF RUN-OFF	NBL	NORTH BOUND LANE
C	COMPACT SPACE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CB	CATCH BASIN / CHORD BEARING	O	ON CENTER
CC	CENTER TO CENTER	OD	OUTSIDE DIAMETER
CFS (Q)	CUBIC FEET PER SECOND	OH	OVERHEAD
CHD	CHORD	P	P
CG	CURB & GUTTER	PC	POINT OF CURVATURE
CIP	CAST IRON PIPE	PCC	POINT OF COMPOUND CURVATURE
CL	CENTERLINE	PCEP	POINT OF CURVE EDGE OF PAVEMENT
CMP	CORRUGATED METAL PIPE	PCTC	POINT OF CURVATURE TOP OF CURB
CONC	CONCRETE	PPM	PUBLIC FACILITIES MANUAL
CO	CLEAN OUT	PG	PAGE
COE	US ARMY CORPS OF ENGINEERS	PGL	PROFILE GRADE LINE
CONT	CONTINUATION	PI	POINT OF INTERSECTION
CT	COURT	PROP	PROPOSED (SHALL MEAN "NEW" ON THESE CONTRACT DOCUMENTS)
D		PSF	POUNDS PER SQUARE FOOT
D	DEPTH	PSI	POUNDS PER SQUARE INCH
DA	DRAINAGE AREA	PVC	POLYVINYL CHLORIDE PIPE
DB	DEED BOOK	Q	Q (C.F.S.)
DE	DELTA	Q	AMOUNT OF RUN-OFF
DES	DEPARTMENT OF ENVIRONMENTAL SERVICES	R	R
DET	DETAIL	R	RISER
DEQ	DEPARTMENT OF ENVIRONMENTAL QUALITY	RAD	RADIUS
DI	DROP INLET	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE (MIN. CLASS 52)	RD	ROAD
DM	DROP MANHOLE	RET	RETAINING
DR	DRIVE	REV	REVISION
DPWES	DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES	RR	RAILROAD
DWG/DRWG	DRAWING	RTE	RTE -- ROUTE
DW	DRIVEWAY	R/W	RIGHT-OF-WAY
DS	DOWNSPOUT	RGP	ROUGH GRADE PLAN
E		S	SAN
EC	EROSION CONTROL	SAN	SANITARY
ESMT	EASEMENT	SBL	SOUTH BOUND LANE
EC	EDGE OF GUTTER	SD	SUBDIVISION
EGL	ENERGY GRADE LINE	SECT	SECTION
ELEV	ELEVATION	SEW	SEWER
EP	EDGE OF PAVEMENT	SP	SITE PLAN
ES	END OF SECTION	SPEC	SPECIFICATION
EW	END WALL	STA	STATION
EX	EXISTING OR EXIST	STD	STANDARD
ELEC	ELECTRICAL	STK	STACK
EBL	EAST BOUND LANE	STM	STORM
F		SW	SIDEWALK
FAR	FLOOR AREA RATIO	SQ	SQUARE
FC	FACE OF CURB	SS	SANITARY SEWER
FEMA	FEDERAL EMERGENCY MANAGEMENT ASSOCIATION	SHC	SEWER HOUSE CONNECTION (LATERAL)
FF	FIRST FLOOR OF FINISHED FLOOR	T	T
FG	FINISHED GRADE	TB	TANGENT
FH	FIRE HYDRANT	TC	TEST BORE
FOY	FOYER	TELE	TOP OF CURB
FP	FLOOD PLAN	TP	TELEPHONE
FT	FEET	TOB	TEST PIT
FS	FIRE SERVICE	TW	TOP OF BANK
FHA	FEDERAL HOUSING ACT	UD	TOP OF WALL
FHAAG	FEDERAL HOUSING ACT ACCESSIBILITY GUIDANCE	UG	UNDERDRAIN
FUT	FUTURE	UL	UNDERGROUND
FW	FAIRFAX WATER	UP	UPPER LEVEL
G		V	UTILITY POLE
G	GAS	V	VELOCITY
GFA	GROSS FLOOR AREA	V	VIRGINIA
Gr	GRADE	VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
GR	GUARD RAIL	VF	VERTICAL FOOT
GF	GARAGE FLOOR	W	W / M
GW	GUY WIRE	W	WATER MAIN
H		WSEL	WATER SURFACE ELEVATION
H	HECTAIRE	WBL	WEST BOUND LANE
HC	HANDICAPPED PARKING SPACE	WHC	WATER HOUSE CONNECTION
HCL	HYDRAULIC GRADE LINE	Y	YARD INLET
HP	HIGH POINT	Y	YEAR
HR	HAND RAIL (VDOT STANDARD)	Z	Z
HT	HEIGHT	Z	SIDE SLOPES
HDPE	HIGH DENSITY POLYETHYLENE PIPE	Z.O.	ZONING ORDINANCE
I			
I	RAINFALL INTENSITY		
ID	INSIDE DIAMETER		
IN	INCH		
INV	INVERT		
IP	IRON PIPE		
IPF	IRON PIPE FOUND		
IPC	INTERNATIONAL PLUMBING CODE		

[illegible]

ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG. SCALE:	N/A
VIKA NO.	7062H
SHEET NO.	02.01



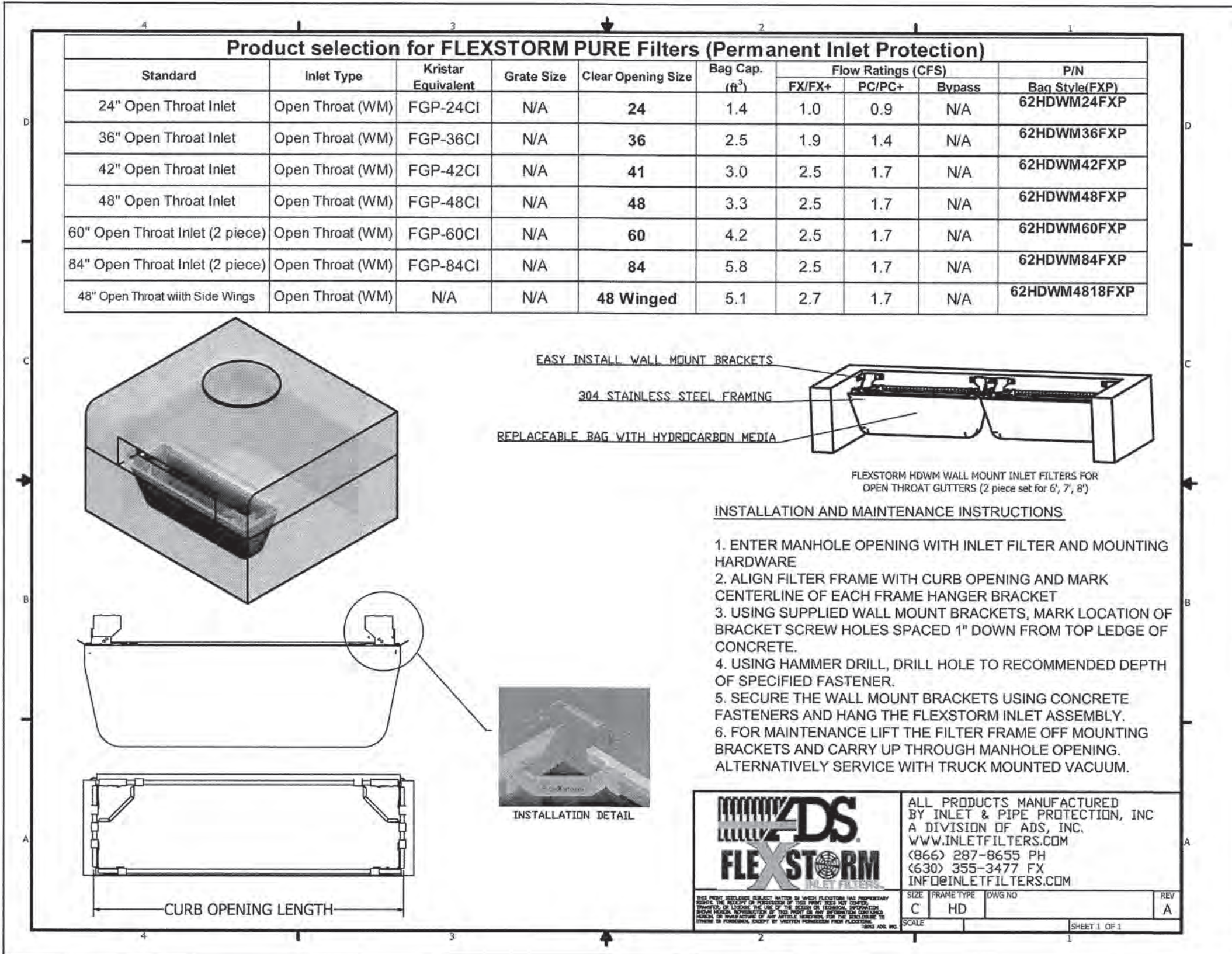
PRODUCT: UX238-IG(SF)
DESCRIPTION: U BIKE RACK
DATE: 10-5-18
ENG: SMC

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- NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 2. CONSULTANT TO SELECT COLOR / FINISH. SEE MANUFACTURER'S SPECIFICATIONS.
 3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.

BIKE RACK DETAIL



INLET FILTER DETAIL

Page 1 of 3

Ecolume is a recilinear arm-mounted area luminaires, also suitable for wall mounting. The precision segmented optical systems provide required light levels, even illumination, wide pole spacing and glare control. The housing is dieformed and the door frame is extruded aluminum. The luminaire is completely sealed and gasketed, preventing intrusion from moisture, insects and contaminants.

Flat glass lens luminaires provide full cutoff performance.

LIGHT TO BE MOUNTED AT 30'

PREFIX	MOUNTING	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
EColume						
Arm Mount to Pole	ECA18	18" Square Luminaire				
Direct Wall Mount	ECW18	18" Square Luminaire				
Wall Mount with Arm	ECWA18	18" Square Luminaire				

*Arm mounting on round poles is designed to mount to poles measuring 3.3" OD or larger only.

DISTRIBUTION
Horizontal Lamp
3H Type III
PH Type IV Forward Throw
QH Type V

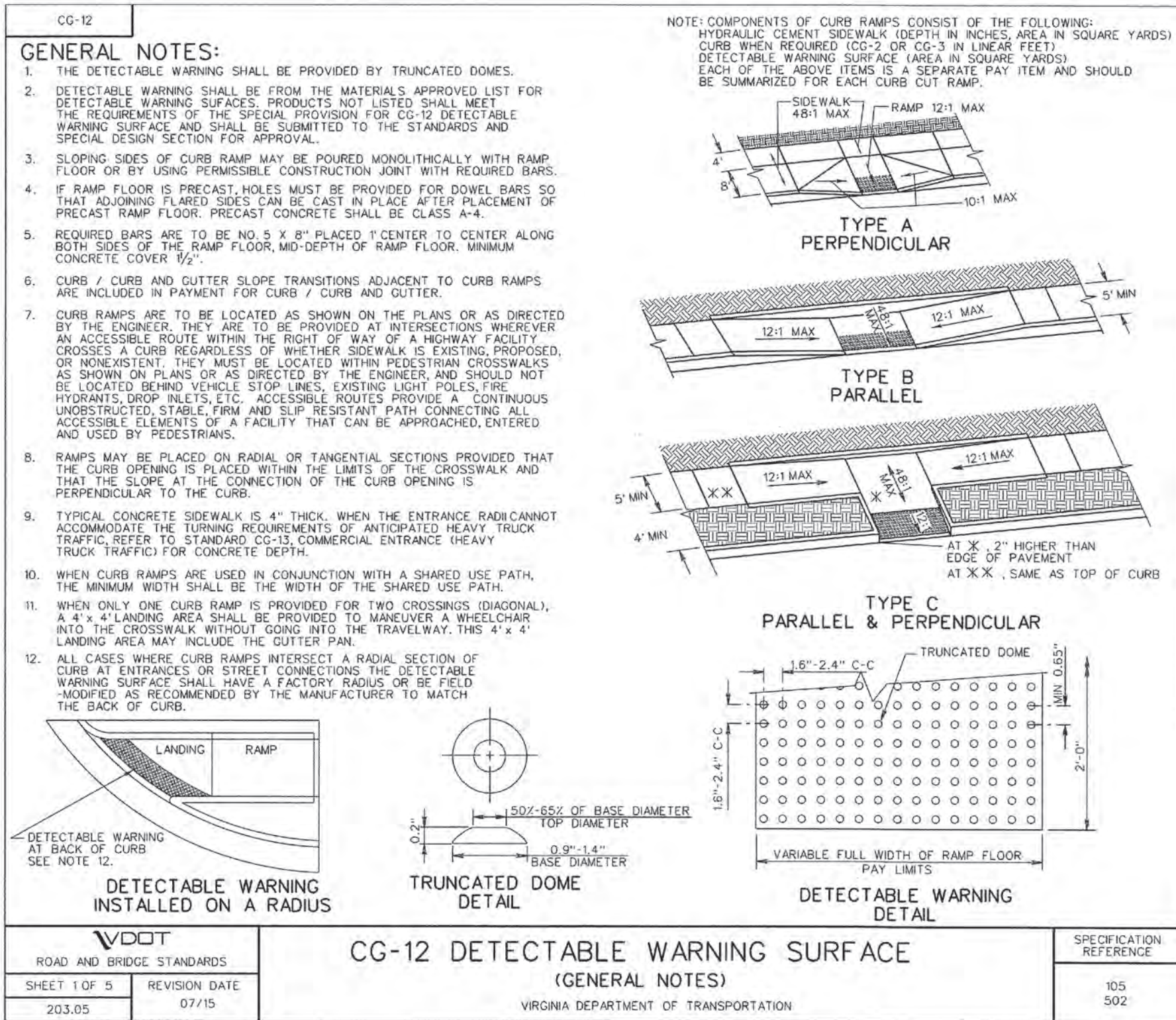
MOUNTING
1 Single Pole Mount
2 Twin Pole Mount at 180°
2@90° Twin Pole Mount at 90°
3 3-way Pole Mount at 90°
3@120° 3-way Pole Mount at 120°
4 4-way Pole Mount

Use "1" for wall mounted units.

THE TOWN OF
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2 LIGHT POST DETAIL



4 DETECTABLE WARNING STRIP DETAIL

NOT TO SCALE

Page 2 of 3

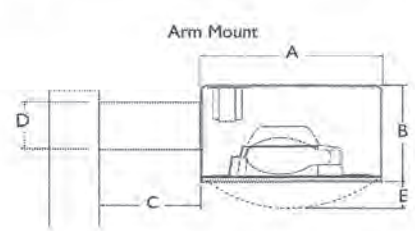
WATTAGE	18"
Pole Start MH Magnetic Ballast	250PSMH 250PSMH 320PSMH 350PSMH 400PSMH
MasterColor Elite Electronic System	210MCE-3K 210MCE-4K 315MCE-3K 315MCE-4K
Pole Start MH Electronic Ballast	250PSE 250PSE
High Pressure Sodium Magnetic Ballast	250HPS 400HPS

* 250P590 includes a 90% efficient magnetic P59H ballast, meeting the requirements of California Title 20.

OPTIONS	18"
HS Internal House Side Shield	Q5 Quartz Standby
F Fusing	Q5 Quartz Standby - Timed
LP In-Pole/In-Line Fusing	Q224 Quartz Emergency Quartz
PCF Locking Type Photocontrol Receptacle with Photocontrol	Q224 Quartz Emergency Quartz
PCR Locking Type Photocontrol Receptacle with Photocontrol	Q224 Quartz Emergency Quartz
PCB Button Photocontrol	Q224 Quartz Emergency Quartz
MF Master Arm Fitter	Q224 Quartz Emergency Quartz
PTF2 Pole top fitter fits 3 3/8-2 1/2" OD x 4" depth tenon	Q224 Quartz Emergency Quartz
PTF3 Pole top fitter fits 3-3 1/2" OD x 6" depth tenon	Q224 Quartz Emergency Quartz
PTF4 Pole top fitter fits 3 1/2-4" OD x 6" depth tenon	Q224 Quartz Emergency Quartz
AP Adjustable Knuckle - Square Pole Mount	Q224 Quartz Emergency Quartz
AT Adjustable Knuckle - Tenon Mount	Q224 Quartz Emergency Quartz

DIMENSIONS AND EPA (CONTINUED ON PAGE 3)

ARM MOUNT	18"
A	18" sq
B	45.72cm
C	10"
D	25.40cm
E	11"
F	27.94cm
G	9"
H	22.86cm
I	5"
J	12.70cm
K	2.25"
L	5.72cm
M	4"
N	10.16cm



ECOLUME	EPA (Effective Projected Area)
18" units	Single 1.9 / 177
	Twin 180° 3.8 / 354
	Quad 4.8 / 446

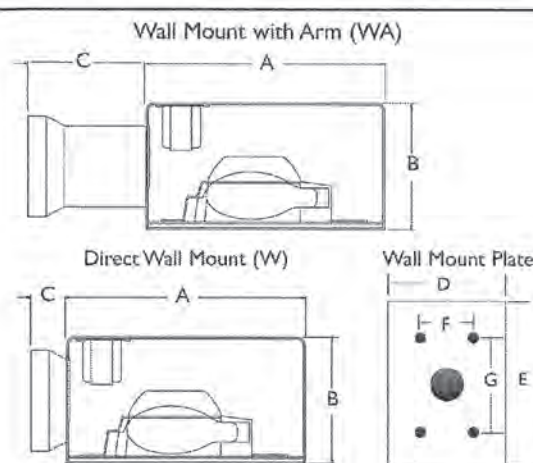
ECOLUME	Single Luminaire Weight (lbs / kg)
18" units	50 / 22.68

Page 3 of 3

DIMENSIONS AND EPA (CONTINUED FROM PAGE 2)

WALL MOUNT / WALL MOUNT PLATE	18"
A (W & WA)	18" sq
B (W & WA)	45.72cm
C (W & WA)	10"
D (W & WA)	25.40cm
E (W & WA)	11"
F (W & WA)	27.94cm
G (W & WA)	9"
H (W & WA)	22.86cm
I (W & WA)	5"
J (W & WA)	12.70cm
K (W & WA)	2.25"
L (W & WA)	5.72cm
M (W & WA)	4"
N (W & WA)	10.16cm

Arm Mount and Wall Mount



SPECIFICATIONS

GENERAL DESCRIPTION: Ecolume is a cutoff luminaire for high intensity discharge lamps. Internal components are totally enclosed, rain-tight, dust-tight, and corrosion resistant. No venting of the optical system or electrical components is required or permitted. Lamping requires no lifting or hinging of the luminaire housing, disturbing wiring or exposing unshielded live parts.

HOUSING: The housing wrapper is one-piece dieformed aluminum. The housing has an integral reinforcing spine and no welded corners. Silicone seals provide a weather-tight seal at all points of material transition.

LENS: A mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. A single flush 1/4 turn captive fastener permits easy access to the luminaire.

OPTICAL SYSTEMS: The segmented reflector system consists of two levels of highly specular silicon bases precisely angled to achieve specified photometric distributions. The entire optical system is field specified in 90° increments. The position-oriented mogul base socket is glazed porcelain with a nickel plated screw shell. A lamp stabilizer is standard on 3H and QH 400W PSMH units.

HEIGHT OF LIGHT POLES TO BE 30'

ELECTRICAL: All electrical components are UL recognized and factory tested. Electronic and magnetic HID ballasts are high power factor. Magnetic HID ballasts are the separate component type. The ballast is mounted on a unitized tray and secured within the luminaires, above the reflector system. Electronic and magnetic HID ballasts are capable of providing reliable lamp starting down to -20°F / -29°C. Standard fluorescent ballasts are solid state.

Luminaires provided with the MasterColor Elite high performance ceramic metal halide electronic system include high power factor electronic ballasts, designed specifically for the system selected.

FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally-cured polyester powder finish after fabrication.

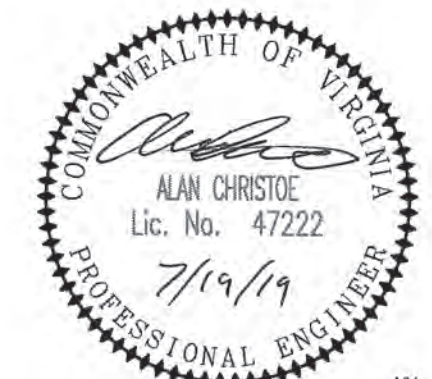
LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Ecolume Luminaires feature a 5 year limited warranty. See www.lighting.phillips.com/support/support/warranty for complete details and exclusions.

VKA
ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING
VKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

REVISIONS	DATE
1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

SITE DETAILS

DRAWN BY:	CH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG. SCALE:	NTS
VKA NO.	7062H
SHEET NO.	03.02

NOTES:

1. THE SUBJECT PROPERTY IS IDENTIFIED ON FAIRFAX COUNTY TAX MAP AS TAX MAP #0491 ((02)) 0002B AND IS ZONED C-1.
2. THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY PANEL NO. 51059C0165E, FOR FAIRFAX COUNTY, VIRGINIA AND UNINCORPORATED AREAS., DATED SEPTEMBER 17, 2010. ZONE "X" IS NOT IDENTIFIED AS A SPECIAL FLOOD HAZARD ZONE AREA.
3. THE HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO VIRGINIA COORDINATE SYSTEM OF 1983 (VCS '83) AND THE VERTICAL DATUM SHOWN HEREON IS REFERENCED TO NATIONAL GEODETTIC VERTICAL DATUM OF 1988 (NGVD '88) BY A GPS SURVEY PERFORMED BY VIKIA VIRGINIA, LLC ON FEBRUARY 26, 2014.
4. THE HORIZONTAL CLOSURE AND ACCURACY OF THE SURVEY CONTROL USED TO PERFORM THIS SURVEY IS 1:168,404 WHICH EXCEEDS THE MINIMUM PRECISION OF 1:20,000 WITH THE ATTENDANT ANGULAR CLOSURE WHICH SUSTAINS THE ERROR OF CLOSURE.
5. THE SUBJECT PROPERTY IS CURRENTLY IN THE NAME OF GRI CEDAR PARK, LLC BY DEED RECORDED IN DEED BOOK 19100 AT PAGE 1934 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
6. THE EXISTING CONDITIONS SURVEY WAS COMPLETED UNDER THE DIRECT RESPONSIBLE CHARGE OF, FRANKLIN JENKINS, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION THAT THE ORIGINAL DATA WAS OBTAINED FEBRUARY 26, 2014 AND THAT THIS PLAN MEETS MINIMUM HORIZONTAL AND VERTICAL ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

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PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

EXISTING CONDITIONS PLAN

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
SCALE:	1"=30'
PROJECT NO.	7062H
SHEET NO.	04.01

EXISTING TOPO CHECK NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXISTING TOPOGRAPHIC CONDITIONS INDICATED ON THESE PLANS AND CONTRACT DOCUMENTS PRIOR TO BEGINNING ANY LAND DISTURBANCE WORK ON THE PROJECT. ONCE LAND DISTURBANCE HAS COMMENCED, THE CONTRACTOR SHALL HAVE NO CLAIMS AS TO EXISTING TOPOGRAPHY NOT MEETING MINIMUM SURVEY STANDARDS AND SHALL ACCEPT ALL EXISTING TOPOGRAPHIC CONDITIONS AS BEING WITHIN UNITED STATES NATIONAL MAP ACCURACY STANDARDS FOR CONSTRUCTION CONTRACT PURPOSES. IF THE CONTRACTOR FINDS A DISCREPANCY IN TOPOGRAPHIC INFORMATION, HE/SHE SHALL NOTIFY VIKI AND THE OWNER PRIOR TO PERFORMING ANY LAND DISTURBING ACTIVITY SO THE AREA CAN BE RESURVEYED IN AN UNDISTURBED STATE.

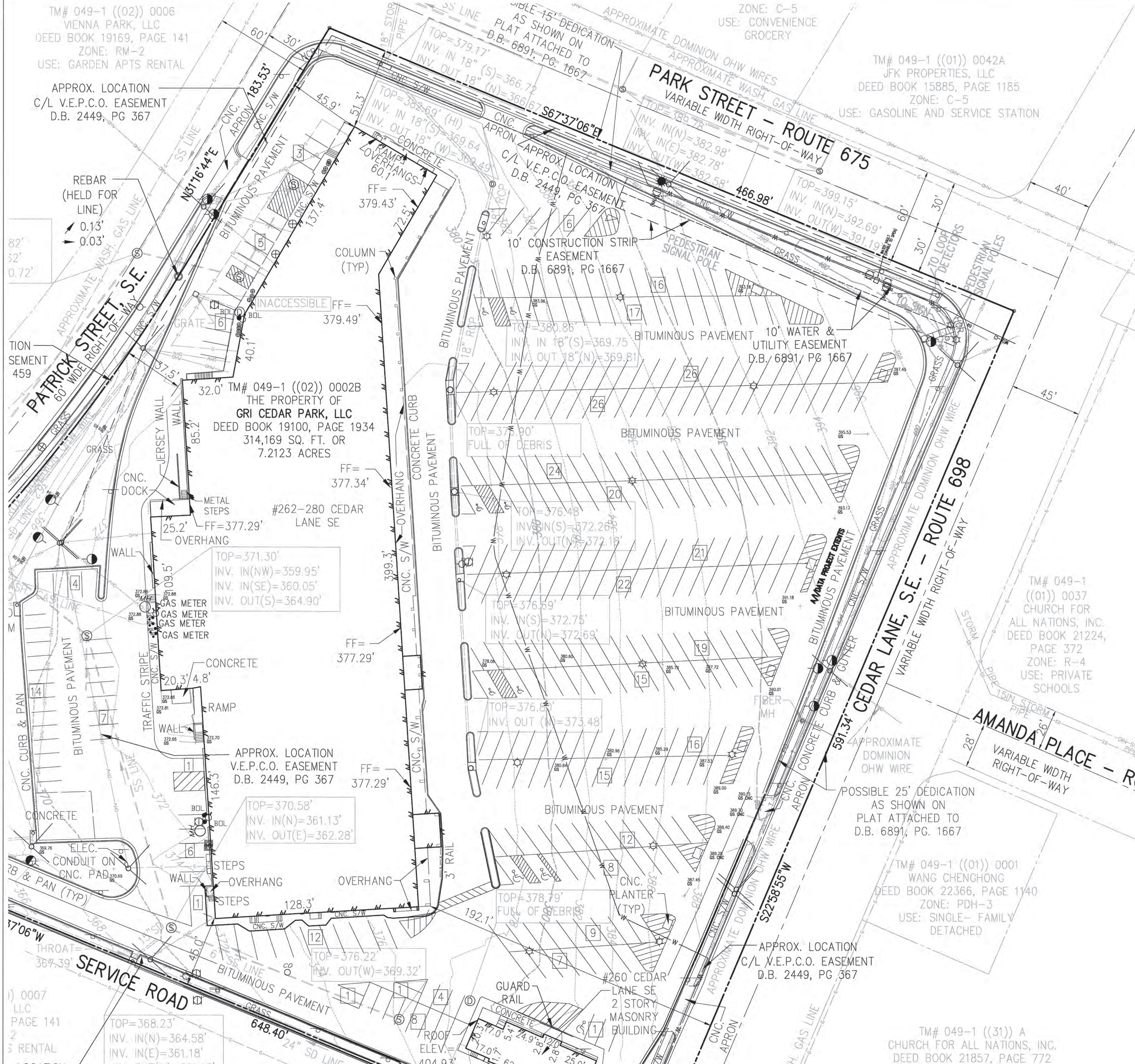


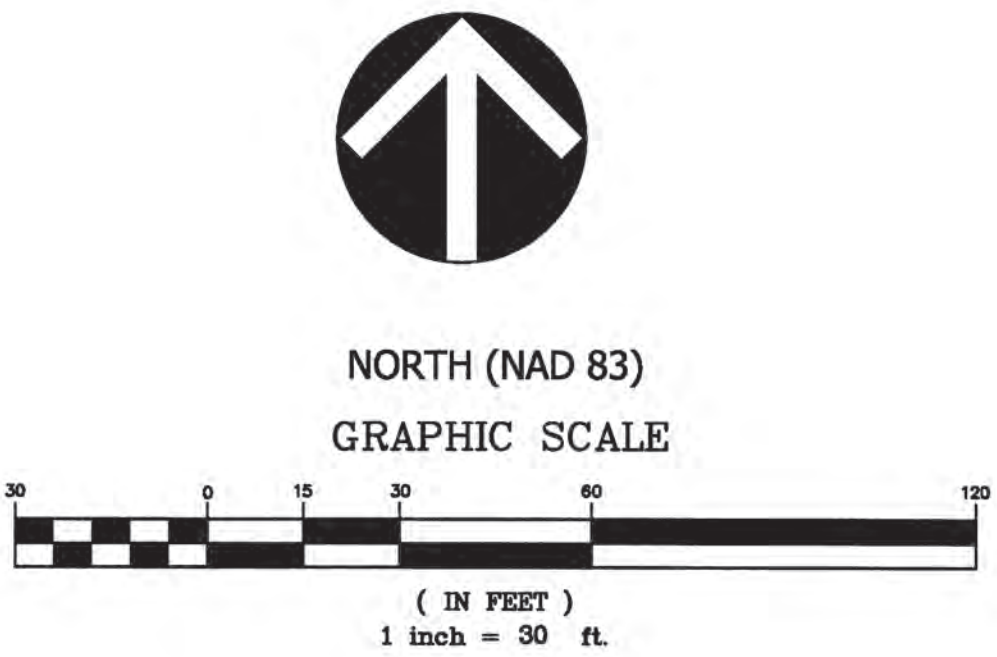
NORTH (NAD 83)

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
1 REVISION APPROVED BY SITE PLAN REVIEW AND INSPECTIONS DIVISION				





PROFESSIONAL SEAL

COMMONWEALTH OF VIRGINIA

ALAN CHRISTOË
Lic. No. 47222

7/2/19

PROFESSIONAL ENGINEER

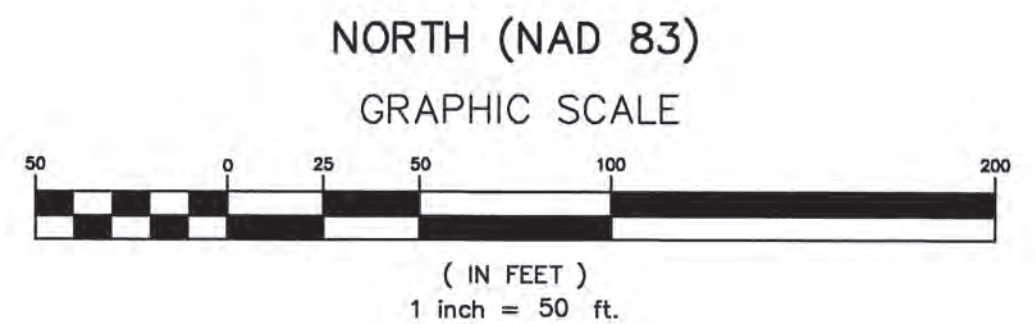
DEMOLITION PLAN

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG. SCALE:	1"=30'
VIKA NO.	7062H
SHEET NO.	04.02



THE TOWN OF
VIENNA
ESTABLISHED 1890
PUBLIC WORKS
APPROVED

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
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AWG.	1"=50'
SCALE:	
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PIKA	7062H
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SHEET	05.01
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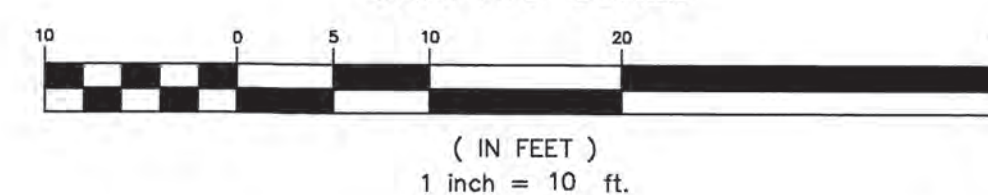
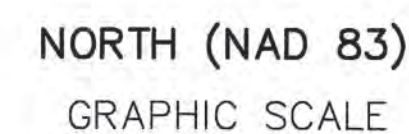
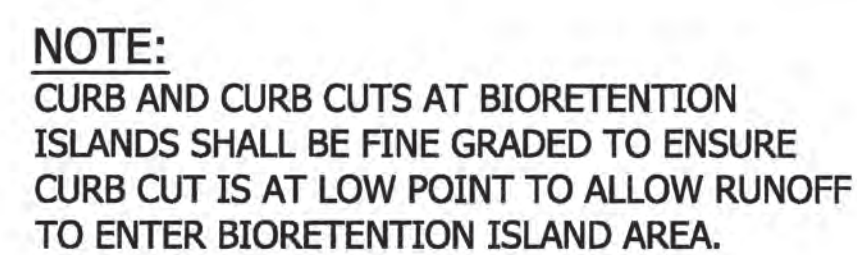
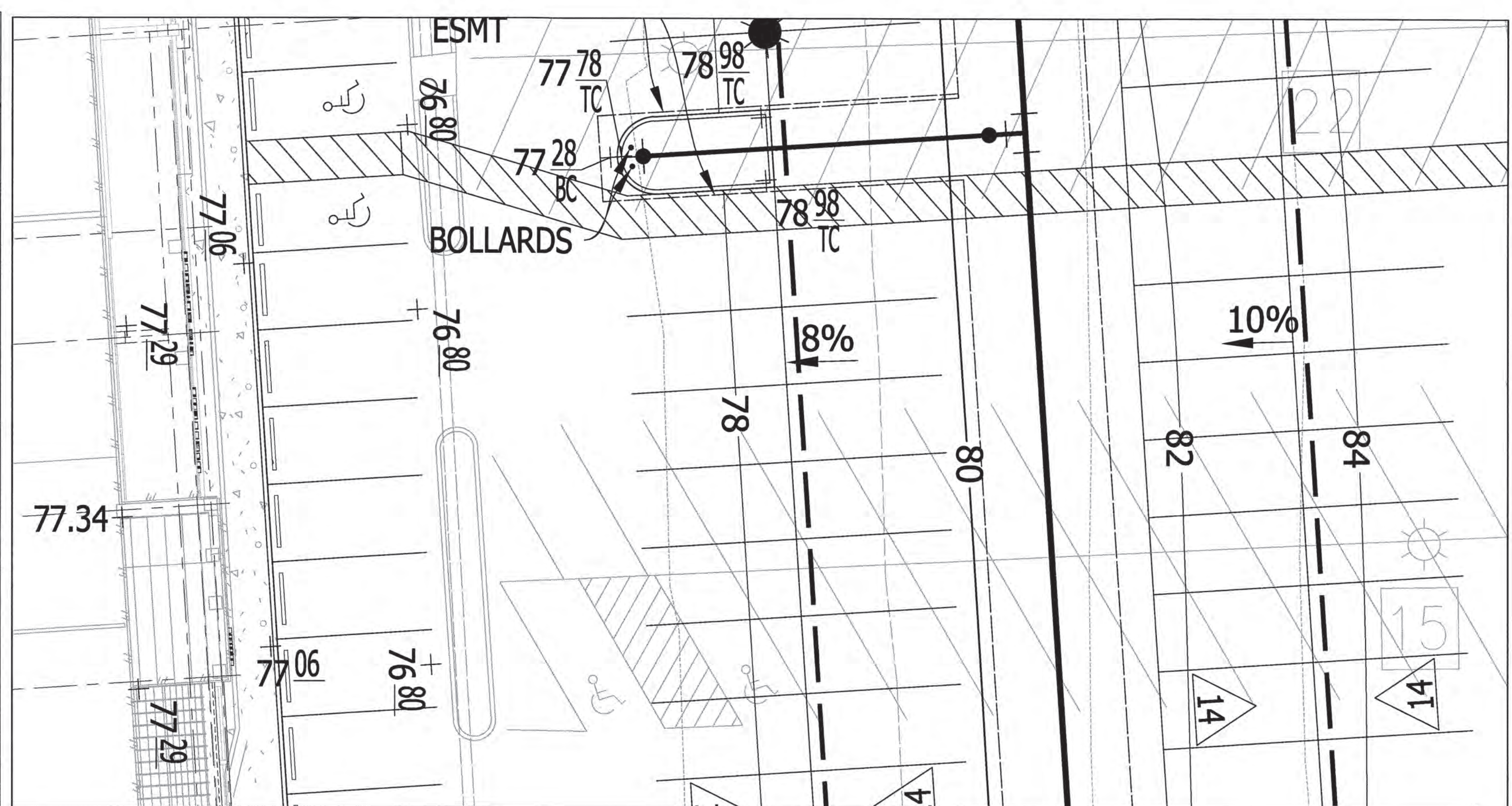
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REVISIONS	DATE
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PROFESSIONAL SEAL

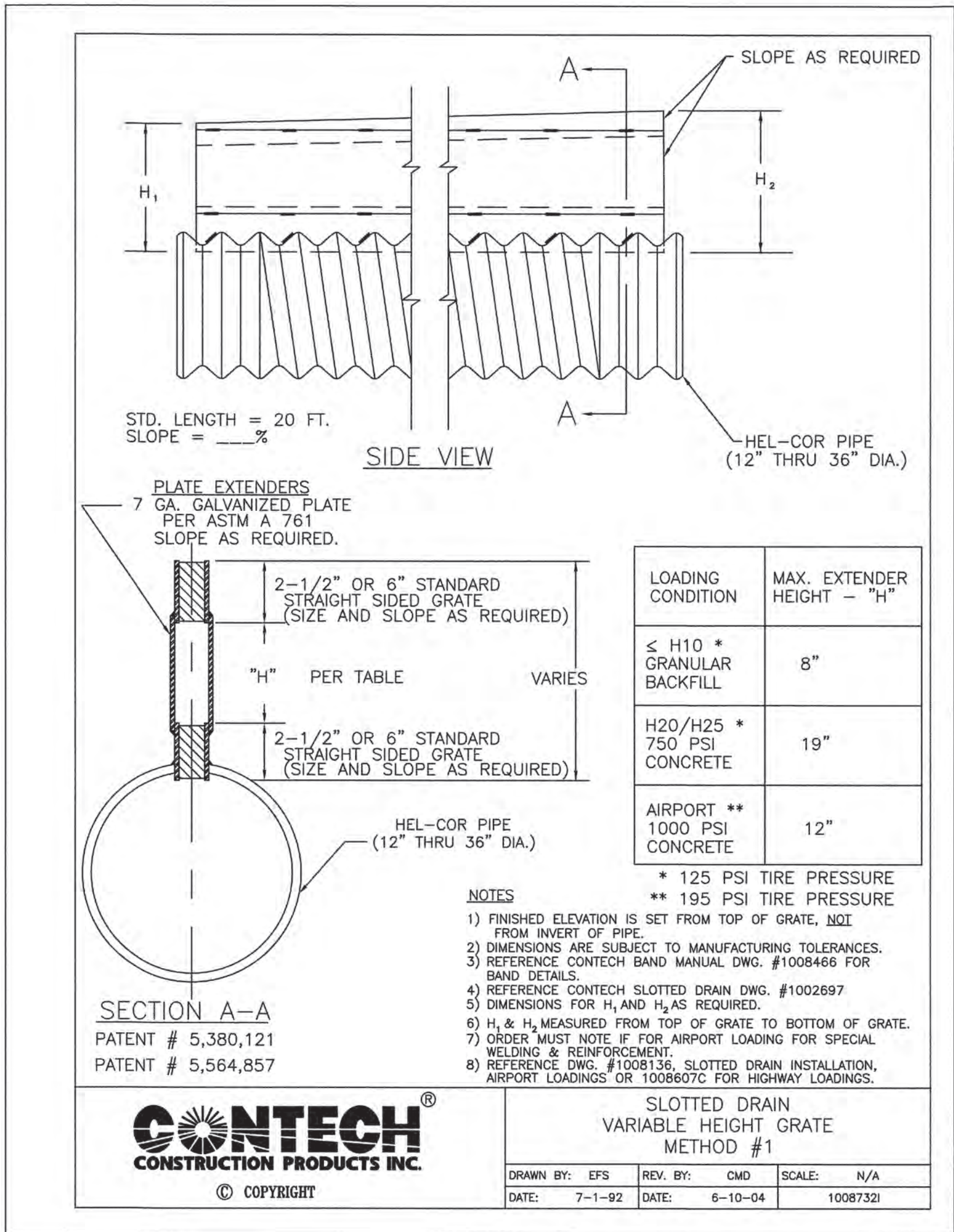
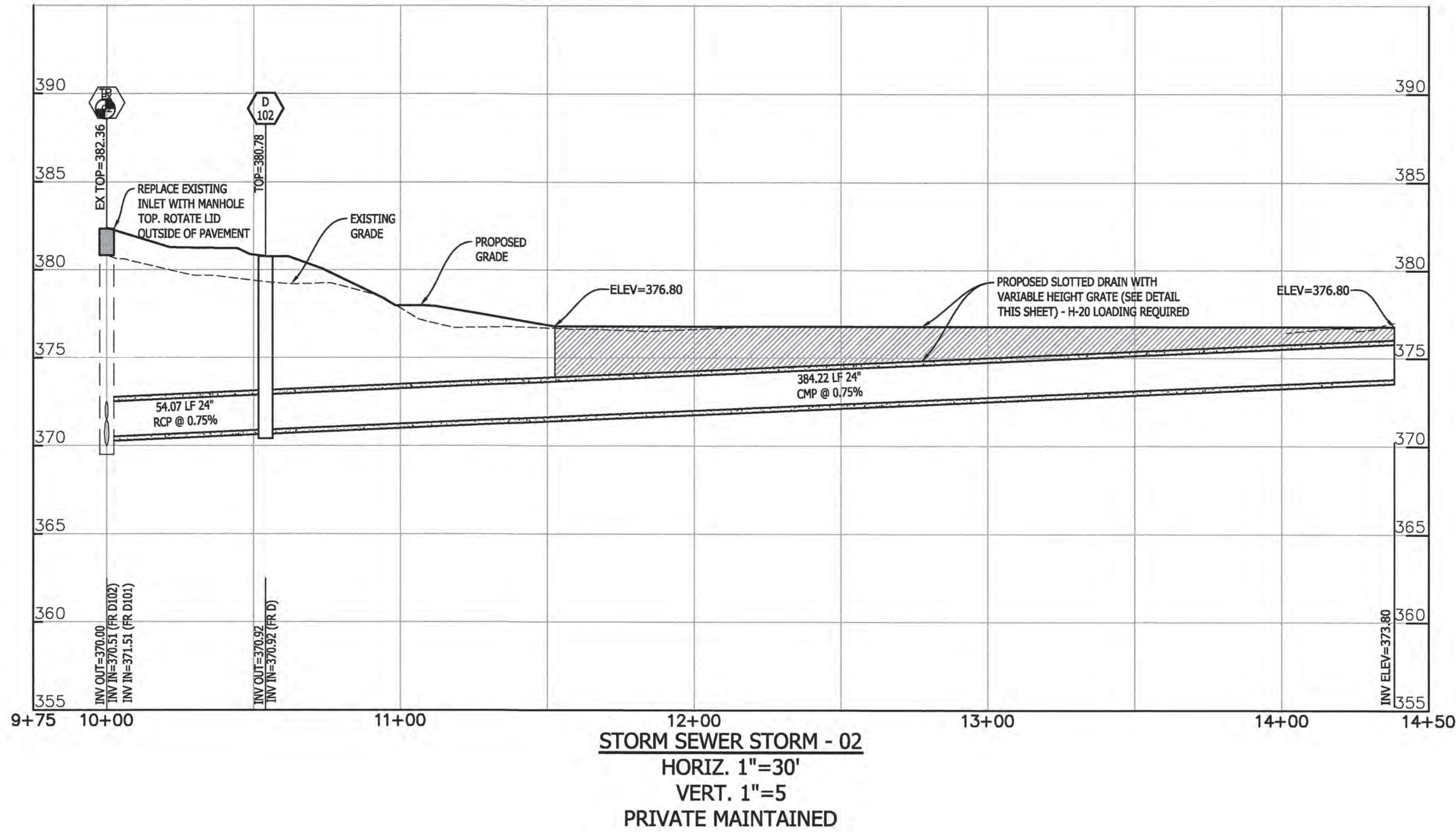
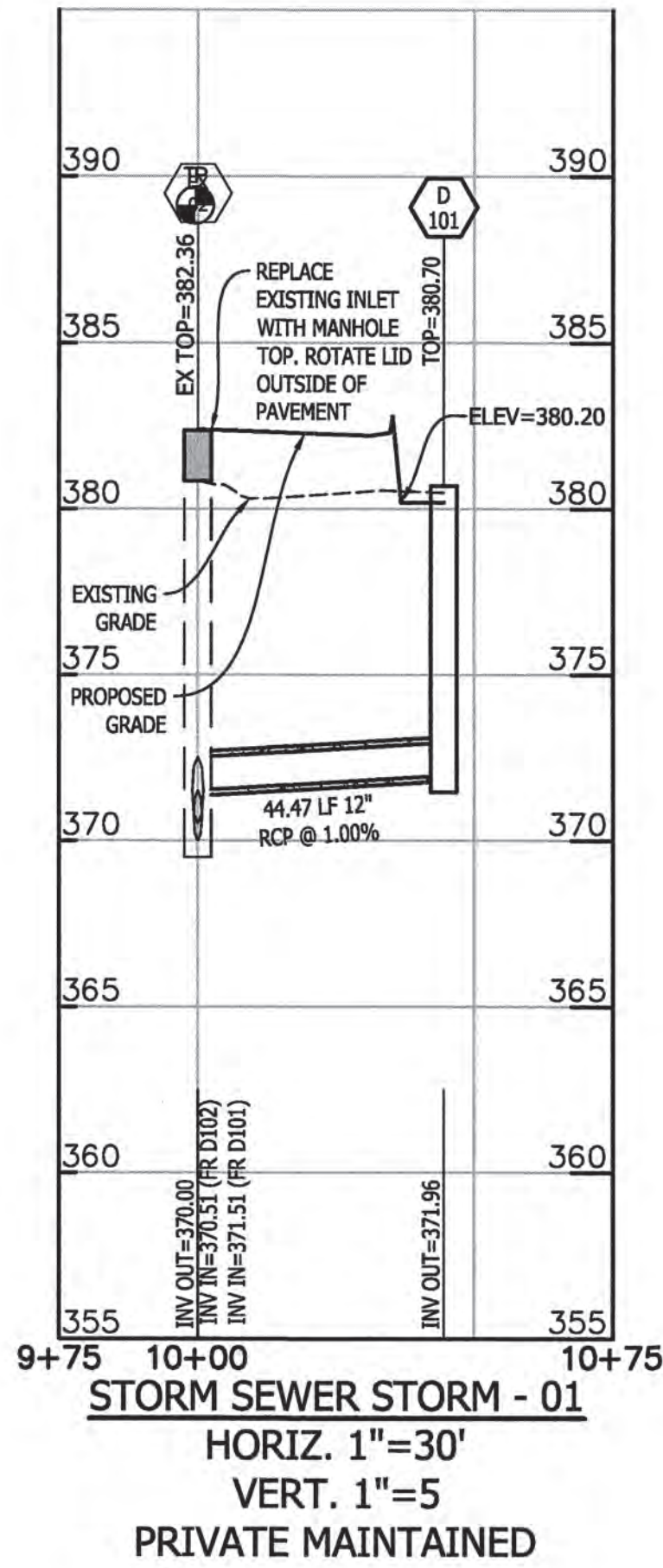
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DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
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WG.	
SCALE:	1"=10'
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DIKA	
O.	7062H
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SHEET	
O.	06.02



NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
<div style="text-align: center;"> REVISION APPROVED BY SITE PLAN REVIEW AND INSPECTIONS DIVISION </div>				

THE TOWN OF
VIENNA
ESTABLISHED 1890
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NOTE:
CONTRACTOR SHALL INSTALL TO ENSURE AT A MINIMUM THE H-20 LOADING SPECIFICATIONS ARE MET.

From Point OUT	To Point IN	Drainage Area	C Factor	C x A Increment	Cumm.	Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elev. Upper End	Lower End	Length FT.	Slope %	Dia. IN.	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.
TRENCH DRAIN	D-102	2.54	0.85	2.16	2.16	5.00	6.78	14.64	373.80	370.92	384.2	0.75%	24	19.64	6.54	0.98
D-102	EX-01	0.00	0	0.00	2.16	5.24	6.69	14.45	370.92	370.51	54.1	0.76%	24	19.75	6.56	0.14
D-101	EX-01	0.63	0.9	0.57	0.57	5.44	6.63	3.76	372.18	371.51	44.5	1.50%	12	4.37	6.26	0.12
EX-01	EX-02	0.00	0	0.00	2.73	6.02	6.44	17.56	368.96	366.93	103.3	1.97%	18	14.77	8.36	0.21

Slotted Drain in Sag	
Required Information	
Total flow into inlet, Q (cfs):	14.64
Depth of flow over the slot, d (ft):	0.25
Output	
Length of the slot required for total interception, L _s (ft):	40.992
Minimum required length with safety factor, L _s (ft):	81.984

TP
TEST PIT NOTE:
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, ELEVATIONS, SIZES, AND MATERIALS OF EX UTILITIES BY DIGGING TEST PITS BY HAND AT ALL POINTS OF CONNECTION AND AT CROSSINGS. RESULTS FROM THESE TEST PITS SHALL BE SUBMITTED TO VIKI, INC. PRIOR TO COMMENCING CONSTRUCTION AND/OR ORDERING MATERIALS.

PIPE MATERIAL NOTE:
UNLESS OTHERWISE NOTED ALL PIPE IS TO BE ASTM C-76 CLASS III RCP.

MAINTENANCE NOTE:
UNLESS OTHERWISE NOTED ALL PIPE IS TO BE PRIVATELY MAINTAINED.

10-YR HGL NOTE:
UNLESS OTHERWISE NOTED THE 10-YR HGL IS AT OR BELOW THE CROWN OF THE PIPE.

ROOF DRAIN NOTE:
ALL ROOF DRAINS AND NON-STANDARD PIPES TO BE CONSTRUCTED UNDER A SEPARATE PLUMBING PERMIT.

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
REVISION APPROVED BY SITE PLAN REVIEW AND INSPECTIONS DIVISION				

VIKA
ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING
VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

REVISIONS	DATE
1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



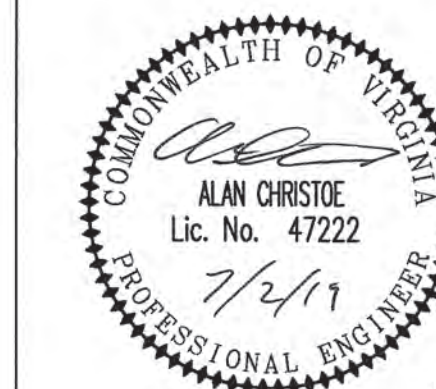
**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

**UTILITY PROFILES
AND
COMPUTATIONS**

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019
DWG. SCALE: H:1"=30'; V:1"=5'
VIKA NO. 7062H
SHEET NO. 08.01

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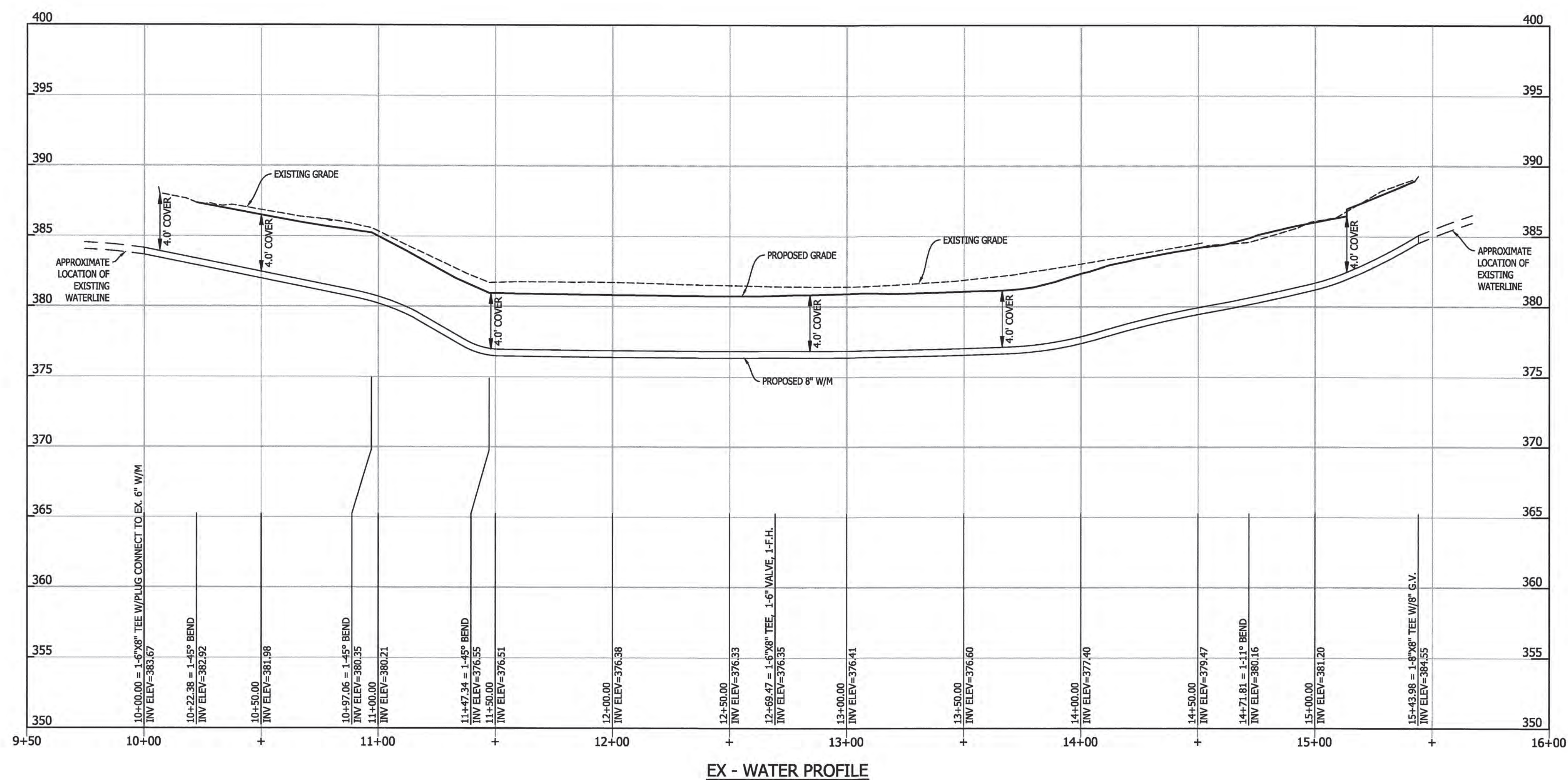
PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

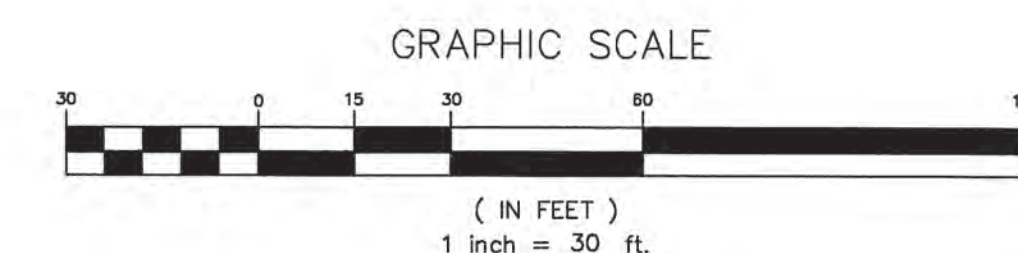
UTILITY PROFILES AND COMPUTATIONS

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG. SCALE:	H:1"=30'; V:1"=5'
VIKA NO.	7062H
SHEET NO.	08.02



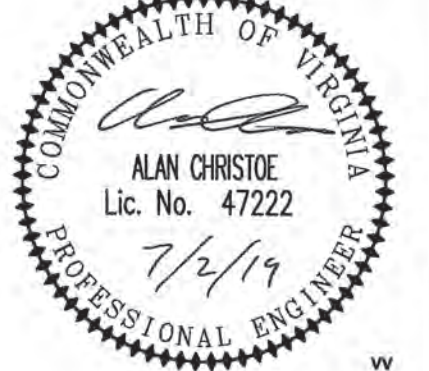
TEST PIT NOTE:
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, ELEVATIONS, AND SIZES OF EX. UTILITIES BY DIGGING TEST PITS BY HAND AT ALL POINTS OF CONNECTION AND AT CROSSINGS. TEST PIT SHALL BE DUG AT APPROPRIATE INTERVAL TO VERIFY ALLOWABLE COVER ON WATER LINE IS MAINTAINED.

RESTRAINT NOTE:
ALL VERTICAL BENDS IN WATER MAIN ARE TO BE RESTRAINED

[illegible]

[illegible]

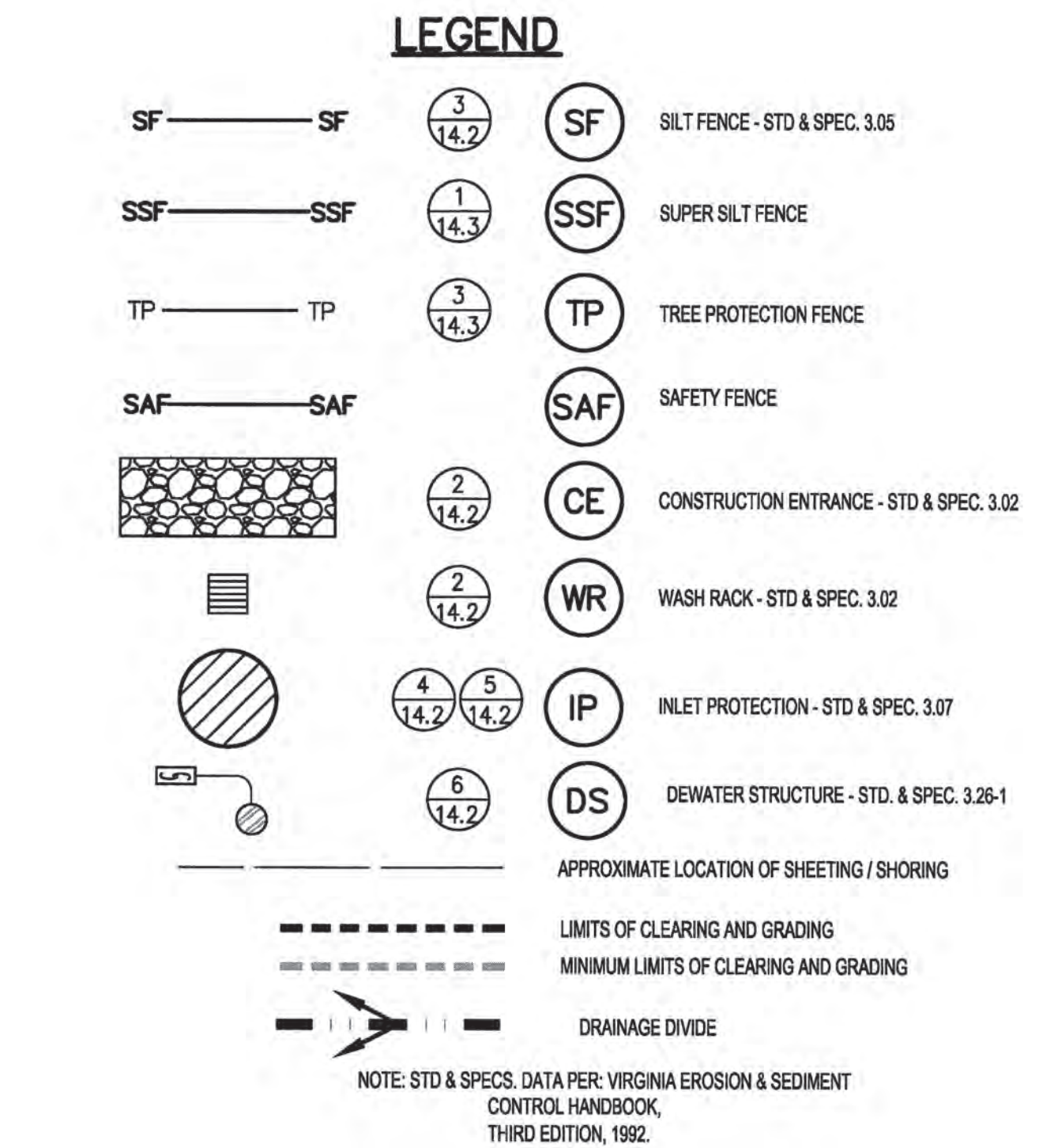
PROFESSIONAL SEAL



**CEDAR PARK
HOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

EROSION AND SEDIMENT CONTROL PLAN PHASE I

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
<hr/>	
FWG.	
SCALE:	1"=30'
<hr/>	
PLANK	
NO.	7062H
<hr/>	
SHEET	
NO.	12.01



CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE OWNER/PROPERTY MANAGER TO ENSURE ACCESS TO THE ACTIVE PORTION OF THE CENTER IS MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS

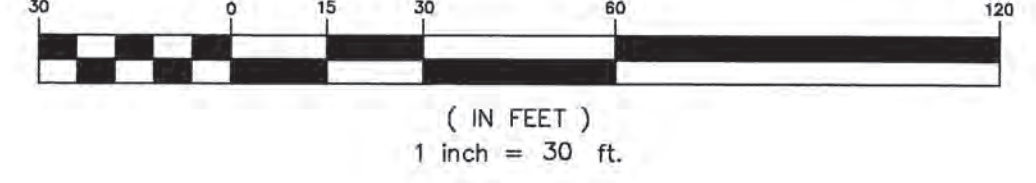
THE TOWN OF
VIENNA
ESTABLISHED 1890
**PLANNING & ZONING
APPROVED**

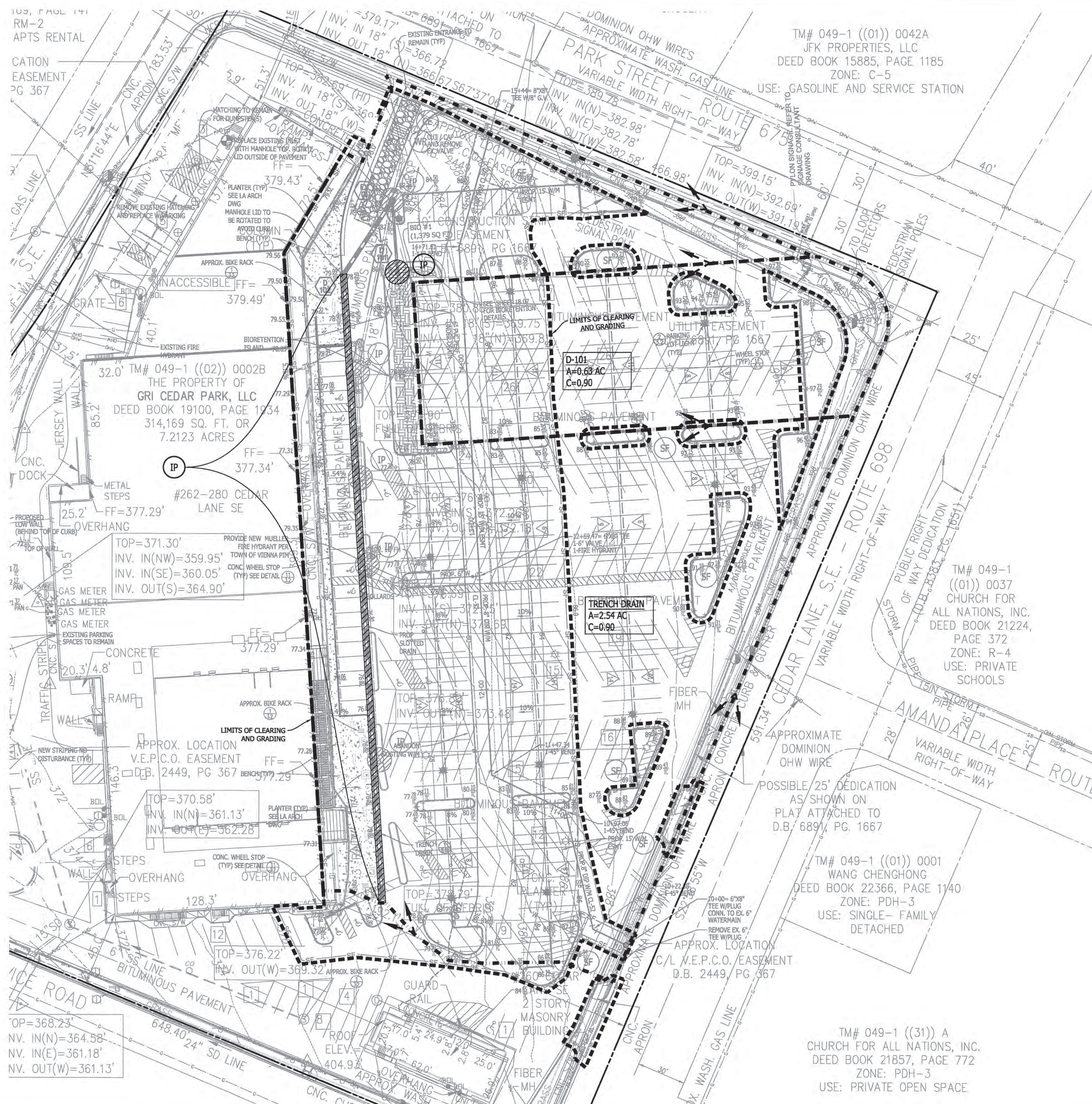
THE TOWN OF
VIENNA
ESTABLISHED 1890
PUBLIC WORKS
APPROVED



NORTH (NAD 83)

GRAPHIC SCALE

[illegible]



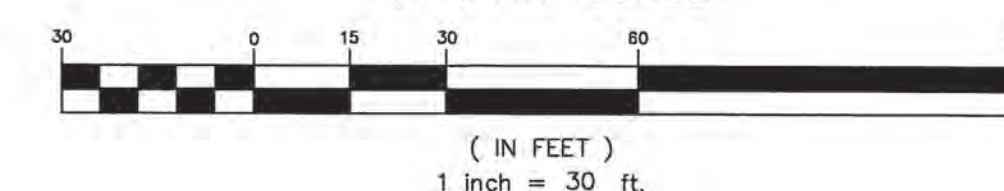
CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE OWNER/PROPERTY MANAGER TO ENSURE ACCESS TO THE ACTIVE PORTION OF THE CENTER IS MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS

THE TOWN OF
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NORTH (NAD 83)
GRAPHIC SCALE



NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
<div style="text-align: center;"> REVISION APPROVED BY SITE PLAN REVIEW AND INSPECTIONS DIVISION </div>				

1. DESCRIPTION OF SITE

TYPE OF DEVELOPMENT: OFFICE / BUSINESS FACILITY, PARKING AREAS,
AND SUPPORTING UTILITIES.

AREA OF SITE: 7.21 ACRES

EXISTING CONDITIONS AND VEGETATION:

THE EXISTING TERRAIN CONSISTS OF MODERATE SLOPES WITH A VAST MAJORITY
OF THE SITE BEING PAVED OR BUILDING AND A MINOR GRASS AREA WITH LIMITED
LANDSCAPING. THERE ARE EXISTING BUILDINGS A MAXIMUM OF 2 STORIES ABOVE
GRADE WITH AN ADDITIONAL STORY BELOW GRADE IN THE SAME AREAS.

DRAINAGE SHED: WOLFTRAP CREEK
2. CONSTRUCTION SCHEDULE:

CONSTRUCTION IS PLANNED TO BEGIN WITHIN ONE YEAR OF APPROVAL OF THE
CONSTRUCTION PLANS AND TO BE COMPLETED IN TWO YEARS.
3. SOILS DATA:

PER FAIRFAX COUNTY SOILS MAPS, SEE COVER SHEET.
4. EROSION AND SEDIMENT CONTROL:

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 60 DAYS.
5. EROSION AND SEDIMENT CONTROL MEASURES:

THE SUBJECT SITE WILL RELY ON SILT FENCE, INLET PROTECTION, AND A CONSTRUCTION
ENTRANCE WITH A WASH RACK TO CONTROL SEDIMENT LEAVING THE SITE AND MINIMIZE
EROSION. THE EXISTING PAVEMENT MAY BE USED AS A CONSTRUCTION ENTRANCE WITH
APPROVAL OF THE TOWN INSPECTOR.

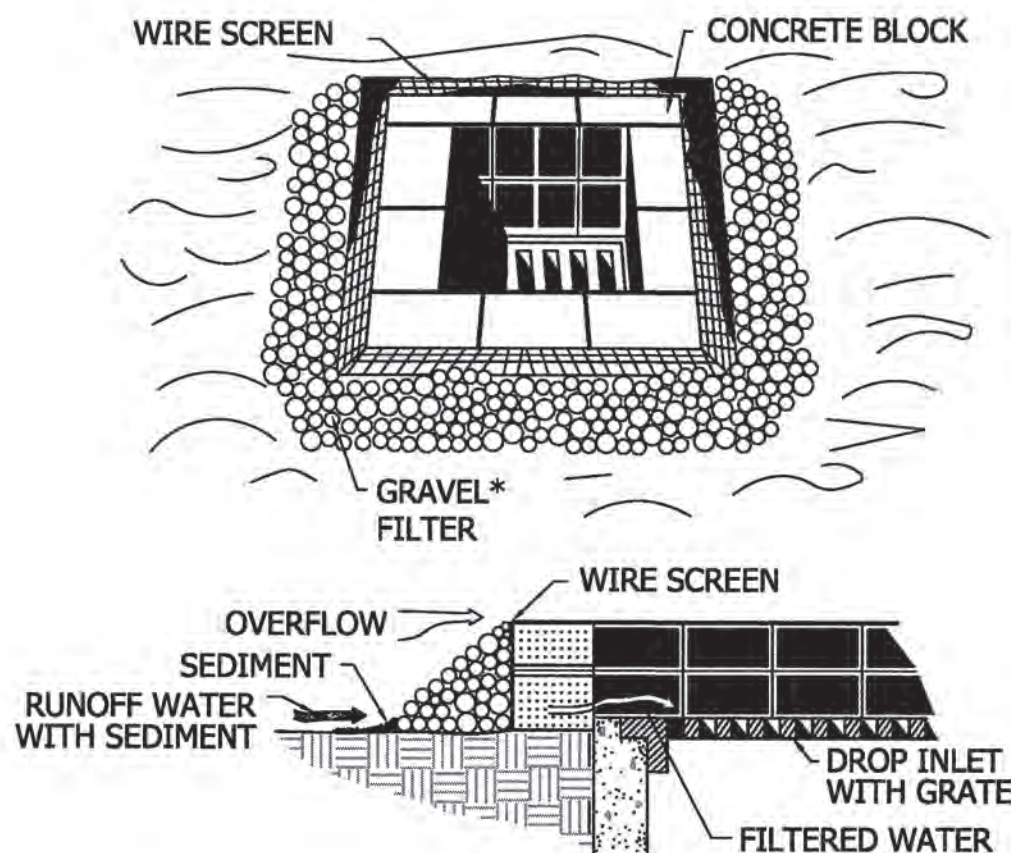
- 1.) INSTALL THE CONSTRUCTION ENTRANCE & PERIMETER CONTROLS & INLET PROTECTION & SILT FENCE.
- 2.) PROCEED WITH DEMOLITION ON THE DEMOLITION PLAN WITH THE INSPECTORS APPROVAL.
- 3.) PROCEED WITH CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THE SITE PLAN, PENDING APPROVAL OF THE INSPECTOR.
- 4.) WORK TOWARD THE PHASE II PROGRAM FOR THIS SITE IN COORDINATION WITH THE INSPECTOR.

1. ALL SEDIMENT AND EROSION CONTROL DEVICES INSTALLED AS PART THE PREVIOUS E&S PHASE SHALL REMAIN IN PLACE AND FUNCTIONING, UNLESS OTHERWISE DIRECTED BY THE INSPECTOR.
2. FILL SLOPE SURFACES TO BE LEFT IN ROUGHENED CONDITION TO REDUCE SHEET AND RILL EROSION OF THE SLOPES. THE CONTRACTOR SHALL REDIRECT CONCENTRATED FLOW AWAY FROM THE SLOPES BY INSTALLING EARTH BERMS AND OUTLETTING THE RUNOFF TO A STABILIZED OUTLET WITH SEDIMENT TRAPPING DEVICE.
3. RESTORE AND STABILIZE ALL UNPAVED AREAS. THIS WORK MUST BE PERFORMED AND INSPECTED AS EARLY AS SITE CONDITIONS ALLOW.
4. REMOVE CONTROLS FROM THE PREVIOUS E&S PHASE ONLY AS APPROVED BY THE INSPECTOR.
5. AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, MECHANICAL CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION UPON APPROVAL OF THE TOWN OF VIENNA INSPECTOR.
6. MECHANICAL DEVICE MAINTENANCE PROGRAM:
 - A. ALL CONTROLS ARE TO BE INSPECTED ON A DAILY BASIS BY THE SITE SUPERVISOR OR HIS REPRESENTATIVE, ANY DAMAGED CONTROLS ARE TO BE REPAIRED BY THE END OF THE WORKING DAY.
7. VEHICLE MAINTENANCE MEASURES:
 - A. ALL CONSTRUCTION VEHICLES LEAVING THE SITE SHALL EXIT VIA THE CONSTRUCTION ENTRANCE, AND 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.
8. SEDIMENT BASIN MAINTENANCE:
 - A. IF THE ENTIRE SITE IS NOT PROTECTED FROM PUBLIC INGRESS/EGRESS A CHAIN LINK FENCE SHALL BE PLACED AROUND THE SEDIMENT BASIN. SIGNS SHALL BE PLACED AROUND THE TEMPORARY SEDIMENT BASIN STATING "DANGER-QUICK-AND-STAY AWAY." THE TEMPORARY SEDIMENT BASIN SHALL BE CLEANED WHEN IT IS NO LONGER REQUIRED. IF APPROVED BY THE GEOTECHNICAL ENGINEER SEDIMENT REMOVED FROM SEDIMENT BASIN MAY BE DRIED OUT AND USED IN NON-STRUCTURAL FILL AREAS.
 - B. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN THE SEDIMENT REACHES THE CLEANOUT ELEVATION SHOWN ON THE BASIN DETAILS.
 - C. SEDIMENT REMOVAL FROM THE TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.

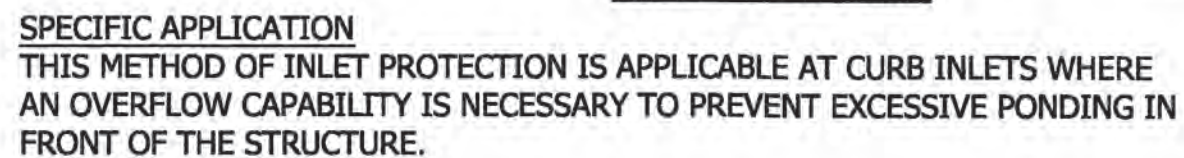
THE TOWN OF
VIENNA
ESTABLISHED 1890
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APPROVED



1. NO DISTURBED AREA WILL REMAIN DENuded AND DORMANT FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR.
SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR LINEAR PROJECTS.
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 7 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET IS TO BE OPENED AT ANY ONE TIME.
4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL.
5. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAM BEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS IS TO BE COVERED FOR TEMPORARY VEGETATION AND MULCHED WITH STRAW MULCH. WHERE IT IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK SLOPED TO DRAIN TOWARD THE TRENCH. THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OF A SEDIMENT BASIN.
6. ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND SEDIMENT CONTROL DAMS ARE TO BE MINED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL STOCKPILES. ALL FILLS ARE TO BE LEFT WITH A TEMPORARY FILL DIVERSION AT THE TOP OF THE SLOPE AT THE END OF EACH DAYS OPERATION.
7. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
8. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND NOT PAVED, SODDED, OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, IS TO BE MULCHED WITH HAY OR STRAW MULCH AT A RATE OF TWO TONS PER ACRE AND OVER SEEDED NO LATER THAN APRIL 15.
9. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
10. AT THE COMPLETION OF CONSTRUCTION PROJECTS AND PRIOR TO RELEASE OF BOND, ALL TEMPORARY SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED AND ALL DISTURBED AREAS SHALL BE STABILIZED.



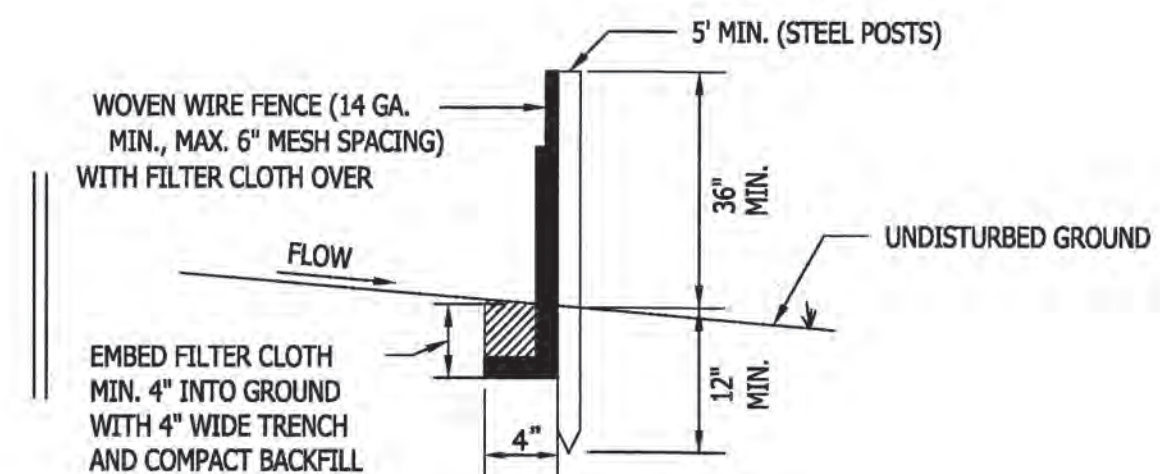
**BLOCK AND GRAVEL DROP
INLET SEDIMENT FILTER**
NOT TO SCALE
TYPE II INLET PROTECTION



MAINTENANCE

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

TYPE I INLET PROTECTION



SECTION

4
14.01

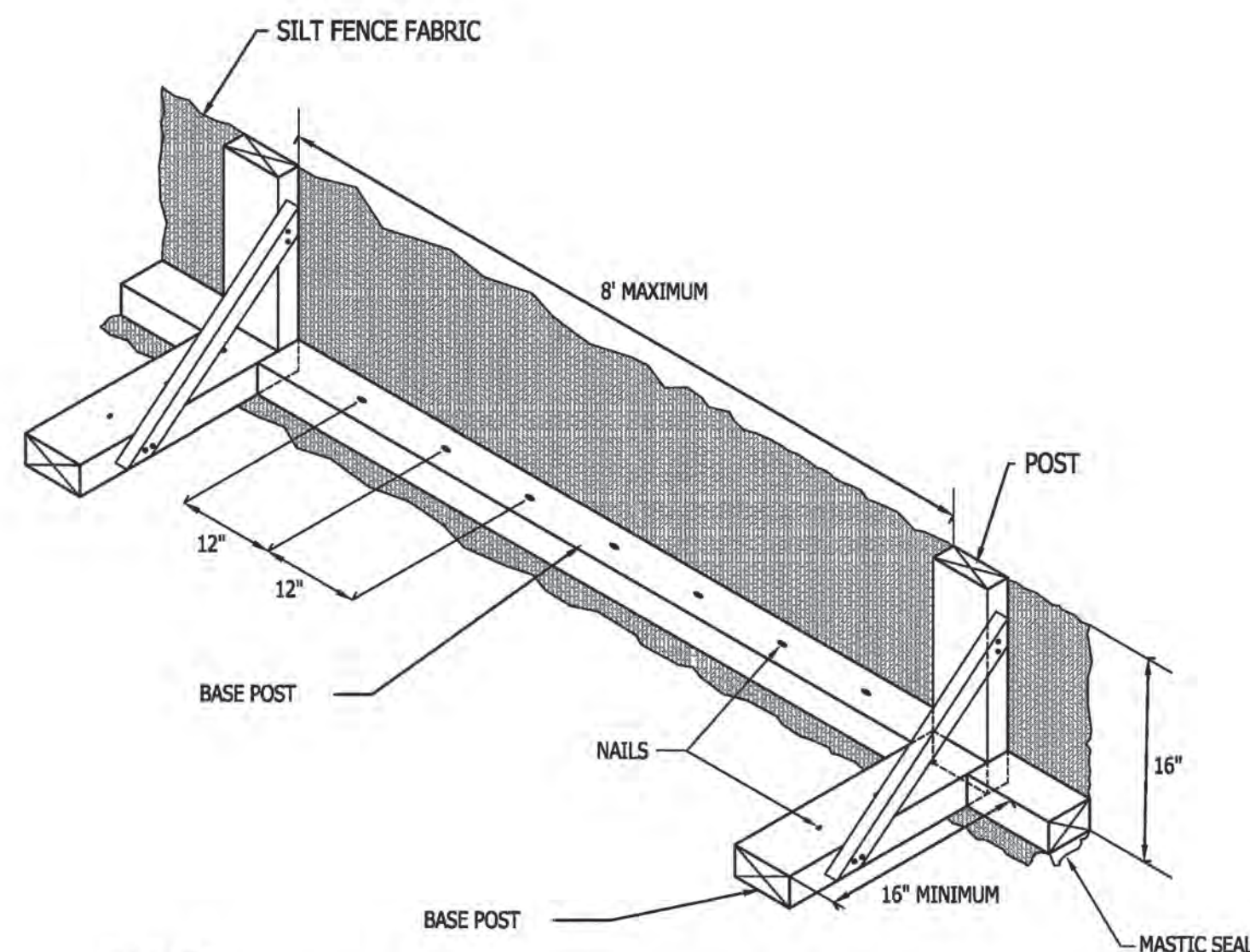
SILT FENCE
NOT TO SCALE

LAND DISTURBING ACTIVITY NOTE:

IN ACCORDANCE WITH AN AMENDMENT TO VIRGINIA SEDIMENT AND EROSION CONTROL LAW, EFFECTIVE JULY 1, 2001, AS A PREREQUISITE TO THE APPROVAL OF AN EROSION AND SEDIMENT CONTROL PLAN, THAT THE PERSON RESPONSIBLE FOR CARRYING OUT THE PLAN (OWNER/DEVELOPER/PERMITEE) SHALL PROVIDE TO THE PLAN APPROVING AUTHORITY THE NAME OF AN INDIVIDUAL HOLDING A CERTIFICATE OF COMPETENCE ISSUED BY THE DEPARTMENT OF CONSERVATION AND RECREATION (DCR) WHO WILL BE RESPONSIBLE FOR CARRYING OUT THE LAND DISTURBING ACTIVITY. THIS INFORMATION MUST BE KEPT CURRENT FOR THE LIFE OF THE PLAN. PLANS APPROVED PRIOR TO JULY 1, 2001, ARE NOT SUBJECT TO THESE REQUIREMENTS.

VSMP NOTE

EFFECTIVE DECEMBER 4, 2002, ALL CONSTRUCTION ACTIVITIES THAT DISTURB MORE THAN 2,500 SF WILL BE REQUIRED TO FILE A GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THIS REGISTRATION STATEMENT IS TO BE SUBMITTED TO THE DEPARTMENT OF CONSERVATION & RECREATION (DCR)



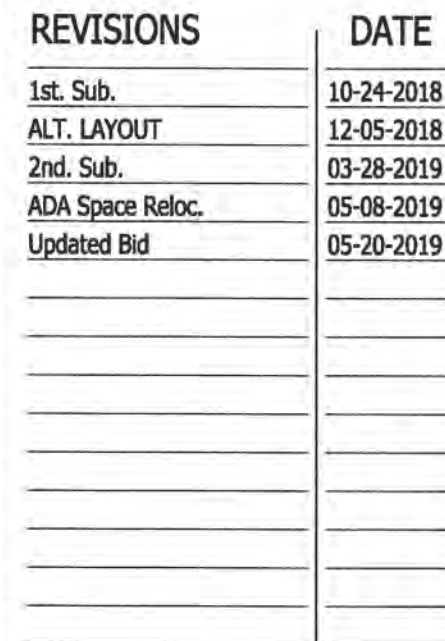
NOTES

1. ALL LUMBER SHALL BE 2"x4" NOMINAL.
2. A MASTIC SEAL SHALL BE PROVIDED, AS SHOWN, TO PREVENT SEDIMENT LADEN WATER ESCAPING UNTREATED BENEATH SILT FENCE INSTALLATION.
3. SILT FENCE FABRIC SHALL BE TAUT AND SECURELY STAPLED TO FACE OF UPRIGHT SUPPORTS.
4. NAILS AS REQUIRED TO SECURE BOARDS TO PAVEMENT SHALL BE 20d X 4" MINIMUM LENGTH.
5. APPLICATION DESIGN AND MATERIALS CRITERIA SHALL BE AS STATED IN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.

5
14.01

SILT FENCE IN PAVEMENT

NOT TO SCALE

[illegible]

PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG. SCALE:	N/A
VIKA NO.	7062H
SHEET NO.	14.01

REBAR —
(HELD FOR
LINE)
0.13'
0.03'

32.0' TM# 049-1 ((02)) 0002B
THE PROPERTY OF
GRI CEDAR PARK, LLC
DEED BOOK 19100, PAGE 1934
314,169 SQ. FT. OR
7.2123 ACRES

#262-280 CEDAR
LANE SE

PROVIDE NEW MUELLER
FIRE HYDRANT PER
TOWN OF VIENNA PIM

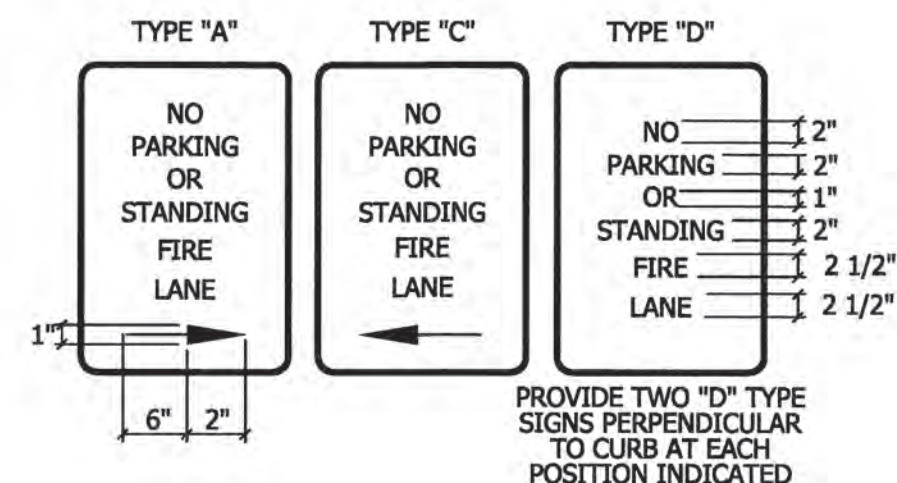
TM# 049-1 ((01)) 0042A
JFK PROPERTIES, LLC
DEED BOOK 15885, PAGE 1185
ZONE: C-5
E: GASOLINE AND SERVICE STATION

10.B. 833
TM# 049-1
((01)) 0037
CHURCH FOR
ALL NATIONS, INC.
DEED BOOK 21224,
PAGE 372
ZONE: R-4
USE: PRIVATE
SCHOOLS

POSSIBLE/25' DEDICATION
AS SHOWN ON
PLAT ATTACHED TO
D.B./6891, PG. 1667

TM# 049-1 ((01)) 0001
WANG CHENGHONG
DEED BOOK 22366, PAGE 1140
ZONE: PDH-3
USE: SINGLE- FAMILY
DETACHED

TM# 049-1 ((31)) A
CHURCH FOR ALL NATIONS, INC.
DEED BOOK 21857, PAGE 772
ZONE: PDH-3
USE: PRIVATE OPEN SPACE



NOT TO SCALE

TYPE AND LOCATION OF SIGNS

- "A" TYPE SIGN
 1. SINGLE FACED
 2. PARALLEL TO CURB OR PAVEMENT
 3. REQUIRED AT THE START OF A FIRE LANE SITUATION
 4. DIRECTIONAL ARROW POINTING TO THE RIGHT
- "C" TYPE SIGN
 1. SINGLE FACED
 2. PARALLEL TO CURB OR PAVEMENT
 3. REQUIRED AT THE END OF A FIRE LANE SITUATION
 4. DIRECTIONAL ARROW POINTING TO THE LEFT
- "D" TYPE SIGN
 1. DOUBLE FACED
 2. PERPENDICULAR TO CURB OR PAVEMENT
 3. NO DIRECTIONAL ARROWS
- NORMAL SPACING BETWEEN SIGNS
 1. 70 FEET BETWEEN SIGNS FOR LONG RUNS OF CURB OR PAVEMENT, WITH NO BREAK IN CURB OR PAVEMENT

APPROVED SIGN CONSTRUCTION

- A. METAL CONSTRUCTION, 12"x18"
B. RED LETTERS ON REFLECTIVE WHITE BACKGROUND WITH 3/8" RED TRIM STRIP AROUND ENTIRE
OUTER EDGE OF SIGN.
C. LETTERING ON SIGN TO BE: "NO PARKING OR STANDING FIRE LANE"
D. LETTERING SIZE TO BE AS FOLLOWS: "NO PARKING" AND "STANDING" - 2", "OR" - 1",
"FIRE LANE" - 2 1/2", ARROWS 1"x6" SOLID SHAFT WITH A SOLID HEAD 1 1/2" WIDE
AND 2" DEEP.
E. SIGNS ARE TO BE MOUNTED 7' FROM THE GROUND TO THE BOTTOM OF THE SIGN UNLESS
OTHERWISE DIRECTED BY THE FAIRFAX COUNTY FIRE PREVENTION DIVISION, FIRE
LANES SECTION.
F. POSTS FOR SIGNS, WHEN REQUIRED, SHALL BE METAL AND SECURELY MOUNTED, UNLESS
WRITTEN PERMISSION FOR ALTERNATIVES IS OBTAINED PRIOR TO INSTALLATION FROM
FAIRFAX COUNTY FIRE PREVENTION DIVISION, FIRE LANES SECTION.
G. OTHER SPECIAL SIGNS AS APPROVED BY THE FIRE PREVENTION DIVISION.

CURB DESIGNATION

ALL CURBS OR PAVED SPACES DESIGNATED AS FIRE LANES SHALL BE INDICATED BY YELLOW PAINT AS APPROVED BY THE FIRE PREVENTION DIVISION. IN AREAS WITHOUT CURBING, A 6" WIDE YELLOW STRIPE SHOULD BE APPLIED TO THE EDGE OF THE PAVEMENT. PAINT SHALL BE HIGHWAY TRAFFIC GRADE.

FIRE LANE NOTE:

FIRE MARSHALL FIELD INSPECTION NECESSARY FOR FINAL APPROVAL OF FIRE LANES. FIRE LANES MUST HAVE FINAL APPROVAL PRIOR TO REQUEST FOR OCCUPANCY.

OWNER SHALL NOTIFY FIRE PREVENTION DIVISION FIRE LANE SECTION, 12099 GOVERNMENT CENTER PARWAY, FAIRFAX, VIRGINIA 22035, WHEN FIRE LANES HAVE BEEN INSTALLED.

FIRE FLOW NOTE:

AVAILABLE FIRE FLOW = 1,088 GPM (3,558 PSI)

DATA PROVIDED FROM FIRE FLOW TEST BY TOWN OF VIENNA

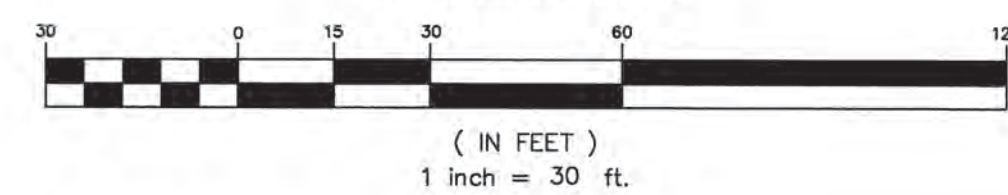


NOTE:
APPLICANT INTENDS TO REMAIN OPERATIONAL DURING CONSTRUCTION.
CONTRACTOR SHALL COORDINATE INTERIM CONSTRUCTION PHASES WITH
FIRE MARSHAL AND/OR SITE INSPECTOR TO ENSURE LIFE SAFETY ACCESS
IS MAINTAINED AT ALL TIMES.



NORTH (NAD 83)

GRAPHIC SCALE



NO.
DESCRIPTION
REVIEW BY
APPROVED
DATE

REVISION APPROVED BY
 SITE PLAN REVIEW AND INSPECTIONS DIVISION

VIKA

ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING

VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

[illegible]

PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**

ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

FIRE PROTECTION PLAN

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019

DWG. SCALE: 1"=30'

SCALE: 1 50
 1/17/84

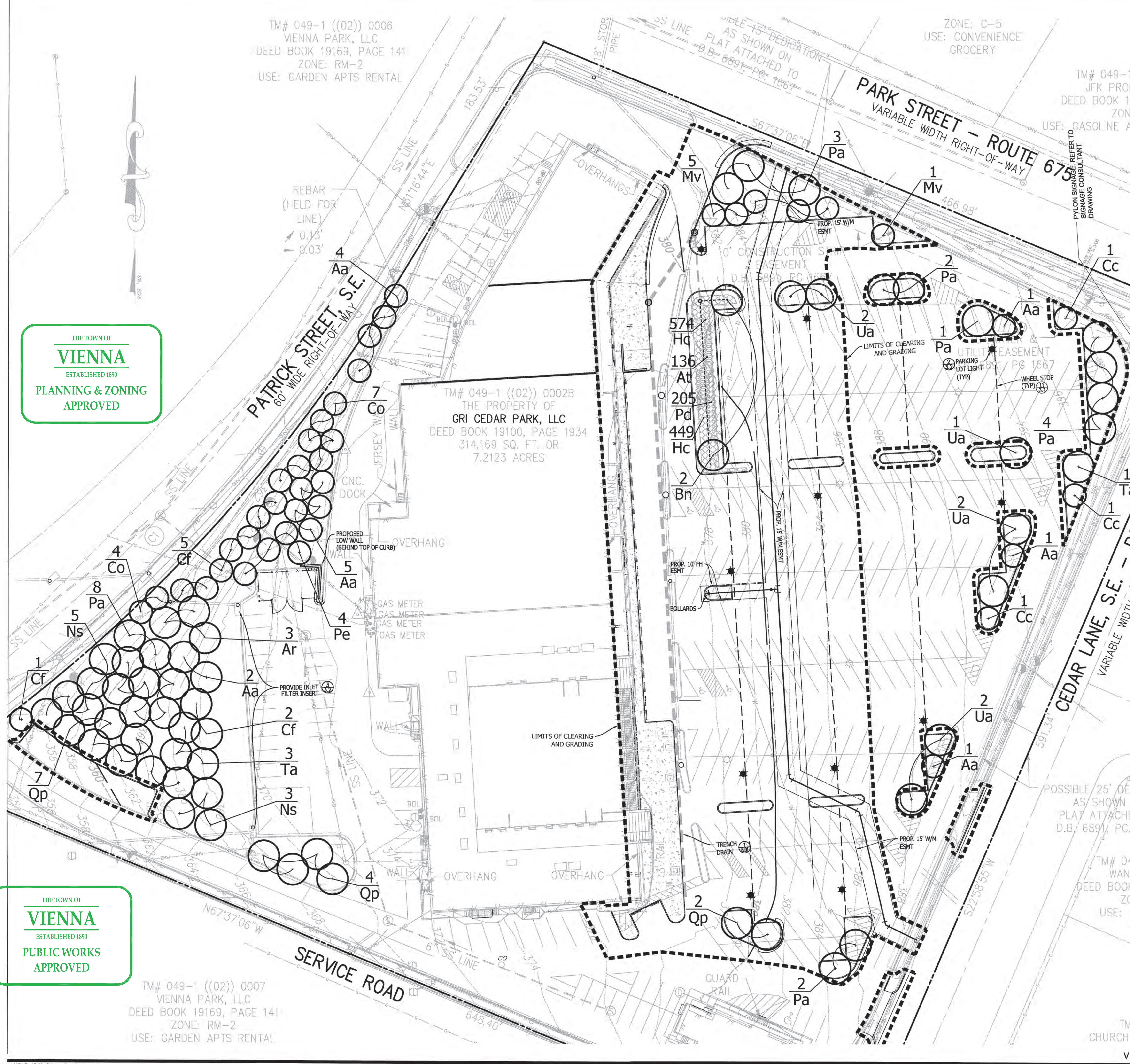
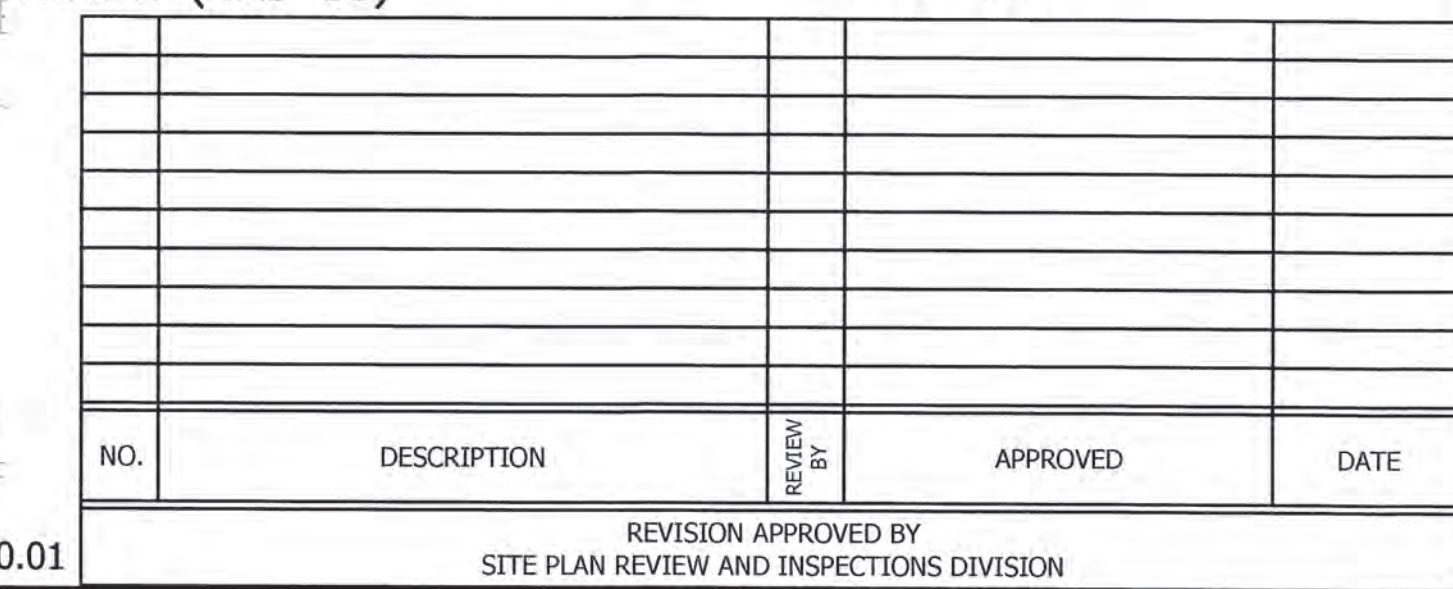
NO. 7062H

SHEET 15 01

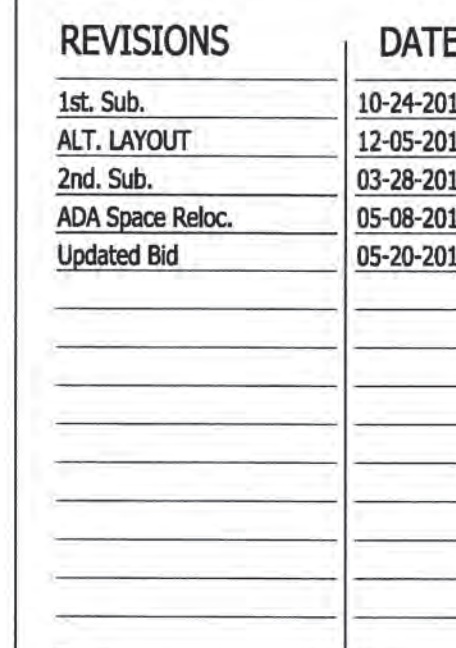
15.01

FILE: P:\projects\7062\7062H\CADD\ENGINEERING\CONSTRUCTION DRAWINGS\7062H - 15.01 FIRE LANE MARKING PLAN.dwg USER: Nguven DATE: July 2, 2019 TIME: 9:21:19 AM LAYOUT: 15.01

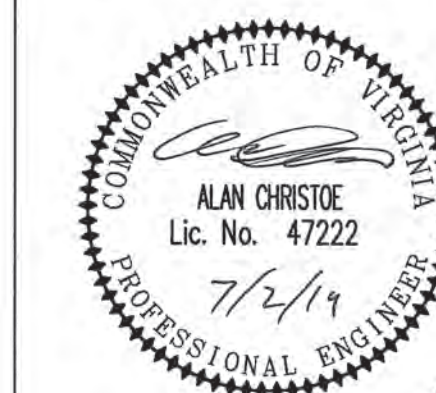
SOME OF THE NEW PROPOSED TREES ON THE WEST SIDE OF THIS SITE WILL REQUIRE THE REMOVAL OF APPROXIMATELY (49) EXISTING TREES. THE TOWN OF VIENNA PARK AND RECREATION DEPARTMENT ARBORIST HAS EVALUATED THESE (49) EXISTING TREES AND DEEMED THEM UNHEALTHY AND NOT TO BE COUNTED TOWARD THE CANOPY CREDITS (SEE SHEET 17.03 EXISTING TREE INVENTORY PLAN).



THE TOWN OF
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PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

LANDSCAPE DETAILS

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG.	
SCALE:	1"=30'
VTKA	
NO.	7062H
SHEET	
NO.	17.02

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
REVISION APPROVED BY				
SITE PLAN REVIEW AND INSPECTIONS DIVISION				

[illegible][illegible]

**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

EXISTING TREE INVENTORY PLAN

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

DWG.
SCALE: 1"=30'

VTKA
NO. 7062H

SHEET
NO. 17.03

PRE-DEVELOPMENT

LEGEND



IMPERVIOUS AREA = 2.11 AC

MANAGED TURF = 0.05 AC
TOTAL = 2.16 AC

THE TOWN OF

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APPROVED

THE TOWN OF

VIENNA

ESTABLISHED 1890

**PUBLIC WORKS
APPROVED**

REVISIONS

DATE _____

1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



**CEDAR PARK
HOPPING CENTER**

ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

EXISTING
SWM BMP MAP

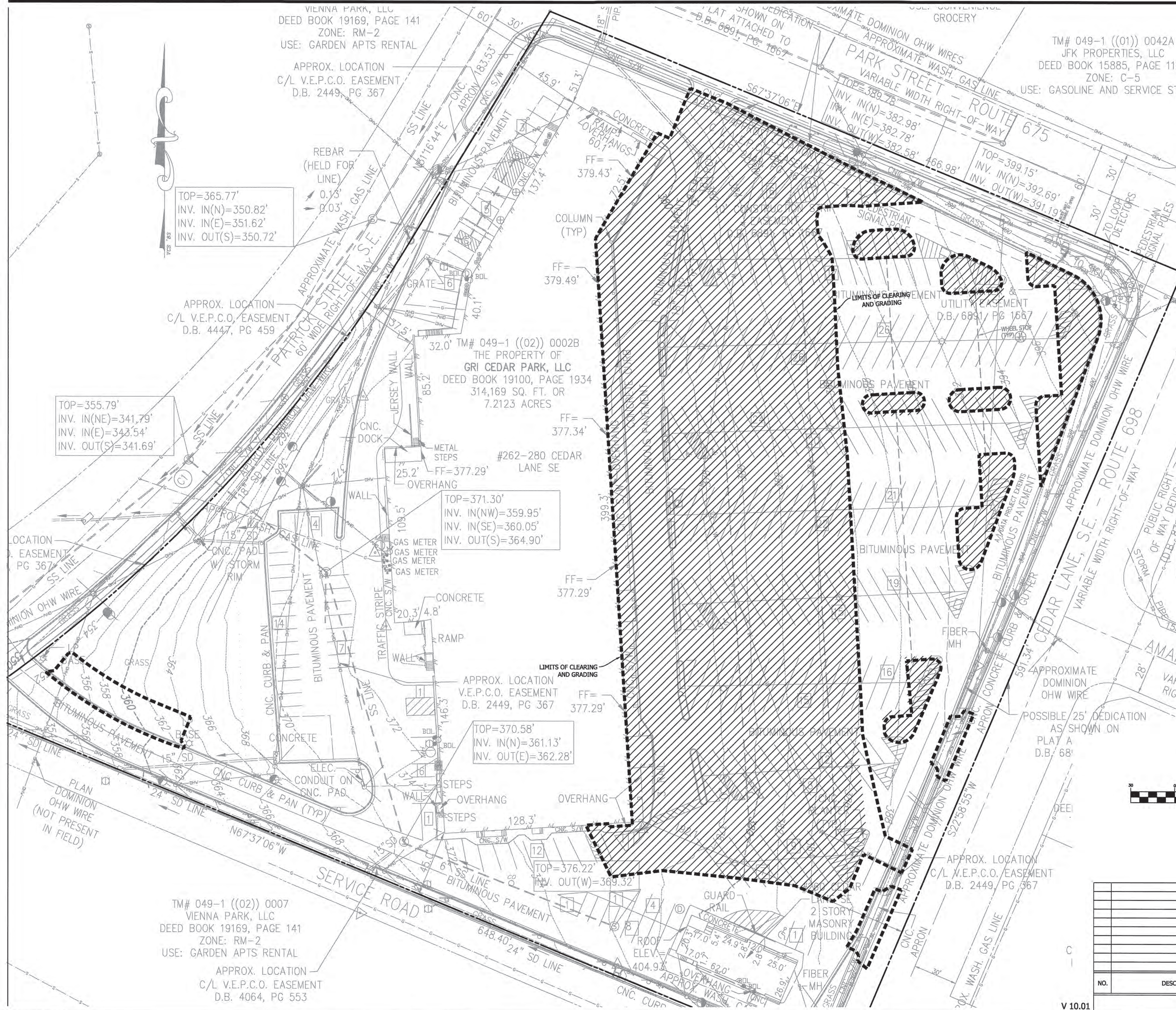
DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

SCALE: 1"=30'

ЛИКА	7062H
NO.	

SHEET NO. 18.01

FILE: P:\projects\7062\7062H\CADD\ENGINEERING\CONSTRUCTION DRAWINGS\7062H - 18.01 PRE SWM MAP.dwg USER: Nguven DATE: July 2, 2019 TIME: 9:23:54 AM LAYOUT: 18.01

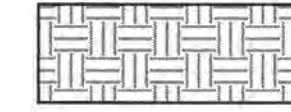


POST-DEVELOPMENT

LEGEND



IMPERVIOUS AREA = 1.73 AC



BIO-RETENTION AREA= 0.03 AC

MANAGED TURF = 0.40 AC
TOTAL = 2.16 AC

SWM DRAINAGE AREAS



IMPERVIOUS AREA
(INCLUDING OFFSITE) TO BIO-RETENTION = 0.52 AC

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THE TOWN OF

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APPROVED



NORTH (NAD 83)

GRAPHIC SCALE



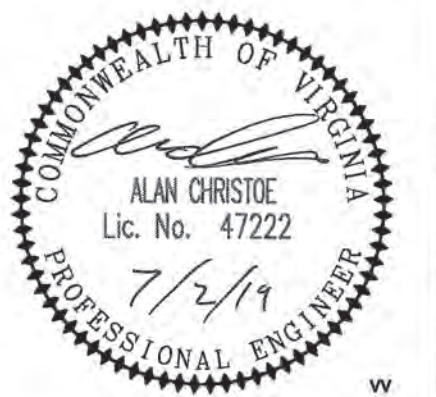
(IN FEET)
1 inch = 30 ft

REVISIONS

DATE _____

st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



CEDAR PARK SHOPPING CENTER

ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

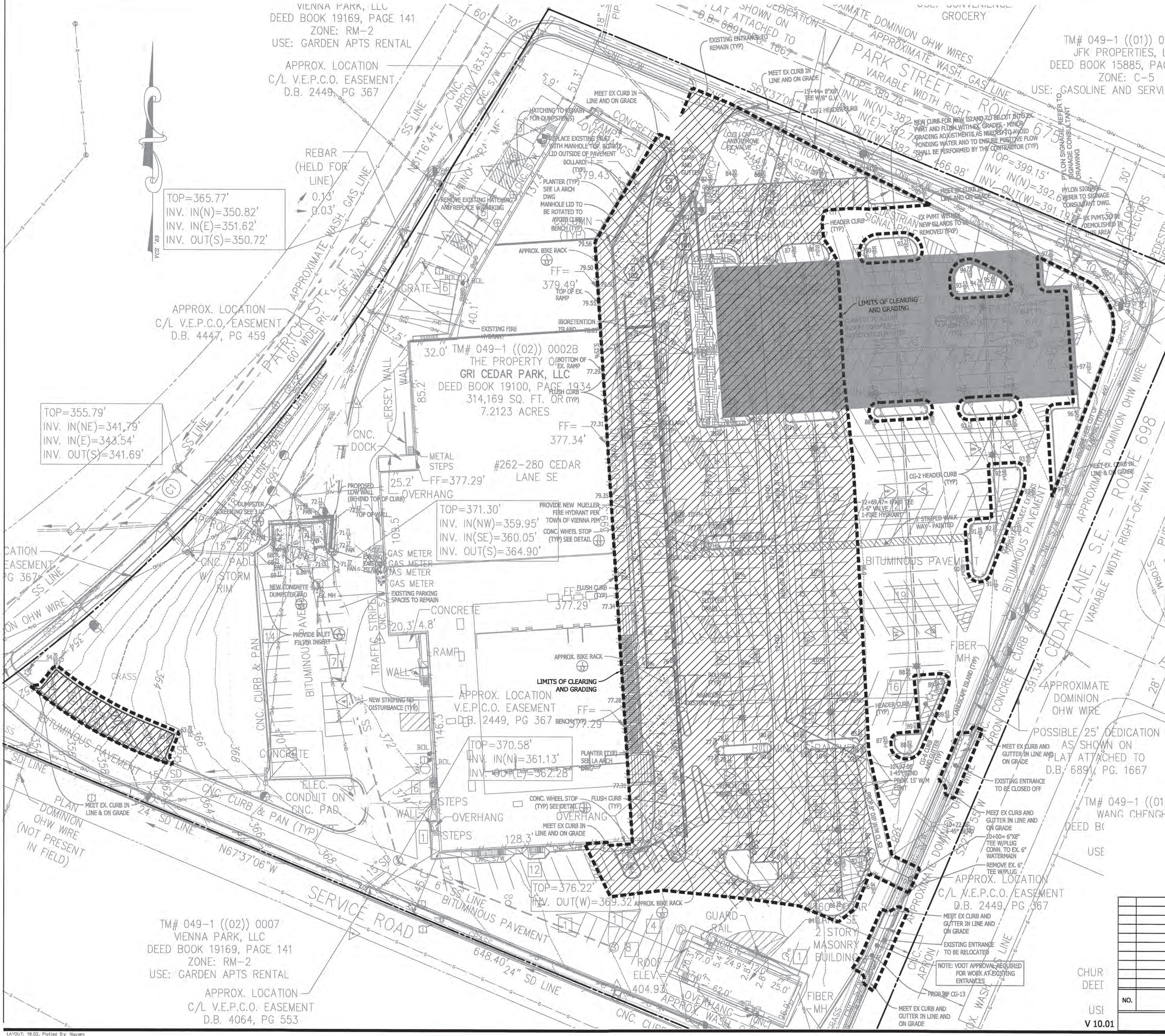
PROPOSED SWM BMP MAP

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

WG.
SCALE: 1"=30'

TKA	
O.	7062H

HEET
0. 18.02



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

2011 BMP Standards and Specifications

2013 Draft BMP Standards and Specifications

Project Name: Cedar Park

Date: 10/11/2018

Linear Development Project? No

CLEAR ALL
(Ctrl+Shift+R)

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 2.16

Maximum reduction required:	20%
The site's net increase in impervious cover (acres) is:	0
Post-Development TP Load Reduction for Site (lb/yr):	0.30

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

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.05	0.05
Impervious Cover (acres)				2.11	2.11
					2.16

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested				0.03	0.03
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.40	0.40
Impervious Cover (acres)				1.73	1.73
Area Check	OK.	OK.	OK.	OK.	2.16

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

Constants

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

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT		
Land Cover Summary-Pre		
Pre-ReDevelopment	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.05	0.05
Weighted Rv(turf)	0.25	0.25
% Managed Turf	2%	2%
Impervious Cover (acres)	2.11	2.11
Rv(impervious)	0.95	0.95
% Impervious	98%	98%
Total Site Area (acres)	2.16	2.16
Site Rv	0.93	0.93

Treatment Volume and Nutrient Load		
Pre-ReDevelopment Treatment Volume (acre-ft)	0.1681	0.1681
Pre-ReDevelopment Treatment Volume (cubic feet)	7,322	7,322
Pre-ReDevelopment TP Load (lb/yr)	4.60	4.60
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	2.13	2.13
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.89

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

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

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

SEE SHEET 19.01 FOR ADEQUATE OUTFALL AND STORMWATER QUALITY NARRATIVE

LAND COVER SUMMARY -- POST DEVELOPMENT		
Land Cover Summary-Post (Final)		
Post ReDev. & New Impervious		
Forest/Open Space Cover (acres)	0.03	
Weighted Rv(forest)	0.05	
% Forest	1%	
Managed Turf Cover (acres)	0.40	
Weighted Rv (turf)	0.25	
% Managed Turf	19%	
Impervious Cover (acres)	1.73	
Rv(impervious)	0.95	
% Impervious	80%	
Final Site Area (acres)	2.16	
Final Post Dev Site Rv	0.81	

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.03
Weighted Rv(forest)	0.05
% Forest	1%
Managed Turf Cover (acres)	0.40
Weighted Rv (turf)	0.25
% Managed Turf	19%
ReDev. Impervious Cover (acres)	1.73
Rv(impervious)	0.95
% Impervious	80%
Total ReDev. Site Area (acres)	2.16
ReDev Site Rv	0.81

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.00
Rv(impervious)	--

Treatment Volume and Nutrient Load			
Final Post-Development Treatment Volume (acre-ft)	0.1454	Post-ReDevelopment Treatment Volume (acre-ft)	0.1454
Final Post-Development Treatment Volume (cubic feet)	6,334	Post-ReDevelopment Treatment Volume (cubic feet)	6,334
Final Post-Development TP Load (lb/yr)	3.98	Post-ReDevelopment Load (TP) (lb/yr)*	3.98
Final Post-Development TP Load per acre (lb/acre/yr)	1.84	Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.84
		Max. Reduction Required (Below Pre-ReDevelopment Load)	20%
		TP Load Reduction Required for Redeveloped Area (lb/yr)	0.30
		TP Load Reduction Required for New Impervious Area (lb/yr)	0

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr) 0.30

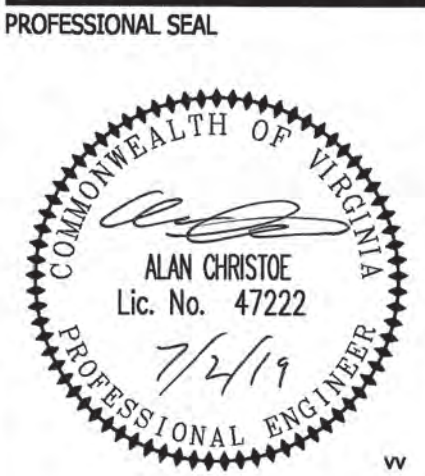
Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr) 32.91

Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr) 28.47



REVISIONS	DATE
1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019



CEDAR PARK SHOPPING CENTER
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

SWM COMPUTATIONS

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019
DWG. SCALE: N/A
VIKA NO. 7062H
SHEET NO. 18.03

Drainage Area A Land Cover (acres)

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr)	3.98
Post Development Treatment Volume in D.A. A (ft³)	6,329

--Select from dropdown lists--

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40		0.51	0	703	1,055	1,759	25	0.00	1.10	0.61	0.50	
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80			0	0	0	0	50	0.00	0.00	0.00	0.00	

Area Checks

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Area Check
FOREST/OPEN SPACE (ac)	0.03	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	1.73	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.51	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.40	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
Area Check	OK.	OK.	OK.	OK.	OK.	

6,334

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	703	0	0	0	0	703
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	3.98	0.00	0.00	0.00	0.00	3.98
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.61	0.00	0.00	0.00	0.00	0.61
TP LOAD REMAINING (lb/yr)	3.37	0.00	0.00	0.00	0.00	3.37

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	5.05	0.00	0.00	0.00	0.00	5.05
--	------	------	------	------	------	------

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	3.98
TP LOAD REDUCTION REQUIRED (lb/yr)	0.30
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.61
TP LOAD REMAINING (lb/yr):	3.37

**** TARGET TP REDUCTION EXCEEDED BY 0.31 LB/YEAR ****

POST-DEVELOPMENT LOAD (lb/yr)

POST-DEVELOPMENT LOAD (lb/yr)	28.47
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	5.05
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	23.42

Enter design storm rainfall depths (in):

1-year storm 2-year storm 10-year storm

2.62	3.17	4.87
------	------	------

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

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

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

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

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

Drainage Area A		A Soils	B Soils	C Soils	D Soils	Total Area (acres): 2.16
Forest/Open Space – undisturbed, protected forest/open space or reforested land	Area (acres)	0.00	0.00	0.00	0.03	Runoff Reduction Volume (ft ³): 703
	CN	30	55	70	77	
Managed Turf – disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.00	0.00	0.00	0.40	
	CN	39	61	74	80	
Impervious Cover	Area (acres)	0.00	0.00	0.00	1.73	
	CN	98	98	98	98	
					CN _(D.A. A)	
					94	
		1-year storm	2-year storm	10-year storm		
RV _{Developed} (watershed-inch) with no Runoff Reduction*		1.98	2.51	4.18		
RV _{Developed} (watershed-inch) with Runoff Reduction*		1.89	2.43	4.09		
Adjusted CN*		93	93	93		

**See Notes above*



DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG.	
SCALE:	N/A
VIKA	
NO.	7062H
SHEET	
NO.	18 04



Site Summary

Total Rainfall (in):	43
Total Disturbed Acreage:	2.16

Update Summary Sheet

[Print Preview](#)

Print

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.05	0.05	2
Impervious Cover (acres)	0.00	0.00	0.00	2.11	2.11	98
					2.16	100

Post-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.03	0.03	1
Managed Turf (acres)	0.00	0.00	0.00	0.40	0.40	19
Impervious Cover (acres)	0.00	0.00	0.00	1.73	1.73	80
* Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method					2.16	100

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

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
Site Rv	0.81	0.81	--	0.93
Treatment Volume (ft ³)	6,334	6,334	--	7,322
TP Load (lb/yr)	3.98	3.98	--	4.60

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post- Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
2.13	1.84	1.84

Total TP Load Reduction Required (lb/yr)	0.30	0.30	0
--	------	------	---

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	28.47	32.91

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%
--	-----

Total Runoff Volume Reduction (ft³)	703
Total TP Load Reduction Achieved (lb/yr)	0.61
Total TN Load Reduction Achieved (lb/yr)	5.05
Remaining Post Development TP Load (lb/yr)	3.37
Remaining TP Load Reduction (lb/yr) Required	0.00

**** TARGET TP REDUCTION EXCEEDED BY 0.31 LB/YEAR ****

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.03	0.00	0.00	0.00	0.00	0.03
Managed Turf (acres)	0.40	0.00	0.00	0.00	0.00	0.40
Impervious Cover (acres)	1.73	0.00	0.00	0.00	0.00	1.73
Total Area (acres)	2.16	0.00	0.00	0.00	0.00	2.16

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.61	0.00	0.00	0.00	0.00	0.61
TN Load Reduced (lb/yr)	5.05	0.00	0.00	0.00	0.00	5.05

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.03	0.03	1
Managed Turf (acres)	0.00	0.00	0.00	0.40	0.40	19
Impervious Cover (acres)	0.00	0.00	0.00	1.73	1.73	80
					2.16	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft ³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device-Filtering	0.18	2.51	8,819.09	0.00	5.53	1.11	4.43	

Total Impervious Cover Treated (acres)	0.51
Total Turf Area Treated (acres)	0.00
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.61
Total TN Load Reduction Achieved in D.A. (lb/yr)	5.05

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm
Target Rainfall/ Event (in)	2.62	3.17	4.87

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		94	0	0	0	0
RR (ft ³)		703	0	0	0	0
1-year return period	RV wo RR (ws-in)	1.98	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	1.89	0.00	0.00	0.00	0.00
	CN adjusted	93	0	0	0	0
2-year return period	RV wo RR (ws-in)	2.51	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	2.43	0.00	0.00	0.00	0.00
	CN adjusted	93	0	0	0	0
10-year return period	RV wo RR (ws-in)	4.18	0.00	0.00	0.00	0.00
	RV w RR (ws-in)	4.09	0.00	0.00	0.00	0.00
	CN adjusted	93	0	0	0	0



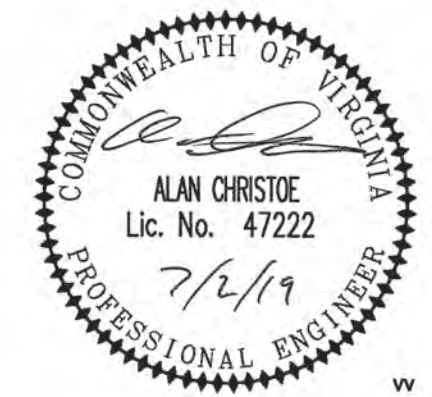
ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING

VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

REVISIONS

[illegible]

PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

SWM COMPUTATIONS

DRAWN BY:	DH
DESIGNED BY:	SEC
DATE ISSUED:	03-27-2019
DWG.	
SCALE:	N/A
VTKA	
NO.	7062H
SHEET	
NO.	18.05

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
REVISION APPROVED BY SITE PLAN REVIEW AND INSPECTIONS DIVISION				

A circular professional seal for the Commonwealth of Virginia. The outer ring contains the text "COMMONWEALTH OF VIRGINIA" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by stars. In the center, there is a signature, the name "ALAN CHRISTOE", the license number "Lic. No. 47222", and the date "7/19/19".

SWM COMPUTATIONS

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

DWG. SCALE: N/A

VIKA NO. 7062H

SHEET NO. 18.06

POST-DEVELOPMENT

WinTR-55 Current Data Description

--- Identification Data ---

User: DH Date: 11/14/2018
Project: 7062H Units: English
SubTitle: POST Areal Units: Acres
State: Virginia
County: Fairfax NOAA-C
Filename: P:\projects\7062\7062H\DATA\SWM\TR55\PRE-SITE.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	To
EX1	Outlet	2.16	93	0.100	

Total area: 2.16 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period

2-Yr (in)	-Yr (in)	10-Yr (in)	-Yr (in)	-Yr (in)	-Yr (in)	1-Yr (in)
3.17	.0	4.87	.0	.0	.0	2.62

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: NOAA_C
Dimensionless Unit Hydrograph: <standard>

DH 7062H
POST
Fairfax NOAA-C County, Virginia

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	-Yr (in)	10-Yr (in)	-Yr (in)	-Yr (in)	-Yr (in)	1-Yr (in)
3.17	.0	4.87	.0	.0	.0	2.62

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: NOAA_C
Dimensionless Unit Hydrograph: <standard>

DH 7062H
POST
Fairfax NOAA-C County, Virginia

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period		
	2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	1-Yr (cfs) (hr)

SUBAREAS			
EX1	6.64	10.81	5.27
	12.12	12.12	12.12

REACHES

OUTLET	6.64	10.81	5.27
--------	------	-------	------

DH 7062H
POST
Fairfax NOAA-C County, Virginia

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
EX1	CN directly entered by user	-	2.16	93
Total Area / Weighted Curve Number:			2.16	93



ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING

VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

DEQ BIO-RETENTION BASIN Sizing chart (ON-SITE)

BIO-RETENTION BASIN #	IMPERVIOUS DA (SQ FT)	PERVIOUS DA (SQ FT)	TOTAL DA (ACRE)	SURFACE AREA REQ'D (SFT)	Rv	Tv REQ'D (CFT)	Surface Area PROV'D (SFT)	PONDING VOL PROV'D (CFT)	SOIL VOL PROV'D (CFT)	GRAVEL VOL PROV'D (CFT)	PONDING DEPTH (INCH)	SOIL DEPTH (FT)	GRAVEL DEPTH (FT)	PONDING Vr	SOIL Vr	GRAVEL Vr	Tv PROV'D (CFT)	t _f PROV'D (Hr)
BIO #1	22,170	0	0.51	1,350	0.95	1,755	1,379	690	690	414	6	2	0.75	1	0.25	0.4	1,793	
TOTALS (Ac) =	0.51	0.00	0.51	1,350	1,755												1,793	

\\192.168.10.93\projects\projects\7062\7062H\DATA\SWMM\DCR SPEC CALCS - SITE PLAN.xlsx|Curb Extension sizing

Note: Sizing based on DCR Spec# 9; Level I design

SA(REQ'D)=Tv/1.40

Tv(REQ'D)=1**Rv*A/12

Tv(PROV'D)=SA*SUM OF STORAGE

Assumes sideslopes are 1:1

1 BIO-RETENTION BASIN COMPUTATIONS

NOT TO SCALE

BIO-RETENTION BASIN DESIGN NARRATIVE

THE BIO-RETENTION AREA HAS BEEN DESIGNED IN ACCORDANCE WITH DCR STORMWATER DESIGN SPECIFICATION #9, LEVEL I DESIGN. AS DEPICTED ON SHEET 18.02 AND 18.03 THE BIO-RETENTION SHALL RECEIVE RUNOFF VIA SURFACE SHEET FLOW THROUGH A 4" GRASS STRIP AND GRAVEL DIAPHRAGM AS WELL AS PIPED FLOW FROM THE ROOF LEADERS. THE BIO-RETENTION MEDIA SHALL BE 24" IN DEPTH WITH 12" STONE PROVIDED, AND 6" UNDER-DRAIN. THE BIO-RETENTION AREA WILL BE DIVIDED INTO THREE CELLS (BIO-RETENTION AREA #1, BIO-RETENTION AREA #2 & BIO-RETENTION AREA #3) IN WHICH EACH CELL WILL TREAT A MAX OF 2.5 AC OF IMPERVIOUS AREA. SEE SHEETS 06.03, 06.04 & 18.03 FOR LOCATIONS. IMPERMEABLE LINERS SHALL BE INSTALLED AROUND EACH CELL AND BENEATH TO PREVENT WATER FROM SEEPING INTO THE ADJACENT BIO-RETENTION CELL AND GROUND. THE BIO-RETENTION AREA SHALL BE GRADED AS SHOWN ON SHEET 18.03 WITH A LEVEL SURFACE AREA AND TWO WEIRS OVERFLOW STRUCTURES. THE FIRST WEIR (2' WEIR) IS LEVEL WITH THE BIO-RETENTION SURFACE AND THE SECOND WEIR (7' WEIR) IS SET 6" ABOVE. TO ELIMINATE ANY POTENTIAL SHORT CIRCUITING THE EACH FACILITY HAS A s_p/i_o RATIO OF 0.68 (0.68) WHICH IS GREATER THAN THE REQUIRED 0.30 FOR LEVEL 1 BIO-RETENTION. THE PLANTING PLAN SHALL BE IN ACCORDANCE WITH THIS SHEET & THE PLANTING MATRIX ON SHEET 17.04 AND THE SOIL MEDIA MIX SHALL BE PER THIS SHEET. SEE THIS SHEET FOR CROSS-SECTION DETAILS AND SIZING CALCULATIONS.

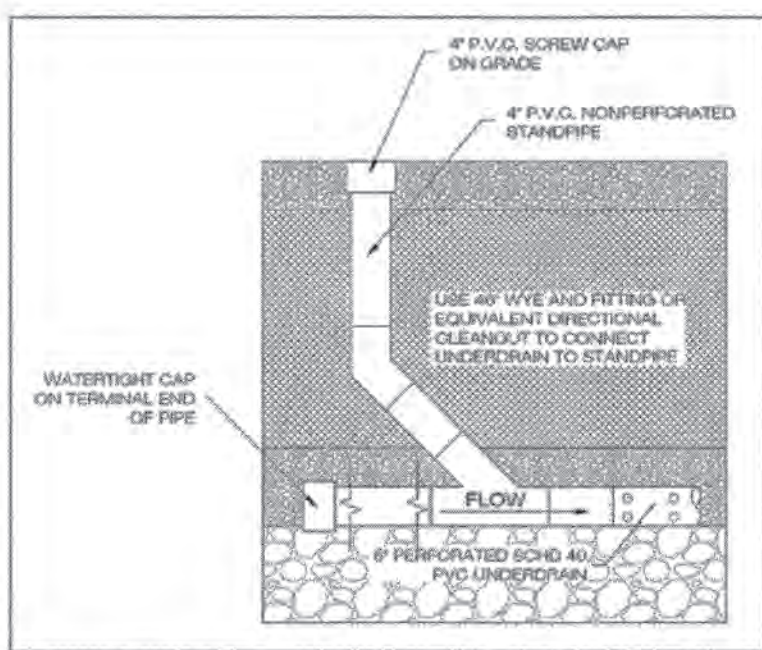
ALL CONSTRUCTION SPECIFICATION ARE TO BE IN ACCORDANCE WITH DEQ SPECIFICATION #9

MATERIAL SPECIFICATIONS

Material	Specification	Notes
Filter Media Composition	Filter Media to contain: <ul style="list-style-type: none">80% - 90% sand10%-20% soil fines3%-5% organic matter	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Available P between L+ and M per DCR 2005 Nutrient Management Criteria.	The media should be certified by the supplier.
Mulch Layer	Use aged, shredded hardwood bark mulch or stable coarse compost.	Lay a 2 to 3 inch layer on the surface of the filter bed.
Alternative Surface Cover	Use river stone or pea gravel, coir and jute matting, or turf cover.	Lay a 2 to 3 inch layer of to suppress weed growth.
Top Soil For Turf Cover	Loamy sand or sandy loam texture, with less than 5% clay content, pH corrected to between 6 and 7, and an organic matter content of at least 2%.	3 inch surface depth.
Geotextile/Liner	Use a non-woven geotextile fabric with a flow rate of > 110 gal./min./sq. ft. (e.g., Geotex 351 or equivalent)	Apply only to the sides and directly above the underdrain. For hotspots and certain karst sites only, use an appropriate liner on bottom.
Choking Layer	Lay a 2 to 4 inch layer of sand over a 2 inch layer of choker stone (typically #8 or #89 washed gravel), which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	12 inches for the underdrain; 12 to 18 inches for the stone storage layer, if needed
Underdrains, Cleanouts, and Observation Wells	Use 6 inch rigid schedule 40 PVC pipe (or equivalent corrugated HDPE for micro-bioretentation), with 3/8-inch perforations at 6 inches on center; position each underdrain on a 1% or 2% slope located not more than 20 feet from the next pipe.	Lay the perforated pipe under the length of the bioretention cell, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the T's and Y's.
Plant Materials	Plant one tree per 250 square feet (15 feet on-center, minimum 1 inch caliper). Shrubs a minimum of 30 inches high planted a minimum of 10 feet on-center. Plant ground cover plugs at 12 to 18 inches on-center; Plant container-grown plants at 18 to 24 inches on-center, depending on the initial plant size and how large it will grow.	Establish plant materials as specified in the landscaping plan and the recommended plant list. In general, plant spacing must be sufficient to ensure the plant material achieves 80% cover in the proposed planting areas within a 3-year period. If seed mixes are used, they should be from a qualified supplier, should be appropriate for stormwater basin applications, and should consist of native species (unless the seeding is to establish maintained turf).

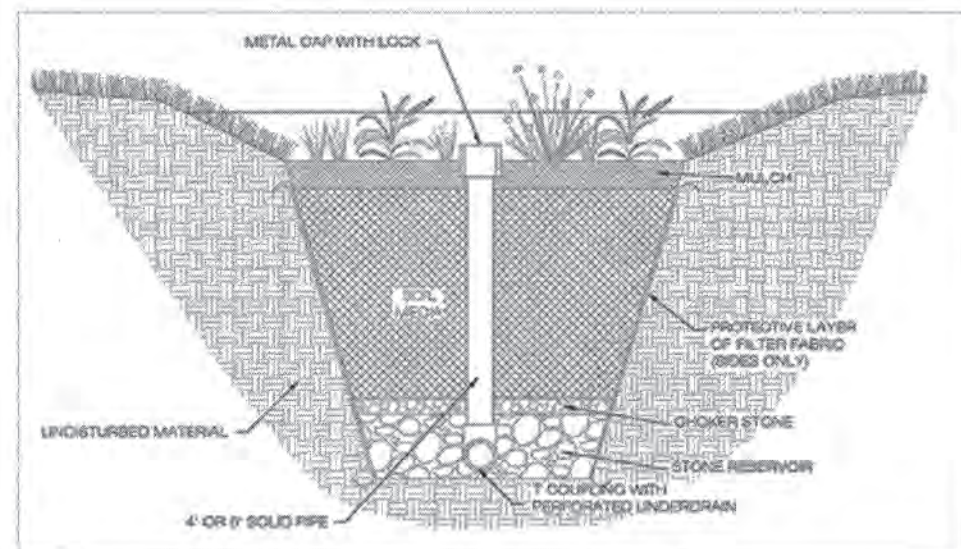
MAINTENANCE SCHEDULE:

Maintenance Tasks	Frequency
• Mowing of grass filter strips and bioretention turf cover	At least 4 times a year
• Spot weeding, erosion repair, trash removal, and mulch raking	Twice during growing season
• Add reinforcement planting to maintain desired the vegetation density	As needed
• Remove invasive plants using recommended control methods	
• Stabilize the contributing drainage area to prevent erosion	
• Spring inspection and cleanup	Annually
• Supplement mulch to maintain a 3 inch layer	Once every 2 to 3 years
• Prune trees and shrubs	Every 3 years
• Remove sediment in pre-treatment cells and inflow points	
• Replace the mulch layer	



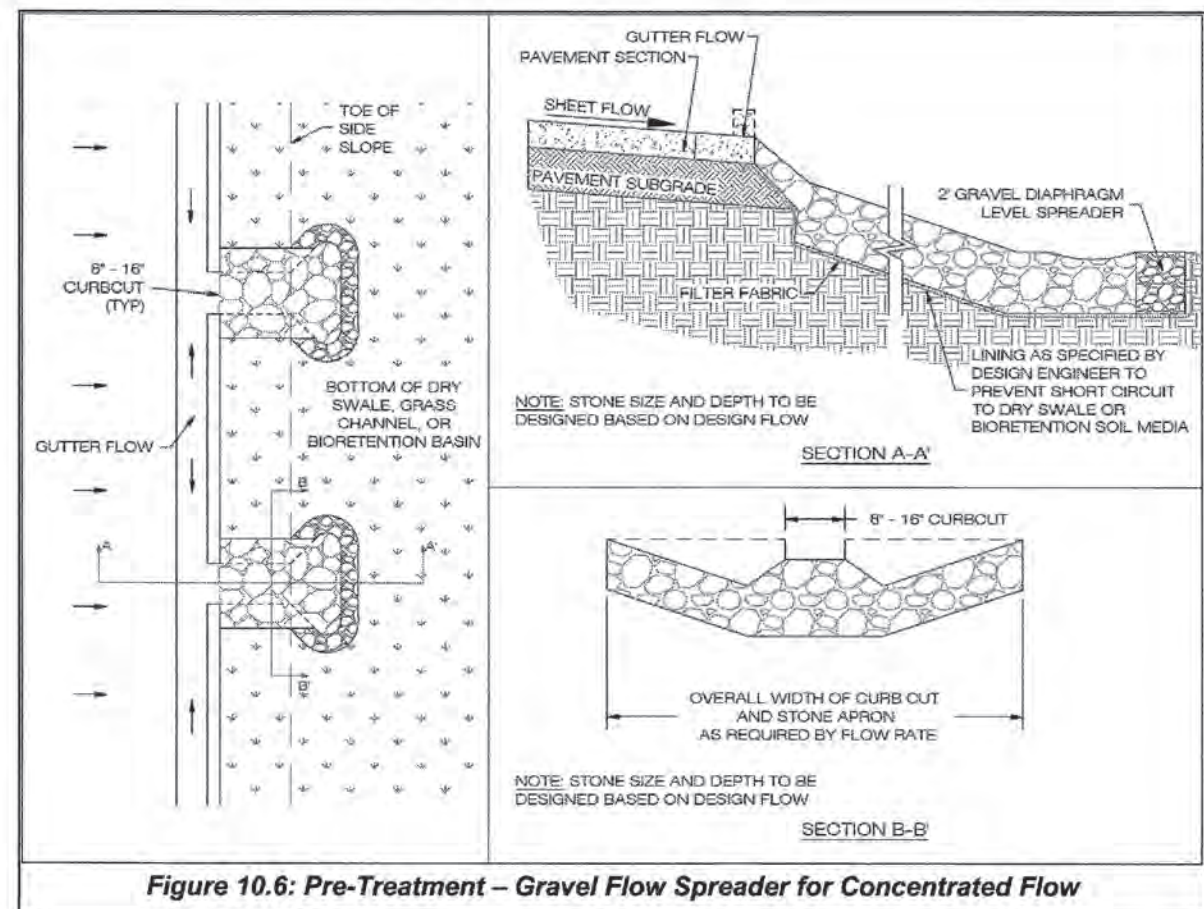
3 UNDERDRAIN CLEANOUT

NOT TO SCALE



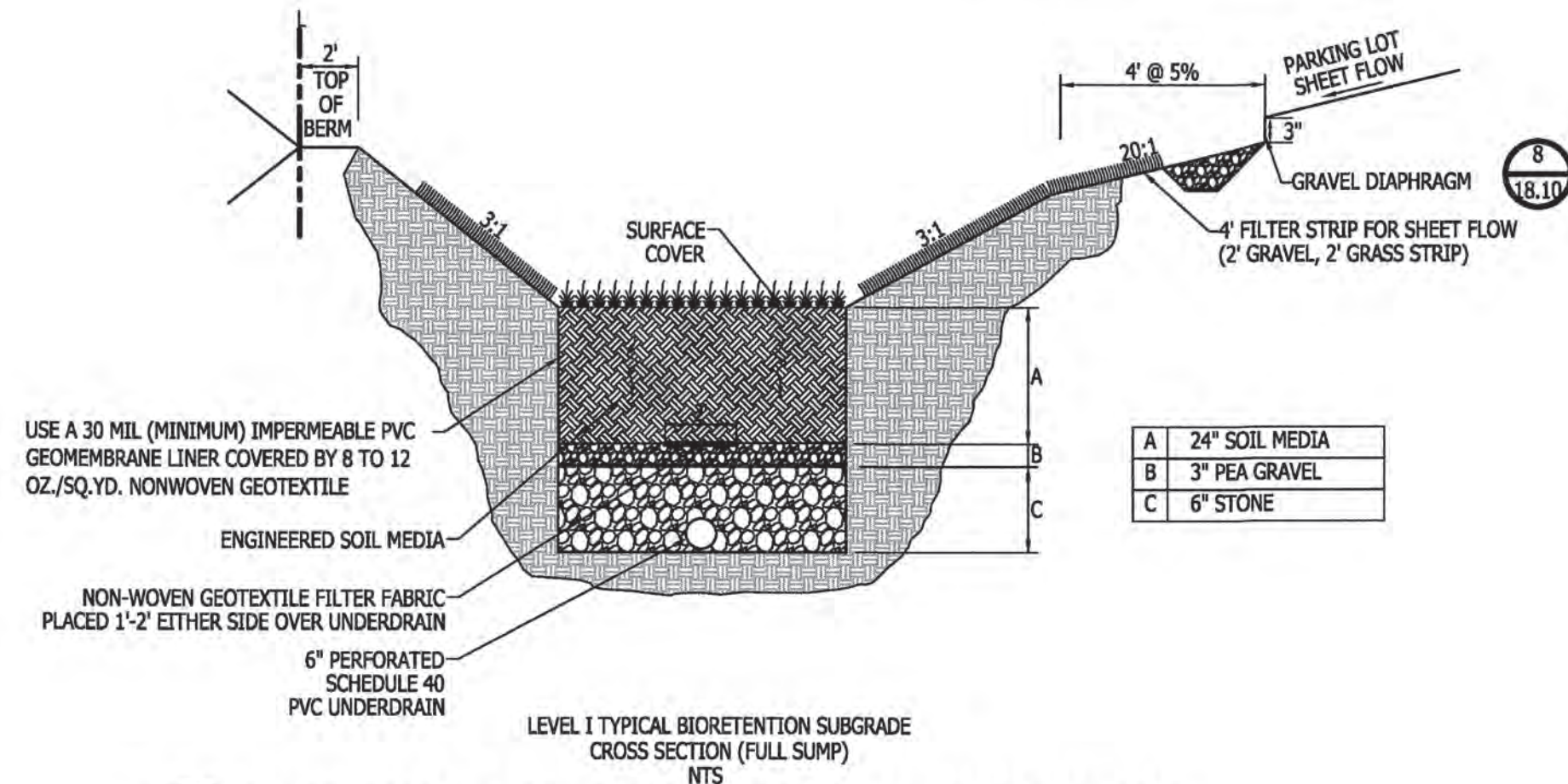
4 OBSERVATION WELL

NOT TO SCALE



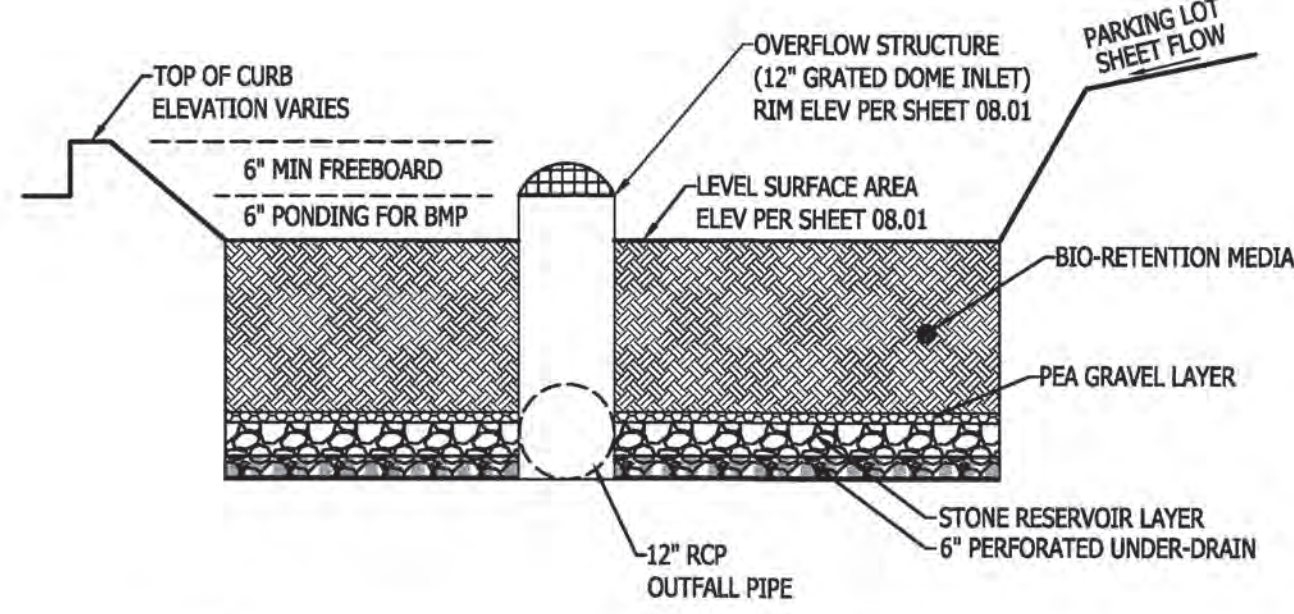
6 GRAVEL FLOW SPREADER DETAIL

NOT TO SCALE



2 TYPICAL LEVEL 1 BIO-RETENTION BASIN

NOT TO SCALE



5 OVERFLOW STRUCUTRE DETAIL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS.

- THE OWNER SHALL PROVIDE FOR INSPECTION DURING CONSTRUCTION OF THE FACILITY BY A LICENSED DESIGN PROFESSIONAL. (IN ACCORDANCE WITH STANDARD PRACTICE, THE ACTUAL INSPECTIONS MAY BE PERFORMED BY AN INDIVIDUAL UNDER RESPONSIBLE CHARGE OF THE LICENSED PROFESSIONAL.) THE LICENSED PROFESSIONAL SHALL CERTIFY THAT THE FACILITY WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. THE LICENSED PROFESSIONAL'S CERTIFICATION ALONG WITH ANY MATERIAL DELIVERY TICKETS AND CERTIFICATIONS FROM THE MATERIAL SUPPLIERS AND RESULTS OF THE TESTS AND INSPECTIONS SHALL BE SUBMITTED TO THE COUNTY PRIOR TO BOND RELEASE.
- BIORETENTION FACILITIES SHALL BE CONSTRUCTED AFTER THE DRAINAGE AREA TO THE FACILITY IS COMPLETELY STABILIZED, EROSION AND SEDIMENT CONTROLS FOR CONSTRUCTION OF THE FACILITY SHALL BE INSTALLED AS SPECIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN.
- THE COMPONENTS OF THE SOIL MEDIA SHALL BE THOROUGHLY MIXED UNTIL A HOMOGENEOUS MIXTURE IS OBTAINED. IT IS PREFERABLE THAT THE COMPONENTS OF THE SOIL MEDIA BE MIXED AT A BATCH FACILITY PRIOR TO DELIVERY TO THE SITE. THE SOIL MEDIA SHALL BE MOISTENED, AS NECESSARY, TO PREVENT SEPARATION DURING INSTALLATION.
- THE PROPOSED ENGINEERED SOIL MEDIA MUST BE APPROVED BY A CERTIFIED VENDOR PRIOR TO INSTALLATION.
- THE SOIL MEDIA SHALL BE TESTED FOR PH, ORGANIC MATTER, GRAIN SIZE DISTRIBUTION, P-INDEX (PHOSPHORUS CONTENT) AND CATION EXCHANGE CAPACITY (CEC) USING STANDARD TEST METHODS PRIOR TO INSTALLATION. IF THE RESULTS OF THE TESTS INDICATE THAT THE REQUIRED SPECIFICATIONS ARE NOT MET, THE SOIL REPRESENTED BY SUCH TESTS SHALL BE AMENDED OR CORRECTED AS REQUIRED AND RETESTED UNTIL THE SOIL MEETS THE REQUIRED SPECIFICATIONS. IF THE PH IS LOW, IT MAY BE RAISED BY ADDING LIME. IF THE PH IS TOO HIGH, IT MAY BE LOWERED BY ADDING IRON SULFATE PLUS SULFUR.
- FOR BIORETENTION BASINS, THE FLOOR OF THE FACILITY SHALL BE SCARIFIED OR TILLED TO REDUCE SOIL COMPACTION AND RAKED TO LEVEL IT BEFORE THE FILTER FABRIC, STONE, AND SOIL MEDIA ARE PLACED.
- THE SOIL MEDIA MAY BE PLACED BY MECHANICAL METHODS WITH MINIMAL COMPACTION IN ORDER TO MAINTAIN THE POROSITY OF THE MEDIA. SPREADING SHALL BE BY HAND. THE SOIL MEDIA SHALL BE PLACED IN 8- TO 12-INCH LIFTS WITH NO MACHINERY ALLOWED OVER THE SOIL MEDIA DURING OR AFTER CONSTRUCTION. THE SOIL MEDIA SHOULD BE OVERTILLED ABOVE THE PROPOSED SURFACE ELEVATION AS NEEDED TO ALLOW FOR NATURAL SETTLEMENT. LIFTS MAY BE LIGHTLY WATERED TO ENCOURAGE SETTLEMENT. AFTER THE FINAL LIFT IS PLACED, THE SOIL MEDIA SHALL BE RAKED TO LEVEL IT, SATURATED, AND ALLOWED TO SETTLE FOR AT LEAST ONE WEEK PRIOR TO INSTALLATION OF PLANT MATERIALS.
- FILL FOR THE BERM AND OVERFLOW WEIR SHALL CONSIST OF CLEAN MATERIAL FREE OF ORGANIC MATTER, RUBBISH, FROZEN SOIL, SNOW, ICE, PARTICLES WITH SIZES LARGER THAN 3 INCHES, OR OTHER DELETERIOUS MATERIAL. FILL SHALL BE PLACED IN 8- TO 12-INCH LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698, AASHTO T-99, OR VDOT SPECIFICATIONS. COMPACTION EQUIPMENT SHALL NOT BE ALLOWED WITHIN THE FACILITY ON THE SOIL BED. THE TOP OF THE BERM AND THE INVERT OF THE OVERFLOW WEIR SHALL BE CONSTRUCTED LEVEL AT THE DESIGN ELEVATION (IF REQUIRED).
- PLANT MATERIAL SHALL BE INSTALLED PER THE APPROVED LANDSCAPE PLAN.
- PLANTING SHALL TAKE PLACE AFTER CONSTRUCTION IS COMPLETED AND DURING THE FOLLOWING PERIODS: MARCH 15 THROUGH JUNE 15 AND SEPT. 15 THROUGH NOV. 15, UNLESS OTHERWISE APPROVED BY THE COUNTY.
- ALL AREAS SURROUNDING THE FACILITY THAT ARE GRADED OR DENIED DURING CONSTRUCTION OF THE FACILITY AND ARE TO BE PLANTED WITH TURF GRASS SHALL BE SODDED.
- THE FACILITY SHALL BE INSPECTED AT 12-24 AND 36-48 HOURS AFTER A SIGNIFICANT RAINFALL (0.5-1.0 INCHES) OR ARTIFICIAL FLOODING TO DETERMINE THAT THE FACILITY IS DRAINING PROPERLY. RESULTS OF THE INSPECTION SHALL BE PROVIDED TO THE COUNTY PRIOR TO BOND RELEASE.
- ADDITIONAL GUIDELINES FOR CONSTRUCTION ARE PROVIDED IN VIRGINIA STORMWATER DESIGN SPECIFICATION NO. 9 BIORETENTION (LATEST VERSION REFERENCED IN THE VSPM REGULATIONS).

REVISIONS

DATE

1st. Sub.	10-24-2018
ALT. LAYOUT	12-05-2018
2nd. Sub.	03-28-2019
ADA Space Reloc.	05-08-2019
Updated Bid	05-20-2019

PROFESSIONAL SEAL



CEDAR PARK
SHOPPING CENTER
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

SWM COMPUTATIONS

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

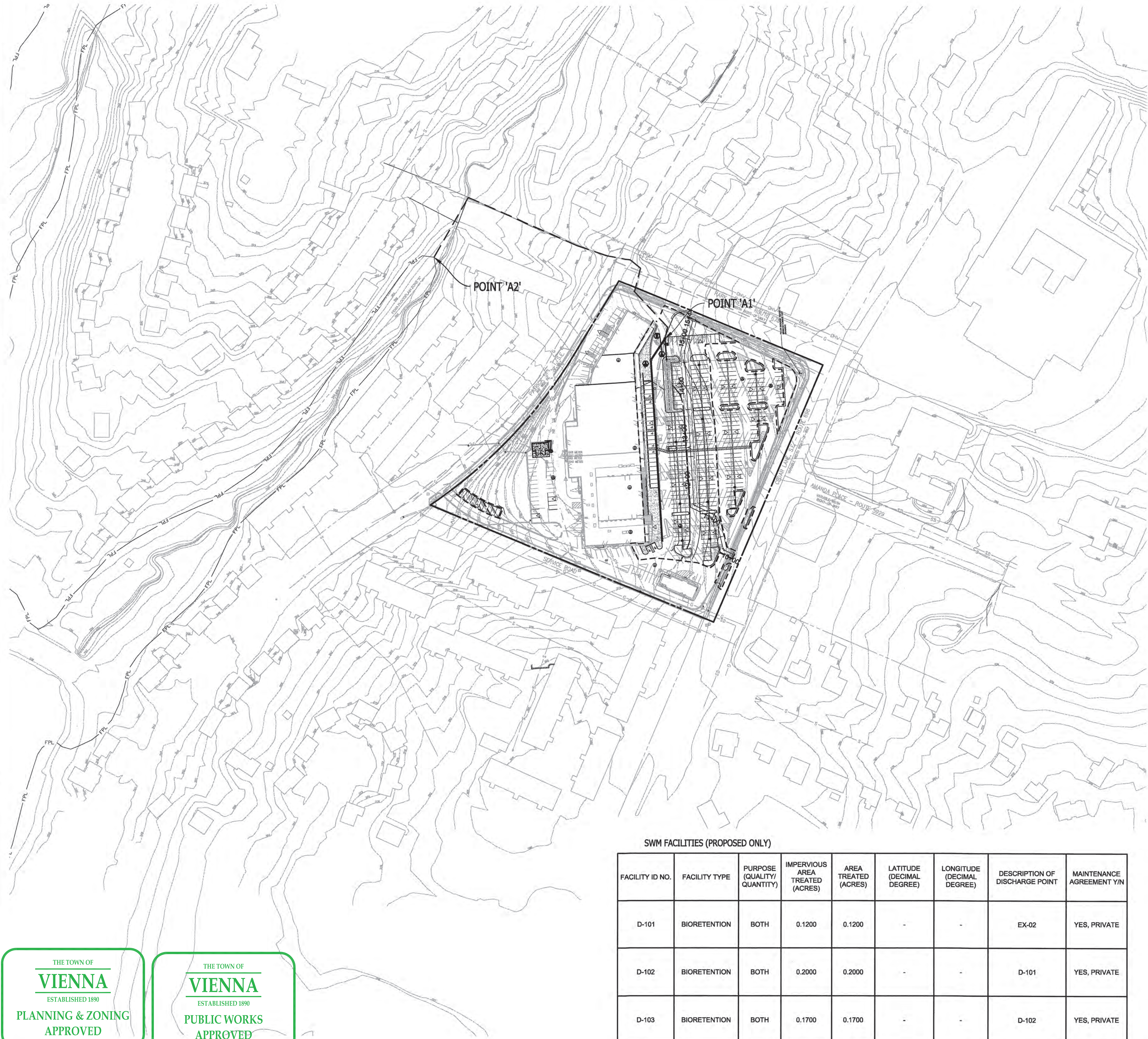
DWG. SCALE: N/A

VIKA NO. 7062H

SHEET NO. 18.07

V 10.01

REVISION APPROVED BY
SITE PLAN REVIEW AND INSPECTIONS DIVISION



THE TOWN OF
VIENNA
ESTABLISHED 1890
PLANNING & ZONING
APPROVED

THE TOWN OF
VIENNA
ESTABLISHED 1890
PUBLIC WORKS
APPROVED

SWM FACILITIES (PROPOSED ONLY)

FACILITY ID NO.	FACILITY TYPE	PURPOSE (QUALITY/ QUANTITY)	IMPERVIOUS AREA TREATED (ACRES)	AREA TREATED (ACRES)	LATITUDE (DECIMAL DEGREE)	LONGITUDE (DECIMAL DEGREE)	DESCRIPTION OF DISCHARGE POINT	MAINTENANCE AGREEMENT Y/N
D-101	BIORETENTION	BOTH	0.1200	0.1200	-	-	EX-02	YES, PRIVATE
D-102	BIORETENTION	BOTH	0.2000	0.2000	-	-	D-101	YES, PRIVATE
D-103	BIORETENTION	BOTH	0.1700	0.1700	-	-	D-102	YES, PRIVATE

WATERSHED A - LIMIT OF ANALYSIS NARRATIVE:
THE PROPOSED REDEVELOPMENT IS APPROXIMATELY 2.16 ACRES AND THE OUTFALL HAS BEEN STUDIED AS OUTLINED IN SECTION 26-329 OF THE TOWN OF VIENNA CODE WHICH REQUIRES THAT ALL REGULATED LAND DISTURBING ACTIVITIES COMPLY WITH STATE CODE 9VAC25-870-66 (WATER QUANTITY).

THIS APPLICATION HAS A SINGLE OUTFALL AT POINT 'A1', (SEE THIS SHEET) AN EXISTING UNDERGROUND CONVEYANCE SYSTEM THAT OUTFALLS AT POINT 'A2' WHICH IS A TRIBUTARY OF BEAR BRANCH AND IS A MAPPED FEMA FLOODPLAIN.

CHANNEL PROTECTION:
AS THE OUTFALL IS A NATURAL CONVEYANCE SYSTEM AT THE POINT WHERE THE TOTAL WATERSHED IS 100 TIMES THE SITES CONTRIBUTING DRAINAGE AREA, THE CHANNEL PROTECTION REQUIREMENTS ARE REQUIRED TO BE ANALYZED PER 9VAC25-870-66-B-3.A (ENERGY BALANCE), WHICH REQUIRES THE MAXIMUM PEAK FLOW RATE FOR THE 1-YEAR 24-HOUR STORM TO BE CALCULATED IN ACCORDANCE WITH THE ENERGY BALANCE EQUATION. AS THE ENERGY BALANCE OPTION IS BEING UTILIZED, PER 9VAC25-870-66-B-4, THE LIMITS OF THE ANALYSIS SHALL TERMINATE AT THE POINT OF DISCHARGE, WHICH IS THE CONNECTION POINT OF THE PROPOSED STORM DRAINS TO THE EXISTING STORM SYSTEM.

THE ALLOWABLE 1-YEAR 24-HOUR PEAK RELEASE RATE PER THE ENERGY BALANCE EQUATION HAS BEEN COMPUTED TO BE 6.05 CFS (SEE ENERGY BALANCE COMPUTATIONS THIS SHEET). POST-DEVELOPMENT PEAK RUNOFF RATE HAS BEEN CALCULATED TO BE 5.27 CFS (SEE WINTNR-20 ON SHEET 18.07). SINCE THE POST DEVELOPMENT 1-YEAR 24-HOUR PEAK RELEASE RATES IS LESS THAN THE COMPUTED ALLOWABLE RELEASE RATE (5.27 CFS < 6.05 CFS) (SEE ENERGY BALANCE COMPUTATIONS THIS SHEET) THE REQUIREMENTS OF 9VAC25-870-66-B-3.A AND 9VAC25-870-66-B-4 HAVE BEEN SATISFIED.

FLOOD CONTROL:
THE FLOOD PROTECTION REQUIREMENTS HAVE BEEN ANALYZED PER 9VAC25-870-66-C-2.A WHICH REQUIRES THE MAXIMUM PEAK FLOW RATE FOR THE POST-DEVELOPMENT 10-YEAR 24-HOUR STORM TO BE CONFINED WITHIN THE CONVEYANCE SYSTEM. ADDITIONALLY, PER 9VAC25-870-66-C-3.C THE LIMITS OF THE ANALYSIS SHALL TERMINATE AT FOLLY LICK BRANCH, WHICH IS A MAPPED FLOODPLAIN CONTAINED WITHIN THE EXISTING BOX CULVERT RUNNING THROUGH THE SITE.

AS SHOWN IN THE STORM DRAIN COMPUTATION ON SHEET 08.01 THE RUNOFF IS ADEQUATELY CONVEYED FROM THE SITE INTO THE BOX CULVERT (MAPPED FLOODPLAIN) THUS MEETING THE REQUIREMENTS OF 9VAC25-870-66-C-2.A AND 9VAC25-870-66-C-3.C

SUMMARY/CONCLUSION:
IT IS THE OPINION OF VIKI VIRGINIA, LLC. THAT THIS PROJECT WILL HAVE NO ADVERSE EFFECT NOR CAUSE FLOODING OF ANY DOWN STREAM PROPERTY OR STRUCTURE AND THAT THE OUTFALL IS ADEQUATE

WATER QUALITY NARRATIVE
TO MEET THE WATER QUALITY REQUIREMENTS OF 9VAC25-870-65 THE POST-DEVELOPMENT SITE INFORMATION WAS INPUT INTO THE CURRENT VRRM STATE SPREADSHEET. AS CAN BE SEEN ON SHEETS 18.03-18.05, 0.28 LBS OF PHOSPHOROUS IS REQUIRED TO BE REMOVED. THIS PLAN PROPOSES TO REDUCE IMPERVIOUS AREAS ON SITE AND PROVIDE BIORETENTION TO TREAT A PORTION OF THE SITE. SEE COMPUTATIONS ON SHEET 18.03-18.05.

SWM/BMP AGREEMENT NOTE:
A STORMWATER MANAGEMENT / BMP FACILITY MAINTENANCE AGREEMENT WILL BE COMPLETED AND RECORDED IN FAIRFAX COUNTY LAND RECORDS PRIOR TO PLAN APPROVAL. SEE SHEET 18.06 FOR MAINTENANCE AND INSPECTION REQUIREMENTS.

SWM Water Quantity Energy Balance Worksheet

CN (BASED ON SITE CONDITIONS)		98
SITE AREA (acre)		2.16
		1-year
P		PRE
CN		2.62
S=1000/CN-10		98
0.25		0.20
RV=(P-0.25)/(P-0.25)+S		0.04
		2.39

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

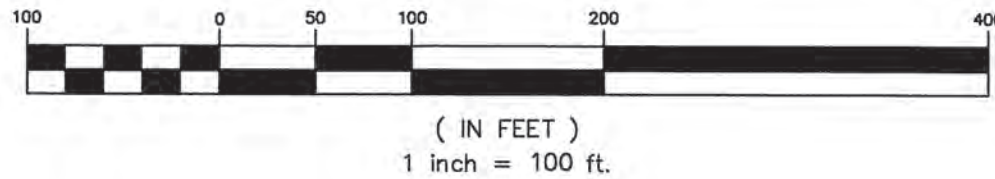
I.F.	0.8
CHANNEL PROTECTION	
Qpre-development	6.05
RVPost Development (with runoff reduction)	1.89
Allowable*	6.05

*UNDER NO CONDITION SHALL QALLOWABLE BE GREATER THAN Qpre-development

1-YR EXISTING RELEASE RATE PER TR55
FROM VRRM SPREADSHEET
1-YR ALLOWABLE RELEASE RATE



NORTH (NAD 83)
GRAPHIC SCALE



ENGINEERING SURVEYING/GEOMATICS
LANDSCAPE ARCHITECTURE PLANNING

VIKA VIRGINIA, LLC
8180 GREENSBORO DRIVE SUITE 200
TYSONS, VIRGINIA 22102
PHONE: (703) 442-7800
FAX: (703) 761-2787
TYSONS, VA. GERMANTOWN, MD.

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1st. Sub.	10-24-2018
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PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

**ADEQUATE
OUTFALL
ANALYSIS**

DRAWN BY: DH
DESIGNED BY: SEC
DATE ISSUED: 03-27-2019

DWG. SCALE: 1"=100'
VIKA NO. 7062H
SHEET NO. 19.01



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TYSONS, VA. GERMANTOWN, MD.

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PROFESSIONAL SEAL



**CEDAR PARK
SHOPPING CENTER**
ZONING DISTRICT C-1
TOWN OF VIENNA, VIRGINIA

CORRESPONDENCE

DRAWN BY: DH
 DESIGNED BY: SEC
 DATE ISSUED: 03-27-2019

DWG.
 SCALE: N/A

TKA
 O. 7062H

SHEET
 O. **20.01**

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V 10.01

LAYOUT: 20.01, Plotted By: Nguyen

FILE: P:\projects\7062\7062H\CADD\ENGINEERING\CONSTRUCTION DRAWINGS\7062H -20.01 CORRESPONDENCE.dwg
USER: Nguyen
DATE: July 2, 2019
TIME: 9:25:26 AM
LAYOUT: 20.01